LETTING DATE 1/22/2014

POLK Co.

PCC PAVEMENT - GRADE AND REPLACE

IM-035-2(365)67--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**
B.1 - 12	Typical Cross Sections and Details
C Sheets	**Quantities and General Information**
C.1	Project Description
C.1 - 2	Estimated Project Quantities
C.3 - 5	Estimate Reference Information
C.6	Standard Road Plans
C.6	Index of Tabulations
C.7	Pollution Prevention Plan
C.8	General Notes
C.8 - 21	Tabulations
CS.1 - 4	Tabulations
D Sheets	**Mainline Plan and Profile Sheets**
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 8	"Interstate 35"
E Sheets	**Side Road Plan and Profile Sheets**
* E.1 - 3	"Grand Avenue"
* E.4 - 5	"Recreational Trail"
G Sheets	**Survey Sheets**
G.1 - 8	Reference Ties and Bench Marks
G.9 - 10	Horizontal Control Tab. & Super for all Alignments
H Sheets	**Right-of-Way Sheets**
H.1 - 6	"Interstate 35"
J Sheets	**Traffic Control and Staging Sheets**
J.1	Traffic Control Plan
J.1 - 2	Staging Notes Stage
J.2	Tabulation of Special Events
* J.3	Traffic Control & Staging Legend & Symbol Info. Sheet
* J.4 - 115	Staging and Traffic Control Sheets
K Sheets	**Interchange Sheets**
K.1 - 2	Interchange Layout Sheets
* K.3	"Grand Avenue" RAMP "A" Plan and Profile Sheets
* K.4	"Grand Avenue" RAMP "B" Plan and Profile Sheets
* K.5	"Grand Avenue" RAMP "C" Plan and Profile Sheets
* K.6 - 7	Grading Plan
K.8 - 13	Ramp Taper Information
L Sheets	**Geometric, Staking and Jointing Sheets**
L.1 - 10	Geometric & Staking "Grand Avenue"
L.11 - 15	Jointing "Grand Avenue"
L.16 - 18	Edge Profiles
M Sheets	**Storm Sewer Sheets**
M.1	Storm Sewer Tabulations
M.2	Storm Sewer Legend & Symbol Information Sheet
M.3 - 4	Storm Sewer Profile Sheets
MIT Sheets	**Wetland Sheets**
MIT.1 - 4	Wetland Sheets
Q Sheets	**Soils Sheets**
Q.1	Soils Legend & Symbol Information Sheet
Q.2 - 10	Soils Sheets "Interstate 35"

Iowa Department of Transportation

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

POLK COUNTY

PCC PAVEMENT - GRADE AND REPLACE

From Warren Co. Line N. to I-80/235 (NBL)

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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

MILEAGE SUMMARY

105-1
09-27-94

Div.	Location	Lin. Ft.	Miles
	Sta. 1364+03.94 to Sta. 1550+62.56 (M.P. 68.11 to M.P. 71.64 I-35)	18,658.62	3.534
	OMIT IAIS RR Bridge & Approaches IAIS RR - Sta. 1380+17.07	351.36	0.067
	OMIT Grand Ave. Bridge & Approaches Grand Ave. - Sta. 1389+89.75	433.39	0.082
	OMIT EP True Bridge & Approaches EP True - Sta. 1512+67.70	597.38	0.113
	Bridge Length Total	1382.13	0.262
	TOTAL PROJECT LENGTH	17,276.49	3.272

IOWA ONE CALL
1-800-292-8989 | 811
www.iowaonecall.com

For Project Location Map
Refer to Sheet A.2

Interstate 35		
DESIGN DATA URBAN		
2015 AADT	62,300	V.P.D.
2035 AADT	96,500	V.P.D.
2035 DHV	9,970	V.P.H.
TRUCKS	14	%
Total Design ESALs	10,000,000	

INDEX OF SEALS

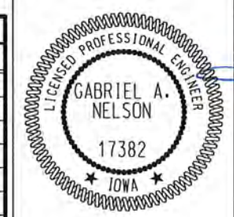
SHEET NO.	NAME	TYPE
A.1	Gabriel A. Nelson	Primary Signature Block
CS.1	Robert L. Stanley	Geotechnical Design
MIT.1	Chin-Ta Tsai	Channel Grading
SPS.1	Robert L. Stanley	Geotechnical Design
V.1	David R. Claman	Hydraulic Design
V.1	James S. Nelson	Structural Design

REVISIONS

TOTAL 502
PROJECT IDENTIFICATION NUMBER
96-77-035-010
PROJECT NUMBER
IM-035-2(365)67--13-77
R.O.W. PROJECT NUMBER
IMN-035-2(338)67--0E-77

INDEX OF SHEETS

No.	DESCRIPTION
S Sheets	**Sidewalk Sheets**
* S .1	Sidewalk Legend & Symbol Information Sheet
* S .2 - 4	Sidewalk Plan Sheets
* S .5	Sidewalk Tabulations
SPS Sheets	**Bridge Plan Soils Sheets**
SPS.1	Bridge Plan Soils Sheets
T Sheets	**Earthwork Quantity Sheets**
T.1 - 7	Earthwork Quantity Sheets
U Sheets	**Barrier Rail Sheets**
* U.1 - 5	Barrier Rail Layout Sheets
U.6 - 9	Special Details
U.10	Gas Main Grading Plan Details
U.11	Clearing and Grubbing
V Sheets	**Bridge and Culvert Situation Plans**
V.1 - 7	Bridge and Culvert Situation Plans
W Sheets	**Mainline Cross Sections**
W.1	Cross Sections Legend & Symbol Information Sheet
W.2 - 148	Interstate 35 Cross Sections
X Sheets	**Side Road Cross Sections**
X.1 - 39	Grand Avenue Road Cross Sections
X.40 - 51	Recreational Trail Cross Sections
Y Sheets	**Ramp Cross Sections**
Y.1 - 18	Ramp "B" Cross Sections
Y.19 - 40	Ramp "C" Cross Sections
	* Color Plan Sheets



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.

Gabriel A. Nelson, P.E. 11/04/13
Date

License Number 17382

My License Renewal Date is December 31, 2014

Pages or sheets covered by this seal:

All Sheets Except
CS.1-4, MIT.1-4, Q.1-10
SPS.1 and V.1-7

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER A.1

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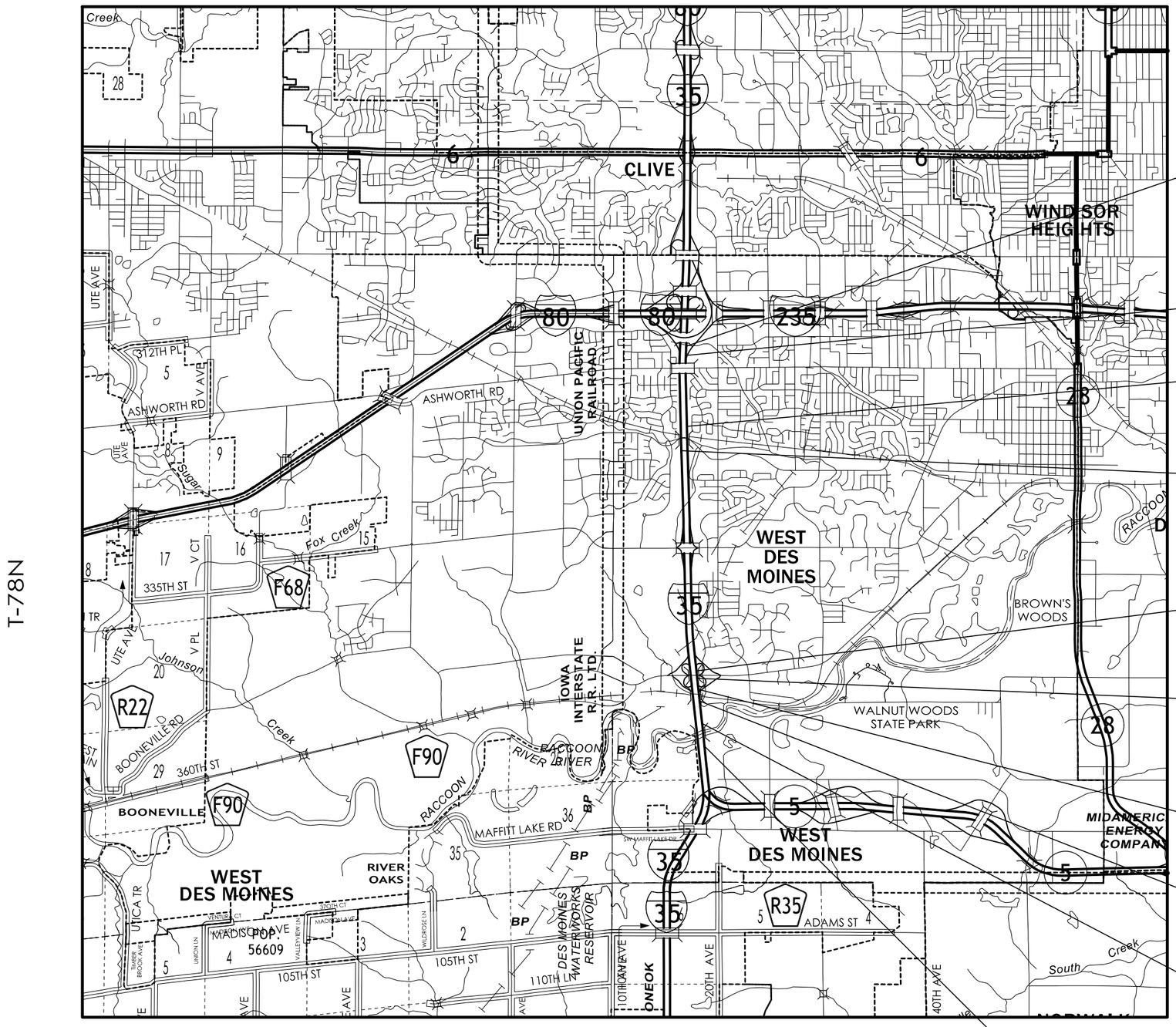

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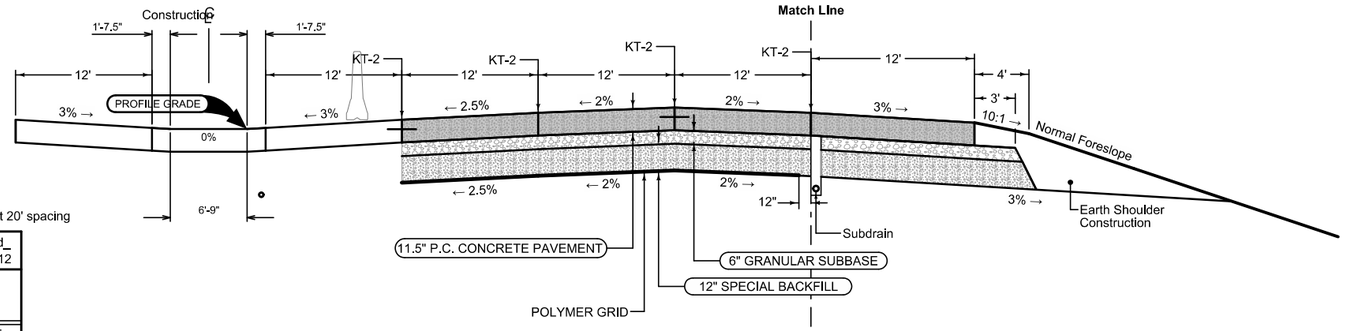


Mainline Jointing:
Transverse joints: CD at 20' spacing

6DP_Closed_ 04-17-12	
BEGIN STATION	END STATION
1364+00.00	1378+40.05
1381+91.41	1387+73.06
1392+06.45	1509+69.01*
1515+66.39	1545+50.00

* NOTE: CURB SECTION NEEDED

Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

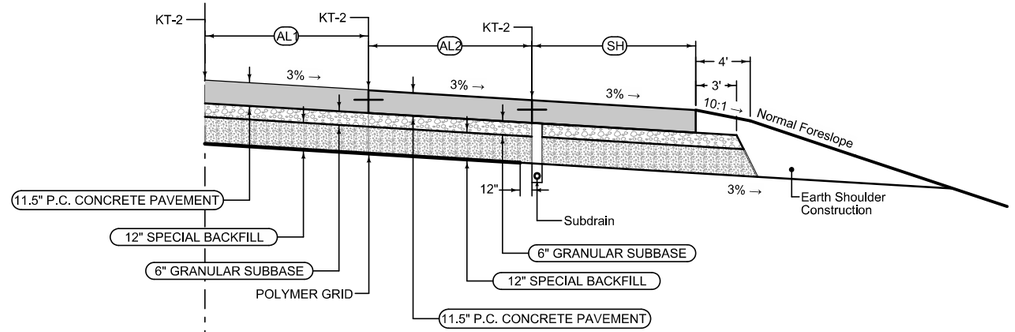
4_AuxLane_PCC_ 10-19-10				
Direction of Travel	BEGIN STATION	END STATION	(AL1) Feet	(AL2) Feet
NB	1406+03.00	1416+50.00	12	12
NB	1416+50.00	1419+50.00*	12	12-0

* TRANSITION OUT OF LANE TO 12' SHOULDER

Full Depth PCC Shoulder

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

6D_Dprs_P_FullPCC_ 04-19-11		
Direction of Travel	BEGIN STATION	END STATION
NB	1364+03.94	1378+40.00
NB	1381+91.41	1387+73.06
NB	1392+06.45	1406+03.56
NB	1443+04.55	1468+65.69
NB		
NB		



Full Depth PCC Shoulder

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

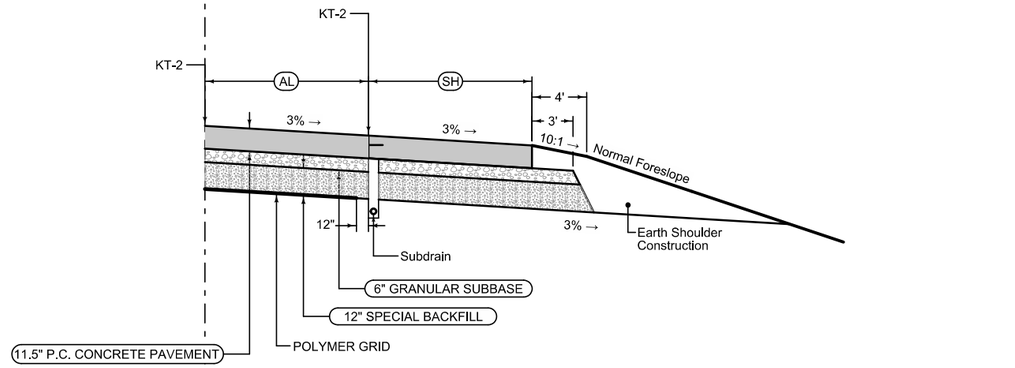
6D_Dprs_P_FullPCC_ 04-19-11			
Direction of Travel	BEGIN STATION	END STATION	(SH) Feet
NB	1406+50.08	1416+50.00	6
NB	1416+50.00	1419+50.00*	6-12

Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

4_AuxLane_PCC_ 10-19-10			
Direction of Travel	BEGIN STATION	END STATION	(AL) Feet
NB	1368+57.98	1375+00.00	12
NB	1419+50.00	1438+23.58	12
NB	1493+83.86	1509+69.02	12
NB	1515+66.40	1550+62.56*	12

* NOTE: CURB SECTION NEEDED



Full Depth PCC Shoulder

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

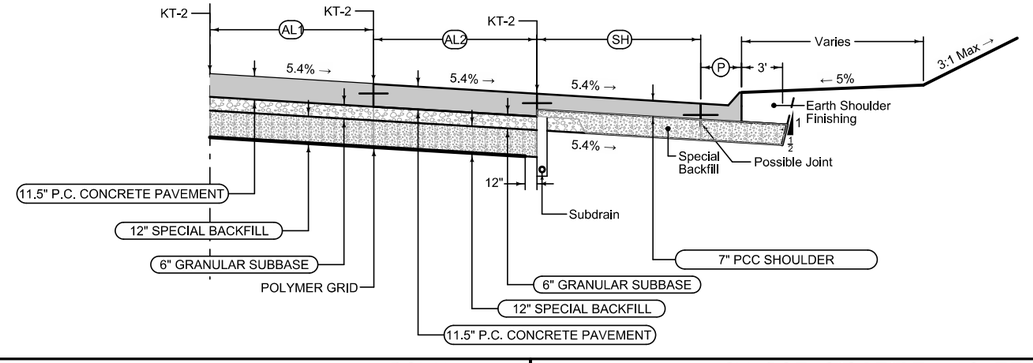
6D_Dprs_P_FullPCC_ 04-19-11			
Direction of Travel	BEGIN STATION	END STATION	(SH) Feet
NB	1368+57.98	1375+00.00	12-6
NB	1419+50.00	1438+23.58	12
NB	1493+83.86	1509+69.02	12
NB	1515+66.40	1550+62.56	12

Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

4_AuxLane_PCC_ 10-19-10				
Direction of Travel	BEGIN STATION	END STATION	(AL1) Feet	(AL2) Feet
NB	1406+07.14*	1406+50.08*	12	12

* NOTE: REFER TO SHEET K.11 FOR GEOMETRICS AND JOINTING



Shoulder w/Curb

Longitudinal joint: L-2 or KT-2
Transverse joint: Match Mainline

4_Shldr_Curb_PCC_ Modified				
Direction of Travel	BEGIN STATION	END STATION	(SH) Feet	(P) Feet
NB	1406+08	1406+50	6	2.5

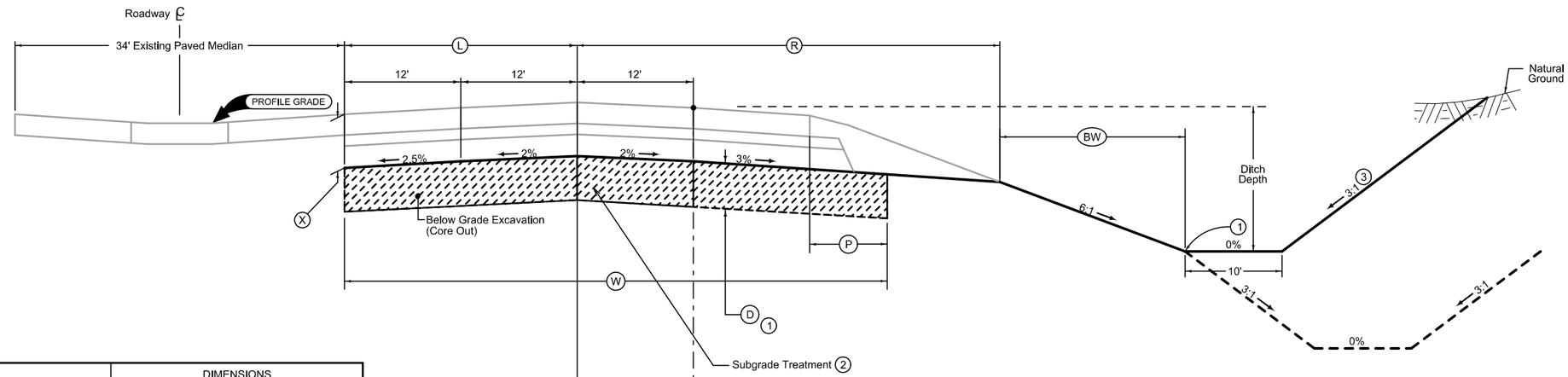
See Tab 100-24 for pavement quantities.

See Tab 112-9 for shoulder quantities.

See Standard Road Plan PV-102 for 4" sloped curb details.

INTERSTATE 35
(Northbound Lanes)

NB_Grading
MODIFIED

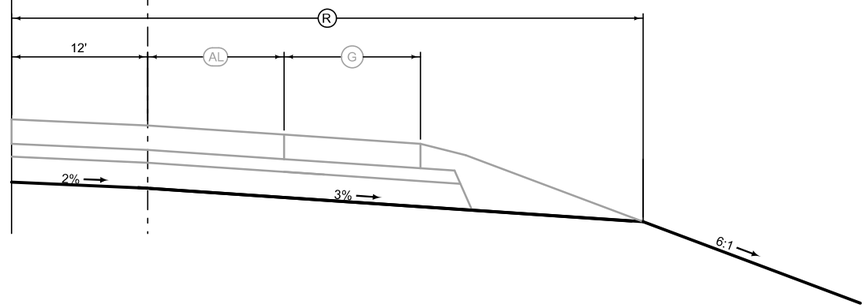


LOCATION			DIMENSIONS					
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	(BW) Feet	(W) Feet	(P) Feet
I-35 NB	1364+00.00	1378+40.00	24	44	29.5	2	51	3
I-35 NB	1381+91.41	1387+73.06	24	44	29.5	2	51	3
I-35 NB	1392+06.45	1509+69.01	24	44	29.5	2	51	3
I-35 NB	1515+66.40	1545+75.00	24	44	29.5	2	51	3

(1) Depth Varies

(2) Refer to tab 103-3 for limits and depths. Subgrade treatment depths and locations are IN ADDITION TO special backfill thickness shown on the paving typical on sheet B.1. Polymer grid in core out areas is to be placed at the bottom of the special backfill. There will not be two layers of polymer grid in core out areas.

(3) Refer to sheet Q.5-Q.10 for backslope construction from Sta. 1416+75 to 1420+70.



Auxiliary Lane Grading

LOCATION			(R) Feet
ROAD IDENTIFICATION	STATION TO STATION		
NB	1368+57.98	1375+00.00	58
NB	1419+50.00	1438+23.58	58
NB	1493+83.86	1509+69.02	58
NB	1515+66.40	1550+62.56*	58

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.

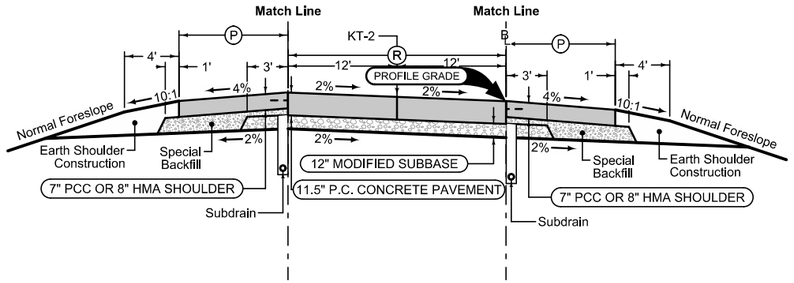
(1) Refer to project plan and cross sections for specific location of foreslope change.

6 LANE GRADING WITH AUXILLARY LANES
(Parrallel Subgrade)

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

		2_P_ALT_ 10-19-10
STATION TO STATION		(P) Feet
2375+00.00	2389+71.19	4
3389+50.07	3406+07.67	4
11390+65.34	11392+00.00	4



Section shown in the direction of traffic.

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

BEGIN STATION	END STATION	(R) Feet
2375+00.00	2389+71.19	24
3389+50.07	3406+07.67	24
11390+65.34	11392+00.00	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

		2_P_ALT_ 10-19-10
STATION TO STATION		(P) Feet
2375+00.00	2389+71.19	6
3389+50.07	3390+36.87	Varies
3390+36.87	3406+49.92	6
11390+65.34	11392+00.00	

Paved Shoulder Alternates

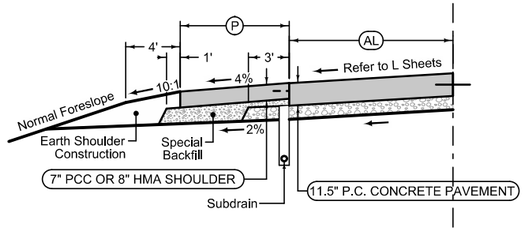
PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

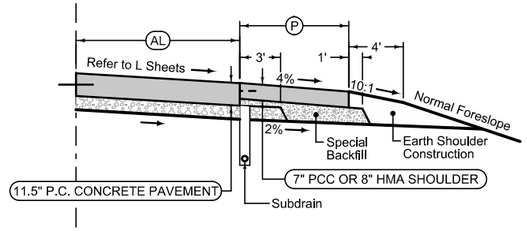
		2_P_ALT_ 10-19-10
STATION TO STATION		(P) Feet
2375+00.00	2389+71.19	4

Auxiliary Lane

Longitudinal joint: L-2 or KT-2
Transverse joint: Match Mainline

		2_AuxLane_PCC_ 10-19-10
STATION TO STATION		(AL) Feet
2385+50.00	2386+70.00	0-12
2386+70.00	2389+71.19	12





Auxiliary Lane

Longitudinal joint: L-2 or KT-2
Transverse joint: Match Mainline

2_AuxLane_PCC_ 10-19-10		
(AL) Feet	STATION TO STATION	
12	11390+65.34	11392+00.00

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

2_P_ALT_ 10-19-10		
(P) Feet	STATION TO STATION	
6	11390+65.34	11392+00.00

See Tab 100-24 for pavement quantities.

See Tab 112-9 for shoulder quantities.

GRAND AVE. - RAMPS

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER B.3

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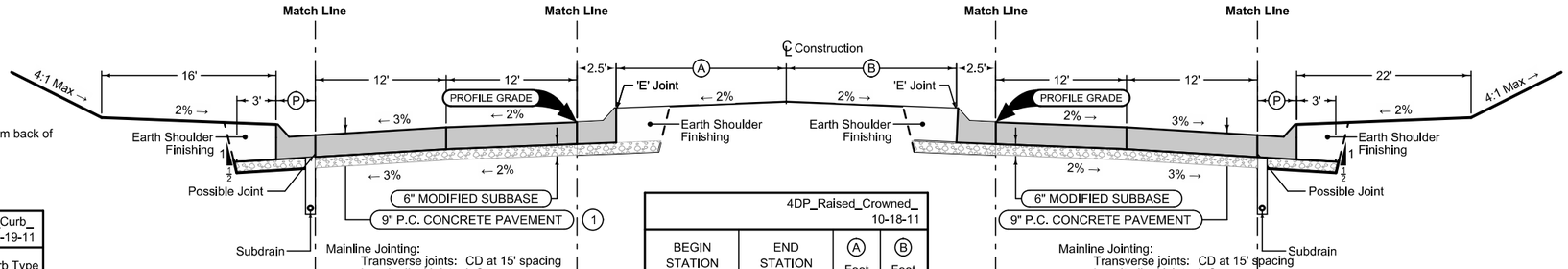


Curbed Shoulder

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 15' spacing

STATION TO STATION		(P) Feet	Curb Type See PV-102
3377+75.00	3383+59.50	2.5	(1)
3385+67.58	3393+77.17	2.5	(1)
3399+43.00	3400+00.00	2.5	(1)

(1) - Refer to Typical 6131 for Curb Type.

(1) Grand Avenue pavement is reinforced. Refer to detail RP-1 on Sheet B.10.

Mainline Jointing:
Transverse joints: CD at 15' spacing
Longitudinal joint: L-2

BEGIN STATION	END STATION
3377+75.00	3397+50

4DP_Raised_Crowned_ 10-18-11

BEGIN STATION	END STATION	(A) Feet	(B) Feet
3377+75.00	3384+51.04	36.75	36.75
3384+51.04	3384+87.79	36.75-0	36.75-0
3394+66.05	3395+02.78	0-36.75	0-36.75
3395+02.78	3397+92.65	36.75	36.75

Mainline Jointing:
Transverse joints: CD at 15' spacing
Longitudinal joint: L-2

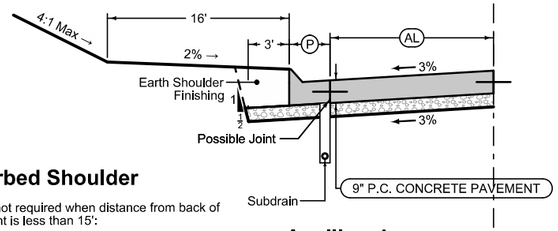
BEGIN STATION	END STATION

Curbed Shoulder

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

Single pour: L-2
Staged : KT-2
Transverse:C at 15' spacing

STATION TO STATION		(P) Feet	Curb Type See PV-102
3385+59.68	3394+16.91	2.5	(1)
(1) - Refer to Typical 6131 for Curb Type.			



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 15' spacing

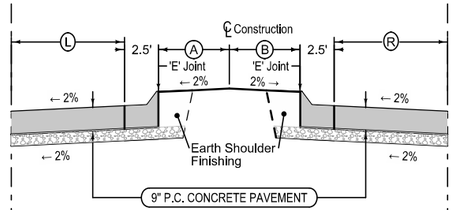
STATION TO STATION		(P) Feet	Curb Type See PV-102
3394+86.73	3399+43.00	2.5	(1)
(1) - Refer to Typical 6131 for Curb Type.			

Auxiliary Lane

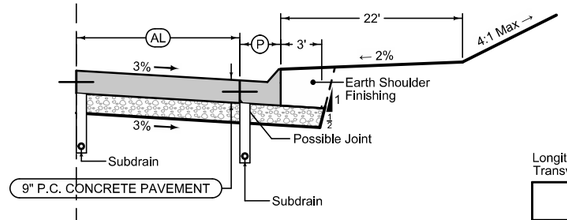
Longitudinal joint: L or KT
Transverse joint: Match Mainline

4_AuxLane_PCC_ 10-19-10

Direction of Travel	BEGIN STATION	END STATION	(AL) Feet
WB	3394+86.73	3397+50.00	12



BEGIN STATION	END STATION	(A) Feet	(B) Feet	(L) Feet	(R) Feet
3385+53.09	3386+90.36	0-24.75	0-36.75	12	0
3386+90.36	3388+67.72	24.75	36.75	12	0
3388+67.72	3389+87.72	24.75	36.75-24.75	12	0-12
3389+87.72	3390+41.40	24.75	24.75	12	12
3390+41.40	3391+61.53	24.75-36.75	24.75	12-0	12
3391+61.53	3392+63.00	36.75	24.75	0	12
3392+63.00	3393+98.05	36.75-0	24.75-0	0	12



Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

4_AuxLane_PCC_ 10-19-10

Direction of Travel	BEGIN STATION	END STATION	(AL) Feet

See Tab 100-24 for pavement quantities.

See Tab 112-9 for shoulder quantities.

GRAND AVENUE

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER B.4

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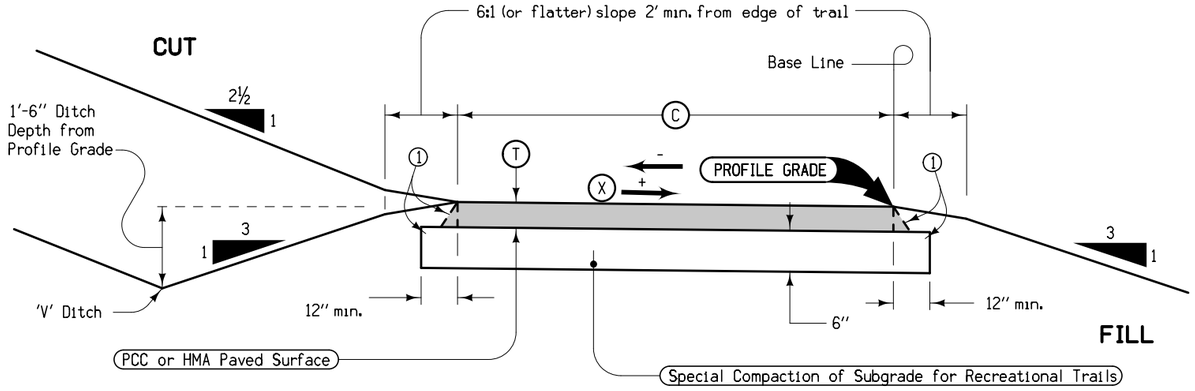


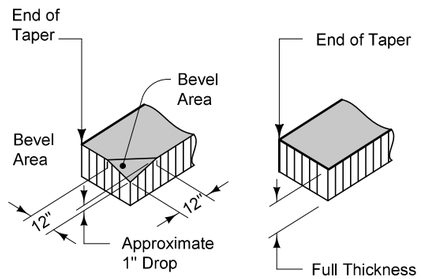
PAVEMENT THICKNESS		
Pavement Type	Trail Width (C)	(T)
PCC	8'	4"
	10' or greater	5"
HMA	8'	5"
	10' or greater	6"

STATION TO STATION		PAVEMENT TYPE PCC, HMA, or option	(C) Feet	(X) %	'V' DITCH
0+00.00	2+00.00	PCC	10	-1.5	SEE CROSS SECT.
2+00.00	2+37.50	PCC	10	-1.5 to +1.5	SEE CROSS SECT.
2+37.50	7+40.50	PCC	10	+1.5	SEE CROSS SECT.
7+40.50	8+63.84	PCC	10	+1.5 to 0	SEE CROSS SECT.
9+71.18	11+15.50	PCC	10	0 to +1.5	SEE CROSS SECT.
11+15.50	12+86.50	PCC	10	+1.5	SEE CROSS SECT.
12+86.50	13+24.00	PCC	10	+1.5 to -1.5	SEE CROSS SECT.
13+24.00	20+82.85	PCC	10	-1.5	SEE CROSS SECT.
21+98.37	24+18.35	PCC	10	-1.5	SEE CROSS SECT.

Notes:
Bid item is "Recreational Trail".
(1) Nominal 1:1 slope (HMA only)

TYPICAL CROSS SECTION RECREATIONAL TRAIL PAVED SURFACE

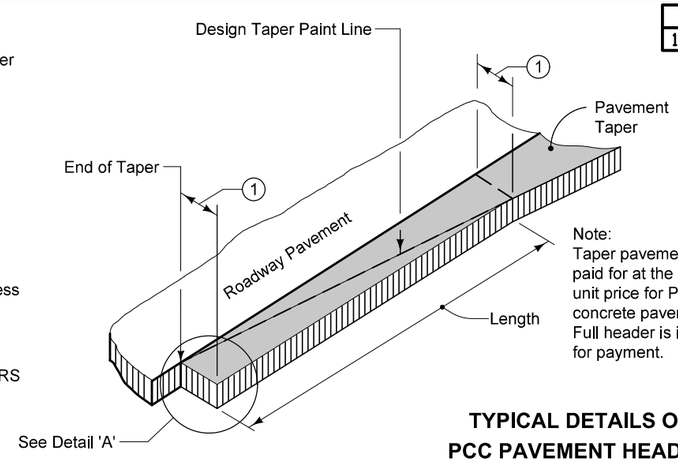
7101
10-19-10



DETAIL 'A'
FOR
GRANULAR SHOULDERS

DETAIL 'A'
FOR
PAVED SHOULDERS

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



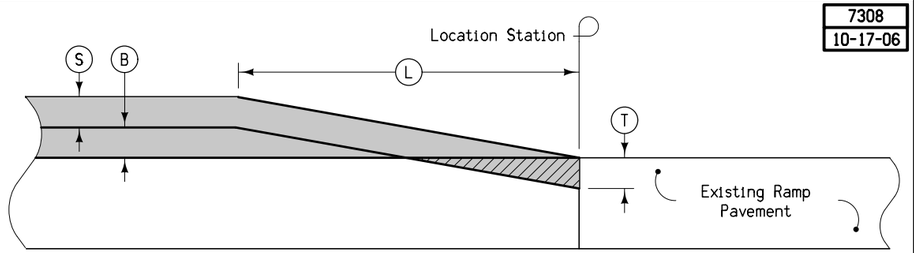
Note:
Taper pavement to be paid for at the contract unit price for P.C. concrete pavement. Full header is included for payment.

TYPICAL DETAILS OF PCC PAVEMENT HEADER

7308
10-17-06

Posted Speed Limit (mph)	Runout Ratio (ft per inch)
45 or More	50
20 to 45	25
Under 20	10 *

* Based on turning maneuvers at side roads and intersections.

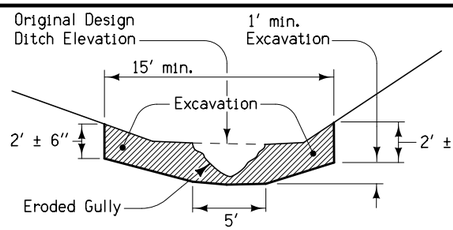


(S) Surface Course
(B) Intermediate Course
(T) Milling

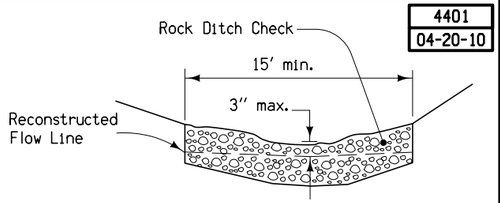
Location Station	(L) Feet	(S) Inches	(B) Inches	(T) Inches	Remarks
1443+00.00	75	1.5	1.5	1.5	
1468+65.00	75	1.5	1.5	1.5	

SURFACE NOTCH - INTERMEDIATE RUNOUT FOR DOUBLE COURSE RESURFACING

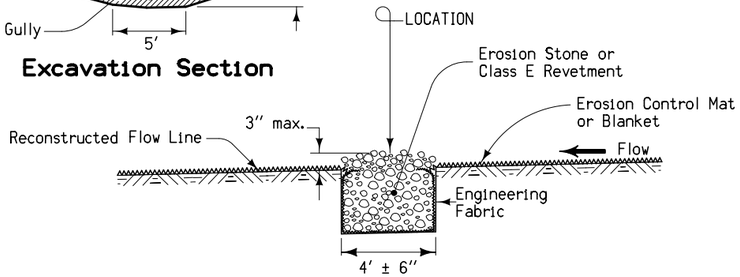
4401
04-20-10



Excavation Section



Ditch Check Section

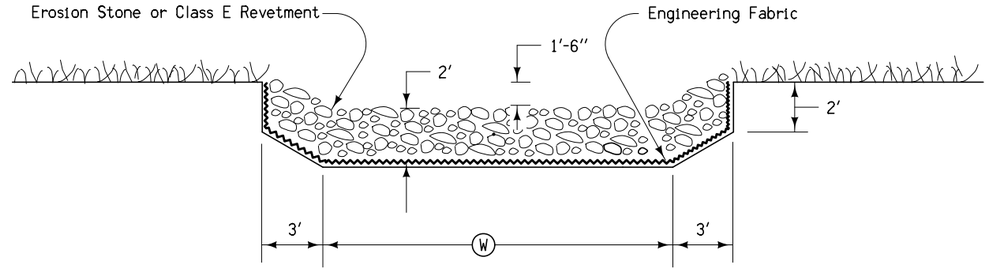


Longitudinal Section at Centerline of Ditch

Refer to Tabulation 100-23
for additional information.

ROCK DITCH CHECK

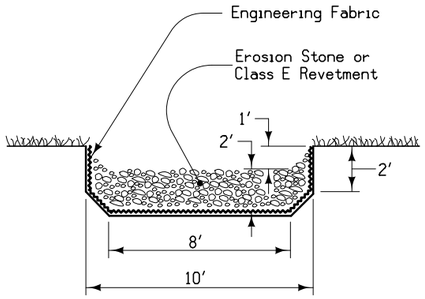
4402
04-20-10



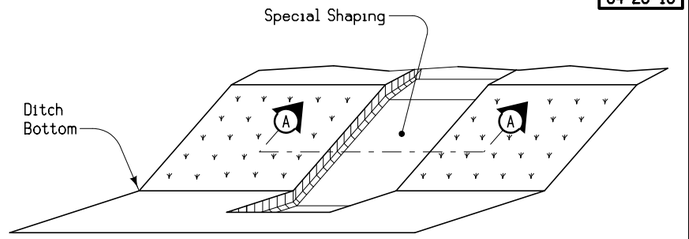
Refer to Tabulation 100-23 for additional information.

ROCK DITCH

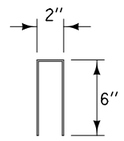
4403
04-20-10



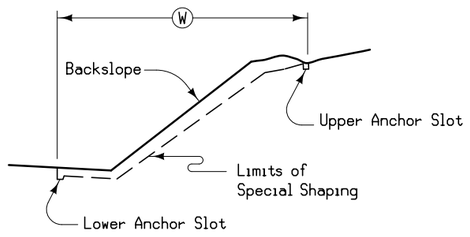
Section A-A



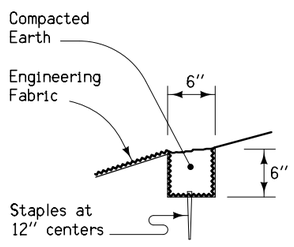
Isometric View



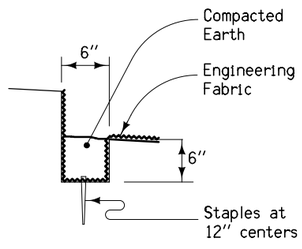
Staple
(No. 11 wire)



Typical Section



Upper Anchor Slot

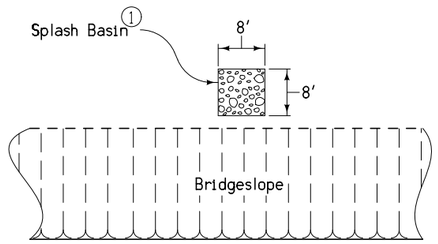


Lower Anchor Slot

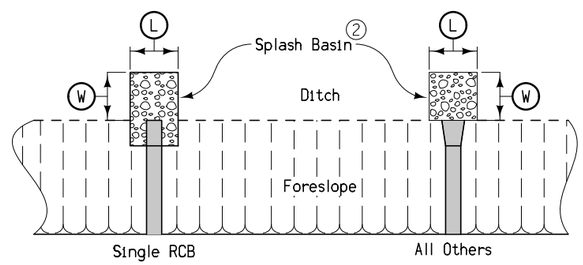
ROCK FLUME

Refer to Tabulation 100-23 for additional information.

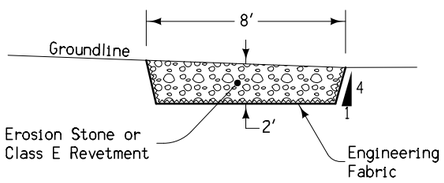
4404
10-16-12



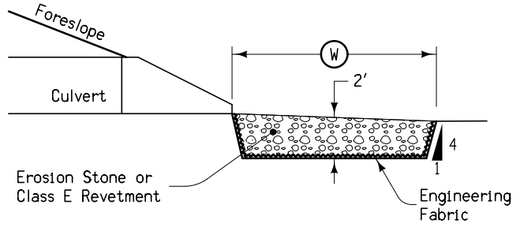
Splash Basin Under Bridge Drain
Plan View



Splash Basin at Culvert Outlet
Plan View



Splash Basin Under Bridge Drain
Typical Section



Splash Basin at Culvert Outlet
Typical Section

① Center splash basin directly under bridge drain.

② For single RCB, extend splash basin along the outside of the wings to the face of the parapet. Construct to a width of 3 feet and a depth of 2 feet.

Refer to Tabulation 100-23 for additional information.

ROCK SPLASH BASIN

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER B.6

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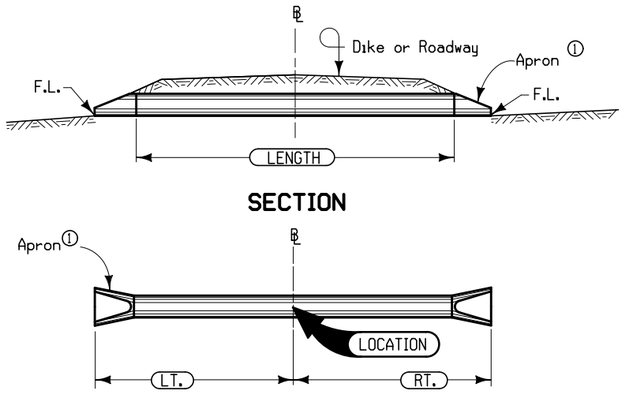
1101
04-30-02



Notes:

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

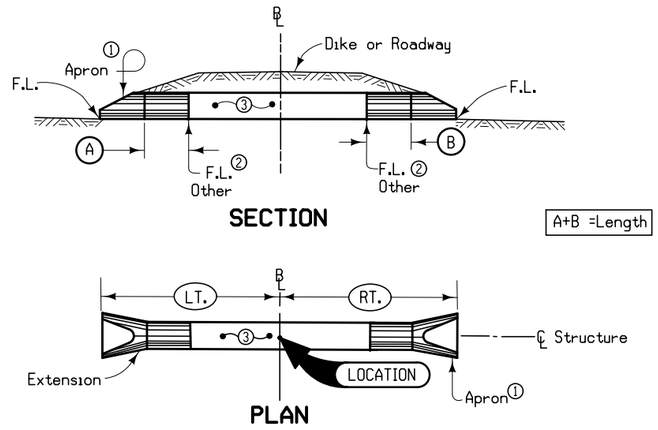
Skew angle is the angle which one end of the pipe is ahead (by stationing) of line perpendicular to the ℄ (example skew Rt. ahead 30°).

Refer to tabular listing and other plans for additional information.

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

PIPE CULVERT

1301
10-03-00



Notes:

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

Extension shall be on line of existing structure to Lt., Rt. or both as specified. Adaptors may be required, see Standard Road Plan RF-2.

Refer to tabular listing and other plans for additional information.

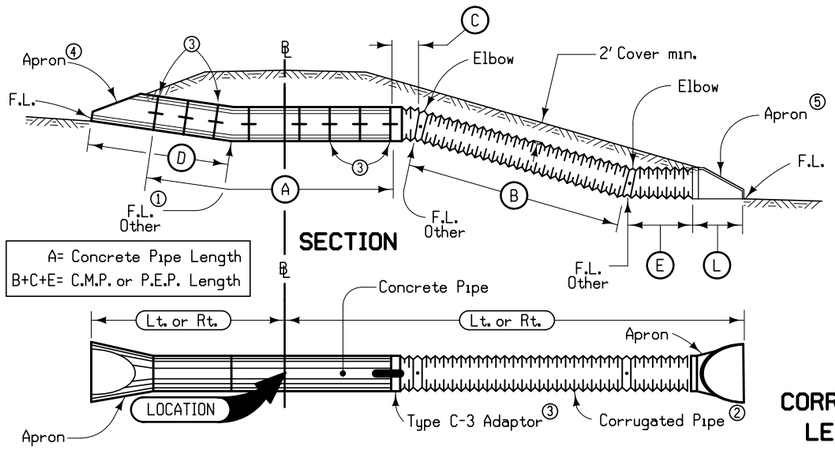
① See Standard Road Plan RF-3 for concrete, RF-5 for metal.

② Optional type "D" section only when specified in tabulation.

③ Existing structure.

PIPE EXTENSION

1501
04-20-10



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

Skew angle is the angle which one end of the pipe is ahead (by stationing) of a line perpendicular to the ℄ .

Refer to Tabulation 104-3.

① Optional D section only when specified in tabulation.

② Standard type joint couplings are required. (See Materials I.M. 441)

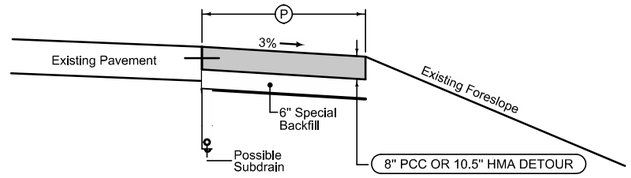
③ See RF-2 & RF-14.

④ See RF-3.

⑤ See RF-5 for Metal and Polyethylene.

CORRUGATED PIPE - CONCRETE LETDOWN STRUCTURE WITH METAL APRON

SS
MODIFIED



Paved Shoulder Jointing:

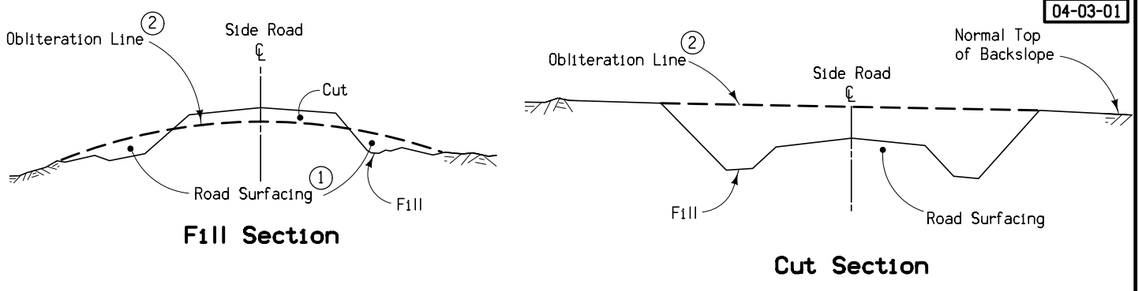
PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

2_P_ALT_
10-19-10

STATION TO STATION		Ⓟ Feet
1434+00.00	1441+00.00	6-7
1469+50.00	1481+25.00	5.5-6
1541+00.00	1545+50.00	6-7

Shoulder Strengthening Alternatives

4302
04-03-01



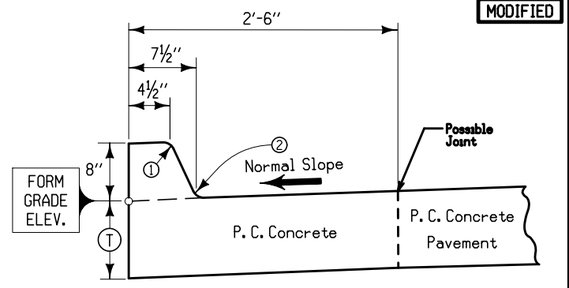
① Existing road surfacing (granular material) shall be placed as shown unless otherwise directed by the Engineer or provided for in the detail project plans.

② When specified, the upper 1' to be suitable for vegetation (grass or crops).

Note:
The work of obliterating or reshaping old roadbeds shall be done at the direction of the Engineer.

TYPICAL DETAILS FOR OBLITERATION EXISTING ROADBED

6131
MODIFIED



Ⓣ Thickness specified for Pavement

① 1" Radius

② 2" Radius

DETAILS OF 8" CURB

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER B.7

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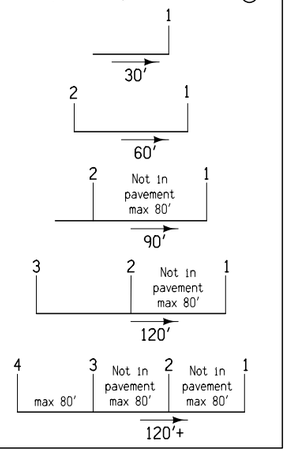
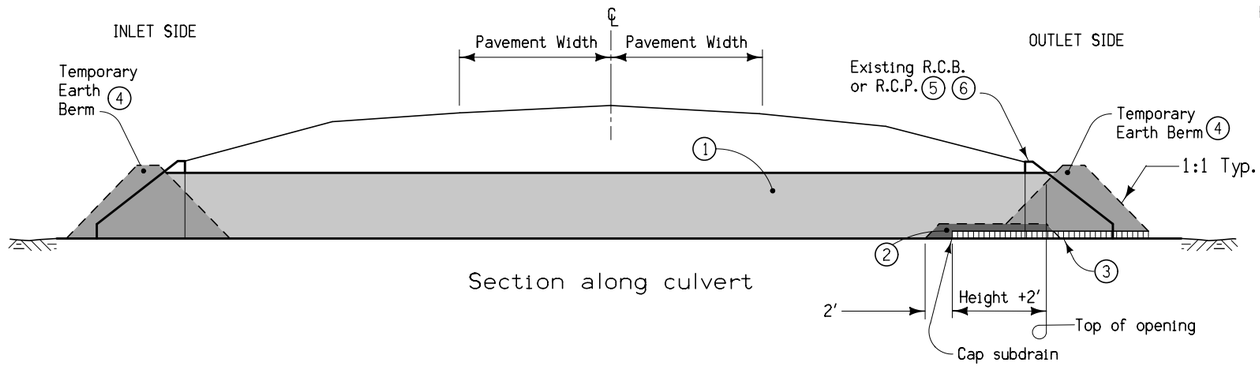
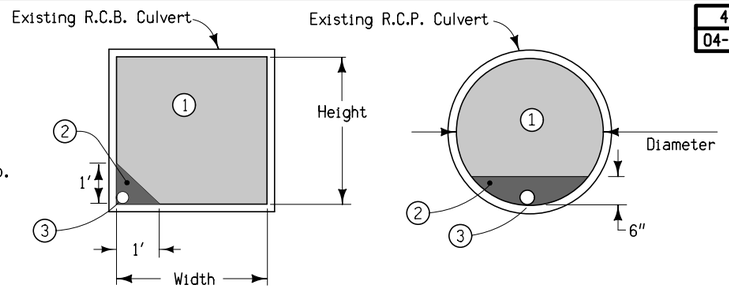
Required Injection Points ⑥





Section along culvert

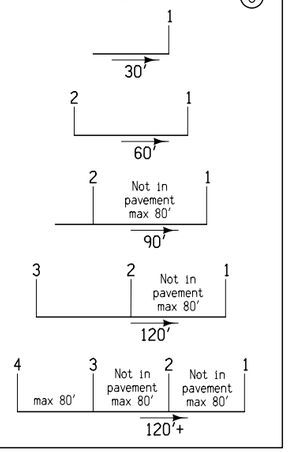


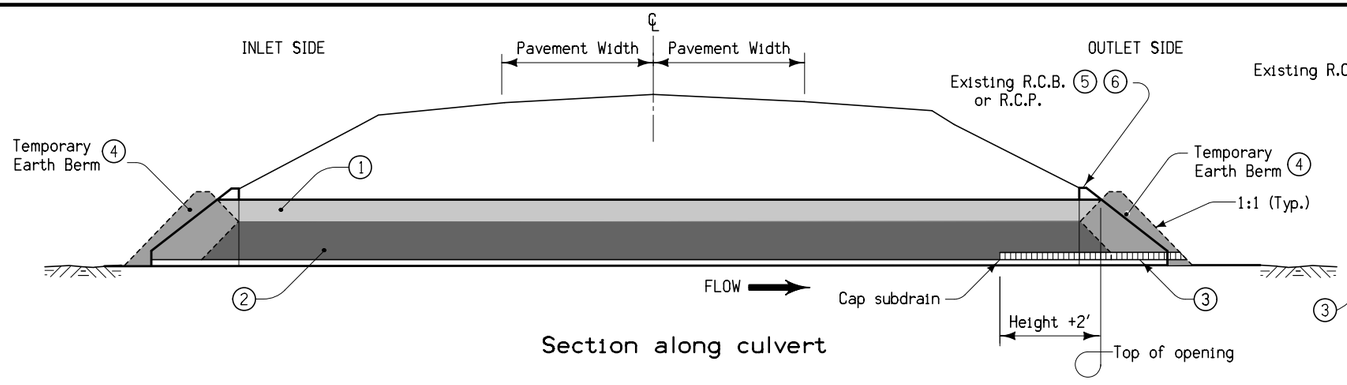
Section thru culvert

① Flowable Mortar.
② Granular Backfill.
③ 4″ subdrain at flowline elevation of culvert shall be extended into the culvert a distance of 2′ plus the height of the culvert. Granular Backfill covers subdrain and extends an additional 2′. Subdrain and granular backfill are incidental to flowable mortar.
④ Ends of culvert shall be plugged sufficiently to retain flowable mortar. Temporary earth berms are incidental to flowable mortar.
⑤ Removal of headwalls may be required.
⑥ Outlet shall be filled first. See injection point detail for additional information.

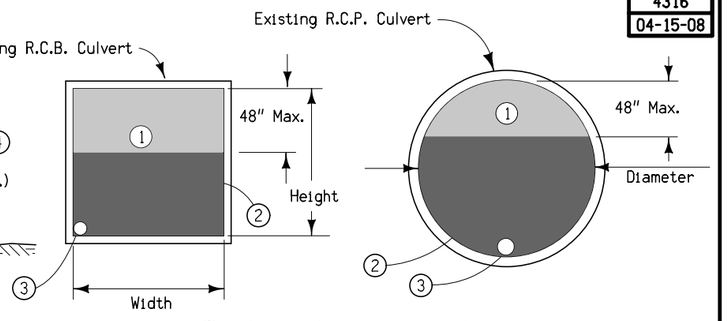
DETAILS OF CULVERT ABANDONMENT WITH FLOWABLE MORTAR (Rectangular structures less than 8′ in either height or width. Circular structures less than 10′ Dia.)

Required Injection Points ⑥





Section along culvert



Section thru culvert

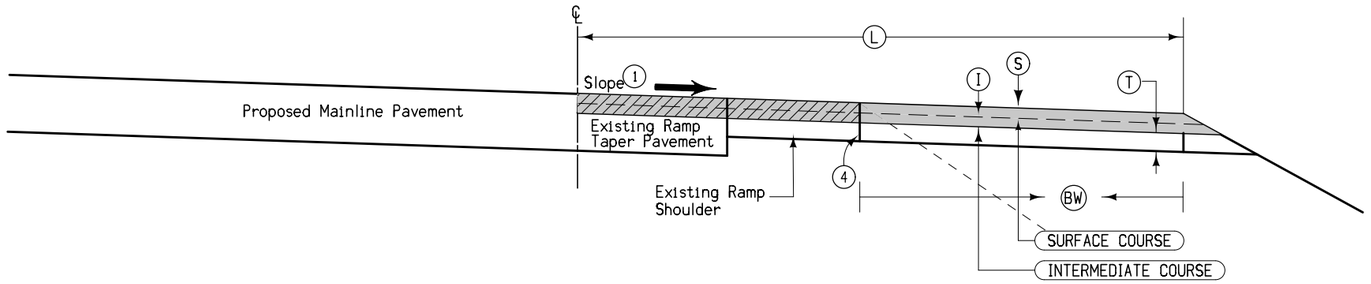
① Flowable Mortar, Minimum 2′ thick.
② Granular Backfill.
③ 4″ Subdrain at flowline elevation of culvert shall be extended into the culvert a distance of 2′ plus the height of the culvert. Subdrain and granular backfill are incidental to flowable mortar.
④ Ends of culvert shall be plugged sufficiently to retain flowable mortar. Temporary earth berms are incidental to flowable mortar.
⑤ Removal of headwalls may be required.
⑥ Outlet shall be filled first. See injection point detail for more information.
⑦ Culvert may be considered a permit-required confined space, per OSHA 29 CFR.

DETAILS OF CULVERT ABANDONMENT WITH FLOWABLE MORTAR (Rectangular structures at least 8′ in both height and width. Circular structures 10′ Dia. or larger)

2617
MODIFIED

Design Rates	
Item	Rate
Surface Course	145 lbs./cu. ft.
Intermediate Course	145 lbs./cu. ft.
Tack Coat	.05 gal./sq. yd

Milling



1. Finished slope shall match existing pavement except that the maximum allowable slope is 3.5%, minimum allowable slope is 2.5%. Section may be modified as directed by the engineer through areas of speacial shaping.

   Refer to Standard Road Plans PV-410 & PV-411 for additional requirements through superelevated curves on Ramp Tapers.

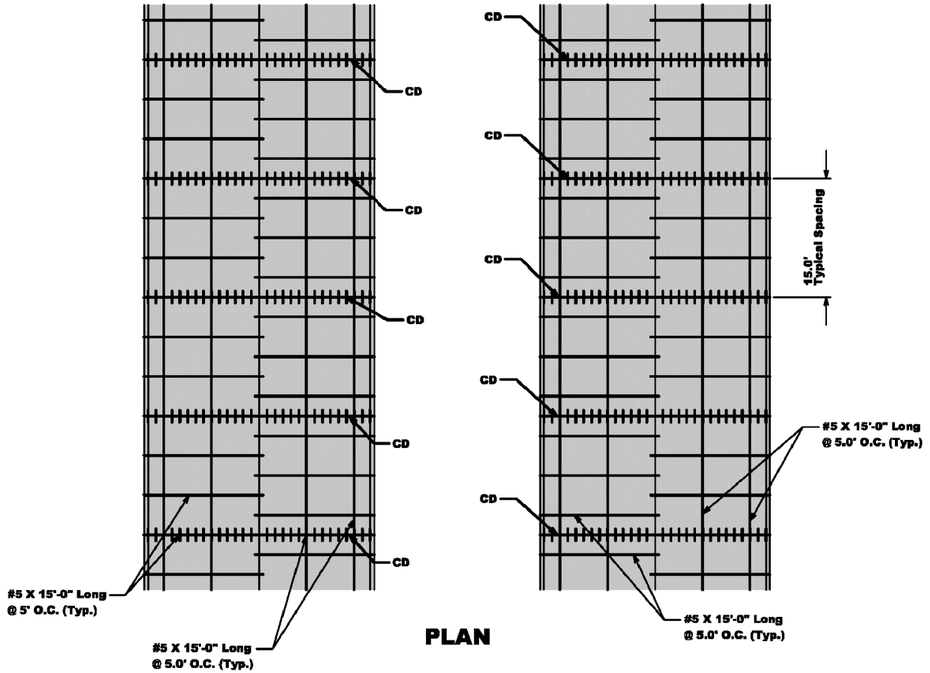
2. Base Widening quantities are not included with Resurfacing quantities, see Standard Road Plan RG-8.
3. Tack Coat estimated for 2 applications.
4. Provide a vertical edge. Incidental to Class 10 Excavation

Location			(S)	(I)	(L)	Resurfacing Quantities (2)					(T)	(BW)	Remarks
						Tack (3) Coat	Asphalt Binder	Hot Mix Asphalt (Tons)					
Road Identification	Station To Station		Inches	Inches	Feet	Gallons	Tons	Surface	Intermediate	Milling	Inches	Feet	
I-35	1438+23.58	1439+33.13	1.5	1.5	11-17.5	18	1.7	14	14	22	5	0	
I-35	1439+33.13	1443+04.55	1.5	1.5	23-48.8	148	14.4	120	120	250	5	0	
I-35	1468+64.93	1470+64.11	1.5	1.5	55-36.6	101	9.7	81	81	153	5	0	
I-35	1470+64.11	1474+20.00	1.5	1.5	36.6-30	129	12.3	102	102	122	5	0	
I-35	1474+20.00	1480+00.00	1.5	Varies	30-22	167	23.7	141	304	89	5	0	
I-35	1480+00.00	1490+10.00	1.5	Varies	22	250	32.5	214	327	243	5	0	
I-35	1490+10.00	1493+83.86	1.5	1.5	22	94	9.8	81	83	81	5	0	
I-35	1550+62.60	1552+05.00	1.5	1.5	12-5	14	1.3	11	11	12	5	7.5-0	HMA Shoulder Option

TYPICAL CROSS SECTION HMA RESURFACING WITH BASE WIDENING FOR RAMP TAPERS AT MILLS CIVIC PARKWAY

RP-1
MODIFIED

Cross Section

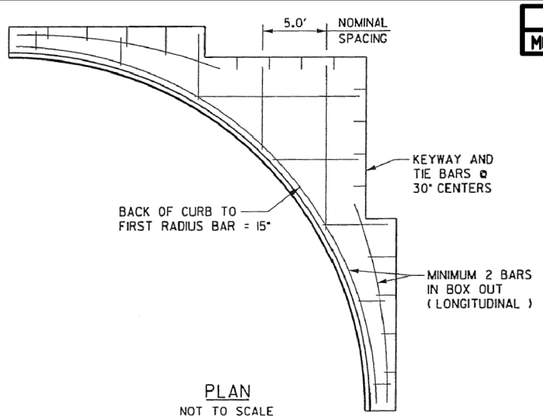


PLAN

REINFORCED PAVEMENT DETAIL

Note:
Pavement joint spacing and cross slopes vary.
See 'L' Sheets for intersection details and joint locations.

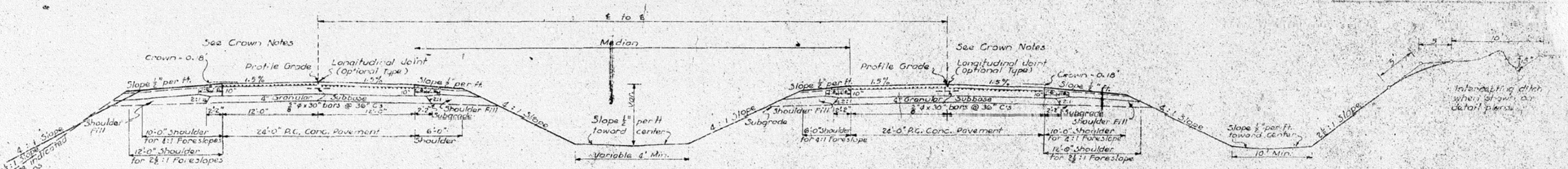
RP-2
MODIFIED



PLAN
NOT TO SCALE

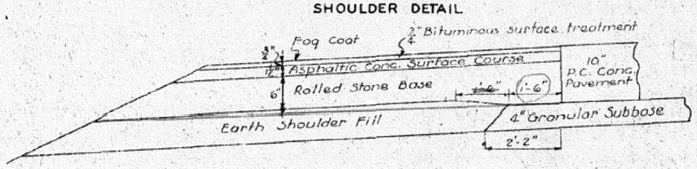
REINFORCED PAVEMENT DETAIL AT INTERSECTION RETURNS

TYPICAL CROSS SECTION



Crown Notes:
On full width construction a maximum parabolic crown in the center six feet will be permitted, with the peak of the crown located on ℄. The maximum deviation below profile grade elevation shall be ¼ inch.

SHOULDER DETAIL



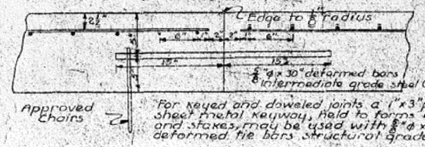
6-inch rolled stone base. Design weight 150 lbs. per cu. ft.
Prime foreslope on rolled stone base and adjacent 1-ft. of shoulder fill. Rate of application 0.30 gal. per sq. yd.
Prime rolled stone base, foreslope and adjacent 1-ft. of shoulder fill. Rate of application 0.20 gal. per sq. yd.
1½-inch type A asphaltic concrete surface course. Design weight 145 lbs. per cu. ft.
Binder bitumen. Rate of application - 0.3 gal. per sq. yd.
¾-inch cover aggregate. Rate of application - 30 lbs. per sq. yd.
*Fog Coat. Rate of application - 0.07 gal. per sq. yd.

JOINT DETAILS

(Other joint details may be submitted for approval.)

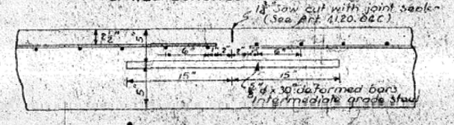
Note:
The contractor may use 12' pavement units with a doweled longitudinal joint, using 10"x 8" forms with keyway, or drilled for dowels, or 24' pav't units with a sawed longitudinal joint, doweled supported on chairs, and using 10"x 10" forms. See optional joints below.

DOWELED OR KEYED AND DOWELED LONGITUDINAL JOINT

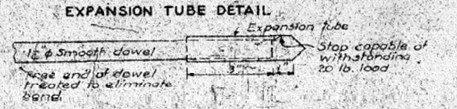


For keyed and doweled joints a 1"x 3" pressed sheet metal keyway, held to forms by clamps and stakes, may be used with ⅝ ø x 30" bent deformed tie bars structural grade steel.

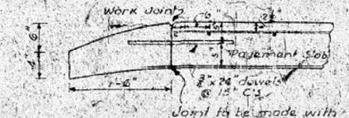
SAWED LONGITUDINAL JOINT



EXPANSION TUBE DETAIL



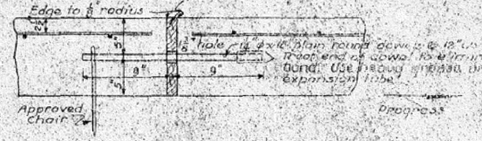
DETAILS OF CONCRETE HEADER



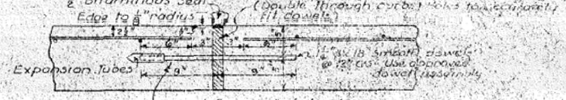
Joint to be made with wood header like days work joint.

DAYS WORK OR EMERGENCY JOINT

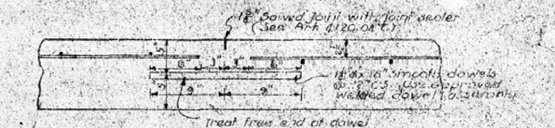
(Wood header shaped to pavement section) (To be removed for multiple lane construction)



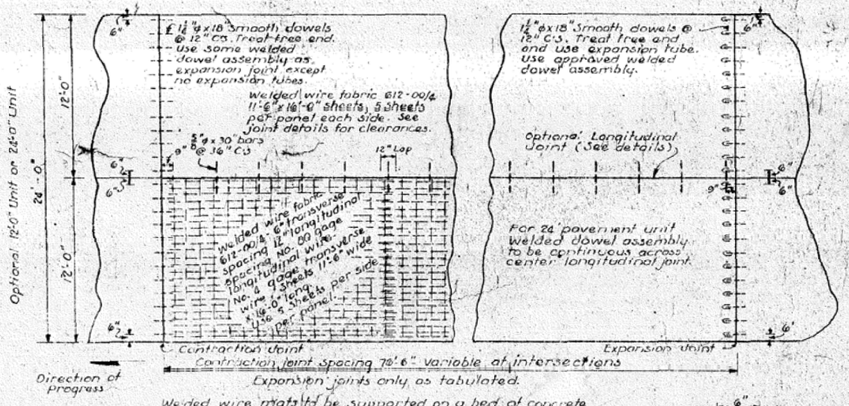
EXPANSION JOINT



CONTRACTION JOINT

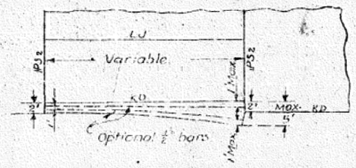


REINFORCING PLAN



Welded wire mat's to be supported on a bed of concrete struck off from the forms with a steel shod template and providing a minimum cover of 2½ inches of concrete. The use of mesh supporting sleds or devices which require dumping concrete through the mesh will not be permitted. Reinforcement shall be included in the unit price bid for concrete pavement.
Roadway slab may be poured one half width or full width at the contractors option, using corresponding optional joints and crowns.

DETAILS FOR WIRE MESH LAP



Contractor may at his option use 2-½" ø bars in place of wire mesh for box-out areas. 2-½" bars to be placed not more than 3" from top of pavement slab.

TYPICAL SECTION, PLAN AND JOINT DETAILS

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER B.11

1:25:53 PM 10/31/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365b01.sht

Polk County I-35 Northbound Lane Foreslope Slide North of Grand Avenue

From approximate Sta. 1416+75 to 1418+00, bench and rebuild the foreslope using Erosion Stone underlain by Engineering Fabric, as depicted in the typical below.

Length of the foreslope slide estimated at about 125 feet, with final length of repair to be determined at time of construction.

Excavated soil is to be wasted.

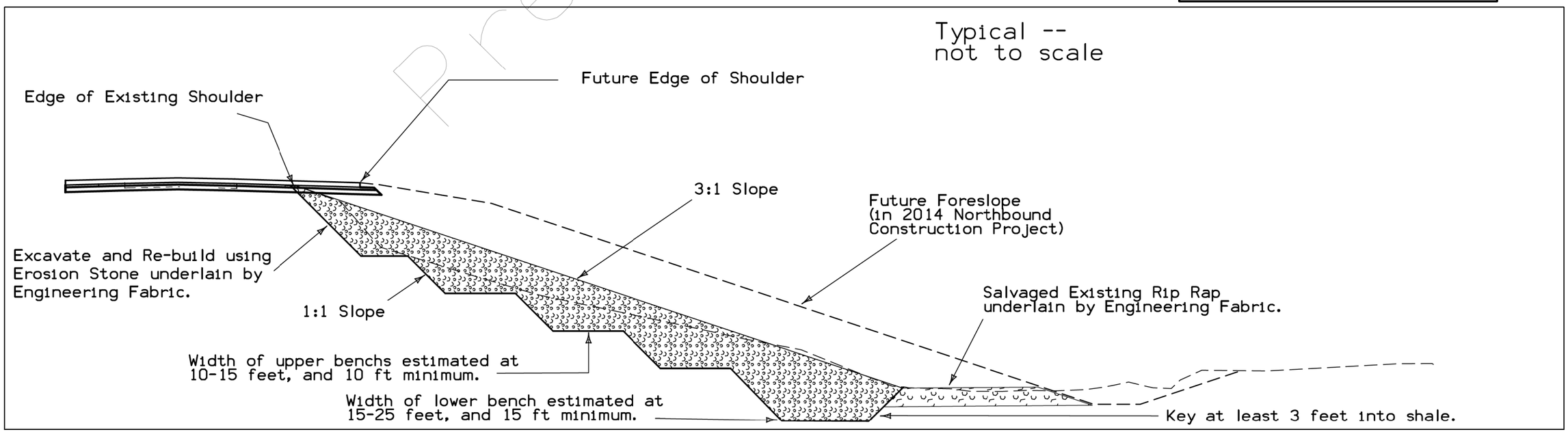
The foreslope shall be rebuilt to an approximate 3:1 slope and blended into the unaffected foreslope to the North and South.

The existing Rip Rap located in the slide area shall be completely removed to rebuild the foreslope, salvaged and re-used as indicated below.

Quantities	
Class 10 Excavation & Waste	4,305 CY
Erosion Stone	8,940Tons
Engineering Fabric	2,514 Sq Yd
Rip Rap	? Tons

FOR INFORMATION ONLY

This foreslope slide repair was constructed in the Fall of 2013. Proposed Class 10 fill in repair area will be placed over Erosion Stone and Rip Rap.



Preliminary

100-1D
10-18-05

PROJECT DESCRIPTION

This Project involves the reconstruction of the Northbound Lanes of Interstate 35 from the Raccoon River North to the West Mixmaster through the City of West Des Moines. The east half of the Grand Avenue interchange and Grand Avenue under I-35 will also be reconstructed as part of this project.

The City of West Des Moines will require a special use permit and approval of haul roads associated with any construction staging or temporary PCC plant sites, etc. associated with this project. No additional compensation for additional out of distance hauling of materials will be allowed as a result of said special use permit.

100-1C
04-17-12

ESTIMATED PROJECT QUANTITIES (UP TO A 5 DIVISION PROJECT)

Division 1: PARTICIPATING
Division 2: NON-PARTICIPATING
Division 3: NOT USED
Division 4: NOT USED
Division 5: NOT USED

Item No.	Item Code	Item	Unit	Quantities											
				Estimated						As Built					
				Division 1	Division 2	Division 3	Division 4	Division 5	Total	Division 1	Division 2	Division 3	Division 4	Division 5
1	2101-0850001	CLEARING AND GRUBBING	ACRE	0.87					0.87					
2	2102-0425071	SPECIAL BACKFILL	CY	55402					55402					
3	2104-2710020	EXCAVATION, CLASS 10, CHANNEL	CY	49598					49598					
4	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	345908					345908					
5	2102-2710080	EXCAVATION, CLASS 10, UNSUITABLE/UNSTABLE MATERIAL	CY	20791					20791					
6	2102-2712015	EXCAVATION, CLASS 12, BOULDER OR ROCK FRAGMENTS	CY	1352					1352					
7	2104-2712020	EXCAVATION, CLASS 12, CHANNEL	CY	200					200					
8	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	82340					82340					
9	2107-0875000	COMPACTION WITH MOISTURE AND DENSITY CONTROL	CY	8669					8669					
10	2107-0875100	COMPACTION WITH MOISTURE CONTROL	CY	166710					166710					
11	2111-8174100	GRANULAR SUBBASE	SY	103832					103832					
12	2113-0001100	SUBGRADE STABILZATION MATERIAL, POLYMER GRID	SY	137808					137808					
13	2115-0100000	MODIFIED SUBBASE	CY	25672					25672					
14	2123-7450000	SHOULDER CONSTRUCTION, EARTH	STA	202.28					202.28					
15	2123-7450020	SHOULDER FINISH, EARTH	STA	50.95					50.95					
16	2212-5070310	PATCHES, FULL DEPTH REPAIR	SY	133					133					
17	2214-5145150	PAVEMENT SCARIFICATION	SY	11073					11073					
18	2301-1003090	STANDARD OR SLIP-FORM PORTLAND CEMENT CONCRETE PAVEMENT, QM-C CLASS 3 DURABILITY, 9 IN.	SY	11222.7					11222.7					
19	2301-1004115	STANDARD OR SLIP-FORM PORTLAND CEMENT CONCRETE PAVEMENT, QM-C CLASS 3I DURABILITY, 11.5 IN.	SY	108439					108439					
20	2303-0042500	HOT MIX ASPHALT (3,000,000 ESAL) INTERMEDIATE COURSE, 1/2 IN. MIX	TON	1206					1206					
21	2303-0043502	HOT MIX ASPHALT (3,000,000 ESAL) SURFACE COURSE, 1/2 IN. MIX, FRICTION L-2	TON	764					764					
22	2303-0043503	HOT MIX ASPHALT (3,000,000 ESAL) SURFACE COURSE, 1/2 IN. MIX, FRICTION L-3	TON	164					164					
23	2303-0246422	ASPHALT BINDER, PG 64-22	TON	128					128					
24	2303-6911000	HOT MIX ASPHALT PAVEMENT SAMPLE	LS	1					1					
25	2304-0100000	DETOUR PAVEMENT	SY	1824					1824					
26	2312-8260051	GRANULAR SURFACE ON ROAD, CLASS A CRUSHED STONE	TON	200					200					
27	2401-6745650	REMOVAL OF EXISTING STRUCTURE	LS	1					1					
28	2402-0425031	GRANULAR BACKFILL	TON	3494					3494					
29	2402-0425040	FLOODED BACKFILL	CY	65					65					
30	2402-2720100	EXCAVATION, CLASS 20, ROADWAY PIPE CULVERT	CY	1871					1871					
31	2416-0100024	APRON, CONCRETE, 24 IN. DIA.	EACH	19					19					
32	2416-0100030	APRON, CONCRETE, 30 IN. DIA.	EACH	1					1					
33	2416-1180024	CULVERT, CONCRETE ROADWAY PIPE, 24 IN. DIA.	LF	414					414					
34	2416-1180030	CULVERT, CONCRETE ROADWAY PIPE, 30 IN. DIA.	LF	21					21					
35	2417-0225024	APRON, METAL, 24 IN. DIA.	EACH	8					8					
36	2417-1060024	CULVERT, METAL ROADWAY PIPE, 24 IN. DIA.	LF	408					408					
37	2435-0140200	MANHOLE, STORM SEWER, SW-402	EACH	2					2					
38	2435-0140300	MANHOLE, STORM SEWER, SW-403	EACH	1					1					
39	2435-0250100	INTAKE, SW-501	EACH	1					1					
40	2435-0250300	INTAKE, SW-503	EACH	9					9					
41	2435-0250304	INTAKE, SW-503, TOP ONLY	EACH	4					4					
42	2502-6745952	REMOVAL OF SUBDRAIN	LF	20984					20984					
43	2502-8212034	SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.	LF	25537					25537					
44	2502-8220193	SUBDRAIN OUTLET, RF-19C	EACH	19					19					
45	2502-8220196	SUBDRAIN OUTLET, RF-19E	EACH	88					88					
46	2502-8220196	SUBDRAIN OUTLET, RF-19F	EACH	4					4					
47	2503-0200036	REMOVE STORM SEWER PIPE LESS THAN OR EQUAL TO 36 IN.	LF	1041					1041					
48	2503-0114224	STORM SEWER GRAVITY-MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP) 2000D (CLASS III), 24 IN.	LF	1116					1116					
49	2504-0240036	REMOVAL OF SANITARY SEWER PIPE LESS THAN OR EQUAL TO 36 IN.	LF	150					150					
50	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL	LF	1115					1115					
51	2505-4008300	STEEL BEAM GUARDRAIL	LF	2275					2275					
52	2505-4008400	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION	EACH	5					5					
53	2505-4021010	STEEL BEAM GUARDRAIL END ANCHOR, BOLTED	EACH	5					5					
54	2505-4021020	STEEL BEAM GUARDRAIL END ANCHOR, W-BEAM	EACH	6					6					
55	2505-4021700	STEEL BEAM GUARDRAIL END TERMINAL	EACH	11					11					
56	2506-4984000	FLOWABLE MORTAR	CY	220					220					
57	2507-3250005	ENGINEERING FABRIC	SY	26455					26455					
58	2507-6800061	REVETMENT, CLASS E	TON	3820					3820					
59	2507-8029000	EROSION STONE	TON	5516					5516					

ESTIMATED PROJECT QUANTITIES
(UP TO A 5 DIVISION PROJECT)

Division 1: PARTICIPATING
Division 2: NON-PARTICIPATING
Division 3: NOT USED
Division 4: NOT USED
Division 5: NOT USED

Item No.	Item Code	Item	Unit	Quantities										
				Estimated						As Built				
				Division 1	Division 2	Division 3	Division 4	Division 5	Total	Division 1	Division 2	Division 3	Division 4	Division 5
60	2510-6745850	REMOVAL OF PAVEMENT	SY	136080					136080					
61	2510-6750600	REMOVAL OF INTAKE AND UTILITY ACCESS	EACH	1					1					
62	2511-0302500	RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE , 5 IN.	SY	2440					2440					
63	2511-0310100	SPECIAL COMPACTION OF SUBGRADE FOR RECREATIONAL TRAIL	STA	22.52					22.52					
64	2511-7526004	SIDEWALK, P.C. CONCRETE , 4 IN.	SY	1121					1121					
65	2511-7526006	SIDEWALK, P.C. CONCRETE , 6 IN.	SY	88					88					
66	2511-7528101	DETECTABLE WARNING	SF	134					134					
67	2512-1725256	CURB AND GUTTER, P.C. CONCRETE , 2.5'	LF	1149					1149					
68	2513-0001000	CONCRETE BARRIER, BA-100	LF	18976					18976					
69	2513-0001011	CONCRETE BARRIER, BA-101	EACH	18					18					
70	2513-0001020	CONCRETE BARRIER, BA-102	LF	859					859					
71	2518-6910000	SAFETY CLOSURE	EACH	11					11					
72	2520-3350010	FIELD LABORATORY	EACH	1					1					
73	2526-8285000	CONSTRUCTION SURVEY	LS	1					1					
74	2527-9263109	PAINTED PAVEMENT MARK, WATERBORNE OR SOLVENT-BASED	STA	1293.43					1293.43					
75	2527-9263131	WET RETROREFLECTIVE REMOVABLE TAPE MARK	STA	1551.23					1551.23					
76	2527-9263137	PAINTED SYMBOL AND LEGEND, WATERBORNE OR SOLVENT-BASED	EACH	27					27					
77	2527-9263180	PAVEMENT MARKINGS REMOVED	STA	543.59					543.59					
78	2527-9263190	SYMBOL AND LEGEND REMOVED	EACH	6					6					
79	2527-9263600	NONREFLECTIVE, PREFORMED REMOVABLE TAPE	STA	32.1					32.1					
80	2528-3800000	MODULAR GLARE SCREEN SYSTEM	LF	18363					18363					
81	2528-4983200	MONITOR WITH INCIDENT RESPONSE	CDAY						0					
82	2528-8400048	TEMPORARY BARRIER RAIL, CONCRETE	LF	63678					63678					
83	2528-8400157	TEMPORARY FLOODLIGHTING LUMINAIRE	EACH	7					7					
84	2528-8445110	TRAFFIC CONTROL	LS	1					1					
85	2528-8445113	FLAGGERS	EACH											
86	2528-9290004	CHANGEABLE MESSAGE SIGN, PORTABLE	CDAY											
87	2533-4980005	MOBILIZATION	LS	1					1					
88	2551-0000110	TEMPORARY CRASH CUSHION	EACH	8					8					
89	2599-9999005	BARRIER GATE, 39-FOOT	EACH		2				2					
90	2599-9999010	PROJECT MANAGEMENT	LS	1					1					
91	2599-9999020	POROUS BACKFILL	TONS	231					231					
92	2601-2633100	MOWING	ACRE	113.3					113.3					
93	2601-2634100	MULCHING	ACRE	42.8					42.8					
94	2601-2634105	MULCHING, BONDED FIBER MATRIX	ACRE	5					5					
95	2601-2638352	SLOPE PROTECTION, WOOD EXCELSIOR MAT	SQ	190					190					
96	2601-2642100	STABILIZE CROP - SEEDING AND FERTILIZING	ACRE	42.8					42.8					
97	2601-2642120	STABILIZE CROP - SEEDING AND FERTILIZING (URBAN)	ACRE	5					5					
98	2601-2643110	WATERING FOR SOD, SPECIAL DITCH CONTROL, OR SLOPE PROTECTION	MGAL	380					380					
99	2601-2643300	MOBILIZATION FOR WATERING	EACH	3					3					
100	2602-0000020	SILT FENCE	LF	24395					24395					
101	2602-0000030	SILT FENCE-DITCH CHECKS	LF	8180					8180					
102	2602-0000050	SILT BASIN	EACH	4					4					
103	2602-0000071	REMOVAL OF SILT FENCE OR SILT FENCE-DITCH CHECK	LF	32575					32575					
104	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE-DITCH CHECK	LF	3258					3258					
105	2602-0000309	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 9 IN. DIA.	LF	400					400					
106	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN.	LF	1000					1000					
107	2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN.	LF	1000					1000					
108	2602-0000350	REMOVAL OF PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE	LF	2400					2400					
109	2602-0010010	MOBILIZATION, EROSION CONTROL	EACH	1					1					
110	2602-0010020	MOBILIZATION, EMERGENCY EROSION CONTROL	EACH	1					1					
		Alternative AA - Option 1												
111	2102-0425071	SPECIAL BACKFILL	CY	1489					1489					
112	2122-5190007	PAVED SHOULDER, P.C. CONCRETE, 7 IN.	SY	3864					3864					
		Alternative AA - Option 2												
113	2102-0425071	SPECIAL BACKFILL	CY	1239					1239					
114	2122-5500080	PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 8 IN.	SY	3864					3864					

SEE V-SHEETS FOR CULVERT QUANTITIES

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
1	2101-0850001	**CLEARING AND GRUBBING**
		Refer to Sheet U.11.

		All Clearing and Grubbing will take place around I-35 and E.P. True Parkway underpass.
-	-	-
2	2102-0425071	**SPECIAL BACKFILL**
		Refer to I-35 Typical for locations.

		Refer to Tab 103-3 for Proposed Subgrade Treatment locations for areas needing extra Speacial Backfill.

		Existing HMA and PCC from pavement removal may be used on the project as special backfill.
-	-	-
3	2104-2710020	**EXCAVATION, CLASS 10, CHANNEL**
		Includes 49,598 cu. yds. of Class 10 to be wasted, as per Article 1106.07 of the current specifications.

		Refer to Sheets K.6 & K.7 for grading plan. Quantity includes channel excavation on north and south side
		of Grand Avenue.
-	-	-
4	2102-2710070	**EXCAVATION, CLASS 10, ROADWAY AND BORROW**
		Includes 345,908 cu. Yds. Of suitable material cut.

		Refer to "T" sheets.

		Refer to Sheet Q.5 for Ditch Grading.

		Overhaul will not be measured or paid for, but shall be considered incidental to roadway excavation on this
		project.

		Includes 129,142 cu. yds. Of Class 10 to be wasted, as per Article 1106.07 of the current specifications.
-	-	-
5	2102-2710080	**EXCAVATION, CLASS 10, UNSUITABLE/UNSTABLE MATERIAL**
		Includes a total of 20,791 CY of unsuitable material to be removed and replaced.

		Refer to Tab. 103-3.
-	-	-
6	2102-2712015	**EXCAVATION, CLASS 12, BOULDER OR ROCK FRAGMENTS**
		Refer to Tab 103-7 and Sheet Q.5.

		Dispose of excess material according to Article 1106.07 of the current specifications.
-	-	-
7	2104-2712020	**EXCAVATION, CLASS 12, CHANNEL**
		Estimated quantity of 200 CY at the outlet of RCB shown on plan sheet E.2. Quantity to be wasted, as per
		Article 1106.07 of the current specifications.
-	-	-
8	2105-8425015	**TOPSOIL, STRIP, SALVAGE AND SPREAD**
		The existing topsoil within the construction limits (cut and fill areas) shall be stripped, salvaged, and spread.
		Topsoil stockpile location shall be approved by the engineer.
		This item is for the topsoil that will be distrubed during grading.

		Refer to Tab. 103-4.

		Refer to Sheet Q.5 for Top Soil Placement of Ditch Grading.
-	-	-
9	2107-0875000	**COMPACTION WITH MOISTURE AND DENSITY CONTROL**
		Refer to Tab. 103-1.

		Cubic yards shown on the contract documents as determined by the template fill volume of the RSS between
		Sta. 1497+25 and Sta. 1509+25. Shrinkage will not be included in the moisture control quantity.
-	-	-
10	2107-0875100	**COMPACTION WITH MOISTURE CONTROL**
		Refer to Tab. 103-6.

		Cubic yards shown on the contract documents as determined by the template fill volume excluding the RSS area
		between Sta. 1497+25 and Sta. 1509+25. Shrinkage will not be included in the moisture control quantity.
-	-	-
11	2111-8174100	**GRANULAR SUBBASE**
		Refer to I-35 and Grand Ave. Typicals. Refer to Tab. 100-24.
-	-	-
12	2113-0001100	**SUBGRADE STABILZATION MATERIAL, POLYMER GRID**
		Refer to Typicals on Sheets B.1 to B.3, Tab. 103-3 and Details on sheets Q.3 & Q.4.
-	-	-
13	2115-0100000	**MODIFIED SUBBASE**
		Refer to Grand Ave.-Ramp Typicals. Refer to Tab. 100-24.
-	-	-
14	2123-7450000	**SHOULDER CONSTRUCTION, EARTH**
		Requires 11,787 cu. yds. of material. No payment for overhaul allowed for this material.
		At least 4" of topsoil will be placed in areas of earth shoulder finishing.

		Refer to I-35 and Ramps B & C Typicals for locations.
-	-	-
15	2123-7450020	**SHOULDER FINISH, EARTH**
		Requires 850 cu. yds. of material. No payment for overhaul allowed for this material.
		At least 4" of topsoil will be placed in areas of earth shoulder finishing.

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
		Refer to Grand Ave. Typicals for locations.
-	-	-
16	2212-5070310	**PATCHES, FULL DEPTH REPAIR**
		Refer to Tab 102-6A.

		Full Depth Patches will be to remove and locate partial sign footings located in the median of I35.
		Singing contractor and paving contractor will need to coordinate during construction.
-	-	-
17	2214-5145150	**PAVEMENT, SCARIFICATION**
		For areas of resurfacing on existing ramps and auxiliary lane at Mills Civic Parkway. Also includes
		resurfacing the pavement transition on the east and west end of Grand Avenue.
-	-	-
18	2301-1003090	**STANDARD OR SLIP-FORM PORTLAND CEMENT CONCRETE PAVEMENT, QM-C CLASS 3 DURABILITY, 9 IN.**
		Refer to Typicals for Grand Avenue. Pavement includes continuous reinforcing. Refer to Details on Sheet B.10.
		Note that Typical RP-1 and RP-2 apply to this pavement.
-	-	-
19	2301-1004115	**STANDARD OR SLIP-FORM PORTLAND CEMENT CONCRETE PAVEMENT, QM-C CLASS 3I DURABILITY, 11.5 IN.**
		Refer to Typicals for Interstate 35 and Grand Avenue Ramps.
-	-	-
20	2303-0042500	**HOT MIX ASPHALT (3,000,000 ESAL) INTERMEDIATE COURSE, 1/2 IN. MIX**
		For resurfacing ramp tapers and auxiliary lane at Mills Civic Parkway. Also includes resurfacing the pavement
		transition on the east and west end of Grand Avenue.
		HMA intermediate course thickness shall be 1 1/2 In. on Grand Avenue. Refer to Typical 2617 on sheet B.9 for
		Mills Civic Parkway Details.
-	-	-
21	2303-0043502	**HOT MIX ASPHALT (3,000,000 ESAL) SURFACE COURSE, 1/2 IN. MIX, FRICTION L-2**
		For resurfacing ramp tapers and auxiliary lane at Mills Civic Parkway. Refer to Typical 2617 on sheet B.9.
-	-	-
22	2303-0043503	**HOT MIX ASPHALT (3,000,000 ESAL) SURFACE COURSE, 1/2 IN. MIX, FRICTION L-3**
		For resurfacing the pavement transition on the east and west end of Grand Avenue. HMA surface course thickness
		shall be 1 1/2 In.
-	-	-
23	2303-0246422	**ASPHALT BINDER, PG 64-22**
		6% of HMA weight.
-	-	-
24	2304-6911000	**HOT MIX ASPHALT PAVEMENT SAMPLE**
		--
-	-	-
25	2304-0100000	**DETOUR PAVEMENT**
		Refer to Tab. 100-24 and Stage 1 Traffic Control sheets.
		Alternatives are 10.5" HMA (as per section 2304.02.B.2 of Standard Specifications) or 8" PCC
		(as per section 2304.02.A.1). Quantities are based on the PCC Alternative.
-	-	-
26	2312-8260051	**GRANULAR SURFACE ON ROAD, CLASS A CRUSHED STONE**
		For surfacing entrances off Grand Avenue and potential staging uses.
-	-	-
27	2401-6745650	**REMOVAL OF EXISTING STRUCTURE**
		Refer to Tab. 110-2 for locations & details.
-	-	-
28	2402-0425031	**GRANULAR BACKFILL**
		Refer to Details on Sheets Q.3 & Q.4.
-	-	-
29	2402-0425040	**FLOODED BACKFILL**
		Refer to Tab. 104-3. See Standard Road Plan RF-30A for details.
-	-	-
30	2402-2720100	**EXCAVATION, CLASS 20, ROADWAY PIPE CULVERT**
		Refer to Tab. 104-3.
-	-	-
31	2416-0100024	**APRON, CONCRETE, 24 IN. DIA.**
32	2416-0100030	**APRON, CONCRETE, 30 IN. DIA.**
33	2416-1180024	**CULVERT, CONCRETE ROADWAY PIPE, 24 IN. DIA.**
34	2416-1180030	**CULVERT, CONCRETE ROADWAY PIPE, 30 IN. DIA.**
35	2417-0225024	**APRON, METAL, 24 IN. DIA.**
36	2417-1060024	**CULVERT, METAL ROADWAY PIPE, 24 IN. DIA.**
		Refer to Tabs. 104-3 & 104-5B.
-	-	-
37	2435-0140200	**MANHOLE, STORM SEWER, SW-402**
38	2435-0140300	**MANHOLE, STORM SEWER, SW-403**
39	2435-0250100	**INTAKE, SW-501**
40	2435-0250300	**INTAKE, SW-503**
41	2435-0250304	**INTAKE, SW-503, TOP ONLY**
		Refer to Tab. 104-5B, and M Sheets for design information.
-	-	-
42	2502-6745952	**REMOVAL OF SUBDRAIN**
		Refer to Tab. 104-9 on sheet CS.3 existing subdrain lengths and locations.

		Method of Measurement:
		The length of subdrain removed will be measured to the nearest lineal foot.

		Basis of Payment:
		The contractor will be paid the contract unit price for each lineal foot of subdrain removed.
-	-	-
43	2502-8212034	**SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.**
		Refer to Tab. 104-9 & Tab. 104-9-RSS for locations and details.

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
-	-	-
44	2502-8220193	**SUBDRAIN OUTLET, RF-19C**
45	2502-8220196	**SUBDRAIN OUTLET, RF-19E**
		Refer to Tab. 104-9 for locations and details.
-	-	-
46	2502-8220196	**SUBDRAIN OUTLET, RF-19F**
		Refer to Tab. 104-9-RSS for locations and details.
-	-	-
47	2503-0200036	**REMOVE STORM SEWER PIPE LESS THAN OR EQUAL TO 36 IN.**
		Refer to Tab. 110-14.
-	-	-
48	2503-0114224	**STORM SEWER GRAVITY-MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP) 2000D (CLASS III), 24 IN.**
		Refer to Tab. 104-5B.
-	-	-
49	2504-0240036	**REMOVAL OF SANITARY SEWER PIPE LESS THAN OR EQUAL TO 36 IN.**
		Refer to Tab. 110-14.
-	-	-
50	2505-4008120	**REMOVAL OF STEEL BEAM GUARDRAIL**
		Refer to Tab. 110-7A.
-	-	-
51	2505-4008300	**STEEL BEAM GUARDRAIL**
52	2505-4008400	**STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION**
53	2505-4021010	**STEEL BEAM GUARDRAIL END ANCHOR, BOLTED**
54	2505-4021020	**STEEL BEAM GUARDRAIL END ANCHOR, W-BEAM**
55	2505-4021700	**STEEL BEAM GUARDRAIL END TERMINAL**
		Refer to Tabs. 108-8A & 108-8C.
-	-	-
56	2506-4984000	**FLOWABLE MORTAR**
		Refer to Tabs. 104-3 & 110-9.

		To fill and abandon culvert. Refer to Tab. 110-9 and Typicals 4315 & 4316.
		Silt inside existing culverts need not be removed prior to placing flowable mortar.
-	-	-
57	2507-3250005	**ENGINEERING FABRIC**
		Refer to Tab. 100-23 and Details on sheets Q.3, Q.4, & Q-5.

		Engineering fabric shall be material as specified for embankment erosion control, Article 4196.01A. Material shall be measured in sq. yds. of actual area covered. Refer to details. Bid Item includes 30% additional quantity for other locations of erosion.
-	-	-
58	2507-6800061	**REVETMENT, CLASS E**
59	2507-8029000	**EROSION STONE**
		Refer to Tab. 100-23 & Sheet Q.5 for Details.

		The tabulation includes estimated locations for placement of "Erosion Stone" to address erosion to be encountered during construction. Verify the specific location with the Engineer prior to beginning placement. Bid item includes 30% additional quantity for other locations of erosion.
-	-	-
60	2510-6745850	**REMOVAL OF PAVEMENT**
		Refer to Tabs. 102-5 & 110-1.
		All pavement removal on I-35, Ramps, and Grand Avenue includes removal of wire mesh.

		Quantity includes removal of Detour Pavement installed in Stage 1 of the Traffic Control Plan.

		Quantity includes removal of Temporary Pavement installed on Grand Ave during the previous years 364 Project.
-	-	-
61	2510-6750600	**REMOVAL OF INTAKE AND UTILITY ACCESS**
		Refer to Tab. 110-15.
-	-	-
62	2511-0302500	**RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 5 IN.**
		Refer to Tab. 113-1.
-	-	-
63	2511-0310100	**SPECIAL COMPACTION OF SUBGRADE FOR RECREATIONAL TRAIL**
		Refer to Typical 7402 on Sheet B.5.
-	-	-
64	2511-7526004	**SIDEWALK, P.C. CONCRETE, 4 IN.**
		Refer to Tab. 113-1.
		Sidewalk construction shall be in accordance with Section 2511 of the Standard Specifications.
-	-	-
65	2511-7526006	**SIDEWALK, P.C. CONCRETE, 6 IN.**
		Refer to Tab. 113-1.
		Sidewalk construction shall be in accordance with Section 2511 of the Standard Specifications.
		See Sheets S.1 to S.5 for locations and details. Includes curb ramps for 10 feet recreational trail.
-	-	-
66	2511-7528101	**DETECTABLE WARNING**
		Refer to Tab. 113-1.
		Detectable warnings shall be as specified in Section 2511 of the Standard Specifications.
-	-	-
67	2512-1725256	**CURB AND GUTTER, P.C. CONCRETE, 2.5'**
		Includes the south edge of Grand Avenue (eastbound) between Ramp A and Ramp B with station ranges between Sta. 3385+60.00 to Sta. 3394+17.00

		Includes the north edge of Grand Avenue (westbound) from Sta. 3397+50.00 to Sta. 3400+00.00.

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ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
		Includes the east edge of Ramp C as shown on Sheet K.11. All other curb is incidental to pcc pavemement construction.
-	-	-
68	2513-0001000	**CONCRETE BARRIER, BA-100**
		Refer to Tab. 108-18.
-	-	-
69	2513-0001011	**CONCRETE BARRIER, BA-101**
		Refer to Tab. 108-18.

		Item includes modified transition as shown on Sheet U.9. No additional payment will be made for modified transition. Crushed concrete and landscaping rock around bridge piers as shown on sheet U.05 is considered incidental to this item.
-	-	-
70	2513-0001020	**CONCRETE BARRIER, BA-102**
		Refer to Tab. 108-18.
-	-	-
71	2518-6910000	**SAFETY CLOSURE**
		Refer to tab. 108-13A.
-	-	-
72	2520-3350010	**FIELD LABORATORY**
		--
-	-	-
73	2526-8285000	**CONSTRUCTION SURVEY**
		Construction Survey shall be in accordance with Section 2526 of the current Specifications.
-	-	-
74	2527-9263109	**PAINTED PAVEMENT MARK, WATERBORNE OR SOLVENT-BASED**
75	2527-9263131	**WET RETROREFLECTIVE REMOVABLE TAPE MARK**
76	2527-9263137	**PAINTED SYMBOL AND LEGEND, WATERBORNE OR SOLVENT-BASED**
77	2527-9263180	**PAVEMENT MARKINGS REMOVED**
78	2527-9263190	**SYMBOL AND LEGEND REMOVED**
79	2527-9263600	**NONREFLECTIVE, PREFORMED REMOVABLE TAPE**
		Refer to Tabs. 108-22, 108-29, and Traffic Control and Staging Sheets for locations and details.
-	-	-
80	2528-3800000	**MODULAR GLARE SCREEN SYSTEM**
		Modular Glare Screen shall be installed on all TBR that separates northbound and southbound traffic for the entire length of project. Modular Glare Screen shall be in accordance with Section 2528.03.F of the current Specifications.
-	-	-
81	2528-4983200	**MONITOR WITH INCIDENT RESPONSE**
		Refer to Tab. 254-1.
-	-	-
82	2528-8400048	**TEMPORARY BARRIER RAIL, CONCRETE**
		Refer to J Sheets and Tab. 108-33.
		Contractor shall deliver 2000 LF of Temporary Barrier Rail to the IDOT Grimes Maintenance Shop after project completion. All costs associated with delivery of TBR to the maintenance shop will be included with this bid item. Temporary barrier rail is already on site from previous project. Contractor responsible for moving into place for staging and removing when complete.
-	-	-
83	2528-8400157	**TEMPORARY FLOODLIGHTING LUMINAIRE**
		Refer to Tab. 108-27.
-	-	-
84	2528-8445110	**TRAFFIC CONTROL**
		Refer to Traffic Control Plan.

		Contractor shall remove delineators on Grand Avenue and deliver them to the IDOT Grimes Maintenance Shop after project completion.
-	-	-
85	2528-8445113	**FLAGGERS**
		--
-	-	-
86	2528-9290004	**CHANGEABLE MESSAGE SIGN, PORTABLE**
		--
-	-	-
87	2533-4980005	**MOBILIZATION**
		--
-	-	-
88	2551-0000110	**TEMPORARY CRASH CUSHION**
		Refer to Tab. 108-30.
-	-	-
89	2599-9999005	**BARRIER GATE, 39-FOOT**
		Barrier gate system shall be ArmorGuard Steel Barrier Gate by the Lindsay Corporation. Gates shall be installed at gaps in temporary barrier rail at locations called out on the J sheets. Each gate installed shall be 39-feet, non-pneumatic assist gates. Gates shall be attached to temporary barrier rail and shall be installed while moving temporary barrier rail into position to ensure proper spacing. Each gate shall be installed in accordance with the manufacturer's recommendations.

		Gate will become the property of the Iowa DOT when project is complete. Contractor shall deliver gate to the Grimes Maintenance Shop at 2300 SE 17th Street, Grimes IA 50111 upon project completion.

		Method of Measurement:
		Each 39-foot gate provided and installed shall be measured separately for payment.

		Basis of Payment:
		Payment shall be for providing each 39-foot gate, providing all hardware and labor necessary to install the gate

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
		to the temporary barrier rail, and maintenance of the gate to ensure proper operation. Contractor shall
		periodically operate the gate at the request of the Engineer to ensure proper operation which is incidental to
		this item.

		Repairs that are necessary as a result of a vehicle collision shall be made by the contractor by extra work
		Order. Product information and details can be found at the web-site,
		http://www.barriersystemsinc.com/armorguard-gate.
-	-	-
90	**2599-9999010**	**PROJECT MANAGEMENT**
		Contractor shall provide a Project Manager as described in the Iowa DOT Speical Provisions SP-120039.

		Contractor shall collect and manage documents through the use of Doc Express as described in the Iowa DOT
		Developmental Specifications DS-12040.
-	-	-
91	**2599-9999020**	**POROUS BACKFILL**
		Refer to Detail on Sheet Q.4.
-	-	-
92	**2601-2633100**	**MOWING**
		Estimate based on one mowing of all DOT ROW on both Northbound and Southbound lanes. Areas inaccessible to
		field equipment shall be cut with appropriate hand equipment. Mowing shall take place in October 2014.
-	-	-
93	**2601-2634100**	**MULCHING**
		Mulching per Article 2601.03, E, 2. Anchor mulch into the soil using mulch anchoring equipment with a
		minimum of two passes.
-	-	-
94	**2601-2634105**	**MULCHING, BONDED FIBER MATRIX**
		A Bonded Fibre Matrix shall be applied as the mulch for all areas designated as "STABILIZING CROP - SEEDING
		AND FERTILIZING (URBAN)".

		The seed and fertilizer for the area to be covered shall be applied before the Bonded Fibre
		Matrix Hydraulic Mulch application.

		Application rate shall be a minimum of 3000 lbs per acre.
-	-	-
95	**2601-2638352**	**SLOPE PROTECTION, WOOD EXCELSIOR MAT**
		See Tab 100-22 for locations. Refer to Standard Road Plan EC-103.

		Wood excelsior mat will be required for this project as described in Article 4169.10, C, 1.

		Straw mat will not be accepted.

		Full seedbed preparation shall be required prior to seeding and fertilizing under the wood excelsior mat.

		Seed mix under the mat shall be as described in Table 2601.03-7. Seed shall be incidental to mat.

		No fertilzer will be required.
-	-	-
96	**2601-2642100**	**STABILIZE CROP - SEEDING AND FERTILIZING**
		Refer to Tab. 100-11.

		Included for all disturbed areas.

		All rural disturbed areas shall be seeded and fertilizer per Article 2601.03, C, 1.
-	-	-
97	**2601-2642120**	**STABILIZE CROP - SEEDING AND FERTILIZING (URBAN)**
		Refer to Tab. 100-11.

		Included for all urban areas.
		All areas shall be seeded and fertilizer per Article 2601.03, C, 2.

		Verify specific locations with the Engineer prior to seeding.
-	-	-
98	**2601-2643110**	**WATERING FOR SOD, SPECIAL DITCH CONTROL, OR SLOPE PROTECTION**
		Estimate based on four waterings of the Special Ditch Control and Slope Protection at a rate of
		50 gallons per square.

		The contractor shall water the required areas no later than the day following placement of the Special Ditch
		Control or Slope Protection. If the Contractor fails to water by the second day following placement,a
		price adjustment will be assessed at a rate of $200.00 per calendar day until the watering has been completed.

		Additional waterings will be required at intervals of 5 to 8 calendar days. Perform all waterings unless
		notified by the Engineer in writing at least 1 calendar day prior to the day the watering is to occur. If the
		Contractor fails to complete the watering before the 8th calendar day has elapsed a price adjustment will be
		assessed at a rate of $200.00 per calendar day, beginning on the 9th day, until the watering is completed.
-	-	-
99	**2601-2643300**	**MOBILIZATION FOR WATERING**
		--
-	-	-
100	**2602-0000020**	**SILT FENCE**
		Refer to Tab. 100-17.
		The tabulation includes estimated locations for placement of "Silt Fence" to address erosion to be encountered
		during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item
		includes 25% additional quantity for field adjustments and replacements.
-	-	-

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ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
101	**2602-0000030**	**SILT FENCE-DITCH CHECKS**
		Refer to Tab. 100-18.
		The tabulation includes estimated locations for placement of "Silt Fence for Ditch Checks" to address erosion
		to be encountered during construction. Verify the specific locations with the Engineer prior to beginning
		placement. Bid item includes 50% additional quantity for field adjustments and replacements.
-	-	-
102	**2602-0000050**	**SILT BASIN**
		Refer to Tab. 100-14.
		The tabulation includes estimated locations for placement of "Silt Basin" to address erosion
		to be encountered during construction. Verify the specific locations with the Engineer prior to beginning
		placement. Bid item includes 100% additional quantity for field adjustments and maintenance.
-	-	-
103	**2602-0000071**	**REMOVAL OF SILT FENCE OR SILT FENCE-DITCH CHECK**
		Includes complete removal of "silt fence" and "silt fence for ditch checks" after project completion.
-	-	-
104	**2602-0000101**	**MAINTENANCE OF SILT FENCE OR SILT FENCE-DITCH CHECK**
		This item is included for clean-out and repair of the silt fence and silt fence for ditch checks during the
		grading project. Includes 10% of total silt fence installed.
-	-	-
105	**2602-0000309**	**PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 9 IN.**
106	**2602-0000312**	**PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN.**
107	**2602-0000320**	**PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN.**
		Refer to Standard Road Plan EC-204.

		Perimeter and Slope Sediment Control Devices will be required to be constructed out of wood excelsior.

		Item is included for temporary perimeter sediment control, inlet protection, and water velocity reduction on
		slopes or ditches at locations to be determined during construction. Verify specific locations with the
		Engineer prior to beginning placement.
-	-	-
108	**2602-0000350**	**REMOVAL OF PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE**
		Included for removal of perimeter and sediment control devices. All material shall become the property of
		the contractor.
-	-	-
109	**2602-0010010**	**MOBILIZATION, EROSION CONTROL**
		--
-	-	-
110	**2602-0010020**	**MOBILIZATION, EMERGENCY EROSION CONTROL**
		--
-	-	-
		Alternative AA - Option 1
-	-	-
111	**2102-0425071**	**SPECIAL BACKFILL**
		Refer to Tab. 112-9.

		Refer to Ramp Typical.

		Existing HMA and PCC from Pavement removal may be usesd on the project
		as special backfill.
-	-	-
112	**2122-5190007**	**PAVED SHOULDER, P.C. CONCRETE, 7"**
		Refer to Tab. 112-9 and ramp Typical.
-	-	-
		Alternative AA - Option 2
-	-	-
113	**2102-0425071**	**SPECIAL BACKFILL**
		Refer to Tab. 112-9.

		Refer to Ramp Typical.

		Existing HMA and PCC from Pavement removal may be usesd on the project
		as special backfill.
-	-	-
114	**2122-5500080**	**PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 8 IN.**
		Refer to Tab. 112-9 and ramp Typical.
-	-	-

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STANDARD ROAD PLANS

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

BA-100	04-20-10	44" Concrete Median Barrier (Full Section)
BA-101	04-20-10	44" Concrete Median Barrier Width Transition
BA-102	04-19-11	44" Concrete Barrier (Half Section)
BA-200	10-18-11	Steel Beam Guardrail Components
BA-202	10-18-11	Steel Beam Guardrail Bolted End Anchor
BA-203	10-18-11	Steel Beam Guardrail W-Beam End Anchor
BA-205	10-18-11	Steel Beam Guardrail End Terminal
BA-401	04-16-13	Temporary Barrier Rail (Precast Concrete)
BA-500	04-20-10	Temporary Crash Cushions Sand Barrel
EC-103	4-20-10	Wood Excelsior Mat for Slope Protection
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PM-120	10-16-12	Stop Lines and Islands
PM-310	04-16-13	Entrance and Exit Ramps
PM-561	04-19-11	Divided Multi-Lane Roadway with Right Turn Lanes
PM-562	04-19-11	Divided Multi-Lane Roadway with Left Turn Lanes
PM-760	04-19-11	Divided Multi-Lane Roadway Median
PV-101	04-17-12	Joints
PV-102	04-16-13	PCC Curb Details
PV-202	04-16-13	Hot Mix Asphalt Resurfacing
PV-303	04-19-11	Superelevation Details Ramps
PV-305	04-17-12	Superelevation Details Six Lane Roadway Closed Median
RF-2	10-18-11	Construction of Type "C" Concrete Adaptors for Pipe Culvert Connections
RF-3	10-18-11	Concrete Aprons
RF-5	04-16-13	Metal Pipe Aprons and Beveled Ends
RF-14	04-16-13	Connected Pipe Joints
RF-19A	10-16-12	Subdrains for Fill or Foundation Drainage
RF-19C	10-16-12	Subdrains (Longitudinal)
RF-19E	10-16-12	Outlets for Longitudinal, Transverse and Backslope Subdrains
RF-19F	10-16-12	Subdrain Outlets (Standard Subdrain, Pressure Release and Special)
RF-26	10-16-12	Pipe Apron Guard
RF-30A	10-19-10	Culvert (Bedding and Backfill)
RF-30B	10-19-10	Pipe Culvert (Cover and Camber)
RF-30C	04-16-13	Pipe Culvert (Installation Details)
RF-31	03-28-95	Depth of Cover Tables for Concrete Pipe
RF-32	10-19-10	Depth of Cover Tables for Corrugated Pipe
RM-48	10-16-12	Temporary Floodlighting
RR-4	04-19-11	Full Dpeth PCC Patch With Dowels
SI-881	10-16-12	Special Signs for Workzones
SW-101	04-21-09	Trench Bedding and Backfill Zones
SW-102	04-21-09	Rigid Gravity Pipe Trench Bedding
SW-402	04-21-09	Rectangular Storm Sewer Manhole
SW-403	04-21-09	Deep Well Rectangular Storm Sewer Manhole
SW-503	10-16-12	Single Grate Intake with Manhole
SW-505	10-16-12	Double Grate Intake
SW-602	10-20-09	Castings for Storm Sewer Manholes
SW-603	04-16-13	Castings for Grate Intakes
TC-1	04-16-13	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-402	04-16-13	Shoulder Closure (Multi-Lane)
TC-417	04-16-13	Ramp Closure
TC-418	10-15-13	Lane Closure on Divided Highway
TC-420	04-17-12	Lane Closure at Ramps
TC-422	10-16-12	Closure of Two Adjacent Lanes on Divided Highway
TC-433	04-16-13	Pavement Marking Operations
TC-451	04-16-13	Temporary Road Closure on Divided Highway
TC-601	10-18-11	Pedestrian Detour

POLLUTION PREVENTION PLAN

This Base Pollution Prevention Plan (PPP) includes information on Roles and Responsibilities, Project Site Description, Controls, Maintenance Procedures, Inspection Requirements, Non-Storm Water Controls, Potential Sources of Off Right-of-Way Pollution, and Definitions. This plan references other documents rather than repeating the information contained in the documents. A copy of this Base Pollution Prevention Plan, amended as needed per plan revisions or by contract modification, will be readily available for review.

All contractors shall conduct their operations in a manner that controls pollutants, minimizes erosion, and prevents sediments from entering waters of the state and leaving the highway right-of-way. The prime contractor shall be responsible for compliance and

implementation of the PPP for their entire contract. This responsibility shall be further shared with subcontractors whose work is a source of potential pollution as defined in this PPP.

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

II. PROJECT SITE DESCRIPTION
- A. This Pollution Prevention Plan (PPP) is for the construction of the northbound lanes of a 6 lane divided Interstate Roadway.
- B. This PPP covers approximately 108.9 acres with an estimated 57.5 acres being disturbed. The portion of the PPP covered by this contract has 57.5 acres disturbed.
- C. The PPP is located in an area of 1 soil association (Clarion-Nicollete-Webster). The estimated average SCS runoff curve number for this PPP after completion will be 68.
- D. Storm Water Site Map - Multiple sources of information comprise the base storm water site map including:
  1. Drainage patterns – Plan and Profile sheets and Situation plans.
  2. Proposed Slopes – Cross Sections.
  3. Areas of Soil Disturbance – construction limits shown on Plan and Profile sheets.
  4. Location of Structural Controls – Tabulations on C sheets.
  5. Locations of Non-structural Controls – Tabulations on C sheets.
  6. Locations of Stabilization Practices – generally within construction limits shown on Plan and Profile sheets.
  7. Surface Waters (including wetlands) – Plan and Profile sheets.
  8. Locations where storm water is discharged – Plan and Profile sheets.
- E. The base site map is amended by contract modifications and progress payments of completed erosion control work.
- F. Runoff from this work will flow into the Raccoon River.

III. CONTROLS
- A. The contractor's work plan and sequence of operations specified in Article 2602.03 for accomplishment of storm water controls should clearly describe the intended sequence of major activities and for each activity define the control measure and the timing during the construction process that the measure will be implemented.
- B. Preserve vegetation in areas not needed for construction.
- C. Section 2601 and 2602 of the Standard Specifications define requirements to implement erosion and sediment control measures. Actual quantities used may vary from the Base PPP and amendment of the plan will be documented via fieldbook entries or by contract modification. Additional erosion and sediment control items may be required as determined by the inspector and/or contractor during storm water monitoring inspections. If the work involved is not applicable to any contract items, the work will be paid for according to Article 1109.03 paragraph B.
  1. EROSION AND SEDIMENT CONTROLS
     - a. Stabilization Practices
       1) Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized.
       2) Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased.
       3) Temporary stabilizing seeding shall be completed as the disturbed areas are constructed. If construction activity is not planned to occur in a disturbed area for at least 21 days, the area shall be stabilized by temporary seeding or mulching within 14 days. Other stabilizing methods shall be used outside the seeding time period.
       4) Stabilization measures to be used for this project are located in the Estimated Project Quantities (100-1A) and Estimate Reference Information (100-4A) located on the C sheets of the plan. Additional items may be found in the Inspector's Daily Reports (IDR) or Contract Modifications.
     - b. Structural Practices
       1) Structural practices will be implemented to divert flows from exposed soils and detain or otherwise limit runoff and the discharge of pollutants from exposed areas of the site.
       2) Structural items to be used for this project are located in the Estimated Project Quantities (100-1A) and Estimate Reference Information (100-4A) located on the C sheets of the plan, as well as all other item specific Tabulations. Typical drawings detailing construction of the devices to be used on this project can be found on the B sheets of the plan or are referenced in the Standard Road Plans Tabulation.
     - c. Storm Water Management
       1) Measures shall be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.
  2. OTHER CONTROLS
     - a. Contractor disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive laws, rules or regulations shall apply.
       1) Vehicle Entrances and Exits - Construct and maintain entrances and exits to prevent tracking of sediments onto roadways.
       2) Material Delivery, Storage and Use - Implement practices to prevent discharge of construction materials during delivery, storage, and use.
       3) Stockpile Management - Install controls to reduce or eliminate pollution of storm water from stockpiles of soil and paving.
       4) Waste Disposal - Do not discharge any materials, including building materials, into waters of the state, except as authorized by a Section 404 permit.
       5) Spill Prevention and Control - Implement procedures to contain and clean-up spills and prevent material discharges to the storm drain system and waters of the state.
       6) Concrete Residuals and Washout Wastes - Designate temporary concrete washout facilities for rinsing out concrete trucks. Provide directions to truck drivers where designated washout facilities are located.
       7) Vehicle and Equipment Cleaning - Employ washing practices that prevent contamination of surface and ground water from wash water.
       8) Vehicle and Equipment Fueling and Maintenance - Perform on site fueling and maintenance in accordance with all environment laws such as proper storage of onside fuels and proper disposal of used engine oil or other fluids on site.
       9) Litter Management - Ensure employees properly dispose of litter.
  3. APPROVED STATE OR LOCAL PLANS
     During the course of this construction, it is possible that situations will arise where unknown materials will be encountered. When such situations are encountered, they will be handled according to all federal, state, and local regulations in effect at the time.

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

V. INSPECTION REQUIREMENTS
- A. Inspections shall be made jointly by the contractor and the contracting authority at least once every seven calendar days. Storm water monitoring inspections will include:
  1. Date of the inspection.
  2. Summary of the scope of the inspection.
  3. Name and qualifications of the personnel making the inspection.
  4. Rainfall amount.
  5. Review erosion and sediment control measures within disturbed areas for the effectiveness in preventing impacts to receiving waters.
  6. Major observations related to the implementation of the PPP.
  7. Identify corrective actions required to maintain or modify erosion and sediment control measures.
- B. Include storm water monitoring inspection reports in the Amended PPP. Incorporate any additional erosion and sediment control measures determined as a result of the inspection. Immediately begin corrective actions on all deficiencies found and complete all actions within 3 calendar days of the inspection.

VI. NON-STORM WATER DISCHARGES
This includes subsurface drains (i.e. longitudinal and standard subdrains) and slope drains. The velocity of the discharge from these features may be controlled by the use of patio blocks, Class A stone, erosion stone or other appropriate materials.

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

VIII. DEFINITIONS
- A. Base PPP - Initial Pollution Prevention Plan.
- B. Amended PPP - May include Plan Revisions or Contract Modifications for new items and fieldbook entries made by the inspector.
- C. IDR - Inspector's Daily Report – this contains the inspector's daily diary and item postings.
- D. Controls - Methods, practices, or measures to minimize or prevent erosion, control sedimentation, control storm water, or minimize contaminants from other types of waste or materials.
- E. Signature Authority - Representative from Designer, Contractor/Subcontractor, or RCE/Inspector authorized to sign various storm water documents.

213-2
10-18-11

BORROW
(REMOVAL AND REPLACEMENT)

Regarding removal and replacement of topsoil in borrow areas:

Quantities estimated for topsoil are calculated on the basis of a uniform removal of topsoil to a depth of 12 inches. Upon completion of excavation work, uniformly spread the removed topsoil over the borrow area to a minimum depth of 8 inches.

232-9
10-18-11

INDIANA BAT

Cut down all trees included in Clearing and Grubbing after September 15 and before April 15. These trees may be inhabited by the Indiana Bat (Myotis sodalist), a State and Federal listed endangered species. Removing a tree between April 15 and September 15 being used by an Indiana Bat constitutes a "taking" of a protected species, which is punishable by law.

254-1
10-02-01

INCIDENT MANAGEMENT

An incident management plan, provided by the District Office, will be discussed at the pre-construction conference.

262-5
10-18-05

UTILITIES
(POINT 25 PROJECT)

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

281-1
10-18-11

SECTION 404 PERMIT AND CONDITIONS

Construct this project according to the requirements of U.S. Army Corps of Engineers Individual, Permit No. 2011-1579. A copy of this permit is available from the Iowa DOT Office of Contracts upon request. The U.S. Army Corps of Engineers reserves the right to visit the site without prior notice.

223-8
10-18-11

WIDENING AND RESURFACING
(BASE WIDENING)

The base widening on the project has been designed to accommodate the HMA option. If the PCC option is used, "on-the-site" grading and adjustment may be required as approved by the Engineer. The Contractor is responsible for providing additional suitable Class 10 borrow made necessary by the use of this option.

214-1
10-18-11

SUBGRADE

Trim the roadbed to within 0.05 feet of the final subgrade elevation. Place trimmed material in a windrow on either foreslope for use in earth shoulder fill after paving. Do not allow stored materials to pond water. Include trimming of material in excavation required for Earth Shoulder Construction. Granular surfacing material, if placed over the winter, is included in the trimmed volume.

100-23
10-19-10

* Design shown for mandatory locations is the minimum allowed.

ROCK DITCH CHECKS/DITCHES/FLUMES/SPLASH BASINS/SLOPE PROTECTION

Refer to Typicals 4401, 4402, 4403, 4404, and 4405

Location				Type								Material			
Road Identification	Station	Side	Mandatory* Location (yes or no)	Rock Ditch Check	Rock Ditch	Rock Flume	Rock Splash Basin	Rock Slope Protection		L	W	Erosion Stone	Class E Revetment	Eng. Fabric	Remarks
		Lt./Rt.								FT	FT	TON	TON	SY	
I-35															
	1366+52.00	Rt.	Yes				X			10.0	10.0	12.2		15.6	
	1382+50.00	Rt.	Yes				X			8.5	10.0	10.4		13.2	
	1384+35.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1386+45.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1392+40.00	Rt.	Yes				X			10.5	10.0	12.8		16.3	
	1393+25.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1395+25.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1397+25.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1399+25.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1405+39.00	Rt.	Yes				X			10.0	10.0	12.0		20.0	
	1409+00.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1411+00.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1413+00.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1416+00.00	Rt.	Yes			X				169.4	10.0		203.2	263.5	
	1418+75.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1420+25.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1421+75.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1423+25.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1424+75.00	Rt.	Yes				X			11.6	10.0	14.2		18.0	
	1426+25.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1428+00.00	Rt.	Yes				X			9.0	10.0	11.0		14.0	CITY PIPE
	1429+00.00	Rt.	Yes				X			11.6	10.0	14.2		18.0	
	1476+00.00	Rt.	Yes				X			11.6	10.0	14.2		18.0	
	1482+00.00	Rt.	Yes				X			11.6	10.0	14.2		18.0	
	1484+75.00	Rt.	Yes				X			11.6	10.0	14.2		18.0	
	1493+50.00	Rt.	Yes				X			11.6	10.0	14.2		18.0	
	1495+00.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1496+00.00	Rt.	Yes				X			11.6	10.0	14.2		18.0	
	1498+00.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1505+00.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1517+50.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1520+00.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1522+00.00	Rt.	Yes				X			11.6	10.0	14.2		18.0	
	1525+00.00	Rt.	No	X						4.0	10.0	10.0		8.0	
	1547+00.00	Rt.	Yes				X			11.6	10.0	14.2		18.0	
	1550+00.00	Rt.	Yes				X			11.6	10.0	14.2		18.0	
RAMP B															
	2375+77.00	Rt.	Yes				X			11.6	10.0	14.2		18.0	
RAMP C															
	3390+50.00	Rt.	Yes			X				50.0	10.0		60.0	82.2	Flow in Channel
GRAND AVE															
	3378+50.00	Lt.	Yes			X				55.0	10.0		66.0	90.0	Flow to RCB
	3381+00.00	Lt.	Yes				X			6.0	10.0	8.4		15.6	
	3383+52.00	Lt.	Yes				X			6.0	10.0	8.4		15.6	
	3385+95.00	Lt.	Yes				X			6.0	10.0	8.4		15.6	
	3391+08.00	Rt.	Yes				X			6.0	10.0	8.4		15.6	
	3393+00.00	Rt.	Yes				X			6.0	10.0	8.4		15.6	
	3393+35.00	Rt.	Yes				X			6.0	10.0	8.4		15.6	
	3395+10.00	Lt.	Yes				X			6.0	10.0	8.4		15.6	
	3397+20.00	Lt.	Yes				X			6.0	10.0	8.4		15.6	
	3396+20.00	Lt.	Yes			X				75.0	10.0		90.0		Flow to RCB
CHANNEL															
			Yes		X		X	X					1807.0	1627.0	Refer to Sheets
															MIT.1-4
	NOTE: REFER TO SHEET MIT.1 FOR ROCK CHECKS IN PROPOSED CHANNEL										TOTALS:	481.8	2226.2	2624.6	
											+30%	144.5	667.9	787.4	
											TOTALS:	626.3	2894.1	3412.0	

BUCKEYE PIPELINE

There is a 6-in. petroleum pipeline owned by Buckeye Pipeline crossing I-35 at Sta. 1406+25 (refer to sheet D.03 for location). The depth on the east side of I-35 is approximately 2.5 ft. under the pavement bottom.

No vibratory compaction with the exception of walk behind units will be allowed for 10-feet on either side of the pipeline. Fill heights during construction of less than 48 in. will require equipment load calculations. Contractor shall be required to submit types of equipment to Buckeye Pipeline for load calculations when fill heights are less than 48 in. Contractor shall be required to coordinate all work around the pipeline with staff from Buckeye Pipeline. Cost of coordination shall be considered incidental to Mobilization.

A Buckeye representative must be on site during all work around the pipeline. Hand digging may be required at their discretion.

Refer to sheet D.03 for location, cross section at Sta. 1406+25 for depth information, and sheet U.10 for culvert construction details under the pipeline. Contact information is located on sheet D.01.

100-17
04-20-10

TABULATION OF SILT FENCES

Refer to EC-201

Location			Length	Remarks
Begin Station	End Station	Side	LF	
1363+00.00	1375+00.00	RT	1320.0	I-35
1381+91.00	1388+67.00	RT	756.0	I-35
1391+11.00	1396+50.00	RT	599.0	I-35
1399+50.00	1401+50.00	RT	220.0	I-35
1406+50.00	1412+25.00	RT	635.0	I-35
1412+25.00	1413+25.00	RT	120.0	I-35
1416+50.00	1416+75.00	RT	45.0	I-35
1416+75.00	1421+50.00	RT	535.0	I-35
1421+50.00	1424+25.00	RT	315.0	I-35
1424+25.00	1426+00.00	RT	195.0	I-35
1432+00.00	1437+00.00	RT	560.0	I-35
1468+75.00	1471+25.00	RT	290.0	I-35
1471+25.00	1485+00.00	RT	1515.0	I-36
1486+00.00	1486+25.00	RT	45.0	I-35
1486+25.00	1492+00.00	RT	635.0	I-35
1493+00.00	1510+00.00	RT	1880.0	I-35
1506+00.00	1509+50.00	RT	390.0	I-35
1515+66.00	1520+00.00	RT	494.0	I-35
1522+75.00	1547+25.00	RT	2710.0	I-35
1549+00.00	1552+00.00	RT	340.0	I-35
2375+00.00	2379+67.00	RT	527.0	RAMP B
2375+00.00	2379+67.00	RT	527.0	RAMP B
2380+50.00	2384+86.00	RT	496.0	RAMP B
2380+50.00	2388+73.00	RT	923.0	RAMP B
2381+00.00	2389+39.00	LT	939.0	RAMP B
3390+00.00	3392+00.00	RT	220.0	RAMP C
3401+50.00	3405+00.00	RT	390.0	RAMP C
1+00.00	2+00.00	RT	120.0	CHANNEL
1+00.00	5+00.00	LT	440.0	CHANNEL
8+25.00	12+75.00	RT	510.0	CHANNEL
8+25.00	12+75.00	LT	510.0	CHANNEL
8+25.00	11+00.00	LT	315.0	CHANNEL
	Subtotal:		19516.0	
	+25% =		4879.0	
	Total:		24395.0	

100-14
04-20-10

TABULATION OF SILT BASINS

Refer to RL-9

Location Station	Side	Remarks
2381+21.00	Right	Before water leaves site
1417+46.00	Right	before water leaves site
Sub Total	2	
+100%	2	
Total	4	

100-18
04-20-10

TABULATION OF SILT FENCES FOR DITCH CHECKS

Refer to EC-201

Location Station	Side	Length	Remarks
		LF	
I-35			
1383+00.00	RT	109.0	
1383+75.00	RT	165.0	
1384+50.00	RT	220.0	
1385+25.00	RT	264.0	
1386+00.00	RT	297.0	
1386+75.00	RT	319.0	
1387+50.00	RT	342.0	
1392+00.00	RT	22.0	
1392+75.00	RT	22.0	
1393+50.00	RT	22.0	
1394+25.00	RT	22.0	
1395+00.00	RT	22.0	
1395+75.00	RT	22.0	
1396+50.00	RT	22.0	
1397+25.00	RT	140.0	
1398+00.00	RT	115.0	
1398+75.00	RT	100.0	
1399+50.00	RT	72.0	
1400+25.00	RT	45.0	
1401+00.00	RT	25.0	
1401+75.00	RT	22.0	
1402+50.00	RT	22.0	
1403+25.00	RT	22.0	
1407+00.00	RT	22.0	
1407+75.00	RT	22.0	
1408+50.00	RT	22.0	
1409+25.00	RT	22.0	
1410+00.00	RT	22.0	
1410+75.00	RT	22.0	
1411+50.00	RT	22.0	
1412+25.00	RT	22.0	
1413+00.00	RT	22.0	
1413+75.00	RT	22.0	
1414+50.00	RT	22.0	
1415+25.00	RT	22.0	
1417+25.00	RT	22.0	
1417+65.00	RT	22.0	
1418+05.00	RT	22.0	
1418+45.00	RT	22.0	
1418+85.00	RT	22.0	
1419+25.00	RT	22.0	
1419+65.00	RT	22.0	
1420+05.00	RT	22.0	
1420+45.00	RT	22.0	
1420+85.00	RT	22.0	
1421+25.00	RT	22.0	
1421+65.00	RT	22.0	
1422+05.00	RT	22.0	
1422+45.00	RT	22.0	
1422+85.00	RT	22.0	
1423+25.00	RT	22.0	
1423+65.00	RT	22.0	
1424+05.00	RT	22.0	
1424+45.00	RT	22.0	
1424+85.00	RT	22.0	
1425+25.00	RT	22.0	
1425+65.00	RT	22.0	
1426+05.00	RT	22.0	
1426+45.00	RT	22.0	
1426+85.00	RT	22.0	
1427+25.00	RT	22.0	
1427+65.00	RT	22.0	
1428+05.00	RT	22.0	
1428+45.00	RT	22.0	
1428+85.00	RT	22.0	
1429+25.00	RT	22.0	
1429+65.00	RT	22.0	
1430+05.00	RT	22.0	
1431+55.00	RT	22.0	
1433+05.00	RT	22.0	
1434+55.00	RT	22.0	
1436+05.00	RT	22.0	
1437+55.00	RT	22.0	
1439+05.00	RT	22.0	
1440+55.00	RT	22.0	
1442+05.00	RT	22.0	
1449+00.00	RT	22.0	

100-18
04-20-10

TABULATION OF SILT FENCES FOR DITCH CHECKS

Refer to EC-201

Location Station	Side	Length	Remarks
		LF	
1450+50.00	RT	22.0	
1452+00.00	RT	22.0	
1458+00.00	RT	12.0	
1459+50.00	RT	12.0	
1461+00.00	RT	12.0	
1462+50.00	RT	12.0	
1464+00.00	RT	12.0	
1465+50.00	RT	12.0	
1481+50.00	RT	22.0	
1483+00.00	RT	22.0	
1484+50.00	RT	22.0	
1486+00.00	RT	22.0	
1487+50.00	RT	22.0	
1489+00.00	RT	22.0	
1490+50.00	RT	22.0	
1492+00.00	RT	22.0	
1492+75.00	RT	22.0	
1493+50.00	RT	22.0	
1494+25.00	RT	22.0	
1495+00.00	RT	22.0	
1495+75.00	RT	22.0	
1497+25.00	RT	22.0	
1515+00.00	RT	22.0	
1515+75.00	RT	22.0	
1516+50.00	RT	22.0	
1517+25.00	RT	22.0	
1518+00.00	RT	22.0	
1518+75.00	RT	22.0	
1519+50.00	RT	22.0	
1520+25.00	RT	22.0	
1521+00.00	RT	22.0	
1521+75.00	RT	22.0	
1522+50.00	RT	22.0	
1523+25.00	RT	22.0	
1524+00.00	RT	22.0	
1524+75.00	RT	22.0	
1525+50.00	RT	22.0	
1526+25.00	RT	22.0	
1527+00.00	RT	22.0	
1527+75.00	RT	22.0	
1528+50.00	RT	22.0	
1529+25.00	RT	22.0	
1530+00.00	RT	22.0	
1530+75.00	RT	22.0	
1532+25.00	RT	22.0	
1533+75.00	RT	22.0	
RAMP C			
3391+00.00	LT	22.0	
3391+75.00	LT	22.0	
3392+50.00	LT	22.0	
3393+25.00	LT	22.0	
3394+00.00	LT	22.0	
3394+75.00	LT	22.0	
3395+50.00	LT	22.0	
3396+25.00	LT	22.0	
3392+00.00	RT	22.0	
3392+75.00	RT	22.0	
3393+50.00	RT	22.0	
3394+25.00	RT	22.0	
3395+00.00	RT	22.0	
3395+75.00	RT	22.0	
3396+50.00	RT	22.0	
3397+25.00	RT	22.0	
3398+00.00	RT	22.0	
3398+75.00	RT	22.0	
3399+50.00	RT	22.0	
3400+25.00	RT	22.0	
3401+00.00	RT	22.0	
3401+75.00	RT	22.0	
3402+50.00	RT	22.0	
3403+25.00	RT	22.0	
3404+00.00	RT	22.0	
3404+75.00	RT	22.0	
GRAND AVENUE			
3390+66.68	LT	22.0	
3392+17.00	LT	22.0	

100-18
04-20-10

TABULATION OF SILT FENCES FOR DITCH CHECKS

Refer to EC-201

Location Station	Side	Length	Remarks
		LF	
CHANNEL			
1+75.00		22.0	
2+50.00		22.0	
3+25.00		22.0	
4+00.00		22.0	
4+75.00		22.0	
9+00.00		22.0	
9+75.00		22.0	
10+50.00		22.0	
11+25.00		22.0	
12+00.00		22.0	
12+75.00		22.0	
13+50.00		22.0	
Subtotal:		5453.0	
+50% =		2726.5	
Total:		8179.5	

102-5
10-16-12

EXISTING PAVEMENT

No.	Location					Year	Type	Project Number	Surface		Base		Subbase		Removal		Coarse Aggregate			Reinforcement	Remarks
	County	Route	Dir. of Travel	Begin Milepost	End Milepost				Type	Depth IN	Type	Depth IN	Type	Depth IN	Type	Depth IN	Source	Type	Durability Class	Type	
1	77 POLK	I-35	NORTH	67.89	72.14	2007		IMN-035-2(335)61--0E-91	HMA	2											
						1986		IR-35-2(191)67--12-77	AAC	1.5	AAC	3									
						1958		I-IG-35-2(10)68	PCC	10	GSB	4					COMMERCE	GRAVEL	2		EXIST. PAVEMENT INCLUDES WIRE MESH
																					REFER TO SHEET B.8 FOR INFORMATION
2	77 POLK	I-35	NORTH	72.14	72.69	1992		IR-35-2(240)74	PCC	12	GSB	9					AMES MINE	C.LST.	I		
3	77 POLK	I-35	SOUTH	67.89	72.14	1986		IR-35-2(191)67--12-77	AAC	1.5	AAC	3									
						1958		I-IG-35-2(10)68	PCC	10	GSB	4					COMMERCE	GRAVEL	2		
4	77 POLK	I-35	SOUTH	72.14	72.69	1992		IR-35-2(240)74	PCC	12	GSB	9					AMES MINE	C.LST.	I		

110-1
04-16-13

REMOVAL OF PAVEMENT

Refer to Tabulation 102-5

* Not a Bid Item

Begin Station	End Station	Side	Pavement Type	Area SY	Saw Cut* LF	Remarks
1364+03.94	1374+99.21	RT	Comb.	5841.4	1095.0	NOTE: All pavement removal on existing mainline, ramps, and loops includes wire mesh.
1374+99.21	1379+14.51	RT	Comb.	2214.9	415.0	
1381+08.51	1388+44.14	RT	Comb.	3923.3	736.0	Refer to Sheet B.8 for information.
1391+31.16	1406+04.14	RT	Comb.	7855.9	1473.0	
1406+04.14	1409+49.01	RT	Comb.	1379.5	345.0	
		RT	Comb.	266.5		
1409+49.01	1438+18.28	RT	Comb.	21041.3	2869.0	
1438+18.28	1442+98.91	RT	Comb.	1922.5	481.0	
			Comb.	74.6		
1442+98.91	1468+60.46	RT	Comb.	13661.6	2562.0	
1468+60.46	1493+78.63	RT	Comb.	10352.5	2518.0	
1493+78.63	1510+42.02	RT	Comb.	11089.3	1663.0	
1514+82.10	1545+65.97	RT	Comb.	20559.1	3084.0	
1545+65.97	1550+52.00	RT	Comb.	1296.1	486.0	
1390+47.69	1393+09.38	NE Loop	Comb.	3493.0	905.0	
1387+34.42	1389+14.11	SE Loop	Comb.	3782.0	912.0	
1380+78.56	1387+93.43	S Ramp	Comb.	5041.7	1358.0	
1389+16.51	1404+18.34	N Ramp	Comb.	6340.0	1725.0	
3377+75.00	3399+75.10	Grand WB	Comb.	7333.7	100.0	
3377+75.00	3387+44.00	Grand WB	Comb.	1662.0		Shoulder
3387+44.00	3390+63.20	Grand WB	Comb.	435.0		Loop turn lanes
3390+63.20	3399+75.00	Grand WB	Comb.	1245.3	0.0	Shoulder
3389+87.72	3391+00.00	Grand EB	Comb.	31.2	112.0	Left Turn Lane Curb and Gutter
3385+60.86	3386+05.12	Grand EB	PCC	32.2	53.0	Ramp A & D Crossover
11390+52.99	11392+00.00	Ramp A	HMA or PCC	1411.5	240.0	Temporary Pavement
3389+83.50	3391+99.68	SE Loop	HMA or PCC	519.0	109.0	Temporary Pavement
3391+25.00	3393+09.23	SE Loop	HMA or PCC	491.0	89.0	Temporary Pavement
1434+00.00	1441+00.00	I-35 NB	HMA or PCC	466.7	700.0	Detour Pavement
1469+50.00	1481+50.00	I-35 NB	HMA or PCC	866.7	1200.0	Detour Pavement
1538+75.00	1545+50.00	I-35 NB	HMA or PCC	487.5	450.0	Detour Pavement
3384+82.44	3385+95.00	Grand Crossover	HMA or PCC	521.4	361.0	Temporary Pavement
3385+32.15	3387+35.50	Grand EB	HMA or PCC	441.3	203.0	Temporary Pavement
				136079.6	26244.0	

100-27
10-20-09

PAVEMENT SMOOTHNESS + PCC TEXTURE

Road Identification	Begin Station	End Station	Proposed Posted Speed			Remarks
			35 or less	40 - 45	over 45	
Interstate 35	1364+03.94	1550+62.56			X	
Ramp A	11390+65.00	11392+00.00			X	
Ramp B	2375+00.00	2389+71.19			X	
Ramp C	3389+54.73	3409+50.00			X	
Grand Avenue	3377+75.00	3397+50.00		X		

110-9
10-18-11

CULVERT ABANDONMENT

Refer to Details 4315 and 4316

* Not a bid item

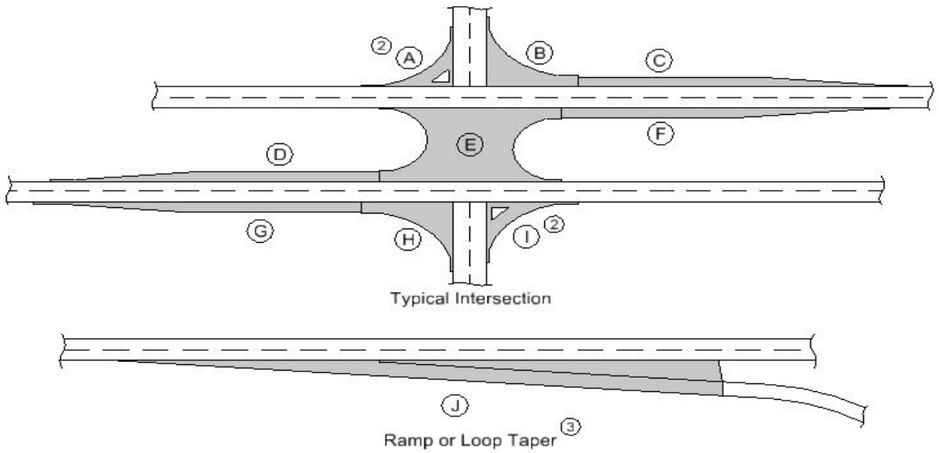
Location Station	Description	Fill Material: Flowable Mortar CY	Fill Material: Granular Backfill* TON	4" Perforated Subdrain* LF	Remarks
3394+60.00	RCB	127.8	862.5	12.0	10x10x172.5 RCB
3398+43.79	RCP	34.0	0.1	4.0	301 LF of 24'' RCP.

100-11
08-01-08

TABULATION OF EROSION CONTROL DETAILS

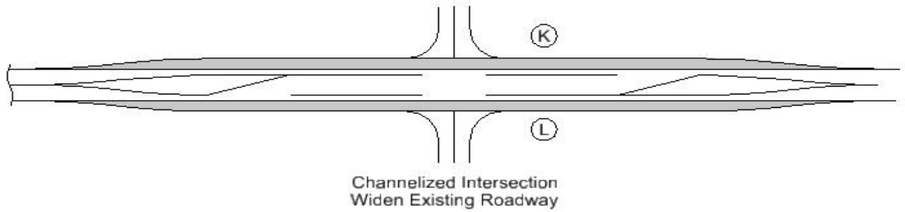
Location: Begin Station	Location: End Station	Over-Seeding and Fertilizing ACRE	Seeding and Fertilizing ACRE	Mulching ACRE	Special Ditch Control: Wood Excelsior Mat SQ	Special Ditch Control	Sod SQ	Crown-Vetch Seeding ACRE	Seeding Special Areas ACRE	Ditch Reshaping STA	Mowing ACRE
1364+03.00	1378+40.00	0.0	1.7	1.7							
1381+91.00	1387+73.00	0.0	3.3	3.3							
1392+06.00	1406+03.00	0.0	2.9	2.9							
1406+03.00	1443+03.00	0.0	8.2	8.2							
1443+03.00	1468+67.00	0.0	1.2	1.2							
1468+67.00	1509+69.00	0.0	3.2	3.2							
1515+66.00	1552+04.00	0.0	5.0	5.0							
Ramp B											
2375+00.00	2389+71.00	0.0	2.6	2.6							
2375+00.00	2389+71.00	0.0	0.8	0.8							
Ramp C											
3389+55.00	3409+50.00	0.0	2.6	2.6							
3389+55.00	3406+08.00	0.0	2.0	2.0							
CHANNEL											
1+00.00	5+07.00	0.0	0.9	0.9							
7+99.00	13+52.00	0.0	2.6	2.6							
GRAND AVE											
3377+75.00	3388+00.00	0.0	1.9	1.9							
3370+79.00	3406+11.00	0.0	3.9	3.9		Urban Seeding					
3377+75.00	3400+00.00	0.0	0.4	0.4		Urban Seeding					
3377+75.00	3397+50.00	0.0	0.3	0.3		Urban Seeding					
SEEDING AND FERTILIZING											
	Subtotal	0.0	38.9	38.9							
	+10%	0.0	3.9	3.9							
	Total	0.0	42.8	42.8							
URBAN SEEDING & FERTILIZING											
	Subtotal	0.0	4.6	4.6							
	+10%	0.0	0.5	0.5							
	Total	0.0	5.0	5.0							

TABULATION OF PAVEMENT

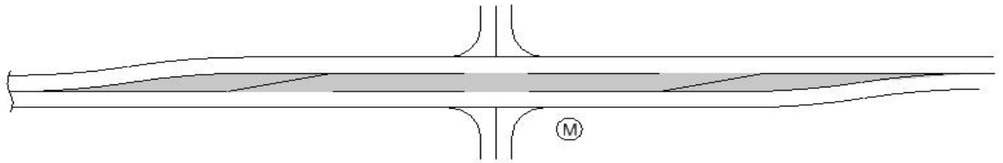


Typical Intersection

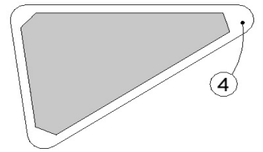
Ramp or Loop Taper (3)



Channelized Intersection
Widen Existing Roadway



Channelized Intersection
Reconstructed Roadway



Paved Island

(1) Quantity includes Pavement Header.

(2) Does not include Island area.

(3) Refer to PV-410, PV-411, PV-412, and PV-414.

(4) Curb area included in areas A and I. Refer to PV-020.

Location						Area (1)													Total Area By Pavement Thickness		Paved Island		Granular Subbase	Remarks
Road Identification	Station to Station		Width	Length	Area	A (2)	B	C	D	E	F	G	H	I (2)	J	K	L	M	SY		Area	Curb		
			FT	FT	SY														9 IN	11½ IN	SY	TYPE	SY	
Interstate 35	1364+03.94	1366+50.00	48.0	246.1	1312.3										2370.1					3682.4			3764.4	
	1366+50.00	1375+01.35	24.0	851.4	2270.3															2270.3			2554.1	
	1375+01.52	1378+40.05	48.0	338.5	1805.5															1805.5			1918.3	
	1381+91.41	1387+73.06	48.0	581.6	3102.1															3102.1			3296.0	
	1392+06.45	1406+03.56	48.0	1397.1	7451.3															7451.3			7917.0	
	1406+03.56	1406+49.75	60.0	46.2	307.9										285.3					593.2			608.6	
	1406+49.75	1416+50.00	66.0	1000.3	7335.2															7335.2			7668.6	
	1416+50.00	1419+50.00	63.0	300.0	2100.0															2100.0			2200.0	
	1419+50.00	1438+23.58	60.0	1873.6	12490.5															12490.5			13115.1	
	1438+23.58	1443+04.55	37.0	481.0	1977.3															1977.3			1977.3	
	1438+23.58	1439+33.13	9.0	109.6	109.6															109.6			146.1	
	1443+04.55	1468+65.68	48.0	2561.1	13659.4															13659.4			14513.1	
	1468+65.68	1493+83.86	37.0	2518.2	10352.5															10352.5			10352.5	
	1493+83.86	1509+69.01	60.0	1585.2	10567.7															10567.7			11096.1	
	1515+66.40	1545+75.00	60.0	3008.6	20057.3															20057.3			21060.2	
	1545+75.00	1550+62.56	24.0	487.6	1300.2															1300.2			1462.7	
	1550+62.56	1552+04.79	8.5	142.2	134.3															134.3			181.7	
	1434+00.00	1441+00.00	6.0	700.0	466.7														466.7*				466.7	Detour Pavement
	1469+50.00	1481+50.00	6.5	1200.0	866.7														866.7*				866.7	Detour Pavement
	1539+00.00	1545+50.00	6.8	650.0	491.1														491.1*				325.0	Detour Pavement
Ramp A	11390+65.34	11392+00.00	48.0	134.7	718.2															718.2			808.0	Modified Subbase Used
	11390+36.71	11391+47.77		111.1		211.7														211.7			97.6	
	11390+74.12	11390+96.26		22.1			22.4													22.4			17.2	
Ramp B	2375+00.00	2378+20.00	24.0	320.0	853.3															853.3			1066.7	Modified Subbase Used
	2381+30.00	2385+50.00	24.0	420.0	1120.0															1120.0			1400.0	
	2385+50.00	2386+70.00	30.0	120.0	400.0															400.0			480.0	
	2386+70.00	2389+71.19	36.0	301.2	1204.8															1204.8			1405.6	
	2389+00.00	2389+71.19		71.2										260.3						260.3			284.0	
Ramp C	3389+54.73	3406+07.67	24.0	1652.9	4407.8															4407.8			5509.8	Modified Subbase Used
	3389+54.73	3390+00.00		45.3			224.2													224.2			239.3	
Ramp D	4389+67.92	4389+97.32		29.4										27.1						27.1			36.9	Modified Subbase Used
Grand Ave	3377+75.00	3397+50.00	29.0	1975.0	6363.9														6363.9				7680.6	Modified Subbase Used
	3384+51.04	3385+99.82		148.8						825.9									825.9				825.9	
	3385+99.83	3391+61.53		561.7							1908.4								1908.4				1908.4	
	3389+87.72	3393+74.77		387.1					885.7										885.7				1014.7	
	3392+63.00	3395+02.78		239.8						814.6									814.6				814.6	
	3394+86.73	3397+50.00		263.3				424.2											424.2				424.2	
									Note: 9" PCC PAVEMENT IS REINFORCED									Detour Totals:	1824.4		Granular Subbase:	103831.7	
																			Pavement Totals:	11222.7	108438.6	Modified Subbase:	25671.8	

SHOULDERS

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

Calculations assume a HMA unit weight (lbs/cf) of 0, a Special Backfill unit weight (lbs/cf) of 140, and a Granular Shoulder unit weight (lbs/cf) of 140.

Location					Quantities															
Road Identification	Direction Of Traffic (1)	Station to Station		Side	(P) Width	(G) Width	(L) Length	Class 13 Excavation Widening (3)	HMA Base Widening (3)		Hot Mix Asphalt		Paved Shoulder	Reinforced Paved Shoulder	Special Backfill		Modified Subbase	Granular Shoulder		Earth Shoulder Construction		Remarks
					FT	FT	FT	CY (2)	TON (2)	TON/STA	TON	TON/STA	SY (2)	SY (2)	TON (2)	TON/STA	CY (2)	TON (2)	TON/STA	STA (2)	CY (4)	
7" PCC Option																						
Ramp A	SB	11392+00.00	11390+45.00	RT	6.0		235.0						156.7		116.631	49.630				2.4	144.5	7" PCC Option
	SB	11392+00.00	11390+80.00	LT	4.0		132.0						58.7		40.099	30.378				1.3	81.2	7" PCC Option
Ramp B	NB	2375+00.00	2378+20.00	LT	4.0		320.0						142.2		97.209	30.378				3.2	196.7	7" PCC Option
	NB	2375+01.00	2378+20.00	RT	6.0		319.0						212.7		158.335	49.635				3.2	196.1	7" PCC Option
	NB	2381+30.00	2389+71.19	LT	4.0		845.0						375.6		256.693	30.378				8.5	519.5	7" PCC Option
	NB	2381+30.00	2389+71.09	RT	6.0		916.0						610.7		454.656	49.635				9.2	563.2	7" PCC Option
Ramp C	NB	3389+70.00	3406+07.67	LT	4.0		1637.7						727.9		497.490	30.378				16.4	1006.9	7" PCC Option
	NB	3390+02.27	3390+36.87	RT	9.0		34.6						34.6		24.261	70.120				0.3	21.3	7" PCC Option
	NB	3390+36.87	3406+49.92	RT	6.0		1613.0						1075.4		800.636	49.635				16.1	991.7	7" PCC Option
Ramp D	SB	4389+67.92	4389+87.10	RT	4.0		19.2						13.6		5.826	30.378				0.2	11.8	7" PCC Option
Grand Ave	EB	3399+75.00	3403+85.26	RT	10.0		410.3						455.8		361.640	88.149				4.1	88.6	7" PCC Option
														PCC Option								
											Totals:		3863.7		2813.476	508.693				64.8	3821.4	
8" HMA Option																						
Ramp A	SB	11392+00.00	11390+45.00	RT	6.0		235.0						156.7		96.973	41.265				2.4	145.4	8" HMA Option
	SB	11392+00.00	11390+80.00	LT	4.0		132.0						58.7		33.337	25.255				1.3	81.6	8" HMA Option
Ramp B	NB	2375+00.00	2378+20.00	LT	4.0		320.0						142.2		80.817	25.255				3.2	197.9	8" HMA Option
	NB	2375+01.00	2378+20.00	RT	6.0		319.0						212.7		131.635	41.265				3.2	197.3	8" HMA Option
	NB	2381+30.00	2389+71.19	LT	4.0		845.0						375.6		213.407	25.255				8.5	522.6	8" HMA Option
	NB	2381+30.00	2389+71.09	RT	6.0		916.0						610.7		377.987	41.265				9.2	566.6	8" HMA Option
Ramp C	NB	3389+70.00	3406+07.67	LT	4.0		1637.7						727.9		413.598	25.255				16.4	1012.9	8" HMA Option
	NB	3390+02.27	3390+36.87	RT	9.0		34.6						34.6		21.986	63.545				0.3	21.4	8" HMA Option
	NB	3390+36.87	3406+49.92	RT	6.0		1613.0						1075.4		665.625	41.265				16.1	997.7	8" HMA Option
Ramp D	SB	4389+67.92	4389+87.10	RT	4.0		19.2						13.6		4.844	25.255				0.2	11.9	8" HMA Option
Grand Ave	EB	3399+75.00	3403+85.26		10.0		410.3						455.8		300.657	73.284				4.1	91.2	8" HMA Option
														HMA Option								
											Totals:		3863.7		2340.867	428.166				64.8	3846.5	

SAFETY CLOSURES

Refer to Section 2518 of the Standard Specifications

Station	Closure Type		Remarks
	Road Qty.	Hazard Qty.	
1363+50.00	1		STAGE 2 & 3
GRAND AVE			
3385+85.00	1		STAGE 2 - GRAND AVE
3371+30.00	1		STAGE 2 & 2B - GRAND AVE
3405+50.00	1		STAGE 2 & 2B
3394+25.00	1		STAGE 2, 2B, 3 - GRAND AVE
3384+65.00	1		STAGE 2B - GRAND AVE
3394+30.00	1		STAGE 3
RAMP A			
11392+07.00	1		STAGE 2 - RAMP A
11392+07.00	1		STAGE 2B - RAMP A
RAMP B			
2388+75.00	1		STAGE 2, 2B, & 3 - RAMP B
RAMP C			
3389+92	1		STAGE 3
Totals:	11		

INCIDENTAL ITEMS

Special or unique items where method of measurement / basis of payment is not indicated in the specifications or other contract documents.

No.	Incidental Item	Quantity	Incidental To		Remarks
			Item Code	Item	
1	CAMBER	0.11 FT	2416-1180024	CULVERT, CONC. ROAD PIPE, 24 IN. DIA., RF-30B	
2	APRON GUARD	2 EA	2416-0100024	APRONS, CONC., 24 IN. DIA., RF-26	

SPECIAL DITCH CONTROL AND SLOPE PROTECTION

Location				(L)	(W)	No. Squares	Remarks
No.	Begin Station	End Station	Side	FT	FT		
1	1+20.00	2+20.00	Channel	14.0	14.0	28.0	Wood Excelsior Mat (Refer to MIT Sheets for Locations)
2	2+50.00	4+75.00	Channel	14.0	14.0	63.0	Wood Excelsior Mat (Refer to MIT Sheets for Locations)
3	8+95.00	9+70.00	Channel	14.0	14.0	21.0	Wood Excelsior Mat (Refer to MIT Sheets for Locations)
4	10+25.00	11+50.00	Channel	14.0	14.0	35.0	Wood Excelsior Mat (Refer to MIT Sheets for Locations)
5	11+75.00	13+00.00	Channel	14.0	14.0	35.0	Wood Excelsior Mat (Refer to MIT Sheets for Locations)
						0.0	
6	1405+30.00	1406+10.00	Right	5.0	5.0	8.0	Wood Excelsior Mat (Refer to Sheet U.10 for Locations)
					Total	190.0	

108-8A
10-19-10

STEEL BEAM GUARDRAIL AT CONCRETE BARRIER OR BRIDGE END POST

Refer to BA-200, BA-201, BA-202, BA-205, BA-250, SI-172, SI-173 and SI-211.

(1) See Standards for list of materials.

Location Station			Layout Lengths				Delineators and Object Markers					Bid Items (1)						Remarks
			VT1	VF	VT2	ET	Type	Delineator	Object Marker			End Anchor Bolted	Barrier Transition Section	Steel Beam Guardrail	End Terminal		Adapter	
								Type 1	Type 2	Type 3					Standard	Flared for Cable Connection		
						Terminal		White		OM-3L	OM-3R							
No.	Station	Offset	LF	LF	LF	LF		No.	No.	No.	No.	BA-202 Type	BA-201 No.	BA-200 LF	BA-205 No.	BA-206 No.	BA-210 No.	
1	1378+92.22	65.62	40.625	75.00		50.0						1	1	87.5	1			
2	1388+29.19	65.6	40.625	75.00		50.0						1	1	87.5	1			
3	1510+23.77	77.63	40.625	12.50	1400.00	50.0						1	1	1425.0	1			
4	2378+85.28	-32.92	28.125	50.00		50.0						1	1	50.0	1			
5	2378+88.01	6.13	28.125	100.00		50.0						1	1	100.0	1			Field Bend Steel Beam Guardrail at Bridge Connection
	Totals:		178.125	312.50	1400.00	250.0						5	5	1750.0	5			

108-27
10-16-12

TEMPORARY FLOODLIGHTING LUMINAIRES

No.	Location Station	Offset	Number Lumin.	Remarks
1	1355+00.00	60	1	
2	1435+00.00	60	1	
3	1441+00.00	60	1	
4	1469+50.00	60	1	
5	1478+00.00	60	1	
6	1545+00.00	60	1	
7	1555+00.00	60	1	
		Total:	7	

107-23
10-18-11

GRADING FOR GUARDRAIL INSTALLATIONS

(1) Lane(s) to which the installation is adjacent.

Refer to EW-301

Location				Foreslope at Guardrail	Dimensions (Feet)									Earthwork		Remarks
No.	Direction of Traffic (1)	Station	Side		X1	Y1	X2	Y2	X3	Y3	X4	Y4	Z	Excavation Class 10	Embankment In Place	
														CY	CY	
6	NB	1371+92.67	RT	6:1	12.5	6.7	87.1	14.2			137.8	16.3	81.0	(1)		
1	NB	1378+92.22	RT	6:1	41.7	5.0	116.3	12.9			166.3	14.9	76.0	(1)		
2	NB	1388+29.19	RT	6:1	41.7	5.0	116.3	12.2			166.3	13.9	72.0	(1)		
7	NB	1422+12.87	RT	6:1	37.5	6.7	112.1	14.2			162.8	16.3	81.0	(1)		
8	NB	1453+87.88	RT	6:1	12.5	6.7	87.1	14.2			137.8	16.3	81.0	(1)		
9	NB	1453+87.88	RT	6:1	12.5	6.7	87.1	14.2			137.8	16.3	81.0	(1)		
3	NB	1510+23.77	RT	6:1	41.7	5.4	54.1	6.6	1454.1	6.6	1504.7	8.6	54.0	(1)		
10	NB	1520+87.88	RT	6:1	12.5	6.7	87.1	14.2			137.8	16.3	81.0	(1)		
11	NB	1535+91.00	RT	6:1	12.5	6.7	87.1	14.2			137.8	16.3	81.0	(1)		
4	NB	2378+85.28	LT	6:1	29.2	12.1	91.3	13.3			129.0	14.1	72.0	(1)		
5	NB	2378+88.01	RT	6:1	29.2	7.3	127.4	19.3			177.7	19.3	92.0	(1)		

(1) - Included in the Template Quantities. See T Sheets.

108-8C
10-18-11

STEEL BEAM GUARDRAIL FOR SIDE OBSTACLE (ONE-WAY PROTECTION)

(1) Lane(s) to which the obstacle is adjacent.

(2) See Standards for list of materials.

Refer to BA-200, BA-201, BA-203, BA-205, BA-206, BA-252, SI-172, SI-173, and SI-211

Location							Layout Lengths							Delineators and Object Markers					Bid Items (2)						Remarks
							Approach Side (A)				Trailing Side				Delineator	Object Marker					End Terminal				
No.	Direction of Traffic (1)	Side O= Outside M= Median	Station	Offset	O_L	D_O	ET	$VT2_A$	VF_A	$VT1_A$	$VT1_T$	EA	Culvert Spanning	Type	Type 1	Type 2	Type 3		Steel Beam Guardrail	W-Beam End Anchor	Standard	Flared for Cable Connection	Adapter		
							Terminal					9.375'			White		OM-3L	OM-3R							
					FT	FT	LF	LF	LF	LF	LF	LF			No.	No.	No.	No.	BA-200 LF	BA-203 No.	BA-205 No.	BA-206 No.	BA-210 No.		
6	NB	O	1371+92.67	88	18.0	14.0	50.0		75.00	12.50	18.75	9.375							100.0	1	1				33' Contilever
7	NB	O	1422+12.87	79	41.8	14.0	50.0		75.00	37.50	18.75	9.375							125.0	1	1				RCB Extension
8	NB	O	1438+15.00	80	18.0	14.0	50.0		75.00	12.50	18.75	9.375							100.0	1	1				33' Coontilever
9	NB	O	1453+87.88	67	18.0	14.0	50.0		75.00	12.50	18.75	9.375							100.0	1	1				73' Truss
10	NB	O	1520+87.88	79	18.0	14.0	50.0		75.00	12.50	18.75	9.375							100.0	1	1				85' Truss
11	NB	O	1535+91.00	81	18.0	14.0	50.0		75.00	12.50	18.75	9.375							100.0	1	1				85' Truss
			Totals				300.0		450.00	100.00	112.50	56.250							525.0	6	6				

108-33
04-16-13

TEMPORARY BARRIER RAIL

Refer to BA-400 and BA-401

* Not a bid item. Anchorage requirements are based on TBR locations shown in the plans. TBR alignments that vary from what is shown in the plans may result in additional TBR sections requiring anchorage.

No.	Station to Station		Length	(Select One) Steel BA-400	(Select One) Concrete BA-401	Anchored* (Y/N)	Remarks
			LF				
1	1433+75.00	1441+25.00	750.0		X	Yes	Stage 1 - FOR DETOUR PAVEMENT
2	1469+25.00	1481+50.00	1225.0		X	Yes	Stage 1 - FOR DETOUR PAVEMENT
3	1538+75.00	1545+75.00	700.0		X	Yes	Stage 1 - FOR DETOUR PAVEMENT
4	1362+85.00	1371+36.00	851.0		X	No	STAGE 2A - 45:1 TAPER
5	1363+35.00	1374+82.00	1147.0		X	No	STAGE 2A - 45:1 TAPER
6	1371+36.00	1433+60.00	6224.0		X	No	STAGE 2A
7	1374+82.00	1448+75.00	7393.0		X	No	STAGE 2A
8	1433+60.00	1435+40.00	180.0		X	No	STAGE 2A - 15:1 TAPER MILLS CIVIC OFF RAMP
9	1435+40.00	1438+15.00	275.0		X	No	STAGE 2A - MILLS CIVIC OFF RAMP
10	1438+15.00	1441+75.00	360.0		X	No	STAGE 2A - MILLS CIVIC OFF RAMP
11	1439+81.00	1443+30.00	349.0				STAGE 2A - MILLS CIVIC OFF RAMP
12	1440+05.00	1445+60.00	555.0		X	No	STAGE 2A
13	1445+60.00	1454+60.00	900.0		X	No	STAGE 2A - 45:1 TAPER
14	1448+75.00	1454+60.00	585.0		X	No	STAGE 2A - 45:1 TAPER
15	1454+60.00	1456+60.00	200.0		X	No	STAGE 2A
16	1454+60.00	1456+60.00	200.0		X	No	STAGE 2A
17	1456+60.00	1462+45.00	585.0		X	No	STAGE 2A - 45:1 TAPER
18	1456+60.00	1465+60.00	900.0				STAGE 2A - 45:1 TAPER
19	1462+45.00	1535+50.00	7305.0		X	No	STAGE 2A
20	1465+60.00	1470+00.00	440.0		X	No	STAGE 2A
21	1467+91.00	1472+25.00	434.0		X	No	STAGE 2A - MILLS CIVIC ON RAMP
22	1468+00.00	1470+00.00	200.0		X	No	STAGE 2A - MILLS CIVIC ON RAMP
23	1472+25.00	1478+25.00	600.0		X	No	STAGE 2A - MILLC CIVIC ON RAMP
24	1478+25.00	1481+25.00	300.0		X	No	STAGE 2A - 25:1 TAPER
25	1481+25.00	1538+78.00	5753.0		X	No	STAGE 2A
26	1535+50.00	1546+97.61	1147.6		X	No	STAGE 2A - 45:1 TAPER (TIE INTO EXISTING)
27	1538+78.00	1548+72.00	994.0				STAGE 2A - 45:1 TAPER
28	1548+72.00	1552+54.00	382.0		X	No	STAGE 2A - OFF RAMP
			0.0				
29	1362+85.00	1378+50.00	1565.0		X	No	STAGE 2 - 45:1 TAPER
30	1363+35.00	1367+00.00	365.0		X	No	STAGE 2
31	1367+00.00	1378+50.00	1150.0		X	No	STAGE 2 - 45:1 TAPER
32	1420+15.00	1426+98.00	683.0		X	No	STAGE 3, MOVE EXISTING TBR FROM STAGE 2
33	1428+61.00	1443+25.00	1464.0		X	No	STAGE 3
34	1433+60.00	1440+06.00	646.0		X	No	STAGE 3, MOVE EXISTING TBR FROM STAGE 2
35	1467+91.00	1481+50.00	1359.0		X	No	STAGE 3, MOVE EXISTING TBR FROM STAGE 2
36	1470+00.00	1481+50.00	1150.0		X	No	STAGE 3
37	1482+00.00	1498+97.00	1697.0		X	No	STAGE 3, MOVE EXISTING TBR FROM STAGE 2
38	1521+25.00	1533+00.00	1175.0		X	No	STAGE 3, MOVE EXISTING TBR FROM STAGE 2
39	1537+25.00	1546+00.00	875.0		X	No	STAGE 3, MOVE EXISTING TBR FROM STAGE 2
40	1362+75.00	1371+00.00	825.0		X	No	STAGE 4, MOVE EXISTING TBR FROM STAGE 3
41	1363+00.00	1371+00.00	800.0		X	No	STAGE 4, MOVE EXISTING TBR FROM STAGE 3
42	1420+15.00	1428+61.00	846.0		X	No	STAGE 4, MOVE EXISTING TBR FROM STAGE 3
43	1447+70.00	1463+48.00	1578.0		X	No	STAGE 4, MOVE EXISTING TBR FROM STAGE 3
44	1450+85.00	1460+33.00	948.0		X	No	STAGE 4, MOVE EXISTING TBR FROM STAGE 3
45	1481+50.00	1498+97.00	1747.0		X	No	STAGE 4, MOVE EXISTING TBR FROM STAGE 3
46	1521+25.00	1547+25.00	2600.0		X	No	STAGE 4, MOVE EXISTING TBR FROM STAGE 3
47	1539+05.00	1548+33.00	928.0		X	No	STAGE 4, MOVE EXISTING TBR FROM STAGE 3
48	3386+50.00	3389+92.00	342.0		X	No	Stage 2A, REMOVE EXISTING TBR FROM WINTER STAGING
		Total:	63677.6				

(1) 94,324 LF of TBR that is the property of the Iowa DOT from the IM-035-2(364)67--13-77 project and may be used for the construction of this project.

(2) 2000 LF of TBR will be transported to the Iowa DOT Grimes Field Office.

(3) All other TBR to be the property of the contractor upon completion of project.

110-2
04-16-13

REMOVAL OF EXISTING STRUCTURES

Location	Description	Remarks
Ex. SE Ramp		
2386+49.51 (Ramp B Sta.)	10'x10'x151.3' RCB	Remove RCB + Wing Walls
Ex. NE Ramp		
3392+56.89 (Ramp C Sta.)	10'x10'x140.16' RCB	Remove RCB + Wing Walls

110-15
04-16-13

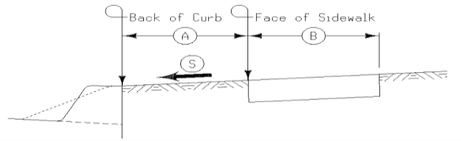
REMOVAL OF INTAKES AND UTILITY ACCESSES

No.	Location/Description	Type	Remarks
1	East of Ramp B @ Sta: 2387+65; 67.5' Rt	Utility Access	Previously abandoned, Requires removal this Contract

113-1
04-16-13

SIDEWALKS

See MI-220 and S Sheets



Road Identification	Station to Station		Side	A FT	B FT	S %	4" PCC Sidewalk SY	6" PCC Sidewalk SY	5" PCC Sidewalk SY	Detectable Warnings SF	Remarks
Grand Ave	3377+75.00	3384+36.87	Lt	9.00	5.00	2.00%	367.7				
	3385+60.87	3393+85.47	Lt	9.00	5.00	2.00%	458.1				
	3394+69.93	3400+00.00	Lt	9.00	5.00	2.00%	294.5				
	3384+36.87	3384+63.49	Lt					10.4		36	
	3385+48.30	3385+60.87	Lt					7.0		10	
	3393+84.97	3393+97.07	Lt					6.9		10	
	3394+51.42	3394+64.96	Lt					8.5		16	
Recreational Trail											
	+00.00	8+63.80	Rt						959.8		
	9+71.20	20+82.80	Rt						1235.1		
	21+98.30	24+18.40	Rt						244.6		
	20+82.85	21+04.86	Rt					24.6		20	
	21+63.94	21+98.41	Rt					29.7		42	
						Total	1120.3	87.1	2439.4	134	

PAVEMENT MARKING LINE TYPES

See PM-110

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

BCY4: Broken Centerline (Yellow) @ 0.25
DCY4: Double Centerline (Yellow) @ 2.00
NPY4: No Passing Zone Line (Yellow) @ 1.25
BLW4: Broken Lane Line (White) @ 0.25
ELW4: Edge Line Right (White) @ 1.00
ELY4: Edge Line Left (Yellow) @ 1.00
SLW2: Stop Line (White) @ 6.00
CHW8: Channelizing Line (White) @ 2.00
SLW4: Solid Lane Line (White) @ 1.00
DLW4: Dotted Line (White) @ 0.33
RLW4: Ramp Edge Line Right (White) @ 1.00
RLY4: Ramp Edge Line Left (Yellow) @ 1.00
CHY8: Channelizing Line (Yellow) @ 2.00
STY6: Standard Curb 6" (Yellow) @ 3.03

Location								Length by Line Type (Unfactored)														
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			BCY4*	DCY4	NPY4**	BLW4	ELW4	ELY4	SLW2	CHW8	SLW4	DLW4	RLW4	RLY4	CHY8	STY6		Remarks
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
I-35	1344+00.00	1374+82.00	NB	Wet Retroreflective Removable Tape			X								30.82								STAGE 2A - TEMPORARY
I-35	1351+20.00	1374+82.00	NB	Wet Retroreflective Removable Tape			X								23.62					23.62			STAGE 2A - TEMPORARY
I-35	1374+82.00	1433+60.00	NB	Wet Retroreflective Removable Tape			X					62.60											STAGE 2A - TEMPORARY
I-35	1374+82.00	1448+75.00	NB	Wet Retroreflective Removable Tape		X					73.93												STAGE 2A - TEMPORARY
I-35	1374+82.00	1448+75.00	NB	Wet Retroreflective Removable Tape	X								73.93										STAGE 2A - TEMPORARY
I-35	1433+60.00	1435+40.00	NB	Wet Retroreflective Removable Tape			X										1.80						STAGE 2A - TEMPORARY
I-35	1433+60.00	1443+38.00	NB	Wet Retroreflective Removable Tape			X											9.78					STAGE 2A - TEMPORARY
I-35	1435+40.00	1438+15.00	NB	Wet Retroreflective Removable Tape			X								2.75								STAGE 2A - TEMPORARY
I-35	1438+15.00	1439+50.00	NB	Wet Retroreflective Removable Tape			X								2.70								STAGE 2A - TEMP., 2 LINES
I-35	1439+50.00	1443+05.00	NB	Wet Retroreflective Removable Tape	X														3.55				STAGE 2A - TEMPORARY
I-35	1439+50.00	1445+60.00	NB	Wet Retroreflective Removable Tape			X					6.10											STAGE 2A - TEMPORARY
I-35	1445+60.00	1448+75.00	NB	Wet Retroreflective Removable Tape		X									3.15								STAGE 2A - TEMPORARY
I-35	1448+75.00	1462+45.00	NB	Wet Retroreflective Removable Tape	X	X	X								27.40					13.70			STAGE 2A - TEMPORARY
I-35	1448+75.00	1462+45.00	SB	Wet Retroreflective Removable Tape	X										27.40					13.70			STAGE 2A - TEMPORARY
I-35	1462+45.00	1535+50.00	NB	Wet Retroreflective Removable Tape		X					73.05												STAGE 2A - TEMPORARY
I-35	1462+45.00	1535+50.00	NB	Wet Retroreflective Removable Tape	X								73.05										STAGE 2A - TEMPORARY
I-35	1462+45.00	1468+66.00	NB	Wet Retroreflective Removable Tape			X					6.21											STAGE 2A - TEMPORARY
I-35 - RAMP	1462+66.00	1468+66.00	NB	Wet Retroreflective Removable Tape			X								6.00								STAGE 2A - TEMPORARY, RAMP
I-35	1468+66.00	1472+25.00	NB	Wet Retroreflective Removable Tape	X		X								3.59								STAGE 2A - TEMP., 2 LINES
I-35	1468+66.00	1481+25.00	NB	Wet Retroreflective Removable Tape			X											12.59					STAGE 2A - TEMPORARY
I-35	1481+25.00	1539+05.00	NB	Wet Retroreflective Removable Tape			X					57.80											STAGE 2A - TEMPORARY
I-35	1472+25.00	1478+25.00	NB	Wet Retroreflective Removable Tape			X										6.00						STAGE 2A - TEMPORARY
I-35	1535+50.00	1550+35.00	NB	Wet Retroreflective Removable Tape			X								14.85								STAGE 2A - TEMPORARY
I-35	1535+50.00	1558+90.00	NB	Wet Retroreflective Removable Tape		X									23.40								STAGE 2A - TEMPORARY
I-35	1535+50.00	1558+90.00	NB	Wet Retroreflective Removable Tape	X															23.40			STAGE 2A - TEMPORARY
I-35	1550+35.00	1551+83.00	NB	Wet Retroreflective Removable Tape			X										1.48						STAGE 2A - TEMPORARY
I-35	1550+35.00	1555+02.00	NB	Wet Retroreflective Removable Tape			X											4.67					STAGE 2A - TEMPORARY
I-35	1551+83.00	1558+90.00	NB	Wet Retroreflective Removable Tape			X								7.07								STAGE 2A - TEMPORARY
I-35	1551+83.00	1555+02.00	NB	Wet Retroreflective Removable Tape	X										3.19								STAGE 2A - TEMPORARY
I-35	1344+00.00	1364+04.00	NB	Removal of Paint			X				20.04	20.04											STAGE 2A - EXISTING
I-35	1351+20.00	1364+04.00	NB	Removal of Paint			X				12.84		12.84										STAGE 2A - EXISTING
I-35	1438+23.00	1442+00.00	NB	Removal of Paint	X	X					3.77		3.77										STAGE 2A - EXISTING
I-35	1438+23.00	1439+04.00	NB	Removal of Paint			X										0.81						STAGE 2A - EXISTING
I-35	1438+23.00	1439+18.00	NB	Removal of Paint			X											0.95					STAGE 2A - EXISTING
I-35	1439+04.00	1443+04.00	NB	Removal of Paint			X								4.00								STAGE 2A - EXISTING
I-35	1439+04.00	1442+00.00	NB	Removal of Paint			X								2.96								STAGE 2A - EXISTING
I-35	1448+75.00	1462+45.00	SB	Removal of Paint	X						13.70	13.70	13.70										STAGE 2A - EXISTING
I-35 - RAMP	1462+66.00	1470+00.00	NB	Removal of Paint			X				7.34						7.34						STAGE 2A - EXISTING - RAMP
I-35	1468+66.00	1472+00.00	NB	Removal of Paint			X				3.34		3.34		6.68								STAGE 2A - EXISTING
I-35	1545+75.00	1558+90.00	NB	Removal of Paint			X				13.15		13.15										STAGE 2A - EXISTING
I-35	1545+75.00	1548+72.00	NB	Removal of Paint			x					2.97											STAGE 2A - EXISTING
I-35	1548+72.00	1551+40.00	NB	Removal of Paint			X										2.68						STAGE 2A - EXISTING
I-35	1548+72.00	1555+02.00	NB	Removal of Paint			X											6.30					STAGE 2A - EXISTING
I-35	1551+40.00	1555+02.00	NB	Removal of Paint			X								3.62								STAGE 2A - EXISTING
I-35	1551+40.00	1555+03.00	NB	Removal of Paint			X								3.63								STAGE 2A - EXISTING
I-35	1555+03.00	1558+90.00	NB	Removal of Paint			x					3.87											STAGE 2A - EXISTING
I-35	1351+20.00	1354+88.00	NB	Wet Retroreflective Removable Tape			X				3.68	3.68	3.68										STAGE 2 - TEMPORARY
I-35	1354+88.00	1378+50.00	NB	Wet Retroreflective Removable Tape		X	X								47.24	23.62							STAGE 2 - TEMPORARY
I-35	1351+20.00	1374+82.00	NB	Removal of Removable Tape		X	X								47.24	23.62							STAGE 2 - TEMP. (STAGE 2A)
I-35	1374+82.00	1378+50.00	NB	Removal of Removable Tape		X	X				3.68	3.68	3.68										STAGE 2 - TEMP. (STAGE 2A)
I-35	1420+15.00	1421+95.00	NB	Wet Retroreflective Removable Tape			X										1.80						STAGE 3 - TEMPORARY
I-35	1420+15.00	1439+18.00	NB	Wet Retroreflective Removable Tape			X											19.03					STAGE 3 - TEMPORARY
I-35	1425+45.00	1429+00.00	NB	Wet Retroreflective Removable Tape	X										7.10								STAGE 3 - TEMPORARY
I-35	1429+00.00	1443+05.00	NB	Wet Retroreflective Removable Tape	X														14.05				STAGE 3 - TEMPORARY
I-35	1433+60.00	1439+50.00	NB	Wet Retroreflective Removable Tape								5.90											STAGE 3 - TEMPORARY
I-35	1462+66.00	1468+66.00	NB	Wet Retroreflective Removable Tape	X															6.00			STAGE 3 - TEMPORARY
I-35	1462+66.00	1470+00.00	NB	Wet Retroreflective Removable Tape			X											7.34					STAGE 3 - TEMPORARY
I-35	1468+66.00	1481+25.00	NB	Wet Retroreflective Removable Tape			X					12.59											STAGE 3 - TEMPORARY
I-35	1468+66.00	1482+00.00	NB	Wet Retroreflective Removable Tape			X												13.34				STAGE 3 - TEMPORARY
I-35	1473+00.00	1499+20.00	NB	Wet Retroreflective Removable Tape			X											26.20					STAGE 3 - TEMPORARY
I-35	1481+25.00	1490+19.00	NB	Wet Retroreflective Removable Tape			X								8.94								STAGE 3 - TEMPORARY
I-35	1482+00.00	1490+19.00	NB	Wet Retroreflective Removable Tape	X										8.19								STAGE 3 - TEMPORARY
I-35	1490+19.00	1499+20.00	NB	Wet Retroreflective Removable Tape			X										9.01						STAGE 3 - TEMPORARY
I-35	1515+25.00	1549+19.00	NB	Wet Retroreflective Removable Tape			X								33.94								STAGE 3 - TEMPORARY
I-35	1515+25.00	1550+90.00	NB	Wet Retroreflective Removable Tape	X	X									35.65					35.65			STAGE 3 - TEMPORARY
I-35	1549+19.00	1550+88.00	NB	Wet Retroreflective Removable Tape			X					1.69											STAGE 3 - TEMPORARY
i-35	1550+90.00	1558+90.00	NB	Wet Retroreflective Removable Tape			X					8.00											STAGE 3 - TEMPORARY
I-35	1420+15.00	1421+95.00	NB	Removal of Removable Tape			X					1.80											STAGE 3 - TEMP. (STAGE 1)
I-35	1425+45.00	1429+00.00	NB	Removal of Removable Tape			X					3.55											STAGE 3 - TEMP. (STAGE 2)
I-35	1433+60.00	1435+40.00	NB	Removal of Removable Tape			X										1.80						STAGE 3 - TEMP. (STAGE 2)
I-35	1433+60.00	1438+31.00	NB	Removal of Removable Tape			X											4.71					STAGE 3 - TEMP. (STAGE 2)

PAVEMENT MARKING LINE TYPES

See PM-110

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

BCY4: Broken Centerline (Yellow) @ 0.25 | DCY4: Double Centerline (Yellow) @ 2.00 | NPY4: No Passing Zone Line (Yellow) @ 1.25 | BLW4: Broken Lane Line (White) @ 0.25 | ELW4: Edge Line Right (White) @ 1.00
ELY4: Edge Line Left (Yellow) @ 1.00 | SLW2: Stop Line (White) @ 6.00 | CHW8: Channelizing Line (White) @ 2.00 | SLW4: Solid Lane Line (White) @ 1.00 | DLW4: Dotted Line (White) @ 0.33
RLW4: Ramp Edge Line Right (White) @ 1.00 | RLY4: Ramp Edge Line Left (Yellow) @ 1.00 | CHY8: Channelizing Line (Yellow) @ 2.00 | STY6: Standard Curb 6" (Yellow) @ 3.03

Location								Length by Line Type (Unfactored)												
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			BCY4*	DCY4	NPY4**	BLW4	ELW4	ELY4	SLW2	CHW8	SLW4	DLW4	RLW4	RLY4	CHY8	STY6		Remarks
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
I-35	1435+40.00	1439+12.00	NB	Removal of Removable Tape			x								3.72								STAGE 3 - TEMP. (STAGE 2)
I-35	1438+15.00	1439+50.00	NB	Removal of Removable Tape			x								1.35								STAGE 3 - TEMP. (STAGE 2)
I-35	1462+66.00	1468+66.00	NB	Removal of Removable Tape			X								6.00								STAGE 3 - TEMP. (STAGE 2)
I-35	1462+66.00	1468+66.00	NB	Removal of Paint			x												6.00				STAGE 3 - EXISTING
I-35	1468+65.00	1469+69.00	NB	Removal of Removable Tape			X								1.04								STAGE 3 - TEMP. (STAGE 2)
I-35	1468+66.00	1470+26.00	NB	Removal of Removable Tape			x											1.60					STAGE 3 - TEMP. (STAGE 2)
I-35	1471+49.00	1472+25.00	NB	Removal of Removable Tape			X								0.76								STAGE 3 - TEMP. (STAGE 2)
I-35	1472+07.00	1481+25.00	NB	Removal of Removable Tape			x											9.18					STAGE 3 - TEMP. (STAGE 2)
I-35	1472+25.00	1478+25.00	NB	Removal of Removable Tape			X										6.00						STAGE 3 - TEMP. (STAGE 2)
I-35	1481+25.00	1499+20.00	NB	Removal of Removable Tape			x					17.95											STAGE 3 - TEMP. (STAGE 2)
I-35	1515+25.00	1539+05.00	NB	Removal of Removable Tape	x	x	x				23.80	23.80	23.80										STAGE 3 - TEMP. (STAGE 2)
I-35	1539+05.00	1550+35.00	NB	Removal of Removable Tape			x								11.30								STAGE 3 - TEMP. (STAGE 2)
I-35	1539+05.00	1558+90.00	NB	Removal of Removable Tape			X								19.85								STAGE 3 - TEMP. (STAGE 2)
I-35	1539+05.00	1558+90.00	NB	Removal of Removable Tape	X															19.85			STAGE 3 - TEMP. (STAGE 2)
I-35	1550+35.00	1552+22.00	NB	Removal of Removable Tape			X										1.59						STAGE 3 - TEMP. (STAGE 2)
I-35	1550+35.00	1555+02.00	NB	Removal of Removable Tape			X											4.39					STAGE 3 - TEMP. (STAGE 2)
I-35	1551+86.00	1558+90.00	NB	Removal of Removable Tape			X								7.04								STAGE 3 - TEMP. (STAGE 2)
I-35	1551+83.00	1555+02.00	NB	Removal of Removable Tape			X								3.19								STAGE 3 - TEMP. (STAGE 2)
I-35	1550+88.00	1555+02.00	NB	Waterborne/Solvent Paint			X								8.28			4.14					STAGE 3 - PERMANENT
I-35	1550+90.00	1558+90.00	NB	Waterborne/Solvent Paint		X					8.00												STAGE 3 - PERMANENT
I-35	1555+02.00	1558+90.00	NB	Waterborne/Solvent Paint			X					3.88											STAGE 3 - PERMANENT
I-35	1345+30.00	1605+00.00	NB	Waterborne/Solvent Paint	X	X					259.70		259.70										STAGE 4 - PERMANENT
I-35	1344+00.00	1371+90.00	NB	Waterborne/Solvent Paint			X					27.90											STAGE 4 - PERMANENT
I-35	1349+50.00	1375+00.00	NB	Waterborne/Solvent Paint		X					25.50												STAGE 4 - PERMANENT
I-35	1351+20.00	1555+17.00	NB	Waterborne/Solvent Paint		X					203.97												STAGE 4 - PERMANENT
I-35	1371+90.00	1375+00.00	NB	Waterborne/Solvent Paint			X								6.20			3.10					STAGE 4 - PERMANENT
I-35	1375+00.00	1406+04.00	NB	Waterborne/Solvent Paint			X					31.04											STAGE 4 - PERMANENT
I-35	1406+04.00	1409+50.00	NB	Waterborne/Solvent Paint			X								3.46								STAGE 4 - PERMANENT
I-35	1409+50.00	1414+50.00	NB	Waterborne/Solvent Paint			X										5.00						STAGE 4 - PERMANENT
I-35	1409+50.00	1419+50.00	NB	Waterborne/Solvent Paint			X											10.00					STAGE 4 - PERMANENT
I-35	1409+50.00	1439+10.00	NB	Waterborne/Solvent Paint		X					29.60												STAGE 4 - PERMANENT
I-35	1419+50.00	1438+22.00	NB	Waterborne/Solvent Paint			X					18.72											STAGE 4 - PERMANENT
I-35	1438+22.00	1443+05.00	NB	Waterborne/Solvent Paint			X											4.83					STAGE 4 - PERMANENT
I-35	1439+10.00	1443+05.00	NB	Waterborne/Solvent Paint			X								7.90								STAGE 4 - PERMANENT
I-35	1443+05.00	1468+66.00	NB	Waterborne/Solvent Paint			X					25.61											STAGE 4 - PERMANENT
I-35	1448+75.00	1462+45.00	SB	Waterborne/Solvent Paint			X				13.70	13.70	13.70										STAGE 4 - PERMANENT
I-35	1462+66.00	1468+66.00	NB	Waterborne/Solvent Paint			X												6.00				STAGE 4 - PERMANENT
I-35	1462+66.00	1525+75.00	NB	Waterborne/Solvent Paint		X					63.09												STAGE 4 - PERMANENT
I-35	1462+66.00	1482+28.00	NB	Waterborne/Solvent Paint			X											19.62					STAGE 4 - PERMANENT
I-35	1468+66.00	1474+38.00	NB	Waterborne/Solvent Paint			X								11.44								STAGE 4 - PERMANENT
I-35	1482+28.00	1525+75.00	NB	Waterborne/Solvent Paint			X					43.47											STAGE 4 - PERMANENT
I-35	1525+75.00	1542+20.00	NB	Waterborne/Solvent Paint			X										16.45						STAGE 4 - PERMANENT
I-35	1525+75.00	1550+63.00	NB	Waterborne/Solvent Paint			X											24.88					STAGE 4 - PERMANENT
I-35	1542+20.00	1550+63.00	NB	Waterborne/Solvent Paint			X								8.43								STAGE 4 - PERMANENT
I-35	1555+03.00	1555+17.00	NB	Waterborne/Solvent Paint			X					0.14											STAGE 4 - PERMANENT
I-35	1599+40.00	1603+25.00	NB	Waterborne/Solvent Paint			X					3.85											STAGE 4 - PERMANENT
I-35	1599+40.00	1616+00.00	NB	Waterborne/Solvent Paint			X				16.60												STAGE 4 - PERMANENT
i-35	1603+25.00	1605+63.00	NB	Waterborne/Solvent Paint			X								2.38								STAGE 4 - PERMANENT
Ramp B	2375+00.00	2386+70.00	NB	Waterborne/Solvent Paint	X	X	X				11.70							11.70	11.70				STAGE 4 - PERMANENT
Ramp B	2386+70.00	2389+39.19	NB	Waterborne/Solvent Paint	X	X	X											2.69	2.69				STAGE 4 - PERMANENT
Ramp B	2386+70.00	2389+39.19	NB	Waterborne/Solvent Paint	X	X										5.38							STAGE 4 - PERMANENT
Ramp B	2389+39.19	2389+39.00	NB	Waterborne/Solvent Paint	X	X	X							0.52									STAGE 4 - PERMANENT
Ramp C	3389+72.00	3406+08.00	NB	Waterborne/Solvent Paint	X														16.36				STAGE 4 - PERMANENT
Ramp C	3389+44.00	3409+50.00	NB	Waterborne/Solvent Paint			X											20.06					STAGE 4 - PERMANENT
Ramp C	3389+91.00	3409+50.00	NB	Waterborne/Solvent Paint		X					19.59												STAGE 4 - PERMANENT
Ramp C	3406+08.00	3409+50.00	NB	Waterborne/Solvent Paint	X										3.42								STAGE 4 - PERMANENT
I-35	1345+30.00	1351+20.00	NB	Removal of Paint	X								5.90										STAGE 4 - EXISTING
I-35	1351+20.00	1354+88.00	NB	Removal of Removable Tape	X								3.68										STAGE 4 - TEMP. (STAGE 2)
I-35	1344+00.00	1378+50.00	NB	Removal of Removable Tape			x								34.50								STAGE 4 - TEMP. (STAGE 2)
I-35	1354+88.00	1378+50.00	NB	Removal of Removable Tape			X								23.62					23.62			STAGE 4 - TEMP. (STAGE 2)
I-35	1378+50.00	1445+60.00	NB	Removal of Removable Tape	X							67.10											STAGE 4 - TEMP. (STAGE 2)
I-35	1378+50.00	1448+75.00	NB	Removal of Removable Tape	X						79.40		79.40										STAGE 4 - TEMP. (STAGE 2)
I-35	1420+15.00	1421+95.00	NB	Removal of Removable Tape			X										1.80						STAGE 4 - TEMP. (STAGE 3)
I-35	1420+15.00	1438+81.00	NB	Removal of Removable Tape			X											18.66					STAGE 4 - TEMP. (STAGE 3)
I-35	1421+95.00	1425+45.00	NB	Removal of Removable Tape	X							3.50											STAGE 4 - TEMP. (STAGE 2)
I-35	1425+45.00	1429+00.00	NB	Removal of Removable Tape	X										7.10								STAGE 4 - TEMP. (STAGE 3)
I-35	1429+00.00	1448+75.00	NB	Removal of Removable Tape	X							19.75											STAGE 4 - TEMP. (STAGE 2)
I-35	1429+00.00	1438+24.00	NB	Removal of Removable Tape			X												9.24				STAGE 4 - TEMP. (STAGE 3)
I-35	1445+60.00	1448+75.00	NB	Removal of Removable Tape	X										3.15								STAGE 4 - TEMP. (STAGE 2)
I-35	1448+75.00	1462+45.00	NB	Removal of Removable Tape	X										27.40					13.70			STAGE 4 - TEMP. (STAGE 2)
I-35	1448+75.00	1462+45.00	SB	Removal of Removable Tape	X										27.40					13.70			STAGE 4 - TEMP. (STAGE 2)
I-35	1462+45.00	1515+25.00	NB	Removal of Removable Tape	X						52.80	52.80	52.80										STAGE 4 - TEMP. (STAGE 2)

PAVEMENT MARKING LINE TYPES

See PM-110

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**NPY4 - For estimating purposes only. No Passing Zone Lines will be located in the field.
***MNY4 - Factor of 1.00 as value includes number of 4-inch passes to cover median nose area.

BCY4: Broken Centerline (Yellow) @ 0.25 | DCY4: Double Centerline (Yellow) @ 2.00 | NPY4: No Passing Zone Line (Yellow) @ 1.25 | BLW4: Broken Lane Line (White) @ 0.25 | ELW4: Edge Line Right (White) @ 1.00
ELY4: Edge Line Left (Yellow) @ 1.00 | SLW2: Stop Line (White) @ 6.00 | CHW8: Channelizing Line (White) @ 2.00 | SLW4: Solid Lane Line (White) @ 1.00 | DLW4: Dotted Line (White) @ 0.33
RLW4: Ramp Edge Line Right (White) @ 1.00 | RLY4: Ramp Edge Line Left (Yellow) @ 1.00 | CHY8: Channelizing Line (Yellow) @ 2.00 | STY6: Standard Curb 6" (Yellow) @ 3.03

Location							Length by Line Type (Unfactored)														
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			BCY4*	DCY4	NPY4**	BLW4	ELW4	ELY4	SLW2	CHW8	SLW4	DLW4	RLW4	RLY4	CHY8	STY6		Remarks
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
I-35	1462+66.00	1468+66.00	NB	Removal of Removable Tape			X													6.00			STAGE 4 - TEMP. (STAGE 3)
I-35	1473+00.00	1482+00.00	NB	Removal of Removable Tape			X												9.00				STAGE 4 - TEMP. (STAGE 3)
I-35	1473+00.00	1498+97.00	NB	Removal of Removable Tape			X											25.97					STAGE 4 - TEMP. (STAGE 3)
I-35	1481+25.00	1489+97.00	NB	Removal of Removable Tape	X										8.72								STAGE 4 - TEMP. (STAGE 3)
I-35	1482+00.00	1489+97.00	NB	Removal of Removable Tape	X										7.97								STAGE 4 - TEMP. (STAGE 3)
I-35	1482+00.00	1550+63.00	NB	Removal of Removable Tape			X					68.63											STAGE 4 - TEMP. (STAGE 3)
I-35	1489+97.00	1498+97.00	NB	Removal of Removable Tape	X												9.00						STAGE 4 - TEMP. (STAGE 3)
I-35	1498+97.00	1521+25.00	NB	Removal of Removable Tape	X							22.28											STAGE 4 - TEMP. (STAGE 3)
I-35	1515+25.00	1549+19.00	NB	Removal of Removable Tape	X										33.94								STAGE 4 - TEMP. (STAGE 3)
I-35	1515+25.00	1550+90.00	NB	Removal of Removable Tape	X										35.65					35.65			STAGE 4 - TEMP. (STAGE 3)
I-35	1549+19.00	1550+88.00	NB	Removal of Removable Tape			X					1.69											STAGE 4 - TEMP. (STAGE 3)
	1550+90.00	1558+90.00	NB	Removal of Removable Tape	X								8.00										STAGE 4 - TEMP. (STAGE 3)
I-35	1558+90.00	1605+00.00	NB	Removal of Paint			X						46.10										STAGE 4 - EXISTING
I-35	1599+40.00	1603+25.00	NB	Removal of Paint			X					3.85											STAGE 4 - EXISTING
I-35	1599+40.00	1605+00.00	NB	Removal of Paint			X				5.60												STAGE 4 - EXISTING
I-35	1603+25.00	1616+00.00	NB	Removal of Paint			X								12.75								STAGE 4 - EXISTING
I-35	1605+63.00	1616+00.00	NB	Removal of Paint			x								10.37								STAGE 4 - EXISTING
I-35	1345+30.00	1603+15.00	SB	Waterborne/Solvent Paint			X				257.85		257.85										STAGE 5 - PERMANENT
I-35	1590+50.00	1594+75.00	SB	Waterborne/Solvent Paint			X								4.25								STAGE 5 - PERMANENT
I-35	1594+75.00	1605+00.00	SB	Waterborne/Solvent Paint			X										10.25						STAGE 5 - PERMANENT
I-35	1594+00.00	1594+75.00	SB	Waterborne/Solvent Paint			x								0.75								STAGE 5 - PERMANENT
I-35	1594+75.00	1619+80.00	SB	Waterborne/Solvent Paint		X					25.80												STAGE 5 - PERMANENT
I-35	1345+30.00	1603+15.00	SB	Removal of Paint			X						257.10										STAGE 5 - EXISTING
I-35	1594+00.00	1619+80.00	SB	Removal of Paint		X											25.80						STAGE 5 - EXISTING
I-35	1594+75.00	1603+15.00	SB	Removal of Paint	X						8.40												STAGE 5 - EXISTING
I-35	1590+50.00	1605+00.00	SB	Removal of Paint			X				14.50												STAGE 5 - EXISTING
GRAND AVE	3367+63.00	3370+00.00	WB	Nonreflective, Preformed Removable Tape	X				2.37														STAGE 2 - EXISTING
GRAND AVE	3381+08.00	3383+02.00	EB	Nonreflective, Preformed Removable Tape			X									1.94							STAGE 2 - EXISTING
GRAND AVE	3386+35.00	3388+15.00	EB	Nonreflective, Preformed Removable Tape			X				1.80												STAGE 2 - EXISTING
GRAND AVE	3386+35.00	3388+15.00	EB	Nonreflective, Preformed Removable Tape			X					1.80											STAGE 2 - EXISTING
GRAND AVE	3406+03.00	3407+84.00	EB	Nonreflective, Preformed Removable Tape			X				1.81												STAGE 2 - EXISTING
GRAND AVE	3406+02.00	3408+56.00	EB	Nonreflective, Preformed Removable Tape			X													2.54			STAGE 2 - EXISTING
GRAND AVE	3407+00.00	3408+56.00	WB	Nonreflective, Preformed Removable Tape			X													1.56			STAGE 2 - EXISTING
GRAND AVE	3408+56.00	3410+80.00	BOTH	Nonreflective, Preformed Removable Tape			X			4.48													STAGE 2 - EXISTING
GRAND AVE	3409+00.00	3412+33.00	WB	Nonreflective, Preformed Removable Tape	X		X				3.33												STAGE 2 - EXISTING
					X																		
GRAND AVE	3367+63.00	3384+58.00	EB	Wet Retroreflective Removable Tape			X					16.95											STAGE 2 - TEMPORARY
GRAND AVE	3371+67.00	3381+22.00	EB	Wet Retroreflective Removable Tape			X		9.55														STAGE 2 - TEMPORARY
GRAND AVE	3377+65.00	3383+02.00	EB	Wet Retroreflective Removable Tape			X					5.37											STAGE 2 - TEMPORARY
GRAND AVE	3381+22.00	3384+58.00	EB	Wet Retroreflective Removable Tape			X														6.72		STAGE 2 - TEMPORARY
GRAND AVE	3385+35.00	3386+35.00	EB	Wet Retroreflective Removable Tape			X									1.00							STAGE 2 - TEMPORARY
GRAND AVE	3385+35.00	3406+03.00	EB	Wet Retroreflective Removable Tape			X					20.68											STAGE 2 - TEMPORARY
GRAND AVE	3385+35.00	3407+84.00	EB	Wet Retroreflective Removable Tape			X		22.49														STAGE 2 - TEMPORARY
GRAND AVE	3385+35.00	3410+80.00	EB	Wet Retroreflective Removable Tape			X					25.45											STAGE 2 - TEMPORARY
GRAND AVE	3407+84.00	3410+80.00	BOTH	Wet Retroreflective Removable Tape	X		X														5.92		STAGE 2 - TEMPORARY
GRAND AVE	3412+33.00	3416+80.00	WB	Wet Retroreflective Removable Tape	X							4.47											STAGE 2 - TEMPORARY
GRAND AVE	3418+15.00	3418+65.00	WB	Wet Retroreflective Removable Tape	X										1.00								STAGE 2 - TEMPORARY
RAMP A	11389+68.00	11390+96.00	SB	Wet Retroreflective Removable Tape		X						1.28											STAGE 2 - TEMPORARY
RAMP A	11389+61.00	11392+00.00	SB	Wet Retroreflective Removable Tape		X						2.39											STAGE 2B - TEMPORARY
GRAND AVE	3367+63.00	3370+00.00	BOTH	Removal of Removable Tape	X		X		2.37														STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3367+63.00	3384+58.00	EB	Removal of Removable Tape			X					16.95											STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3371+67.00	3381+22.00	EB	Removal of Removable Tape			X		9.55														STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3377+65.00	3383+02.00	EB	Removal of Removable Tape			X					5.37											STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3381+08.00	3383+02.00	EB	Removal of Removable Tape			X									1.94							STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3381+22.00	3384+58.00	EB	Removal of Removable Tape			X														6.72		STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3385+35.00	3386+35.00	EB	Removal of Removable Tape			X									1.00							STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3385+35.00	3410+80.00	EB	Removal of Removable Tape			X					25.45											STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3385+35.00	3407+84.00	EB	Removal of Removable Tape			X		22.49														STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3386+35.00	3388+15.00	EB	Removal of Removable Tape			X				1.80												STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3386+35.00	3388+15.00	EB	Removal of Removable Tape			x					1.80											STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3385+35.00	3406+03.00	EB	Removal of Removable Tape			x					20.68											STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3389+87.00	3393+97.93	EB	Removal of Paint	X											4.11							STAGE 3 - EXISTING
GRAND AVE	3406+02.00	3408+56.00	EB	Removal of Removable Tape			x													2.54			STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3406+03.00	3407+84.00	EB	Removal of Removable Tape			x				1.81												STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3407+00.00	3408+56.00	WB	Removal of Removable Tape	x															1.56			STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3407+84.00	3410+80.00	EB	Removal of Removable Tape			x														5.92		STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3408+56.00	3410+80.00	EB	Removal of Removable Tape			x			4.48													STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3409+00.00	3412+33.00	WB	Removal of Removable Tape	x						3.33												STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3412+33.00	3416+80.00	WB	Removal of Removable Tape	x							4.47											STAGE 3 - TEMP (STAGE 2)
GRAND AVE	3418+15.00	3418+65.00	WB	Removal of Removable Tape	x										1.00								STAGE 3 - TEMP (STAGE 2)

PAVEMENT MARKING LINE TYPES

See PM-110

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

BCY4: Broken Centerline (Yellow) @ 0.25
DCY4: Double Centerline (Yellow) @ 2.00
NPY4: No Passing Zone Line (Yellow) @ 1.25
BLW4: Broken Lane Line (White) @ 0.25
ELW4: Edge Line Right (White) @ 1.00
ELY4: Edge Line Left (Yellow) @ 1.00
SLW2: Stop Line (White) @ 6.00
CHW8: Channelizing Line (White) @ 2.00
SLW4: Solid Lane Line (White) @ 1.00
DLW4: Dotted Line (White) @ 0.33
RLW4: Ramp Edge Line Right (White) @ 1.00
RLY4: Ramp Edge Line Left (Yellow) @ 1.00
CHY8: Channelizing Line (Yellow) @ 2.00
STY6: Standard Curb 6" (Yellow) @ 3.03

Location								Length by Line Type (Unfactored)														
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			BCY4*	DCY4	NPY4**	BLW4	ELW4	ELY4	SLW2	CHW8	SLW4	DLW4	RLW4	RLY4	CHY8	STY6		Remarks
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
RAMP A	11389+68.00	11390+96.00	SB	Removal of Removable Tape		x						1.28										STAGE 3 - TEMP (STAGE 2)
RAMP A	11389+61.00	11392+00.00	SB	Removal of Removable Tape		x						2.39										STAGE 3 - TEMP (STAGE 2B)
GRAND AVE	3367+63.00	3371+67.00	EB	Wet Retroreflective Removable Tape			x					4.04										STAGE 3 - TEMPORARY
GRAND AVE	3367+63.00	3371+67.00	EB	Nonreflective, Preformed Removable Tape			x		4.04													STAGE 3 - TEMPORARY
GRAND AVE	3368+66.00	3371+32.00	EB	Wet Retroreflective Removable Tape			x		2.66													STAGE 3 - TEMPORARY
GRAND AVE	3374+92.00	3377+75.00	WB	Waterborne/Solvent Paint	x		X					2.83	2.83									STAGE 3 - PERMANENT
GRAND AVE	3377+75.00	3400+00.00	WB	Waterborne/Solvent Paint		X					22.25											STAGE 3 - PERMANENT
GRAND AVE	3383+59.00	3385+04.00	WB	Waterborne/Solvent Paint			X					1.45										STAGE 3 - PERMANENT
GRAND AVE	3385+48.00	3385+68.00	WB	Waterborne/Solvent Paint			X						0.20									STAGE 3 - PERMANENT
GRAND AVE	3385+81.73	3390+41.00	WB	Waterborne/Solvent Paint	X	X									9.19							STAGE 3 - PERMANENT
GRAND AVE	3385+81.73	3390+41.00	WB	Waterborne/Solvent Paint	X	X									7.30							STAGE 3 - PERMANENT
GRAND AVE	3389+88.00	3393+89.52	EB	Waterborne/Solvent Paint	X	X									8.03							STAGE 3 - PERMANENT
GRAND AVE	3389+88.00	3393+89.52	EB	Waterborne/Solvent Paint	X	X									5.50							STAGE 3 - PERMANENT
GRAND AVE	3394+87.00	3398+23.00	WB	Waterborne/Solvent Paint	x											3.36						STAGE 3 - PERMANENT
GRAND AVE	3397+50.00	3400+00.00	WB	Waterborne/Solvent Paint	x								2.50									STAGE 3 - PERMANENT
GRAND AVE	3399+43.00	3403+00.00	WB	Waterborne/Solvent Paint	x							3.57										STAGE 3 - PERMANENT
														0.63								
Ramp A	11390+87.00	11390+93.61	SB	Waterborne/Solvent Paint	X	X	X															
RAMP A	11390+96.00	11392+00.00	WB	Waterborne/Solvent Paint	x	X	X						1.04			3.12						STAGE 3 - PERMANENT
RAMP A	11391+24.00	11392+00.00	WB	Waterborne/Solvent Paint			X					0.76										STAGE 3 - PERMANENT
GRAND AVE	3367+63.00	3371+67.00	WB	Removal of Removable Tape	x				4.04													STAGE 4 - TEMP (STAGE 3)
GRAND AVE	3367+63.00	3371+67.00	WB	Removal of Removable Tape	x							4.04										STAGE 4 - TEMP (STAGE 3)
GRAND AVE	3368+66.00	3371+32.00	EB	Removal of Removable Tape			x		2.66													STAGE 4 - TEMP (STAGE 3)
GRAND AVE	3385+41.00	3385+60.00	EB	Waterborne/Solvent Paint			x						0.19									STAGE 4 - PERMANENT
GRAND AVE	3394+17.00	3394+36.00	EB	Waterborne/Solvent Paint			X						0.19									STAGE 4 - PERMANENT
GRAND AVE	3394+85.00	3396+10.00	EB	Waterborne/Solvent Paint			X					1.25										STAGE 4 - PERMANENT
GRAND AVE	3399+75.00	3401+10.00	EB	Waterborne/Solvent Paint			x					1.35										STAGE 4 - PERMANENT
				Factored Total: Waterborne/Solvent Paint				-	-	-	239.34	179.52	538.20	3.12	173.05	11.86	10.57	101.02	36.75	-	-	-	
				Factored Total: Wet Retroreflective Removable Tape				-	69.40	-	37.67	245.20	150.66	-	636.00	24.62	6.70	79.61	30.94	232.14	38.30	-	
				Factored Total: Nonreflective, Preformed Removable Tape				-	12.82	5.60	1.74	1.80	-	-	-	1.94	-	-	-	8.20	-	-	
				Factored Total: Removal of Paint				-	-	-	25.67	44.43	355.90	-	88.02	4.11	12.21	7.25	6.00	-	-	-	
				Factored Total: Removal of Removable Tape				-	82.22	5.60	41.66	368.96	171.36	-	623.88	26.56	6.73	64.51	18.24	233.24	38.30	-	
				Bid Quantity: Painted Pavement Markings, Waterborne or Solvent-Based							1293.43												
				Bid Quantity: Wet Retroreflective Removable Tape Markings							1551.23												
				Bid Quantity: Removable, Nonreflective, Preformed Tape							32.10												
				Bid Quantity: Pavement Markings Removed							543.59												
				Incidental Removal of Removable Tape							1681.25												

CRASH CUSHIONS

* Bid Item
(1) Lane(s) to which the installation is adjacent.
(2) Complete this section when using the Temporary Crash Cushion bid item and Earthwork is needed for Sand Barrel placement. Refer to BA-500

No.	(1) Direction of Traffic	Location Station	Side	Obstacle Width	Crash Cushion (Select One)*					Sand Barrel Details (2)					Earthwork*		Spare Parts Kit (Select One)*		Obstacle Description	Remarks
					Temporary	Temporary Redirective	Temporary Severe Use	Permanent	Permanent Severe Use	V Length	W Length	X Length	Y Length	Z Length	Excavation Class 10	Embankment in Place	Permanent	Permanent Severe Use		
				FT						FT	FT	FT	FT	FT	CY	CY	EACH	EACH		
1	NB	1362+85.00	RT	1.88	X					0.00	24.25	5.25	3.25	12.00					TBR	STAGE 2A
2	NB	1439+81.00	RT	1.88	X					0.00	24.25	5.25	3.25	12.00					TBR	STAGE 2A
3	NB	1467+91.00	RT	1.88	X					0.00	24.25	5.25	3.25	12.00					TBR	STAGE 2A
4	NB	1362+85.00	RT	1.88	X					0.00	24.25	5.25	3.25	12.00					TBR	STAGE 2A,3
5	NB	1428+61.00	RT	1.88	X					0.00	24.25	5.25	3.25	12.00					TBR	STAGE 3
6	NB	1467+91.00	RT	1.88	X					0.00	24.25	5.25	3.25	12.00					TBR	STAGE 3
7	NB	1482+00.00	RT	1.88	X					0.00	24.25	5.25	3.25	12.00					TBR	STAGE 3
8	NB	1362+58.00	RT	1.88	X					0.00	24.25	5.25	3.25	12.00					TBR	STAGE 4
														Totals		0.0				

PAVEMENT MARKING SYMBOLS AND LEGENDS

Refer to PM-111

Road Identification	Location		STAW	RTAW	LTAW	CSRW	CSLW	CSTW	CRLW	FERW	LLRW	RLRW	RRCW	BLSW	WCSW	WPSB	SCLW	XNGW	STPW	AHDW	ONLW	BIKW	LANW	XITW	Remarks
	Station	Side											RR				SCHOOL	XING	STOP	AHEAD	ONLY	BIKE	LANE	EXIT	
I-35	1345+93.87	R										1													Stage 2 - Temporary
I-35	1346+33.87	R										1													Stage 2 - Temporary
I-35	1348+34.51	R										1													Stage 2 - Temporary
I-35	1348+74.51	R										1													Stage 2 - Temporary
Grand Ave	3410+16.00				1																				Stage 2 - Removal (Existing)
Grand Ave	3410+35.00			1																					Stage 2 - Removal (Existing)
Grand Ave	3392+96.00	R			1																				Stage 3 - Permanent
Grand Ave	3393+33.50	R																			1				Stage 3 - Permanent
Grand Ave	3393+71.00	R			1																				Stage 3 - Permanent
Grand Ave	3410+16.00				1																				Stage 3 - Permanent
Grand Ave	3410+35.00			1																					Stage 3 - Permanent
I-35	1345+93.87	R										1													Stage 4 - Removal (Stage 1)
I-35	1346+33.87	R										1													Stage 4 - Removal (Stage 1)
I-35	1348+34.51	R										1													Stage 4 - Removal (Stage 1)
I-35	1348+74.51	R										1													Stage 4 - removal (Stage 1)
Ramp A	11391+65.00			1	1	1	1																		Stage 4 - Permanent
Ramp B	2388+14.18			1	1			1																	Stage 4 - Permanent
Ramp B	2388+51.77																				2				Stage 4 - Permanent
Ramp B	2388+90.00			1	1			1																	Stage 4 - Permanent
Grand Ave	3386+30.00	L			1																				Stage 4 - Permanent
Grand Ave	3386+65.00	L																							Stage 4 - Permanent
Grand Ave	3387+05.00	L			1																1				Stage 4 - Permanent
Grand Ave	3395+15.29	R		1																					Stage 4 - Permanent
Grand Ave	3395+49.73	R																			1				Stage 4 - Permanent
Grand Ave	3395+90.30	R		1																					Stage 4 - Permanent
																							Totals		
	Total Installed			6	8	1	1	2				4									5		27		
	Total Removed			1	1							4											6		

TABULATION OF SPREADING TOPSOIL

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

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

Placement Description								Topsoil Excavation Available From			
Area	Quantity	Location		Side	Slope	(T)	Remarks	Amount Reserved	Station to Station		Remarks
No.	CY	Station to Station		L. or R.	B. or F.	IN		CY			
1	1205.6	1364+03.94	1378+40.00	R	Both	8.0	NB Mainline	2979.0	1364+03.94	1378+40.00	NB Mainline: 12'' topsoil removal
2	2455.9	1381+91.41	1387+73.06	R	Both	8.0		3869.0	1381+91.41	1387+73.06	
3	2379.3	1392+06.45	1406+03.00	R	Both	8.0		3817.0	1392+06.45	1406+03.00	
4	7381.2	1406+03.00	1443+03.63	R	Both	8.0		14988.0	1406+03.00	1443+03.63	
5	645.8	1443+03.63	1468+67.75	R	Both	8.0		1835.0	1443+03.63	1468+67.75	
6	6123.6	1468+67.75	1509+69.02	R	Both	8.0		10228.0	1468+67.75	1509+69.02	
7	4163.9	1515+66.40	1552+04.79	R	Both	8.0		9477.0	1515+66.40	1552+04.79	
8	4389.0	2375+00.00	2389+71.09	Both	Both	8.0	Ramp B	8963.0	2375+00.00	2389+71.09	Ramp B: 12'' topsoil removal
9	4301.0	3389+54.73	3406+08.26	Both	Both	8.0	Ramp C	9470.0	3389+54.73	3406+08.26	Ramp C: 12'' topsoil removal
10	3375.7	3377+75.00	3389+03.18	L	Both	8.0	Grand Ave West of I-35	6170.0	3377+75.00	3389+03.18	Grand Ave: 12'' topsoil removal
11	2459.1	3389+03.18	3401+00.00	L	Both	8.0	Grand Ave East of I-35	5100.0	3389+03.18	3401+00.00	
12	1005.0	1+00.00	5+07.63	Both	Both	8.0	Channel North of Grand Ave	1508.0	1+00.00	5+07.63	Channel: 12'' topsoil removal
13	2624.5	7+99.44	13+52.21	Both	Both	8.0	Channel South of Grand Ave	3936.0	7+99.44	13+52.21	
Total:	42509.3						Total	82340.0			

REMOVAL OF STEEL BEAM GUARDRAIL

(1) Lane(s) to which the installation is adjacent.
(2) Includes length of End Terminals and End Anchors.

Location					
No.	(1) Direction of Traffic	Station to Station		Side	Removal of Guardrail (2)
					LF
1	N	1377+92.39	1379+16.59	RT	124.8
2	N	1380+80.90	1382+15.64	RT	139.0
3	N	1387+80.95	1388+55.49	RT	75.5
4	N	1437+64.13	1439+17.46	RT	153.5
6	N	1449+08.23	1450+58.67	RT	151.0
7	N	1520+79.58	1521+59.50	RT	78.2
8	W	3388+34.94	3390+27.75	RT	193.0
9	E	3393+00.00	3395+00.00	RT	200.0
				Totals:	1114.8

DRAINAGE STRUCTURE BY ROAD CONTRACTOR

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

Drainage Area	Location	Type	Size	Kind Of Pipe (1)	Length New Const.	Bedding Class	Design Cover (H)	Camber* (RF-30B)	Apron No.		Apron Guard* (RF-26)	Elbow* (RF-13)	Diaphragm* (RF-7)	Tee Section* (RF-21)	"D" Section* (RF-13)	Reducer*	Adaptors* (RF-2)		Connected Pipe Joint* (RF-14)	4" Perforated Subdrain*	Flow Line Elevations				Dimensions Lin. Ft. Total		Dimensions Lin. Ft. Extensions		Skew Ahead Degrees		Dike Rt. / Location Station	Dike Top Elevation	Dike Type	Class 20	Flowable Mortar	Floodable* Backfill (A)	Porous* Backfill (B)	Flooded Backfill (A+B)	Remarks
ACRE			IN		LF		FT	FT	IN	OUT	No.	No.	No.	No.	No.	No.	Type	No.	Type	FT	Lt.	Rt.	Other	Other	Lt.	Rt.	Lt.	Rt.	Lt.	Rt.	Lt.				CY	CY	CY	CY	CY	
MED	1366+50.00	1301	24	RCP	6	B				1												818.49	818.95			129.7		6.0							14.7	0.0	0.0	0.8	0.8	NOTE 1
MED	1375+75.00	1501	24	RCP	14	B																838.47	839.03			131.6		14.0							131.6	0.0	0.0	5.9	5.9	NOTE 2
	1375+75.00	1501	24	CMP	64	C				1		2					C-3	1				820.90	838.47			199.3		64.0								0.0	0.0	5.8	5.8	
MED	1382+50.00	1501	24	CMP	86	C				1		2					C-3	1				829.70	854.04			173.7		86.0							98.2	0.0	0.0	5.8	5.8	NOTE 3
MED	1392+50.00	1501	24	CMP	65	C				1		2					C-3	1				850.18	868.01			152.5		65.0							74.8	0.0	0.0	4.4	4.4	NOTE 4
MED	1400+50.00	1501	24	CMP	38	C				1		2					C-3	1				881.28	890.14			126.3		38.0							174.9	0.0	0.0	2.8	2.8	NOTE 5
3.5	1405+39.00	1301	24	RCP	158	B			1	1											906.50	903.40			142.2	158.2								444.5	57.4	0.0	11.4	11.4	NOTE 6
MED	1416+00.00	1301	24	RCP	28	B				1												927.73	929.09			121.5		28.0							29.8	0.0	0.0	2.2	2.2	NOTE 7
MED	1424+75.00	1501	24	RCP	14	B																935.08	935.64			101.2		14.0							67.4	0.0	0.0	3.2	3.2	NOTE 8
	1424+75.00	1501	24	CMP	30	C				1		2					C-3	1				927.87	935.08			134.1		30.0											0.0	
MED	1429+00.00	1301	24	RCP	14	B				1												944.45	944.81			107.6		14.0							10.0	0.0	0.0	1.3	1.3	NOTE 9
MED	1476+00.00	1301	24	RCP	-	B				1												930.77	931.01			123.5		-							6.0	0.0	0.0	0.4	0.4	NOTE 10
MED	1482+00.00	1301	24	RCP	-	B				1												923.89	923.95			105.6		-							1.8	0.0	0.0	0.4	0.4	NOTE 11
MED	1484+75.00	1301	24	RCP	-	B				1												922.60	922.66			105.6		-							1.6	0.0	0.0	0.4	0.4	NOTE 12
MED	1493+50.00	1301	24	RCP	10	B				1												918.35	918.51			103.6		10.0							11.3	0.0	0.0	1.1	1.1	NOTE 13
MED	1496+00.00	1301	24	RCP	16	B				1												913.18	914.06			115.6		16.0							37.8	0.0	0.0	1.5	1.5	NOTE 14
MED	1522+00.00	1501	24	RCP	16	B																946.49	946.81			91.4		16.0							94.9	0.0	0.0	4.2	4.2	NOTE 15
	1522+00.00	1501	24	CMP	46	C				1		2					C-3	1				935.43	946.49			139.0		46.0											0.0	
MED	1547+00.00	1301	30	RCP	21	B				1												963.81	963.95			103.8		21.0							25.3	0.0	0.0	2.8	2.8	NOTE 16
MED	1550+00.00	1301	24	RCP	20	B				1												963.23	963.28			101.4		20.0							10.7	0.0	0.0	1.6	1.6	NOTE 17
	RAMP C																																						
7.5	3390+50.00	1301	24	RCP	118				1	1											842.30	836.00			68.9	60.9								635.7	0.0	4852.8	8.7	8.7	NOTE 18
																																Totals		1870.9	57.4	4852.8	64.6	64.6	

NOTES:

ALL RCP'S WILL BE 2000D UNLESS NOTED

1.0 REMOVE PIPE APRON. REPLACE WITH 6' EXTENSION PLUS PIPE APRON. REFER TO I-35 CROSS SECTIONS.
2.0 TWO 15° CMP ELBOWS, A=14', B=52', C=2', E=10' L=3.5'. REFER TO I-35 CROSS SECTIONS.
3.0 53' OF RCP REMOVED. TWO 15° CMP ELBOWS, A=0', B=76', C=2', E=8' L=3.5'. REFER TO I-35 CROSS SECTIONS.
4.0 6' OF RCP REMOVED. TWO 15° CMP ELBOWS, A=0', B=55', C=2', E=8' L=3.5'. REFER TO I-35 CROSS SECTIONS.
5.0 32' OF RCP REMOVED. TWO 15° CMP ELBOWS, A=0', B=26', C=2', E=10' L=3.5'. REFER TO I-35 CROSS SECTIONS.
6.0 158' PLUS TWO APRONS. REFER TO SHEET U.10 FOR DETAILS.
7.0 28' EXTENSION PLUS APRON. REFER TO I-35 CROSS SECTIONS.
8.0 TWO 15° CMP ELBOWS, A=14', B=06', C=2', E=8' L=3.5'. REFER TO I-35 CROSS SECTIONS.
9.0 14' EXTENSION PLUS APRON. REFER TO I-35 CROSS SECTIONS.
10.0 APRON ONLY. REFER TO I-35 CROSS SECTIONS.
11.0 6' OF RCP REMOVED. REPLACE WITH APRON. REFER TO I-35 CROSS SECTIONS.
12.0 6' OF RCP REMOVED. REPLACE WITH APRON. REFER TO I-35 CROSS SECTIONS.
13.0 10' EXTENSION PLUS PIPE APRON. REFER TO I-35 CROSS SECTIONS.
14.0 16' EXTENSION PLUS APRON AND 8' SECTION FOR MEDIAN DRAIN REPLACEMENT. REFER TO I-35 CROSS SECTIONS.
15.0 TWO 15° CMP ELBOWS, A=16', B=34', C=2', E=10' L=3.5'. REFER TO I-35 CROSS SECTIONS.
16.0 21' EXTENSION PLUS APRON. REFER TO I-35 CROSS SECTIONS.
17.0 20' EXTENSION PLUS APRON. REFER TO I-35 CROSS SECTIONS.
18.0 118' PLUS TWO ARPONS. REFER TO I-35 CROSS SECTIONS.

PIPE TOTALS	SIZE	TYPE	LENGTH
	24	CMP	329
	24	RCP	414
	30	RCP	21

APRON TOTALS	SIZE	TYPE	TOTAL
	24	CMP	6
	24	RCP	13
	30	RCP	1

102-6C
10-18-11

FULL-DEPTH PATCHES

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

Location			Dimension			PCC Patches												
Count	Station or Milepost	Lane	Length	Width	Patch Thickness	With Dowels RR-4	Without Dowels RR-2	C R C RR-18	HMA Patches	Composite HMA	Subbase Patches RR-26	Subbase Patch w/ 'EF' Joint RR-1	Patch Subdrain RR-1 or RR-26	'CD' Joints	'CT' Joints	'EF' Joints RR-1	Anchor Lugs Removal	Remarks
		L, R, or B	FT	FT	IN	SY	SY	SY	SY	TON	SY	SY	No.	No.	No.	No.	No.	
1	1422+00.00	MEDIAN	20.0	10.0	11.5	22.2												SIGN FOOTING
2	1430+00.00	MEDIAN	20.0	10.0	11.5	22.2												SIGN FOOTING
3	1454+00.00	MEDIAN	20.0	10.0	11.5	22.2												SIGN FOOTING
4	1521+00.00	MEDIAN	20.0	10.0	11.5	22.2												SIGN FOOTING
5	1523+75.00	MEDIAN	20.0	10.0	11.5	22.2												SIGN FOOTING
6	1536+00.00	MEDIAN	20.0	10.0	11.5	22.2												SIGN FOOTING
					Total	133.3												

103-3
10-16-12

PROPOSED SUBGRADE TREATMENT

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

No.	Location		Description					Type		Quantity		Polymer Grid	Available From		Remarks
	Begin Station	End Station	Side	Type	Depth FT	Width FT	Area SF	Material	Shrink %	CY	TON	SY	Quantity CY	Location or Station to Station	
1	1403+17.00	1411+10.00	NBL	Standard	3.0	51.0	0.0	SPECIAL BACKFILL (SEE ART. 4132)	0.00%	4,493.7	8,493.030			Contractor Provided	CORE OUT AREA ONLY
2	1418+43.00	1421+00.00	NBL	Standard	3.0	51.0	0.0	SPECIAL BACKFILL (SEE ART. 4132)	0.00%	1,456.3	2,752.470			Contractor Provided	CORE OUT AREA ONLY
3	1424+74.00	1432+26.00	NBL	Standard	3.0	51.0	0.0	SPECIAL BACKFILL (SEE ART. 4132)	0.00%	4,261.3	8,053.920			Contractor Provided	CORE OUT AREA ONLY
4	1441+75.00	1450+00.00	NBL	Standard	1.5	51.0	0.0	SPECIAL BACKFILL (SEE ART. 4132)	0.00%	2,337.5	4,417.875			Contractor Provided	CORE OUT AREA ONLY
5	1456+61.00	1464+65.00	NBL	Standard	1.5	51.0	0.0	SPECIAL BACKFILL (SEE ART. 4132)	0.00%	2,278.0	4,305.420			Contractor Provided	CORE OUT AREA ONLY
6	1484+20.00	1487+05.00	NBL	Standard	2.5	51.0	0.0	SPECIAL BACKFILL (SEE ART. 4132)	0.00%	1,345.8	2,543.625			Contractor Provided	CORE OUT AREA ONLY
7	1489+77.00	1494+15.00	NBL	Standard	2.5	51.0	0.0	SPECIAL BACKFILL (SEE ART. 4132)	0.00%	2,068.3	3,909.150			Contractor Provided	CORE OUT AREA ONLY
8	1533+00.00	1542+00.00	NBL	Standard	1.5	51.0	0.0	SPECIAL BACKFILL (SEE ART. 4132)	0.00%	2,550.0	4,819.500			Contractor Provided	CORE OUT AREA ONLY
									Total	20,791.0	39,294.990				

NOTE: THIS SUBGRADE TREATMENT LAYER OF SPECIAL BACKFILL IS IN ADDTION TO THE LAYER OF SPECIAL BACKFILL SHOWN ON THE PAVING TYPICAL. IT IS INTENDED TO ADDRESS EXISTING SOFT SUBGRADE AREAS. LOCATIONS APPLY ONLY THROUGH THE TABULATED AREAS UNLESS MODIFIED BY THE ENGINEER

110-14
04-16-13

SANITARY OR STORM SEWER ABANDONMENT OR REMOVAL

* Not a bid item

Location/Description	Sanitary or Storm Sewer	Abandonment, Plug Only or Abandonment, Plug and Fill or Removal	Length of Pipe ≤ 36 inch diameter LF	Length of Pipe > 36 inch diameter LF	Fill Material* Flowable Mortar or CLSM CY	Remarks
I-35 Mainline						
1366+50.00	Storm Sewer	Removal				Remove and Replace Apron
1382+50.00	Storm Sewer	Removal	53			Remove and install let down
1392+50.00	Storm Sewer	Removal	6			Remove and install let down
1400+50.00	Storm Sewer	Removal	32			Remove and install let down
1482+00.00	Storm Sewer	Removal	6			Remove and install Apron
1484+75.00	Storm Sewer	Removal	6			Remove and install Apron
1391+57.2	Storm Sewer	Abandonment, Plug Only				
Ramp B						
2382+98.64	Storm Sewer	Removal	145			Remove attached pipe plus two aprons
2385+62.34; 150.22 rt to 2386+63.00; 98.05 rt	Sanitary Sewer	Removal	150			Contractor verify pipe removal
2388+22.99	Storm Sewer	Removal	114			Remove attached pipe plus two aprons
2389+04.00	Storm Sewer	Removal	80			Remove attached pipe plus two aprons
Ramp C						
3391+36.01	Storm Sewer	Removal	91			Remove attached pipe plus two aprons
Grand Ave						
3383+93.62	Storm Sewer	Removal	70			Remove attached pipe plus two aprons
3392+63.38	Storm Sewer	Removal	146			Remove attached pipe plus two aprons
3396+61.61	Storm Sewer	Removal	74			Remove attached pipe plus two aprons
3398+69.01	Storm Sewer	Removal	92			Remove attached pipe plus two aprons
Ramp A						
11390+03.85	Storm Sewer	Removal	126			Remove attached temporary pipe plus two aprons
		Total Storm Sewer	1041			
		Total Sanitary Sewer	150			

103-1
10-19-10

EMBANKMENT WITH MOISTURE AND DENSITY CONTROL

Moisture content shall be within the limits of minus _2_ and plus _2_ percentage points of optimum for maximum density within the area described and listed below.

Location		Lane	Depth	Compact	Remarks
Station to Station			FT	CY	
					All Backfill Material within the full limits of the Reinforced
					Steepened Slope. The required compaction is 95% Standard Proctor.
					See Embankment With Moisture Control tab for other areas.

103-7
08-01-08

SHRINKAGE DATA

Material	%	Remarks
TOPSOIL	40%	
REMAINDER PROJECT CUT	30%	
		20 Cu. Yds. BOULDERS

103-6
04-19-11

EMBANKMENT WITH MOISTURE CONTROL

Moisture content shall be within the limits of minus _2_ and plus _2_ percentage points of Optimum Moisture Content for maximum density within the area described and listed below.

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

See Moisture And Density Tab 103-1 at left for the Reinforced Steepened Slope (RSS).

104-9-RSS
Modified

REINFORCED STEEPENED SLOPE (RSS) SUBDRAIN FOR CHIMNEY DRAINS

Refer to Soils Sheets

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

Location						Longitudinal Subdrain (RF-19C)							Subdrain Outlet			Porous* Backfill	Class "A"* Crushed Stone	Remarks
Line No.	Road or Lane Ident.	Station to Station		Side	Depth (D)	Shoulder		Backslope		Bridge Berm (1)			RF-19C, RF-19E, or RF-19F					
						Size	Length	Size	Length	Size	Type	Length	Station	Size	Standard Road Plan and Type			
					IN	IN	FT	IN	FT	IN		FT		IN		CY	CY	
1	RSS	1497+25.00	1509+25.00	LT	66.0	4.0	1271.0						1497+25.00	6.0	RF-19F,A	196.1		
													1501+25.00	6.0	RF-19F,A			INSTALL USING TEE
													1505+25.00	6.0	RF-19F,A			INSTALL USING TEE
													1509+25.00	6.0	RF-19F,A			
Totals							1271.0		0.0						4	196.1	0.0	

NOTE: ALL REINFORCED STEEPENED SLOPE SUBDRAINS FOR THE CHIMNEY DRAINS ARE SIMULAR TO RF-19A TYPE1 INSTALLATION (SEE THE Q SHEETS FOR MORE INFORMATION).

NOTE

SEE CS.3 FOR NECESSARY ACTION WITH EXISTING LONGITUDINAL SUBDRAIN AND OUTLETS.

104-9
10-15-13

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

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

Location						Longitudinal Subdrain (RF-19C)							Subdrain Outlet			Porous* Backfill	Class "A"* Crushed Stone	Remarks
Line No.	Road or Lane Ident.	Station to Station		Side	Depth (D)	Shoulder		Backslope		Bridge Berm (1)			RF-19C, RF-19E, or RF-19F					
						Size	Length	Size	Length	Size	Type	Length	Station	Size	Standard Road Plan and Type			
					IN	IN	FT	IN	FT	IN		FT		IN		CY	CY	
1	NBL	1364+04.00	1367+00.00	RT	42.0	4.0	336.0						1364+04.00	6.0	RF-19E	31.1	0.2	
													1367+00.00	6.0	RF-19E		0.2	
2	NBL	1367+00.00	1370+00.00	RT	42.0	4.0	340.0						1367+00.00	6.0	RF-19E	31.5	0.2	
													1370+00.00	6.0	RF-19E		0.2	
3	NBL	1370+00.00	1375+00.00	RT	42.0	4.0	540.0						1370+00.00	6.0	RF-19E	50.0	0.2	
													1375+00.00	6.0	RF-19E		0.2	
4	NBL	1375+00.00	1378+40.00	RT	42.0	4.0	380.0						1375+00.00	6.0	RF-19E	35.2	0.2	INSTALL PRIOR TO PAVING
													1378+40.00	6.0	RF-19E		0.2	RAMP
5	NBL	1381+91.50	1387+73.00	RT	42.0	4.0	621.5						1381+91.50	6.0	RF-19E	57.5	0.2	
													1387+73.00	6.0	RF-19E		0.2	
6	NBL	1392+06.00	1397+00.00	RT	42.0	4.0	534.0						1392+06.00	6.0	RF-19E	49.4	0.2	
													1397+00.00	6.0	RF-19E		0.2	
7	NBL	1397+00.00	1402+00.00	RT	42.0	4.0	540.0						1397+00.00	6.0	RF-19E	50.0	0.2	
													1402+00.00	6.0	RF-19E		0.2	
8	NBL	1402+00.00	1407+00.00	RT	42.0	4.0	520.0						1402+00.00	6.0	RF-19E	48.1	0.2	CAP AT 1407+00
9	NBL	1407+00.00	1412+00.00	RT	42.0	4.0	540.0						1407+00.00	6.0	RF-19E	50.0	0.2	FOLLOW RAMP BACK TO
													1412+00.00	6.0	RF-19E		0.2	MAINLINE
10	NBL	1412+00.00	1416+00.00	RT	42.0	4.0	440.0						1412+00.00	6.0	RF-19E	40.7	0.2	
													1416+00.00	6.0	RF-19E		0.2	
11	NBL	1416+00.00	1421+00.00	RT	42.0	4.0	540.0						1416+00.00	6.0	RF-19E	50.0	0.2	
													1421+00.00	6.0	RF-19E		0.2	
12	NBL	1421+00.00	1426+00.00	RT	42.0	4.0	540.0						1421+00.00	6.0	RF-19E	50.0	0.2	
													1426+00.00	6.0	RF-19E		0.2	
13	NBL	1426+00.00	1431+00.00	RT	42.0	4.0	540.0						1426+00.00	6.0	RF-19E	50.0	0.2	
													1431+00.00	6.0	RF-19E		0.2	
14	NBL	1431+00.00	1436+00.00	RT	42.0	4.0	540.0						1431+00.00	6.0	RF-19E	50.0	0.2	
													1436+00.00	6.0	RF-19E		0.2	
15	NBL	1436+00.00	1441+00.00	RT	42.0	4.0	540.0						1436+00.00	6.0	RF-19E	50.0	0.2	FOLLOW RAMP
													1441+00.00	6.0	RF-19E		0.2	
16	NBL	1441+00.00	1443+03.60	RT	42.0	4.0	243.6						1441+00.00	6.0	RF-19E	22.6	0.2	FOLLOWING RAMP

GEOTECHNICAL DESIGN

LICENSED PROFESSIONAL ENGINEER
Robert L. Stanley
08468
IOWA

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

Robert Stanley — Signature — 11-1-13 — Date

Robert L. Stanley
Printed or Typed Name

My license renewal date is December 31, 2014

Pages or sheets covered by this seal: CS.1-CS.4, Q.1-Q.10

ENGLISH	IOWA DOT	DESIGN TEAM Stanley/Megivern/Schappaugh	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER CS.1

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

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

Location						Longitudinal Subdrain (RF-19C)							Subdrain Outlet			Porous* Backfill	Class "A"* Crushed Stone	Remarks
Line No.	Road or Lane Ident.	Station to Station		Side	Depth (D)	Shoulder		Backslope		Bridge Berm (1)			RF-19C, RF-19E, or RF-19F					
						Size	Length	Size	Length	Size	Type	Length	Station	Size	Standard Road Plan and Type			
					IN	IN	FT	IN	FT	IN		FT		IN		CY	CY	
													1443+03.60	6.0	RF-19E		0.2	
17	NBL	1443+56.00	1447+00.00	RT	24.0	4.0	366.0						1443+56.00	6.0	RF-19C	16.9	0.2	OUTLET TO DITCH INTAKE
													1447+00.00	6.0	RF-19E		0.2	
18	NBL	1447+00.00	1452+00.00	RT	42.0	4.0	540.0						1447+00.00	6.0	RF-19E	50.0	0.2	
													1452+00.00	6.0	RF-19E		0.2	
19	NBL	1452+00.00	1457+00.00	RT	42.0	4.0	540.0						1452+00.00	6.0	RF-19E	50.0	0.2	
													1457+00.00	6.0	RF-19E		0.2	
20	NBL	1457+00.00	1462+00.00	RT	42.0	4.0	540.0						1457+00.00	6.0	RF-19E	50.0	0.2	
													1462+00.00	6.0	RF-19E		0.2	
21	NBL	1462+00.00	1468+53.00	RT	24.0	4.0	675.0						1462+00.00	6.0	RF-19E	31.3	0.2	
													1468+53.00	6.0	RF-19C		0.2	OUTLET TO DITCH INTAKE
22	NBL	1468+67.00	1474+00.00	RT	42.0	4.0	573.0						1468+67.00	6.0	RF-19E	53.1	0.2	FOLLOWING RAMP
													1474+00.00	6.0	RF-19E		0.2	
23	NBL	1474+00.00	1479+00.00	RT	42.0	4.0	540.0						1474+00.00	6.0	RF-19E	50.0	0.2	
													1479+00.00	6.0	RF-19E		0.2	
24	NBL	1479+00.00	1484+00.00	RT	42.0	4.0	540.0						1479+00.00	6.0	RF-19E	50.0	0.2	
													1484+00.00	6.0	RF-19E		0.2	
25	NBL	1484+00.00	1489+00.00	RT	42.0	4.0	540.0						1484+00.00	6.0	RF-19E	50.0	0.2	
													1489+00.00	6.0	RF-19E		0.2	
26	NBL	1489+00.00	1494+00.00	RT	42.0	4.0	540.0						1489+00.00	6.0	RF-19E	50.0	0.2	
													1494+00.00	6.0	RF-19E		0.2	
27	NBL	1494+00.00	1499+00.00	RT	24.0	4.0	540.0						1494+00.00	6.0	RF-19E	25.0	0.2	
													1499+00.00	6.0	RF-19E		0.2	
28	NBL	1499+00.00	1504+00.00	RT	24.0	4.0	540.0						1499+00.00	6.0	RF-19E	25.0	0.2	
													1504+00.00	6.0	RF-19E		0.2	
29	NBL	1504+00.00	1509+69.00	RT	24.0	4.0	609.0						1504+00.00	6.0	RF-19E	28.2	0.2	
													1509+69.00	6.0	RF-19E		0.2	
30	NBL	1515+66.40	1520+00.00	RT	42.0	4.0	473.6						1515+66.40	6.0	RF-19E	43.9	0.2	
													1520+00.00	6.0	RF-19E		0.2	
31	NBL	1520+00.00	1525+00.00	RT	42.0	4.0	540.0						1520+00.00	6.0	RF-19E	50.0	0.2	
													1525+00.00	6.0	RF-19E		0.2	
32	NBL	1525+00.00	1530+00.00	RT	42.0	4.0	540.0						1525+00.00	6.0	RF-19E	50.0	0.2	
													1530+00.00	6.0	RF-19E		0.2	
33	NBL	1530+00.00	1535+00.00	RT	42.0	4.0	540.0						1530+00.00	6.0	RF-19E	50.0	0.2	
													1535+00.00	6.0	RF-19E		0.2	
34	NBL	1535+00.00	1540+00.00	RT	42.0	4.0	540.0						1535+00.00	6.0	RF-19E	50.0	0.2	
													1540+00.00	6.0	RF-19E		0.2	
35	NBL	1540+00.00	1545+00.00	RT	42.0	4.0	540.0						1540+00.00	6.0	RF-19E	50.0	0.2	
													1545+00.00	6.0	RF-19E		0.2	
36	NBL	1545+00.00	1550+62.50	RT	42.0	4.0	602.5						1545+00.00	6.0	RF-19E	55.8	0.2	
													1550+62.50	6.0	RF-19E		0.2	
37	NBL	2375+00.00	2378+24.00	RT	42.0	4.0	364.0						2375+00.00	6.0	RF-19E	33.7	0.2	RAMP B
													2378+24.00	6.0	RF-19E		0.2	
38	NBL	2381+38.00	2383+00.00	RT	42.0	4.0	202.0						2381+38.00	6.0	RF-19E	18.7	0.2	RAMP B
													2383+00.00	6.0	RF-19E		0.2	
39	NBL	2383+00.00	2386+00.00	LT	42.0	4.0	340.0						2383+00.00	6.0	RF-19E	31.5	0.2	RAMP B
													2386+00.00	6.0	RF-19E		0.2	
40	NBL	2386+00.00	2388+80.00	LT	42.0	4.0	320.0						2386+00.00	6.0	RF-19E	29.6	0.2	RAMP B
													2388+80.00	6.0	RF-19E		0.2	
41	NBL	3390+00.00	3392+00.00	RT	42.0	4.0	240.0						3390+00.00	6.0	RF-19E	22.2	0.2	RAMP C
													3392+00.00	6.0	RF-19E		0.2	
42	NBL	3392+00.00	3397+00.00	RT	42.0	4.0	540.0						3392+00.00	6.0	RF-19E	50.0	0.2	RAMP C
													3397+00.00	6.0	RF-19E		0.2	
43	NBL	3397+00.00	3402+00.00	RT	42.0	4.0	540.0						3397+00.00	6.0	RF-19E	50.0	0.2	RAMP C
													3402+00.00	6.0	RF-19E		0.2	
44	NBL	3402+00.00	3407+00.00	RT	42.0	4.0	540.0						3402+00.00	6.0	RF-19E	50.0	0.2	RAMP C
													3407+00.00	6.0	RF-19E		0.2	
45	Grand Ave	3374+90.00	3378+50.00	LT	24.0	4.0	382.0						3374+90.00	6.0	RF-19E	17.7	0.2	
													3378+50.00	6.0	RF-19C			SEE NOTE #1
46	Grand Ave	3378+50.00	3381+00.00	LT	24.0	4.0	254.0						3378+50.00	6.0	RF-19C	11.8		SEE NOTE #1
													3381+00.00	6.0	RF-19C			SEE NOTE #1
47	Grand Ave	3381+00.00	3383+52.00	LT	24.0	4.0	256.0						3381+00.00	6.0	RF-19C	11.9		SEE NOTE #1
													3383+52.00	6.0	RF-19C			SEE NOTE #1
48	Grand Ave	3383+52.00	3385+75.00	LT	24.0	4.0	227.0						3383+52.00	6.0	RF-19C	10.5		SEE NOTE #1 & #2
													3385+75.00	6.0	RF-19C			SEE NOTE #1 & #2
49	Grand Ave	3385+75.00	3388+40.00	LT	24.0	4.0	269.0						3385+75.00	6.0	RF-19C	12.5		SEE NOTE #1
													3388+40.00	6.0	RF-19C			SEE NOTE #1
50	Grand Ave	3388+40.00	3391+09.00	LT	24.0	4.0	273.0						3388+40.00	6.0	RF-19C	12.6		SEE NOTE #1
													3391+09.00	6.0	RF-19C			SEE NOTE #1
51	Grand Ave	3391+09.00	3393+63.00	LT	24.0	4.0	258.0						3391+09.00	6.0	RF-19C	11.9		SEE NOTE #1
													3393+63.00	6.0	RF-19C			SEE NOTE #1
52	Grand Ave	3393+63.00	3395+10.00	LT	24.0	4.0	151.0						3393+63.00	6.0	RF-19C	7.0		SEE NOTE #1 & #2
													3395+10.00	6.0	RF-19C			SEE NOTE #1 & #2
53	Grand Ave	3395+10.00	3397+20.00	LT	24.0	4.0	214.0						3395+10.00	6.0	RF-19C	9.9		SEE NOTE #1 & #3
													3397+20.00	6.0	RF-19C			SEE NOTE #1 & #3
54	Grand Ave	3397+20.00	3400+00.00	LT	24.0	4.0	302.0						3397+20.00	6.0	RF-19C	14.0		SEE NOTE #1 & #3
													3400+00.00	6.0	RF-19E		0.2	SEE NOTE #3

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

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

Location						Longitudinal Subdrain (RF-19C)							Subdrain Outlet			Porous* Backfill	Class "A"* Crushed Stone	Remarks
Line No.	Road or Lane Ident.	Station to Station	Side	Depth (D)	Shoulder		Backslope		Bridge Berm (1)			RF-19C, RF-19E, or RF-19F					
					Size	Length	Size	Length	Size	Type	Length	Station	Size	Standard Road Plan and Type			
				IN	IN	FT	IN	FT	IN		FT		IN		CY	CY	
														RF-19C = 19			
														RF-19E = 88			
Totals						24266.2		0.0						107	2000.8	17.8	

NOTE: ALL LONGITUDINAL SUBDRAINS ARE TYPE 7 WITH PCC OR TYPE 8 WITH HMA (ACC) UNLESS OTHERWISE NOTED IN REMARKS COLUMN.
NOTE: ALL LONGITUDINAL SUBDRAINS MAY BE ADJUSTEDIN FIELD AS NECESSARY AND APPROVED.
NOTE 1: SEE STANDARD ROAD PLAN RF-19C FOR TYPE 12 INSTALLATION DETAILS. INSTALL TO STORM SEWER INTAKE USING INTAKE OUTLET DETAIL.
NOTE 2: INSTALL PRIOR TO PAVING RAMP.
NOTE 3: INSTALL FOLLOWING EDGE OF TURN LANE.

TABULATION OF LONGITUDINAL SUBDRAIN
Shoulder and Backslope

104-9
4/1/86

*Not a bid item

Line No.	Road or Lane Ident.	LOCATION Station to Station		Side	Depth (D) inches	LONGITUDINAL SUBDRAIN SHOULDER Refer to RF-19C Size	SHOULDER Lin. Ft.	BACKSLOPE Refer to Soils Sheets Size	BACKSLOPE Lin. Ft.	C M P SUBDRAIN OUTLET Station	Size	Porous * Backfill Cu. Yds.	Class "A" * Crushed Stone Cu. Yds.	REMARKS
1	NBL	75+00	85+00	Rt.	48	4"	1026			85+00	6"	113	0.2	
2		85+00	93+00				975			93+00		91	0.2	Along Ramp
3		91+00	100+25				926			100+25		105	0.2	
4		101+00	107+00				632			107+00		69	0.2	Along Ramp
5		107+00	117+00				882			107+00		113	0.2	
6		124+00	127+50				374			127+50		41	0.2	
7		127+50	139+00				1074			127+50		135	0.2	
8	Ramp	1+00	12+15				1115			12+00		124	0.2	S East Ramp - B1
9	NBL	143+50	147+00				369			143+50		41	0.2	
10		154+00	159+50				522			154+00		63	0.2	
11	Ramp	7+00	14+25				736			7+00		83	0.2	NE Ramp - D1
12	NBL	160+05	164+00				430			160+05		46	0.2	Along Ramp
13		164+05	176+40				1260			164+05		139	0.2	
14		176+45	188+60				1230			176+45		136	0.2	
15		188+65	200+00				1136			188+65		128	0.2	
16		200+05	215+45				1433			200+05		175	0.2	
21A		281+00	287+00				623			215+45			0.2	
17		223+75	229+00				578			229+00		61	0.2	
18		244+00	245+50				175			245+50		19	0.2	
19		245+55	257+00				1162			257+00		129	0.2	
20		257+00	271+50				1408			257+00		162	0.2	
21		275+25	281+00				592			275+25		132	0.2	
22		287+00	307+90				2110			287+00		259	0.2	
22A		307+90	310+00				222			310+00			0.2	Along Ramp
23	SBL	311+00	300+00	Rt.	48	4"	1105			311+00	6"	124	0.2	
25		300+00	275+45				2306			300+00		168	0.2	
										275+30		105	0.2	
26		271+80	258+00				1401			258+00		155	0.2	
27		258+00	255+95				226			258+00		25	0.2	
28		255+90	245+00				1111			255+90		123	0.2	
29		245+00	233+05				1217			245+00		134	0.2	
30		233+00	223+05				1010			233+00		112	0.2	
31		223+05	215+50				769			223+00		85	0.2	
32		215+45	208+88				668			215+45		175	0.2	
32A		208+88	200+90				827			200+05			0.2	
33		200+00	188+00				1242			188+00		135	0.2	
34		188+00	180+00				824			188+00		91	0.2	
35		171+00	166+05				518			166+05		57	0.2	
36		166+00	158+00				854			158+00		91	0.2	Along Ramp
37		159+00	154+50				468			154+50		52	0.2	
38	Loop	10+00	0+00	Lt.			1018			10+00		113	0.2	S.W. Loop - Ramp A2
39		10+50	4+00				604			4+00		74	0.2	S.E. Loop - Ramp B2
40		9+00	0+00				926			9+00		102	0.2	N.E. Loop - Ramp D2
41		11+00	2+50				855			2+50		96	0.2	N.W. Loop - Ramp C2
42	SBL	146+50	143+50	Rt.			321			143+50		36	0.2	
43		139+50	127+50				1250			127+50		135	0.2	
44		127+50	124+56				318			127+50		41	0.2	
45		117+00	108+00				927			108+00		102	0.2	
46		108+00	103+00				520			103+00		58	0.2	Along Ramp
47		101+00	88+00				1323			101+00		146	0.2	
48		87+00	73+00				1425			87+00		157	0.2	
32B		200+78	200+05				100							

GEOTECHNICAL DESIGN

I hereby certify that this plan was prepared under my supervision and that geotechnical decisions with regard to the design were made by me or by other duly Qualified Professional Geologists under the laws of the State of Iowa.

Name Raymond F. L'Heureux

Date 4/18/86

POLK COUNTY

PROJECT NUMBER	STATE	FHWA Region	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IR-35-2(191)67--12-77	IOWA	7		38	8

THIS TAB IS FROM AS-BUILT PLANS.

ALL EXISTING LONGITUDINAL SUBDRAINS AND OUTLETS ARE TO BE REMOVED IN THEIR ENTIRETY AND THE NEW LONGITUDINAL SUBDRAINS TABULATED ON THE PREVIOUS C SHEETS ARE TO BE INSTALLED.

IF REMOVAL OF EXISTING LONGITUDINAL SUBDRAINS AND OUTLETS WITHIN THE PROJECT LIMITS RESULTS IN ONLY PARTIAL REMOVAL OF AN EXISTING LONGITUDINAL SUBDRAIN AND OUTLET, A NEW OUTLET SHALL BE ADDED TO THE UNDISTURBED PORTION OF THE EXISTING LONGITUDINAL SUBDRAIN AT THE CUT-OFF POINT.

OLD AS-BUILT STATIONING 180+00 = CURRENT PROJECT STATIONING 1419+56.5

SURVEY SYMBOLS

- IN Storm Sewer Intake
- FW Wire Fence
- INB Storm Sewer Beehive Intake
- PR Electic Riser Pole
- GP Guard Post (Less Than 4 Posts)
- SL Speed Limit Sign
- SI Sign
- TIL Tile Line
- GDL Guard Rail Steel
- LUM Luminaire
- UE Utility Elevation
- WV Water Valve
- GPR Guard Post (4 or More Posts)
- FP Filler Pipe
- OUT Tile Outlet
- MIS Miscellaneous
- PPA Power Pole Co. 1
- AST Above Ground Storage Tank
- LP L.P. Tank
- FLG Flag Poles
- WHD Water Hydrant
- WEL Well
- MH Utility Access (Manhole)
- TPD Telephone Pedestal
- MM Mile Marker Post
- FCL Chain Link and Security Fence
- EB Electrical Box
- TV Satelite TV Dish
- UB Utility Box
- UST Underground Tank
- GV Gas Valve
- WHU WHU RV Water Hook Up
- SEP Septic Tank
- FHD Fire Hydrants
- FWD Wood Fence
- RET Retaining Walls
- D Centerline Draw or Stream (Down)
- BNK Stream Bank
- RIP Rip-Rap
- EW Edge of Water
- DU Centerline Draw or Stream (Up)
- ENT Centerline BL of Entrance
- ENU Edge Unpaved Entrance & Parking
- EG Edge of Gravel Road
- SNP Unpaved Shoulder
- DIK Centerline of Dike or Dam
- FO2 FOB Underground Fiber Optic Co. 2
- T1 TLA Underground Telephone Line Co. 1
- E1 ELA Underground Electric Line Co. 1
- FO FOA Underground Fiber Optic Co. 1
- W WLA Underground Water Line Co. 1
- St.S.2 STB Storm Sewer Line Co. 2
- San. SAA Sanitary Sewer Line Co. 1
- E2 ELB Underground Electric Line Co. 2
- TV TVA Underground TV Cable Co. 1
- FO3 FOC Underground Fiber Optic Co. 3

UTILITY LEGEND

- MID-AMERICAN ENERGY
- MID-AMERICAN ENERGY
- W1 WARREN COUNTY RURAL WATER
- W2 WEST DES MOINES PUBLIC WORKS
- W3 DES MOINES WATER
- E-1 STATE OF IOWA
- E-2 MID-AMERICAN ENERGY
- E-3 GLENN OAKS OWNERS ASSOC.
- E-4 CITY OF WEST DES MOINES
- FO-1 CENTURY LINK
- FO-2 DES MOINES WATERWORKS
- FO-3 SPRINT
- FO-4 WEST DES MOINES PUBLIC WORKS
- FO-5 GLENN OAKS OWNERS ASSOC.
- FO-6 ATT
- FO-7 MEDIACOM FIBER OPTICS
- FO-8 HICKORY TECH
- GHP-1 MID-AMERICAN ENERGY
- GHP-2 KINDER MORGAN ENERGY PARTNERS
- G-1 BUCKEYE PIPELINE
- G-2 MID-AMERICAN ENERGY
- San. CITY OF WEST DES MOINES
- St. S.-1 STATE OF IOWA
- St. S.-2 CITY OF WEST DES MOINES
- T CENTURY LINK
- TV MEDIACOM

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
Blue, Light	(230)	Existing Culvert Pipes

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

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PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

POLK COUNTY
WALNUT TWP.
T-78N R-25W
SEC. 30

1355 1360 1365 1370 1375 1380 1385

STA. 1364+03.94
BEGIN PAVING

RACCOON RIVER

STA. 1378+40.05
STOP CONSTRUCTION

Work By Others
BRFIM-035-2(370)69--05-77

EXTEND
Sta. 1366+54.4
24" X 114.53' Conc Pipe
D.A. = highway Surface M
Install 6 '- 24" RCP Plus Apron
F.L. = Ot. 818.95
Rt. 818.49

STA. 1381+91.41
RESUME CONSTRUCTION

EXTEND
Sta. 1375+75.00
24" X 114.0' Conc Pipe
D.A. = MEDIAN ONLY Ac
Install 14' - 24" RCP
Install 64' - 24" CMP Let Down
Plus CMP Apron
F.L. = Ot. 839.03
Rt. 820.90

Sta. 1380+31.2, 90.3 Lt.
CENTRAL 156' X 40'
CONTIN. I-BEAM BRIDGE

REMOVE & EXTEND
Sta. 1382+50.00
24" X 138' Conc Pipe
D.A. = MEDIAN ONLY Ac
Remove 53' - 24" RCP
Install 86' - 24" CMP
Let Down
Plus CMP Apron
F.L. = Ot. 854.04
Rt. 829.70
Remove

Sta. 1384+49.7
24" X 144.62' Conc Pipe
D.A. = 12 Ac

IAIS R.R.

For Ramp Taper Information
Refer to Sheets No. K.8 TO K.10

For Interchange Grading
Refer to Sheets No. K.6 to K.7

0 100
FEET

880 870 860 850 840 830 820 810

Match Existing Median

VPI +75.003
Elv 845.78

+2.395%

VPI +40.053
Elv 854.52

+2.224%

VPI +00.003
Elv 862.53
Len 586.79 ft
K = 586

+1.223%

+27 Rt.
827.80

+2.90% Rt. Ditch Grade

Lt	UAC DITCH		RAMP	UAC DITCH	BRIDGE		UAC DITCH		Lt
Med	UAC EXISTING PAVED MEDIAN				BRIDGE		UAC EXISTING PAVED MEDIAN		Med
Rt	UAC DITCH	UAC DITCH			BRIDGE	UAC	DITCH GRADE		Rt

845.78 846.38 846.98 847.57 848.17 848.77 849.37 849.97 850.57 851.17 851.77 852.36 852.96 853.56 854.16 854.74 855.30 855.85 856.41 856.95 857.48 858.00 858.51 859.01 859.50 859.98 860.45 860.91 861.36 861.79 862.22 862.63 863.04 863.43 863.81 864.18 864.55 864.90 865.24 865.57 865.88 866.19

1355 1360 1365 1370 1375 1380 1385

C	ENGLISH	IOWA DOT	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER D.2	

8:39:57 AM 11/4/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365d02.sht

POLK COUNTY
WALNUT TWP.
T-78N R-25W
SEC. 19

Refer to Buckeye Pipeline Note on Sheet C.8

Work By Others
BRFIM-035-2(372)69--15-77

STA. 1392+06.45
RESUME CONSTRUCTION

STA. 1387+73.06
STOP CONSTRUCTION

EXTEND
2+50.00
Conc Pipe
N ONLY Ac -
24" RCP
24" CMP
Down
on
54.04
29.70

Remove

Sta. 1389+98.9
263'- 9 x 40'
PRETENSIONED PRESTRESSED
CONC BEAM BRIDGE

Do Not Disturb

Sta. 1391+57.2
24" X 78.64' Conc Pipe
D.A. = MEDIAN Ac - R

24" X 134.05' RCB
D.A. = Ac - R

Sta. 1391+56.2
24 X 65.60' CMP
D.A. = MEDIAN A - R
24" x 91.15'
Conc. Pipe

REMOVE & EXTEND
Sta. 1392+55.00
24" X 90.00' Conc Pipe
D.A. = MEDIAN ONLY Ac -
Remove 6' -24" RCP
Install 65' - 24" CMP Let Down
Plus Concrete Apron
F.L. = Ot. 868.01
Rt. 850.18

Remove

REMOVE & EXTEND
Sta. 1400+50
24" X 115.0' Conc Pipe
D.A. = MEDIAN ONLY Ac -
Remove 32' -24" RCP
Install 38' - 24" CMP Let Down
Plus Concrete Apron
F.L. = Ot. 890.14
Rt. 881.28

Remove

Plugged & Abandoned (364)
Sta. 1399+54.3
18" X 256.30' Conc Pipe
D.A. = SIDE DITCH Ac -

UAC (364)
Sta. 1403+26.77
24" X 161.71' Conc Pipe
D.A. = 12 Ac - B

Plugged & Abandoned (364)
Sta. 1403+56.2
24" X 202.50' Conc Pipe
D.A. = 5 Ac - R

REMOVED (364)
Sta. 1405+36.1
24" X 59.51' Conc Pipe
D.A. = MEDIAN ONLY Ac -

Refer to Cross Sections for Urban Section over Pipeline and Sheet U.10 for details.

Sta 1407+42.57
Sta 1408+02.57
Sta 1408+32.57
Sta 1410+90.87
Sta 1413+48.98
Sta 1413+78.98
Sta 1414+38.98

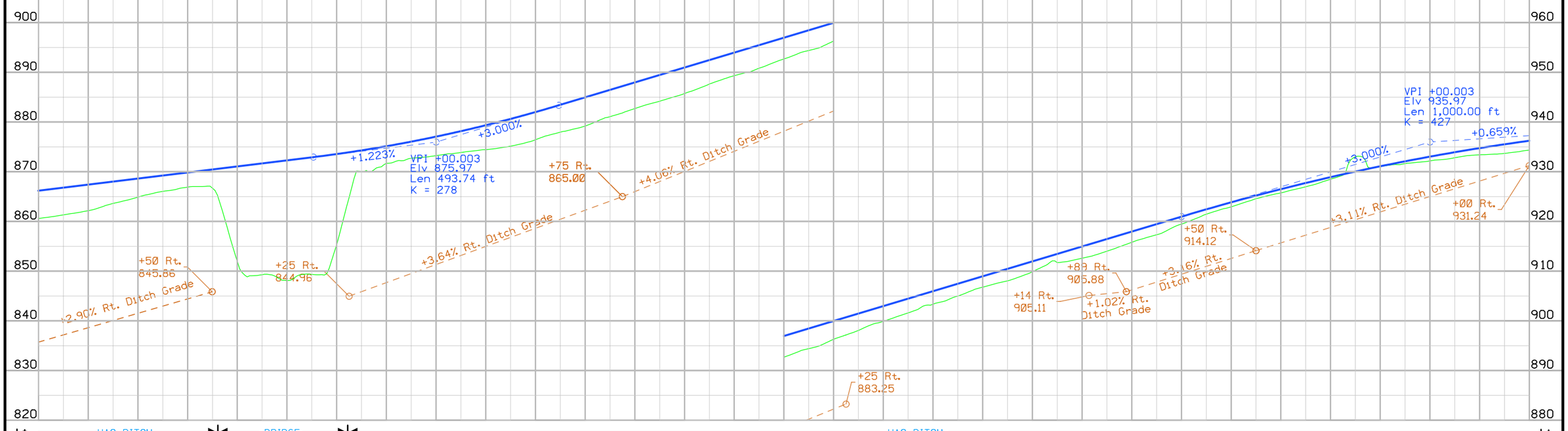
EXTEND
Sta. 1416+00.00
24" X 84.00' Conc Pipe
D.A. = MEDIAN ONLY Ac -
Install 28.0'- 24" RCP Plus Apron
F.L. = Ot. 929.09
Rt. 927.73

Plugged &
Sta. 141
24" X 63.19'
D.A. = MEDIA

0 100 FEET

For Ramp Taper Information
Refer to Sheets No. K.11 to K.13

For Interchange Grading
Refer to Sheets No. K.6 to K.7



C ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER D.3

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NOTE: Fill over existing erosion stone to construct foreslope from Sta. 1416+75 to 1418+00. Refer to Sheet B.12 for existing information. Backslope construction from Sta. 1416+75 to 1420+75 shall be in accordance with sheets Q.5-Q.10.

POLK COUNTY
WALNUT TWP.
T-78N R-25W
SEC. 19

Sec. 18

Sta. 1427+28.6, 165' Lt.
Rock Grade Control
Installed with (407)

1415 1420 1425 1430 1435 1440 1445

Sta 1414+38.98

300' Taper 25:1

Remove

Plugged & Abandoned (363)
Sta. 1415+89.5
24" X 63.19' Conc Pipe
D.A. = MEDIAN ONLY

Curve Data
Δ = 3° 52' 22.09" (RT)
T = 258.30
L = 516.41
R = 7,640.00
E = 4.37

SCS PI Sta 1410+90.93
Δ = 4° 32' 51.92" (RT)
Theta = 0° 20' 14.91"
Ls = 90.00
Xs = 348.39
Es = 6.06
p = 0.04
k = 45.00
Xc = 90.00
Yc = 0.18
LT = 60.00
ST = 30.00
LC = 90.00

8.0' x 5.0' 25.97' R.C.B.

EXTEND
Sta. 1424+75.00
24" X 84.00' Conc Pipe
D.A. = MEDIAN ONLY Ac -

Install 14.0' - 24" RCP
Install 30.0' - 24" CMP Let Down
Plus CondreteP Apron
F.L. = Ot. 935.64
Rt. 927.87

Sta. 1421+96.41
5.0' X 5.0' X 318.93' RCB
D.A. = 67 Ac - H

18" x 184.41' Conc. Pipe

Remove

Plugged & Abandoned (407)
Sta. 1427+61.7
36" X 185.56' Conc Pipe
D.A. = 11 Ac - R

EXTEND
Sta. 1429+00.00
24" X 84.00' Conc Pipe
D.A. = MEDIAN ONLY Ac -

Install 14.0' - 24" RCP Plus Apron
F.L. = Ot. 944.81
Rt. 944.45

REMOVED (364)
Sta. 1428+53.9
24" X 71.67' Conc Pipe
D.A. = MEDIAN ONLY Ac - R

UAC
Sta. 1439+53.4
30" X 183.68' Conc Pipe
D.A. = ROW Ac - R

Sta. 1439+32.82
End PCC Shoulder
(Match Existing)

REMOVED (364)
Sta. 1440+54.3, 96 Lt.
24" X 80.91' Conc Pipe
D.A. = MEDIAN ONLY Ac - R

18" X 45.68' Conc. Pipe

UAC
24" x 55.30' Conc. Pipe

Refer to Detail 2617
on Sheet B.9

0 100 FEET

990 980 970 960 950 940 930 920

VPI +00.003
Elv 943.88
Len 300.00 ft
K = 247

+0.659%
+1.875%

+00 Rt.
948.24

+50 Rt.
962.20

+50 Rt.
964.84

+2.64% Rt. Ditch Grade

+4.00% Rt. Ditch Grade

+75 Rt.
927.24

+50 Rt.
911.00

+5.00% Rt. Ditch Grade

+4.64% Rt. Ditch Grade

+25 Rt.
891.29

-30.23% Rt. Ditch Gr

+00 Rt.
929.08

Lt UAC DITCH Lt
Rt 5' DITCH DITCH GRADE UAC EXISTING PAVED MEDIAN 5' DITCH DITCH GRADE UAC DITCH "V" Rt

936.57 936.89 937.19 937.48 937.76 938.02 938.26 938.49 938.71 938.91 939.10 939.27 939.43 939.60 939.76 939.93 940.09 940.26 940.42 940.58 940.75 940.91 941.08 941.24 941.41 941.57 941.74 941.90 942.07 942.23 942.40 942.56 942.73 942.89 943.07 943.27 943.50 943.75 944.03 944.33 944.66 945.02 945.40 945.80 946.24 946.69 947.16 947.63 948.10 948.57 949.03 949.50 949.97 950.44 950.91 951.38 951.85 952.32 952.78 953.25 953.72 954.19 954.66 955.13 955.60 956.07 956.53 957.00 957.47 957.94 958.41 958.88 959.35 959.82 960.28 960.75 961.22 961.69 962.16 962.63 963.10 963.57 964.03 964.50 964.97 965.44 965.91 966.38 966.85 967.32 967.78 968.25 968.72 969.19 969.66 970.13 970.60 971.07 971.53 972.00 972.47 972.94 973.41 973.87 974.32 974.75 975.16 975.56 975.95 976.32 976.67 977.01 977.33 977.64 977.94 978.21 978.48 978.72 978.95 979.17

1415 1420 1425 1430 1435 1440 1445

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	D.4

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POLK COUNTY
WALNUT TWP.
T-78N R-25W
SEC. 18

Sta. 1462+54.6
24" X 68.16' Conc Pipe
D.A. = MEDIAN ONLY Ac - R

Sta. 1464+79.2
36" X 139.67' Conc Pipe
D.A. = MEDIAN ONLY

Sta. 1468+55.2
18" X 72.86' Conc Pipe
D.A. = MEDIAN ONLY

18" x 79.31' C.M.P.
18" x 113.46' C.M.P.
18" x 72.84' C.M.P.
18" x 105.09' C.M.P.

Do Not Disturb
Existing MSE Walls

UAC

UAC
18" x 199.06'
Conc. Pipe

EXTEND
Sta. 1476+00.00
24" X 114.00' Conc Pipe
D.A. = MEDIAN ONLY Ac -
Install Concrete Apron
Ot. 931.01
F.L. = Rt. 930.77

Refer to Detail 2617
on Sheet B.9

Plugged & Abandoned (364)
Sta. 1472+54.7
24" X 107.28' Conc Pipe
D.A. = MEDIAN ONLY Ac - R

UAC
Sta. 1463+25.2
36" X 312.82 Conc Pipe
D.A. = 5 Ac - R

UAC
Sta. 1462+82.50
24" X 195.35' Conc Pipe
D.A. = MEDIAN ONLY

Sta. 1455+60.0
181'-6 x196'-0
PRETENS. PRESTRESSED

2617

0 100 FEET

1445 1450 1455 1460 1465 1470 1475

VPI +00.003
Elv 985.13
Len 1,250.00 ft
K = 409

+1.875%
-1.180%
-0.71% Rt. Ditch Grade

+00 Rt.
978.46

+84 Rt.
975.00

VPI +50.003
Elv 963.30
Len 450.00 ft
K = 454

-1.180%
-2.171%

990 980 970 960 950 940 930 920

Lt — UAC DITCH — Lt
UAC EXISTING PAVED MEDIAN
Rt DITCH — DITCH GRADE — UAC DITCH — UAC D Rt

1445	1450	1455	1460	1465	1470	1475
979.37 979.56 979.73 979.89 980.03 980.15 980.26 980.36	980.43 980.50 980.55 980.58 980.60 980.60 980.59 980.56	980.52 980.46 980.39 980.30 980.19 980.07 979.94 979.79	979.62 979.44 979.25 979.04 978.81 978.57 978.31 978.04	977.75 977.46 977.16 976.87 976.57 976.28 975.98 975.69	975.39 975.10 974.80 974.51 974.21 973.92 973.62 973.33	973.03 972.74 972.44 972.15 971.85 971.56 971.26 970.97	970.67 970.38 970.08 969.79 969.49 969.20 968.90 968.61	968.31 968.02 967.72 967.43 967.13 966.84 966.54 966.25	965.95 965.65 965.34 965.01 964.66 964.31 963.94 963.55	963.15 962.74 962.32 961.88 961.42 960.96 960.48 959.98	959.47 958.95 958.41 957.87 957.33 956.79 956.24 955.70	955.16 954.61 954.07 953.53 952.99 952.44 951.90 951.36	950.82 950.27 949.73 949.19 948.64 948.10 947.56 947.02	946.47 945.93 945.39 944.85 944.30 943.76 943.22 942.67

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	D.5

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POLK COUNTY
WALNUT TWP.
T-78N R-25W
SEC. 7

Sec. 18

1475 1480 1485 1490 1495 1500 1505

15" x 79.53' Conc. Pipe

Installed 214' - 30" RF-1 (364)
F.L. = Lt. 918.00
Rt. 910.94

SIGN

UAC
UAC
UAC
UAC
Sta. 1477+26.61
8' X 4' X 300.83' RCB
D.A. = 114 Ac - R-H

REMOVE & EXTEND
Sta. 1482+00.00
24" X 102.00' Conc Pipe
D.A. = MEDIAN ONLY Ac -
Remove 6' - 24" RCP
Install Concrete Apron
F.L. = Ot. 923.95 UAC
Rt. 923.89

Sta. 1483+95.8, 54.3 Rt.
42" X 194.56' Conc Pipe
D.A. = 14 Ac - M

REMOVE & EXTEND
Sta. 1484+75.00
24" X 102.00' Conc Pipe
D.A. = MEDIAN ONLY Ac -
Remove 6' - 24" RCP
Install Concrete Apron
F.L. = Ot. 922.66
Rt. 922.60

Plugged & Abandoned (363)
Sta. 1485+04.0
24" X 74.76' Cond Pipe
D.A. = MEDIAN - Ac - R

EXTEND
Sta. 1493+50.00
24" X 84.00' Conc Pipe
D.A. = MEDIAN ONLY Ac -
Install 10.0' - 24" RCP Plus Apron
F.L. = Ot. 918.51
Rt. 918.35

Sta. 1493+83.86
End Overlay of
Ramp Taper

Plugged & Abandoned (364)
Sta. 1495+47.6
30" X 177.17' Conc Pipe
D.A. = 9 Ac - M

Plugged & Abandoned (272)
Sta. 1496+53.0
24" X 75.25' Conc Pipe
D.A. = MEDIAN Ac - R

EXTEND
Sta. 1496+00.00
24" X 90.00' Conc Pipe
D.A. = MEDIAN ONLY Ac -
Install 16.0' - 24" RCP Plus Apron
& 8.0' For Tee Replacement
F.L. = Lt. 914.06
Rt. 913.18

0 100
FEET

970 960 950 940 930 920 910 900

VPI +50.003
Elv 930.73
Len 310.00 ft
K = 186

-2.17%
-0.500%

+00 Rt.
924.07
-0.2% Rt. Ditch Grade

+50 Rt.
923.32
-3.32% Rt. Ditch Grade

+00 Rt.
921.66
+0.47% Rt. Ditch Grade

+03 Rt.
922.14

+00 Rt.
920.21
-2.73% Rt. Ditch Grade

+35 Rt.
911.05
-1.51% Rt. Ditch Grade

-0.500%
+1.000%

VPI +50.003
Elv 922.73
Len 300.00 ft
K = 200

+00 Rt.
904.05
-0.59% Rt. Ditch Grade

Lt UAC DITCH UAC DITCH Lt
UAC EXISTING PAVED MEDIAN
Rt DITCH DITCH GRADE UAC DITCH DITCH GRADE Rt

942.13 941.59 941.05 940.50 939.96 939.42 938.87 938.33 937.79 937.25 936.70 936.16 935.62 935.08 934.53 933.99 933.47 932.99 932.53 932.12 931.73 931.38 931.06 930.78 930.53 930.31 930.13 929.98 929.86 929.73 929.61 929.48 929.36 929.23 929.11 928.98 928.86 928.73 928.61 928.48 928.36 928.23 928.11 927.98 927.86 927.73 927.61 927.48 927.36 927.23 927.11 926.98 926.86 926.73 926.61 926.48 926.36 926.23 926.11 925.98 925.86 925.73 925.61 925.48 925.36 925.23 925.11 924.98 924.86 924.73 924.61 924.48 924.36 924.23 924.11 923.98 923.86 923.73 923.61 923.48 923.37 923.30 923.25 923.23 923.25 923.30 923.37 923.48 923.62 923.80 924.00 924.23 924.48 924.73 924.98 925.23 925.48 925.73 925.98 926.23 926.48 926.73 926.98 927.23 927.48 927.73 927.98 928.23 928.48 928.73 928.98 929.23 929.48 929.73 929.98 930.23 930.48 930.73 930.98 931.23

1475 1480 1485 1490 1495 1500 1505

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	D.6

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STA. 1509+69.01
STOP PAVING
-

STA. 1515+66.39
RESUME PAVING
-

POLK COUNTY
WALNUT TWP.
T-78N R-25W
SEC. 7

UNION PACIFIC RAILROAD

E.P. TRUE PARKWAY

Work By Others
BRFIM-035-2(361)72--05-77

72"x145.55' Conc. Pipe

30" x 92.50' C.M.P.

30" x 40.00' C.M.P.

24" x 113.88' Conc. Pipe

30" x 42.71' C.M.P.

Sta. 1510+33.4
335' x 28'
Cont. I-Beam Bridge

Sta. 1511+48.1, 83.6' Lt.
335' x 28'
Cont. I-Beam Bridge

Sta. 1512+99.7
TRIPLE
12' X 14' X 147.00' RCB
D.A. = 32.50' Ac - VR

Remove Guardrail

EXTEND
Sta. 1522+00.00
24" X 72.00' Conc Pipe
D.A. = MEDIAN ONLY Ac -
Install 16.0'- 24" RCP
Install 46.0'- 24" CMP Let Down
Plus CMP Apron
F.L. = Lt. 935.43
Rt. 946.81

Sta. 1524+52.6
24" X 74.54' Conc Pipe
D.A. = MEDIAN ONLY

EXTEND
Sta. 1530+52.9
24" X 185.8' Conc Pipe
D.A. = 2 Ac - R
Install 30' - 24" RCP
F.L. = Lt. 956.00
Rt. 958.34

0 100 FEET

VPI +00.003
Elv 945.23
Len 300.00 ft
K = 187

+1.000%
+2.600%
-0.59% Rt. Ditch Grade
-0.48% Rt. Ditch Grade
+2.50% Rt. Ditch Grade
+3.50% Rt. Ditch Grade

+75 Rt. 898.29
+25 Rt. 898.05
+00 Rt. 915.59
+00 Rt. 928.09
+50 Rt. 954.35
+50 Rt. 964.88
+50 Rt. 969.65

VPI +70.003
Elv 978.25
Len 1,280.00 ft
K = 406

+2.600%
-0.550%
+1.59% Rt. Ditch Grade

Lt UAC DITCH | BRIDGE | DITCH GRADE | Ditch 5' Width | UAC DITCH | DITCH GRADE | UAC DITCH | DITCH GRADE
UAC EXISTING PAVED MEDIAN | BRIDGE | Trans | Trans | UAC EXISTING PAVED MEDIAN
Rt BRIDGE

931.48 931.73 931.98 932.23 932.48 932.73 932.98 933.23 933.48 933.73 933.98 934.23 934.48 934.73 934.98 935.23 935.48 935.73 935.98 936.23 936.48 936.73 936.98 937.23 937.48 937.73 937.98 938.23 938.48 938.73 938.98 939.23 939.48 939.73 939.98 940.23 940.48 940.73 940.98 941.23 941.48 941.73 941.98 942.23 942.48 942.73 942.98 943.23 943.48 943.73 944.00 944.30 944.63 945.00 945.40 945.83 946.30 946.80 947.33 947.90 948.50 949.13 949.78 950.43 951.08 951.73 952.38 953.03 953.68 954.33 954.98 955.63 956.28 956.93 957.58 958.23 958.88 959.53 960.18 960.83 961.48 962.13 962.76 963.37 963.97 964.56 965.12 965.68 966.22 966.74 967.24 967.74 968.21 968.67 969.12 969.55 969.96 970.36 970.75 971.11 971.47 971.81 972.13 972.44 972.73 973.00 973.26 973.51 973.74 973.95 974.15 974.34 974.51 974.66 974.80 974.92 975.03 975.12 975.19 975.26

1505 1510 1515 1520 1525 1530 1535

C ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER D.7

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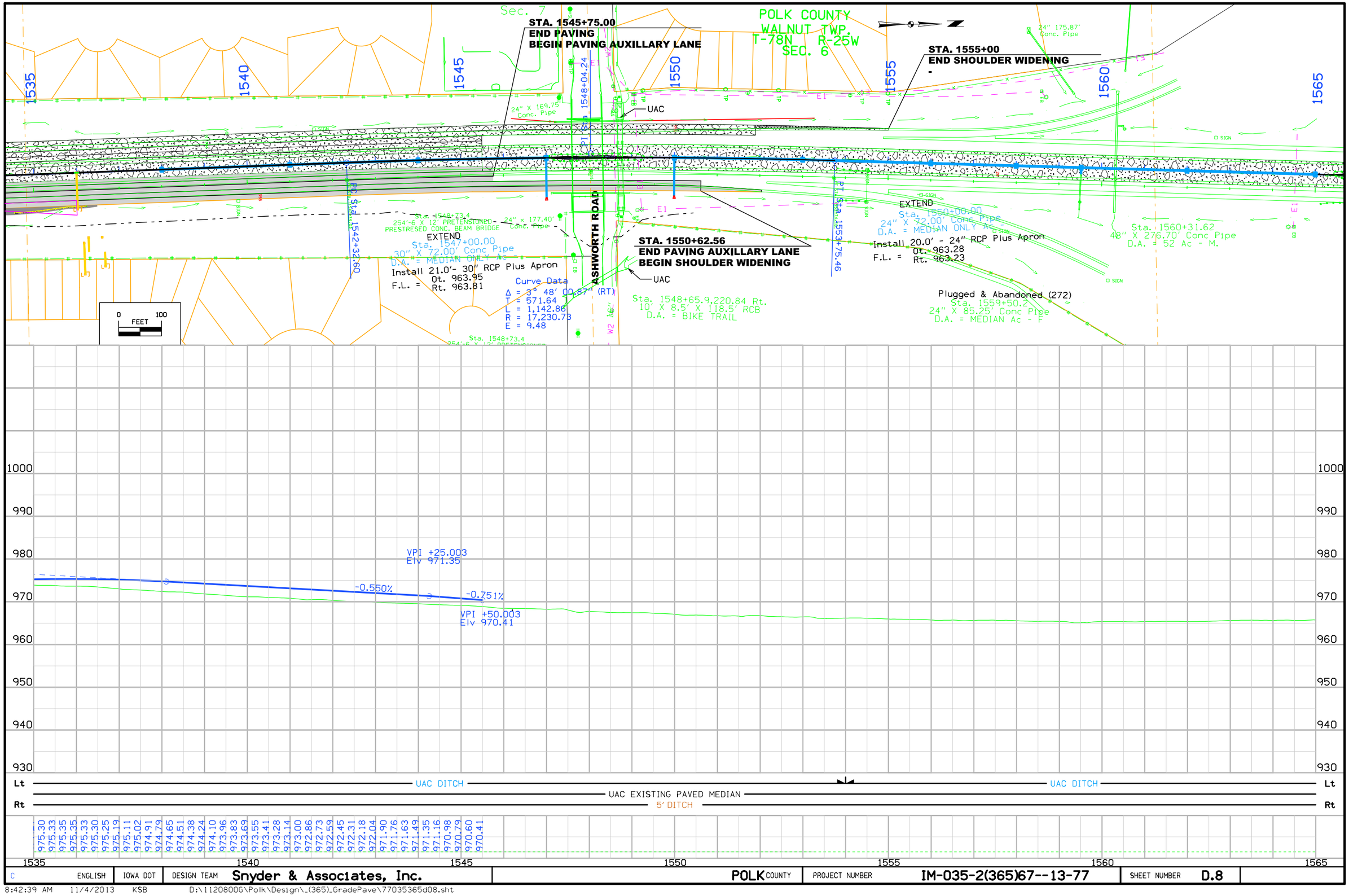

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	D.8

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WALNUT TWP.
T-78N R-25W
SEC. 19

STA. 3374+90.00 (WB)
BEGIN CONSTRUCTION
Begin Resurfacing & Base Widening

STA. 3377+75.00
Begin Sidewalk Paving

STA. 3377+75.00
Begin Paving

DO NOT DISTURB

PT Sta 3372+13.91
POT Sta 3372+20.26
PI Sta 3369+37.72

02A
02
P-02
03A
03
P-03
5'
9'
05A
05
P-05

Curve Data
Δ = 21° 20' 58.40" (RT)
T = 282.74
L = 558.93
R = 1,500.00
E = 26.42

Grand Avenue Eastbound was Reconstructed as Part of Project IM-035-2(364)67--13-77

Refer to Sheet No. E.4-E.5 for Trail Plan and Profile

SEC. 30

0 50 FEET

(UAC)
STA. 3379+52.36
11'-12'X12' RCB
F.L. = LT. 827.30
RT. 825.90
DESIGN NO. 713

VPI +00.000
Elv 847.38
Len 135.00 ft

VPI +50.000
Elv 844.88
Len 135.00 ft

+00 837.97
+50 837.34
+50 836.36
+20 827.41
+49 838

844.42

+0.261%
+1.000%
+0.249%
-0.42% Lt. Ditch Grade
-0.98% Lt. Ditch Grade
+2.00% Ditch Grade

Lt -0.42% Ditch Grade -0.98% Ditch Grade +2.00% Ditch Grade Lt
Rt Rt

844.42 844.49 844.55 844.62 844.68 844.75 844.86 845.00 845.18 845.38 845.63 845.88 846.13 846.38 846.63 846.87 847.08 847.25 847.39 847.49 847.56 847.63 847.69 847.75 847.81 847.87

3369 3370 3371 3372 3373 3374 3375 3376 3377 3378 3379 3380 3381 3382 3383 3384

855 850 845 840 835 830

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	E.1

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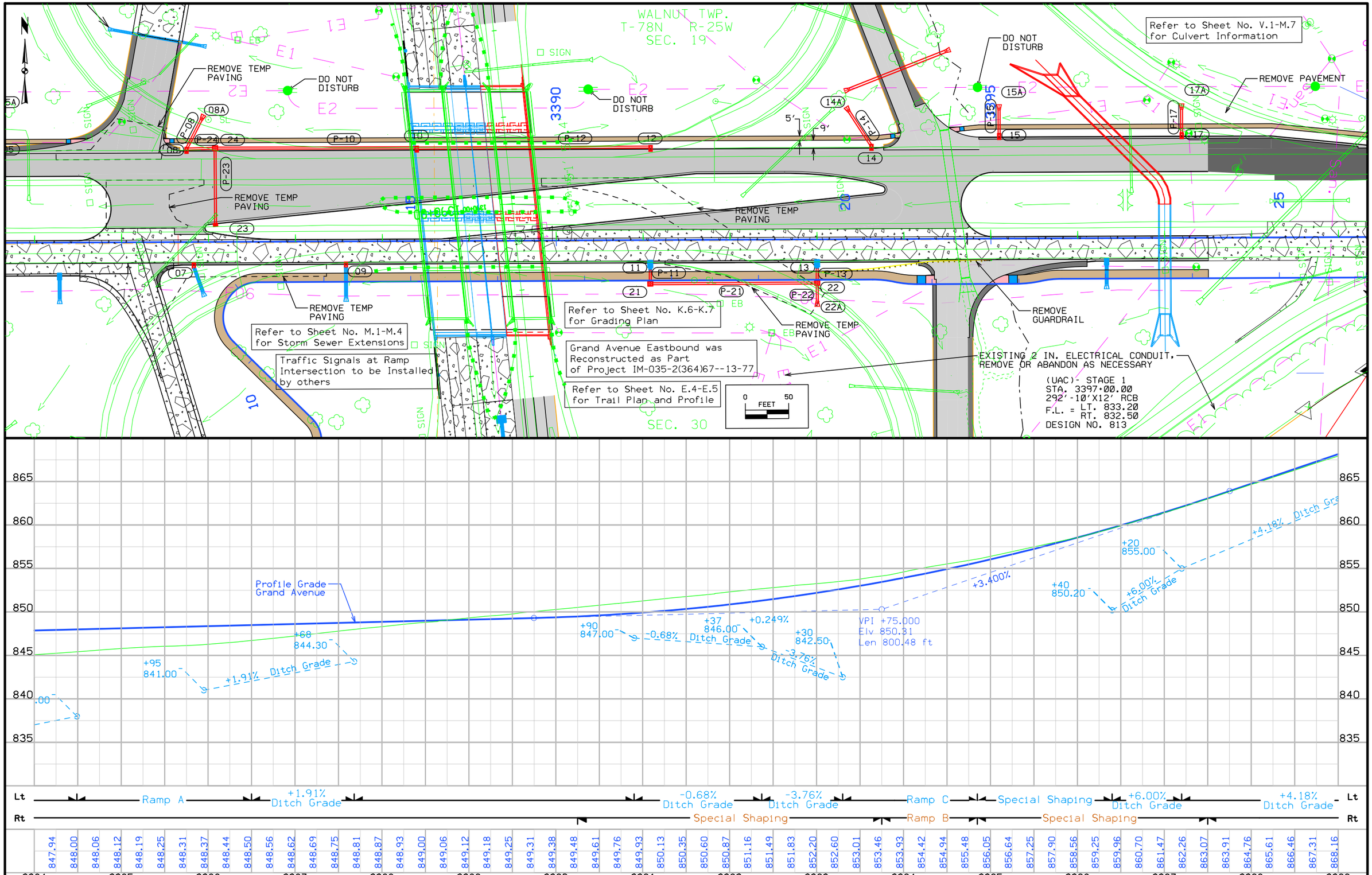
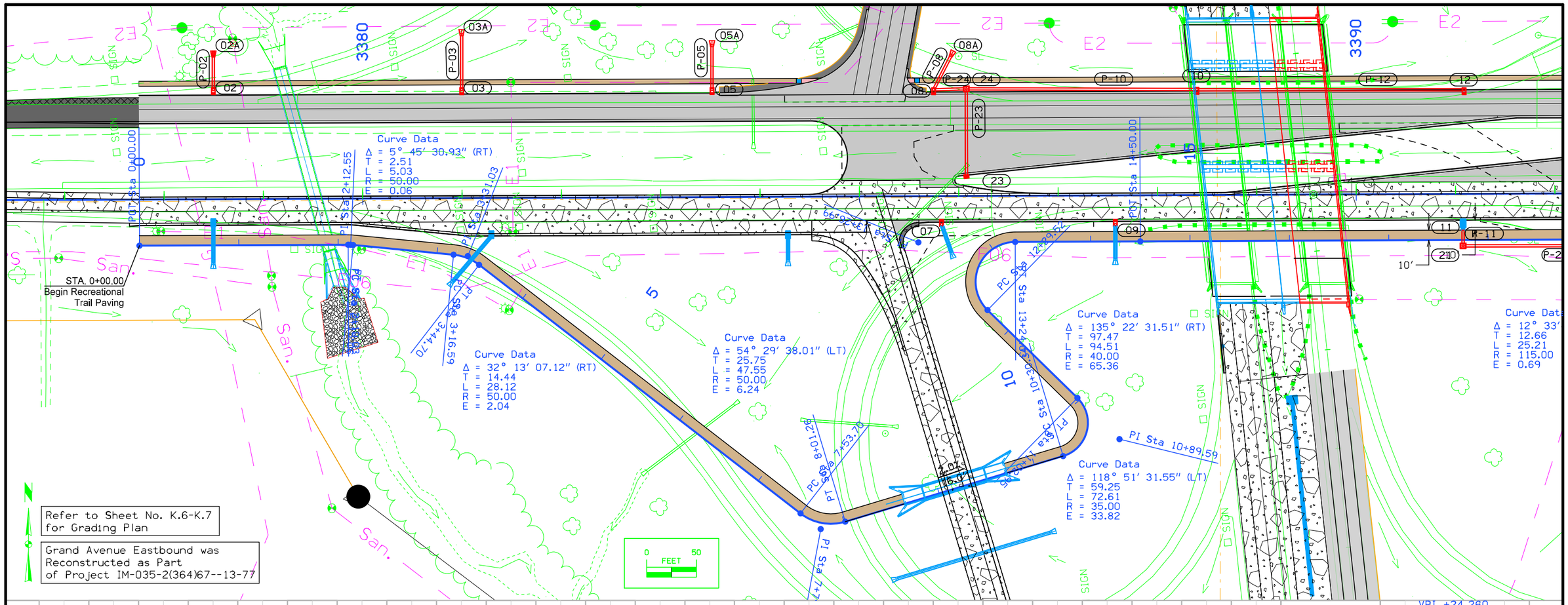


C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER E.2

8:43:30 AM 11/4/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365e02.sht

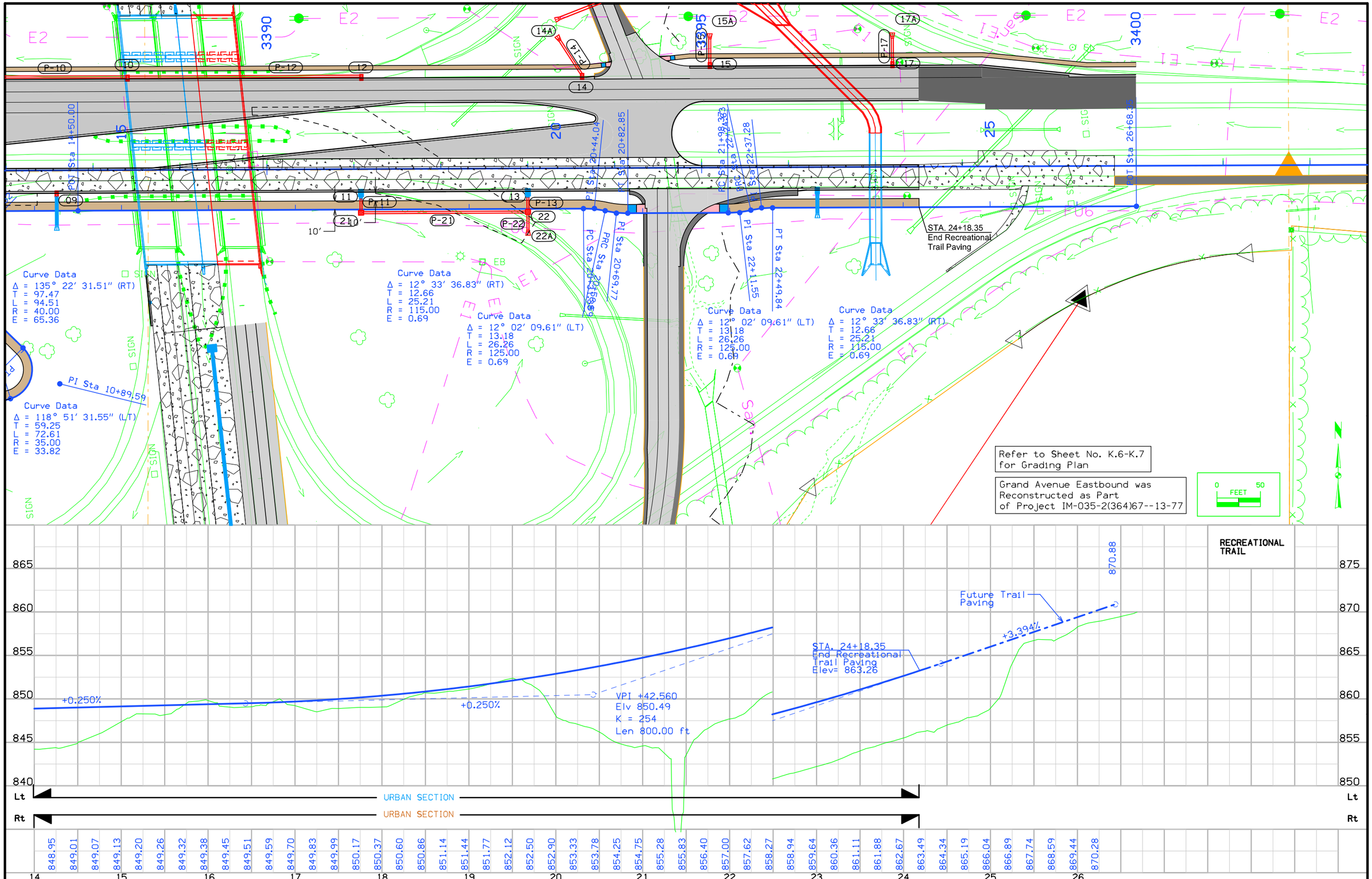
ENGLISH | IOWA DOT | DESIGN TEAM **Snyder & Associates, Inc.** | **POLK** COUNTY | PROJECT NUMBER **IM-035-2(365)67--13-77** | SHEET NUMBER **E.3**

8:43:52 AM 11/4/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365e03.sht



ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	E.4

2:43:04 PM 11/4/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365e04.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER E.5

8:44:36 AM 11/4/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365e05.sht

General Information

The GPS Network along this project was collected by IDOT Preliminary Survey Crews. Information about that network can be found in the 0412gpspoints.doc file included with this survey in NAD83 (1996) Project Coordinates.

The mainline alignment of this survey is a retrace of the as-built plans Proj. No. I-853(10) 1959 PCC Paving Plan and The IN-ING 853-(8) AB plans (centerline of N. B. Lanes).Stationing was obtained at PI Sta. 1281+39.80 (G080) and backed up To the BOP then carried ahead to the EOP.

This survey intersects a 2000 Warren Co. Road G-14 intersection survey, a Dave Guge 1997 survey at Grand Avenue, and the I-235 survey. Equations to the common points to both this survey and the older surveys can be found below in the Horizontal Datum.

The mainline alignment for this project is a retrace of the as-built alignment. Station equations to all as-built PI points are in the Horizontal datum information.

Vertical Datum

This survey is relative to NAVD88 vertical datum. A three wire bench level run was run throughout this project.I-35 benches were established. The first run originated at BM # 500 a Posted code "A" Vertical Order BM Stamped L 116 1935(PID# MH0304)in St. Charles. A Circuit was ran from St. Charles easterly to I-35, northerly to Grand Ave., easterly to Commerce to BM# 625,a 1st order USGS stamped Q-155 1950.PID#MH0433. The second bench circuit began at BM# 625 in Commerce and went northerly along 50th St., westerly along I-235,southernly along I-35 And easterly along Grand Ave. returning to BM # 625 in Commerce. Additional Bench circuits were also completed at County road G-14, Grand Ave. and I-35 between I-235 and University Ave. Benches were established along all Bench Runs.

Vertical Equations to the Project Datum Bench Marks and Benches along this Survey are as Follows:

BM # 568 This Survey EL. = 908.545
=BM # 501 John Adams 2000 survey EL. = 908.420
Project #IM-35-2(276)65--13-91

BM # 569 This Survey EL. = 938.180
=BM # 502 From John Adams 2000 Survey EL. = 938.001
Project # IM-35-2(276)65--13-91

BM # 570 This Survey El. = 930.732
=BM # 503 From John Adams 2000 Survey El. = 930.561
Project # IM-35-2(276)65--13-91

BM # 571 This Survey El. = 944.242
=BM # 504 From John Adams 2000 Survey El. = 944.035
Project #IM-35-2(276)65--13-91

BM # 573 This Survey El. = 984.976
=BM# 505 From John Adams 2000 Survey El. = 984.691
Project #IM-35-2(276)65--13-91

BM # 626 This Survey El. = 963.367
=BM # 510 From John Adams 2000 Survey El. = 963.154
Project # IM-35-2(276)65--13-91

BM # 572 This Survey El. = 973.820
=BM # 512 From John Adams 2000 Survey El. = 973.556
Project # IM-35-2(276)65--13-91

BM # 627 This Survey El. = 962.757
=BM # 509 From John Adams 2000 Survey El. = 962.540
Project # IM-35-2(276)65--13-91

BM # 574 This Survey El. = 963.489
=BM # 506 From John Adams 2000 Survey El. = 963.225
Project # IM-35-2(276)65--13-91

BM # 575 This Survey El. = 963.181
=BM # 511 From John Adams 2000 Survey El. = 962.930
Project # IM-35-2(276)65--13-91

BM # 576 This Survey El. = 982.679
=BM # 507 From John Adams 2000 Survey El. = 982.398
Project # IM-35-2(276)65--13-91

BM # 577 This Survey El. = 963.460
=BM # 508 From John Adams 2000 Survey El. = 963.233
Project # IM-35-2(276)65--13-91

BM # 585 This Survey EL. = 957.644
=BM # 629 From Dave Guge 1997 Survey El. = 957.311
Project # NHS-6-5(36)-19-77

BM # 586 This Survey EL. = 944.995
=BM # 628 From Dave Guge 1997 Survey El. = 945.792
Project # NHS-6-5(36)-19-77

BM # 596 This Survey EL. = 858.431
=BM # 603 From Dave Guge 1997 Survey El. = 858.384
Project # NHS-6-5(36)-19-77
=BM # 5 From Joe Feller 1985 Survey EL. = 858.41
Project # IR-35-2(19)67-12-77

BM # 634 This Survey EL. = 847.613
=BM# 627 From Dave Guge 1997 Survey El. = 847.508
Project # NHS-6-5(36)-19-77

BM # 598 This Survey EL. = 872.129
=BM # 604 From Dave Guge 1997 Survey El. = 872.029
Project # NHS-6-5(36)-19-77
=BM # 6 From Joe Feller 1985 Survey EL. = 871.981
Project # IR-35-2(19)67-12-77

BM # 633 This Survey EL. = 856.102
=BM # 626 From Dave Guge 1997 Survey El. = 855.960
Project # NHS-6-5(36)-19-77

BM # 632 This Survey EL. = 841.673
=BM # 606 From Dave Guge 1997 Survey El. = 841.576
Project # NHS-6-5(36)-19-77
=BM # 5 From Joe Feller 1985 Survey EL. = 841.54
Project # IR-35-2(19)67-12-77

BM # 599 This Survey EL. = 895.643
=BM # 605 From Dave Guge 1997 Survey El. = 895.533
Project # NHS-6-5(36)-19-77
=BM # 8 From Joe Feller 1985 Survey EL. = 895.51
Project # IR-35-2(19)67-12-77

BM # 620 This Survey EL. = 987.086
=BM # 501 From Carlson 1996 Survey El. = 987.065
Project # IM-235-2(241)73-13-77

Horizontal Datum

The mainline alignment of this survey is a retrace of the as-built plans Proj. No. I-853(10) 1959 PCC Paving Plan and The IN-ING 853-(8) AB plans (centerline of N. B. Lanes).Stationing was obtained at PI Sta. 1281+39.80 (G080) and backed up To the BOP then carried ahead to the EOP.

Side Road "A"(G-14)is a Retrace of the 2ooo Adams survey.
Stationing was established at POT # 107(see Equation)

Side Road "B"(Grand Ave.)is a Retrace of the P-934-0(6)-30-77 1989 AB Plan
Stationing was established at CN # 119(see Equation)

Mainline (I-35) Equations

BOP POT Sta. 1135+92.30 this survey(CP#100)
=BOP POT Sta. 1135+87.54 IM-35-2(276)65-13-91 2000 Adams Survey

POT Sta. 1172+97.92 This Mainline Survey(POT#107)
=POT Sta. 2172+97.92 This Co. Road G-14 Survey
=POT Sta. 1172+93.14 IM-35-2(276)65-13-91 2000 Adams Mainline Survey
=POT Sta. 2172+85.10 IM-35-2(276)65-13-91 2000 Adams Co. Road G-14 Survey
=POt Sta. 172+85.1 PCC Paving Plan Proj.# I-853(10)

PI Sta. 1196+49.34 This Survey(PI#101)
=PI Sta. 1196+44.50 IM-35-2(276)65-13-91 2000 Adams Mainline Survey
=PI Sta. 1196+45.5 PCC Paving Plan Proj.# I-853(10)

PI Sta. 1281+39.80 This Survey(PI#80)
=PI Sta. 1281+39.80 PCC Paving Plan Proj.# I-853(10)

PI Sta. 1321+90.58 This Survey(PI#81)
=PI Sta. 3282+32.48 NHS-5-5(36)-19-77 1997 Guge Survey

POT Sta. 1380+07.34 This Survey(CN117)Inters. I-35 & RR tracks
=POT Sta. 140+50.8 IN-ING-853-(8) AB Plan

POT Sta. 1389+57.01 This Mainline Survey(CN#119)
=POT Sta. 3389+57.01 This Grand Ave. Survey
=POt Sta. 150+00.0 F.Proj.# IN-ING-853(8) AB Plan

POT Sta. 1402+03.99 This Survey(POT#103)
=POT Sta. 3362+46.14 NHS-5-5(36)-19-77 1997 Guge Survey

PI Sta. 1410+94.03 This Survey(PI#113)
=PI Sta. 171+42.4 IN-ING-853-(8) AB Plan

PI Sta. 1548+04.27 This Survey(PI#114)
=PI Sta. 308+52.8 IN-ING-853-(8) AB Plan

Side Road "A"(Co.Road G-14) Equations

PI Sta. 2144+06.46 This Survey(PI#109)
=PI Sta. 2143+93.71 IM-35-2(276)65-13-91 2000 Adams Survey
=PI Sta. 513+59.7 Warren Co. Plan RS-7577(6)-69-91

POT Sta. 2162+97.70 This Survey(CP#110)
=POT Sta. 2162+84.96 IM-35-2(276)65-13-91 2000 Adams Survey
=PI Sta. 532+50.1 Warren Co. Plan RS-7577(6)-69-91

POT Sta. 1172+97.92 This Mainline Survey(POT#107)
=POT Sta. 2172+97.92 This Co. Road G-14 Survey
=POT Sta. 1172+93.14 IM-35-2(276)65-13-91 2000 Adams Mainline Survey
=POT Sta. 2172+85.10 IM-35-2(276)65-13-91 2000 Adams Co. Road G-14 Survey
=POT Sta. 172+85.1 PCC Paving Plan Proj.# I-853(10)

PI Sta. 2182+12.73 This Survey(PI#111)
=PI Sta. 2181+99.99 IM-35-2(276)65-13-91 2000 Adams Survey
=PI Sta. 64+22.3 Warren Co. Plan RS-7577(6)-69-91

PI Sta. 2199+68.47 This Survey(PI#112)
=PI Sta. 2199+55.73 IM-35-2(276)65-13-91 2000 Adams Survey
=PI Sta. 81+78.4 Warren Co. Plan RS-7577(6)-69-91

DETAILS OF REFERENCE INFORMATION

All References are Plumb Distances unless otherwise noted.

Side Road "B"(Grand Ave.)Equations

POT Sta. 3413+21.1 This Survey(PI#122)
=PI Sta. 1315+21.1 F. Proj.# 340(12) AB Plan

POT Sta. 3441+05.31 This Survey(CP#124)
=POT Sta. 1343+13.7 F. Proj.# 340(12) AB Plan

POT Sta. 1389+57.01 This Mainline Survey(CN#119)
=POT Sta. 3389+57.01 This Grand Ave. Survey
=POt Sta. 150+00.0 F.Proj.# IN-ING-853(8) AB Plan

Equations are as follows:
Point # G011 This Survey (Local Project Coord.-Feet)
yc=540450.94, xc=1562391.17, zc =965.09 (G.P.S. HT)
=Point #XXXX from assumed District Control Survey (no known coordinates)

Point # G012 This Survey (Local Project Coord.-Feet)
yc=540451.05, xc=1563820.56, zc =981.64 (G.P.S. HT)
=Point # 303 Adams Warren Co. G-14 Survey (Feet)
yc=503693.36, xc=500108.22, zc =not set

Point # G013 This Survey (Local Project Coord.-Feet)
yc=540453.91, xc=1565137.32, zc =970.62 (G.P.S. HT)
=Point # 320 Adams Warren Co. G-14 Survey (Feet)
yc=503702.392, xc=501424.988, zc =not set

Note: This GPS survey between G012 & G013 distance of 1316.763' Azimuth 89*52'32.0" (Local Project Coordinate-feet) = Adams G14 Survey between 303 & 320 distance of 1316.799' Azimuth 89*36'25.2"

Point # G030 This Survey (Local Project Coord.-Feet)
yc=580048.97, xc=1565679.42, zc =987.22 (G.P.S. HT)
=Point # G014 Polk Co. I235 Survey (Feet)
yc=580043.725, xc=1565675.966, zc =not set
=Point # G014 Polk Co. I235 Survey (Metric)
yc=176797.681, xc=477218.989, zc=not set

Point # 7701 This Survey (Local Project Coord.-Feet)
yc=553644.27, xc=1564267.18, zc =939.17 (G.P.S. HT)
=Point # 7701 Polk Co. I235 Survey (Feet)
yc=553639.35, xc=1564263.70, zc =not set
=Point # 7701 Polk Co. I235 Survey (Metric)
yc=168749.610, xc=476788.529, zc=not set

Note: This GPS survey between 7701 & G030 distance of 26442.439' Azimuth 3*03'41.5" (Local Project Coordinate-feet) = Stensland Survey between 7710 & G014 distance of 26442.122' Azimuth 3*03'41.8"

Point # 7701 This Survey (Local Project Coord.-Feet)
yc=553644.27, xc=1564267.18, zc =939.17 (G.P.S. HT)
=Point # G409 Adams Polk Co. IA 5 Survey (Feet)
yc=553641.59, xc=1564264.41, zc =not set
=Point # G409 Adams Polk Co. IA 5 Survey (Metric)
yc=168750.293, xc=476788.746, zc=not set

Point # G022 This Survey (Local Project Coord.-Feet)
yc=561622.53, xc=1564039.34, zc =841.71 (G.P.S. HT)
=Point # 722 Guge Polk Co. I35 Survey (Feet)
yc=561619.75, xc=1564036.26, zc =not set
=Point # 722 Guge Polk Co. I35 Survey (Metric)
yc=171182.041, xc=476719.205, zc =not set

Point # G023 This Survey (Local Project Coord.-Feet)
yc=561637.70, xc=1565600.92, zc =850.91 (G.P.S. HT)
=Point # 719 Guge Polk Co. I35 Survey (Feet)
yc=561635.00, xc=1565597.93, zc =not set
=Point # 719 Guge Polk Co. I35 Survey (Metric)
yc=171186.691, xc=477195.204, zc =not set

Note: This GPS survey between 7701 & G022 distance of 7981.51' Azimuth 358*21'51.2" (Local Project Coordinate-feet) = Adams & Guge Survey between 409 & 722 distance of 7981.42' Azimuth 358*21'43"

Note: This GPS survey between 7701 & G023 distance of 8103.94' Azimuth 9*28'22.1" (Local Project Coordinate-feet) = Adams & Guge Survey between 409 & 719 distance of 8103.88' Azimuth 9*28'16.6"

Note: This GPS survey between G022 & G023 distance of 1561.65' Azimuth 89*26'36.3" (Local Project Coordinate-feet) = Adams & Guge Survey between 722 & 719 distance of 1561.75' Azimuth 89*26'25.1"

BENCHMARKS

					ELEVATION
No.	568	Sta. 1143+56.772	61.08 Rt.	FD "X" INLET HDWL 4.0 X 5.0 R.C.B. =BM 501 FROM JOHN ADAMS 2000 SURVEY PROJECT # IM-35-2(276)65--13-91 ELEV. =908.420----------	908.545
No.	569	Sta. 1157+04.463	73.30 Rt.	FD "X" EAST CONC SIGN POST BASE =BM 502 FROM JOHN ADAMS 2000 SURVEY PROJECT # IM-35-2(276)65--13-91 ELEV. =938.001----------	938.180
No.	570	Sta. 1158+65.578	174.79 Rt.	FD\IHC BM ON INLET HDWL 5.0 X 7.0 R.C.B. =BM 503 FROM JOHN ADAMS 2000 SURVEY PROJECT # IM-35-2(276)65--13-91 ELEV. =930.561----------	930.732
No.	571	Sta. 1167+22.461	101.59 Rt.	FD "X" ON INLET 24" RCP UNDER NB OFF-RAMP EXIT 65 =BM 504 FROM JOHN ADAMS 2000 SURVEY PROJECT # IM-35-2(276)65--13-91 ELEV. =944.035----------	944.242
No.	574	Sta. 1173+57.190	45.07 Rt.	FD X INLET 24"CIRC.RCP =BM# 506 ELEV.963.225(E) IM-35-2(276)65--13-91 2000 ADAMS SURVEY----------	963.489
No.	576	Sta. 1181+02.610	119.12 Rt.	FD RR SPK SW SIDE P.POLE =BM# 507 ELEV.982.398(E) IM-35-2(276)65--13-91 2000 ADAMS SURVEY----------	982.679
No.	577	Sta. 1187+58.262	68.10 Rt.	FD X INLET 42"RCP =BM# 508 ELEV.963.233(E) IM-35-2(276)65--13-91 2000 ADAMS SURVEY----------	963.460
No.	578	Sta. 1207+04.872	57.72 Rt.	CUT X W SIDE CO SIGN BASE SIGN SAYS WDM 8 MILES----------	963.032
No.	579	Sta. 1221+66.178	95.49 Lt.	FD IHC W.INLET HDWL6X5RCB------	969.162
No.	580	Sta. 1234+04.309	28.01 Lt.	CUT"X" ON COLLAR OF 4.0' CIR. MED GD. INTAKE +-35' BACK OF DELINEATOR POST 66.25----------	978.479
No.	581	Sta. 1252+24.082	69.44 Rt.	FD "X" ON S.E. HANDRAIL BRIDGE OVERPASS #9166.6--------	1008.168
No.	582	Sta. 1252+54.420	135.89 Lt.	CUT"X" ON N.W. WING BRIDGE OVERPASS #9166.6--------	1006.448
No.	583	Sta. 1266+01.014	30.45 Lt.	FD"X" N. EDGE CO INTAKE IN MEDIAN BM # 583 ELEV. 976.766(E) THIS SURVEY =BM# 630 ELEV. 297.608(M) NHS-6-5(36)--19-77 1997 GUGE SURVEY----------	976.766
No.	584	Sta. 1268+50.391	56.65 Rt.	FD"X" E.OUTLET FLUME HDWL 36" RCP----------	963.703
No.	585	Sta. 1282+02.269	31.72 Lt.	FD "X" N. EDGE CO. INTAKE IN MEDIAN BM # 585 ELEV. 957.644(E) THIS SURVEY =BM# 629 ELEV. 291.789(M) NHS-6-5(36)--19-77 1997 GUGE SURVEY----------	957.644
No.	586	Sta. 1288+05.204	147.47 Lt.	FD."X"N.HDWL.42"CIR.RCP BM # 586 ELEV. 944.995(E) THIS SURVEY =BM# 628 ELEV. 288.278(M) NHS-6-5(36)--19-77 1997 GUGE SURVEY----------	944.995
No.	587	Sta. 1290+75.448	42.40 Rt.	FD."X"E.OUTLET 54"CIR.RCP------	932.043
No.	641	Sta. 1300+94.167	1148.99 Lt.	SET\RR SPK N SIDE P.POLE 3RD POLE WEST OF INTERS. MAFFITT LAKE RD & MAFFITT LAKE DR----------	931.671
No.	588	Sta. 1303+27.005	61.07 Rt.	FD "X" E. OUTLET FLUME HDWL 42" RCP----------	887.501
No.	589	Sta. 1308+96.255	165.28 Rt.	FD.DOT BUTTON INLET HDWL 6' X 5' RCB----------	875.478
No.	590	Sta. 1312+05.184	128.65 Lt.	CUT"X"NE.COR.CONC.EB.BASE------	883.189
No.	591	Sta. 1324+84.869	39.40 Lt.	CUT"V"N.END CO.INCASEMENT 18"CMP SAFETY SLOPE APRON------	852.687
No.	592	Sta. 1333+95.591	27.02 Rt.	CUT"X"SW.COR.CONC. PAD NEAR JUNCT.NB I35&IA5RAMP------	834.504
No.	593	Sta. 1356+68.106	37.22 Rt.	FD."DOT" BUTTON S.E. COR. HDRL.RACCOON RIVER BRIDGE------	837.242
No.	594	Sta. 1363+50.641	37.70 Rt.	CUT"X"N.E.HNDRL.N.B.I-35 OVER RACCOON RIVER----------	837.209
No.	595	Sta. 1379+56.463	112.76 Lt.	CUT"X"S.W.ELEPHANT EAR OF S.B.I-35 BRIDGE OVER R.R.------	858.731
No.	596	Sta. 1380+98.179	19.90 Lt.	FD."X"N.W.WING N.B. I-35 BRIDGE OVER R.R. BM # 596 ELEV. 858.431(E) THIS SURVEY =BM# 603 ELEV. 261.636(M) NHS-6-5(36)--19-77 1997 GUGE SURVEY =BM # 5 ELEV. 858.41(E) IR-35-2(19)67--12-77 1985 FELLER SURVEY----------	858.431
No.	597	Sta. 1388+56.773	30.48 Rt.	CUT"X"S.E.WING N.B. I-35 BRIDGE OVER GRANDE AVE.--------	868.689
No.	630	Sta. 1390+81.036	2599.13 Lt.	CUT"X"NE.BOLT FHD.IN NE. QUAD INTERS.OF GRAND AVE. & BOONEVILLE RD.----------	841.649
No.	598	Sta. 1391+46.673	61.14 Lt.	FD."X"N.E.COR. N.E. WING OF S.B. I-35 BRIDGE OVER GRAND AVE. BM # 598 ELEV. 872.129(E) THIS SURVEY =BM# 604 ELEV. 265.795(M) NHS-6-5(36)--19-77 1997 GUGE SURVEY =BM # 6 ELEV. 871.981(E) IR-35-2(19)67--12-77 1985 FELLER SURVEY----------	872.129
No.	631	Sta. 1392+05.683	1948.66 Lt.	SET RR.SPK.S.SIDE P.POLE JUST WEST OF END OF DIVIDED 4 LANE ROAD----------	842.220
No.	599	Sta. 1399+68.959	62.09 Lt.	FD."X"E. SIDE OF E. OVRHD CONC. SIGN BASE OVER S.B. LANE I-35 AT GRAND AVE. OFF RAMP BM # 599 ELEV. 895.643(E) THIS SURVEY =BM# 605 ELEV. 272.959(M) NHS-6-5(36)--19-77 1997 GUGE SURVEY =BM # 8 ELEV. 895.51(E) IR-35-2(19)67--12-77 1985 FELLER SURVEY----------	895.643

DETAILS OF REFERENCE INFORMATION

All References are Plumb Distances unless otherwise noted.

No. 600 Sta. 1403+73.676 112.07 Lt. CUT "X" E.SIDE OF CONC. LUM POLE BASE W.SIDE OF I-35---------- 908.495
No. 601 Sta. 1411+73.348 43.19 Lt. CUT "X" INLET 18" RCP MEDIAN CROSS-OVER PIPE--------- 932.333
No. 602 Sta. 1415+90.555 30.26 Lt. FD "X" INLET 21" RCP MEDIAN DRAIN---------- 935.413
No. 603 Sta. 1431+54.057 113.65 Lt. CUT "X" E.SIDE OF CONC LUM POLE BASE---------- 955.888
No. 604 Sta. 1439+12.917 41.91 Rt. CUT "X" W.SIDE OF E. CONC OVRHD SIGN BASE AT BEGINNING OF NB OFF-RAMP FOR MILLS CIVIC PARKWAY-------- 971.469
No. 605 Sta. 1450+54.901 28.55 Rt. CUT "X" ON W.SIDE OF E. CONC OVRHD. SIGN BASE SIGN IS THE AUTO CHANGE MESSAGE SIGN---------- 981.793
No. 606 Sta. 1462+56.334 122.06 Lt. CUT "X" NE COR OF 4.0X3.7 CONC INTAKE COVER ON W.SIDE I-35 BETWEEN RAMP & SB LANES---------- 965.311
No. 607 Sta. 1474+29.564 56.24 Lt. CUT "X" E.SIDE OF EAST CONC OVERHEAD SIGN BASE AT BEGINNING SB OFF-RAMP FOR MILLS CIVIC PARKWAY-------- 945.147
No. 608 Sta. 1482+54.566 39.51 Rt. CUT "X" W.SIDE OF CONC LUM POLE BASE OPP. APARTMENT COMPLEXES---------- 928.720
No. 609 Sta. 1496+53.464 33.22 Lt. CUT "X" INLET APRON 24" RCP MEDIAN PIPE---------- 921.761
No. 610 Sta. 1511+25.765 20.43 Rt. CUT "X" SE COR WING NB BRIDGE I-35 OVER---------- 937.064
No. 611 Sta. 1514+74.369 19.97 Lt. CUT "X" NW COR WING NB BRIDGE I-35 OVER---------- 939.878
No. 612 Sta. 1514+83.106 99.63 Lt. FD "X" NW COR ELEPHANT EAR OF SB BRIDGE I-35 OVER---------- 942.647
No. 613 Sta. 1521+52.380 22.65 Lt. CUT "X" W.SIDE OF W.CONC OVERHEAD SIGN BASE---------- 952.271
No. 614 Sta. 1532+53.077 60.89 Rt. CUT "X" W.SIDE OF W.CONC SIGN BASE STATE FAIR GROUNDS EXIT 72A SIGN---------- 968.915
No. 615 Sta. 1547+31.383 93.23 Rt. SET\RR SPK W SIDE P.POLE 40' SOUTH OF BRIDGE OVERPASS---------- 980.906
No. 616 Sta. 1549+24.457 77.63 Rt. CUT "X" W.SIDE OF LUM. POLE BASE---------- 974.477
No. 617 Sta. 1554+51.094 22.67 Lt. CUT "X" W.SIDE OF WEST OVERHEAD SIGN BASE---------- 968.400
No. 618 Sta. 1564+54.321 80.37 Rt. CUT "X" NW COR CONC ELECTRICAL BOX PAD---------- 960.534
No. 619 Sta. 1566+59.477 107.46 Lt. CUT "X" NW END OF CONC BARRIER WALL W.SIDE I-35 80/35 NB RAMP BRIDGE---------- 969.767
No. 620 Sta. 1575+42.811 85.21 Rt. FD IHCBM WING,SE COR OF THE E.BOUND I-235 BRG OVER I-35 =BM#501 ELEV. 987.065(E) FROM 1996 CARLSON IM-235-2(241)73--13-77 SURVEY---------- 987.086
No. 635 Sta. 1576+74.401 171.84 Lt. FD."SQ."NW.COR.WHLGD.WB. I235 BRIDGE OVER I35---------- 989.017
No. 636 Sta. 1584+91.096 40.98 Rt. FD."X"ON W.BOLT SIGN BASE N.OF I235 ON E.SH.I35/I80 NB.+/-200'BACK OVERPASS FOR WESTOWN PARKWAY---------- 961.628
No. 640 Sta. 1588+80.749 666.49 Rt. CUT"X"ON E.CONC.OVRHD.SGN BASE ON EB.I80 TO NB.I35/ I80 ON RAMP---------- 956.349
No. 637 Sta. 1591+49.642 61.61 Lt. CUT"X"ON E.CONC.OVRHD.SGN BASE IN MEDIAN I35/I80 +/-300'N.OF OVERPASS FOR WESTOWN PARKWAY---------- 951.966
No. 638 Sta. 1597+98.403 315.52 Rt. FD.IHC BM NW.HNDRL.NB.I35 OFF RAMP FOR UNIVERSITYAV------ 961.178
No. 639 Sta. 1605+38.432 31.07 Lt. CUT"X"ON CONC.MED.WALL I35 +/-50'S.OF OVERPASS FOR UNIVERSITY AVE.---------- 935.597

No. 627 Sta. 2159+46.574 49.41 Lt. FD\RR SPK S SIDE P.POLE 3RD POLE WEST OF SB I-35 OFF-RAMP N.SIDE G-14 =BM 509 FROM JOHN ADAMS 2000 SURVEY PROJECT # IM-35-2(276)65--13-91 ELEV. =962.540---------- 962.757
No. 626 Sta. 2165+91.143 24.91 Lt. FD "X" SW COR CONC ISLAND ON TOP OF CURB =BM 510 FROM JOHN ADAMS 2000 SURVEY PROJECT # IM-35-2(276)65--13-91 ELEV. =963.154---------- 963.367
No. 573 Sta. 2173+67.588 12.58 Rt. FD "X" SE WING WALL G14 OVERPASS BRIDGE OF I-35 =BM 505 FROM JOHN ADAMS 2000 SURVEY PROJECT # IM-35-2(276)65--13-91 ELEV. =984.691---------- 984.976
No. 575 Sta. 2179+56.793 279.44 Lt. FD RR SPK W SIDE P.POLE =BM# 511 ELEV.962.930(E) IM-35-2(276)65--13-91 2000 ADAMS SURVEY---------- 963.181
No. 572 Sta. 2183+96.887 39.81 Lt. FD RR SPK S SIDE P.POLE =BM# 512 ELEV.973.556(E) IM-35-2(276)65--13-91 2000 ADAMS SURVEY---------- 973.820
No. 632 Sta. 3379+17.077 132.17 Lt. FD.IHC INLET HDWL12X12RCB ON W.SIDE OF SB.I35 TO WB.GRAND AVE. ON-RAMP BM # 632 ELEV. 841.673(E) THIS SURVEY =BM# 606 ELEV. 256.513(M) NHS-6-5(36)--19-77 1997 GUGE SURVEY =BM # 5 ELEV. 841.54(E) P-934-0(3)--30-77 1985 FELLER SURVEY---------- 841.673
No. 633 Sta. 3386+92.160 172.60 Lt. FD.RR.SPK.S.SIDE P.POLE BETWEEN SB.I-35 BRIDGE & WB.GRAND TO SB.I-35 RAMP BM # 633 ELEV. 856.102(E) THIS SURVEY =BM# 626 ELEV. 260.897(M) NHS-6-5(36)--19-77 1997 GUGE SURVEY---------- 856.102
No. 634 Sta. 3394+46.868 125.07 Lt. FD.IHC INLET HDWL10X12RCB N.SIDE OF GRAND BETWEEN WB.GRAND TO NB.I-35 RAMP& NB.I-35 TO WB.GRAND RAMP BM # 634 ELEV. 847.613(E) THIS SURVEY =BM# 627 ELEV.258.321(M) NHS-6-5(36)--19-77 1997 GUGE SURVEY---------- 847.613
No. 621 Sta. 3398+93.042 134.24 Lt. CUT X SW COR CO LUM POLE BASE N OF GRAND AVE AT CROSSOVER APPROX 600 FT N NE OF I-35---------- 864.525
No. 622 Sta. 3409+77.691 88.87 Lt. SET RR SPK S SIDE P POLE N SIDE OF GRAND AVE 150'W OF FIRE STATION ENTRANCE------- 900.206
No. 623 Sta. 3417+48.352 57.49 Rt. FD X SE BOLT F HYDRANT AT SE QUAD GRAND AVE AND S 50TH ST.---------- 908.420

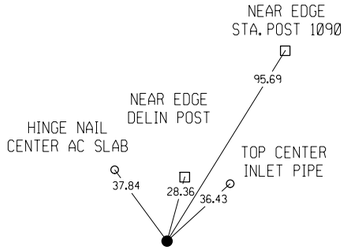
MISCELLANEOUS LOCATIONS

No. 500 ********** USGS STAMPED L116 1935 PID#MH0304 MADISON COUNTY/IOWA USGS QUAD-ST CHARLES 1983 A USC&GS STANDARD AZIMUTH DISK STAMPED L116 1935 WAS FOUND AT THE INTERS. OF CO.RD. R-35 & SYCAMORE ST.IN ST CHARLES THE DISK IS 40'WEST OF CL CO.RD.R-34,36'SO.OF CL SYCAMORE ST,6'NE OF APPLE TREE,23'SO. OF PO.POLE NAVD88 ELEV.=1066.33(E)-------- 1066.330
No. 501 ********** CUT X TOP BOLT FIRE HYDRN------ 1067.731
No. 502 ********** SET RR SPK S.SIDE P.POLE------- 1045.629
No. 503 ********** SET RR SPK S.SIDE P.POLE------- 1048.917
No. 504 ********** FD IHC SW.WING BRIDGE---------- 1045.769
No. 505 ********** FD IHC INLET 6X5 RCB---------- 961.278
No. 506 ********** CUT X E.SIDE CONC SGN BSE------ 942.587
No. 507 ********** SET 60D SW SIDE COR POST------- 962.981
No. 508 ********** CUT X 24" RCP OUTLET HDWL------ 922.046
No. 509 ********** CUT X CONC UMBRELLA INTKE------ 859.814
No. 511 ********** FD IHC SW COR WING BRIDGE------ 865.309
No. 510 ********** FD X SW COR WING BRIDGE-------- 865.323
No. 512 ********** FD IHC NE COR WING BRIDGE------ 877.706
No. 513 ********** CUT X NW COR WING BRIDGE------- 877.207
No. 515 ********** CUT X SW COR WING BRIDGE------- 889.044
No. 514 ********** CUT X SE COR WING BRIDGE------- 888.595
No. 517 ********** CUT X NE COR WING BRIDGE------- 889.385

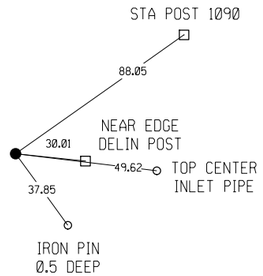
DETAILS OF REFERENCE INFORMATION

All References are Plumb Distances unless otherwise noted.

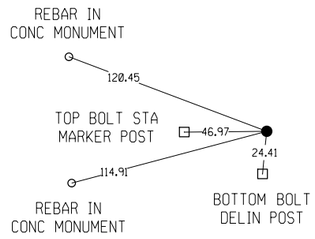
CP STA 1089+25.48,22.41RT
POINT # 380
SET IRON PIN Ø.5 DEEP
XC=1563734.44, YC=532092.43



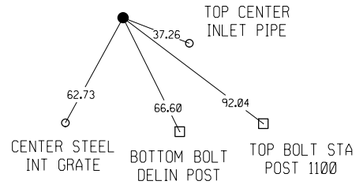
POT STA 1089+56.42,.76RT
POINT # 383
SET HINGE NAIL
XC=1563712.15, YC=532122.90



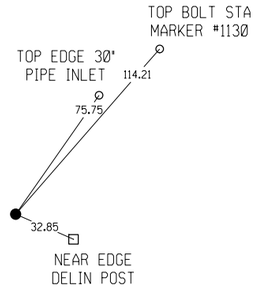
GPS STA 1095+02.65,87.2LT
POINT # GØ78
FD REBAR 6" DEEP
XC=1563613.58, YC=532667.76



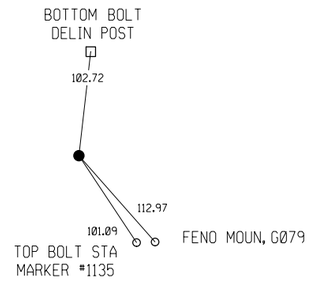
POT STA 1100+65.01,.526RT
POINT #384
SET HINGE NAIL
XC=1563696.60, YC=533231.36



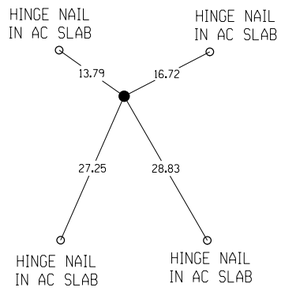
POT STA 1129+17.56,.307RT
POINT # 385
SET HINGE NAIL
XC=1563679.66, YC=536083.86



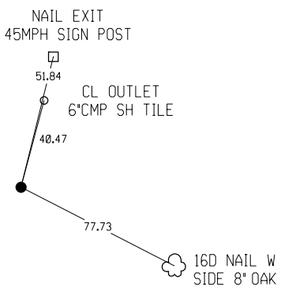
CP STA 1135+91.91,19.21RT
POINT # 301
FD HINGE NAIL
XC=1563695.39, YC=536758.21



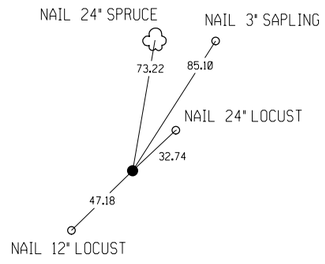
CP 1135+95.30
POINT # 100
FD-FROST NAIL
XC=1563675.40, YC=536758.58



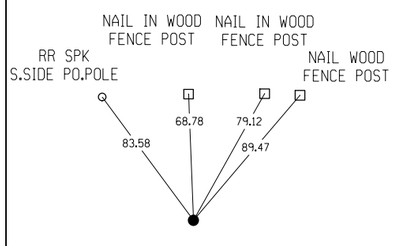
CP 1163+08.51, 31.13 RT
CP POINT 307
FD FROST NAIL
XC=1563718.90, YC=539474.62



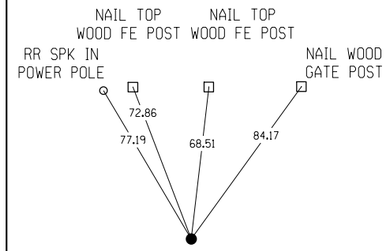
CP 1168+60.24, 128.88 RT
CP POINT 302
FD IRON PIN 6"DEEP
XC=1563819.16, YC=540025.90



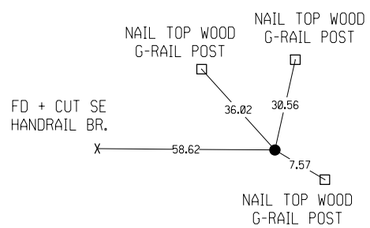
GPS 1172+78.77,1301.03 LT
POINT # 11
FD-IRON-PIN---6"DEEP
XC=1562391.17, YC=540450.94



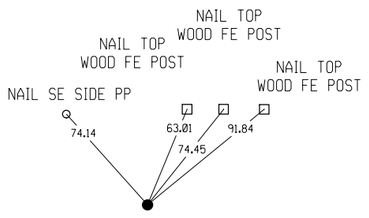
CP 1172+79.37, 1311.51 LT
CP POINT 319
FD IRON PIN
XC=1562380.69, YC=540451.59



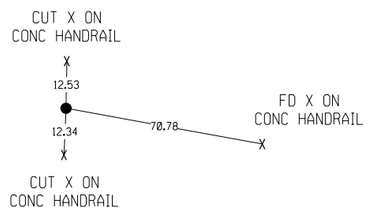
GPS 1172+85.39, 128.34 RT
GPS POINT 12
FD IRON PIN
XC=1563820.56, YC=540451.05



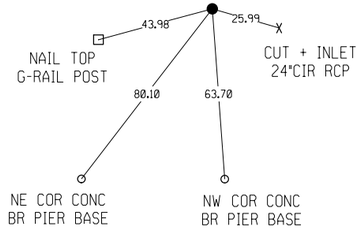
GPS 1172+94.25 1445.08 RT
GPS POINT 13
FD IRON PIN
XC=1565137.32, YC=540453.91



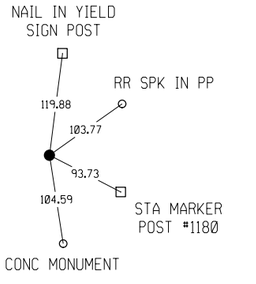
POT STA 1172+97.92
POT POINT 107
FD X ON BR FLOOR
XC=1563692.27, YC=540464.16



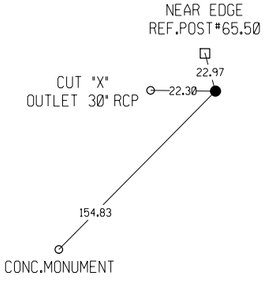
CP 1173+64.30, 20.12 RT
CP POINT 304
FD HINGE NAIL IN AC SH
XC=1563712.69, YC=540530.45



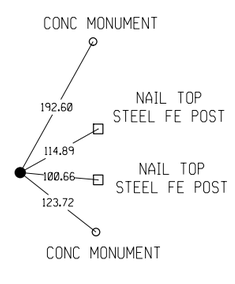
CP 1180+42.42, 34.66 RT
CP POINT 305
FD FROST NAIL IN AC
XC=1563730.33, YC=541208.50



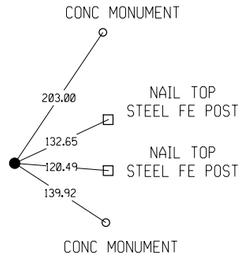
CP STA 1194+71.90,83.96LT
CP,SET IRON PIN Ø.5' DEEP
CP NO. 327
XC=1563618.14, YC=542638.40



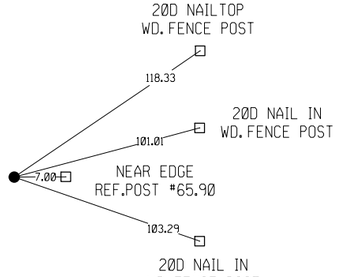
CP 1196+49.32, 20.35 RT
CP POINT 325
FD FROST NAIL
XC=1563722.85, YC=542815.52



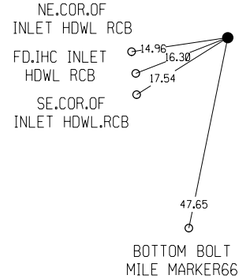
PI 1196+49.34
PI POINT 101
FD FROST NAIL
XC=1563702.99, YC=542815.56



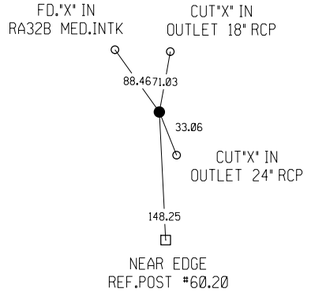
GPS STA 1216+00.75,23.1RT
GPS,FD. REBAR Ø.5' DEEP
GPS POINT NO. G015
XC=1563722.56, YC=544767.01



CP STA 1221+72.04,80.33LT
CP,SET HINGE NAIL IN ACSH
CP NO. 332
XC=1563618.09, YC=545338.12



CP STA 1233+32.19,23.18RT
CP,SET IRON PIN Ø.4' DEEP
CP NO. 333
XC=1563719.50, YC=546498.45

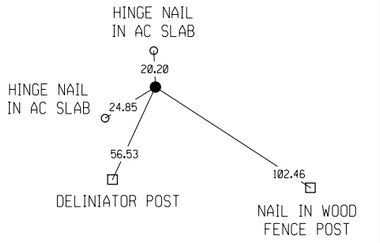


DETAILS OF REFERENCE INFORMATION

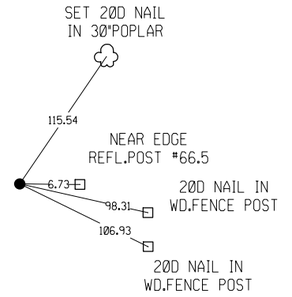
All References are Plumb Distances unless otherwise noted.

ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER G.4

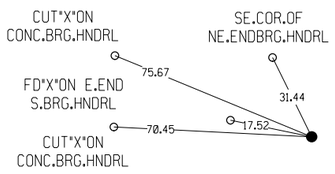
CP 1239+9.55, 24.77 RT.
POINT # 337
SET-IRON-PIN---6"DEEP
XC=1564341.67, YC=552325.96



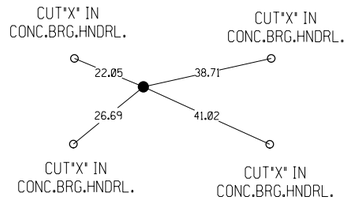
GPS STA 1247+68.18,23.4RT
GPS,FD.REBAR Ø.6' DEEP
GPS POINT NO. G016
XC=1563717.08, YC=547934.44



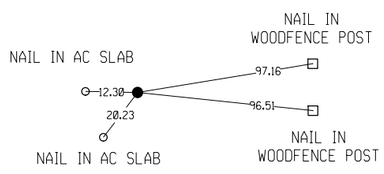
CP,STA 1252+20.52,86.61RT
CP SET IRON PIN Ø.5' DEEP
CP NO. 334
XC=1563779.51, YC=548386.90



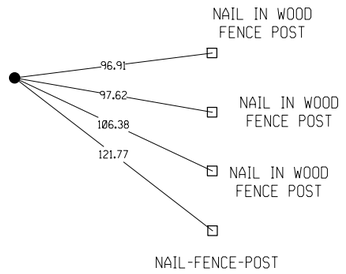
SCR STA 1252+41.17,21.1LT
SCR,FD."X" ON BRIDGE DECK
SCR NO. 104
XC=1563671.78, YC=548407.35



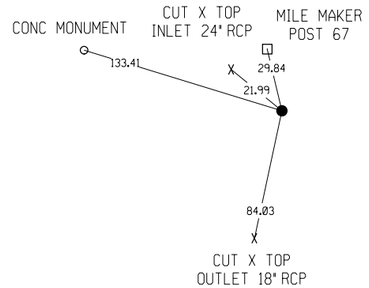
CP 1257+74.84, 23.86 RT
POINT # 335
SET-IRON-PIN---6"DEEP
XC=1563715.76, YC=548941.10



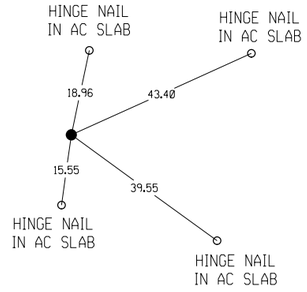
CP 1265+79.98, 23.29 RT
POINT # 336
SET-IRON-PIN---6"DEEP
XC=1563713.74, YC=549746.24



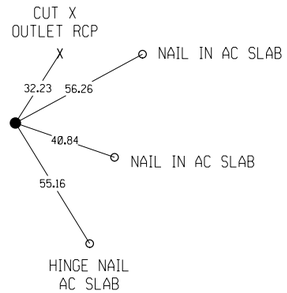
GPS 1273+81.370, 83.00 LT
POINT # 17
FD-REBAR-6"DEEP
XC=1563607.05, YC=550549.11



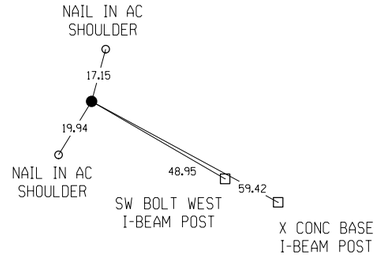
CP 1278+28.45, 47.82 LT.
POINT # 102
FD RR\SPK W/ CENTER PUNCH
XC=1563685.11, YC=551000.42



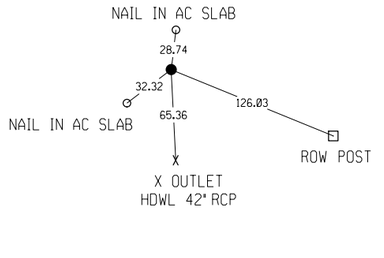
PI 1281+39.80
POINT # G080
FD CM---6"DEEP
XC=1563687.63, YC=551306.01



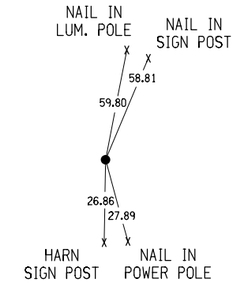
GPS 1285+54.87, 23.36 RT
POINT # 18
FD-REBAR---6"DEEP
XC=1563967.13, YC=551674.81



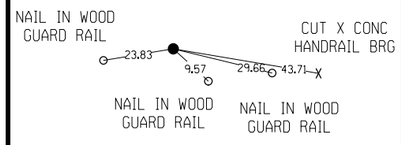
CP 1303+80.95, 24.26 RT
POINT # 338
SET-IRON-PIN---6"DEEP
XC=1564901.02, YC=553239.76



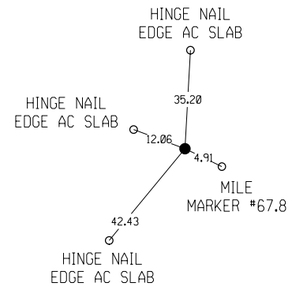
GPS 1303+94.69, 727.54 LT
POINT # 7701
FD-IDOT-DISK
XC=1563721.91, YC=545598.45



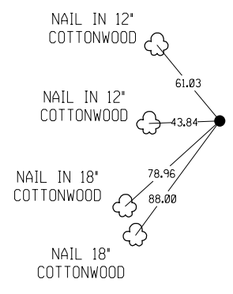
CP 1308+21.98, 266.64 LT
POINT # 339
SET-IRON-PIN---6"DEEP
XC=1564883.42, YC=553767.80



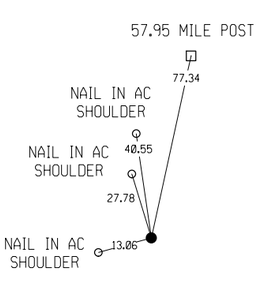
GPS 1316+25.31, 24.08 RT
POINT # G019
FD-REBAR-6"DEEP
XC=1565526.88, YC=554318.04



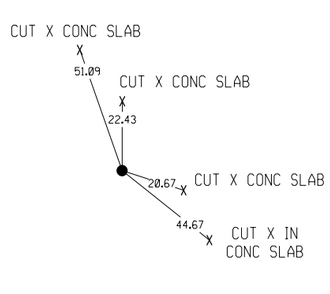
PI 1321+90.58
POINT # G081
FD-1"REBAR---6"DEEP
XC=1565825.83, YC=554795.42



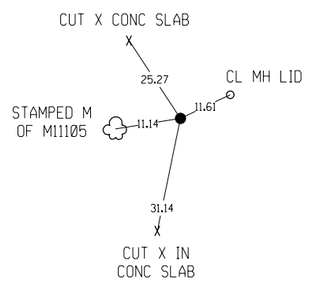
CP 1323+33.57, 24.78 RT
POINT # 340
SET-IRON-PIN---6"DEEP
XC=1565726.48, YC=555001.99



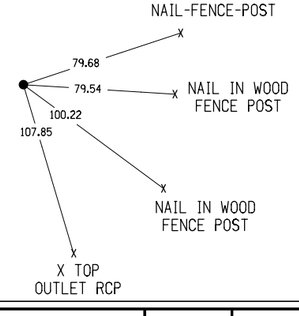
CP 1329+04.47, 204.35 RT
POINT # 341
SET-IRON-PIN---6"DEEP
XC=1565940.21, YC=555583.02



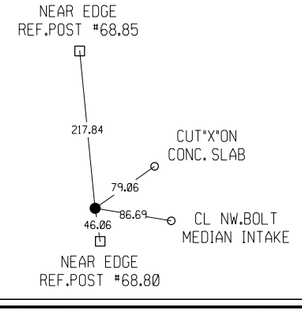
GPS 1336+83.97, 52.28 RT
POINT # 20
FD-REBAR---6"DEEP
XC=1565711.42, YC=556356.04



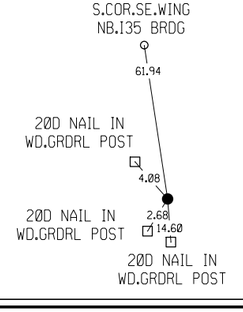
CP 1347+64.23, 41.90 RT
POINT # 342
SET-IRON-PIN---6"DEEP
XC=1565586.16, YC=557429.06



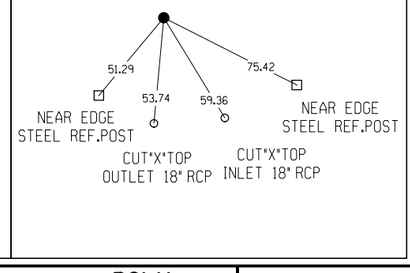
CP STA 1373+15.68,129.2LT
CP,SET IRON PIN Ø.3' DEEP
CP NO. 344
XC=1565144.54, YC=559947.82



GPS STA 1378+56.11,34.1RT
GPS,SET REBAR Ø.5' DEEP
GPS POINT # G021
XC=1565249.49, YC=560502.57
S.COR.SE.WING
NB.I35 BRDG



SCR STA1388+32.8,1215.3RT
SCR,FD.IDOT DISK W/PUNCH
SCR NO. 120
XC=1566320.04, YC=561599.43

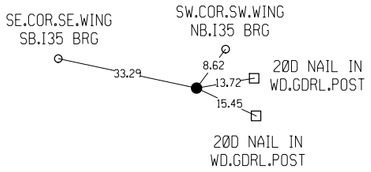


DETAILS OF REFERENCE INFORMATION

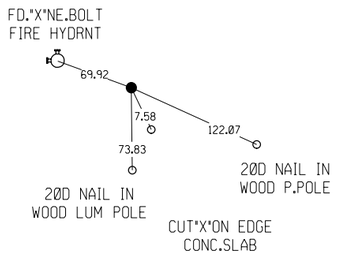
All References are Plumb Distances unless otherwise noted.

ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	G.5

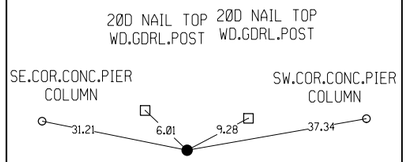
CP STA 1388+54.72,30.30LT
CP,SET IRON PIN Ø.5' DEEP
CP NO. 345
XC=1565079.17, YC=561488.66



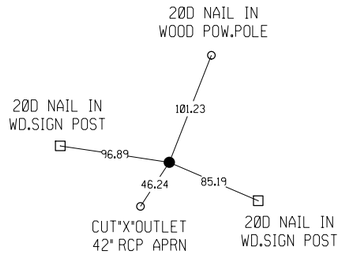
CP STA 1390+50.6,2536.2LT
CP SET IRON PIN Ø.5' DEEP
CP NO. 361
XC=1562566.68, YC=561416.81



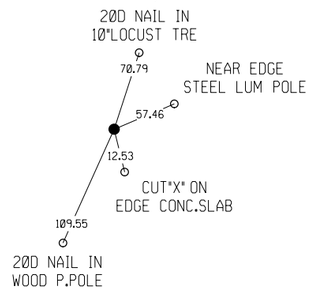
CP STA 1390+71.81,46.09LT
CP SET IRON PIN Ø.5' DEEP
CP NO. 364
XC=1565040.37, YC=561702.83



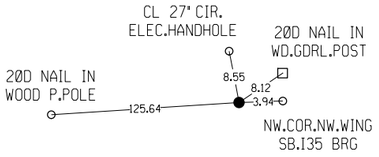
CP STA 1391+34.5,1727.7LT
CP,FD."X"IN CL GRAND AVE.
CP NO. 118
XC=1563361.68, YC=561586.23



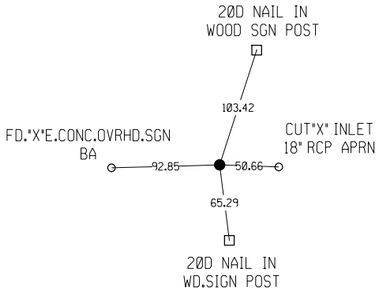
CP STA 1391+50.8,2123.6LT
CP SET IRON PIN Ø.5' DEEP
CP NO. 362
XC=1562966.29, YC=561560.36



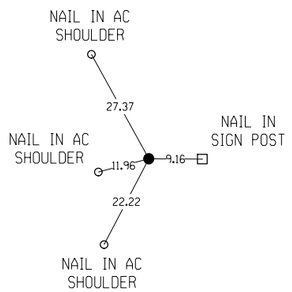
CP STA 1391+50.94,119.6LT
CP,SET IRON PIN Ø.4' DEEP
CP NO. 363
XC=1564958.89, YC=561773.69



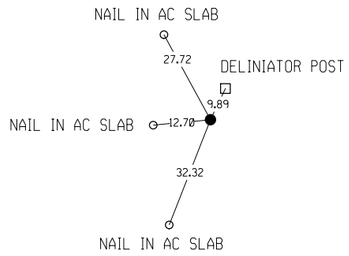
CP STA 1399+61.66,30.48RT
CP,SET IRON PIN Ø.5' DEEP
CP NO. 346
XC=1565021.82, YC=562595.78



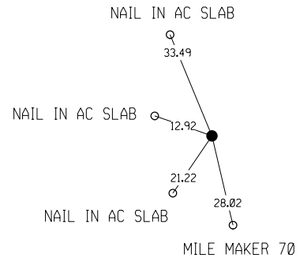
GPS 1412+18.43, 25.45 RT
POINT # 24
FD-REBAR---6"DEEP
XC=1564895.15, YC=563844.51



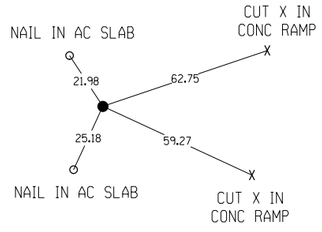
CP 1422+81.73, 24.89 RT
POINT # 347
SET-IRON-PIN---6"DEEP
XC=1564863.59, YC=564906.73



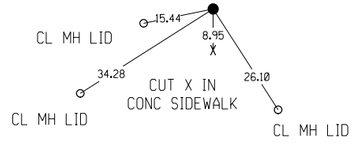
CP 1433+73.81, 24.99 RT.
POINT # 348
SET-IRON-PIN---6"DEEP
XC=1564833.96, YC=565998.42



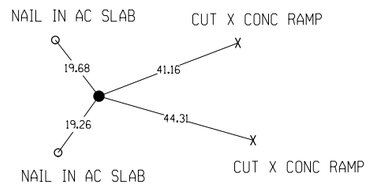
GPS 1447+10.22, 23.93 RT
POINT # 25
FD-REBAR-6"DEEP
XC=1564796.52, YC=567334.30



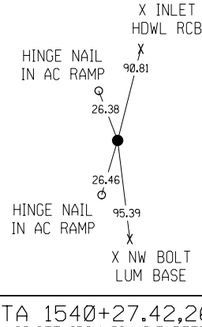
CP 1456+30.81, 101.47 RT
POINT # 349
SET-IRON-PIN---6"DEEP
XC=1564848.98, YC=568256.65



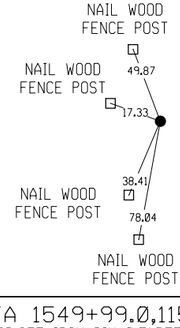
GPS 1465+99.76, 24.79 RT
POINT # 26
FD-REBAR---6"DEEP
XC=1564745.95, YC=569223.16



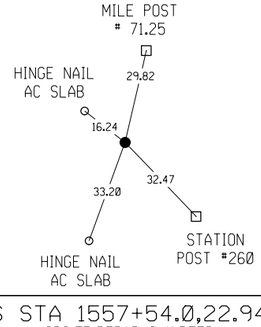
CP 1477+50.65, 39.59 RT.
POINT # 350
SET-IRON-PIN---6"DEEP
XC=1564729.42, YC=570374.03



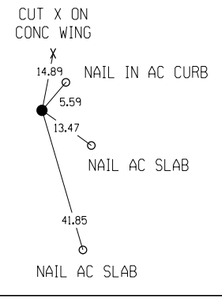
CP 1488+66.37, 182.53 LT
POINT # 351
SET-IRON-PIN---6"DEEP
XC=1564477.00, YC=571483.55



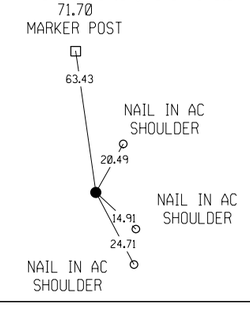
CP 1499+11.06, 24.90 RT.
POINT # 352
SET-IRON-PIN---6"DEEP
XC=1564655.93, YC=572533.24



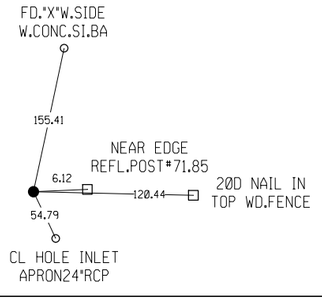
CP 1511+25.57, 106.81 LT
POINT # 353
SET-IRON-PIN---6"DEEP
XC=1564491.21, YC=573743.71



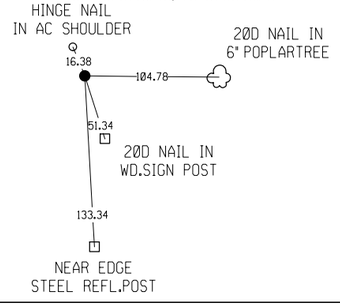
CP 1522+52.68, 107.80 LT
POINT # 354
SET-IRON-PIN---6"DEEP
XC=1564459.54, YC=574870.37
71.70
MARKER POST



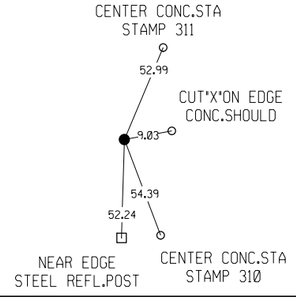
GPS STA 1531+02.04,24.3RT
GPS,FD.REBAR Ø.5' DEEP
GPS POINT #G027
XC=1564568.47, YC=575723.02



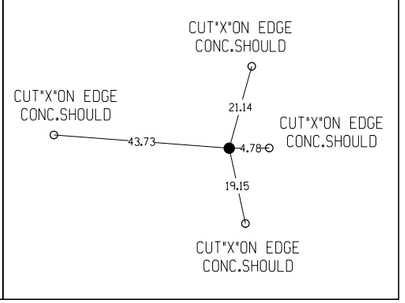
CP STA 1540+27.42,26.97RT
CP,SET IRON PIN Ø.5' DEEP
CP NO. 355
XC=1564545.95, YC=576648.13



CP STA 1549+99.0,115.33LT
CP,SET IRON PIN Ø.5' DEEP
CP NO. 356
XC=1564394.25, YC=577620.82



GPS STA 1557+54.0,22.94LT
GPS,FD.REBAR Ø.4' DEEP
GPS POINT #G028
XC=1564512.07, YC=578374.27

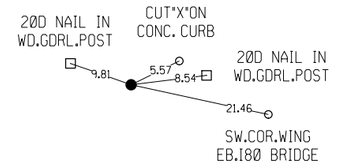


DETAILS OF REFERENCE INFORMATION

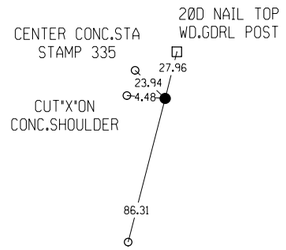
All References are Plumb Distances unless otherwise noted.

ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	G.6

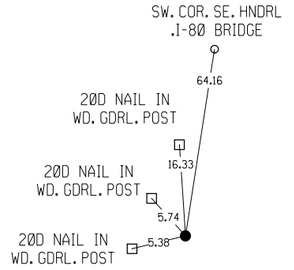
CP STA 1565+96.36,185.8LT
CP,SET IRON PIN Ø.5' DEEP
CP NO. 357
XC=1564382.28, YC=579222.36



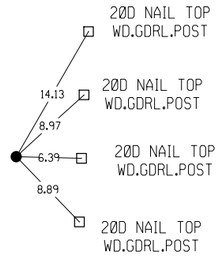
GPS STA 1574+32.6,29.04RT
GPS,FD.REBAR Ø.6' DEEP
GPS POINT #G029
XC=1564629.63, YC=580049.56



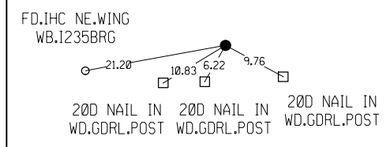
GPSSTA 1574+73.1,1078.1RT
GPS,FD.FENO.MONU.Ø.2'DEEP
GPS POINT #G030
XC=1565679.42, YC=580048.97



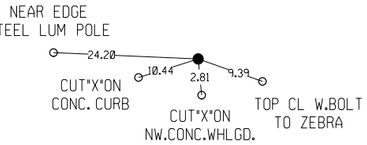
CP STA 1576+21.51,55.63LT
CP,SET IRON PIN Ø.5' DEEP
CP NO. 371
XC=1564552.41, YC=580241.63



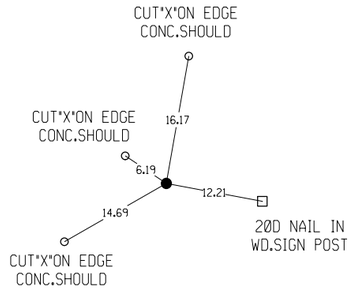
CP STA 1576+93.21,113.4RT
CP,SET IRON PIN Ø.4' DEEP
CP NO. 372
XC=1564724.15, YC=580306.67



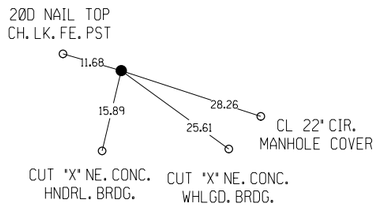
CP STA 1587+84.27,413.1LT
CP,SET IRON PIN Ø.6' DEEP
CP NO. 373
XC=1564240.70, YC=581417.48



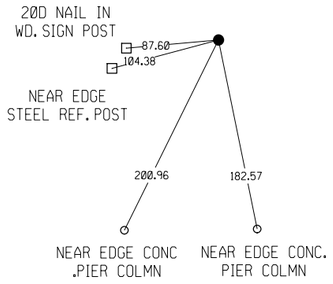
CP STA 1587+89.24,222.2LT
CP,SET IRON PIN Ø.6' DEEP
CP NO. 378
XC=1564431.58, YC=581414.98



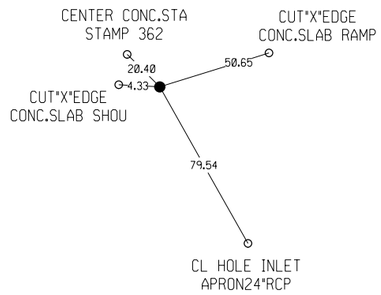
CP STA 1588+52.42,806.ØRT
CP,SET IRON PIN Ø.5' DEEP
CP NO. 374
XC=1565461.50, YC=581437.92



CP STA 1589+78.69,171.6RT
CP,SET IRON PIN Ø.6' DEEP
CP NO. 375
XC=1564832.54, YC=581588.89



GPS STA 1601+30.28,26.1RT
GPS,FD.FENO.MONU.Ø.6'DEEP
GPS POINT #G032
XC=1564730.77, YC=582745.63



CP STA 1605+87.59,132.8RT
CP SET HINGE NAIL IN ACSH
CP NO. 376
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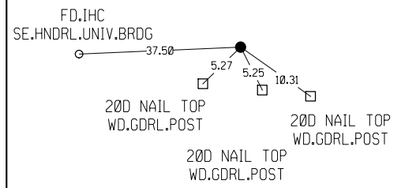

CP STA 1607+07.32,52.68RT
CP,SET 16DNAIL IN CONC.SH
CP NO. 377
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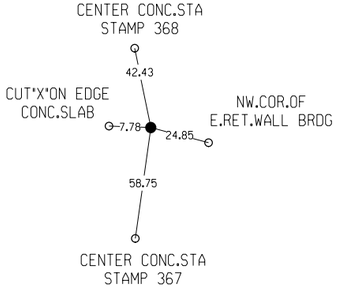

PI 2144+06.46
PI POINT 109
FD SURVEY DISK
WARREN CO CONTROL PT#5301
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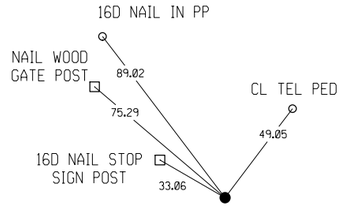

PI 2162+97.70
PI POINT 110
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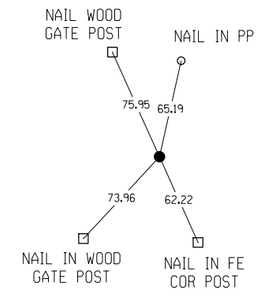

PI STA 2182+12.73
PI POINT 111
FD PK NAIL
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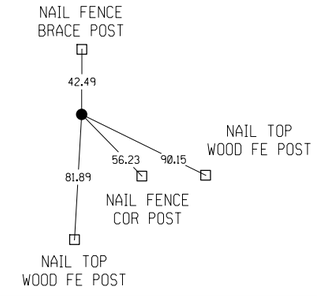

POT 2199+68.47
POT POINT 112
FD PK NAIL
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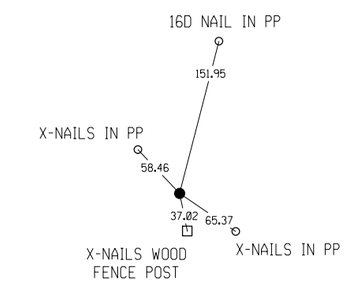
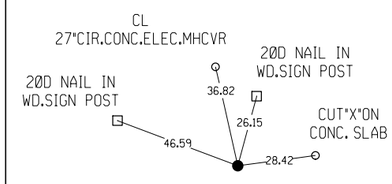
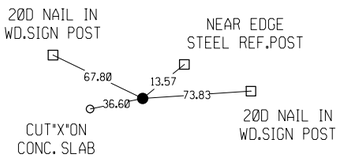


CP STA 3385+08.91,102.8LT
CP,FD.HINGE NAIL IN AC SH
CP NO. 369
XC=1564649.88, YC=561694.48



CP STA 3392+17.56,113.5LT
CP,FD.16D NAIL IN DIRT SH
CP NO. 370
XC=1565358.48, YC=561708.15



CP STA 3404+28.53,23.ØRT
CP SET IRON PIN Ø.4' DEEP
CP NO. 366
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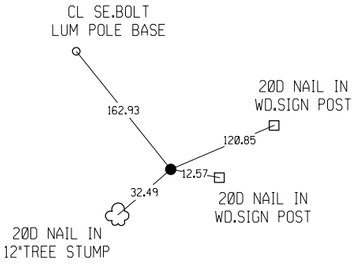

CP STA 3405+71.265
CP,FD.IRON PIN IN CL ROAD
CP NO. 121
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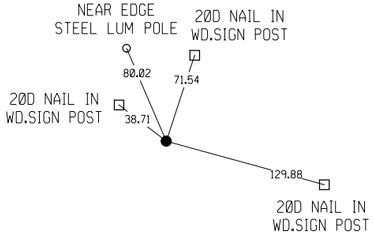
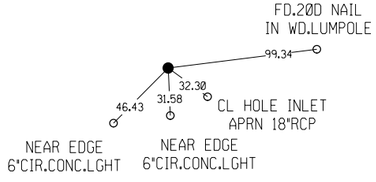


CP STA 3412+16.93,33.71RT
CP,SET IRON PIN Ø.4' DEEP
CP NO. 367
XC=1567359.94, YC=561587.81



CP STA 3420+53.849
CP,FD.IRON PIN IN CL ROAD
CP NO. 123
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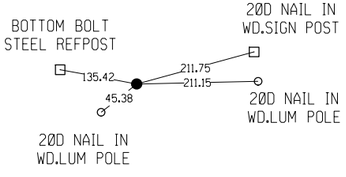
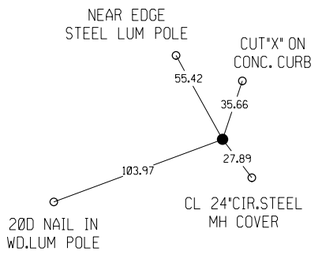


DETAILS OF REFERENCE INFORMATION

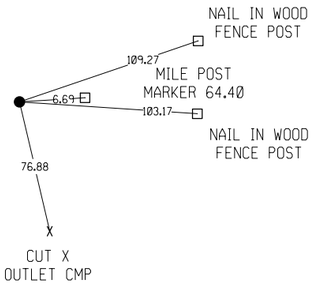
All References are Plumb Distances unless otherwise noted.

ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	G.7

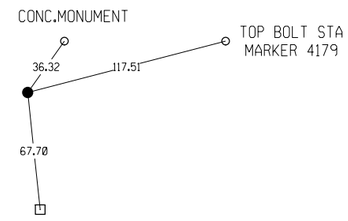
CP STA 3441+05.310
CP,FD."X" IN CL ROAD
CP NO. 124
XC=1570223.77, YC=561976.56



GPS 1147+51.51, 24.38 RT
POINT# 10
FD REBAR 6" DEEP
XC=1563705.05, YC=537917.67



GPS STA 1179+09.42, 22.9 RT
GPS,FD. REBAR Ø.4' DEEP
GPS POINT NO. G014
XC=1563717.99, YC=541075.56



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GPS #G023, FD IP
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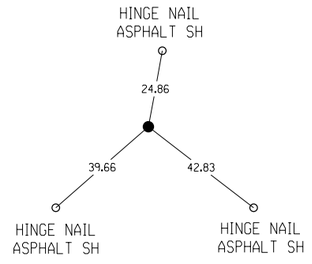

STA 3379+98.067, 33.43 LT
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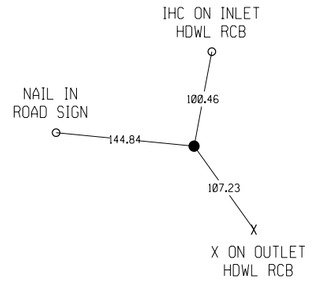
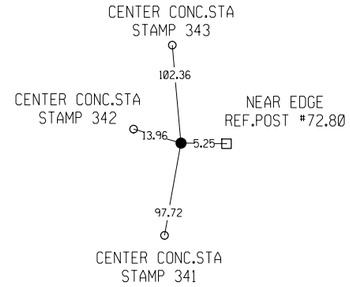
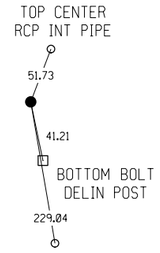


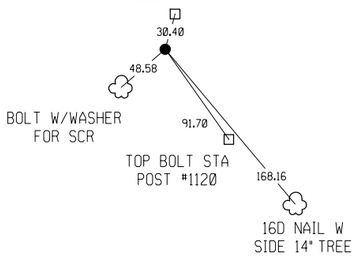
GPS STA 1581+43.9, 24.68 RT
GPS, FD. REBAR Ø.5' DEEP
GPS POINT #G031
XC=1564653.08, YC=580760.49



CP STA 1108+36.58, 22.53 RT
POINT #381
SET IRON PIN 5' DEEP
XC=1563714.17, YC=534003.04



CP STA 1120+83.82, 22.29 RT
POINT #382
SET IRON PIN 3" DEEP
XC=1563706.75, YC=535250.26



DETAILS OF REFERENCE INFORMATION

All References are Plumb Distances unless otherwise noted.

ALIGNMENT COORDINATES

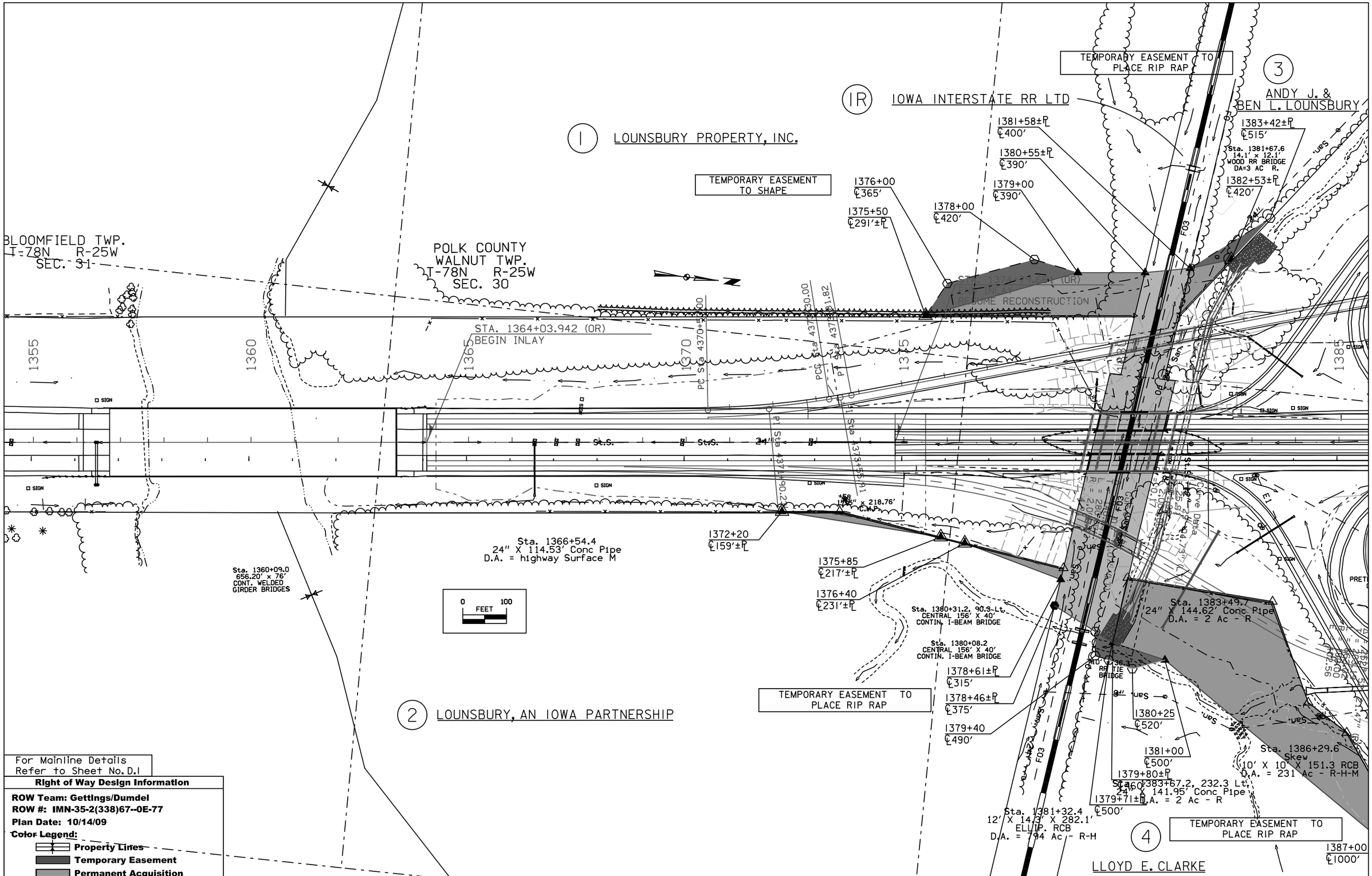
101-16
10-20-09

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)
CL3507	I-35	1290+25.00	552,098.34	1,564,137.96															
CLCUR04	I-35				1311+37.14	553,899.26	1,565,241.51	1313+87.14	554,114.40	1,565,368.79	1321+76.67	554,785.62	1,565,784.64	1328+99.44	555,570.31	1,565,696.77	1331+49.44	555,819.25	1,565,674.04
CLCUR01	I-35				1407+42.57	563,369.27	1,564,866.17	1408+32.57	563,458.78	1,564,856.77	1410+90.93	563,715.66	1,564,829.11	1413+48.98	563,973.94	1,564,822.25	1414+38.98	564,063.90	1,564,819.62
CLCUR02	I-35							1542+32.60	576,852.78	1,564,471.38	1548+04.24	577,424.21	1,564,455.82	1553+75.46	577,995.41	1,564,478.17			
CLCUR03	I-35							1598+78.21	582,494.72	1,564,654.20	1602+48.28	582,864.50	1,564,668.66	1606+18.27	583,234.56	1,564,671.16			
CL3505	I-35	1627+32.57	585,348.81	1,564,685.44															
GRAND01	I-35	3366+02.64	561,461.69	1,562,761.02															
GRAND01	I-35							3366+54.98	561,480.95	1,562,809.68	3369+37.72	561,585.00	1,563,072.59	3372+13.91	561,586.20	1,563,355.33			
7	I-35	3372+20.26	561,586.23	1,563,361.68															
CUR6	I-35							3405+69.22	561,600.41	1,566,710.61	3413+13.08	561,603.56	1,567,454.47	3420+54.86	561,702.86	1,568,191.67			
8	I-35	3441+05.31	561,976.56	1,570,223.77															
RAMPA4		11389+61.14	561,591.65	1,564,641.41															
RAMPA1								11396+85.75	562,304.99	1,564,768.68	11398+96.18	562,512.15	1,564,805.64	11401+05.08	562,722.47	1,564,798.67			
RAMPA10		11406+76.25	563,293.33	1,564,779.76															
RAMPB2								2375+00.00	560,155.22	1,565,305.62	2377+94.92	560,449.90	1,565,293.82	2380+79.25	560,718.78	1,565,414.98			
RAMPB3								2384+29.25	561,037.88	1,565,558.77	2385+68.85	561,165.16	1,565,616.13	2387+04.19	561,304.77	1,565,615.54			
RAMPB5		2389+95.19	561,595.77	1,565,614.31															
RAMPC1		3388+40.12	561,595.77	1,565,614.31															
RAMPC1								3403+71.49	563,020.95	1,565,053.99	3406+62.78	563,292.04	1,564,947.41	3409+50.00	563,582.27	1,564,922.58			
RT01		0+00.00	561,542.08	1,563,916.61															
RECTRAIL-1								2+10.03	561,542.97	1,564,126.64	2+12.55	561,542.98	1,564,129.16	2+15.06	561,542.74	1,564,131.66			
RECTRAIL-2								3+16.59	561,532.98	1,564,232.72	3+31.03	561,531.59	1,564,247.09	3+44.70	561,522.75	1,564,258.51			
RECTRAIL-3								7+53.70	561,272.44	1,564,581.97	7+79.45	561,256.68	1,564,602.34	8+01.26	561,264.11	1,564,626.99			
RECTRAIL-4								10+30.34	561,330.16	1,564,846.35	10+89.59	561,347.25	1,564,903.08	11+02.95	561,388.69	1,564,860.73			
RECTRAIL-5								12+29.52	561,477.22	1,564,770.27	13+26.99	561,545.40	1,564,700.61	13+24.03	561,545.81	1,564,798.08			
RT02		14+50.00	561,546.34	1,564,924.04															
RECTRAIL-6								20+31.38	561,548.81	1,565,505.42	20+44.04	561,548.92	1,565,518.07	20+56.59	561,546.28	1,565,530.45			
RECTRAIL-7								20+56.59	561,546.28	1,565,530.45	20+69.77	561,543.53	1,565,543.34	20+82.85	561,543.52	1,565,556.52			
RT03		20+92.86	561,543.57	1,565,566.53															
RT04		21+04.86	561,543.62	1,565,578.53															
RT05		21+65.15	561,543.87	1,565,638.82															
RECTRAIL-8								21+98.37	561,544.01	1,565,672.04	22+11.55	561,544.13	1,565,685.21	22+24.63	561,546.99	1,565,698.08			
RECTRAIL-9								22+24.63	561,546.99	1,565,698.08	22+37.28	561,549.73	1,565,710.43	22+49.84	561,549.73	1,565,723.09			
RT06		24+18.35	561,550.44	1,565,891.60															
RT07		26+68.35	561,551.50	1,566,141.59															

SUPERELEVATION DATA

See PV-300 Series

Road Identification	Circular Curve or Spiral Curve Name	Radius	Superelevation Data			Standard Road Plan	Section A-A	Section B-B	Section C-C	Section D-D	Section E-E	Section F-F	Case A	Case B	Case C	Case S	Case T	Case U	Remarks
			e	L	x														
		FT	%	FT	FT														
I-35	CLCUR01	2685	6.0	379	158	PV-305	1308+50.14	1308+81.74	1310+08.14	1311+34.54	1311+66.14	1313+87.14	1313+87.14			1311+97.64	1313+23.97		See Modified PV-305 on Sheet U.8
							1334+36.44	1334+04.84	1332+78.44	1331+52.04	1331+20.44	1328+99.44	1328+99.44			1330+88.94	1329+62.61		
I-35	CLCUR01	7640	2.9	186	158	PV-305	1403+98.57	1404+30.17	1405+56.57	1406+82.97	1407+14.57	1407+42.57		1407+42.57					See Modified PV-305 on Sheet U.8
							1416+92.98	1416+61.38	1415+34.98	1414+08.58	1413+76.98	1413+48.98		1413+48.98					
I-35	CLCUR02	17230	NC	0	0	PV-305	1542+32.60	1542+32.60	1542+32.60	1542+32.60	1542+32.60	1542+32.60	1542+32.60						See Modified PV-305 on Sheet U.8
							1553+75.46	1553+75.46	1553+75.46	1553+75.46	1553+75.46	1553+75.46	1553+75.46						
I-35	CLCUR03	22876	NC	0	0	PV-305	1598+78.21	1598+78.21	1598+78.21	1598+78.21	1598+78.21	1598+78.21	1598+78.21						See Modified PV-305 on Sheet U.8
							1606+18.27	1606+18.27	1606+18.27	1606+18.27	1606+18.27	1606+18.27	1606+18.27						
RAMP B	RAMPB1	1250	6.0	230	77	PV-303	2374+16.00		2375+00.00	2375+69.00						2374+92.33	2374+92.33		
							2382+32.25		2381+45.25	2380+79.25						2381+55.92	2381+55.92		
RAMP B	RAMPB2	643	6.0	200	67	PV-303	2382+32.25	2382+89.25	2384+29.25	2384+89.25						2384+22.58	2384+22.58		
							2389+11.19	2388+44.19	2387+04.19	2386+44.19						2387+10.86	2387+10.86		
RAMP C	RAMPC1	2000	5.4	216	80	PV-303	3403+00.29		3403+71.49	3404+36.29						3403+80.29	3403+80.29		
							3410+21.20		3409+50.00	3408+85.20						3409+41.20	3409+41.20		



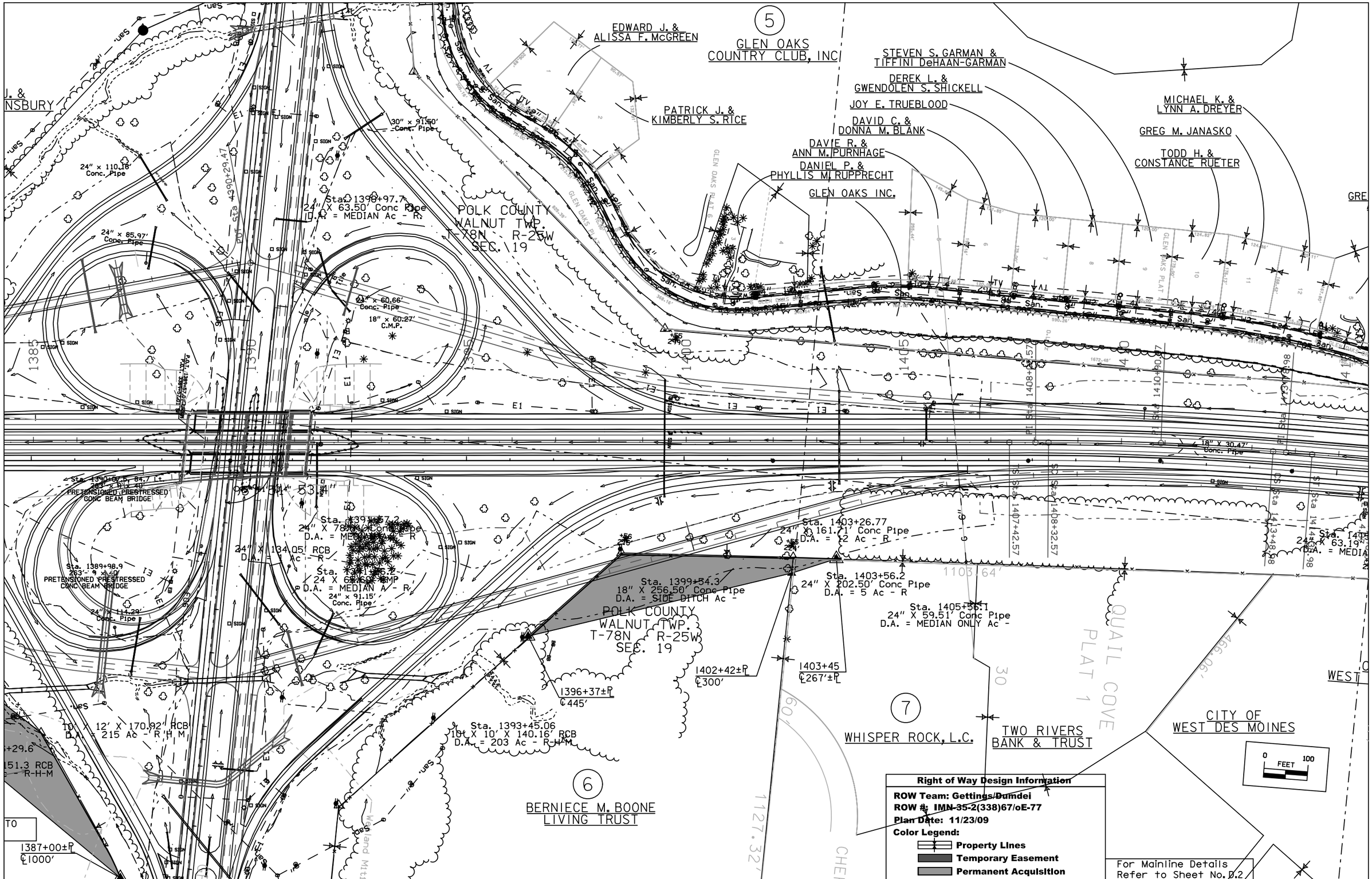
For Mainline Details Refer to Sheet No. D.1

Right of Way Design Information

ROW Team: Gettings/Dumdel
ROW #: IMN-35-2(338)67--0E-77
Plan Date: 10/14/09
Color Legend:
- **Property Lines**
- **Temporary Easement**
- **Permanent Acquisition**

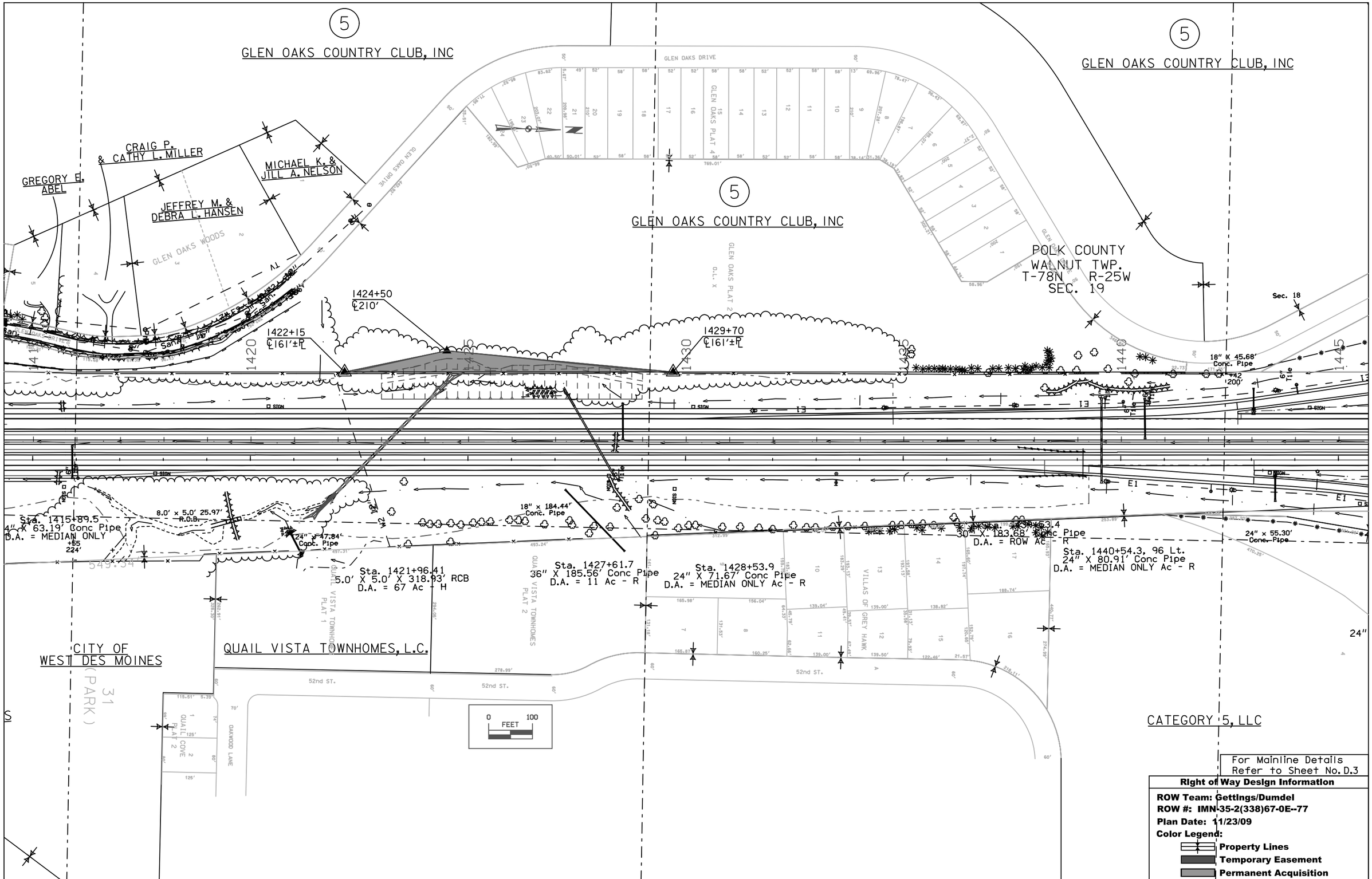
ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER H.1

3:55:29 PM 9/17/2012 mgogert W:\Projects\7703501096\ROW\Grading Sheets\(364)\77035314_H1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER H.2

3:55:35 PM 9/17/2012 mgogert W:\Projects\7703501096\ROW\Grading Sheets\(364)\77035314_H2.sht



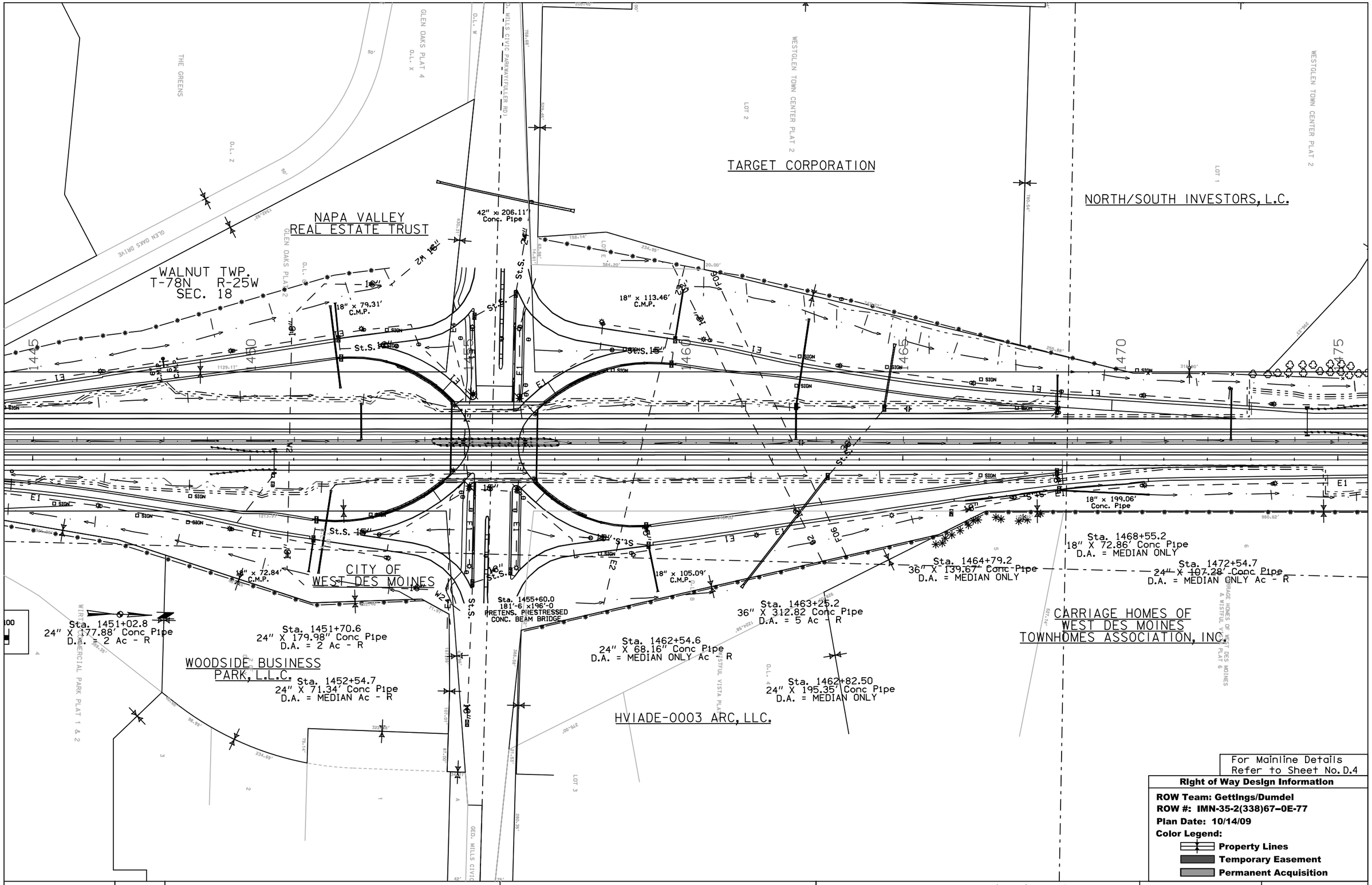
For Mainline Details Refer to Sheet No. D.3

Right of Way Design Information

ROW Team: Gettings/Dumdel
ROW #: IMN-35-2(338)67-0E--77
Plan Date: 11/23/09
Color Legend:
- **Property Lines**
- **Temporary Easement**
- **Permanent Acquisition**

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER H.3

3:55:40 PM 9/17/2012 mgogert W:\Projects\7703501096\ROW\Grading Sheets\(364)\77035314_H3.sht



For Mainline Details
Refer to Sheet No. D.4

Right of Way Design Information

ROW Team: Gettings/Dumdel
ROW #: IMN-35-2(338)67--0E-77
Plan Date: 10/14/09
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER H.4

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S. PRAIRIE DR.

PRAIRE VIEW DR.

WESTGLEN TOWN CENTER PLAT 2

PRAIRIE VIEW WEST PLAT 1

LOT 1

VILLAS OF BIRKSHIRE HILLS

TURTLE CREEK

PCP-DES MOINES, L.L.C.

VILLAS OF BERKSHIRE HILLLS CONDO

13

SFI LIMITED PARTNERSHIP 38

POLK COUNTY
WALNUT TWP.
T-78N R-25W
SEC. 7

Sec. 18

1475 1480 1485 1490 1495 1500 1505

15" x 79.53' Conc. Pipe

15" x 72.58' Conc. Pipe

E1

SIGN

Sta. 1477+26.61
8' X 4' X 300.83' RCB
D.A. = 114 Ac - R-H

0 100
FEET

Sta. 1483+95.8, 54.3 Rt.
42" X 194.56' Conc Pipe
D.A. = 14 Ac - M

Sta. 1485+04.0
24" X 75.26' Conc Pipe
D.A. = MEDIAN Ac - M

Sta. 1495+47.6
30" X 177.17' Conc Pipe
D.A. = 9 Ac - M

Sta. 1496+53.0
24" X 75.25' Conc Pipe
D.A. = MEDIAN Ac - R

CSM FOUNTAINS
LIMITED PARTNERSHIP

MARCIA L. WOODS AND MAX L. WILLIAMS

BRIAN & DIANNE GOODNER

LEONA M. RUGG

NEAL S. NESSELROAD

DALE V. & KAREN BUEHLER

WILLIAM V. MULLINS

MARCELLA R. HUFF REV. TRUST
MARCELLA R. HUFF (TRUSTEE)

RONALD RIPPERGER

JASON & WENDI FREDREGILL

GREG & DAWN M. BALDER

KAREN Y. LEHOCZ

APPROX. SEC. LINE

SOUTHWOODS W.
TRI-PLEX OWNERS ASSOC.

WESTWOOD RESIDENTIAL
COOPERATIVE

SOUTHWOODS WEST
TOWNHOUSES OWNERS ASSOC.

52ND ST.

WESTWOOD DR.

WISTFUL VISTA PLAT 2

WISTFUL VISTA PLAT 4

SOUTHWOODS WEST PLAT 6

SOUTHWOODS WEST PLAT 5

SOUTHWOODS WEST PLAT 3

BLOCK 2

BLOCK 3

BLOCK 4

O.L. 9

For Mainline Details
Refer to Sheet No. D.5

Right of Way Design Information

ROW Team: Gettings/Dumdel
ROW #: IMN-35-2(338)67--0E-77
Plan Date: 11/23/09
Color Legend:

- **Property Lines**
- **Temporary Easement**
- **Permanent Acquisition**

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER H.5

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Right of Way Design Information

ROW Team: Gettings/Dumdei
ROW #: ~~IMN-35-2(338)67--0E-77~~
Plan Date: 2/17/10
Color Legend:
- **Property Lines**
- **Temporary Easement**
- **Permanent Acquisition**

For Mainline Details
Refer to Sheet No. D.6

REVISED | 2/17/10 | PAR | 13

CITY OF
WEST DES MOINES

1514+83±℄
℄228'(ExCorner)

1513+77±℄
℄206'(ExCorner)

13 SFI LIMITED PARTNERSHIP 38

From Warren Co. Line N. to I-80/235 (SBL)

72"x148.55' Conc. Pipe

30" x 92.50' C.M.P.

30" x 40.00" C.M.P.

24" x 113.88' Conc. Pipe

12" x 6.17' Conc. Pipe

Sta. 1510+33.4
335' x 28'
Cont. I-Beam Bridge

30" x 42.71' C.M.P.

Sta. 1511+48.1, 66.6' Lt.
335' x 28'
Cont. I-Beam Bridge

Sta. 1512+99.7
TRIPLE
12' X 14' X 147.00' RCB
D.A. = 32.50' Ac - VR

1512+90±℄
℄289'(ExCorner)

1513+93±℄
℄279'(ExCorner)

Sta. 1524+52.6
24" X 74.54' Conc Pipe
D.A. = MEDIAN ONLY

Sta. 1530+52.9
24" X 185.8' Conc Pipe
D.A. = 2 Ac - R

0 FEET 100

CITY OF
WEST DES MOINES

13R UNION PACIFIC RAILROAD

R. LINDLEY-MEADOW CHASE APARTMENTS, L.L.C.

SHAWN & DANIELLE PIPPERT
RANDY E. & FLORENCE M. TAYLOR
DENNIS L. & MARGARET L. HARRIS
JOHN R. & TEGWYN M. SMITH
MARCIA A. HAMPTON
NAFTALY M. MUCHACHI & ELIZABETH MAINA
RANDAL ANDERSON
LISA M. CHEDESTER
SARAH C. LEDGER
ANDREW J. DePAUW
DORLAN R. JOSHWAY
DUSTIN L. & SONYA K. GRABER
MATTHEW MOTSENBOCKER AND LINDSEY CRAWFORD
KEVIN DOWNING
JOSE R. & ABBY R. DeJESUS
MATTHEW R. WHITE & LAURIE L. ANDERSON WHITE
ADAM R. BEATTIE & BRADIE L. TORSTENSON
THOMAS L. & CHRISTINA A. MOORE
JAMES Z. OLTMANN
JOSEPH L. BALLARD
ANDREW J. JEPSON
MARTHA DAVIS-THORN
JASON S. AHERNS
DANIEL J. & SELVI CHRISTUDOSS
TODD A. KRUCKENBERG

BRIAN A. BEATTIE AND SARAH M. FARRAND
ERIC J. KOZAK

EDDIE K. AU AND LILI CHEUNG
DEBRA L. SCORPINITI
ALEXANDER OPOKU-BRENYAH & AGATHA COLLINS
MURIZ & ALMA HECIMOVIC
GAUTAM SURA AND SUSMITA DATTA
DZEVAD & SIDA KUSTURA
ESTEBAN & WENDI RODRIGUEZ
RYAN A. SAMO
GAIL HUISMAN
MARINE B. & NAZALEEN R. SUKHRAM
CHAD C. & BROOKE FISHER
BRENT & STEFANIE LOVLN
JOHN J. METZ
JAMES R. CLEARWATER AND ANN M. O'HARA
JON T. & TERESA L. YOUNG
ANTHONY & AMANDA GOODRICH
SARAH A. STEINKAMP
BAE SERVICES
BENJAMIN DYER
LUE R. & ERIN B. BEAUMONT
MATHEW R. & LINDSAY S. DeGROOTE
ANNE E. REGNIER
LISA HUFFORD
GABRIEL B. BAKKER
GURMEET S. WALIA & AMARJIT S. WALIA
SHAWN M. & JAYNE K. DOUGLAS

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER H.6

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TRAFFIC CONTROL PLAN

Unless absolutely necessary, or as specified in the staging plans, traffic lanes are intended to be a minimum width of 12’. Any traffic lane width changes require the engineer’s approval.

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 the 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 shall coordinate traffic control with Iowa DOT projects listed in Tabulation 111-01, and other projects in the area.

The contractor shall notify the resident construction engineer, Polk County, and the City of West Des Moines two (2) weeks prior to temporary road closures and changes in traffic patterns during construction.

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

The Engineer may require modifications to the pavement marking details shown. Conflicting permanent edge lines, centerlines, or lane lines shall be removed. Where applicable, permanent edge lines, centerlines, and lane lines shall be placed before the roadway is returned to normal traffic. The current Standard Specifications and supplemental specifications shall apply.

The contractor shall maintain clean pavement in and out of the work area at all times.

Refer to Tab. 108-26A for traffic control specifics.

1. Interstate 35
   - No lane closures will be allowed on I-35 from 6:00 AM to 8:00 PM Sundays thru Thursdays; all day on Fridays, Saturday, Holidays, or during the dates listed on Tabulation 102-15 at any time.
   - Temporary single lane closures may be allowed on I-35 during “off-peak” travel periods, which is defined as daily from 8:00 PM to 6:00 AM from Sundays thru Fridays, however the time, length, and duration of each lane closures shall be approved by the resident construction engineer. The Iowa DOT reserves the right to modify these restrictions to accommodate specific contractor activities, unforeseen traffic conditions and special events.
   - Access to the project work area from I-35 and the ramps at the Mills Civic Parkway interchange will only be allowed with lane closures between 6:00 AM to 8:00 PM.

2. Grand Avenue
   - A minimum of 1 lane of traffic in each direction will be maintained at all times, except for bridge removal and bridge replacement operations.
   - During the bridge removal period, the detour will be in place for approximately 4 nights (9:00 PM to 6:00 AM only)
   - During the bridge replacement period, the detour will be in place for approximately 5 nights (midnight to 5:00 AM only).
   - Detours will only be in effect from Sunday night through Friday morning.
   - Refer to sheet J.113 for detour route

3. EP True Parkway
   - A minimum of 1 lane of traffic in each direction will be maintained at all times, except for bridge removal and bridge replacement operations.
   - During the bridge removal period, the detour will be in place for approximately 4 nights (9:00 PM to 6:00 AM only)
   - During the bridge replacement period, the detour will be in place for approximately 5 nights (midnight to 5:00 AM only).
   - Detours will only be in effect from Sunday night through Friday morning.
   - Refer to sheet J.112 for detour route
   - The reinforced box culvert adjacent to EP True Parkway shall be fenced off to prevent any equipment from crossing. No additional loads may be applied to this culvert.
   - Sidewalk and Recreational Trail at EP True Parkway will remain open to pedestrians during construction.

4. Union Pacific Railroad track at EP True Parkway
   - Due to low volume on the UPRR, the track can be taken out of service except for times when UP is using the track. Approximately 1 train per week is run through the project area. The contractor shall be notified with reasonable advance of the times in which the track will be placed in service. All equipment and materials must be outside the railroad clearzone when the line is in service or flaggers will be required. The contractor shall notify Union Pacific at least 15 days in advance to occupy and use the UP right-of-way. Refer to Developmental Specification 12008 – Construction Work on Railroad Right-of-Way with A+ for Bidding Railroad Flaggers (Union Pacific Railroad).

5. Mid-American Overhead Lines at EP True Parkway
   - The contractor shall note that the two overhead electric transmission lines in the northerly portion of the proposed bridge construction area are continuously energized. The conductors on these electric lines are bare and un-insulated and contact with these electric lines can cause serious injury or death. All people involved with any construction, maintenance, or similar activities within the vicinity of these electric lines must be aware and remain aware of the hazards of working around these electric lines, including maintaining proper safety clearances from these electric lines. De-energizing the two overhead electric transmission lines in the northerly portion of the proposed bridge construction area will be allowable only for bridge beam installation work directly under these two electric lines, subject to the following restrictions:
   * Electric line outage requests for the two electric transmission lines shall be limited to only two night-time line outages to install all bridge beams required to be placed under these two electric lines.
   * Each of these two night-time line outages shall be scheduled with MidAmerican Energy Company by the Contractor at least 14 calendar days in advance.
   * Each of these two night-time outages shall be only scheduled between 10:00 PM and 6:00 AM.
   * Approval by MidAmerican Energy Company of each of these two night-time line outages is subject to weather and electric system requirements as solely determined by MidAmerican Energy Company.

STAGING NOTES

Interstate 35 is a high volume roadway. Construction activity in the area will disrupt traffic on Interstate 35, Grand Avenue, EP True Parkway, 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 contactors’ activities 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, should 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.

GENERAL NOTES:

1. Access to properties along Grand Avenue shall be maintained at all times.
2. The contractor shall coordinate traffic control with Iowa DOT projects listed in Tabulation 111-01, and other projects in the area.
3. In the construction staging notes, “off-peak” refers to construction activities that are required to be performed during off-peak travel periods on Interstate 35, as defined in the Traffic Control Plan.

Stage 1 - Traffic
  I-35
    - Maintain all lanes of traffic, inclucing Northbound, Southbound, and ramps, in the existing lanes.
    - An existing shoulder closure with TBR (which includes modular glare screens) is installed on the existing Southbound lanes. Utilize Standard Road Plan TC-402 when installing or moving any TBR.
    - An existing shoulder closure with TBR is installed on the existing Northbound lanes. Anchor existing TBR on the existing Northbound lanes between Sta. 1433+75.00 to Sta. 1441+25.00, Sta. 1469+25.00 to Sta. 1481+50.00, and Sta. 1538+75.00 to Sta. 1545+75.00. Utilize Standard Road Plan TC-402 when installing anchored TBR.
    - Maintain existing median TBR. Remove TBR at temporary grading and paving locations as shown in the J-sheets.

  Grand Ave.
    - Maintain all lanes of traffic, both Eastbound and Westbound, in the existing lanes.
    - Maintain all on and off ramps.

Stage 1 - Construction
  I-35
    - Install temporary traffic control required in Stage 1 construction.
    - Maintain existing TBR along the existing Southbound and Northbound I-35 left shoulder as shown in the plans. Anchor existing TBR at locations shown in the plans.
    - Grade and pave the "gap" between the existing Nouthbound lanes and the existing paved median between Sta. 1434+00.00 to Sta. 1441+00.00, Sta. 1469+50.00 to Sta. 1481+25.00, and Sta. 1539+00.00 to Sta. 1545+50.00.

  Grand Ave.
    - None.

Stage 2A - Traffic
  I-35
    - Maintain all lanes of Southbound traffic in existing lanes, except between Sta. 1448+75 to Sta. 1462+45, where a temporary lane shift will be utilized so that the temporary Northbound lanes can avoid the existing median bridge pier at Mills Civic Parkway. Refer to sheets J.24-J.27 and J.32-J.43 for layout.
    - Reduce Northbound traffic to two lanes beginning at Sta. 1344+00. Utilize Standard Road Plan TC-421. Refer to sheets J.24-J.27.
    - At the south end of the project, shift Northbound traffic to the existing paved median. Refer to sheets J.24-J.27 for layout.
    - Maintain Northbound traffic in paved median except between Sta. 1448+75 to Sta. 1462+45, where a lane shift will be utilized in order to avoid the existing median bridge pier at Mills Civic Parkway. At the north end of the project, shift Northbound traffic back to the existing northbound lanes. Refer to sheets J.32-J.43 for layout.
    - Northbound on and off ramps at Mills Civic Parkway and the off ramp at the I-235 Interchange shall be maintained. Refer to J-sheets for staged layouts. Refer to Standard Road Plan TC-420.
    - Close Northbound on and off ramps at Grand Avenue. Refer to J.113 and J.114 for detour routes and signage.
    - Maintain existing Southbound ramps at Grand Avenue, Mills Civic Parkway, and I-235 Interchanges. Refer to sheets J.24-J.27 and J.32-J.43.

  Grand Ave.
    - Maintain all lanes of traffic, both Eastbound and Westbound, in the existing lanes.
    - Maintain existing Southbound on and off ramps to I-35.
    - Close Northbound off and on ramps to I-35 (Ramps B & D). Refer to Standard Road Plan TC-252, Situation 4. Refer to J.114 detour route and signage.

Stage 2A - Construction
  I-35
    - Install temporary traffic control required in Stage 2A construction.
    - Move existing Stage 1 TBR along the existing Southbound I-35 left shoulder as shown in the plans. Install gates.
    - Remove Northbound I-35 shoulder TBR.
    - Install and move TBR, drums, channelizers, and temporary crash cushions along Northbound median lanes as shown in the plans.
    - Install temporary pavement markings and remove conflicting existing pavement markings
    - Remove existing pavement, grade, and pave from beginning of project to Sta. 1378+40.05 for all Northbound lanes as shown in sheets J.26-J.27. Refer to contract as 25 working days are issued to grade and pave this portion of the project. Stage 2A paving shall be completed and cured prior to the shifting of Stage 2 traffic.

  Grand
    - Install safety closure for Northbound on and off Ramps (Ramp B & D) and detour route.

Stage 2 - Traffic
  I-35
    - Maintain all lanes of Southbound traffic in existing lanes, except between Sta. 1448+75 to Sta. 1462+45, where a temporary lane

STAGING NOTES

shift will be utilized so that the temporary Northbound lanes can avoid the existing median bridge pier at Mills Civic Parkway. Refer to sheets J.28-J.43 for layout.
- Reduce Northbound traffic to two lanes beginning at Sta. 1344+00. Utilize Standard Road Plan TC-421. Refer to sheets J.28-J.31.
- At the south end of the project, shift Northbound traffic to the existing paved median. Refer to sheets J.28-J.31 for layout. This new Northbound traffic taper is used in order to shift the Northbound lanes east at the intakes, located from Sta. 1366+50 to Sta. 1367+50, in order to shift the traffic away from the ponding at the intakes during rainstorms.
- Maintain Northbound traffic in paved median except between Sta. 1448+75 to Sta. 1462+45, where a lane shift will be utilized in order to avoid the existing median bridge pier at Mills Civic Parkway. At the north end of the project, shift Northbound traffic back to the existing northbound lanes. Refer to sheets J.28-J.43 for layout.
- Northbound on and off ramps at Mills Civic Parkway and the off ramp at the I-235 Interchange shall be maintained. Refer to J-sheets for staged layouts. Refer to Standard Road Plan TC-420.
- Close Northbound on and off ramps at Grand Avenue. Refer to J-sheets for detour routes and signage.
- Maintain existing Southbound ramps at Grand Avenue, Mills Civic Parkway, and I-235 Interchanges. Maintain at least one lane of traffic for Ramp A at all times. Refer to Stage 2(a) and Stage 2(b) sheets in the J-sheets.

Grand Ave.
- Shift Westbound traffic into the existing eastbound lanes.
- Grand Avenue traffic shall be maintained at all times, except when a detour is required during bridge removal and replacement periods. Refer to sheet J.113 for detour route and signage.
- Maintain existing Southbound on and off ramps to I-35.
- Close Northbound off and on ramps to I-35 (Ramps B & D). Refer to Standard Road Plan TC-252, Situation 4. Refer to sheet J.114 for detour route and signage.

Stage 2 - Construction

I-35
- Install temporary traffic control required in Stage 2 construction.
- Maintain existing Stage 2A TBR along the existing Southbound I-35.
- Maintain existing Stage 2A TBR for Northbound lanes except for locations that will need to be adjusted. At these locations, install TBR, drums, channelizers, and temporary crash cushions along Northbound lanes as shown in the plans.
- Install temporary pavement markings and remove conflicting existing pavement markings
- Remove existing pavement, grade, and pave all remaining Northbound lanes as shown in sheets J.31-J.42.
- Remove existing pavement, grade, and pave Northbound on and off ramps at Grand Avenue.
- Install new culverts and extend, remove, or plug existing culverts.
- Installation of backslope slide repair (See Q sheets) cannot begin until the temporary easement for the repair has been obtained.
- Install temporary erosion control measured for work completed.

Grand Ave.
- Install temporary traffic control required in Stage 2 construction.
- Install temporary pavement markings and remove conflicting existing pavement markings.
- Install drums, channelizers, and safety closures as outlined in the J-sheets.
- Install RCB at Sta. 3397+00. Refer to V-sheets for details.
- Remove existing pavement, grade, and pave Northbound on and off ramps.
- Remove existing pavement, grade, and pave Westbound Grand Avenue.
- Remove existing pavement, grade, and pave Southbound Ramp A connection to Grand Avenue one-half at a time. Refer to Stage 2(a) and Stage 2(b) sheets as shown in sheets J.44-J.51.

Stage 3 - Traffic

I-35
- Maintain Stage 2 Southbound traffic layout.
- Maintain Stage 2 Northbound traffic layout.
- Northbound on and off ramps at Mills Civic Parkway and the off ramp at the I-235 Interchange shall be maintained. Refer to sheets J.52-J.67 for Stage 3 layouts. Refer to Standard Road Plan TC-416 and TC-420.
- Maintain closures of the Northbound on and off ramps at Grand Avenue. Refer to sheet J.114 for detour routes and signage.
- Maintain existing Southbound ramps at Grand Avenue, Mills Civic Parkway, and I-235 Interchange.

Grand Ave.
- Open all lanes to traffic for Westbound lanes.
- Open left lane and close right lane to traffic for Eastbound lanes. Refer to Standard Road Plan TC-418 for right lane closure.
- Grand Avenue traffic shall be maintained at all times, except when a detour is required during bridge removal and replacement periods. Refer to sheet J.113 for detour route and signage.
- Maintain existing Southbound on and off ramps to I-35.
- Maintain closure of Northbound on and off ramps to I-35 (Ramps B & D). Refer to Standard Road Plan TC-252, Situation 4. Refer to sheet J.114 for detour route and signage.

Stage 3 - Construction

I-35
- Install temporary traffic control required in Stage 3 construction.
- Maintain existing Stage 2 TBR along the existing Southbound I-35.
- Maintain existing Stage 2 TBR for Northbound lanes except for locations that are will need to be adjusted. At these locations, install TBR, drums, channelizers, and temporary crash cushions along Northbound lanes as shown in the plans.
- Install temporary pavement markings and remove conflicting pavement markings.
- Remove remaining existing pavement, grade, and pave all remaining Northbound lanes as shown in the J-sheets.

Grand Ave.
- Remove existing pavement as detailed in the J-sheets.
- Grade and pave all remaining right lane curb and gutter.
- Grade and pave the remaining portion of Ramp B as it ties into Grand Avenue.

Stage 4 - Traffic

I-35
- Maintain all lanes of Southbound traffic in existing lanes, including shifting the Southbound lanes back into the existing lanes between Sta. 1448+75 to Sta. 1462+45.
- Shift Northbound traffic to new Northbound lanes and open all Northbound lanes to traffic.
- Open on and off ramps at Grand Avenue, Mills Civic Parkway, and I-235 Interchange. Remove all Grand Avenue detour routes and signage.
- Maintain all Southbound ramps at Grand Avenue, Mills Civic Parkway, and I-235 Interchanges.

108-26A
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STAGING NOTES

- Close Northbound Mills Civic Parkway on and off ramps during night time HMA overlay operations. Construct during night time hours of 8:00 PM to 6:00 AM. Utilize Standard Road Plan TC-422 to close outside Northbound lane(s) (two inside lanes to remain open) during HMA overlay construction. Remove traffic control for daytime hours. Install detour route as shown in sheet J.115.

Grand Avenue
- Open all lanes to traffic.
- Open all ramps to traffic and remove all detour routes and signage.

Stage 4 - Construction

I-35
- Install temporary traffic control required in Stage 4 construction.
- Install TBR, drums, channelizers, and temporary crash cushions along Northbound and Southbound lanes as shown in the plans.
- Install permanent pavement markings and remove conflicting pavement markings.
- Install permanent median barrier.
- Install HMA overlay at Mills Civic Parkway interchange on and off ramps along I-35. This is "off peak" night construction.
- After the completion of the remaining sign footings (Iowa DOT Project: IM-035-2(366)67--13-77), install full-depth patches as shown in the plan set.

Grand Ave.
- None.

Stage 5 - Traffic

I-35
- Open all Northbound lanes, all Southbound lanes, and all ramps to traffic.

Grand Ave.
- Open all Westbound lanes, all Eastbound lanes, and all ramps to traffic.

Stage 5 - Construction

I-35
- Paint pavement markings as shown in the J-sheets

Grand Ave.
- None.

PEDESTRIAN PATH CLOSURES

Refer to TC-601.

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

Location	Side	Type III Barricades* No.	Remarks
EP True Parkway - Trail	Lt	2	
EP True Parkway - Trail	Lt	2	
EP True Parkway - Sidewalk	Rt	1	
EP True Parkway - Sidewalk	Rt	1	

TABULATION OF SPECIAL EVENTS

Event	Location	Date
Principal Charity Classic	Wakonda GC DSM	TBD
World Pork Expo	Iowa State Fair Grounds - Des Moines, IA	June 4-6, 2014
Iowa State Fair	Iowa State Fair Grounds - Des Moines, IA	August 7-17, 2014
Hy-Vee Triathalon	Des Moines	TBD

COORDINATED OPERATIONS

Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
IM-035-2(385)69--13-77	Bridge New-PPCB
BRFIM-035-2(370)69--05-77	Bridge Replacement-PPCB
BRFIM-035-2(372)69--05-77	Bridge Replacement-PPCB
BRFIM-035-2(361)72--05-77	Bridge Replacement-PPCB
IM-035-2(368)67--13-77	Lighting
IM-035-2(366)67--13-77	Traffic Signs
IM-035-2(330)67--13-77	Traffic Signals
IMN-035-4(157)87--0E-77	PCC Patching
IMN-035-2(415)67--0E-77	Erosion Control
IMX-080-3(179)128--02-77	HMA Resurfacing
IMN-080-4(50)122--0E-77	PCC Patching
TSF-141-7(41)--92-77	Traffic Signals
IMN-235-2(625)00--0E-77	Bridge Rehabilitation

CROSS SECTION VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

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

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

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

PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Magenta	(5)	Pavement Marking Call Outs
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Yellow	(4)	Pavement Markings, Yellow
Off White	(254)	Pavement Markings, White

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Proposed Granular Surface Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(9)	Temporary Pavement Shading
Brown, Light	(236)	Proposed Grading Limits Shading
Pink, Dark	(13)	Proposed MSE or CIP Wall Shading
Red	(3)	Proposed Bridge Shading and Sign Trusses
Black w/Gray, Light Fill	(0,48)	Previously Constructed Structure

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

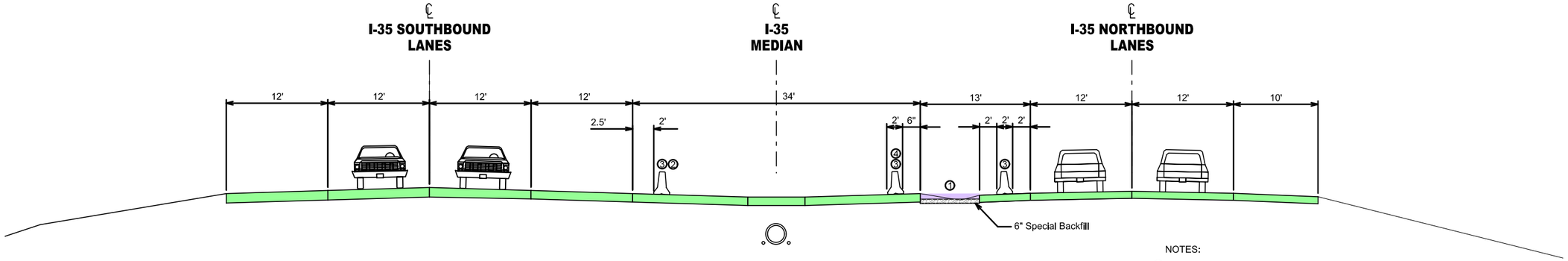
- Channelizing Device
- Crash Cushion
- Drum
- Traffic Signal
- Temporary Lane Separator
- Flagger
- Tubular Marker
- Temporary Floodlighting
- Channelizer Marker
- Traffic Sign
- Concrete Barrier Marker
- Type III Barricade
- Delineator
- Type A Warning Light
- Temporary Barrier Rail
- Direction of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

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

TRAFFIC CONTROL AND STAGING LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES J)

TYPICAL 1
I-35



STAGE 1
RELOCATED BARRIER RAIL AND PAVE TEMPORARY PAVEMENT
Traffic in Existing Southbound Lanes and Existing Northbound Lanes

NOTES:

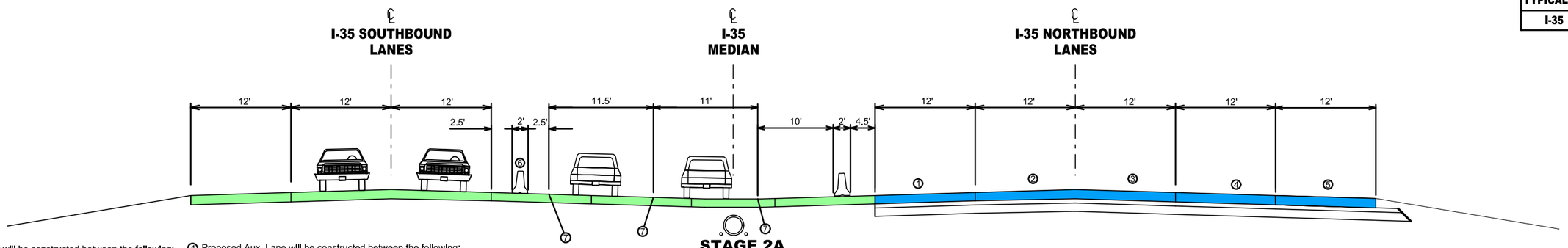
① Temporary pavement will be constructed between the following:
A) Sta. 1434+00.00 to Sta. 1441+00.00
B) Sta. 1469+50.00 to Sta. 1481+25.00
C) Sta. 1539+00.00 to Sta. 1545+50.00

② Use Modular Screen on TBR

③ Use existing TBR location

④ Remove TBR at temporary pavement locations

TYPICAL 2A
I-35



NOTES:

① Proposed left shoulder will be constructed between the following:
A) Sta. 1375+00.83 to Sta. 1378+40.05

② Proposed left lane will be constructed between the following:
A) Sta. 1364+05.00 to Sta. 1378+40.05

③ Proposed right lane will be constructed between the following:
A) Sta. 1364+05.00 to Sta. 1378+40.05

④ Proposed Aux. Lane will be constructed between the following:
A) Sta. 1364+05.00 to Sta. 1375+00.00

⑤ Proposed right shoulder will be constructed between the following:
A) Sta. 1364+05.00 to Sta. 1378+40.05

⑥ Use Modular Screen on TBR

⑦ Temporary pavement markings

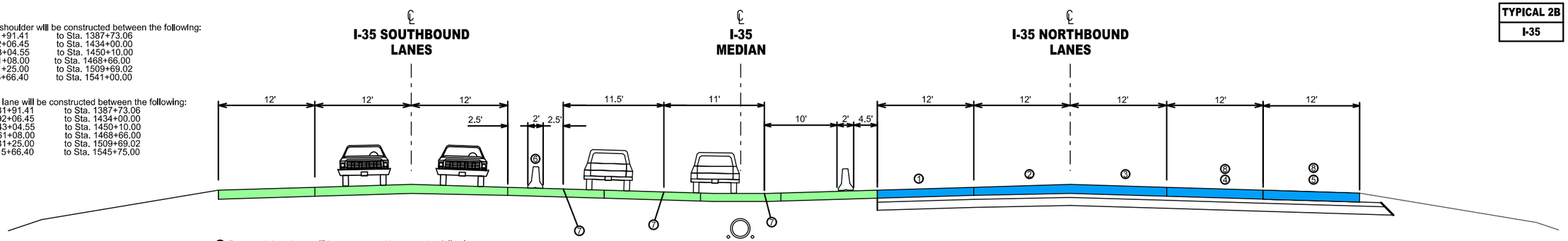
STAGE 2A
NORTHBOUND CONSTRUCTION
Traffic in Existing Southbound Lanes and Existing Median

TYPICAL 2B
I-35

NOTES:

① Proposed left shoulder will be constructed between the following:
A) Sta. 1381+91.41 to Sta. 1387+73.06
B) Sta. 1392+06.45 to Sta. 1434+00.00
C) Sta. 1443+04.55 to Sta. 1450+10.00
D) Sta. 1461+08.00 to Sta. 1468+66.00
E) Sta. 1481+25.00 to Sta. 1509+69.02
F) Sta. 1515+66.40 to Sta. 1541+00.00

② Proposed left lane will be constructed between the following:
A) Sta. 1381+91.41 to Sta. 1387+73.06
B) Sta. 1392+06.45 to Sta. 1434+00.00
C) Sta. 1443+04.55 to Sta. 1450+10.00
D) Sta. 1461+08.00 to Sta. 1468+66.00
E) Sta. 1481+25.00 to Sta. 1509+69.02
F) Sta. 1515+66.40 to Sta. 1545+75.00



③ Proposed right lane will be constructed between the following:
A) Sta. 1381+91.41 to Sta. 1387+73.06
B) Sta. 1392+06.45 to Sta. 1434+00.00
C) Sta. 1443+04.55 to Sta. 1450+10.00
D) Sta. 1461+08.00 to Sta. 1468+66.00
E) Sta. 1481+25.00 to Sta. 1509+69.02
F) Sta. 1515+66.40 to Sta. 1545+75.00

④ Proposed Aux. Lane will be constructed between the following:
A) Sta. 1406+00.00 to Sta. 1434+00.00
B) Sta. 1493+83.85 to Sta. 1509+69.02
C) Sta. 1515+66.40 to Sta. 1550+62.56

STAGE 2
NORTHBOUND CONSTRUCTION
Traffic in Existing Southbound Lanes and Existing Median

⑤ Proposed right shoulder will be constructed between the following:
A) Sta. 1381+91.41 to Sta. 1387+73.06
B) Sta. 1392+06.45 to Sta. 1434+00.00
C) Sta. 1443+04.55 to Sta. 1450+10.00
D) Sta. 1461+08.00 to Sta. 1468+66.00
E) Sta. 1493+83.85 to Sta. 1509+69.02
F) Sta. 1515+66.40 to Sta. 1552+05.00

⑥ Use Modular Screen on TBR

⑦ Temporary pavement markings

⑧ HMA Overlay
A) Sta. 1481+25.00 to Sta. 1493+83.35

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.4

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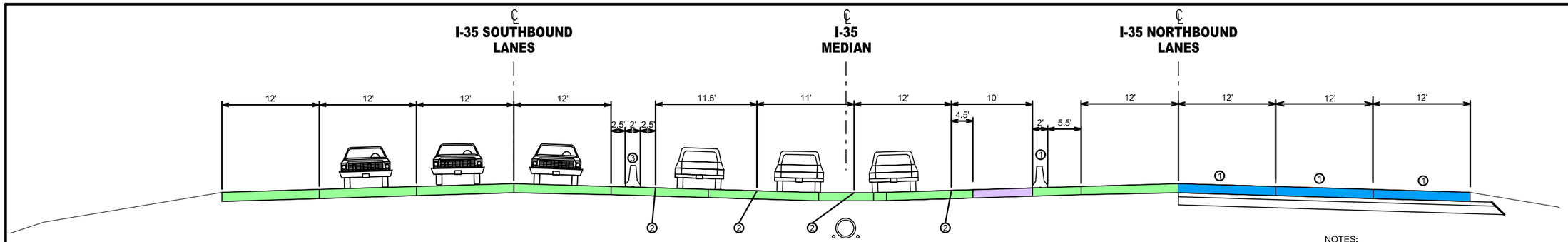
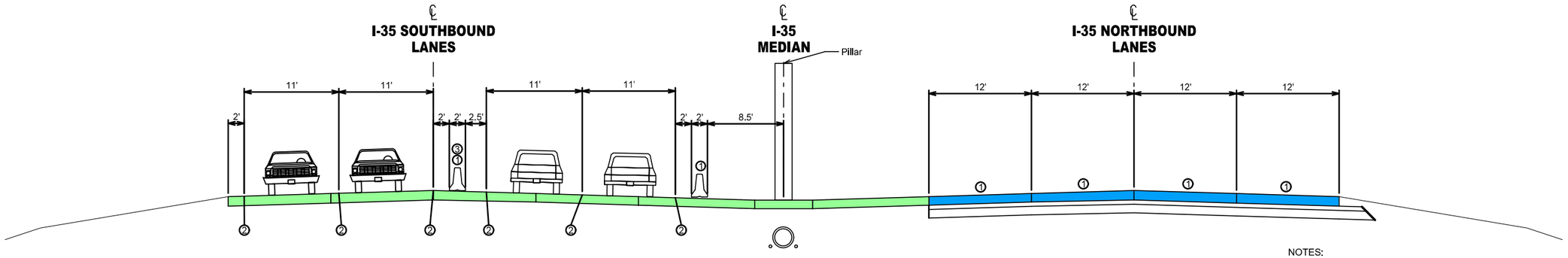
TYPICAL 2C
I-35



STAGE 2
RELOCATED BARRIER RAIL AND NORTHBOUND CONSTRUCTION
Traffic in New Southbound Lanes and Existing Median

NOTES:
1. Proposed pavement and shifted TBR will be constructed between the following:
   A) Sta. 1434+00.00 to Sta. 1438+23.58
2. Temporary pavement markings
3. Use Modular Screen on TBR

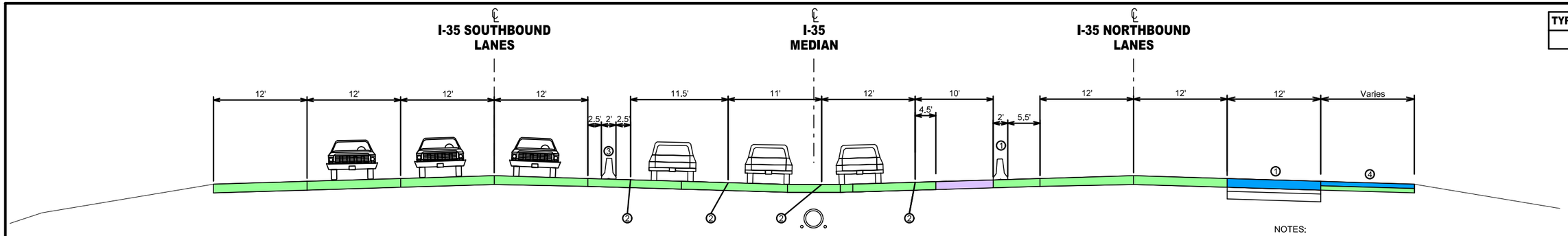
TYPICAL 2D
I-35



STAGE 2
RELOCATED BARRIER RAIL AND NORTHBOUND CONSTRUCTION
Traffic in New Southbound Lanes

NOTES:
1. Proposed pavement and shifted TBR will be constructed between the following:
   A) Sta. 1450+10.00 to Sta. 1461+08.00
2. Temporary pavement markings
3. Use Modular Screen on TBR

TYPICAL 2E
I-35



STAGE 2
RELOCATED BARRIER RAIL AND NORTHBOUND CONSTRUCTION
Traffic in New Southbound Lanes and Existing Median

NOTES:
1. Proposed pavement and shifted TBR will be constructed between the following:
   A) Sta. 1473+00.00 to Sta. 1481+25.00
2. Temporary pavement markings
3. Use Modular Screen on TBR
4. HMA Overlay

TYPICAL 3A
I-35

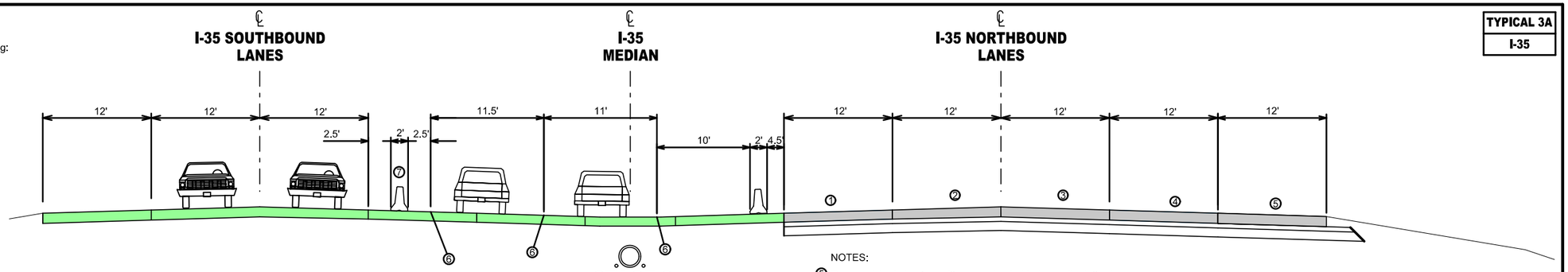
NOTES:

① Proposed left shoulder will be constructed between the following:
A) Sta. 1375+00.83 to Sta. 1378+40.05
B) Sta. 1381+91.41 to Sta. 1387+73.06
C) Sta. 1392+06.45 to Sta. 1434+00.00
D) Sta. 1442+00.00 to Sta. 1450+10.00
E) Sta. 1461+08.00 to Sta. 1468+66.00
F) Sta. 1481+25.00 to Sta. 1509+69.02
G) Sta. 1515+66.40 to Sta. 1541+00.00

② Proposed left lane will be constructed between the following:
A) Sta. 1364+05.00 to Sta. 1378+40.05
B) Sta. 1381+91.41 to Sta. 1387+73.06
C) Sta. 1392+06.45 to Sta. 1434+00.00
D) Sta. 1442+00.00 to Sta. 1450+10.00
E) Sta. 1461+08.00 to Sta. 1468+66.00
F) Sta. 1481+25.00 to Sta. 1509+69.02
G) Sta. 1515+66.40 to Sta. 1545+75.00

③ Proposed right lane will be constructed between the following:
A) Sta. 1364+05.00 to Sta. 1378+40.05
B) Sta. 1381+91.41 to Sta. 1387+73.06
C) Sta. 1392+06.45 to Sta. 1434+00.00
D) Sta. 1442+00.00 to Sta. 1450+10.00
E) Sta. 1461+08.00 to Sta. 1468+66.00
F) Sta. 1481+25.00 to Sta. 1509+69.02
④ G) Sta. 1515+66.40 to Sta. 1545+75.00

Proposed Aux. Lane
A) Sta. 1364+05.00 to Sta. 1375+00.00
B) Sta. 1406+00.00 to Sta. 1434+00.00
C) Sta. 1493+83.85 to Sta. 1509+69.02
D) Sta. 1515+66.40 to Sta. 1550+62.56



STAGE 3
NORTHBOUND CONSTRUCTION
Traffic in New Southbound Lanes and Existing Median

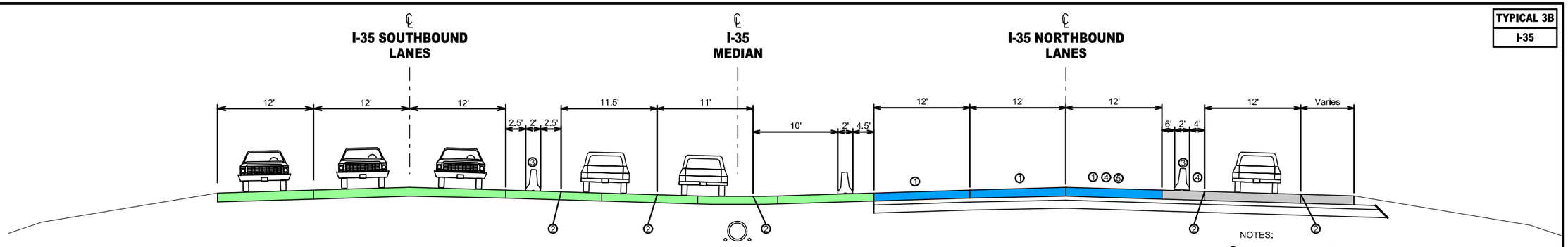
NOTES:

⑤ Proposed right shoulder will be constructed between the following:
A) Sta. 1364+05.00 to Sta. 1378+40.05
B) Sta. 1381+91.41 to Sta. 1387+73.06
C) Sta. 1392+06.45 to Sta. 1434+00.00
D) Sta. 1443+04.55 to Sta. 1450+10.00
E) Sta. 1461+08.00 to Sta. 1468+66.00
F) Sta. 1493+83.85 to Sta. 1509+69.02
G) Sta. 1515+66.40 to Sta. 1552+05.00

⑥ Temporary pavement markings

⑦ Use Modular Screen on TBR

TYPICAL 3B
I-35



STAGE 3
NORTHBOUND CONSTRUCTION
Traffic in New Southbound Lanes, Existing Median, and New Northbound Outside Lane

NOTES:

① Proposed pavement will be constructed between the following:
A) Sta. 1434+00.00 to Sta. 1443+04.55
B) Sta. 1468+66.00 to Sta. 1481+25.00

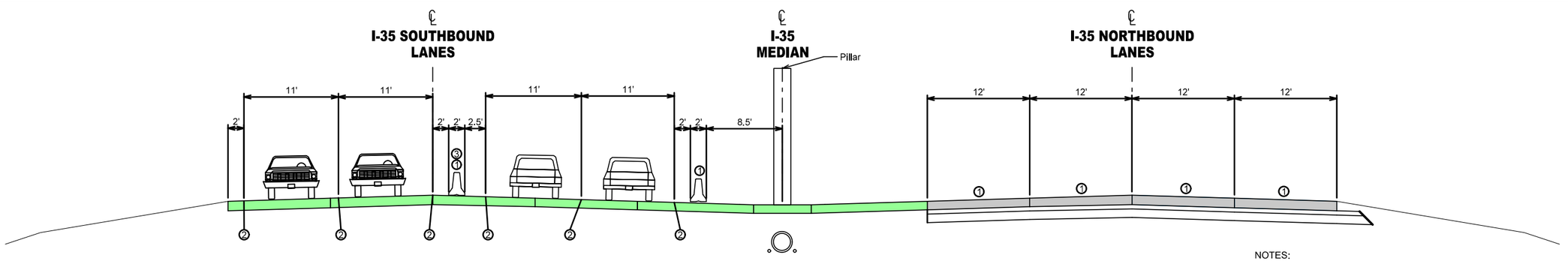
② Temporary pavement markings

③ Use Modular Screen on TBR

④ From Sta. 1473+00.00 to Sta. 1481+25.00, lane was previously constructed in Stage 2. See Stage 2d cross section.

⑤ From Sta. 1434+00.00 to Sta. 1438+23.58, lane was previously constructed in Stage 2. See Stage 2b cross section.

TYPICAL 3C
I-35



STAGE 3
RELOCATED BARRIER RAIL AND NORTHBOUND CONSTRUCTION
Traffic in New Southbound Lanes

NOTES:

① Pavement Previously constructed and shifted TBR was constructed between the following:
A) Sta. 1450+10.00 to Sta. 1461+08.00

② Temporary pavement markings

③ Use Modular Screen on TBR

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.6

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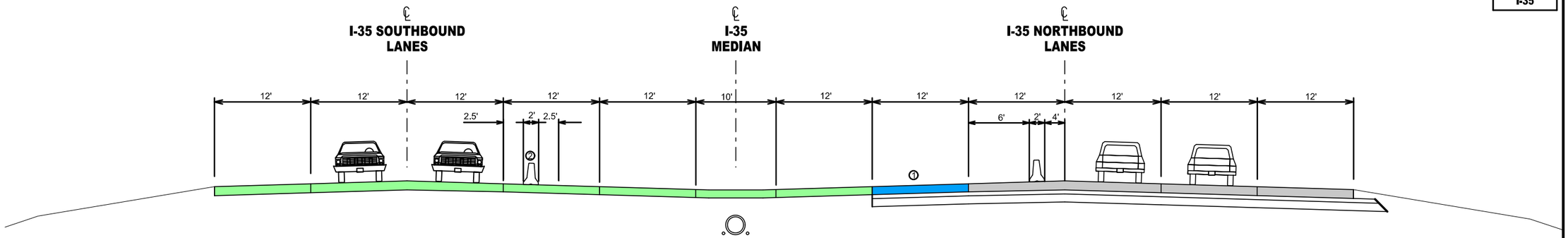
TYPICAL 3D
I-35

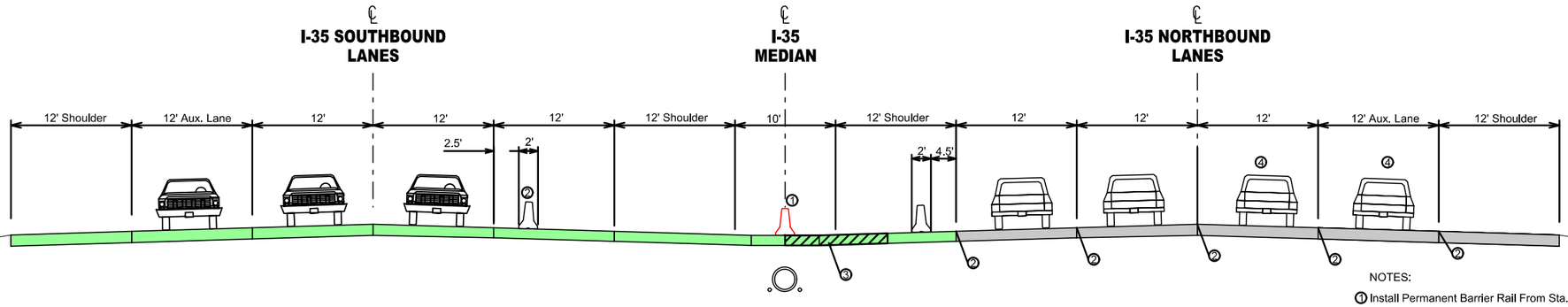


STAGE 3
NORTHBOUND CONSTRUCTION
Traffic in New Southbound Lanes and New Northbound Outside Lanes

NOTES:

1. Proposed pavement will be constructed between the following:
   A) Sta. 1540+15.00 to Sta. 1546+89.00
2. Use Modular Screen on TBR

TYPICAL 4
I-35

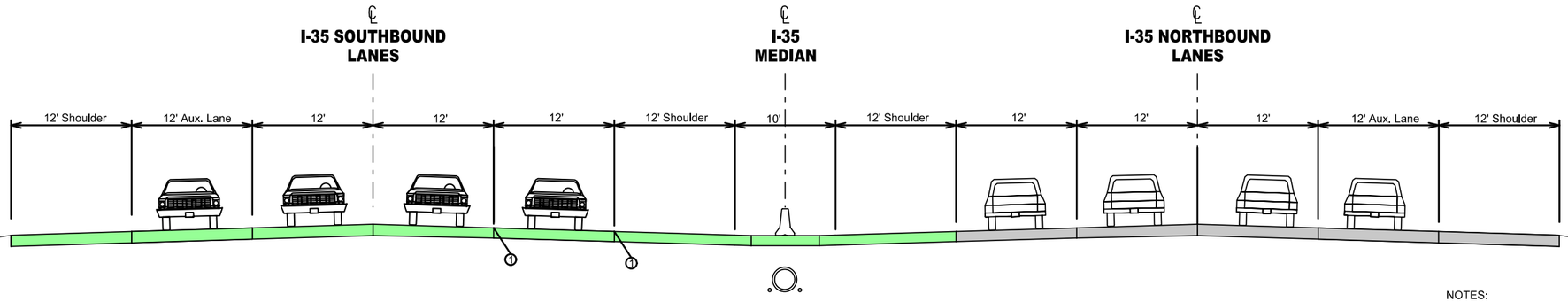


STAGE 4
PERMANENT BARRIER RAIL CONSTRUCTION
Traffic in New Lanes

NOTES:

1. Install Permanent Barrier Rail From Sta. 1363+35.00 to Sta. 1546+97.00
2. Install Permanent Markings
3. Refer to plans for patching locations
4. Close lanes during night construction at Mills Civic Parkway ramps for HMA overlay

TYPICAL 5
I-35

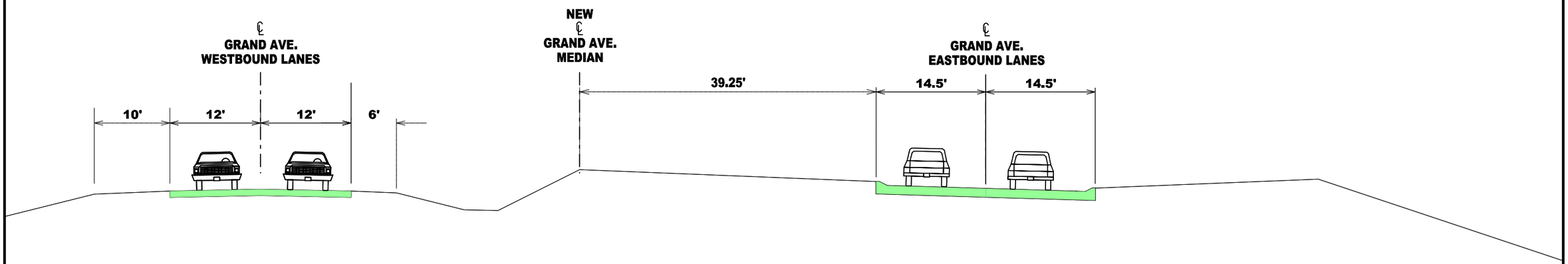


STAGE 5 - FINAL
Traffic in New Lanes

NOTES:

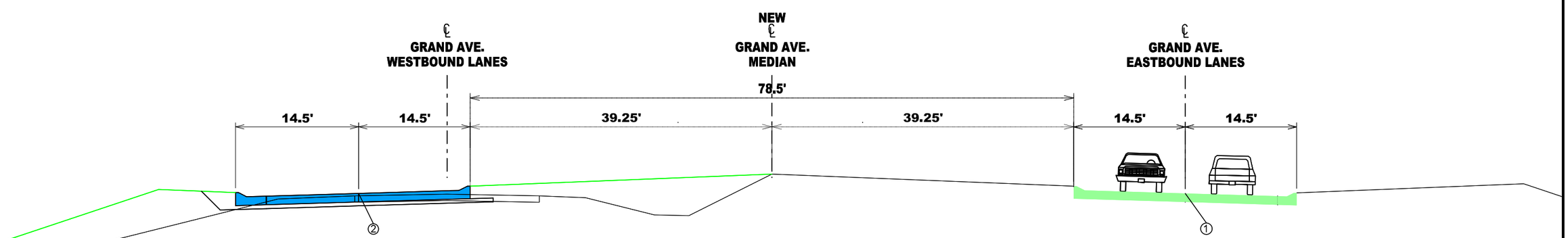
1. Install Permanent Markings

STAGE 1
GRAND



STAGE 1
Traffic in Existing Lanes

STAGE 2
GRAND



Notes:
① Temporary Pavement Markings
② Permanent Pavement markings

STAGE 2
Reconstruct Westbound Lanes
Traffic in new Eastbound Lanes

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.8

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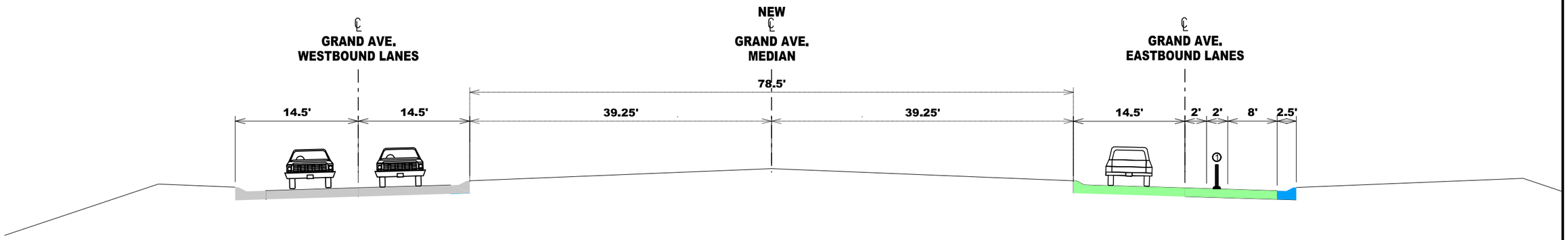
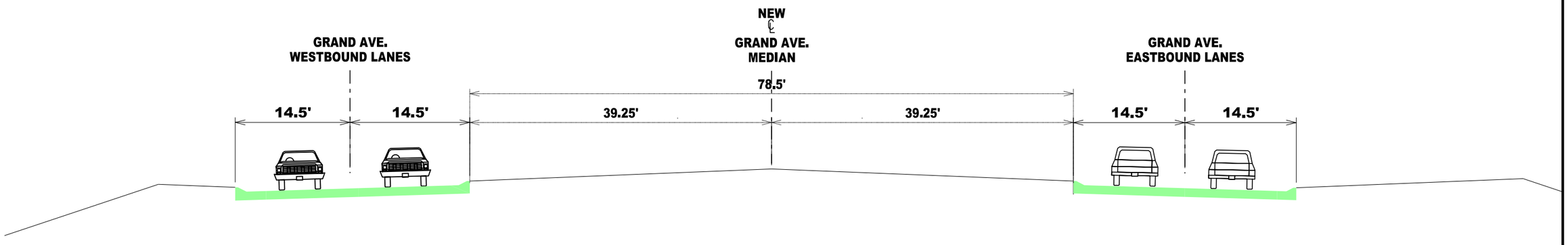
STAGE 3
GRAND



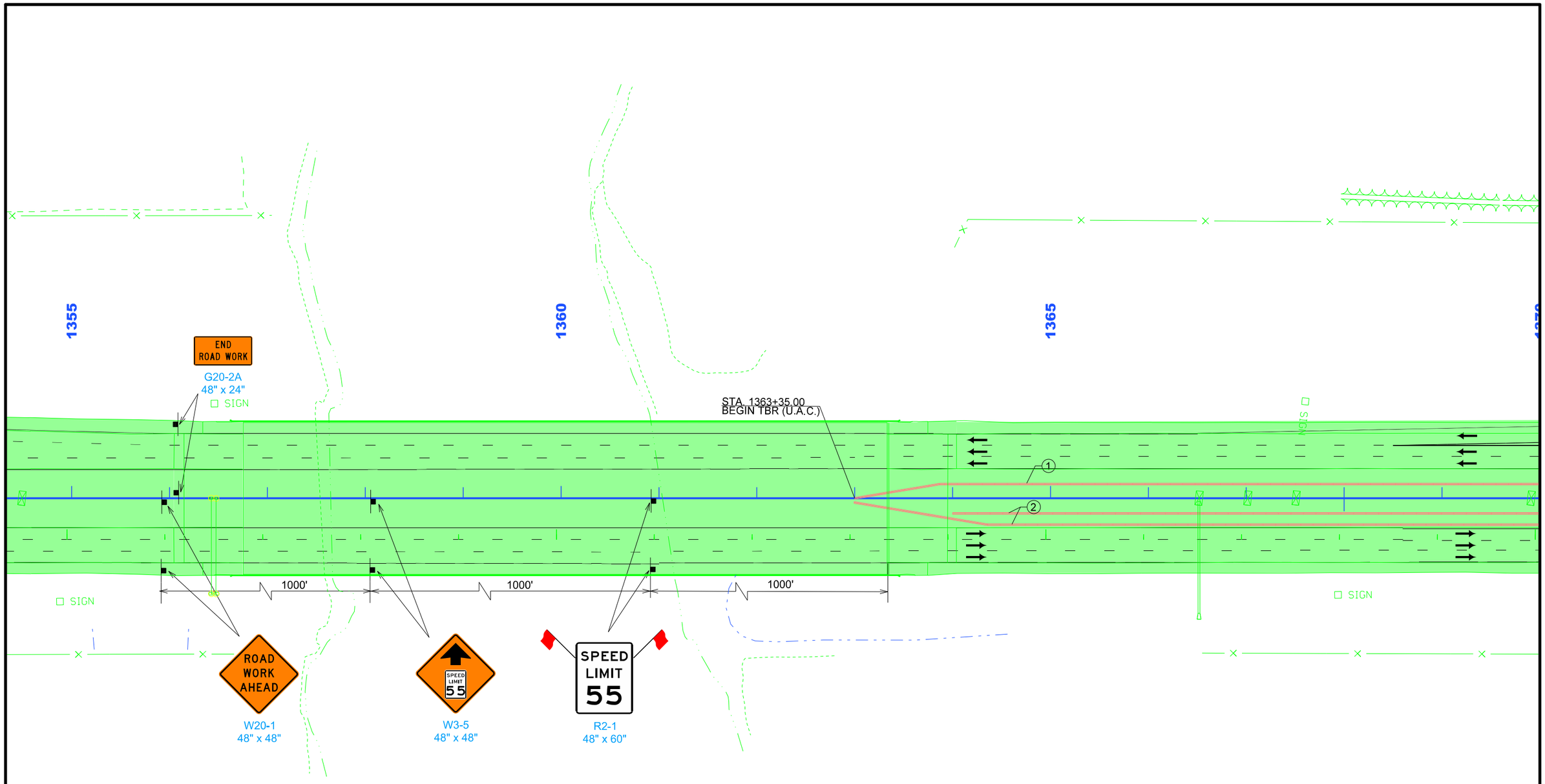
STAGE 3
Traffic in New Lanes
Construct Remaining Curb and Gutter
Sta. 3377+75.00 to Sta. 3397+50.00

NOTES:
① 42" Channelizers

Stage 4
GRAND



Stage 4
All Lanes Open to Traffic



NOTES:

① Attach Modular Glare Screen to TBR. TBR to be used as constructed.

② TBR to be used as constructed.

Stage 1

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.10

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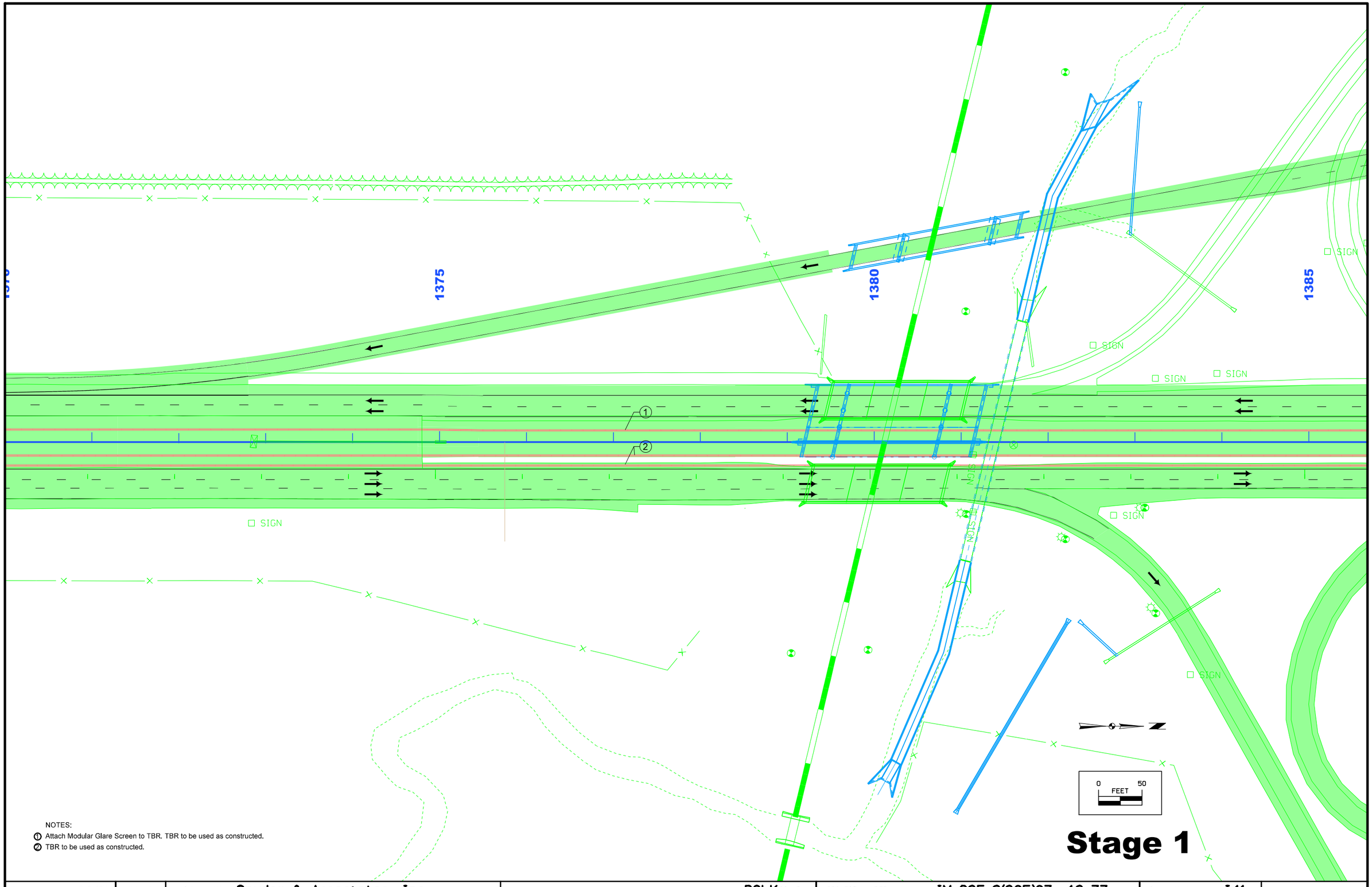

NOTES:

① Attach Modular Glare Screen to TBR. TBR to be used as constructed.

② TBR to be used as constructed.

Stage 1

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.11

4:41:26 PM 10/21/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j11.sht

NOTES:

① Attach Modular Glare Screen to TBR. TBR to be used as constructed.

② TBR to be used as constructed.

1390

1395

1400

0 50 FEET

Stage 1

C ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.12

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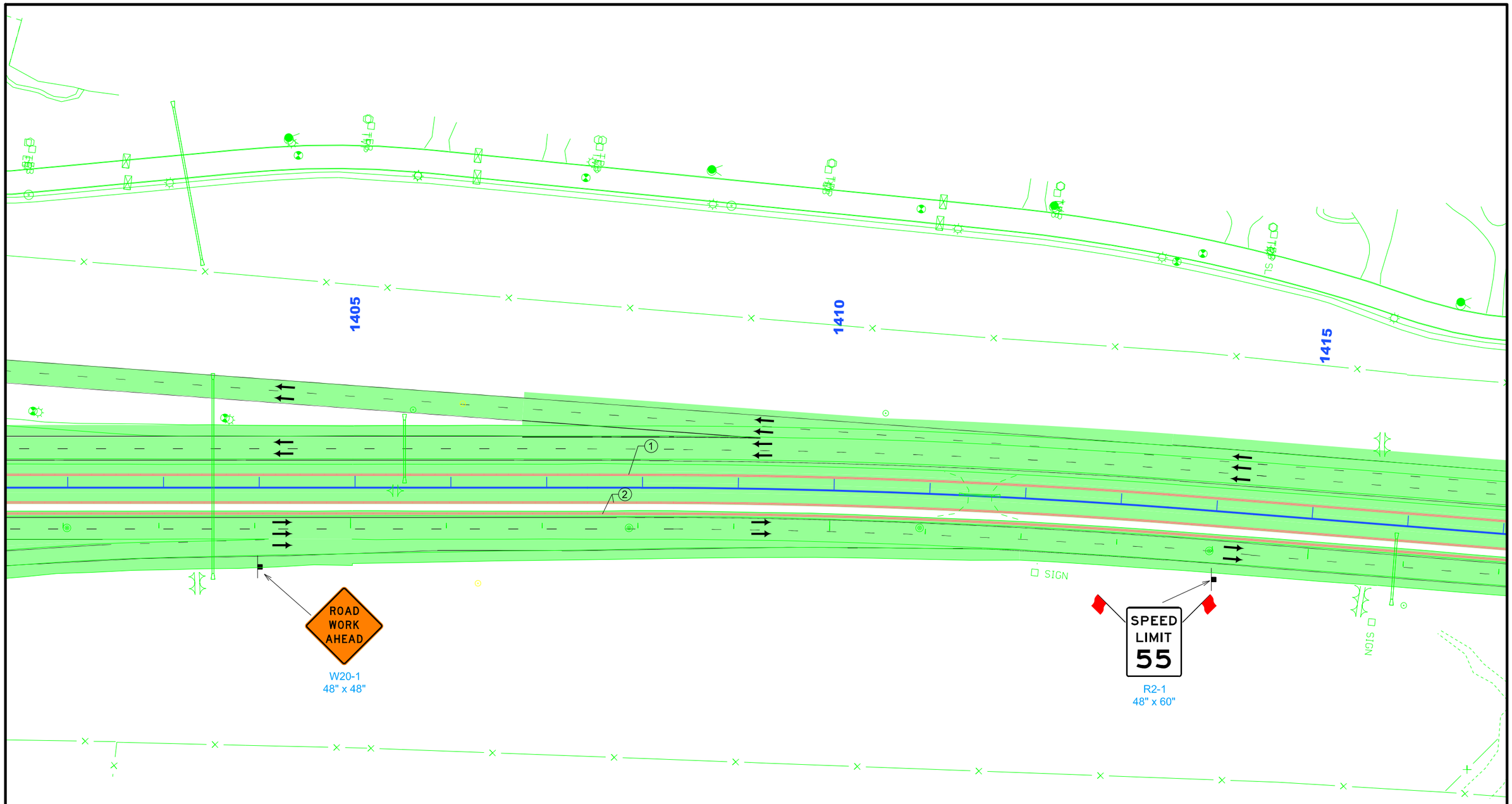


NOTES:

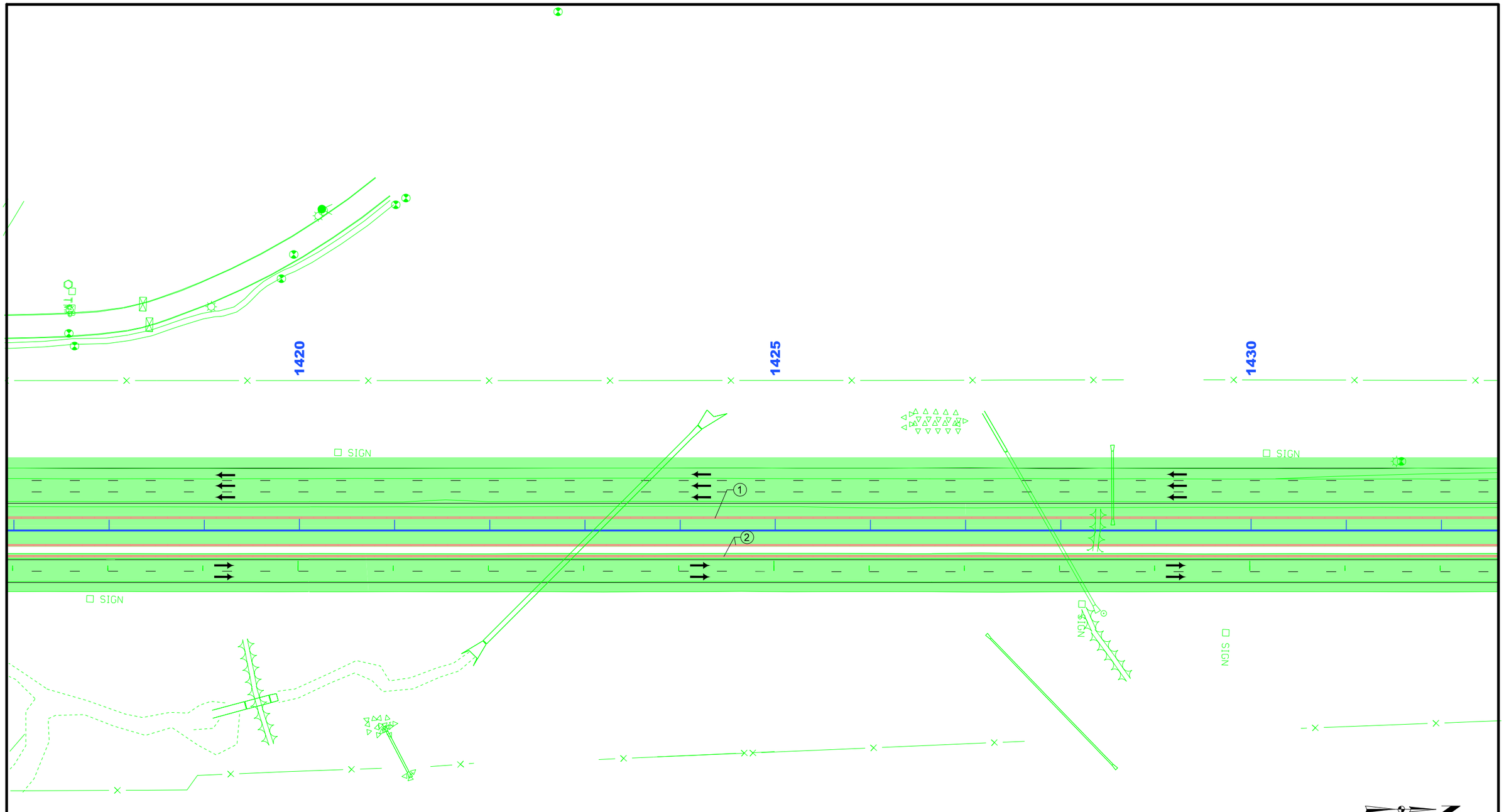
① Attach Moldular Glare Screen to TBR. TBR to be used as constructed.

② TBR to be used as constructed.

Stage 1

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	J.13

4:42:12 PM 10/21/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j13.sht



NOTES:

① Attach Modular Glare Screen to TBR. TBR to be used as constructed.

② TBR to be used as constructed.

Stage 1

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.14

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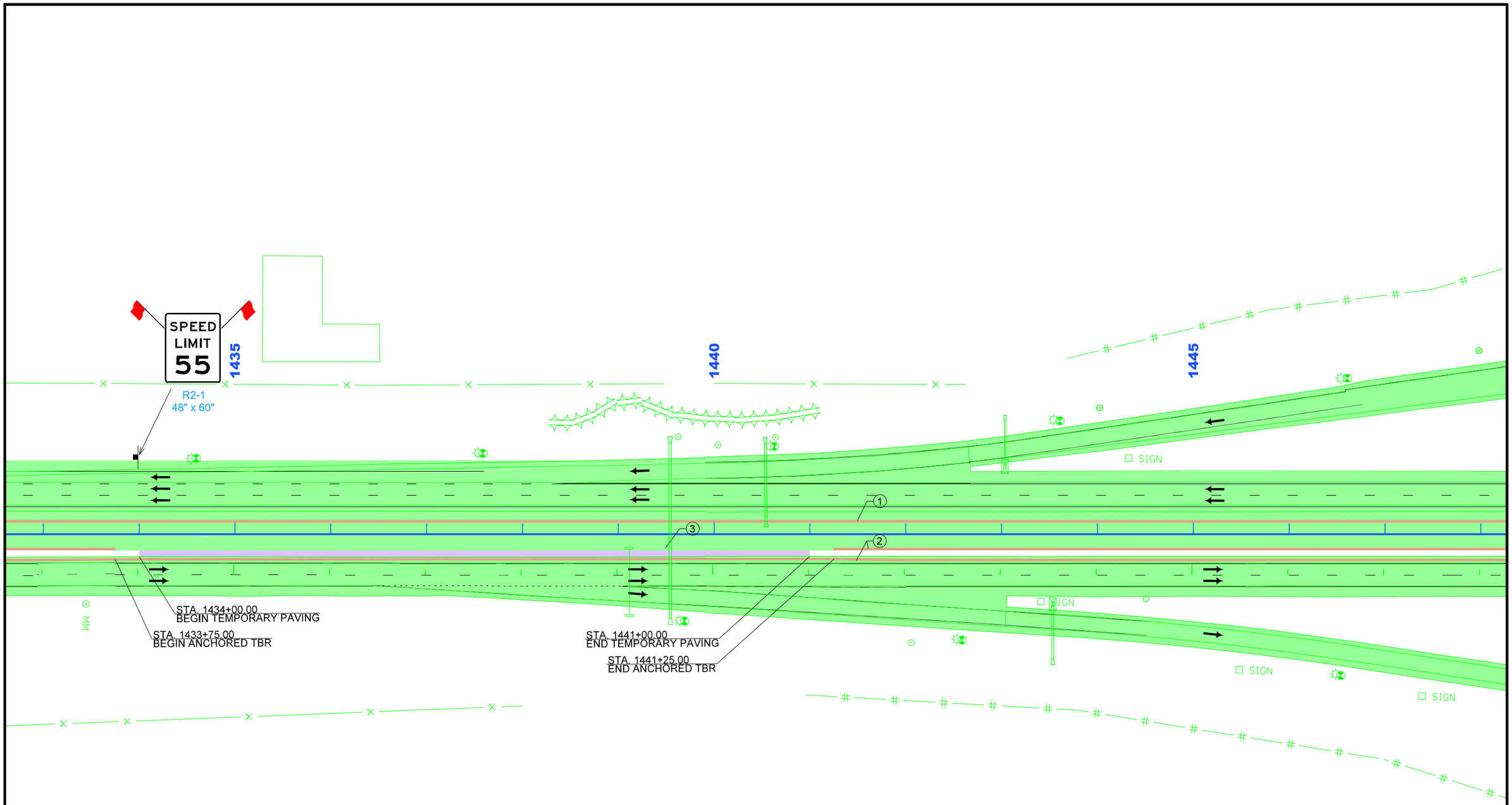


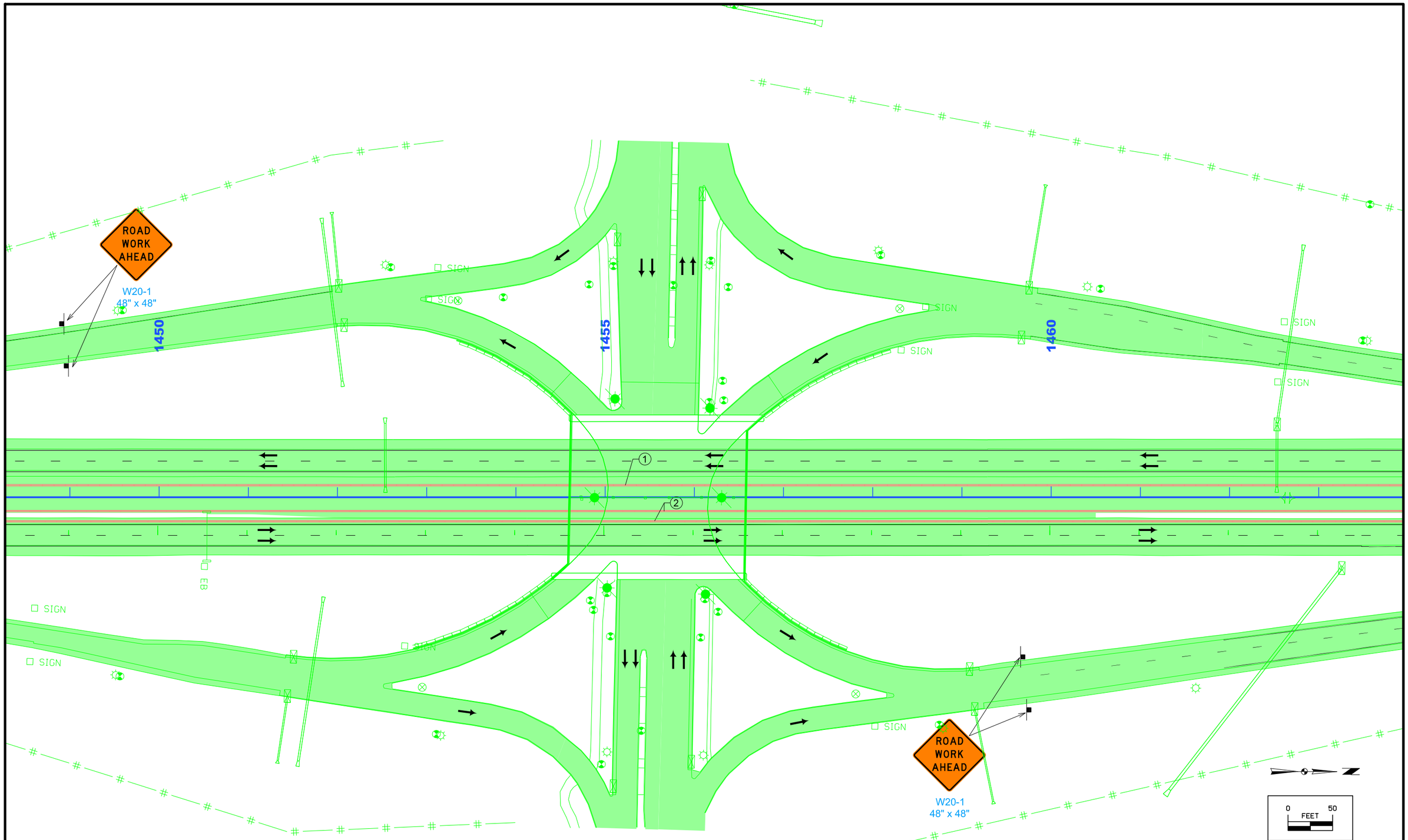
NOTES:

① Attach Modular Glare Screen to TBR. TBR to be used as constructed.
② TBR to be used as constructed.
③ Remove existing TBR for grading and paving operations

Stage 1

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.15	

4:42:59 PM 10/21/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j15.sht



NOTES:

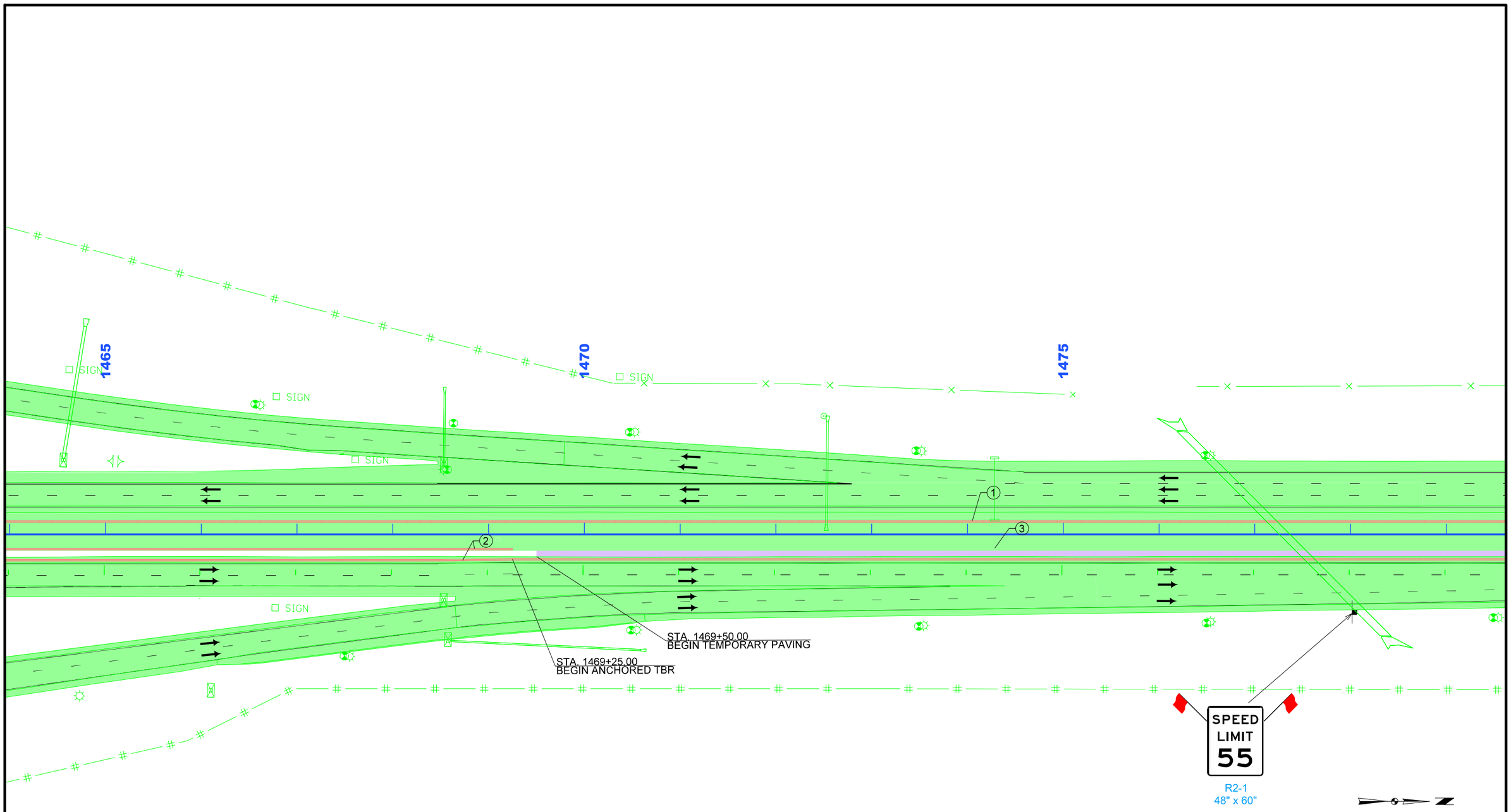
① Attach Modular Glare Screen to TBR. TBR to be used as constructed.

② TBR to be used as constructed.

Stage 1

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.16

4:43:19 PM 10/21/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j16.sht



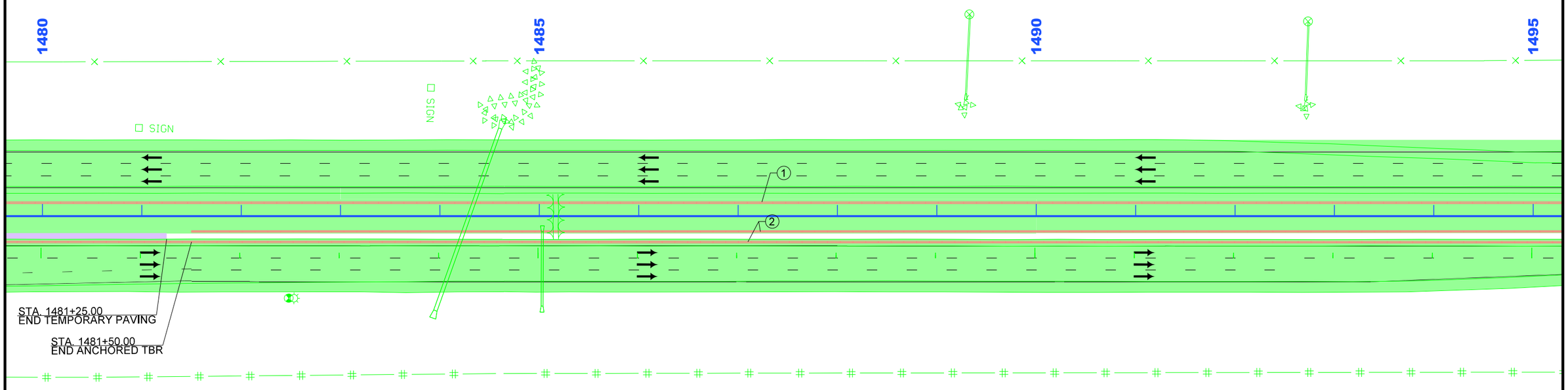
NOTES:

1. Attach Modular Glare Screen to TBR. TBR to be used as constructed.
2. TBR to be used as constructed.
3. Remove existing TBR for grading and paving operations.

Stage 1

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.17

4:43:59 PM 10/21/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j17.sht



NOTES:

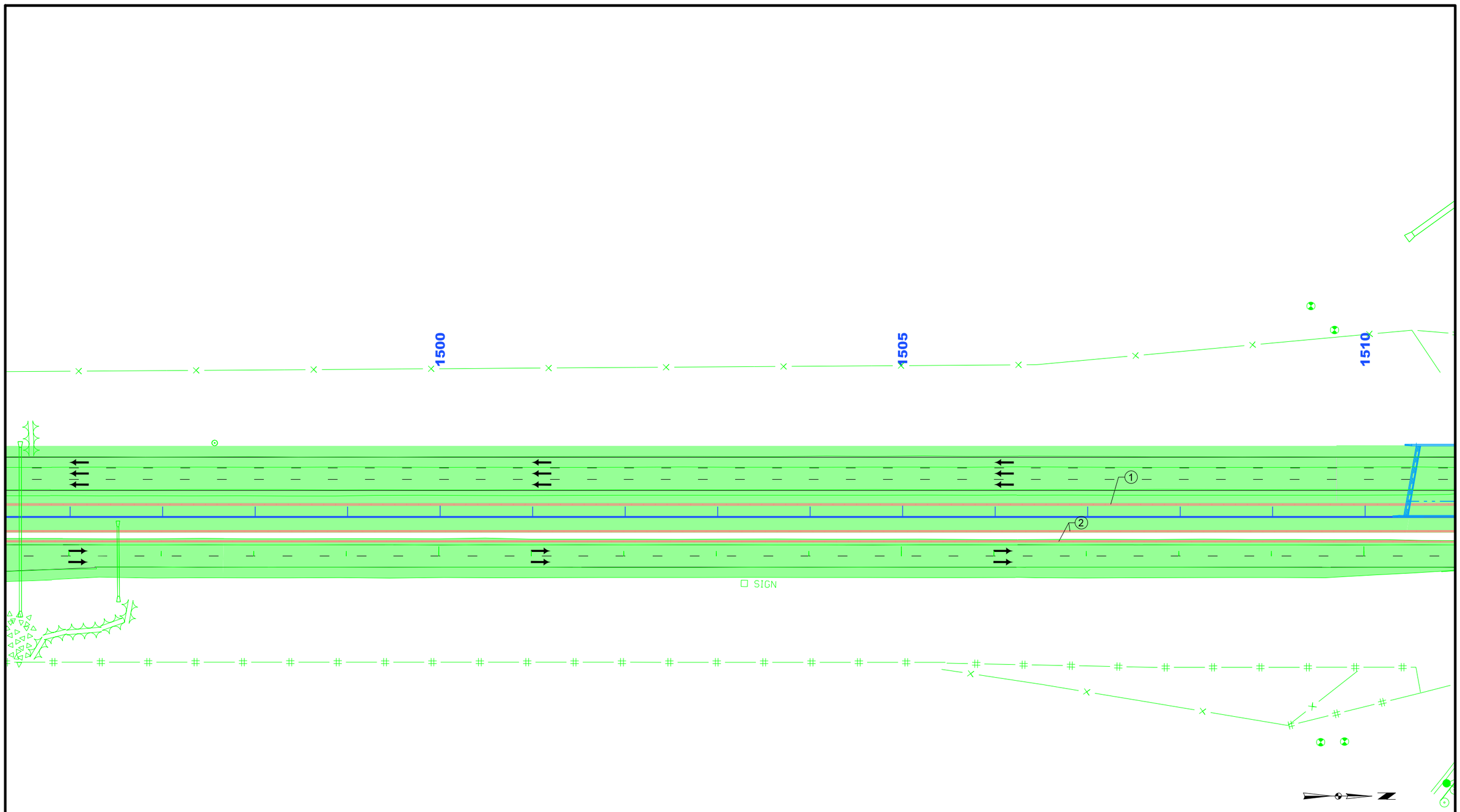
① Attach Modular Glare Screen to TBR. TBR to be used as constructed.

② TBR to be used as constructed.

Stage 1

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.18

4:44:45 PM 10/21/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j18.sht



NOTES:

① Attach Modular Glare Screen to TBR. TBR to be used as constructed.

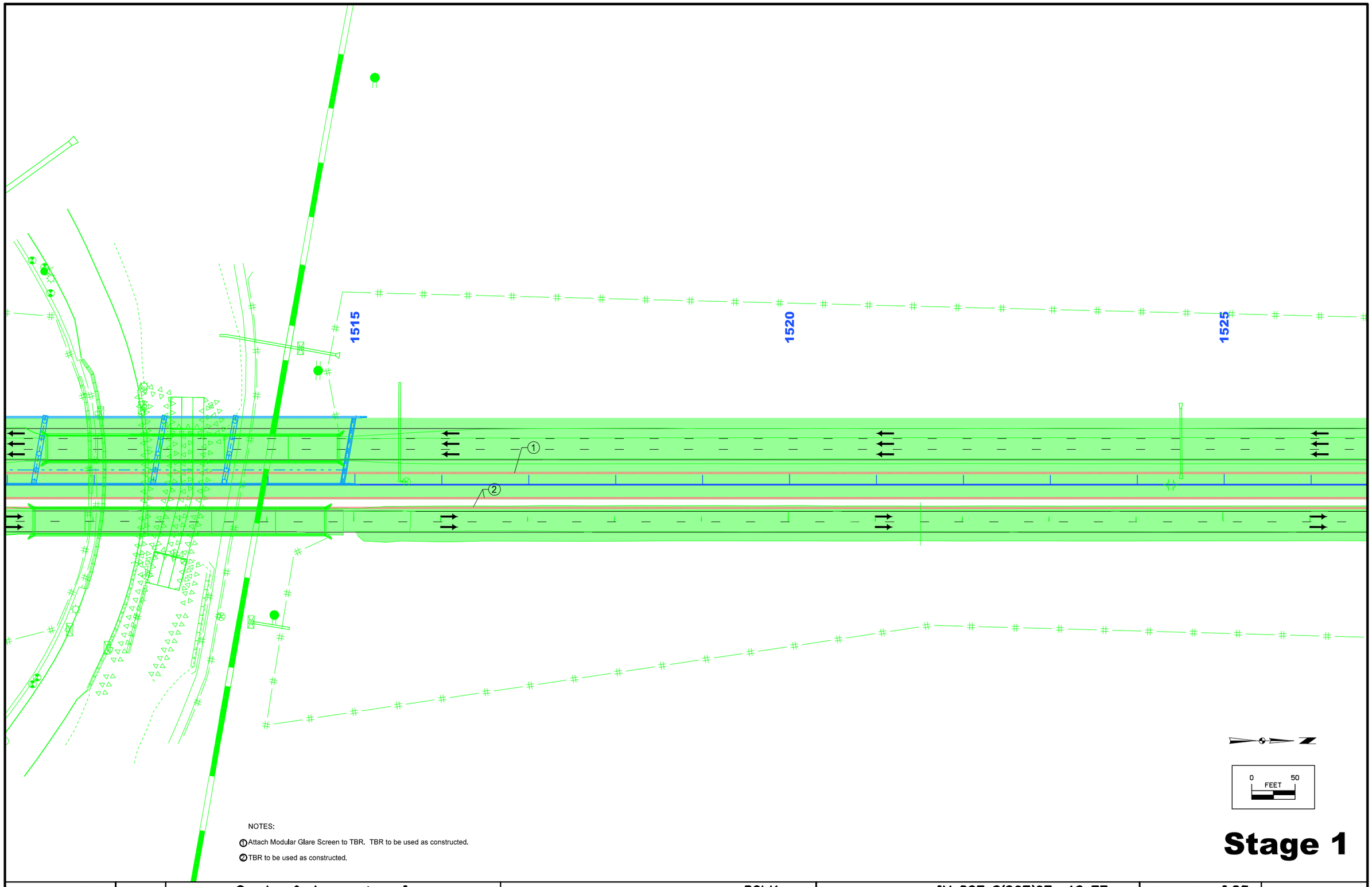
② TBR to be used as constructed.

0 FEET 50

Stage 1

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.19

4:45:05 PM 10/21/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j19.sht



NOTES:

① Attach Modular Glare Screen to TBR. TBR to be used as constructed.

② TBR to be used as constructed.

0 FEET 50

Stage 1

C ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.20

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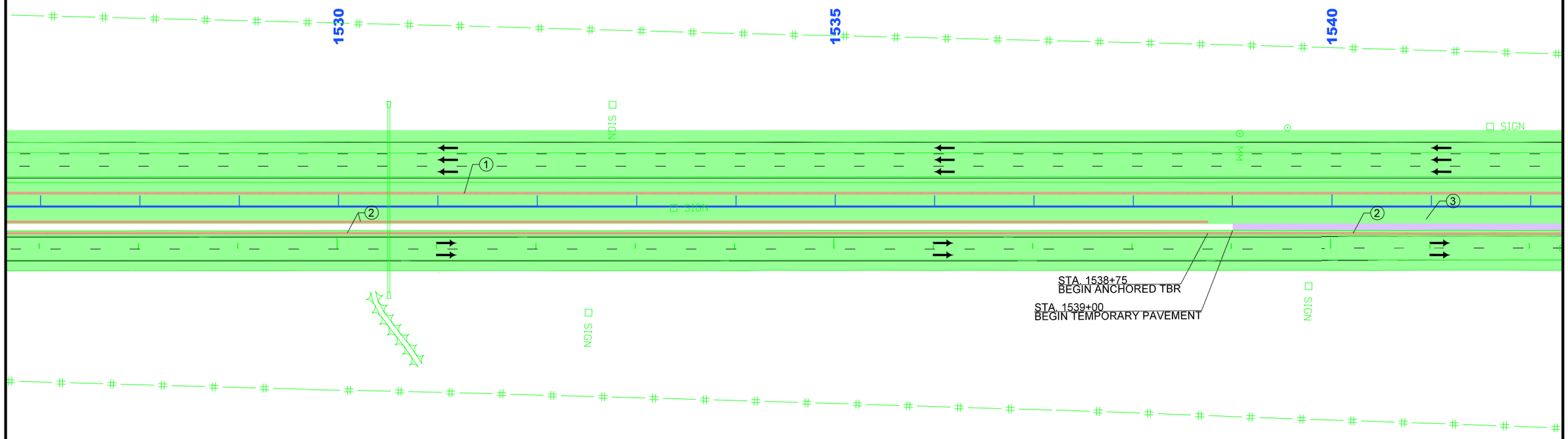

NOTES:

1. Attach Modular Glare Screen to TBR. TBR to be used as constructed.
2. TBR to be used as constructed.
3. Remove existing TBR for grading and paving operations.

Stage 1

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.21

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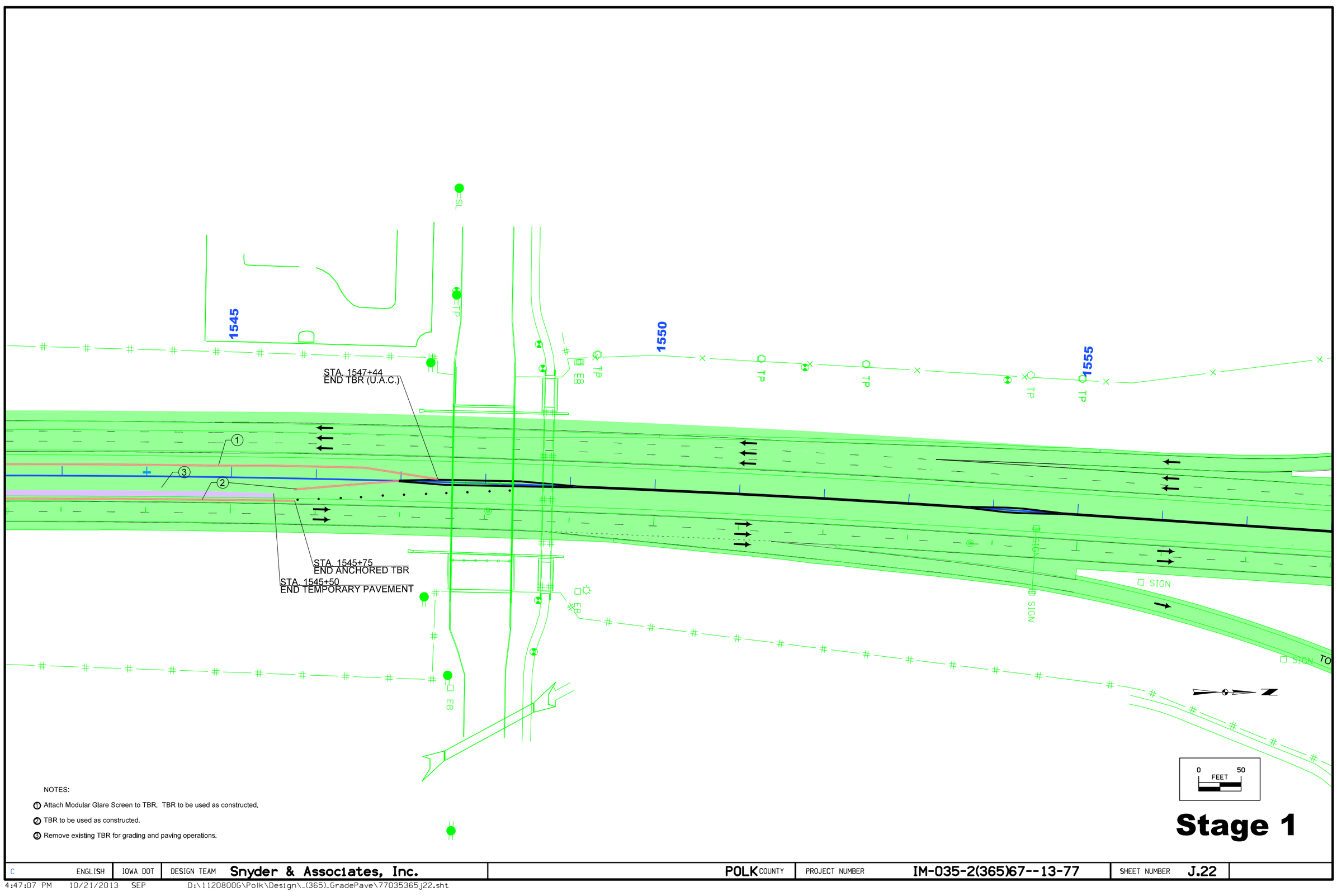

NOTES:

1. Attach Modular Glare Screen to TBR. TBR to be used as constructed.
2. TBR to be used as constructed.
3. Remove existing TBR for grading and paving operations.

0 FEET 50

Stage 1

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.22	

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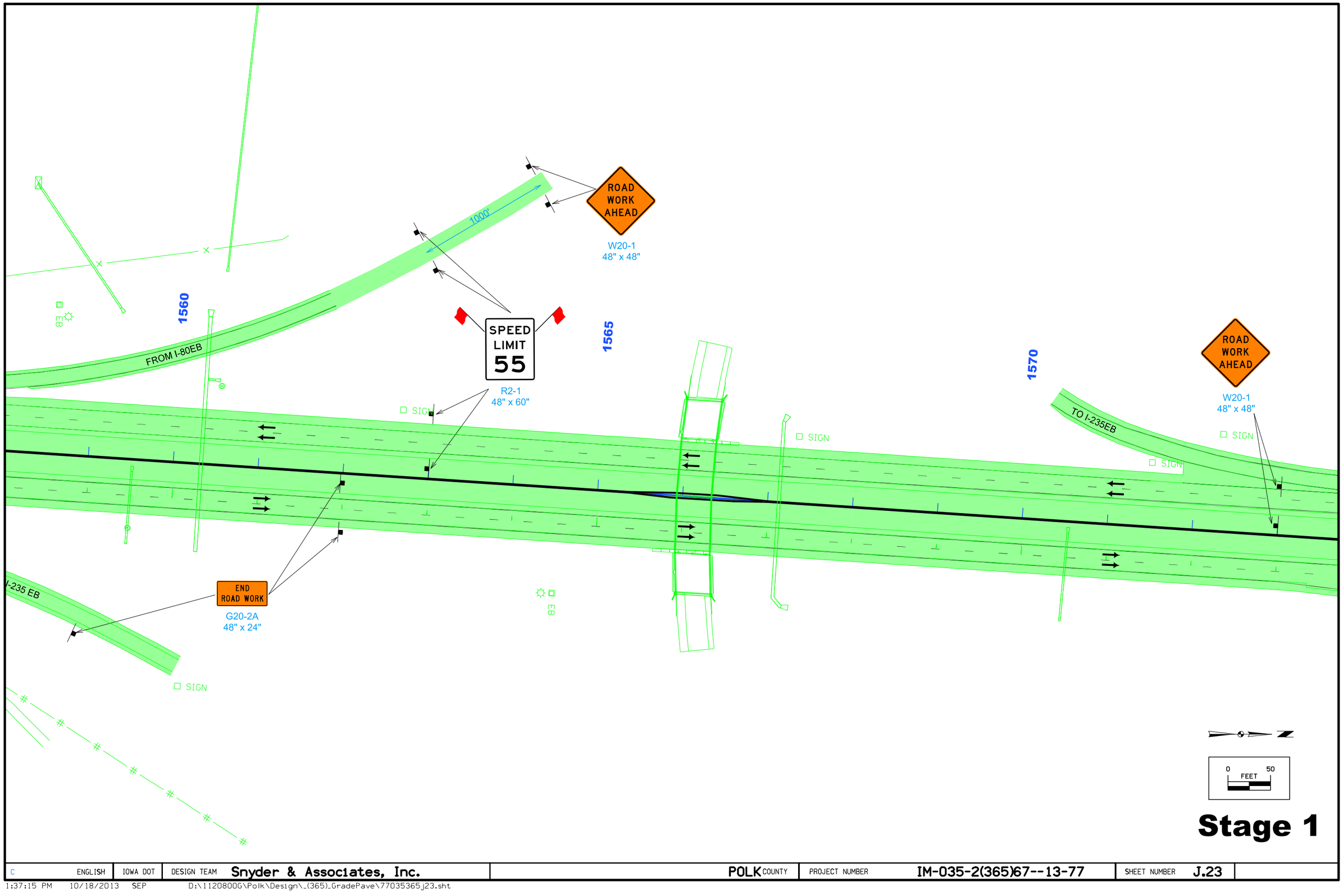
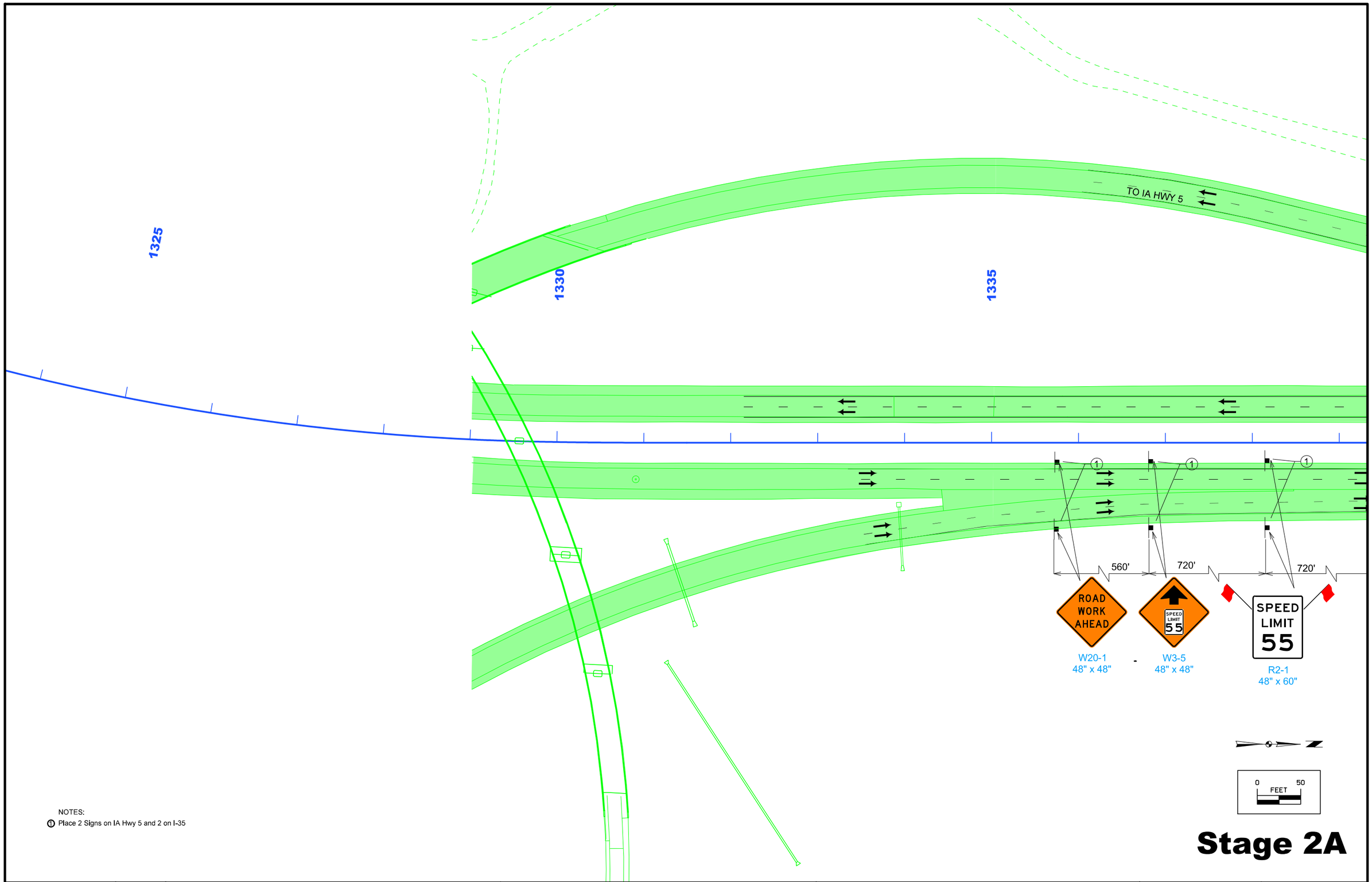


Stage 1

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	J.23

1:37:15 PM 10/18/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j23.sht



NOTES:

① Place 2 Signs on IA Hwy 5 and 2 on I-35

Stage 2A

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.24

1:39:44 PM 10/18/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j24.sht

1340

1345

1350

W4-2
48" x 48"

W1-4L
48" x 48"

W24-1cP
30" x 30"

ALL LANES

TO IA HWY 5

500'

100'

1000'

500'

100'

1000'

STA. 1344+00
BEGIN REMOVAL OF
EXISTING ELW4 & BLW4

STA. 1344+00
BEGIN 60:1 CHW8 TAPER

STA. 1351+20
BEGIN REMOVAL OF
EXISTING ELY4 AND BLW4
BEGIN TEMP. CHY8 & CHW8

STA. 1351+20
END 60:1 TAPER
BEGIN 45:1 TAPER

CHANGEABLE MESSAGE BOARD
STATING "GRAND AVE CLOSED
USE DETOUR ROUTE"

RIGHT LANE CLOSED AHEAD

W20-5
48" x 48"

MERGE

W4-2M
48" x 48"

0 FEET 50

NOTES:

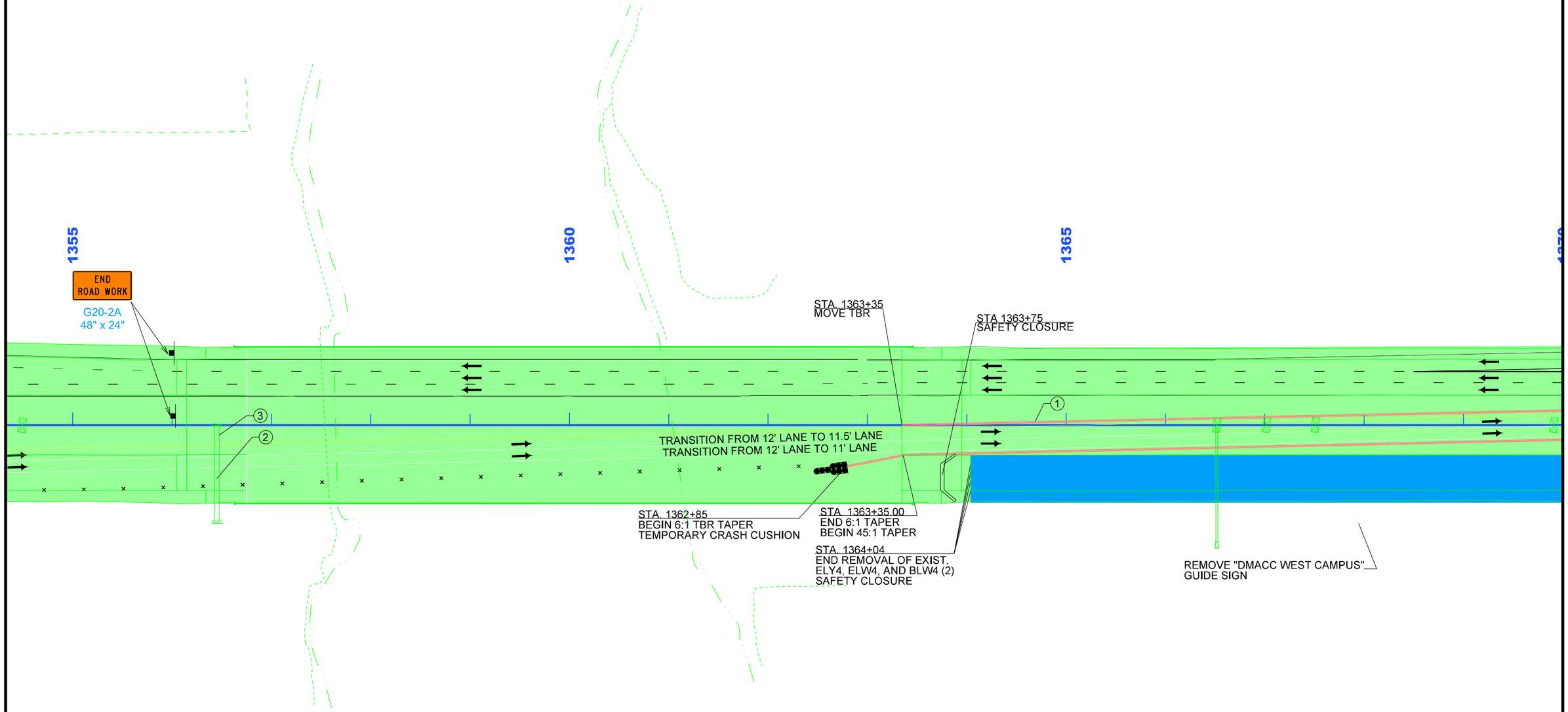
① Place Pavement Marking Symbols on the Outside Lane of IA Hwy 5 Ramp.

② Place 2 Signs on IA Hwy 5 and 2 on I-35

Stage 2A

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.25

2:05:12 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j25.sht



NOTES:

① Attach Modular Glare Screen to TBR

② Cover "EXIT ONLY" Sign with "DETOUR" (M4-8, 48"x36") Sign. Cover "EXIT 69A" Sign with "EXIT 70" (E1-5P, 114"x30")

③ Cover "1/2 MILE" Sign with "DETOUR" (M4-8, 48"x36") Sign. Cover "EXIT 69B" Sign with "EXIT 70" (E1-5P, 114"x30")

Stage 2A

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	J.26

2:05:51 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j26.sht

1375

1380

1385

STA. 1371+36
END 45:1 TBR TAPER

STA. 1374+82
END 45:1 TAPER

11.5' LANE
11' LANE

REMOVE "EXIT 25 MPH" SIGN

STA. 1374+82
END TEMP. CHW8 (2) & CHY8
BEGIN TEMP ELW4, BLW4, & ELY4

M6-3
21" X 15"

Grand Avenue

D3-1
30" X 24"

DETOUR

M4-8
30" X 15"

CLOSED

REMOVE "EXIT 69A" SIGN

REMOVE "RAMP EXIT 25 MPH" SIGN

COORDINATE CONSTRUCTION WITH BRFIM-035-2(370)69--05-77 PROJECT

COORDINATE CONSTRUCTION WITH IM-035-2(385)69--13-77 PROJECT

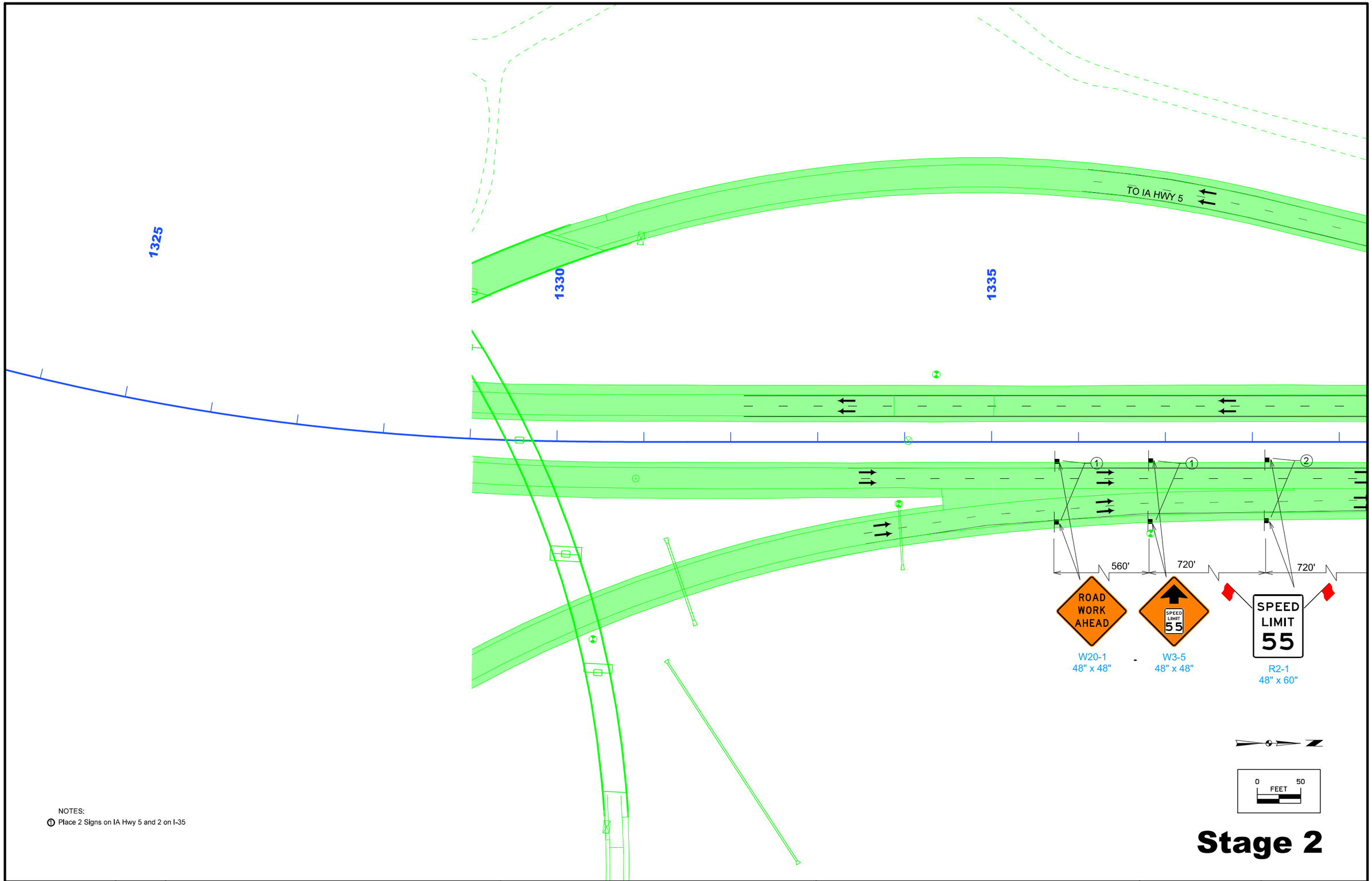
NOTES:
① Attach Modular Glare Screen to TBR
② Attach Sign to TBR

Stage 2A

0 50
FEET

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.27

2:06:29 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j27.sht



NOTES:

① Place 2 Signs on IA Hwy 5 and 2 on I-35

Stage 2

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.28

2:07:02 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j28.sht

1340

1345

1350

W4-2
48" x 48"

W1-4L
48" x 48"

W24-1cP
30" x 30"

ALL LANES

TO IA HWY 5

SIGN

500' 100' 500' 100' 1000' 1000'

STA. 1344+00
U.A.C. PAVEMENT MARKINGS FROM STAGE 2A

STA. 1351+20
END 60:1 TAPER

STA. 1351+20
END U.A.C. PAV'T MARKINGS
BEGIN TEMP. CHW8(2) & TEMP. CHY8 REMOVAL (STAGE 2A)
BEGIN TEMP. ELW4, ELY4, & BLW4

CHANGEABLE MESSAGE BOARD
STATING "GRAND AVE CLOSED
USE DETOUR ROUTE"

RIGHT LANE CLOSED AHEAD

W20-5
48" x 48"

MERGE

W4-2M
48" x 48"

0 FEET 50

NOTES:

① Place Pavement Marking Symbols on the Outside Lane of IA Hwy 5 Ramp.

② Place 2 Signs on IA Hwy 5 and 2 on I-35

Stage 2

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.29

2:07:30 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j29.sht

1355

1360

1365

END
ROAD WORK
G20-2A
48" x 24"

SIGN

STA. 1363+35
BEGIN TBR MOVE

STA. 1367+00
BEGIN 45:1 TBR TAPER

TRANSITION FROM 12' LANE TO 11.5' LANE
TRANSITION FROM 12' LANE TO 11' LANE

SIGN

STA. 1354+88
BEGIN TEMP. CHW8(2) & CHY8
END TEMP. ELW4, ELY4, & BLW4
BEGIN 45:1 TAPER

STA. 1362+85
BEGIN 6:1 TBR TAPER
TEMPORARY CRASH CUSHION

STA. 1363+35.00
END 6:1 TAPER
BEGIN 45:1 TAPER

STA 1363+75
SAFETY CLOSURE (STAGE 2A)

SIGN

REMOVE "DMACC WEST CAMPUS"
GUIDE SIGN

NOTES:
① Attach Modular Glare Screen to TBR
② Cover "EXIT ONLY" Sign with "DETOUR" (M4-8, 48"x36") Sign. Cover "EXIT 69A" Sign with "EXIT 70" (E1-5P, 114"x30")
③ Cover "1/2 MILE" Sign with "DETOUR" (M4-8, 48"x36") Sign. Cover "EXIT 69B" Sign with "EXIT 70" (E1-5P, 114"x30")

0 50
FEET

Stage 2

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.30

2:08:02 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j30.sht

1375

1380

1385

STA. 1374+82
END TEMP. CHW8 (2) & CHY8 REMOVAL (STAGE 2A)
BEGIN ELW4, BLW4, & ELY4 REMOVAL (STAGE 2A)

STA. 1378+50
END 45:1 TAPER
END TBR MOVE

SIGN

SIGN

SIGN

SIGN

11.5' LANE
11' LANE

SIGN

SIGN

CLOSED

SIGN

REMOVE "EXIT 25 MPH" SIGN

M6-3
21" X 15"

Grand Avenue

D3-1
30" X 24"

DETOUR

M4-8
30" X 15"

STA. 1378+50
END TEMP. CHW8 (2) & CHY8
BEGIN U.A.C. ELW4, BLW4, & ELY4 (STAGE 2A)
END ELW4, BLW4, & ELY4 REMOVAL (STAGE 2A)

REMOVE "RAMP EXIT 25 MPH" SIGN

REMOVE "EXIT 69A" SIGN

COORDINATE CONSTRUCTION WITH BRFIM-035-2(370)69--05-77 PROJECT

COORDINATE CONSTRUCTION WITH IM-035-2(385)69--13-77 PROJECT

SIGN

0 50
FEET

NOTES:
① Attach Modular Glare Screen to TBR
② Attach Sign to TBR

Stage 2

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	J.31

2:08:38 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j31.sht

STA. 11392+07
SAFETY CLOSURE

STA. 11389+73
SAFETY CLOSURE

1390

1395

1400

SIGN

11.5' LANE
11' LANE

CLOSED

REMOVE YIELD SIGN

REMOVE LANES MERGE SIGN

COORDINATE CONSTRUCTION
WITH BRFIM-035-2(372)69--05-77
PROJECT

REMOVE "GRAND AVE WEST"
GUIDE SIGN

REMOVE "EXIT 69B"
GUIDE SIGN

REMOVE LANE MERGE SIGN

CLOSED

CLOSED

REMOVE "RAMP 25 MPH"
SIGN

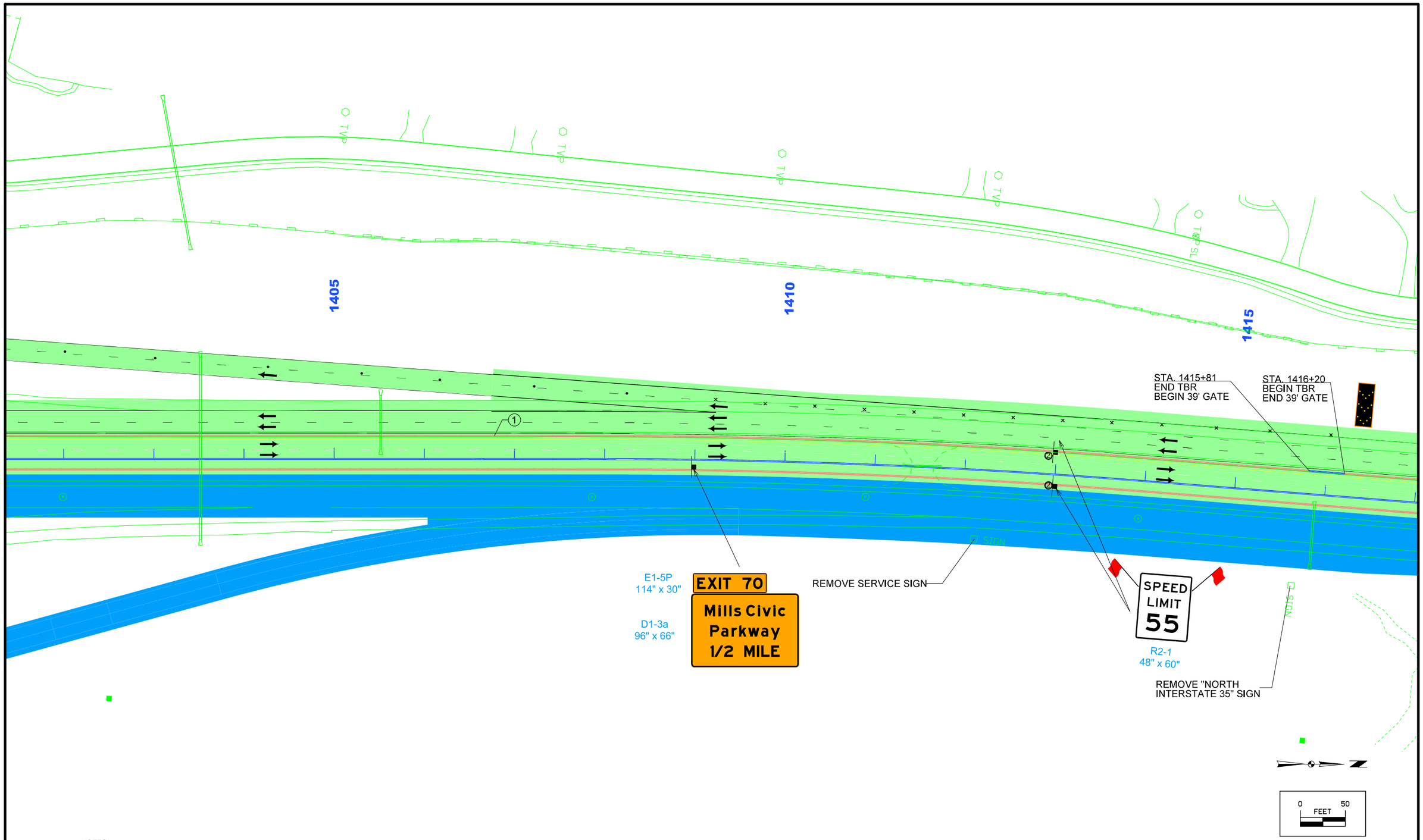
0 FEET 50

NOTES:
① Attach Modular Glare Screen to TBR

Stage 2

C	ENGLISH	IOWA DOT	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER J.32

2:09:06 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j32.sht

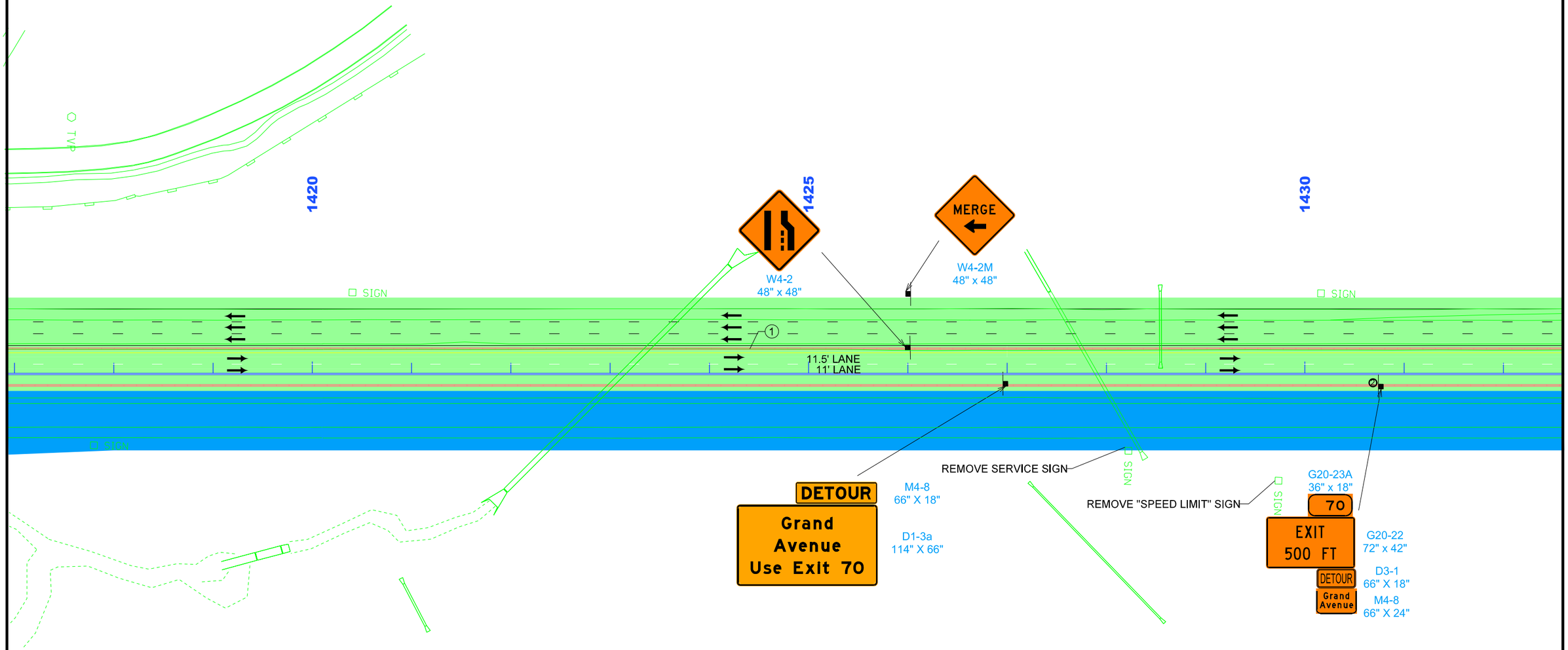


NOTES:
① Attach Modular Glare Screen to TBR
② Attach Sign to TBR

Stage 2

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.33

2:09:32 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j33.sht



NOTES:
1. Attach Modular Glare Screen to TBR
2. Attach Sign to TBR

Stage 2

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.34

2:09:59 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j34.sht

SPEED LIMIT 55

1435

R2-1
48" x 60"

STA. 1435+40
END TEMP. DLW4
BEGIN TEMP. CHW8

RIGHT LANE CLOSED AHEAD

W20-5
48" x 48"

STA. 1438+15
END TEMP. CHW8
BEGIN TEMP. CHW8 (2)
BEGIN TAPER

STA. 1439+81
TEMPORARY CRASH CUSHION
BEGIN TBR

RIGHT SHOULDER CLOSED AHEAD

W21-5bR
48" x 48"

LEFT SHOULDER CLOSED AHEAD

W21-5bL
48" x 48"

W24-1L
48" x 48"

1445

ALL LANES

W24-1cP
30" x 30"

SIGN

STA. 1445+60
BEGIN TEMP. CHW8
END TEMP. ELW4

11.5' LANE
11' LANE
12' LANE

STA. 1435+40
END 15:1 TBR TAPER

STA. 1435+40
END 15:1 TAPER

STA. 1433+60
BEGIN 15:1 TAPER
BEGIN TEMP. DLW4
BEGIN TEMP. RLW4
END TEMP. ELW4

EXIT 35 M.P.H.

W13-2
48" x 60"

STA. 1438+23
BEGIN REMOVAL OF EXIST.
ELY4, BLW4, DLW4, & RLW4

STA. 1439+04
END EXIST. DLW4 REMOVAL
BEGIN EXIST. CHW8 (2) REMOVAL

STA. 1439+18
END EXIST RLW4 REMOVAL

G20-23A
36" x 18"

70

EXIT

G20-23
48" x 48"

Mills Civic Parkway

D3-1
90" X 36"

Grand Avenue

D3-1
66" X 24"

DETOUR

M4-8
66" X 18"

STA. 1439+50
END TEMP. CHW8 (2)
BEGIN TEMP. ELW4
BEGIN TEMP. RLY4

STA. 1441+75
END TBR

STA. 1442+00
END REMOVAL OF EXIST.
ELY4, CHW8, AND BLW4

SIGN

REMOVE EXIT 70 SIGN

STA. 1443+04
END EXIST. CHW8 REMOVAL
END TEMP. RLY4

STA. 1443+38
END TAPER
END TEMP. RLW4

STA. 1443+30
END TBR

STA. 1445+60
BEGIN 45:1 TBR TAPER

SIGN

SIGN

0 50 FEET

NOTES:
1. Attach Modular Glare Screen to TBR
2. Attach Sign to TBR
3. Construct HMA wedge from new pavement to existing pavement

Stage 2

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	J.35

2:10:42 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j35.sht

ROAD WORK AHEAD

W20-1
48" x 48"

1450

1455

1460

SIGN

STA. 1448+75
BEGIN EXISTING ELY4, BLW4, & ELW4 REMOVAL
BEGIN 45:1 TAPER FOR TEMP. CHW8(2) & CHY8

STA. 1454+60.00
END 45:1 TAPER

STA. 1456+60.00
BEGIN 45:1 TAPER

STA. 1462+45
END TEMP. CHW8 (2) & CHY8
END EXIST. ELW4, BLW4, & ELY4 REMOVAL
END 45:1 TAPER

TRANSITION FROM 12' LANE TO 11' LANE
TRANSITION FROM 12' LANE TO 11' LANE
TRANSITION FROM 11.5' LANE TO 11' LANE
11' LANE

11' LANE
11' LANE
11' LANE
11' LANE

TRANSITION FROM 11' LANE TO 12' LANE
TRANSITION FROM 11' LANE TO 12' LANE
TRANSITION FROM 11' LANE TO 11.5' LANE
11' LANE

STA. 1448+75
BEGIN 45:1 CHW8 TAPER
END TEMP. BLW4
BEGIN TEMP. CHY8
END TEMP. ELY4

STA. 1462+45
END TEMP. CHW8 (2) & CHY8
BEGIN TEMP. ELY4, ELW4, & BLW4
END 45:1 TAPER

STA. 1462+66
BEGIN TEMP. 50:1 CHW8 TAPER
BEGIN REMOVAL OF EXIST. BLW4 & RLW4

ROAD WORK AHEAD

W20-1
48" x 48"

W4-2
48" x 48"

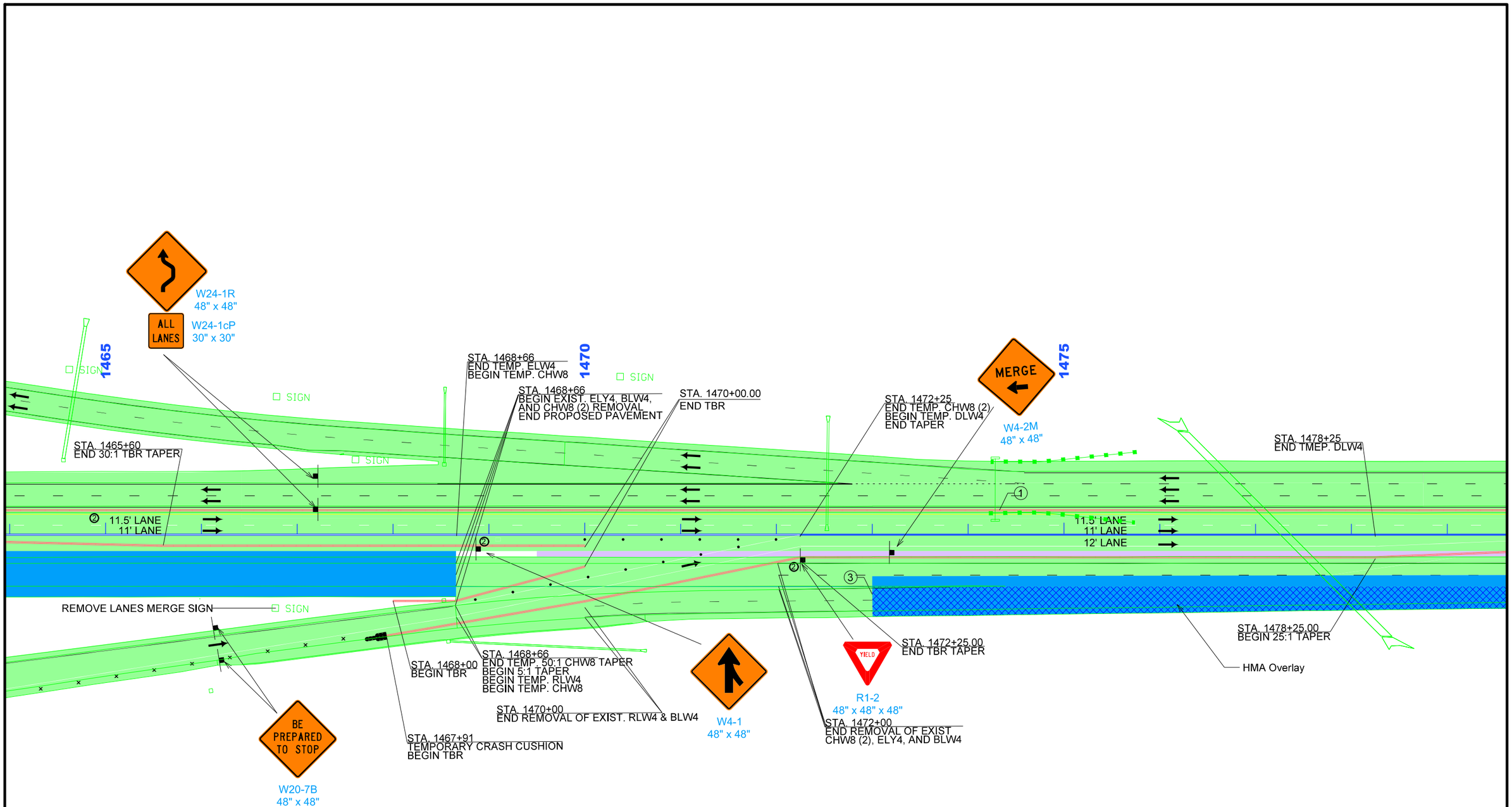
NOTES:
① Attach Modular Glare Screen to TBR

0 50
FEET

Stage 2

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	J.36

2:11:24 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j36.sht



NOTES:
1. Attach Modular Glare Screen to TBR
2. Attach Sign to TBR
3. Construct HMA wedge from existing pavement to proposed pavement

Stage 2

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.37

2:12:00 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j37.sht

1480

1485

1490

1495

SIGN

STA. 1481+25
END 25:1 TAPER
END TEMP. RLW4
BEGIN TEMP. ELW4

STA. 1484+81
END TBR
BEGIN 39' GATE

STA. 1485+20
BEGIN TBR
END 39' GATE

REMOVE "LANE ENDS MERGE LEFT" SIGN

REMOVE "RIGHT LANE ENDS" SIGN

SPEED LIMIT 55

R2-1
48" x 60"

STA 1493+83.85
END HMA OVERLAY
BEGIN RECONSTRUCTION

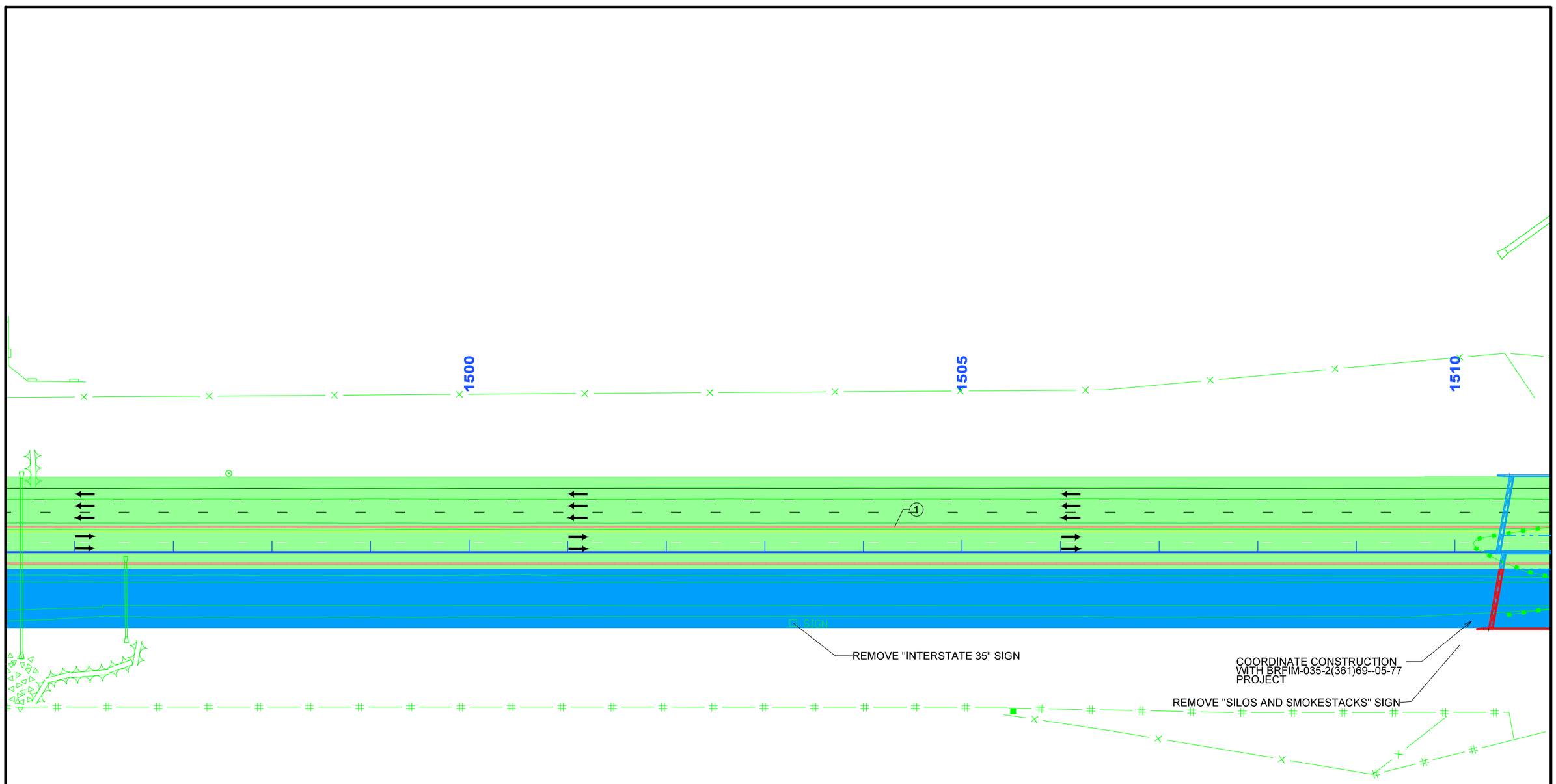
0 FEET 50

NOTES:
① Attach Modular Glare Screen to TBR
② Attach Sign to TBR

Stage 2

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.38

2:12:31 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j38.sht



NOTES:
① Attach Modular Screen to TBR

Stage 2

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.39		

2:14:55 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j39.sht

1515

1520

1525

11.5' LANE
11' LANE

①

②

REMOVE "SPEED LIMIT 55" SIGN

COORDINATE CONSTRUCTION
WITH BRFIM-035-2(361)69--05-77
PROJECT

NOTES:
① Attach Modular Glare Screen to TBR
② Remove "I-35/I-80" and "I-80/I-235" Guide Signs and Post Mount Signs During Construction.

0 FEET 50

Stage 2

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.40

2:16:10 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j40.sht

1530

1535

1540

STA. 1535+50
BEGIN 45:1 TAPER
END TEMP. ELY4, BLW4, & ELW4
BEGIN TEMP. CHW8(2) & CHWY8

SIGN

SIGN

SIGN

SIGN

1.5' LANE
11' LANE

TRANSITION FR
TRANSITION FR

STA. 1538+78
BEGIN 30:1 TBR TAPER

REMOVE "STATE FAIRGROUNDS"
GUIDE SIGN

REMOVE "RIDESHARE INFORMATION"
GUIDE SIGN

W1-4R
48" x 48"

W24-1cP
30" x 30"

ALL
LANES

0 FEET 50

NOTES:
1. Attach Modular Glare Screen to TBR
2. Attach Sign to TBR

Stage 2

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.41

2:16:50 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j41.sht

1545

1550

1555

LEFT SHOULDER CLOSED AHEAD

W21-5bL
48" x 48"

STA. 1546+97.61
END 45:1 TBR TAPER

STA. 1551+83
BEGIN TEMP. CHW8 (2)
END TEMP. DLW4

DM 11.5' LANE TO 12' LANE
DM 11' LANE TO 12' LANE

STA. 1545+75
BEGIN REMOVAL OF EXIST
ELW4, ELY4 & BLW4

STA. 1548+72
END EXIST. ELW4 REMOVAL
BEGIN EXIST. RLW4 & DLW4 REMOVAL

STA. 1550+35
END TEMP. CHW8 45:1 TAPER
BEGIN TEMP. RLW4 TAPER
BEGIN TEMP. DLW4

STA. 1551+40
END EXIST. DLW4 REMOVAL
BEGIN EXIST. CHW8 (2) REMOVAL

STA. 1552+54
END TBR

STA. 1555+02
END TEMP. CHW8 & RLW4
END EXIST. CHW8 & RLW4 REMOVAL

STA. 1555+03
END EXIST. REMOVAL OF CHW8
BEGIN EXIST. REMOVAL OF ELW4

SIGN

SIGN

SIGN

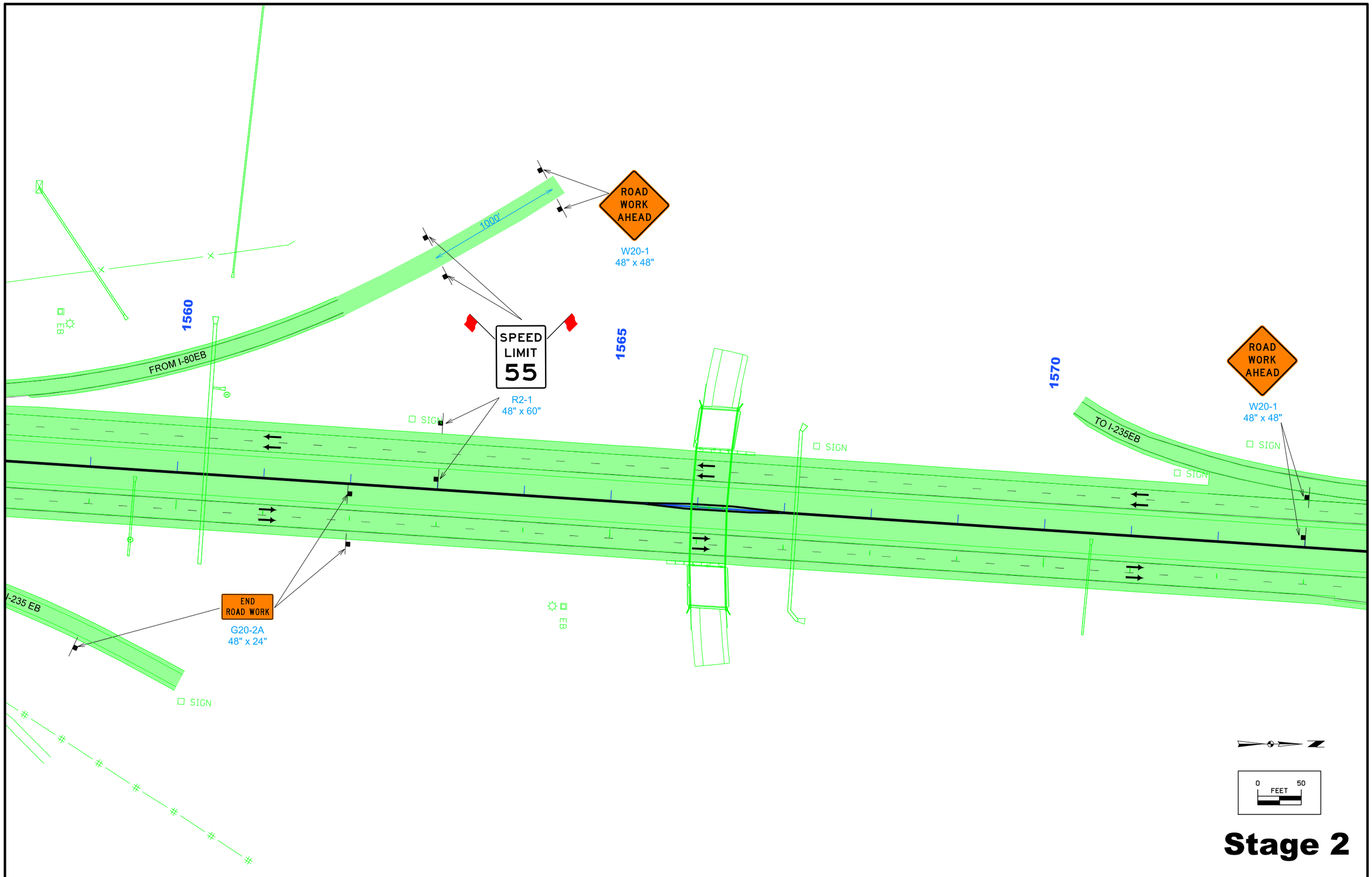
NOTES:
① Attach Modular Glare Screen to TBR

0 50
FEET

Stage 2

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.42

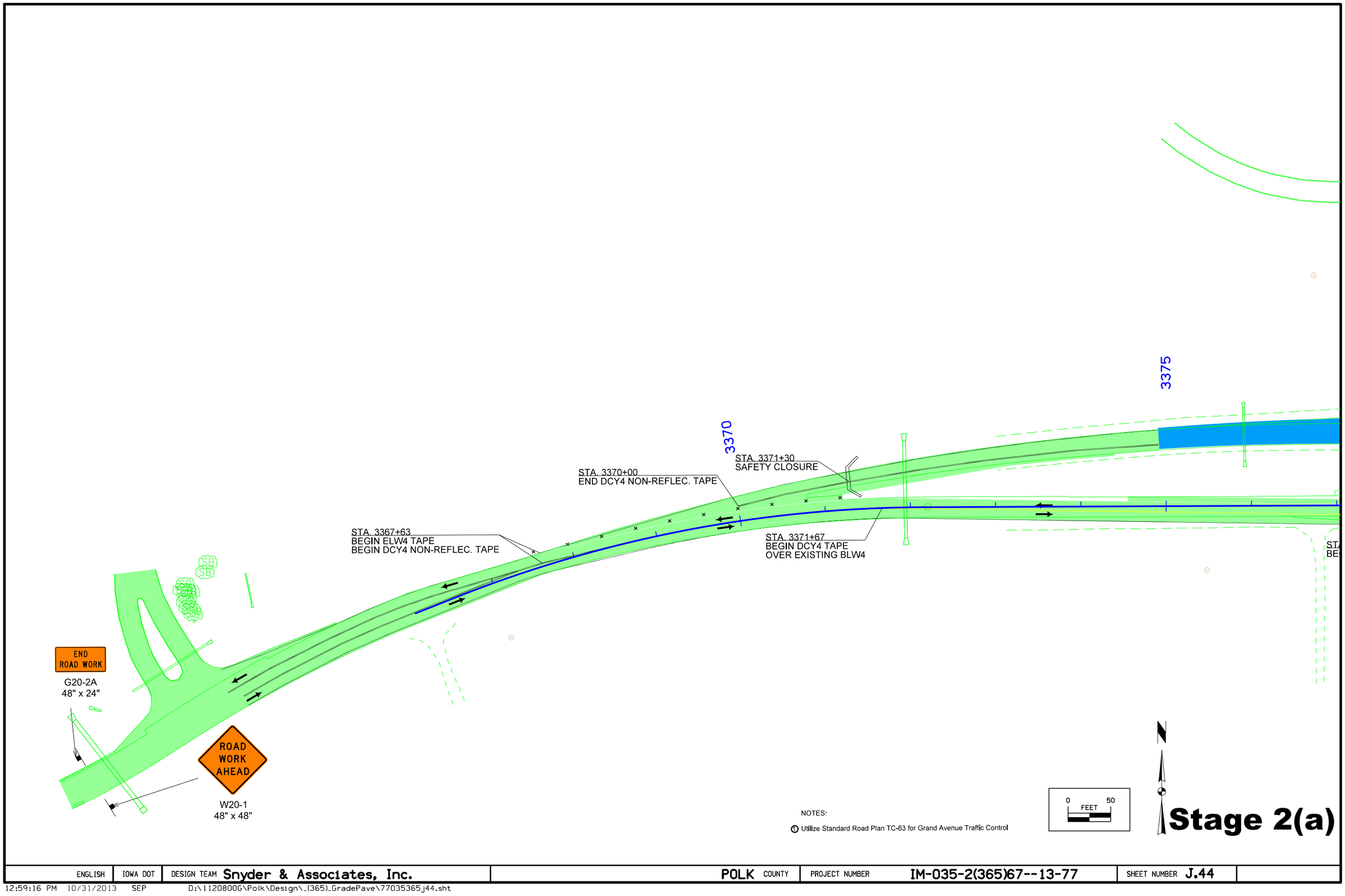
2:17:22 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j42.sht



Stage 2

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.43	

2:17:53 PM 10/25/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j43.sht



NOTES:

① Utilize Standard Road Plan TC-63 for Grand Avenue Traffic Control

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.44

12:59:16 PM 10/31/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j44.sht

3380

3385

3390

1395

1390

STOP

R1-1
48" x 48"

STA. 11390+96
END ELW4 TAPE

STA. 11389+67
BEGIN ELW4 TAPE

LEFT LANE
MUST
TURN LEFT

R3-7
36" x 36"

STA. 3385+85
SAFETY CLOSURE

COORDINATE CONSTRUCTION
WITH BRFIM-035-2(372)69--05-77
PROJECT

REMOVE "YIELD" SIGN

REMOVE "DO NOT ENTER" SIGN

STA. 3385+35
BEGIN ELW4 (2), DCY4, & SLW4 TAPE

STA. 3381+08
BEGIN SLW4 NON-REFLECT. TAPE

STA. 3383+02
END SLW4 NON-REFLEC. TAPE

STA. 3377+65
BEGIN ELW4 TAPE

250'

STA. 3381+22
END DCY4 TAPE
BEGIN STY6 (2) TAPE OVER EXISTING BLW4
BEGIN 15:1 TAPER

STA. 3383+02
END ELW4 TAPE
END 15:1 TAPER

STA. 3384+58
END STY6 (2) & ELW4 TAPE

STA. 3386+35
END SLW4 TAPE
BEGIN NON-REFLEC BLW4 & ELW4 TAPE
BEGIN 15:1 TAPER

ONLY ONLY

R3-8
42" x 36"

STA. 3388+15
END 15:1 TAPER

STA. 3388+15
END ELW4 & BLW4 NON-REFLECT TAPE

REMOVE "RAMP 25 MPH" SIGN

W1-4R
48" x 48"

R4-7B
36" x 48"

0 FEET 50

Stage 2(a)

NOTES:

1. Utilize Standard Road Plan TC-63 for Grand Avenue Traffic Control

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.45

4:45:37 PM 10/31/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j45.sht

REMOVE LANE MERGE SIGN

3395

REMOVE "RAMP 40 MPH" SIGN

3400

W6-3
48" x 48"

3405

STA. 3407+00
BEGIN NON-REFLECT CHY8 TAPE

STA. 3405+50
SAFETY CLOSURE

STA. 3394+25
SAFETY CLOSURE

STA. 3397+50
BEGIN 30:1 TAPER

STA. 3397+50
COVER EXISTING ELY4 WITH ELW4 TAPE

STA. 3401+10
END 30:1 TAPER

STA. 3406+02
BEGIN NON-REFLECT CHY8 TAPE

STA. 3406+03
BEGIN 15:1 TAPER
END ELW4 TAPE
BEGIN NON-REFLEC BLW4 TAPE

U.A.C. GUARDRAIL

STA. 2388+75
SAFETY CLOSURE

REMOVE LANE MERGE SIGN

REMOVE "NORTH INTERSTATE 35" SIGN

REMOVE "YIELD" SIGN

REMOVE "DO NOT ENTER" SIGN

Stage 2(a)

0 50
FEET

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.46

11:11:00 AM 11/1/2013 SEP D:\11208006\Polk\Design_(365)_GradePave\77035365j46.sht

STA. 3408+56
BEGIN NPY4 NON-REFLEC TAPE

STA. 3410+80
END STY4 (2) & ELW4 TAPE
END NPY4 (2) NON-REFLECT TAPE
BEGIN U.A.C. NPY4
END 15:1 TAPER

3410

STA. 3409+00
BEGIN NON-REFLECT BLW4 TAPE

W1-4L
48" x 48"

3415

STA. 3412+33
BEGIN ELW4 TAPE OVER EXISTING BLW4
END BLW4 NON-REFLECT TAPE

STA. 3418+15
BEGIN CHW8 (2) TAPE

ROAD WORK AHEAD

3420

W20-1
48" x 48"

500'

STA. 3418+65
END CHW8 (2) TAPE

500'

END ROAD WORK

G20-2A
48" x 24"

STA. 3416+80
END ELW4 TAPE OVER EXISTING BLW4

STA. 3408+56
END NON-REFLECT CHY8 (2) TAPE
BEGIN NPY4 NON-REFLEC TAPE

REMOVE LEFT TURN ARROWS

STA. 3407+84
END DCY4 TAPE
BEGIN STY4 (2) TAPE
END BLW4 NON-REFLECT. TAPE
BEGIN U.A.C. BLW4

SB

0 FEET 50

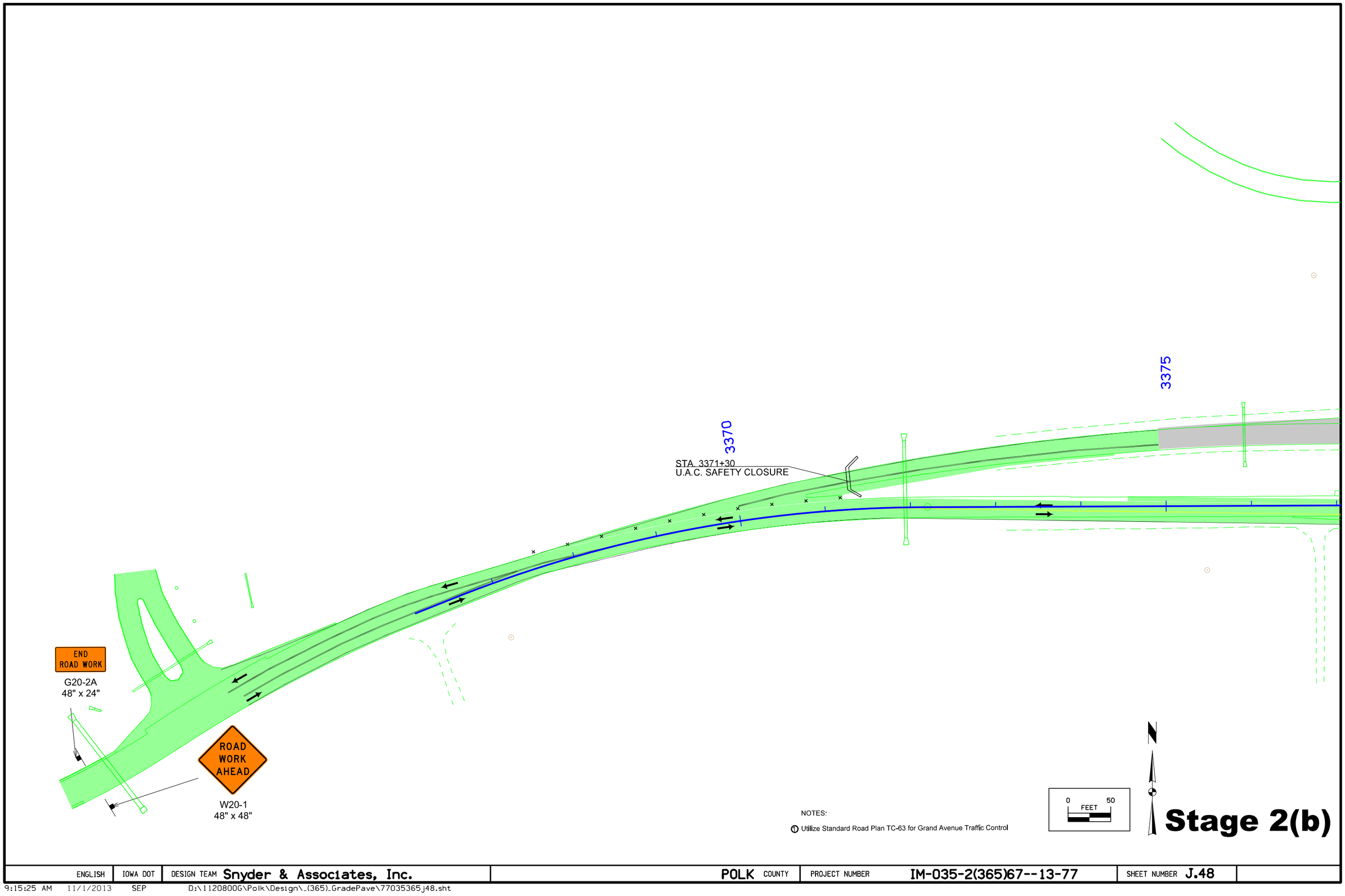
Stage 2(a)

NOTES:

① Utilize Standard Road Plan TC-63 for Grand Avenue Traffic Control

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.47

4:46:36 PM 10/31/2013 SEP D:\11208006\Polk\Design_(365)_GradePave\77035365j47.sht



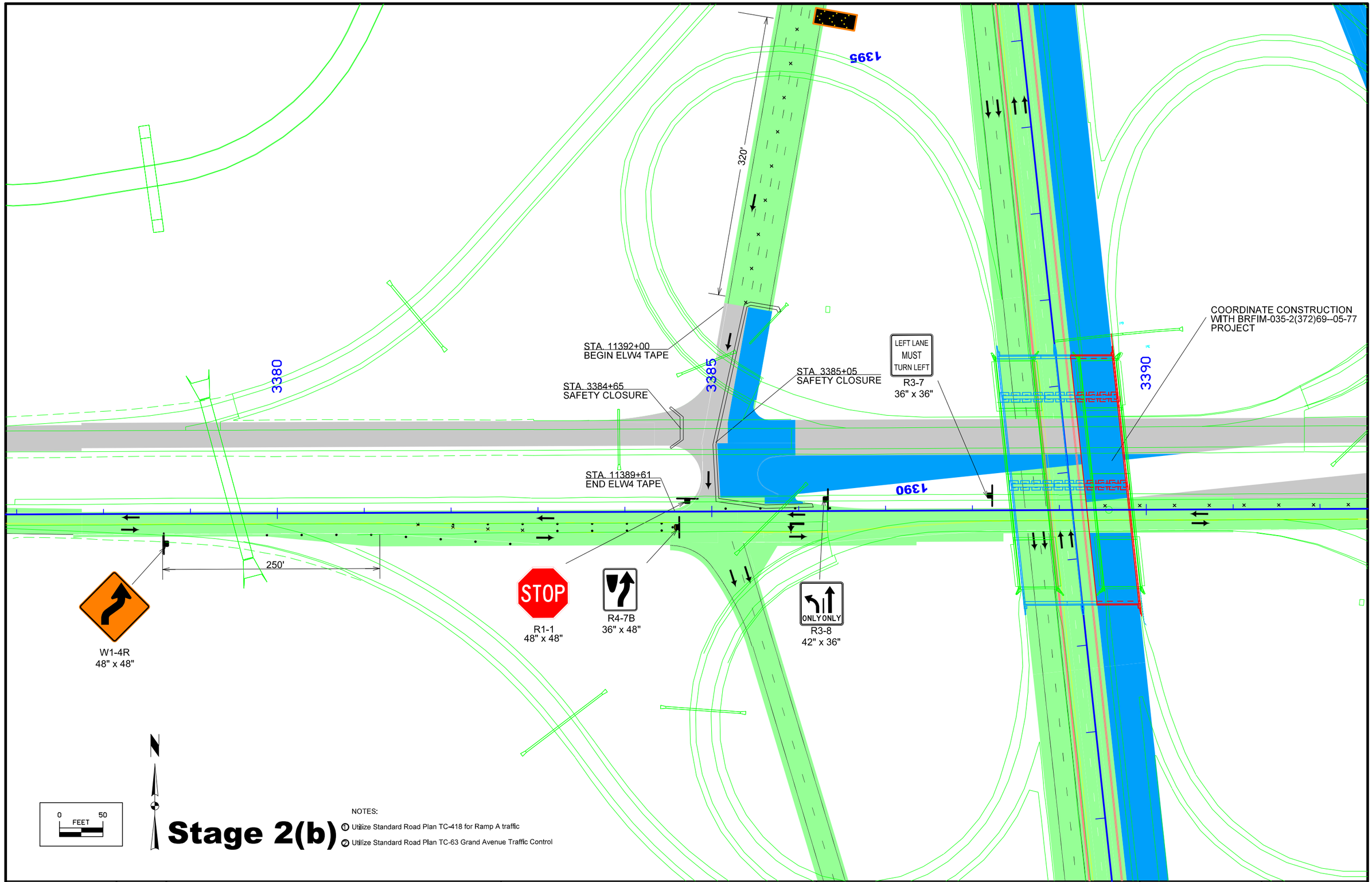
NOTES:

① Utilize Standard Road Plan TC-63 for Grand Avenue Traffic Control

Stage 2(b)

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.48

9:15:25 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j48.sht



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.49

9:16:21 AM 11/1/2013 SEP D:\11208006\Polk\Design_(365)_GradePave\77035365j49.sht

3395

3400

3405

W6-3
48" x 48"

STA. 3394+25
U.A.C. SAFETY CLOSURE

U.A.C. GUARDRAIL

STA. 2388+75
U.A.C. SAFETY CLOSURE

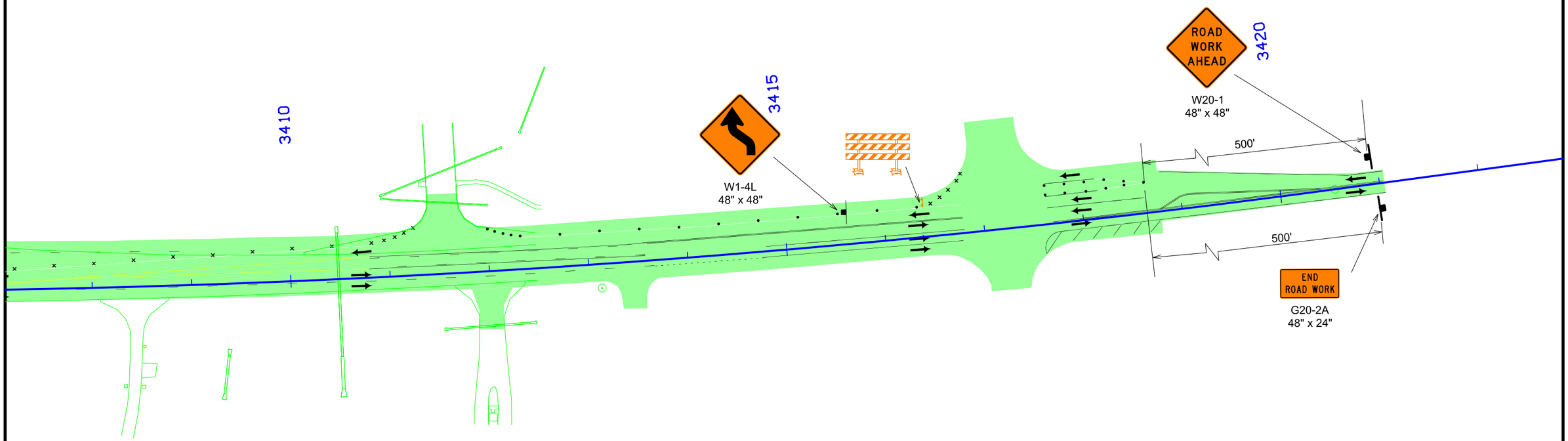
STA. 3405+50
U.A.C. SAFETY CLOSURE

Stage 2(b)

0 FEET 50

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.50

11:12:00 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j50.sht



0 FEET 50

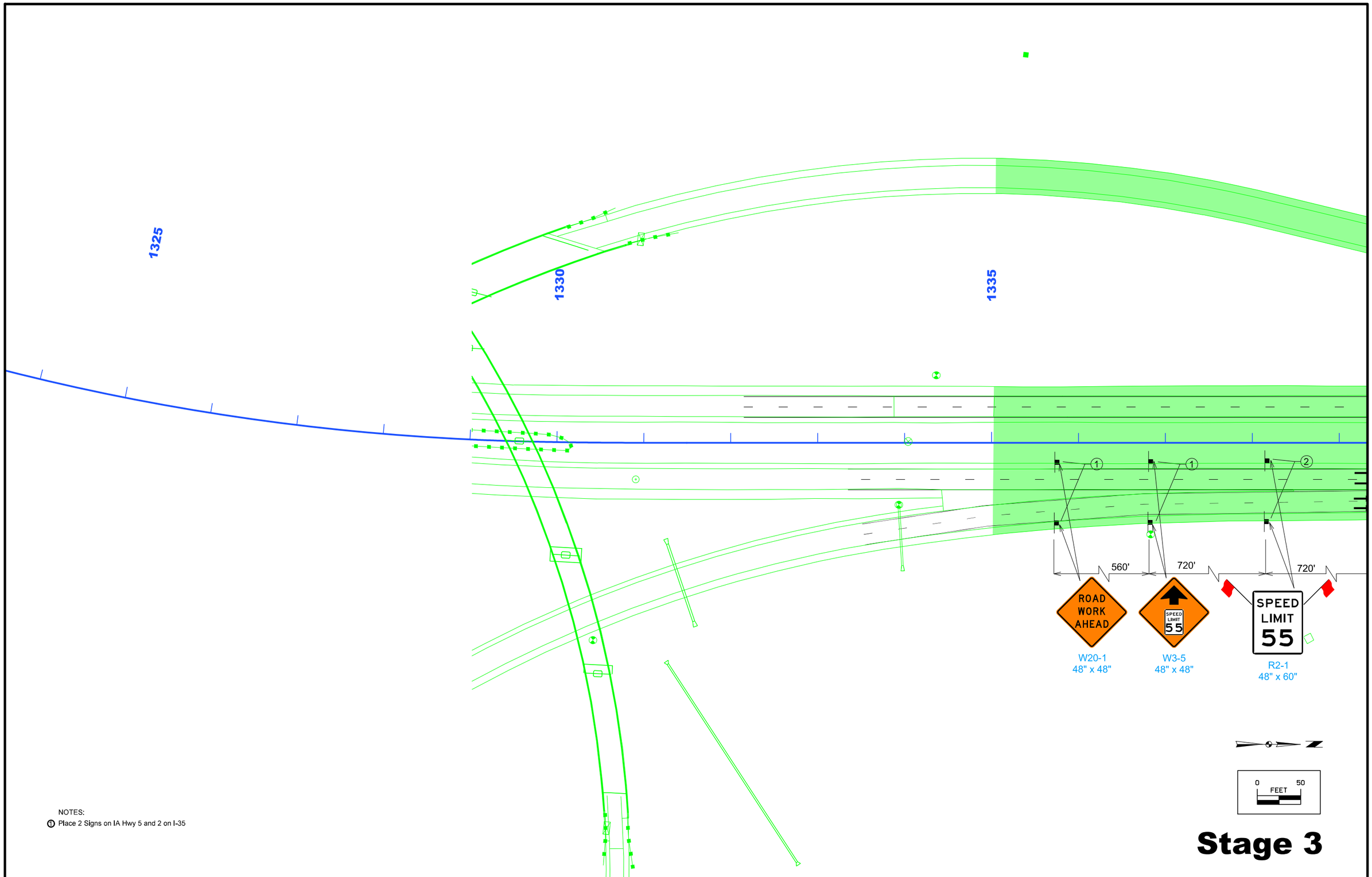
Stage 2(b)

NOTES:

① Utilize Standard Road Plan TC-63 for Grand Avenue Traffic Control

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.51

9:17:39 AM 11/1/2013 SEP D:\11208006\Polk\Design_(365)_GradePave\77035365j51.sht



NOTES:

① Place 2 Signs on IA Hwy 5 and 2 on I-35

Stage 3

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.52

4:49:16 PM 10/31/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j52.sht

1340

1345

1350

W4-2
48" x 48"

W1-4L
48" x 48"

W24-1cP
30" x 30"

ALL LANES

TO IA HWY 5

500'

100'

1000'

500'

100'

1000'

STA. 1344+00
U.A.C. PAV'T MARKINGS
FROM STAGE 2

RIGHT LANE CLOSED AHEAD

W20-5
48" x 48"

MERGE

W4-2M
48" x 48"

CHANGEABLE MESSAGE BOARD
STATING "GRAND AVE CLOSED
USE DETOUR ROUTE"

0 FEET 50

NOTES:

① Place Pavement Marking Symbols on the Outside Lane of IA Hwy 5 Ramp. U.A.C. from Stage 2.

② Place 2 Signs on IA Hwy 5 and 2 on I-35. U.A.C. from Stage 2.

Stage 3

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.53

8:50:32 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j53.sht

1355

1360

1365

END
ROAD WORK
G20-2A
48" x 24"

STA. 1363+35.00
U.A.C. TBR
FROM STAGE 2

1

TRANSITION FROM 12' LANE TO 11.5' LANE
TRANSITION FROM 12' LANE TO 11' LANE

STA. 1355+50.00
U.A.C. PAV'T MARKINGS
FROM STAGE 2

STA. 1362+85
U.A.C. TBR AND
TEMP. CRASH CUSHION
FROM STAGE 2

STA. 1363+75
SAFETY CLOSURE (STAGE 2A)

0 FEET 50

NOTES:
1 Attach Modular Glare Screen to TBR

Stage 3

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.54

8:59:09 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j54.sht

1375

1380

1385

U.A.C. FROM STAGE 2

1

M6-3
21" X 15"

Grand Avenue

D3-1
30" X 24"

DETOUR

M4-8
30" X 15"

COORDINATE CONSTRUCTION
WITH BRFIM-035-2(370)69--05-77
PROJECT

COORDINATE CONSTRUCTION
WITH IM-035-2(385)69--13-77
PROJECT

0 50
FEET

Stage 3

NOTES:
1. Attach Modular Glare Screen to TBR

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.55

8:59:42 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j55.sht

1390

1395

1400

W12-1
48" x 48"

U.A.C. FROM STAGE 2

11.5' LANE
11' LANE

3390

E1-5P
114" x 30"

EXIT 70

D1-3a
96" x 66"

Mills Civic
Parkway
1/2 MILE

COORDINATE CONSTRUCTION
WITH BRFIM-035-2(372)69--05-77
PROJECT

NOTES:
① Attach Modular Glare Screen to TBR

0 50
FEET

Stage 3

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.56

9:00:27 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j56.sht

1405

1410

1415

U.A.C. FROM STAGE 2

①

DETOUR

Grand
Avenue
Use Exit 70

M4-8
66" X 18"

D1-3a
114" X 66"

0 FEET 50

NOTES:
① Attach Modular Glare Screen to TBR

Stage 3

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.57	

9:01:19 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j57.sht

1420

1425

1430

STA. 1421+95
END REMOVAL OF
TEMP. ELW4 (STAGE 2)
END TEMP. DLW4 (STAGE 3)
BEGIN U.A.C. ELW4 (STAGE 2)

U.A.C. FROM STAGE 2

STA. 1428+61
BEGIN TBR TAPER
BEGIN U.A.C. TBR (STAGE 2)
TEMPORARY CRASH CUSHION

(1)

11.5' LANE
11' LANE
12' LANE

STA. 1420+15
BEGIN 15:1 TBR TAPER
END U.A.C. TBR (STAGE 2)
BEGIN TBR (STAGE 3)

G20-23A
36" x 12"

70
Grand Avenue
DETOUR

D3-1
66" X 24"

M4-8
66" X 18"

EXIT
500 FT

G20-22
72" x 42"

STA. 1420+15
BEGIN 15:1 TAPER
BEGIN REMOVAL OF TEMP.
ELW4 (STAGE 2)
BEGIN TEMP. DLW4
BEGIN TEMP. RLW4

STA. 1421+95
END 15:1 TAPER

EXIT
35
M.P.H.

W13-2
48" x 60"

STA. 1425+45
BEGIN 15:1 TAPER
BEGIN TEMP. CHW8 (2) (STAGE 3)
END U.A.C. ELW4 (STAGE 2)
BEGIN REMOVAL OF TEMP. ELW4 (STAGE 2)

STA. 1426+98
END 15:1 TBR TAPER

G20-23A
36" x 12"

70
EXIT
Mills Civic Parkway
Grand Avenue
DETOUR

G20-23
48" x 48"

D3-1
90" X 36"

D3-1
66" X 24"

M4-8
66" X 18"

STA. 1429+00
END TEMP. CHW8 (2)
BEGIN TEMP. RLY4
BEGIN U.A.C. TEMP. ELW4 (STAGE 2)
END TEMP. ELW4 REMOVAL (STAGE 2)

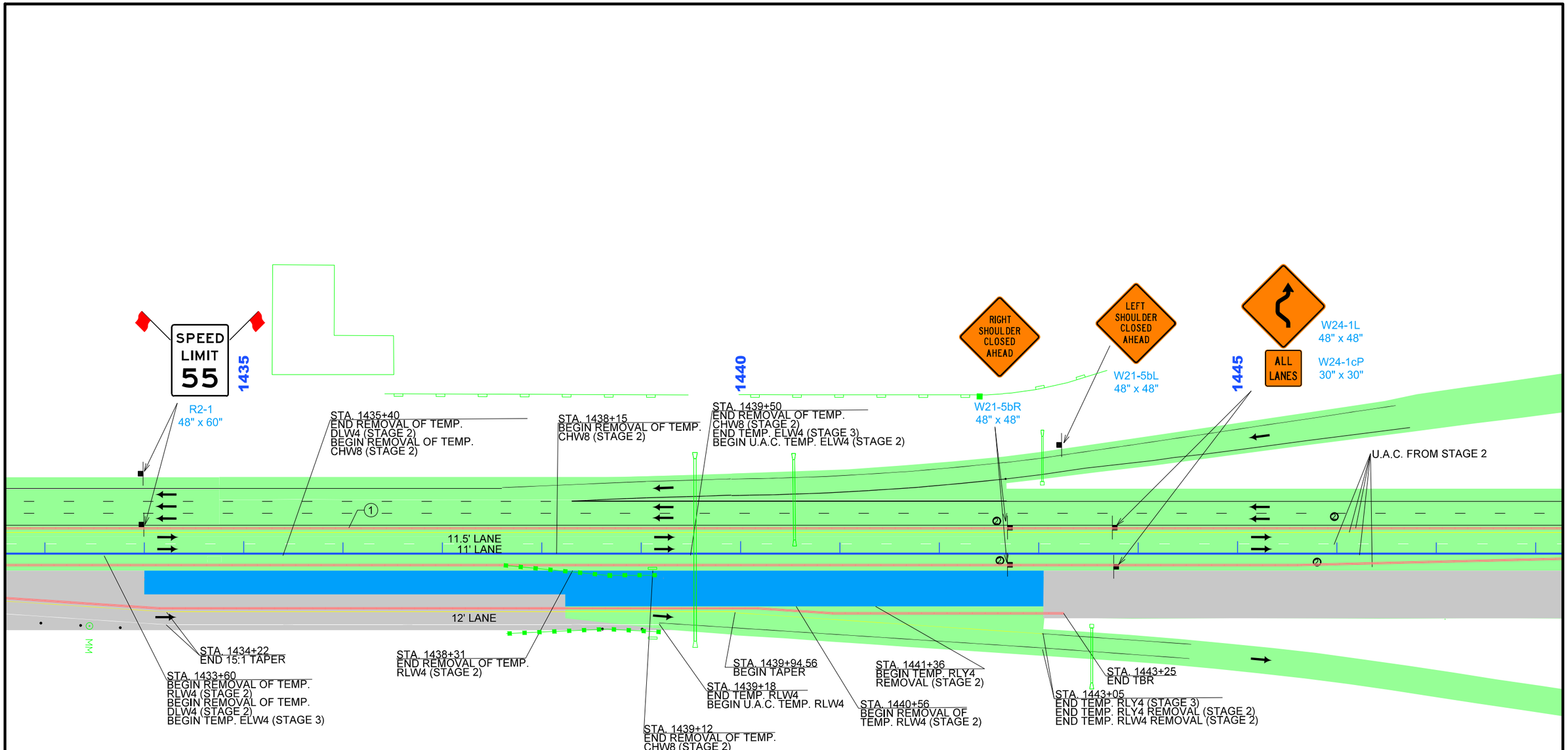
0 50
FEET

NOTES:
(1) Attach Modular Glare Screen to TBR

Stage 3

C ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.58

9:02:05 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j58.sht



NOTES:
① Attach Modular Glare Screen to TBR
② Attach Sign to TBR

Stage 3

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.59

9:03:18 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j59.sht

ROAD WORK AHEAD

W20-1
48" x 48"

1450

1455

1460

SIGN

SIGN

SIGN

SIGN

SIGN

SIGN

U.A.C. FROM STAGE 2

TRANSITION FROM 12' LANE TO 11' LANE
TRANSITION FROM 12' LANE TO 11' LANE

TRANSITION FROM 11.5' LANE TO 11' LANE
11' LANE

11' LANE
11' LANE

1

11' LANE
11' LANE

TRANSITION FROM 11' LANE TO 12' LANE
TRANSITION FROM 11' LANE TO 12' LANE

TRANSITION FROM 11' LANE TO 11.5' LANE
11' LANE

STA. 1462+66
BEGIN TEMP. 50:1 CHY8 TAPER
BEGIN REMOVAL OF EXIST. RLY4

STA. 1462+66
BEGIN REMOVAL OF TEMP.
CHW8 (STAGE 2)
BEGIN TEMP. RLW4

SIGN

SIGN

SIGN

SIGN

ROAD WORK AHEAD

W20-1
48" x 48"

W4-2
48" x 48"

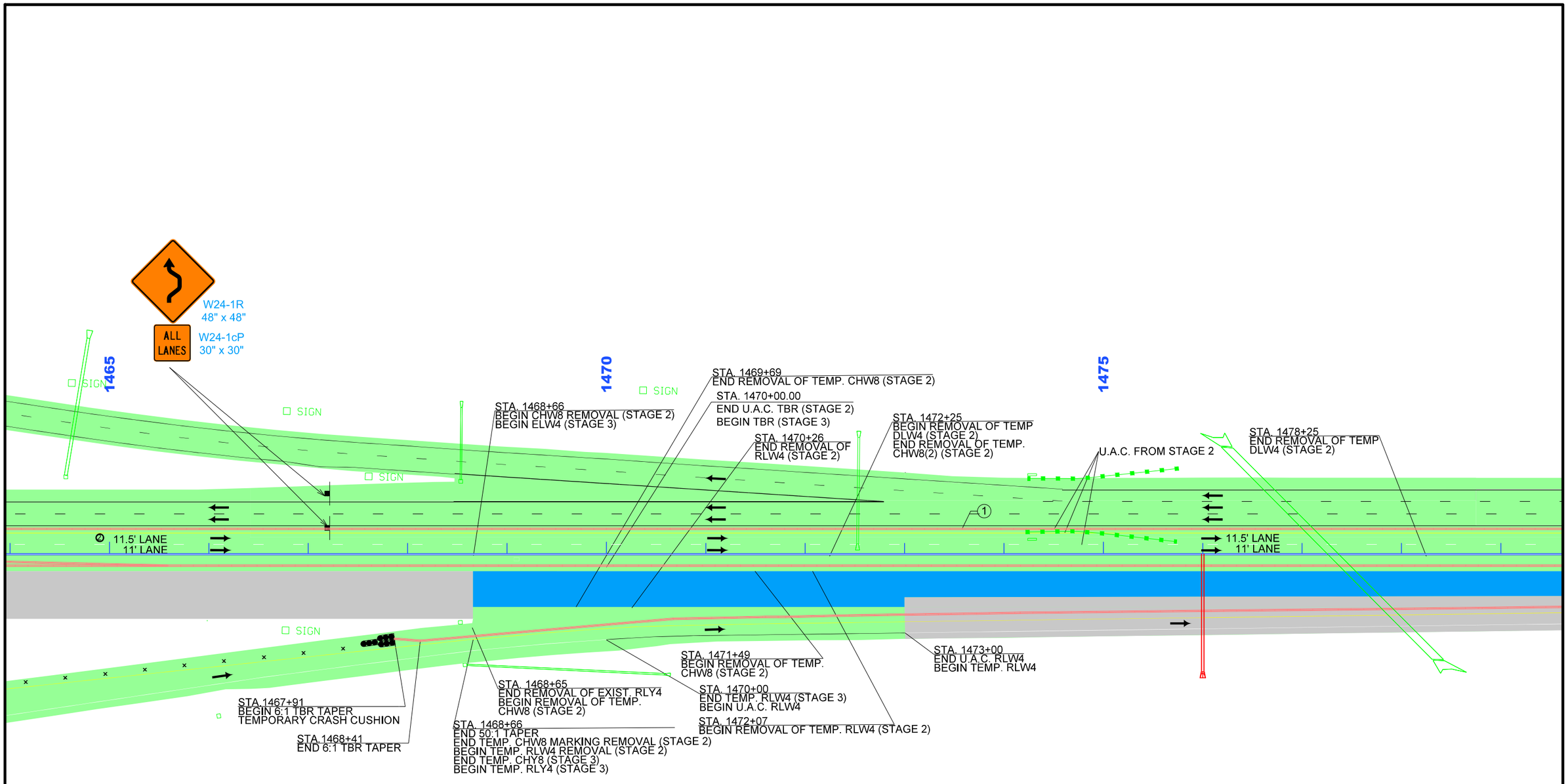
0 FEET 50

NOTES:
1 Attach Modular Glare Screen to TBR

Stage 3

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	J.60

9:04:31 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j60.sht



NOTES:
1. Attach Modular Glare Screen to TBR
2. Attach Sign to TBR

Stage 3

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	J.61

9:05:35 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j61.sht

1480

1485

1490

1495

STA. 1481+25
END REMOVAL OF TEMP.
RLW4 (STAGE 2)
END TEMP. ELW4 (STAGE 3)
BEGIN TEMP. CHW8 (STAGE 3)
BEGIN REMOVAL OF TEMP. ELW4 (STAGE 2)

STA. 1481+50.00
END TBR (STAGE 3)

SIGN

SIGN

U.A.C. FROM STAGE 2

STA. 1490+19
END TEMP. CHW8 (2) (STAGE 3)
BEGIN TEMP. DLW4 (STAGE 3)

STA. 1482+00
END TEMP. RLY4
BEGIN TEMP. CHW8

STA. 1482+00
BEGIN 15:1 TAPER
BEGIN TBR
TEMPORARY CRASH CUSHION

STA. 1490+19
END 15:1 TAPER

BE PREPARED TO STOP

W20-7B
48" x 48"

W4-1
48" x 48"

YIELD

R1-2
48" x 48" x 48"

MERGE

W4-2M
48" x 48"

0 50
FEET

NOTES:
① Attach Modular Glare Screen to TBR
② Attach Sign to TBR

Stage 3

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.62

9:06:25 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j62.sht

1500

1505

1510

W1-4R
48" x 48"

ALL LANES

W24-1cP
30" x 30"

STA. 1499+20
END REMOVAL OF TEMP. ELW4 (STAGE 2)
END TEMP. DLW4 & RLW4
BEGIN UAC TEMP. ELW4

U.A.C. FROM STAGE 2

STA. 1499+20
END 25:1 TAPER

STA. 1498+97
END TBR (STAGE 3)
BEGIN U.A.C. TBR (STAGE 2)

STA. 1495+97
BEGIN 25:1 TAPER

SPEED LIMIT 55

R2-1
48" x 60"

COORDINATE CONSTRUCTION WITH BRFIM-035-2(361)69--05-77 PROJECT

0 50
FEET

NOTES:
① Attach Modular Glare Screen to TBR
② Attach Sign to TBR

Stage 3

C ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.63

9:06:53 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j63.sht

1515

1520

1525

STA. 1515+25
BEGIN TAPER
BEGIN TEMP. ELY4, BLW4, & ELW4 REMOVAL (STAGE 2)
END U.A.C. ELY4, BLW4, & ELW4 (STAGE 2)
BEGIN TEMP. CHY8, CHW8 (2) (STAGE 3)

11.5' LANE
11' LANE

TRANSITION FROM 11.5' LANE TO 12' LANE
TRANSITION FROM 11' LANE TO 12' LANE

STA. 1515+25
END U.A.C TBR (STAGE 2)
BEGIN TBR (STAGE 3)

COORDINATE CONSTRUCTION WITH BRFIM-035-2(361)69--05-77 PROJECT

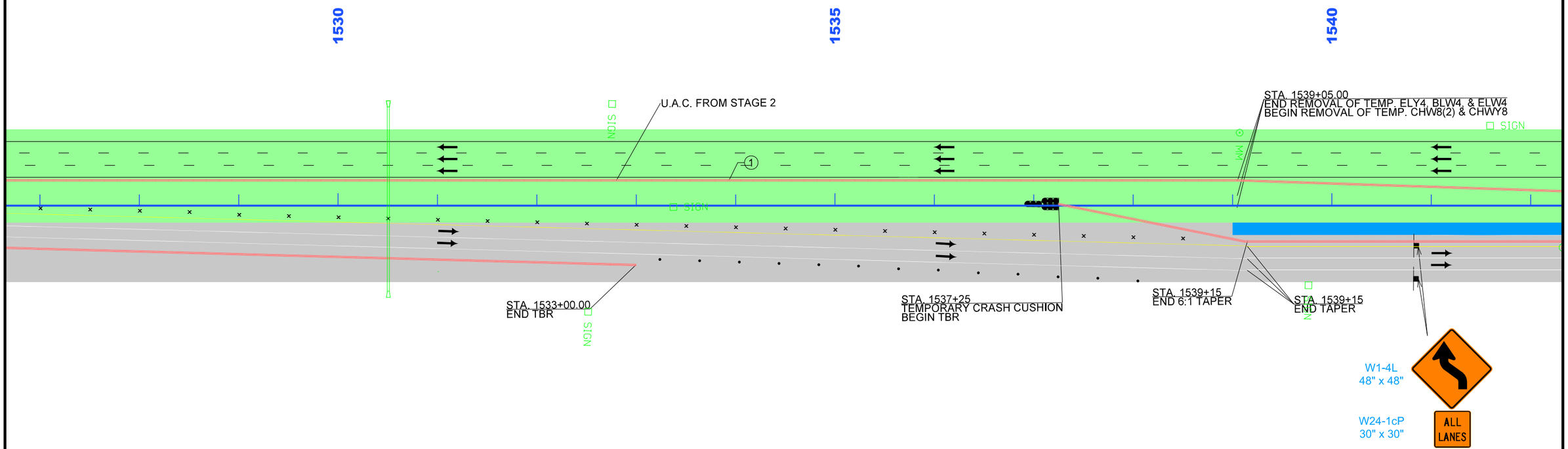
NOTES:
① Attach Modular Glare Screen to TBR
② Attach Sign to TBR

0 50
FEET

Stage 3

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	J.64

9:09:57 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j64.sht



NOTES:

① Attach Modular Glare Screen to TBR

Stage 3

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.65

9:12:17 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j65.sht

1545

1550

1555

U.A.C. FROM STAGE 2

STA. 1546+00
END TBR

STA. 1549+19
END TEMP. CHW8 (STAGE 3)
BEGIN TEMP. ELW4 (STAGE 3)

STA. 1550+90
END 45:1 TAPER
END TEMP. CHY8 & CHW8 (STAGE 3)
BEGIN TEMP. ELY4
BEGIN PROP. BLW4

LEFT SHOULDER CLOSED AHEAD

W21-5bL
48" x 48"

12' LANE
12' LANE

G20-23A
36" x 12"

72A
EXIT
500 FT

G20-22
72" x 42"

STA. 1546+00
BEGIN 45:1 TAPER

STA. 1550+88
BEGIN PROP. CHW8 (2)
BEGIN PROP. RLW4
END TEMP. ELW4

STA. 1550+35
BEGIN REMOVAL OF TEMP
DLW4 & RLW4 (STAGE 2)
END REMOVAL OF TEMP. CHW8 (STAGE 2)

STA. 1551+83
BEGIN REMOVAL OF TEMP
CHW8 (2) (STAGE 2)
END REMOVAL OF TEMP. DLW4 (STAGE 2)

STA. 1555+02
END REMOVAL OF TEMP.
CHW8 & RLW4 (STAGE 2)
END PROP. CHW8(2) & RLW4
BEGIN PROP. ELW4

SIGN

SIGN

SIGN

SIGN TO

NOTES:

① Attach Modular Glare Screen to TBR

0 50 FEET

Stage 3

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.66		

9:12:59 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j66.sht

ROAD WORK AHEAD

W20-1
48" x 48"

1000'

1560

1565

1570

SPEED LIMIT 55

R2-1
48" x 60"

FROM I-80EB

STA. 1558+90
END REMOVAL OF TEMP CHY8 & CHW8 (2) (STAGE 2)
END TEMP. ELY4
END PERM. ELW4 & BLW4
UAC EXIST. ELY4, BLW4, ELW4

SIGN

ROAD WORK AHEAD

W20-1
48" x 48"

SIGN

SIGN

SIGN

END ROAD WORK

G20-2A
48" x 24"

I-235 EB

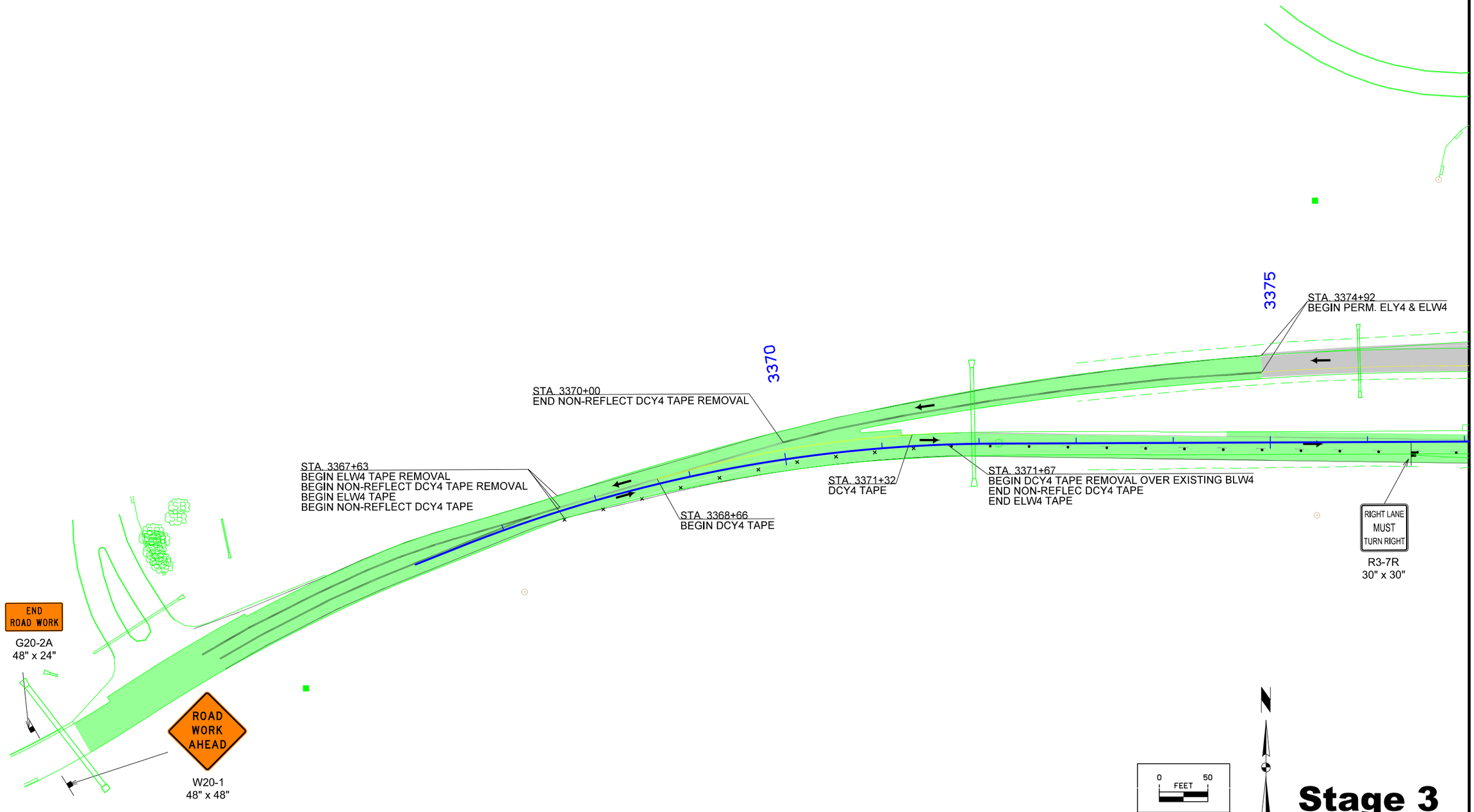
SIGN

0 FEET 50

Stage 3

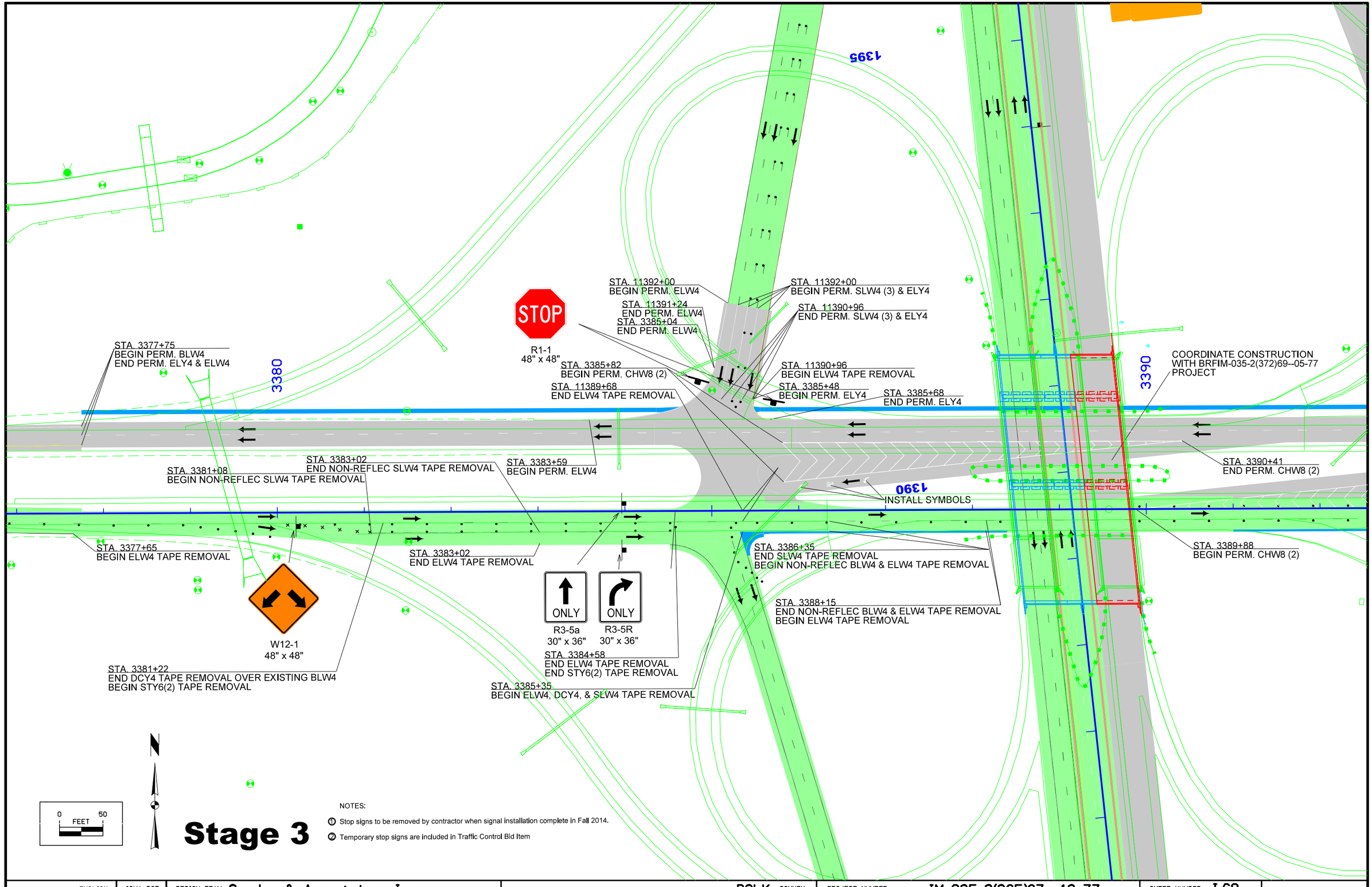
C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.67

9:13:19 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j67.sht



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.68

9:13:40 AM 11/1/2013 SEP D:\11208006\Polk\Design_(365)_GradePave\77035365j68.sht



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.69

2:49:46 PM 11/4/2013 SEP D:\11208006\Polk\Design_(365)_GradePave\77035365j69.sht

STA. 4389+05
SAFETY CLOSURE
STA. 3394+87
BEGIN PERM. SLW4

3395

STA. 3398+23
END PERM. SLW4

3400

STA. 3399+43
BEGIN PERM. ELW4

STA. 3403+00
END PERM. ELW4

3405

STA. 3407+00
BEGIN NON-REFLECT CHY8 TAPE REMOVAL

+41
M. CHW8 (2)

STA. 3394+30
SAFETY CLOSURE

STA. 3393+90
END PERM. CHW8 (2)

STA. 3397+50
BEGIN PERM. ELY4

STA. 3400+00
END PERM. ELY4 & BLW4

INSTALL SYMBOLS

HW8 (2)

STA. 3394+30
SAFETY CLOSURE

STA. 2388+75
SAFETY CLOSURE

STA. 3406+02
BEGIN NON-REFLECT CHY8 TAPE REMOVAL
STA. 3406+03
END ELW4 TAPE REMOVAL
BEGIN BLW4 NON-REFLECT TAPE REMOVAL

Stage 3

0 FEET 50

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.70

2:50:07 PM 11/4/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j70.sht

3410

STA. 3410+80
END STY4(2) & ELW4 TAPE REMOVAL
END NPY4(2) NON-REFLEC TAPE REMOVAL

STA. 3409+00
BEGIN NON-REFLECT BLW4 TAPE REMOVAL

STA. 3408+56
BEGIN NPY4 NON-REFLEC
TAPE REMOVAL

3415

STA. 3412+33
BEGIN ELW4 TAPE REMOVAL
END BLW4 NON-REFLECT TAPE REMOVAL

STA. 3418+15
BEGIN CHW8 (2) TAPE REMOVAL

3420

ROAD WORK AHEAD

W20-1
48" x 48"

STA. 3418+65
END CHW8 (2) TAPE

END ROAD WORK

G20-2A
48" x 24"

STA. 3416+80
END ELW4 TAPE REMOVAL

STA. 3408+56
END NON-REFLECT CHY8 (2) TAPE REMOVAL
BEGIN NPY4 NON-REFLEC TAPE REMOVAL

INSTALL LEFT TURN ARROWS

STA. 3407+84
END DCY4 TAPE REMOVAL
BEGIN STY4(2) TAPE REMOVAL
END BLW4 NON-REFLECT TAPE REMOVAL

SB

Stage 3

0 FEET 50

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.71

9:18:32 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j71.sht

1340

1345

1350

TO IA HWY 5

SIGN

COORDINATE PAVEMENT MARKING
CONSTRUCTION WITH IOWA DOT PROJECT
IM-035-2(336)65--13-91

STA. 1345+30
BEGIN PROP. BLW4 & ELY4
BEGIN REMOVAL OF EXIST. ELY4

STA. 1344+00
BEGIN PROP. ELW4
BEGIN REMOVAL OF
TEMP. CHW8 (STAGE 2)

STA. 1349+50
BEGIN PROP. BLW4

STA. 1351+20
BEGIN PROP. BLW4 (STAGE 2)
END EXIST. ELY4 REMOVAL
BEGIN TEMP. ELY4 REMOVAL (STAGE 2)

1000'

1000'

ROAD
WORK
AHEAD

W20-1
48" x 48"

SPEED
LIMIT
55

W3-5
48" x 48"

SPEED
LIMIT
55

R2-1
48" x 60"

0 50
FEET

Stage 4

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.		POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.72

9:34:45 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j72.sht

1355

1360

1365

END
ROAD WORK
G20-2A
48" x 24"

STA. 1363+00
BEGIN TBR

STA. 1363+33
BEGIN PROPOSED MEDIAN BARRIER

STA. 1354+88
END TEMP. ELY4 REMOVAL (STAGE 2)
BEGIN TEMP. CHY8 & CHW8 REMOVAL (STAGE 2)
BEGIN PROP. BLW4
END U.A.C. BLW4 (STAGE 2)

STA. 1362+75
TEMPORARY CRASH CUSHION
BEGIN TBR

0 FEET 50

Stage 4

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	J.73

9:35:09 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j73.sht

1375

1380

1385

STA. 1378+50
END TEMP CHW8 (2) & CHY8 REMOVAL (STAGE 2)
BEGIN TEMP. ELY4, BLW4, & ELW4 REMOVAL (STAGE 2)

TBR

STA. 1371+90
END PROP. ELW4
BEGIN PROP. CHW8 (2), RLW4

STA. 1375+00
END PROP. CHW8 (2)
END PROP. RLW4 & BLW4
BEGIN PROP. ELW4

STA. 2375+00
BEGIN PROP. RLY4 & RLW4
BEGIN PROP. BLW4

PROPOSED BARRIER

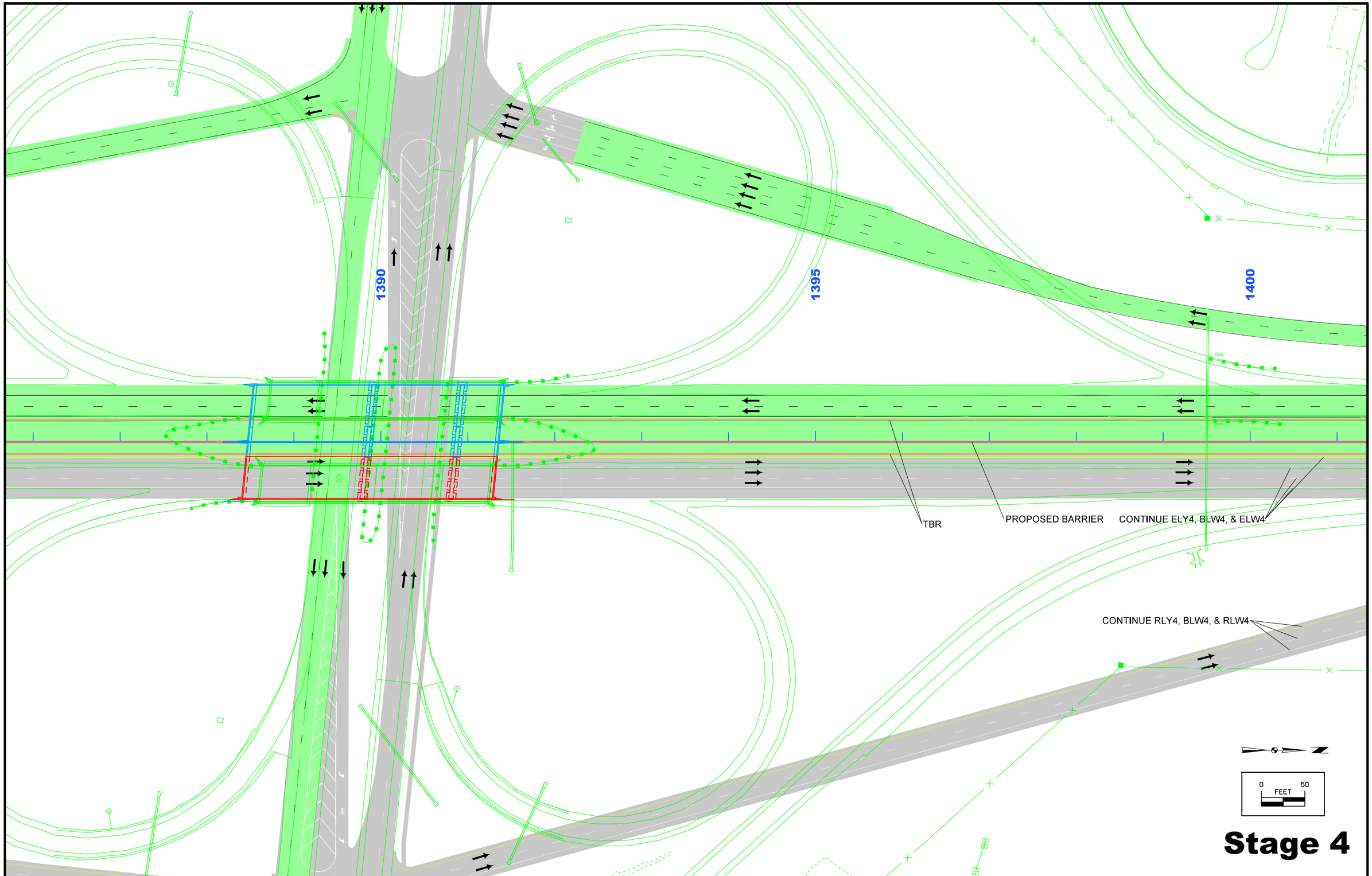
TBR

0 50
FEET

Stage 4

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	J.74

9:35:35 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j74.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.75

9:36:03 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j75.sht

1405

1410

1415

TBR

PROPOSED BARRIER

STA. 1406+04
END PROP. ELW4
BEGIN PROP. CHW8

STA. 3406+08
END PROP. RLY4
BEGIN PROP. CHW8

STA. 3409+50
END PROP. CHW8
END PROP. RLW4 & BLW4

STA. 1409+50
BEGIN PROP BLW4, RLW4, & DLW4
END PROP CHW8

INSTALL PAV'T MARKINGS

STA. 1414+50
END PROP DLW4

0 FEET 50

Stage 4

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.76	

9:36:26 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j76.sht

1420

1425

1430

STA. 1421+95
END REMOVAL OF TEMP. DLW4 (STAGE 3)
BEGIN REMOVAL OF TEMP. ELW4 (STAGE 2)

STA. 1425+45
BEGIN REMOVAL OF TEMP. CHW8 (2) (STAGE 3)
END REMOVAL OF TEMP. ELW4 (STAGE 2)

TBR

PROPOSED BARRIER

STA. 1419+50
END PROP.RLW4
BEGIN PROP. ELW4

STA. 1420+15
BEGIN REMOVAL OF
TEMP. DLW4 & RLW4 (STAGE 3)

INSTALL PAV'T MARKINGS

STA. 1422+00
FULL-DEPTH PATCH

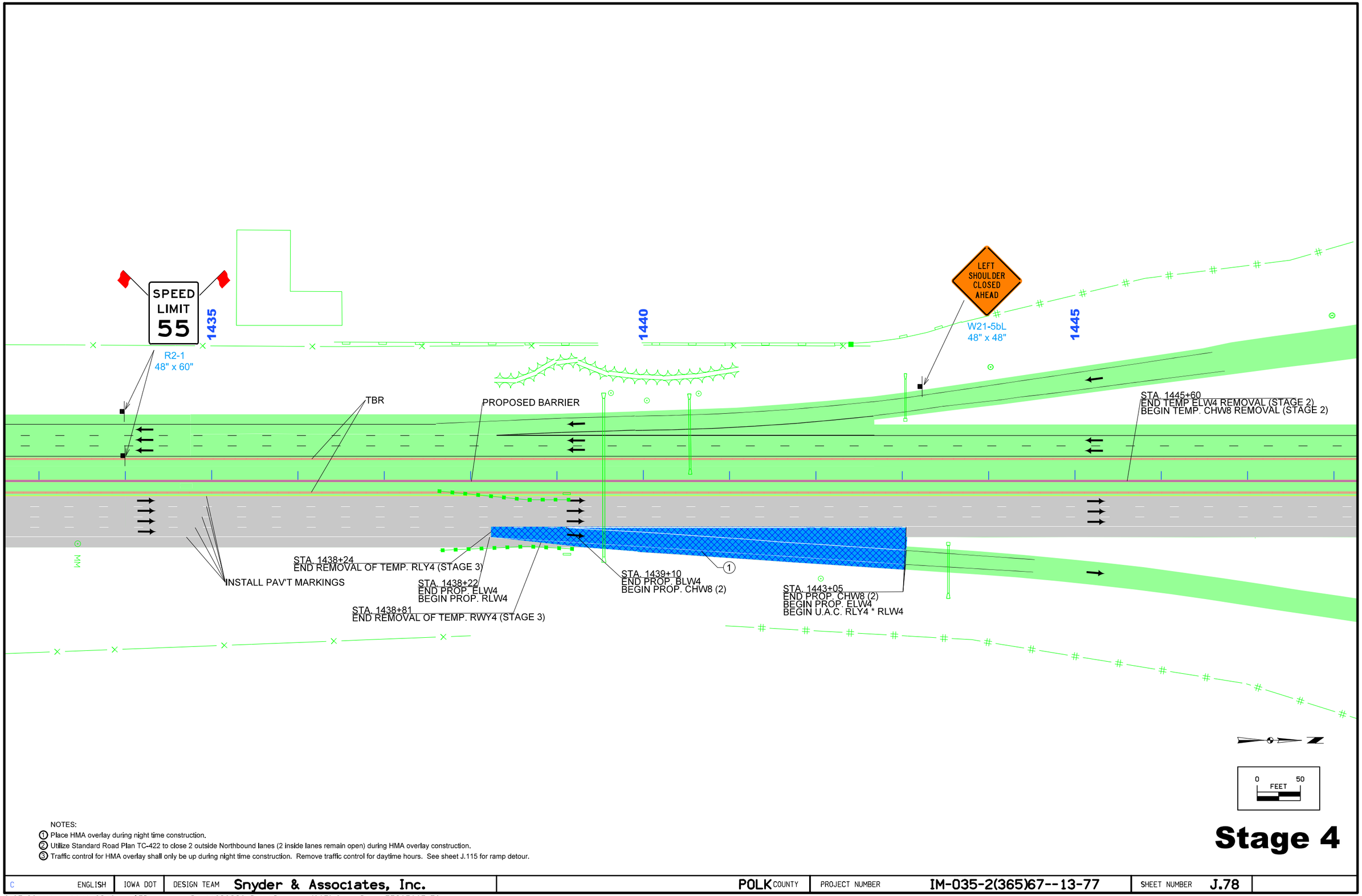
STA. 1429+00
END TEMP. CHW8 (2) REMOVAL (STAGE 3)
BEGIN TEMP. RLY4 REMOVAL (STAGE 3)
BEGIN TEMP. ELW4 REMOVAL (STAGE 2)

0 50
FEET

Stage 4

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.77	

9:36:51 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j77.sht



NOTES:

① Place HMA overlay during night time construction.

② Utilize Standard Road Plan TC-422 to close 2 outside Northbound lanes (2 inside lanes remain open) during HMA overlay construction.

③ Traffic control for HMA overlay shall only be up during night time construction. Remove traffic control for daytime hours. See sheet J.115 for ramp detour.

Stage 4

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.78

9:37:29 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j78.sht

ROAD WORK AHEAD

W20-1
48" x 48"

1450

1455

1460

SIGN

SIGN

SIGN

SIGN

SIGN

SIGN

STA. 1448+75
BEGIN TEMP. CHY8 & CHW8 (2) REMOVAL (STAGE 2)
BEGIN PERM. ELY4, BLW4, & ELW4

TBR

PROPOSED BARRIER

STA. 1462+45
END TEMP. CHY8 & CHW8 (2) REMOVAL (STAGE 2)
END PERM. ELY4, ELW4, & BLW4

STA. 1448+75
END TEMP. BLW4 & ELY4 REMOVAL (STAGE 2)
BEGIN TEMP. CHY8 AND CHW8 REMOVAL (STAGE 2)

INSTALL PAV'T MARKINGS

STA. 1454+00
FULL-DEPTH PATCH

STA. 1462+45
END TEMP. CHY8 & CHW8 (2) REMOVAL (STAGE 2)
BEGIN TEMP. ELY4, ELW4, & BLW4 REMOVAL (STAGE 2)

STA. 1462+66
BEGIN TEMP. CHY8 REMOVAL (STAGE 3)
BEGIN PROP. RLY4

STA. 1462+66
BEGIN PROPOSED BLW4

STA. 1462+66
BEGIN PROP. RLW4

SIGN

SIGN

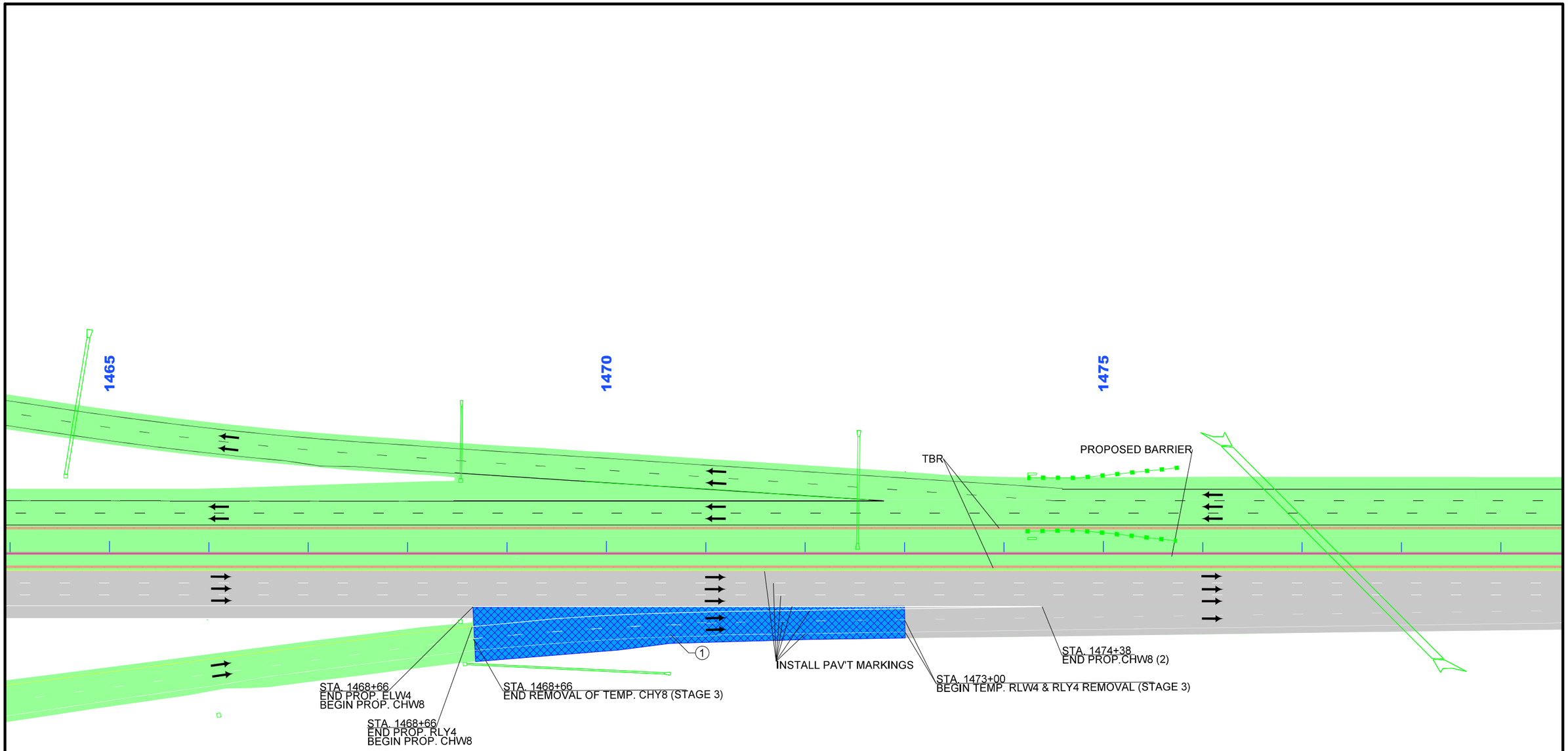
SIGN

0 FEET 50

Stage 4

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	J.79

9:38:49 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j79.sht



NOTES:

1. Place HMA overlay during night time construction.
2. Utilize Standard Road Plan TC-422 to close outside Northbound lane (2 inside lanes remain open) during HMA overlay construction.
3. Traffic control for HMA overlay shall only be up during night time construction. Remove traffic control for daytime hours. See sheet J.115 for ramp detour.

Stage 4

1480

1485

1490

1495

STA. 1481+25
END TEMP. ELW4 REMOVAL (STAGE 3)
BEGIN TEMP. CHW8 REMOVAL (STAGE 3)

SIGN

PROPOSED BARRIER

TBR

STA. 1489+97
END TEMP. CHW8 (2) REMOVAL (STAGE 3)
BEGIN TEMP. DLW4 REMOVAL (STAGE 3)

STA. 1482+00
END TEMP. RLY4 REMOVAL (STAGE 3)
BEGIN TEMP. CHW8 REMOVAL (STAGE 3)

STA. 1482+28
END PROP. RLW4
BEGIN PROP. ELW4

STA. 1482+00
BEGIN REMOVAL OF
TEMP. ELW4 (STAGE 3)

INSTALL PAV'T MARKINGS

0 50
FEET

Stage 4

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.81

9:41:30 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j81.sht

1500

1505

1510

STA. 1498+97
END TEMP. DLW4 & RLW4 REMOVAL (STAGE 3)
BEGIN TEMP. ELW4 REMOVAL (STAGE 3)

PROPOSED BARRIER

TBR

INSTALL PAV'T MARKINGS

0 FEET 50

Stage 4

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.82	

9:41:59 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j82.sht

1515

1520

1525

STA. 1515+25
END TEMP. ELY4, BLW4, AND ELW4 REMOVAL (STAGE 3)
BEGIN TEMP. CHY8 & CHW8 (2) REMOVAL (STAGE 3)

PROPOSED BARRIER

TBR

STA. 1521+00
FULL-DEPTH PATCH

INSTALL PAV'T MARKINGS

STA. 1525+75
BEGIN PROP. DLW4
END PROP. BLW4

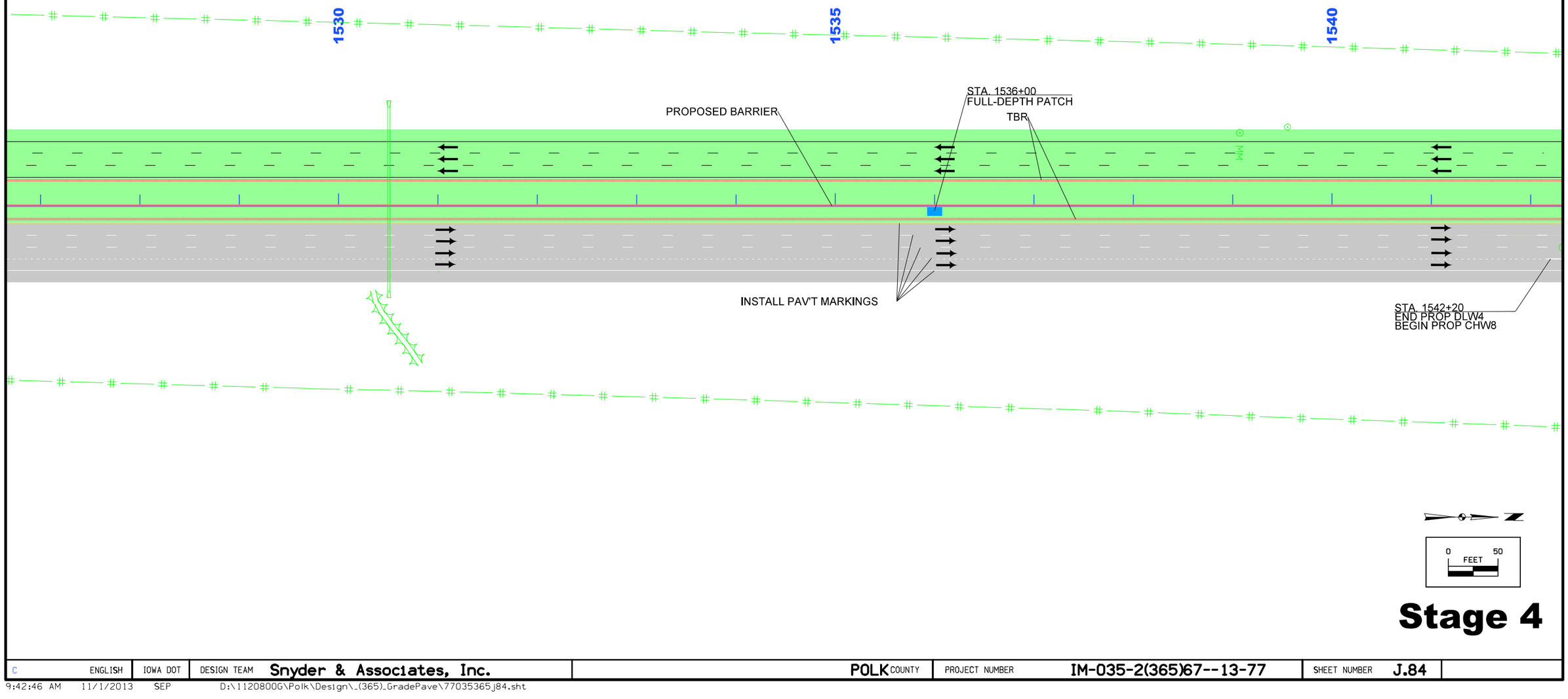
STA. 1525+75
BEGIN PROP. RLW4
END PROP. ELW4

0 FEET 50

Stage 4

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.83

9:42:23 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j83.sht



Stage 4

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.84	

9:42:46 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j84.sht

1545

1550

1555

STA. 1548+33
END TBR

STA. 1549+19
END TEMP. CHW8 REMOVAL (STAGE 3)
BEGIN TEMP. ELW4 REMOVAL (STAGE 3)

STA. 1550+90
END TEMP. CHY8 & CHW8 REMOVAL (STAGE 3)
BEGIN TEMP. ELY4 REMOVAL (STAGE 3)
BEGIN UAC BLW4

LEFT SHOULDER CLOSED AHEAD

W21-5bL
48" x 48"

STA. 1546+97
END PROPOSED BARRIER

STA. 1547+25
END TBR

STA. 1550+88
BEGIN U.A.C. CHW8 (2) & RLW4 (STAGE 3)
END CHW8 & RLW4
END ELW4 REMOVAL (STAGE 3)

SIGN

SIGN

SIGN

SIGN

STA. 1558+9
END REMOV
BEGIN REM

TO

0 FEET 50

Stage 4

C ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.85

9:43:08 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j85.sht

1560

1565

1570

FROM I-80EB

1000'

ROAD WORK AHEAD

W20-1
48" x 48"

SPEED LIMIT 55

R2-1
48" x 60"

SIGN

SIGN

TO I-235EB

ROAD WORK AHEAD

W20-1
48" x 48"

SIGN

SIGN

AL TEMP. ELY4 (STAGE 3)
OVAL EXIST. ELY4

CONTINUE ELY4 & BLW4
CONTINUE ELY4 REMOVAL

I-235 EB

END ROAD WORK

G20-2A
48" x 24"

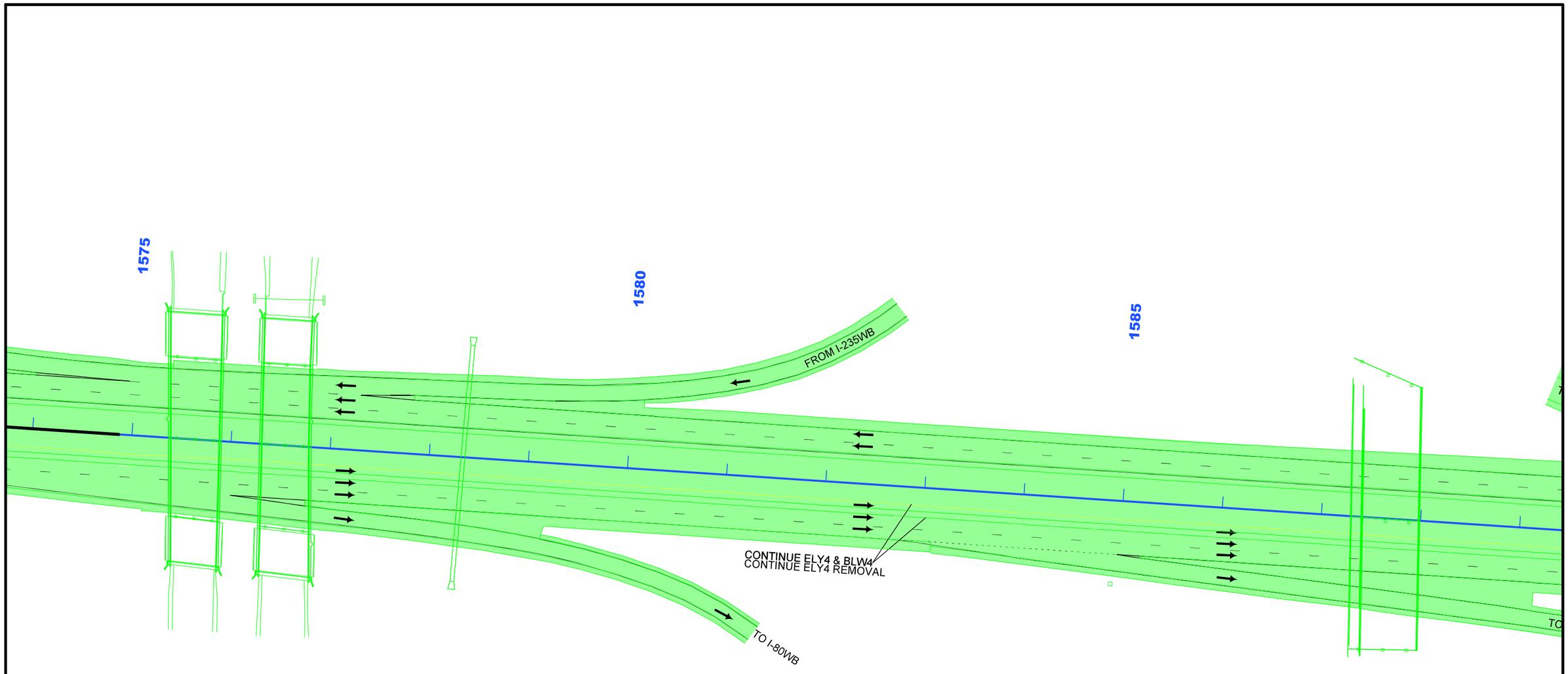
SIGN

0 FEET 50

Stage 4

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.86

9:43:28 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j86.sht



Stage 4

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	J.87

9:43:54 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j87.sht

1590

1595

1600

1605

O I-80WB

UNIVERSITY AVE.

CONTINUE ELY4 & BLW4
CONTINUE ELY4 REMOVAL

STA. 1599+40
BEGIN REMOVAL OF EXIST. BLW4 & ELW4
BEGIN PROP. BLW4 & ELW4

STA. 1599+40
BEGIN 70:1 Taper

STA. 1603+25
BEGIN REMOVAL OF EXIST. CHW8
END REMOVAL OF EXIST. ELW4

FROM I-80/235

STA. 1603+25
BEGIN PROP. CHW8
END PROP. ELW4

STA. 1605+00
END 70:1 TAPER

STA. 1605+00
END PROP. ELY4 & BLW4
END REMOVAL OF EXIST. ELY4 & B
BEGIN U.A.C. ELY4 & BLW4

SIGN

0 FEET 50

Stage 4

C ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.88

9:45:54 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j88.sht

1610

1615

1620

FROM UNIVERSITY

STA. 1605+63
BEGIN REMOVAL OF EXIST. CHW8 (2)
END PROP. CHW8

LW4

STA. 1616+00
END REMOVAL OF EXIST. CHW8 (2)
END PROP. BLW4
BEGIN U.A.C. BLW4

FROM UNIVERSITY

0 FEET 50

Stage 4

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	J.89

9:46:19 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j89.sht

3375

3370

STA. 3367+63
BEGIN DCY4 NON-REFLEC TAPE REMOVAL
BEGIN ELW4 TAPE REMOVAL

STA. 3368+66
BEGIN DCY4 TAPE REMOVAL

STA. 3371+32
END DCY4 TAPE REMOVAL

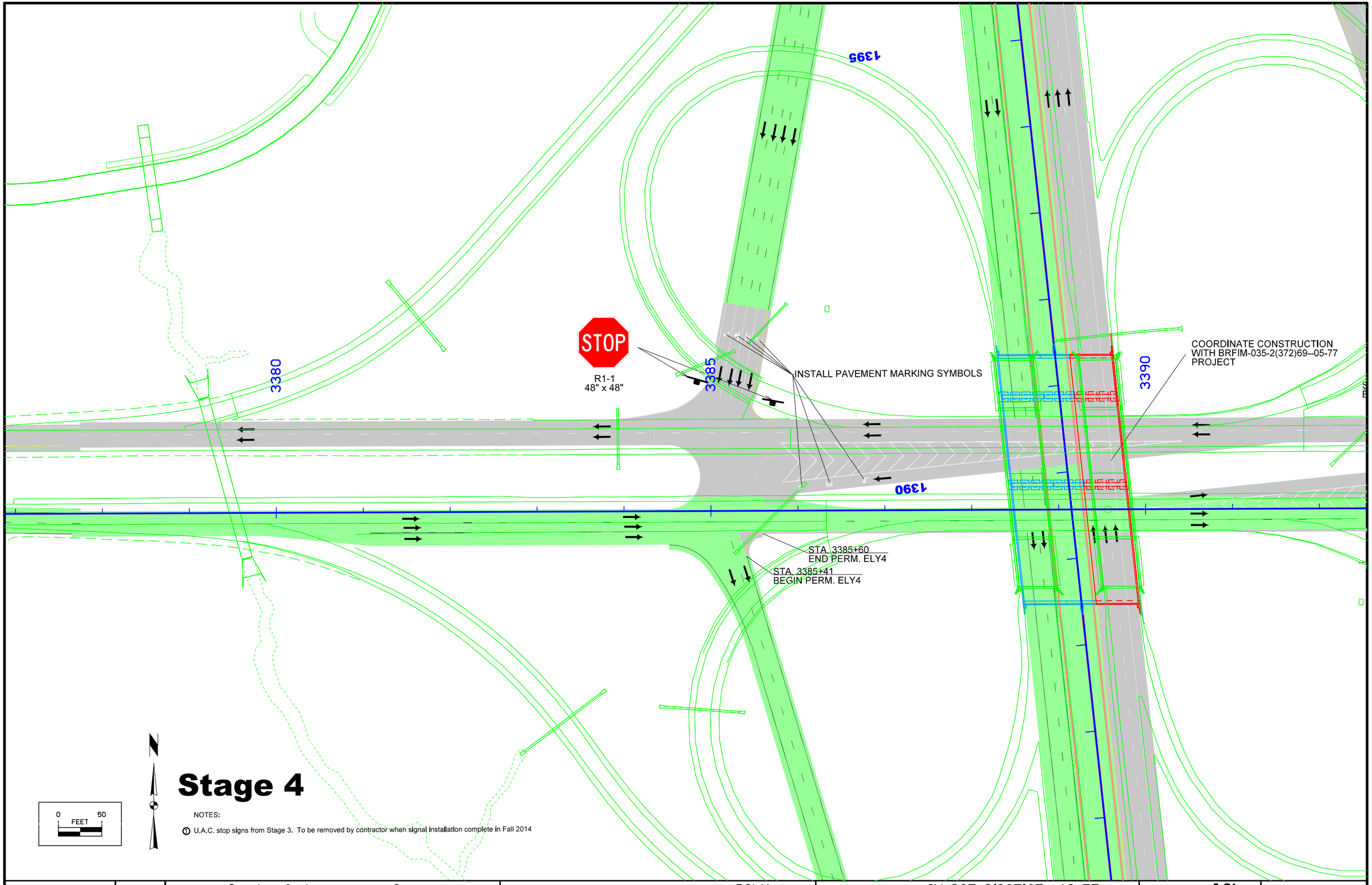
STA. 3371+67
END DCY4 NON-REFLEC TAPE REMOVAL
END ELW4 TAPE REMOVAL

0 FEET 50

Stage 4

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.90

9:49:22 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j90.sht



Stage 4

NOTES:

① U.A.C. stop signs from Stage 3. To be removed by contractor when signal installation complete in Fall 2014

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.91

2:50:32 PM 11/4/2013 SEP D:\11208006\Polk\Design_(365)_GradePave\77035365j91.sht

STA. 3389+44
BEGIN PROP. ELW4

STA. 3389+91
BEGIN PROP. BLW4

STA. 3389+72
BEGIN PROP.ELY4

3395

3400

3405

STA. 2389+69
END PROP. ELW4

INSTALL PAVEMENT MARKING SYMBOLS

STA. 3394+17
BEGIN PROP. ELY4

STA. 3394+36
END PROP. ELY4

STA. 2389+49
END PROP. ELY4

STA. 3394+37
BEGIN PROP. SLW2

STOP

R1-1
48" x 48"

STA. 3394+85
BEGIN PROP. ELW4
END PROP. SLW2

STA. 2389+31
END PROP. ELW4

STA. 2389+39
END PROP. SLW4 (2)

STA. 4386+55
INSTALL SYMBOLS

STA. 4386+20
INSTALL SYMBOLS

STA. 4385+85
INSTALL SYMBOLS

STOP

R1-1
48" x 48"

STA. 3399+75
BEGIN ELW4

STA. 3401+10
END ELW4

STA. 2386+70
END PROP. BLW4
BEGIN PROP. SLW4 (2)

NOTES:

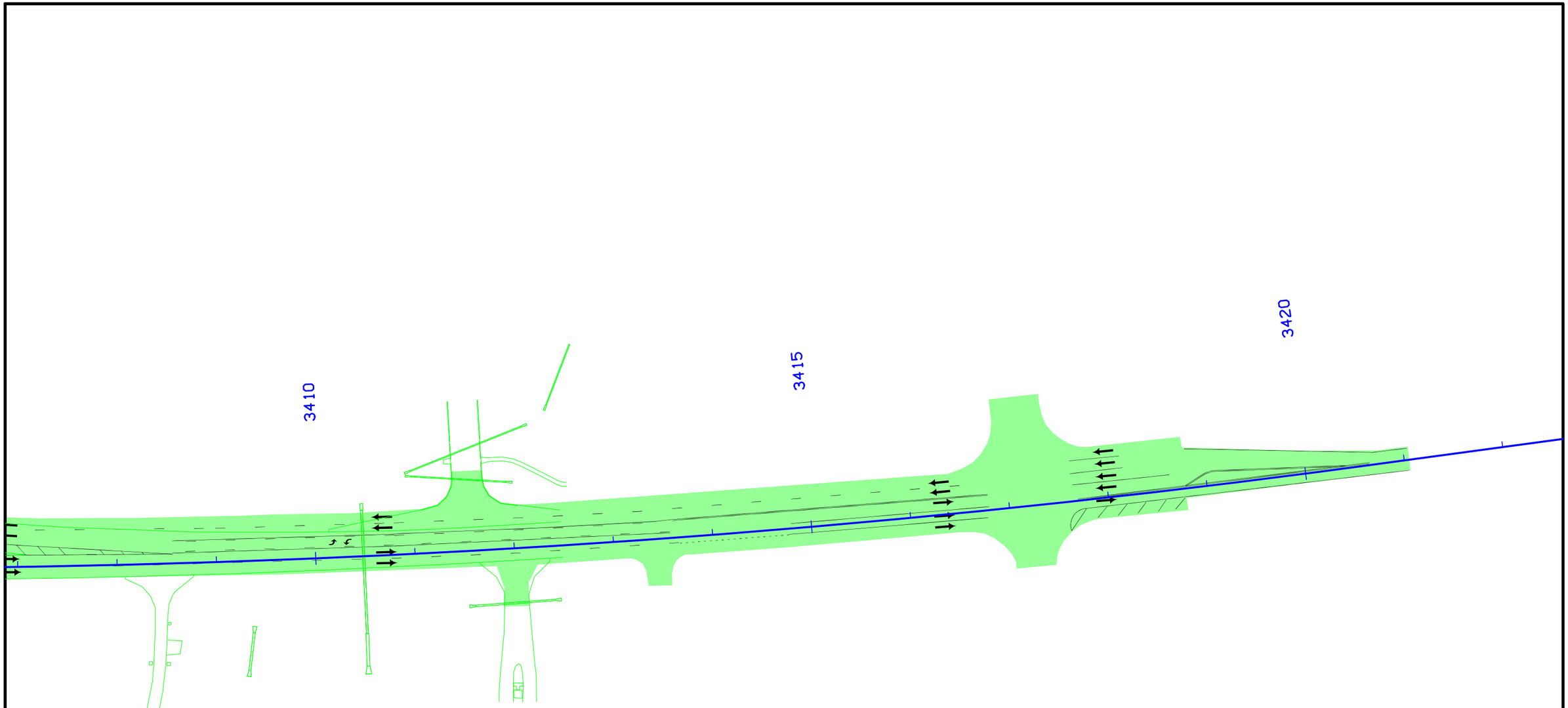
1. Stop signs to be removed by contractor when signal installation complete in Fall 2014.
2. Temporary stop signs are included in Traffic Control Bid Item

Stage 4

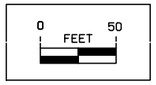
0 FEET 50

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.92

2:50:54 PM 11/4/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j92.sht



Stage 4



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.93

9:53:53 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j93.sht

1340

1345

1350

STA. 1345+30
BEGIN PROP. BLW4 & ELY4
BEGIN REMOVAL OF EXIST. ELY4

TO IA HWY 5

SIGN

COORDINATE PAVEMENT MARKING
CONSTRUCTION WITH IOWA DOT PROJECT
IM-035-2(336)65--13-91

0 FEET 50

Stage 5

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.94	

9:54:38 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j94.sht

1355

1360

1365

CONTINUE REMOVAL ELY4

CONTINUE ELY4 & BLW4

0 FEET 50

Stage 5

C ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.95

9:55:05 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j95.sht

1375

1380

1385

CONTINUE REMOVAL ELY4

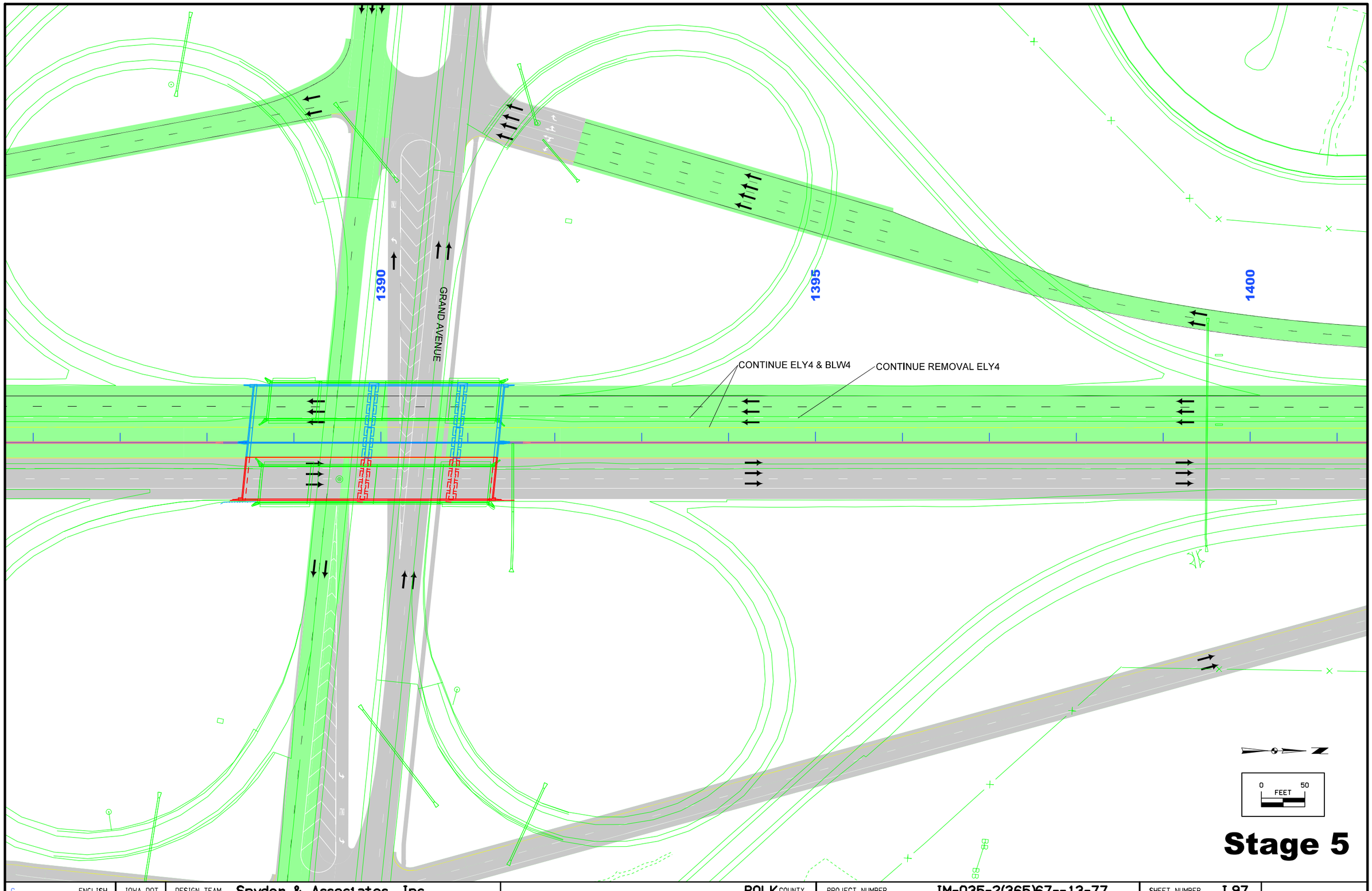
CONTINUE ELY4 & BLW4

0 50 FEET

Stage 5

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.96	

10:01:55 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j96.sht



C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.		POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.97	

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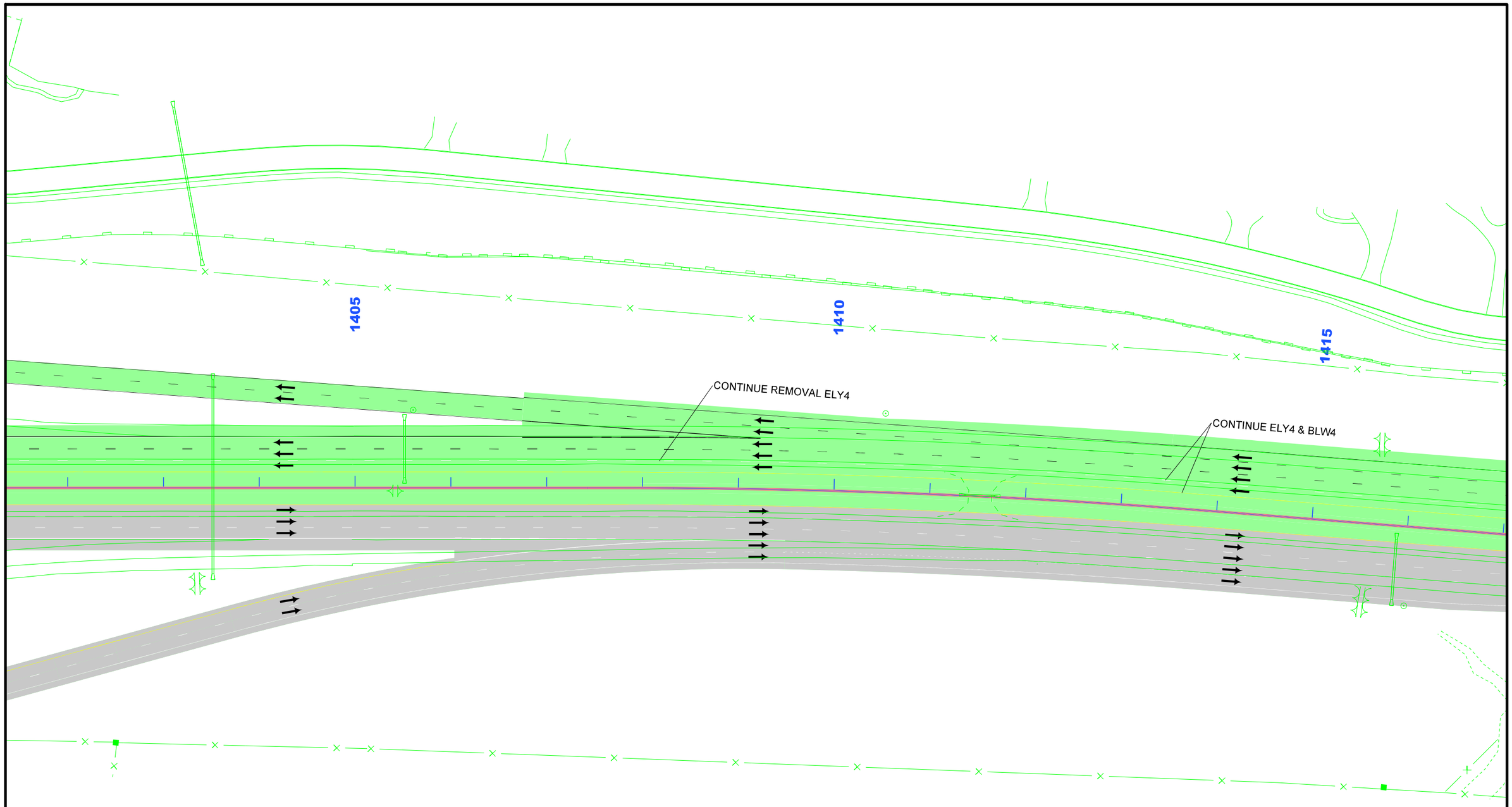

Stage 5

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	J.98

10:05:32 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j98.sht

1420

1425

1430

CONTINUE REMOVAL ELY4

CONTINUE ELY4 & BLW4

0 50
FEET

Stage 5

C ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	J.99

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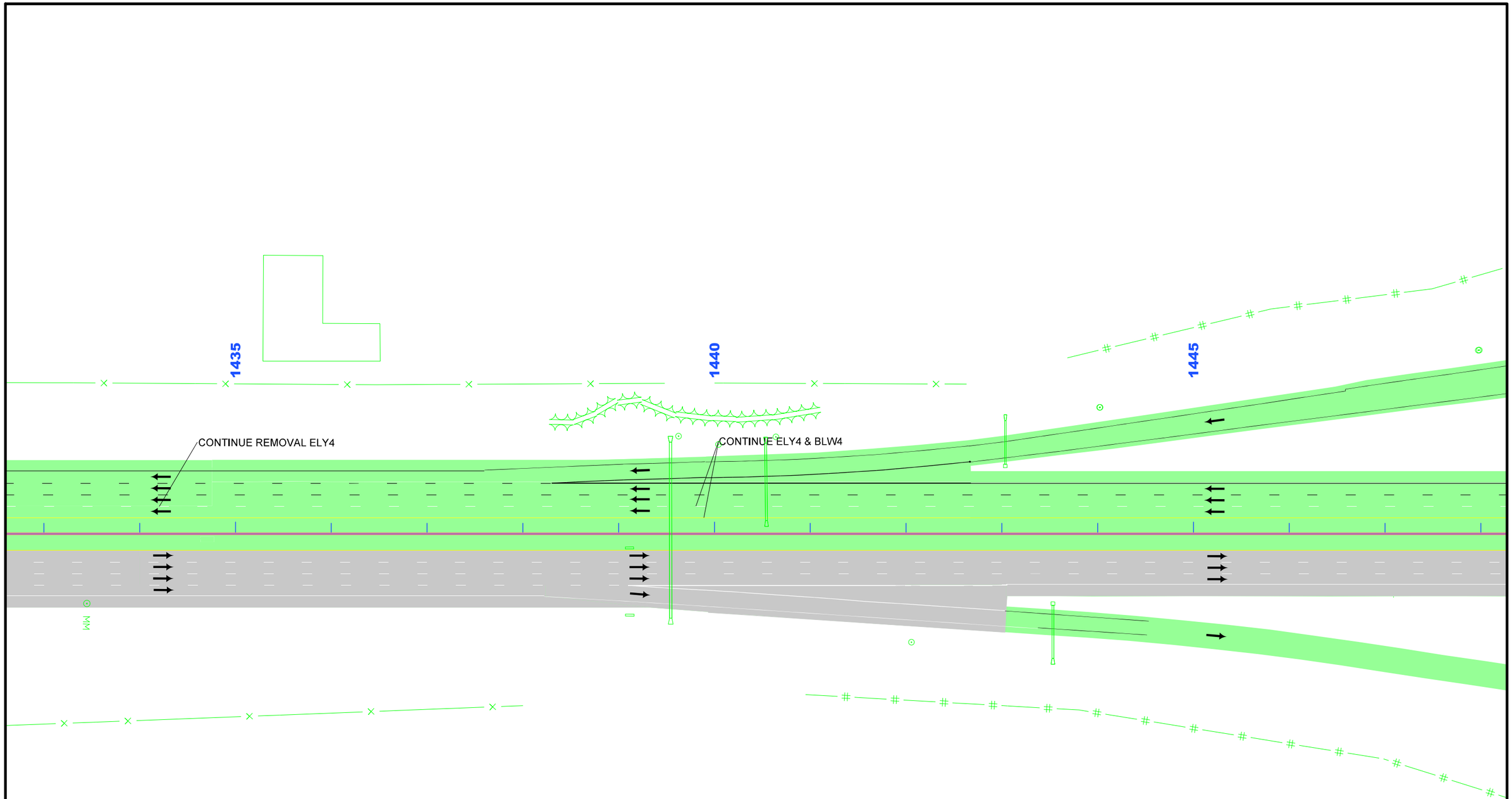

Stage 5

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.100	

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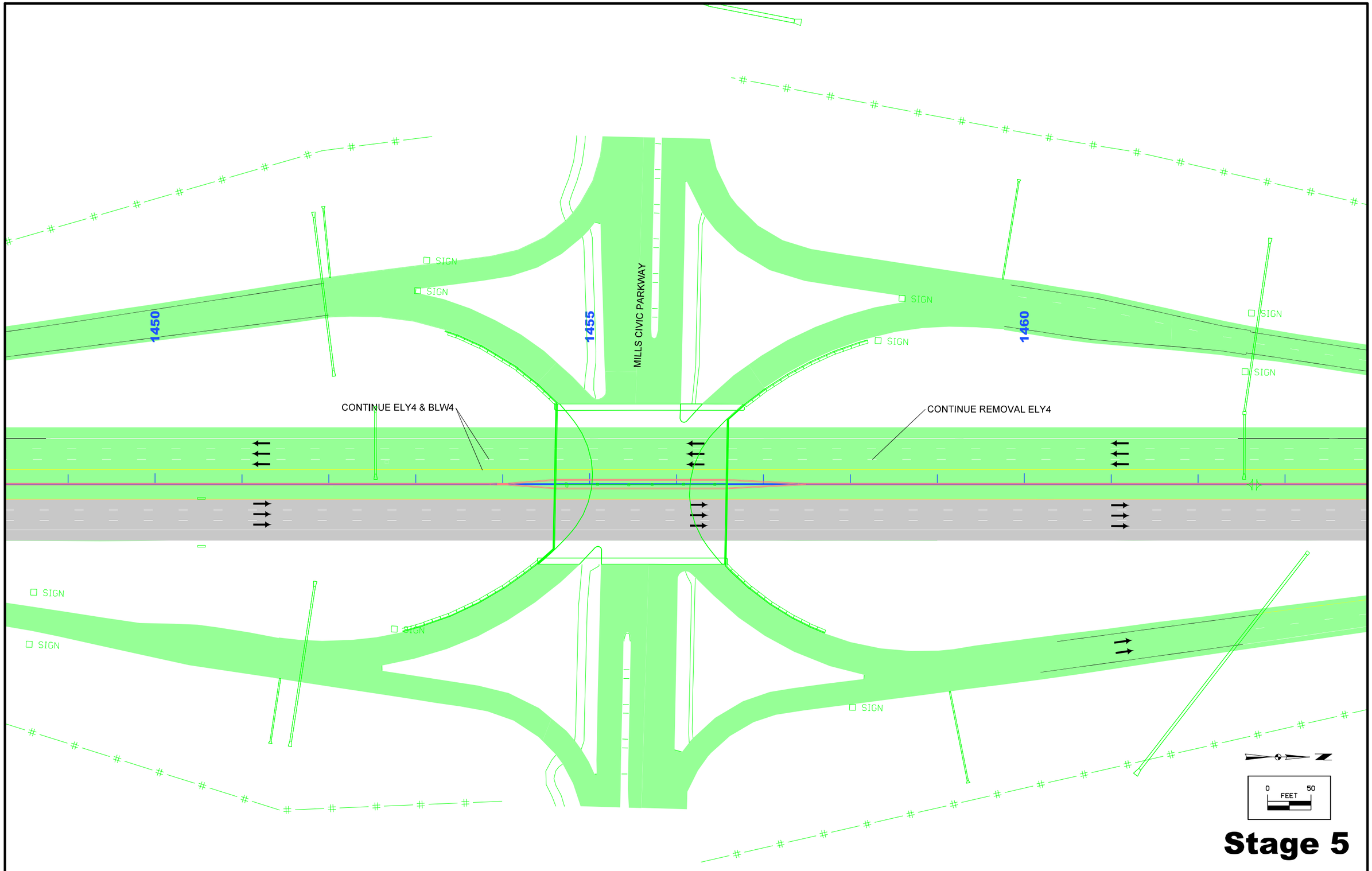

Stage 5

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	J.101

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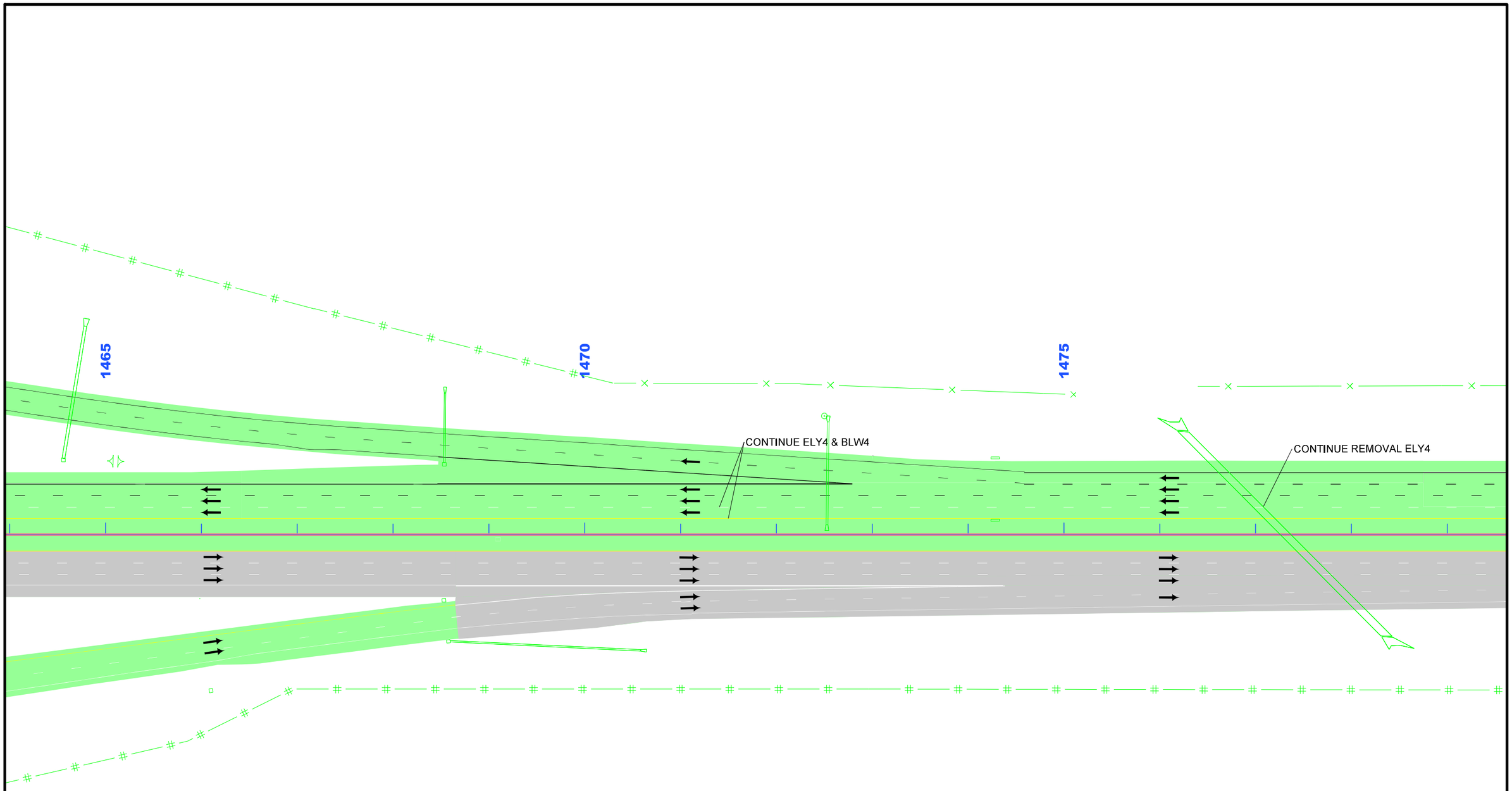

Stage 5

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.102	

10:12:15 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j102.sht

1480

1485

1490

1495

SIGN

SIGN

CONTINUE ELY4 & BLW4

CONTINUE REMOVAL ELY4

0 FEET 50

Stage 5

C ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.103

10:12:41 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j103.sht

1500

1505

1510

CONTINUE ELY4 & BLW4

CONTINUE REMOVAL ELY4

0 FEET 50

Stage 5

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.104	

10:13:04 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j104.sht

1515

1520

1525

CONTINUE ELY4 & BLW4

CONTINUE REMOVAL ELY4

0 FEET 50

Stage 5

C ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.105

10:13:25 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j105.sht

1530

1535

1540

CONTINUE ELY4 & BLW4

CONTINUE REMOVAL ELY4

0 FEET 50

Stage 5

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.106	

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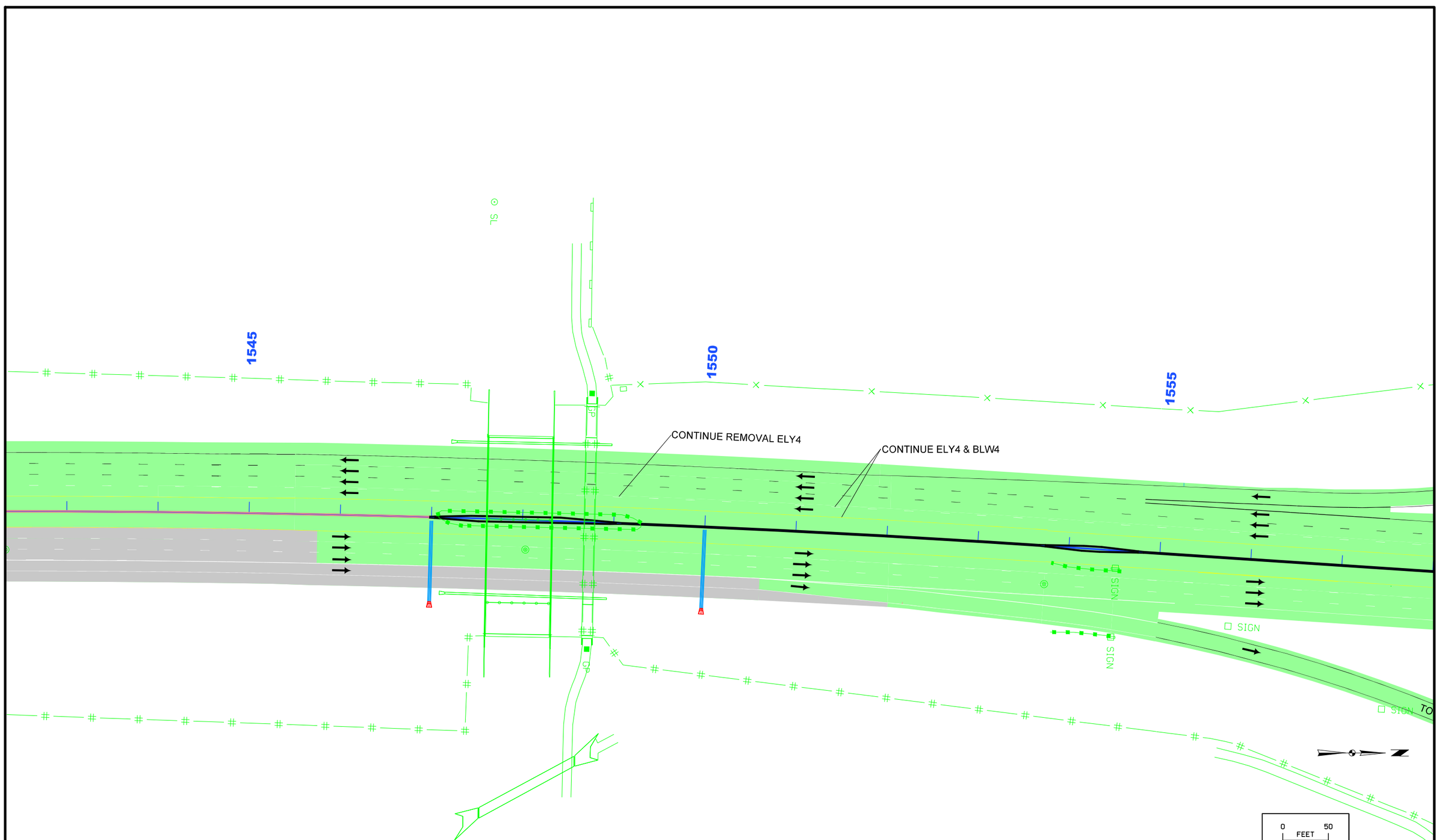


Stage 5

C ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.107

10:14:47 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j107.sht

1560

1565

1570

FROM I-80EB

CONTINUE ELY4 & BLW4

CONTINUE REMOVAL ELY4

SIGN

SIGN

SIGN

SIGN

TO I-235EB

SIGN

I-235 EB

SIGN

0 FEET 50

Stage 5

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.108

10:15:09 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j108.sht

1575

1580

1585

SIGN

SIGN

SIGN

SIGN

SIGN

SIGN

SIGN

SIGN

SIGN

FROM I-235WB

CONTINUE ELY4 & BLW4

CONTINUE REMOVAL ELY4

TO I-80WB

TO

0 FEET 50

Stage 5

C ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER J.109

10:15:32 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j109.sht

1590

1595

1600

1605

STA. 1590+50
BEGIN EXIST. BLW4 REMOVAL
BEGIN PROP. CHW8

STA. 1594+00
BEGIN REMOVAL OF EXIST. DLW4
BEGIN PRPO. CHW8

STA. 1594+75
BEGIN 70:1 Taper

STA. 1594+75
BEGIN PROP. BLW4
END PROP. CHW8

STA. 1594+75
END PROP. CHW8
BEGIN PROP. DLW4

CONTINUE ELY4 & BLW4

CONTINUE REMOVAL OF ELY4

STA. 1603+15
END 70:1 TAPER

STA. 1603+15
END PROP. ELY4, BLW4
END EXIST. BLW4 & ELY4 REMOVAL
BEGIN U.A.C. ELY4 & BLW4

STA. 1605+00
END PROP. DLW4
END EXIST. BLW4 REMOVAL

TO I-80WB

UNIVERSITY AVE.

FROM I-80/235

SIGN

0 FEET 50

Stage 5

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.110	

10:16:07 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j110.sht

1610

1615

1620

FROM UNIVERSITY

STA. 1619+80
END REMOVAL OF EXIST. DLW4
END PROP. BLW4
BEGIN U.A.C. BLW4

FROM UNIVERSITY

0 FEET 50

Stage 5

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	J.111

10:16:31 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j111.sht

Detour Notes

As part of the removal and replacement for EP True Parkway, the roadway will be closed and a detour will be used. The detour will be in place for 4 nights during the removal of the existing bridge from 9:00 PM to 6:00 AM. This same detour will be used for 5 nights from 12:00 AM to 5:00 AM for beam replacement. The detour may only be used from Sunday night through Friday morning.

Refer to Traffic Control Plan for additional information.

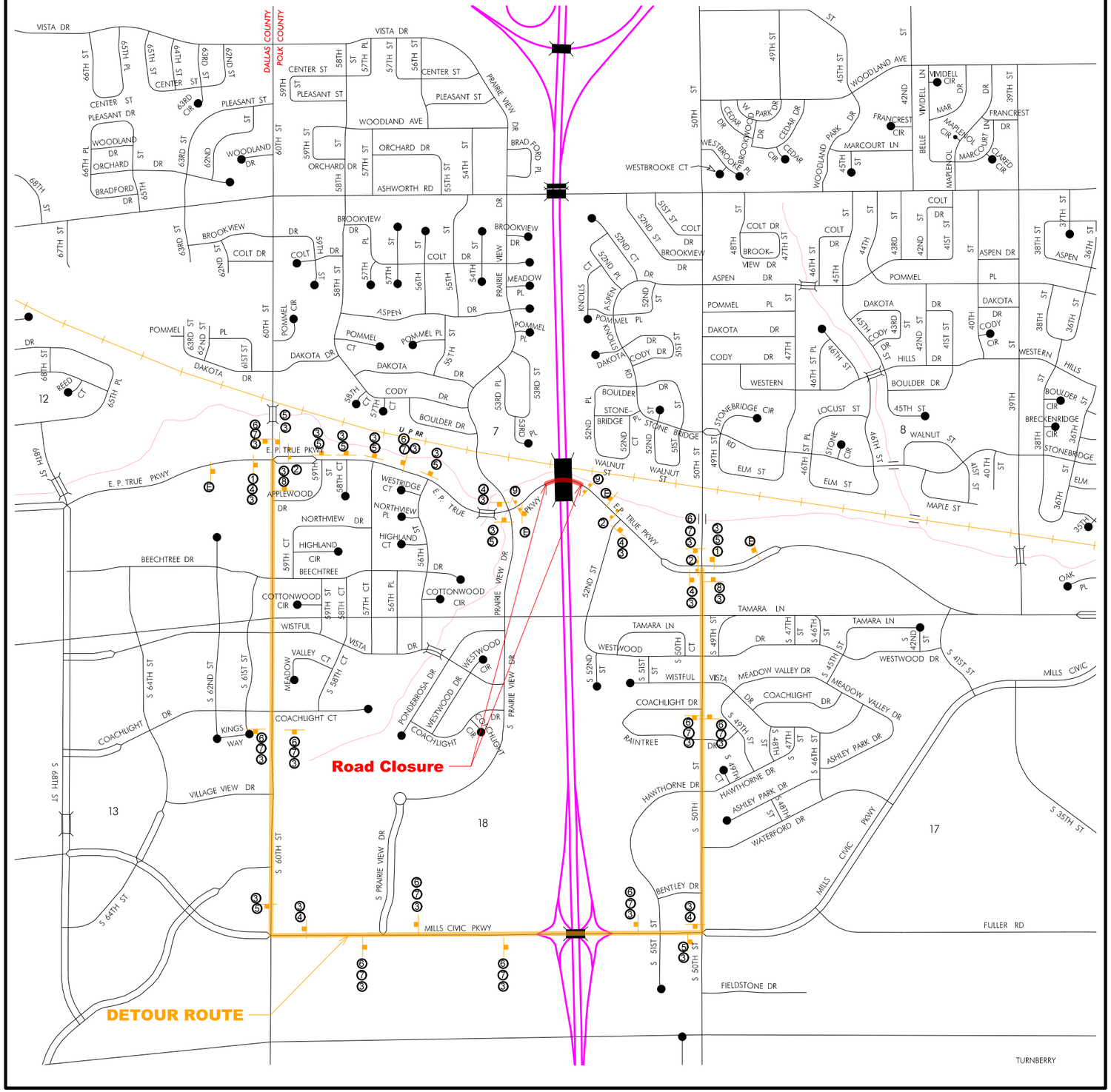
Detour Route:
The detour route for EP True will be from EP True Parkway to S. 50th Street to George Mills Civic Parkway to S. 60th Street back to EP True Parkway.

The bid item for Traffic Control will be considered full compensation for installing, covering, and uncovering signs required for the detour. It is the contractor's responsibility to set up, cover, uncover, and maintain all signs along the detour routes.

SIGN TABULATION

No.	Sign & Type	Quantity	Size
①	Road Closed Ahead (W20-3)	2	(48"x48")
②	Road Closed to Thru Traffic – Type III Barricade (R11-4)	3	(60"x30")
③	EP True. (D3-1)	28	(30"x12")
④	Detour → (M4-9)	6	(30"x24")
⑤	Detour ← (M4-9)	9	(30"x24")
⑥	Detour (M4-8)	11	(24"x12")
⑦	↑ (M6-3)	11	(21"x15")
⑧	End Detour (M4-8a)	2	(24"x18")
⑨	Road Closed – Type III Barricade (R11-2)	2	(60'X30")
Ⓔ	Changeable Message Board	4	

EASTBOUND AND WESTBOUND
EP TRUE PARKWAY DETOUR
DURING BRIDGE REMOVAL AND REPLACEMENT



Detour Notes

As part of the bridge removal and replacement for Grand Avenue, the roadway will be closed and a detour will be used. The detour will be in place for 4 nights during the removal of the existing bridge from 9:00 PM to 6:00 AM. This same detour will be used for during beam setting operations for the new bridge. The detour will be used for 5 nights from 12:00 AM to 5:00 AM for beam replacement. The detour may only be used from Sunday night through Friday morning.

Refer to Traffic Control Plan for additional information.

Detour Route:
The detour route for eastbound Grand Avenue will begin at Raccoon River Drive and proceed westbound on Grand Ave. then north on S. Jordan Creek Parkway then east on George Mills Civic Parkway to S. 50th Street then back to Grand Avenue.

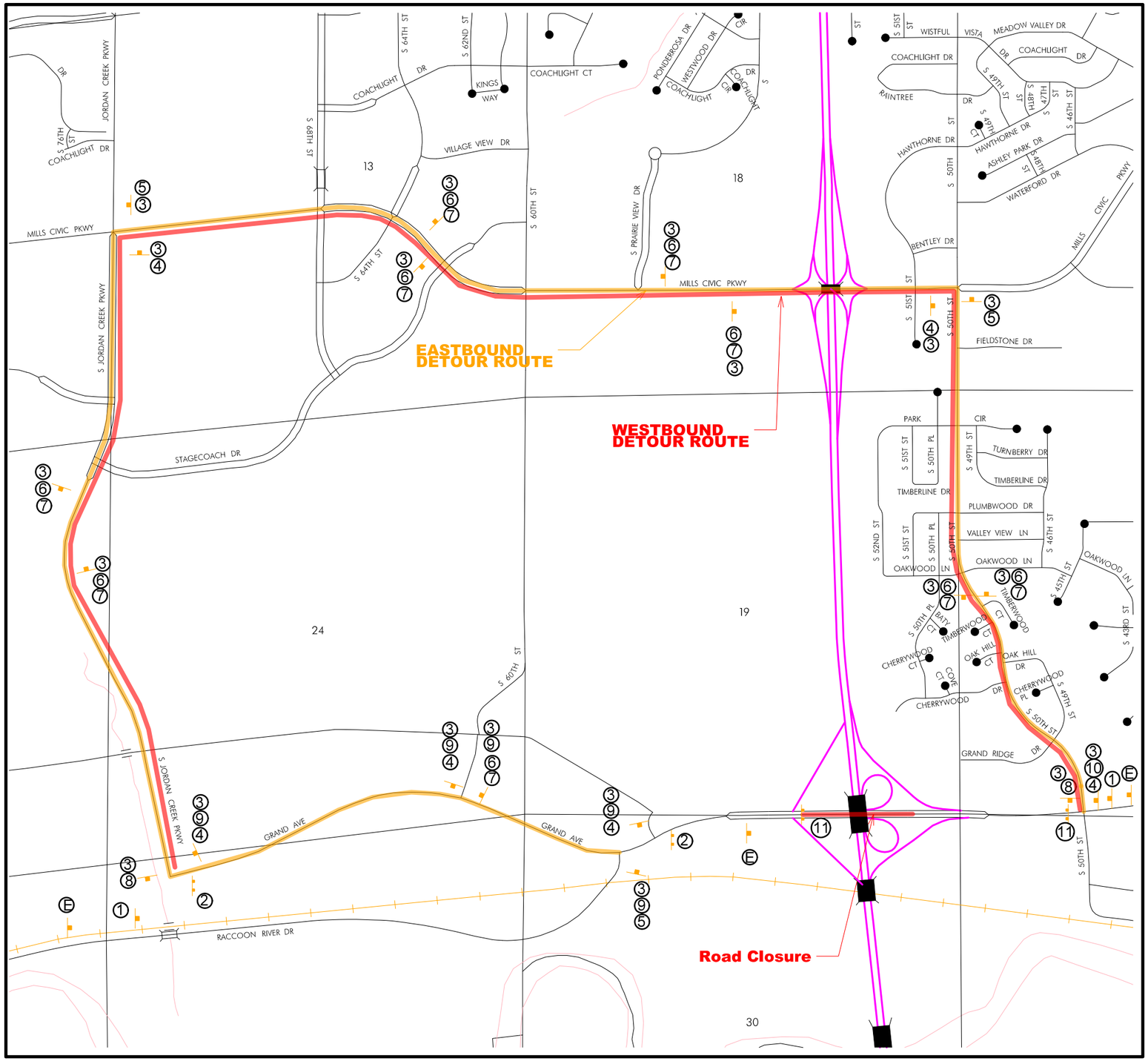
The detour route for westbound Grand Avenue will begin at the I-35 Grand Avenue Interchange and proceed north on I-35 to George Mills Civic Parkway then west to S. Jordan Creek Parkway then south back to Grand Avenue.

The bid item for Traffic Control will be considered full compensation for installing, covering, and uncovering signs required for the detour. It is the contractor's responsibility to set up, cover, uncover, and maintain all signs along the detour routes.

SIGN TABULATION

No.	Sign & Type	Quantity	Size
①	Road Closed Ahead (W20-3)	2	(48"x48")
②	Road Closed to Thru Traffic – Type III Barricade (R11-4)	2	(60"x30")
③	Grand Ave. (D3-1)	20	(30"x12")
④	Detour → (M4-9)	6	(30"x24")
⑤	Detour ← (M4-9)	3	(30"x24")
⑥	Detour (M4-8)	9	(24"x12")
⑦	↑ (M6-3)	9	(21"x15")
⑧	End Detour (M4-8a)	2	(24"x18")
⑨	Eastbound	5	(30"x12")
⑩	Westbound	1	(30"x12")
⑪	Road Closed – Type III Barricade (R11-2)	2	(60"x30")
Ⓔ	Changeable Message Board	3	

EASTBOUND GRAND AVENUE AND WESTBOUND GRAND AVENUE DETOUR DURING I-35 BRIDGE REMOVAL & REPLACEMENT



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.113

10:17:15 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j113.sht

Detour Notes

As part of the ramp reconstruction for Grand Avenue, the Northbound ramps will be closed and a detour will be used.

Refer to Traffic Control Plan for additional information.

Detour Route:
The detour route for Northbound I-35 will begin at the on ramp on Grand Avenue and proceed Westbound to S. Jordan Creek Pkwy, then proceed North to Mills Civic Pkwy, then head East to the I-35 interchange.

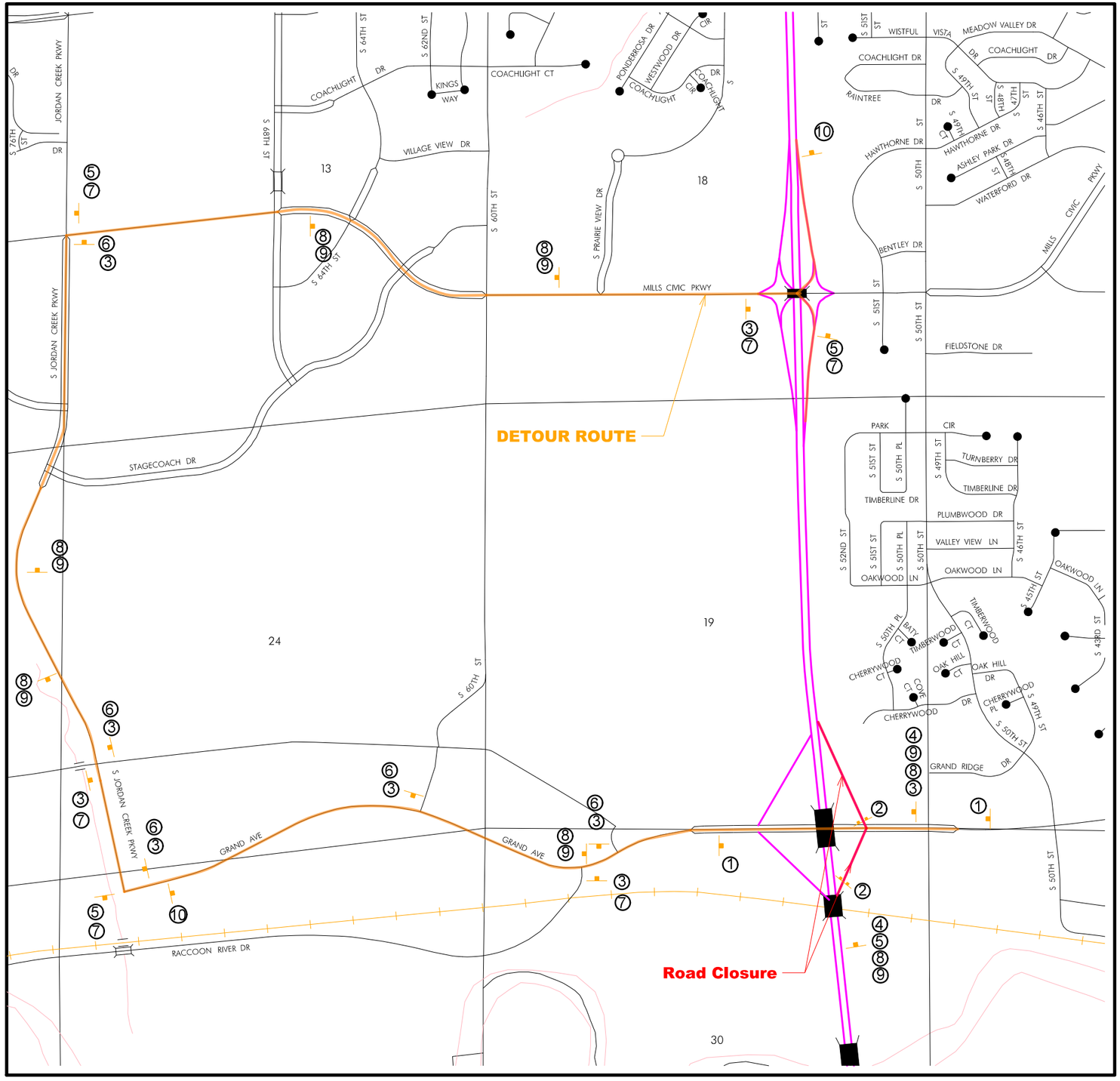
The detour route for Grand Avenue will begin at the off ramp on I-35 and proceed West on Mills Civic Pkwy, then head South on S. Jordan Creek Pkwy.

The bid item for Traffic Control will be considered full compensation for installing, covering, and uncovering signs required for the detour. It is the contractor's responsibility to setup, cover, uncover, and maintain all signs along the detour route.

SIGN TABULATION

No.	Sign & Type	Quantity	Size
①	Road Work Ahead (W20-1)	2	(48"x48")
②	Road Closed to Thru Traffic – Type III Barricade (R11-4)	2	(60"x30")
③	I-35 Northbound (D3-1)	9	(30"x24")
④	Road Closed (D3-1)	2	(30"x24")
⑤	Grand Ave. (D3-1)	4	(30"x12")
⑥	Detour → (M4-9)	5	(30"x24")
⑦	Detour ← (M4-9)	6	(30"x24")
⑧	Detour (M4-8)	7	(24"x12")
⑨	↑ (M6-3)	7	(21"x15")
⑩	End Detour (M4-8a)	2	(24"x18")

NORTHBOUND I-35 TO
WESTBOUND AND EASTBOUND GRAND AVE.
AND
WESTBOUND AND EASTBOUND GRAND AVE. TO
NORTHBOUND I-35 DETOUR



Detour Notes

As part of the ramp HMA overlay for Mills Civic Parkway, the Northbound ramps will be closed and a detour will be used. This is a night time detour only between the times of 8:00 PM to 6:00 AM.

Refer to Traffic Control Plan for additional information.

Detour Route:
The detour route for Northbound I-35 will begin at the on ramp on Mills Civic Parkway and proceed Westbound to S. Jordan Creek Pkwy, then proceed South to Grand, then head East to the I-35 interchange.

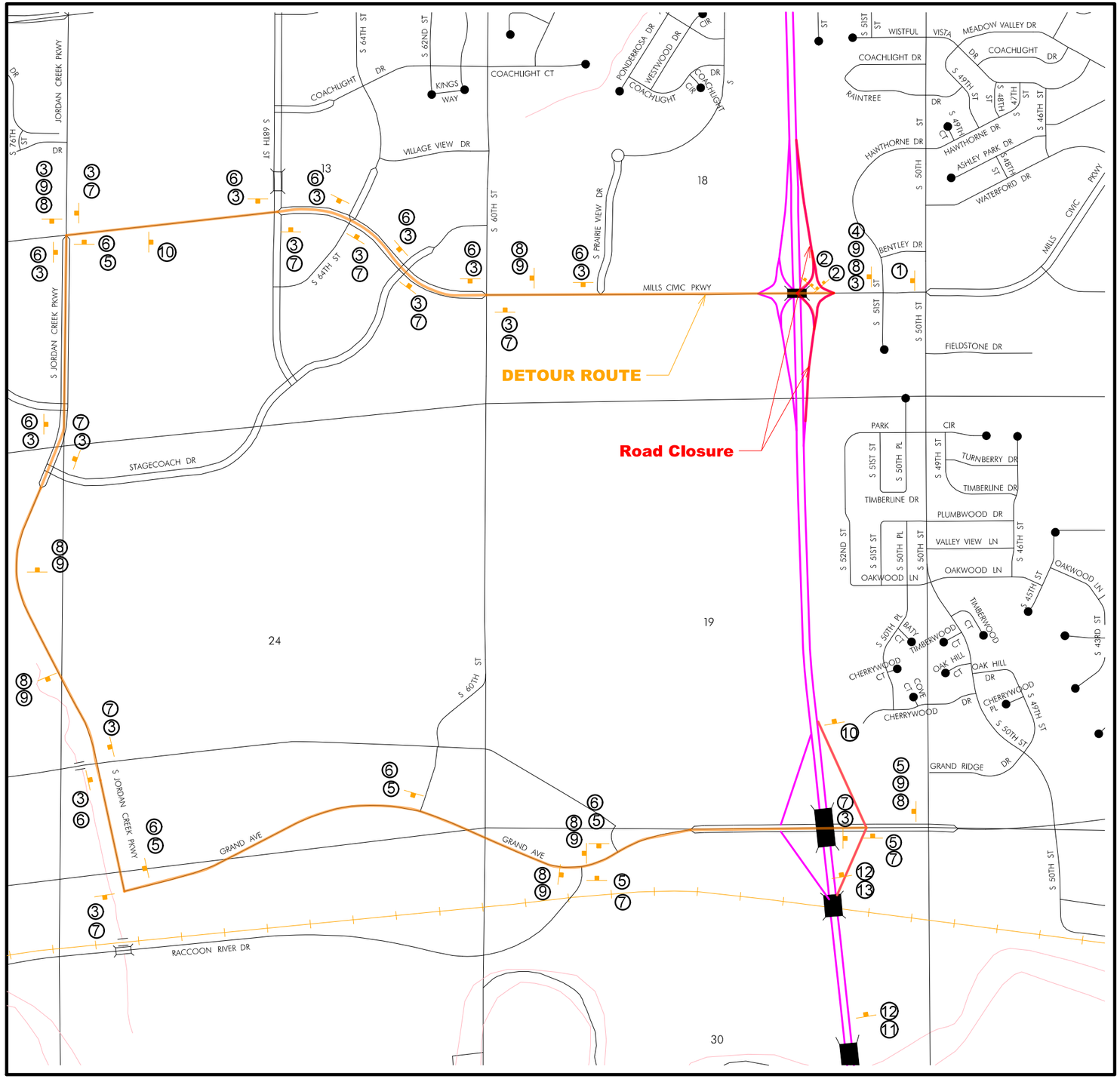
The detour route for Mills Civic Parkway will begin at the off ramp on I-35 and proceed West on Grand Avenue, then head North on S. Jordan Creek Pkwy.

The bid item for Traffic Control will be considered full compensation for installing, covering, and uncovering signs required for the detour. It is the contractor's responsibility to setup, cover, uncover, and maintain all signs along the detour route.

SIGN TABULATION

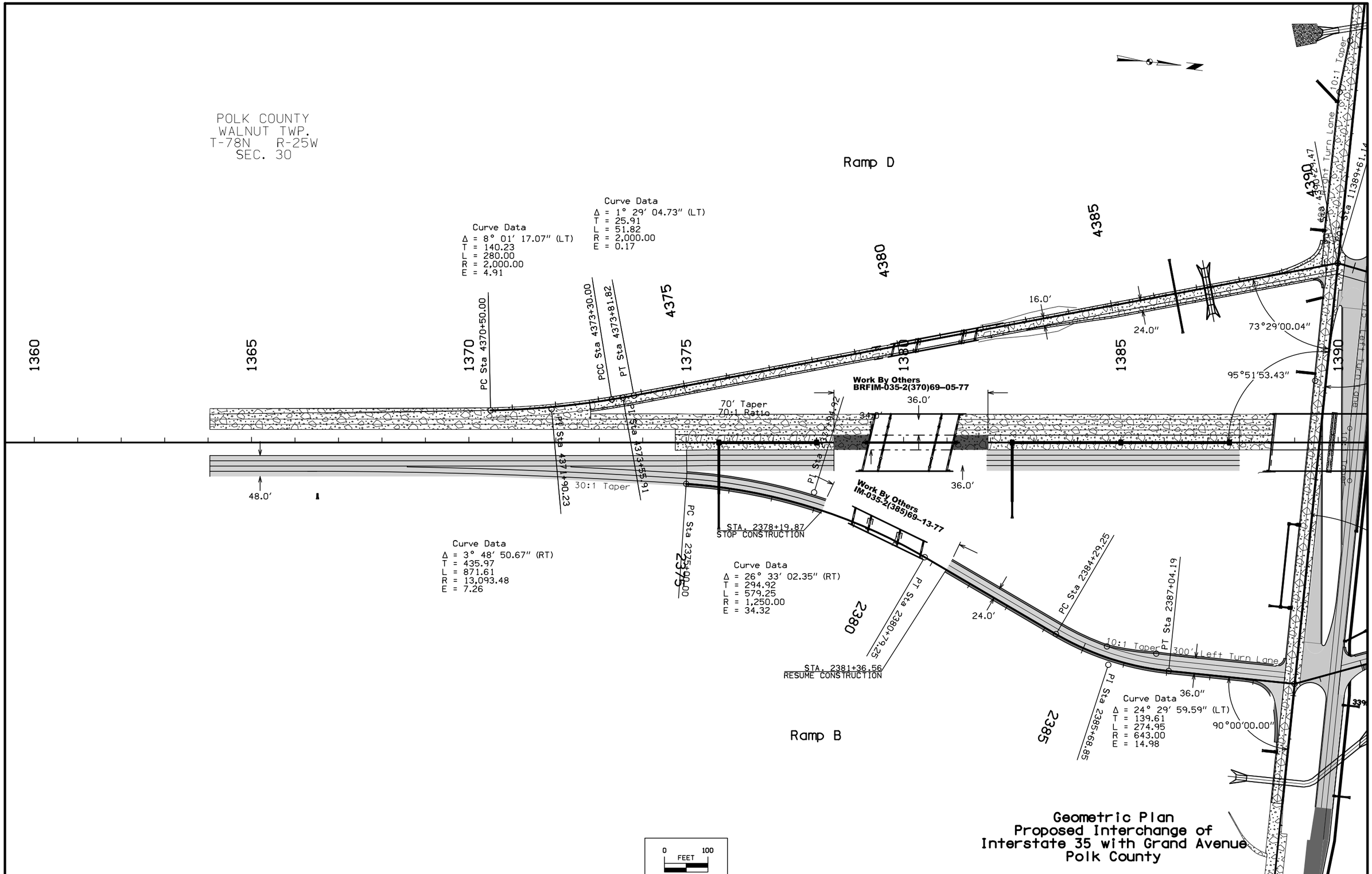
No.	Sign & Type	Quantity	Size
①	Road Work Ahead (W20-1)	1	(48"x48")
②	Road Closed to Thru Traffic – Type III Barricade (R11-4)	2	(60"x30")
③	I-35 Northbound (D3-1)	19	(30"x24")
④	Ramp Closed (D3-1)	1	(30"x24")
⑤	Mills Civic Pkwy (D3-1)	7	(48"x24")
⑥	Detour → (M4-9)	12	(30"x24")
⑦	Detour ← (M4-9)	11	(30"x24")
⑧	Detour (M4-8)	8	(24"x12")
⑨	↑ (M6-3)	8	(21"x15")
⑩	End Detour (M4-8a)	2	(24"x18")
⑪	Mills Civic Parkway Use Exist 69 (D1-3a)	1	(114"x66")
⑫	Detour (M4-8)	2	(66"x18")
⑬	Mills Civic Pkwy (D3-1)	1	(90"x36")

NORTHBOUND I-35 TO WESTBOUND & EASTBOUND MILLS CIVIC PARKWAY AND WESTBOUND & EASTBOUND MILLS CIVIC PARKWAY TO NORTHBOUND I-35 DETOUR



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER J.115

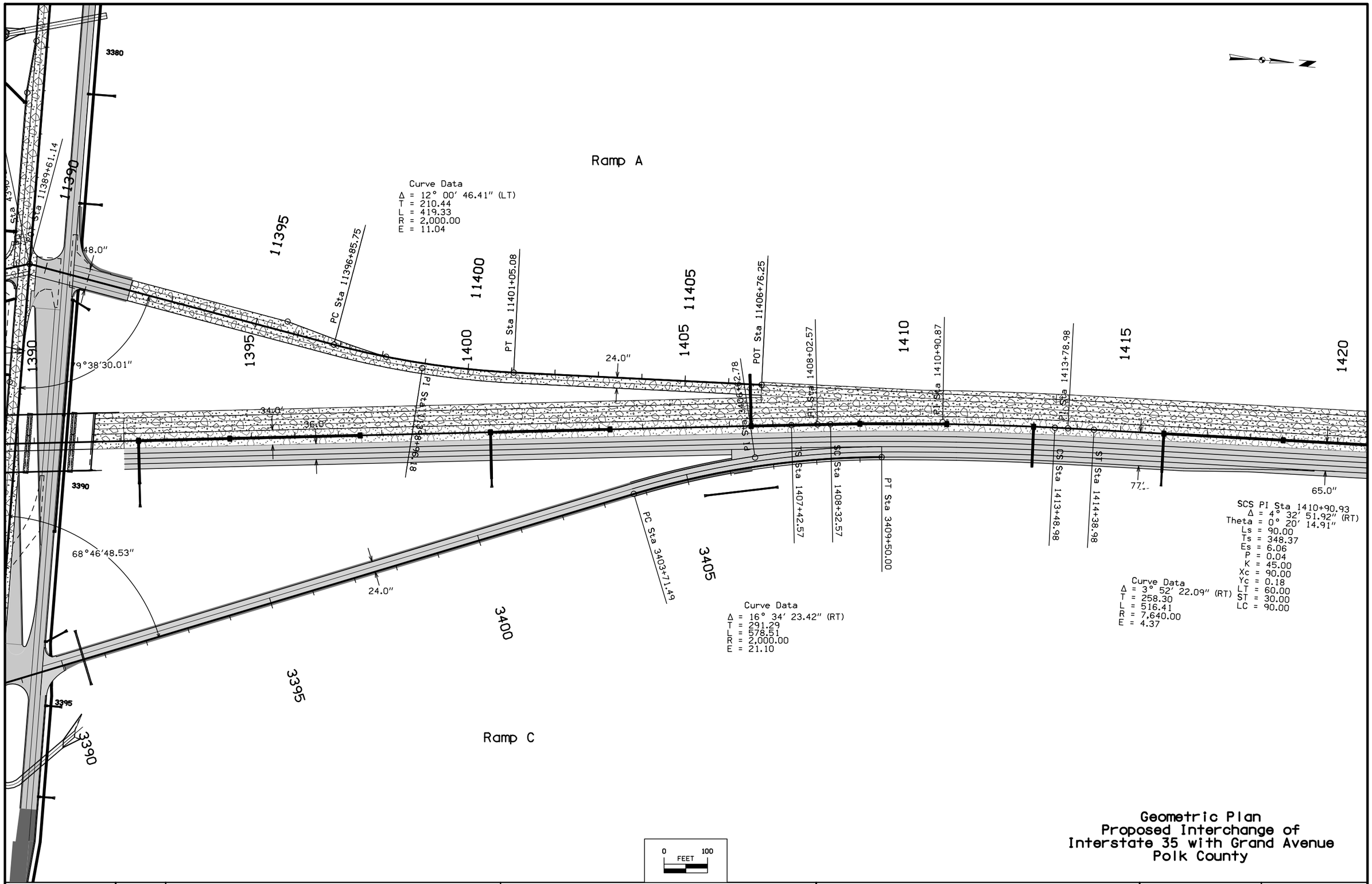
10:23:20 AM 11/1/2013 SEP D:\1120800G\Polk\Design_(365)_GradePave\77035365j115.sht



Geometric Plan
Proposed Interchange of
Interstate 35 with Grand Avenue
Polk County

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER K.1

11:46:46 AM 10/31/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365k01.sht



Geometric Plan
Proposed Interchange of
Interstate 35 with Grand Avenue
Polk County

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER K.2	

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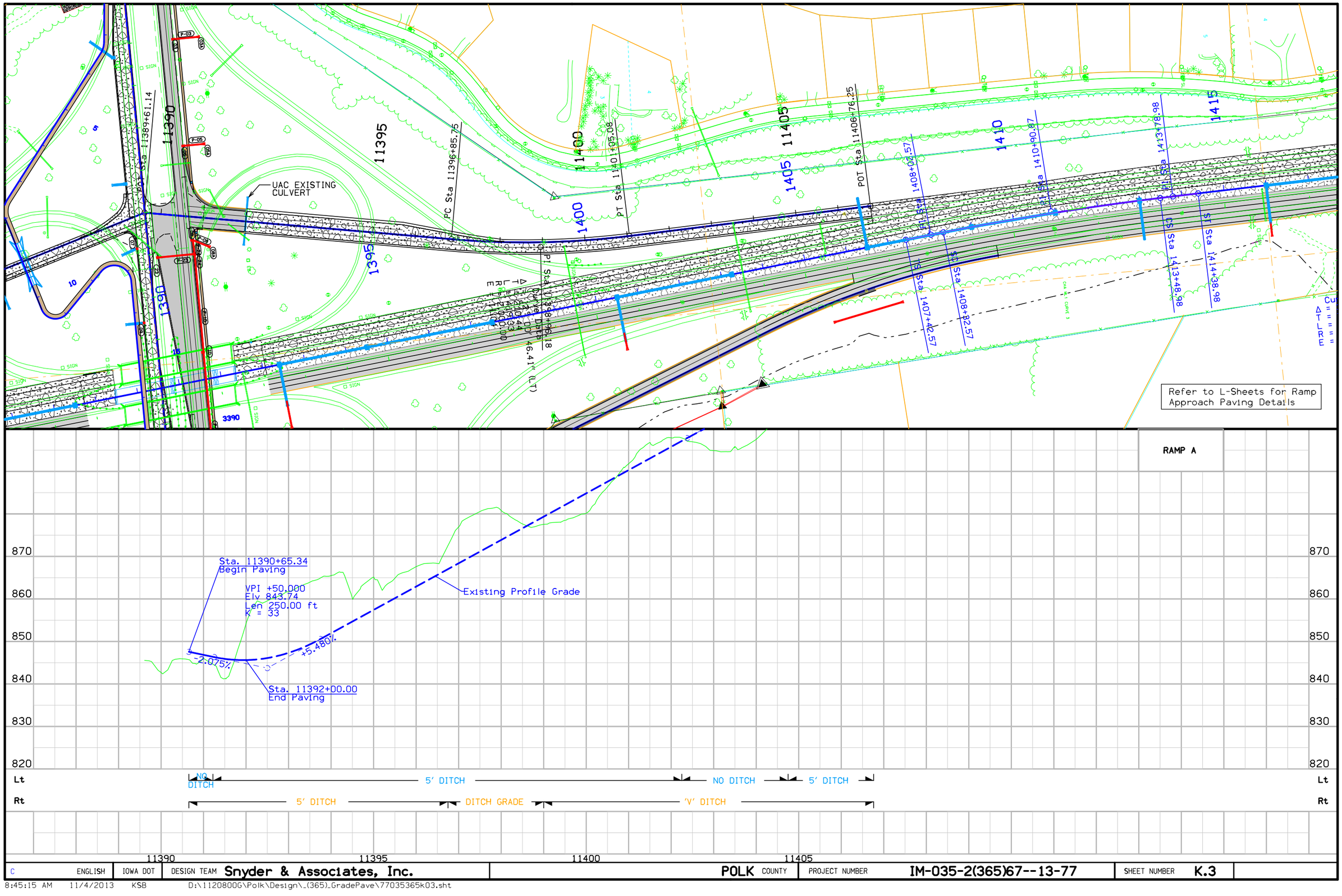

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER K.3	

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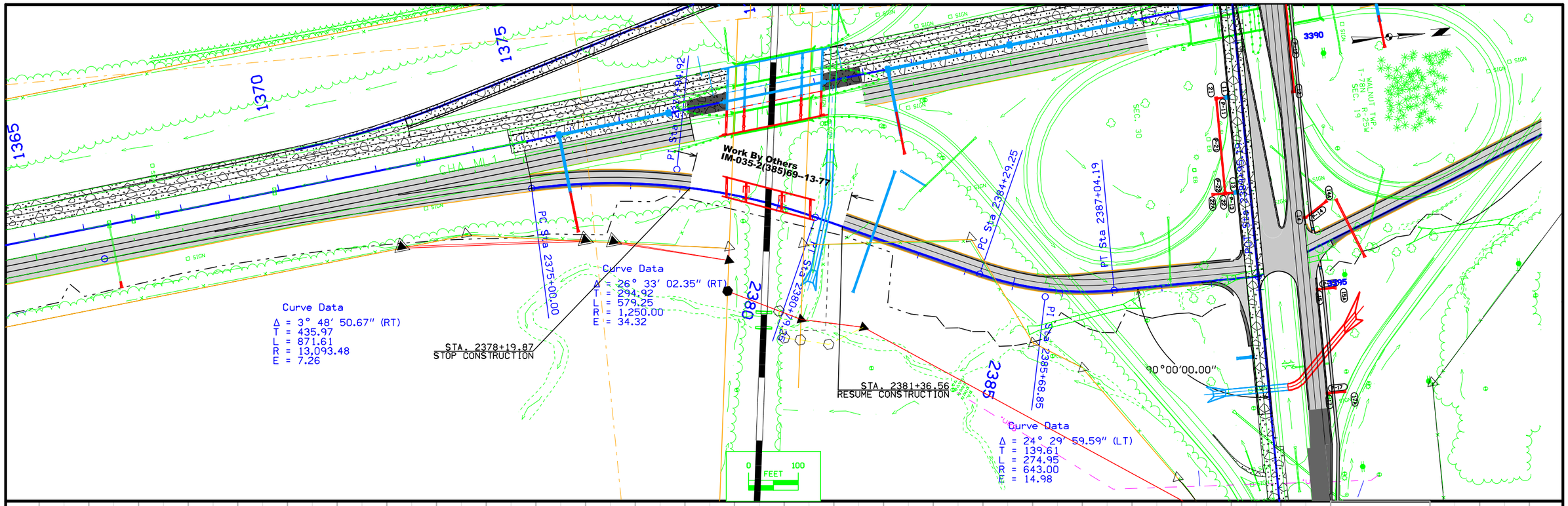

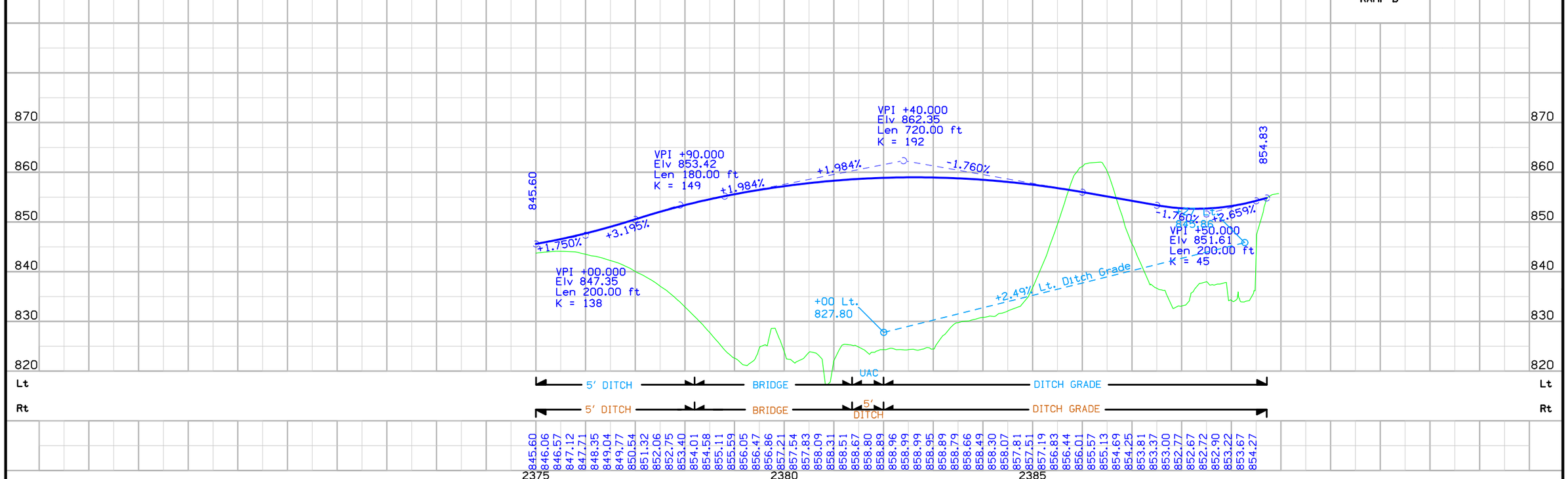

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER K.4	

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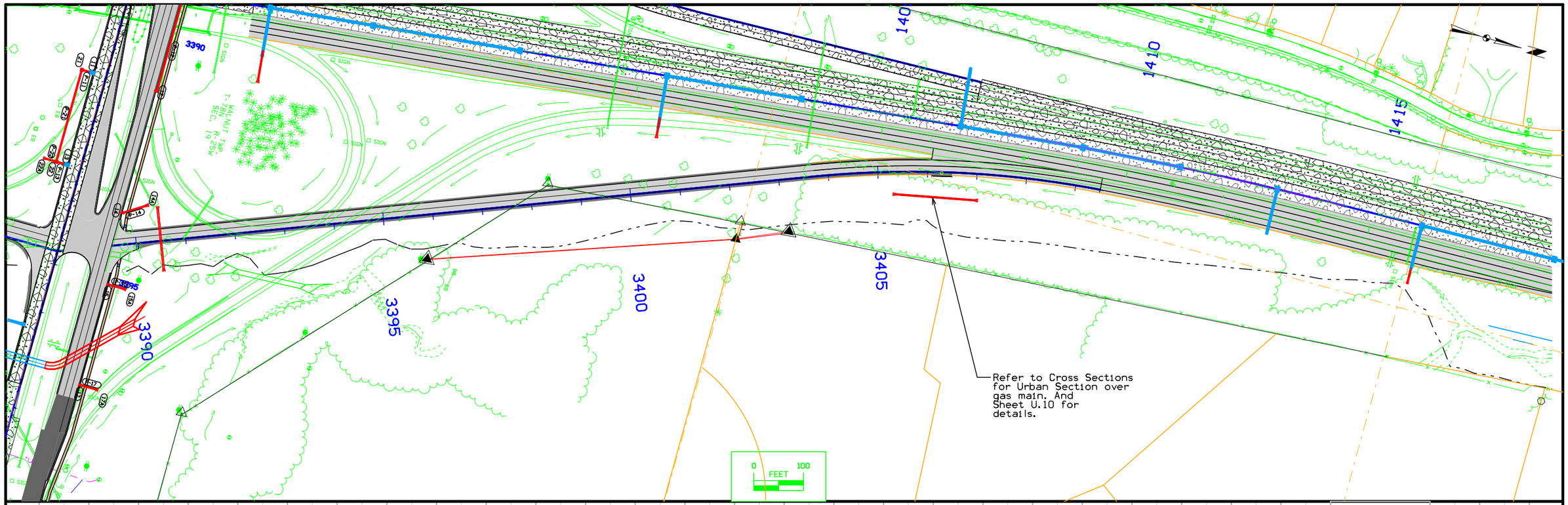
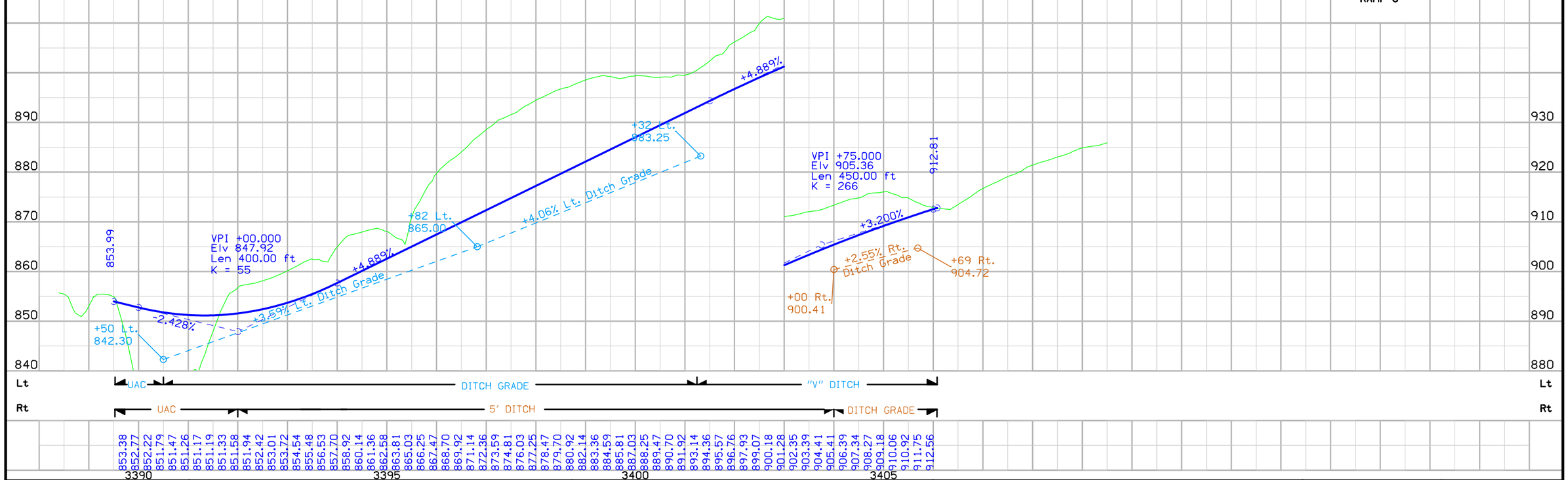


RAMP C



C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER K.5

8:46:00 AM 11/4/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365k05.sht

POLK COUNTY
WALNUT TWP.
T-78N R-25W
SEC. 30

Ramp D

Ramp B

1365
1370
1375
1380
1385
1390
4375
4380
4385
4390
2375
2380
2385

0 100
FEET

GRADING PLAN FOR GRAND AVENUE INTERCHANGE

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER K.6	

8:46:27 AM 11/4/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365k06.sht

Ramp A

Ramp C

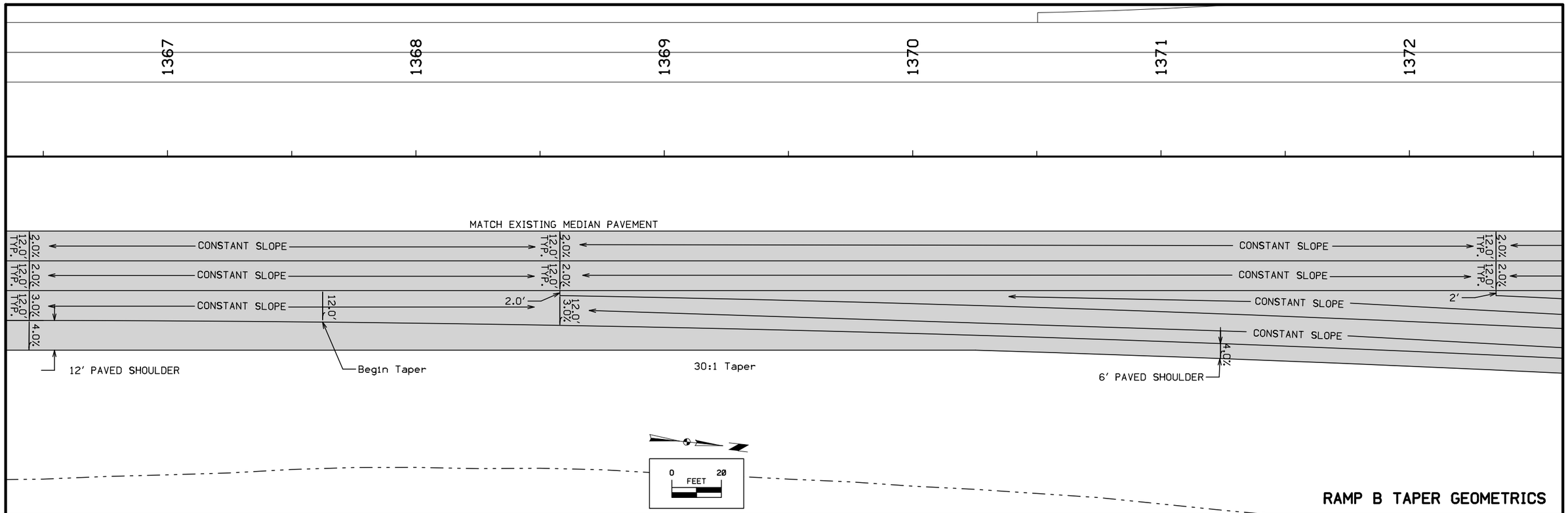
Curve Data
Δ = 3° 52' 22.09" (RT)
T = 258.30
L = 516.41
R = 7,640.00
E = 4.37

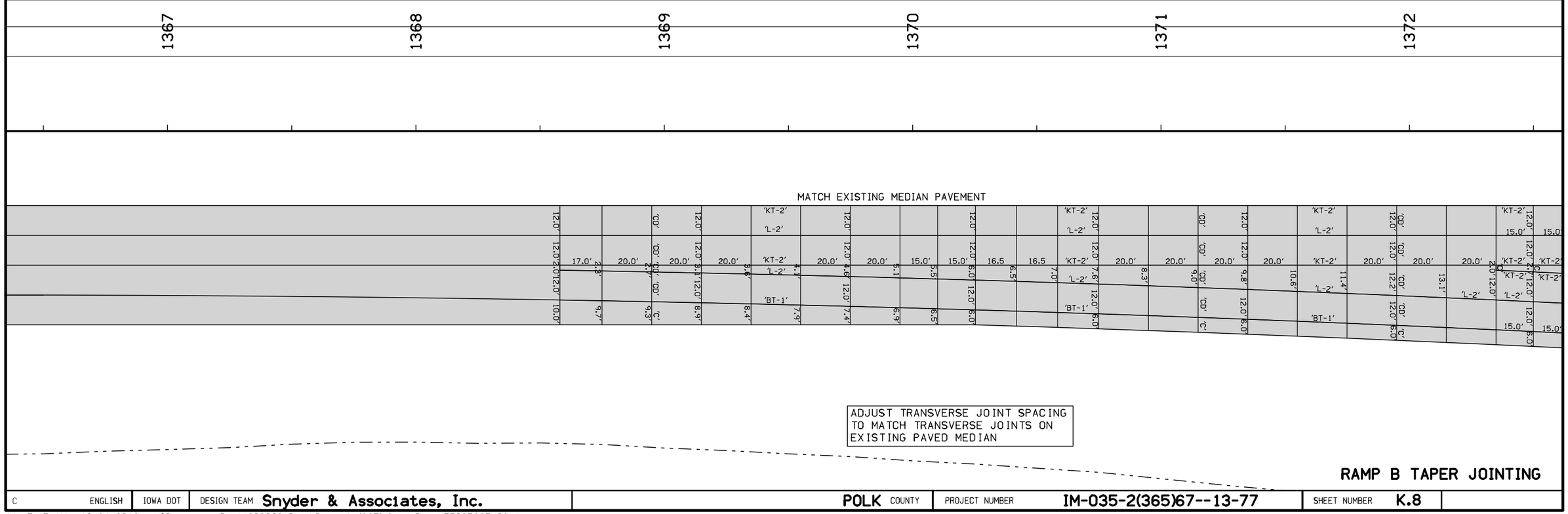
0 100
FEET

GRADING PLAN FOR GRAND AVENUE INTERCHANGE

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER K.7

8:46:50 AM 11/4/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365k07.sht





C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER K.8

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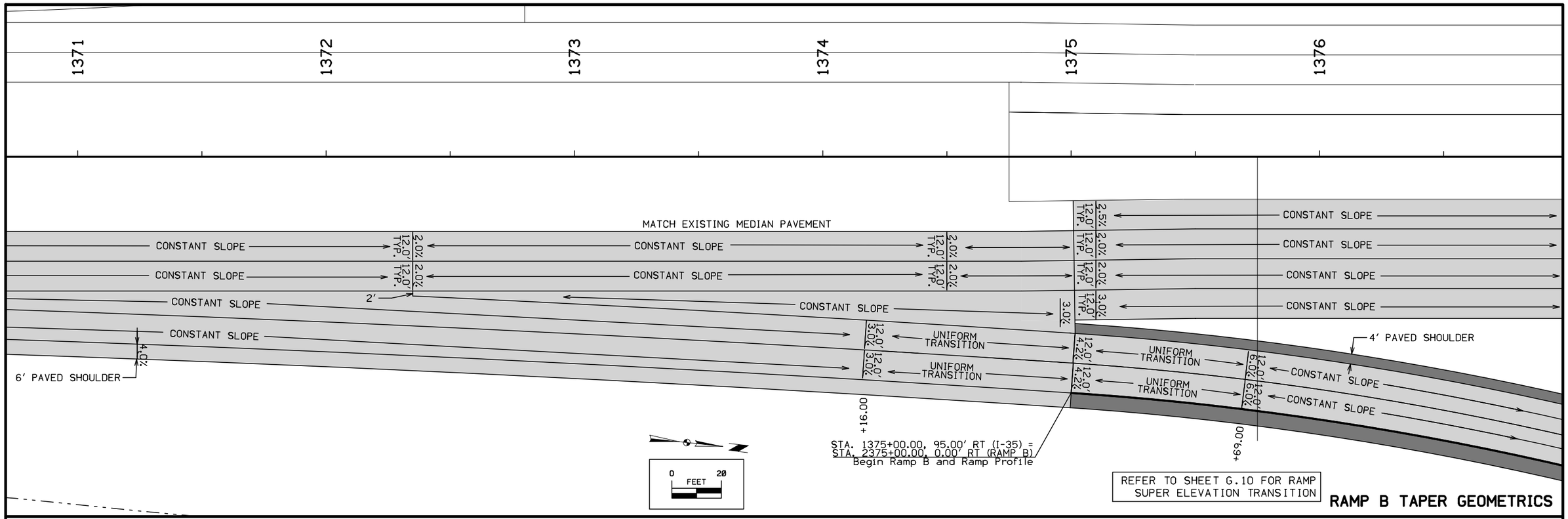

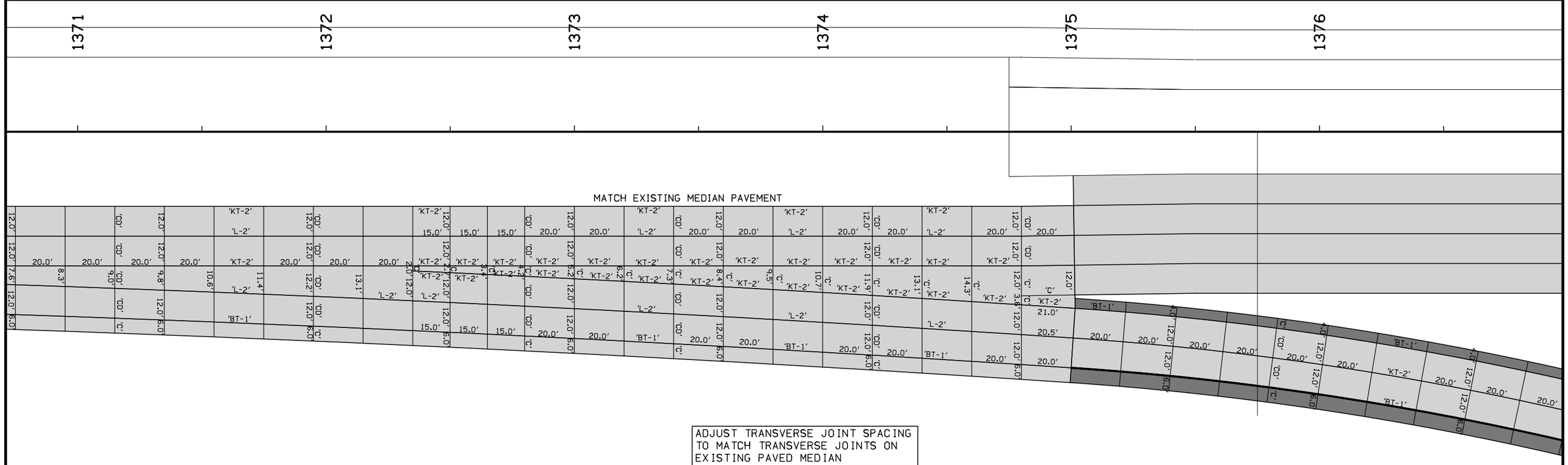

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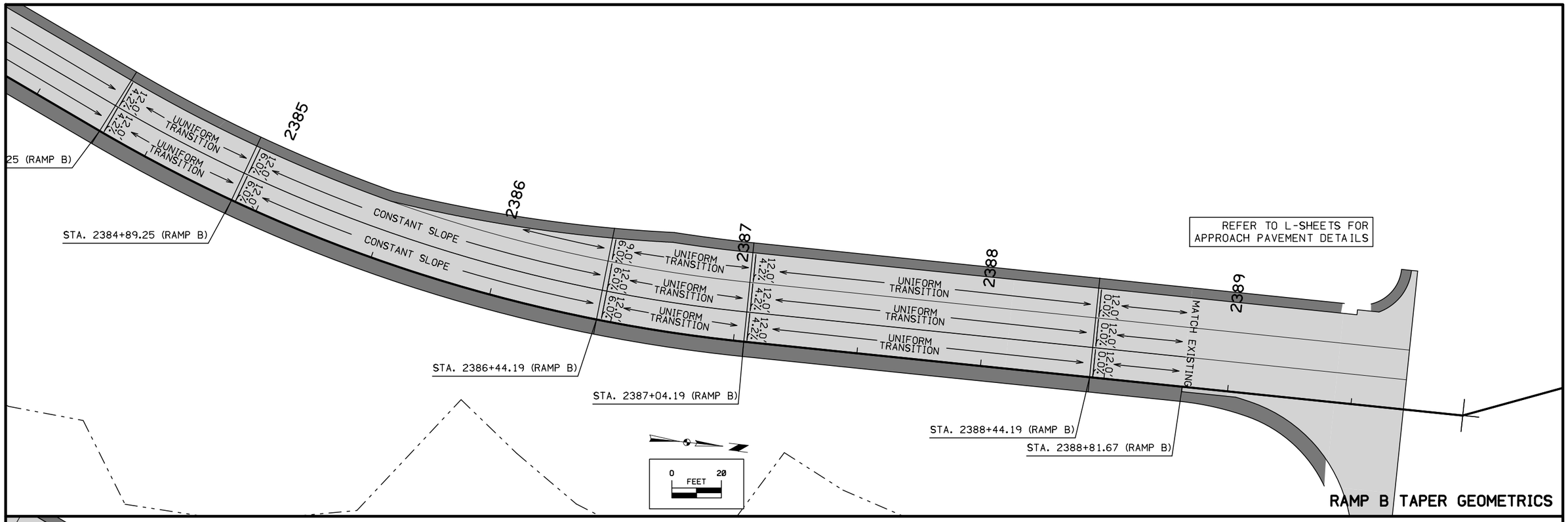
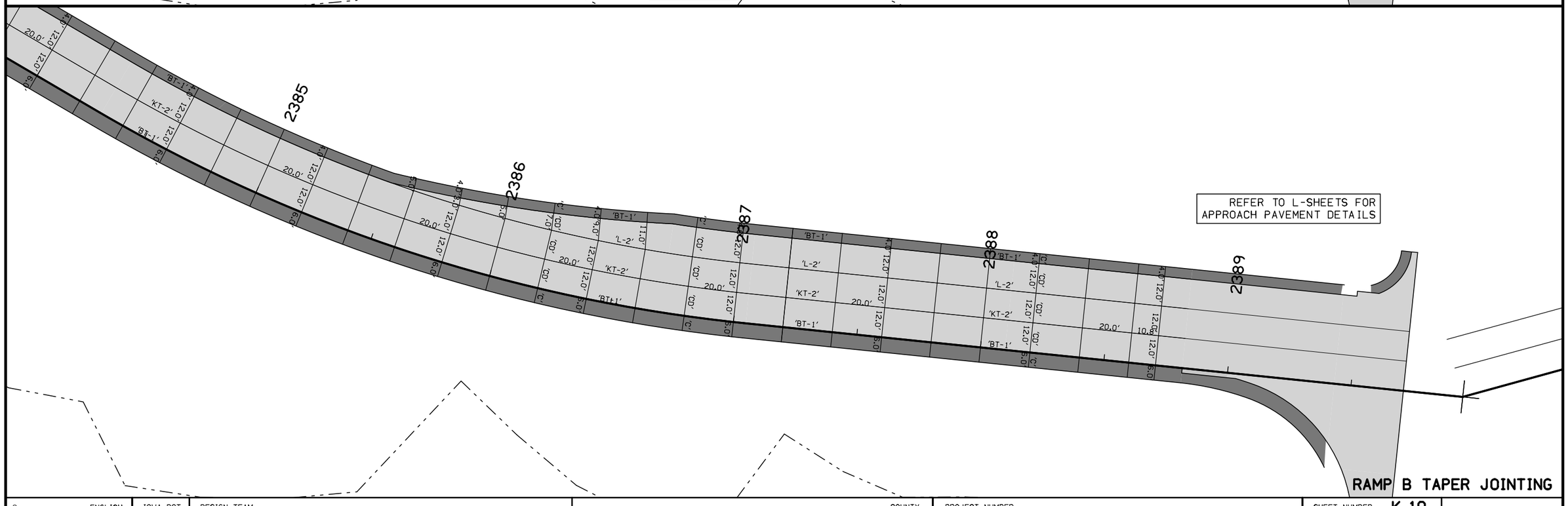


RAMP B TAPER GEOMETRICS



RAMP B TAPER JOINTING

C	ENGLISH	IOWA DOT	DESIGN TEAM		COUNTY	PROJECT NUMBER	SHEET NUMBER K.10	

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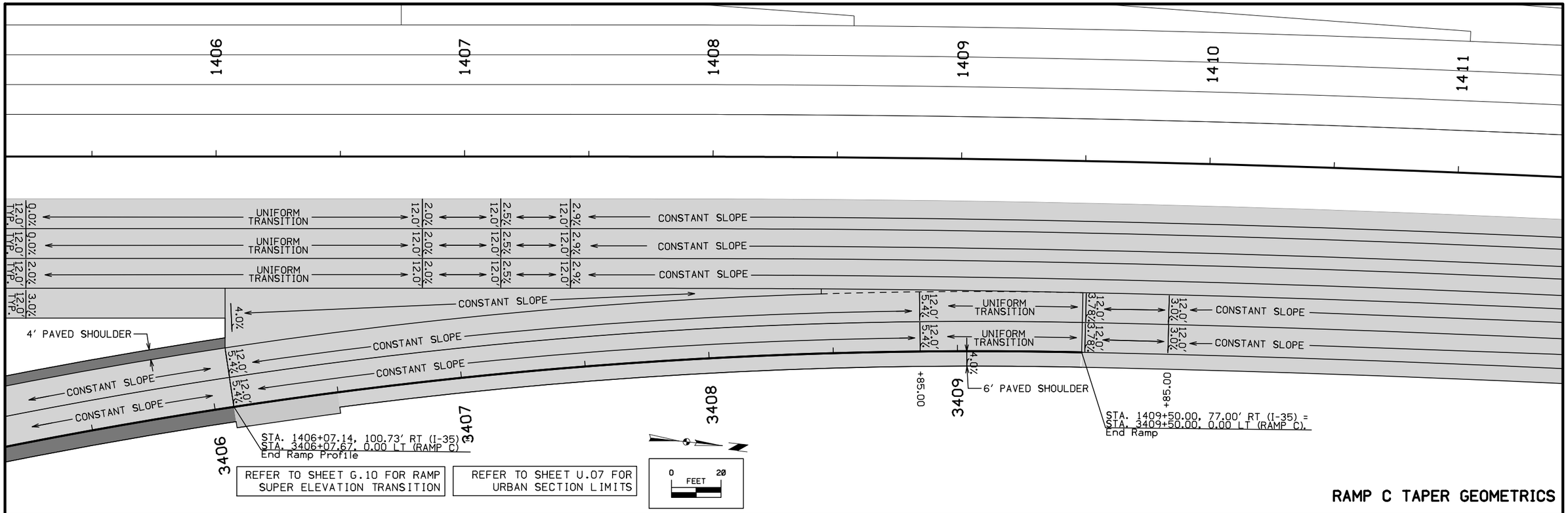
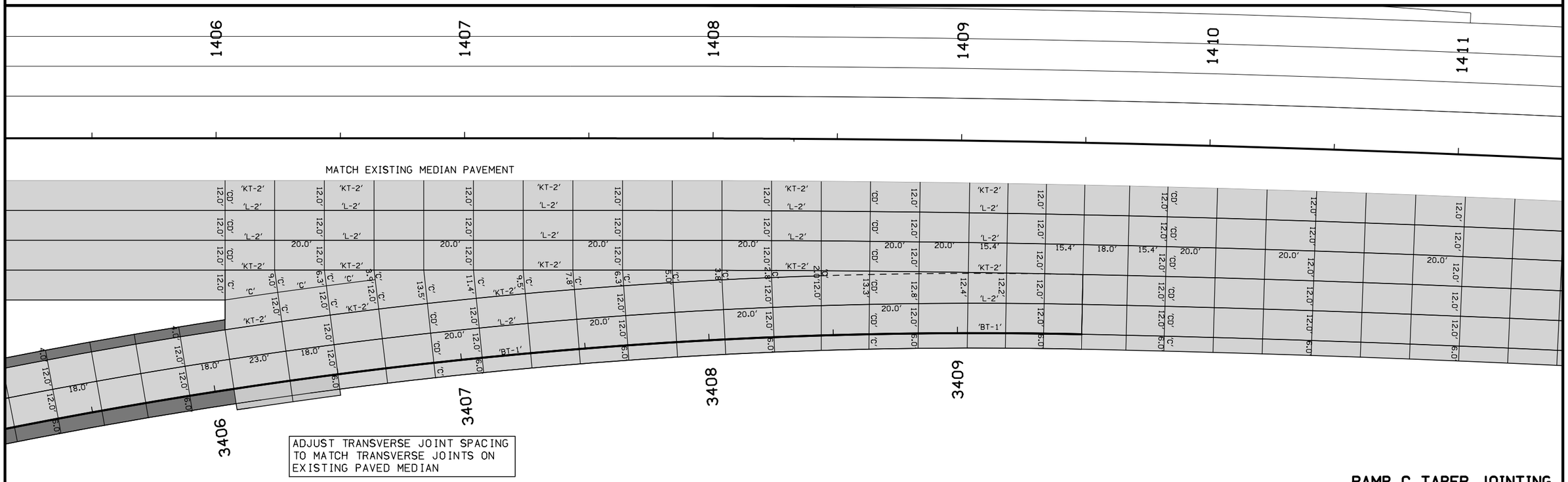


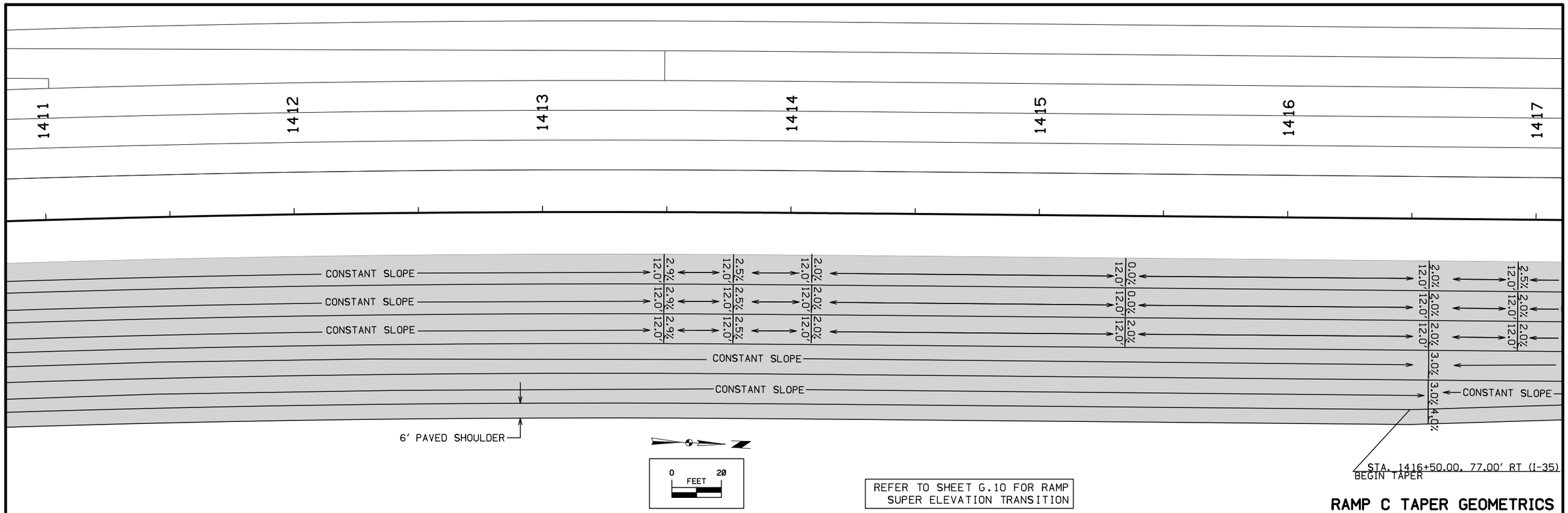
RAMP C TAPER GEOMETRICS



RAMP C TAPER JOINTING

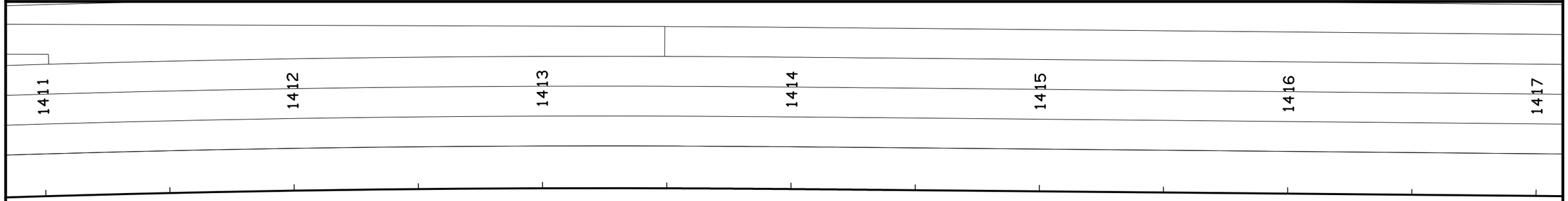
C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER K.11

2:49:23 PM 11/4/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365k11.sht



REFER TO SHEET G.10 FOR RAMP SUPER ELEVATION TRANSITION

RAMP C TAPER GEOMETRICS



ADJUST TRANSVERSE JOINT SPACING TO MATCH TRANSVERSE JOINTS ON EXISTING PAVED MEDIAN

RAMP C TAPER JOINTING

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER K.12	

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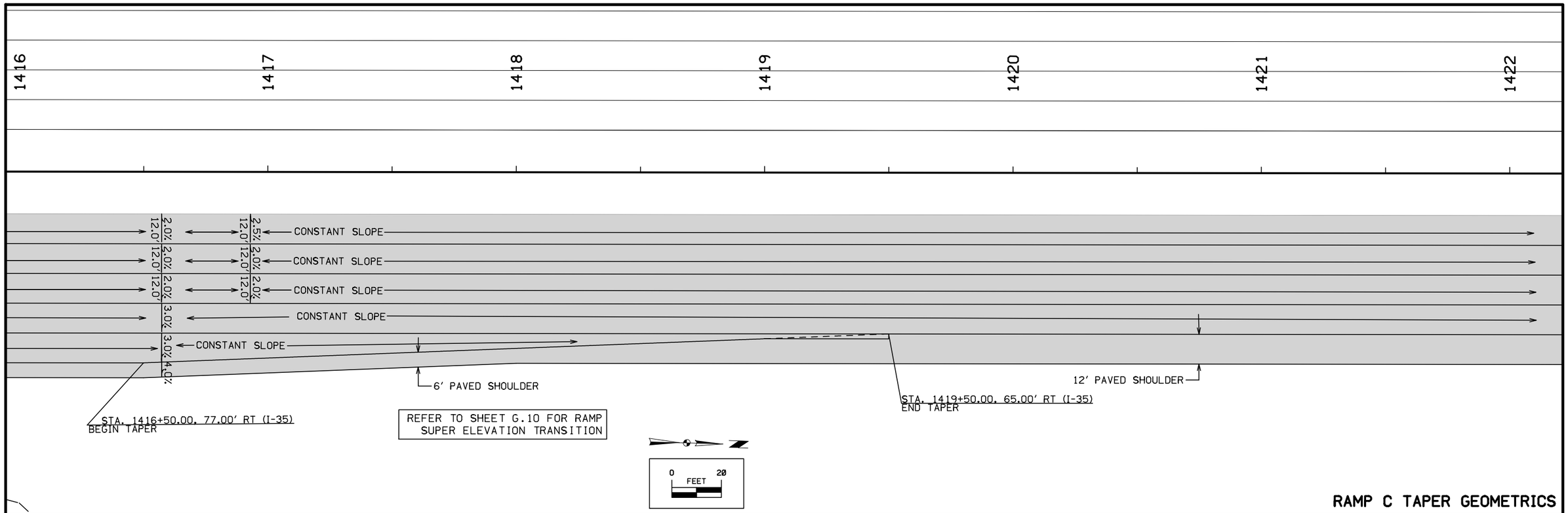
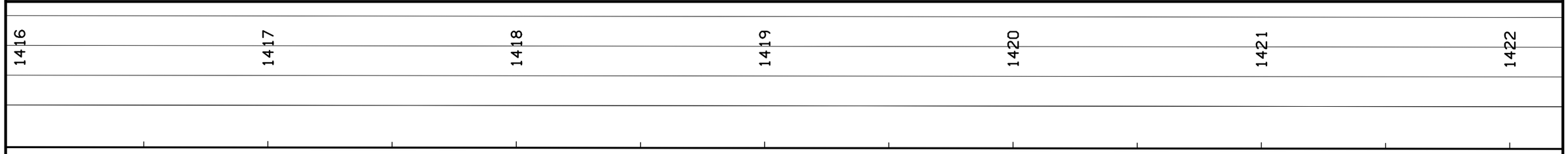
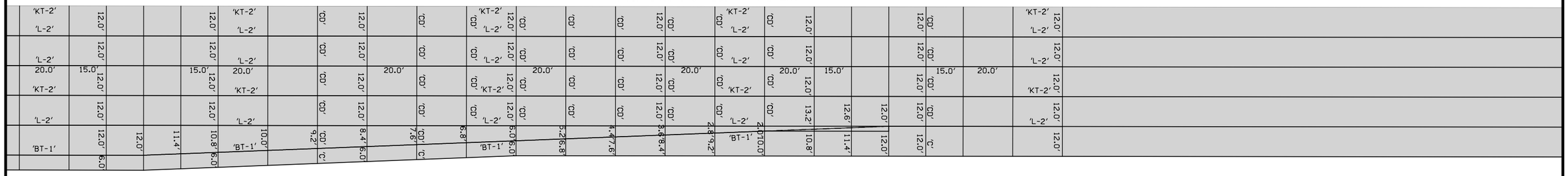


RAMP C TAPER GEOMETRICS



MATCH EXISTING MEDIAN PAVEMENT



ADJUST TRANSVERSE JOINT SPACING TO MATCH TRANSVERSE JOINTS ON EXISTING PAVED MEDIAN

RAMP C TAPER JOINTING

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER K.13	

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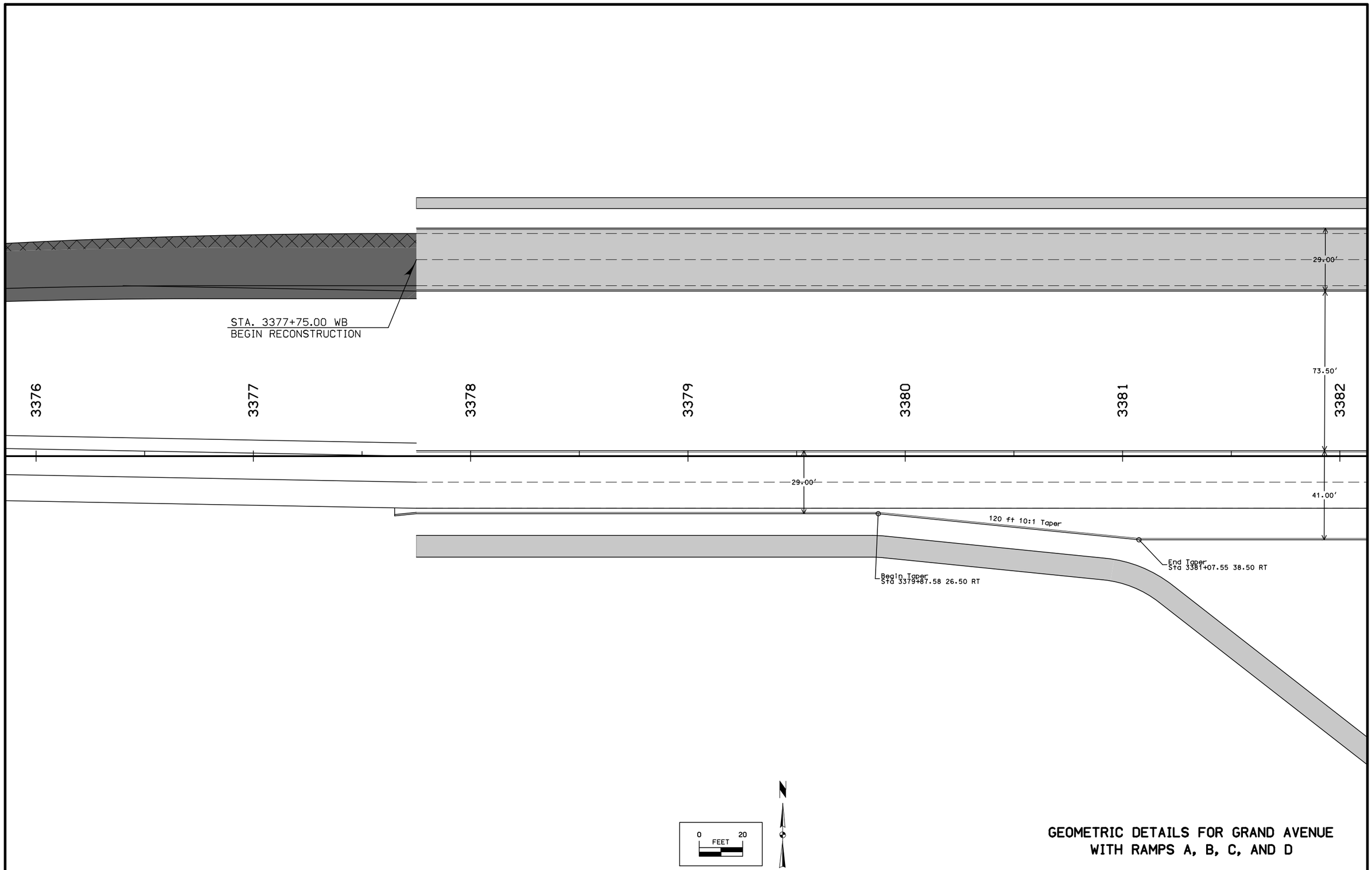
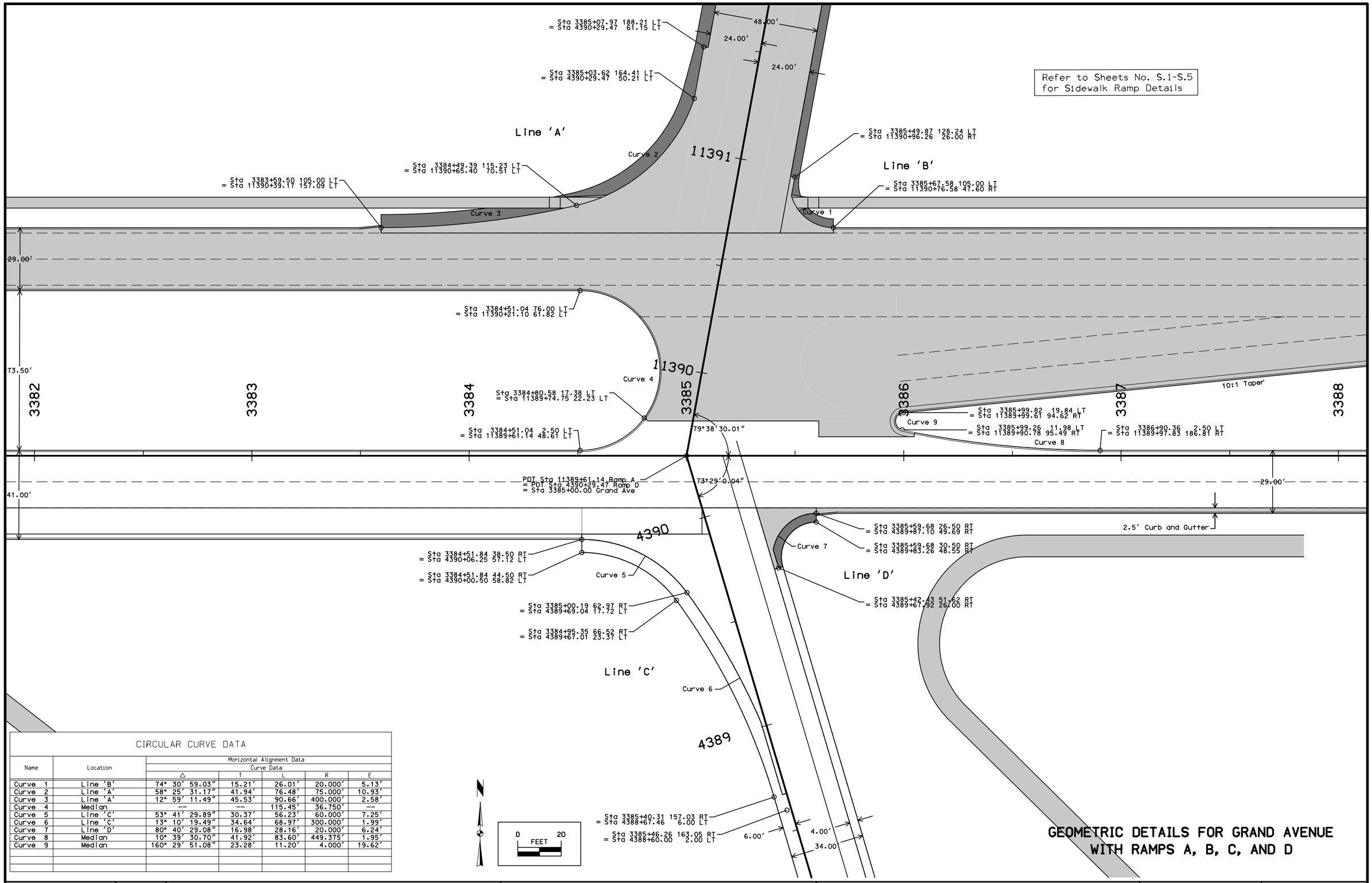


GEOMETRIC DETAILS FOR GRAND AVENUE WITH RAMPS A, B, C, AND D

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER L.1

8:20:41 AM 11/4/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365L1-L5.sht



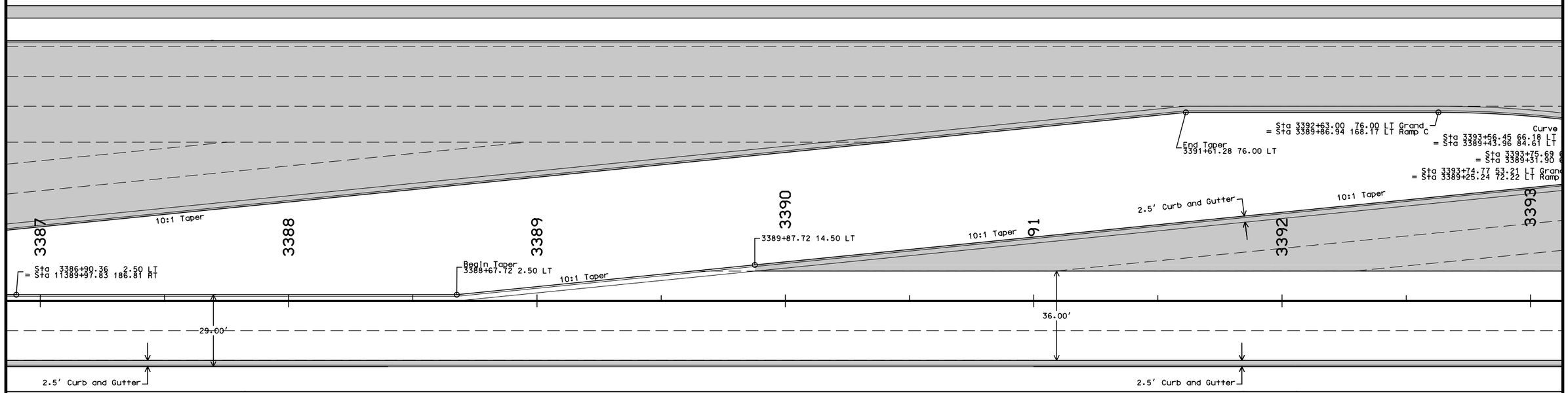
CIRCULAR CURVE DATA

Name	Location	Horizontal Alignment Data				
		Curve Data				
		△	T	L	R	E
Curve 1	Line 'B'	74° 30' 59.03"	15.21'	26.01'	20.000'	5.13'
Curve 2	Line 'A'	58° 25' 31.17"	41.94'	76.48'	75.000'	10.93'
Curve 3	Line 'A'	12° 59' 11.49"	45.53'	90.66'	400.000'	2.58'
Curve 4	Median	--	--	115.45'	36.750'	--
Curve 5	Line 'C'	53° 41' 29.89"	30.37'	56.23'	60.000'	7.25'
Curve 6	Line 'C'	13° 10' 19.49"	34.64'	68.97'	300.000'	1.99'
Curve 7	Line 'D'	80° 40' 29.08"	16.98'	28.16'	20.000'	6.24'
Curve 8	Median	10° 39' 30.70"	41.92'	83.60'	449.375'	1.95'
Curve 9	Median	160° 29' 51.08"	23.28'	11.20'	4.000'	19.62'

GEOMETRIC DETAILS FOR GRAND AVENUE WITH RAMPS A, B, C, AND D

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER L.2

8:21:06 AM 11/4/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365L1-L5.sht



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FEET

GEOMETRIC DETAILS FOR GRAND AVENUE WITH RAMPS A, B, C, AND D

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER L.3	

8:21:27 AM 11/4/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365L1-L5.sht

Refer to Sheets No. S.1-S.5
for Sidewalk Ramp Details

Sta 3394+23.00 156.55 LT
= Sta 3390+03.19 9.78 RT

Sta 3394+24.87 156.28 LT
= Sta 3390+03.19 11.78 RT

Line 'F'

Sta 3393+92.66 140.37 LT
= Sta 3390+00.01 24.00 LT

Sta 3393+93.95 131.52 LT
= Sta 3389+91.29 26.00 LT

Sta 3393+97.11 123.39 LT
= Sta 3389+82.58 26.00 LT

3390

Curve 2

Sta 3394+53.14 127.28 LT
= Sta 3389+65.93 27.64 RT

Sta 3394+86.73 117.00 LT
= Sta 3389+44.18 55.23 RT

Curve 1

Line 'E'

Curve 3

Sta 3393+77.17 105.00 LT
= Sta 3389+72.65 51.24 LT

26.50'

Sta 3392+63.00 76.00 LT Grand
= Sta 3389+86.94 168.17 LT Ramp C

End Taper
3391+61.28 76.00 LT

Curve 4

Sta 3393+56.45 66.18 LT Grand
= Sta 3389+43.96 84.61 LT Ramp C

Curve 5

Sta 3393+75.69 60.72 LT Grand
= Sta 3389+31.90 68.65 LT Ramp C

Curve 6

Sta 3393+74.77 53.21 LT Grand
= Sta 3389+25.24 72.22 LT Ramp C

Sta 3395+02.78 76.00 LT Grand
= Sta 3389+00.15 55.36 RT Ramp C

2.5' Curb and Gutter

10:1 Taper

3389

3392

3393

3394

3395

3396

3397

Curve 12

73.50'

Sta 3395+02.78 2.50 LT Grand
= Sta 3388+40.12 28.75 RT Ramp C

68°46'48.53"

90°00'00.00"

POT Sta 2389+95.19 Ramp B
= POT Sta 3388+40.12 Ramp C
= Sta 3395+72.91 Grand Ave

29.00'

2.5' Curb and Gutter

Sta 3394+16.91 26.50 RT
= Sta 2389+68.69 56.00 LT

Curve 8

Curve 11

Line 'G'

Sta 3396+10.59 26.50 RT
= Sta 2389+68.69 137.68 RT

Sta 3394+34.91 37.78 RT
= Sta 2389+57.41 38.00 LT

Curve 10

Sta 3395+15.78 41.87 RT
= Sta 2389+53.32 42.87 RT

Line 'H'

Sta 3394+34.91 46.50 RT
= Sta 2389+48.69 38.00 LT

Sta 3394+76.58 84.07 RT
= Sta 2389+11.12 3.67 RT

Curve 9

2389

Sta 3394+74.91 91.71 RT
= Sta 2389+03.48 2.00 RT

Sta 3394+36.91 113.53 RT
= Sta 2388+81.67 36.00 LT

Sta 3394+74.91 113.53 RT
= Sta 2388+81.67 2.00 RT

0 20
FEET

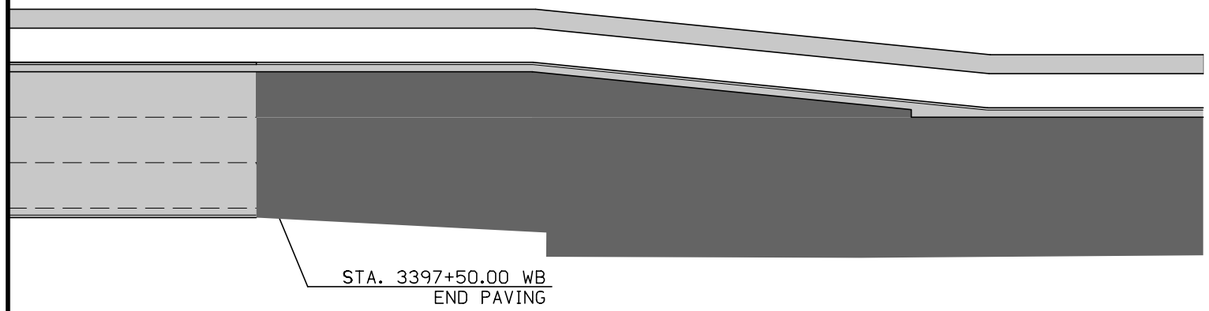
CIRCULAR CURVE DATA

Name	Location	Horizontal Alignment Data				
		Curve Data				
		△	T	L	R	E
Curve 1	Line 'F'	34° 18' 10.14"	18.52'	35.92'	60.000'	2.79'
Curve 2	Line 'F'	23° 21' 42.55"	20.67'	40.77'	100.000'	2.11'
Curve 3	Line 'E'	85° 22' 40.51"	18.45'	29.80'	20.000'	7.21'
Curve 4	Median	12° 00' 09.36"	47.24'	94.14'	449.375'	2.48'
Curve 5	Median	7° 40' 41.29"	10.02'	20.02'	149.37'	0.34'
Curve 6	Median	154° 36' 31.23"	17.21'	10.46'	4.000'	13.76'
Curve 8	Line 'G'	64° 09' 29.04"	12.54'	22.40'	20.000'	3.61'
Curve 9	Line 'H'	3° 44' 5.60"	3.91'	7.82'	120.000'	0.06'
Curve 10	Line 'H'	57° 22' 1.90"	32.83'	60.07'	60.000'	8.39'
Curve 11	Line 'H'	18° 25' 21.37"	48.65'	96.46'	300.00'	3.92'
Curve 12	Median	--	--	115.45'	36.750'	--

GEOMETRIC DETAILS FOR GRAND AVENUE WITH RAMPS A, B, C, AND D

C	ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER L.4

8:21:46 AM 11/4/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365L1-L5.sht



3397 3398 3399 3400 3401 3402 3403

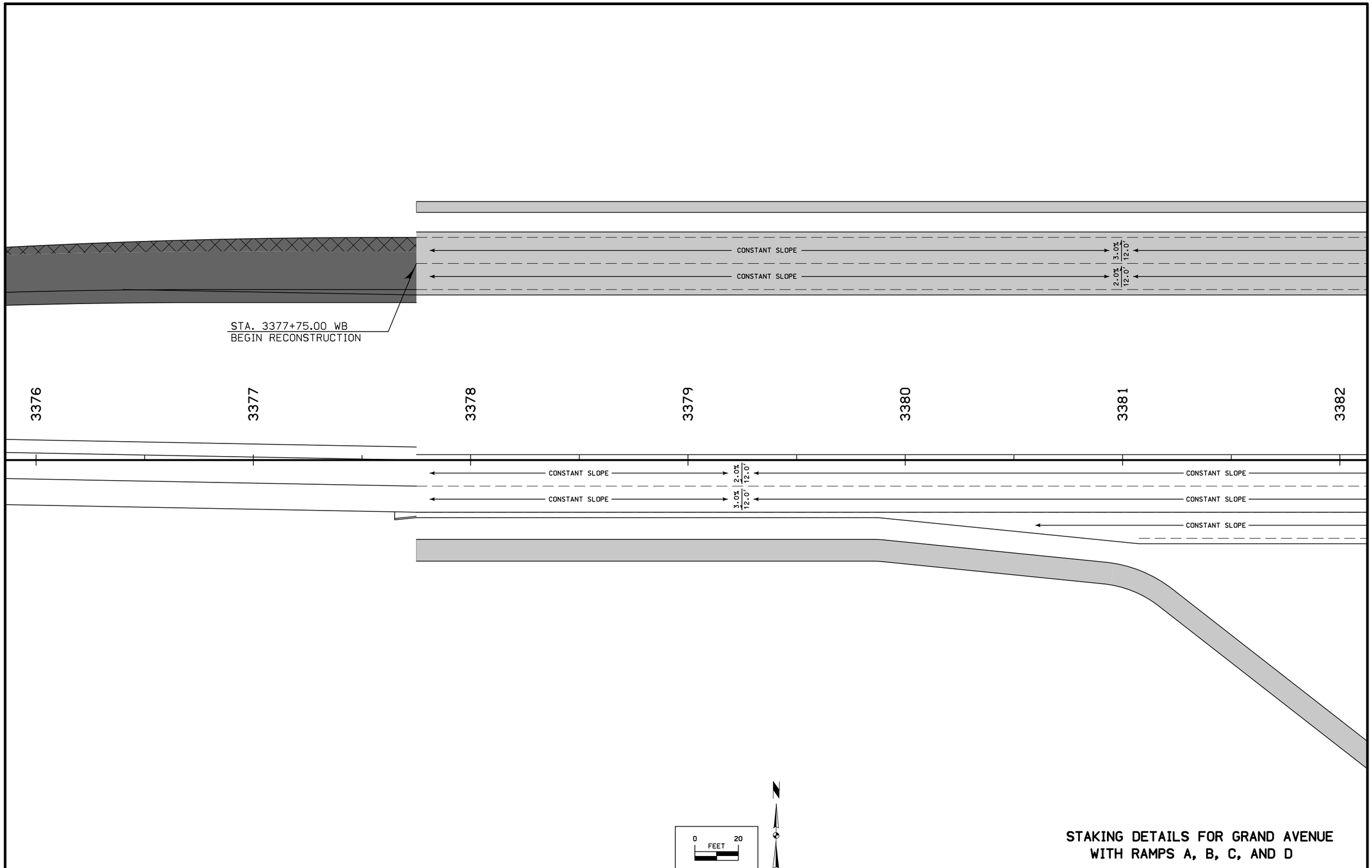
0 20
FEET

N

GEOMETRIC DETAILS FOR GRAND AVENUE
WITH RAMPS A, B, C, AND D

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER L.5

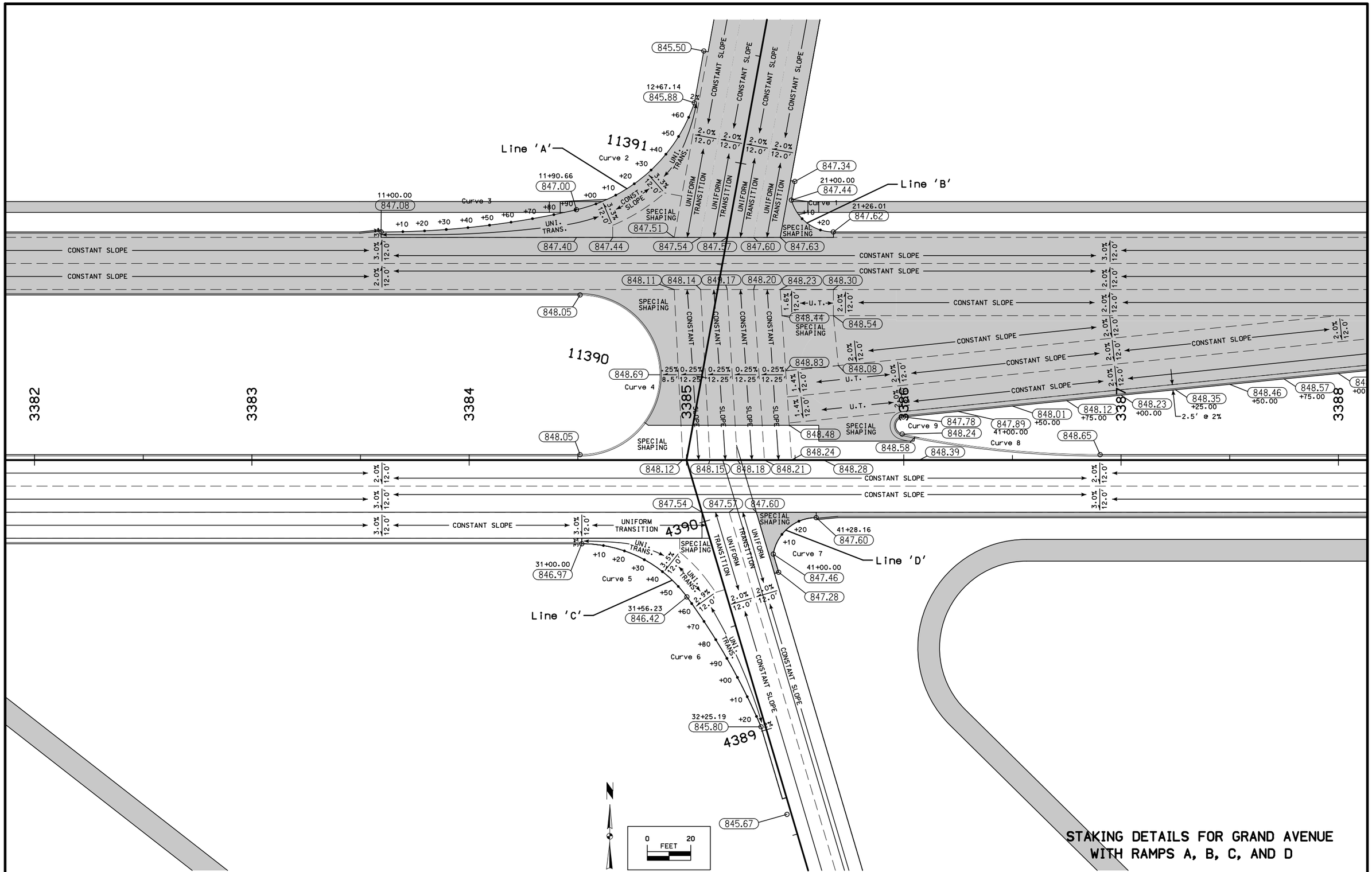
8:22:13 AM 11/4/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365L1-L5.sht



STAKING DETAILS FOR GRAND AVENUE WITH RAMPS A, B, C, AND D

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER L.6

8:32:21 AM 11/4/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365L6-L10.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER L.7

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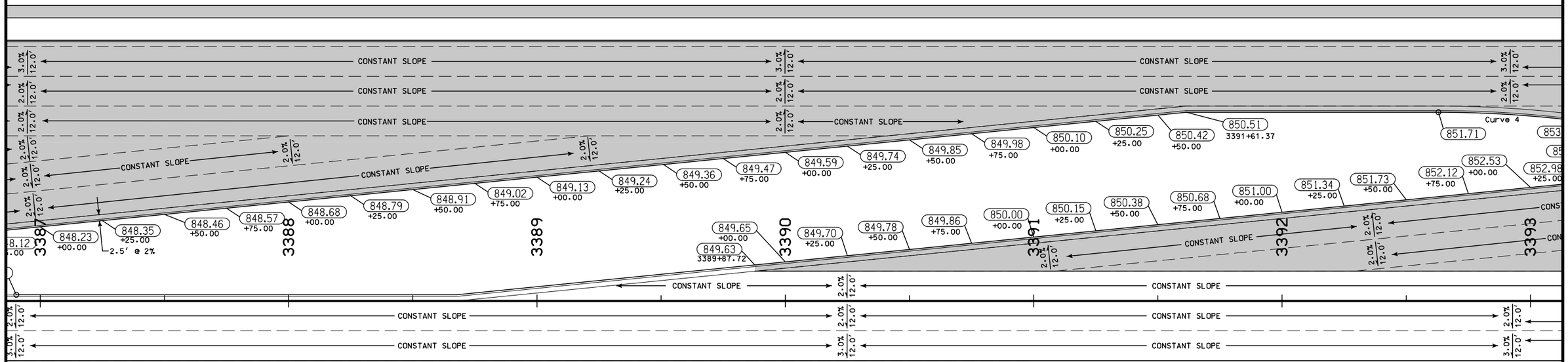

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FEET

STAKING DETAILS FOR GRAND AVENUE WITH RAMPS A, B, C, AND D

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER L.8

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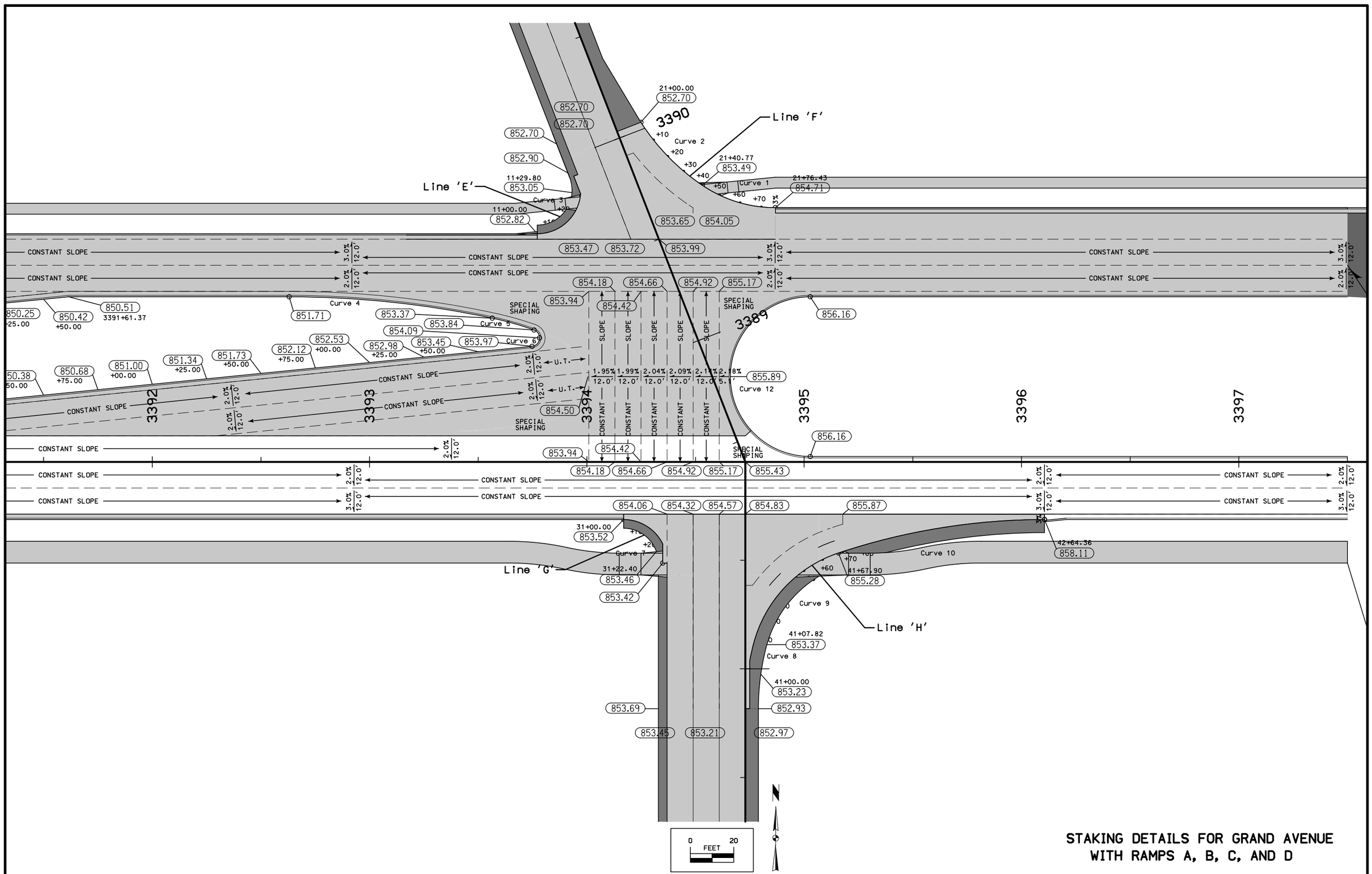

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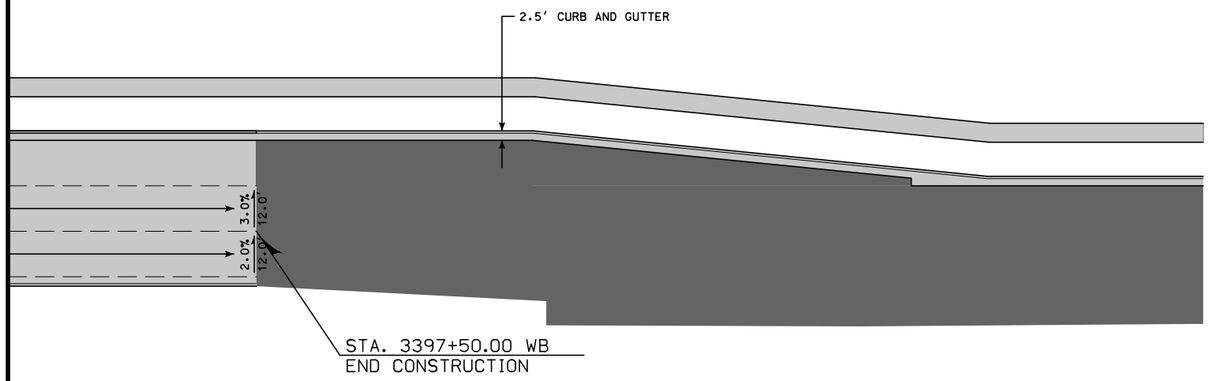

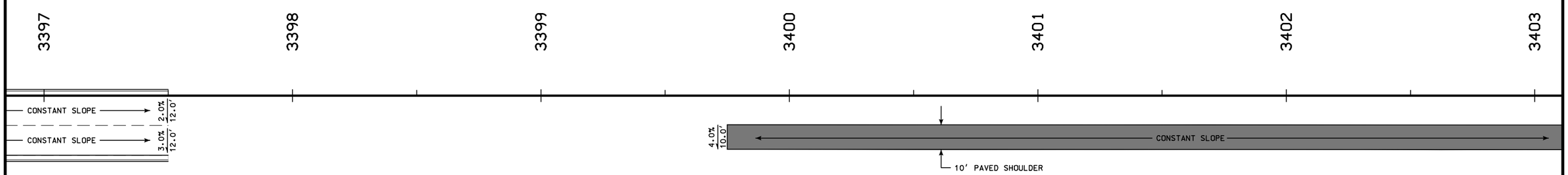

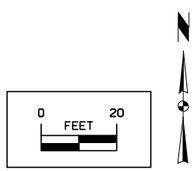

STAKING DETAILS FOR GRAND AVENUE WITH RAMPS A, B, C, AND D

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER L.10

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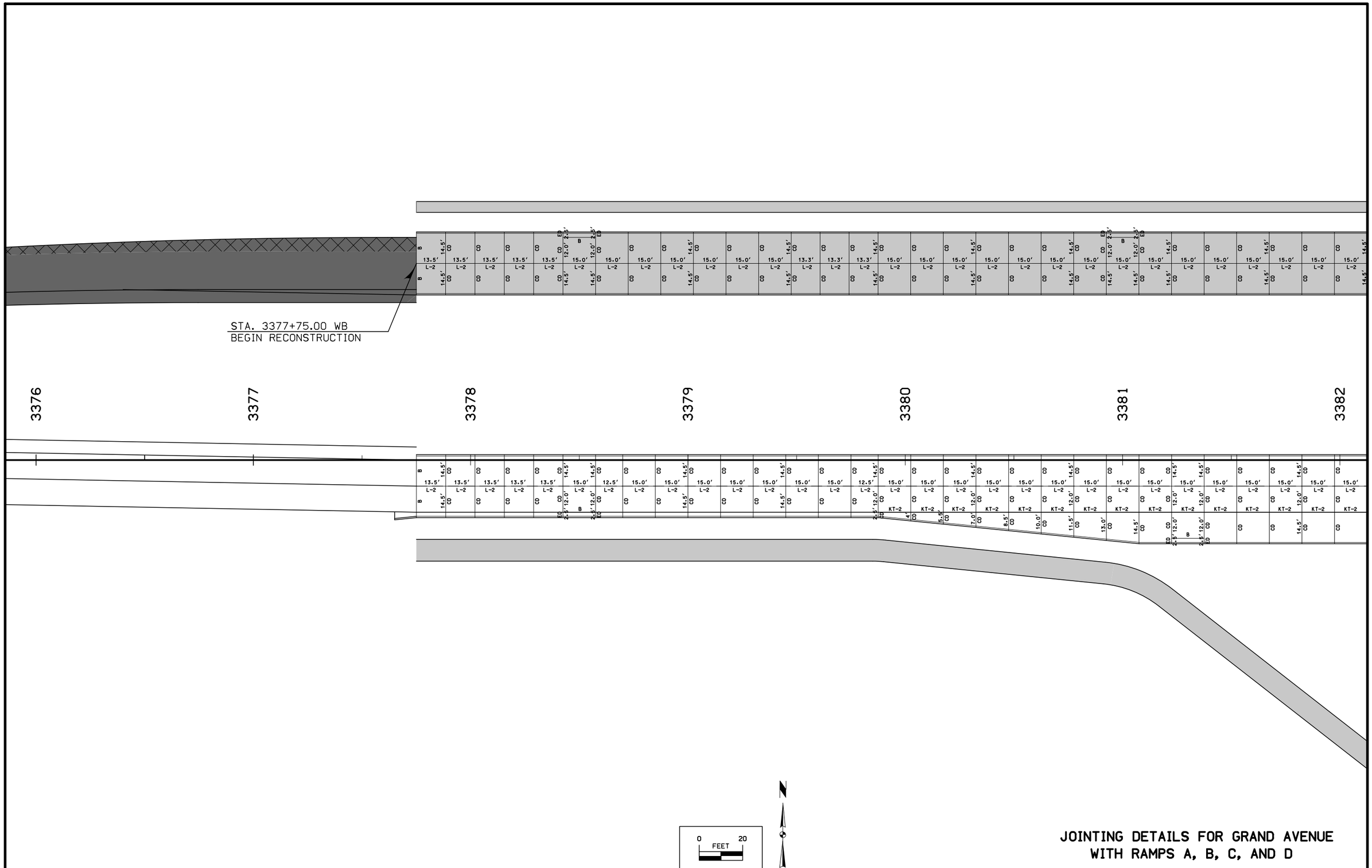

JOINTING DETAILS FOR GRAND AVENUE
WITH RAMPS A, B, C, AND D

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER L.11

11:52:16 AM 10/31/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365L11-L15.sht

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0 FEET 20

JOINTING DETAILS FOR GRAND AVENUE
WITH RAMPS A, B, C, AND D

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER L.12	

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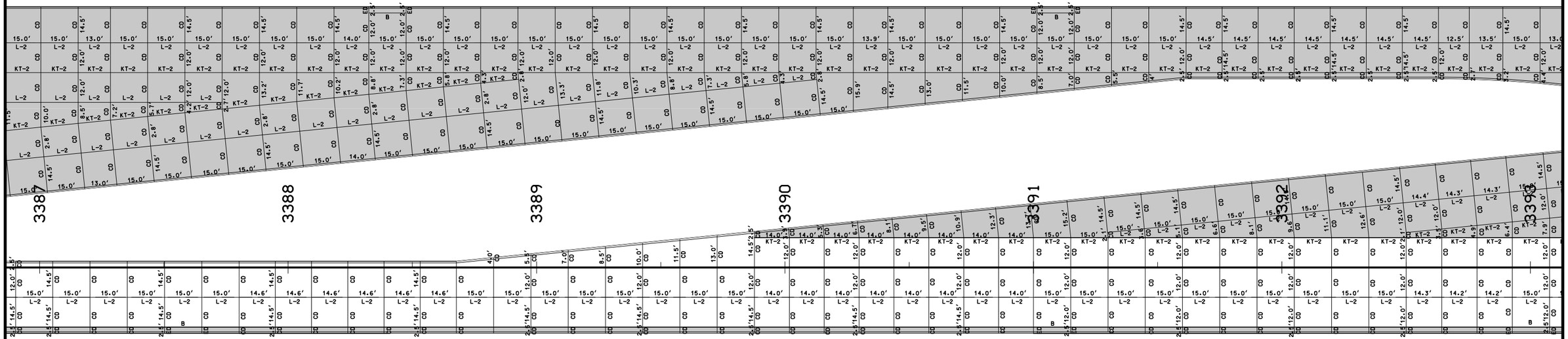

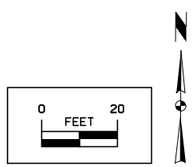

JOINTING DETAILS FOR GRAND AVENUE
WITH RAMPS A, B, C, AND D

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER L.13	

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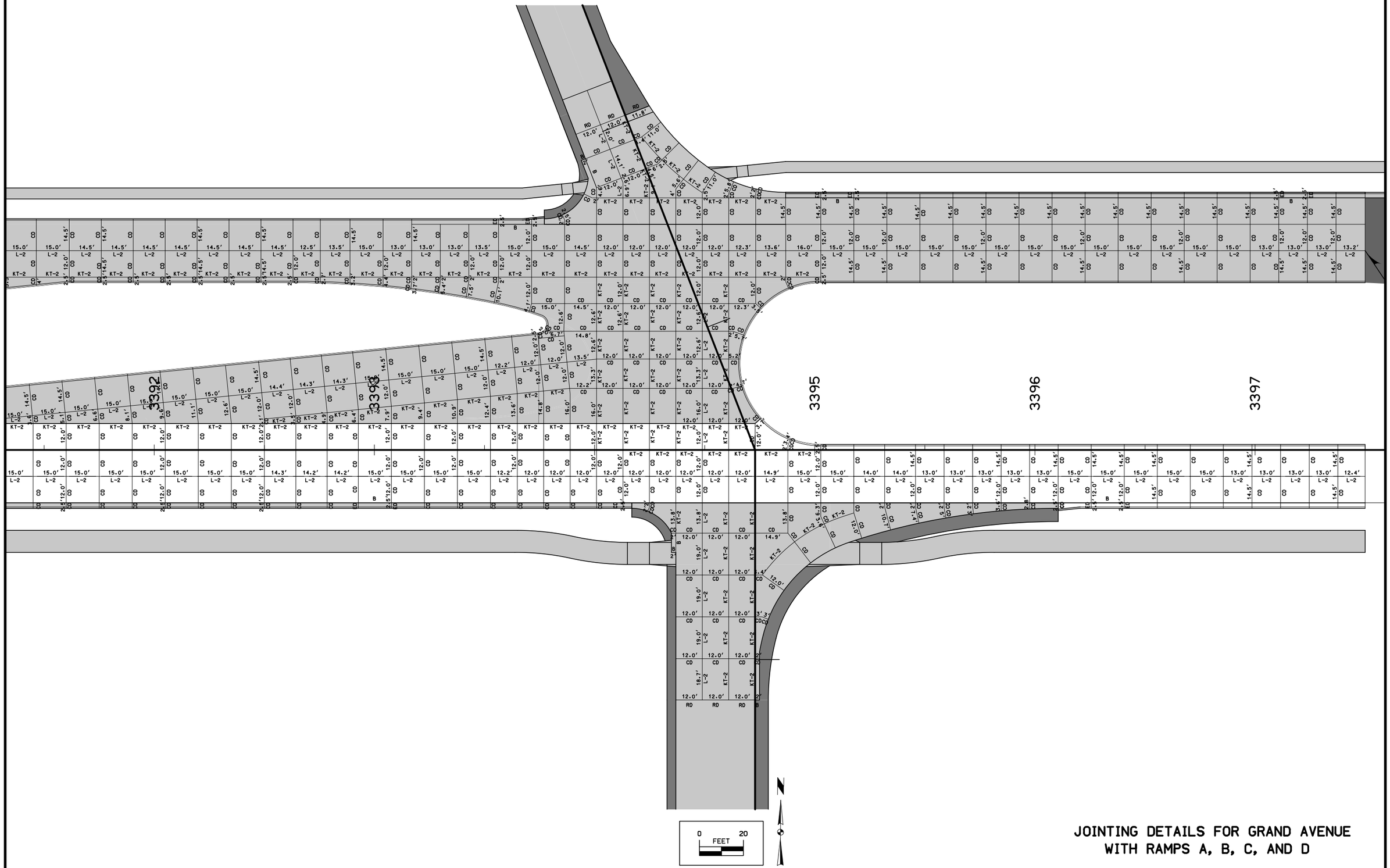

JOINTING DETAILS FOR GRAND AVENUE
WITH RAMPS A, B, C, AND D

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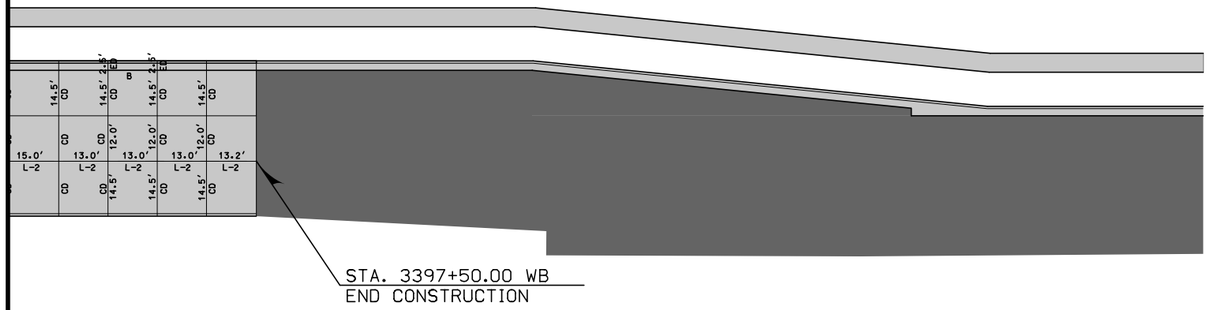
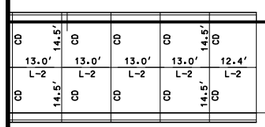
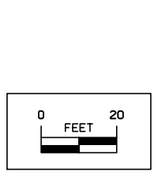


3397 3398 3399 3400 3401 3402 3403





JOINTING DETAILS FOR GRAND AVENUE
WITH RAMPS A, B, C, AND D

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER L.15

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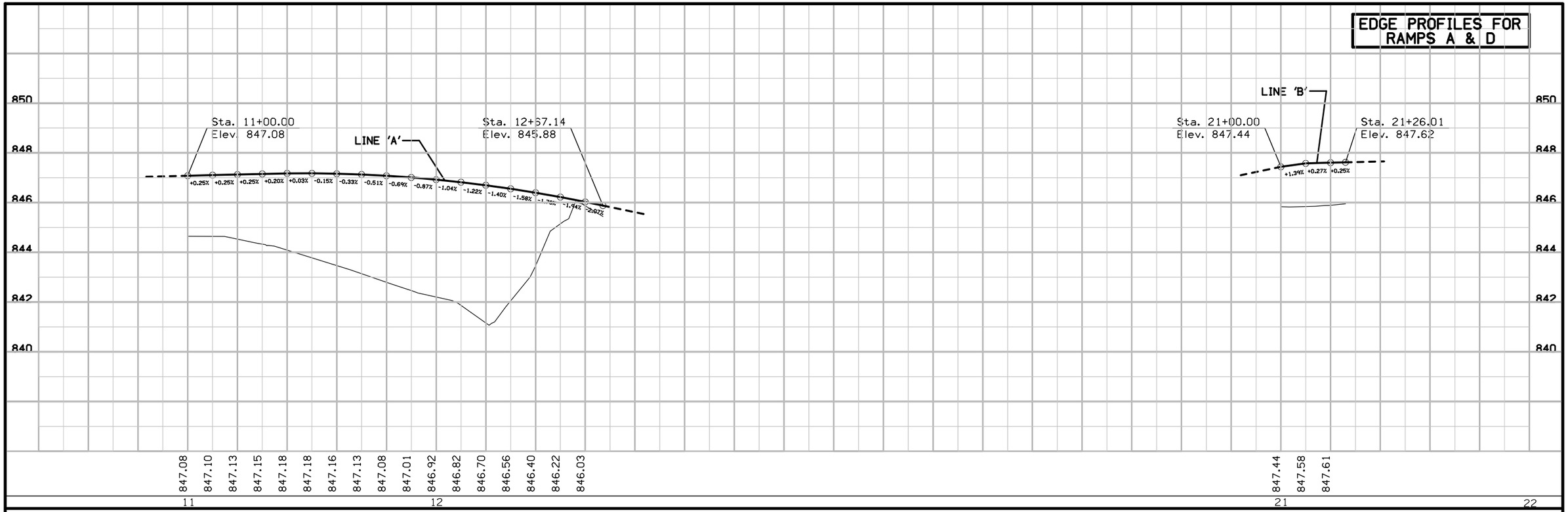
EDGE PROFILES FOR RAMPS A & D



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EDGE PROFILES FOR RAMPS B & C

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER L.17	

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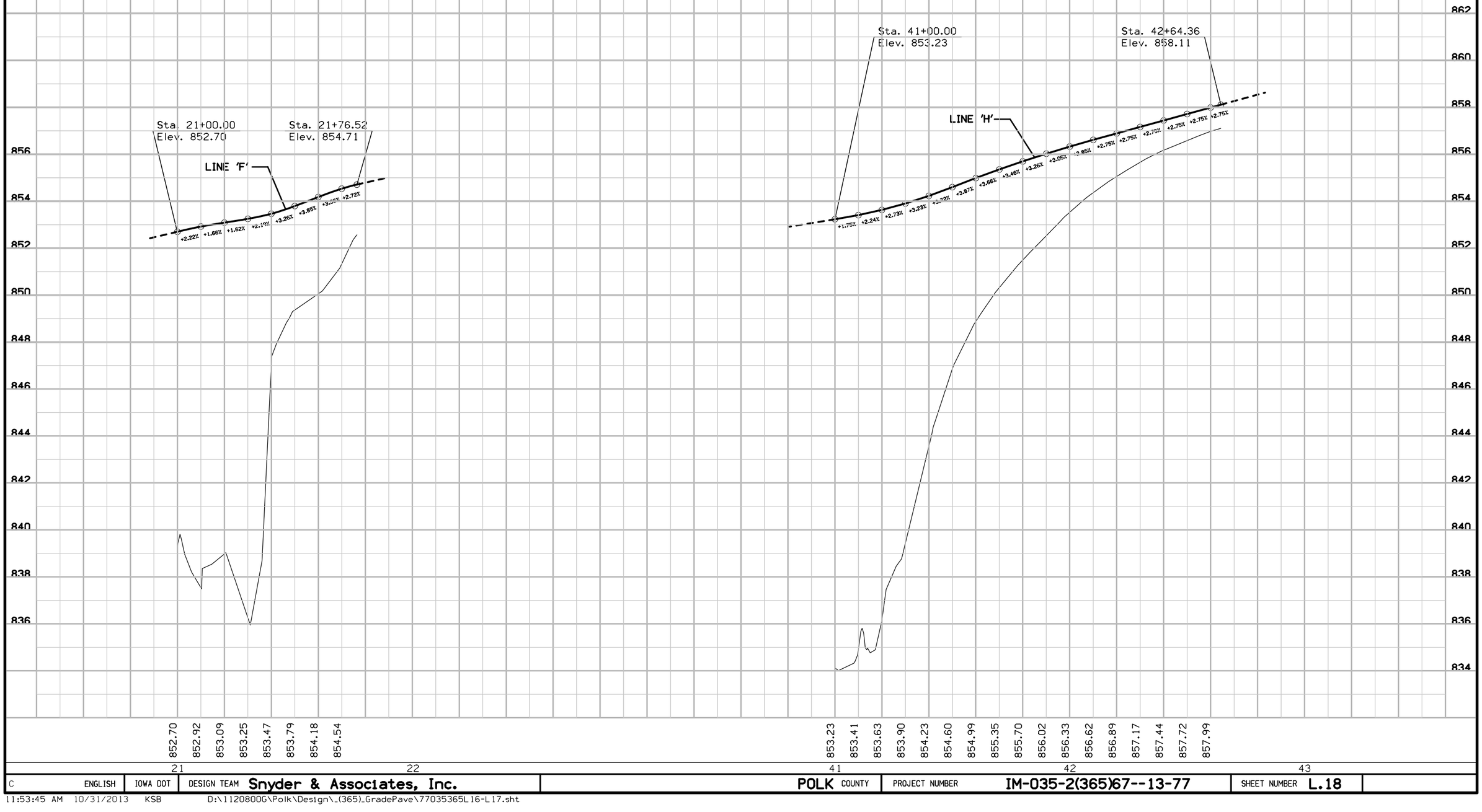
EDGE PROFILES FOR RAMPS B & C



C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER L.18	

11:53:45 AM 10/31/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365L16-L17.sht

STORM SEWER

* Bid Item

INTAKES AND UTILITY ACCESSES

No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade Elev.	Bottom Well Elev.	Extension Length** FT	Notes
I-2	3378+50, 105' Lt	SW-503	843.94	838.94		NOTE 5
I-2A	3378+50, 146' Lt	RF-3 (24")	836.53			
I-3	3381+00, 105' Lt	SW-503	845.70	840.70		NOTE 5
	3381+00, 122.5' Lt					
I-3A	3381+00, 167.5' Lt	RF-5 (24")	831.26			
I-5	3383+52, 105' Lt	SW-503	847.09	842.09		NOTE 5
	3383+52, 122.5' Lt					
1-5A	3383+52, 156.5' Lt	RF-5 (24")	836.26			
I-7	3385+83, 26.5' Rt	SW-503	847.66	841.66		TOP ONLY
I-12	3391+09, 105' Lt	SW-503	849.32	844.86		NOTE 5
I-10	3388+40, 105' Lt	SW-503	848.30	843.50		NOTE 5
I-23	3386+08, 20.7' Lt	SW-501	847.70	842.70		
I-24	3386+08, 108' Lt	SW-402	848.27	842.27		
I-8	3385+75, 105' Lt	SW-503	847.64	841.64		NOTE 5
I-8A	3385+95, 144' Lt	RF-3 (24")	841.09			
I-9	3387+58, 26.5' Rt	SW-503	848.09	842.39		TOP ONLY
I-11	3391+08, 26.5' Rt	SW-503	849.31	844.31		TOP ONLY
I-21	3391+08, 50.0' Rt	SW-402	850.65	844.10		
I-13	3393+00, 26,5' Rt	SW-503	851.53	846.53		TOP ONLY
I-22	3393+00, 50.0' Rt	SW-403	852.85	843.60		
I-22A	3393+00, 74' Rt	RF-3 (24")	843.00			
I-14	3393+63, 105' Lt	SW-503	852.58	846.58		NOTE 5
I-14A	3393+35, 150' Lt	RF-3 (24")	843.49			
I-15	3395+10, 117' Lt	SW-503	855.26	850.26		NOTE 5
I-15A	3395+10, 154' Lt	RF-3 (24")	849.32			
I-17	3397+20, 117' Lt	SW-503	861.07	856.07		NOTE 5
I-17A	3397+20, 154' Lt	RF-3 (24")	855.08			

TOTALS	Each
RF-3	6
RF-5	2
SW-501	1
SW-503	9
SW-402	2
SW-403	1
SW-503 (Top Only)	4

NOTES

1. TWO 15° CMP ELBOWS, A=17', B=27', C=2', E=15', L=3.5'
2. TWO 15° CMP ELBOWS, A=17', B=15', C=2', E=15', L=3.5'
3. UN-COVER AND UN-PLUG EXISTING. INSTALL 13' INTO I-21
4. UN-COVER AND UN-PLUG EXISTING. INSTALL 13' INTO I-22
5. STRUCTURE WELLS HAVE ALREADY BEEN MADE. CONTRACTOR SHALL PICK UP FROM GRIMES FIELD OFFICE AND INSTALL ONLY.

PIPES

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

Line Number	Intake/ Utility Access No. From	To	Class 'D'	Pipe Diameter IN	Bid* Length FT	Design Length FT	Slope %	Flow Lines Inlet Elevation	Outlet Elevation	Other Elevation	Pipe Profile Sheet No.	Notes
P-2	I-2	I-2A	2000D	24	41	38	7.65	839.44	836.53		M.3	
P-3	I-3	P-3A	2000D	24	17	14	5.10	841.20	840.49		M.3	NOTE 1
P-3A	P-3	I-3A	CMP	24	44	44	VARIES	840.49	831.26		M.3	
P-5	I-5	P-5A	2000D	24	17	14	5.10	842.59	841.88		M.3	NOTE 2
P-5A	P-5	I-5A	CMP	24	35	35	VARIES	841.88	836.26		M.3	
P-12	I-12	I-10	2000D	24	269	263	0.40	845.36	844.30		M.3	
P-10	I-10	I-24	2000D	24	232	226	0.35	844.00	843.20		M.3	
P-23	I-23	I-24	2000D	24	90	84	0.54	843.66	843.20		M.4	
P-24	I-24	I-8	2000D	24	34	28	0.54	843.10	842.95		M.3	
P-8	I-8	I-8A	2000D	24	46	40	2.60	842.14	841.09		M.3	
												NOTE 3
P-11	I-11	I-21	2000D	24	16	13	0.50	844.78	844.70	844.81	M.4	NOTE 4
P-21	I-21	I-22	2000D	24	192	186	0.20	844.60	844.22		M.4	
P-13	I-13	I-22	2000D	24	16	13	2.00	846.91	846.67	847.03	M.4	
P-22	I-22	I-22A	2000D	24	21	18	5.24	844.10	843.00		M.4	
P-14	I-14	I-14A	2000D	24	53	50	7.16	847.08	843.49		M.4	
P-15	I-15	I-15A	2000D	24	36	33	4.33	850.75	849.32		M.4	
P-17	I-17	P-17A	2000D	24	36	33	4.5	856.57	855.08		M.4	

TOTALS	LF
RCP	1116
CMP	79

SURVEY SYMBOLS

UTILITY LEGEND

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
Survey Line
Station
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)

THE CONTRACTOR SHALL VERIFY THE EXISTING PIPE ELEVATIONS IN THE FIELD TO ENSURE PROPER DRAINAGE BEFORE CONNECTING NEW PIPE INTO IT.

I-2
SW-503
Sta. 3378+50, 105.00' LT
FG= 843.94
BW= 838.94

I-2A
RF-3
Sta. 3378+50, 146.00' LT
FL= 836.53

P-2
24" 2000D RCP
38.00 FT
Slope: 7.65%

FL 839.44
FL 836.53

I-3
SW-503
Sta. 3381+00, 105.00' LT
FG= 845.70
BW= 840.70

P-3
24" 2000D RCP
14.00 FT
Slope: 5.1%

FL 841.20
FL 840.49

P-3A
24" CMP
44.00 FT
Slope: Varies

FL 831.98
FL 831.26

I-3A
RF-5
Sta. 3381+00, 167.50' LT
FL= 831.26

I-5
SW-503
Sta. 3383+52, 105.00' LT
FG= 847.09
BW= 842.09

P-5
24" 2000D RCP
14.00 FT
Slope: 5.1%

FL 842.59
FL 841.80

P-5A
24" CMP
35.00 FT
Slope: Varies

FL 836.99
FL 836.26

I-5A
RF-5
Sta. 3383+52, 156.50' LT
FL= 836.26

I-8
SW-503
Sta. 3385+75, 105.00' LT
FG= 847.64
BW= 841.64

I-8A
RF-3
Sta. 3385+95, 144' LT
FL= 841.09

P-8
24" 2000D RCP
40.00 FT
Slope: 2.60%

FL 841.09
FL 842.14
FL 842.95

I-24
SW-402
Sta. 3386+08, 108.00' LT
FG= 848.27
BW= 842.27

P-24
24" 2000D RCP
28.00 FT
Slope: 0.54%

FL 843.10
FL 843.20
FL 843.20

P-10
24" 2000D RCP
226.00 FT
Slope: 0.35%

I-10
SW-503
Sta. 3388+40, 105.00' LT
FG= 848.30
BW= 843.50

FL 844.00
FL 844.30

I-12
SW-503
Sta. 3391+09, 105.00' LT
FG= 849.32
BW= 844.86

P-12
24" 2000D RCP
263.00 FT
Slope: 0.40%

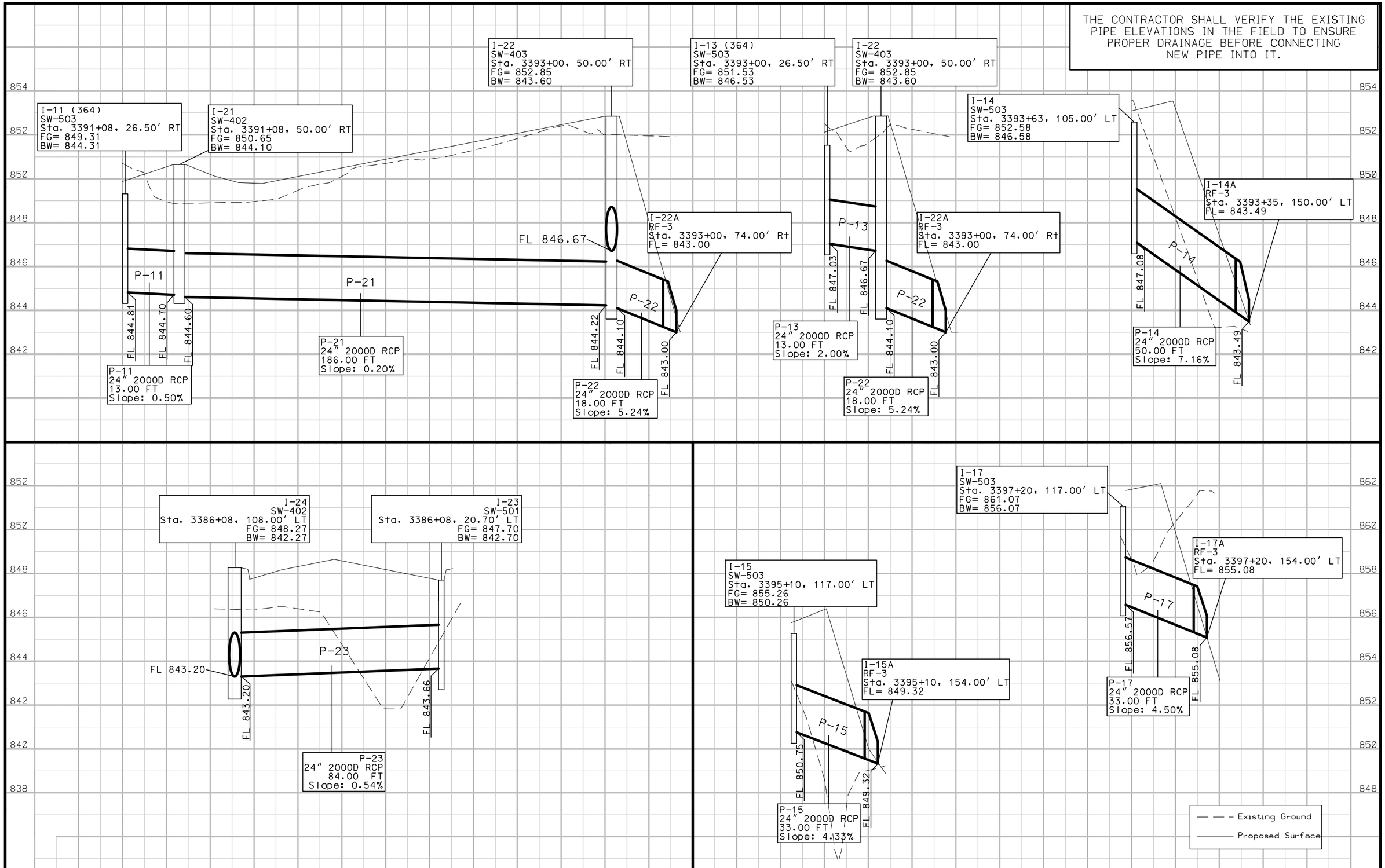
FL 845.36

Existing Ground
Proposed Surface

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER M.3	REVISED

10:17:50 AM 11/4/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365M03.sht

THE CONTRACTOR SHALL VERIFY THE EXISTING PIPE ELEVATIONS IN THE FIELD TO ENSURE PROPER DRAINAGE BEFORE CONNECTING NEW PIPE INTO IT.



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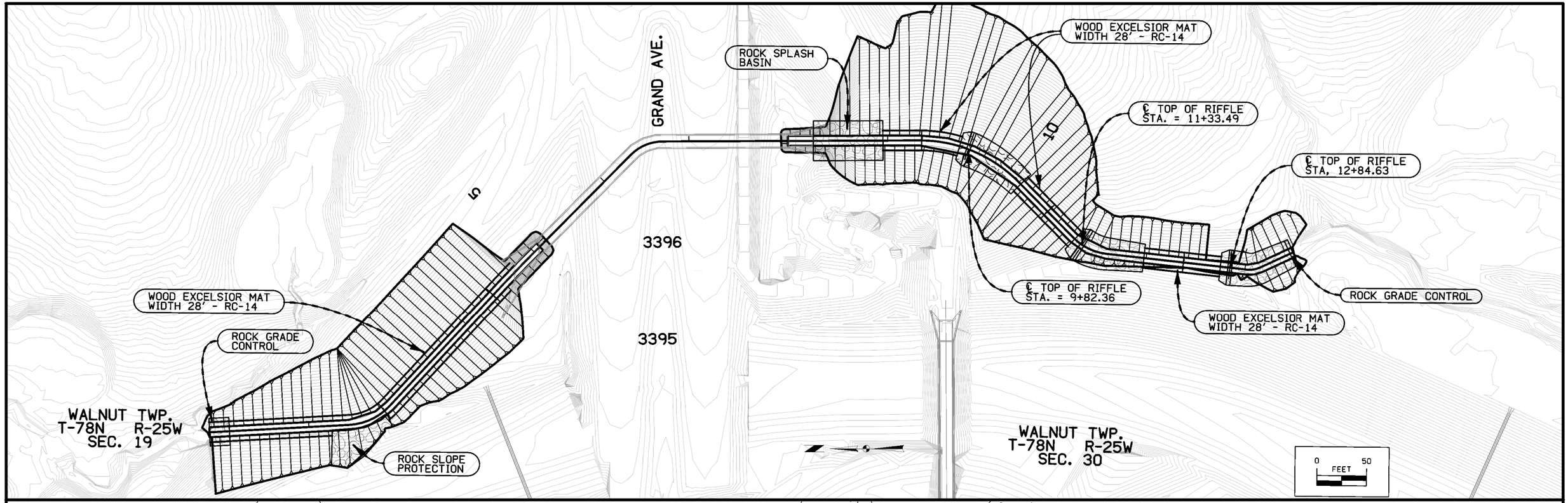

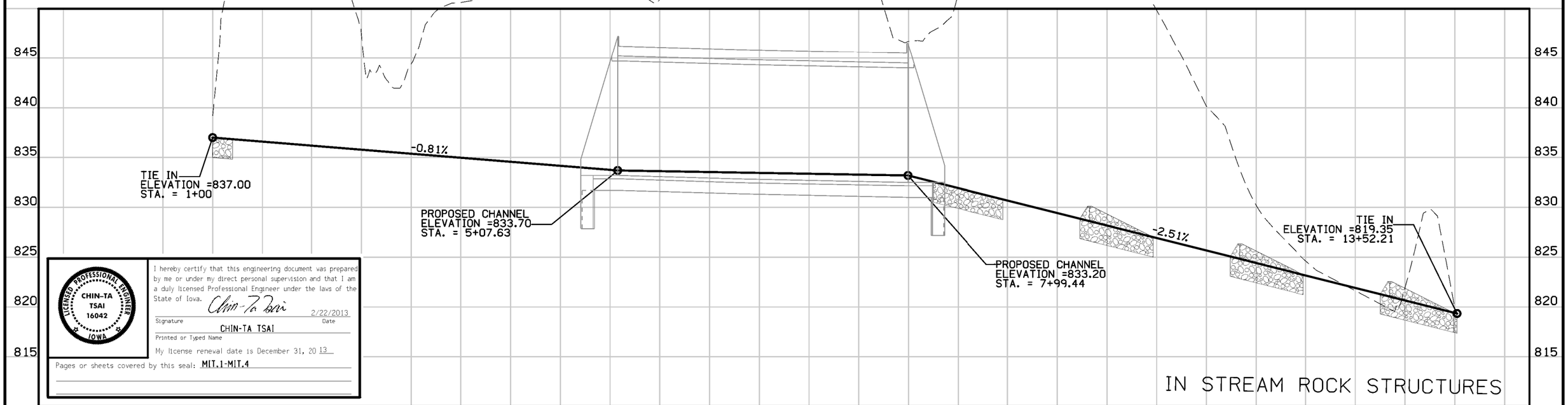

IN STREAM ROCK STRUCTURES

CHIN-TA TSAI 16042 LICENSED PROFESSIONAL ENGINEER IOWA

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

Signature: Chin-Ta Tsai — Date: 2/22/2013

Printed or Typed Name: CHIN-TA TSAI

My license renewal date is December 31, 2013

Pages or sheets covered by this seal: MIT.1-MIT.4

50	ENGLISH	IOWA DOT	DESIGN TEAM MARLER\TSAI	POLK	COUNTY	PROJECT NUMBER	IM-35-2(365)67--13-77	SHEET NUMBER MIT.1	REVISED

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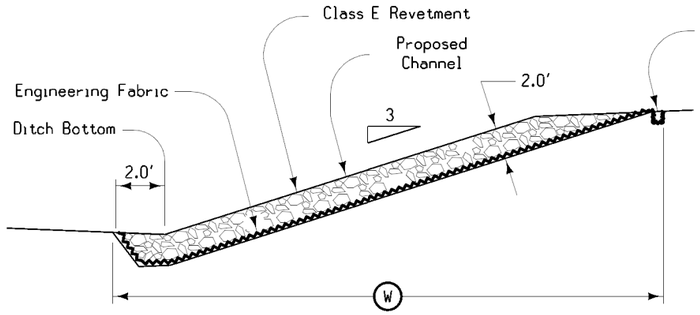
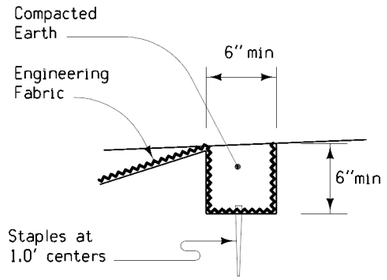
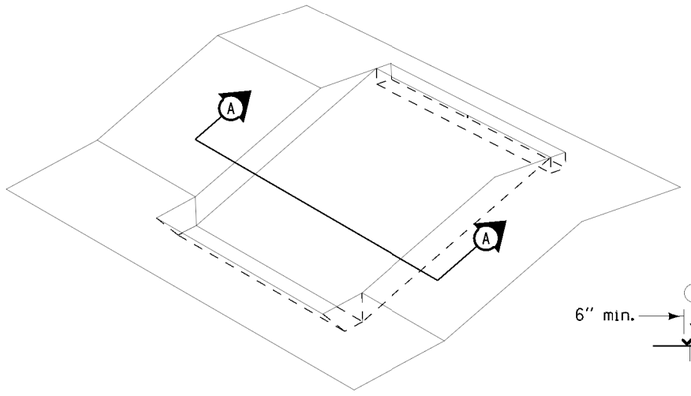
4405
MODIFIED



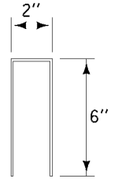
Typical Section



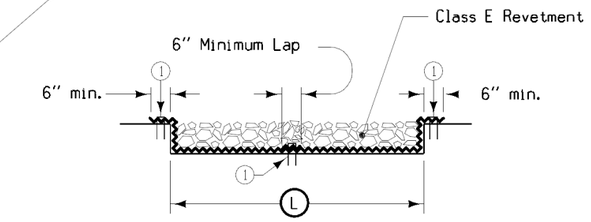
Anchor Slot



Isometric View



Staple
(No. 11 wire)

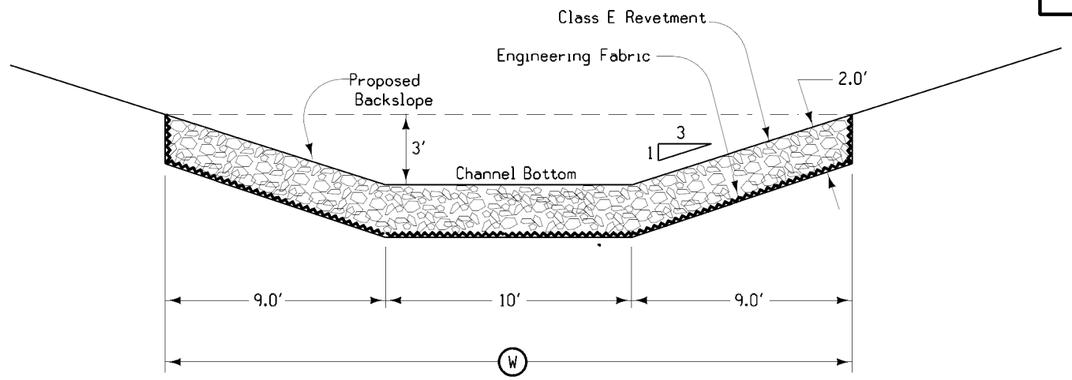


Section A-A

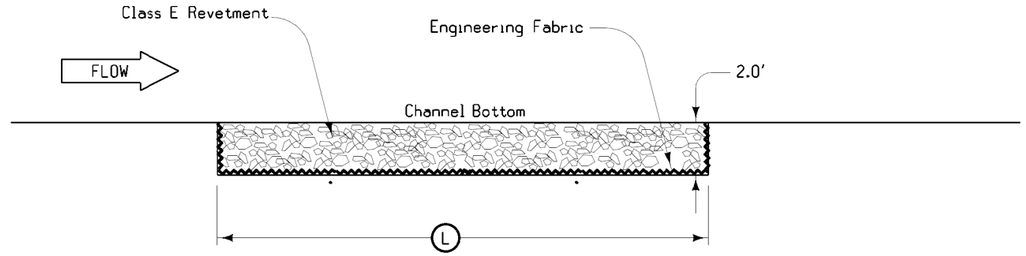
① Staples at 1.0' centers
NOTE: SEE TAB 100-22 FOR ADDITIONAL INFORMATION

ROCK SLOPE PROTECTION

W1



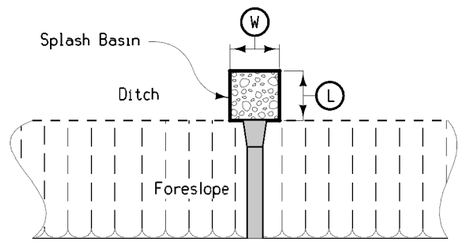
Typical Cross Section



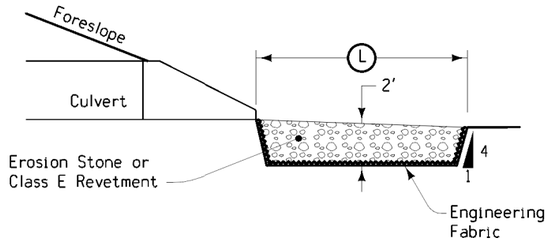
Typical Longitudinal Section

ROCK GRADE CONTROL

4404
MODIFIED



Splash Basin at Culvert Outlet
Plan View



Splash Basin at Culvert Outlet
Typical Section

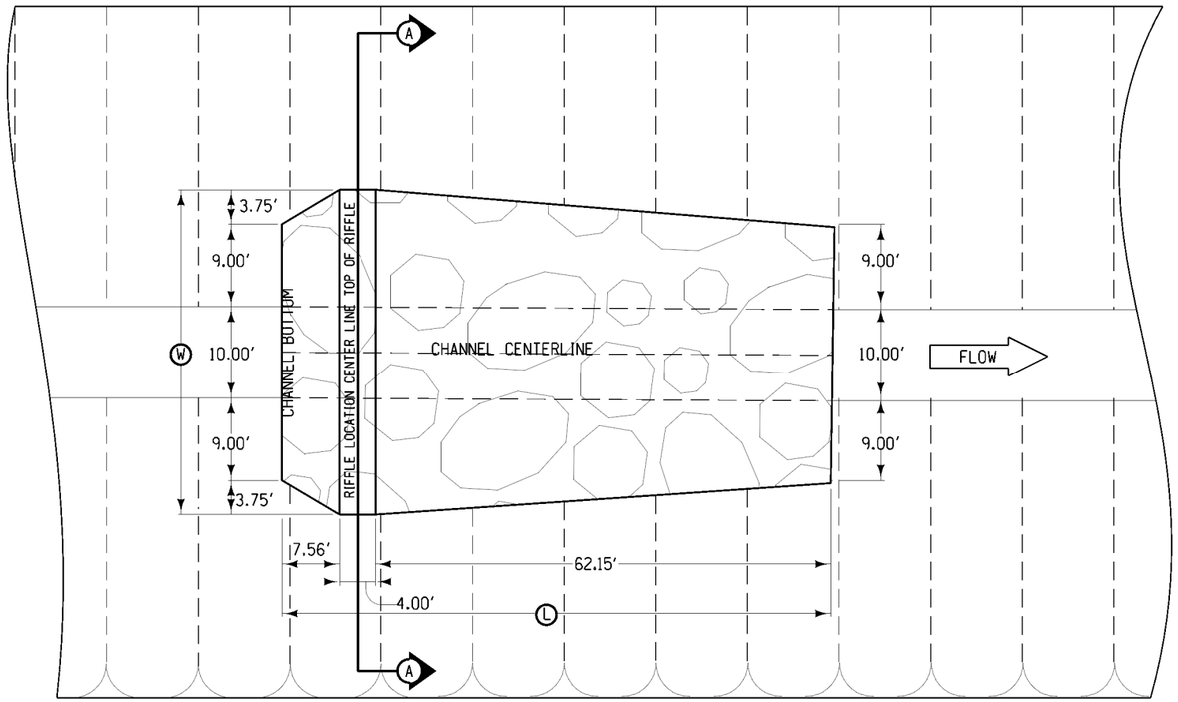
ROCK SPLASH BASIN

SPECIAL CHANNEL CONTROL AND SLOPE PROTECTION

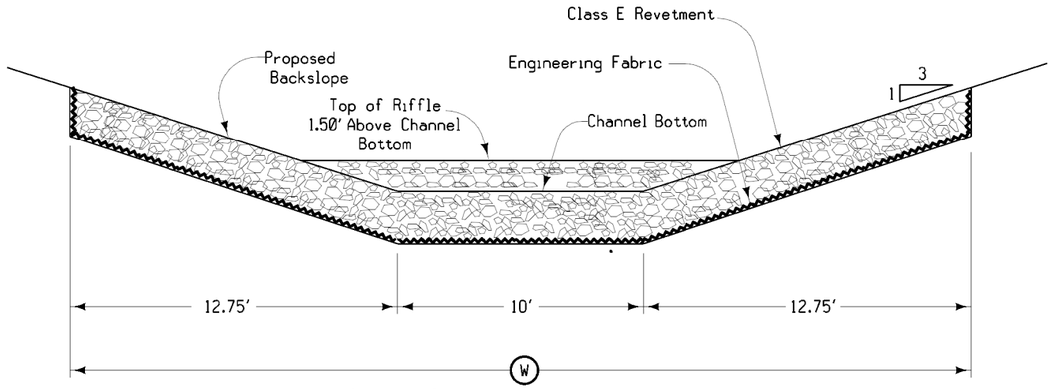
100-22
MODIFIED

Location				(L)	(W)	Class E Revetment	Engineering Fabric	Remarks
DISCRIPTION	Station to Station		Side	Feet	Feet	TONS	SY	
Rock Grade Ctrl.	1+00.00	1+20.00	BOTH	20.00	28.00	69	75	
Rock Slope Pro.	2+24.00	2+80.00	RT	64.00	VARIABLE	205	230	W = DISTANCE TO TIE INTO TOP OF 3:1 PROPOSED CHANNEL SLOPE. SEE S.1
Rock Splash Bas.	8+25.11	8+95.12	BOTH	70.00	40.00	342	372	
Rock Riffle	9+72.80	10+46.51	BOTH	73.71	35.50	393	312	
Rock Riffle	11+23.93	11+97.64	BOTH	73.71	35.50	393	312	
Rock Riffle	12+75.07	13+48.78	BOTH	73.71	35.50	393	312	
Rock Grade Ctrl.	13+48.78	13+52.21	BOTH	3.43	28.00	12	13	
					TOTAL	1807	1627	
WOOD EXCELSIOR MAT	182 SQ							

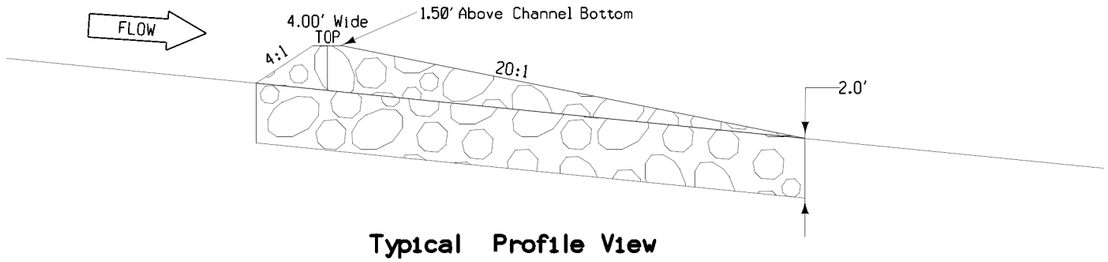
W2



PLAN VIEW



Typical Cross Section A-A



Typical Profile View

RIFFLE STRUCTURE

ENGLISH	IOWA DOT	DESIGN TEAM MARLER\TSAI	POLK COUNTY	PROJECT NUMBER IM-35-2(365)67--13-77	SHEET NUMBER MIT.3	REVISED

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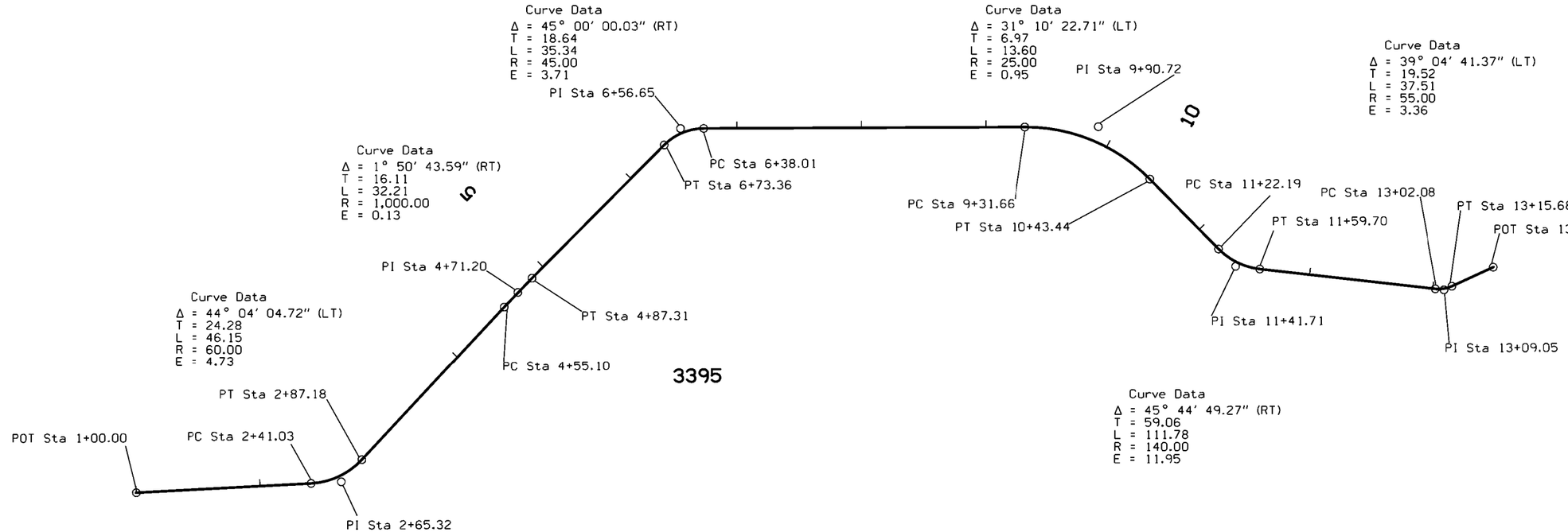
3400



GEOMETRIC DATA

ENGLISH	IOWA DOT	DESIGN TEAM MARLER\TSAI	POLK COUNTY	PROJECT NUMBER IM-35-2(365)67--13-77	SHEET NUMBER MIT.4	REVISED

SURVEY SYMBOLS

- CP Control Point
- FW Wire Fence
- TLNL Tree Line Left
- BLD Building or Foundation
- D Centerline Draw or Stream (Down)
- DU Centerline Draw or Stream (Up)
- CON Concrete or A/C Slab
- CU Back of Curb
- GU Gutter In Front of Curb
- EP Edge of Paved Roads (ML or SR)
- ENT Centerline BL of Entrance
- St.S. STA Storm Sewer Line Co. 1
- BL Topo Breakline
- INB Storm Sewer Beehive Intake

UTILITY LEGEND

PLAN VIEW COLOR LEGEND OF SOILS SHEETS

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

PROFILE VIEW COLOR LEGEND OF SOILS SHEETS

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

PATTERN AND SYMBOL LEGEND OF SOILS SHEETS

Soils Book No._____

Date(s) Drilled_____

- $-H_2O-$ Water
- — DRY Dry
- Ⓢ Sample
- Plugged
- M— Moisture
- Shelby
- Blow Count
- Dens. Core
- Treatment
- Sand Blanket
- Soil Remediation Area
- Select Soil
- Select Sand
- Shale
- Broken and Weathered Rock
- Rock
- Sandstone
- Unsuitable A Topsoil
- Unsuitable B Topsoil
- Unsuitable C Topsoil
- Unsuitable A
- Unsuitable B
- Unsuitable C
- Sandy Soil
- Boulders

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

RIGHT-OF-WAY LEGEND

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

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

SOILS LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES Q & R)

ENGLISH	IOWA DOT	DESIGN TEAM	Stanley/Megivern/Schappaugh	POLK COUNTY	PROJECT NUMBER	IM-35-2(365)--13-77	SHEET NUMBER	Q.1

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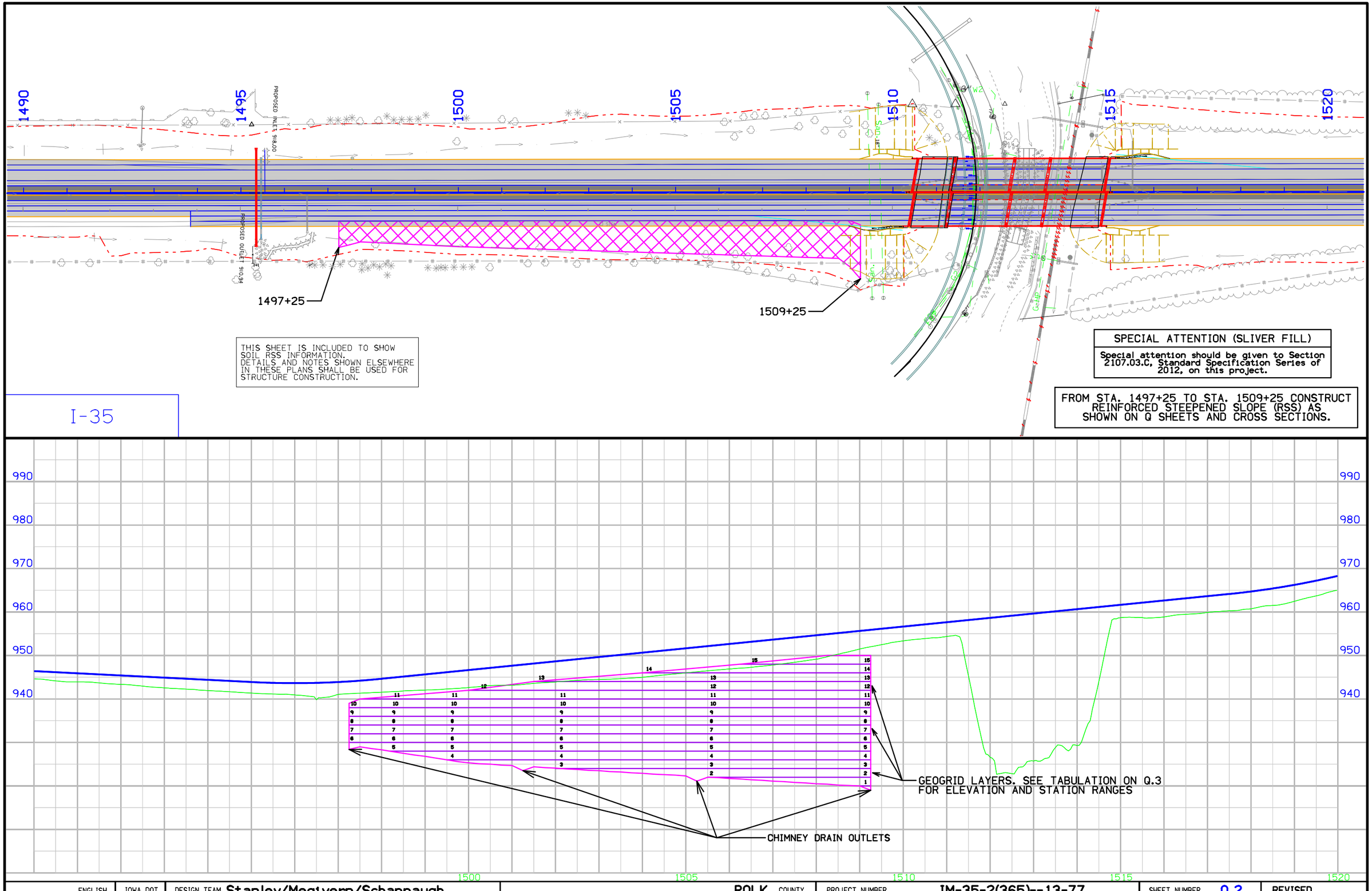

THIS SHEET IS INCLUDED TO SHOW SOIL RSS INFORMATION. DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

I-35

SPECIAL ATTENTION (SLIVER FILL)

Special attention should be given to Section 2107.03.C, Standard Specification Series of 2012, on this project.

FROM STA. 1497+25 TO STA. 1509+25 CONSTRUCT REINFORCED STEEPENED SLOPE (RSS) AS SHOWN ON Q SHEETS AND CROSS SECTIONS.

ENGLISH	IOWA DOT	DESIGN TEAM Stanley/Megivern/Schappaugh	POLK COUNTY	PROJECT NUMBER IM-35-2(365)--13-77	SHEET NUMBER Q.2	REVISED

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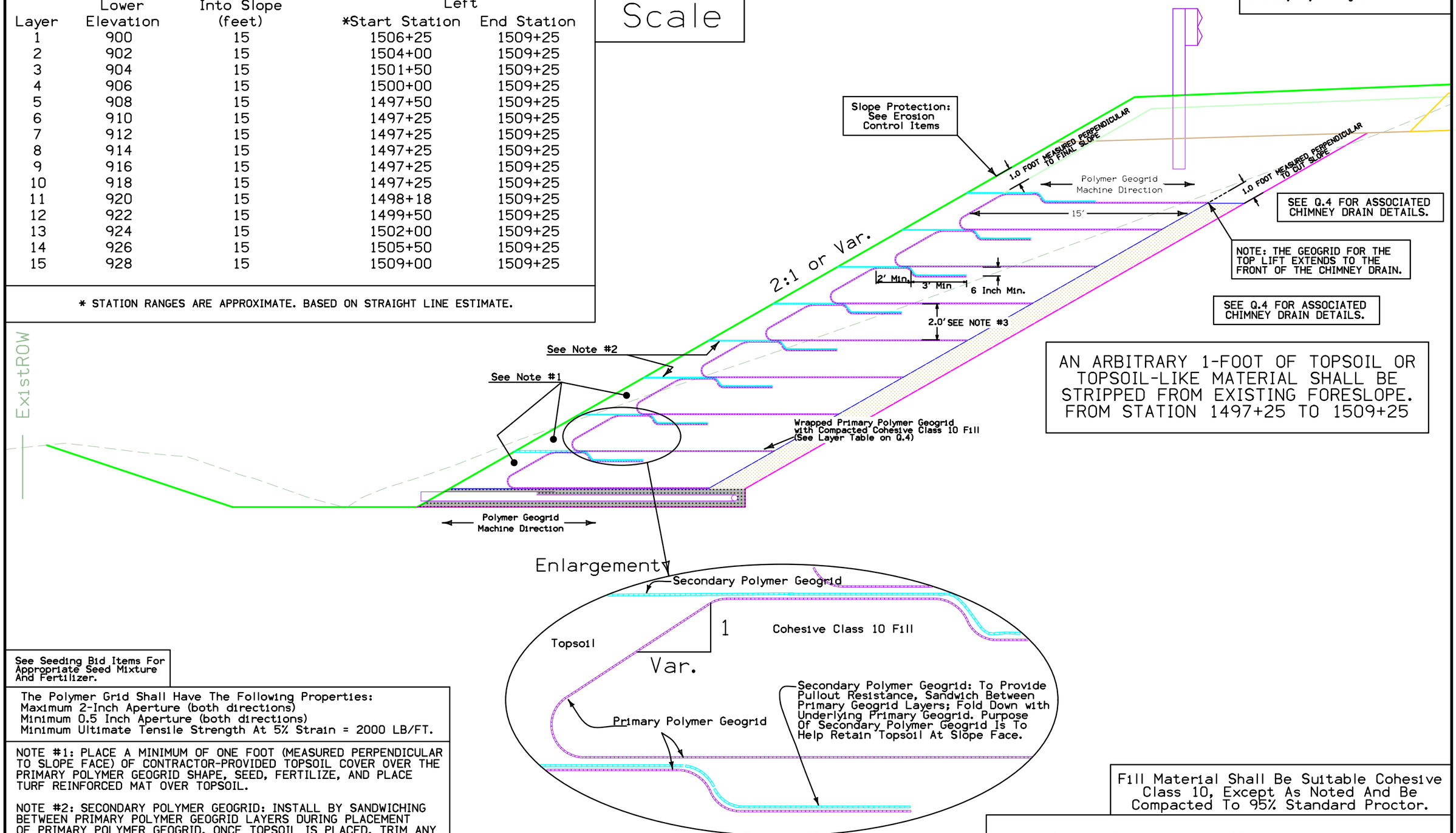
RSS

Layer	Lower Elevation	Reinforced Width Into Slope (feet)	I-35 Stationing Left *Start Station	End Station
1	900	15	1506+25	1509+25
2	902	15	1504+00	1509+25
3	904	15	1501+50	1509+25
4	906	15	1500+00	1509+25
5	908	15	1497+50	1509+25
6	910	15	1497+25	1509+25
7	912	15	1497+25	1509+25
8	914	15	1497+25	1509+25
9	916	15	1497+25	1509+25
10	918	15	1497+25	1509+25
11	920	15	1498+18	1509+25
12	922	15	1499+50	1509+25
13	924	15	1502+00	1509+25
14	926	15	1505+50	1509+25
15	928	15	1509+00	1509+25

* STATION RANGES ARE APPROXIMATE. BASED ON STRAIGHT LINE ESTIMATE.

Not To Scale

Polymer Geogrid Legend
Primary Polymer Geogrid
Secondary Polymer Geogrid



AN ARBITRARY 1-FOOT OF TOPSOIL OR TOPSOIL-LIKE MATERIAL SHALL BE STRIPPED FROM EXISTING FORESLOPE. FROM STATION 1497+25 TO 1509+25

See Seeding Bid Items For Appropriate Seed Mixture And Fertilizer.

The Polymer Grid Shall Have The Following Properties:
Maximum 2-Inch Aperture (both directions)
Minimum 0.5 Inch Aperture (both directions)
Minimum Ultimate Tensile Strength At 5% Strain = 2000 LB/FT.

NOTE #1: PLACE A MINIMUM OF ONE FOOT (MEASURED PERPENDICULAR TO SLOPE FACE) OF CONTRACTOR-PROVIDED TOPSOIL COVER OVER THE PRIMARY POLYMER GEOGRID SHAPE, SEED, FERTILIZE, AND PLACE TURF REINFORCED MAT OVER TOPSOIL.

NOTE #2: SECONDARY POLYMER GEOGRID: INSTALL BY SANDWICHING BETWEEN PRIMARY POLYMER GEOGRID LAYERS DURING PLACEMENT OF PRIMARY POLYMER GEOGRID. ONCE TOPSOIL IS PLACED, TRIM ANY EXCESS SECONDARY POLYMER GEOGRID AT THE SLOPE FACE AS NEEDED TO ACHIEVE A SMOOTH SLOPE FACE.

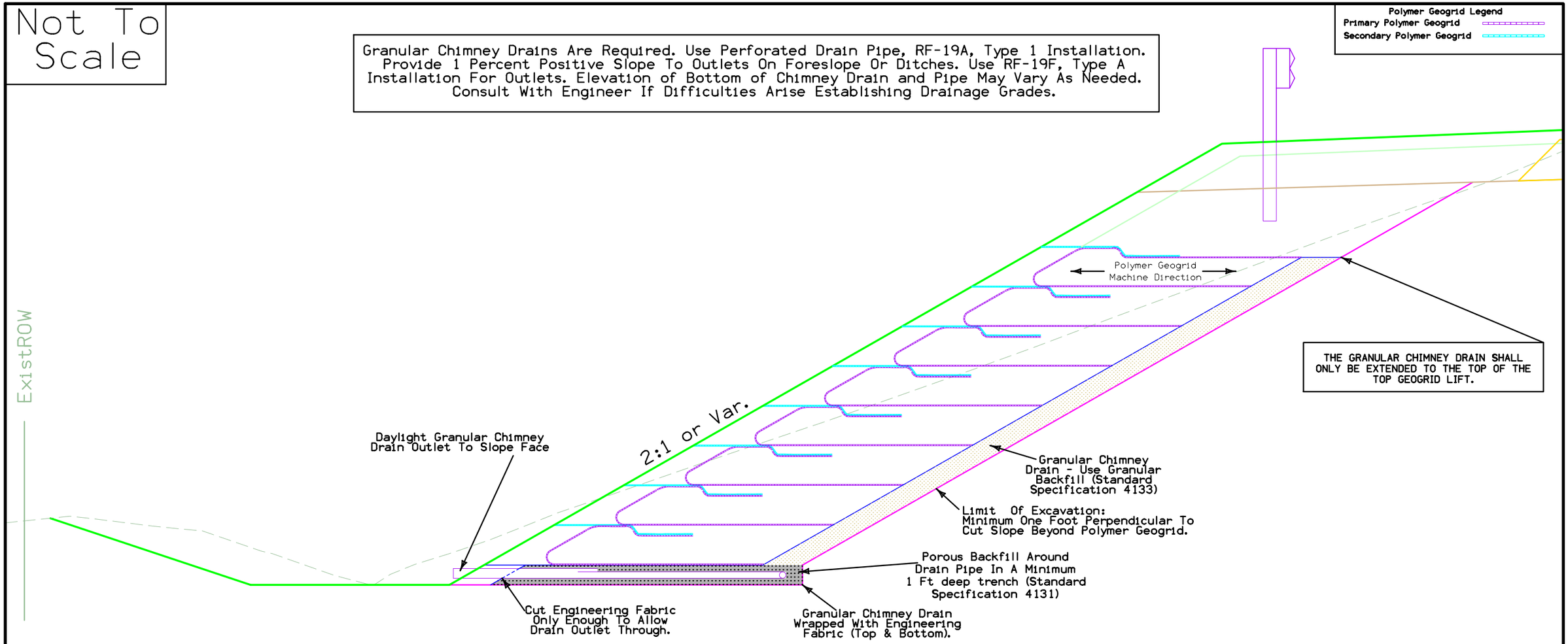
NOTE #3: MAXIMUM DISTANCE BETWEEN BOTH PRIMARY AND/OR SECONDARY POLYMER GEOGRID LAYERS SHALL BE 2 FOOT.

Fill Material Shall Be Suitable Cohesive Class 10, Except As Noted And Be Compacted To 95% Standard Proctor.

Reinforced Steepened Slope (RSS) Details

Not To Scale

Granular Chimney Drains Are Required. Use Perforated Drain Pipe, RF-19A, Type 1 Installation. Provide 1 Percent Positive Slope To Outlets On Foreslope Or Ditches. Use RF-19F, Type A Installation For Outlets. Elevation of Bottom of Chimney Drain and Pipe May Vary As Needed. Consult With Engineer If Difficulties Arise Establishing Drainage Grades.



QUANITIES FOR RSS (Sq. Yds**)	
POLYMER GEOGRID	ENGINEERING FABRIC-GRANULAR CHIMNEY DRAIN
59,203	15,480
**Quantities are neat line estimates and assume a maximum of 2 feet of sidelap between adjacent rolls (minimum 1 foot sidelap required).	

QUANITIES FOR RSS (TONS)	
GRANULAR BACKFILL	POROUS BACKFILL
3,494	231

Granular Chimney Drain Outlet Locations

Station	Offset
1497+25	RT
1501+25	RT
1505+25	RT
1509+25	RT

Granular Chimney Drain Details

C	ENGLISH	IOWA DOT	DESIGN TEAM	Stanley/Megivern/Schappaugh	POLK COUNTY	PROJECT NUMBER	IM-35-2(365)--13-77	SHEET NUMBER	Q.4

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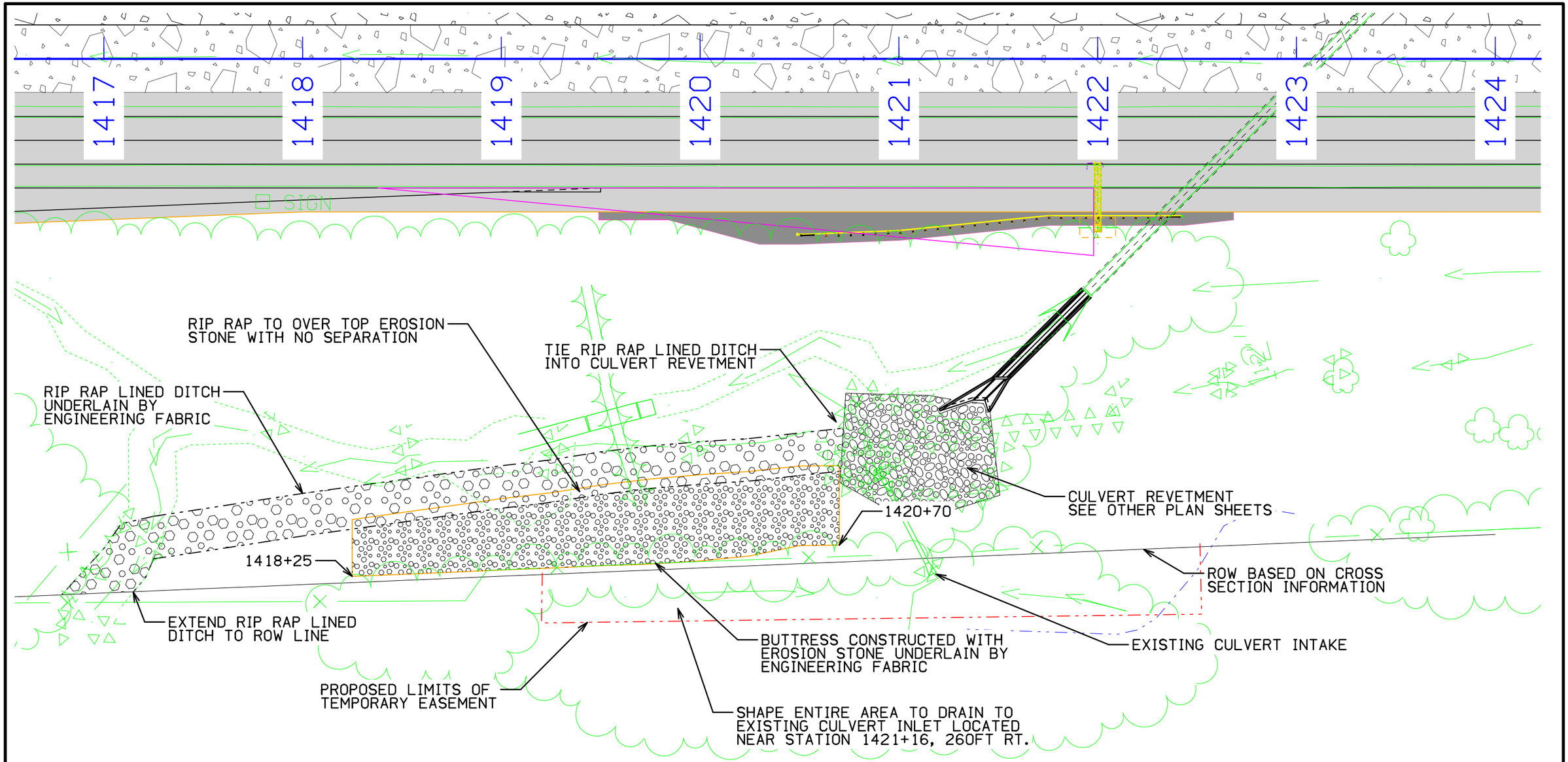


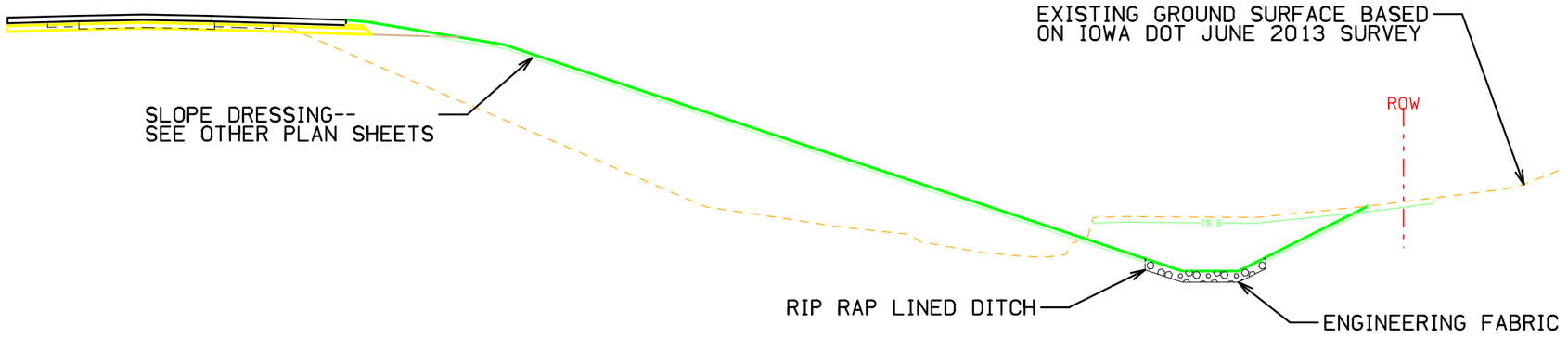
BUTTRESS EXCAVATION SHALL BE COMPLETED IN LINEAL INCREMENTS OF NO GREATER THAN 25 FEET. BACKFILLING OF THE BUTTRESS MUST BE COMPLETED IMMEDIATELY UPON COMPLETING THE EXCAVATION WITH NO PARTIAL EXCAVATION LEFT OPEN OVERNIGHT. AVOID MIXING OF EXCAVATED MATERIAL AND IN-PLACE EROSION STONE.

ALL EXCAVATED SHALE SHALL BE WASTED OFF SITE.

ANY DISTURBED EXISTING RIP RAP MAY BE REUSED ON SITE.

Quantities	
Class 10 Excavation	6,306 CY
Class 12 Excavation	1,332 CY
Topsoil Placement	231 CY
Engineering Fabric	2,919 Sq Yds
Erosion Stone	4,890 Tons
Rip Rap	926 Tons

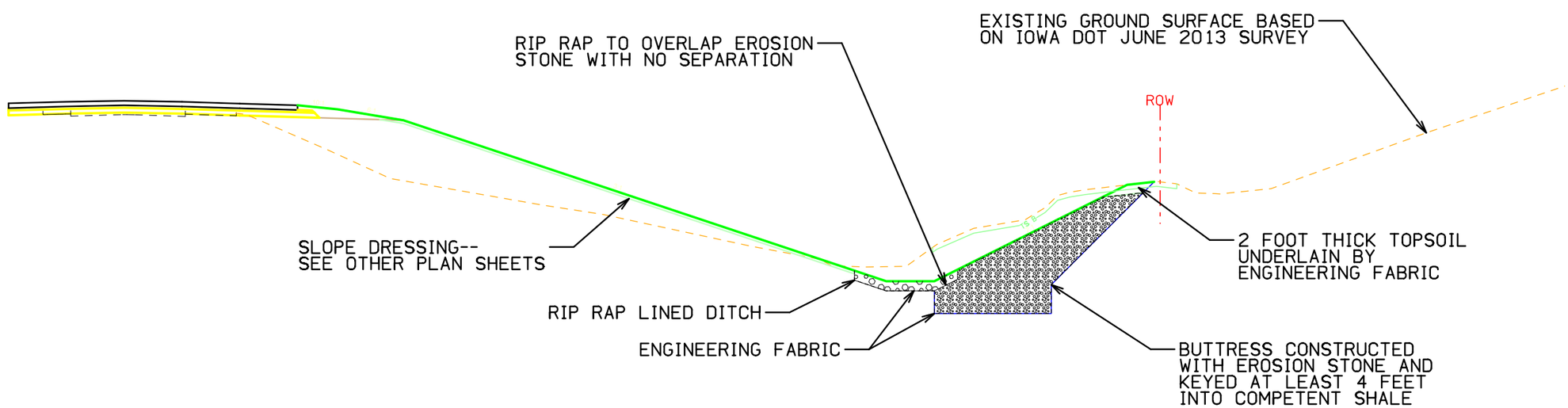
NOT TO SCALE -- SEE CROSS SECTIONS



BUTTRESS TO BE CONSTRUCTED WITH EROSION STONE AND ENVELOPED WITH ENGINEERING FABRIC, EXCEPT ON EXPOSED SLOPE.

ALL SHALE GENERATED WITH SLIDE REPAIR TO BE WASTED OFF SITE.

NOT TO SCALE -- SEE CROSS SECTIONS



C	ENGLISH	IOWA DOT	DESIGN TEAM Stanley/Dell/Schappaugh	Polk COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER Q.6

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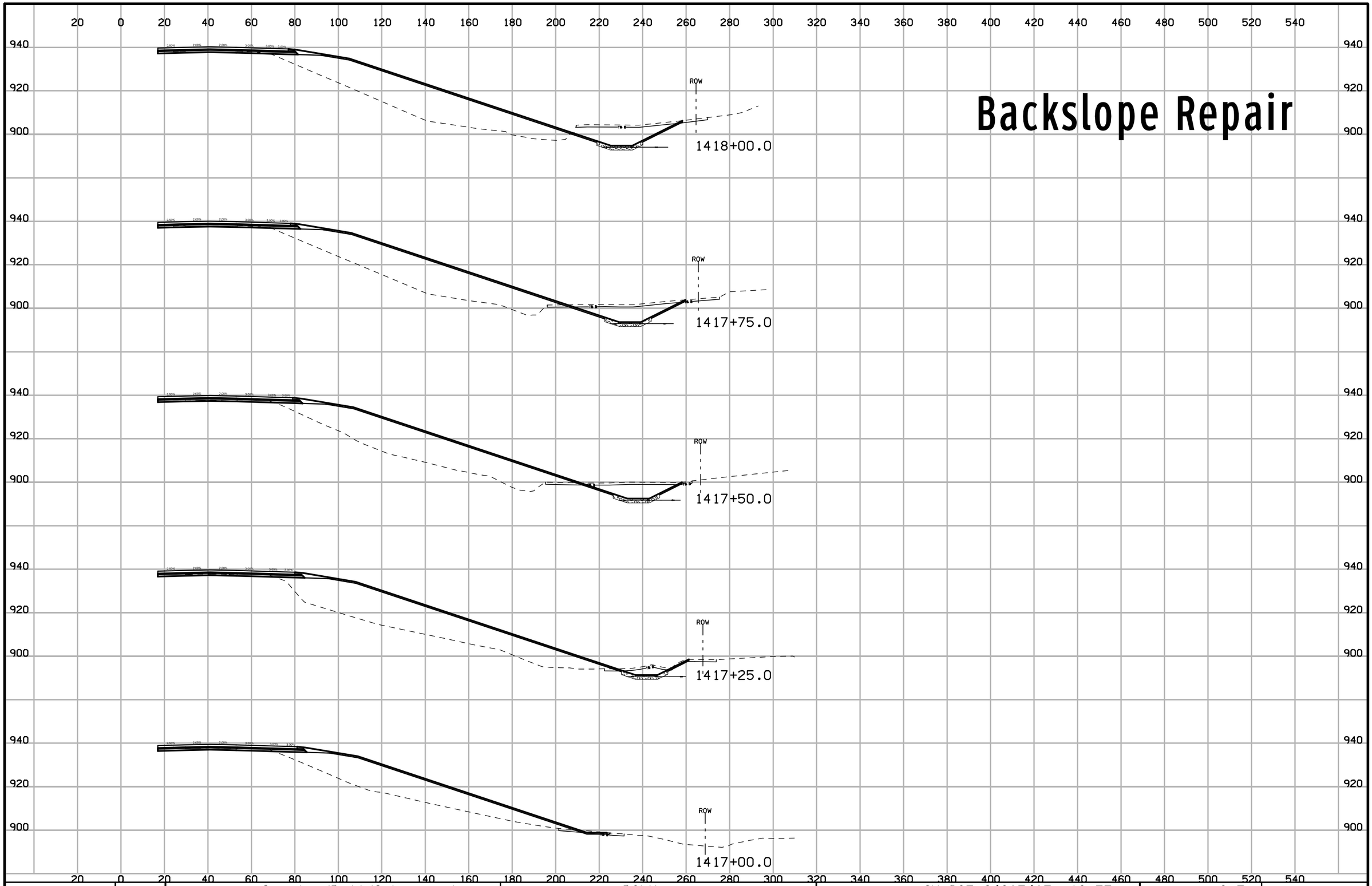
Backslope Repair



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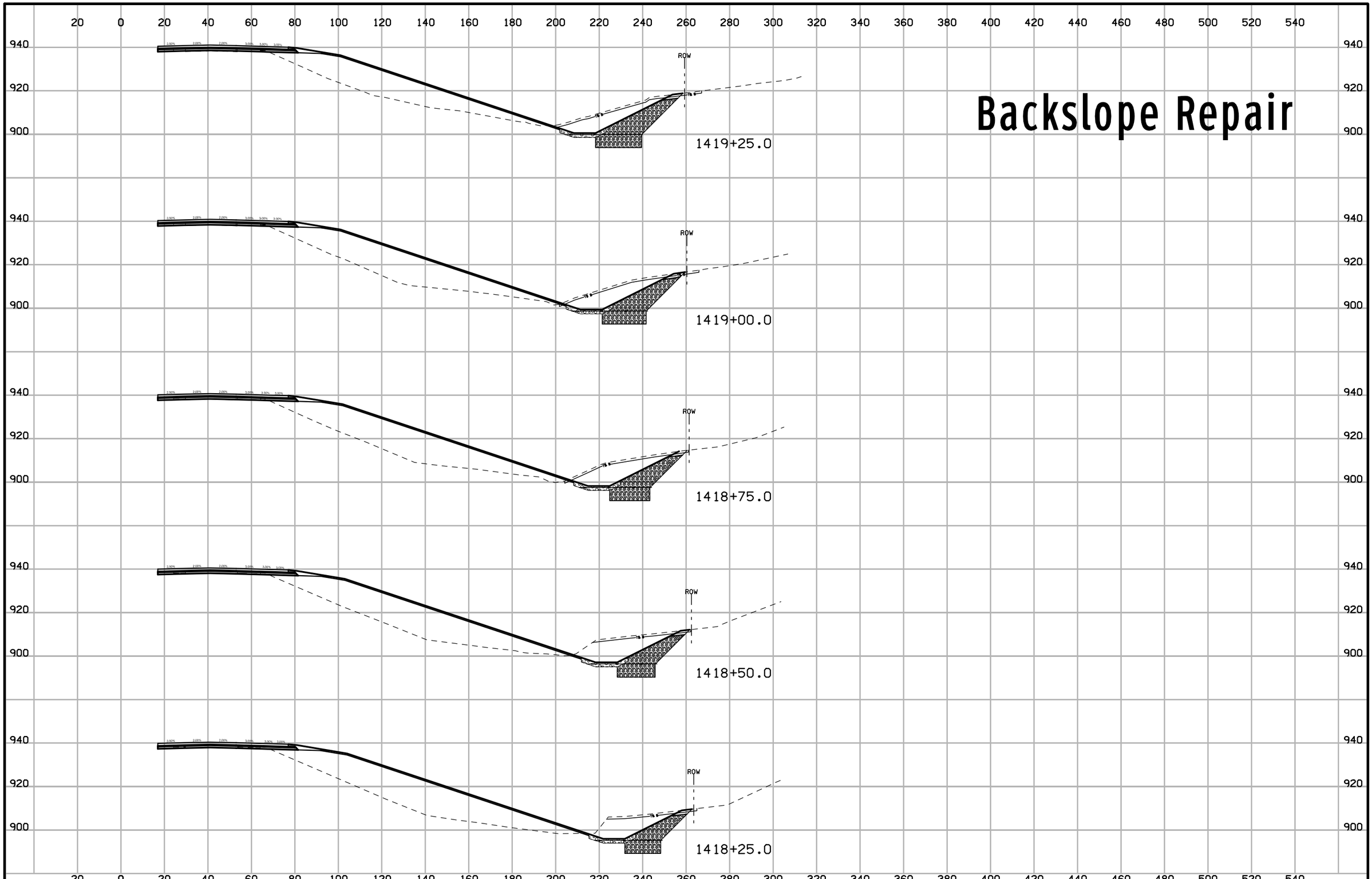
Backslope Repair



ENGLISH	IOWA DOT	DESIGN TEAM	Stanley/Dell/Schappaugh	POLK	COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	Q.8

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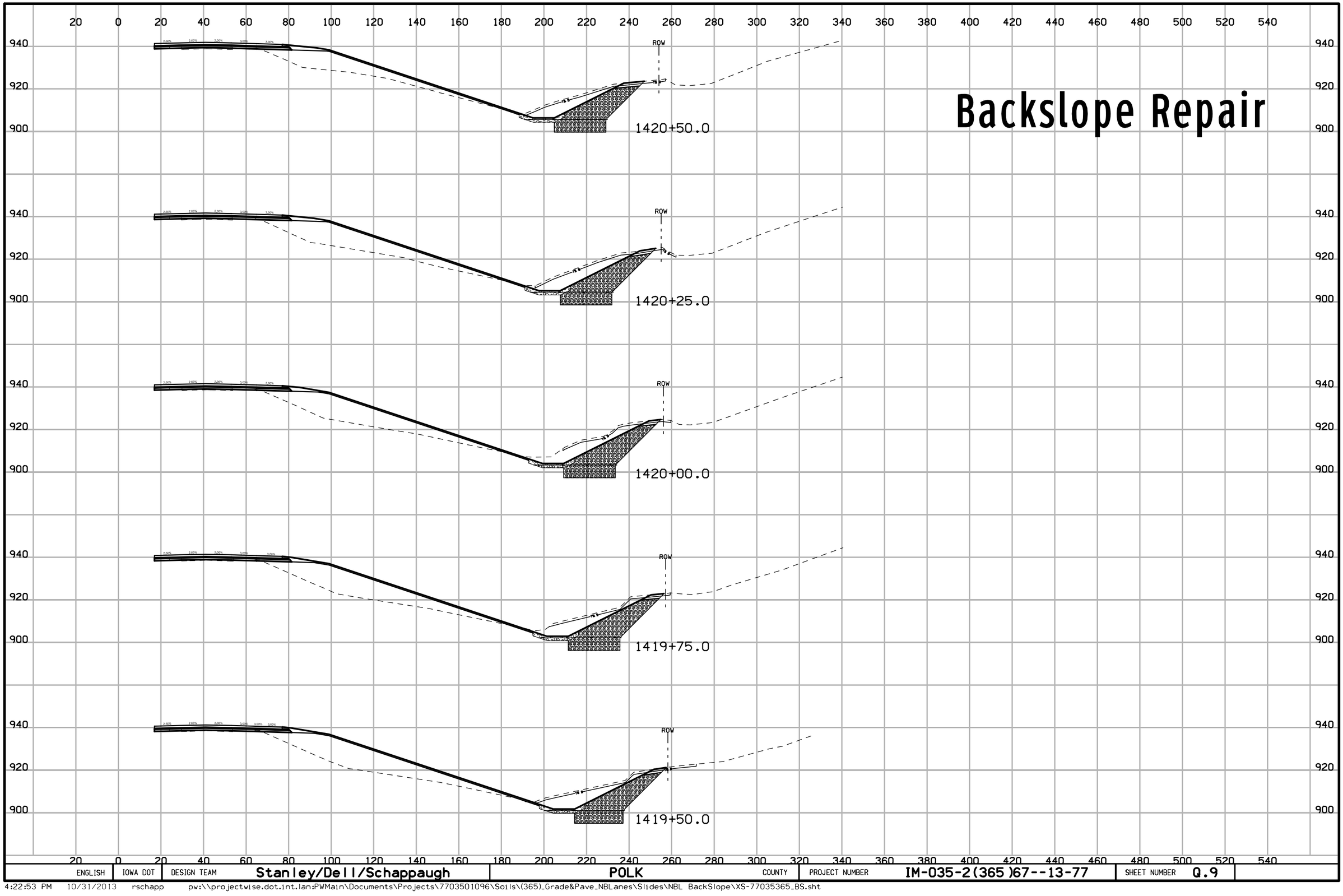
Backslope Repair



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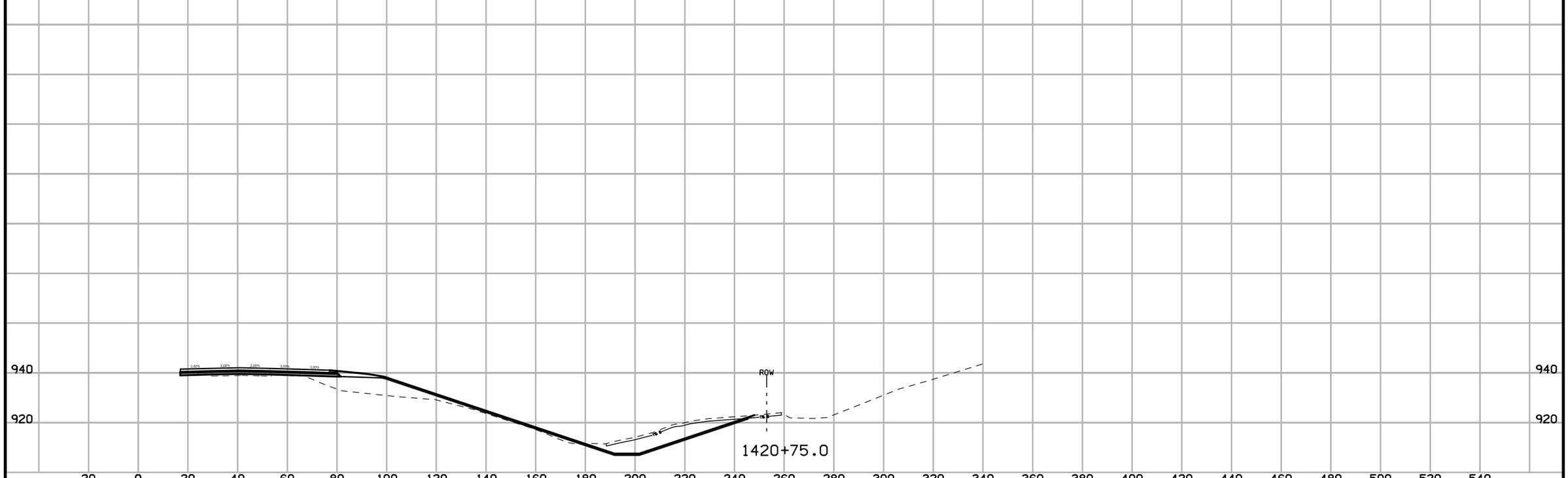
Backslope Repair



ENGLISH	IOWA DOT	DESIGN TEAM	Stanley/Dell/Schappaugh	POLK	COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER Q.10

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SURVEY SYMBOLS

- IN Storm Sewer Intake
- FW Wire Fence
- INB Storm Sewer Beehive Intake
- PR Electic Riser Pole
- GP Guard Post (Less Than 4 Posts)
- SL Speed Limit Sign
- SI Sign
- TIL Tile Line
- GDL Guard Rail Steel
- LUM Luminaire
- UE Utility Elevation
- WV Water Valve
- GPR Guard Post (4 or More Posts)
- FP Filler Pipe
- OUT Tile Outlet
- MIS Miscellaneous
- PPA Power Pole Co. 1
- AST AST Above Ground Storage Tank
- LP L.P. Tank
- FLG Flag Poles
- WHD Water Hydrant
- WEL Well
- MH Utility Access (Manhole)
- TPD Telephone Pedestal
- MM Mile Marker Post
- FCL Chain Link and Security Fence
- EB Electrical Box
- TV Satelite TV Dish
- UB Utility Box
- UST Underground Tank
- GV Gas Valve
- WHU RV Water Hook Up
- SEP Septic Tank
- FHD Fire Hydrants
- FWD Wood Fence
- RET Retaining Walls
- D Centerline Draw or Stream (Down)
- BNK Stream Bank
- RIP Rip-Rap
- EW Edge of Water
- DU Centerline Draw or Stream (Up)
- ENT Centerline BL of Entrance
- ENU Edge Unpaved Entrance & Parking
- EG Edge of Gravel Road
- SNP Unpaved Shoulder
- DIK Centerline of Dike or Dam
- FO2 FOB Underground Fiber Optic Co. 2
- T1 TLA Underground Telephone Line Co. 1
- E1 ELA Underground Electric Line Co. 1
- FO FOA Underground Fiber Optic Co. 1
- W WLA Underground Water Line Co. 1
- St.S.2 STB Storm Sewer Line Co. 2
- San. SAA Sanitary Sewer Line Co. 1
- E2 ELB Underground Electric Line Co. 2
- TV TVA Underground TV Cable Co. 1
- FO3 FOC Underground Fiber Optic Co. 3

UTILITY LEGEND

- MID-AMERICAN ENERGY
- MID-AMERICAN ENERGY
- W1 WARREN COUNTY RURAL WATER
- W2 WEST DES MOINES PUBLIC WORKS
- W3 DES MOINES WATER
- E-1 STATE OF IOWA
- E-2 MID-AMERICAN ENERGY
- E-3 GLENN OAKS OWNERS ASSOC.
- E-4 CITY OF WEST DES MOINES
- FO-1 U.S. WEST
- FO-2 DES MOINES WATERWORKS
- FO-3 SPRINT
- FO-4 WEST DES MOINES PUBLIC WORKS
- FO-5 GLENN OAKS OWNERS ASSOC.
- FO-6 ATT
- FO-7 MEDIACOM FIBER OPTICS
- FO-8 HICKORY TECH
- GHP-1 MID-AMERICAN ENERGY
- GHP-2 KINDER MORGAN ENERGY PARTNERS
- G-1 BP NORTH-AMERICA (1-800-948-6482)
- G-2 MID-AMERICAN ENERGY
- San. CITY OF WEST DES MOINES
- St. S.-1 STATE OF IOWA
- St. S.-2 CITY OF WEST DES MOINES
- T U.S. WEST
- TV MEDIACOM

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)	Existing Utilities
SHADING	**Design Color No.**	
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading
Yellow	(4)	Highlight for Critical Notes or Features
Red	(3)	Delineates Restricted Areas
Lavender	(9)	Temporary Pavement Shading
Gray, Light	(48)	Proposed Pavement Shading
Gray, Med	(80)	Proposed Granular Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading
Brown, Light	(236)	Grading Shading

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

RIGHT-OF-WAY LEGEND

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

SIDEWALK LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES S)

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER S.1

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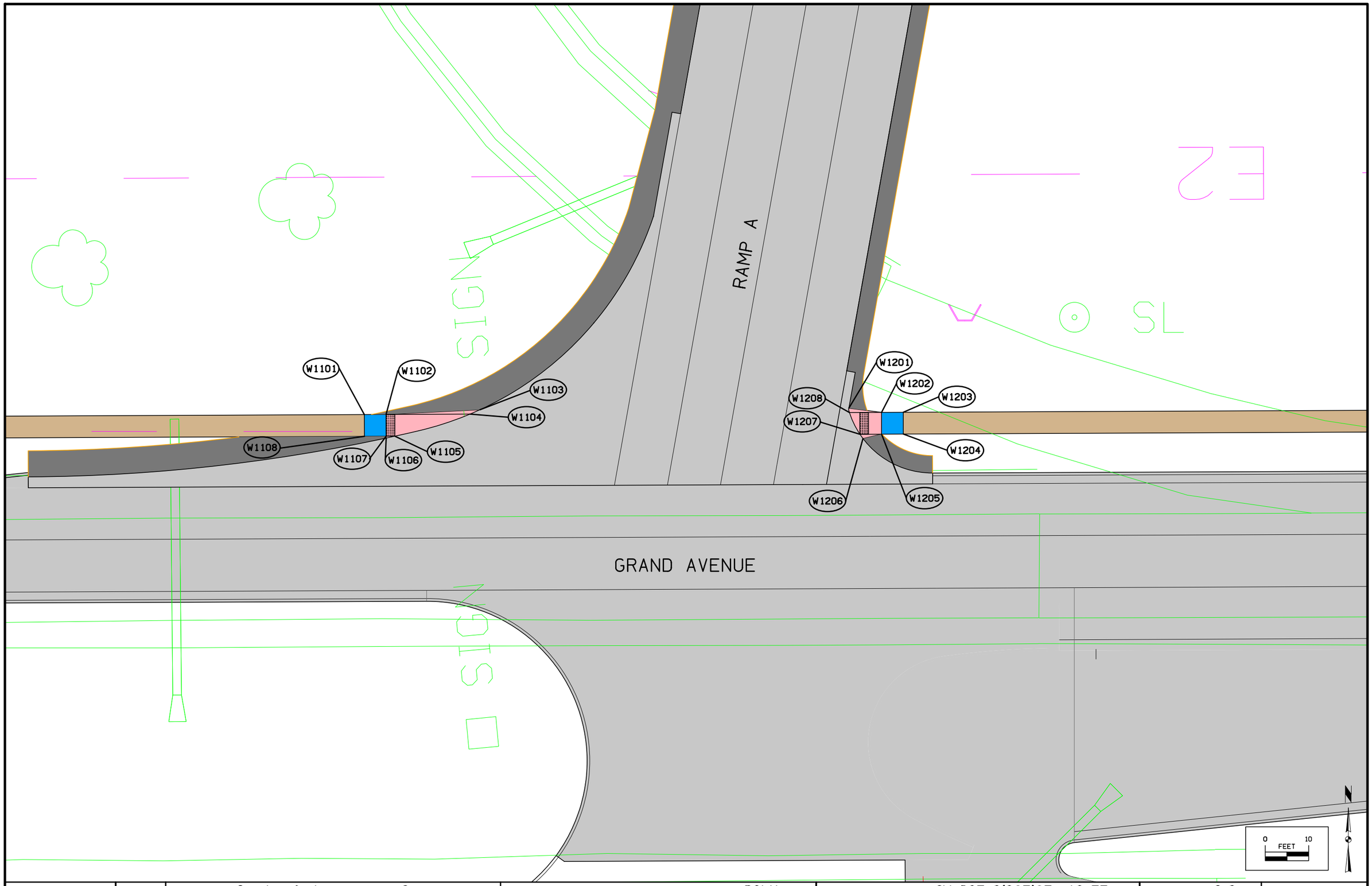
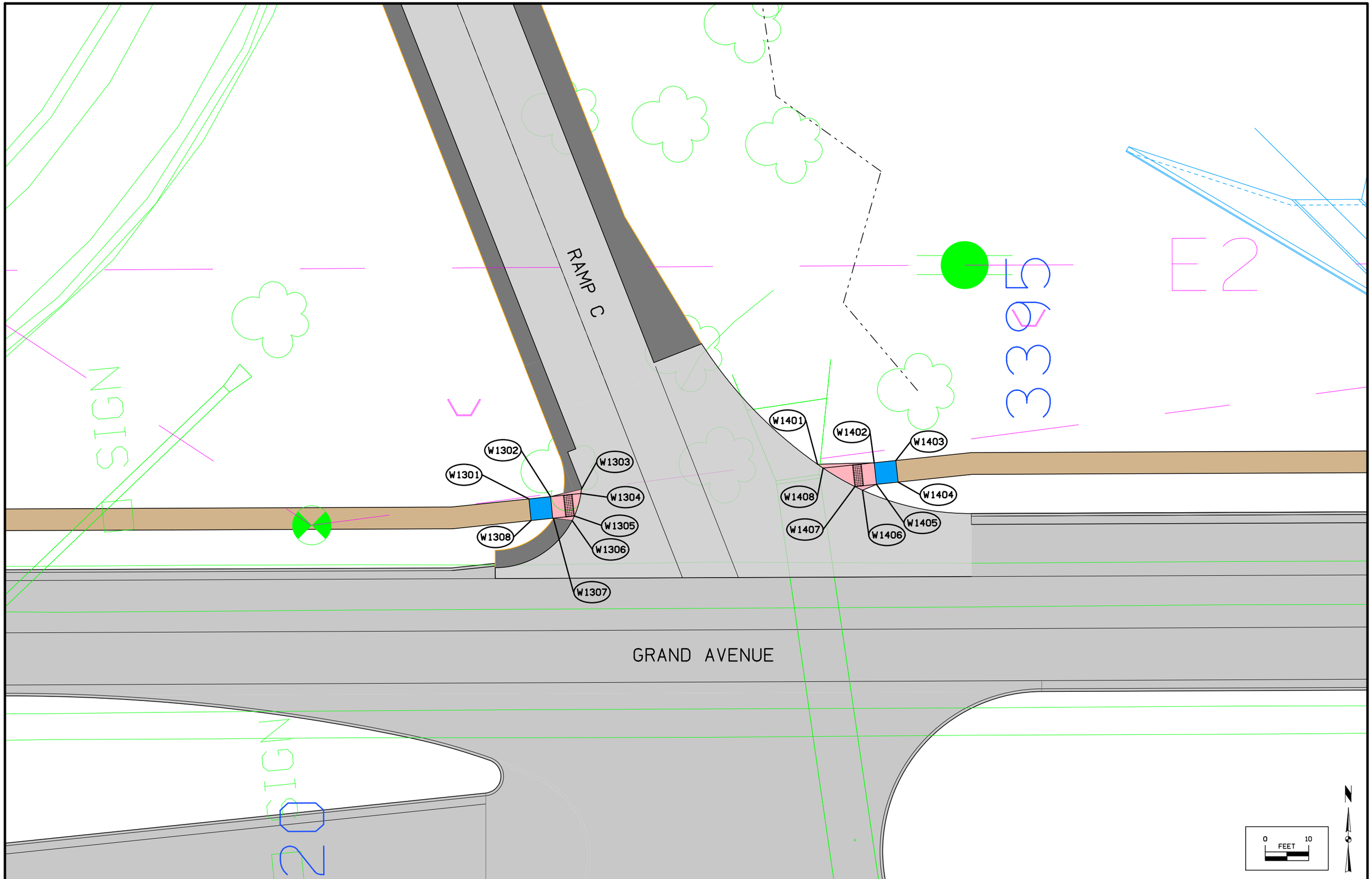


C ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER S.2

11:43:29 AM 10/31/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365s02.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER S.3

11:43:48 AM 10/31/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365s03.sht

GRAND AVENUE

RAMP B

W1501
W1502
W1503
W1504
W1510
W1505
W1506
W1507
W1508
W1509
W1601
W1602
W1603
W1610
W1608
W1607
W1606
W1605
W1604
W1609

0 FEET 10

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER S.4	

11:44:10 AM 10/31/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365s04.sht

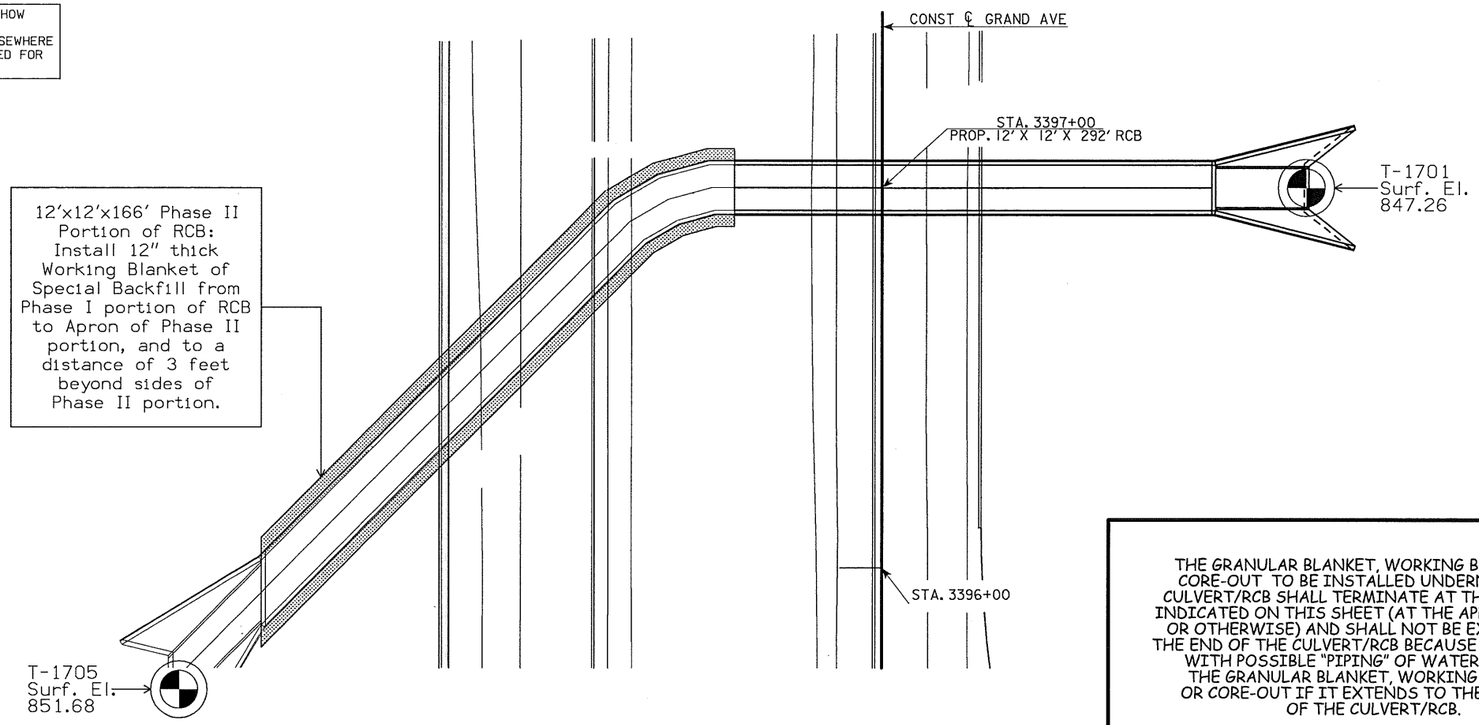
SIDEWALK COMPLIANCE

See S Sheets

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

Point to Point		Sidewalk Designation	Distance*	Δ Elevation	Slope	Acceptable Constructed Range	Staking Required on this Quadrant? (1)	Measured Slope	Initials	Remarks		FOR INFORMATION ONLY: VALUES USED TO DETERMINE DESIGNED SLOPES			
												Point	Station	Offset	Elevation
			FT	FT	%	Pos. or Neg.		%							
W1101	W1102	Landing/Turning Space	5.00	0.02	0.5%	0.1% to 2.0%						W1101	3384+36.87	-119.00	847.15
W1102	W1104	Ramp Running Slope	19.31	-0.29	-1.5%	0.5% to 8.3%						W1102	3384+41.87	-119.00	847.17
W1101	W1108	Landing/Turning Space	5.00	-0.08	-1.5%	0.1% to 2.0%						W1103	3384+63.49	-120.00	846.87
W1108	W1107	Landing/Turning Space	5.00	0.02	0.5%	0.1% to 2.0%						W1104	3384+61.18	-119.00	846.89
W1107	W1105	Ramp Running Slope	2.00	-0.05	-2.4%	0.5% to 8.3%						W1105	3384+43.87	-114.00	847.05
W1102	W1107	Landing/Turning Space	5.00	-0.08	-1.5%	0.1% to 2.0%						W1106	3384+41.87	-113.57	847.06
W1103	W1104	Ramp Cross Slope	2.52	0.02	0.7%	0.1% to 2.0%						W1107	3384+41.87	-114.00	847.10
W1104	W1105	Ramp Cross Slope	18.05	0.16	0.9%	0.1% to 2.0%						W1108	3384+36.87	-114.00	847.07
W1105	W1106	Ramp Cross Slope	2.05	0.01	0.5%	0.1% to 2.0%									
W1208	W1202	Ramp Running Slope	7.38	0.33	4.5%	0.5% to 8.3%						W1201	3385+48.36	-120.00	847.44
W1202	W1203	Landing/Turning Space	5.00	0.08	1.5%	0.1% to 2.0%						W1202	3385+55.87	-119.00	847.78
W1207	W1205	Ramp Running Slope	5.00	0.18	3.6%	0.5% to 8.3%						W1203	3385+60.87	-119.00	847.86
W1205	W1204	Landing/Turning Space	5.00	0.08	1.5%	0.1% to 2.0%						W1204	3385+60.87	-114.00	847.78
W1203	W1204	Landing/Turning Space	5.00	-0.08	-1.5%	0.1% to 2.0%						W1205	3385+55.87	-114.00	847.71
W1202	W1205	Landing/Turning Space	5.00	-0.08	-1.5%	0.1% to 2.0%						W1206	3385+51.58	-113.00	847.55
W1201	W1208	Ramp Cross Slope	0.86	0.01	1.6%	0.1% to 2.0%	Yes					W1207	3385+50.87	-114.00	847.53
W1208	W1207	Ramp Cross Slope	5.55	0.08	1.4%	0.1% to 2.0%						W1208	3385+50.87	-119.00	847.45
W1207	W1206	Ramp Cross Slope	1.22	0.02	1.4%	0.1% to 2.0%									
W1301	W1302	Landing/Turning Space	5.00	0.02	0.5%	0.1% to 2.0%						W1301	3393+84.97	-120.79	852.99
W1302	W1304	Ramp Running Slope	7.04	0.04	0.6%	0.5% to 8.3%						W1302	3393+89.94	-121.29	853.02
W1308	W1307	Landing/Turning Space	5.00	0.02	0.5%	0.1% to 2.0%						W1303	3393+89.94	-123.01	853.05
W1307	W1305	Ramp Running Slope	5.00	0.18	3.5%	0.5% to 8.3%						W1304	3393+96.94	-121.99	853.06
W1301	W1308	Landing/Turning Space	5.00	-0.08	-1.5%	0.1% to 2.0%						W1305	3393+95.42	-116.81	853.12
W1302	W1307	Landing/Turning Space	5.00	-0.08	-1.5%	0.1% to 2.0%						W1306	3393+94.91	-115.75	853.13
W1303	W1304	Ramp Cross Slope	1.03	0.01	1.0%	0.1% to 2.0%						W1307	3393+90.44	-116.31	852.94
W1304	W1305	Ramp Cross Slope	5.41	0.06	1.1%	0.1% to 2.0%						W1308	3393+85.47	-115.81	852.92
W1305	W1306	Ramp Cross Slope	1.17	0.01	0.9%	0.1% to 2.0%									
W1408	W1402	Ramp Running Slope	11.82	0.75	6.4%	0.5% to 8.3%						W1401	3394+51.43	-128.46	853.44
W1407	W1405	Ramp Running Slope	5.00	0.41	8.2%	0.5% to 8.3%	Yes					W1402	3394+64.46	-128.76	854.24
W1402	W1403	Landing/Turning Space	5.00	0.08	1.5%	0.1% to 2.0%						W1403	3394+69.43	-129.26	854.31
W1405	W1404	Landing/Turning Space	5.00	0.08	1.5%	0.1% to 2.0%						W1404	3394+69.93	-124.29	854.24
W1402	W1405	Landing/Turning Space	5.00	-0.08	-1.5%	0.1% to 2.0%						W1405	3394+64.96	-123.79	854.16
W1403	W1404	Landing/Turning Space	5.00	-0.08	-1.5%	0.1% to 2.0%						W1406	3394+61.72	-122.46	853.82
W1401	W1408	Ramp Cross Slope	1.54	0.04	2.6%	0.1% to 3.6%				Signalized intersection leg		W1407	3394+59.98	-122.46	853.75
W1408	W1407	Ramp Cross Slope	8.47	0.27	3.2%	0.1% to 4.2%				Signalized intersection leg		W1408	3394+52.69	-127.58	853.48
W1407	W1406	Ramp Cross Slope	1.93	0.07	3.4%	0.1% to 4.4%				Signalized intersection leg					
W1501	W1502	Landing/Turning Space	10.00	-0.15	-1.5%	0.1% to 2.0%						W1501	20+82.81	-10.00	854.15
W1502	W1504	Ramp Running Slope	10.00	-0.40	-4.0%	0.5% to 8.3%						W1502	20+92.86	-10.00	854.00
W1509	W1508	Landing/Turning Space	10.00	-0.15	-1.5%	0.1% to 2.0%						W1503	21+02.86	-11.00	853.62
W1508	W1506	Ramp Running Slope	12.00	-0.78	-6.5%	0.5% to 8.3%						W1504	21+02.86	-10.00	853.60
W1501	W1509	Landing/Turning Space	10.00	0.15	1.5%	0.1% to 2.0%						W1505	21+04.86	-5.50	853.52
W1502	W1508	Landing/Turning Space	10.00	0.15	1.5%	0.1% to 2.0%						W1506	21+04.86	0.00	853.37
W1503	W1504	Ramp Cross Slope	1.00	-0.02	-2.0%	0.1% to 2.0%	Yes					W1507	21+04.86	1.00	853.35
W1504	W1510	Ramp Cross Slope	4.50	-0.12	-2.7%	0.1% to 3.7%						W1508	20+92.86	0.00	854.15
W1510	W1505	Ramp Running Slope	2.00	0.04	2.0%	0.5% to 8.3%						W1509	20+82.85	0.00	854.30
W1505	W1506	Ramp Cross Slope	5.50	-0.15	-2.7%	0.1% to 3.7%						W1510	20+82.86	-5.50	853.48
W1506	W1507	Ramp Cross Slope	1.00	-0.02	-2.0%	0.1% to 2.0%	Yes								
W1608	W1602	Ramp Running Slope	5.00	0.40	8.0%	0.5% to 8.3%	Yes					W1601	21+86.40	-11.00	855.50
W1607	W1605	Ramp Running Slope	23.21	1.34	5.8%	0.5% to 8.3%						W1602	21+88.36	-10.00	855.79
W1602	W1603	Landing/Turning Space	10.00	0.15	1.5%	0.1% to 2.0%						W1603	21+98.41	-10.00	855.94
W1605	W1604	Landing/Turning Space	10.00	0.15	1.5%	0.1% to 2.0%						W1604	21+98.36	0.00	856.09
W1602	W1605	Landing/Turning Space	10.00	0.15	1.5%	0.1% to 2.0%						W1605	21+88.36	0.00	855.94
W1603	W1604	Landing/Turning Space	10.00	0.15	1.5%	0.1% to 2.0%						W1606	21+63.94	1.00	854.55
W1601	W1608	Ramp Cross Slope	2.81	-0.11	-3.9%	0.1% to 4.9%				Signalized intersection leg		W1607	21+65.15	0.00	854.60
W1608	W1607	Ramp Cross Slope	20.88	-0.79	-3.8%	0.1% to 4.8%				Signalized intersection leg		W1608	21+83.36	-10.00	855.39
W1607	W1606	Ramp Cross Slope	1.57	-0.05	-3.2%	0.1% to 4.2%				Signalized intersection leg		W1609	22+24.63	0.00	857.65
W1603	W1610	Ramp Running Slope	24.15	1.56	6.5%	0.5% to 8.3%						W1610	22+24.63	-10.00	857.50
W1604	W1609	Ramp Running Slope	26.26	1.56	5.9%	0.5% to 8.3%									
W1610	W1609	Ramp Cross Slope	10.00	0.15	1.5%	0.1% to 2.0%									

THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.



LOCATION

T-78 N R-25 W
SECTION 19/30
WALNUT TOWNSHIP
POLK COUNTY

0 ENGLISH 40
SCALE IN FEET

GEOTECHNICAL DESIGN

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

Robert Stanley 10-20-13
Signature Date

Robert L. Stanley
Printed or Typed Name

My license renewal date is December 31, 2014

Pages or sheets covered by this seal: SPS.1

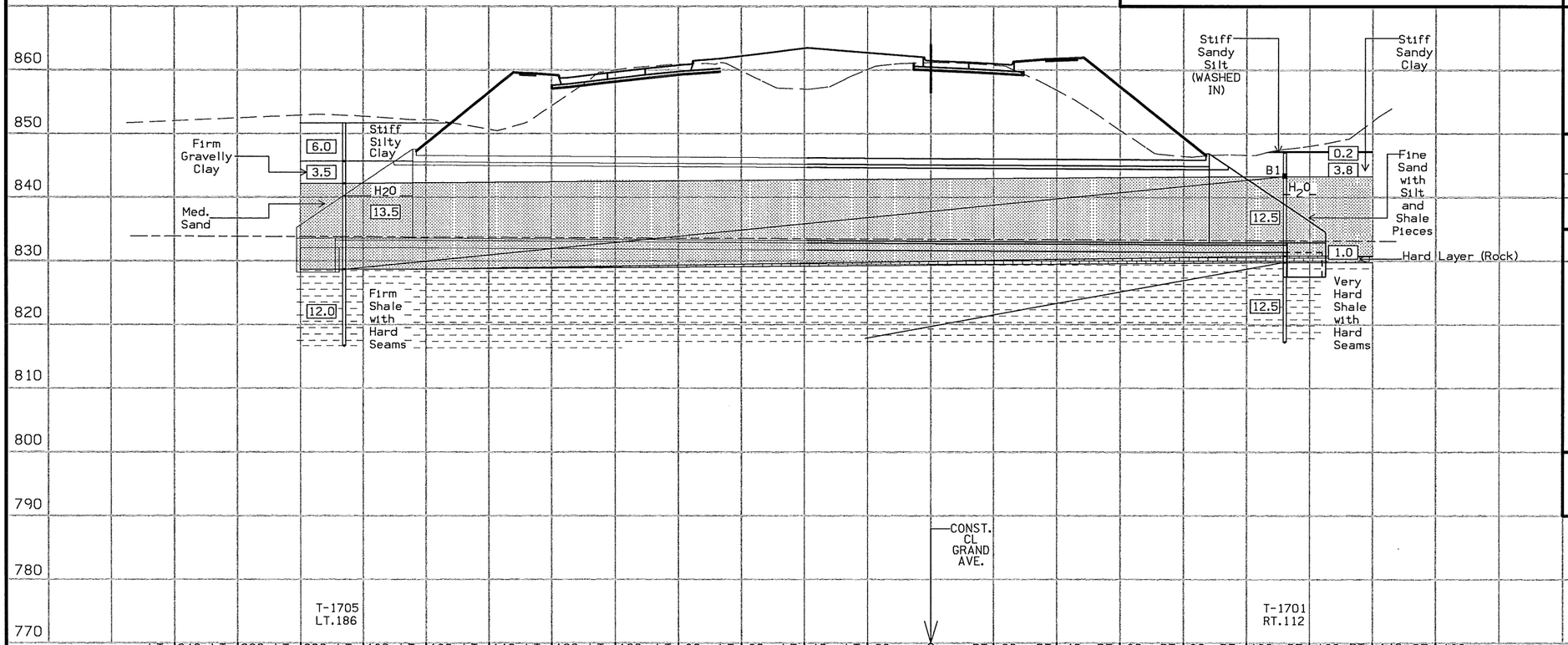
THE GRANULAR BLANKET, WORKING BLANKET, OR CORE-OUT TO BE INSTALLED UNDERNEATH THE CULVERT/RCB SHALL TERMINATE AT THE LOCATION INDICATED ON THIS SHEET (AT THE APRON SECTION OR OTHERWISE) AND SHALL NOT BE EXTENDED TO THE END OF THE CULVERT/RCB BECAUSE OF CONCERNS WITH POSSIBLE "PIPING" OF WATER THROUGH THE GRANULAR BLANKET, WORKING BLANKET, OR CORE-OUT IF IT EXTENDS TO THE VERY END OF THE CULVERT/RCB.

STAGE 2
12' X 12' X 167'-0 REINFORCED CONCRETE BOX CULVERT SOIL PROFILE SHEET

STATION 3397+00.00

POLK COUNTY

DESIGN SHEET No.1 OF 1 FILE No.30397 DESIGN No. 2014



-H2O- WATER SOILS BOOK NO.
(S) SAMPLE SHELBY DENS. CORE
PLUGGED BLOW SELECT SAND
M MOISTURE UNSUITABLE SANDY SOIL
SHALE ROCK SELECT SOIL

Boring No.	Date Drilled	GroundWater Level (Ft.)
T-1701	07/14/2009	7.30
T-1705	07/23/2009	11.50

SHELBY TUBE CORE DATA

CORE NO.	T-1701-B1
CLASSIFICATION [AASHTO]	6(8)
COEFF. CONSOL. SQ. FT /DAY	0.562
TRIAXIAL COMPRESSION	CU
COHESION - PSF	32
FRICTION COEFF.	0.233
MOISTURE CONTENT %	17.50
DRY DENSITY - PCF	116.50

UU-UNCONSOLIDATED & UNDRAINED
CU-CONSOLIDATED & UNDRAINED

Note:
12.5 Indicates Layer Thickness

ENGLISH	IOWA DOT	DESIGN TEAM STANLEY / MEGIVERN / GORJACKOVSKI	POLK COUNTY	PROJECT NUMBER IM-035-2(365)69--13-77	SHEET NUMBER SPS.1

1:32:47 PM 10/28/2013 rschapp pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7703501096\Soils\S4Submittal\(411)RCB's\Working_Files\770813_364sh..sht

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL CLASS 10 SAVED -C	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK
1364+50.00	105	39	66	66	14	18	18
1364+75.00	119	54	65	65	29	38	38
1365+00.00	119	53	66	66	29	38	38
1365+25.00	103	38	65	65	15	20	20
1365+50.00	102	37	65	65	19	25	25
1365+75.00	116	51	65	65	32	42	42
1366+00.00	118	50	68	68	26	34	34
1366+25.00	116	50	66	66	29	38	38
1366+50.00	114	49	65	65	30	39	39
1366+75.00	115	48	67	67	24	31	31
1367+00.00	118	47	71	71	23	30	30
1367+25.00	117	47	70	70	23	30	30
1367+50.00	114	46	68	68	25	33	33
1367+75.00	114	46	68	68	26	34	34
1368+00.00	117	46	71	71	30	39	39
1368+25.00	119	46	73	73	33	43	43
1368+50.00	118	46	72	72	33	43	43
1368+75.00	118	47	71	71	38	49	49
1369+00.00	119	49	70	70	41	53	53
1369+25.00	118	50	68	68	43	56	56
1369+50.00	117	50	67	67	45	59	59
1369+75.00	117	51	66	66	47	61	61
1370+00.00	119	53	66	66	50	65	65
1370+25.00	122	54	68	68	58	75	75
1370+50.00	125	56	69	69	69	90	90
1370+75.00	126	58	68	68	80	104	104
1371+00.00	126	60	66	66	96	125	125
1371+25.00	129	62	67	67	111	144	144
1371+50.00	134	65	69	69	124	161	161
1371+75.00	136	67	69	69	143	186	186
1372+00.00	136	70	66	66	165	215	215
1372+25.00	137	73	64	64	188	244	244
1372+50.00	140	76	64	64	211	274	274
1372+75.00	142	78	64	64	237	308	308
1373+00.00	143	81	62	62	270	351	351
1373+25.00	146	85	61	61	303	394	394
1373+50.00	149	88	61	61	332	432	432
1373+75.00	152	92	60	60	363	472	472
1374+00.00	155	97	58	58	395	514	514
1374+25.00	160	100	60	60	425	553	553
1374+50.00	167	103	64	64	448	582	582
1374+75.00	171	105	66	66	471	612	612
1375+00.00	137	71	66	66	245	319	319
1375+25.00	102	36	66	66	3	4	4
1375+50.00	86	18	68	68	3	4	4
1375+75.00	86	19	67	67	2	3	3
1376+00.00	86	19	67	67			
1376+25.00	72	2	70	70			
1376+50.00	74	5	69	69			
1376+75.00	78	8	70	70			
1377+00.00	83	12	71	71			
1377+25.00	89	19	70	70			
1377+50.00	96	29	67	67			
1377+75.00	98	35	63	63			
1378+00.00	93	40	53	53	1	1	1
1378+25.00							
1382+00.00	45	13	32	32	71	92	92
1382+25.00	560	51	509	509	68	88	88
1382+50.00	1322	105	1217	1217	69	90	90
1382+75.00	1810	133	1677	1677	102	133	133
1383+00.00	2162	142	2020	2020	191	248	248
1383+25.00	2309	151	2158	2158	298	387	387
1383+50.00	2206	159	2047	2047	368	478	478
1383+75.00	1883	167	1716	1716	405	527	527
1384+00.00							

STATION	TOTAL CUT	TOPSOIL CLASS 10 SAVED -C	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK
1384+00.00	1544	174	1370	1370	428	556	556
1384+25.00	1454	180	1274	1274	433	563	563
1384+50.00	1887	187	1700	1700	428	556	556
1384+75.00	2681	193	2488	2488	410	533	533
1385+00.00	3168	200	2968	2968	359	467	467
1385+25.00	3075	206	2869	2869	272	354	354
1385+50.00	2736	213	2523	2523	179	233	233
1385+75.00	2431	220	2211	2211	116	151	151
1386+00.00	2145	226	1919	1919	83	108	108
1386+25.00	1866	233	1633	1633	70	91	91
1386+50.00	1635	224	1411	1411	71	92	92
1386+75.00	1454	219	1235	1235	75	98	98
1387+00.00	1305	231	1074	1074	90	117	117
1387+25.00	1180	242	938	938	116	151	151
1387+50.00							
1392+50.00	1000	114	886	886	75	98	98
1392+75.00	959	105	854	854	73	95	95
1393+00.00	915	93	822	822	75	98	98
1393+25.00	930	123	807	807	75	98	98
1393+50.00	943	137	806	806	80	104	104
1393+75.00	933	112	821	821	89	116	116
1394+00.00	943	114	829	829	96	125	125
1394+25.00	885	117	768	768	101	131	131
1394+50.00	752	115	637	637	101	131	131
1394+75.00	673	110	563	563	97	126	126
1395+00.00	670	108	562	562	90	117	117
1395+25.00	659	107	552	552	79	103	103
1395+50.00	651	106	545	545	69	90	90
1395+75.00	658	107	551	551	63	82	82
1396+00.00	669	108	561	561	61	79	79
1396+25.00	684	109	575	575	59	77	77
1396+50.00	870	113	757	757	57	74	74
1396+75.00	1058	116	942	942	54	70	70
1397+00.00	1080	114	966	966	51	66	66
1397+25.00	1097	111	986	986	44	57	57
1397+50.00	1095	109	986	986	37	48	48
1397+75.00	1076	107	969	969	35	46	46
1398+00.00	1047	105	942	942	32	42	42
1398+25.00	1031	103	928	928	27	35	35
1398+50.00	1018	101	917	917	23	30	30
1398+75.00	999	98	901	901	19	25	25
1399+00.00	988	95	893	893	13	17	17
1399+25.00	969	92	877	877	6	8	8
1399+50.00	933	88	845	845	2	3	3
1399+75.00	891	85	806	806			
1400+00.00	843	63	780	780			
1400+25.00	772	43	729	729			
1400+50.00	697	43	654	654			
1400+75.00	641	42	599	599			
1401+00.00	589	42	547	547			
1401+25.00	440	35	405	405			
1401+50.00	304	28	276	276			
1401+75.00	284	27	257	257			
1402+00.00	268	26	242	242			
1402+25.00	253	24	229	229			
1402+50.00	239	22	217	217			
1402+75.00	226	20	206	206			
1403+00.00	220	18	202	202			
1403+25.00	211	15	196	196			
1403+50.00	196	13	183	183			
1403+75.00	189	11	178	178			
1404+00.00	184	9	175	175			
1404+25.00	185	7	178	178			
1404+50.00	187	6	181	181			
1404+75.00	188	4	184	184			
1405+00.00							

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL CLASS 10 SAVED -C	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK
1405+00.00	187	2	185	185			
1405+25.00	203	20	183	183	1	1	1
1405+50.00	220	39	181	181	2	3	3
1405+75.00	219	38	181	181	3	4	4
1406+00.00	588	78	510	510	2	3	3
1406+25.00	1245	124	1121	1121			
1406+50.00	1570	130	1440	1440			
1406+75.00	1626	131	1495	1495			
1407+00.00	1636	131	1505	1505			
1407+25.00	1619	129	1490	1490			
1407+50.00	1591	128	1463	1463			
1407+75.00	1556	126	1430	1430			
1408+00.00	1524	124	1400	1400			
1408+25.00	1495	122	1373	1373			
1408+50.00	1474	121	1353	1353			
1408+75.00	1462	121	1341	1341			
1409+00.00	1446	120	1326	1326			
1409+25.00	1429	120	1309	1309			
1409+50.00	1422	120	1302	1302			
1409+75.00	1415	119	1296	1296			
1410+00.00	1401	118	1283	1283			
1410+25.00	1380	117	1263	1263			
1410+50.00	1356	116	1240	1240			
1410+75.00	1334	114	1220	1220			
1411+00.00	1305	113	1192	1192			
1411+25.00	1258	112	1146	1146			
1411+50.00	1196	110	1086	1086			
1411+75.00	1144	108	1036	1036			
1412+00.00	1093	106	987	987			
1412+25.00	1028	103	925	925			
1412+50.00	963	100	863	863			
1412+75.00	896	97	799	799			
1413+00.00	832	94	738	738			
1413+25.00	771	91	680	680			
1413+50.00	704	88	616	616			
1413+75.00	642	86	556	556	1	1	1
1414+00.00	594	84	510	510	2	3	3
1414+25.00	545	81	464	464	4	5	5
1414+50.00	481	77	404	404	5	7	7
1414+75.00	415	71	344	344	7	9	9
1415+00.00	363	68	295	295	10	13	13
1415+25.00	309	65	244	244	5	7	7
1415+50.00	237	60	177	177	7	9	9
1415+75.00	179	61	118	118	59	77	77
1416+00.00	171	75	96	96	180	234	234
1416+25.00	166	88	78	78	379	493	493
1416+50.00	162	107	55	55	677	880	880
1416+75.00	188	136	52	52	996	1295	1295
1417+00.00	239	166	73	73	1366	1776	1776
1417+25.00	345	181	164	164	1525	1983	1983
1417+50.00	427	182	245	245	1470	1911	1911
1417+75.00	478	182	296	296	1461	1899	1899
1418+00.00	504	180	324	324	1417	1842	1842
1418+25.00	505	179	326	326	1351	1756	1756
1418+50.00	513	180	333	333	1286	1672	1672
1418+75.00	495	179	316	316	1242	1615	1615
1419+00.00	499	177	322	322	1128	1466	1466
1419+25.00	449	175	274	274	902	1173	1173
1419+50.00	383	174	209	209	865	1125	1125
1419+75.00	393	173	220	220	981	1275	1275
1420+00.00	404	170	234	234	1010	1313	1313
1420+25.00	393	164	229	229	1028	1336	1336
1420+50.00	404	164	240	240	1013	1317	1317
1420+75.00	449	163	286	286	568	738	738
1421+00.00	469	156	313	313	146	190	190
1421+25.00	473	154	319	319	149	194	194
1421+50.00	489	155	334	334	150	195	195
1421+75.00	506	156	350	350	156	203	203
1422+00.00	485	156	329	329	417	542	542
1422+25.00	469	156	313	313	660	858	858
1422+50.00	474	155	319	319	604	785	785
1422+75.00	477	154	323	323	525	683	683
1423+00.00	491	155	336	336	452	588	588
1423+25.00	495	154	341	341	393	511	511
1423+50.00	486	151	335	335	356	463	463
1423+75.00	471	148	323	323	332	432	432
1424+00.00	457	143	314	314	304	395	395
1424+25.00	447	139	308	308	274	356	356
1424+50.00	434	134	300	300	250	325	325
1424+75.00	421	128	293	293	225	293	293
1425+00.00	412	123	289	289	202	263	263
1425+25.00	386	118	268	268	188	244	244
1425+50.00	348	111	237	237	175	228	228
1425+75.00	313	104	209	209	160	208	208
1426+00.00	281	97	184	184	149	194	194
1426+25.00	255	92	163	163	143	186	186
1426+50.00	230	87	143	143	139	181	181
1426+75.00	205	81	124	124	135	176	176
1427+00.00	187	75	112	112	125	163	163
1427+25.00	175	70	105	105	115	150	150
1427+50.00	165	67	98	98	112	146	146
1427+75.00	155	65	90	90	105	137	137
1428+00.00	151	63	88	88	68	88	88
1428+25.00	148	64	84	84	54	70	70
1428+50.00	142	64	78	78	66	86	86
1428+75.00	133	57	76	76	58	75	75
1429+00.00	132	55	77	77	56	73	73
1429+25.00	144	57	87	87	63	82	82
1429+50.00	165	58	107	107	69	90	90
1429+75.00	194	59	135	135	66	86	86
1430+00.00	241	61	180	180	52	68	68
1430+25.00	288	65	223	223	40	52	52
1430+50.00	319	69	250	250	42	55	55
1430+75.00	344	71	273	273	44	57	57
1431+00.00	369	73	296	296	45	59	59
1431+25.00	394	75	319	319	44	57	57
1431+50.00	416	77	339	339	42	55	55
1431+75.00	436	79	357	357	41	53	53
1432+00.00	457	80	377	377	38	49	49
1432+25.00	466	81	385	385	35	46	46
1432+50.00	467	82	385	385	35	46	46
1432+75.00	471	83	388	388	33	43	43
1433+00.00	473	83	390	390	33	43	43
1433+25.00	477	83	394	394	34	44	44
1433+50.00	479	84	395	395	36	47	47
1433+75.00	482	84	398	398	36	47	47
1434+00.00	484	84	400	400	35	46	46
1434+25.00	478	84	394	394	33	43	43
1434+50.00	472	83	389	389	34	44	44
1434+75.00	475	83	392	392	34	44	44
1435+00.00	473	82	391	391	31	40	40
1435+25.00	467	81	386	386	31	40	40
1435+50.00	459	81	378	378	33	43	43
1435+75.00	451	81	370	370	33	43	43
1436+00.00	438	80	358	358	35	46	46
1436+25.00	422	79	343	343	35	46	46
1436+50.00	402	78	324	324	29	38	38
1436+75.00	370	77	293	293	26	34	34
1437+00.00	347	77	270	270	28	36	36
1437+25.00	333	75	258	258	26	34	34
1437+50.00							

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL CLASS 10 SAVED -C	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK
1437+50.00	311	74	237	237	21	27	27
1437+75.00	280	71	209	209	18	23	23
1438+00.00	247	68	179	179	15	20	20
1438+25.00	215	65	150	150	14	18	18
1438+50.00	212	64	148	148	13	17	17
1438+75.00	217	63	154	154	7	9	9
1439+00.00	204	61	143	143	1	1	1
1439+25.00	179	58	121	121	7	9	9
1439+50.00	162	57	105	105	10	13	13
1439+75.00	159	57	102	102	10	13	13
1440+00.00	147	57	90	90	14	18	18
1440+25.00	133	57	76	76	17	22	22
1440+50.00	127	57	70	70	22	29	29
1440+75.00	130	59	71	71	26	34	34
1441+00.00	131	61	70	70	29	38	38
1441+25.00	132	62	70	70	31	40	40
1441+50.00	132	62	70	70	30	39	39
1441+75.00	125	62	63	63	28	36	36
1442+00.00	105	50	55	55	26	34	34
1442+25.00	94	40	54	54	23	30	30
1442+50.00	102	45	57	57	25	33	33
1442+75.00	99	39	60	60	16	21	21
1443+00.00	99	20	79	79	3	4	4
1443+25.00	111	12	99	99	1	1	1
1443+50.00	116	14	102	102	1	1	1
1443+75.00	123	15	108	108			
1444+00.00	130	17	113	113			
1444+25.00	139	19	120	120			
1444+50.00	146	21	125	125			
1444+75.00	152	23	129	129	1	1	1
1445+00.00	157	26	131	131	1	1	1
1445+25.00	161	28	133	133	2	3	3
1445+50.00	164	30	134	134	3	4	4
1445+75.00	170	33	137	137	3	4	4
1446+00.00	177	36	141	141	1	1	1
1446+25.00	182	39	143	143	1	1	1
1446+50.00	187	43	144	144	3	4	4
1446+75.00	183	35	148	148	3	4	4
1447+00.00	182	26	156	156			
1447+25.00	194	28	166	166			
1447+50.00	204	31	173	173			
1447+75.00	208	33	175	175			
1448+00.00	214	35	179	179			
1448+25.00	219	36	183	183			
1448+50.00	220	37	183	183			
1448+75.00	219	38	181	181			
1449+00.00	216	39	177	177			
1449+25.00	214	40	174	174			
1449+50.00	209	41	168	168	1	1	1
1449+75.00	198	41	157	157	1	1	1
1450+00.00	190	42	148	148	1	1	1
1450+25.00	193	42	151	151	1	1	1
1450+50.00	185	43	142	142	1	1	1
1450+75.00	166	44	122	122	3	4	4
1451+00.00	153	46	107	107	6	8	8
1451+25.00	141	46	95	95	8	10	10
1451+50.00	133	46	87	87	12	16	16
1451+75.00	118	34	84	84	9	12	12
1452+00.00	102	21	81	81	3	4	4
1452+25.00	96	18	78	78	1	1	1
1452+50.00	91	16	75	75			
1452+75.00	89	15	74	74			
1453+00.00	87	14	73	73			
1453+25.00	85	13	72	72			
1453+50.00	84	11	73	73			
1453+75.00	83	10	73	73			
1454+00.00	82	10	72	72			
1454+25.00	81	8	73	73			
1454+50.00	77	6	71	71			
1454+75.00	75	6	69	69			
1455+00.00	74	6	68	68			
1455+25.00	75	6	69	69			
1455+50.00	75	6	69	69			
1455+75.00	74	6	68	68			
1456+00.00	74	5	69	69			
1456+25.00	77	5	72	72			
1456+50.00	80	6	74	74			
1456+75.00	84	7	77	77			
1457+00.00	84	7	77	77			
1457+25.00	85	8	77	77			
1457+50.00	86	9	77	77			
1457+75.00	84	7	77	77			
1458+00.00	81	5	76	76			
1458+25.00	87	10	77	77	1	1	1
1458+50.00	93	15	78	78	2	3	3
1458+75.00	92	15	77	77	2	3	3
1459+00.00	92	15	77	77	2	3	3
1459+25.00	88	14	74	74	2	3	3
1459+50.00	86	14	72	72	1	1	1
1459+75.00	85	13	72	72	1	1	1
1460+00.00	85	13	72	72	1	1	1
1460+25.00	84	13	71	71	1	1	1
1460+50.00	85	13	72	72	1	1	1
1460+75.00	86	14	72	72	2	3	3
1461+00.00	84	13	71	71	2	3	3
1461+25.00	83	13	70	70	2	3	3
1461+50.00	82	11	71	71	1	1	1
1461+75.00	80	10	70	70			
1462+00.00	79	10	69	69			
1462+25.00	79	10	69	69			
1462+50.00	78	10	68	68			
1462+75.00	77	9	68	68			
1463+00.00	76	8	68	68			
1463+25.00	77	8	69	69			
1463+50.00	79	9	70	70			
1463+75.00	81	9	72	72			
1464+00.00	82	10	72	72			
1464+25.00	82	10	72	72			
1464+50.00	82	10	72	72			
1464+75.00	83	10	73	73			
1465+00.00	85	10	75	75			
1465+25.00	86	10	76	76			
1465+50.00	87	10	77	77			
1465+75.00	87	10	77	77			
1466+00.00	86	10	76	76			
1466+25.00	85	10	75	75			
1466+50.00	85	9	76	76			
1466+75.00	86	9	77	77			
1467+00.00	85	9	76	76			
1467+25.00	83	9	74	74			
1467+50.00	83	8	75	75			
1467+75.00	82	7	75	75			
1468+00.00	80	6	74	74			
1468+25.00	78	5	73	73			
1468+50.00	355	39	316	316			
1468+75.00	634	74	560	560			
1469+00.00	635	75	560	560			
1469+25.00	630	74	556	556			
1469+50.00	609	74	535	535			
1469+75.00	559	74	485	485			
1470+00.00							

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL CLASS 10 SAVED -C	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK
1470+00.00	480	74	406	406			
1470+25.00	380	75	305	305	1	1	1
1470+50.00	276	75	201	201	2	3	3
1470+75.00	203	74	129	129	2	3	3
1471+00.00	171	72	99	99	2	3	3
1471+25.00	111	42	69	69	4	5	5
1471+50.00	69	21	48	48	12	16	16
1471+75.00	78	31	47	47	20	26	26
1472+00.00	80	32	48	48	23	30	30
1472+25.00	78	29	49	49	21	27	27
1472+50.00	73	24	49	49	16	21	21
1472+75.00	71	23	48	48	16	21	21
1473+00.00	71	23	48	48	17	22	22
1473+25.00	70	23	47	47	16	21	21
1473+50.00	67	22	45	45	15	20	20
1473+75.00	66	22	44	44	16	21	21
1474+00.00	65	22	43	43	15	20	20
1474+25.00	64	22	42	42	16	21	21
1474+50.00	65	23	42	42	17	22	22
1474+75.00	64	23	41	41	17	22	22
1475+00.00	63	22	41	41	15	20	20
1475+25.00	63	23	40	40	16	21	21
1475+50.00	64	23	41	41	18	23	23
1475+75.00	65	24	41	41	21	27	27
1476+00.00	66	25	41	41	24	31	31
1476+25.00	68	27	41	41	25	33	33
1476+50.00	68	27	41	41	24	31	31
1476+75.00	67	26	41	41	22	29	29
1477+00.00	66	26	40	40	23	30	30
1477+25.00	65	26	39	39	24	31	31
1477+50.00	63	25	38	38	22	29	29
1477+75.00	63	25	38	38	21	27	27
1478+00.00	63	25	38	38	19	25	25
1478+25.00	64	25	39	39	18	23	23
1478+50.00	63	24	39	39	17	22	22
1478+75.00	60	20	40	40	15	20	20
1479+00.00	63	22	41	41	12	16	16
1479+25.00	67	26	41	41	11	14	14
1479+50.00	65	24	41	41	12	16	16
1479+75.00	74	32	42	42	17	22	22
1480+00.00	85	41	44	44	16	21	21
1480+25.00	110	43	67	67	10	13	13
1480+50.00	142	48	94	94	12	16	16
1480+75.00	150	49	101	101	14	18	18
1481+00.00	151	49	102	102	16	21	21
1481+25.00	146	49	97	97	16	21	21
1481+50.00	141	48	93	93	15	20	20
1481+75.00	133	47	86	86	14	18	18
1482+00.00	126	46	80	80	14	18	18
1482+25.00	120	45	75	75	15	20	20
1482+50.00	115	44	71	71	18	23	23
1482+75.00	109	43	66	66	21	27	27
1483+00.00	101	41	60	60	24	31	31
1483+25.00	93	39	54	54	27	35	35
1483+50.00	89	39	50	50	33	43	43
1483+75.00	94	43	51	51	37	48	48
1484+00.00	103	44	59	59	35	46	46
1484+25.00	116	45	71	71	28	36	36
1484+50.00	137	48	89	89	21	27	27
1484+75.00	155	51	104	104	22	29	29
1485+00.00	148	52	96	96	21	27	27
1485+25.00	148	54	94	94	17	22	22
1485+50.00	181	59	122	122	17	22	22
1485+75.00	216	65	151	151	19	25	25
1486+00.00	248	71	177	177	20	26	26
1486+25.00							

STATION	TOTAL CUT	TOPSOIL CLASS 10 SAVED -C	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK
1486+25.00	278	76	202	202	20	26	26
1486+50.00	302	79	223	223	20	26	26
1486+75.00	320	82	238	238	20	26	26
1487+00.00	343	84	259	259	19	25	25
1487+25.00	364	86	278	278	17	22	22
1487+50.00	376	86	290	290	15	20	20
1487+75.00	384	87	297	297	15	20	20
1488+00.00	393	88	305	305	14	18	18
1488+25.00	403	89	314	314	14	18	18
1488+50.00	408	89	319	319	12	16	16
1488+75.00	407	90	317	317	11	14	14
1489+00.00	401	89	312	312	11	14	14
1489+25.00	392	89	303	303	12	16	16
1489+50.00	391	88	303	303	14	18	18
1489+75.00	393	88	305	305	16	21	21
1490+00.00	388	87	301	301	18	23	23
1490+25.00	376	86	290	290	20	26	26
1490+50.00	362	84	278	278	23	30	30
1490+75.00	340	82	258	258	23	30	30
1491+00.00	310	79	231	231	21	27	27
1491+25.00	282	76	206	206	18	23	23
1491+50.00	256	74	182	182	15	20	20
1491+75.00	212	69	143	143	16	21	21
1492+00.00	186	66	120	120	16	21	21
1492+25.00	193	63	130	130	16	21	21
1492+50.00	202	62	140	140	17	22	22
1492+75.00	207	62	145	145	20	26	26
1493+00.00	205	61	144	144	24	31	31
1493+25.00	200	61	139	139	28	36	36
1493+50.00	188	60	128	128	32	42	42
1493+75.00	189	59	130	130	34	44	44
1494+00.00	187	58	129	129	38	49	49
1494+25.00	174	59	115	115	44	57	57
1494+50.00	168	60	108	108	47	61	61
1494+75.00	161	61	100	100	56	73	73
1495+00.00	153	62	91	91	79	103	103
1495+25.00	152	76	76	76	175	228	228
1495+50.00	161	81	80	80	195	254	254
1495+75.00	161	71	90	90	134	174	174
1496+00.00	168	69	99	99	143	186	186
1496+25.00	181	72	109	109	175	228	228
1496+50.00	181	74	107	107	184	239	239
1496+75.00	172	75	97	97	189	246	246
1497+00.00	207	73	134	134	218	283	283
1497+25.00	250	68	182	182	221	287	287
1497+50.00	263	62	201	201	218	283	283
1497+75.00	272	59	213	213	226	294	294
1498+00.00	270	59	211	211	236	307	307
1498+25.00	273	61	212	212	247	321	321
1498+50.00	279	62	217	217	257	334	334
1498+75.00	286	63	223	223	267	347	347
1499+00.00	292	64	228	228	278	361	361
1499+25.00	298	66	232	232	289	376	376
1499+50.00	305	68	237	237	299	389	389
1499+75.00	314	70	244	244	310	403	403
1500+00.00	314	71	243	243	319	415	415
1500+25.00	301	71	230	230	326	424	424
1500+50.00	282	71	211	211	332	432	432
1500+75.00	271	72	199	199	338	439	439
1501+00.00	282	73	209	209	353	459	459
1501+25.00	290	74	216	216	360	468	468
1501+50.00	291	75	216	216	358	465	465
1501+75.00	296	75	221	221	366	476	476
1502+00.00	299	76	223	223	372	484	484
1502+25.00	309	77	232	232	379	493	493
1502+50.00							

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL CLASS 10 SAVED -C	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK
1502+50.00	322	79	243	243	385	501	501
1502+75.00	326	80	246	246	392	510	510
1503+00.00	326	81	245	245	399	519	519
1503+25.00	328	82	246	246	406	528	528
1503+50.00	336	83	253	253	414	538	538
1503+75.00	338	82	256	256	421	547	547
1504+00.00	326	81	245	245	427	555	555
1504+25.00	323	80	243	243	435	566	566
1504+50.00	326	80	246	246	442	575	575
1504+75.00	327	81	246	246	449	584	584
1505+00.00	338	83	255	255	464	603	603
1505+25.00	336	84	252	252	471	612	612
1505+50.00	326	85	241	241	470	611	611
1505+75.00	335	86	249	249	478	621	621
1506+00.00	348	87	261	261	486	632	632
1506+25.00	358	88	270	270	494	642	642
1506+50.00	369	89	280	280	503	654	654
1506+75.00	387	91	296	296	510	663	663
1507+00.00	404	93	311	311	517	672	672
1507+25.00	411	95	316	316	524	681	681
1507+50.00	416	97	319	319	531	690	690
1507+75.00	422	100	322	322	537	698	698
1508+00.00	436	103	333	333	545	709	709
1508+25.00	459	106	353	353	552	718	718
1508+50.00	479	109	370	370	559	727	727
1508+75.00	402	119	283	283	565	735	735
1509+00.00	332	138	194	194	864	1123	1123
1509+25.00	225	143	82	82	1146	1490	1490
1509+50.00							
1515+75.00							
1516+00.00	100	92	8	8	710	923	923
1516+25.00	103	95	8	8	697	906	906
1516+50.00	102	93	9	9	671	872	872
1516+75.00	102	94	8	8	647	841	841
1517+00.00	108	99	9	9	632	822	822
1517+25.00	108	99	9	9	609	792	792
1517+50.00	105	94	11	11	576	749	749
1517+75.00	107	93	14	14	547	711	711
1518+00.00	108	92	16	16	513	667	667
1518+25.00	110	89	21	21	475	618	618
1518+50.00	112	84	28	28	444	577	577
1518+75.00	121	86	35	35	427	555	555
1519+00.00	136	92	44	44	431	560	560
1519+25.00	147	93	54	54	437	568	568
1519+50.00	156	93	63	63	427	555	555
1519+75.00	163	93	70	70	412	536	536
1520+00.00	170	93	77	77	399	519	519
1520+25.00	171	91	80	80	395	514	514
1520+50.00	166	88	78	78	385	501	501
1520+75.00	162	86	76	76	374	486	486
1521+00.00	163	89	74	74	374	486	486
1521+25.00	170	92	78	78	365	475	475
1521+50.00	174	91	83	83	357	464	464
1521+75.00	170	89	81	81	353	459	459
1522+00.00	167	86	81	81	350	455	455
1522+25.00	165	86	79	79	345	449	449
1522+50.00	158	85	73	73	343	446	446
1522+75.00	147	77	70	70	350	455	455
1523+00.00	143	74	69	69	361	469	469
1523+25.00	147	79	68	68	363	472	472
1523+50.00	149	80	69	69	351	456	456
1523+75.00	151	80	71	71	337	438	438
1524+00.00	151	80	71	71	325	423	423
1524+25.00	150	78	72	72	312	406	406
1524+50.00	150	77	73	73	290	377	377
1524+75.00							

STATION	TOTAL CUT	TOPSOIL CLASS 10 SAVED -C	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK
1524+75.00	146	73	73	73	266	346	346
1525+00.00	143	69	74	74	246	320	320
1525+25.00	142	69	73	73	231	300	300
1525+50.00	146	71	75	75	212	276	276
1525+75.00	151	74	77	77	200	260	260
1526+00.00	154	74	80	80	195	254	254
1526+25.00	157	73	84	84	188	244	244
1526+50.00	159	72	87	87	180	234	234
1526+75.00	161	71	90	90	172	224	224
1527+00.00	161	66	95	95	171	222	222
1527+25.00	160	62	98	98	165	215	215
1527+50.00	160	57	103	103	156	203	203
1527+75.00	162	54	108	108	142	185	185
1528+00.00	168	53	115	115	129	168	168
1528+25.00	173	52	121	121	119	155	155
1528+50.00	177	51	126	126	110	143	143
1528+75.00	179	50	129	129	101	131	131
1529+00.00	180	48	132	132	95	124	124
1529+25.00	181	46	135	135	86	112	112
1529+50.00	181	45	136	136	77	100	100
1529+75.00	180	43	137	137	71	92	92
1530+00.00	181	42	139	139	55	72	72
1530+25.00	211	54	157	157	51	66	66
1530+50.00	219	59	160	160	56	73	73
1530+75.00	202	53	149	149	50	65	65
1531+00.00	201	53	148	148	52	68	68
1531+25.00	200	52	148	148	55	72	72
1531+50.00	198	52	146	146	55	72	72
1531+75.00	196	51	145	145	52	68	68
1532+00.00	196	51	145	145	48	62	62
1532+25.00	196	50	146	146	44	57	57
1532+50.00	195	49	146	146	38	49	49
1532+75.00	194	49	145	145	31	40	40
1533+00.00	192	48	144	144	26	34	34
1533+25.00	192	51	141	141	24	31	31
1533+50.00	190	52	138	138	23	30	30
1533+75.00	185	48	137	137	20	26	26
1534+00.00	185	48	137	137	15	20	20
1534+25.00	187	50	137	137	11	14	14
1534+50.00	186	51	135	135	12	16	16
1534+75.00	187	53	134	134	15	20	20
1535+00.00	187	55	132	132	17	22	22
1535+25.00	185	56	129	129	18	23	23
1535+50.00	181	56	125	125	19	25	25
1535+75.00	175	55	120	120	19	25	25
1536+00.00	169	55	114	114	19	25	25
1536+25.00	161	55	106	106	21	27	27
1536+50.00	154	54	100	100	21	27	27
1536+75.00	149	54	95	95	22	29	29
1537+00.00	142	54	88	88	26	34	34
1537+25.00	137	53	84	84	29	38	38
1537+50.00	136	53	83	83	31	40	40
1537+75.00	134	53	81	81	34	44	44
1538+00.00	132	53	79	79	37	48	48
1538+25.00	131	53	78	78	37	48	48
1538+50.00	130	52	78	78	38	49	49
1538+75.00	130	52	78	78	40	52	52
1539+00.00	129	52	77	77	41	53	53
1539+25.00	124	51	73	73	43	56	56
1539+50.00	123	51	72	72	42	55	55
1539+75.00	123	51	72	72	40	52	52
1540+00.00	120	51	69	69	42	55	55
1540+25.00	115	50	65	65	43	56	56
1540+50.00	112	50	62	62	42	55	55
1540+75.00	115	50	65	65	41	53	53
1541+00.00							

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL CLASS 10 SAVED -C	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK
1541+00.00	115	50	65	65	41	53	53
1541+25.00	116	50	66	66	42	55	55
1541+50.00	120	51	69	69	43	56	56
1541+75.00	121	51	70	70	44	57	57
1542+00.00	122	52	70	70	45	59	59
1542+25.00	124	53	71	71	46	60	60
1542+50.00	124	53	71	71	47	61	61
1542+75.00	122	53	69	69	47	61	61
1543+00.00	123	53	70	70	45	59	59
1543+25.00	122	52	70	70	42	55	55
1543+50.00	124	54	70	70	42	55	55
1543+75.00	131	58	73	73	43	56	56
1544+00.00	141	60	81	81	44	57	57
1544+25.00	151	63	88	88	43	56	56
1544+50.00	166	65	101	101	40	52	52
1544+75.00	184	68	116	116	34	44	44
1545+00.00	198	70	128	128	29	38	38
1545+25.00	220	73	147	147	22	29	29
1545+50.00	246	76	170	170	17	22	22
1545+75.00	245	79	166	166	15	20	20
1546+00.00	250	82	168	168	14	18	18
1546+25.00	288	85	203	203	14	18	18
1546+50.00	330	86	244	244	14	18	18
1546+75.00	375	88	287	287	14	18	18
1547+00.00	470	89	381	381	7	9	9
1547+25.00	781	101	680	680	0	0	0
1547+50.00	1138	114	1024	1024	0	0	0
1547+75.00	1283	125	1158	1158	1	1	1
1548+00.00	1314	133	1181	1181	4	5	5
1548+25.00	1242	123	1119	1119	2	3	3
1548+50.00	1185	113	1072	1072	0	0	0
1548+75.00	976	104	872	872	1	1	1
1549+00.00	571	85	486	486	3	4	4
1549+25.00	347	73	274	274	5	7	7
1549+50.00	279	68	211	211	8	10	10
1549+75.00	233	63	170	170	12	16	16
1550+00.00	201	59	142	142	16	21	21
1550+25.00	177	56	121	121	18	23	23
1550+50.00	0	0	0	0	0	0	0
Sub Total	242050	47076	194974	194974	87199	113394	113394
RAMP B							
2375+00.00	127	115	12	12	498	647	647
2375+25.00	126	117	9	9	553	719	719
2375+50.00	125	120	5	5	630	819	819
2375+75.00	125	124	1	1	727	945	945
2376+00.00	127	127	0	0	847	1101	1101
2376+25.00	130	130	0	0	982	1277	1277
2376+50.00	109	101	8	8	531	690	690
2376+75.00	83	72	11	11	11	14	14
2377+00.00	79	74	5	5	18	23	23
2377+25.00	79	76	3	3	27	35	35
2377+50.00	74	73	1	1	34	44	44
2377+75.00	71	71	0	0	40	52	52
2378+00.00	65	62	3	3	28	36	36
2378+19.87	9	9	0	0	27	35	35
2381+36.56	36	36	0	0	22	29	29
2381+50.00	66	66	0	0	41	53	53
2381+75.00	66	66	0	0	40	52	52
2382+00.00	121	111	10	10	95	124	124
2382+25.00	218	160	58	58	136	177	177
2382+50.00	394	215	179	179	305	397	397
2382+75.00	624	269	355	355	1316	1711	1711
2383+00.00	865	275	590	590	2899	3769	3769
2383+25.00	1223	278	945	945	3743	4866	4866
2383+50.00	1699	278	1421	1421	3646	4740	4740
2383+75.00	2165	289	1876	1876	3465	4505	4505
2384+00.00	2458	298	2160	2160	3338	4339	4339
2384+25.00	2706	298	2408	2408	3052	3968	3968
2384+50.00	3048	297	2751	2751	2687	3493	3493
2384+75.00	3340	306	3034	3034	2367	3077	3077
2385+00.00	3460	316	3144	3144	2131	2770	2770
2385+25.00	3405	309	3096	3096	1707	2219	2219
2385+50.00	3236	299	2937	2937	951	1236	1236
2385+75.00	3050	269	2781	2781	248	322	322
2386+00.00	2932	250	2682	2682	0	0	0
2386+25.00	2782	264	2518	2518	2	3	3
2386+50.00	2492	273	2219	2219	64	83	83
2386+75.00	2089	277	1812	1812	228	296	296
2387+00.00	1664	255	1409	1409	503	654	654
2387+25.00	1394	237	1157	1157	797	1036	1036
2387+50.00	1250	242	1008	1008	956	1243	1243
2387+75.00	1126	240	886	886	1020	1326	1326
2388+00.00	1029	234	795	795	1095	1424	1424
2388+25.00	945	230	715	715	1173	1525	1525
2388+50.00	724	231	493	493	1493	1941	1941
2388+75.00	380	224	156	156	1681	2185	2185
2389+00.00	284	211	73	73	953	1239	1239
2389+25.00	415	154	261	261	163	212	212
2389+50.00	0	0	0	0	0	0	0
Sub Total	53015	9028	43987	43987	47270	61451	61451
RAMP C							
3389+75.00	274	121	153	153	226	294	294
3390+00.00	153	121	32	32	841	1093	1093
3390+25.00	120	120	0	0	1082	1407	1407
3390+50.00	196	130	66	66	923	1200	1200
3390+75.00	361	144	217	217	800	1040	1040
3391+00.00	450	140	310	310	562	731	731
3391+25.00	450	134	316	316	354	460	460
3391+50.00	431	122	309	309	185	241	241
3391+75.00	405	104	301	301	55	72	72
3392+00.00	417	97	320	320	6	8	8
3392+25.00	523	120	403	403	20	26	26
3392+50.00	683	144	539	539	39	51	51
3392+75.00	813	149	664	664	50	65	65
3393+00.00	922	154	768	768	59	77	77
3393+25.00	1005	141	864	864	31	40	40
3393+50.00	1065	126	939	939	0	0	0
3393+75.00	1126	128	998	998	0	0	0
3394+00.00	1149	133	1016	1016	0	0	0
3394+25.00	1094	134	960	960	0	0	0
3394+50.00	956	125	831	831	0	0	0
3394+75.00	843	119	724	724	4	5	5
3395+00.00	899	128	771	771	4	5	5
3395+25.00	1135	141	994	994	0	0	0
3395+50.00	1416	152	1264	1264	0	0	0
3395+75.00	1620	158	1462	1462	0	0	0
3396+00.00	1747	162	1585	1585	0	0	0
3396+25.00	1851	166	1685	1685	0	0	0
3396+50.00	2050	175	1875	1875	0	0	0
3396+75.00	2583	190	2393	2393	0	0	0
3397+00.00	3061	197	2864	2864	0	0	0
3397+25.00	3201	195	3006	3006	0	0	0
3397+50.00	3314	193	3121	3121	0	0	0
3397+75.00	3438	192	3246	3246	0	0	0
3398+00.00							

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL CLASS 10 SAVED -C	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 30% SHRINK	TOTAL FILL WITH SHRINK
3398+00.00	3568	192	3376	3376	0	0	0
3398+25.00	3634	190	3444	3444	0	0	0
3398+50.00	3579	186	3393	3393	0	0	0
3398+75.00	3444	180	3264	3264	0	0	0
3399+00.00	3265	173	3092	3092	0	0	0
3399+25.00	3052	166	2886	2886	0	0	0
3399+50.00	2810	159	2651	2651	0	0	0
3399+75.00	2547	152	2395	2395	0	0	0
3400+00.00	2276	146	2130	2130	0	0	0
3400+25.00	2006	141	1865	1865	0	0	0
3400+50.00	1768	136	1632	1632	0	0	0
3400+75.00	1589	133	1456	1456	0	0	0
3401+00.00	1481	133	1348	1348	0	0	0
3401+25.00	1524	140	1384	1384	0	0	0
3401+50.00	1654	150	1504	1504	0	0	0
3401+75.00	1712	154	1558	1558	0	0	0
3402+00.00	1732	155	1577	1577	0	0	0
3402+25.00	1763	154	1609	1609	0	0	0
3402+50.00	1746	150	1596	1596	0	0	0
3402+75.00	1638	146	1492	1492	0	0	0
3403+00.00	1499	143	1356	1356	0	0	0
3403+25.00	1382	139	1243	1243	0	0	0
3403+50.00	1270	136	1134	1134	0	0	0
3403+75.00	1179	133	1046	1046	0	0	0
3404+00.00	1136	131	1005	1005	0	0	0
3404+25.00	1113	130	983	983	1	1	1
3404+50.00	1101	129	972	972	3	4	4
3404+75.00	1101	129	972	972	2	3	3
3405+00.00	1102	129	973	973	1	1	1
3405+25.00	1106	130	976	976	1	1	1
3405+50.00	1009	125	884	884	0	0	0
3405+75.00	913	120	793	793	1	1	1
3406+00.00	0	0	0	0	0	0	0
Sub Total	100450	9465	90985	90985	5250	6826	6826
Grand Ave							
3377+75.00	159	121	38	38	275	358	358
3378+00.00	111	107	4	4	276	359	359
3378+25.00	109	108	1	1	274	356	356
3378+50.00	108	108	0	0	259	337	337
3378+75.00	115	115	0	0	270	351	351
3379+00.00	219	146	73	73	272	354	354
3379+25.00	341	168	173	173	257	334	334
3379+50.00	376	164	212	212	270	351	351
3379+75.00	414	157	257	257	288	374	374
3380+00.00	473	152	321	321	315	410	410
3380+25.00	539	155	384	384	347	451	451
3380+50.00	596	159	437	437	387	503	503
3380+75.00	616	164	452	452	438	569	569
3381+00.00	575	168	407	407	488	634	634
3381+25.00	486	171	315	315	522	679	679
3381+50.00	367	165	202	202	544	707	707
3381+75.00	260	149	111	111	564	733	733
3382+00.00	272	150	122	122	589	766	766
3382+25.00	353	159	194	194	613	797	797
3382+50.00	382	157	225	225	618	803	803
3382+75.00	384	156	228	228	605	787	787
3383+00.00	375	155	220	220	594	772	772
3383+25.00	350	153	197	197	593	771	771
3383+50.00	327	151	176	176	592	770	770
3383+75.00	306	148	158	158	587	763	763
3384+00.00	181	107	74	74	486	632	632
3384+25.00	68	68	0	0	382	497	497
3384+50.00	63	63	0	0	331	430	430
3384+75.00	58	58	0	0	264	343	343
3385+00.00	58	58	0	0	241	313	313
3385+25.00	59	59	0	0	238	309	309
3385+50.00	98	92	6	6	301	391	391
3385+75.00	157	136	21	21	396	515	515
3386+00.00	196	170	26	26	427	555	555
3386+25.00	250	191	59	59	415	540	540
3386+50.00	317	190	127	127	391	508	508
3386+75.00	366	185	181	181	362	471	471
3387+00.00	401	180	221	221	329	428	428
3387+25.00	429	177	252	252	294	382	382
3387+50.00	301	167	134	134	345	449	449
3387+75.00	153	145	8	8	349	454	454
3388+00.00	138	124	14	14	247	321	321
3388+25.00	133	113	20	20	195	254	254
3388+50.00	124	100	24	24	163	212	212
3388+75.00	110	81	29	29	129	168	168
3389+00.00	116	80	36	36	112	146	146
3389+25.00	128	85	43	43	109	142	142
3389+50.00	134	83	51	51	100	130	130
3389+75.00	148	88	60	60	105	137	137
3390+00.00	213	99	114	114	90	117	117
3390+25.00	254	108	146	146	65	85	85
3390+50.00	197	94	103	103	63	82	82
3390+75.00	184	97	87	87	82	107	107
3391+00.00	221	121	100	100	119	155	155
3391+25.00	240	125	115	115	123	160	160
3391+50.00	258	127	131	131	125	163	163
3391+75.00	283	133	150	150	154	200	200
3392+00.00	326	141	185	185	174	226	226
3392+25.00	367	147	220	220	188	244	244
3392+50.00	383	155	228	228	207	269	269
3392+75.00	339	162	177	177	236	307	307
3393+00.00	246	155	91	91	278	361	361
3393+25.00	192	141	51	51	329	428	428
3393+50.00	188	141	47	47	378	491	491
3393+75.00	160	117	43	43	275	358	358
3394+00.00	115	76	39	39	137	178	178
3394+25.00	99	62	37	37	129	168	168
3394+50.00	124	88	36	36	306	398	398
3394+75.00	152	118	34	34	445	579	579
3395+00.00	151	120	31	31	405	527	527
3395+25.00	146	118	28	28	400	520	520
3395+50.00	143	118	25	25	399	519	519
3395+75.00	140	118	22	22	396	515	515
3396+00.00	137	118	19	19	400	520	520
3396+25.00	217	139	78	78	398	517	517
3396+50.00	307	157	150	150	388	504	504
3396+75.00	317	151	166	166	365	475	475
3397+00.00	309	144	165	165	313	407	407
3397+25.00	287	139	148	148	269	350	350
3397+50.00	253	135	118	118	251	326	326
3397+75.00	213	132	81	81	252	328	328
3398+00.00	180	129	51	51	243	316	316
3398+25.00	158	127	31	31	204	265	265
3398+50.00	155	131	24	24	180	234	234
3398+75.00	161	134	27	27	189	246	246
3399+00.00	167	129	38	38	224	291	291
3399+25.00	145	118	27	27	264	343	343
3399+50.00	0	0	0	0	0	0	0
0+00	0	0	1	0	0	0	0
Sub Total	20926	11270	9656	9656	26991	35095	35095
Total	416441	76839	339602	339602	166710	216766	216766

CONCRETE BARRIER

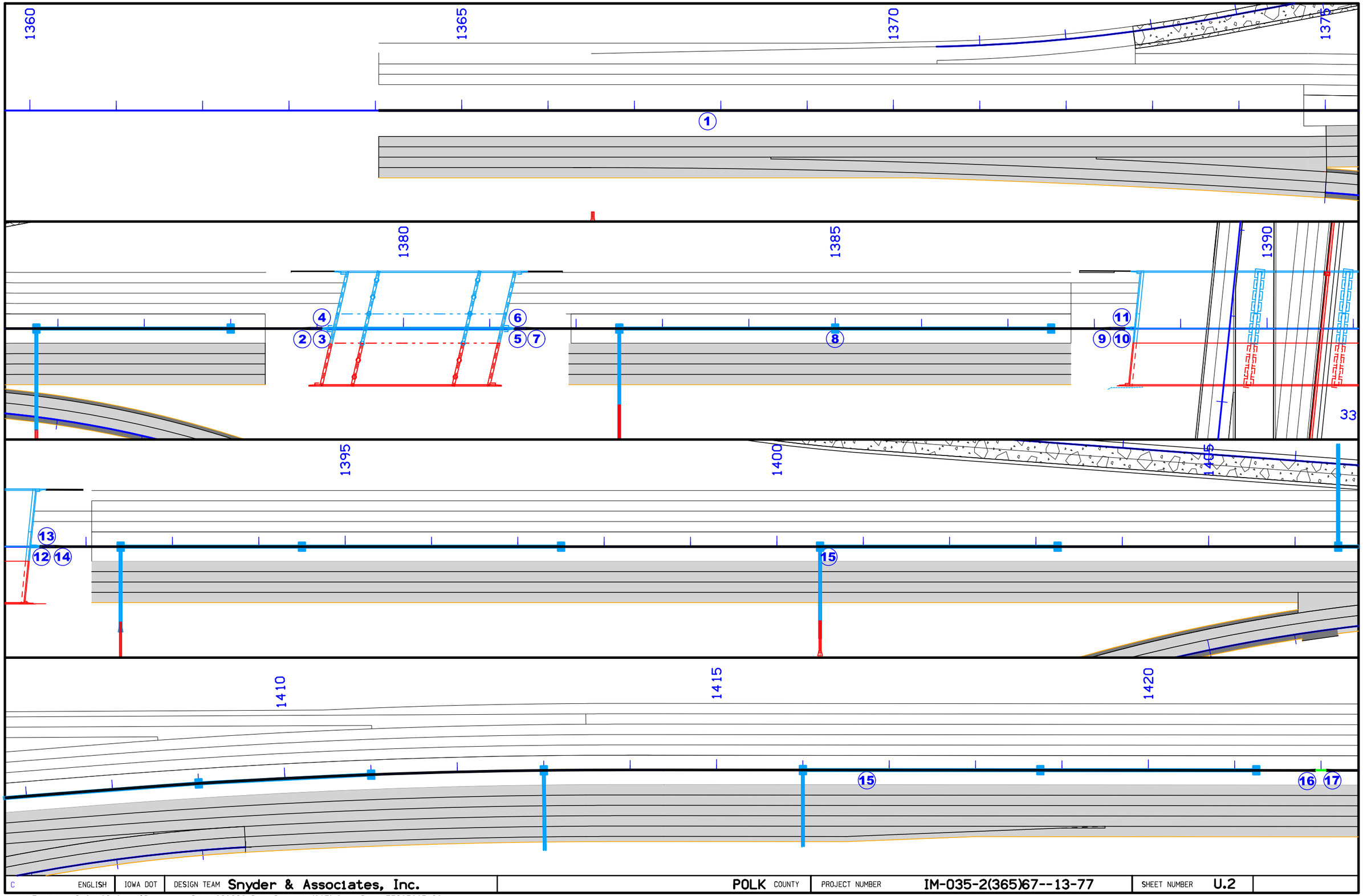
See BA-100, BA-101, BA-102, and BA-103

No.	Begin Station	End Station	Side	Barrier Type: Standard Road Plan	Barrier Type: Length LF	Transition Section: Detail Sheet	Transition Section: L	Footing: Length LF	Remarks
1	1364+03.94	1378+83.94	Median	BA-100	1480.0				
2	1378+83.94	1378+91.94	Median			BA-101	8.0		
3	1378+91.94	1379+05.16	Median-Rt	BA-102	13.2				
4	1378+91.94	1379+05.89	Median-Lt	BA-102	14.0				
5	1381+28.21	1381+42.16	Median-Rt	BA-102	14.0				
6	1381+28.94	1381+42.16	Median-Lt	BA-102	13.2				
7	1381+42.16	1381+50.16	Median			BA-101	8.0		
8	1381+50.16	1388+10.16	Median	BA-100	660.0				
9	1388+10.16	1388+18.16	Median			BA-101	8.0		
10	1388+18.16	1388+35.38	Median-Rt	BA-102	17.2				
11	1388+18.16	1388+35.71	Median-Lt	BA-102	17.6				
12	1391+46.40	1391+63.95	Median-Rt	BA-102	17.6				
13	1391+46.73	1391+63.95	Median-Lt	BA-102	17.2				
14	1391+63.95	1391+71.95	Median			BA-101	8.0		
15	1391+71.95	1421+85.58	Median	BA-100	3013.6				
16	1421+85.58	1421+93.58	Median			U.9	8.0		MATCH SIGN FOOTING
17	1422+06.42	1422+14.42	Median			U.9	8.0		MATCH SIGN FOOTING
18	1422+14.42	1429+85.58	Median	BA-100	771.2				
19	1429+85.58	1429+93.58	Median			U.9	8.0		MATCH SIGN FOOTING
20	1430+06.42	1430+14.42	Median			U.9	8.0		MATCH SIGN FOOTING
21	1430+14.42	1453+85.58	Median	BA-100	2371.2				
22	1453+85.58	1453+93.58	Median			U.9	8.0		MATCH SIGN FOOTING
23	1454+06.42	1457+40.36	Median-Rt	BA-102	334.2				MATCH SIGN FOOTING
24	1454+06.42	1457+40.36	Median-Lt	BA-102	334.2				MATCH SIGN FOOTING
25	1457+40.36	1457+48.36	Median			BA-101	8.0		
26	1457+48.36	1510+08.00	Median	BA-100	5259.6				
27	1510+08.00	1510+16.00	Median			BA-101	8.0		
28	1510+16.00	1510+35.40	Median-Rt	BA-102	19.4				
29	1510+16.00	1510+29.94	Median-Lt	BA-102	13.9				
30	1515+00.00	1515+19.41	Median-Lt	BA-102	19.4				
31	1515+05.48	1515+19.41	Median-Rt	BA-102	13.9				
32	1515+19.41	1515+27.41	Median			BA-101	8.0		
33	1515+27.41	1520+85.58	Median	BA-100	558.2				
34	1520+85.58	1520+93.58	Median			U.9	8.0		MATCH SIGN FOOTING
35	1521+06.42	1521+14.42	Median			U.9	8.0		MATCH SIGN FOOTING
36	1521+14.42	1523+60.58	Median	BA-100	2583.2				
37	1523+60.58	1523+68.61	Median			U.9	8.0		MATCH SIGN FOOTING
38	1523+81.39	1523+89.42	Median			U.9	8.0		MATCH SIGN FOOTING
39	1523+89.42	1535+85.58	Median	BA-100	1196.2				
40	1535+85.58	1535+93.58	Median			U.9	8.0		MATCH SIGN FOOTING
41	1536+06.42	1536+14.42	Median			U.9	8.0		MATCH SIGN FOOTING
42	1536+14.42	1546+97.57	Median	BA-100	1083.1				Tie New Median Barrier to Existing Barrier
			Total BA-100 (LF)		18976.2				
			Total BA-101 (EACH)		18.0				
			Total BA-102 (LF)		858.8				

Expansion Joints: Station	Side	Remarks

* Refer to Standard Road Plan SW-547 for Locations Where
Concrete Barrier Crosses Storm Sewer Intakes
* Concrete Barrier Crosses Storm water Intakes
At the Following Stations:

Sta. 1375+75.00, Sta. 1378+00.00,
Sta. 1382+50.00, Sta. 1385+00.00,
Sta. 1387+50.00, Sta. 1392+40.00,
Sta. 1394+50.00, Sta. 1397+50.00,
Sta. 1400+50.00, Sta. 1403+25.00,
Sta. 1406+50.00, Sta. 1411+00.00,
Sta. 1413+00.00, Sta. 1416+00.00,
Sta. 1418+75.00, Sta. 1421+25.00,
Sta. 1424+75.00, Sta. 1429+00.00,
Sta. 1431+50.00, Sta. 1434+50.00,
Sta. 1437+50.00, Sta. 1440+00.00,
Sta. 1442+00.00, Sta. 1445+00.00,
Sta. 1451+00.00, Sta. 1453+00.00,
Sta. 1457+50.00, Sta. 1459+00.00,
Sta. 1461+00.00, Sta. 1464+00.00,
Sta. 1467+00.00, Sta. 1470+00.00,
Sta. 1473+00.00, Sta. 1476+00.00,
Sta. 1479+00.00, Sta. 1482+00.00,
Sta. 1484+75.00, Sta. 1488+00.00,
Sta. 1491+00.00, Sta. 1493+50.00,
Sta. 1495+50.00, Sta. 1496+00.00,
Sta. 1496+50.00, Sta. 1499+50.00,
Sta. 1502+50.00, Sta. 1505+00.00,
Sta. 1507+50.00, Sta. 1509+50.00,
Sta. 1516+10.00, Sta. 1518+00.00,
Sta. 1522+00.00, Sta. 1524+50.00,
Sta. 1527+00.00, Sta. 1530+00.00,
Sta. 1533+00.00, Sta. 1538+00.00,
Sta. 1541+00.00, Sta. 1544+00.00,
Sta. 1547+00.00, Sta. 1550+00.00,
Sta. 1553+00.00, Sta. 1556+00.00,
Sta. 1558+00.00, Sta. 1559+50.00,
Sta. 1562+00.00, Sta. 1565+00.00,
Sta. 1568+00.00, Sta. 1570+50.00,
Sta. 1574+50.00, Sta. 1577+50.00



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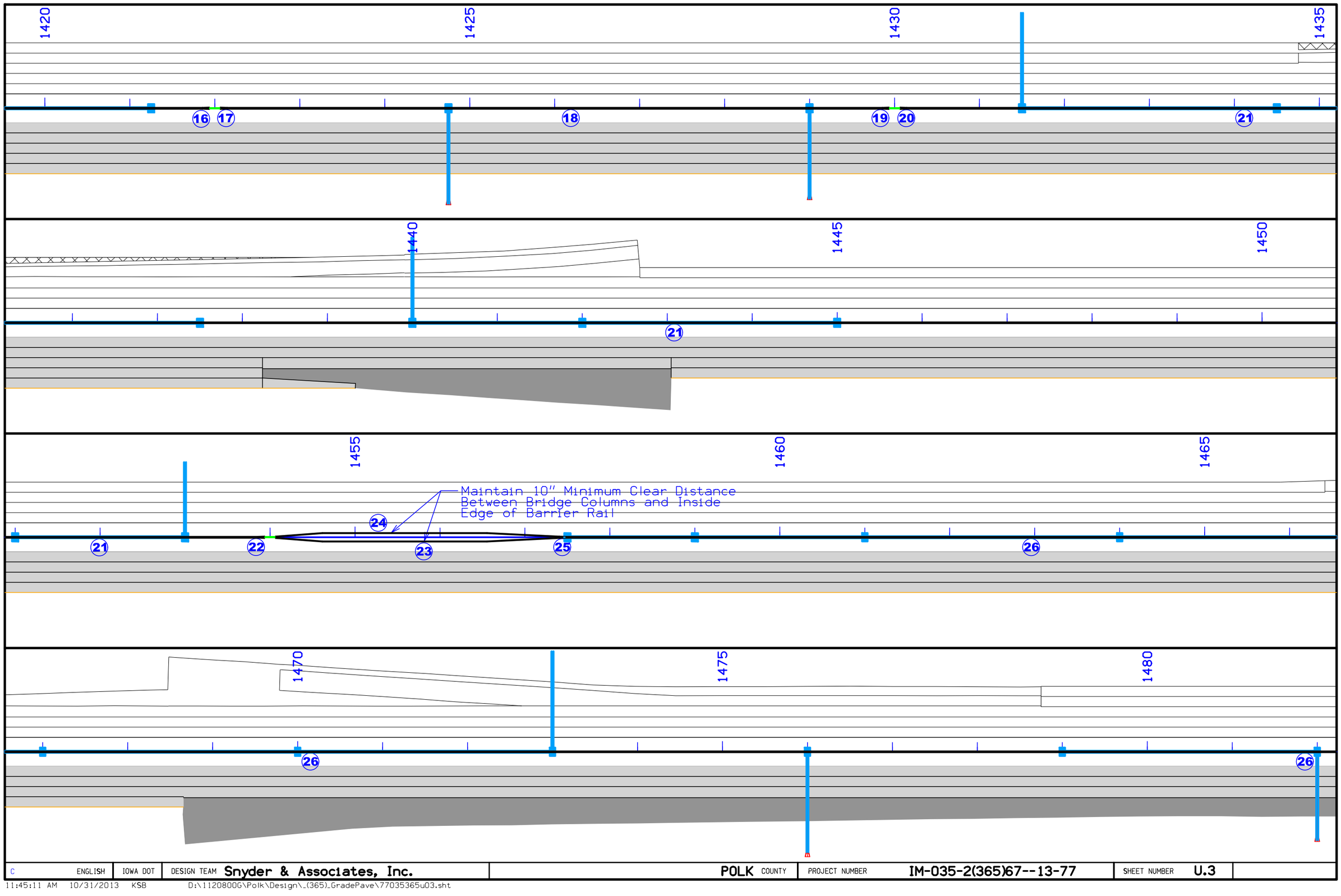

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11:45:11 AM 10/31/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365u03.sht

1485 1490 1495

26

1500 1505 1510

26 29 27 28

1515 1520 1525

30 31 32 33 34 35 36 37 38 39

1530 1535 1540

40 41 42

C ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER U.4	

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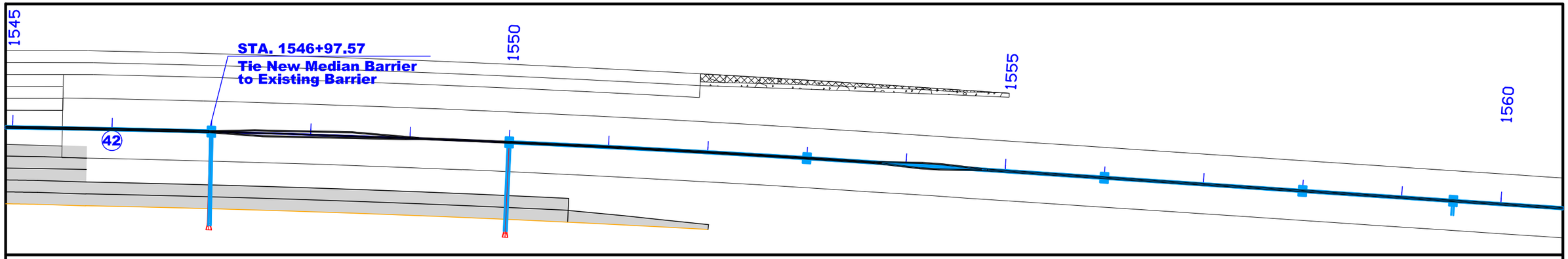
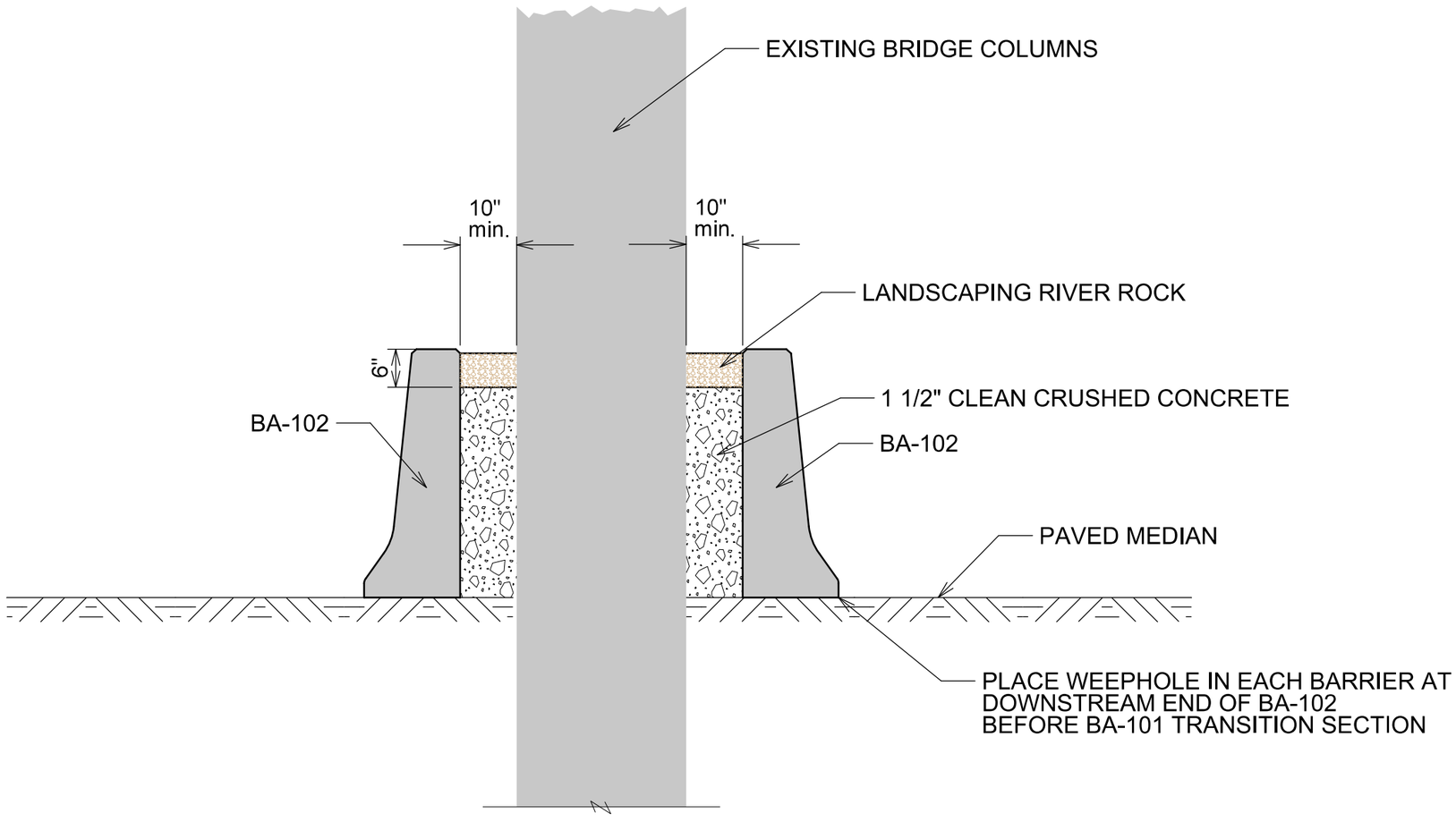
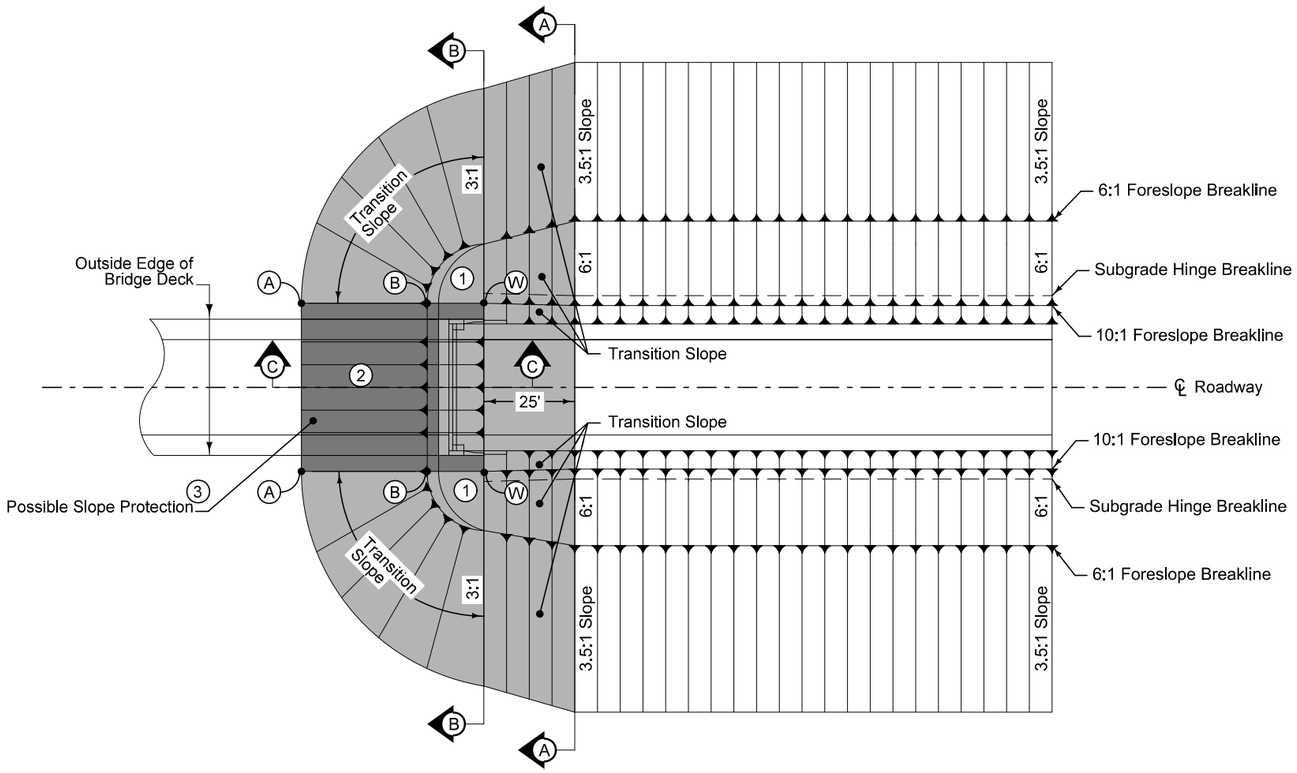

1545
1550
1555
1560
STA. 1546+97.57
Tie New Median Barrier
to Existing Barrier
42


EXISTING BRIDGE COLUMNS
10"
min.
10"
min.
LANDSCAPING RIVER ROCK
6"
1 1/2" CLEAN CRUSHED CONCRETE
BA-102
BA-102
PAVED MEDIAN
PLACE WEEPHOLE IN EACH BARRIER AT
DOWNSTREAM END OF BA-102
BEFORE BA-101 TRANSITION SECTION



PLAN VIEW OF BRIDGE BERM
(BARNROOF FORESLOPE)

Grading surface:
Refer to berm slope location table in project plans for locations of A, B, W and possible other points.

1. Variable slope.
2. Bridge Berm slope may vary and is determined by the A and B points. Slope is normally 2.5:1 or flatter.
3. Refer to contract documents for limits of the slope protection.

MODIFIED

STANDARD ROAD PLAN

REVISION	
2	04-17-12

EW-201

SHEET 1 of 3

REVISIONS: Modified temporary grading surface in Section C-C.

APPROVED BY DESIGN METHODS ENGINEER

BRIDGE BERM GRADING
WITHOUT RECOVERABLE SLOPE
(BARNROOF SECTION)

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER U.6	X

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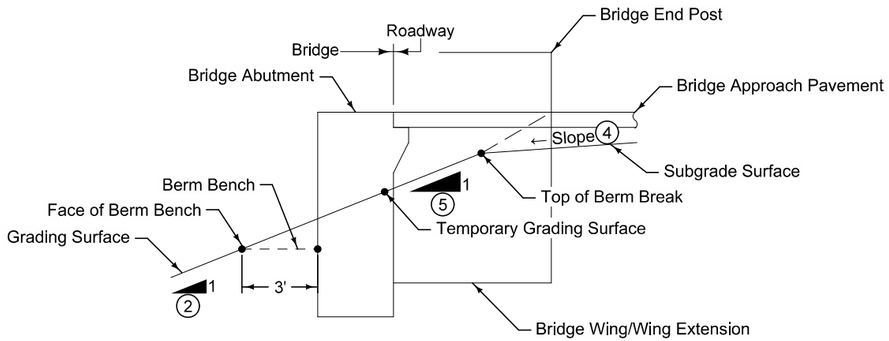


SECTION C-C

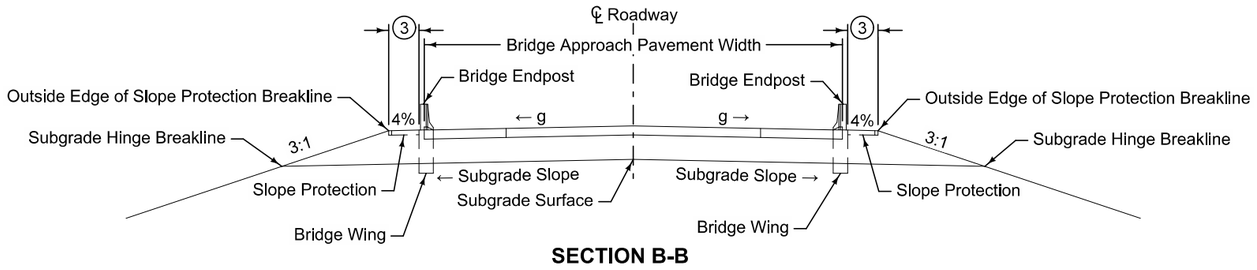
(2) Bridge Berm slope may vary and is determined by the A and B points.

(3) Refer to contract documents for limits of the slope protection.

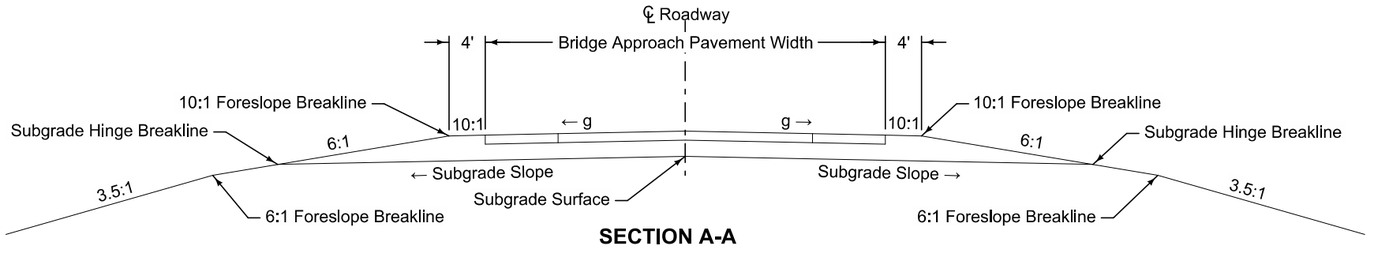
(4) Refer to RK series for longitudinal subgrade slope.

(5) Temporary grading slope.

g = Pavement cross slope.



SECTION B-B



SECTION A-A

MODIFIED

STANDARD ROAD PLAN

REVISION	
2	04-17-12

EW-201

SHEET 2 of 3

REVISIONS: Modified temporary grading surface in Section C-C.

APPROVED BY DESIGN METHODS ENGINEER

BRIDGE BERM GRADING WITHOUT RECOVERABLE SLOPE (BARNROOF SECTION)

ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	U.7	X

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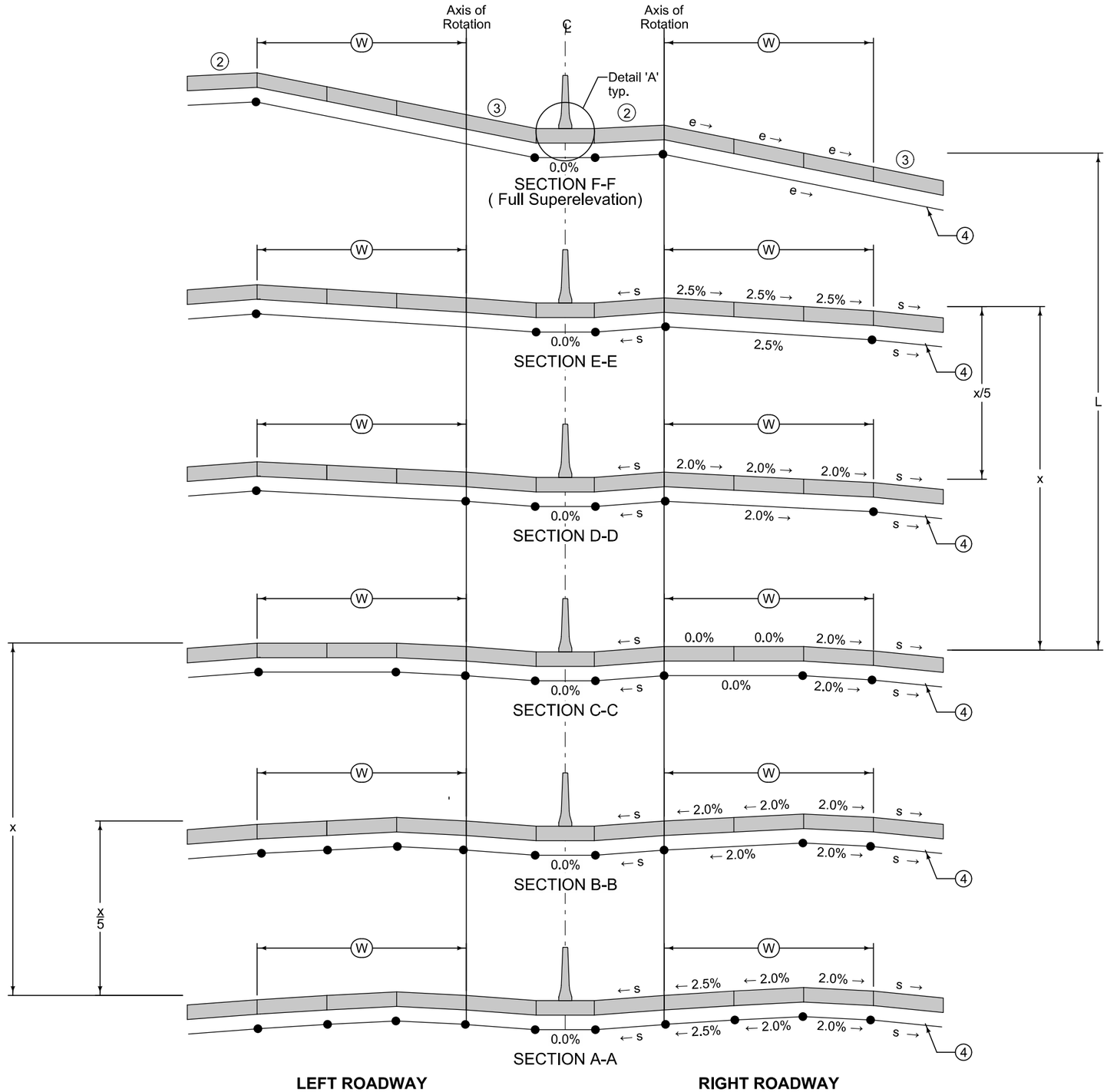
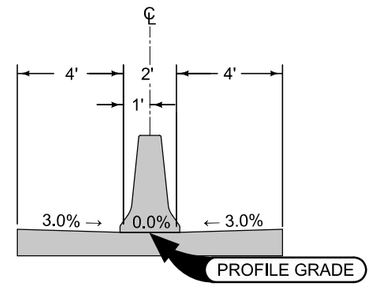


(2) High Side Shoulder: Maintain normal shoulder cross slope (s) until the cross slope break with the adjacent pavement reaches 8.0%, then slope the shoulder at the same rate as the adjacent pavement maintaining an 8% cross slope breakover.

(3) Low Side Shoulder: Maintain normal shoulder cross slope (s) until the adjacent pavement slope equals s, then slope the shoulder at the same cross slope as the adjacent pavement.

(4) Subgrade Surface: Subgrade surface cross slope parallel to pavement surface cross slope.



DETAIL A

MODIFIED
STANDARD ROAD PLAN

REVISION	
2	04-17-12

PV-305

SHEET 2 of 4

MODIFICATIONS: Modified Left and Right Roadway to match typical section.

APPROVED BY DESIGN METHODS ENGINEER

SUPERELEVATION DETAILS
SIX LANE ROADWAY
CLOSED MEDIAN

ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER U.8

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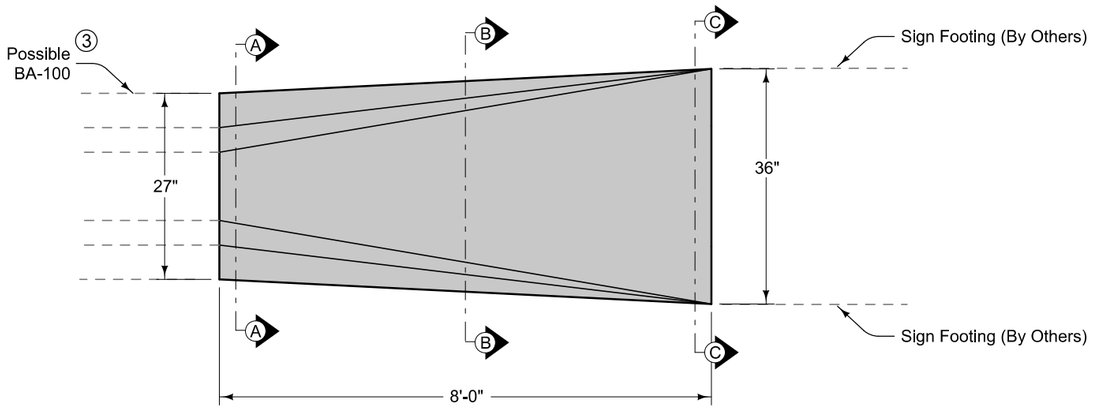
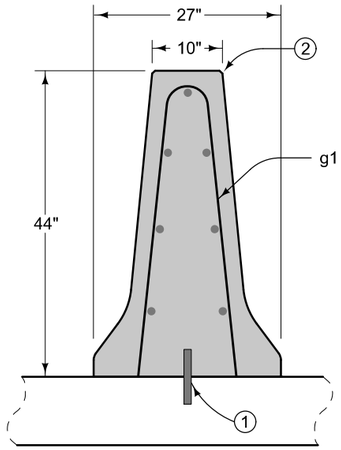


PLAN



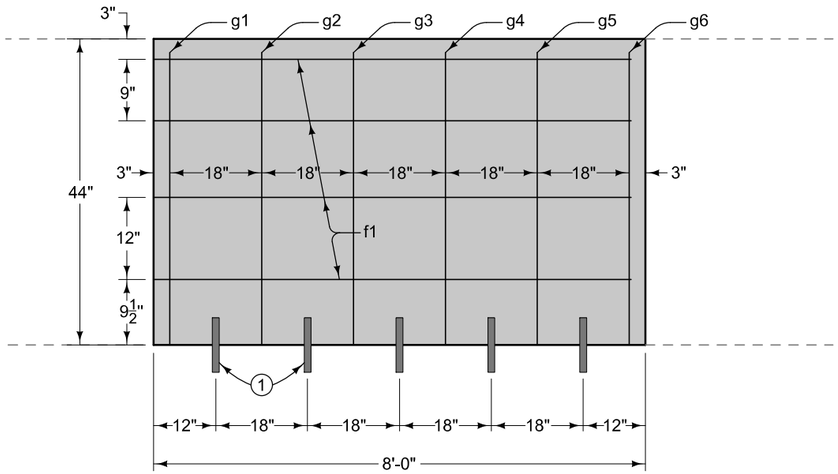
SECTION A-A

Use epoxy-coated grade 60 reinforcing bars. Provide 2 inches minimum cover. Anchor barrier reinforcement to prevent movement. Secure each section at the front, back, and at 3'-6" minimum intervals using a method approved by the Engineer.

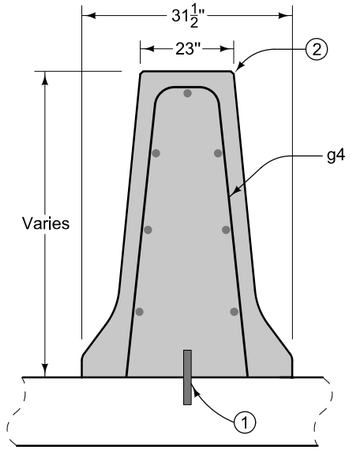
1. Use 1 inch diameter deformed dowel bars of sufficient length to ensure 6 inch minimum embedment in barrier and supporting surface. Install bars either in supporting surface when placed or in drilled holes using polymer grout complying with Materials I.M. 491.11 or hydraulic cement grout complying with Materials I.M. 491.13.

2. Fillet all exposed corners with a $\frac{3}{4}$ inch dressed and beveled strip.

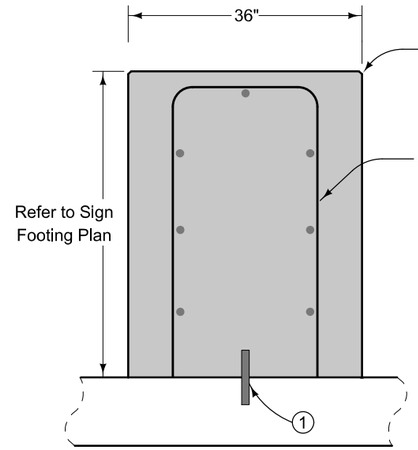
3. Provide 18 inch overlap of reinforcing steel between sections.



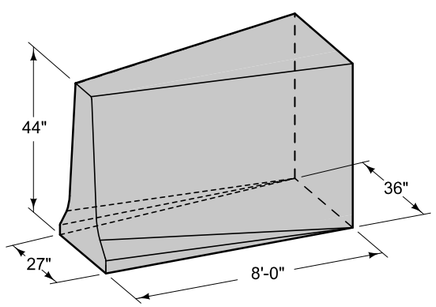
ELEVATION



SECTION B-B

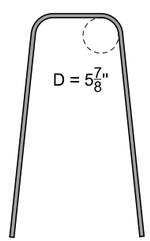


SECTION C-C



ISOMETRIC

BENT BARS



All "g" Bars
D = pin diameter

REINFORCING BAR LIST
Per Section (6'-0")

Mark	Size	Number of Bars	Length	Weight (lbs.)
f1	5	7	69"	42
g1	5	1	87"	8
g2	5	1	88"	8
g3	5	1	89"	8
g4	5	1	90"	8
g5	5	1	92"	8
g5	5	1	94"	8

Possible Contract Item:
Concrete Barrier, BA-101

Possible Tabulation:
108-18

MODIFIED

STANDARD ROAD PLAN

REVISION
New 04-20-10

BA-101

SHEET 1 of 1

REVISIONS: Revised BA-101 to Match Sign Truss Footing Cross Section

44" CONCRETE MEDIAN BARRIER WIDTH TRANSITION AT SIGN FOOTING

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.		POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER U.10	REVISED

11:55:50 AM 10/31/2013 KSB D:\1120800G\Polk\Design_(365)_GradePave\77035365u10.sht

STA. 1509+69.01
STOP PAVING
-

STA. 1515+66.39
RESUME PAVING
-

1510

1515

1520

UNION PACIFIC RAILROAD

30" x 92.50' C.M.P.

30" x 40.00" C.M.P.

24" x 113.88' Conc. Pipe

Work By Others
BRFIM-035-2(361)72--05-77

E.P. TRUE PARKWAY

E.P. TRUE PARKWAY

.37 Ac.

.20 Ac.

30" Ac. 42.71' C.M.P.

Sta. 1510+63.10
85.00' RT

Sta. 1510+23.86
241.82' RT

Sta. 1511+16.40
230.52' RT

Sta. 1512+18.68
174.76' RT

Sta. 1512+96.17
TRIPLE
12' X 14' X 147.00' RCB
D.A. = 32.50' Ac. - VR

Sta. 1511+48.13
335' x 28'
Conc. I-Beam Bridge

Sta. 1511+82.37
85.00' RT

Sta. 1513+19.74
17[illegible].51' RT

Sta. 1513+66.63
199.97' RT

Sta. 1515+00.06
83.69' RT

Remove Guardrail

EXTEND
Sta. 1522+00.00
24" X 72.00' Conc. Pipe
D.A. = MEDIAN ONLY Ac -
Install 16.0'- 24" RCP
Install 46.0'- 24" CMP Let Dow
Plus CMP Apron
F.L. = Ot. 935.43
Rt. 946.81

0 100
FEET

TOTAL CLEARING AND GRUBBING = .87 ACRES

CLEAR AND GRUBBING AREA

Clearing and Grubbing

C	ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER U.11

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ESTIMATED CAST IN PLACE CULVERT QUANTITIES

ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL	AS BUILT QUAN.
1	2102-0425071	SPECIAL BACKFILL	CY	127.0	
2	2401-6750001	REMOVALS, AS PER PLAN	LS	1.00	
3	2402-2720000	EXCAVATION, CLASS 20	CY	9,215	
4	2403-0100020	STRUCTURAL CONCRETE (RCB CULVERT)	CY	468.7	
5	2404-7775000	REINFORCING STEEL	LB	80,657	

ESTIMATE REFERENCE INFORMATION

ITEM NO.	ITEM CODE	DESCRIPTION
1	2102-0425071	SPECIAL BACKFILL - -
2	2401-6750001	REMOVALS, AS PER PLAN REMOVE THE EXISTING SHORING INSTALLED IN STAGE 1 CONSTRUCTION TO THE LIMITS INDICATED IN THESE PLANS. THE TEMPORARY SHORING CONSISTS OF A SOLDIER PILE AND LAGGING WALL.
3	2402-2720000	EXCAVATION, CLASS 20 - -
4	2403-0100020	STRUCTURAL CONCRETE (RCB CULVERT) - -
5	2404-7775000	REINFORCING STEEL - -

HYDRAULIC DESIGN

LICENSED PROFESSIONAL ENGINEER
David R. Claman
11571
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.

David R. Claman 10-29-2014
Signature Date

David R. Claman
Printed or Typed Name

My license renewal date is December 31, 2014

Pages or sheets covered by this seal: SHEET V.3

STRUCTURAL DESIGN

LICENSED PROFESSIONAL ENGINEER
James S. Nelson
16032
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.

10-29-2014
Signature Date

James S. Nelson
Printed or Typed Name

My license renewal date is December 31, 2013

Pages or sheets covered by this seal: SHEETS V.1 THRU V.7

NOTE:
ROADWAY QUANTITIES SHOWN ELSEWHERE IN THESE PLANS.

DESIGN FOR 0° SKEW

12' x 12' x 167'-0 REINFORCED CONCRETE BOX CULVERT

QUANTITIES

STATION: 3397+00.00 OCTOBER, 2013

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 7 FILE NO. 30397 DESIGN NO. 2014

DESIGN TEAM DAW/JDC | POLK COUNTY | PROJECT NUMBER IM-035-2(365)67--13-77 | SHEET NUMBER V.1

GENERAL NOTES:

IT IS THE INTENT OF THIS DESIGN TO CONSTRUCT STAGE 2 OF A 12'-0 x 12'-0 x 292'-0 REINFORCED CONCRETE BOX CULVERT SKEWED 0° AT STATION 3397+00.00 GRAND AVE.

COPIES OF ORIGINAL DESIGN PLANS WILL BE MADE AVAILABLE TO THE CONTRACTOR. CONTACT THE OFFICE OF CONTRACTS - HIGHWAY DIVISION - IOWA D.O.T. - AMES. DIMENSIONS SHOWN ON THESE PLANS ARE BASED ON DESIGN PLANS (ORIGINAL DESIGN NO. 813).

THE R.C.B. CULVERT SECTIONS ARE DESIGNED FOR HS20-44 LIVE LOAD AND EARTH FILLS OF 18 FEET.

FAINT LINES ON PLANS INDICATE EXISTING STRUCTURE.

UTILITY COMPANIES AND MUNICIPALITIES WHOSE FACILITIES ARE SHOWN ON THE PLANS OR KNOWN TO BE WITHIN THE CONSTRUCTION LIMITS SHALL BE NOTIFIED BY THE CONTRACTOR OF THE CONSTRUCTION STARTING DATE.

EXCESS CLASS 20 EXCAVATION MATERIAL SUITABLE FOR BACKFILLING SHALL BE STOCKPILED AT THE CONSTRUCTION SITE, AS DIRECTED BY THE ENGINEER.

CLASS 20 EXCAVATION MATERIAL UNSUITABLE FOR BACKFILLING SHALL BE DISPOSED OF IN A MANNER THAT WILL LEAVE THE SITE IN A NEAT CONDITION.

WHEN DE-WATERING PRESENTS A PROBLEM FOR PLACING THE CURTAIN WALLS AS DETAILED, ALTERNATE METHODS SUCH AS STEEL SHEET PILE AND PRECAST CONCRETE WALLS MAY BE APPROVED BUT AT NO ADDITIONAL COST. THE CULVERT CONTRACTOR IS TO SUBMIT TO THE ENGINEER FOR APPROVAL COMPLETE DRAWINGS OF THE PROPOSED CURTAIN WALL ALTERNATE BEFORE BEGINNING CONSTRUCTION.

NEW CULVERT CONSTRUCTION SHALL BE DONE IN STAGES AS SHOWN ON THE SITUATION PLAN, STAGING DETAIL SHEETS AND IN THE ROAD SHEETS.

THESE BRIDGE PLANS LABEL ALL REINFORCING STEEL WITH ENGLISH NOTATION (5a1 IS 5/8 INCH DIAMETER BAR). ENGLISH REINFORCING STEEL RECEIVED IN THE FIELD MAY DISPLAY THE FOLLOWING "BAR DESIGNATION". THE "BAR DESIGNATION" IS THE STAMPED IMPRESSION ON THE REINFORCING BARS, AND IS EQUIVALENT TO THE BAR DIAMETER IN MILLIMETERS.

ENGLISH SIZE	3	4	5	6	7	8	9	10	11
BAR DESIGNATION	10	13	16	19	22	25	29	32	36

THE EXISTING TEMPORARY SHORING SHALL BE REMOVED TO ELEVATION 845 AT A MINIMUM FOLLOWING THE CONSTRUCTION OF THE STAGE 2 CULVERT AND BACKFILL WITH THE ENGINEERS APPROVAL. THE MATERIALS REMOVED WILL BECOME PROPERTY OF THE CONTRACTOR. ORIGINAL SHORING CONSTRUCTION PLANS MAY BE OBTAINED FROM IOWA DOT-OFFICE OF BRIDGES AND STRUCTURES. ALL COSTS SHALL BE INCLUDED IN THE BID ITEM REMOVALS, AS PER PLAN. THE METHOD OF MEASUREMENT AND BASIS OF PAYMENT IS LUMP SUM.

BENCH MARK NO. 634; 3394+46.90, 125.10' LT, FD IHC LT HDWL 10' X 12' RCB; ELEV= 847.61.

STANDARDS:
FOR DETAILS AND NOTES NOT SHOWN REFER TO THE FOLLOWING IOWA D.O.T. - HIGHWAY STANDARDS:

STANDARD	ISSUED	REVISED
RCB-G1-87	5-87	8-10
FWH 45-1-87	5-87	1-98
FWH 45-3-87	5-87	4-07
FWH 45-4-87	5-87	
FWH 45-5-87	5-87	
FWH 45-6-87	5-87	1-98
RCB 12-1-87	5-87	8-89

SUMMARY OF REINFORCING STEEL

LOCATION	QUANTITY	TOTAL
12'x12' HEADWALL 45° SKEW (1 REQ'D.)	10,638	10,638
16'-0 INLET BARREL SECTION (1 REQ'D.)	6653	6653
38'-0 BARREL SECTION (3 REQ'D.)	3 AT 15,800	47,400
12'-0 BARREL SECTION 15° BEND (3 REQ'D.)	3 AT 5228	15,684
**5r1 CONNECTION DOWEL BARS (6 SETS REQ'D.)	6 AT 47	282
	TOTAL (LBS.)	80,657

** ONE SET INCLUDES 13-5r1 BARS x 3'-6, TOTAL WEIGHT = 47 LBS.

CONCRETE PLACEMENT QUANTITIES

LOCATION	FOOTING	WALLS	SLAB	TOTAL
12'x12' HEADWALL 45° SKEW (1 REQ'D.)	67.3	33.6	*2.6	103.5
16'-0 INLET BARREL SECTION (1 REQ'D.)	11.8	13.8	9.6	35.2
38'-0 BARREL SECTION (3 REQ'D.)	3 AT 28.0 = 84.0	3 AT 32.8 = 98.4	3 AT 22.9 = 68.7	251.1
12'-0 BARREL SECTION 15° BEND (3 REQ'D.)	3 AT 8.8 = 26.4	3 AT 10.3 = 30.9	3 AT 7.2 = 21.6	78.9
TOTAL (CU. YDS.)	189.5	176.7	102.5	468.7

* INCLUDES PARAPET AND TOP OF WINGWALL.

SPECIFICATIONS:

DESIGN: AASHTO SERIES OF 1983.
CONSTRUCTION: IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 2012, PLUS APPLICABLE GENERAL SUPPLEMENTAL SPECIFICATIONS, DEVELOPMENTAL SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT.

DESIGN STRESSES:

DESIGN STRESSES FOR THE FOLLOWING MATERIALS ARE IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SERIES OF 1983.
REINFORCING STEEL IN ACCORDANCE WITH SECTION 8, GRADE 60.
CONCRETE IN ACCORDANCE WITH SECTION 8, f'c = 3,500 PSI.

DESIGN HISTORY AT THIS SITE

DES. NO.	TYPE OF WORK
813	RCB CULVERT

NOTE:
POLLUTION PREVENTION PLAN SHOWN ELSEWHERE IN THESE PLANS.

TRAFFIC CONTROL PLAN
NOTE: THE ROADWAY WILL BE OPEN TO THRU TRAFFIC. REFER TO THE TRAFFIC CONTROL PLAN SHOWN ELSEWHERE IN THESE PLANS.

DESIGN FOR 0° SKEW

12' x 12' x 167'-0 REINFORCED CONCRETE BOX CULVERT

GENERAL NOTES

STATION: 3397+00.00 OCTOBER, 2013

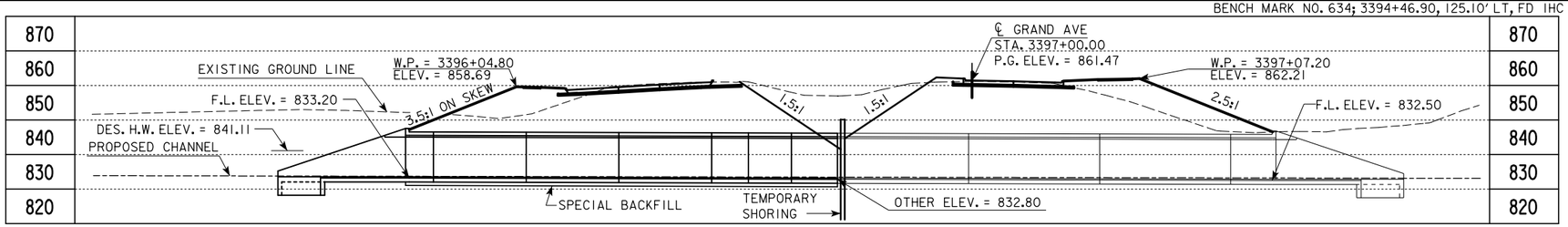
POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

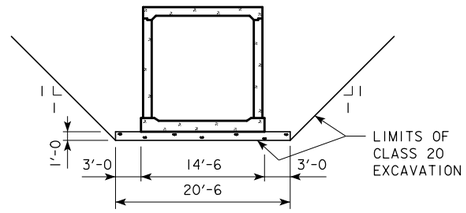
DESIGN SHEET NO. 2 OF 7 FILE NO. 30397 DESIGN NO. 2014

DESIGN TEAM DAW/JDC | POLK COUNTY | PROJECT NUMBER IM-035-2(365)67--13-77 | SHEET NUMBER V.2

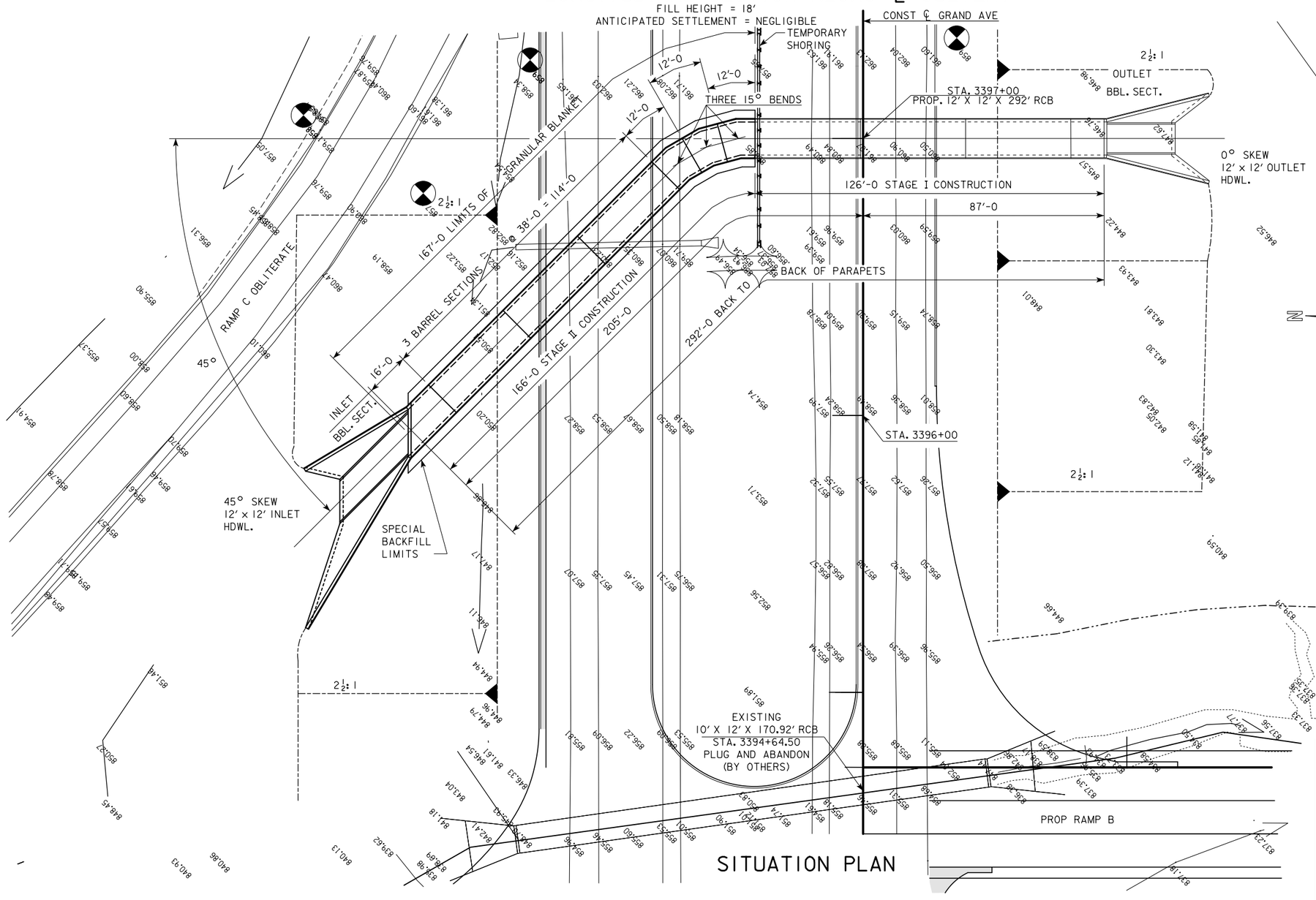
BENCH MARK NO. 634; 3394+46.90, 125.10' LT, FD IHC LT HDWL 10' X 12' RCB; ELEV= 847.61.



LONGITUDINAL SECTION ALONG ℄ CULVERT



GRANULAR BLANKET DETAIL



HYDRAULIC DATA

DRAINAGE AREA= 215 R-H-M
Q_{100}= 509 CFS
HIGHWATER= 841.11

TRAFFIC ESTIMATE

20XX	AADT	X V.P.D
20XX	AADT	X V.P.D.
20XX	DHV	X V.P.D.
TRUCKS		X %

LOCATION

GRAND AVE. OVER DITCH
T-78 N R-25 W
SECTION 19/30
WALNUT TOWNSHIP
POLK COUNTY
CITY OF WEST DES MOINES
LATITUDE
LONGITUDE

DESIGN FOR 0° SKEW

12' x 12' x 167'-0 REINFORCED CONCRETE BOX CULVERT

SITUATION PLAN

STATION: 3397+00.00 OCTOBER, 2013

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 3 OF 7 FILE NO. 30397 DESIGN NO. 2014

DESIGN TEAM DAW/JDC | POLK COUNTY | PROJECT NUMBER IM-035-2(365)67--13-77 | SHEET NUMBER V.3

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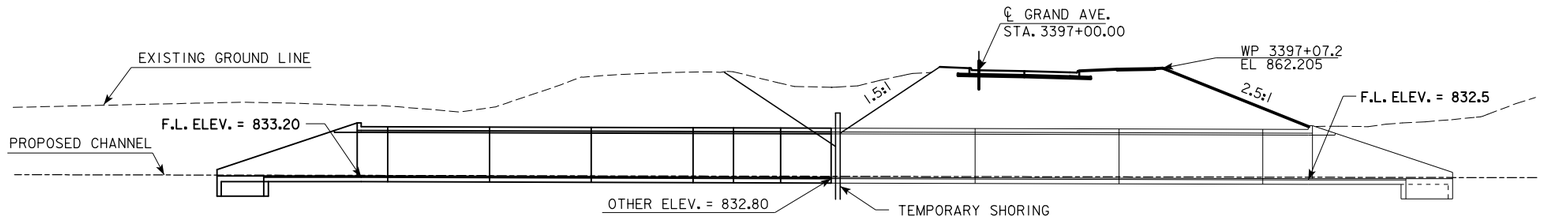
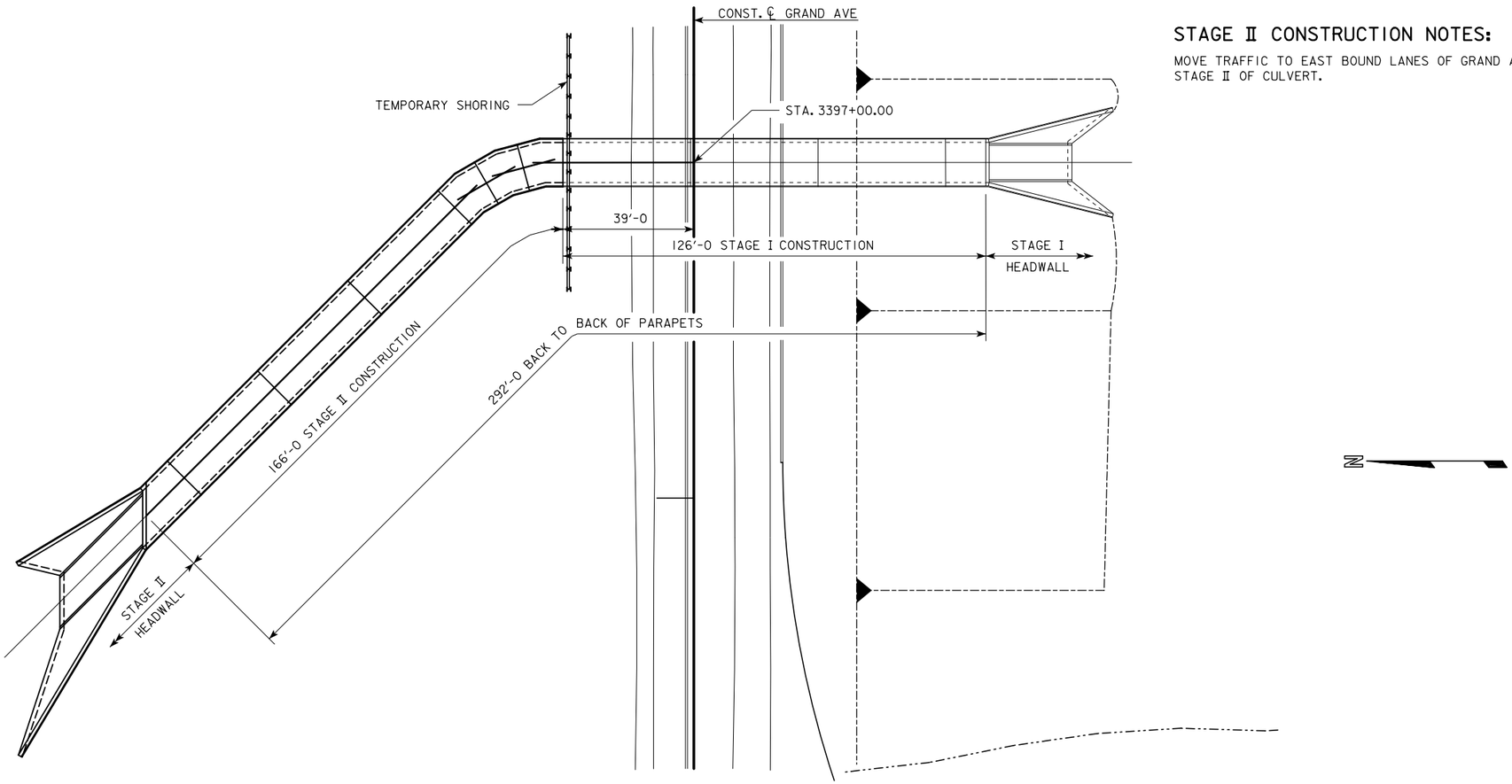
BENCH MARK NO. 634; 3394+46.90, 125.10' LT, FD IHC LT HDWL 10' X 12' RCB; ELEV= 847.61.



STAGE II ELEVATION



STAGE II PLAN

STAGE II CONSTRUCTION NOTES:

MOVE TRAFFIC TO EAST BOUND LANES OF GRAND AVENUE AND CONSTRUCT STAGE II OF CULVERT.

DESIGN FOR 0° SKEW

12' x 12' x 167'-0 REINFORCED CONCRETE BOX CULVERT

STAGE II CONSTRUCTION DETAILS

STATION: 3397+00.00 OCTOBER, 2013

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 4 OF 7 FILE NO. 30397 DESIGN NO. 2014

DESIGN TEAM DAW/JDC	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER V.4

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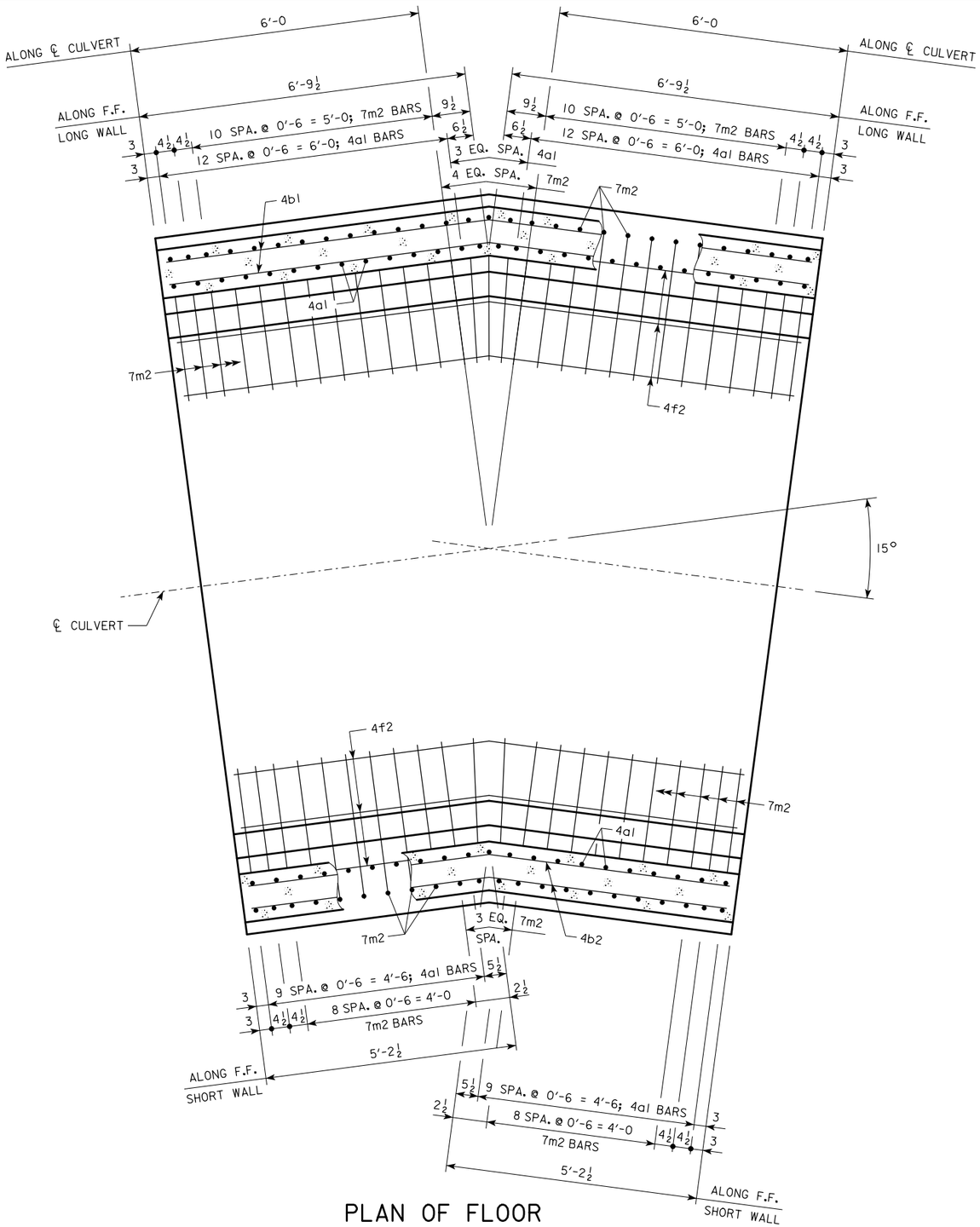
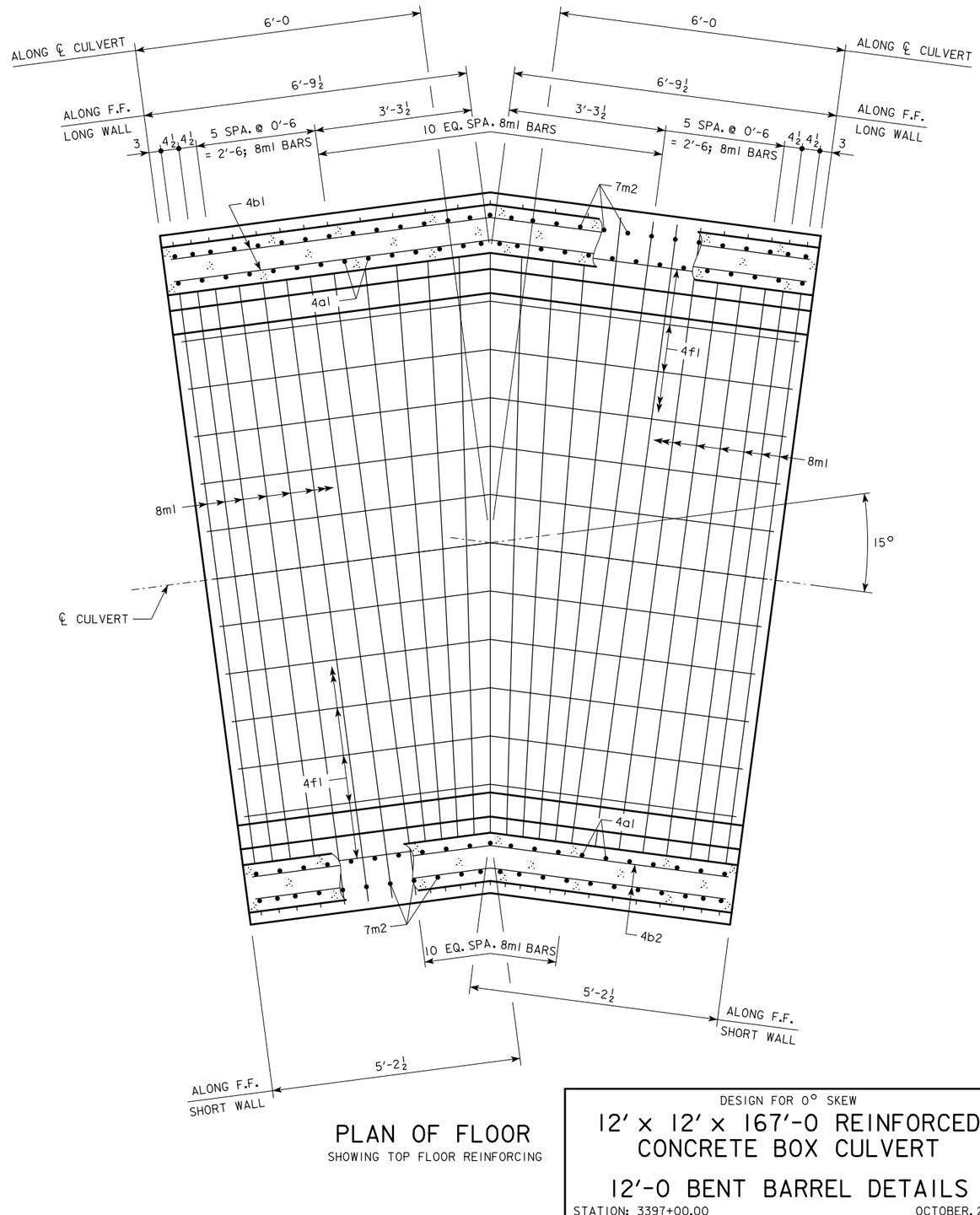


PLAN OF FLOOR

SHOWING BOTTOM FLOOR REINFORCING



PLAN OF FLOOR

SHOWING TOP FLOOR REINFORCING

DESIGN FOR 0° SKEW

12′ x 12′ x 167′-0 REINFORCED CONCRETE BOX CULVERT

12′-0 BENT BARREL DETAILS

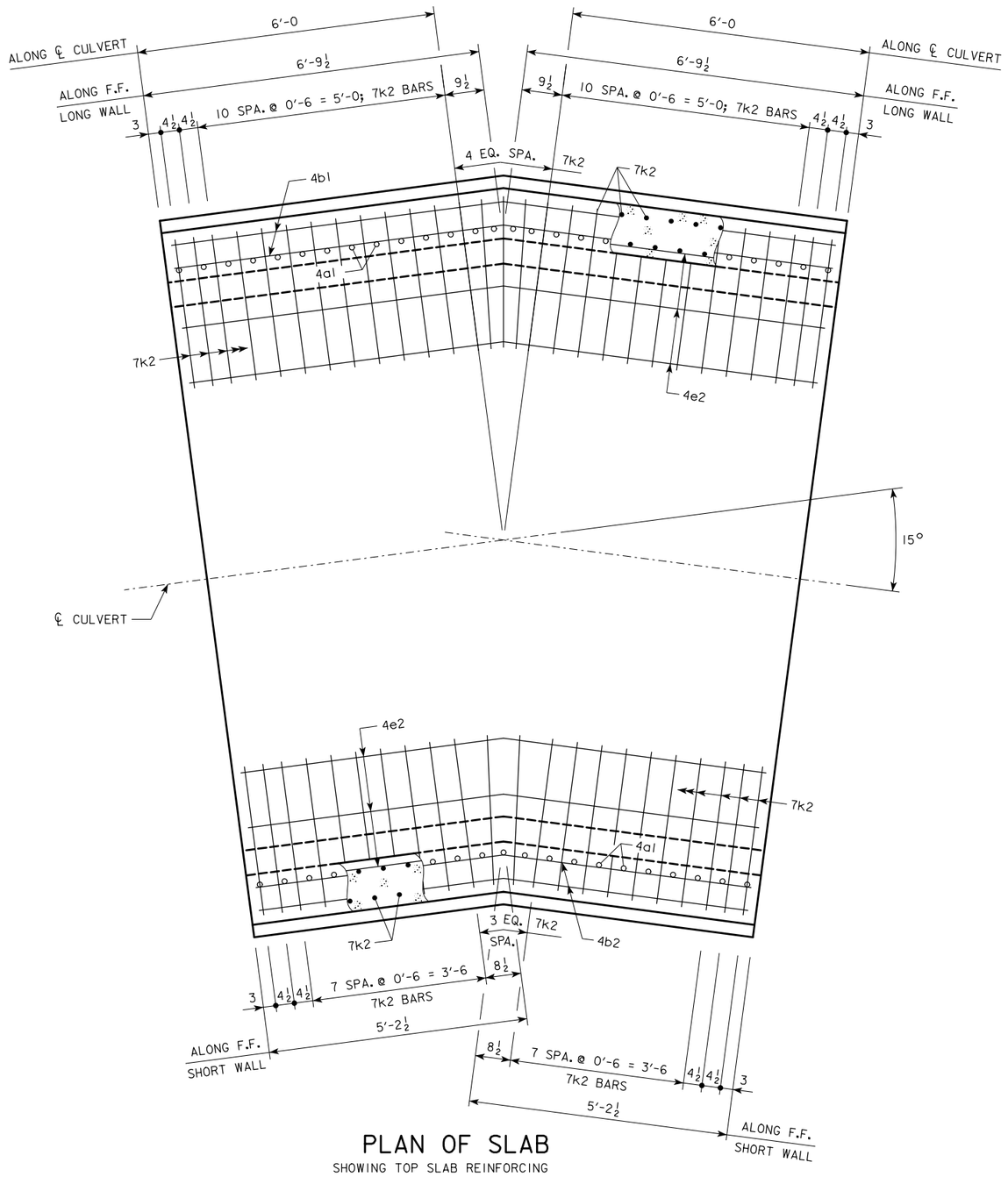
STATION: 3397+00.00 OCTOBER, 2013

POLK COUNTY

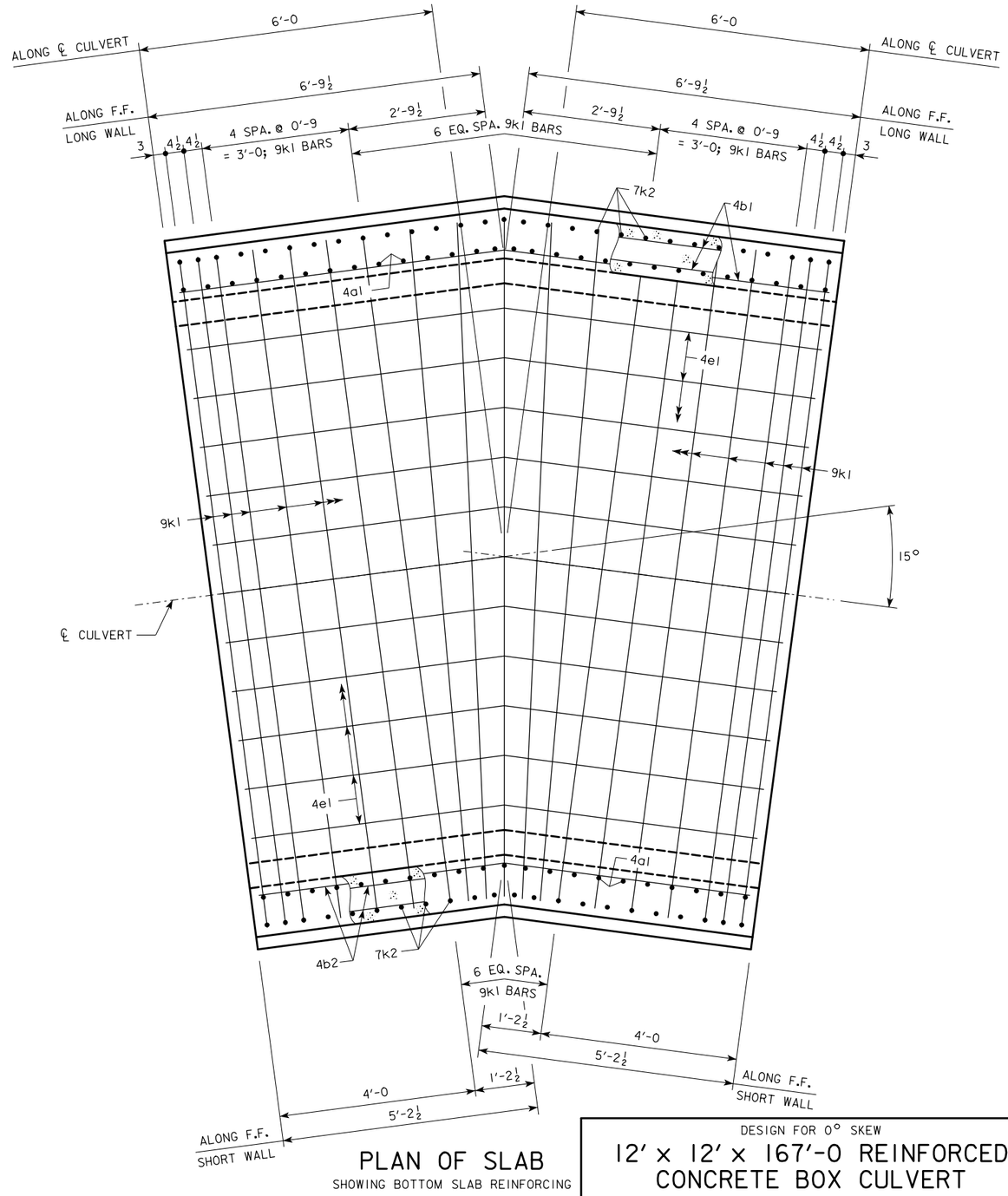
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 5 OF 7 FILE NO. 30397 DESIGN NO. 2014

DESIGN TEAM DAW/JDC	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER V.5



PLAN OF SLAB
SHOWING TOP SLAB REINFORCING



PLAN OF SLAB
SHOWING BOTTOM SLAB REINFORCING

DESIGN FOR 0° SKEW

12′ x 12′ x 167′-0 REINFORCED CONCRETE BOX CULVERT

12′-0 BENT BARREL DETAILS

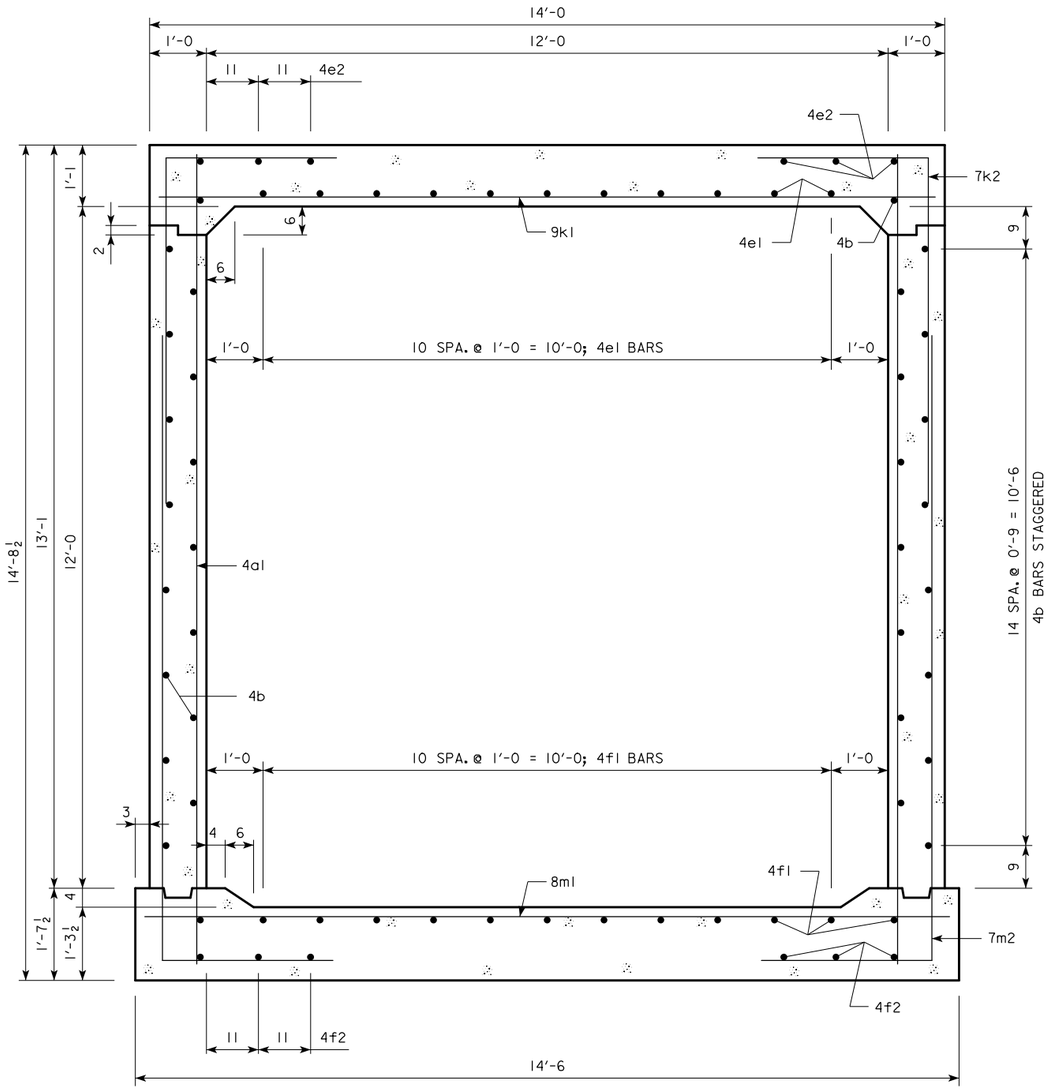
STATION: 3397+00.00 OCTOBER, 2013

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 6 OF 7 FILE NO. 30397 DESIGN NO. 2014

DESIGN TEAM DAW/JDC | POLK COUNTY | PROJECT NUMBER IM-035-2(365)67--13-77 | SHEET NUMBER V.6

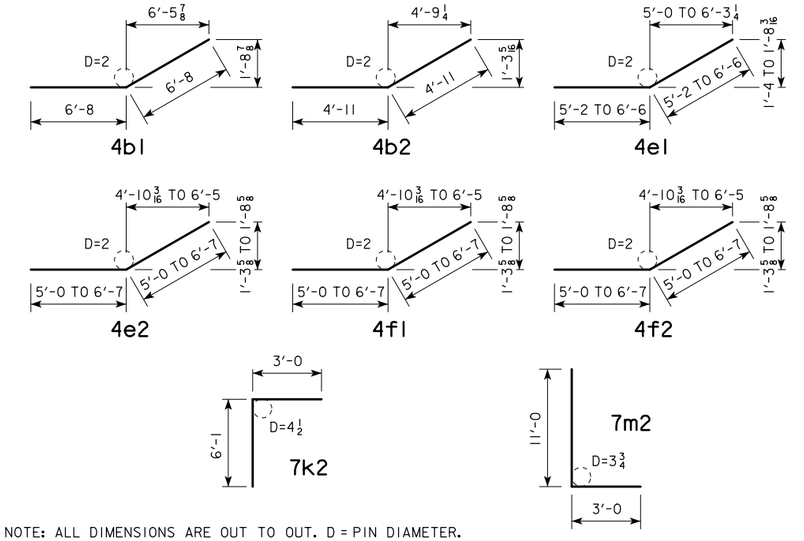


TYPICAL BARREL SECTION

REINF. BAR LIST - ONE 12'-0 BENT BARREL SECT.

BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
4a1	EXTERIOR WALLS, VERTICAL	—	49	14'-3	466
4b1	LONG EXTERIOR WALL, HORIZONTAL	⌣	16	13'-4	143
4b2	SHORT EXTERIOR WALL, HORIZONTAL	⌣	16	9'-10	105
4e1	SLAB, BOTT., LONGIT.	⌣	11	VARIES	86
4e2	SLAB, TOP, LONGIT.	⌣	6	VARIES	46
4f1	FLOOR, TOP, LONGIT., LONG BARREL	⌣	13	VARIES	101
4f2	FLOOR, BOTT., LONGIT., LONG BARREL	⌣	6	VARIES	46
9k1	SLAB, BOTTOM, TRANSVERSE	—	19	13'-8	883
7k2	SLAB, TOP CORNER	⌞	51	9'-1	947
8m1	FLOOR, TOP, TRANSVERSE	—	25	14'-2	946
7m2	FLOOR, BOTTOM CORNER	⌟	51	14'-0	1459
				TOTAL (LBS.)	5228

BENT BAR DETAILS



NOTE: ALL DIMENSIONS ARE OUT TO OUT. D = PIN DIAMETER.

DESIGN FOR 0° SKEW

12' x 12' x 167'-0 REINFORCED CONCRETE BOX CULVERT

12'-0 BENT BARREL DETAILS

STATION: 3397+00.00 OCTOBER, 2013

POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 7 OF 7 FILE NO. 30397 DESIGN NO. 2014

DESIGN TEAM DAW/JDC | POLK COUNTY | PROJECT NUMBER IM-035-2(365)67--13-77 | SHEET NUMBER V.7

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LINE STYLE LEGEND OF CROSS SECTION SHEETS (ROAD)

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

LINE STYLE LEGEND OF CROSS SECTION SHEETS (SOILS)

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

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

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

SYMBOL LEGEND OF CROSS SECTION SHEETS

Existing Right-of-Way Limit

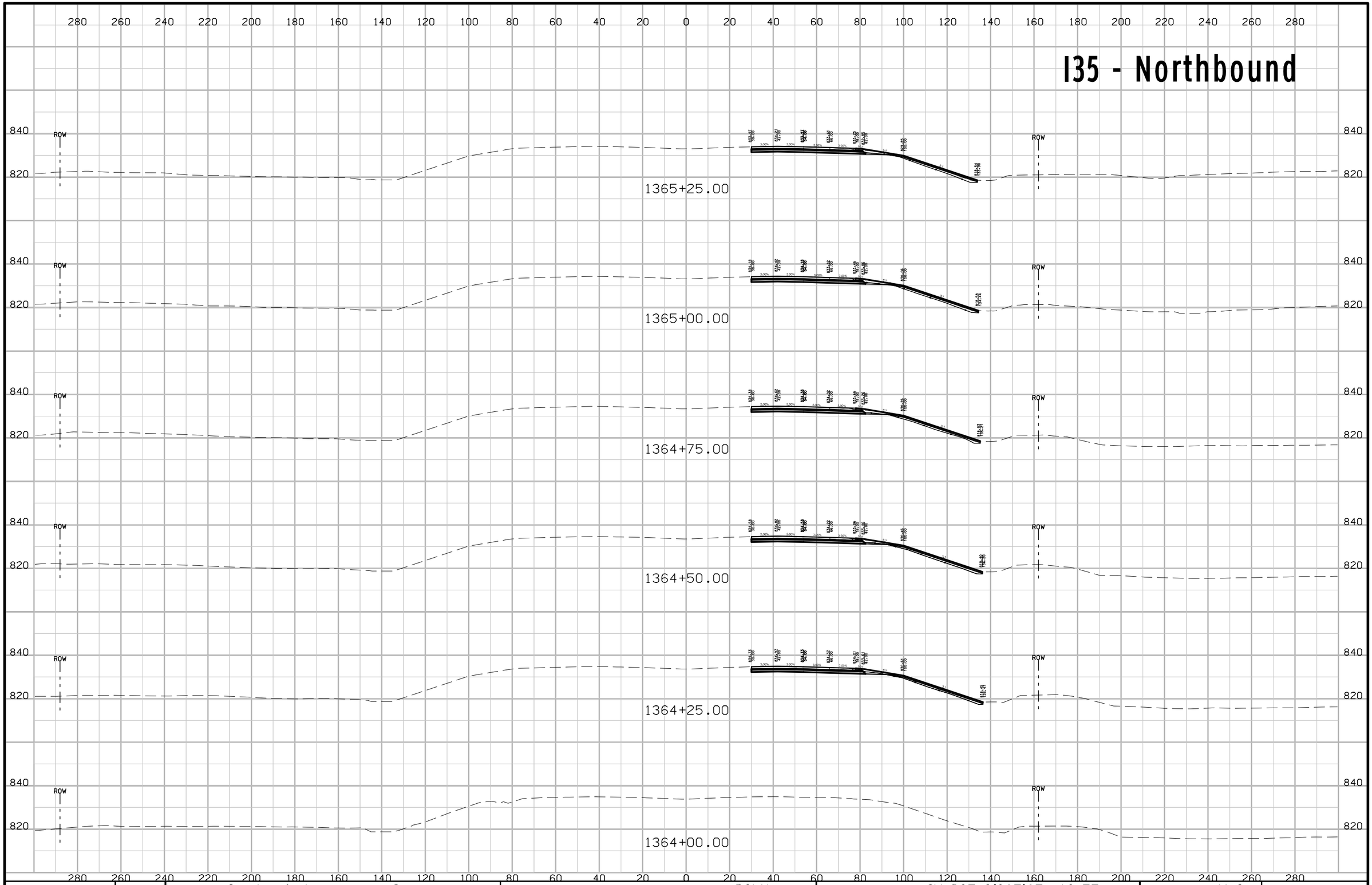
Proposed Right-of-Way Limit

Temporary Right-of-Way Limit

CROSS SECTION LEGEND AND SYMBOL INFORMATION SHEET

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

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.2

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I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

840 820 ROW

1366+75.00

1366+50.00

1366+25.00

1366+00.00

1365+75.00

1365+50.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.3

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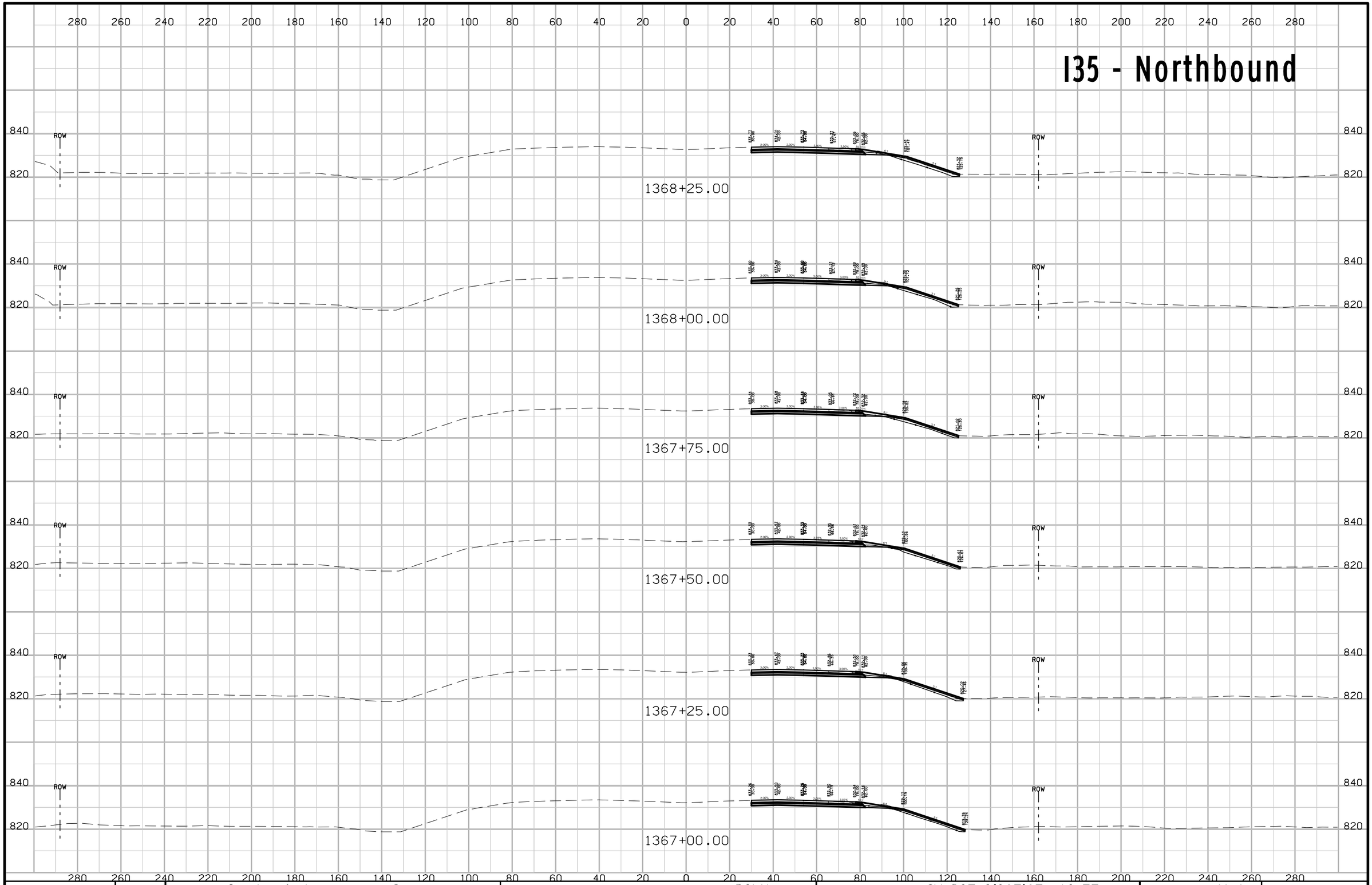
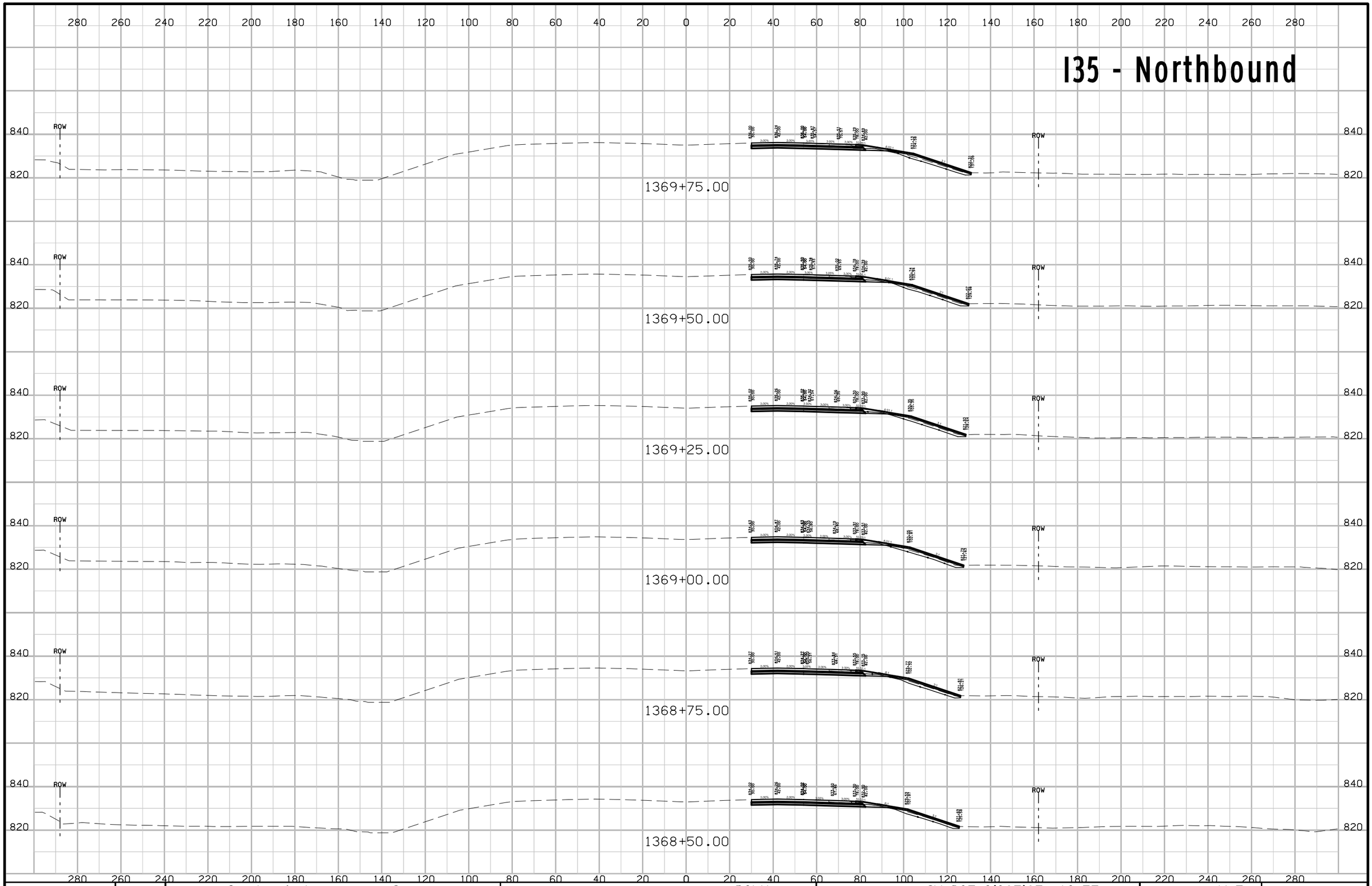


ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.4

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.5

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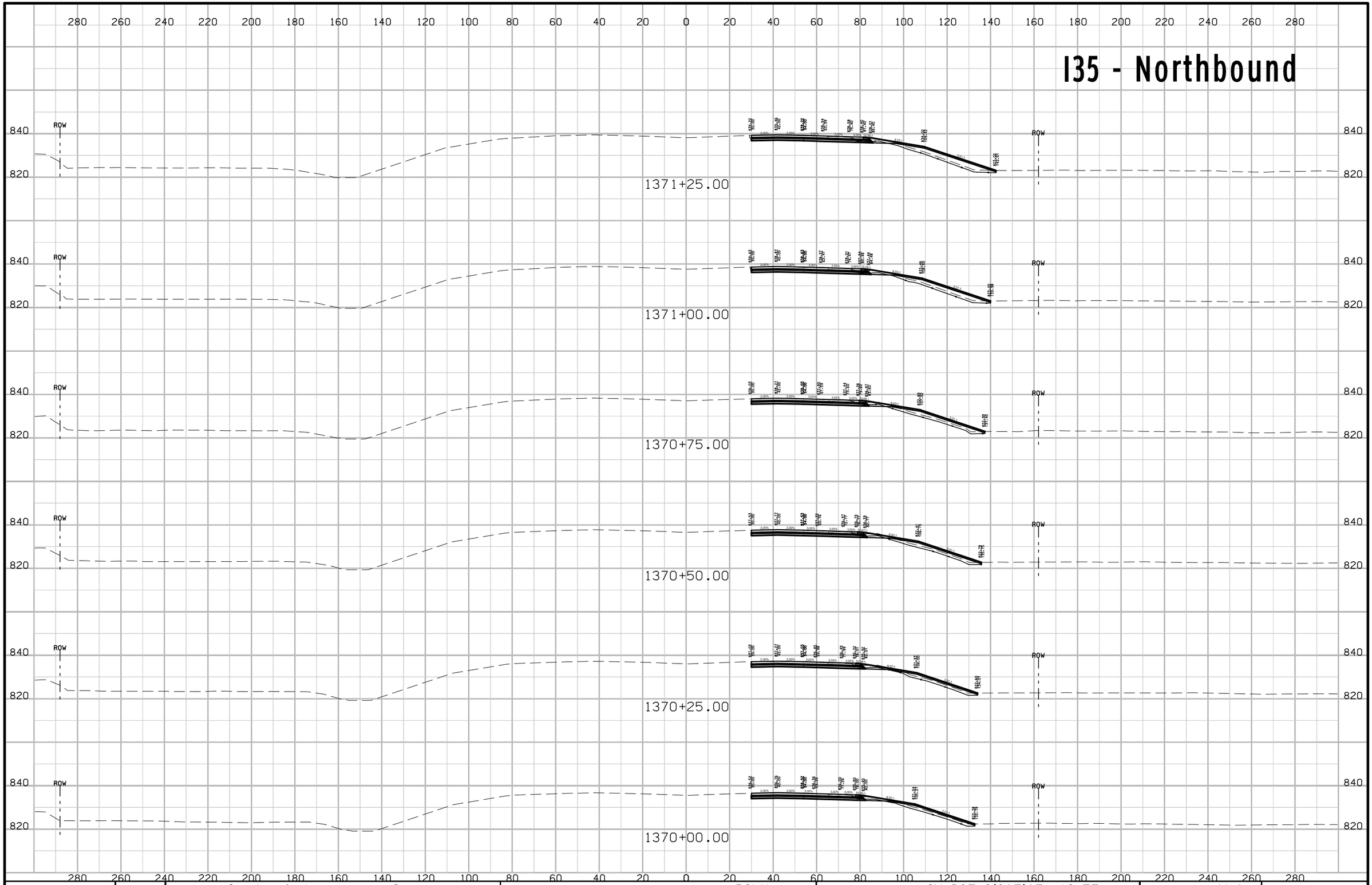
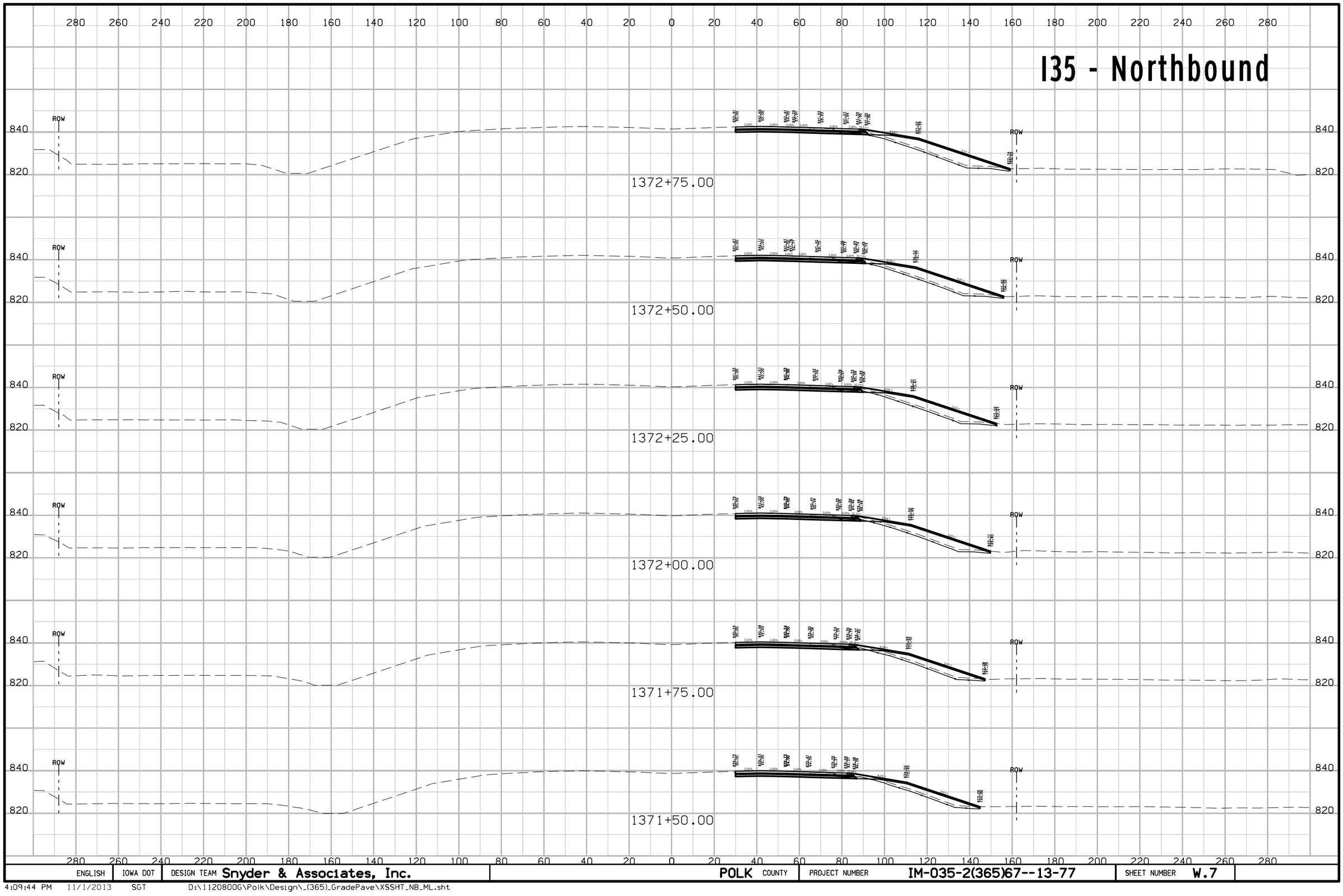
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	W.6

4:09:39 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

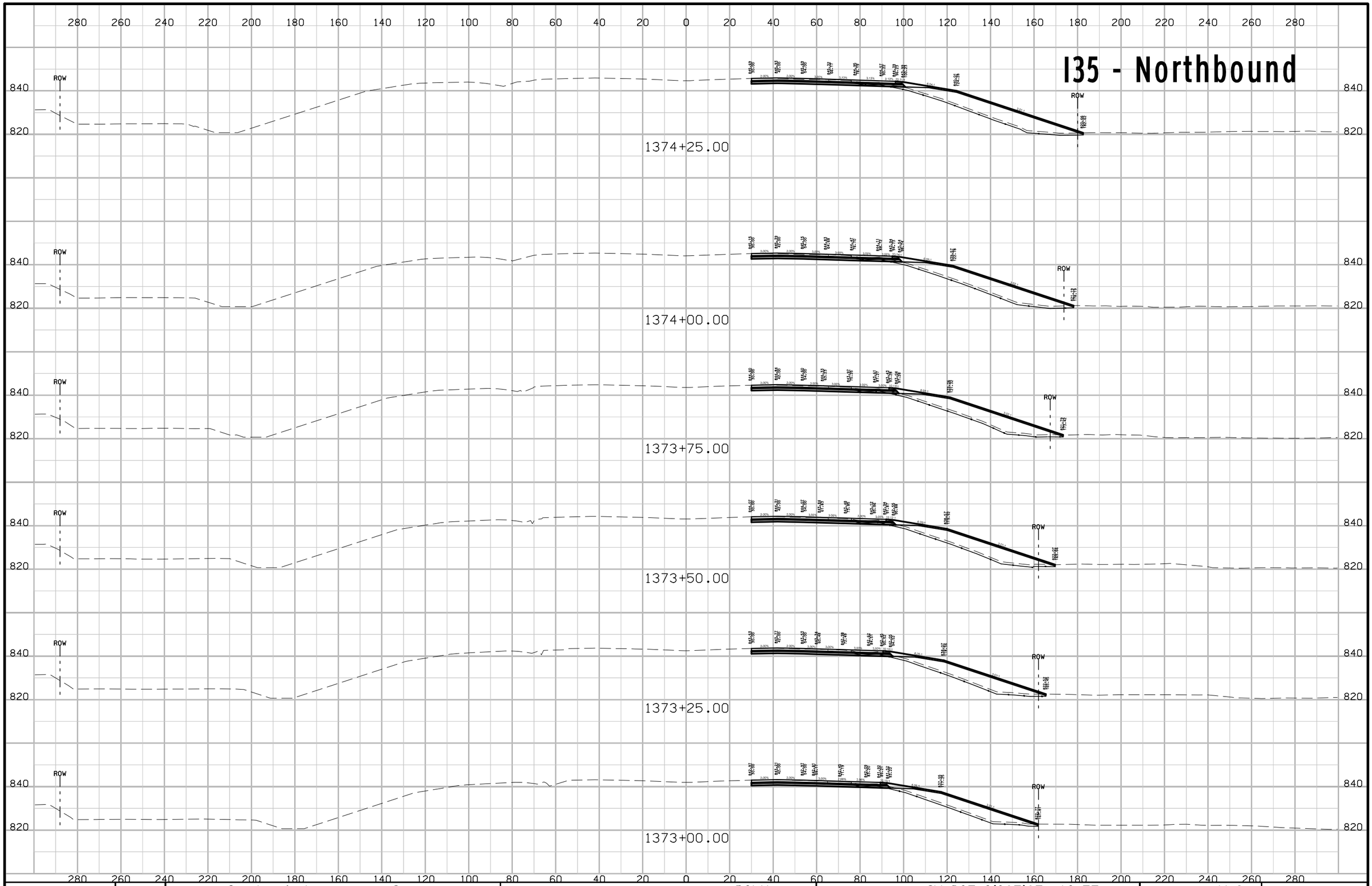
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.7

4:09:44 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.8

4:09:48 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

840
820

ROW

1375+50.00

1375+25.00

1375+00.00

1374+75.00

1374+50.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.9

4:09:53 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

840
820

ROW

1376+75.00

1376+50.00

1376+25.00

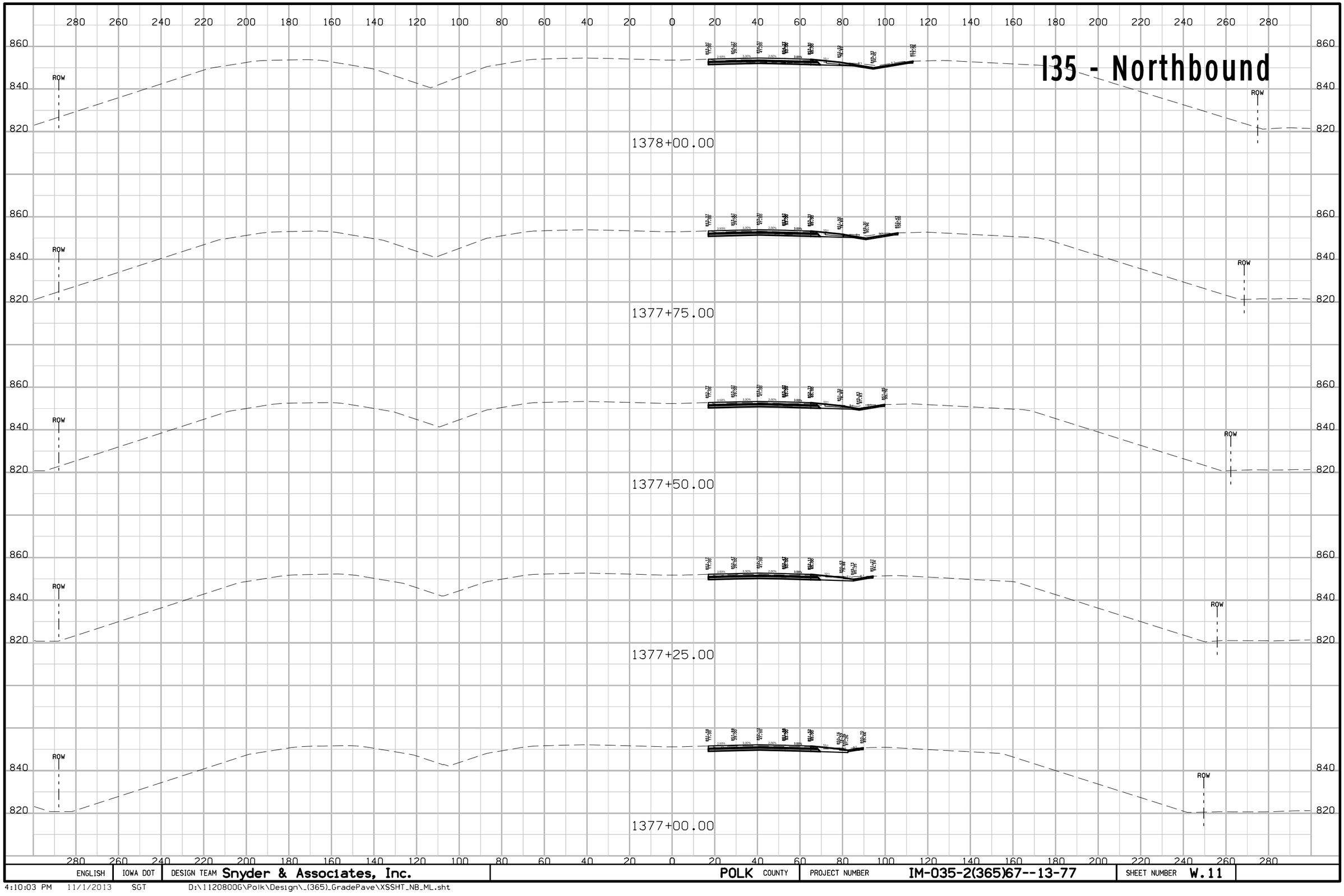
1376+00.00

1375+75.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.10

4:09:58 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.11

4:10:03 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

860
840
820

ROW

1379+25.00

1379+00.00

1378+75.00

1378+50.00

1378+25.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.12

4:10:07 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

860
840
820

1380+50.00

ROW

1380+25.00

1380+00.00

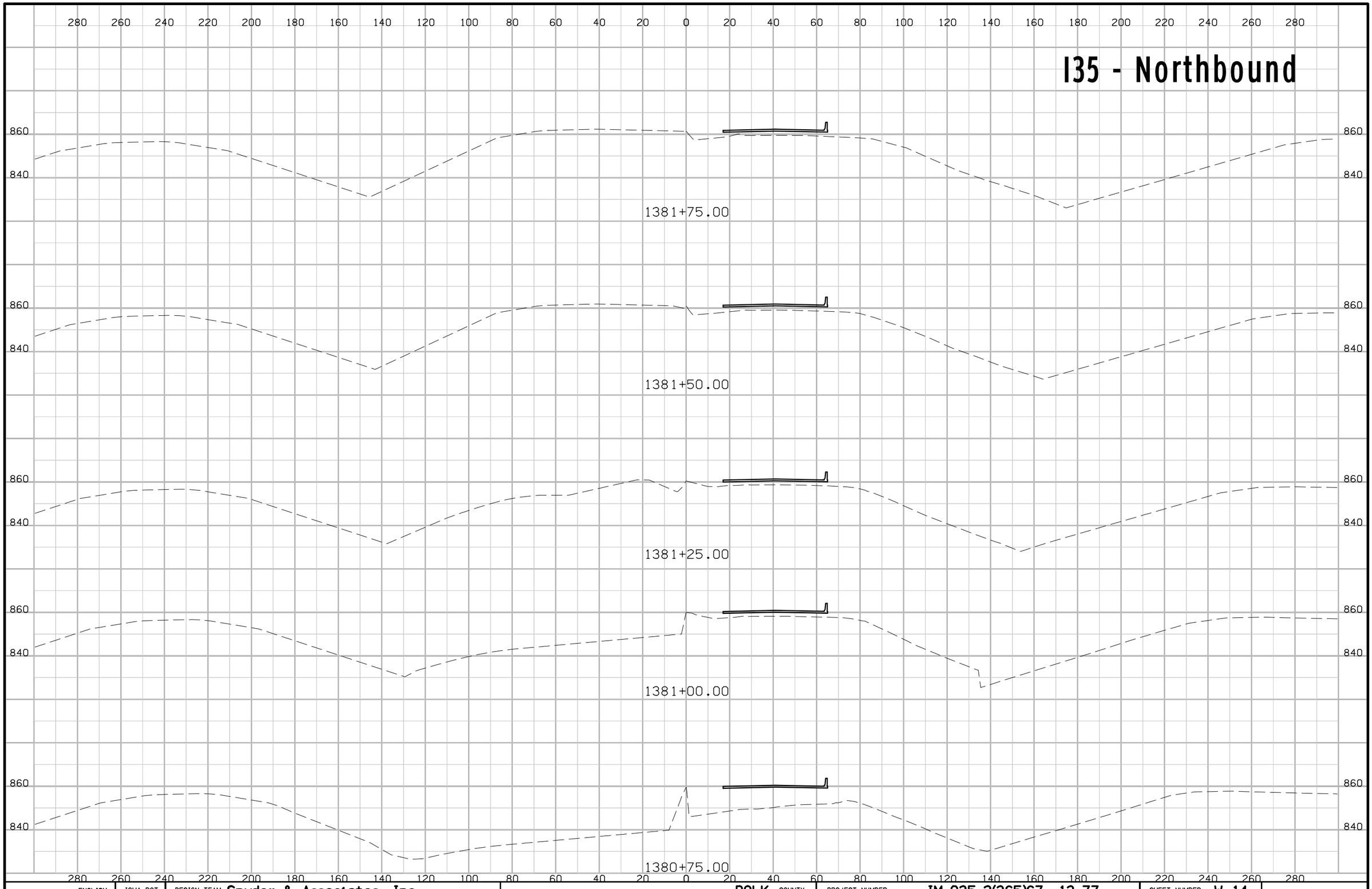
1379+75.00

1379+50.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.13

4:10:12 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

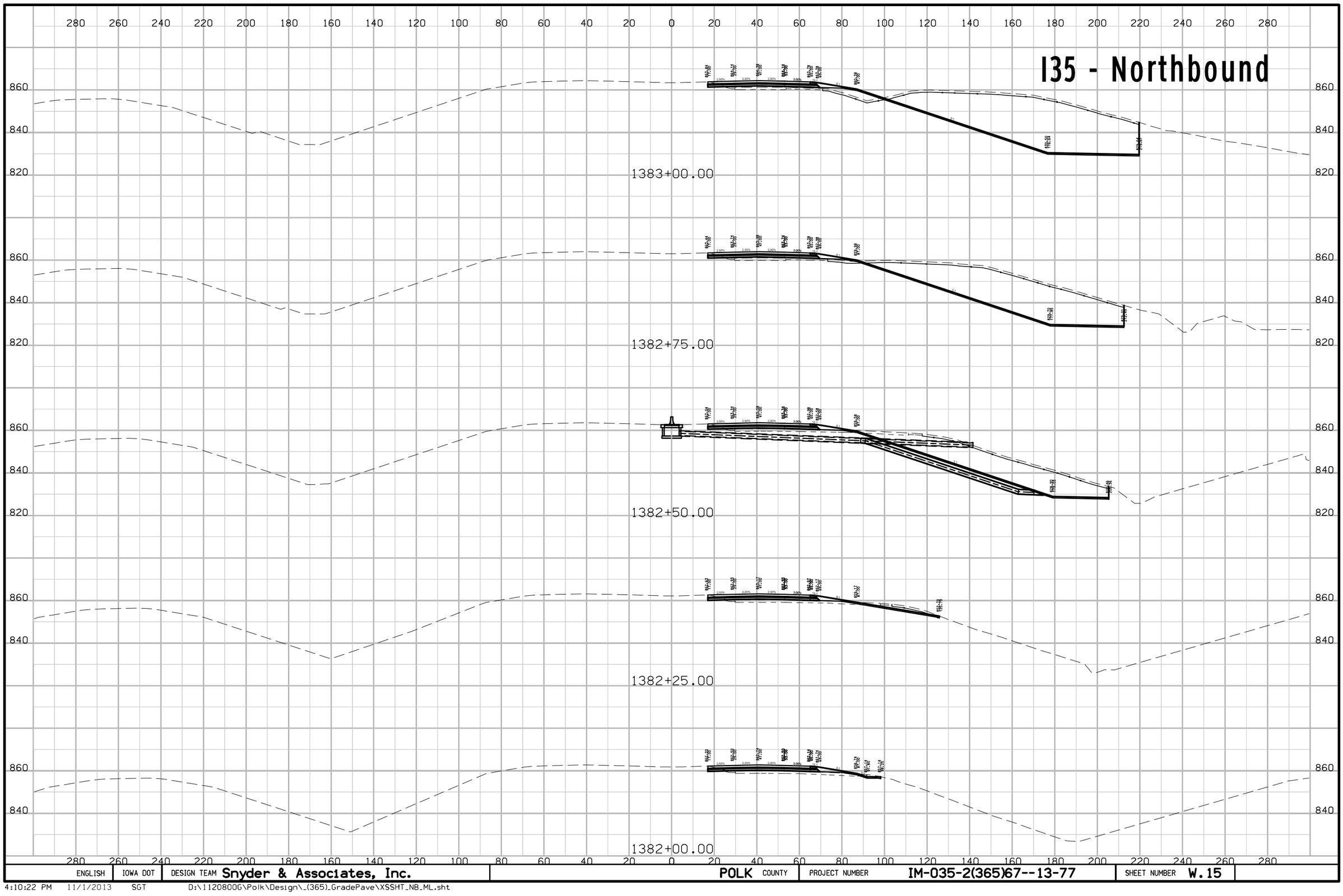
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.14

4:10:17 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

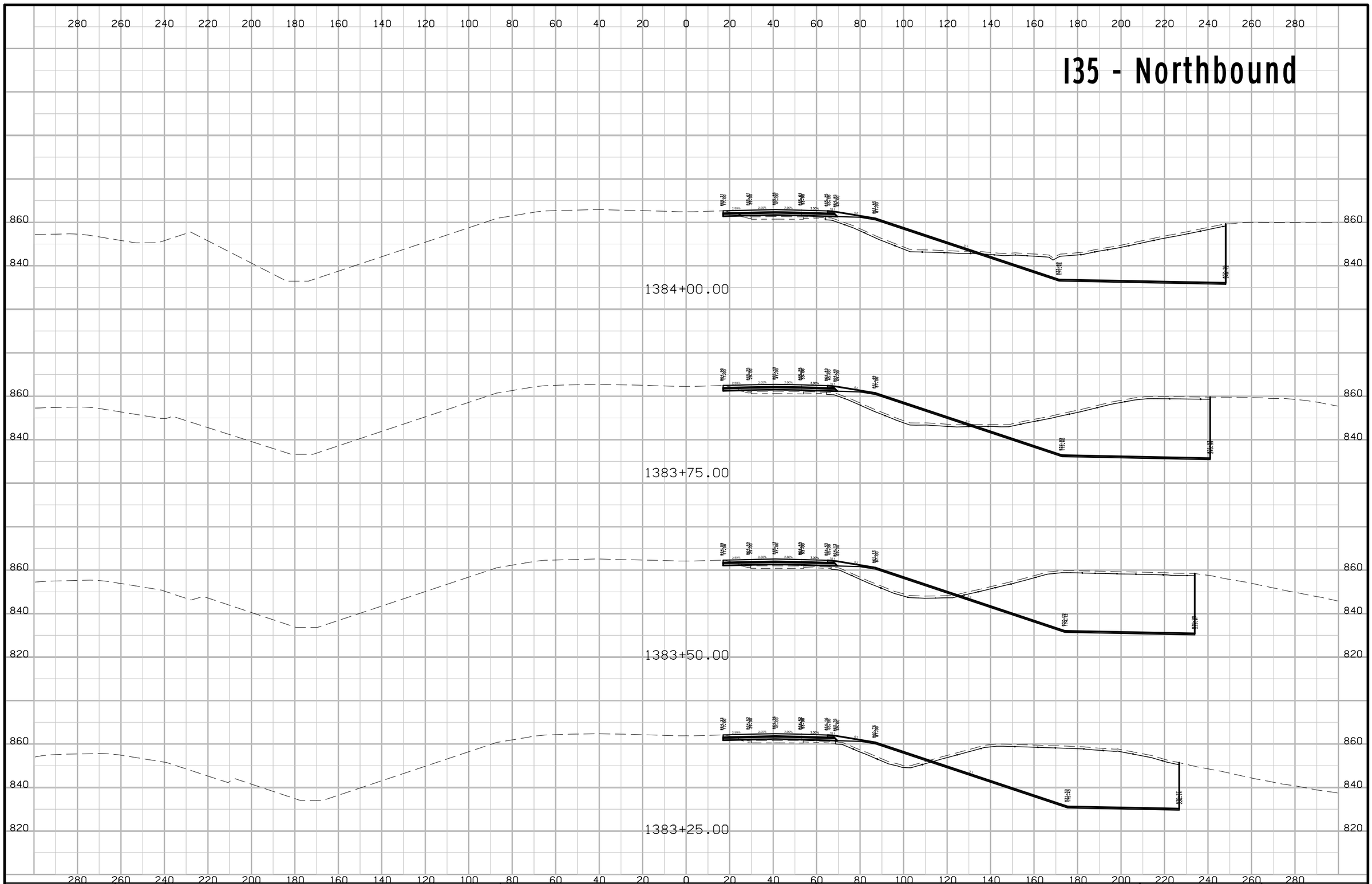
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.15

4:10:22 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

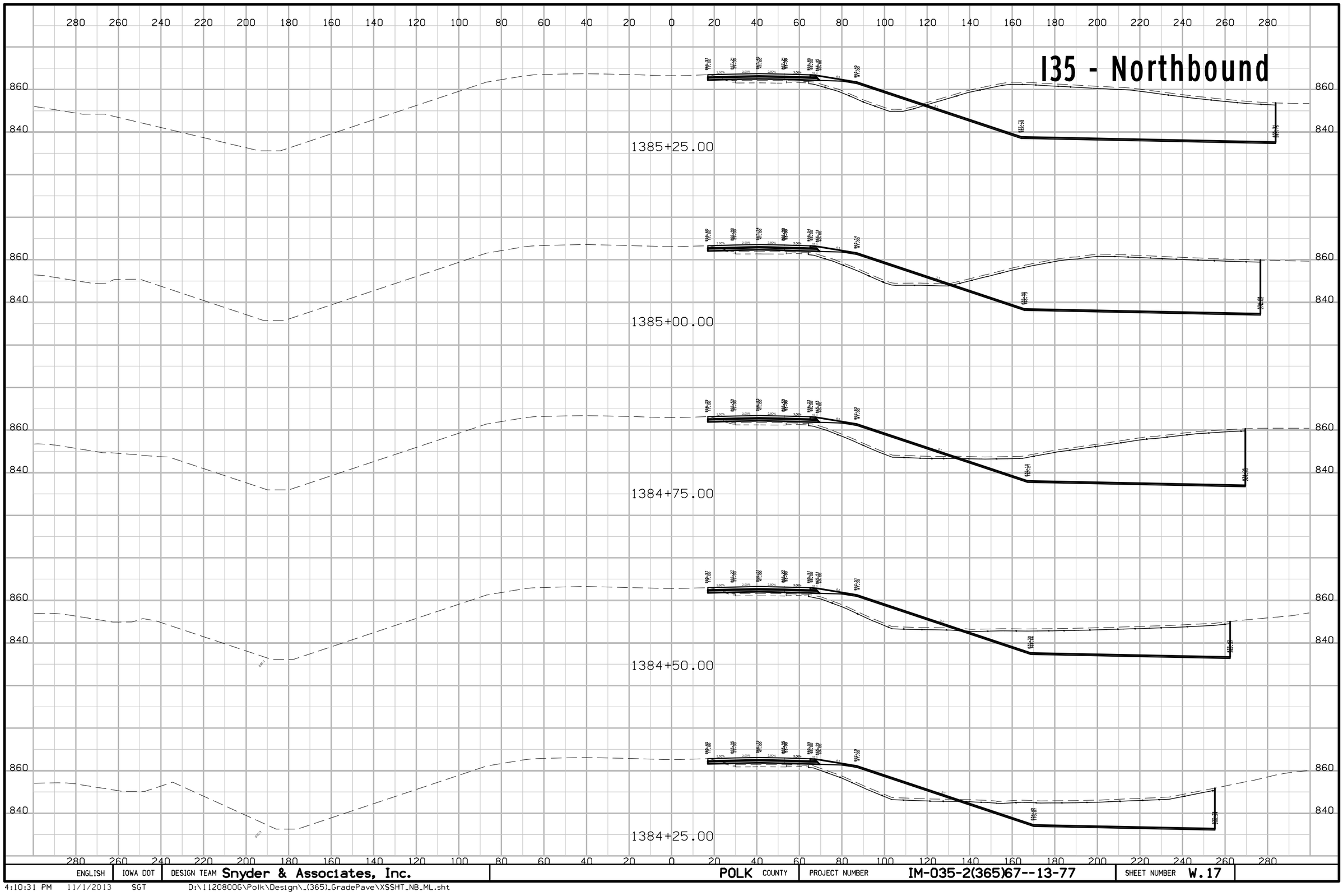
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.16

4:10:26 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

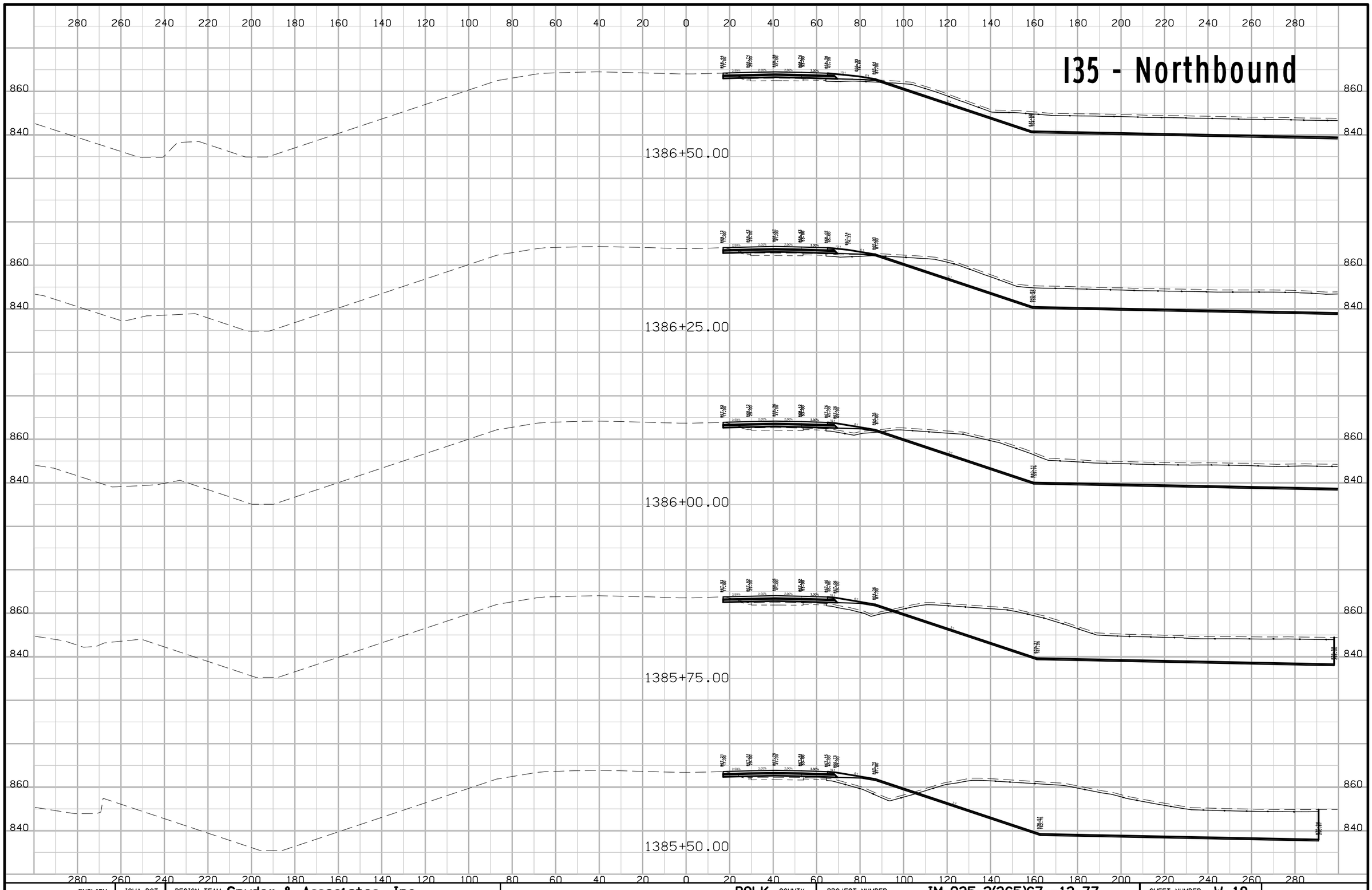
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.17

4:10:31 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.18

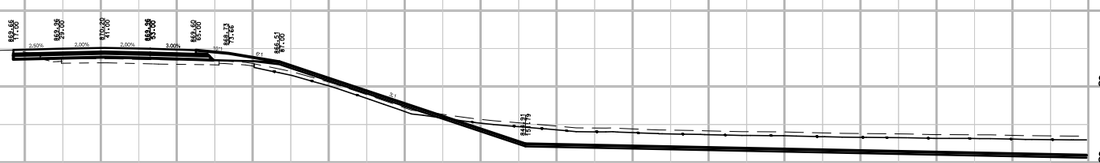
4:10:36 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

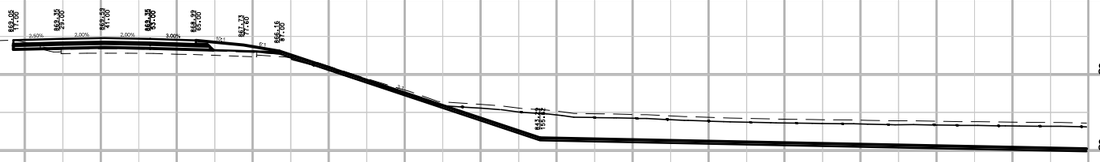
860
840

1387+75.00

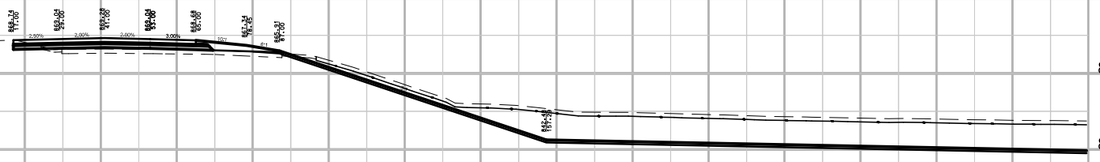


1387+50.00

1387+25.00



1387+00.00



1386+75.00

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.19

4:10:41 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

860
840

1389+00.00

1388+75.00

1388+50.00

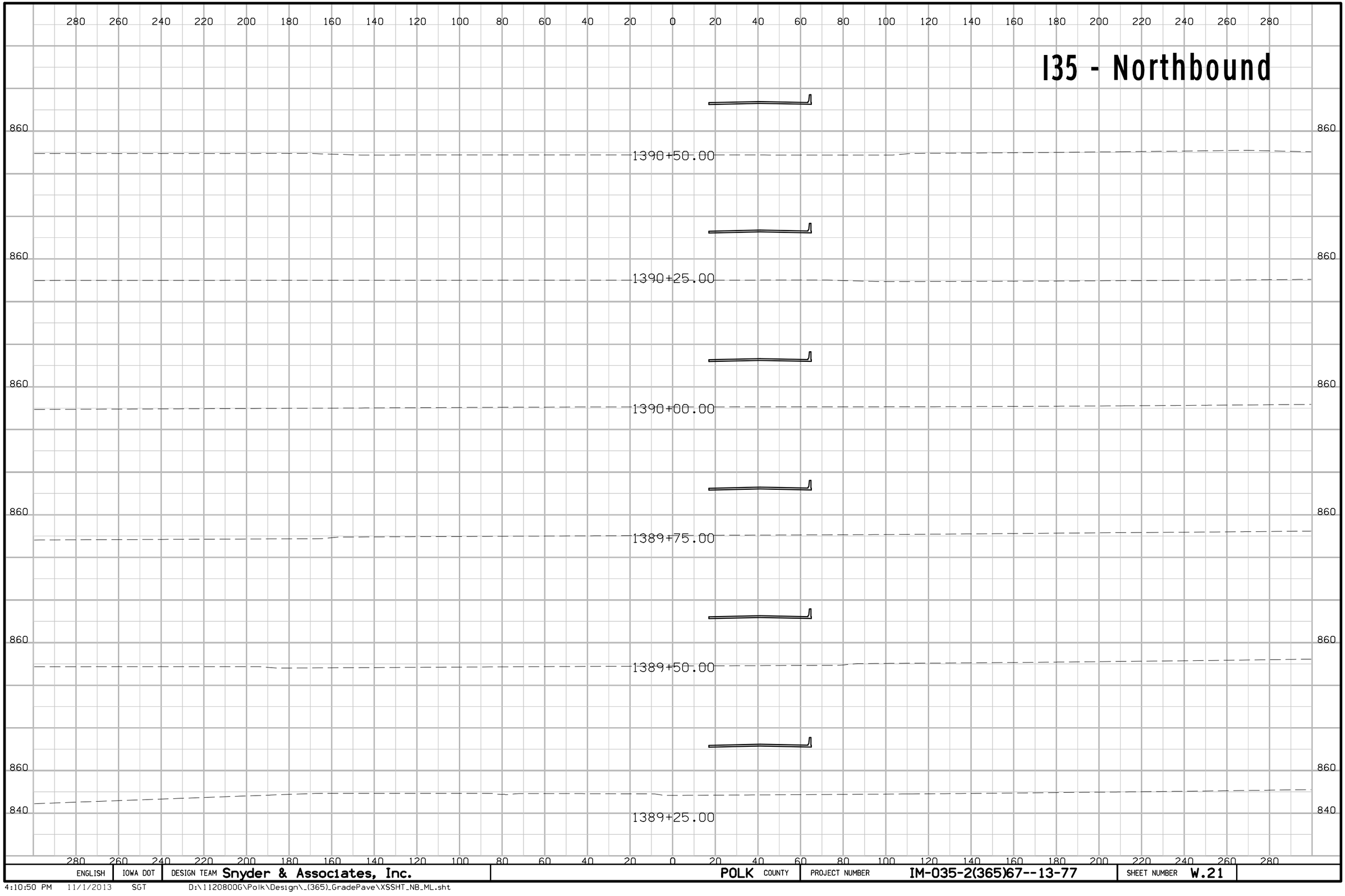
1388+25.00

1388+00.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.20

4:10:46 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.21

4:10:50 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

860
840

1392+00.00

1391+75.00

1391+50.00

1391+25.00

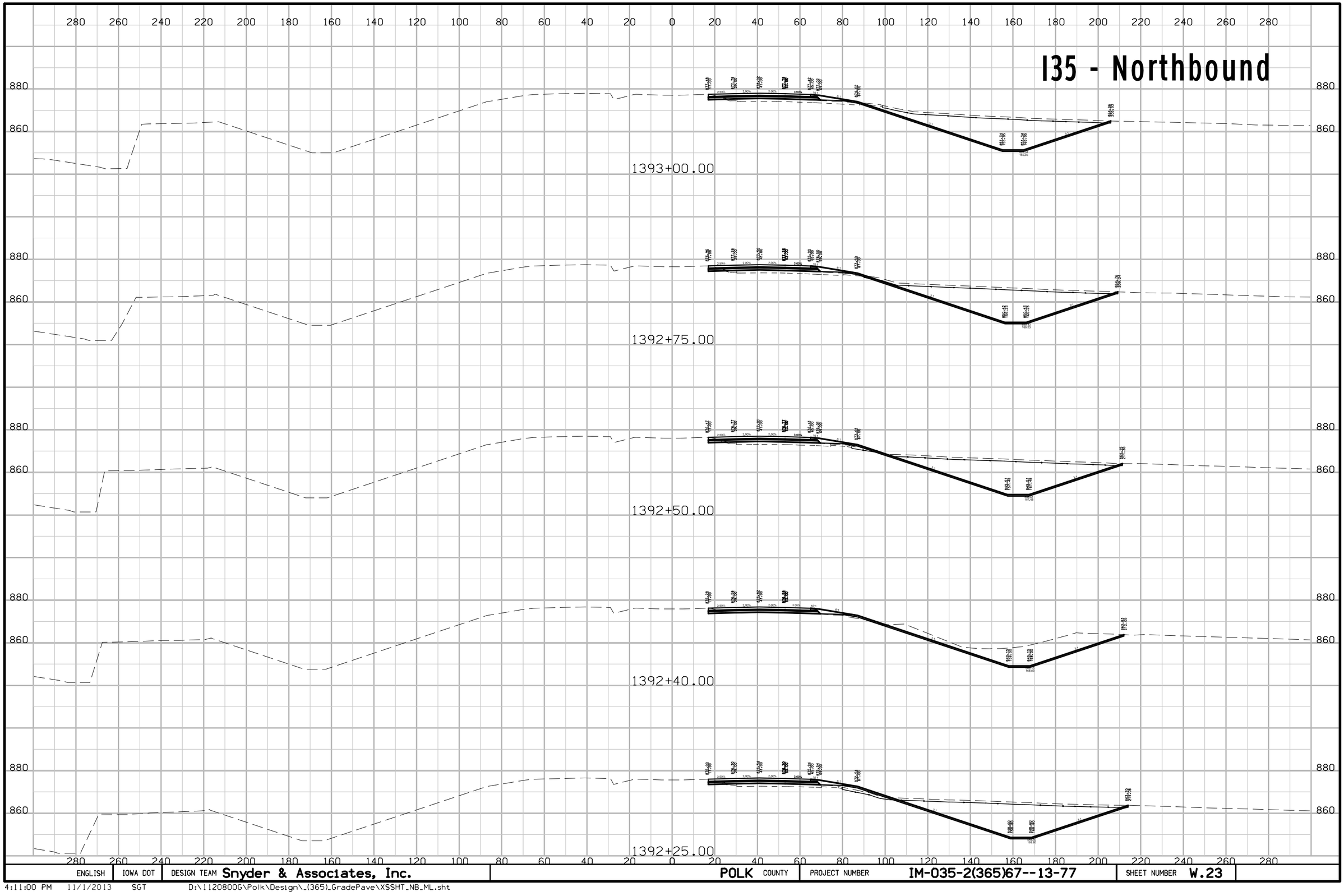
1391+00.00

1390+75.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.22

4:10:55 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

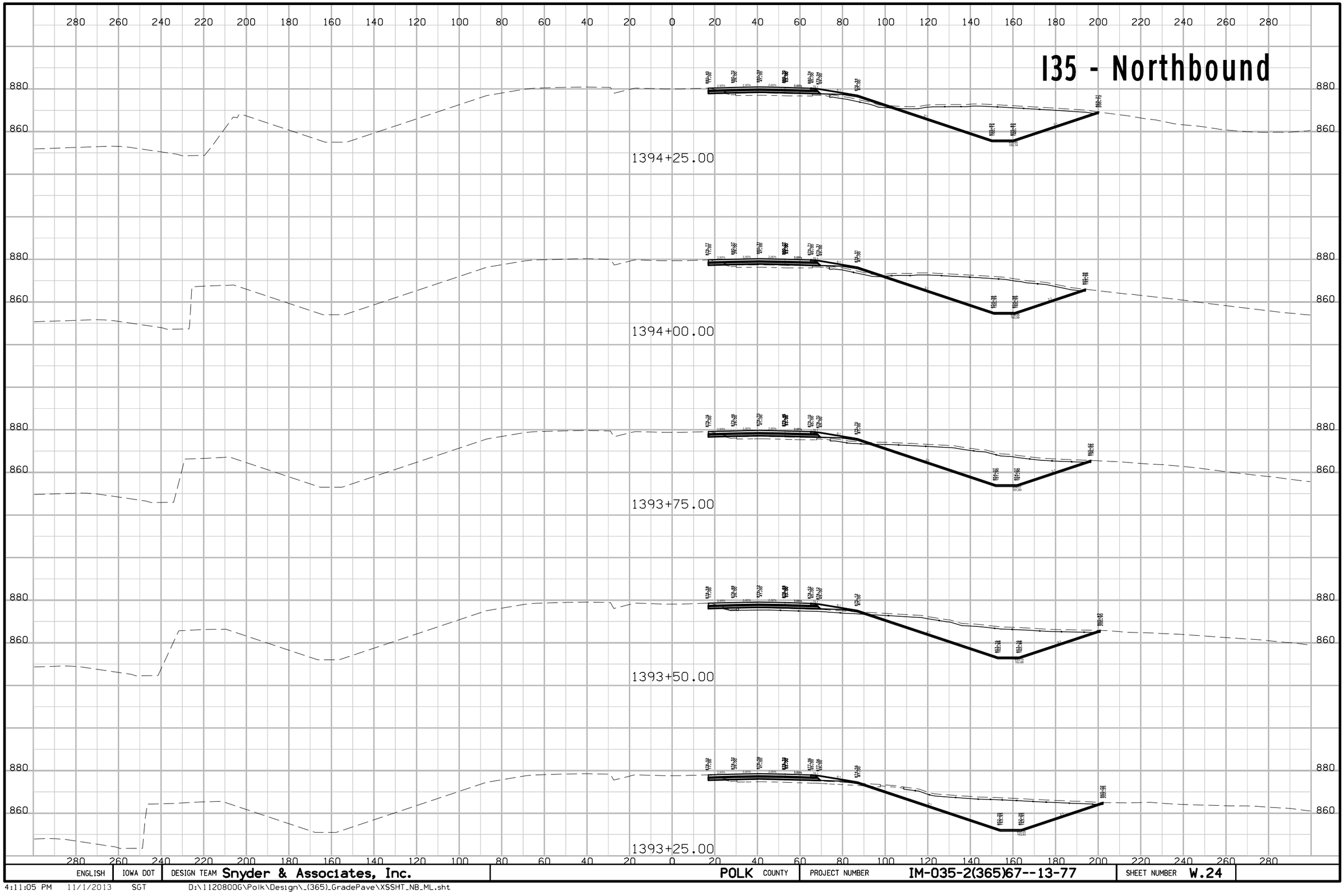
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.23

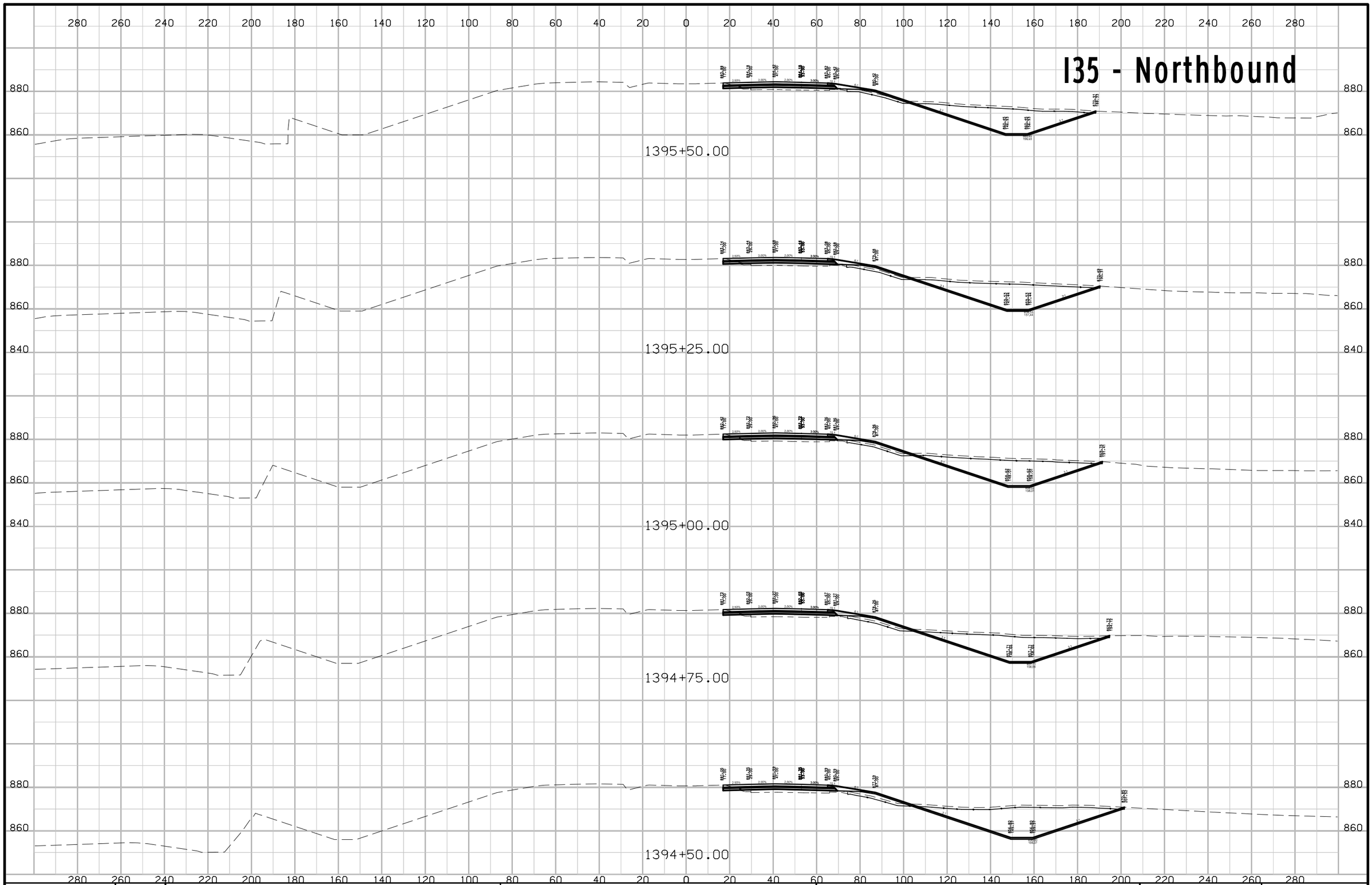
4:11:00 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.24

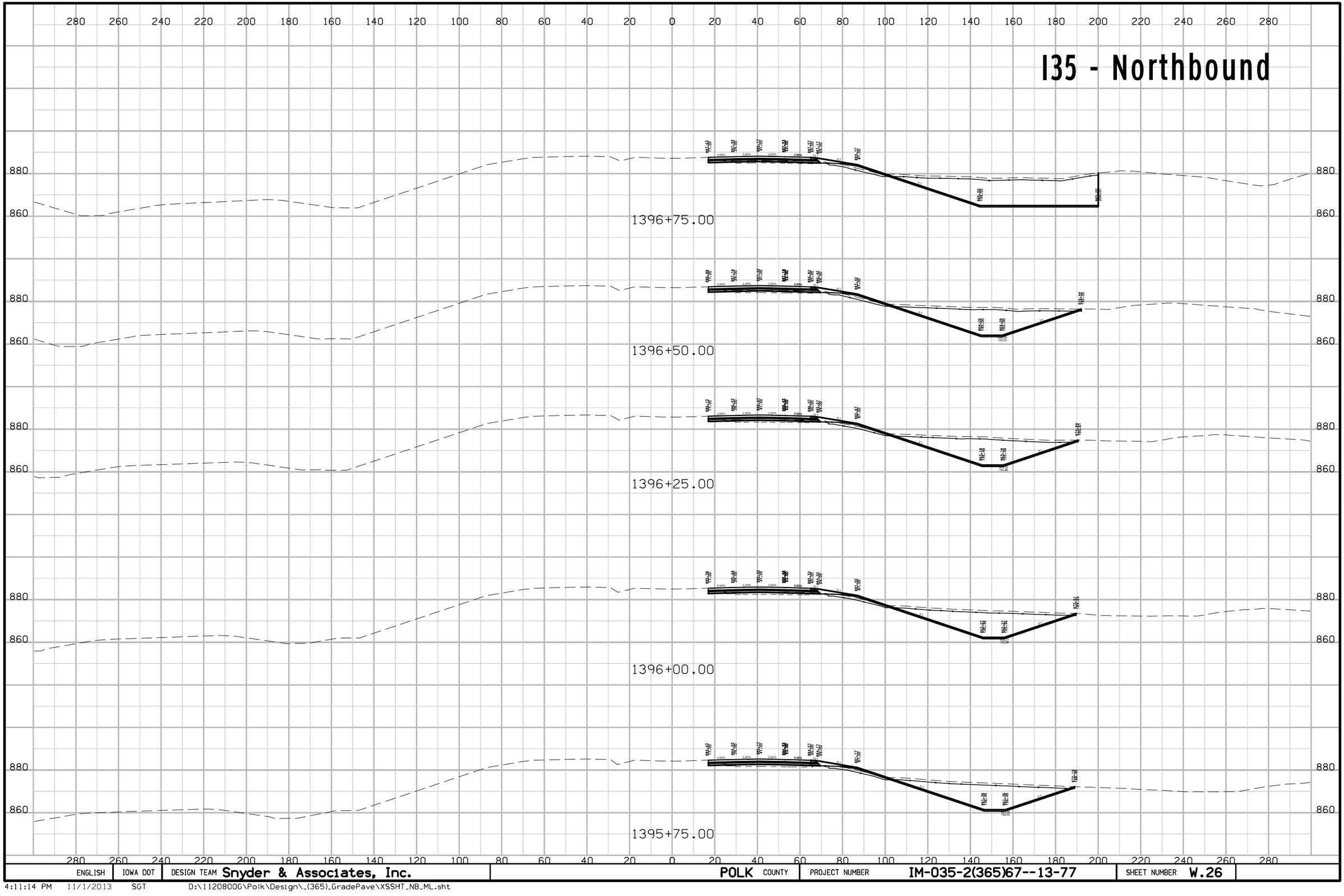
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.25

4:11:09 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

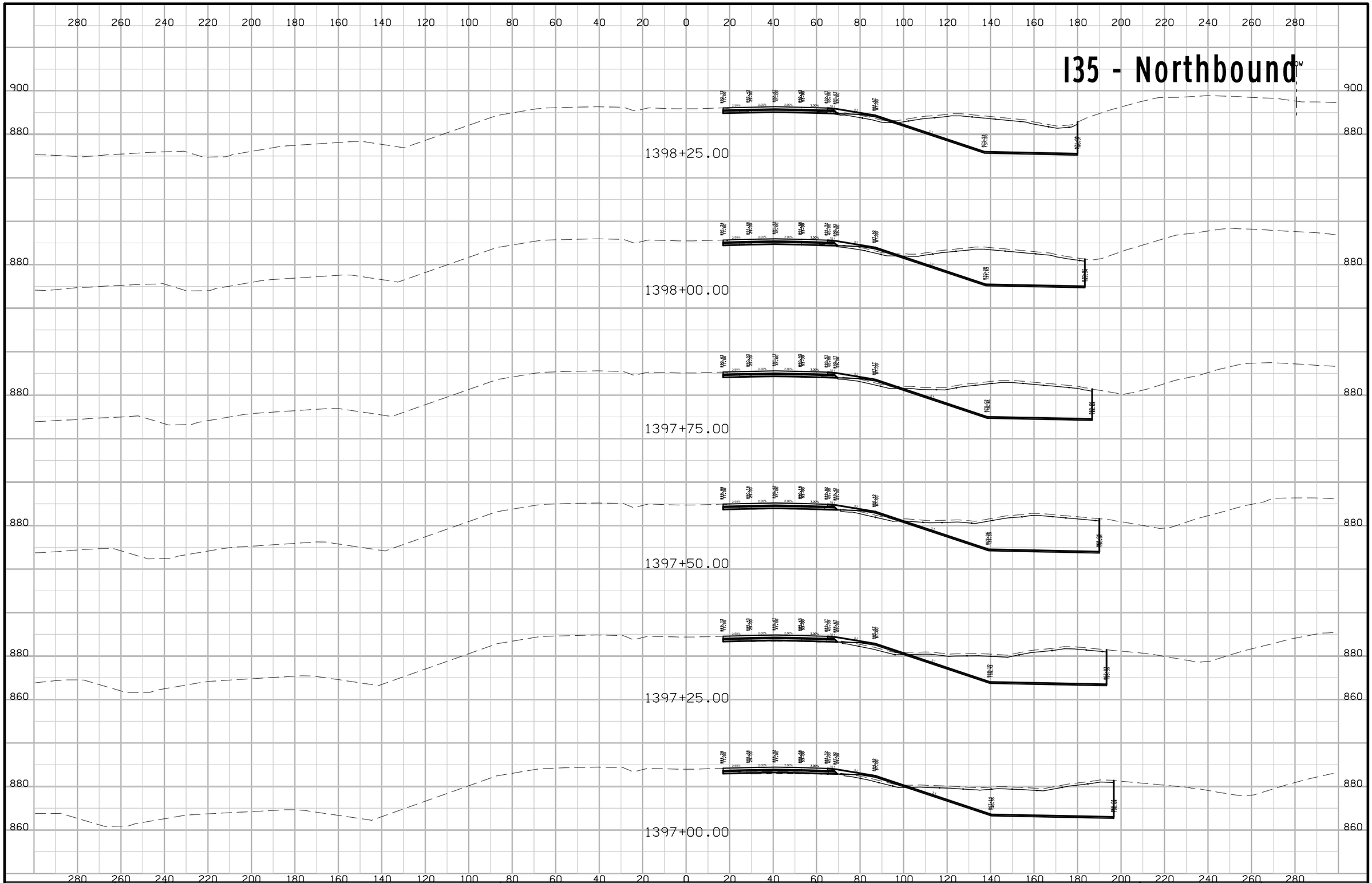
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.26

4:11:14 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

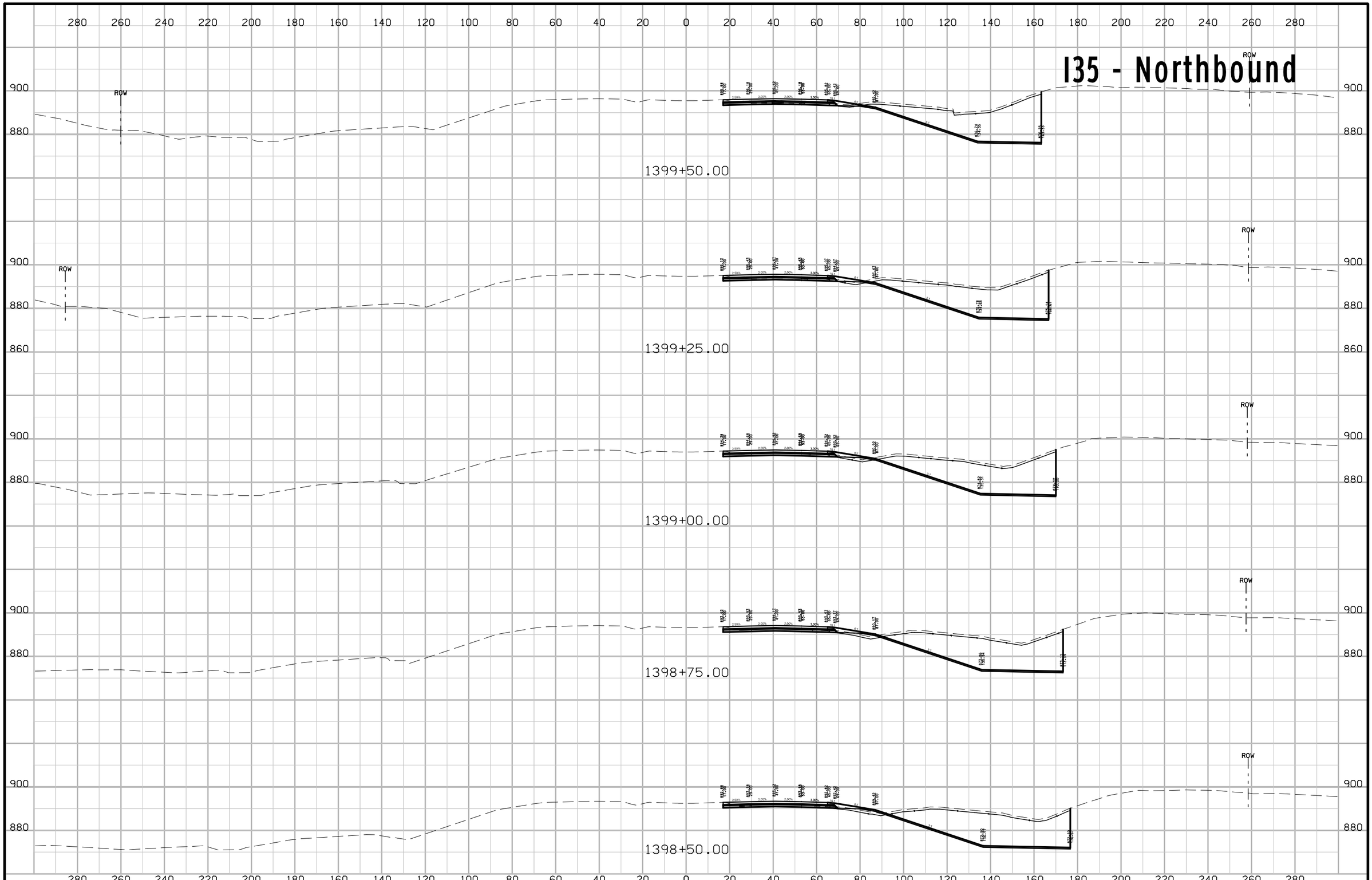
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.27

4:11:19 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

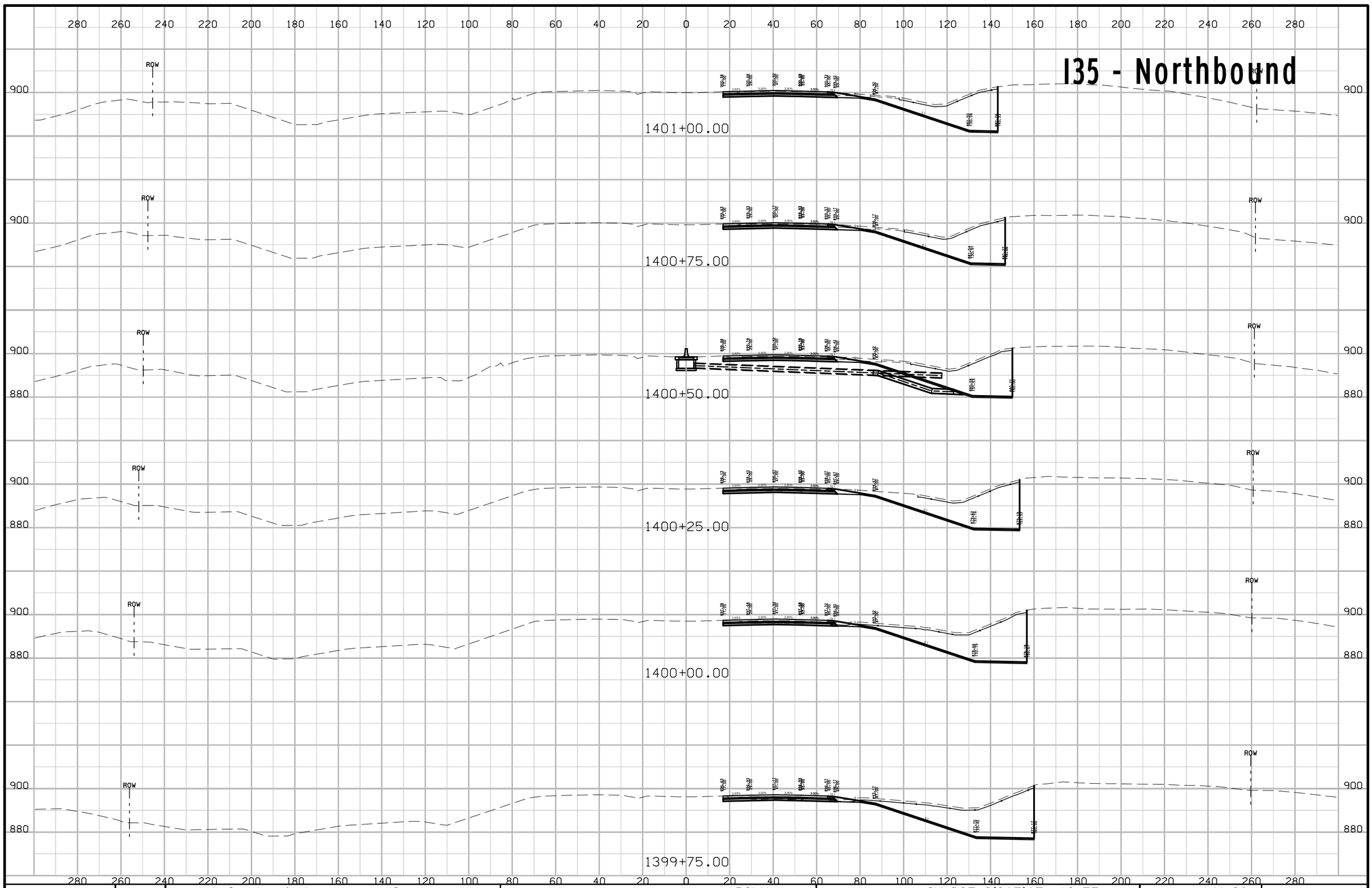
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.28

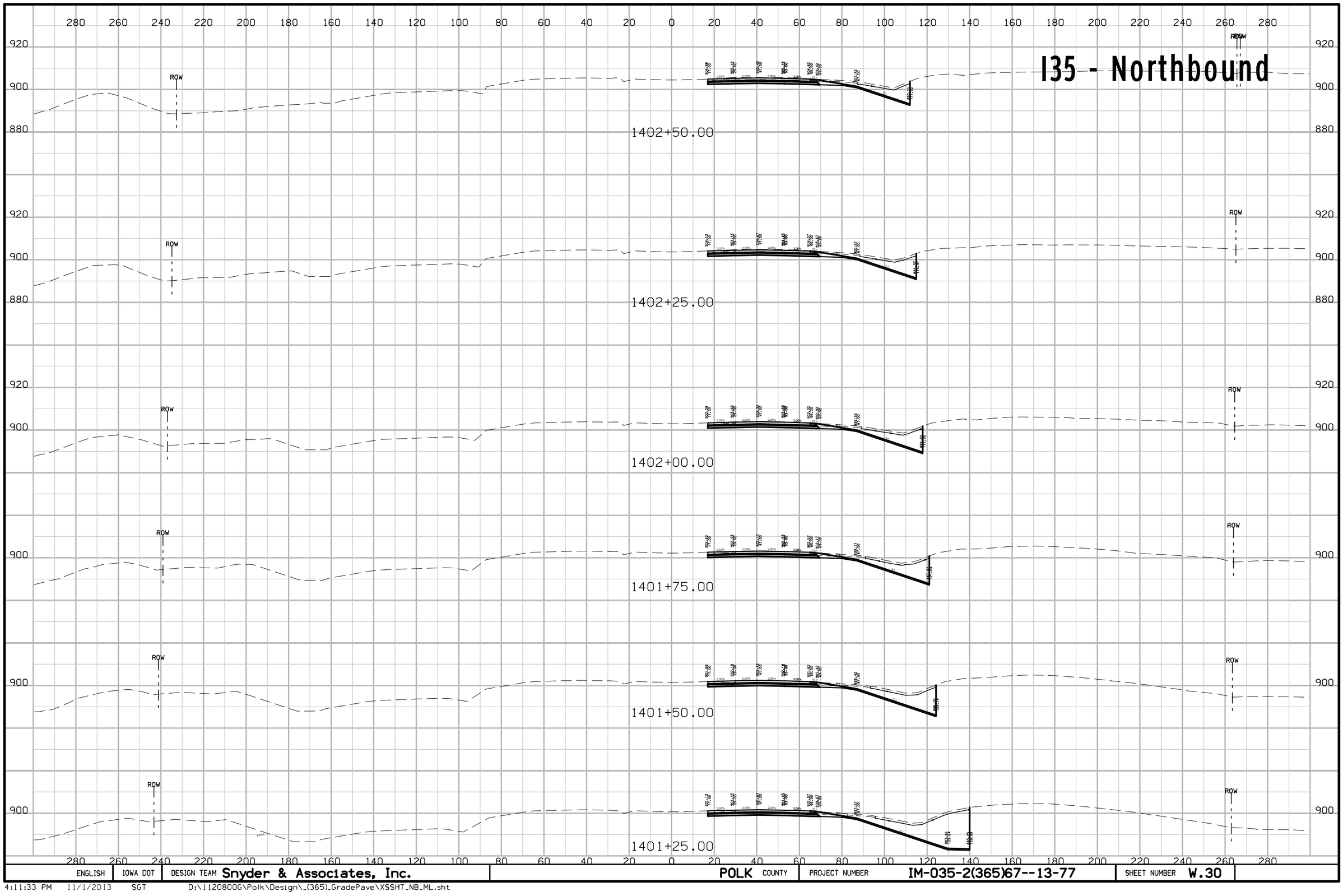
4:11:24 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.29

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.30

4:11:33 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

920 900 880

ROW

1403+50.00

1403+25.00

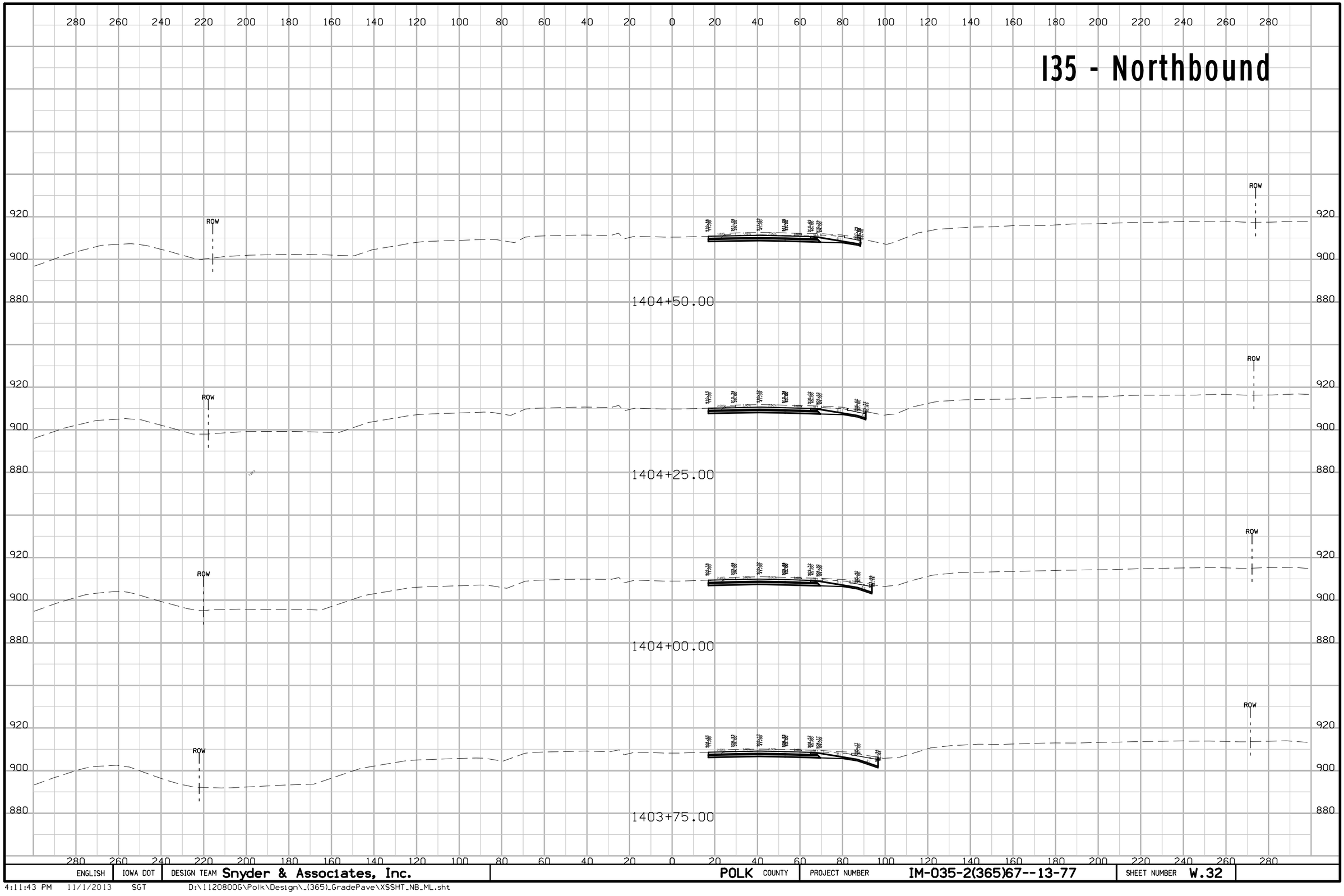
1403+00.00

1402+75.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.31

4:11:38 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

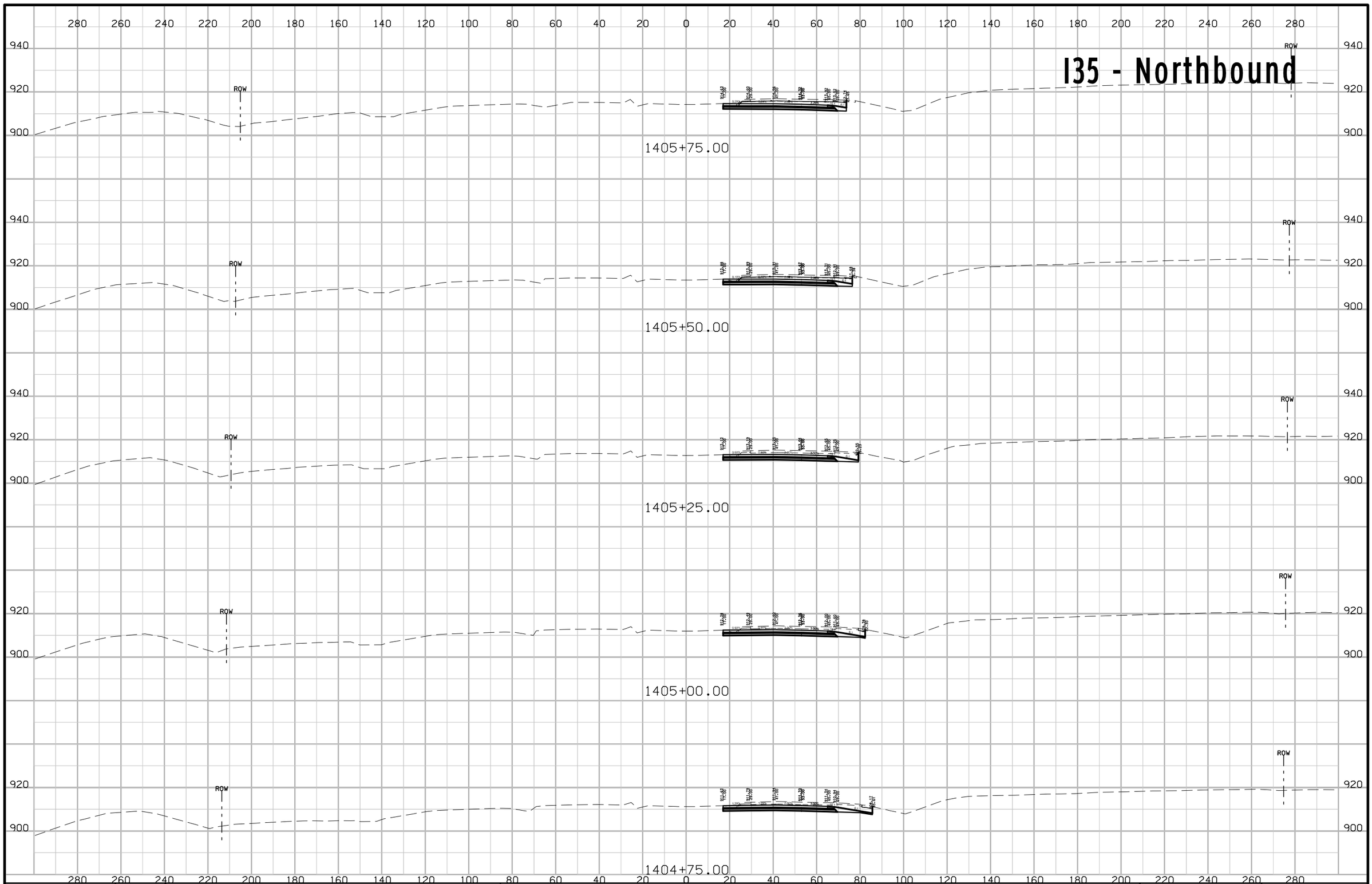
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.32

4:11:43 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.33

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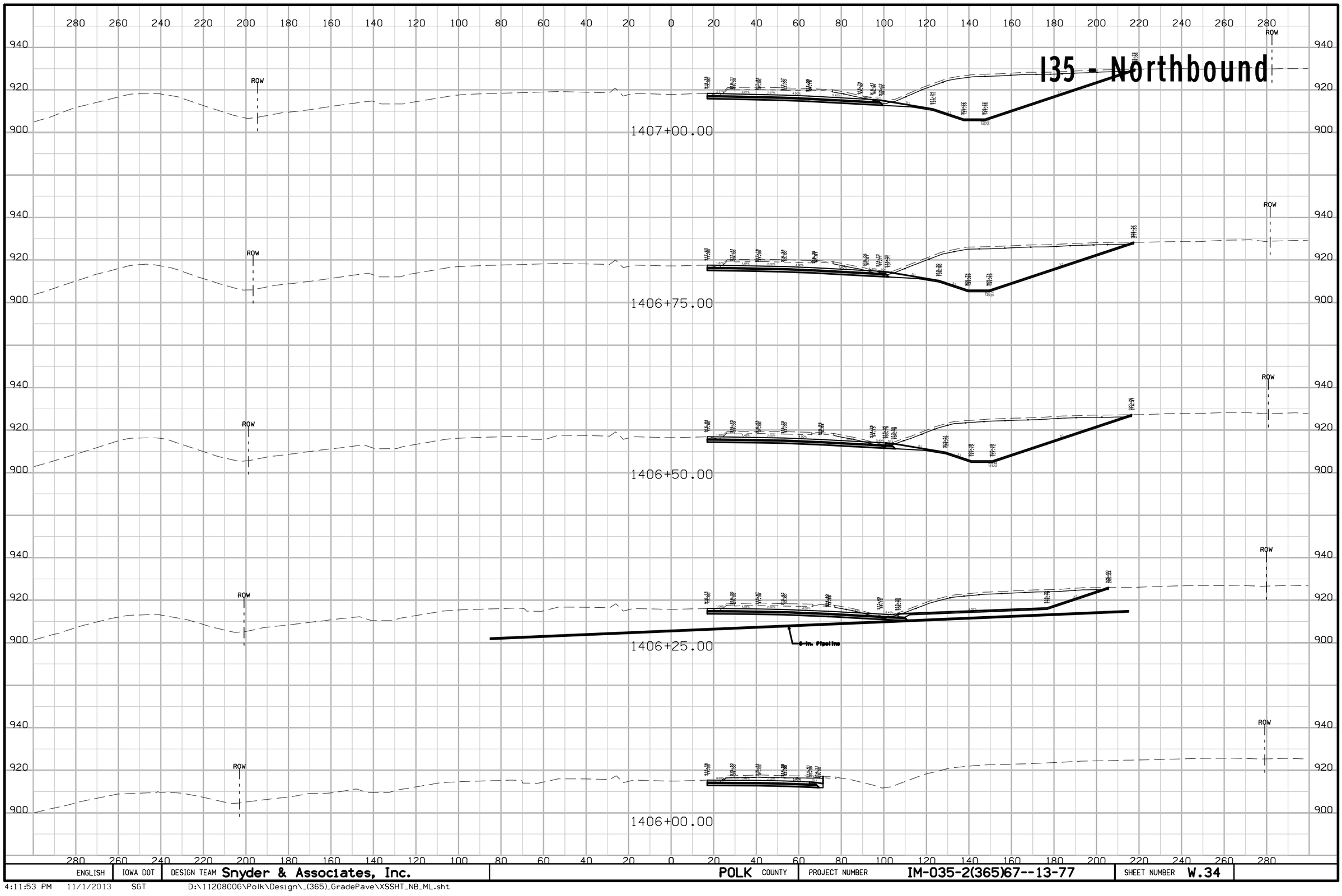
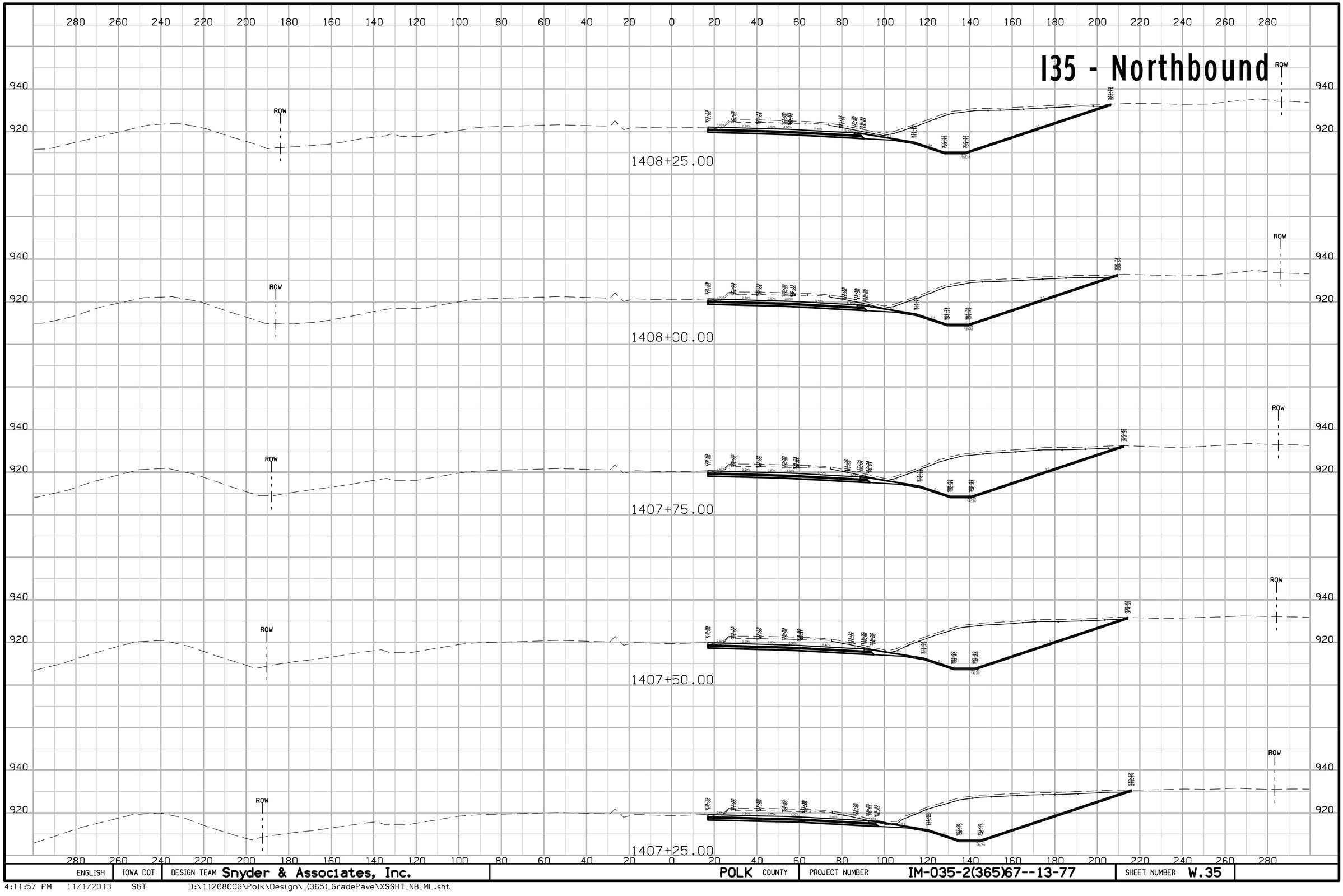
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.34

4:11:53 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

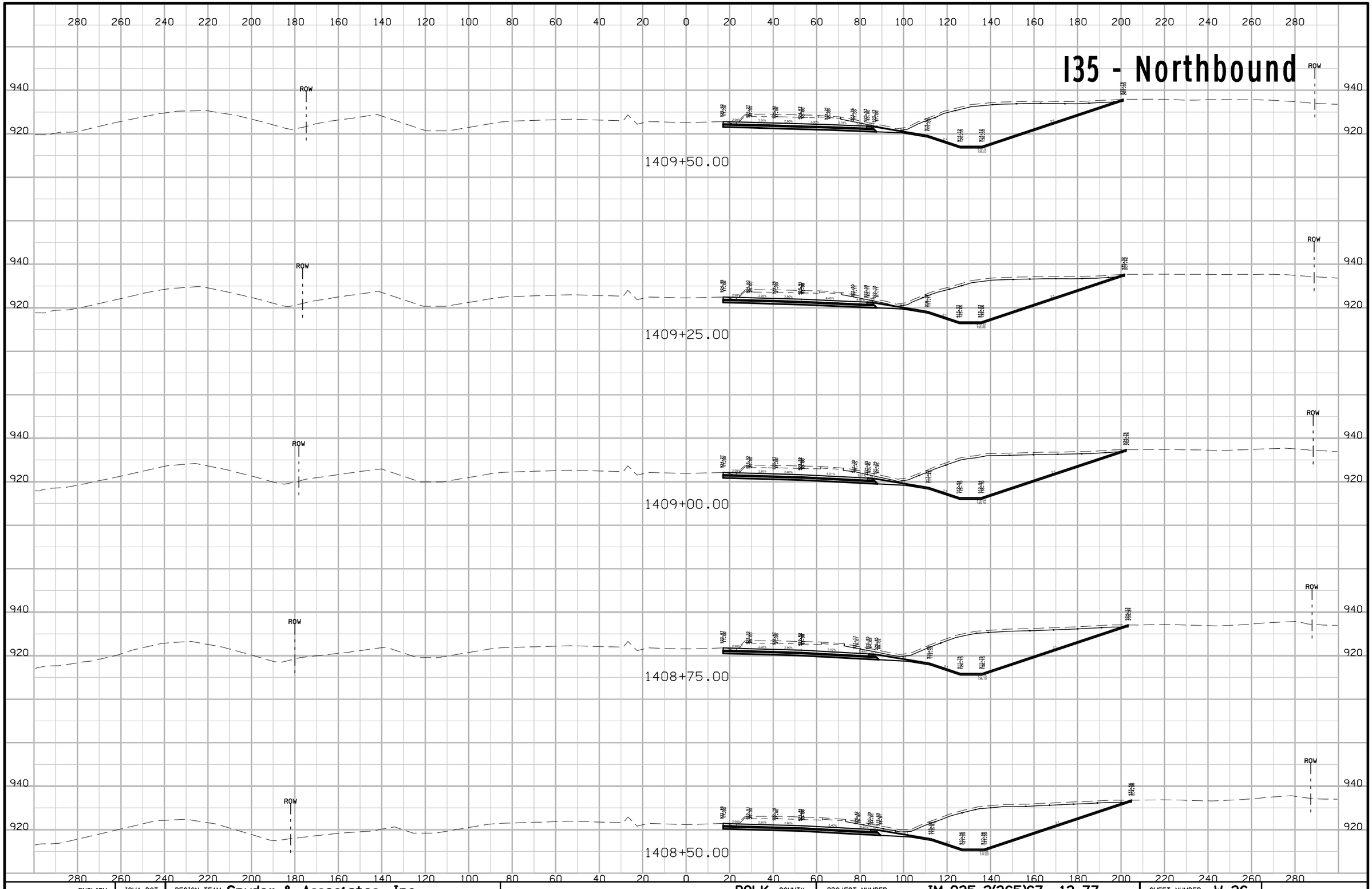
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.35

4:11:57 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

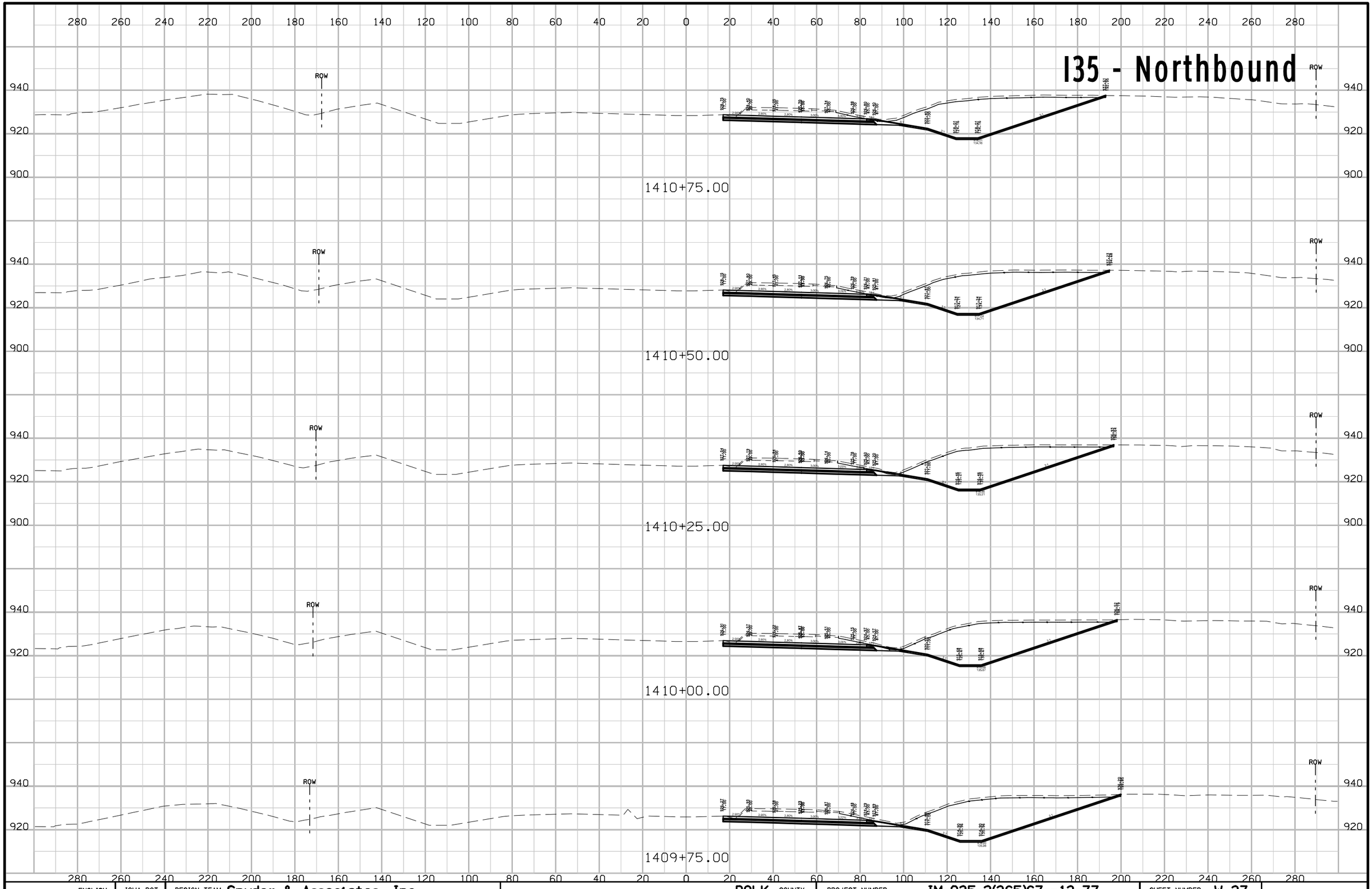
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.36

4:12:02 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.37

4:12:07 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

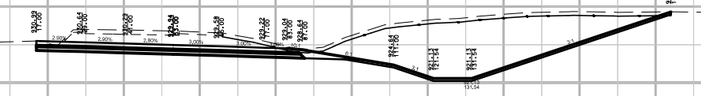
I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

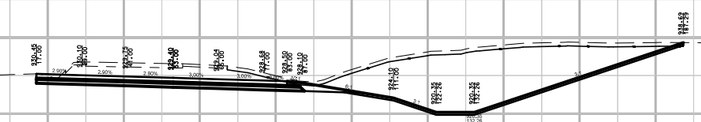
940 920 900 880

ROW

1411+75.00

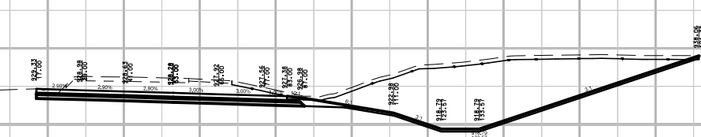


1411+50.00



1411+25.00

1411+00.00



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.38

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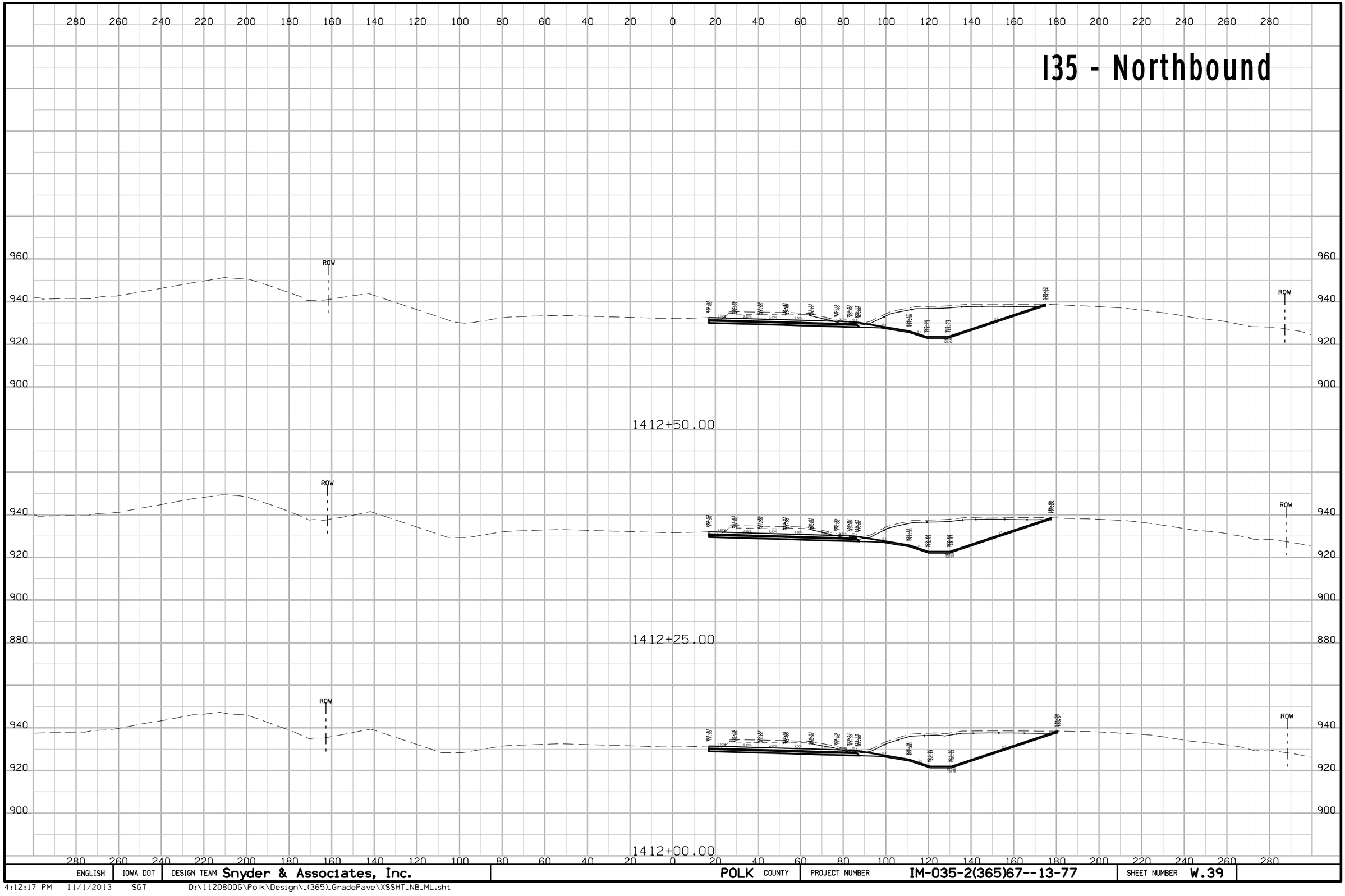
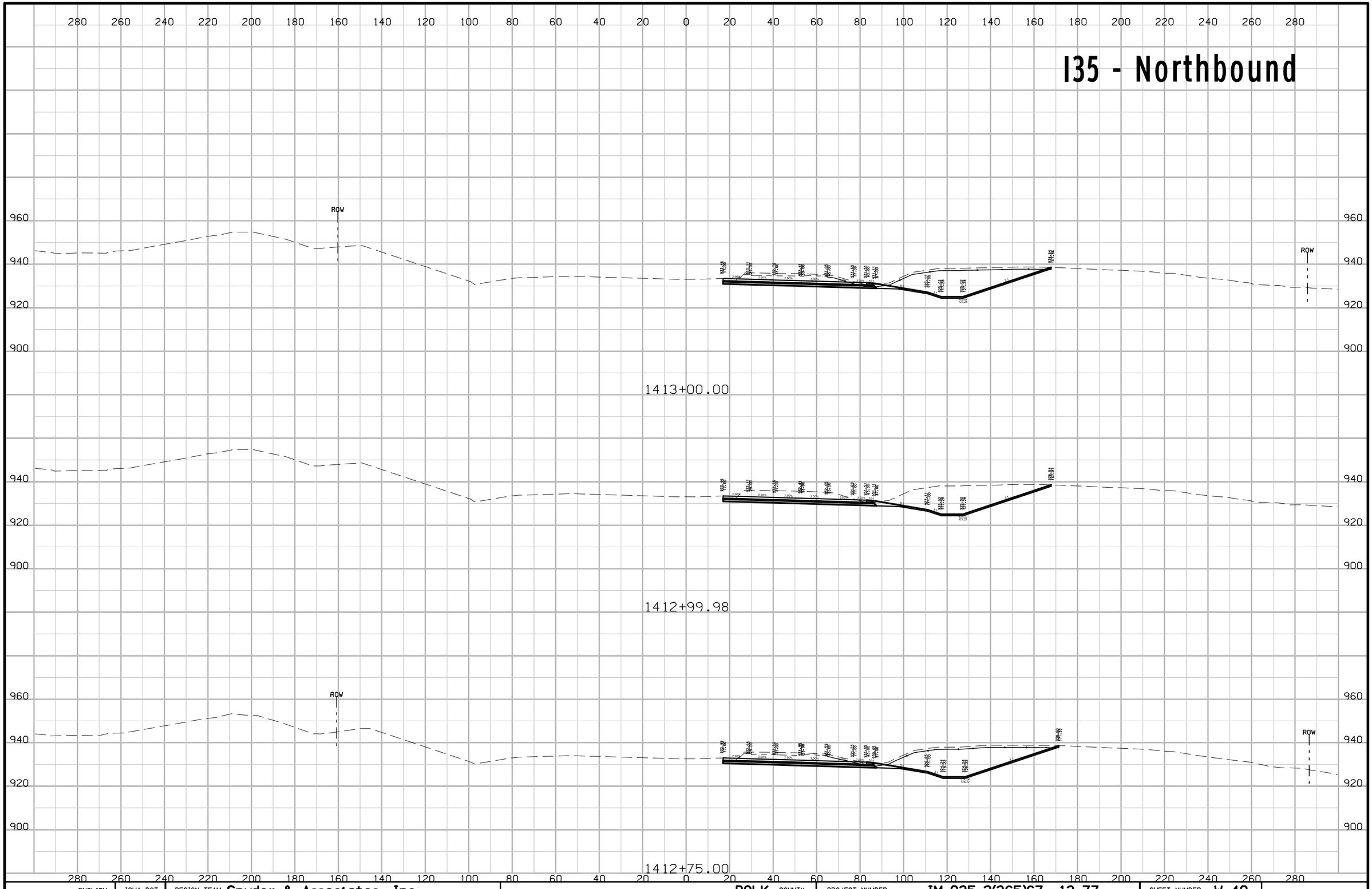
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.39

4:12:17 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

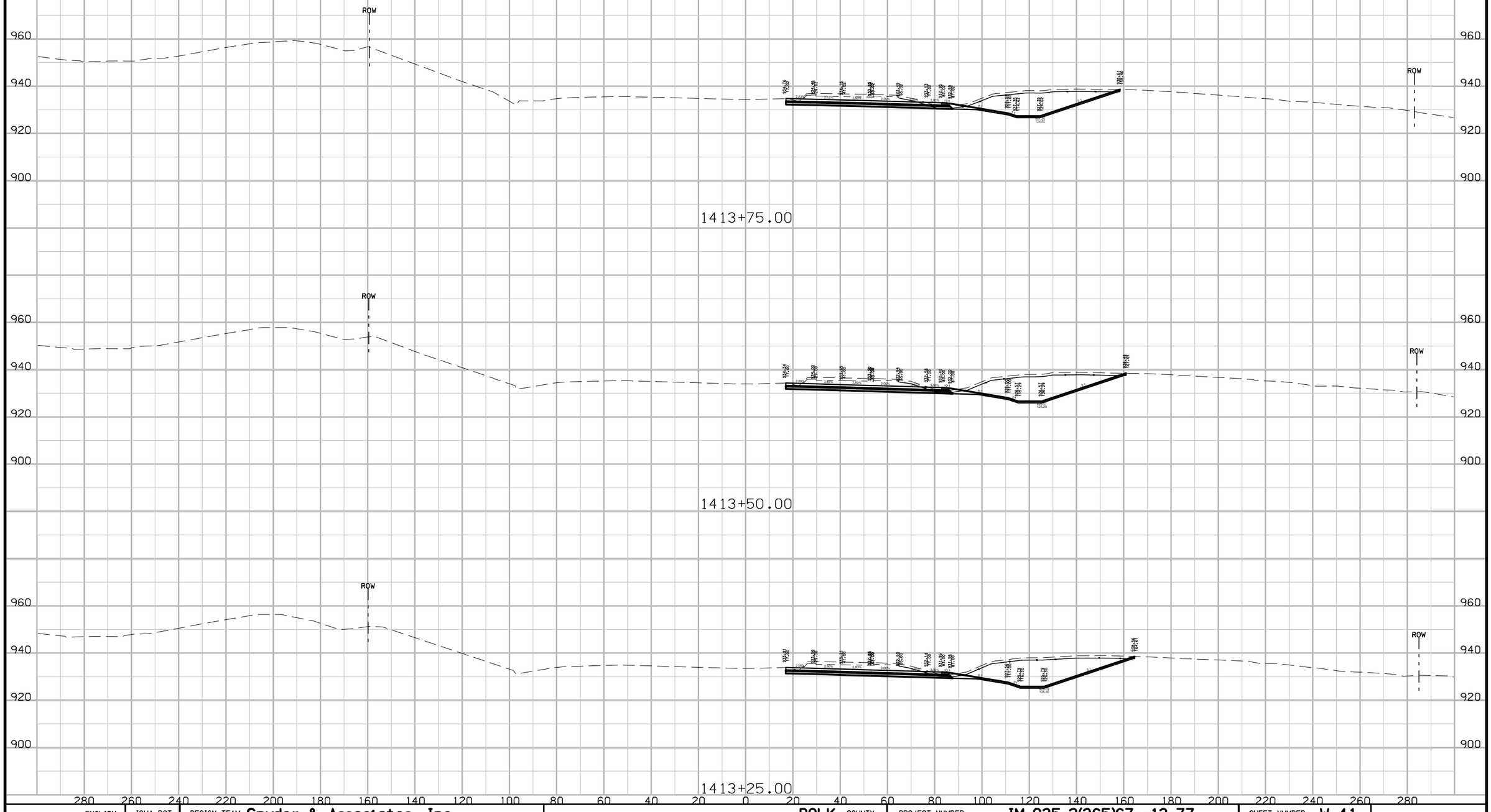
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.40

4:12:21 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

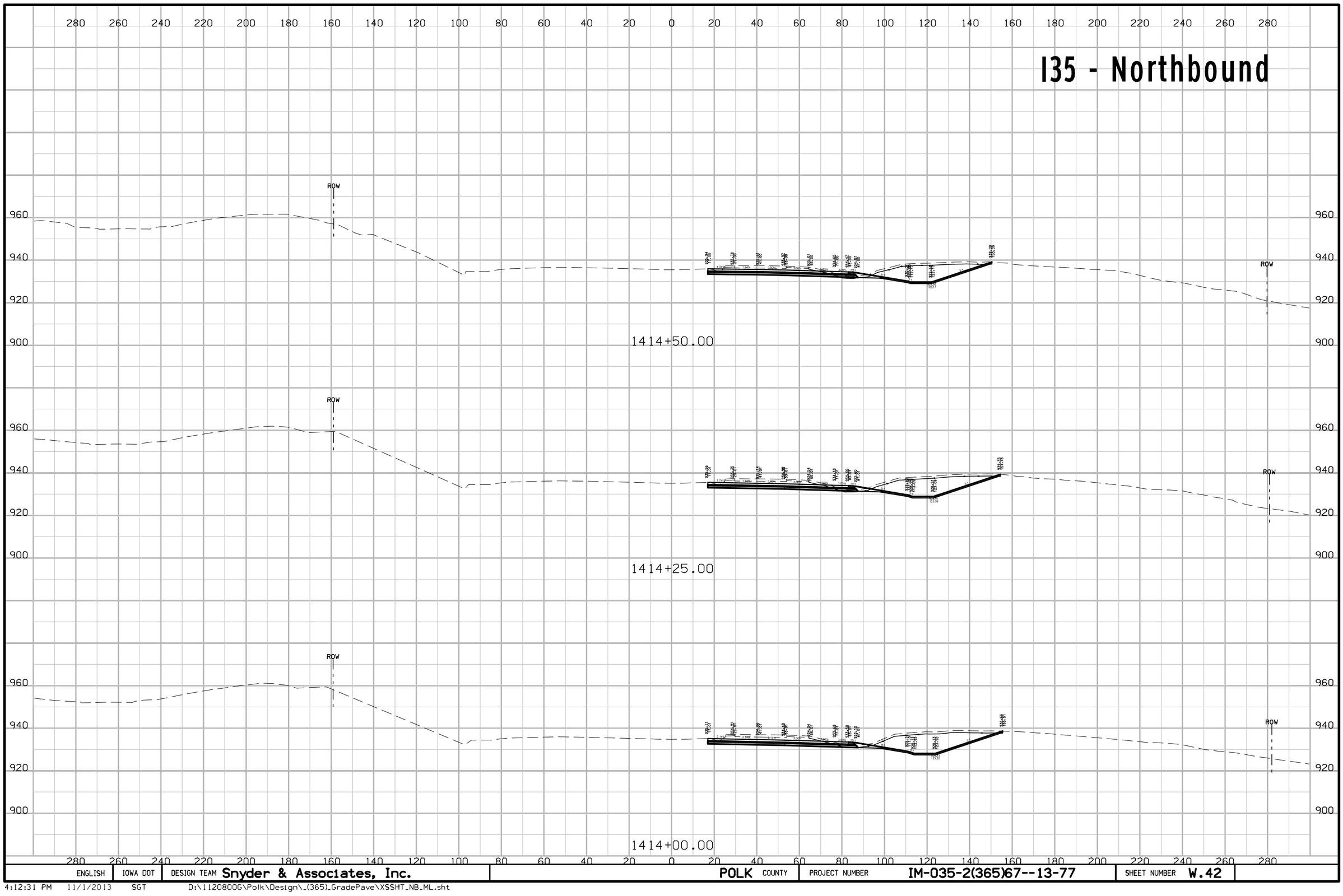
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.41

4:12:26 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.42

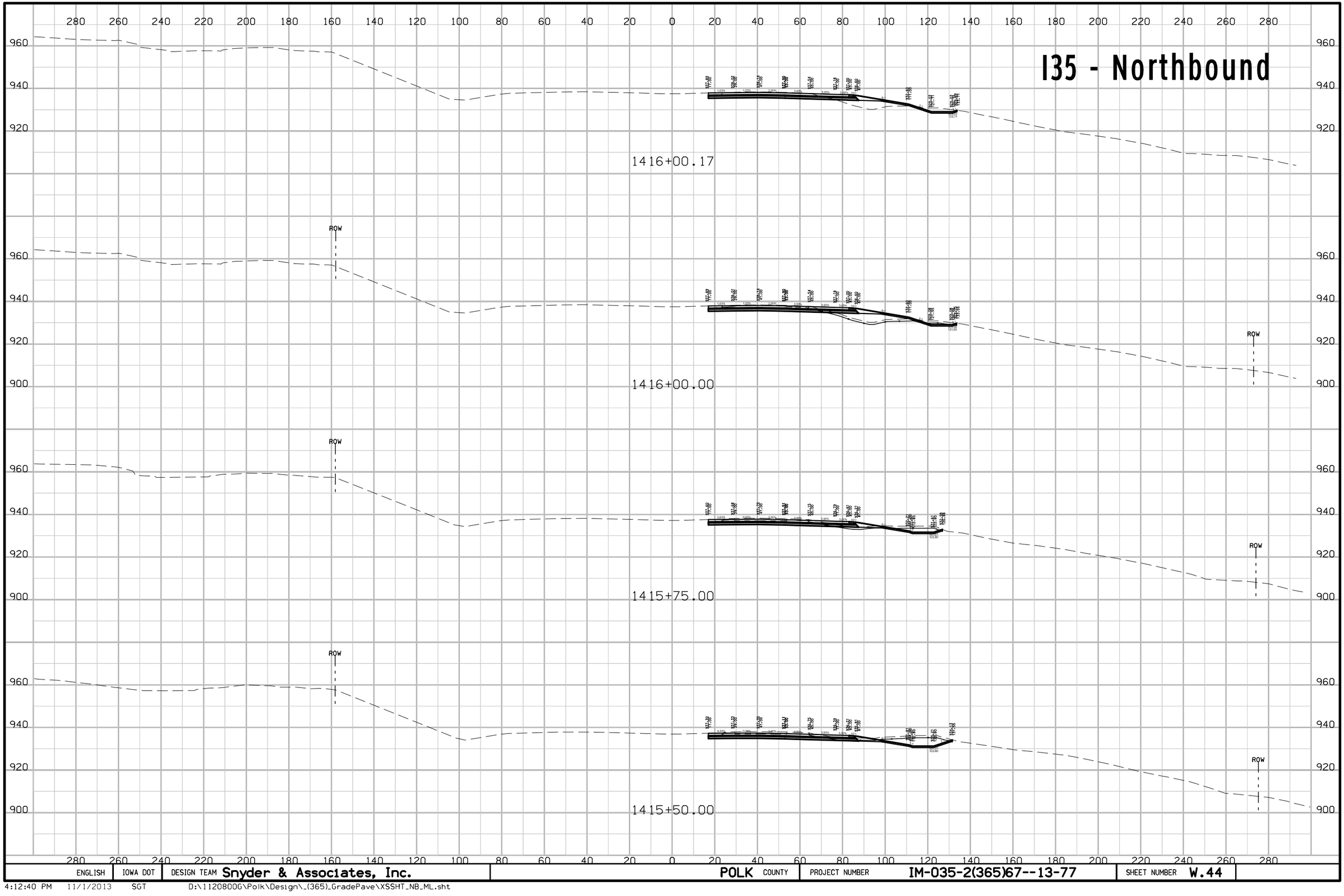
4:12:31 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.43

4:12:36 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

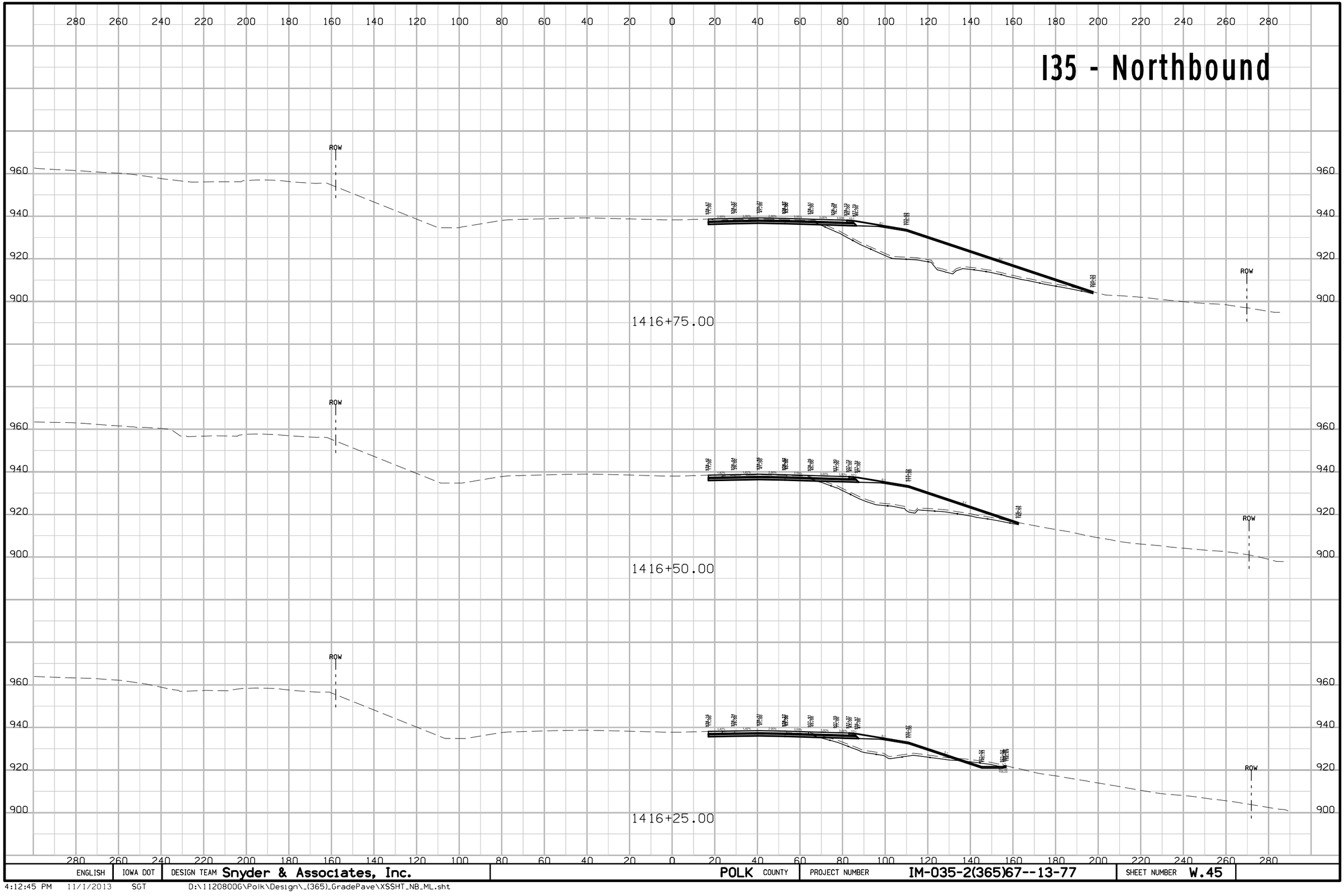
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.44

4:12:40 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.45

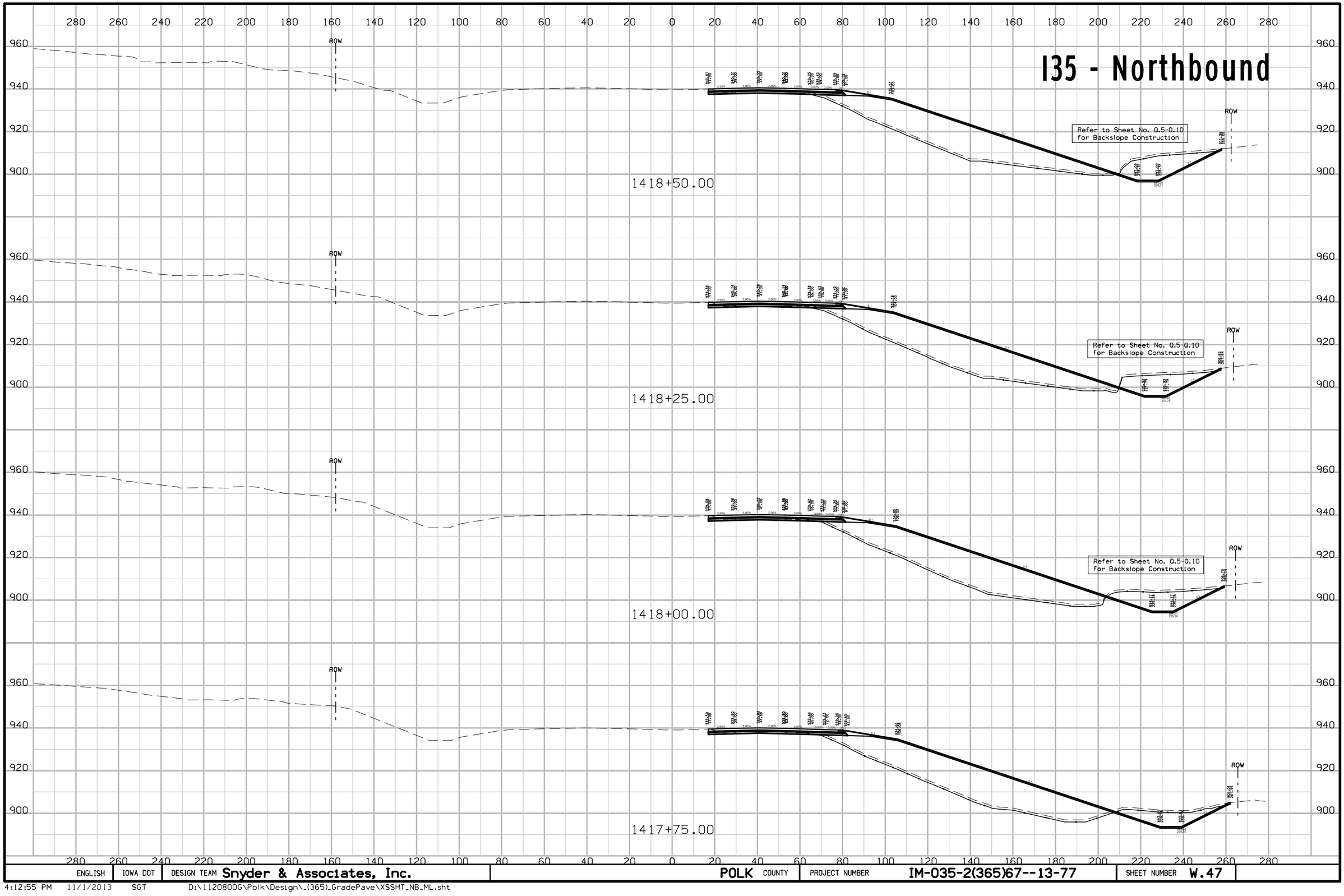
4:12:45 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.46

4:12:50 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

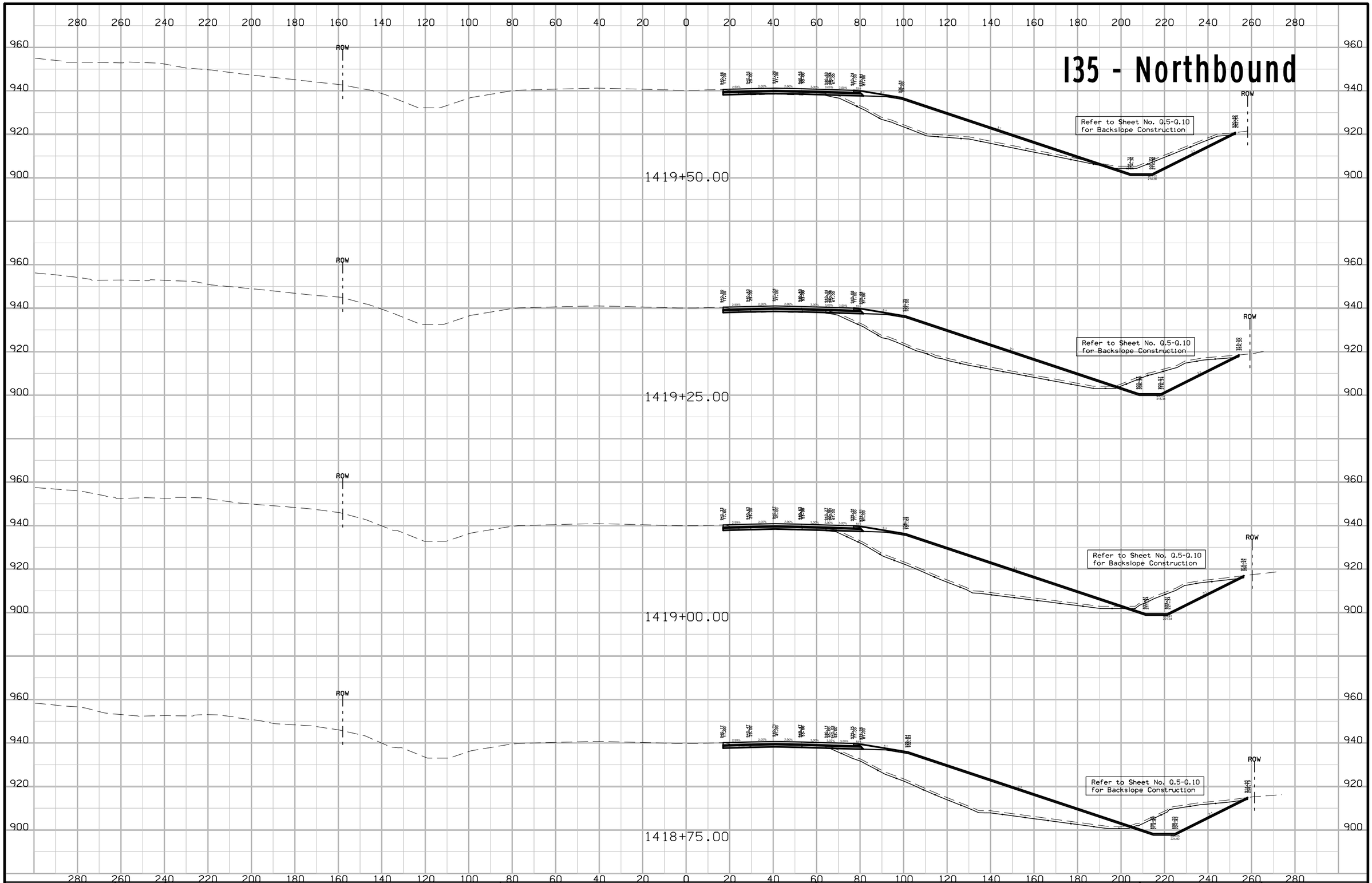
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.47

4:12:55 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

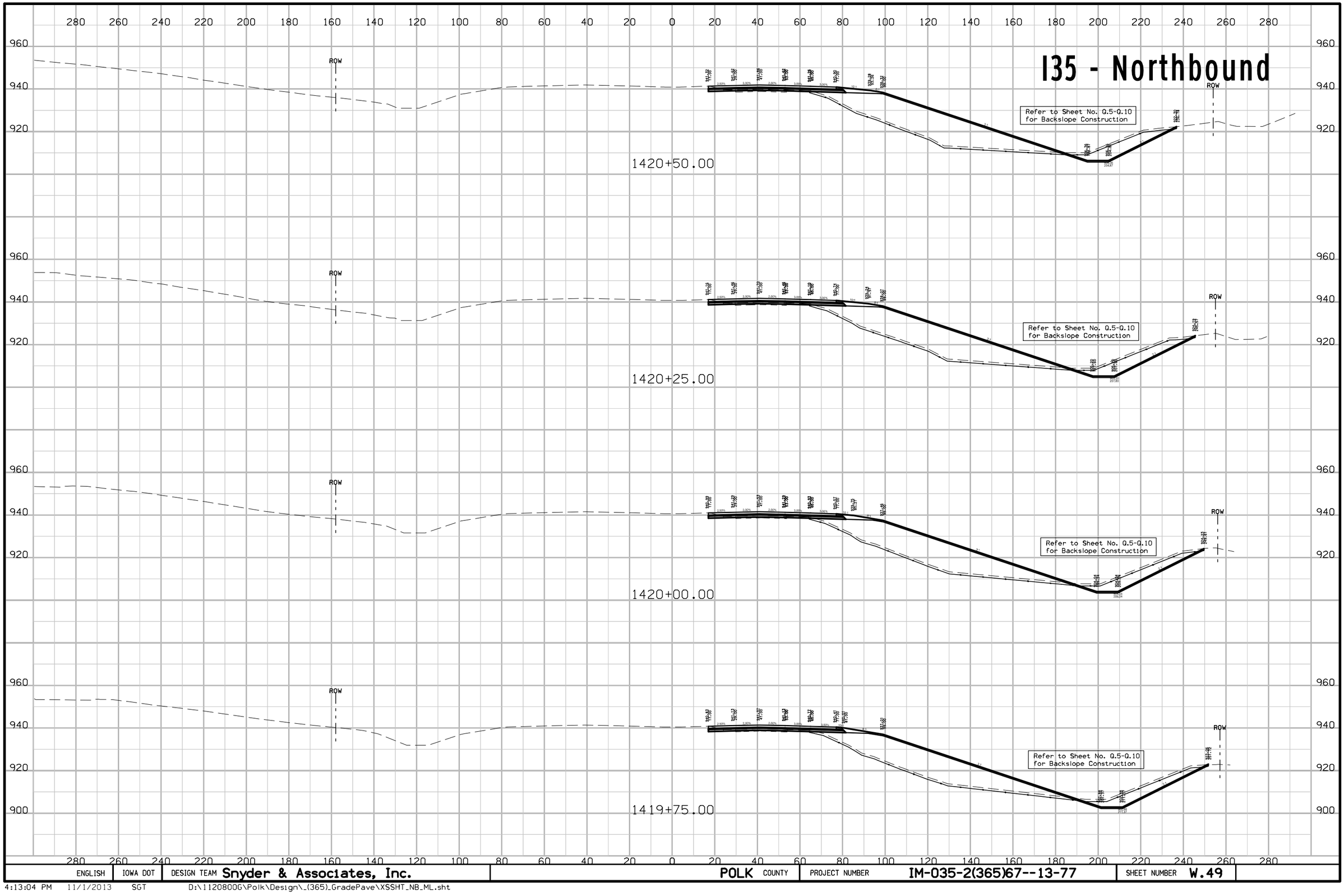
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.48

4:13:00 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.49

4:13:04 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

1421+75.00

1421+50.00

1421+25.00

1421+00.00

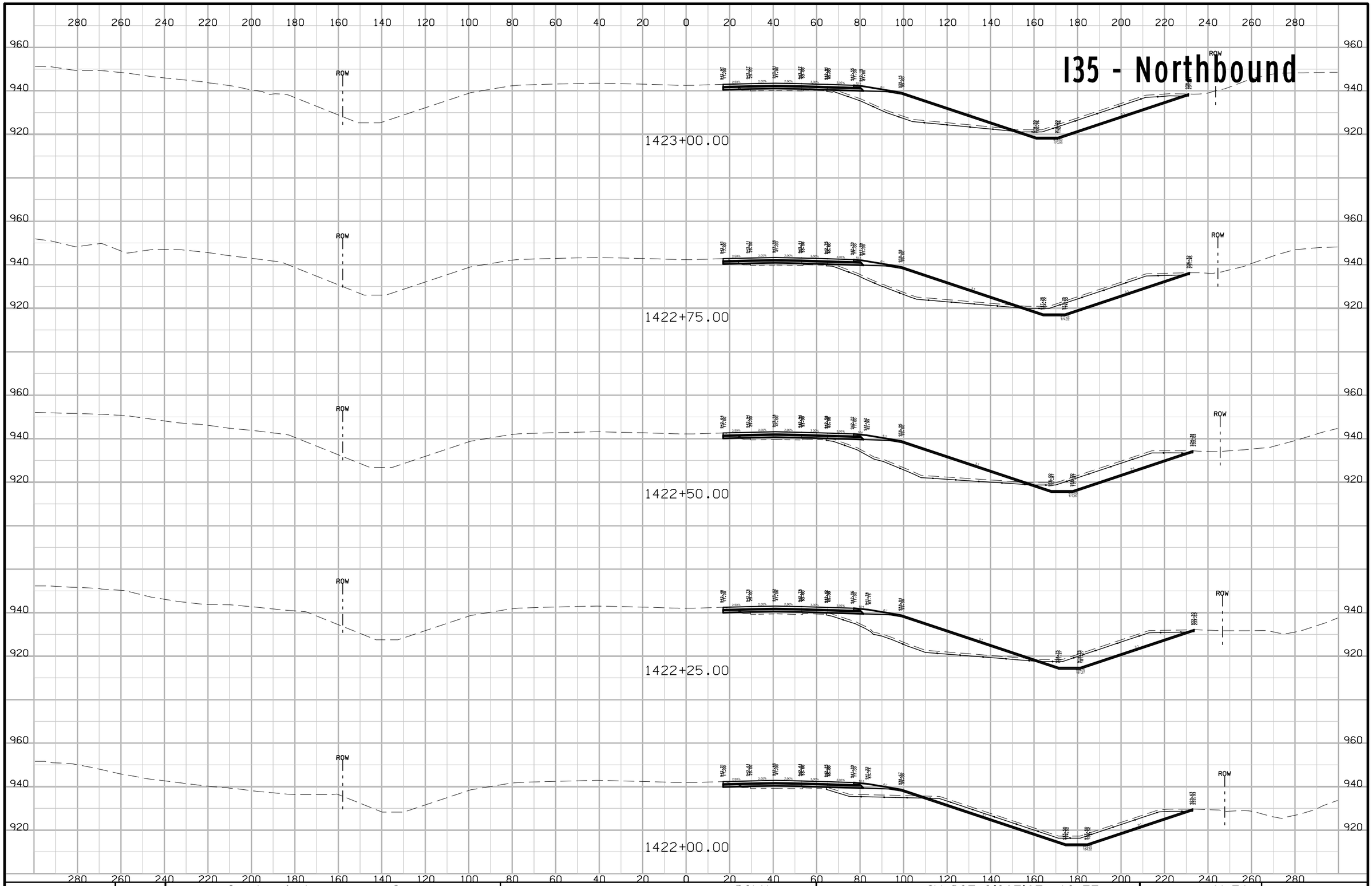
1420+75.00

Refer to Sheet No. Q.5-Q.10 for Backslope Construction

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.50

4:13:09 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

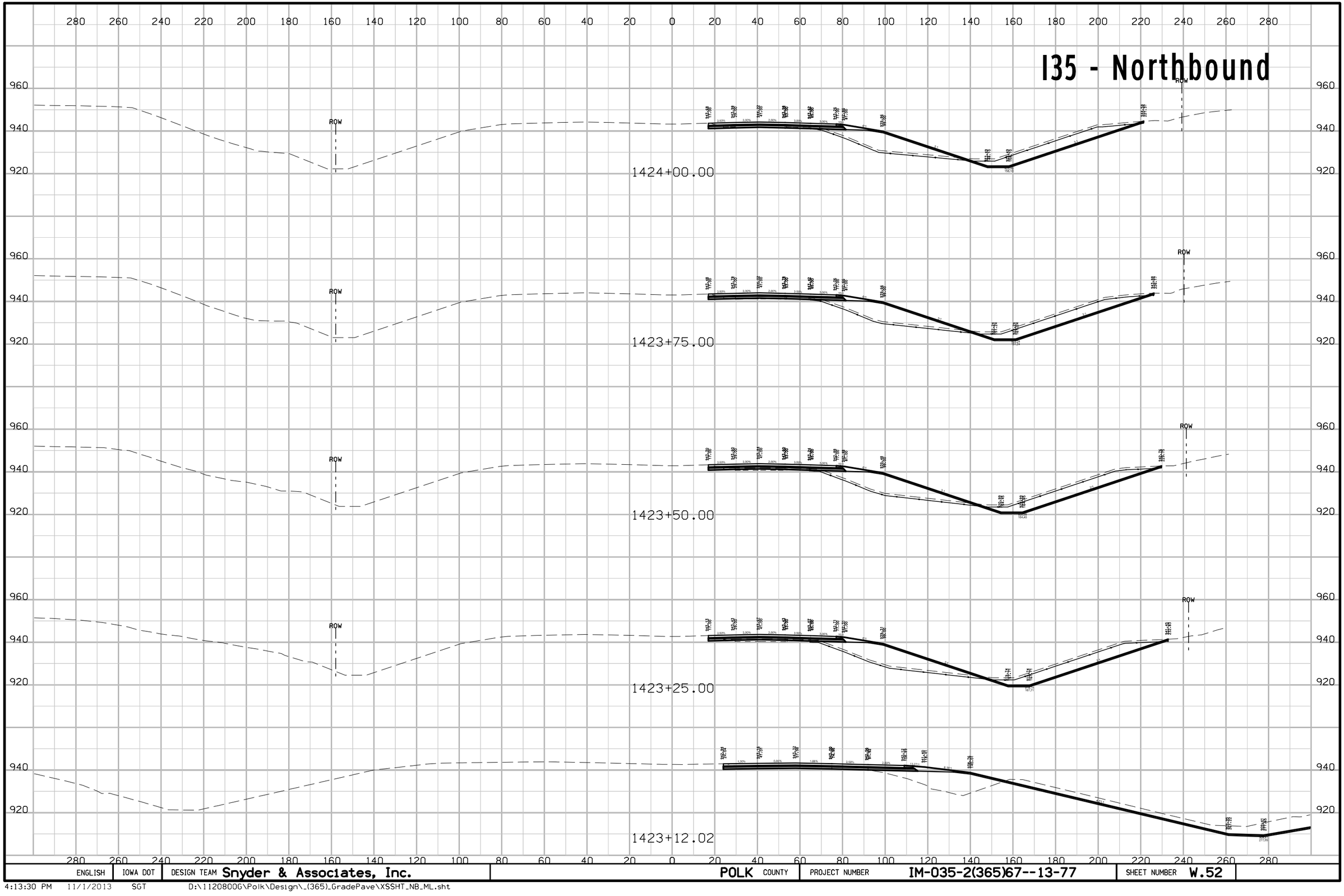
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.51

4:13:14 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

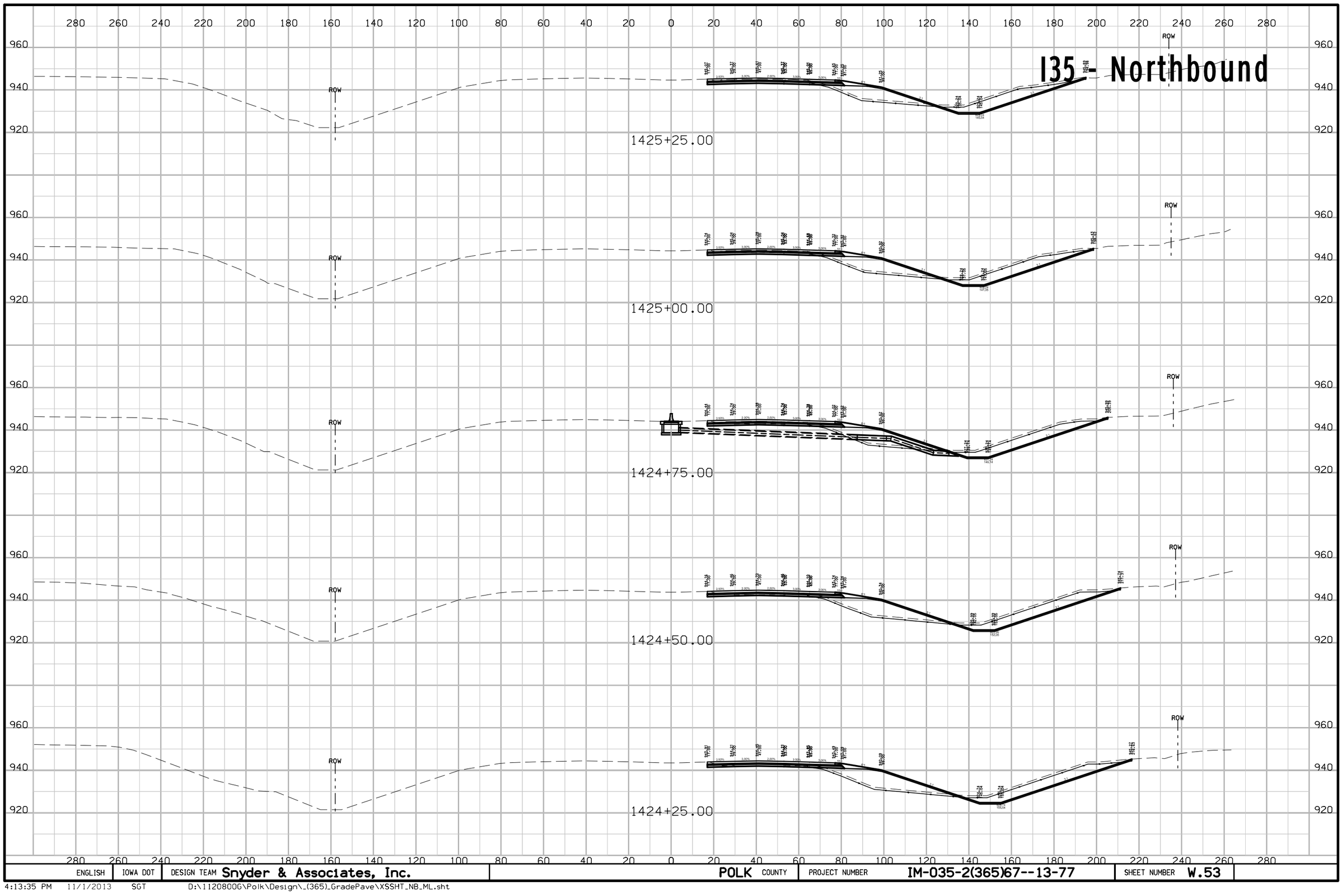
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.52

4:13:30 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

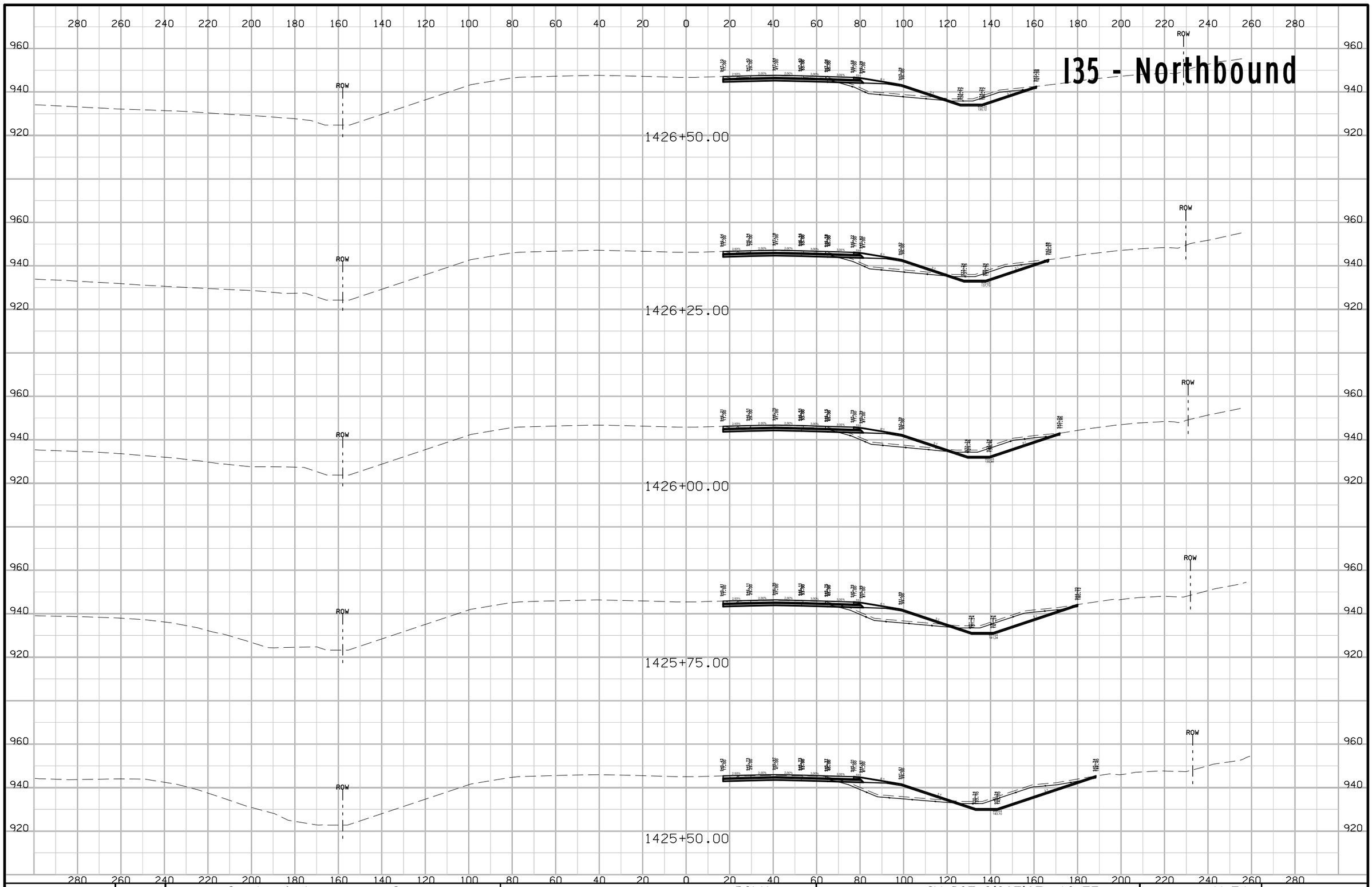
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.53

4:13:35 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.54

4:13:40 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

1427+75.00

1427+50.00

1427+25.00

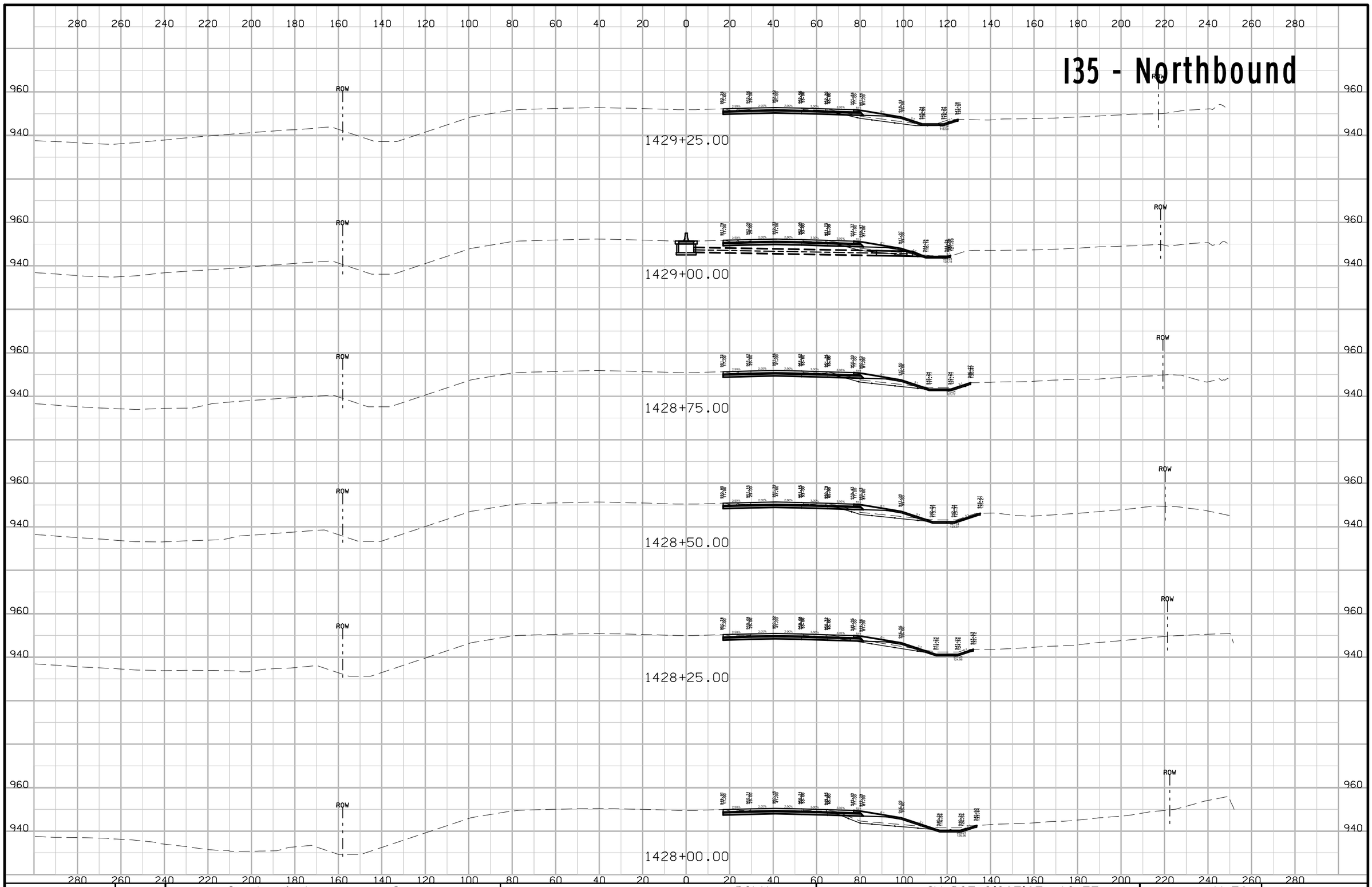
1427+00.00

1426+75.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.55

4:13:45 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

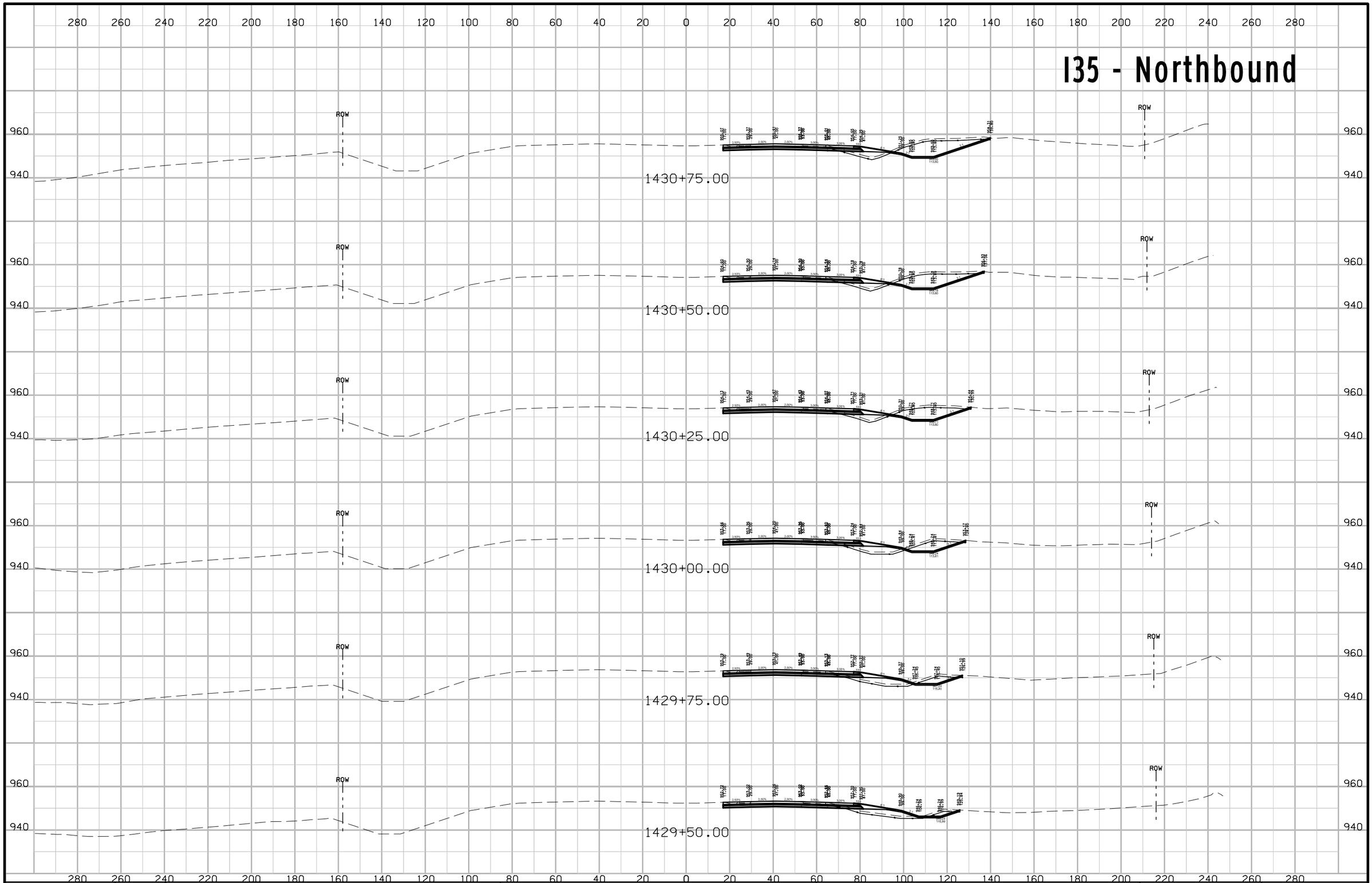
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.56

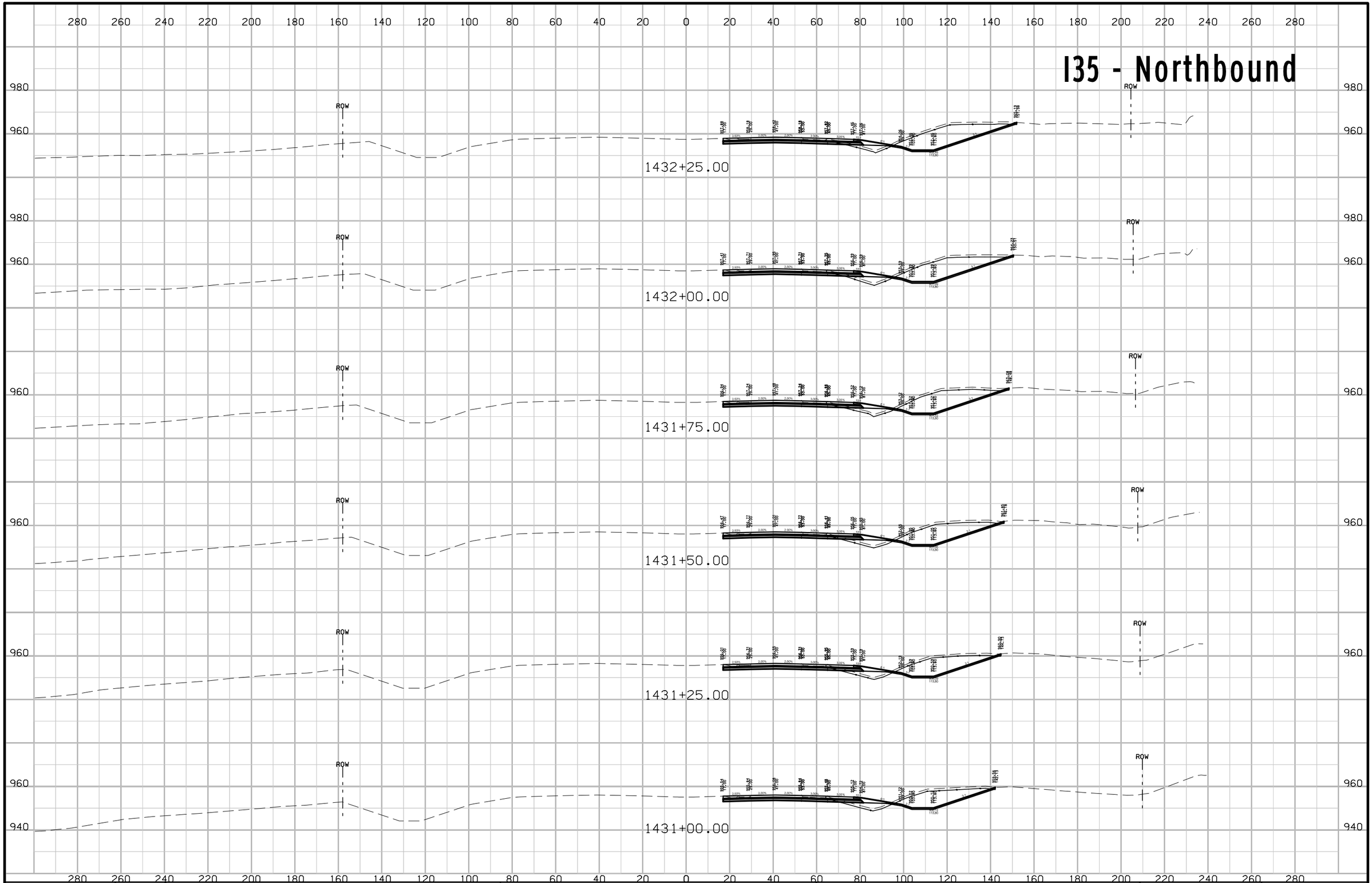
4:13:49 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



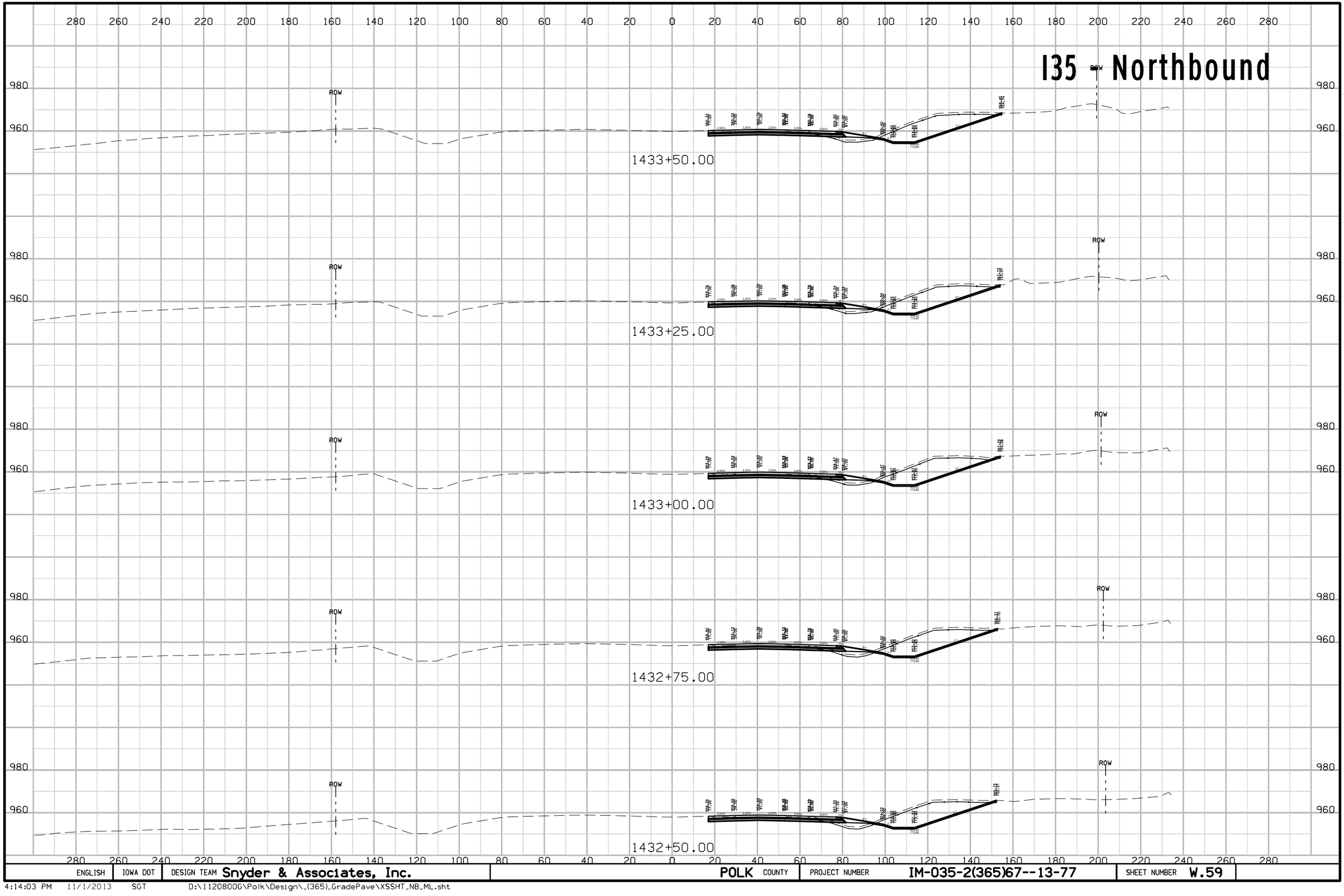
ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.57

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.58

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.59

4:14:03 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

980 960

ROW

1434+75.00

1434+50.00

1434+25.00

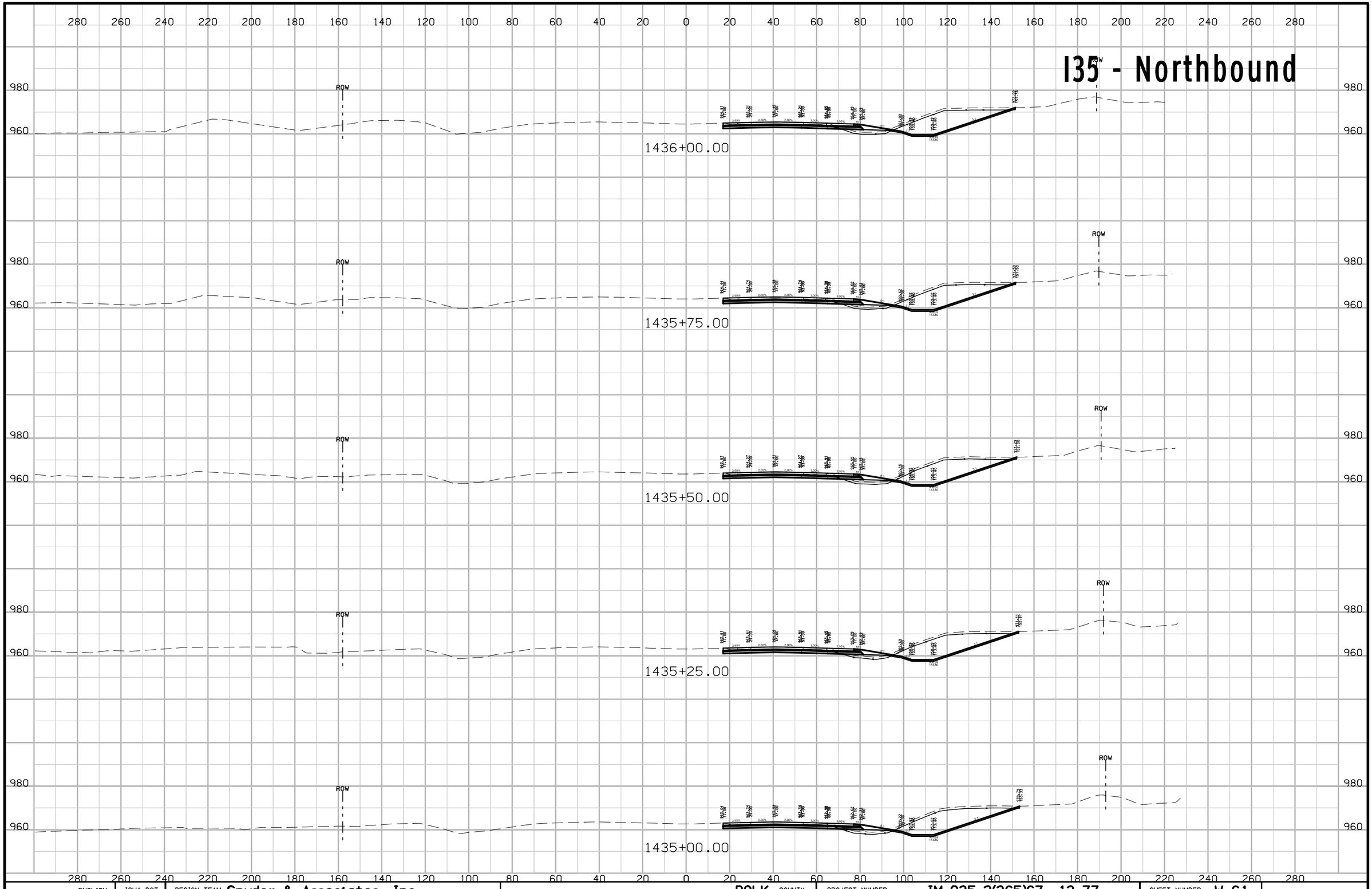
1434+00.00

1433+75.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.60

4:14:08 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

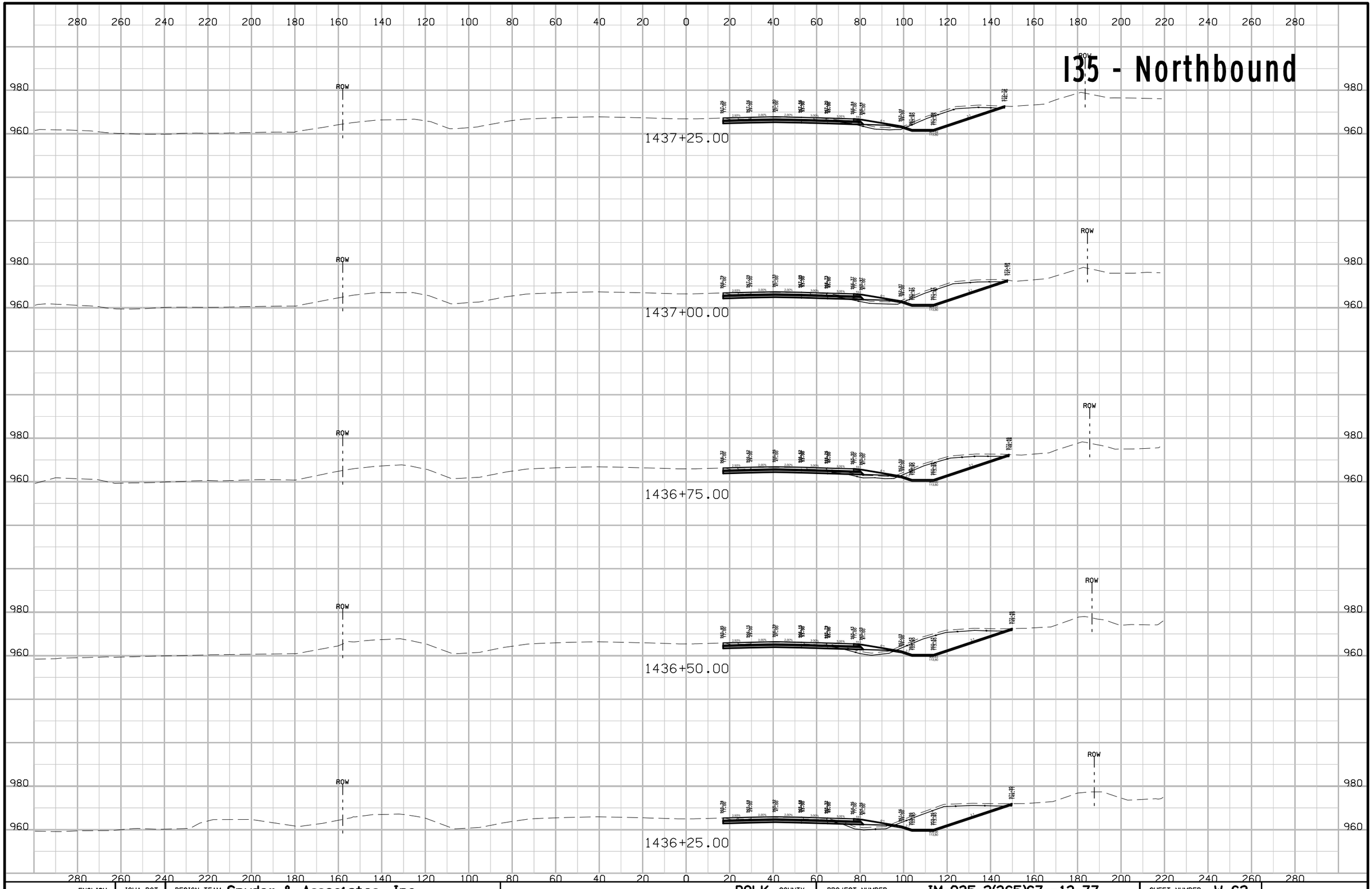
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.61

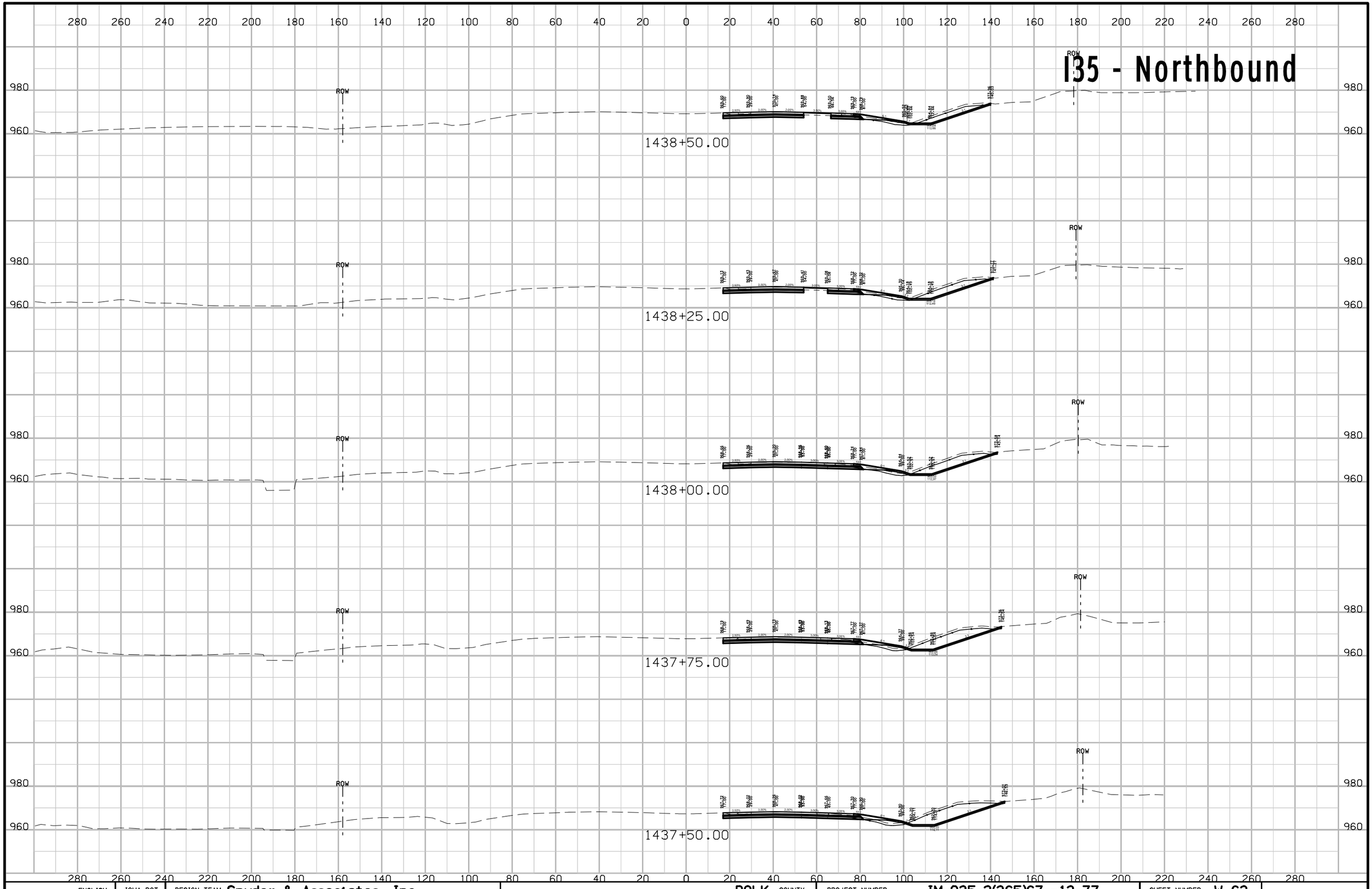
4:14:13 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.62

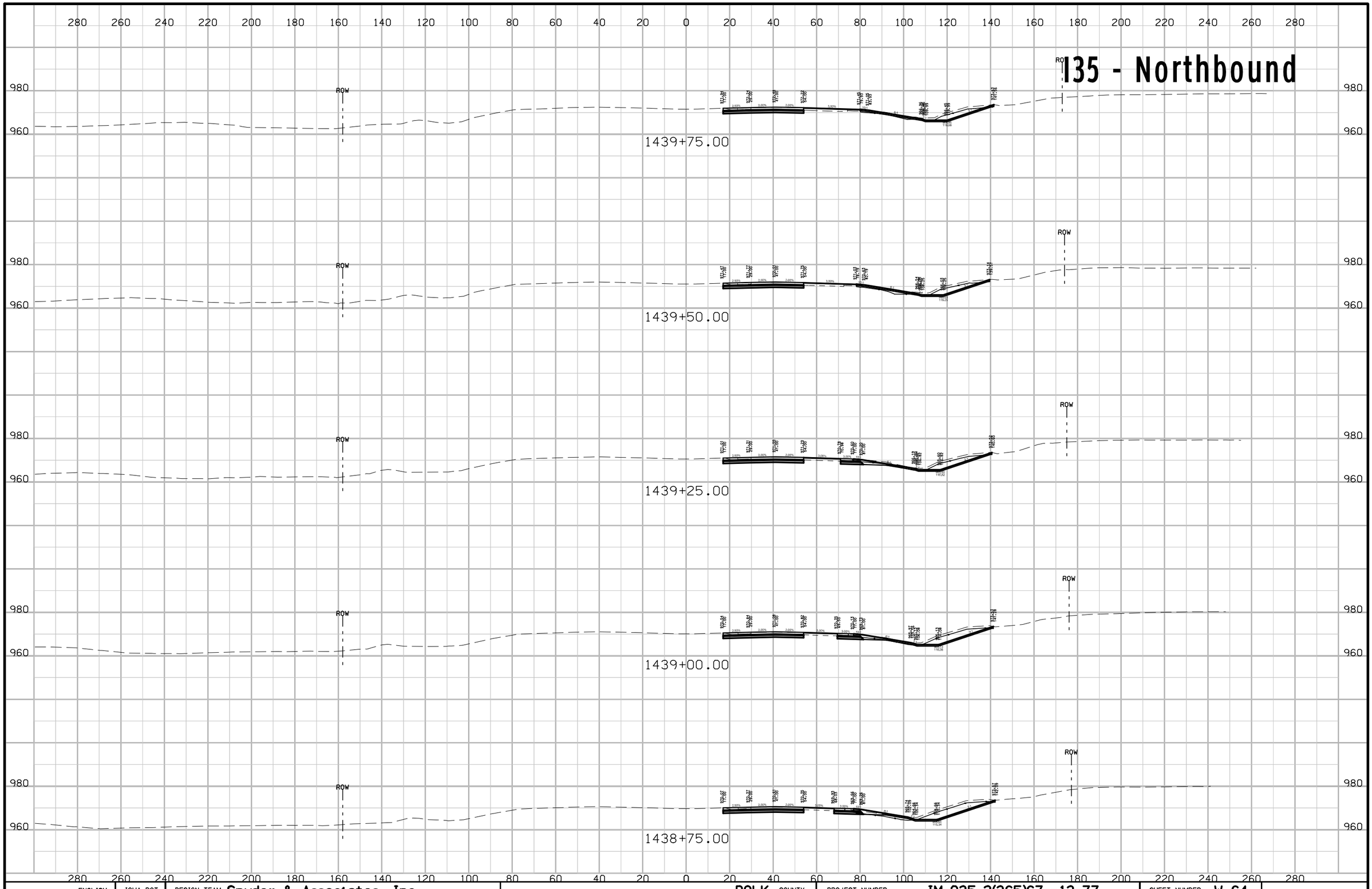
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.63

4:14:22 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.64

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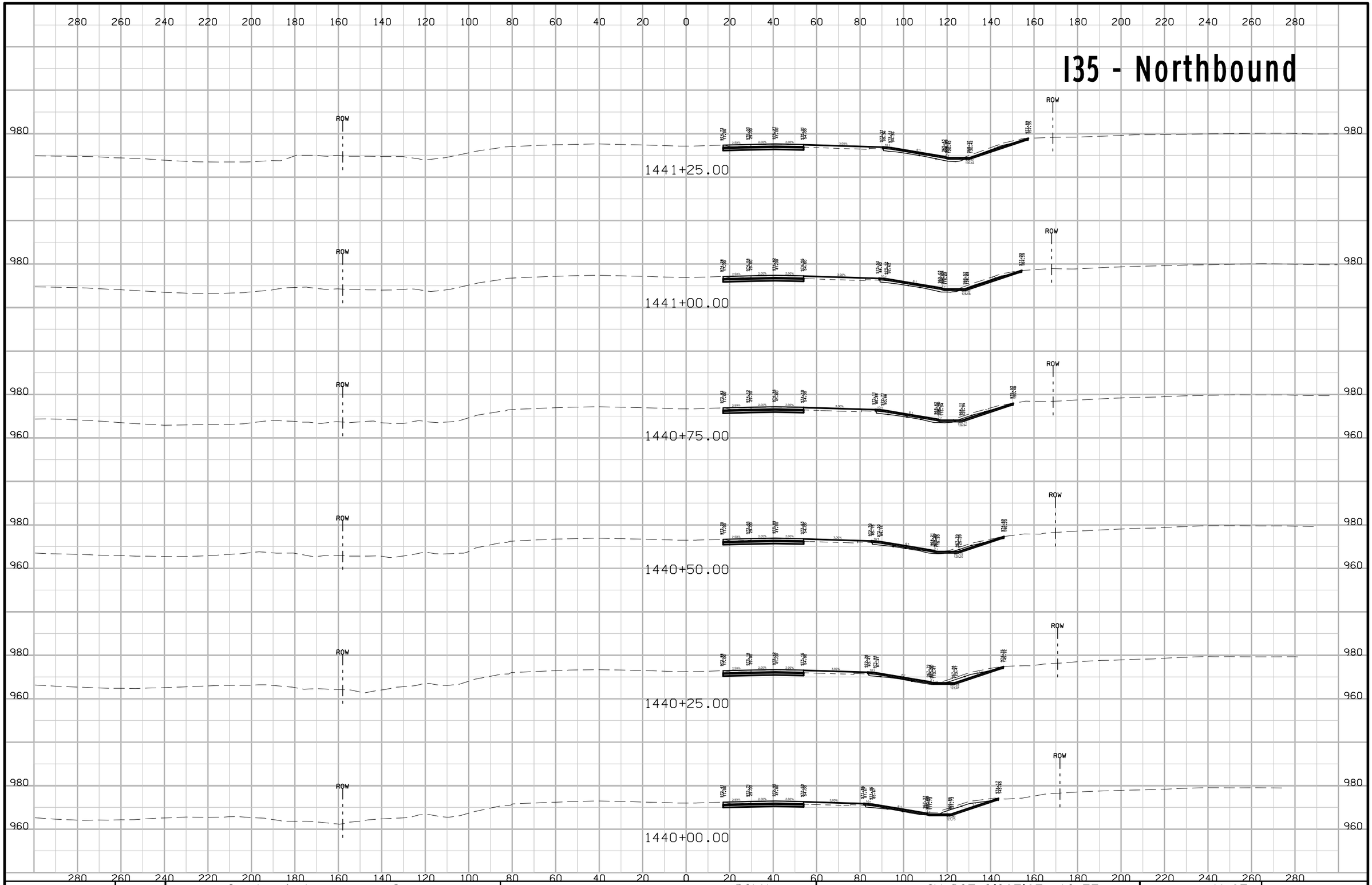
I35 - Northbound



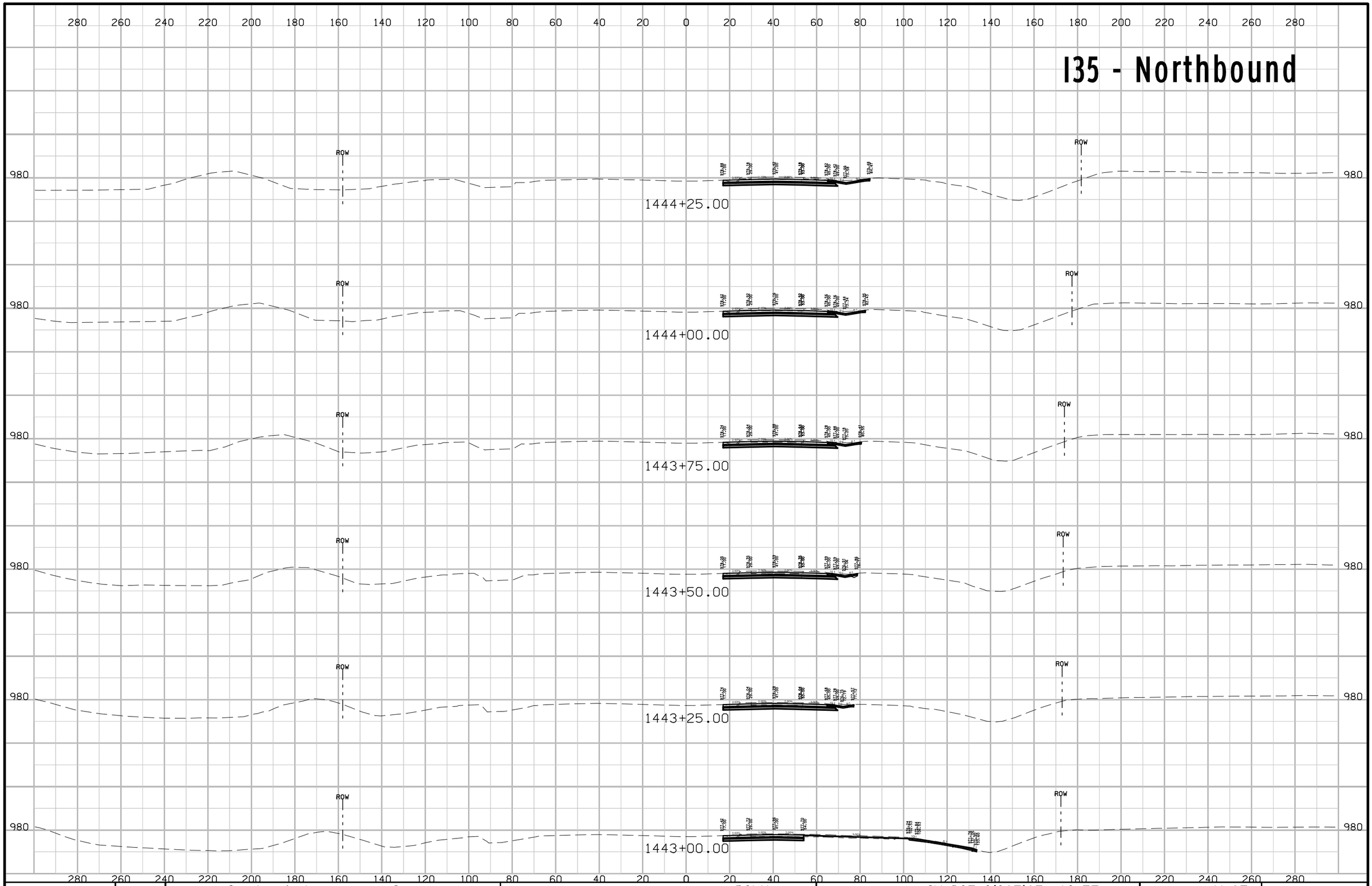
ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.65

I35 - Northbound

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.66

4:14:36 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

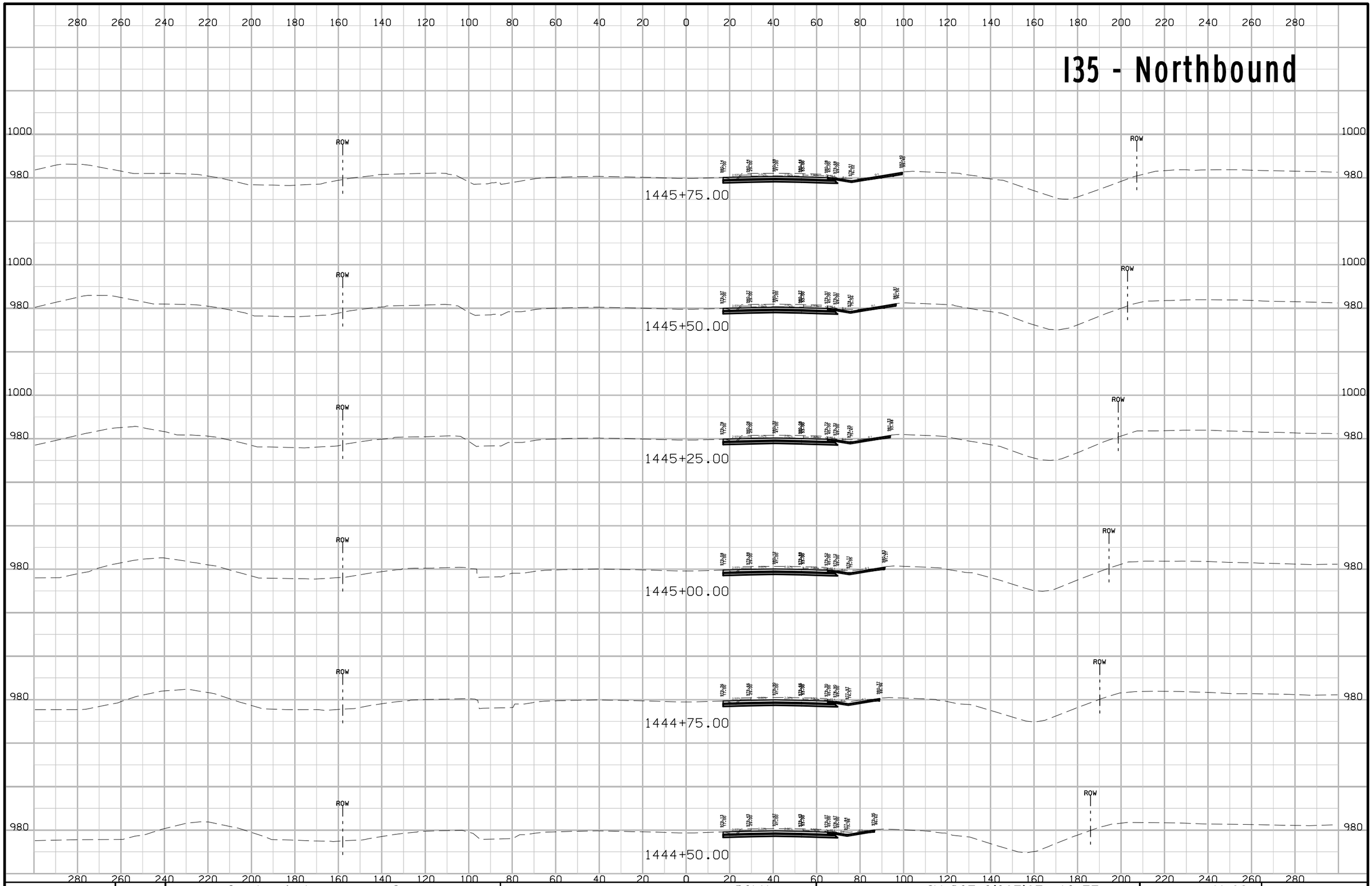
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.67

4:14:41 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	W.68

4:14:46 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

1000
980
ROW

1447+25.00

1447+00.00

1446+75.00

1446+50.00

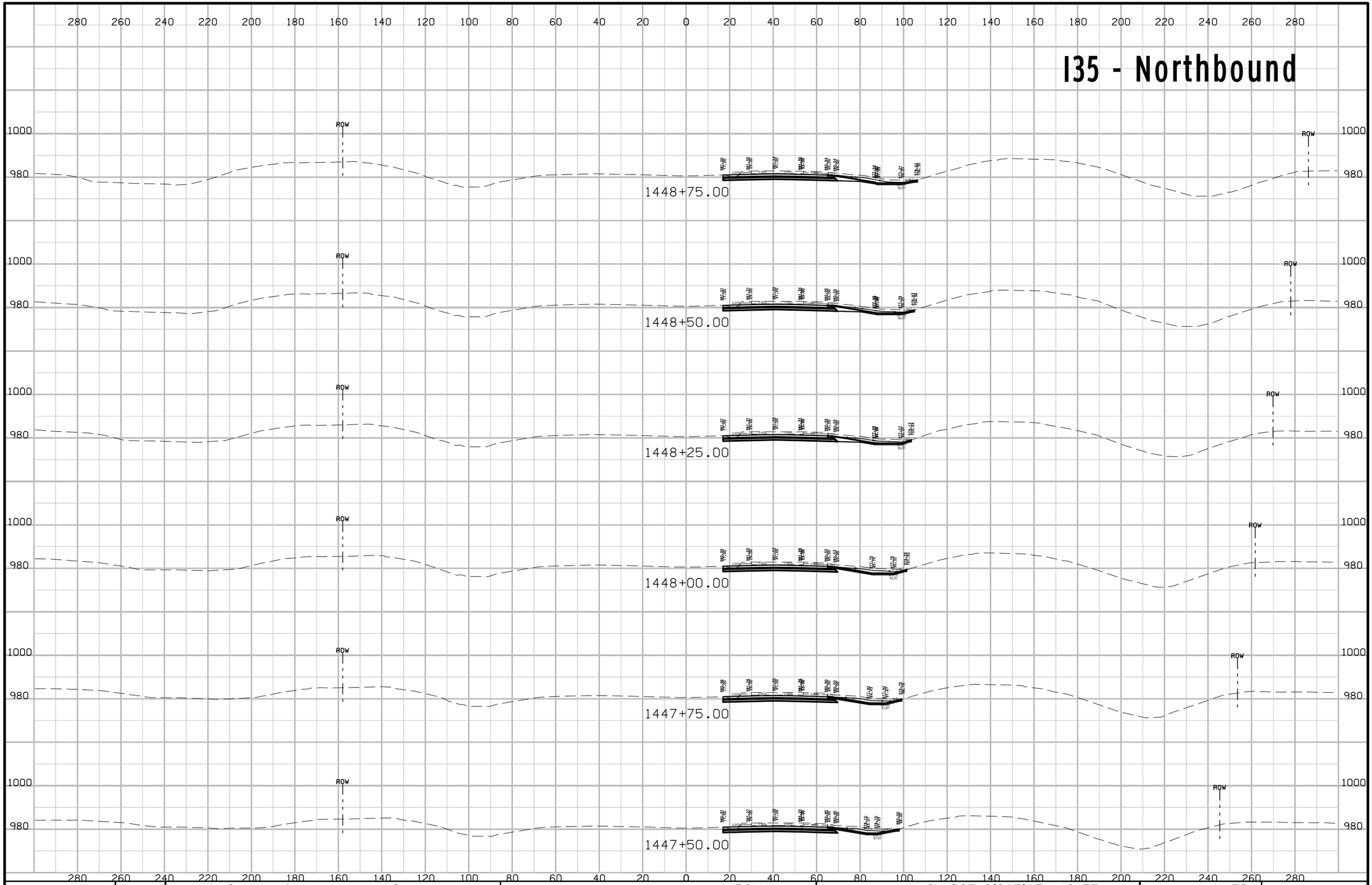
1446+25.00

1446+00.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.69

4:14:50 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

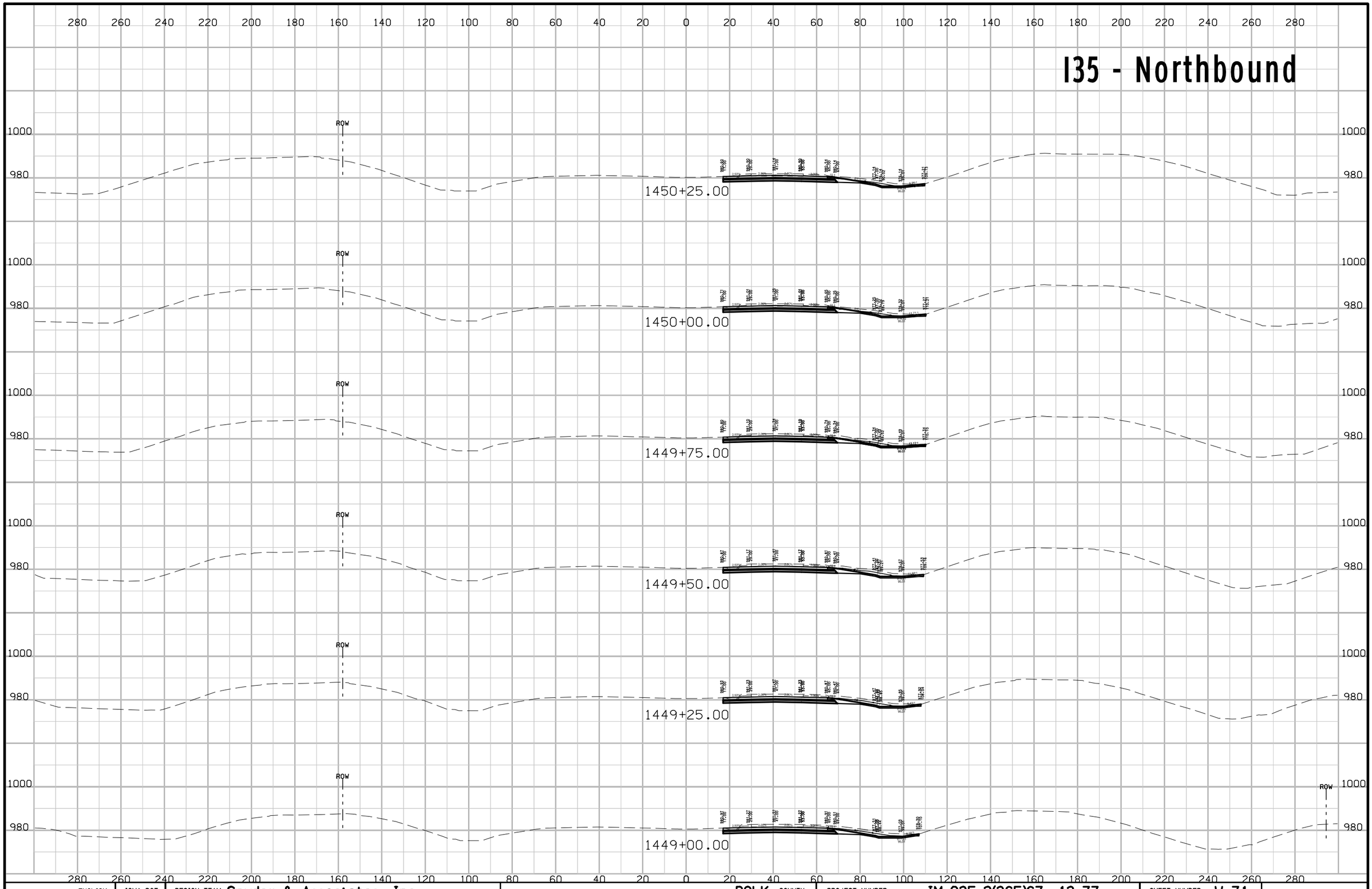
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.70

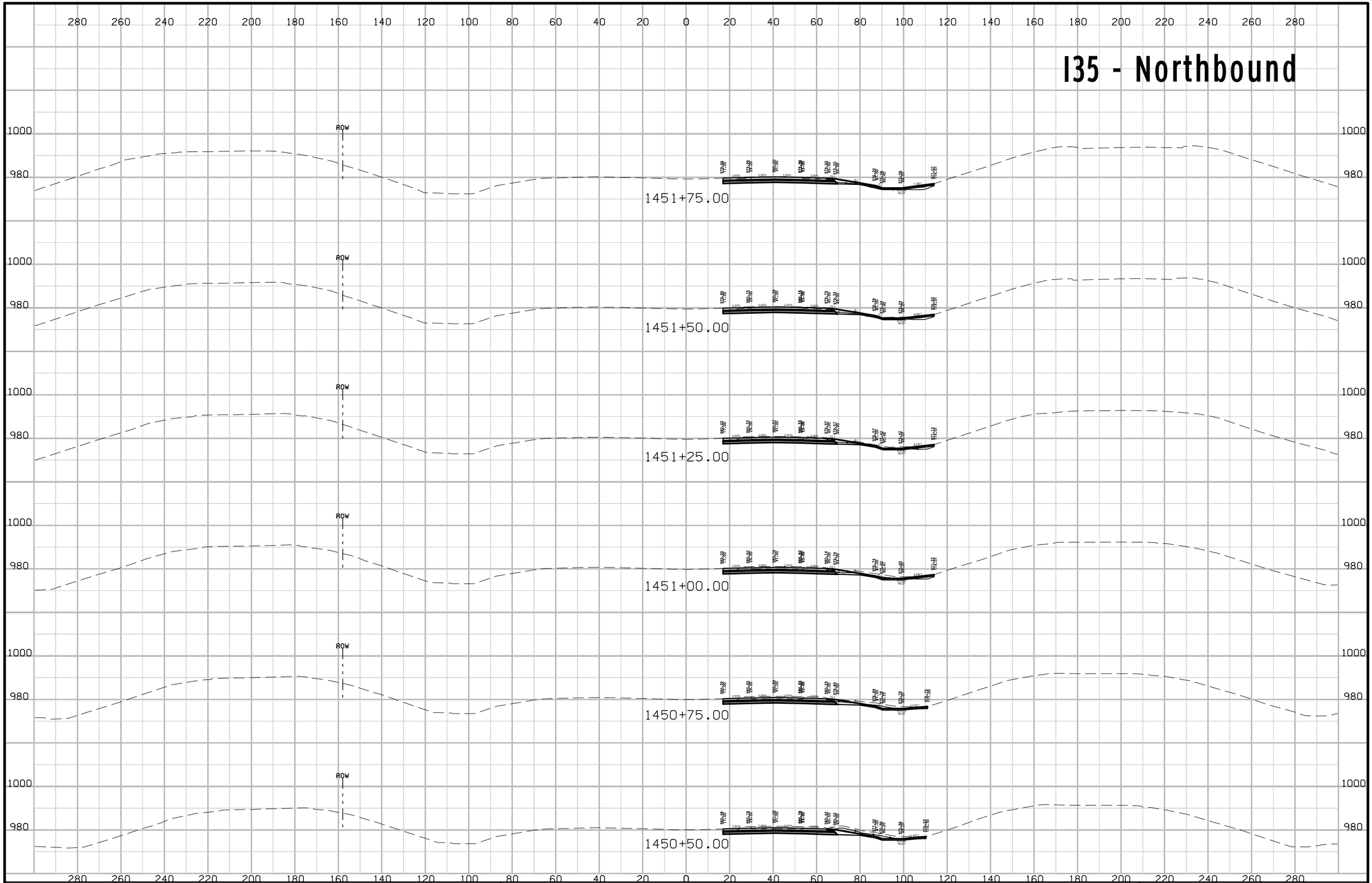
4:14:55 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.71

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.72

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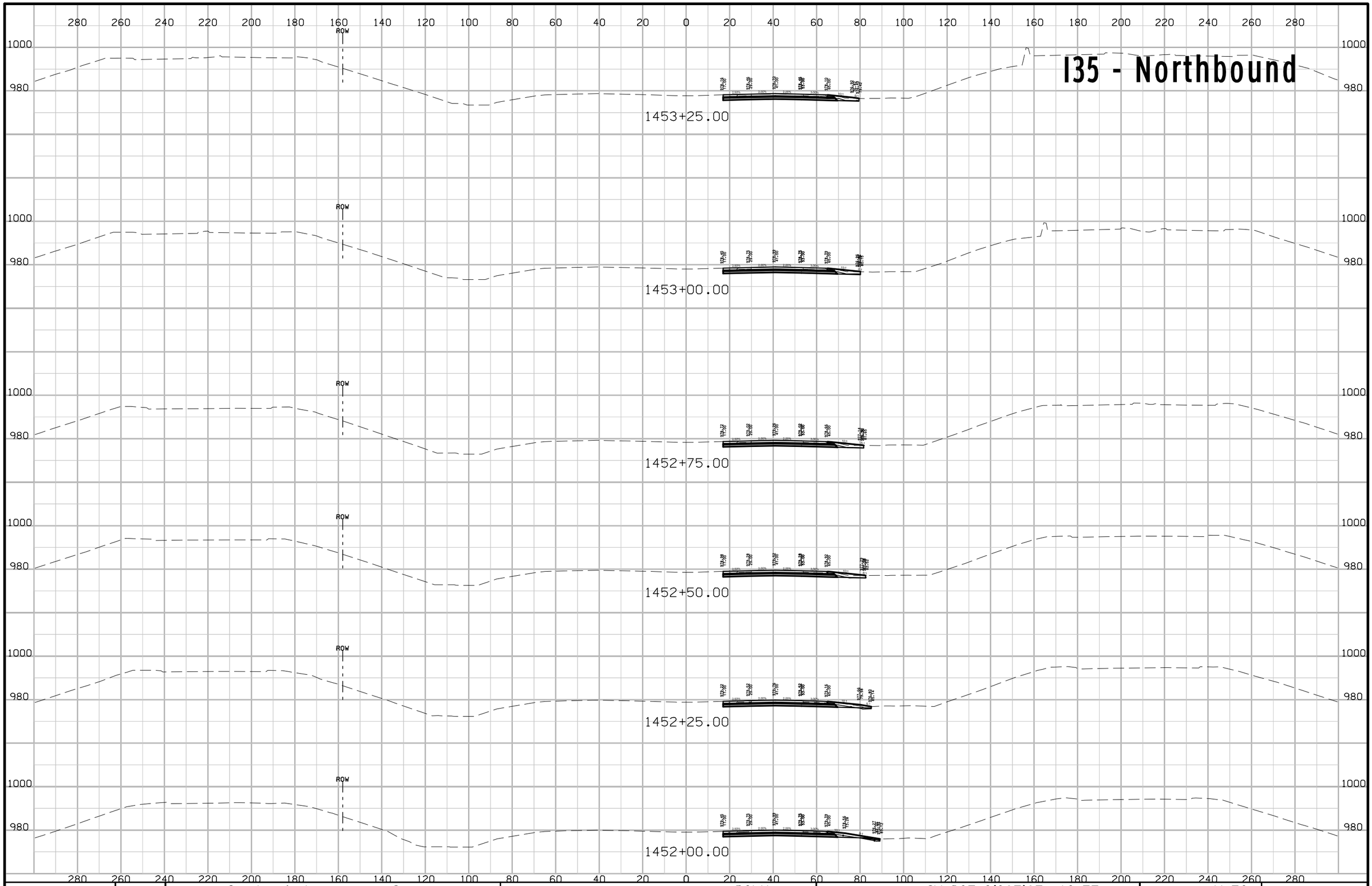
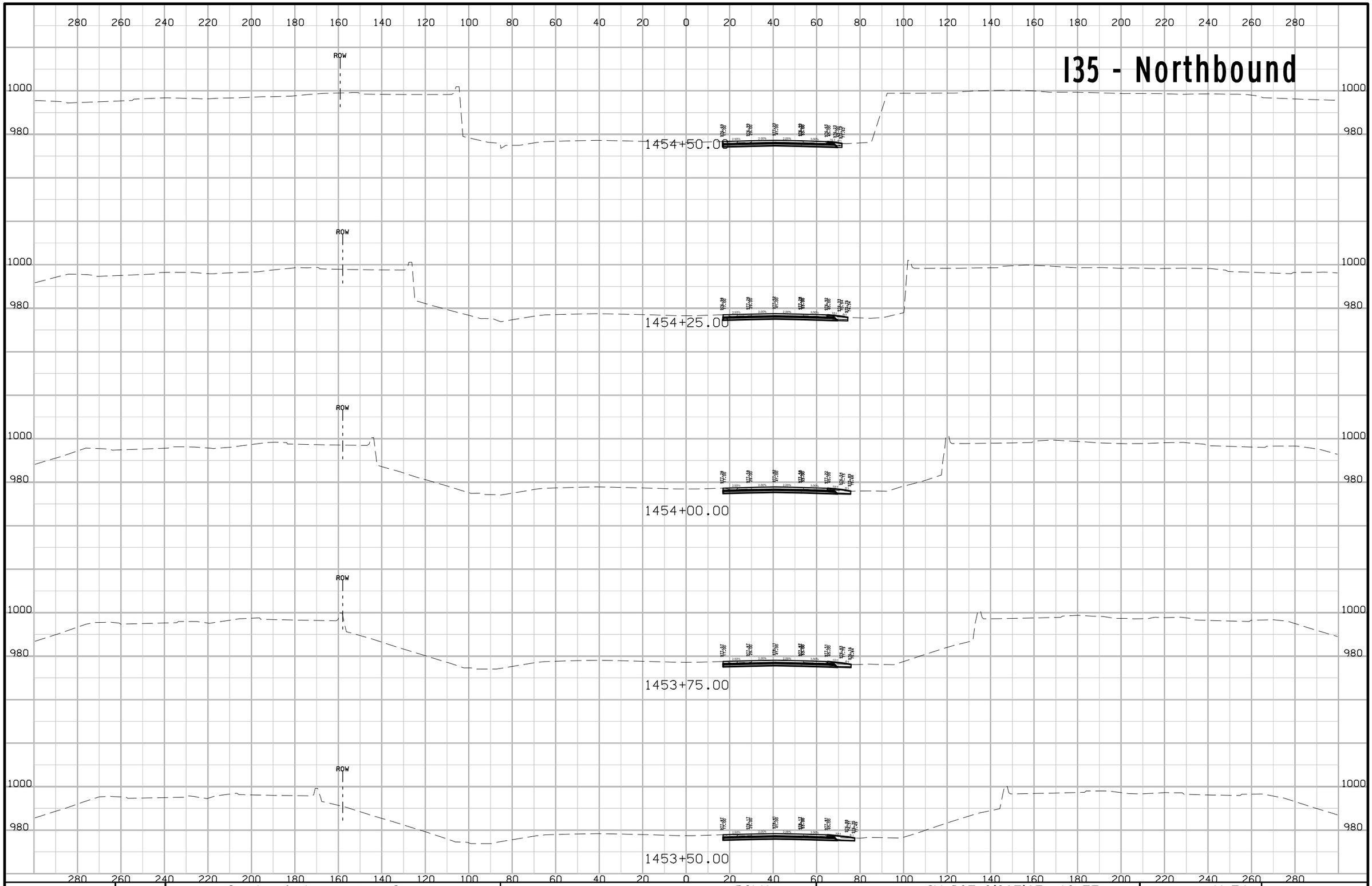
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.73

4:15:09 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.74

4:15:14 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

1000
980

1456+00.00

1455+75.00

1455+50.00

1455+25.00

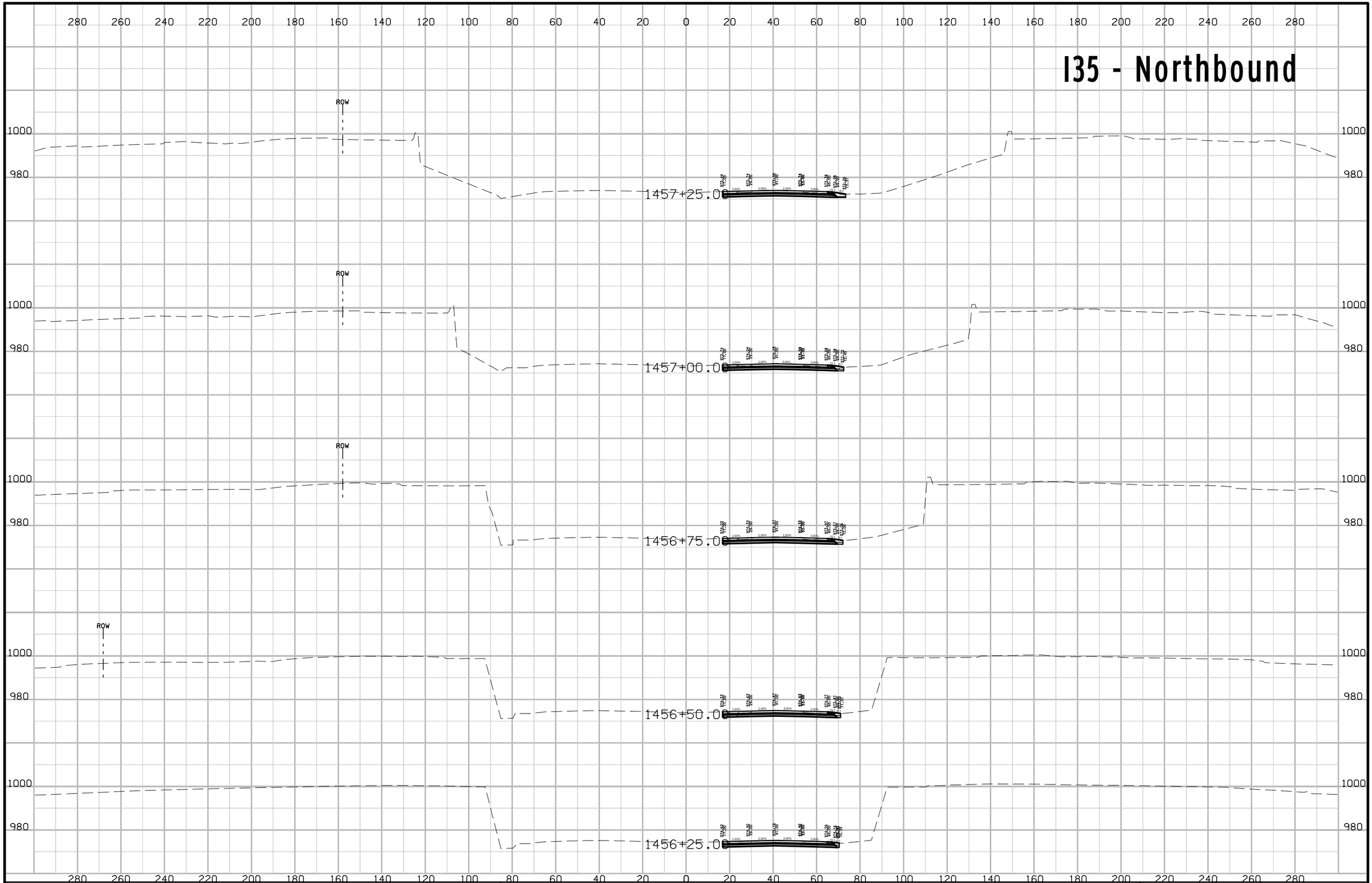
1455+00.00

1454+75.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.75

4:15:19 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

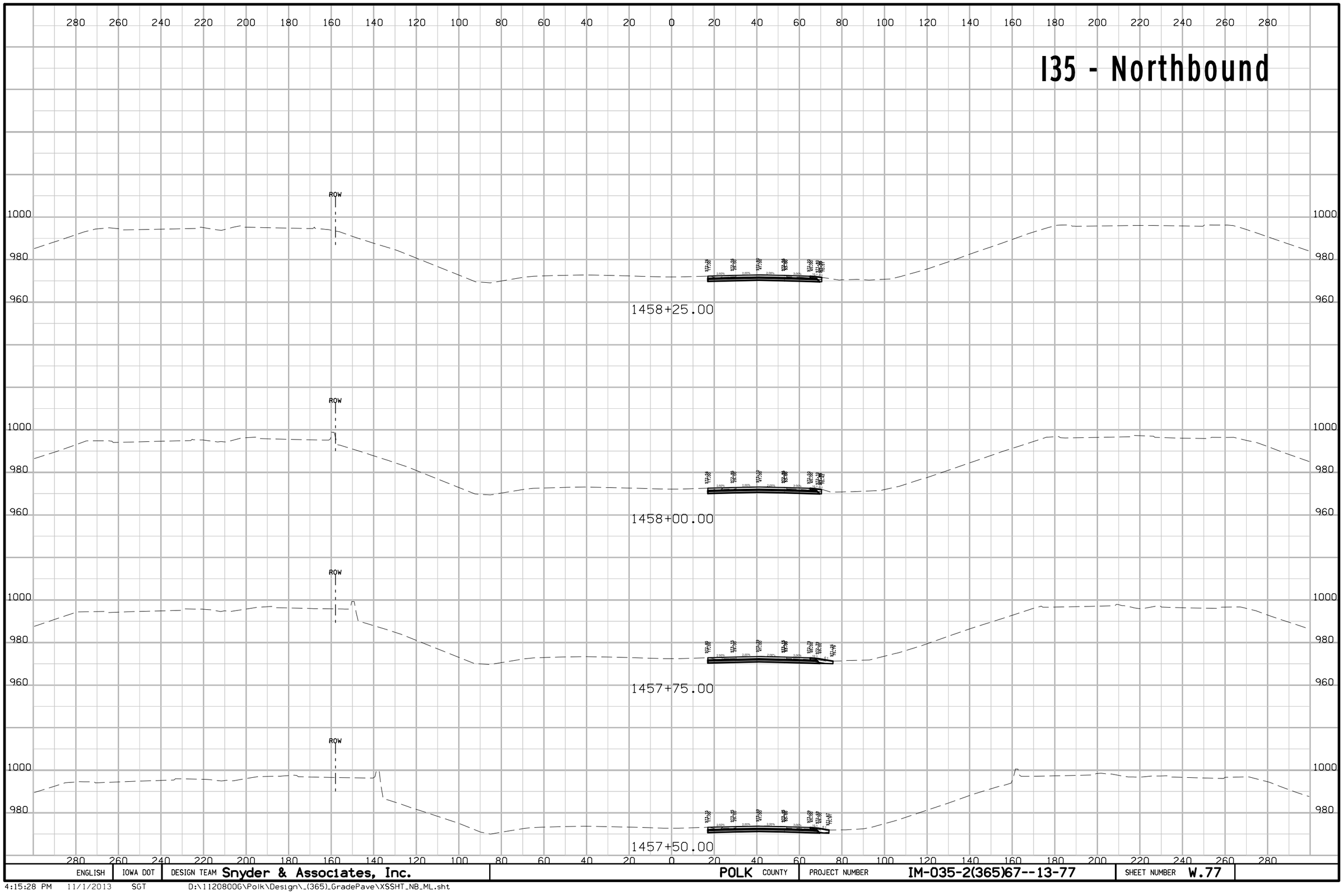
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.76

4:15:23 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.77

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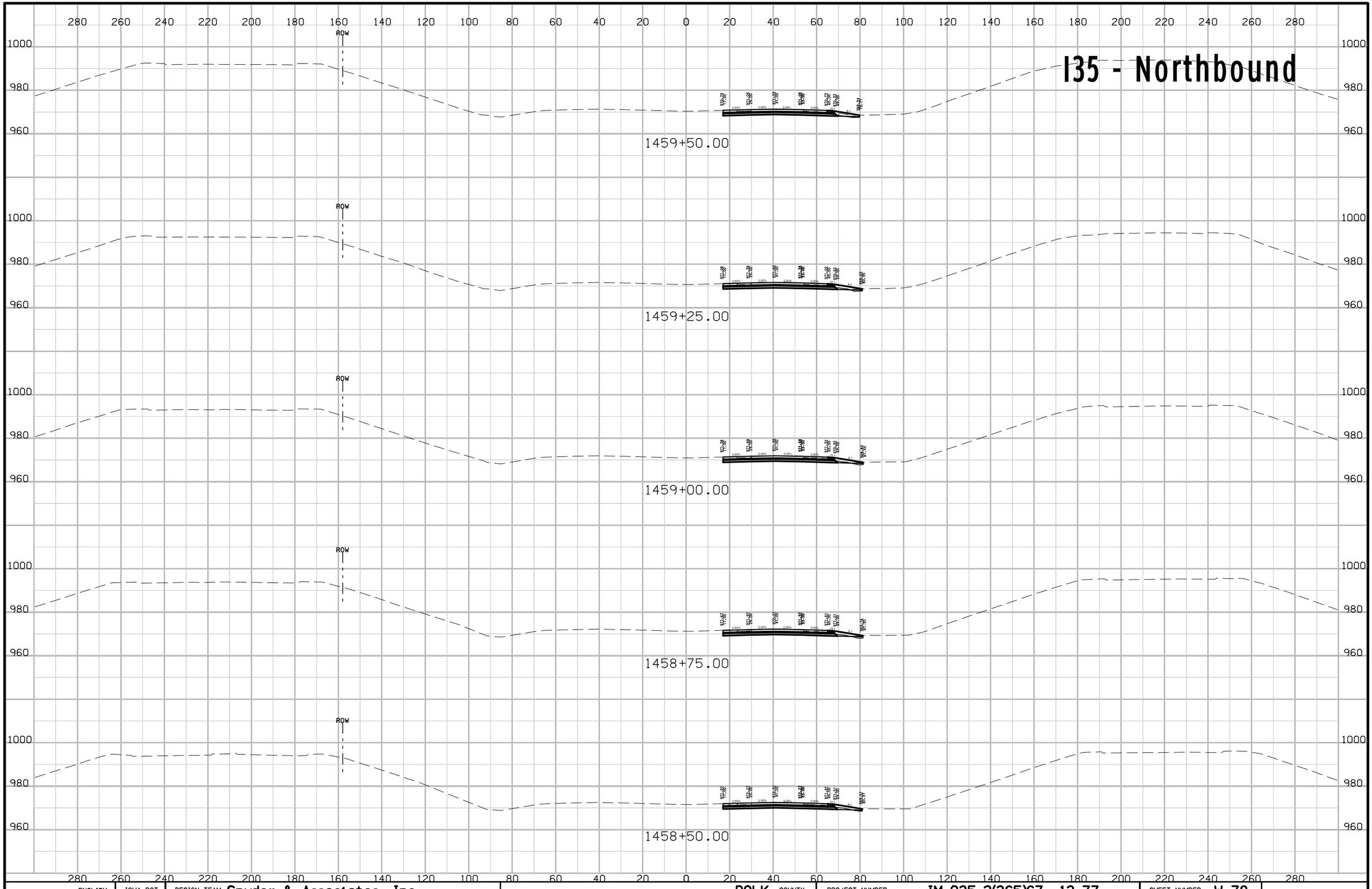
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.78

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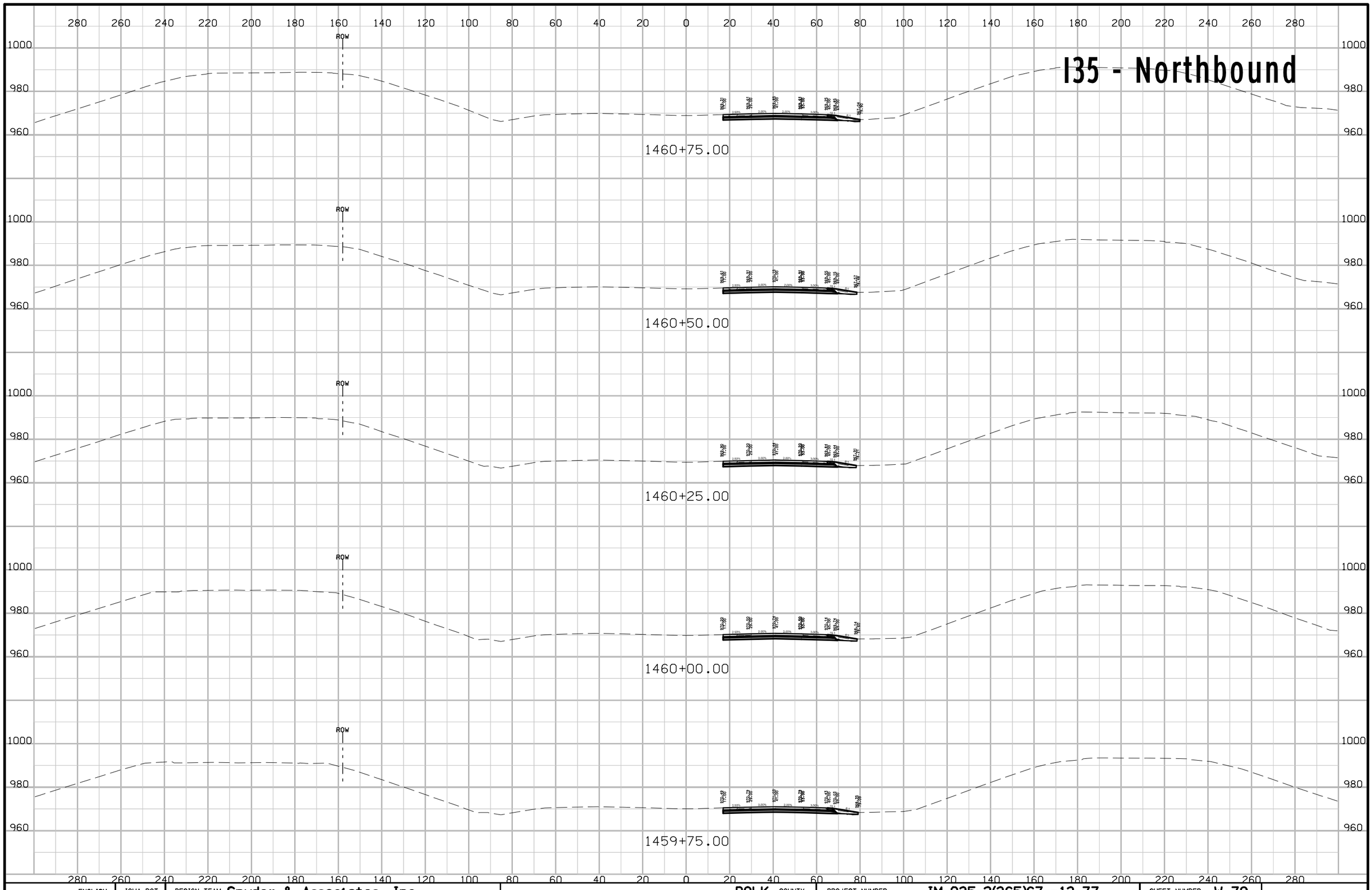
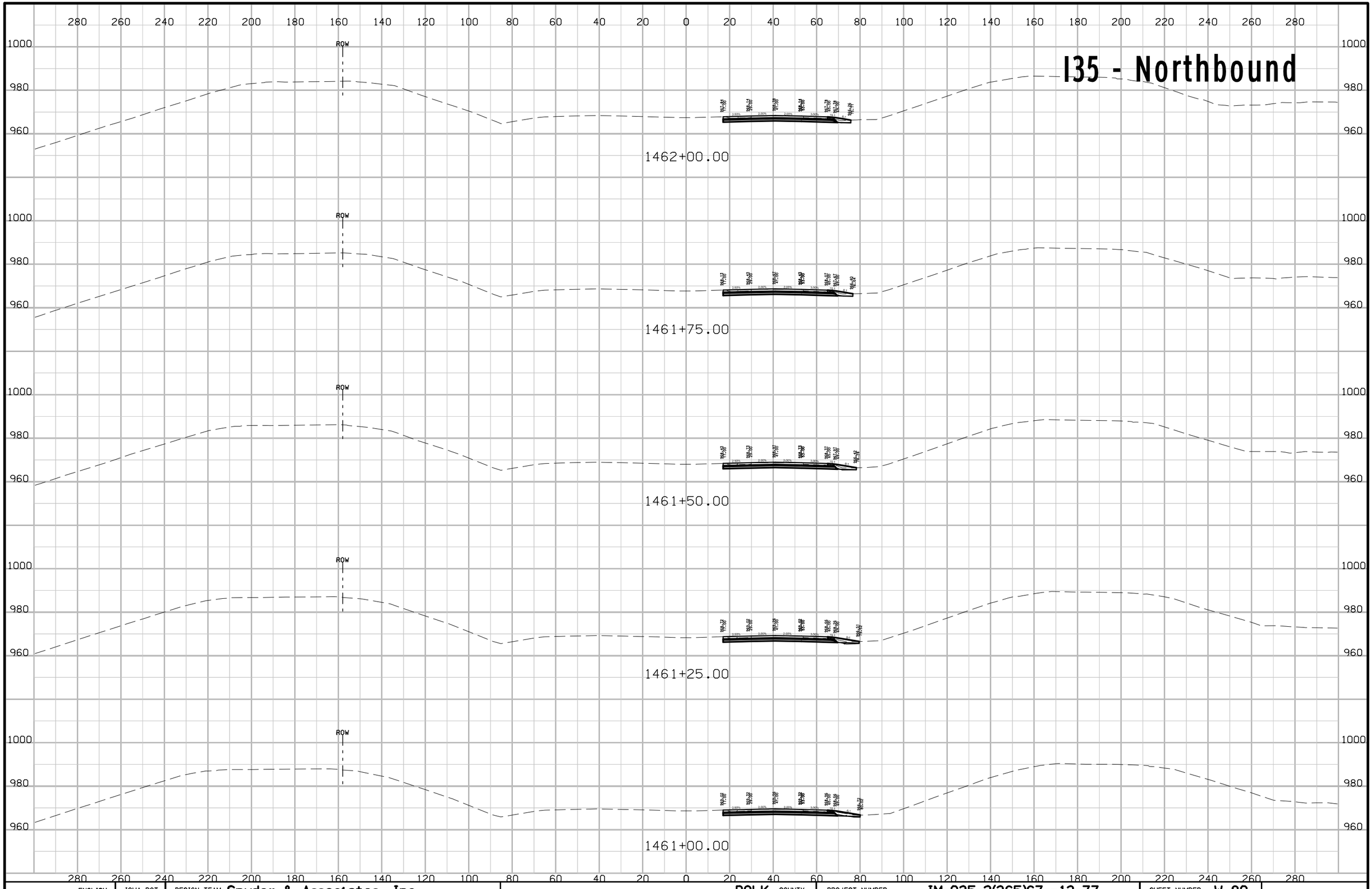
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.79

4:15:37 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

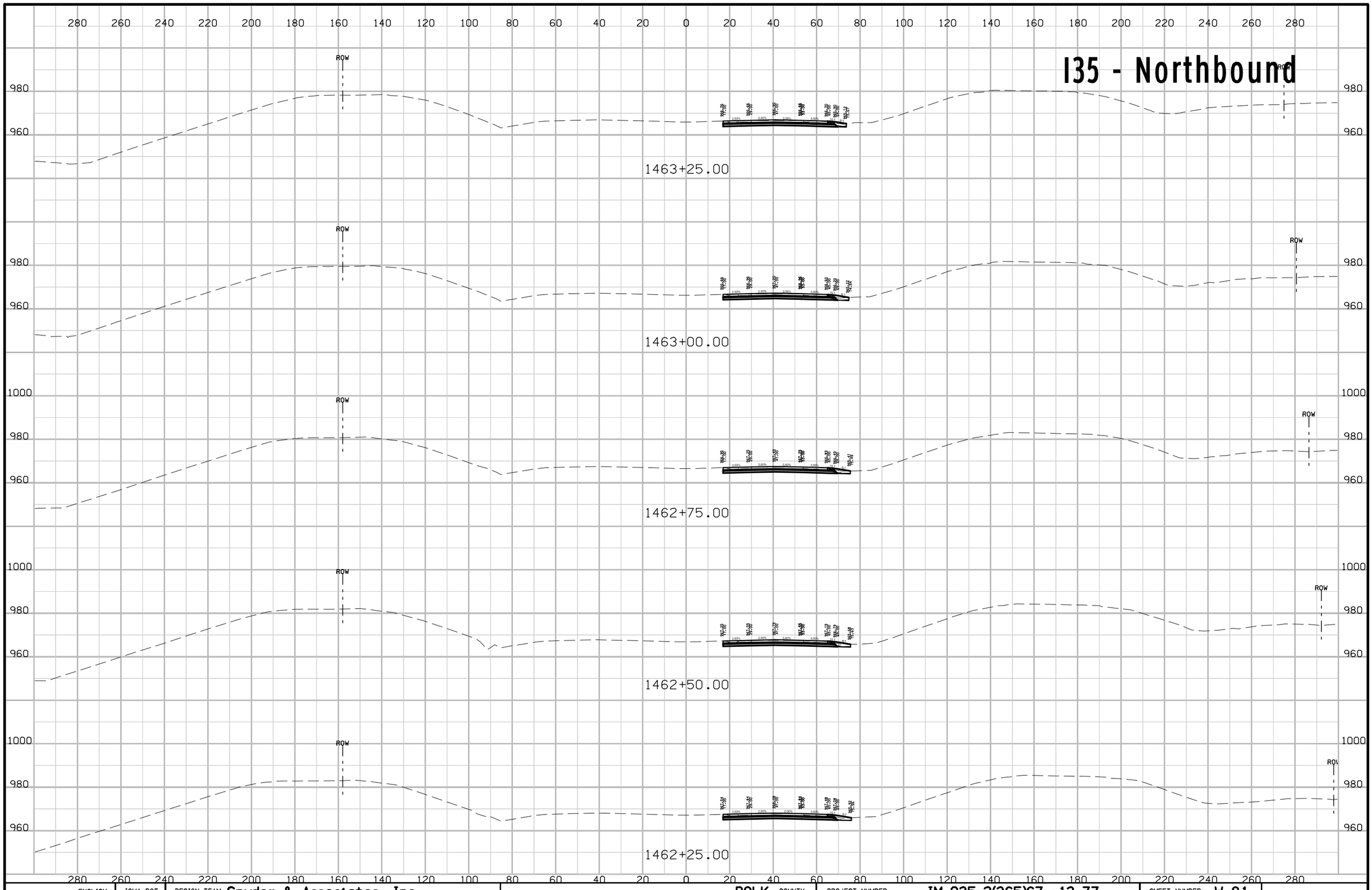
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.80

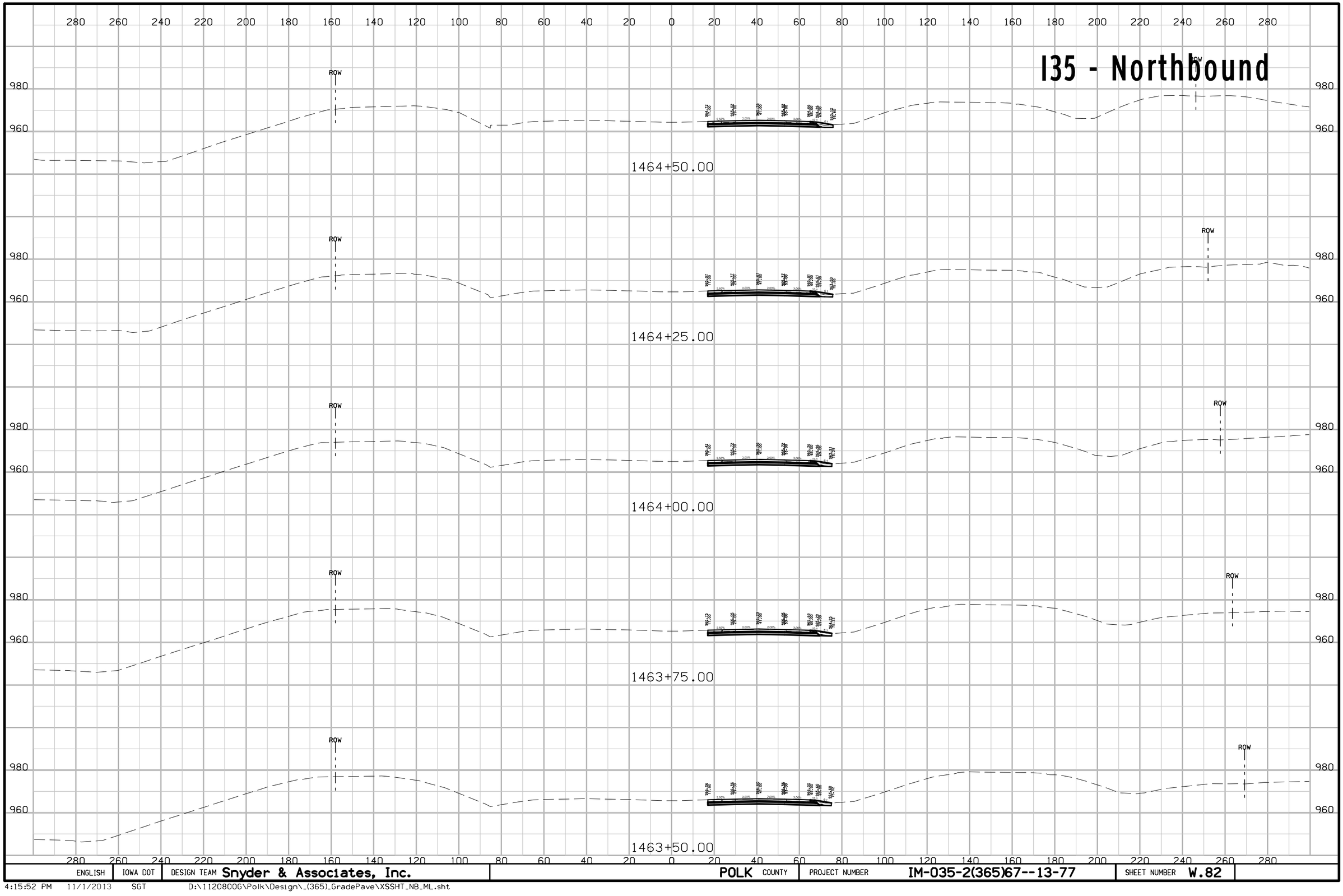
4:15:42 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.81

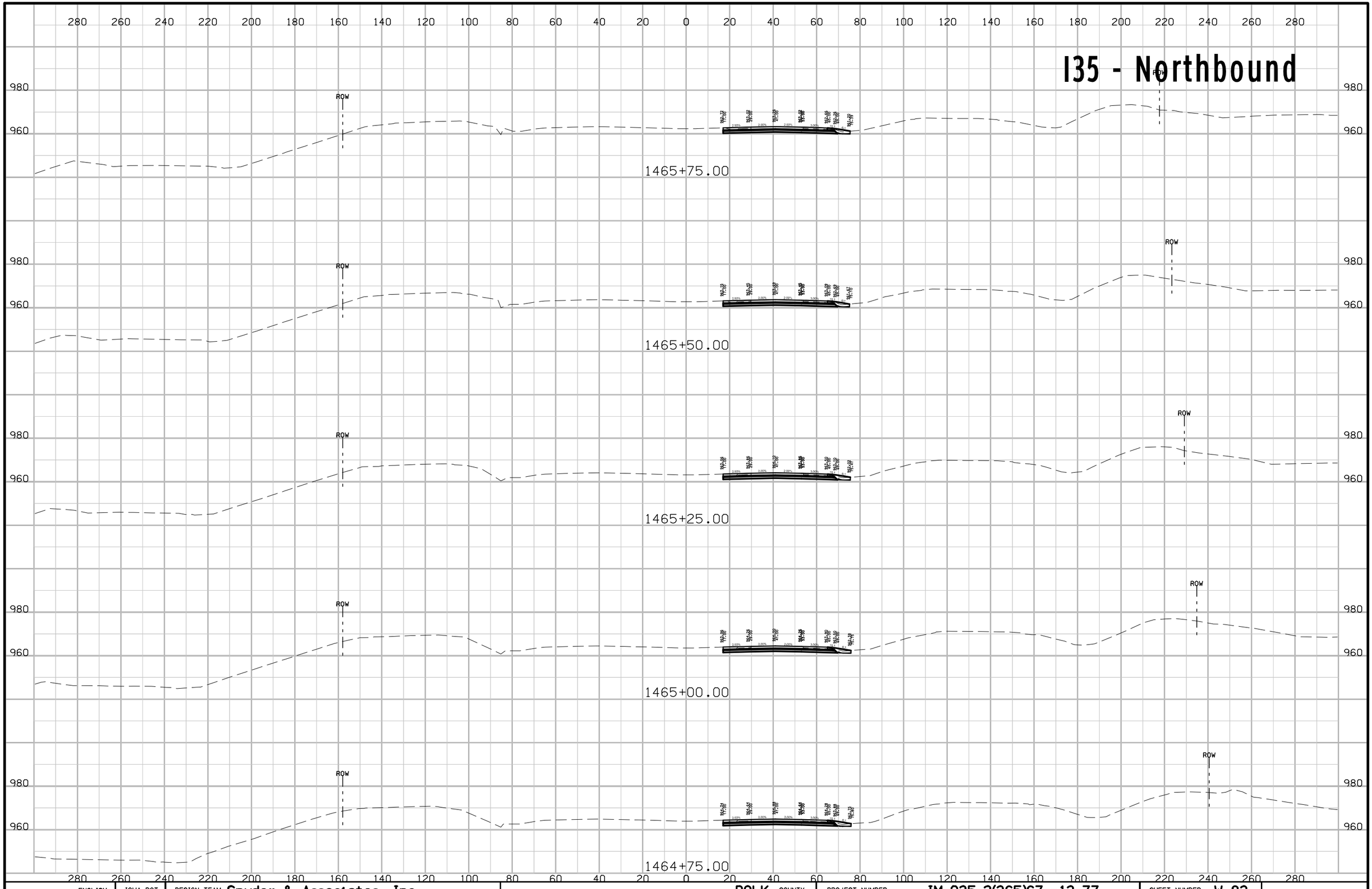
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.82

4:15:52 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

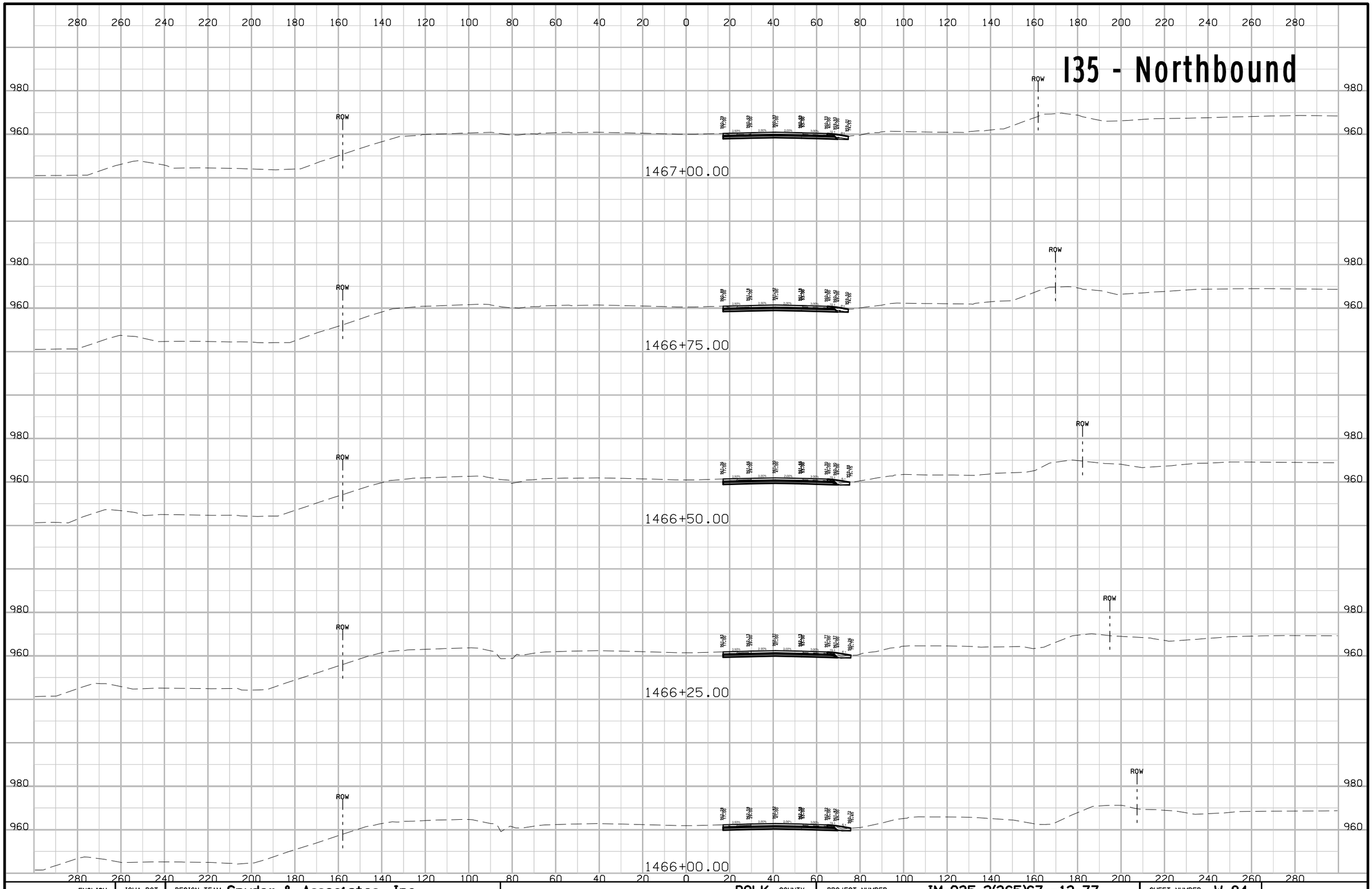
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.83

4:15:56 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

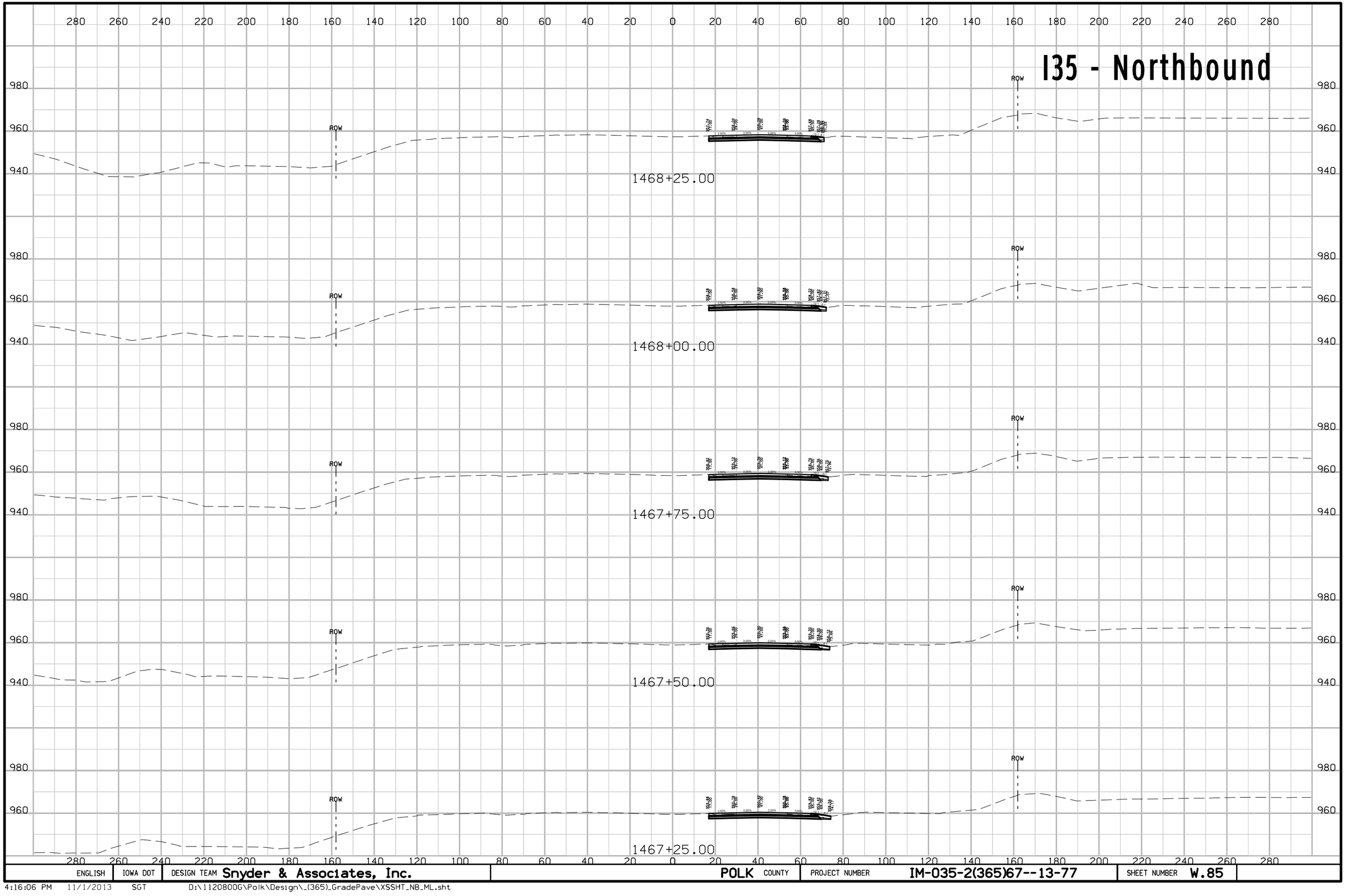
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.84

4:16:01 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.85

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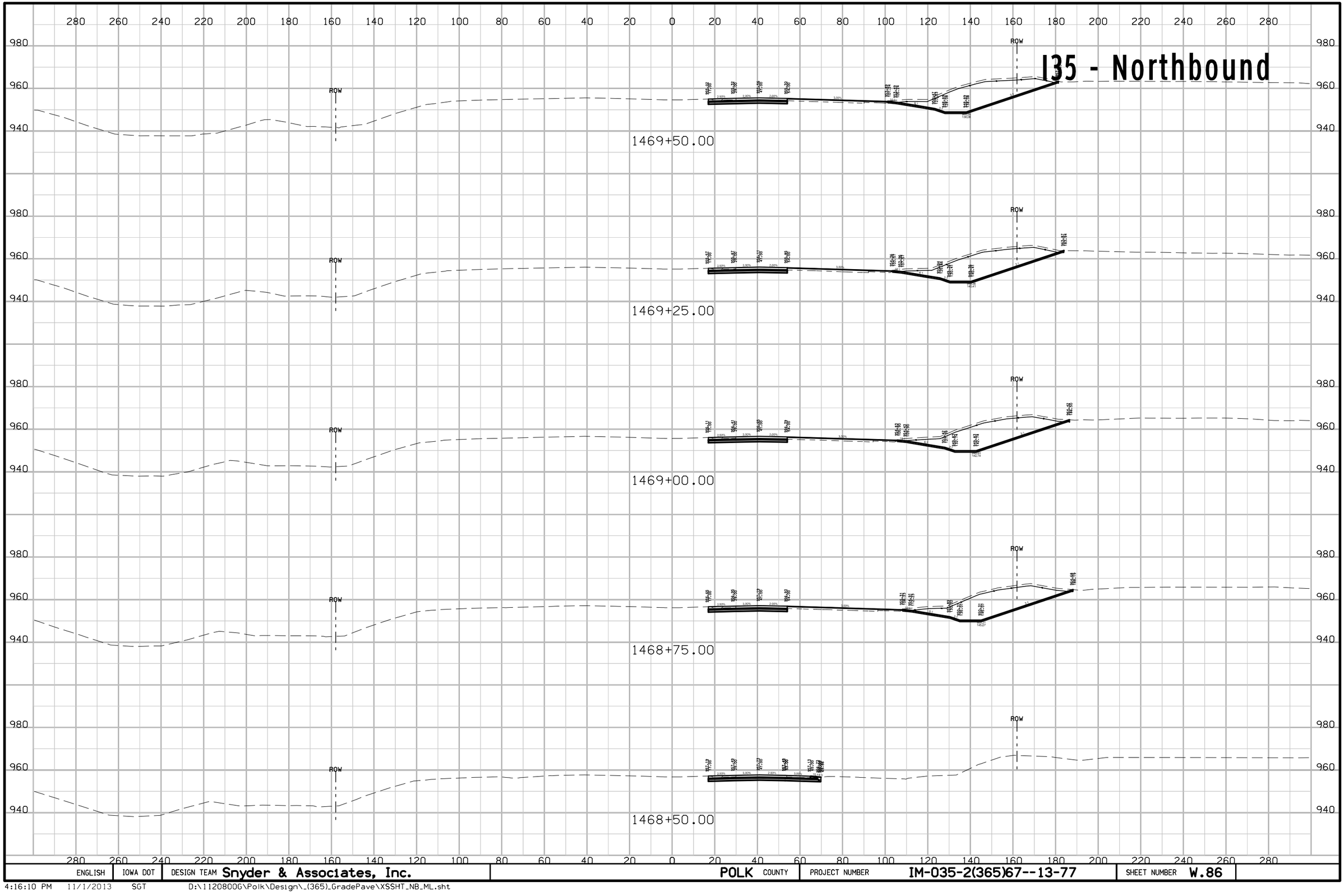
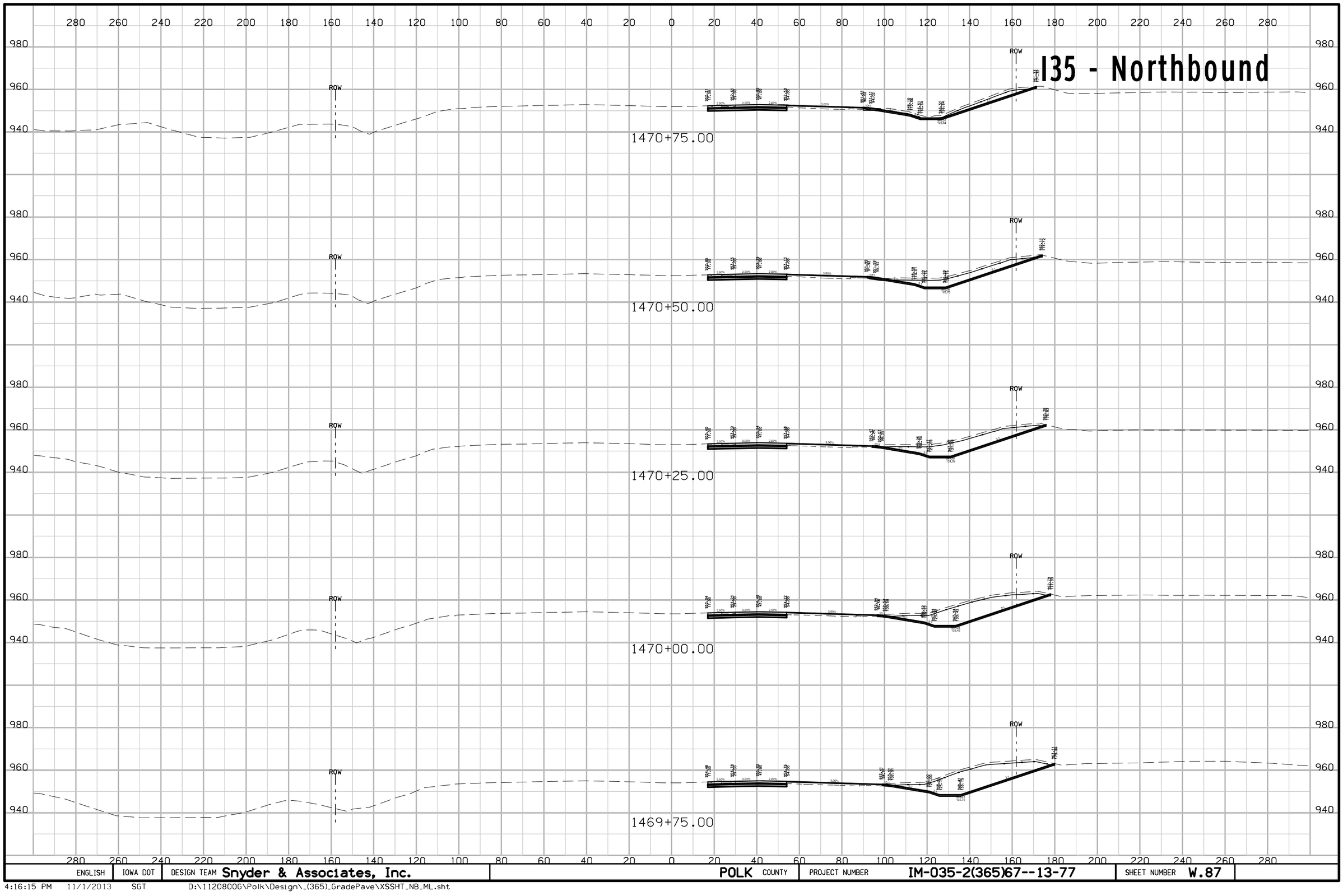
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.86

4:16:10 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

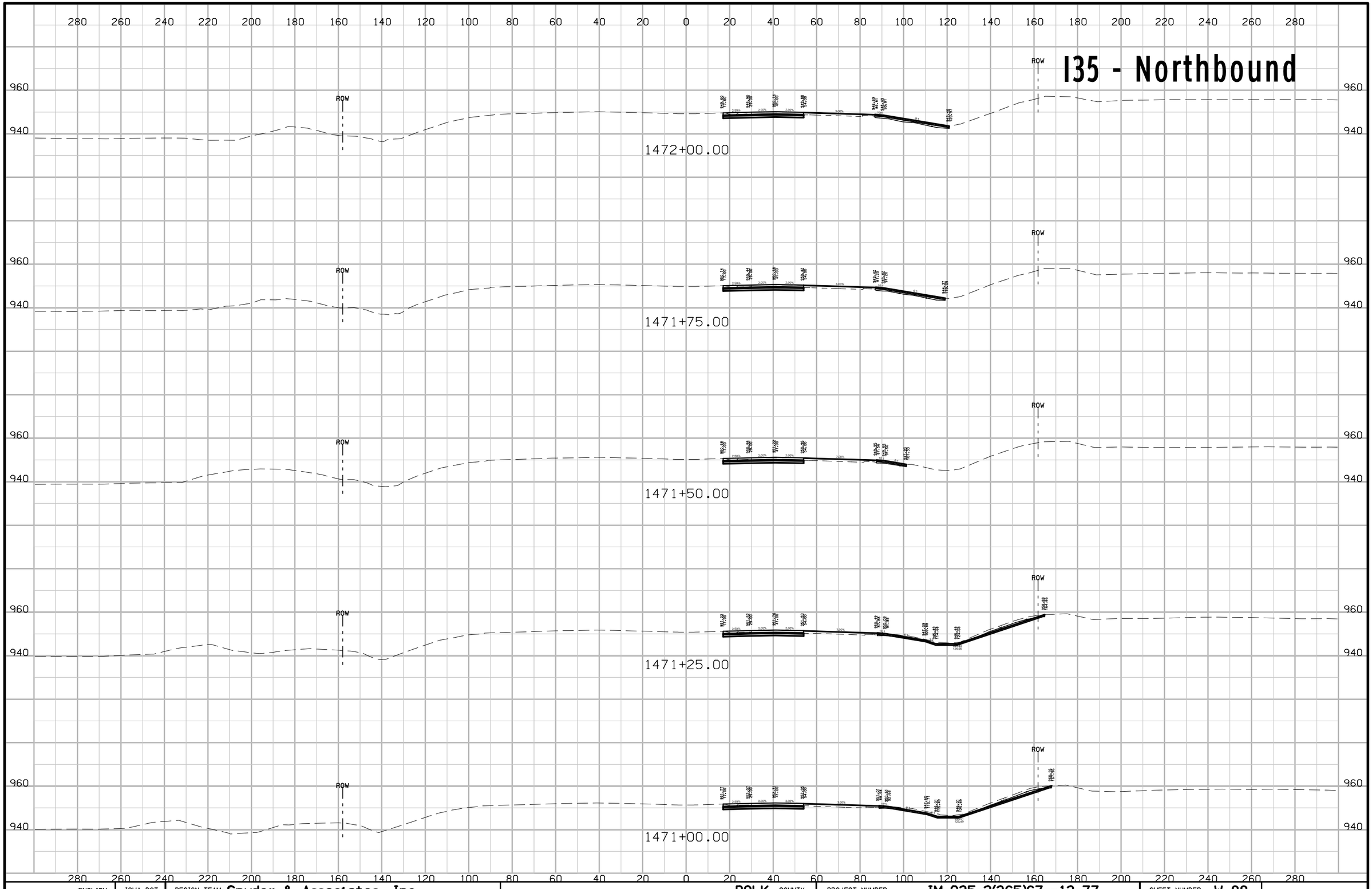
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.87

4:16:15 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

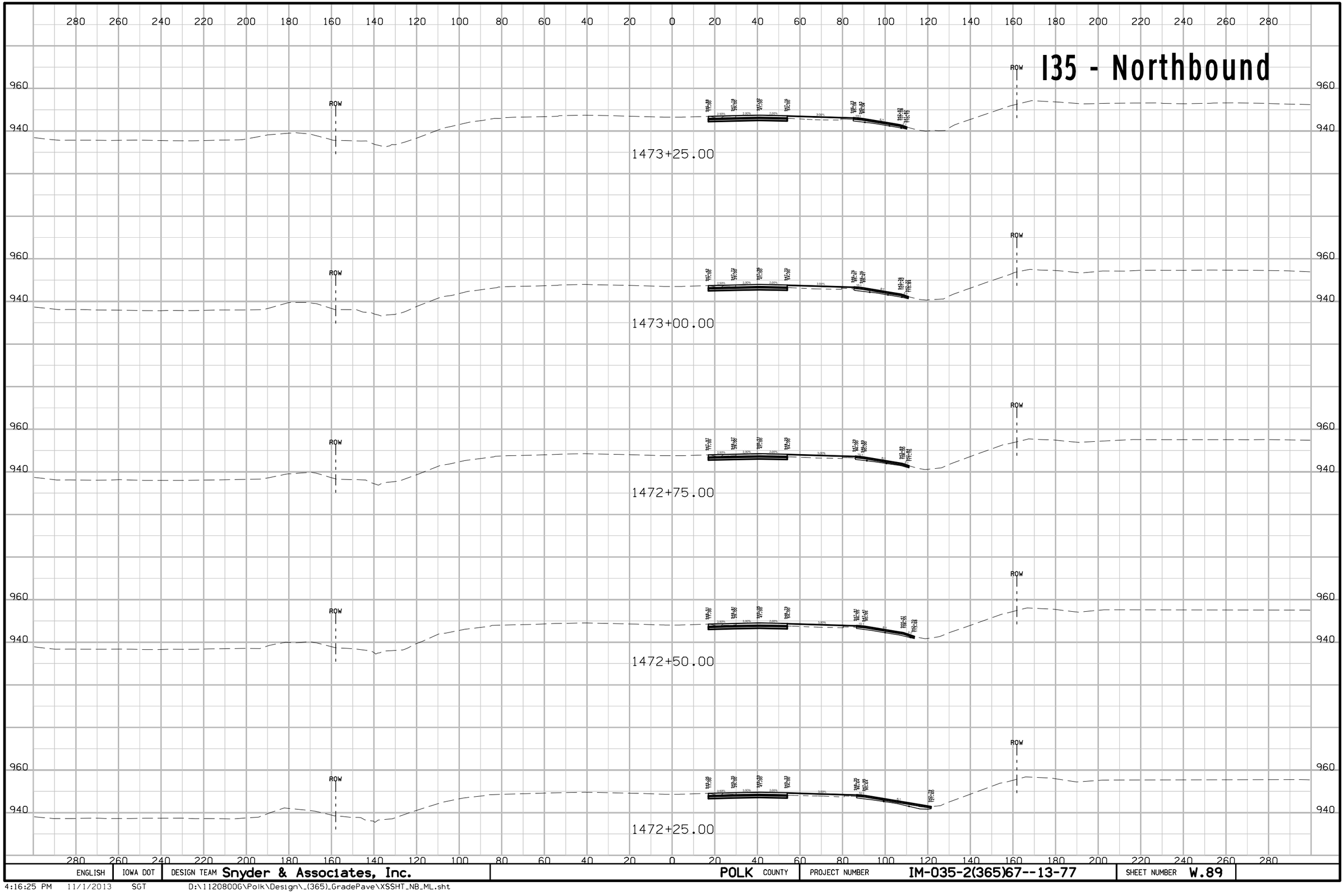
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.88

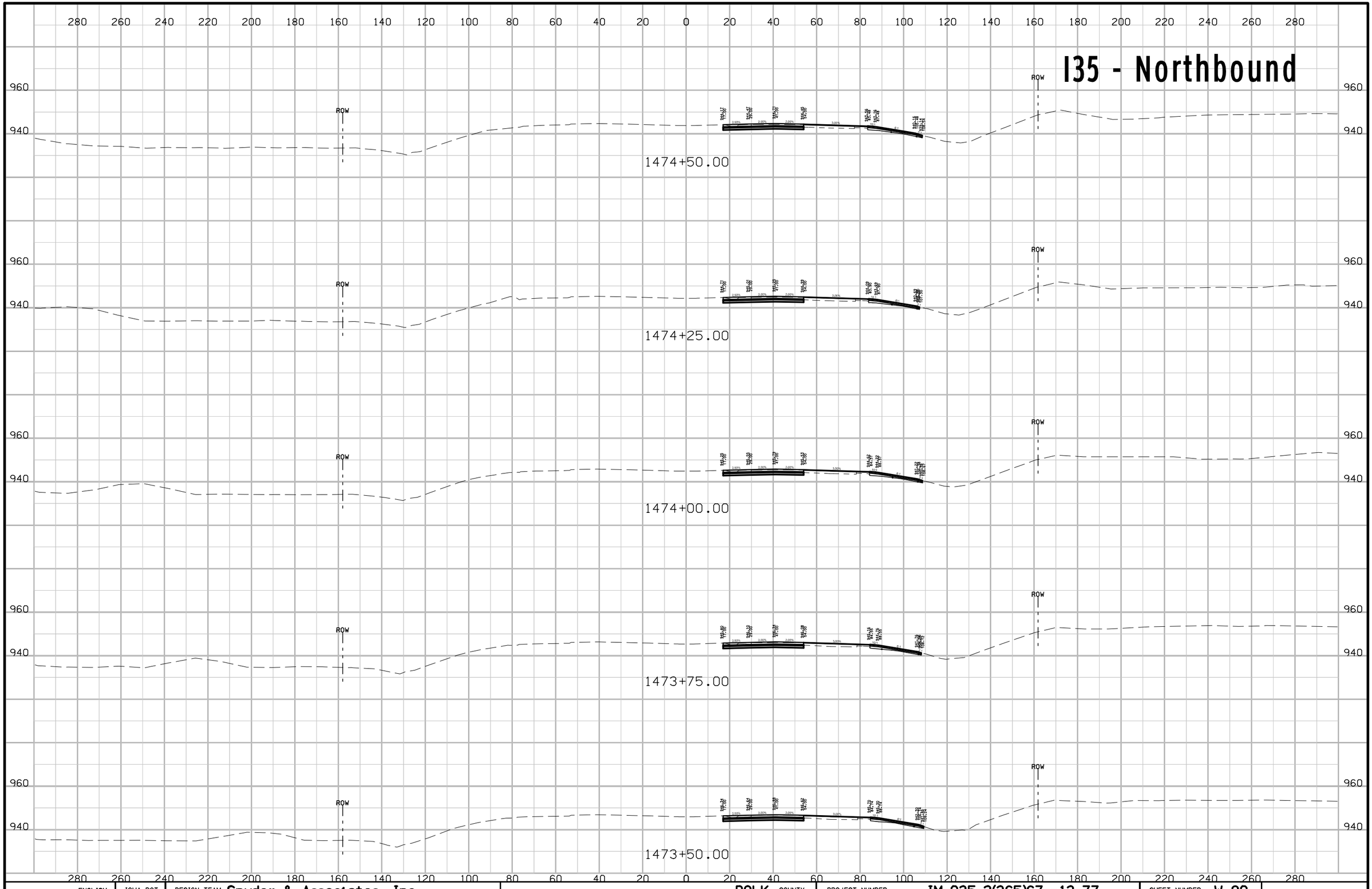
4:16:20 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.89

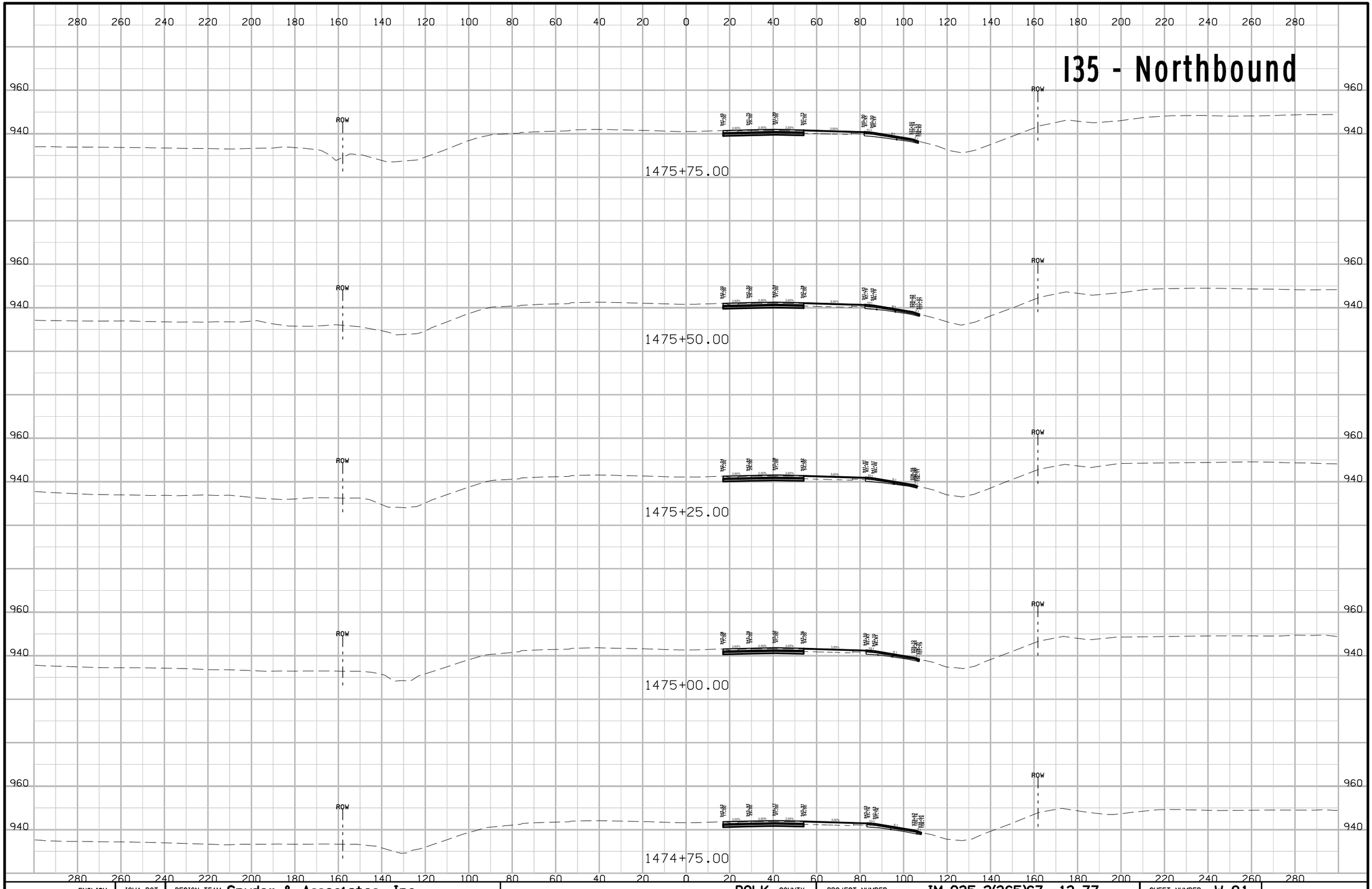
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.90

4:16:29 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.91

4:16:34 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

940

ROW

1477+25.00

1477+00.00

1476+75.00

1476+50.00

960

1476+25.00

1476+00.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.92

4:16:39 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

940

ROW

1478+75.00

1478+50.00

1478+25.00

1478+00.00

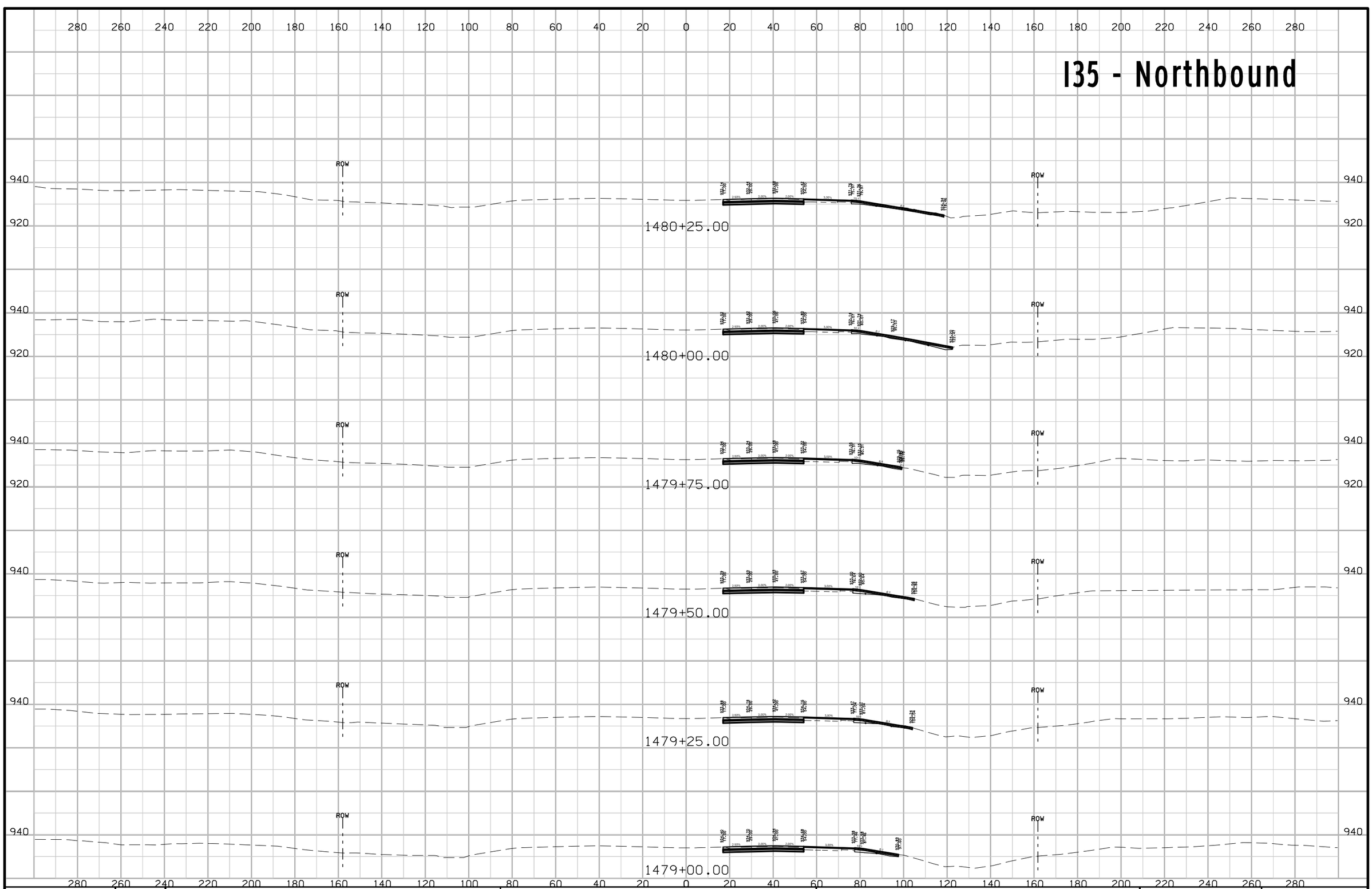
1477+75.00

1477+50.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.93

4:16:44 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

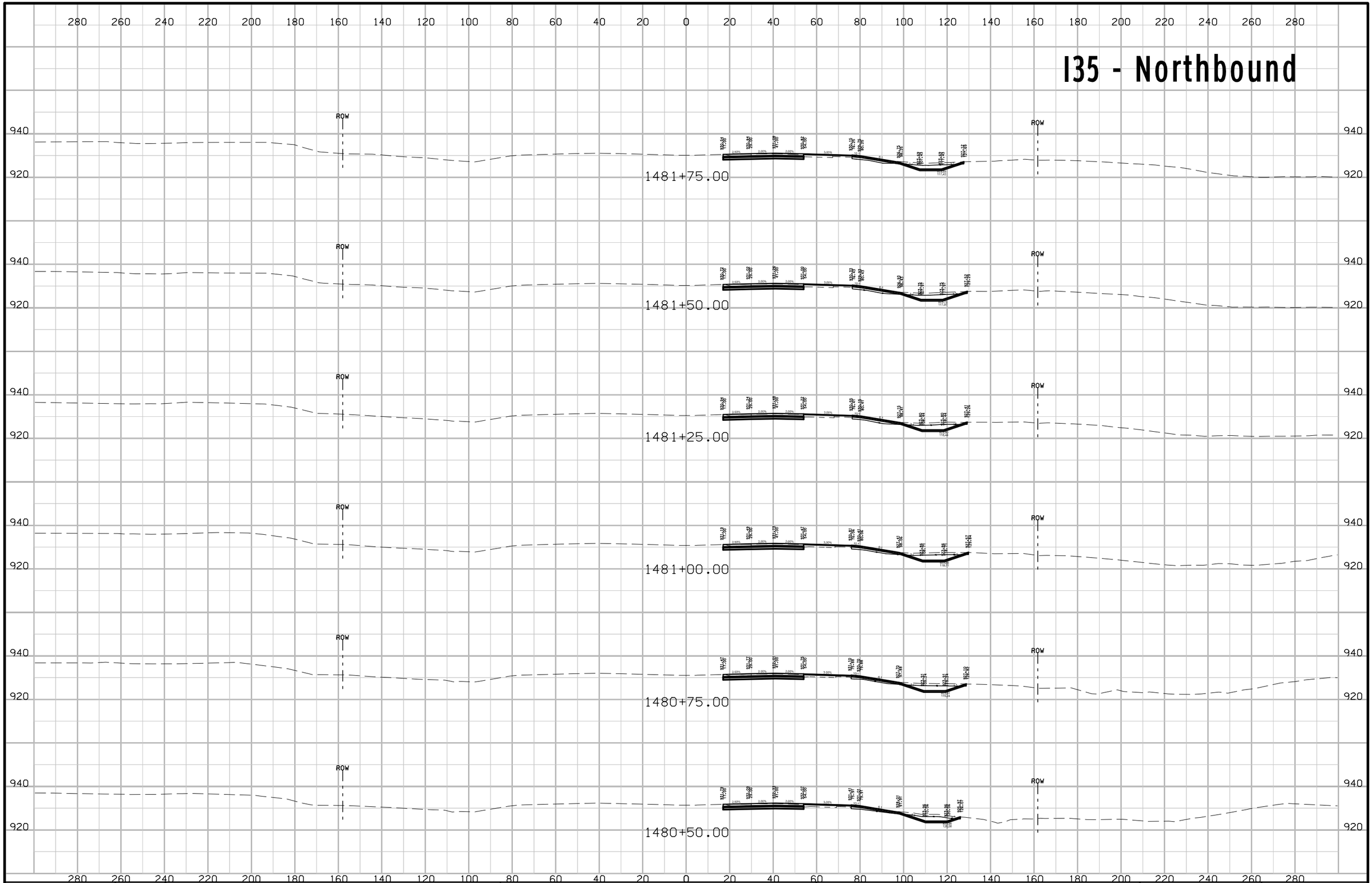
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.94

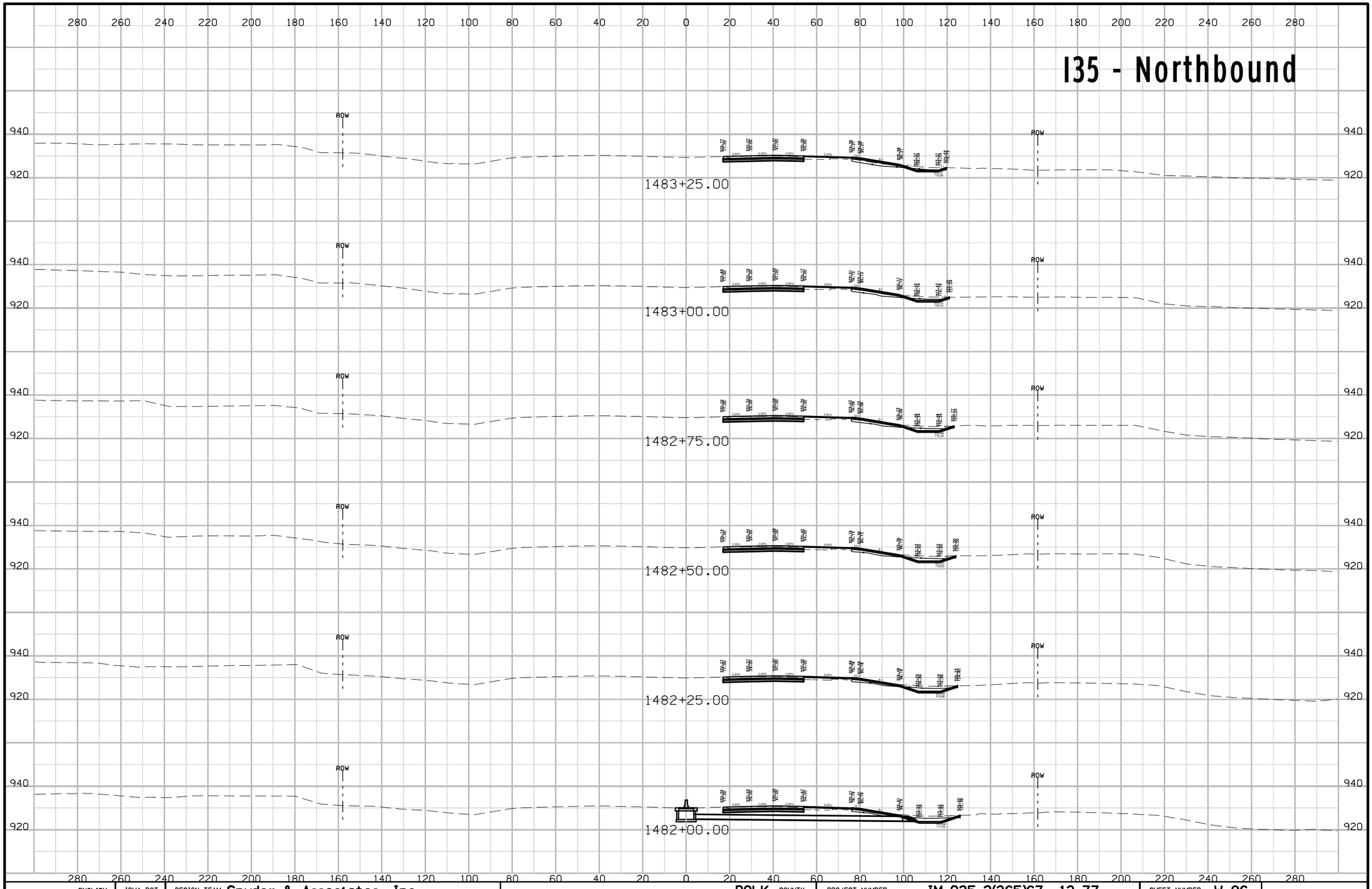
4:16:48 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.95

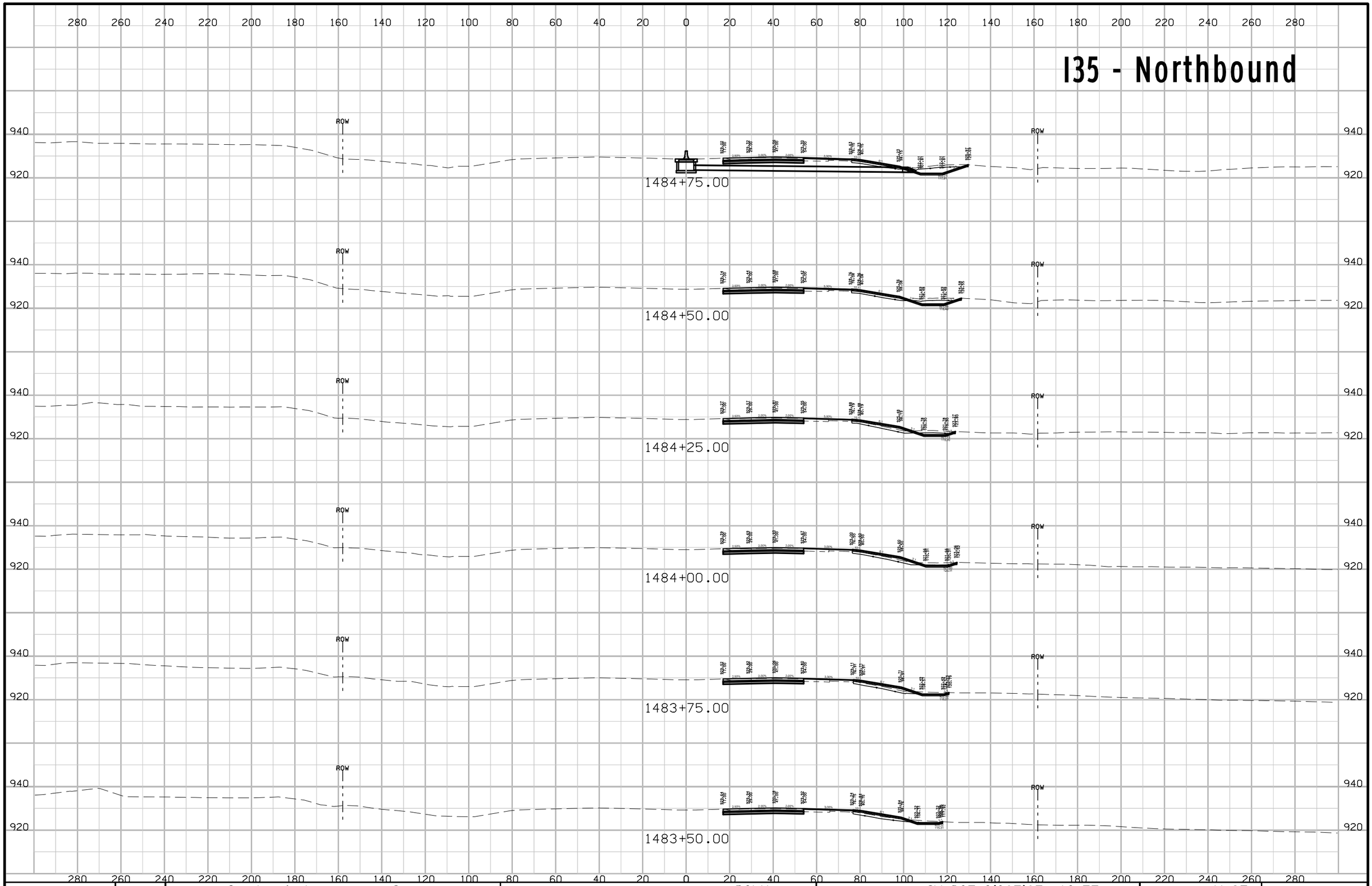
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.96

4:16:58 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

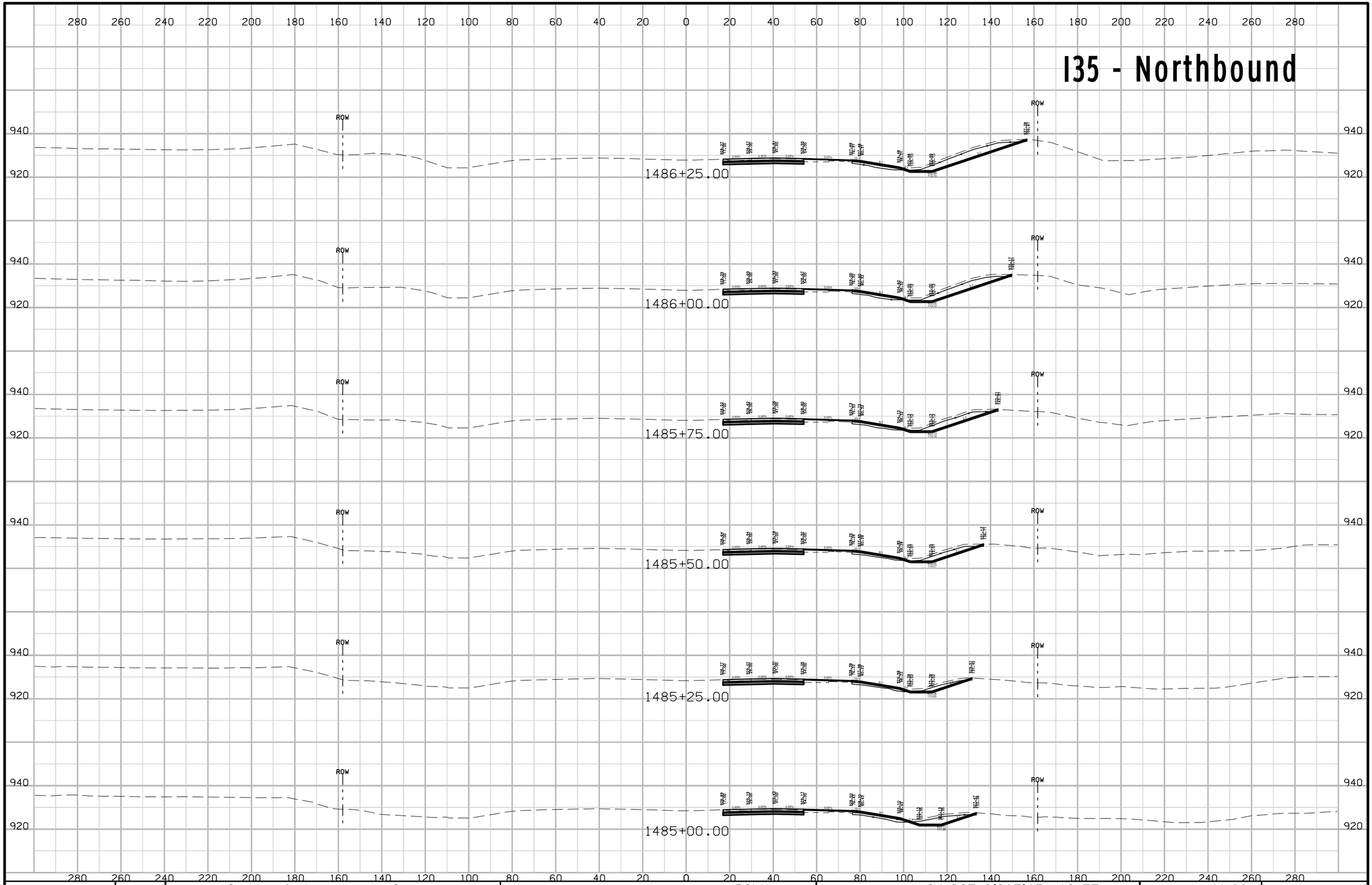
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.97

4:17:03 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

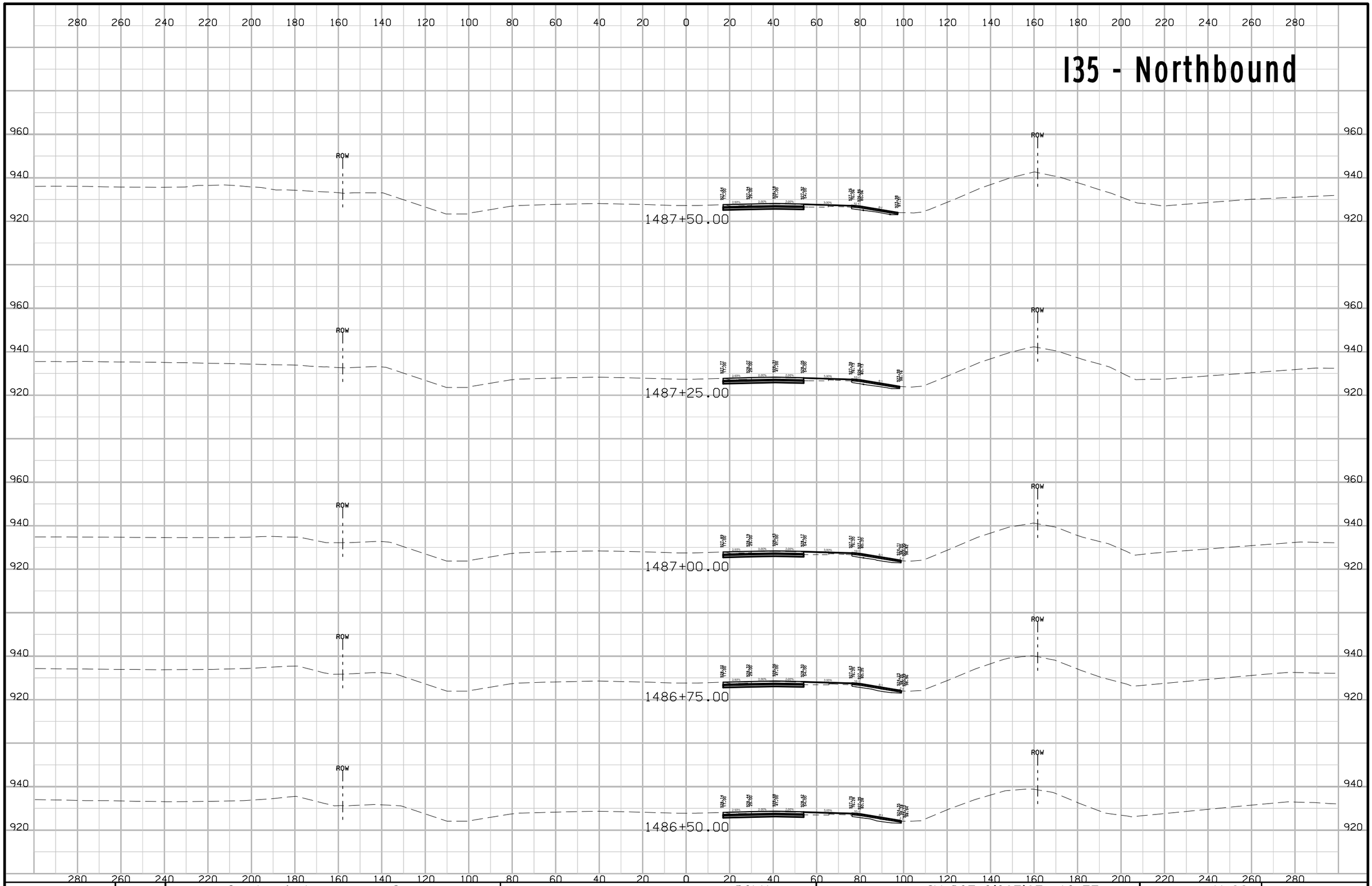
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.98

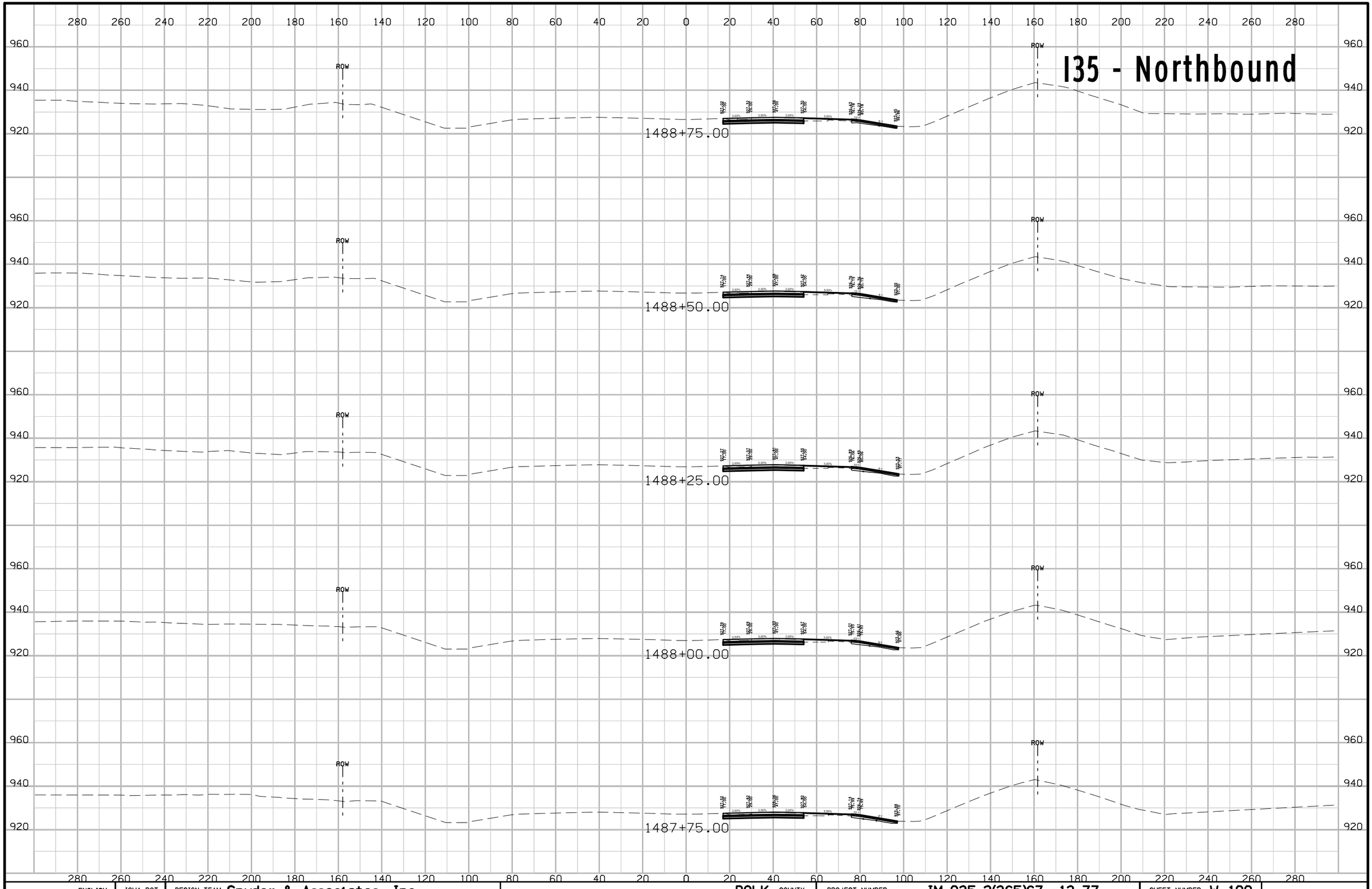
4:17:07 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.99

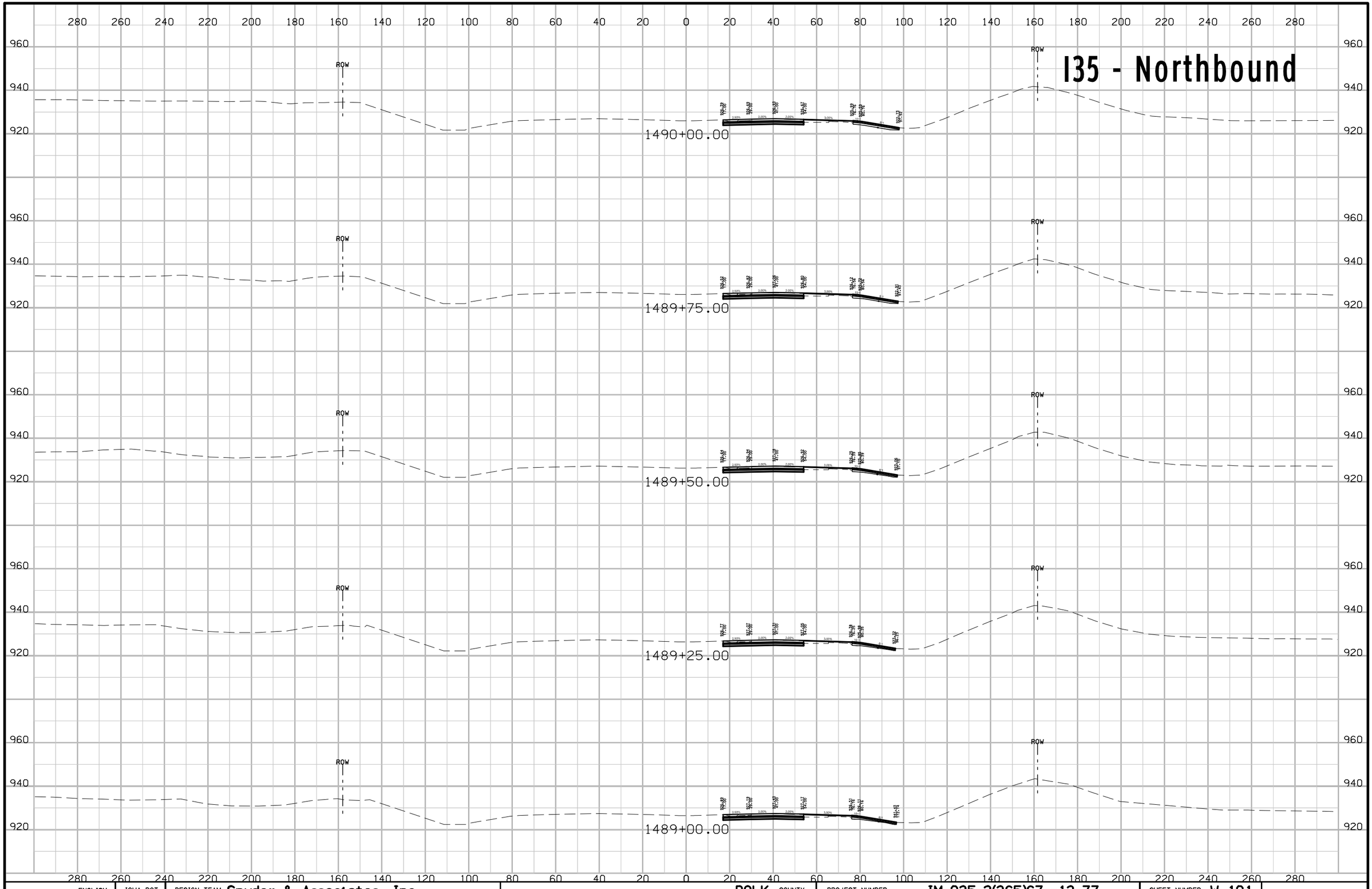
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.100

4:17:17 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

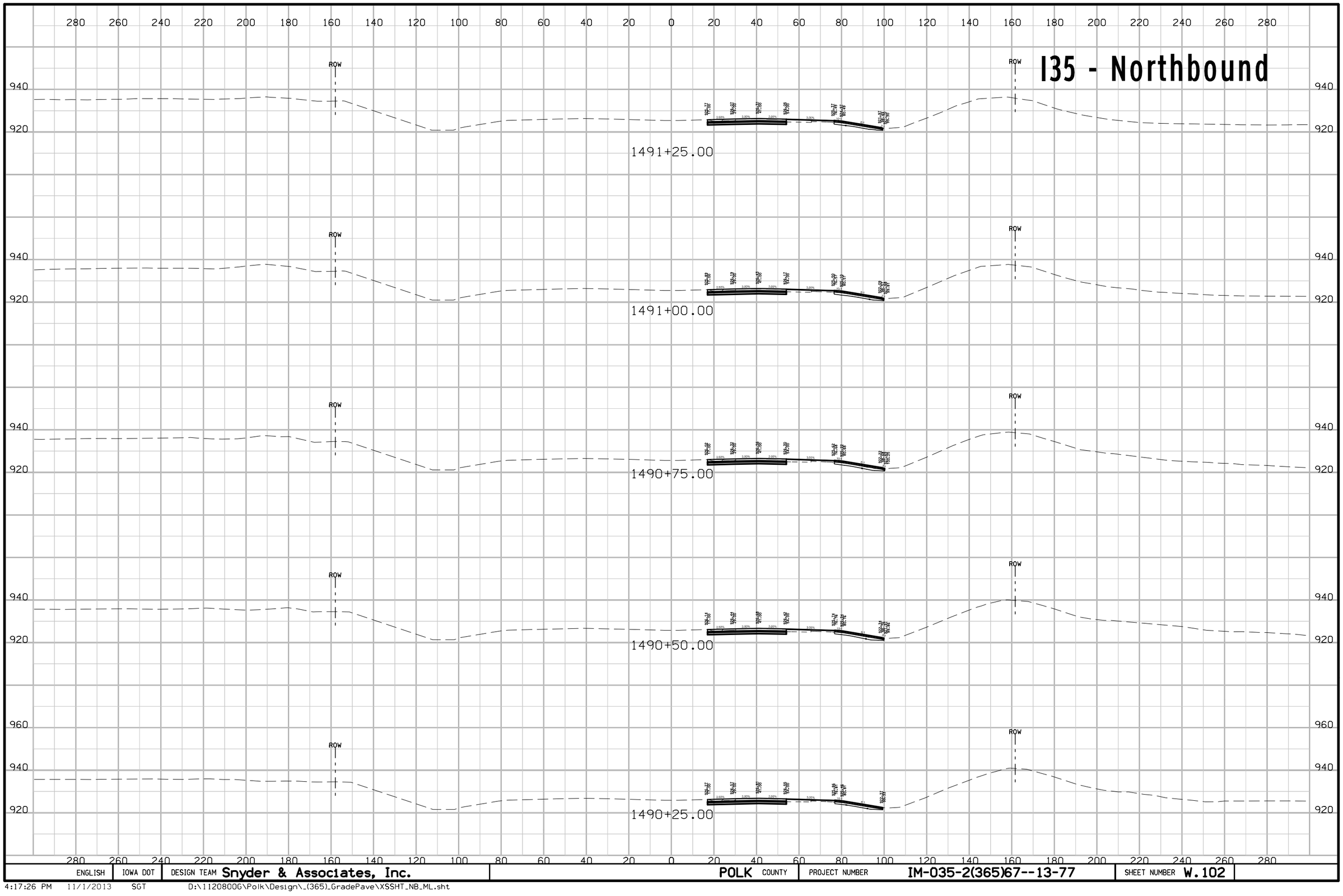
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.101

4:17:22 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

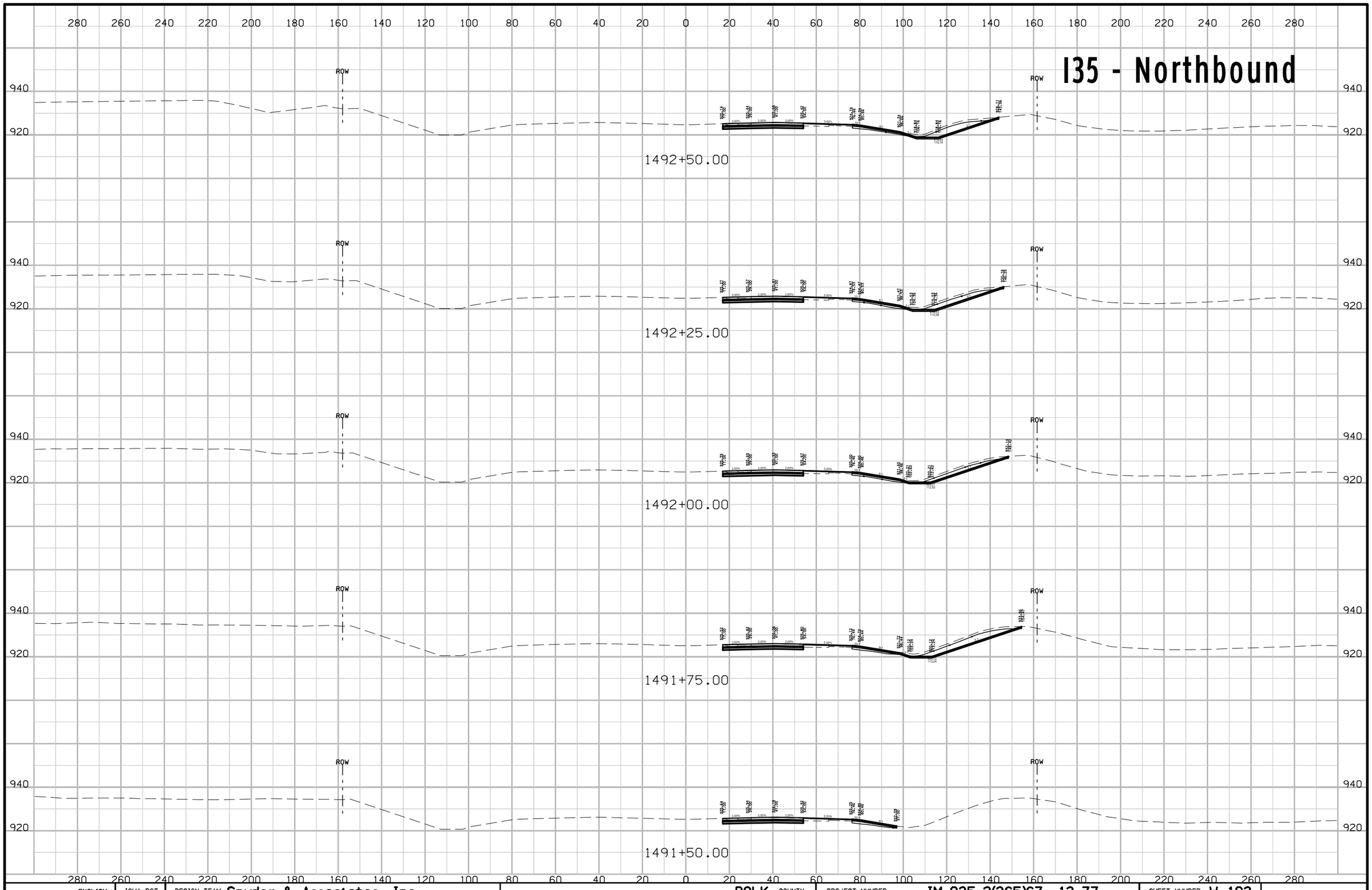
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.102

4:17:26 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

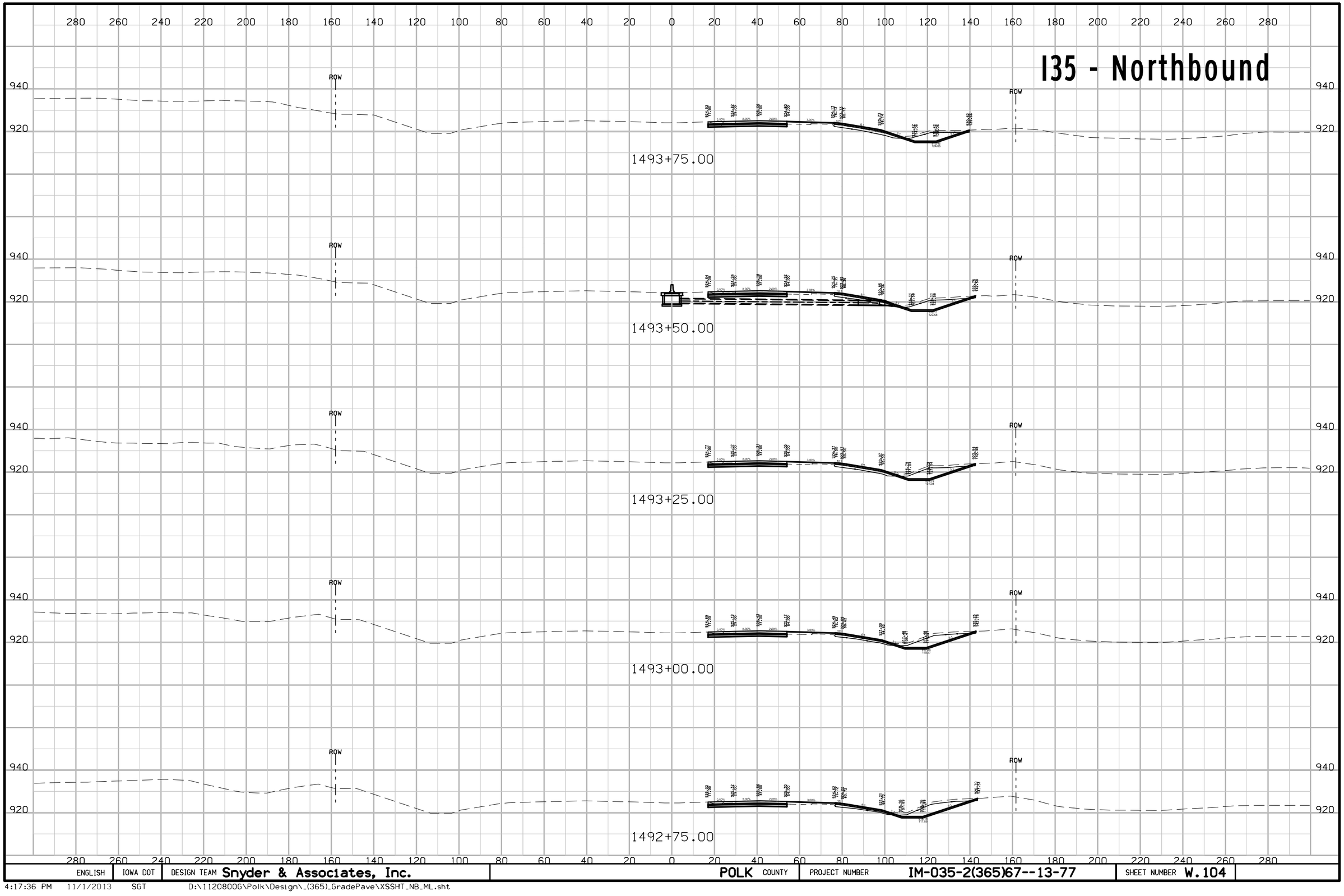
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.103

4:17:31 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.104

4:17:36 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

940
920

ROW

1495+00.00

1494+75.00

1494+50.00

1494+25.00

1494+00.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.105

4:17:40 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

940
920

ROW

1495+75.00

1495+50.00

1495+46.24

1495+35.00

1495+25.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.106

4:17:45 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

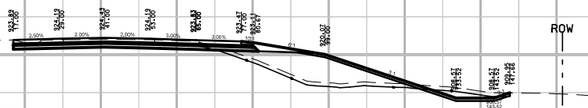
I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

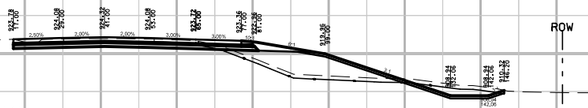
940
920

ROW

1497+00.00



1496+75.00



1496+50.00

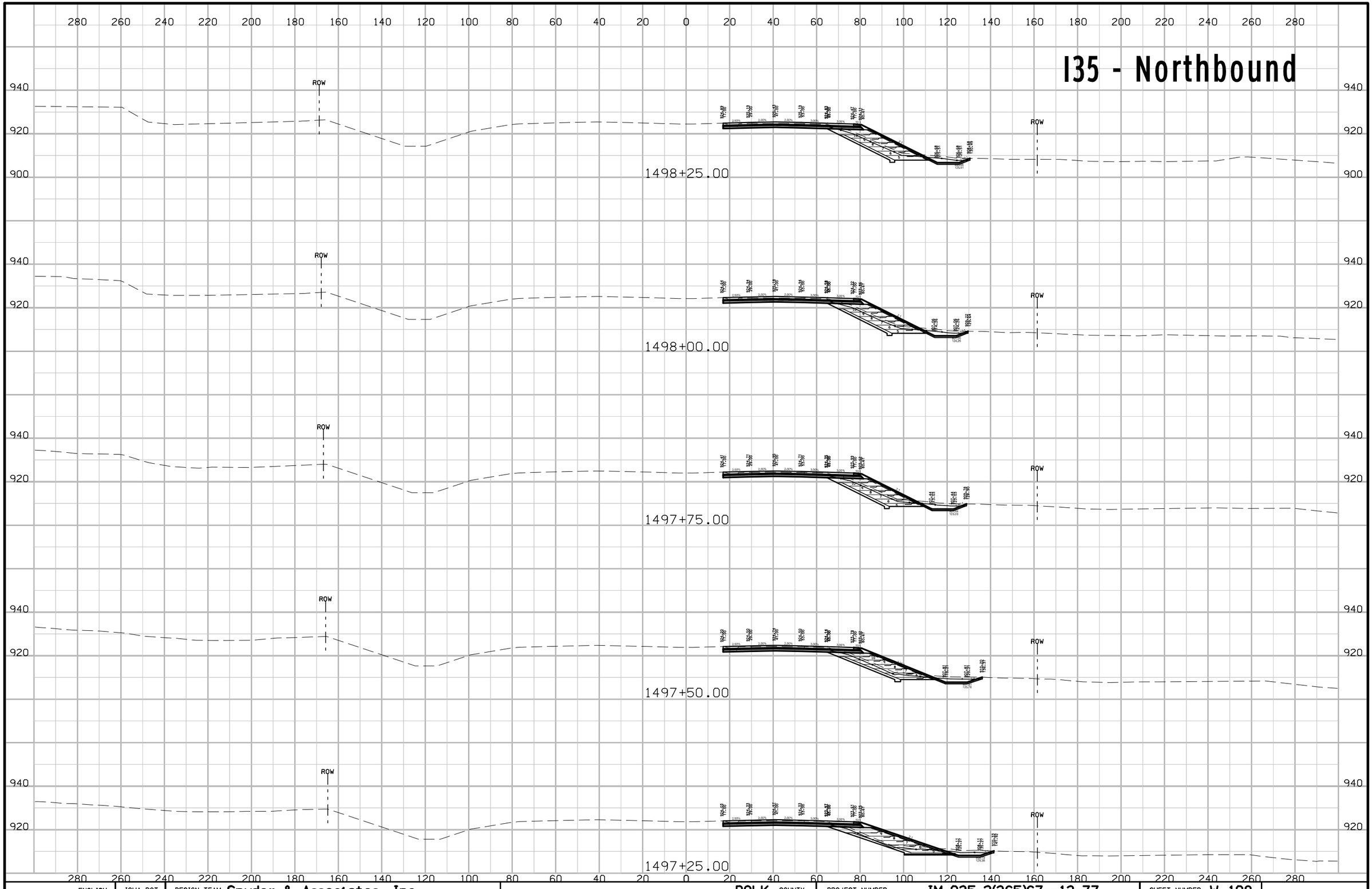
1496+25.00

1496+00.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.107

4:17:50 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.108

4:17:55 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

920
900

ROW

1499+50.00

940
920
900

ROW

1499+25.00

940
920
900

ROW

1499+00.00

940
920
900

ROW

1498+75.00

940
920
900

ROW

1498+50.00

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.109

4:18:00 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

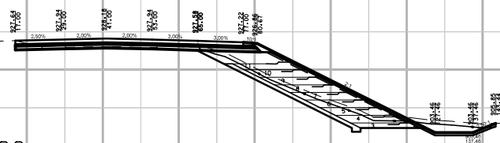
I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

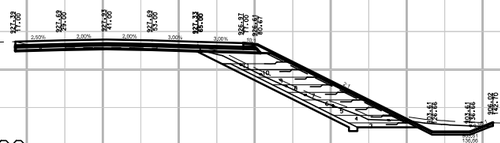
920
900

ROW

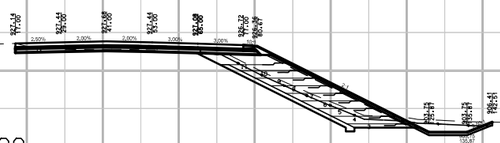
1501+00.00



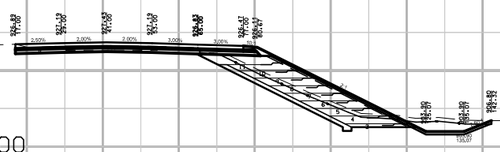
1500+75.00



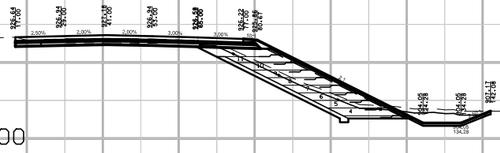
1500+50.00



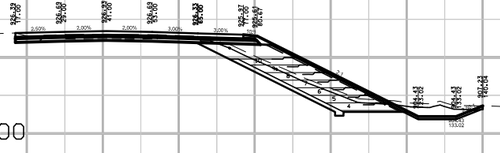
1500+25.00



1500+00.00



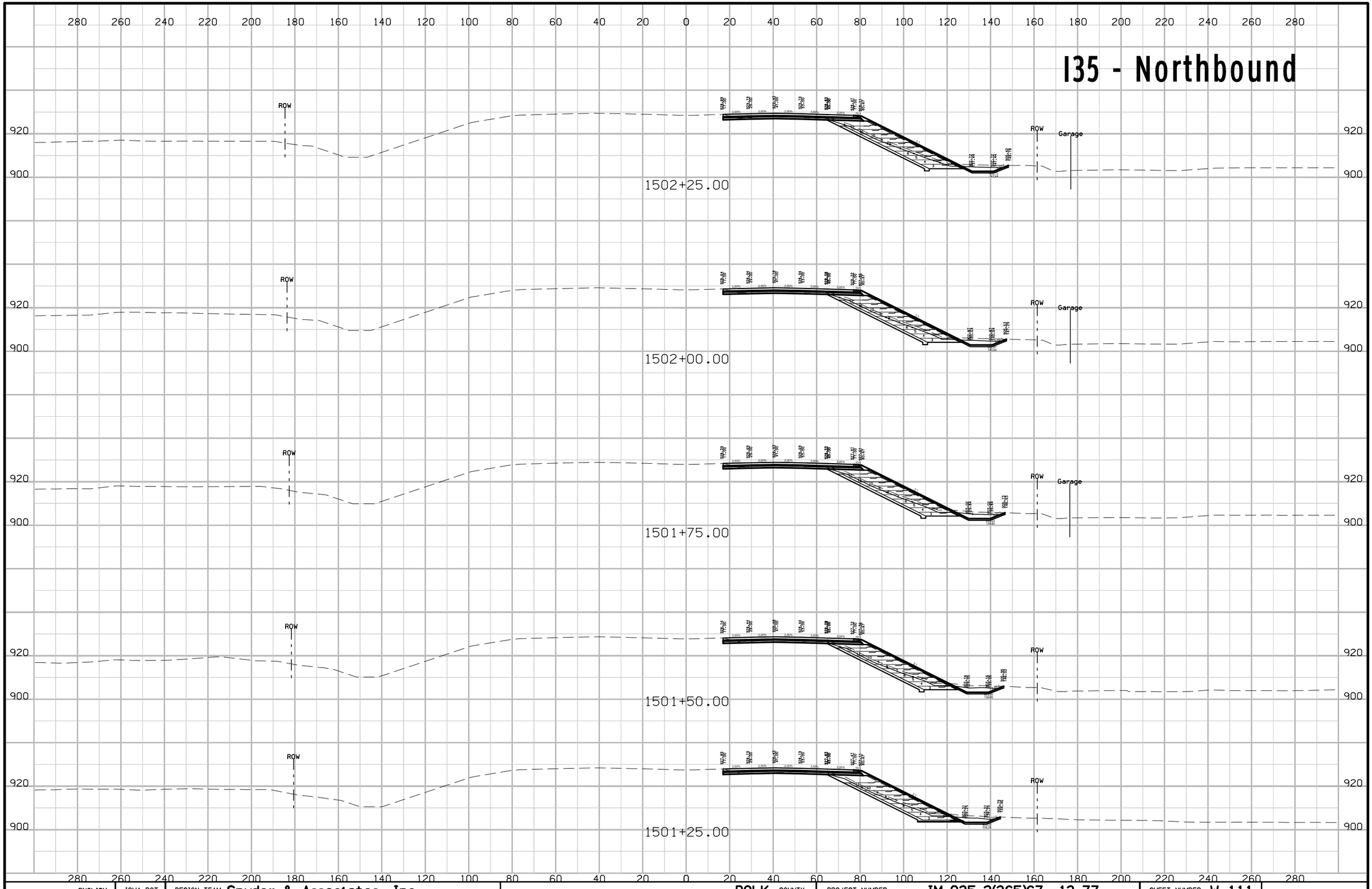
1499+75.00



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.110

4:18:04 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

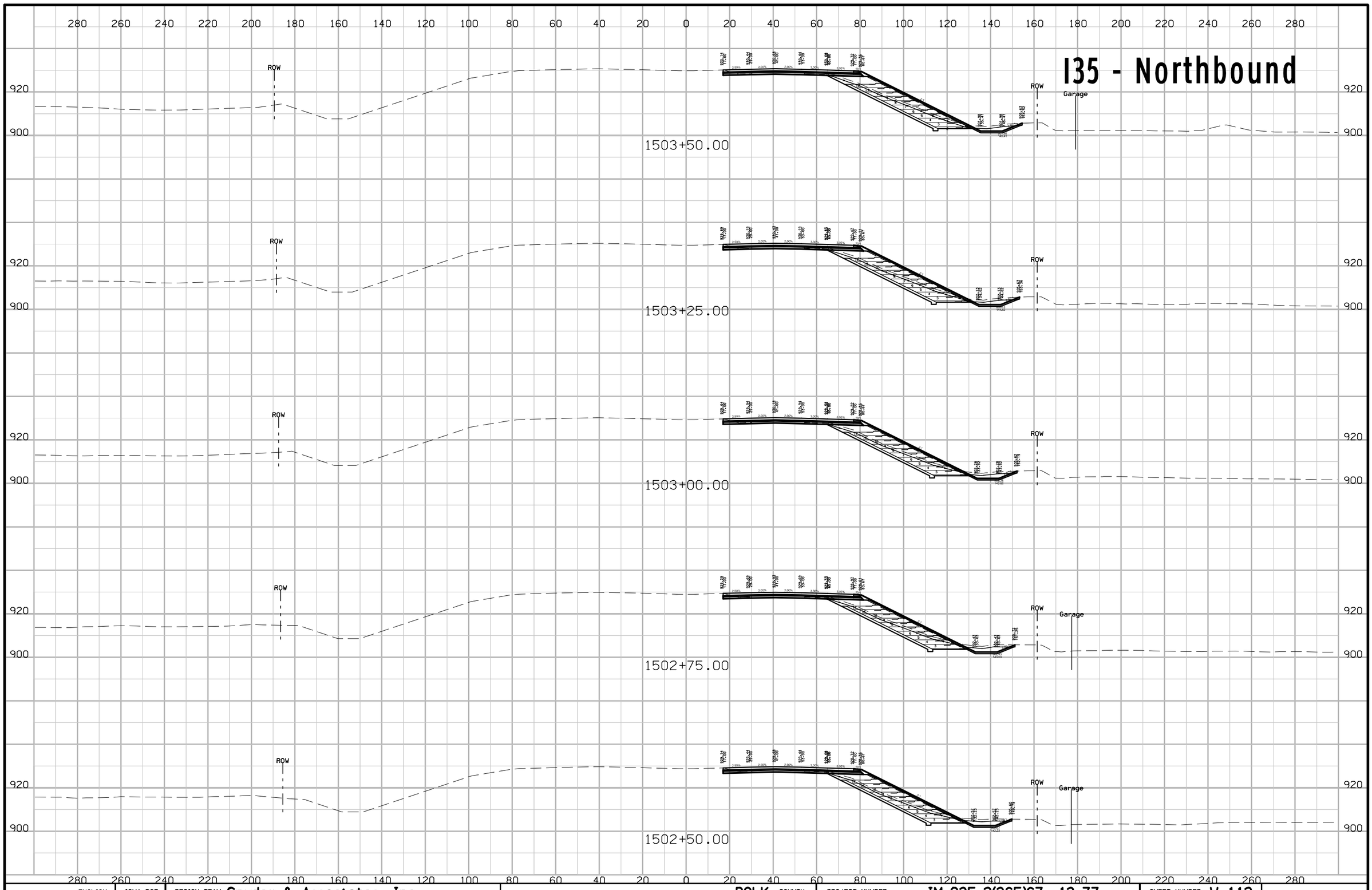
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.111

4:18:09 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

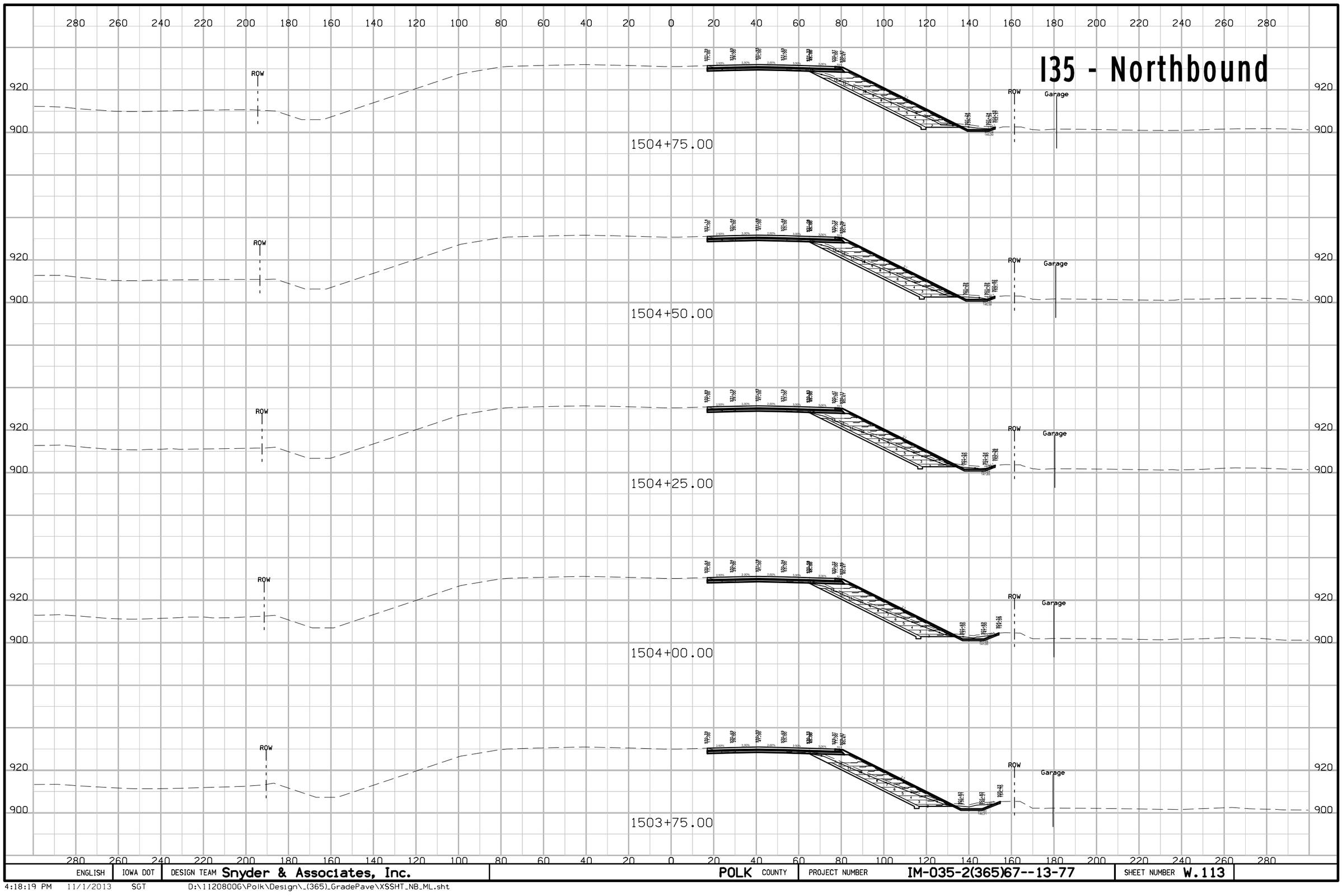
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.112

4:18:14 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

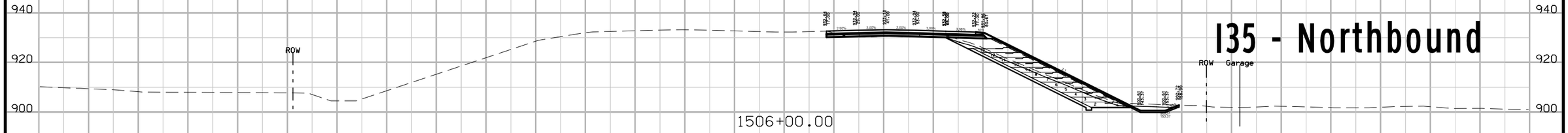
I35 - Northbound



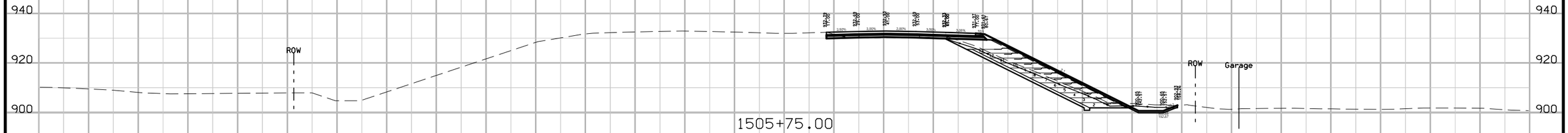
ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.113

I35 - Northbound

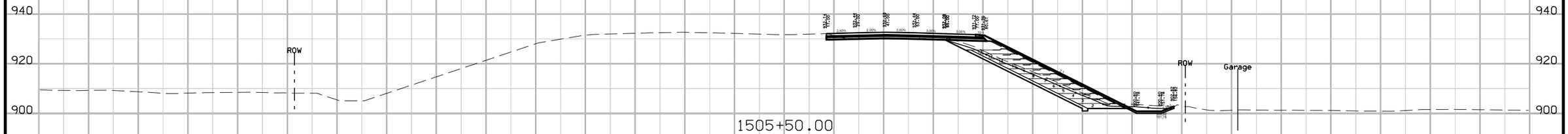
1506+00.00



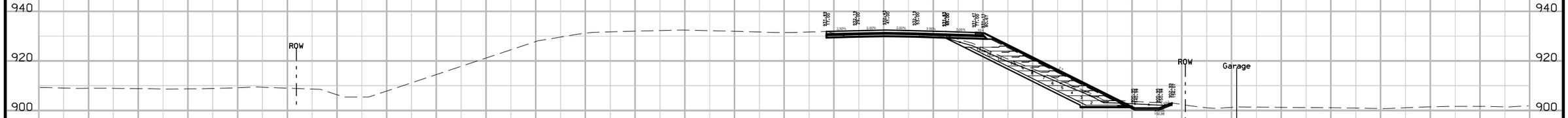
1505+75.00



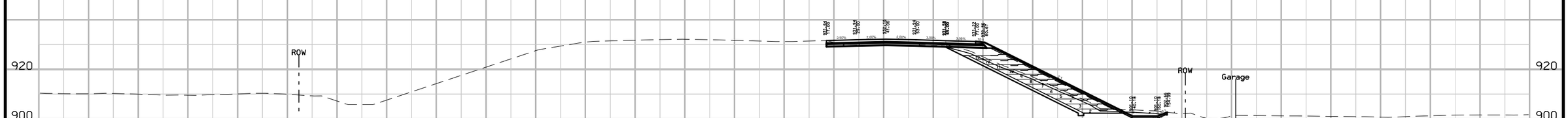
1505+50.00



1505+25.00



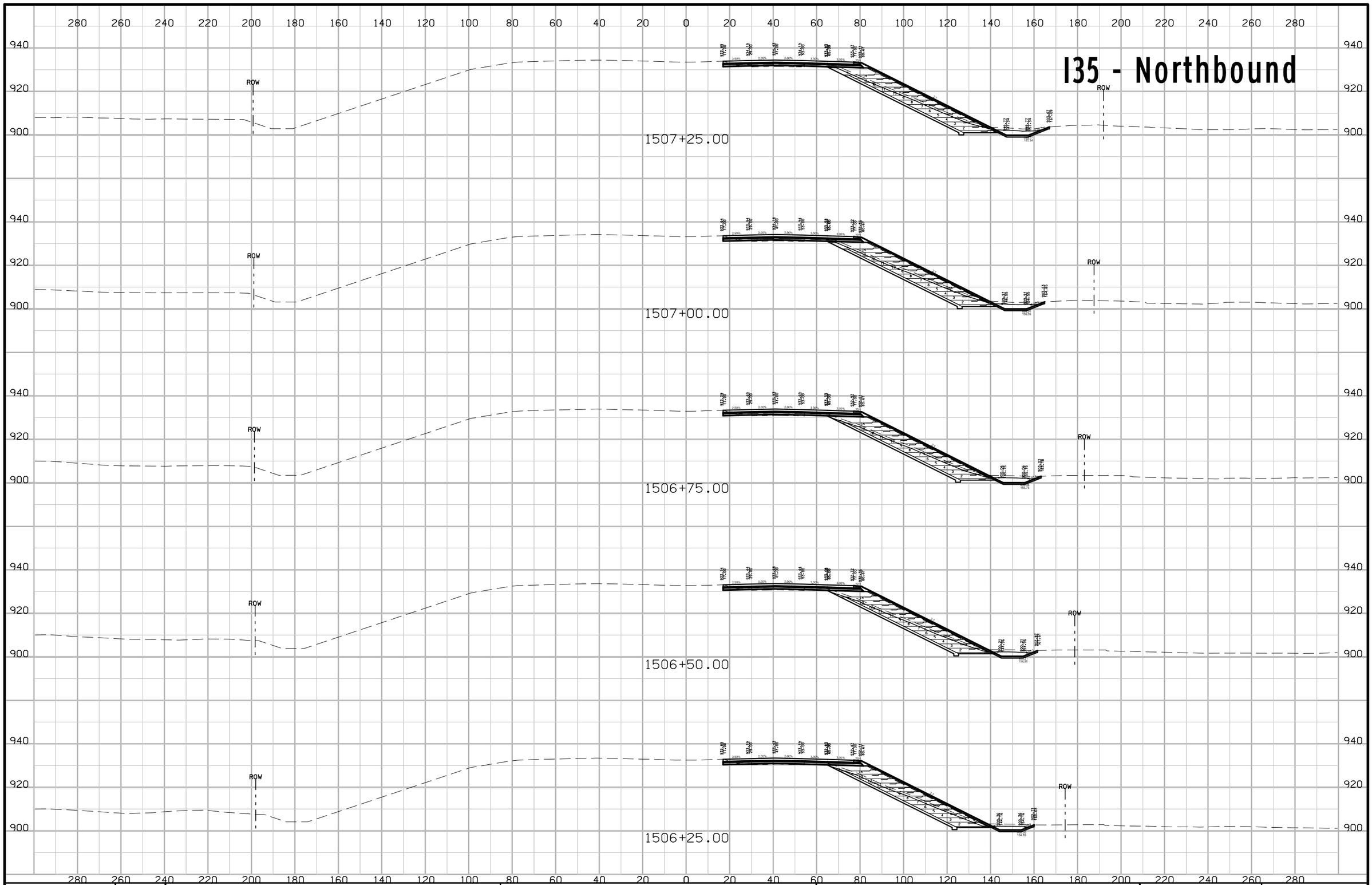
1505+00.00



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.114

4:18:23 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

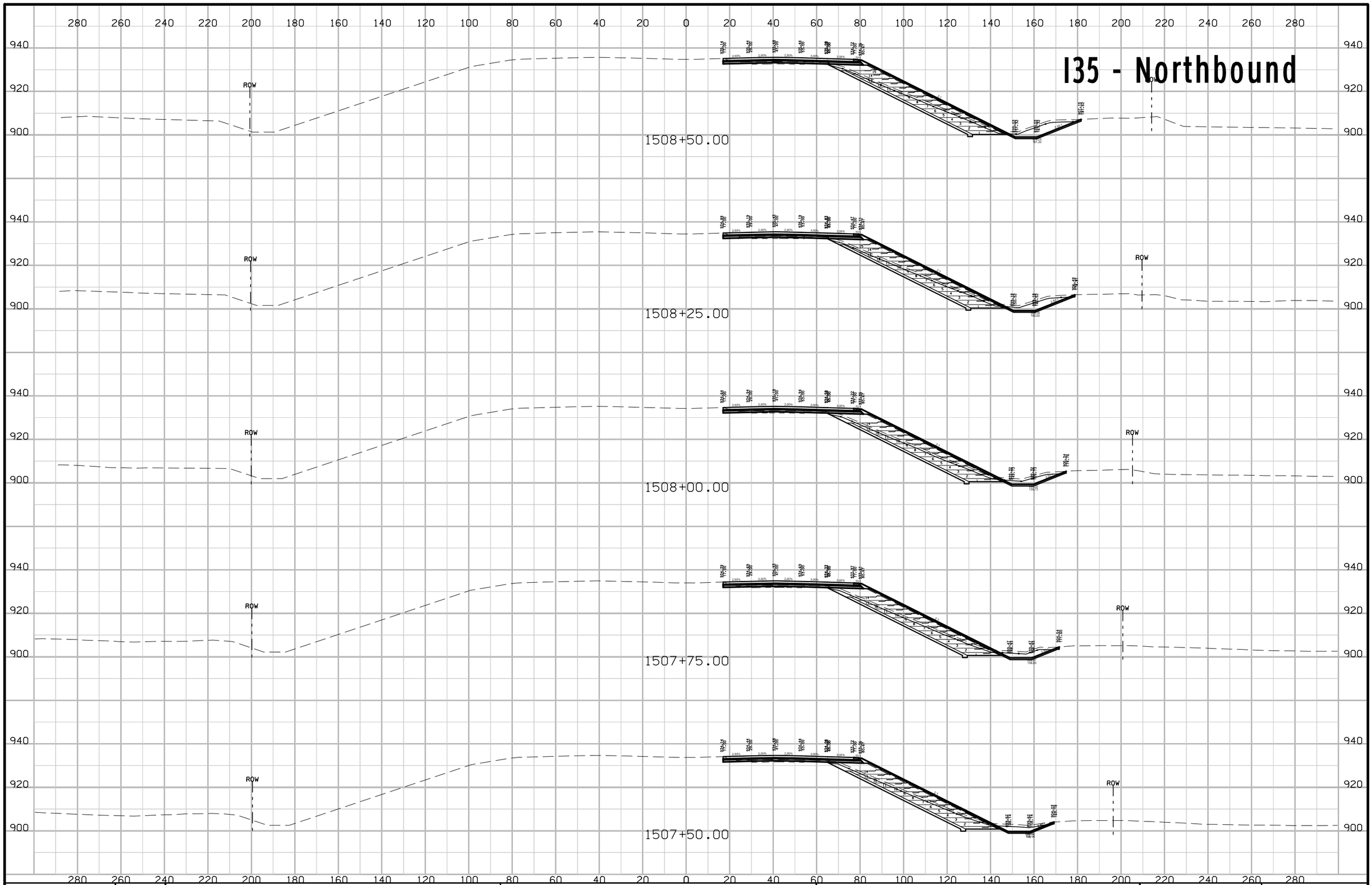
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.115

4:18:28 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

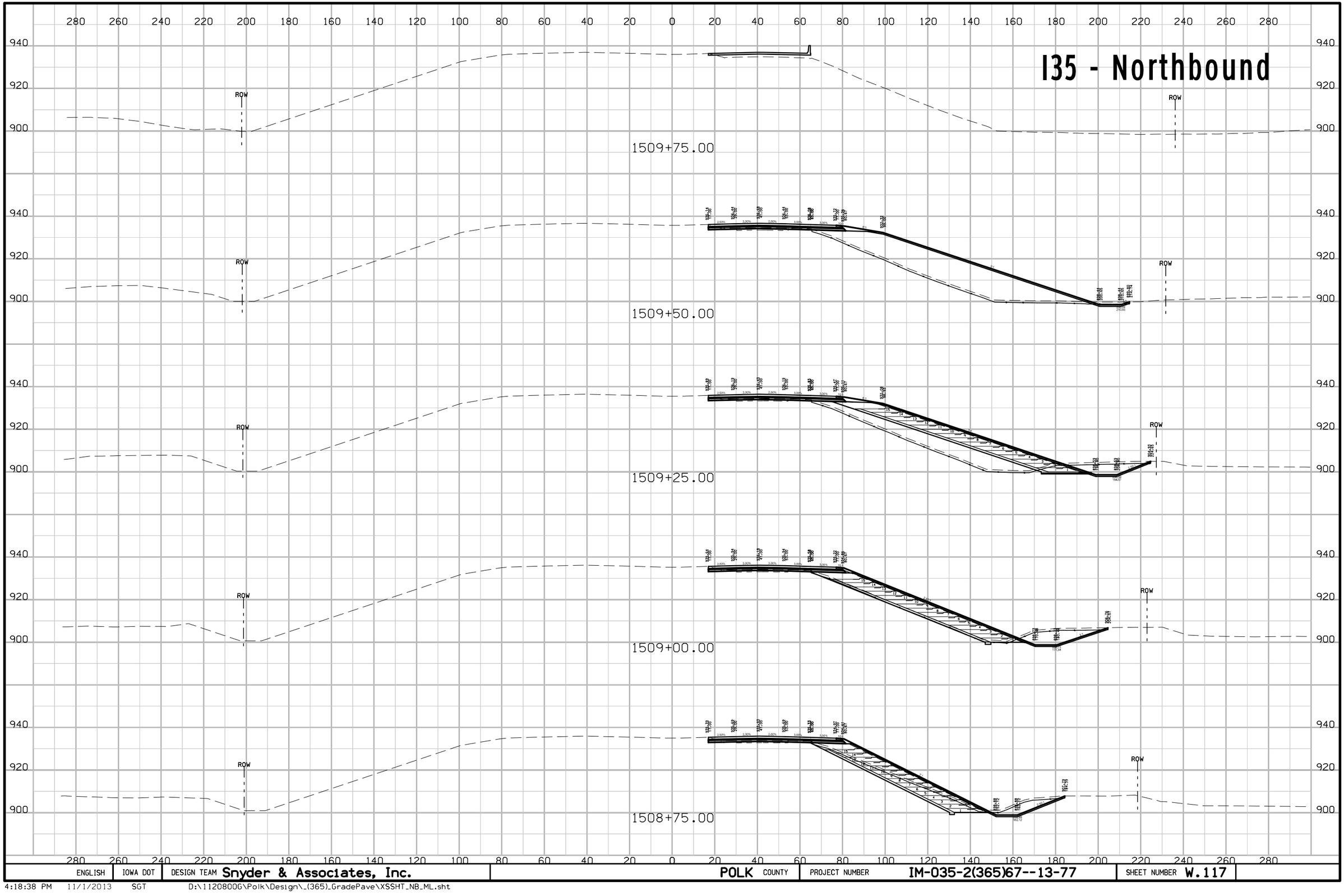
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.116

4:18:33 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

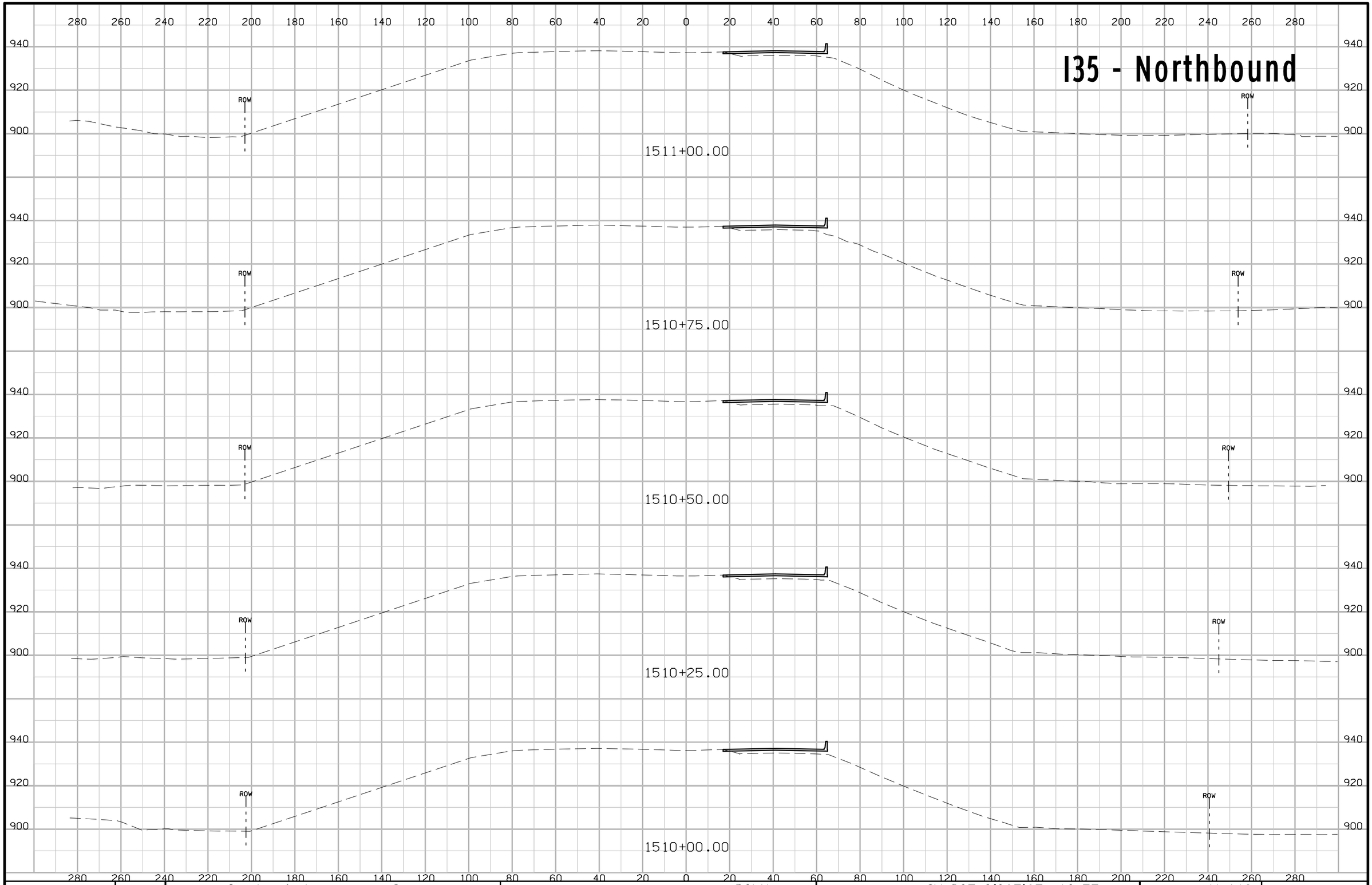
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.117

4:18:38 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.118

4:18:42 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

940
920
900
880

ROW

1512+00.00

940
920
900

ROW

1511+75.00

940
920
900

ROW

1511+50.00

940
920
900

ROW

1511+25.00

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.119

4:18:47 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

940
920
900
880

ROW

1513+00.00

1512+75.00

1512+50.00

1512+25.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.120

4:18:52 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

940
920

ROW

1514+25.00

940
920

ROW

1514+00.00

940
920
900

ROW

1513+75.00

940
920
900

ROW

1513+50.00

940
920
900

ROW

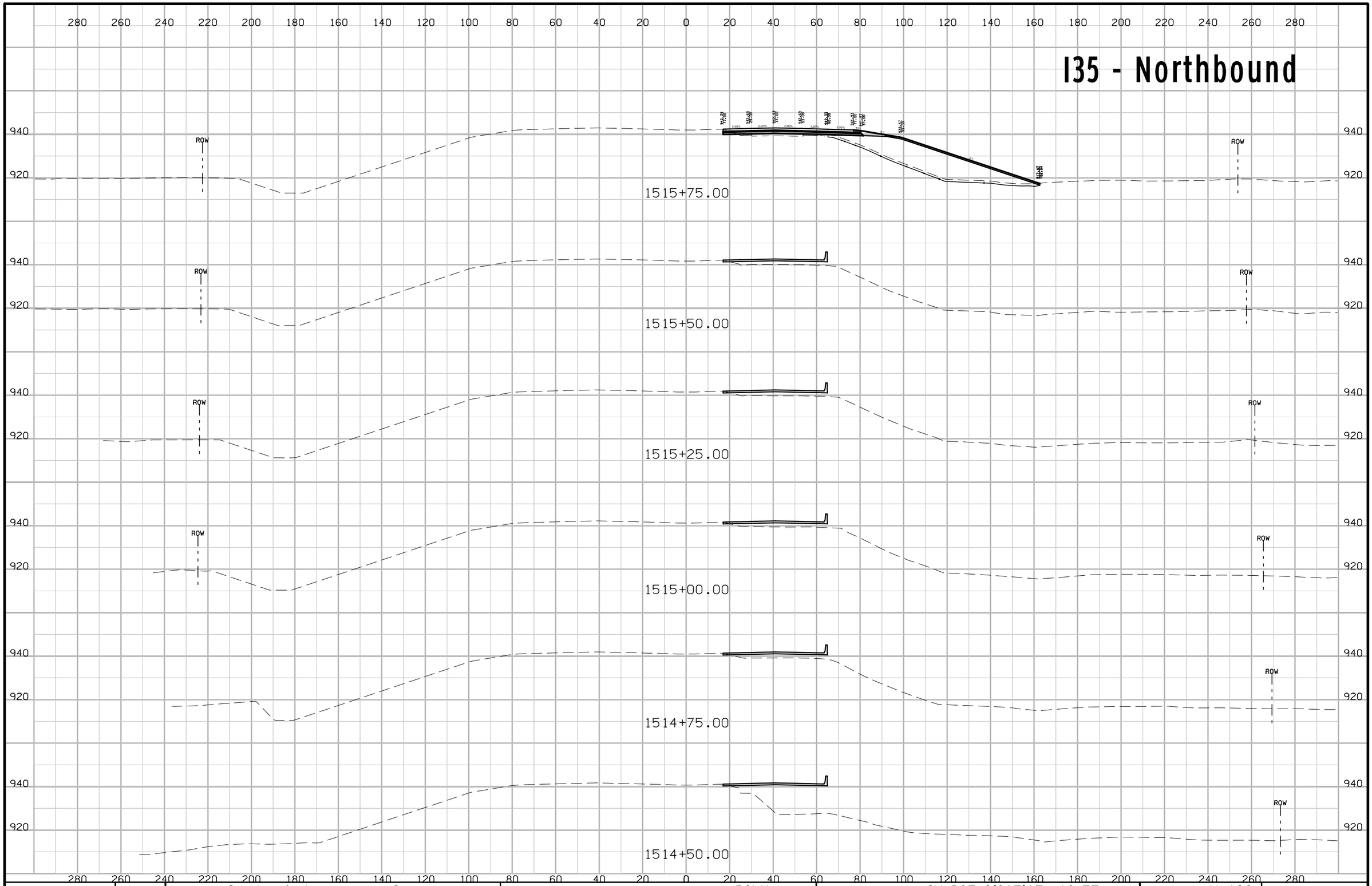
1513+25.00

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.121

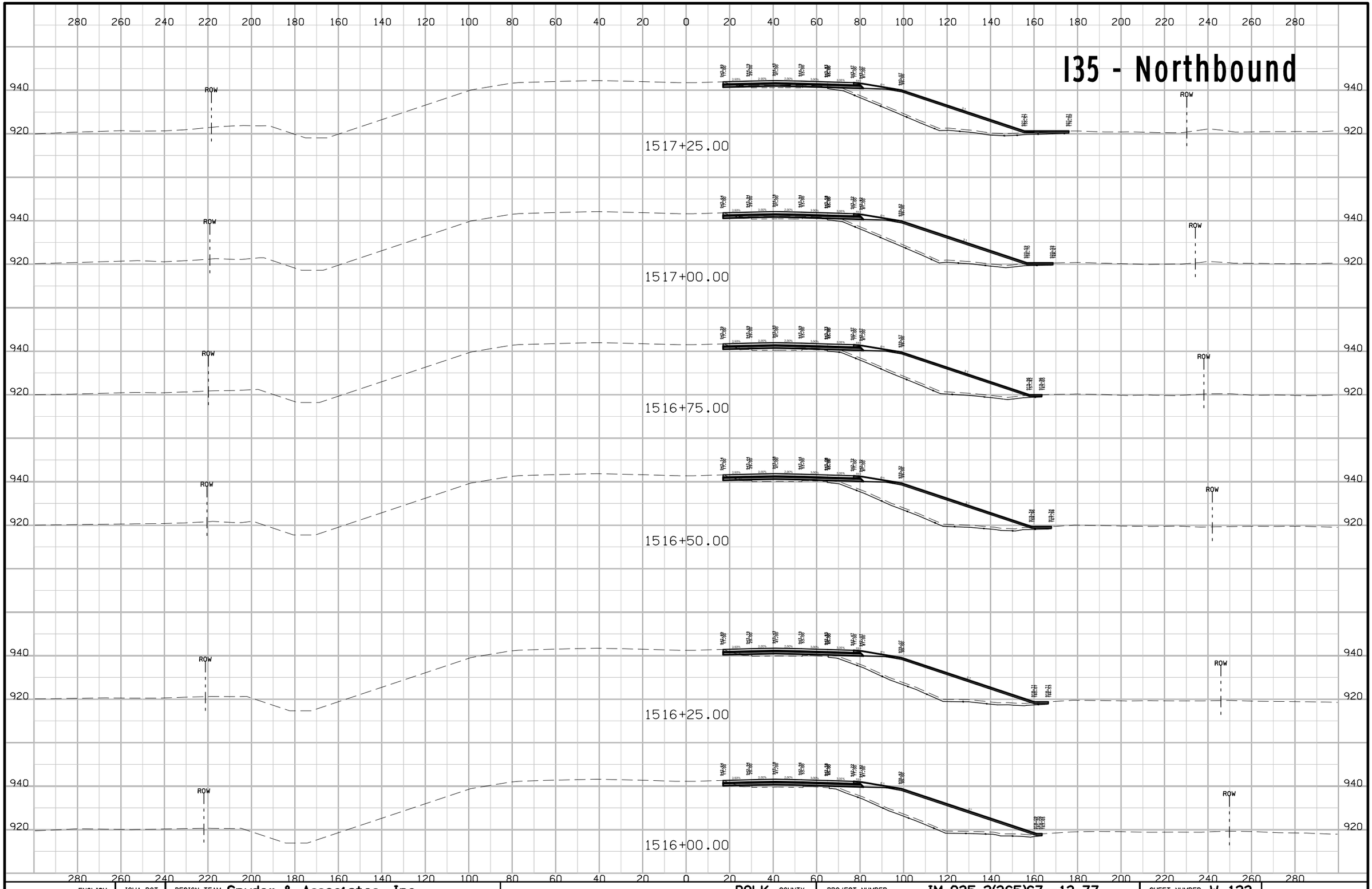
4:18:57 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.122

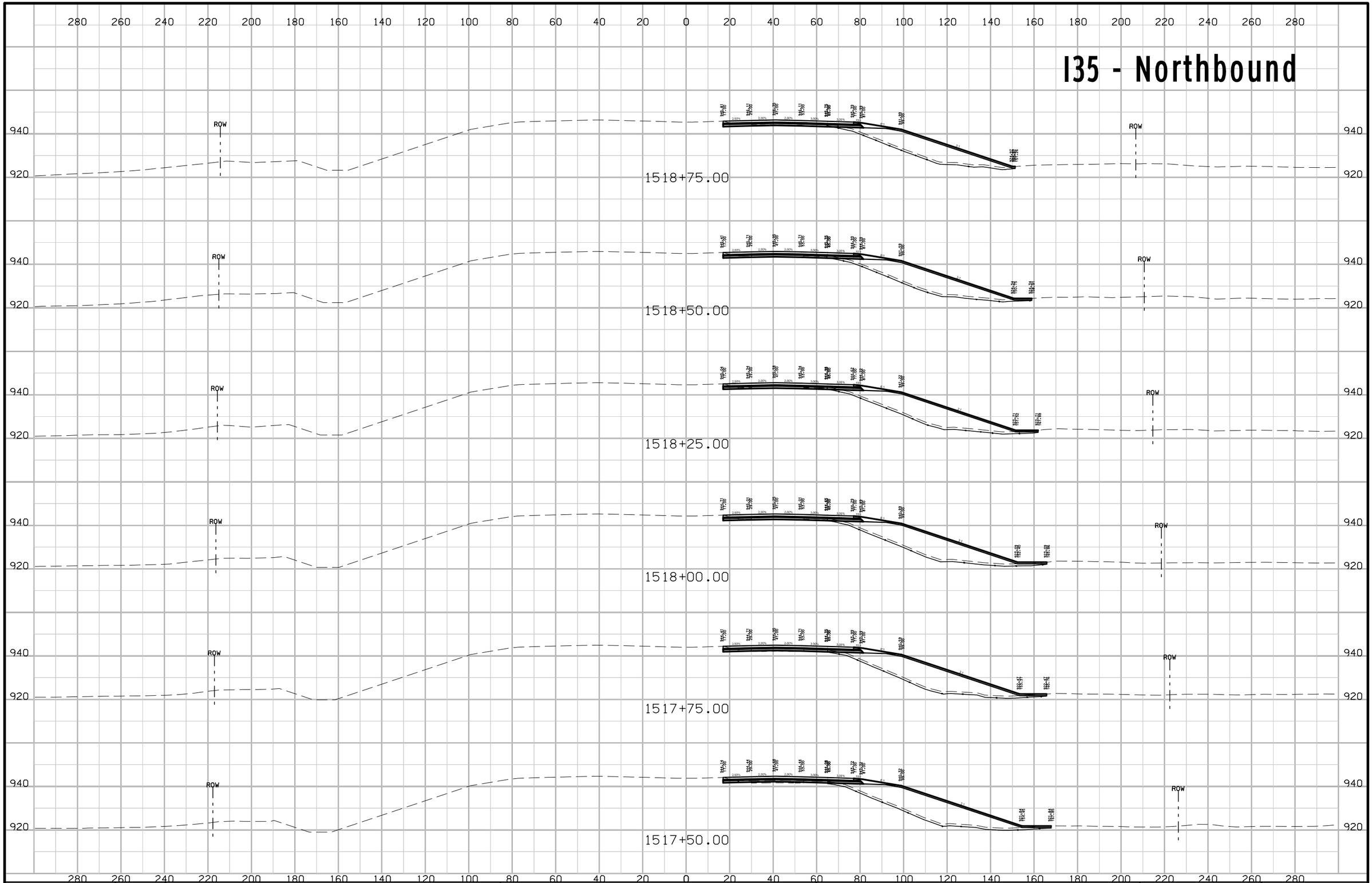
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.123

4:19:06 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.124

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

940

ROW

1520+25.00

1520+00.00

1519+75.00

1519+50.00

1519+25.00

940

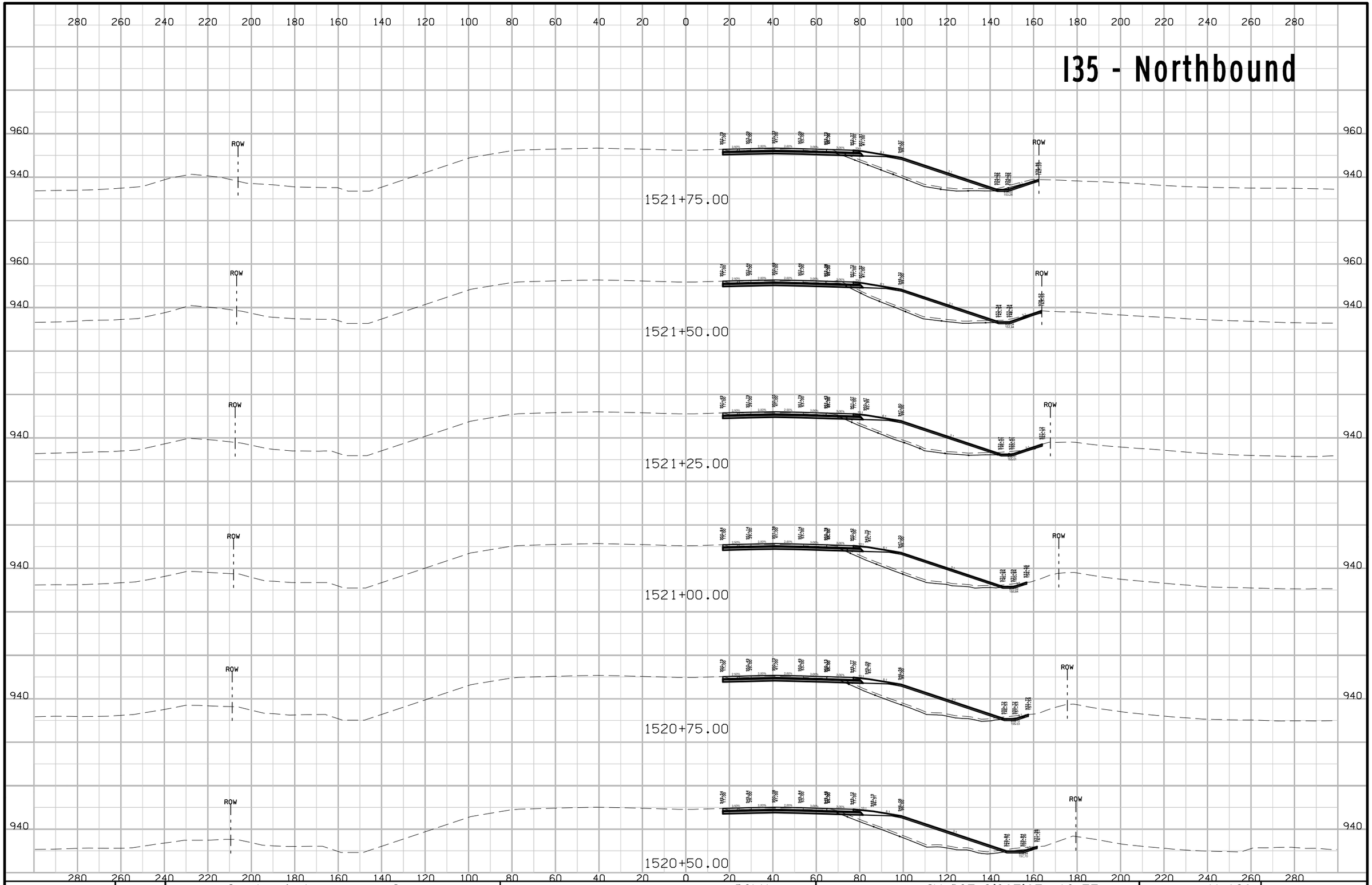
920

1519+00.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.125

4:19:16 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

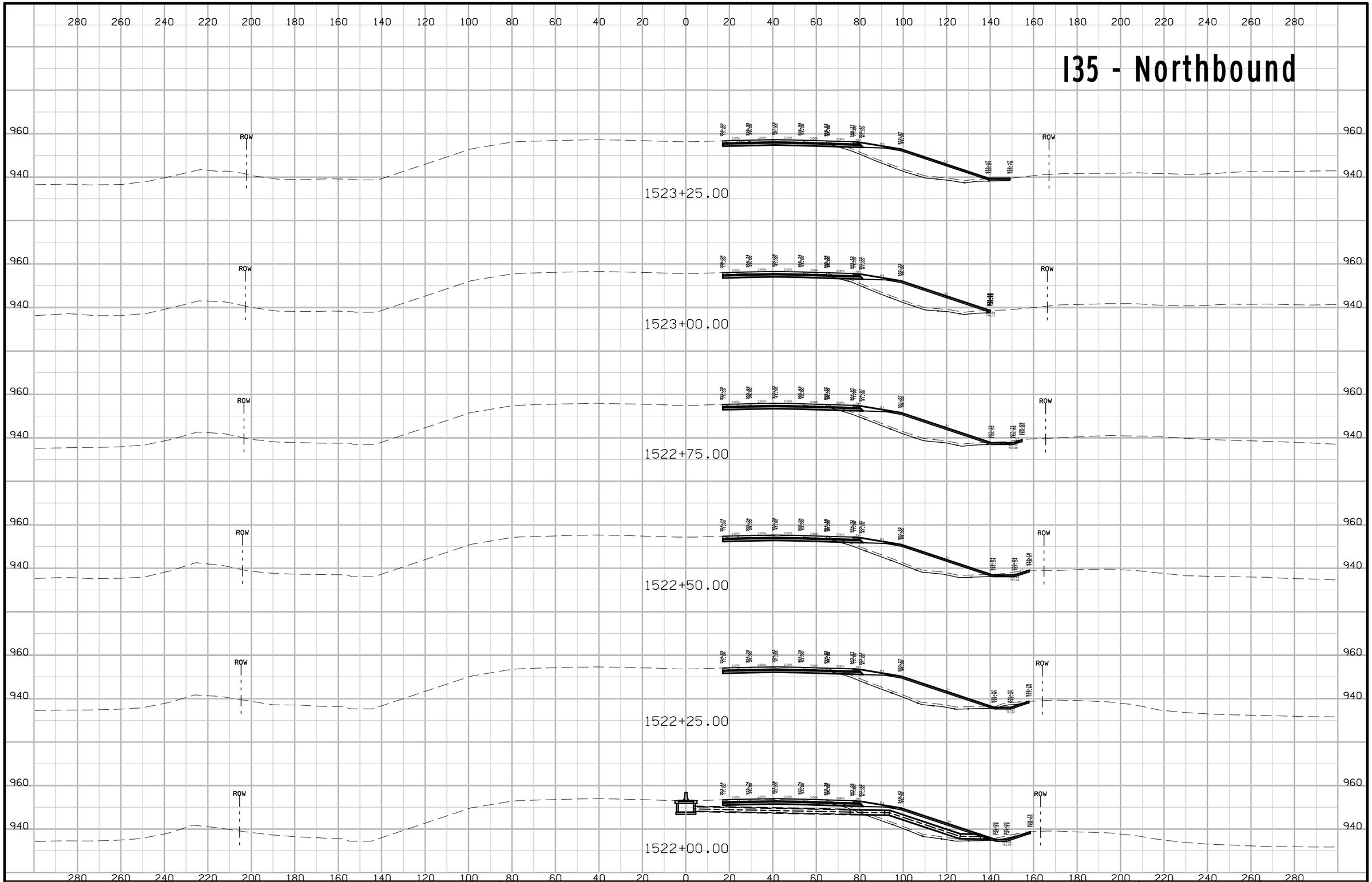
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.126

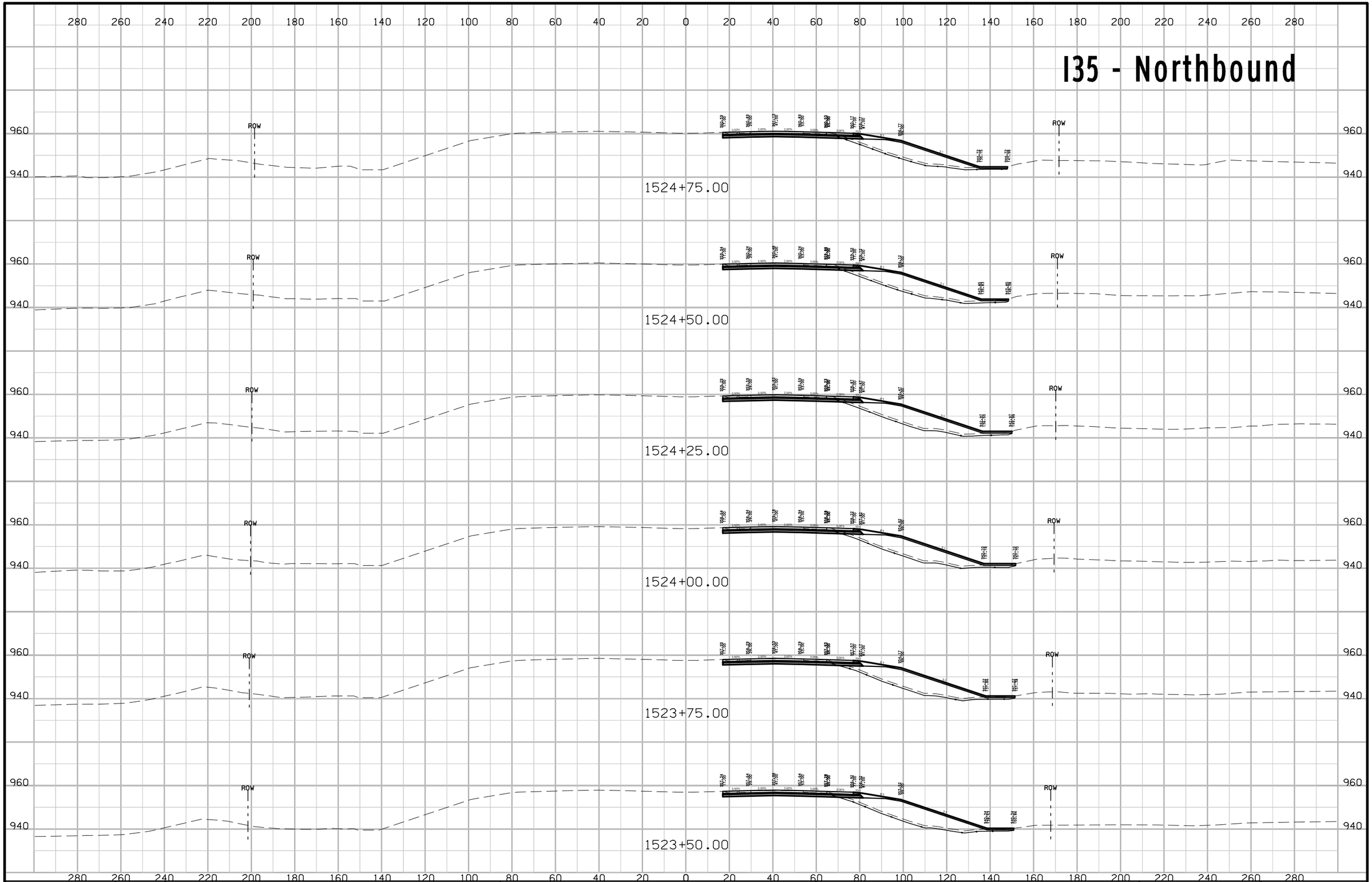
4:19:21 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



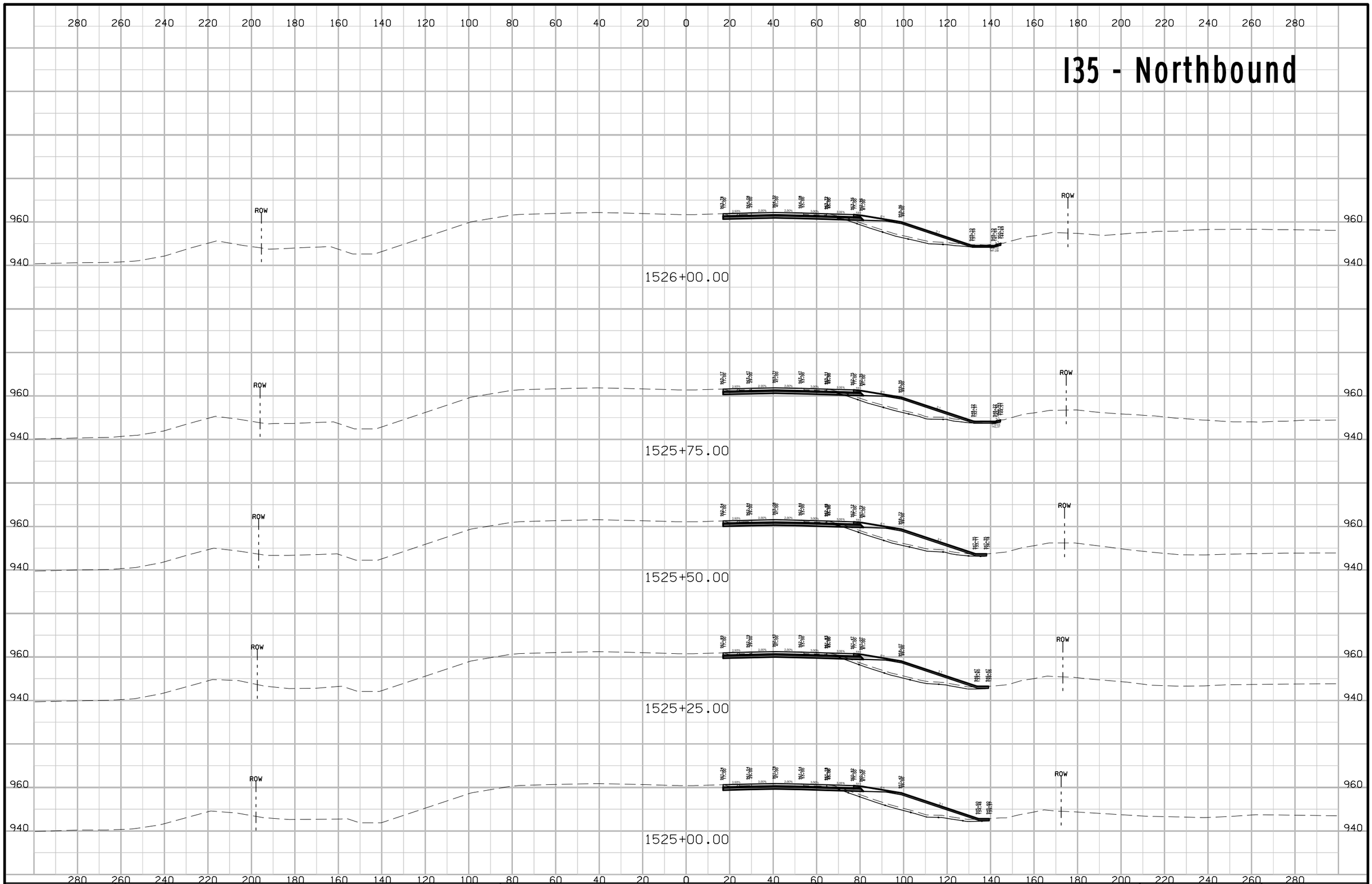
ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.127

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.128

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.129

4:19:35 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

980
960
940

ROW

1527+25.00

1527+00.00

1526+75.00

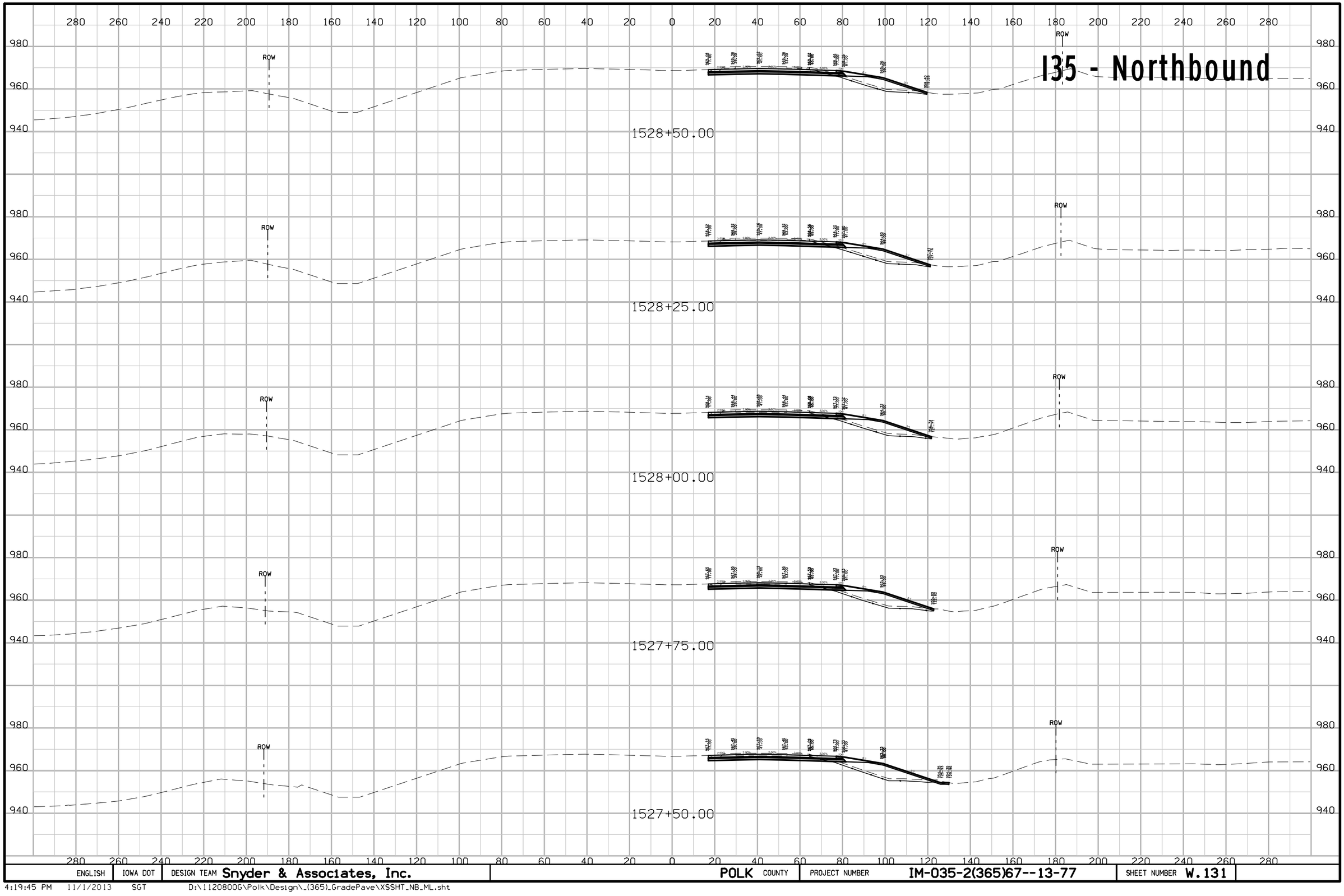
1526+50.00

1526+25.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.130

4:19:40 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

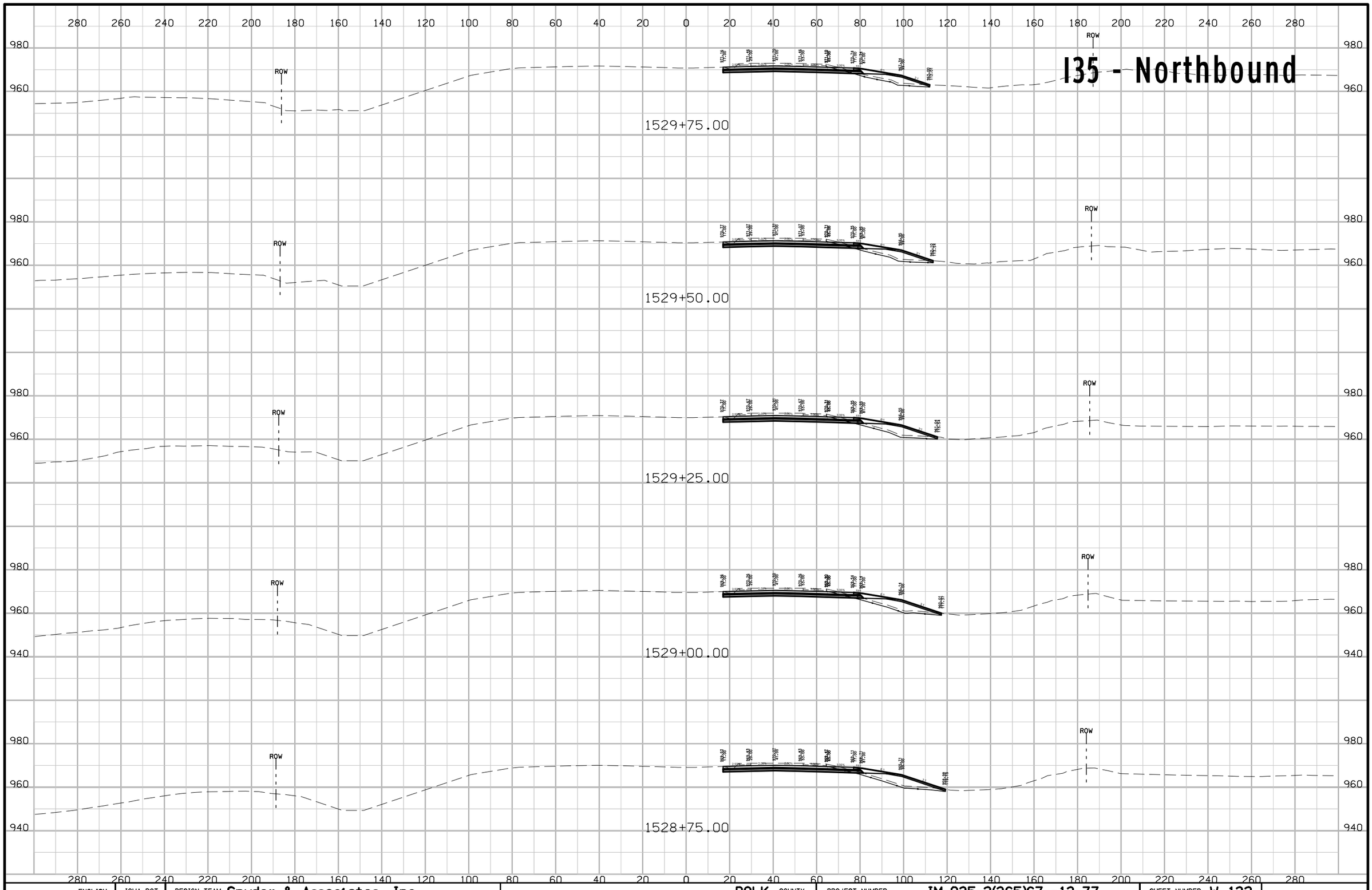
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.131

4:19:45 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

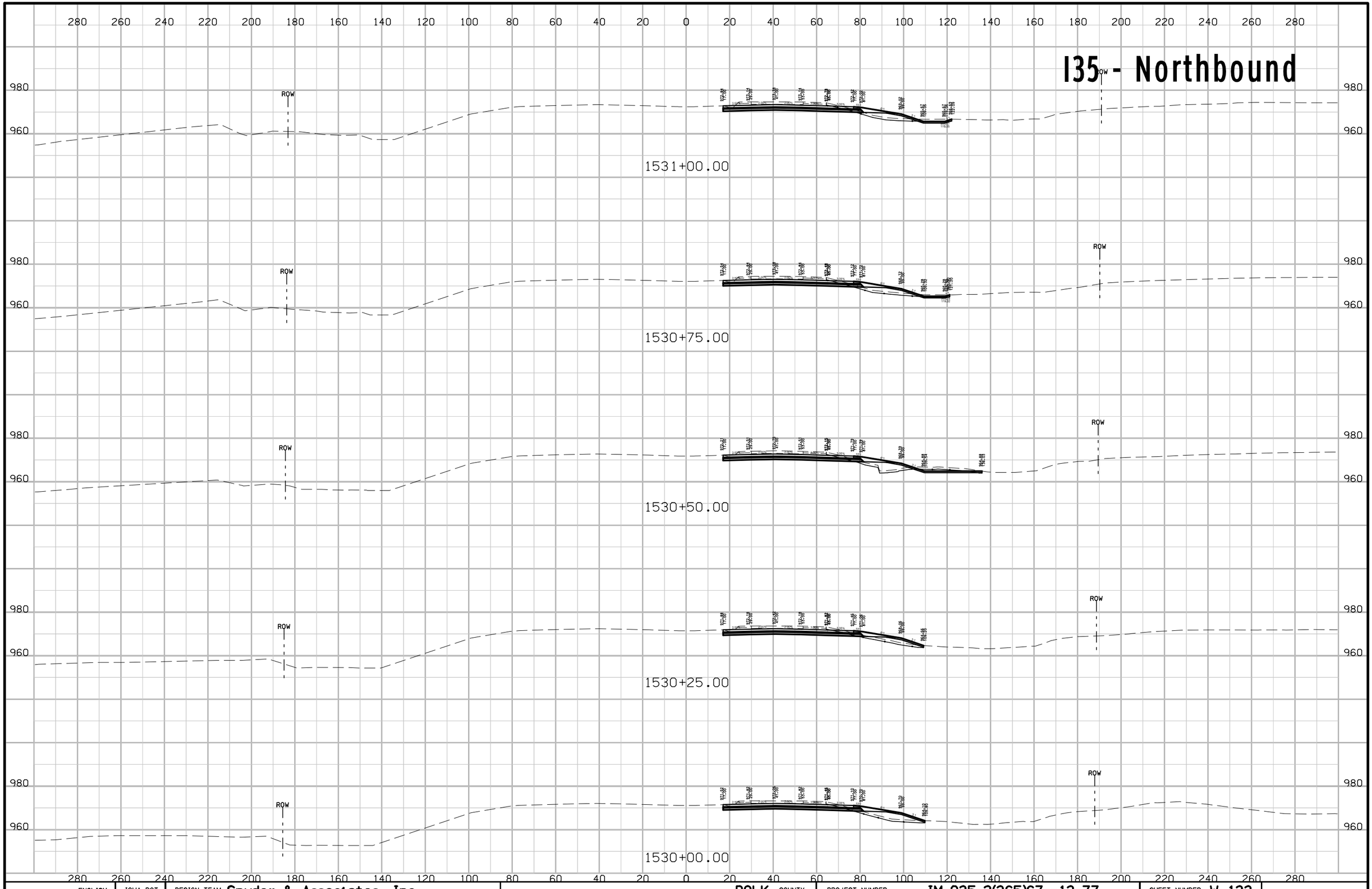
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.132

4:19:50 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.133

4:19:55 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

980
960

ROW

1532+25.00

1532+00.00

1531+75.00

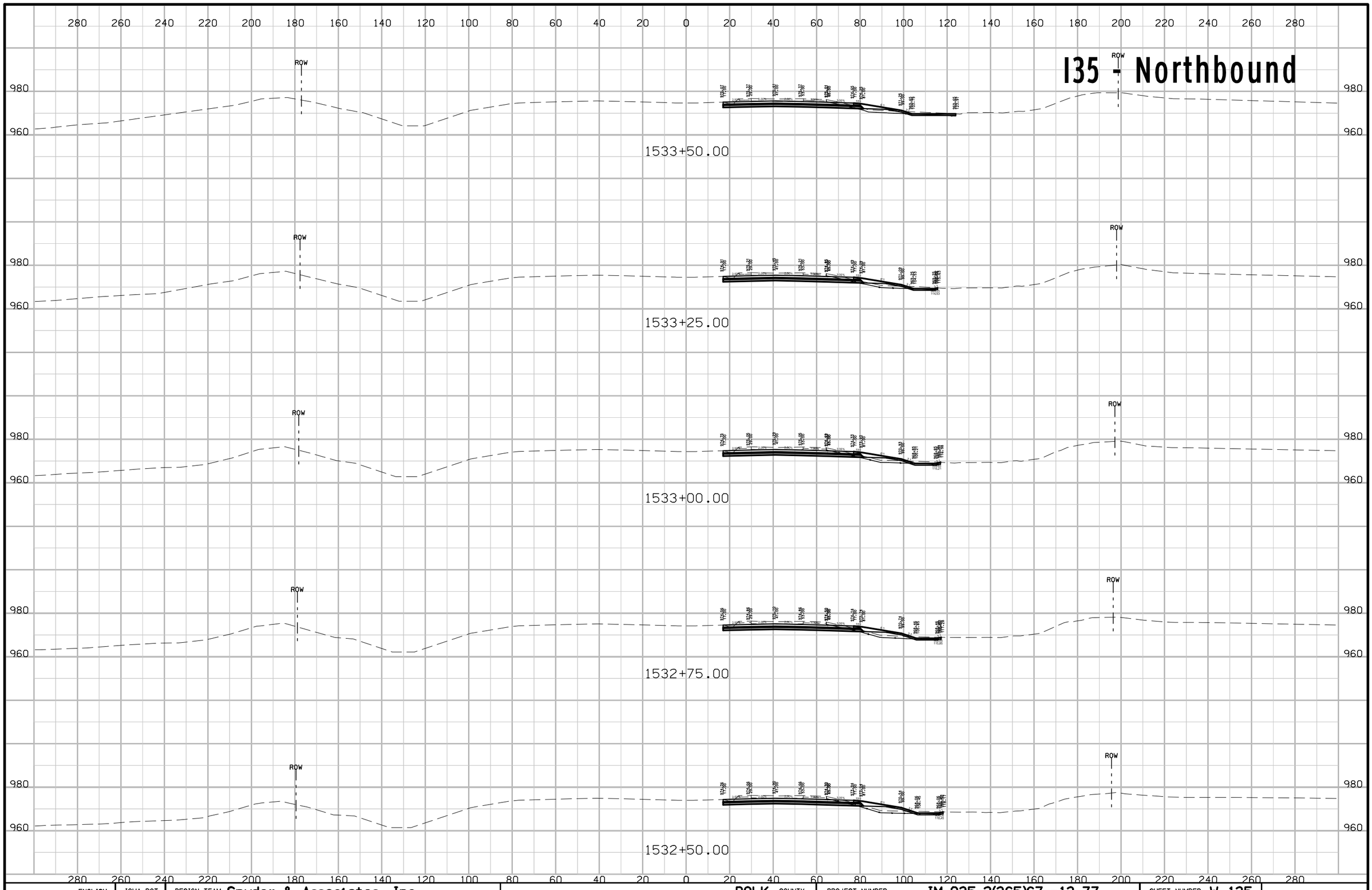
1531+50.00

1531+25.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.134

4:20:00 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

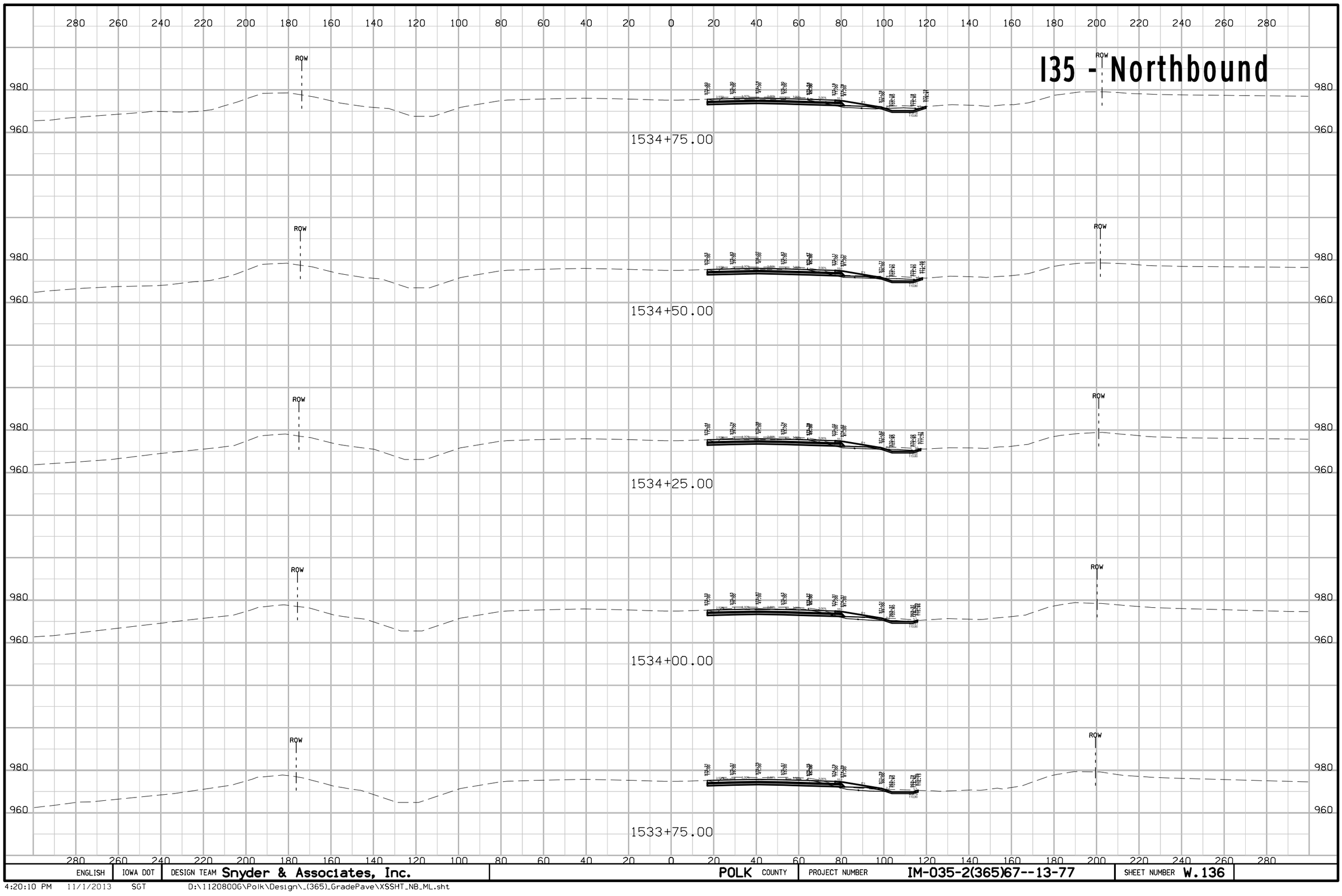
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.135

4:20:05 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

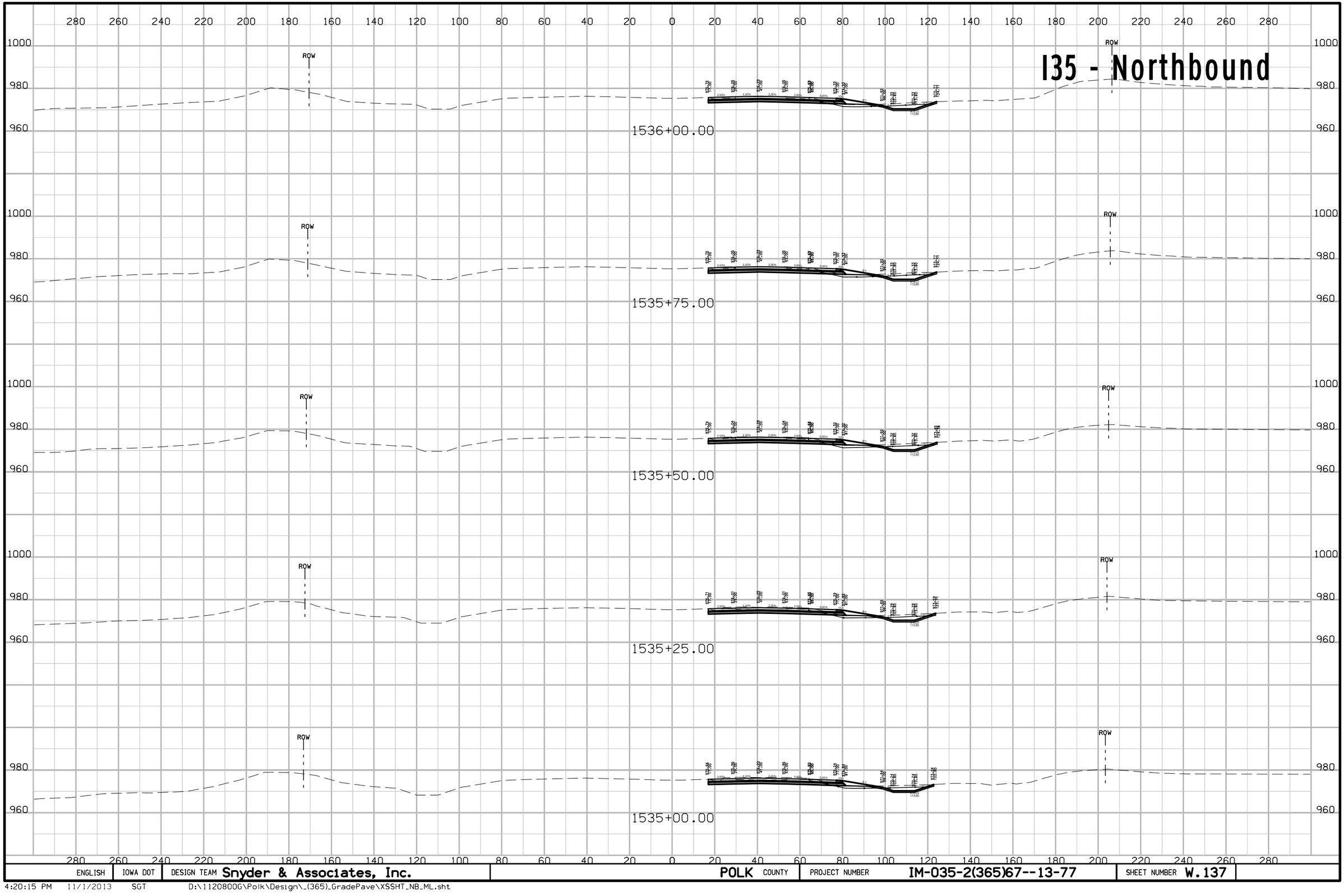
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.136

4:20:10 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

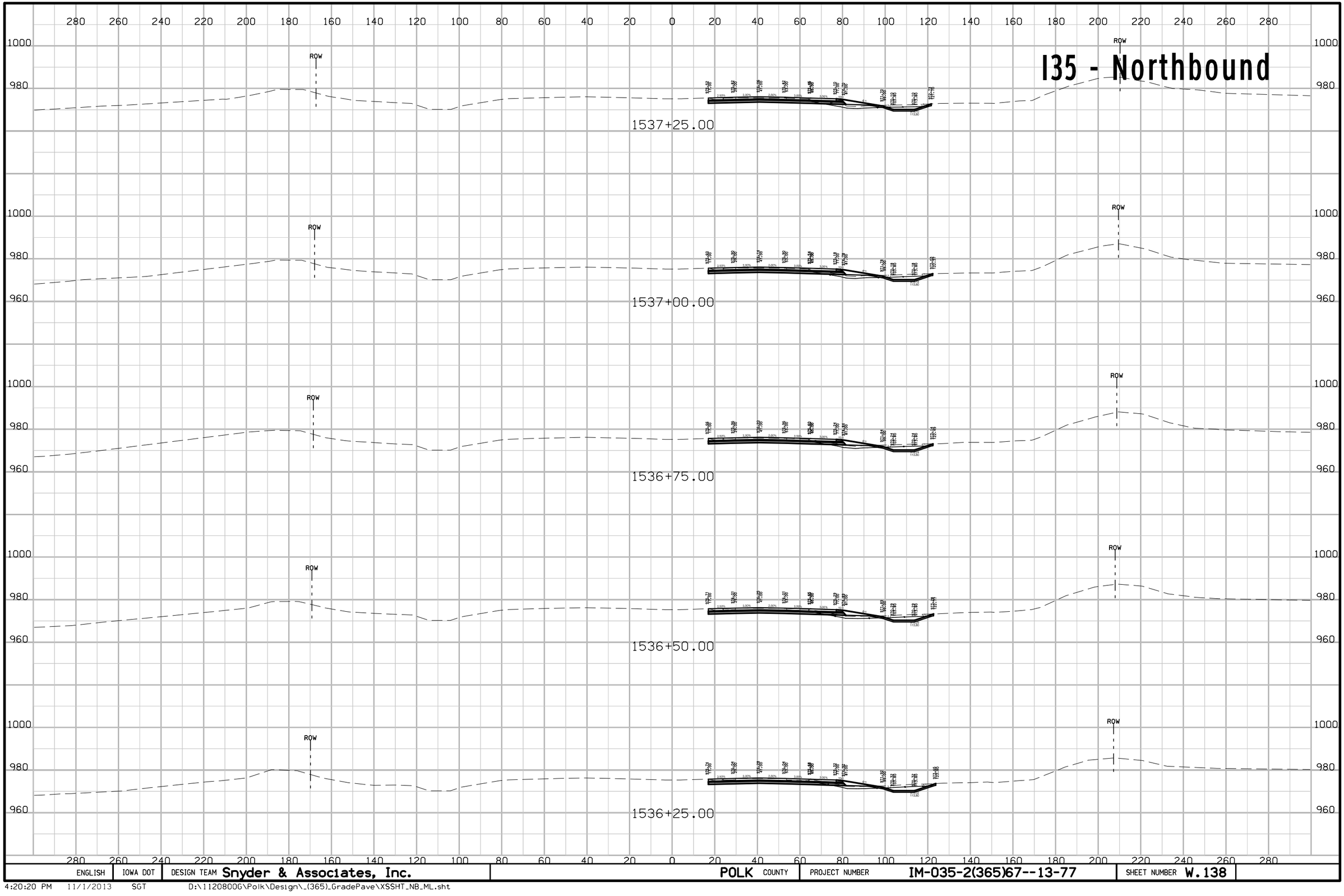
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.137

4:20:15 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

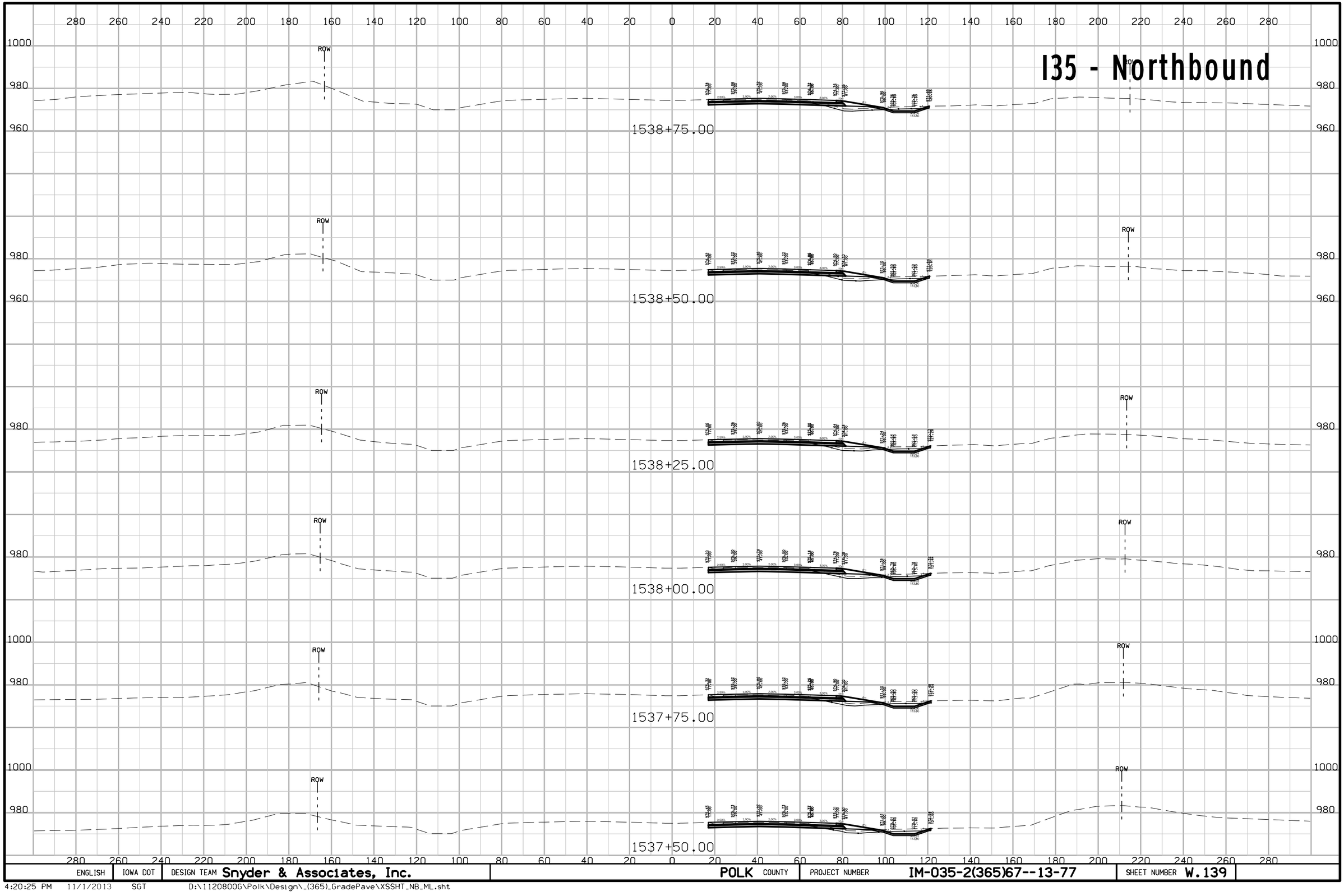
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.138

4:20:20 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

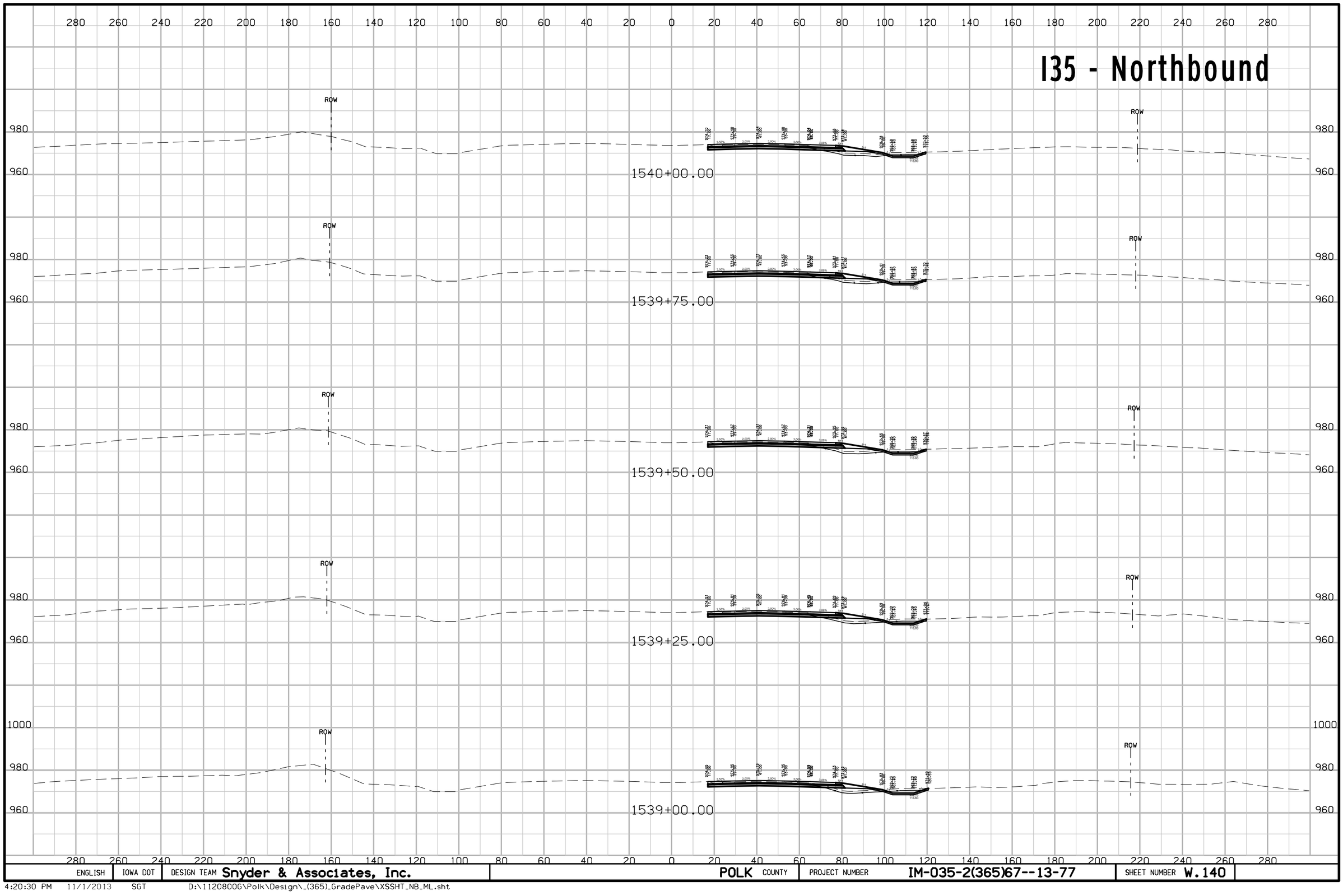
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.139

4:20:25 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

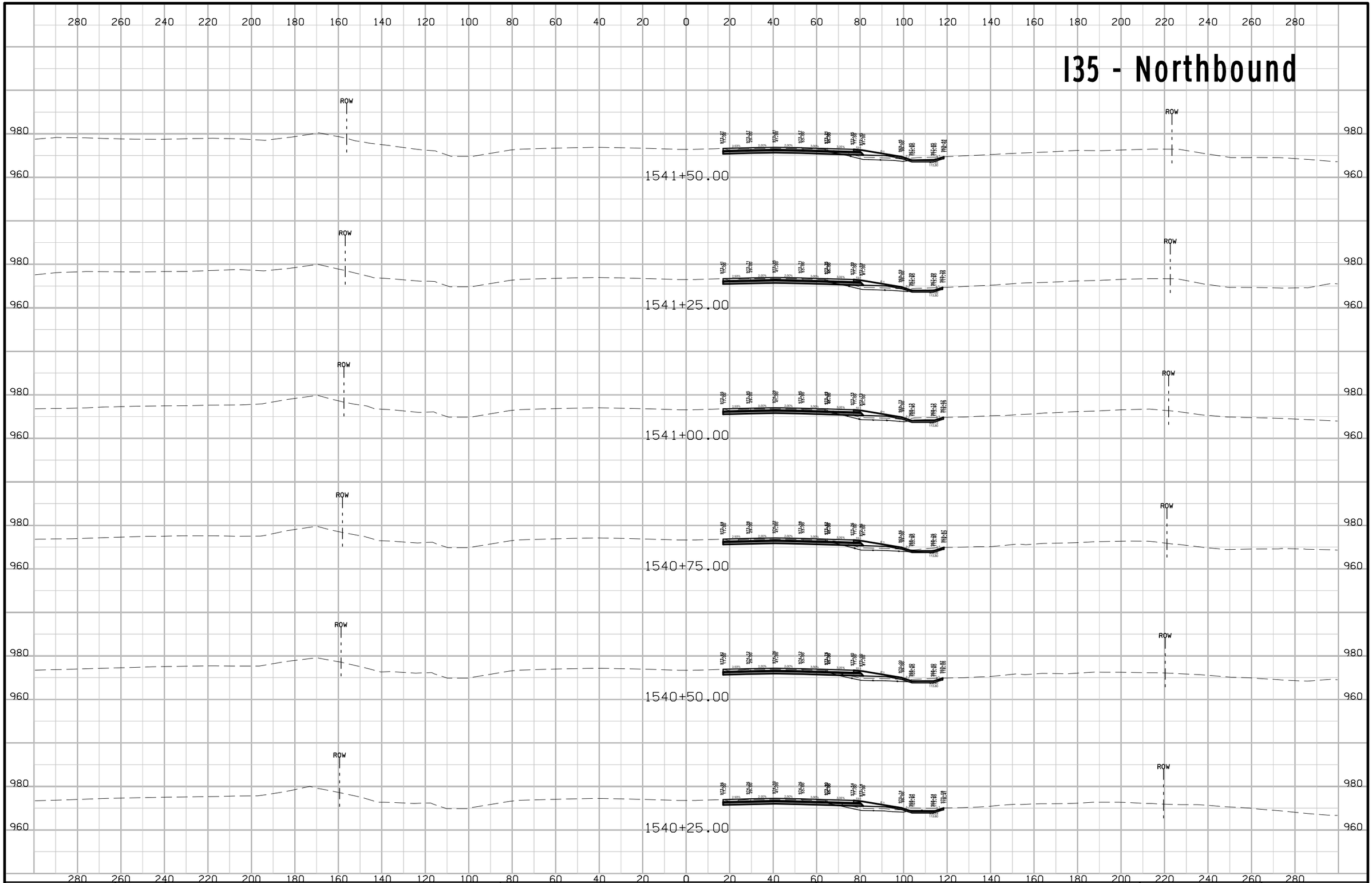
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.140

4:20:30 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.141

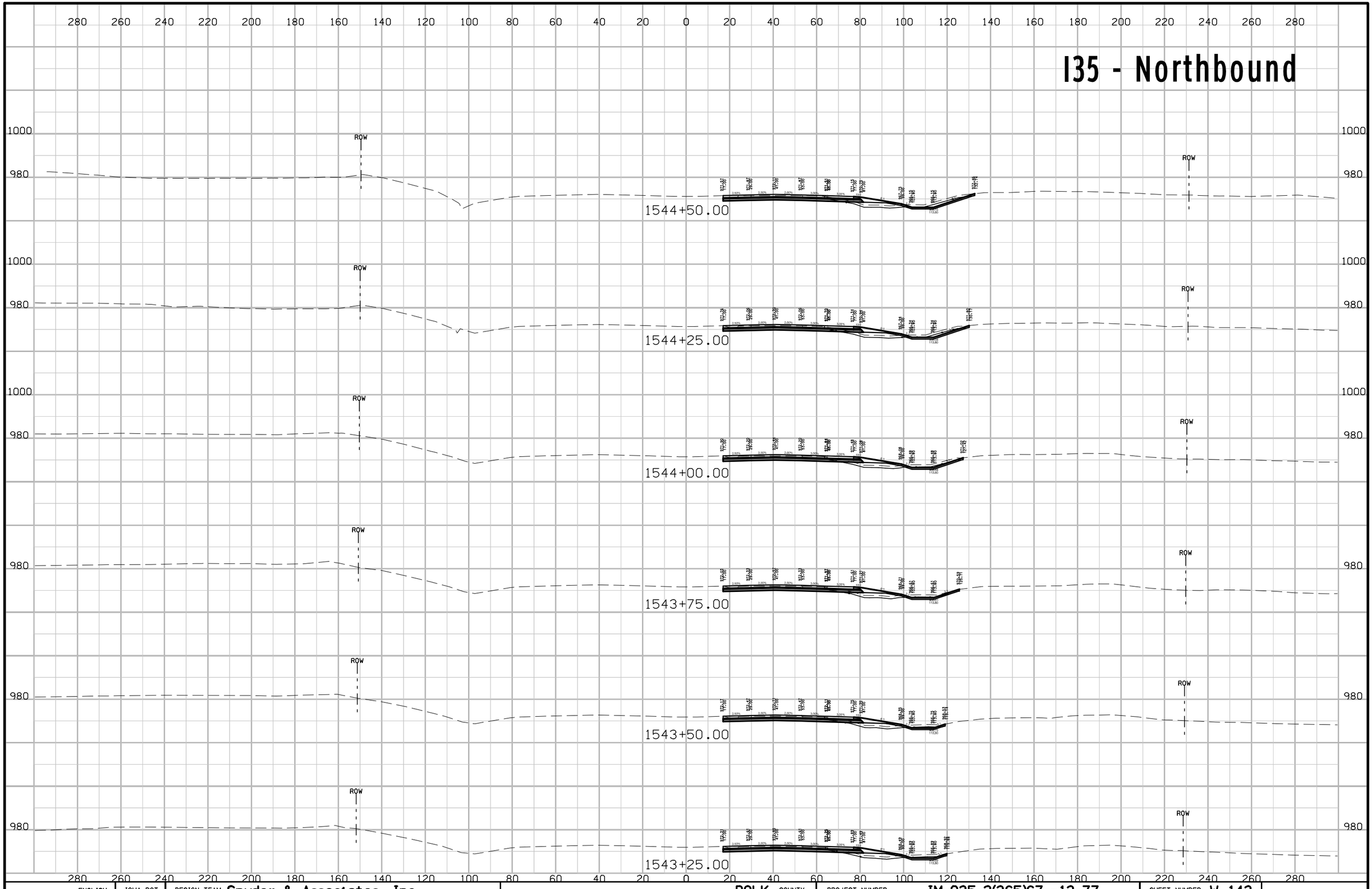
4:20:35 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.142

4:20:40 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.143

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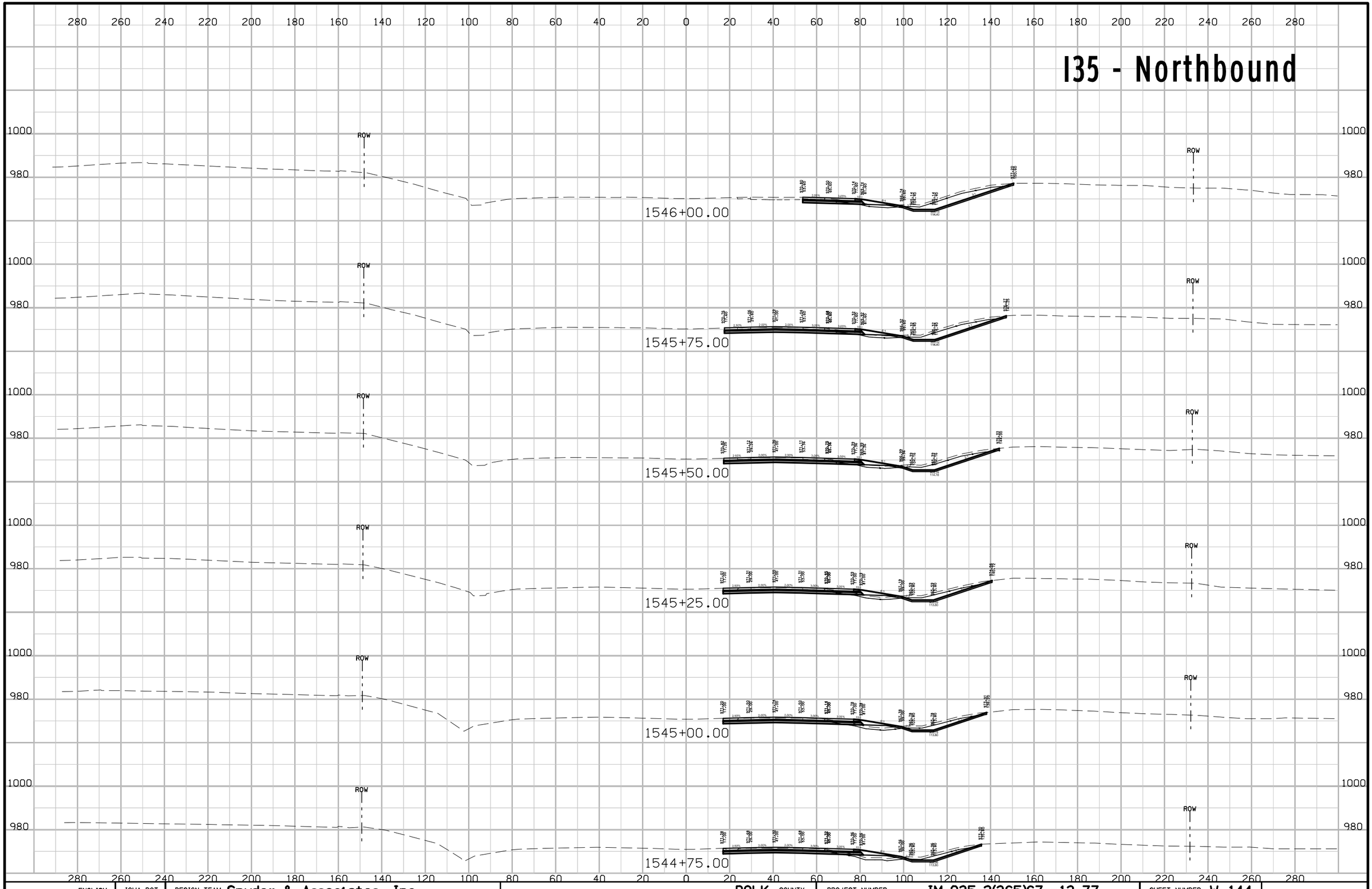
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.144

4:20:50 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

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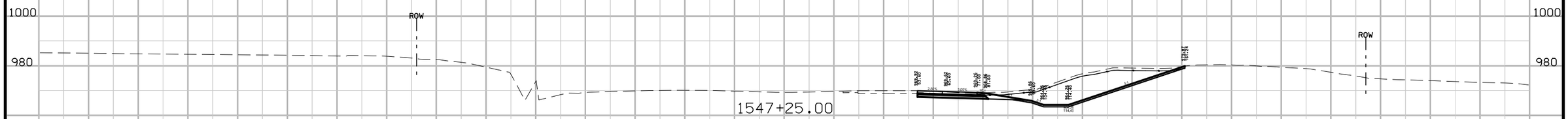
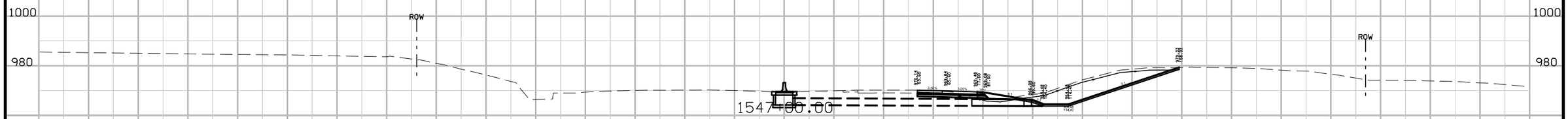
1547+25.00

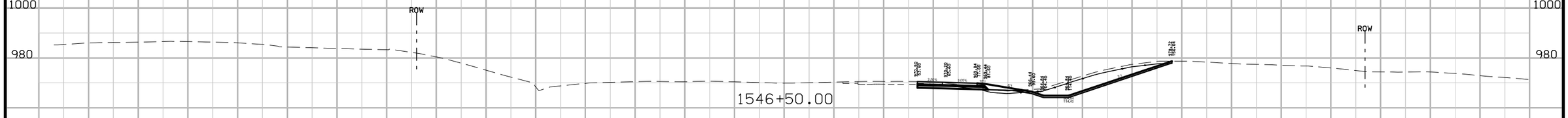


1547+00.00

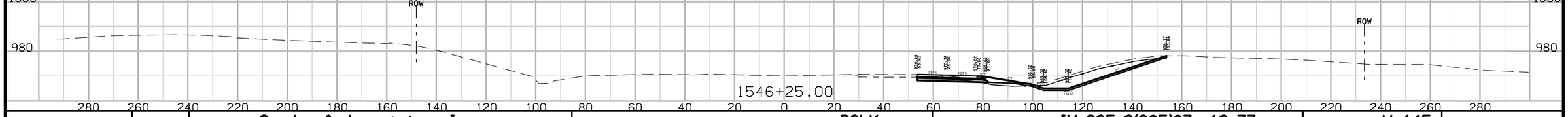


1546+75.00

1546+50.00



1546+25.00

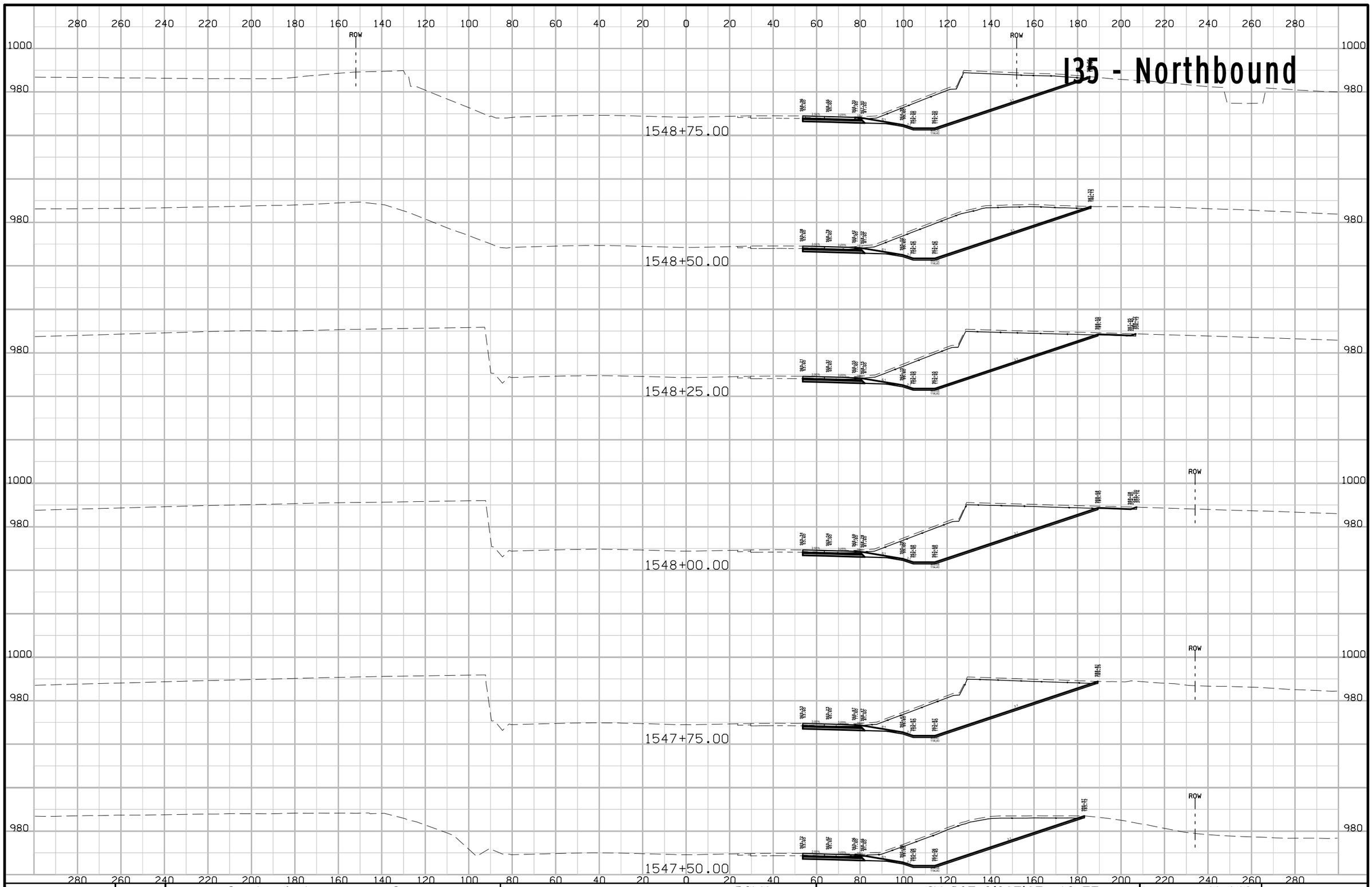


280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.145

4:20:54 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

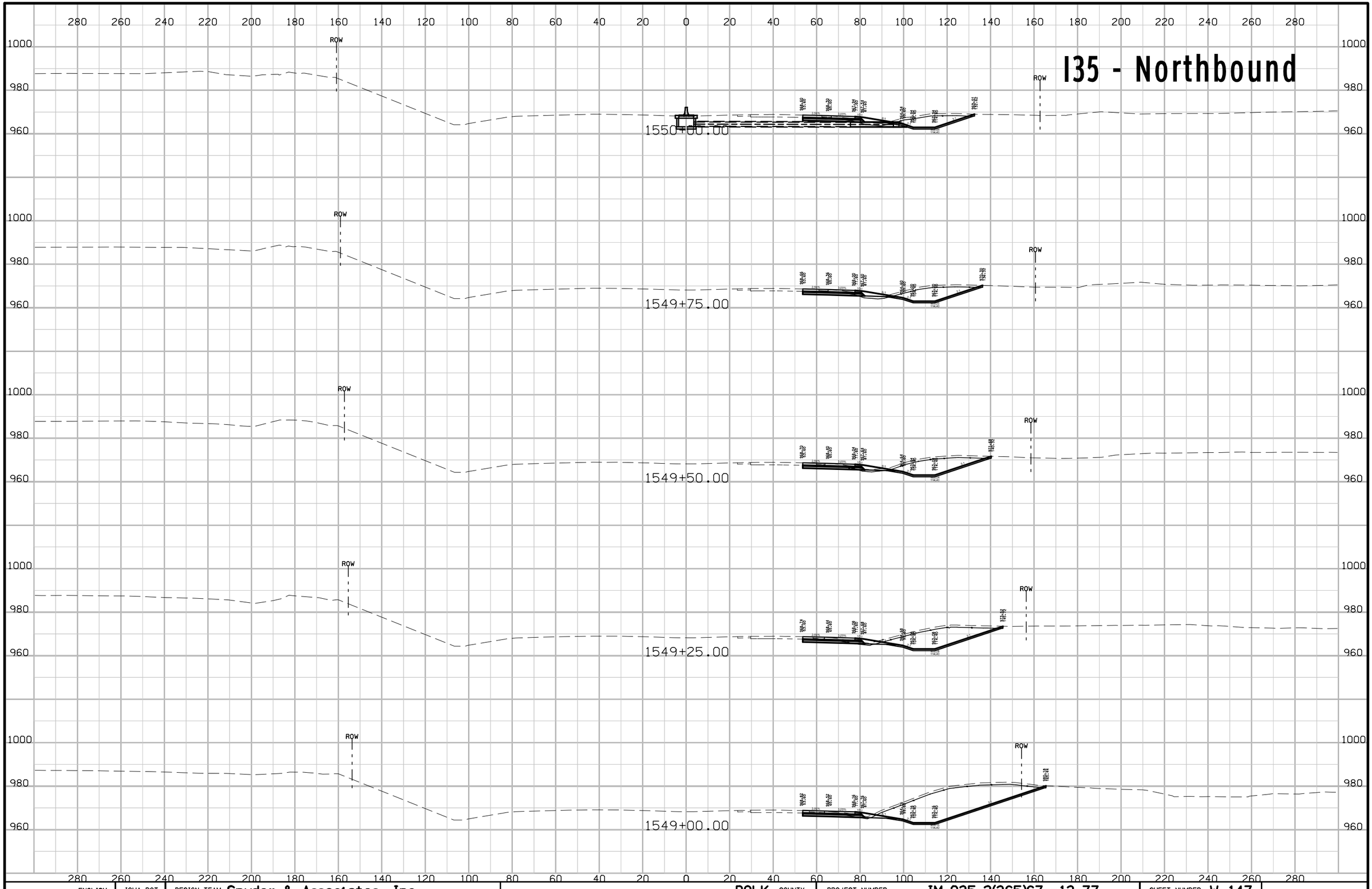
I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.146

4:20:59 PM 11/1/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.147

4:21:04 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

I35 - Northbound

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

1000
980
960

ROW

1550+75.00

ROW

1000
980
960

ROW

1550+50.00

ROW

1000
980
960

ROW

1550+25.00

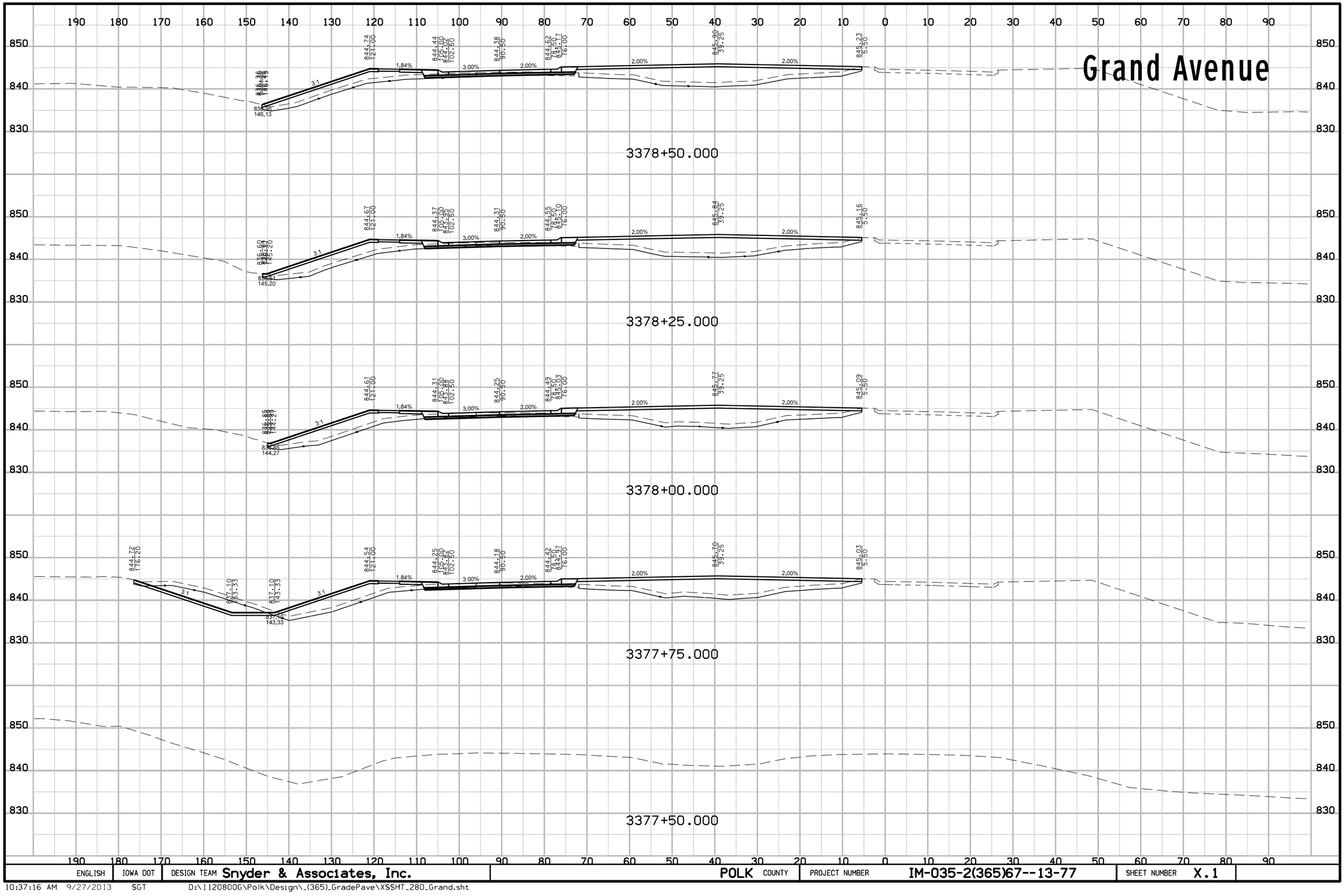
ROW

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER W.148

4:21:09 PM 11/1/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_NB_ML.sht

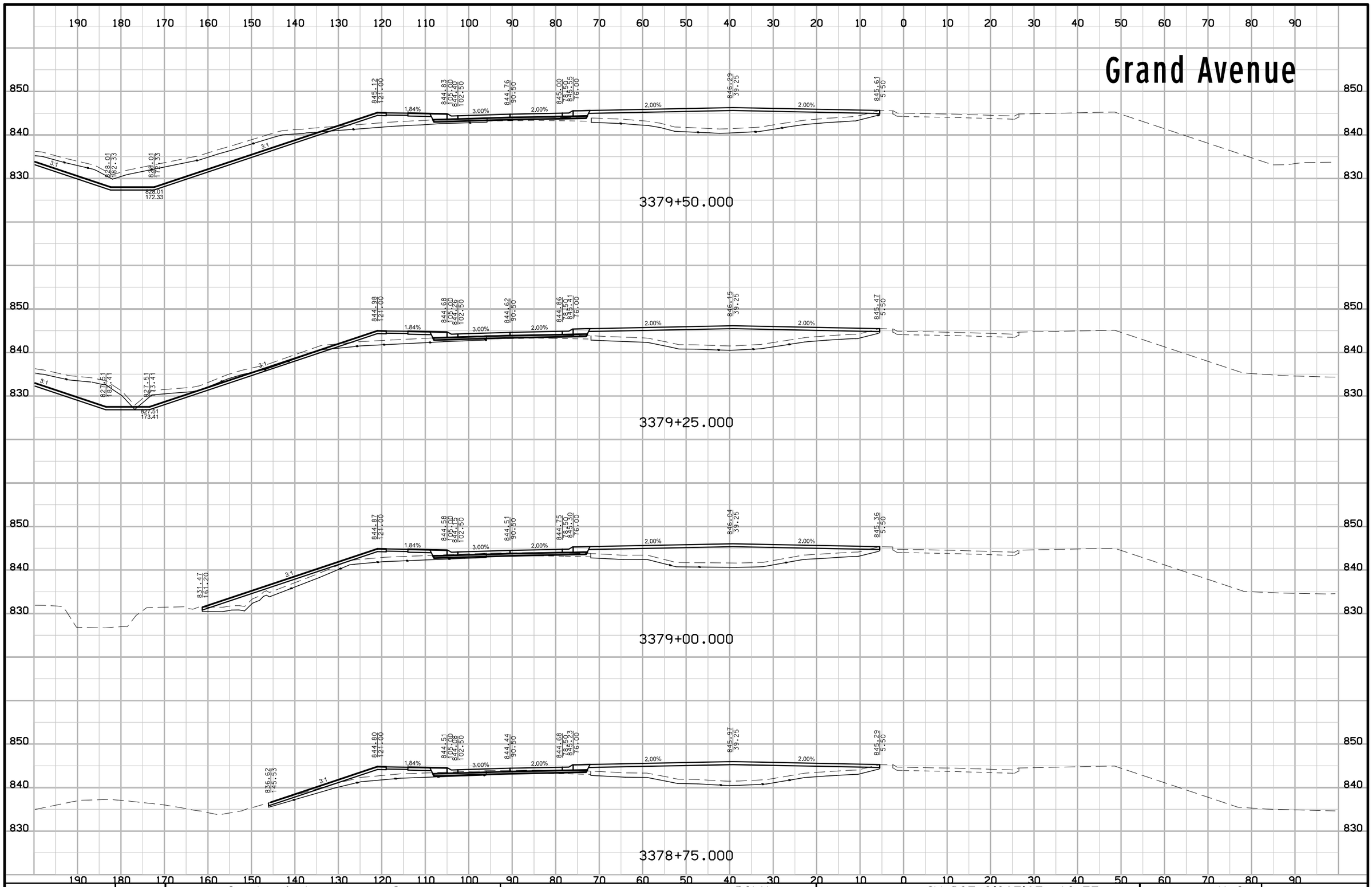
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.1

10:37:16 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_280_Grand.sht

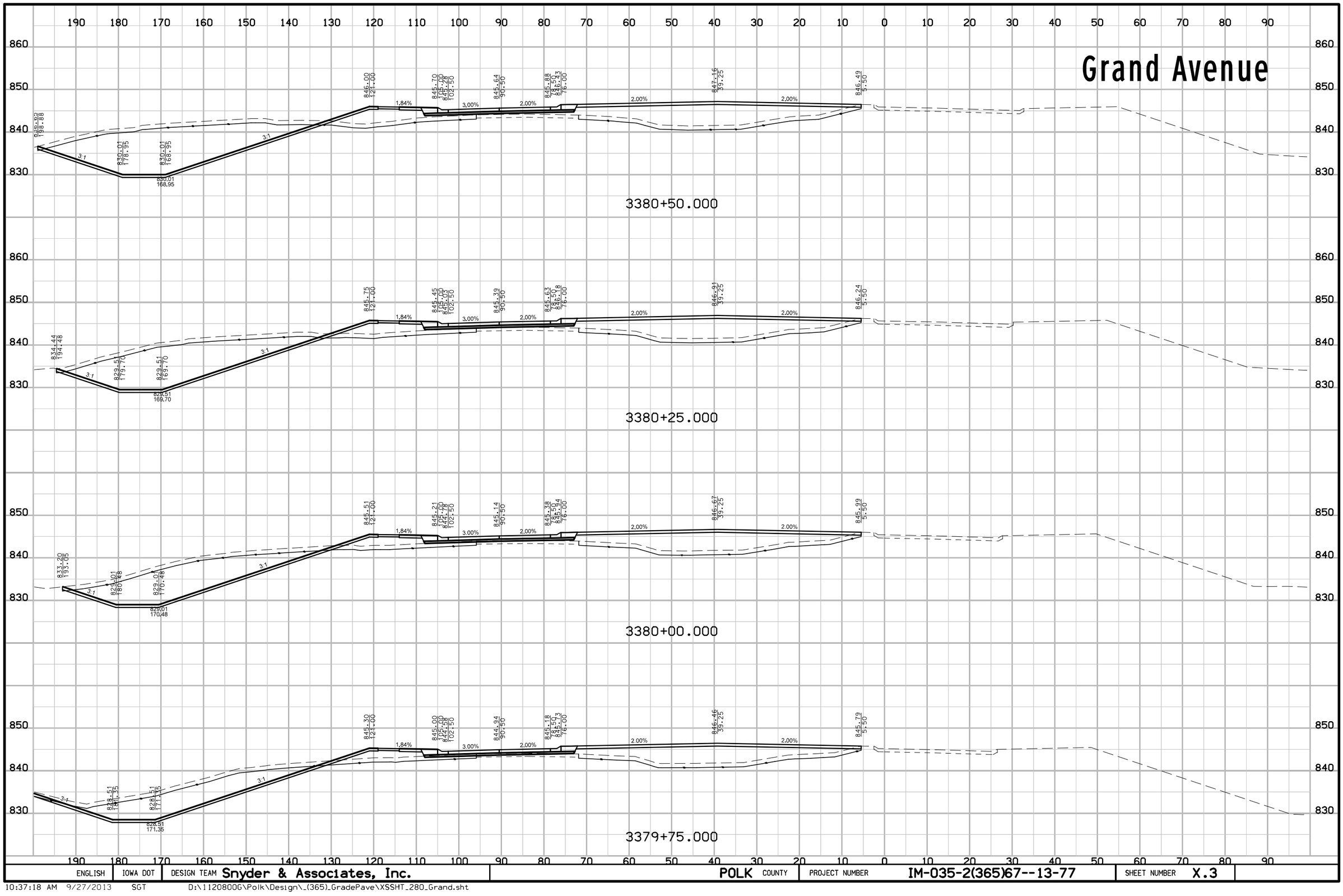
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.2

10:37:17 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_280_Grand.sht

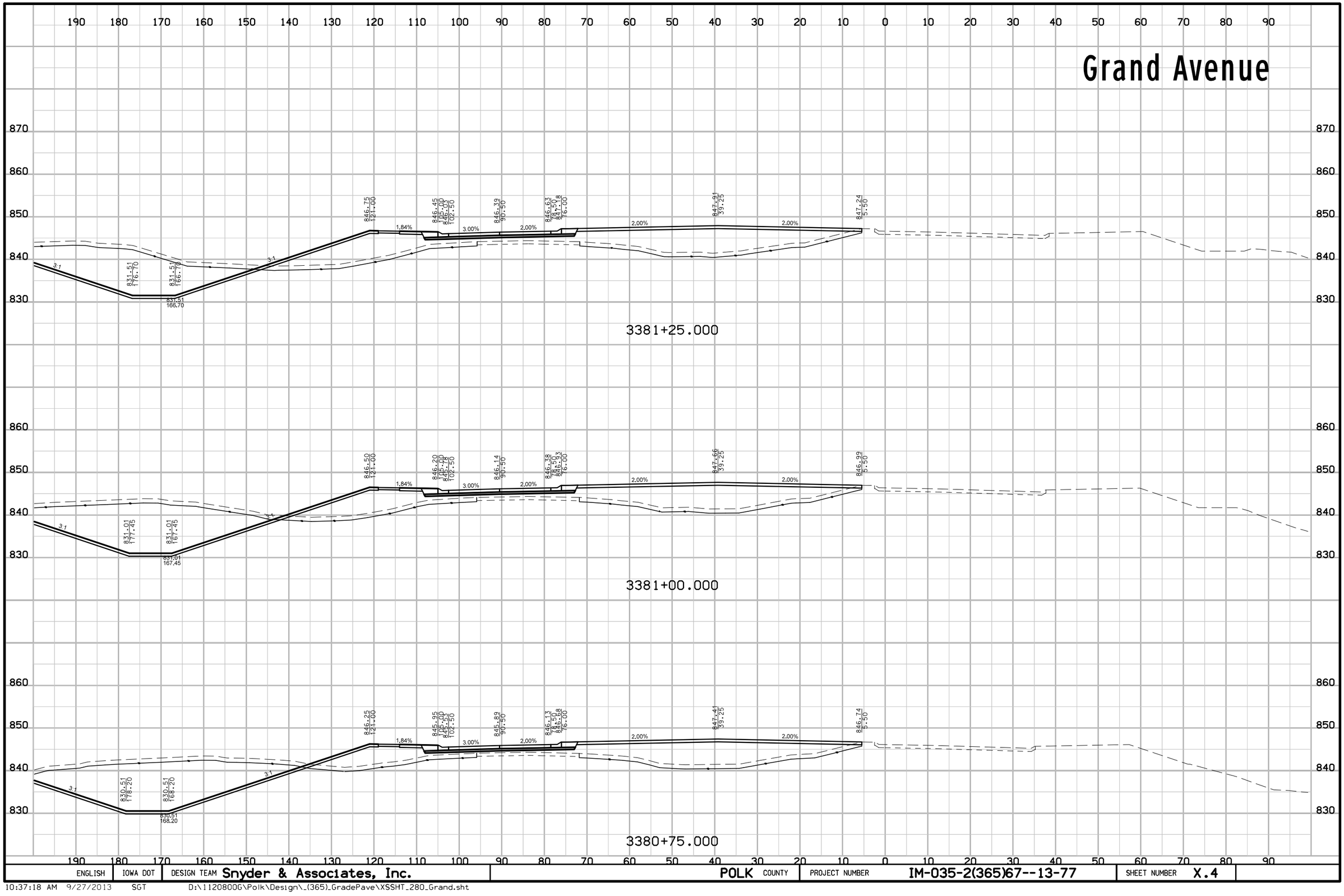
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.3

10:37:18 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_280_Grand.sht

Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.		POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.4	

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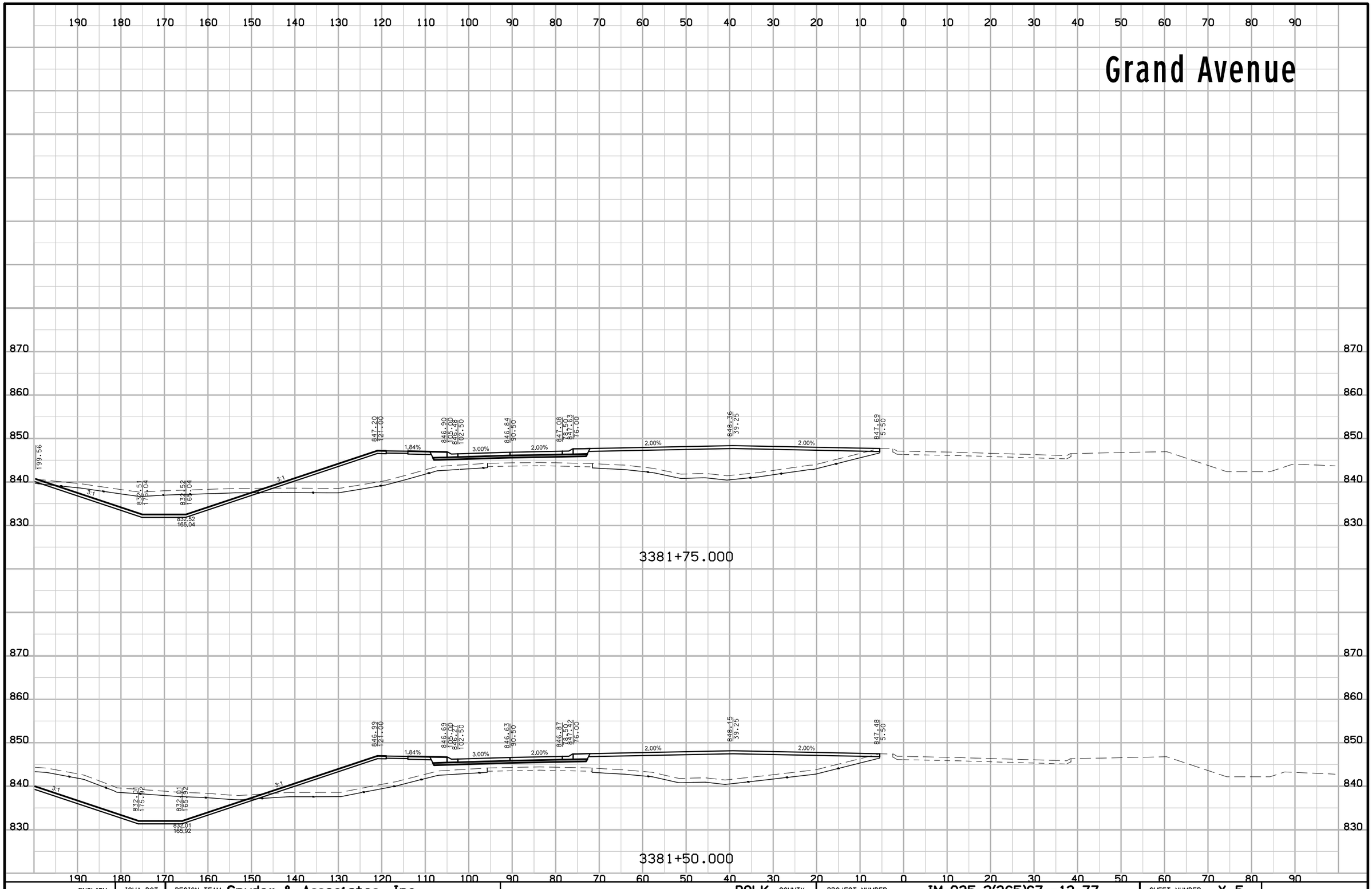
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.5

10:37:19 AM 9/27/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_280_Grand.sht

Grand Avenue

190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90

870 860 850 840 830

847.51
121.00

1.84%

847.21
105.00
846.75
102.50

3.00%

847.15
90.50

2.00%

847.39
847.59
847.94
76.00

2.00%

848.67
39.25

2.00%

848.00
5.50

3:1

833.52
172.98

833.52
174.98

3:1

833.52
162.98

3382+25.000

835.69
182.09

3:1

833.01
174.06

833.02
164.06

3:1

847.37
121.00

1.84%

847.08
105.00
846.65
102.50

3.00%

847.01
90.50

2.00%

847.25
847.50
847.80
76.00

2.00%

848.53
39.25

2.00%

847.86
5.50

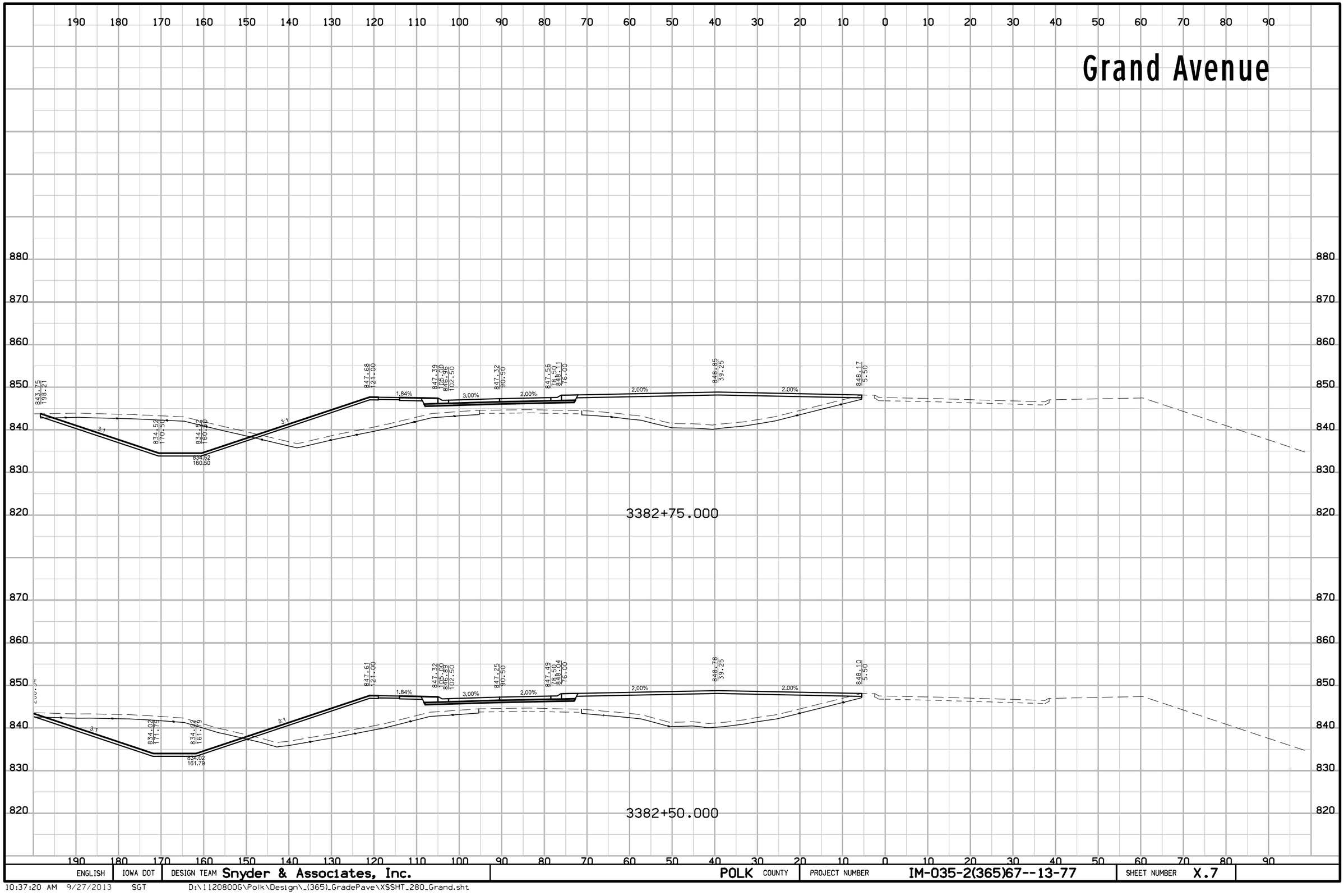
3382+00.000

190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.6

10:37:20 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_280_Grand.sht

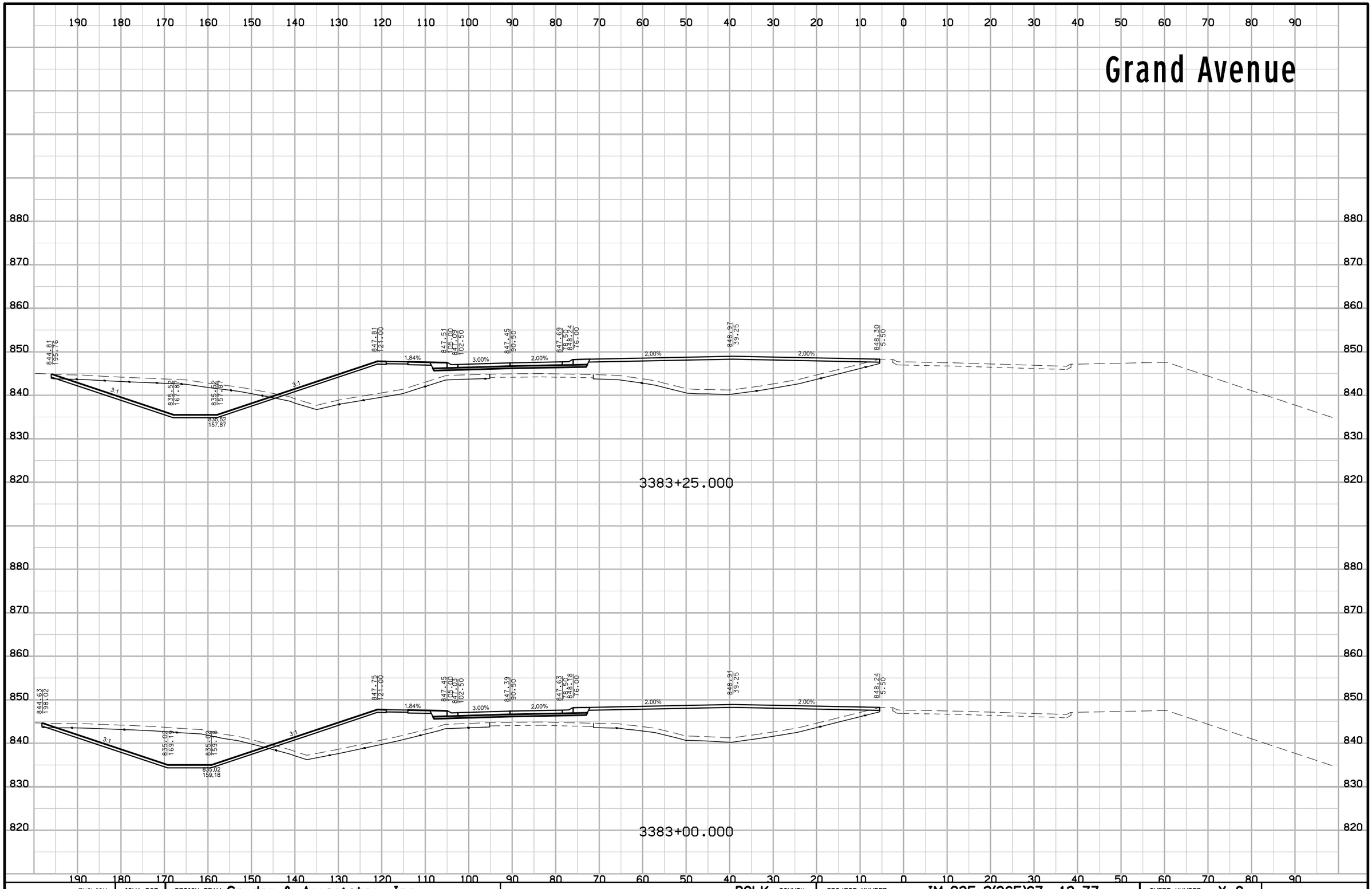
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.7

10:37:20 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_280_Grand.sht

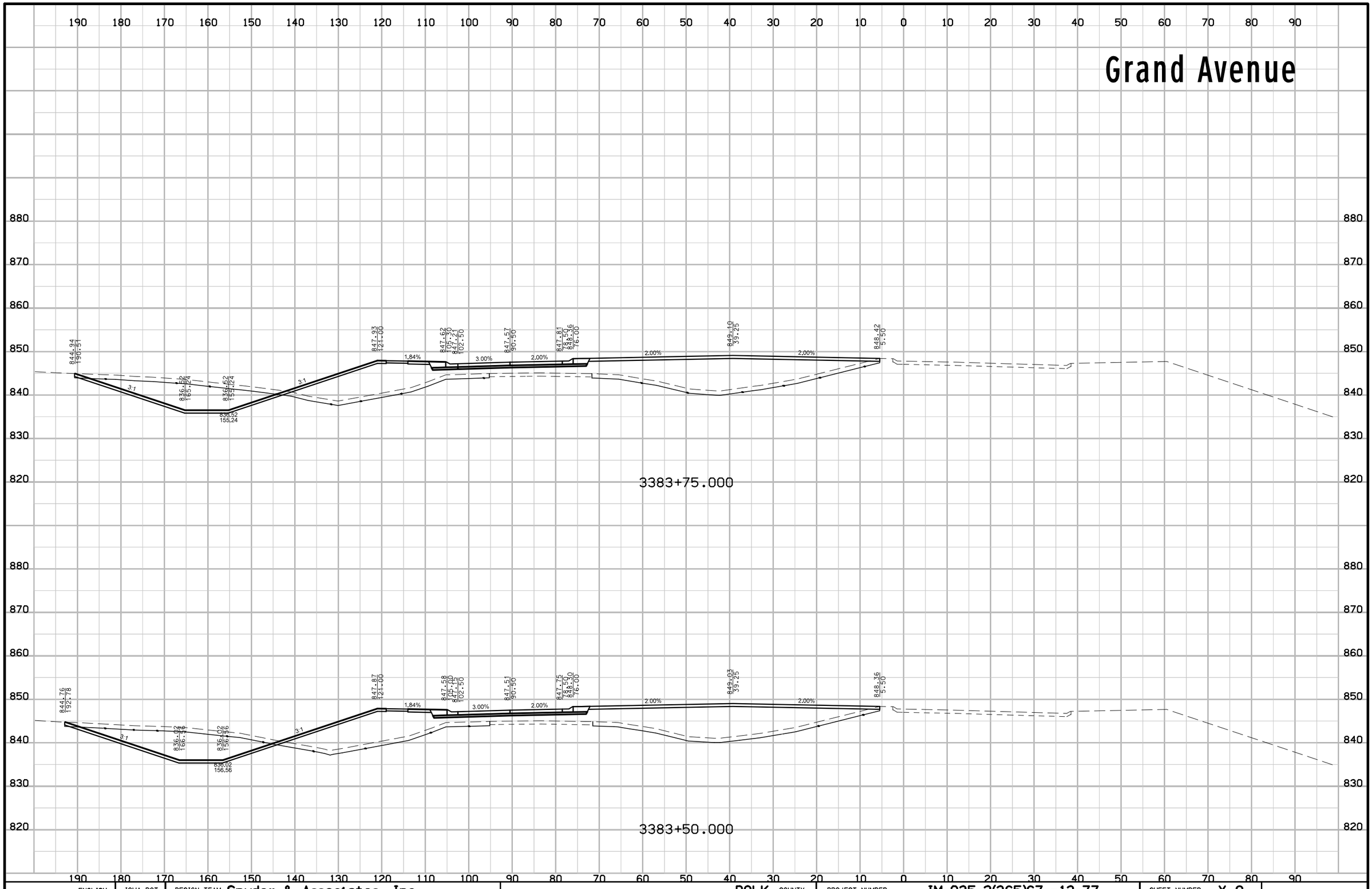
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.8

10:37:21 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_280_Grand.sht

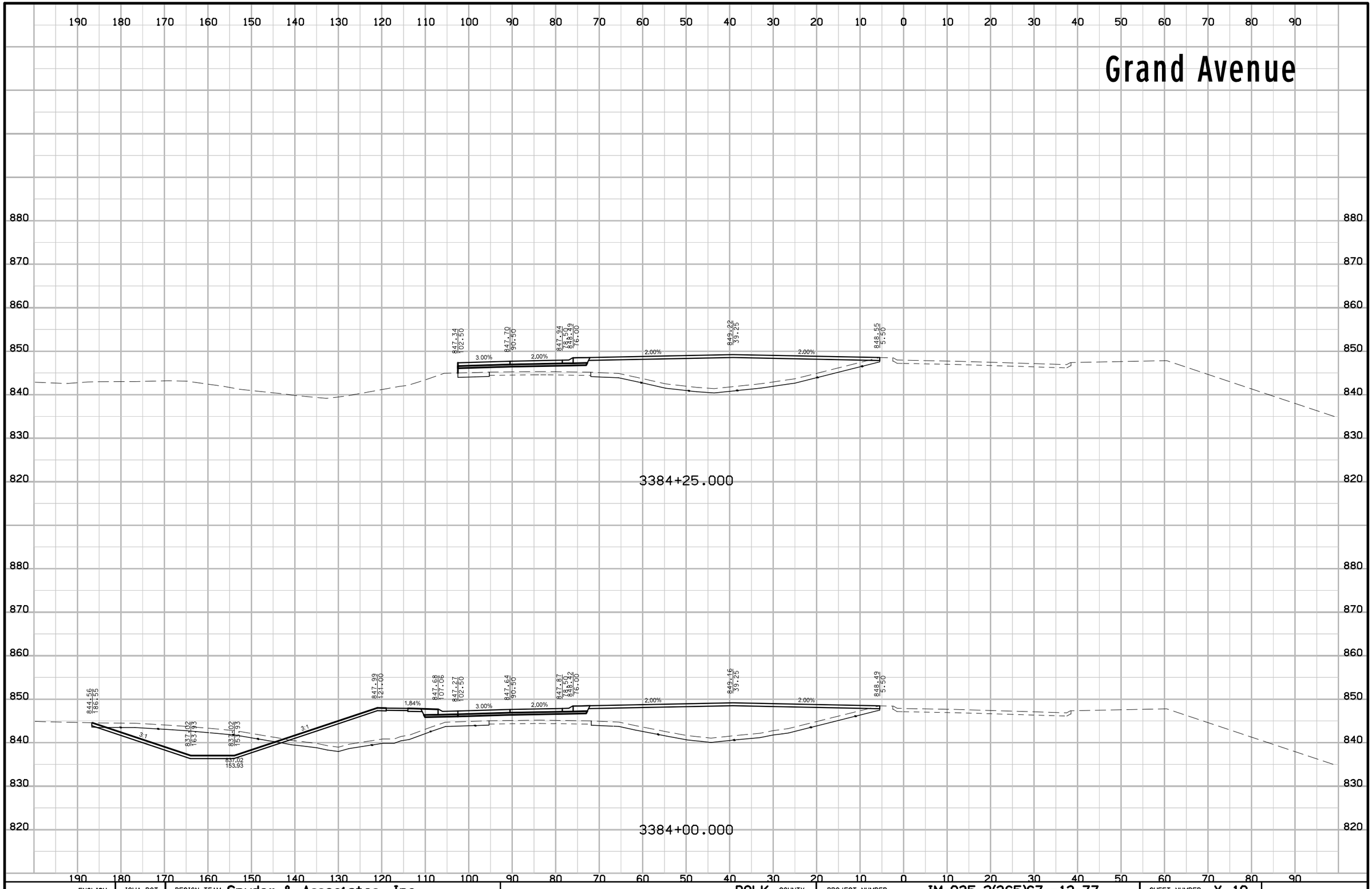
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.9

10:37:22 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_280_Grand.sht

Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.10

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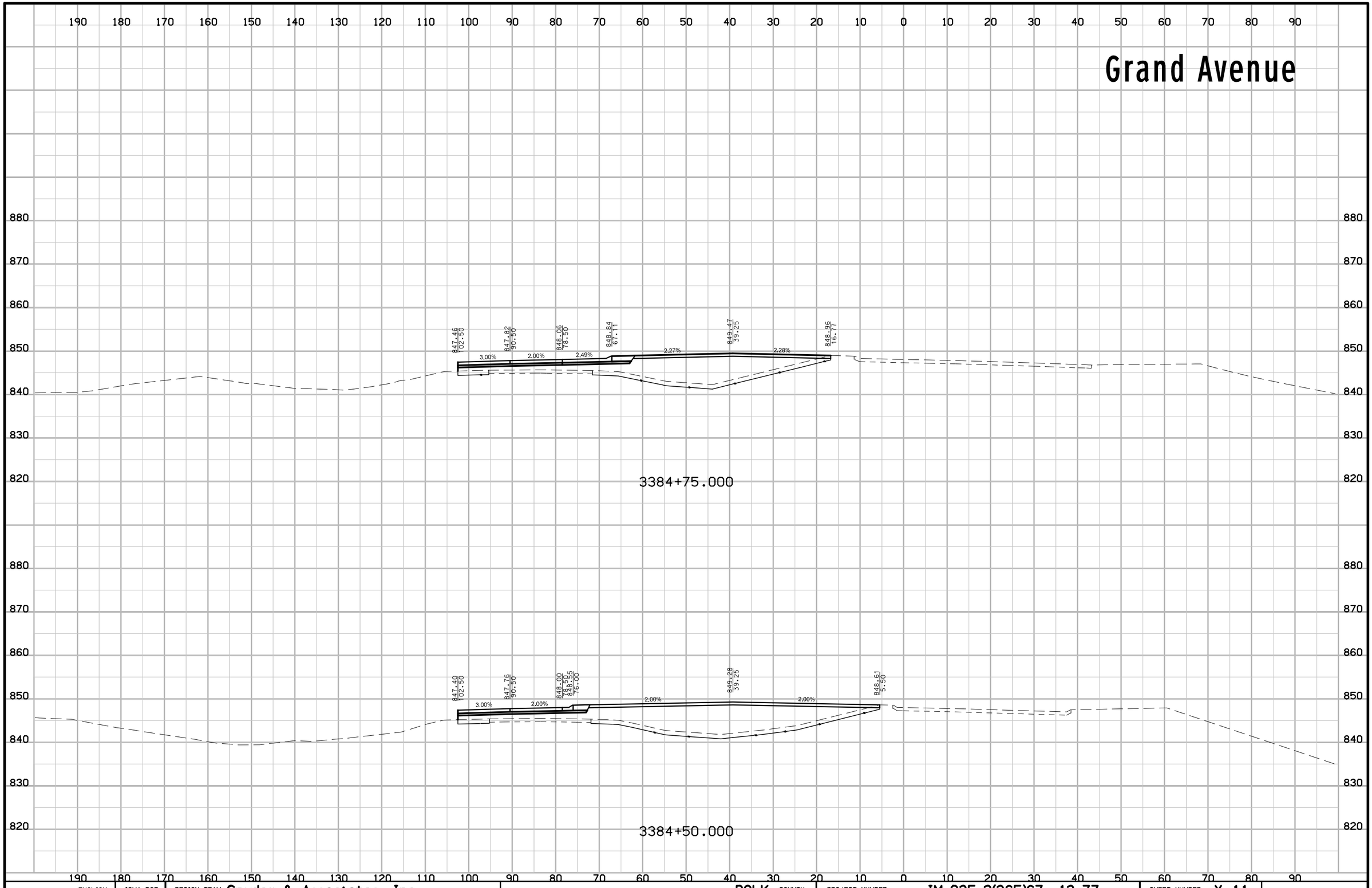
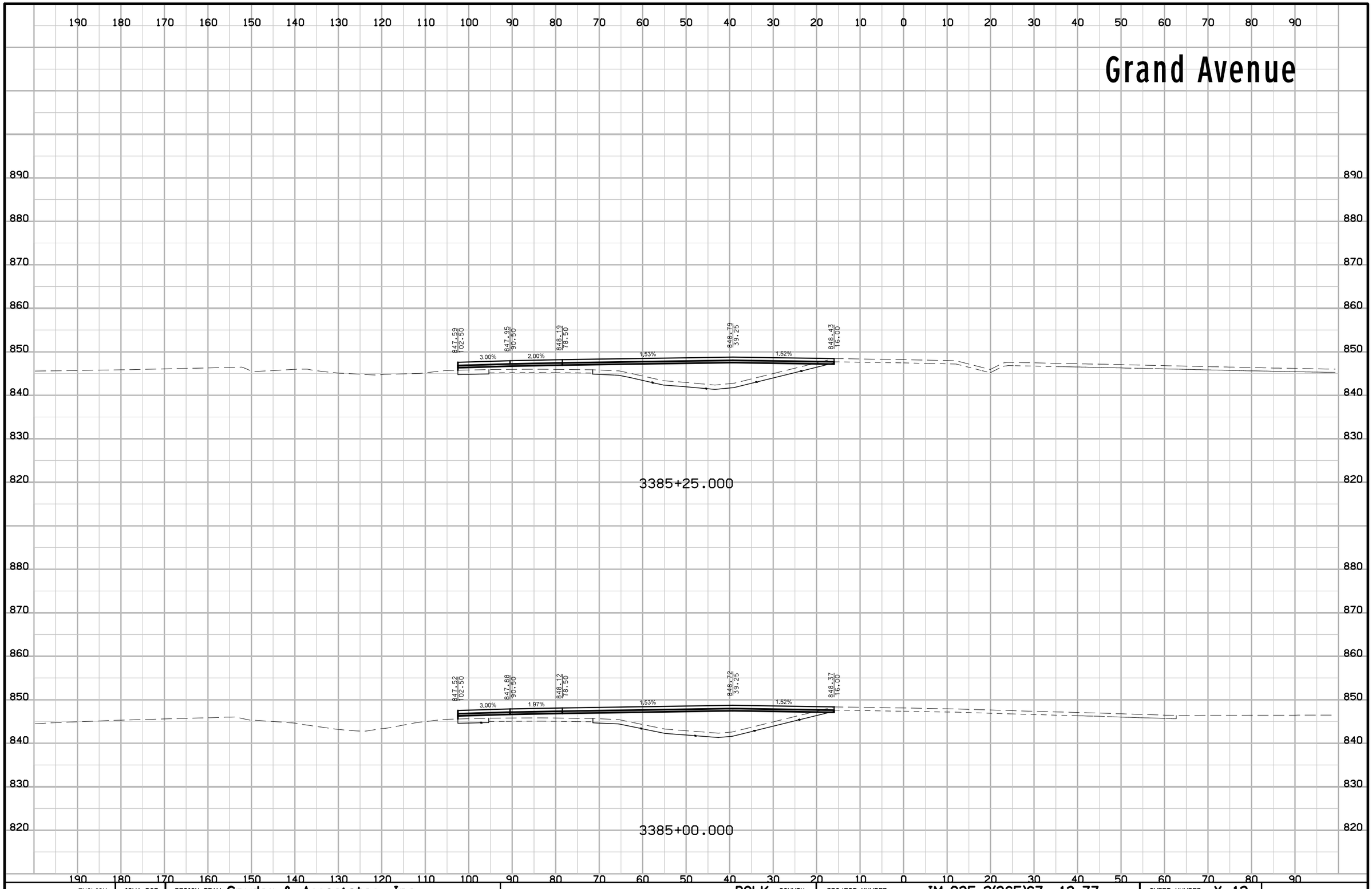
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.11

10:37:23 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_280_Grand.sht

Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.12

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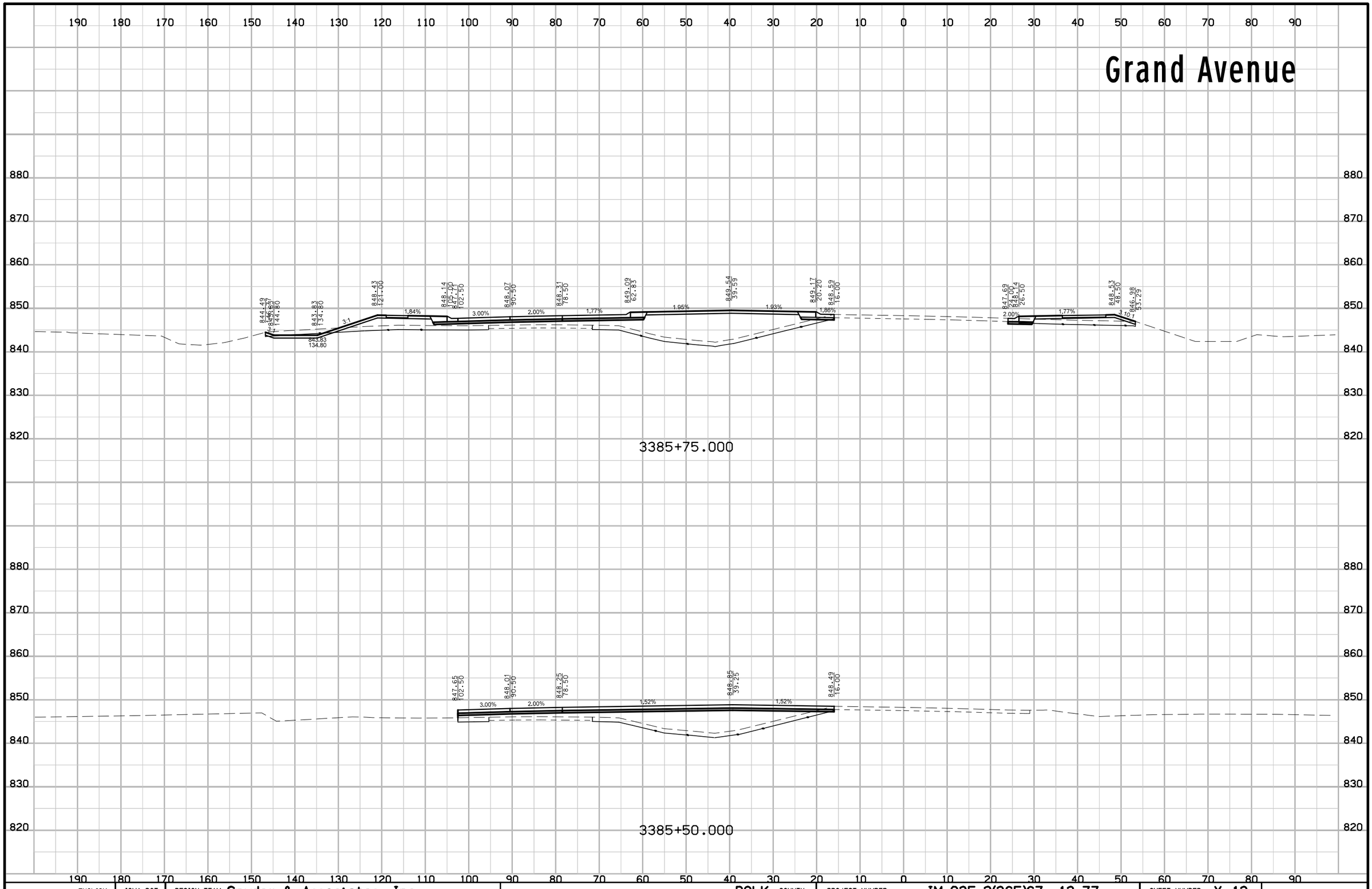
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.13

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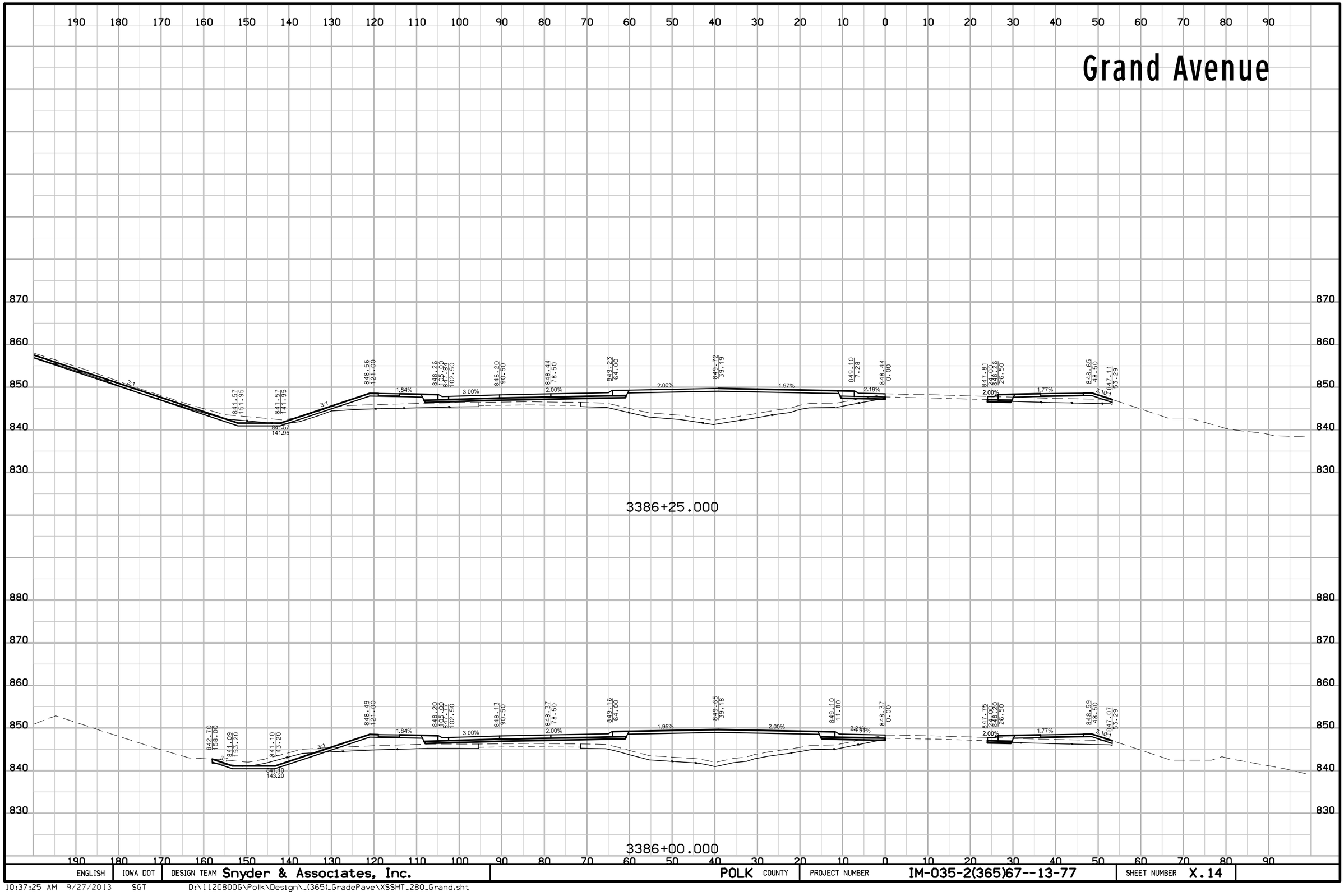
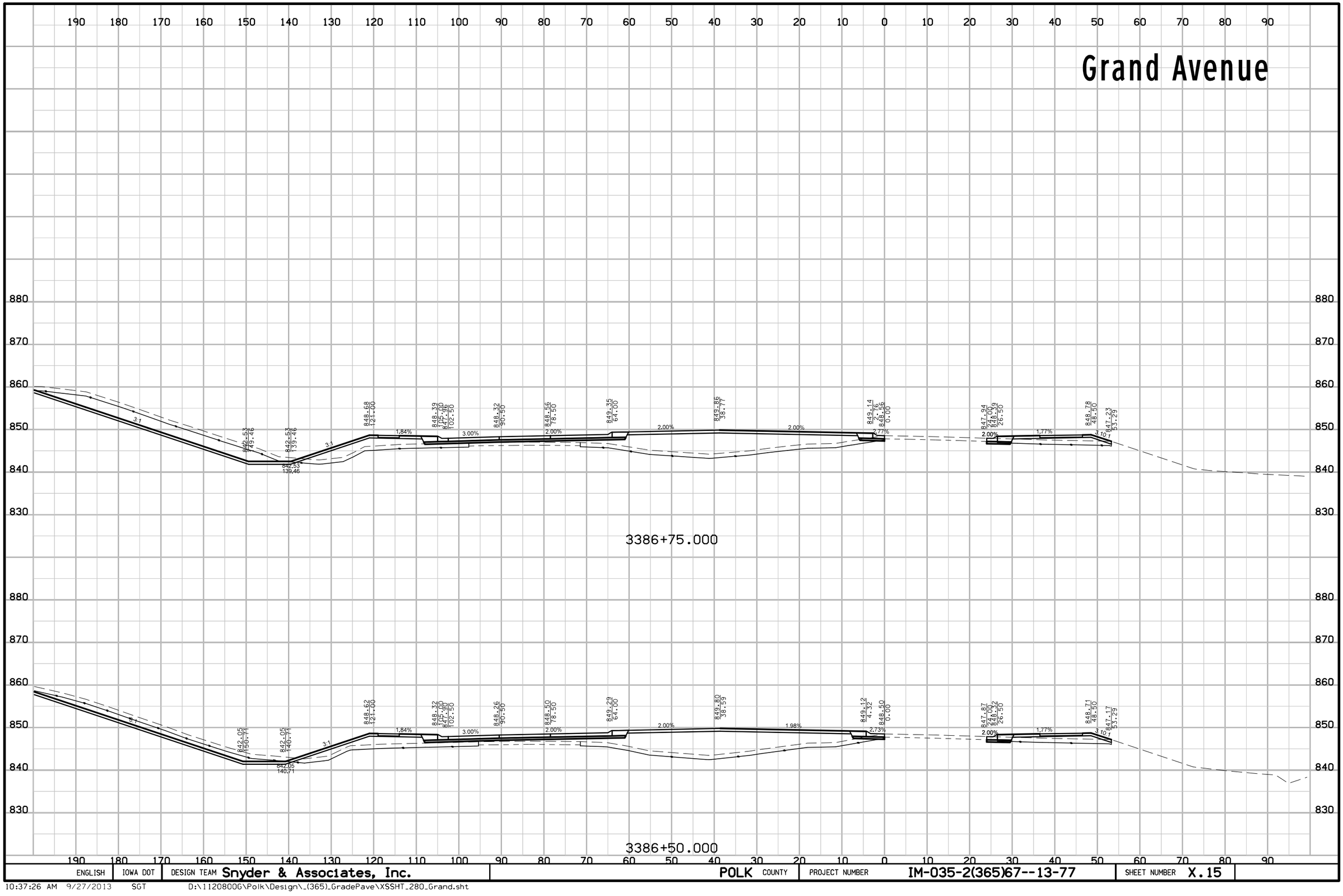
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.14

10:37:25 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_280_Grand.sht

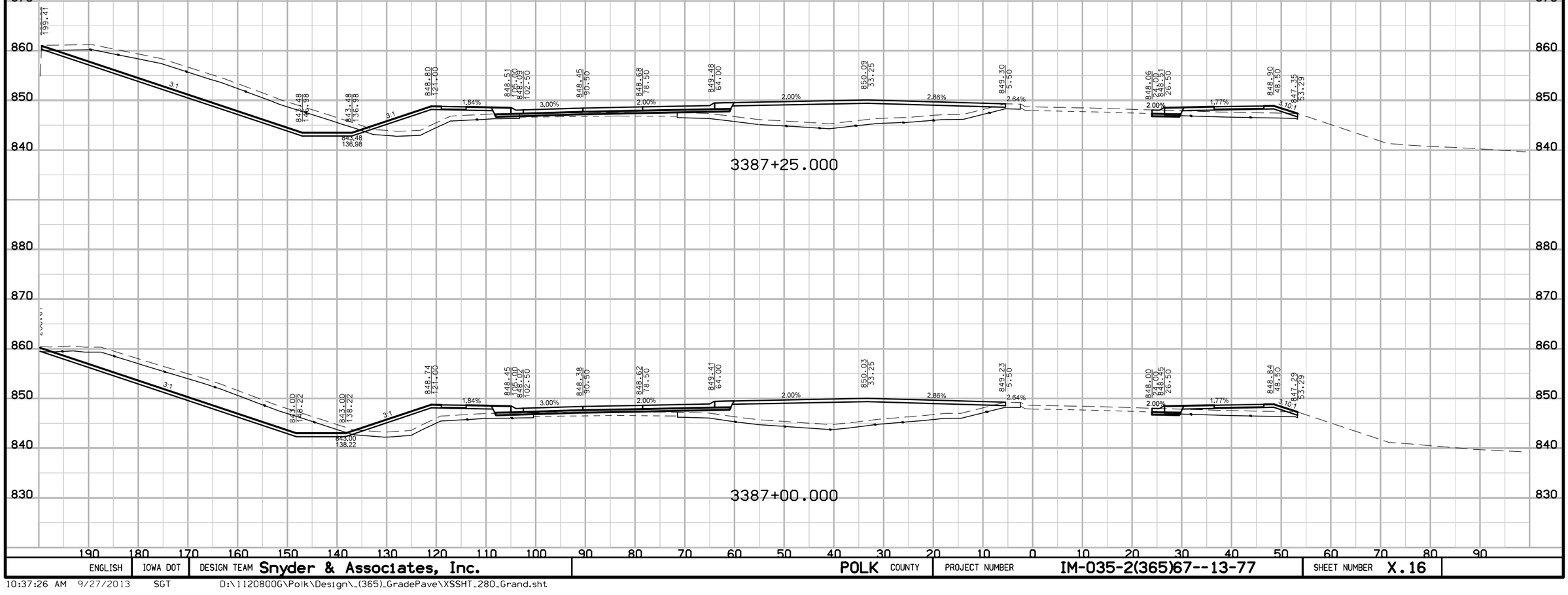
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.15

10:37:26 AM 9/27/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_280_Grand.sht

Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.16

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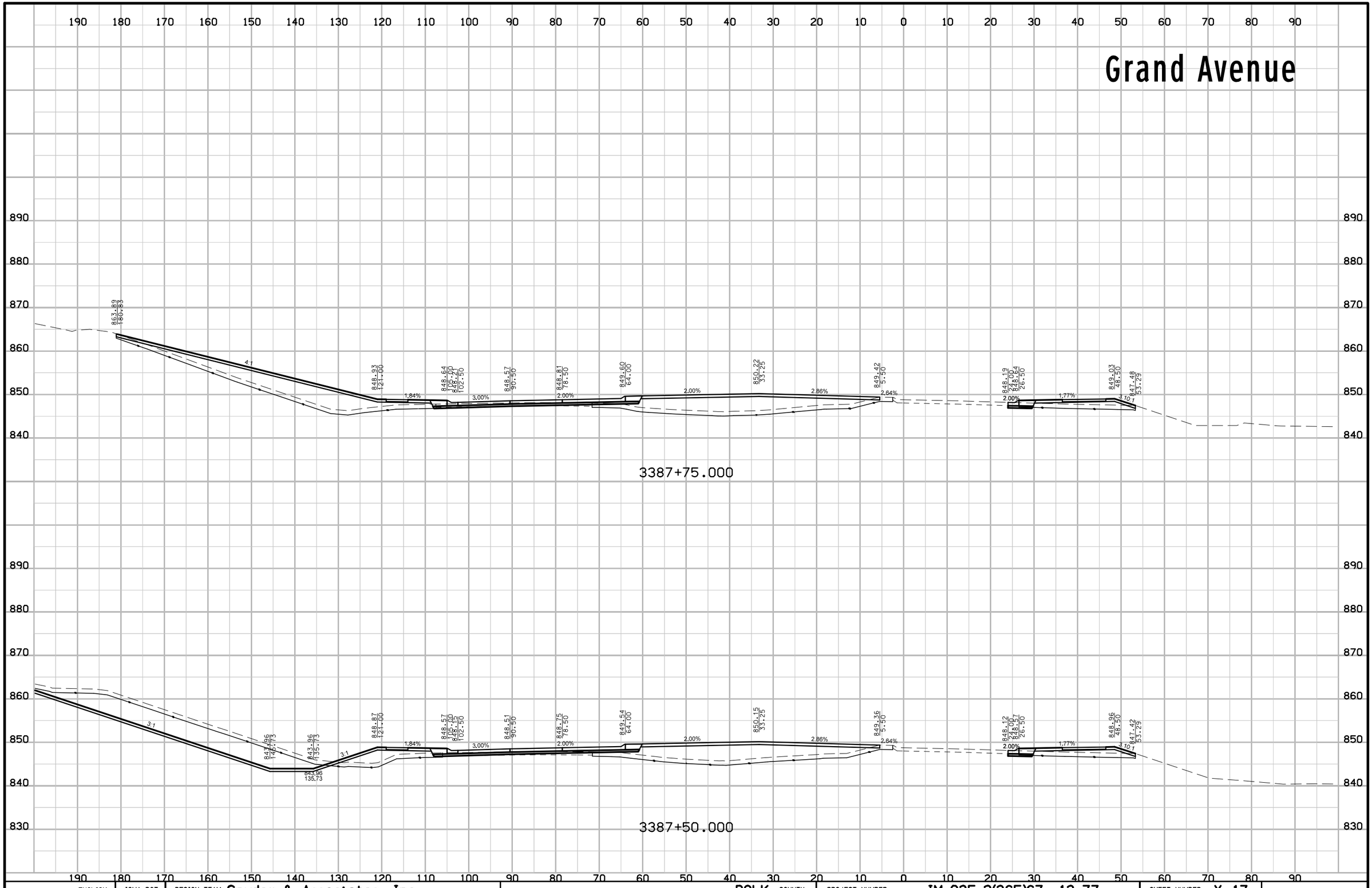
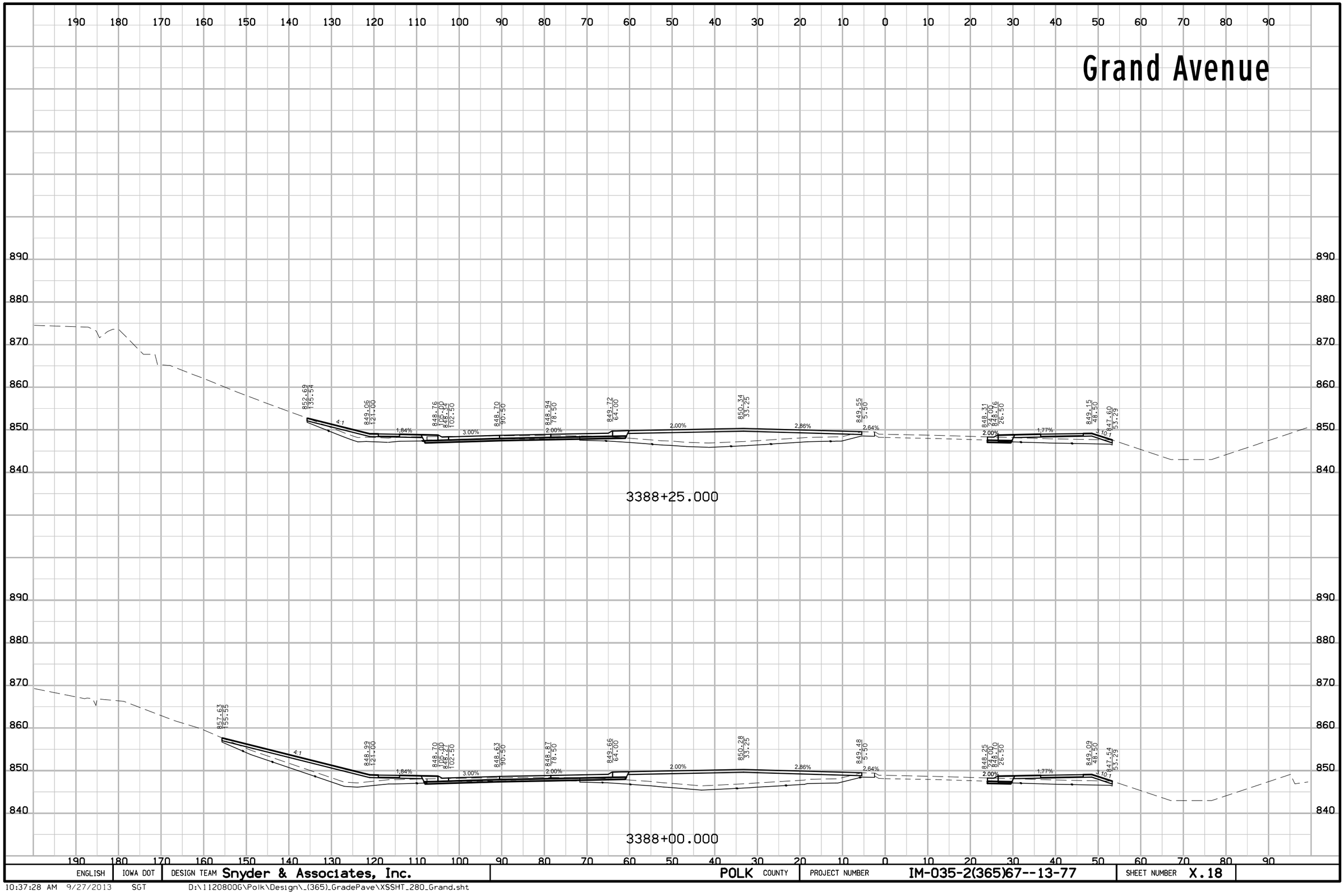
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.17

10:37:27 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_280_Grand.sht

Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.18

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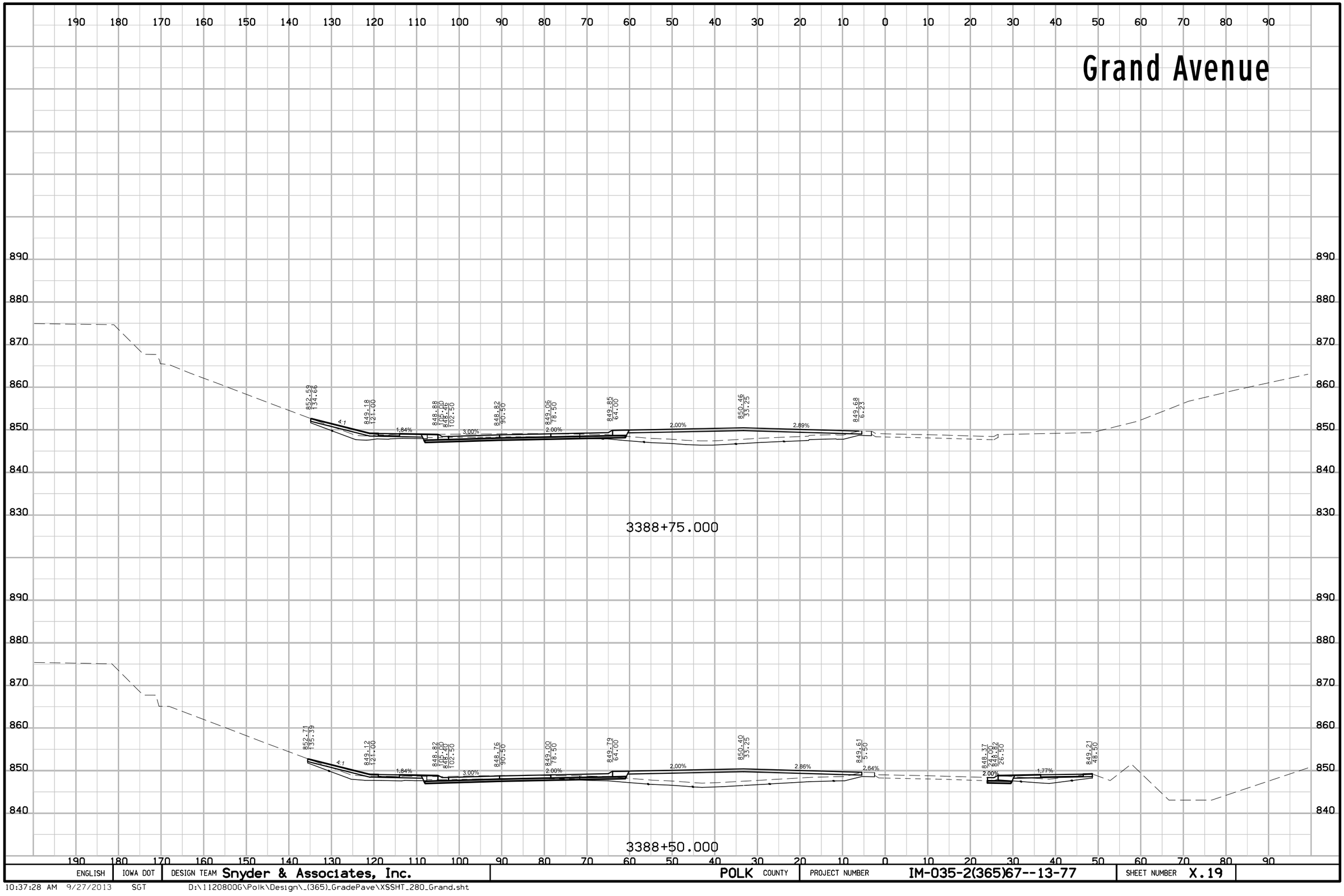
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.19

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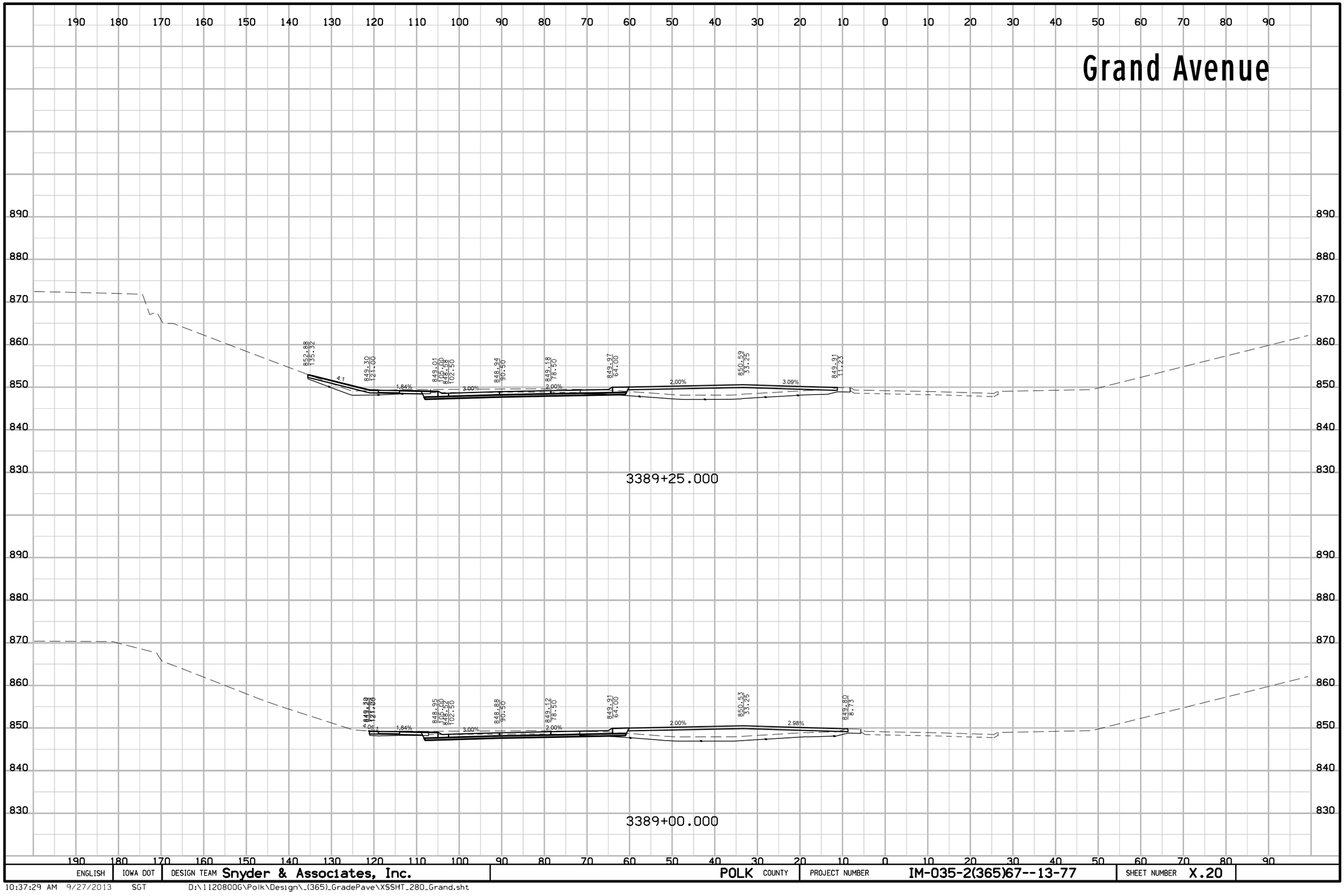
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.20

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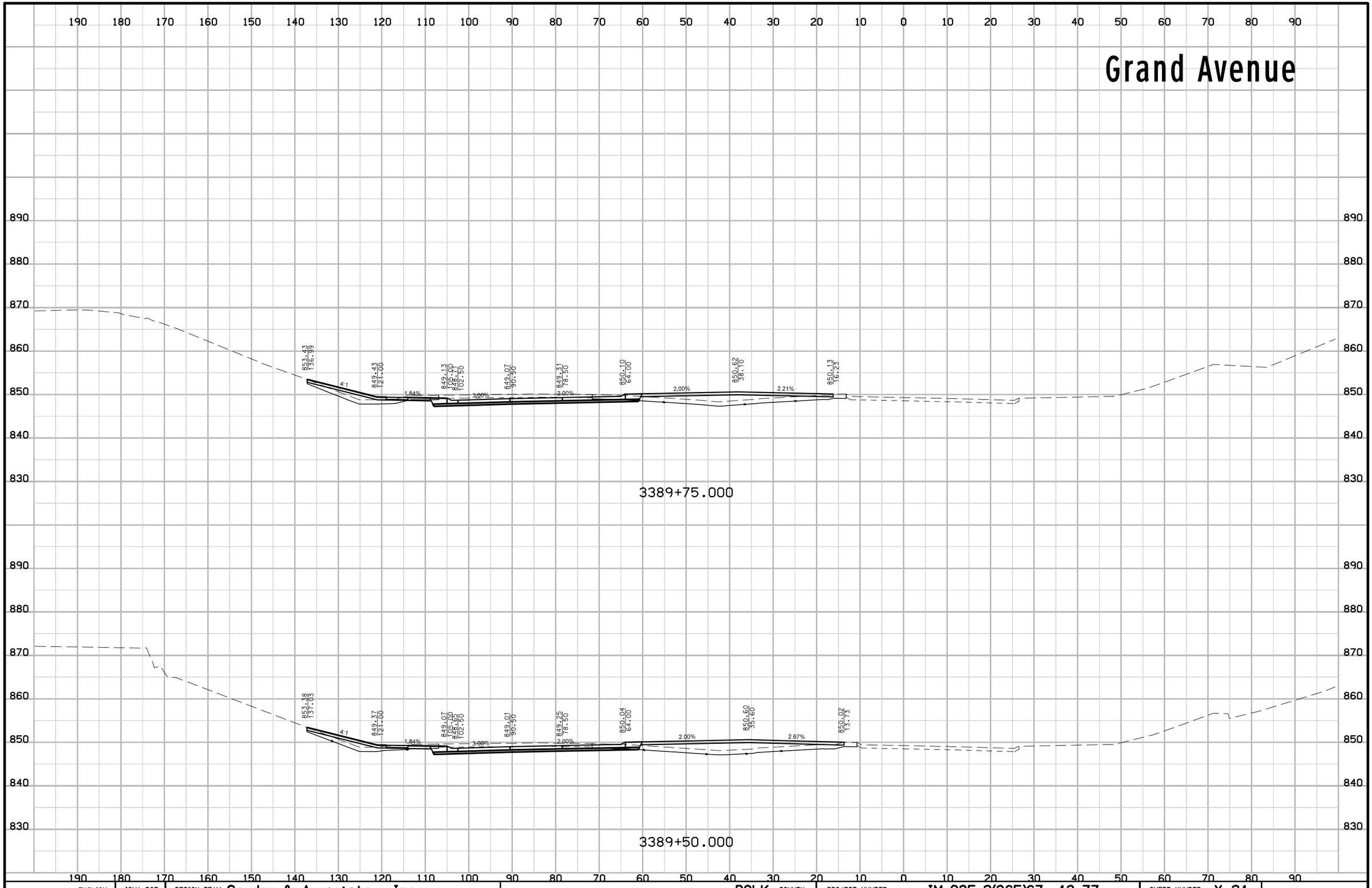
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.21

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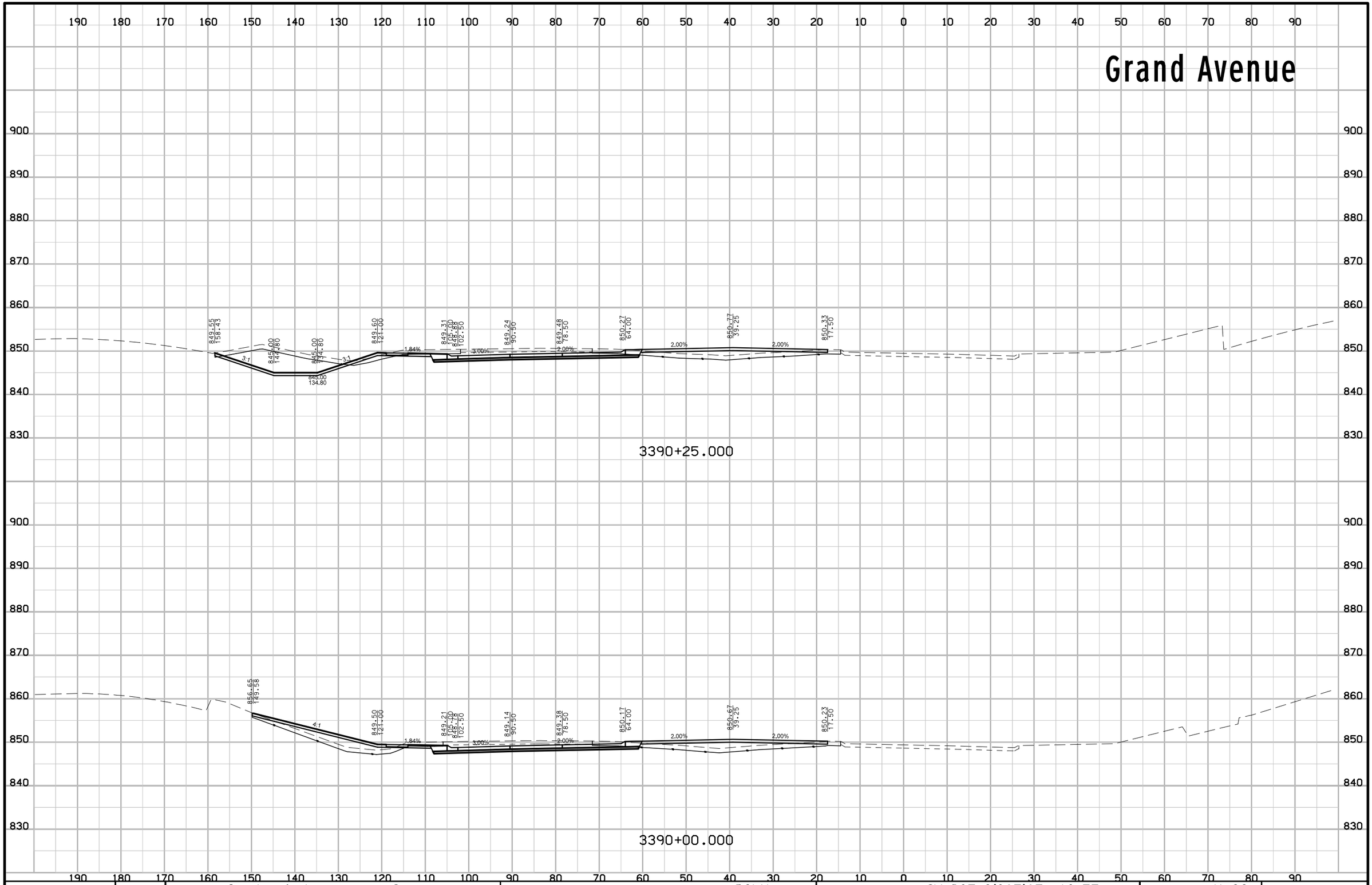
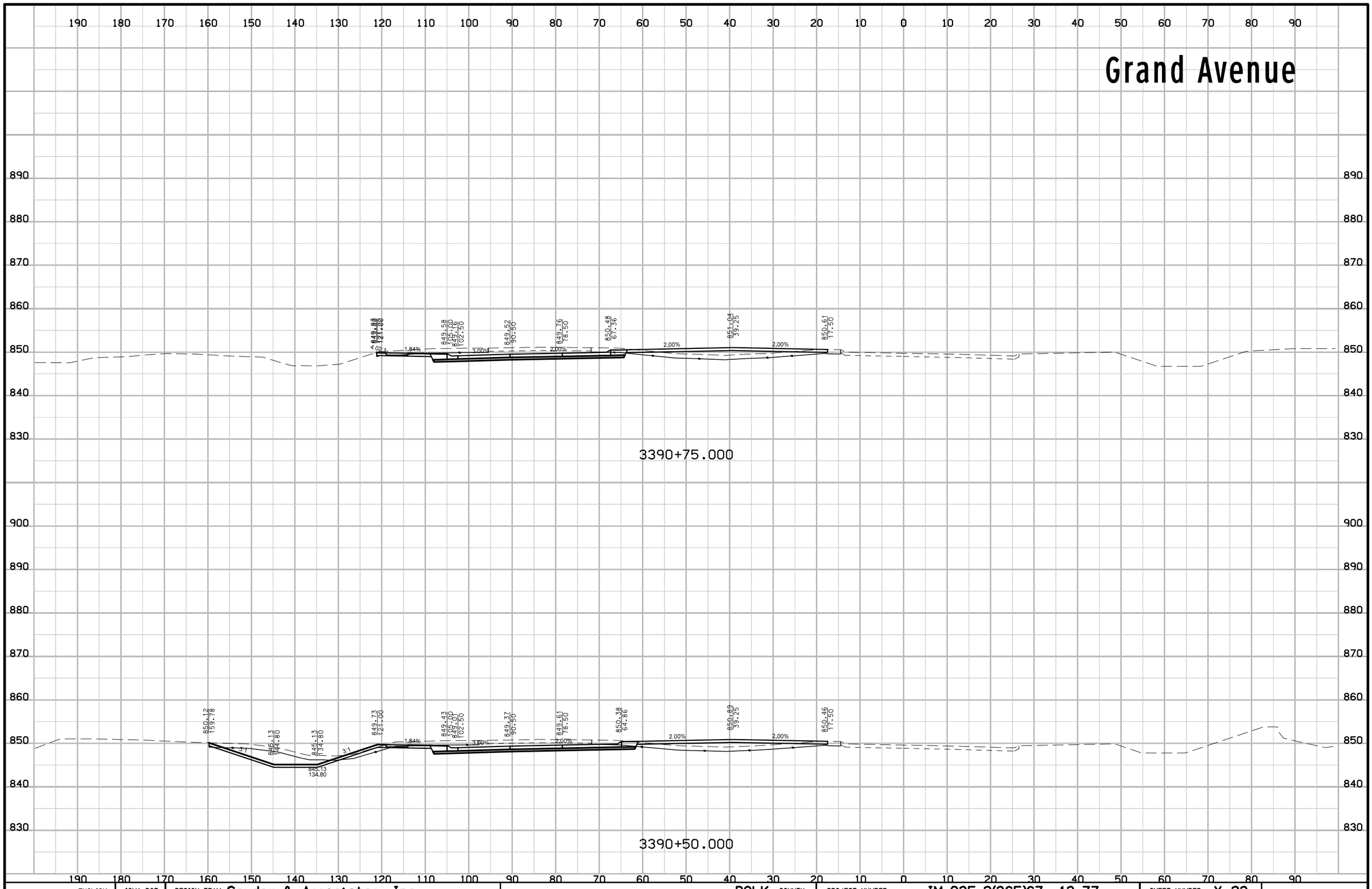
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.22

10:37:31 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_280_Grand.sht

Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.23

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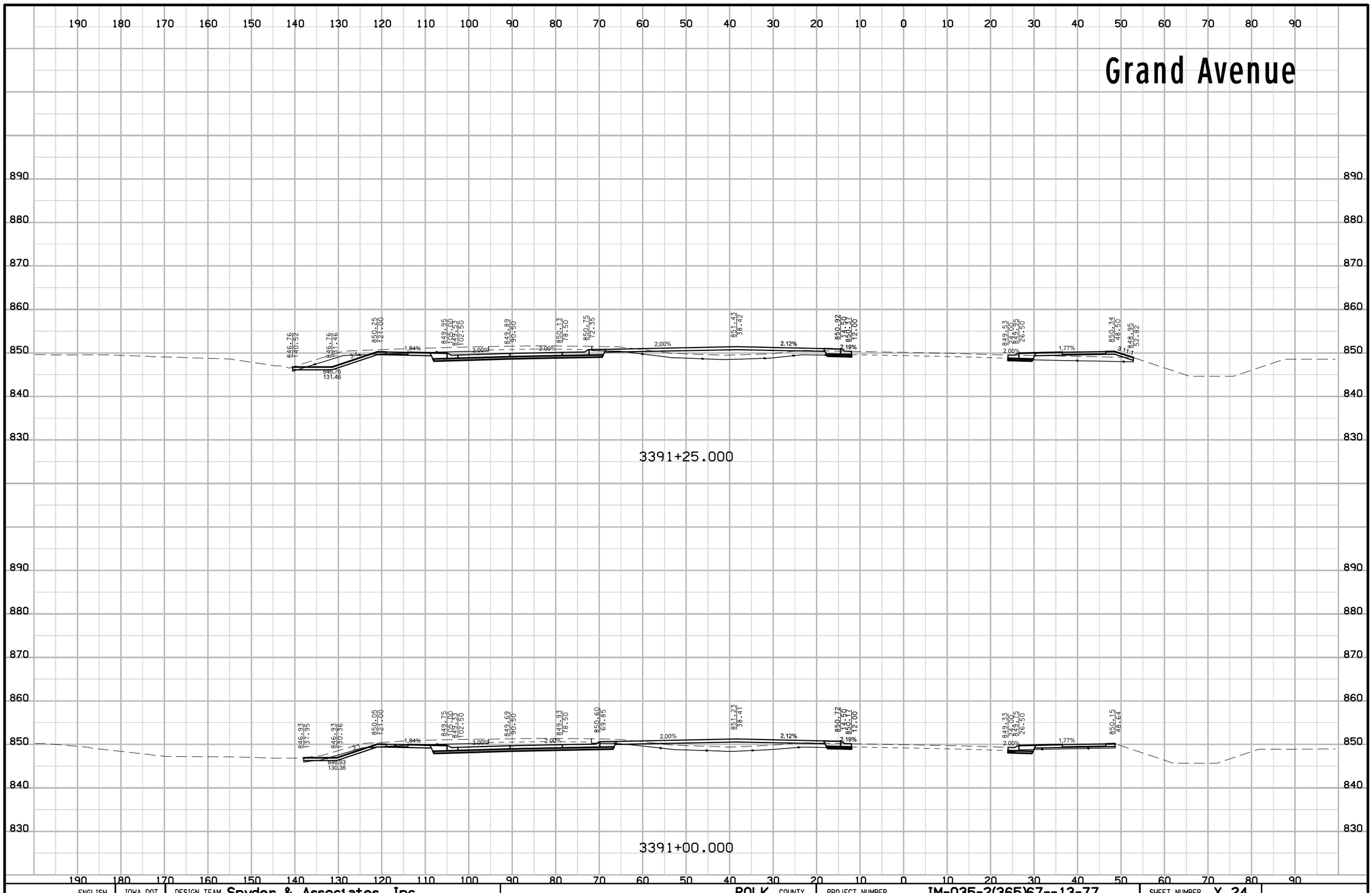
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.24

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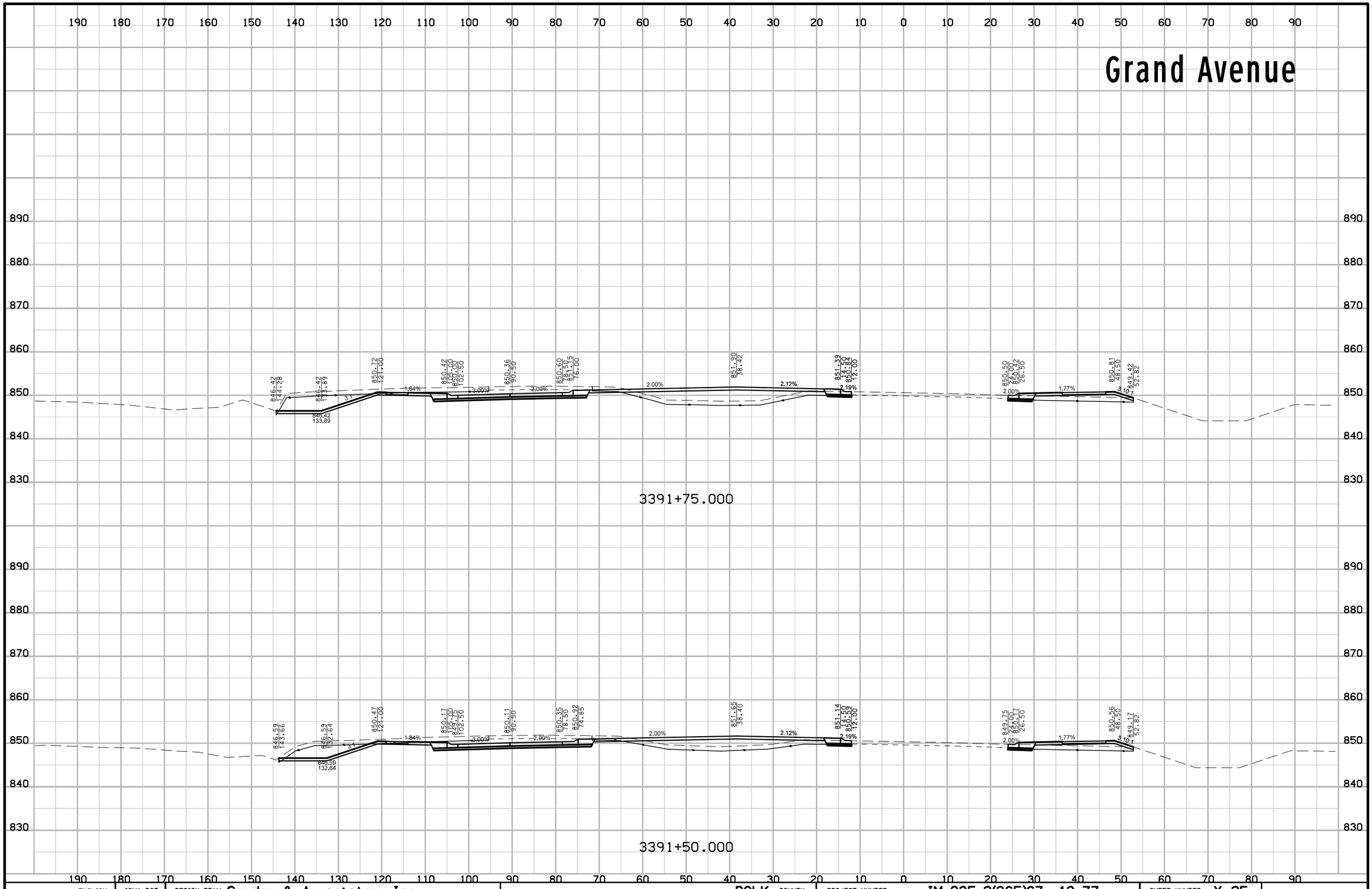
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.25

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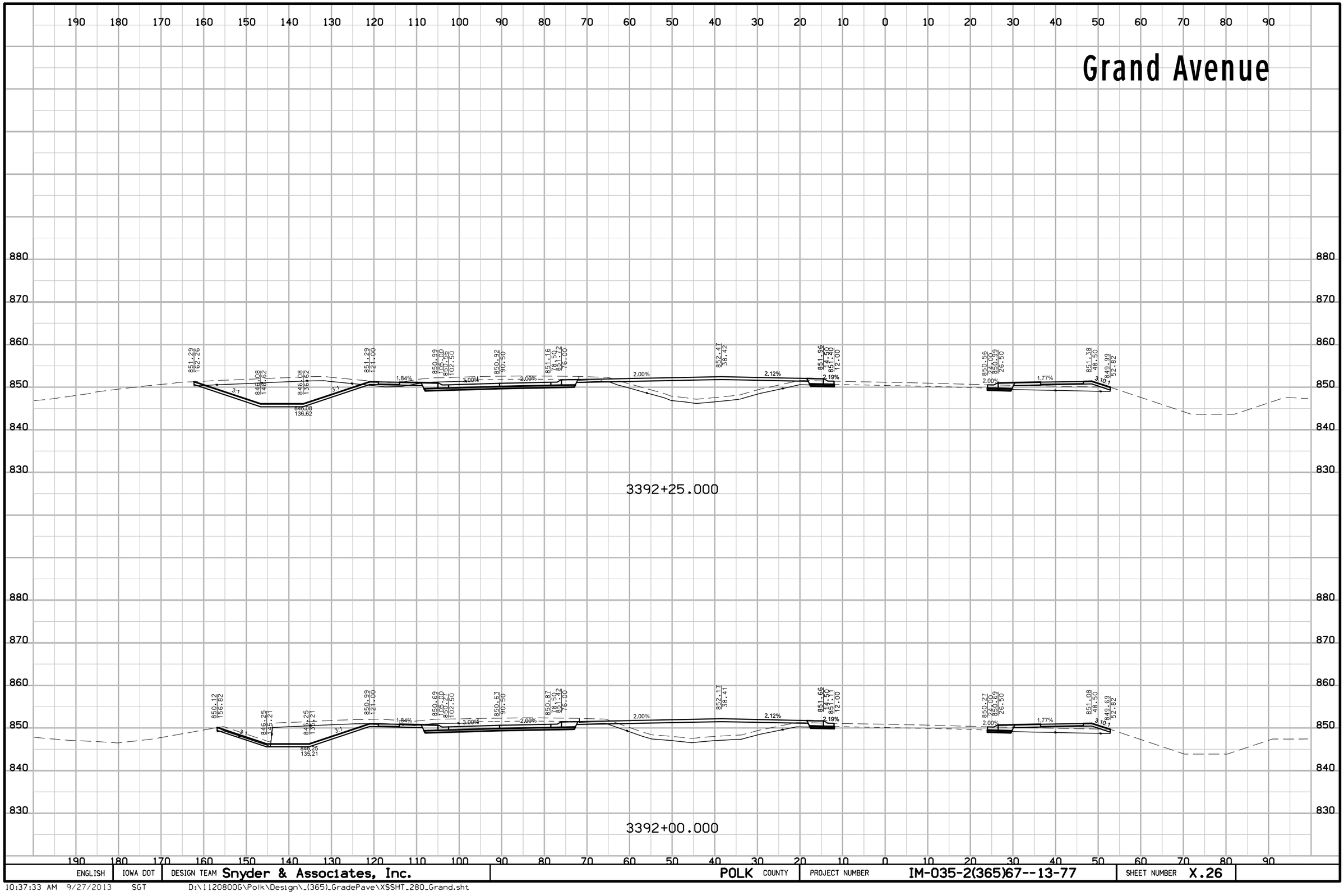
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.26

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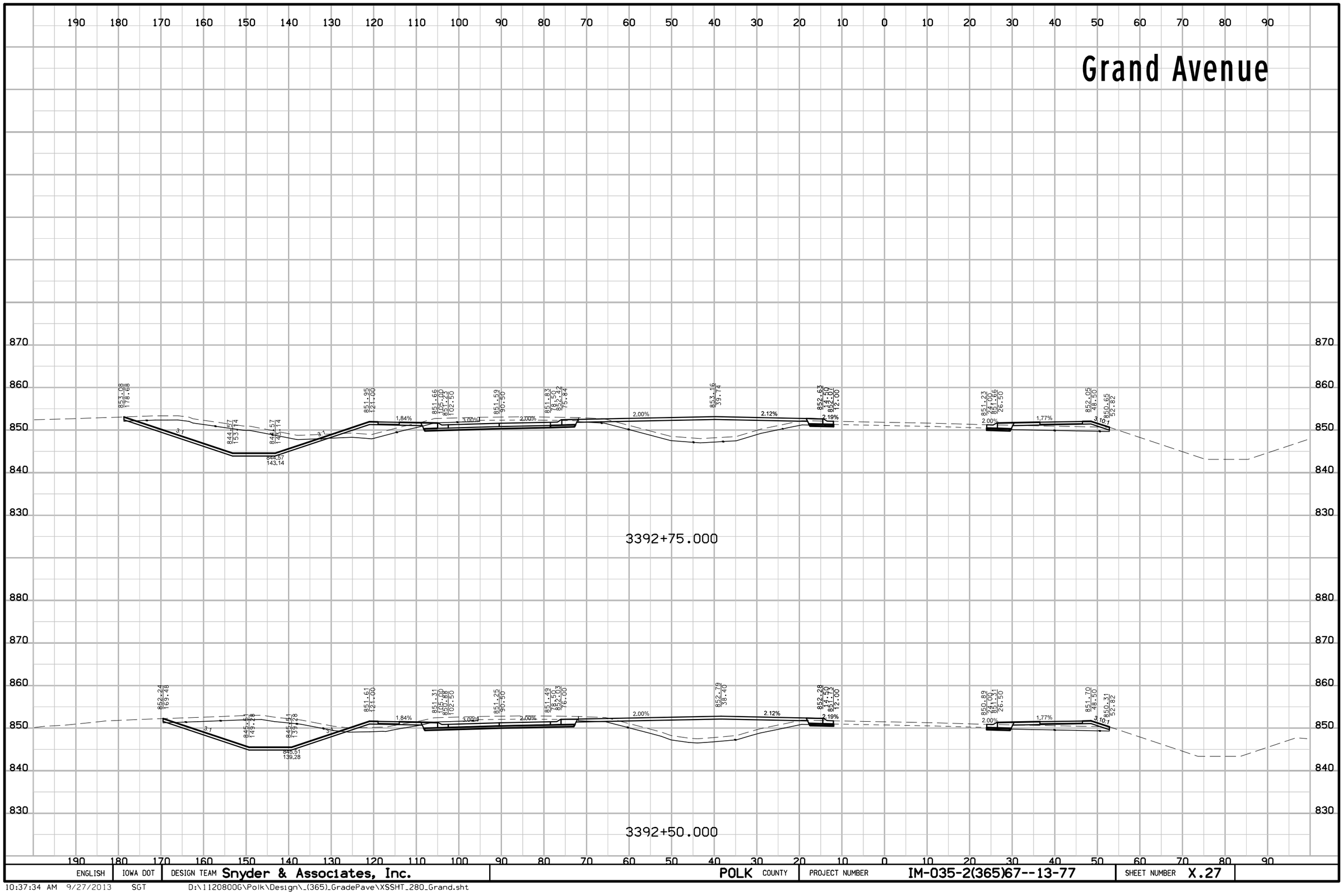
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.27

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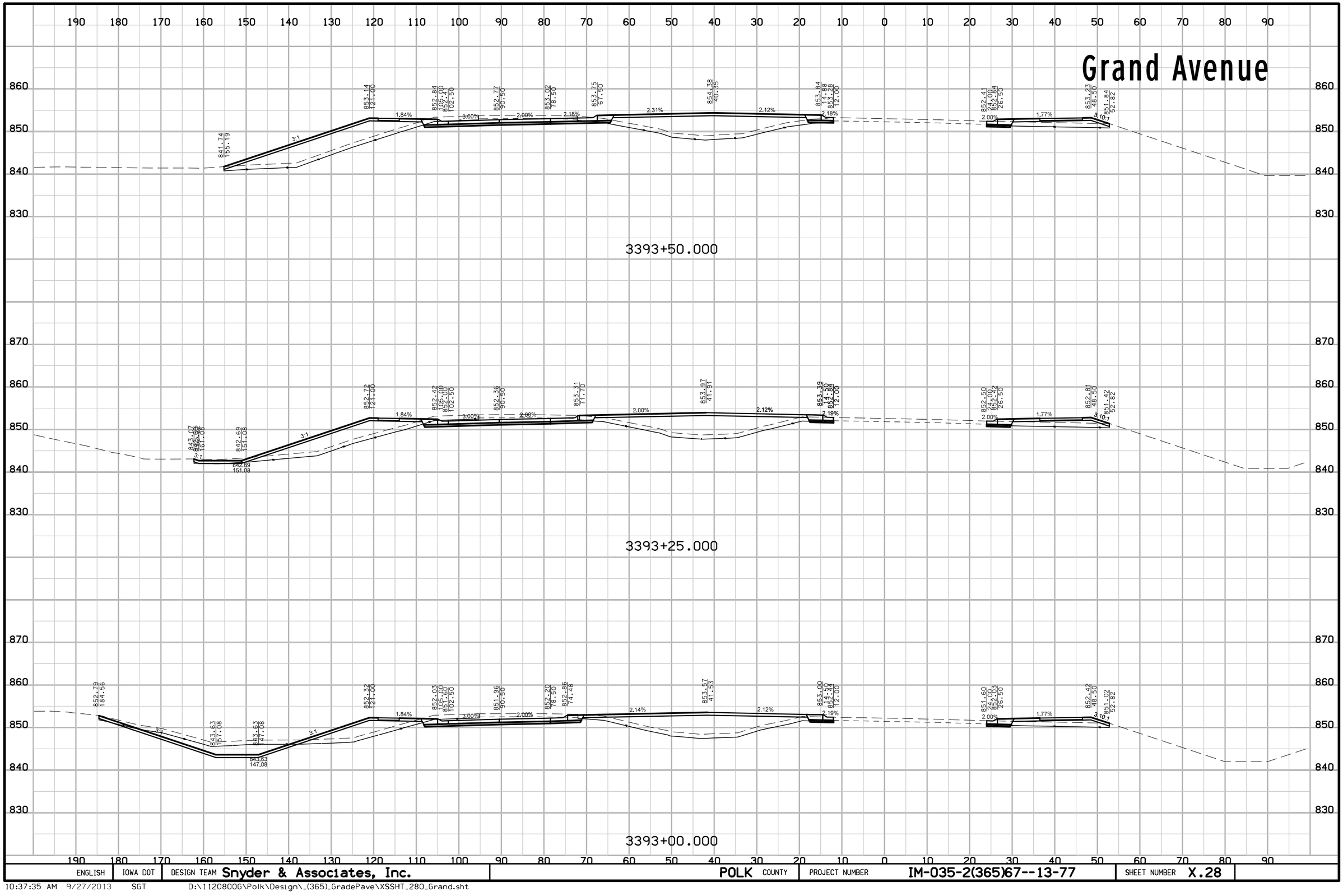
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.28

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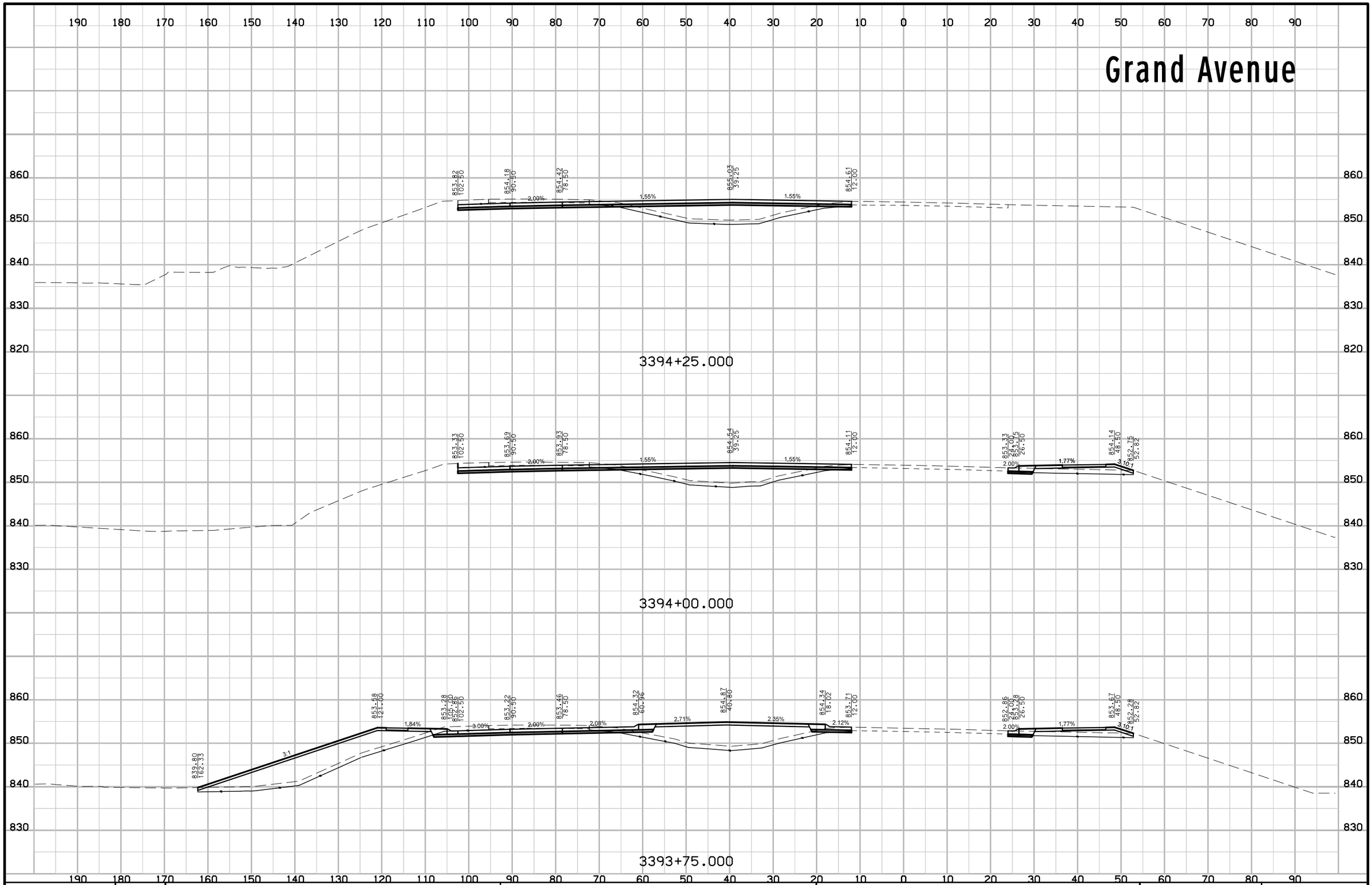
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.29

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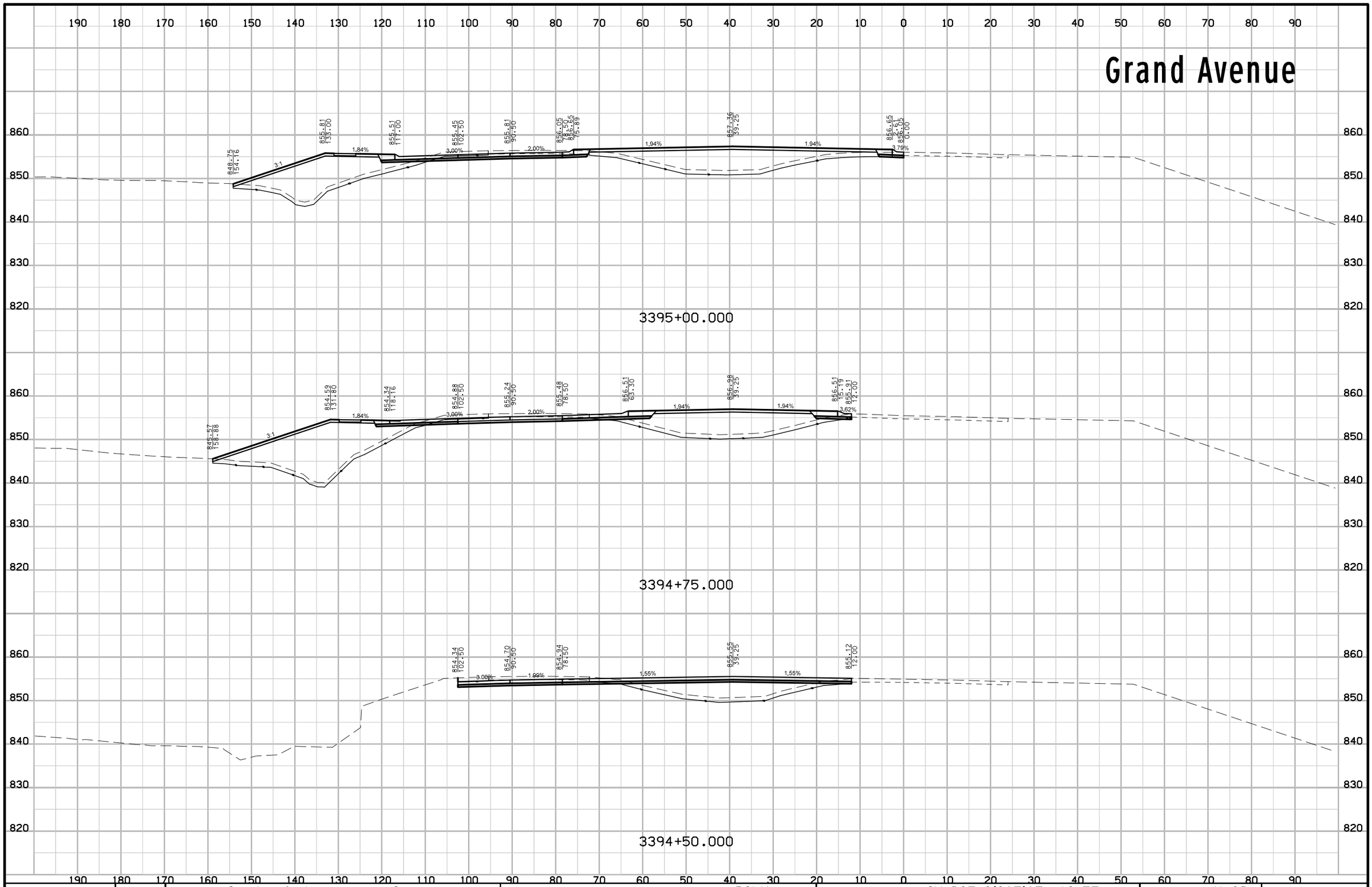
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.30

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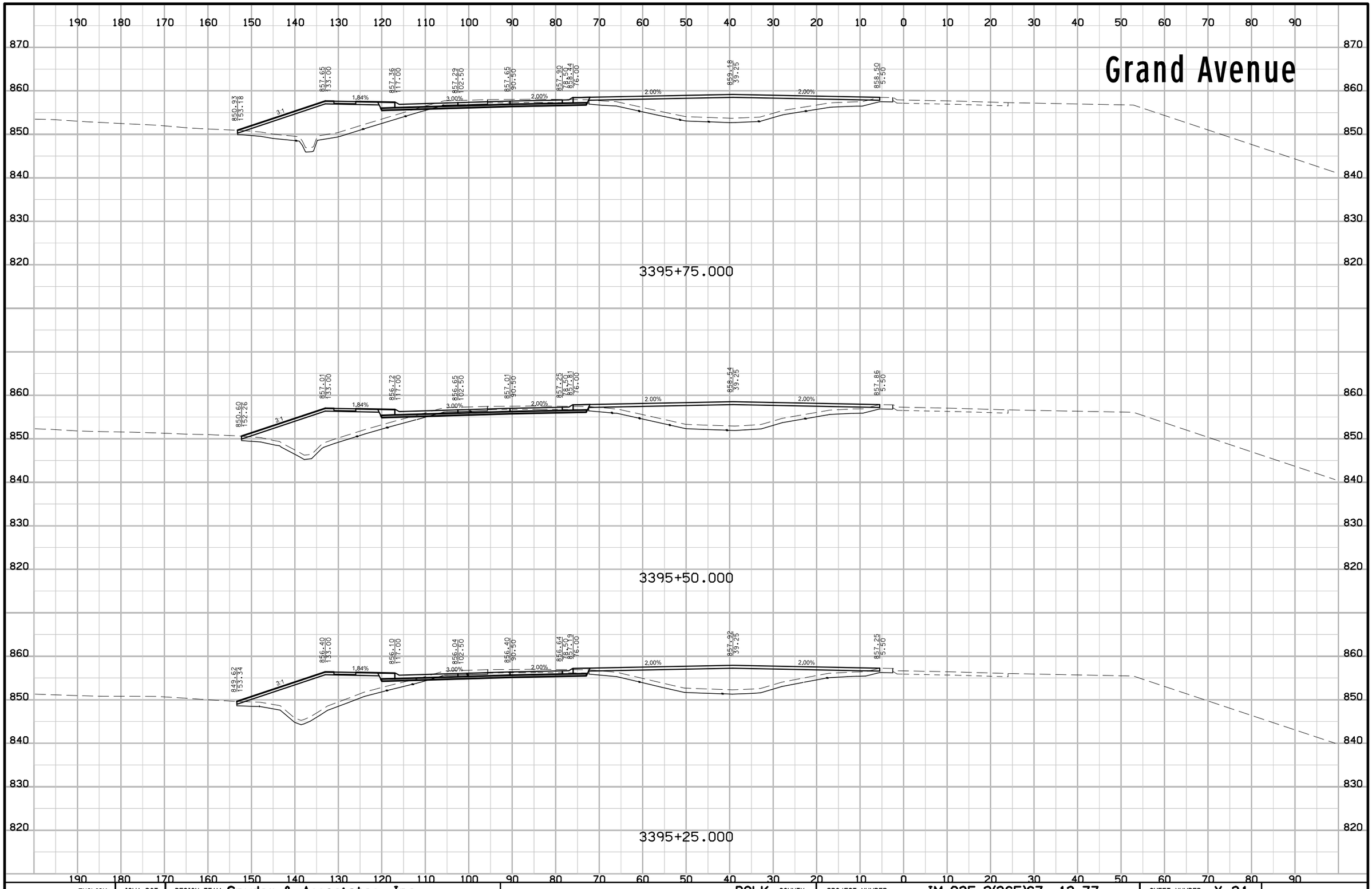
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.31

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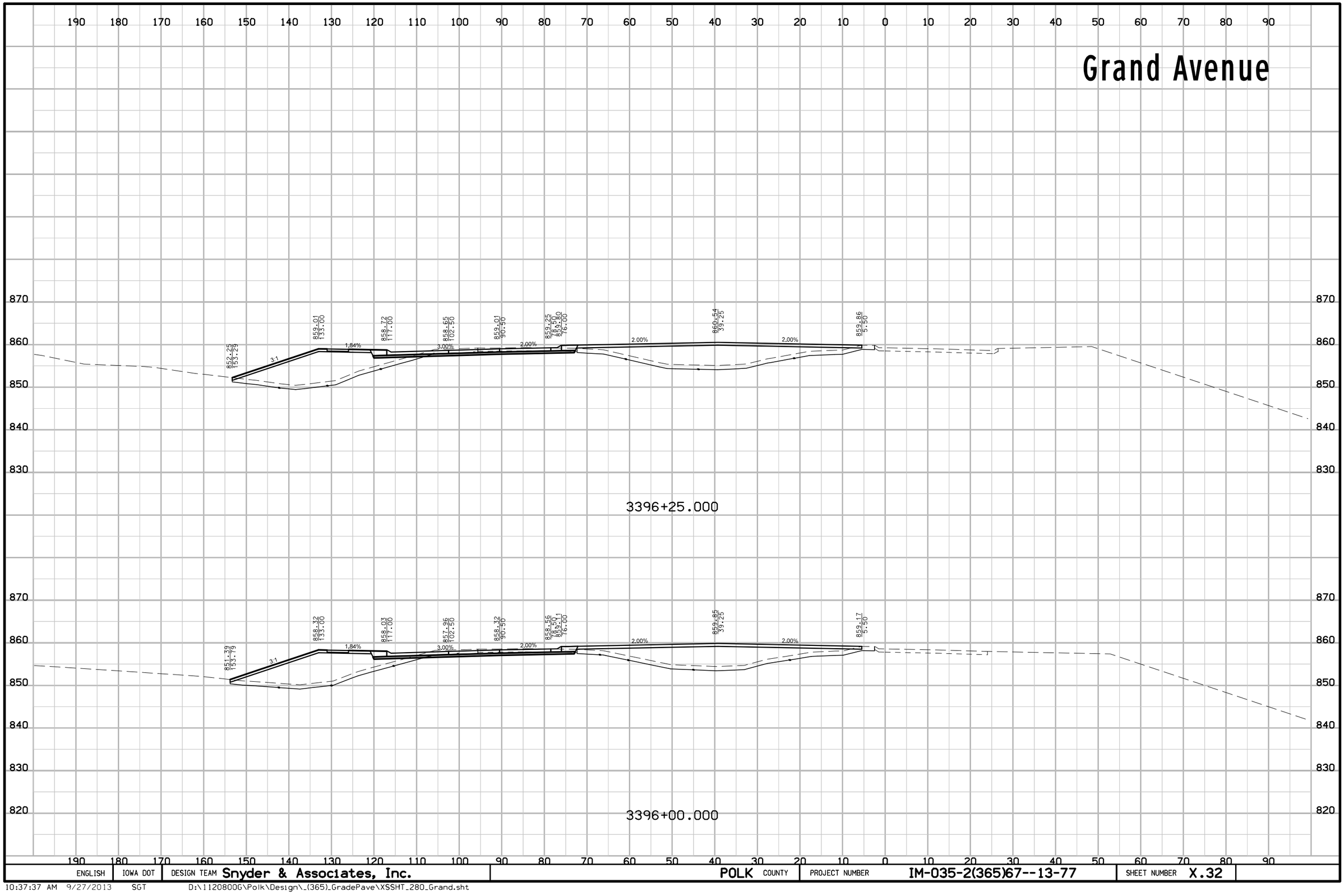
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.32	

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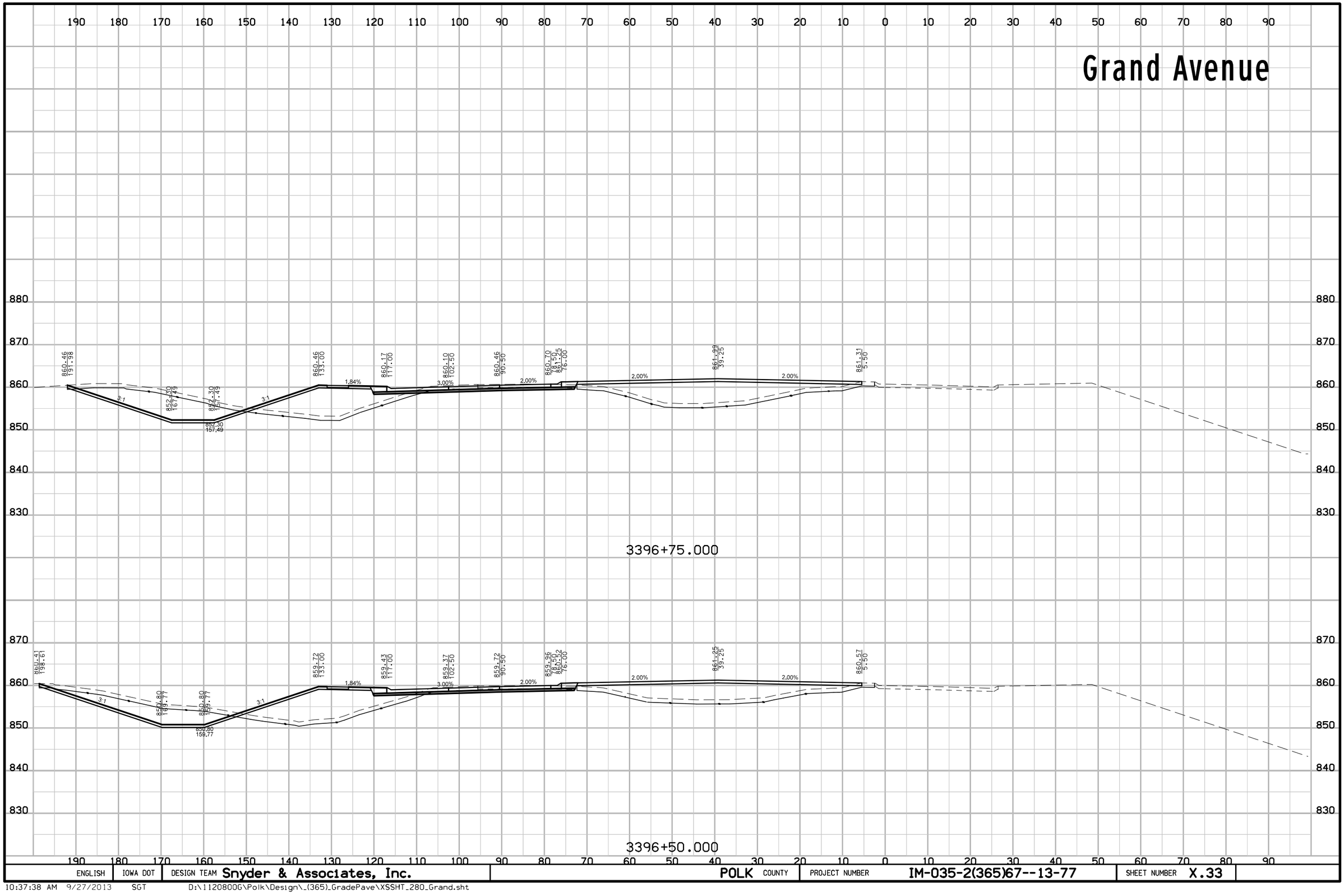
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.33

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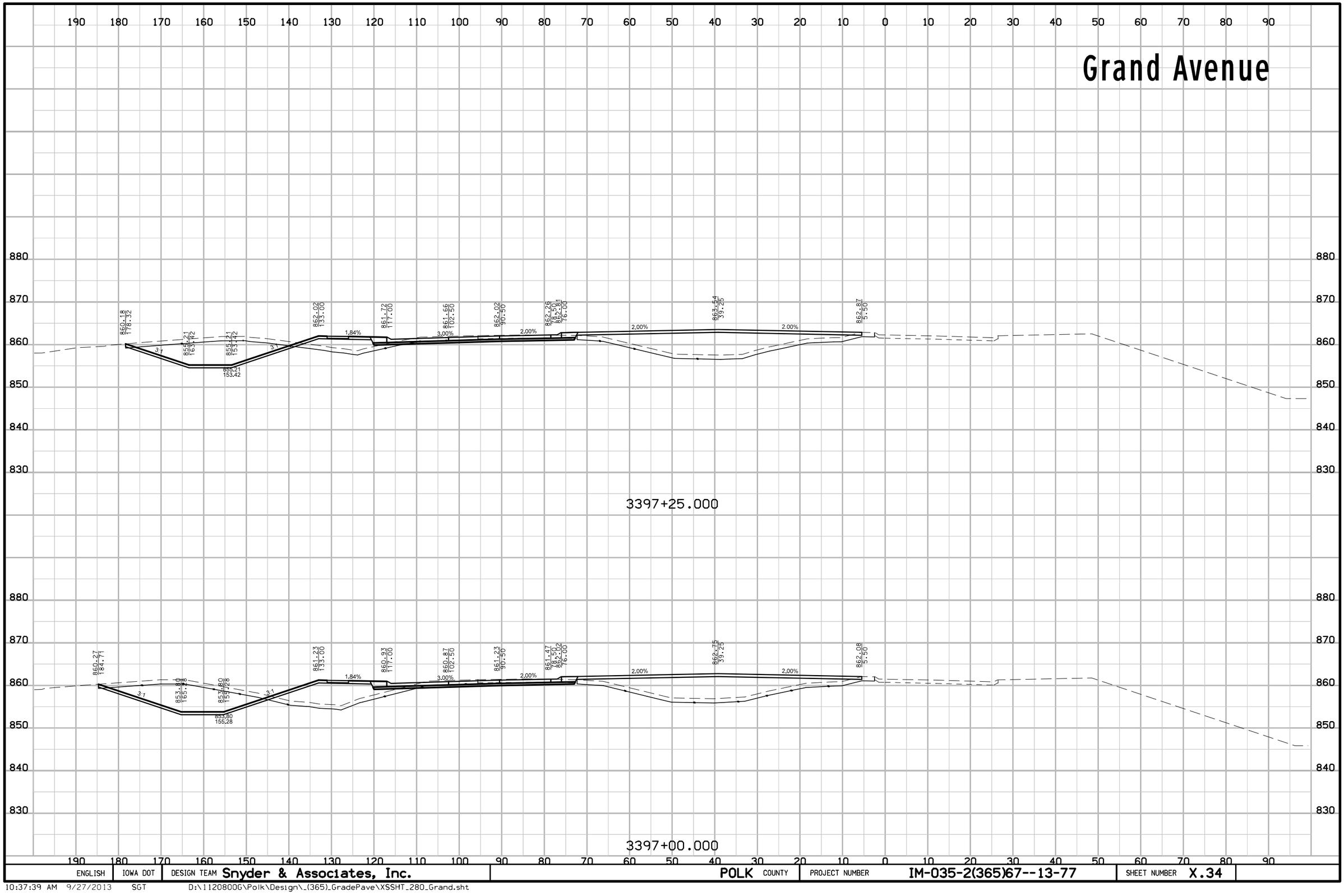
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.34

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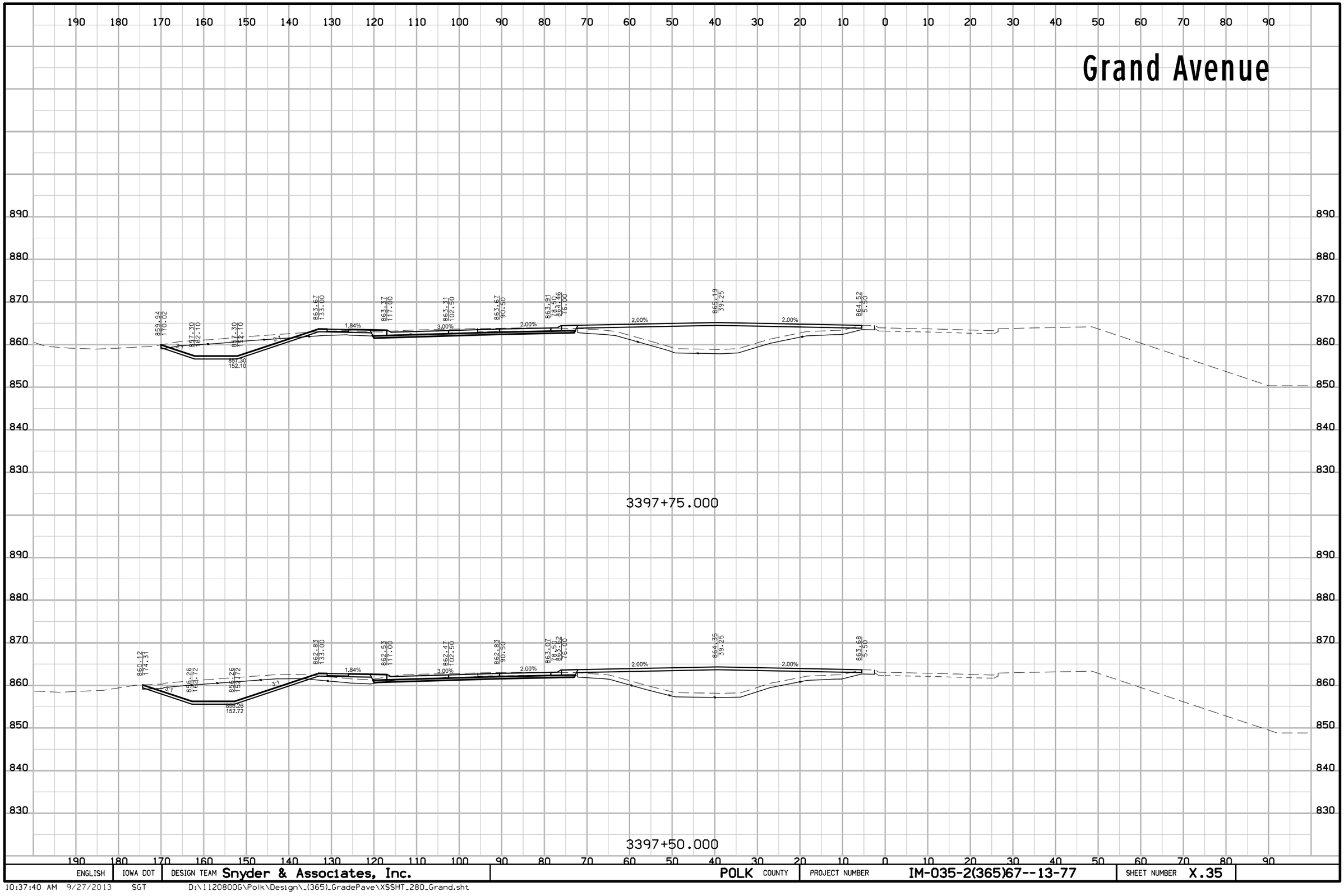
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.35

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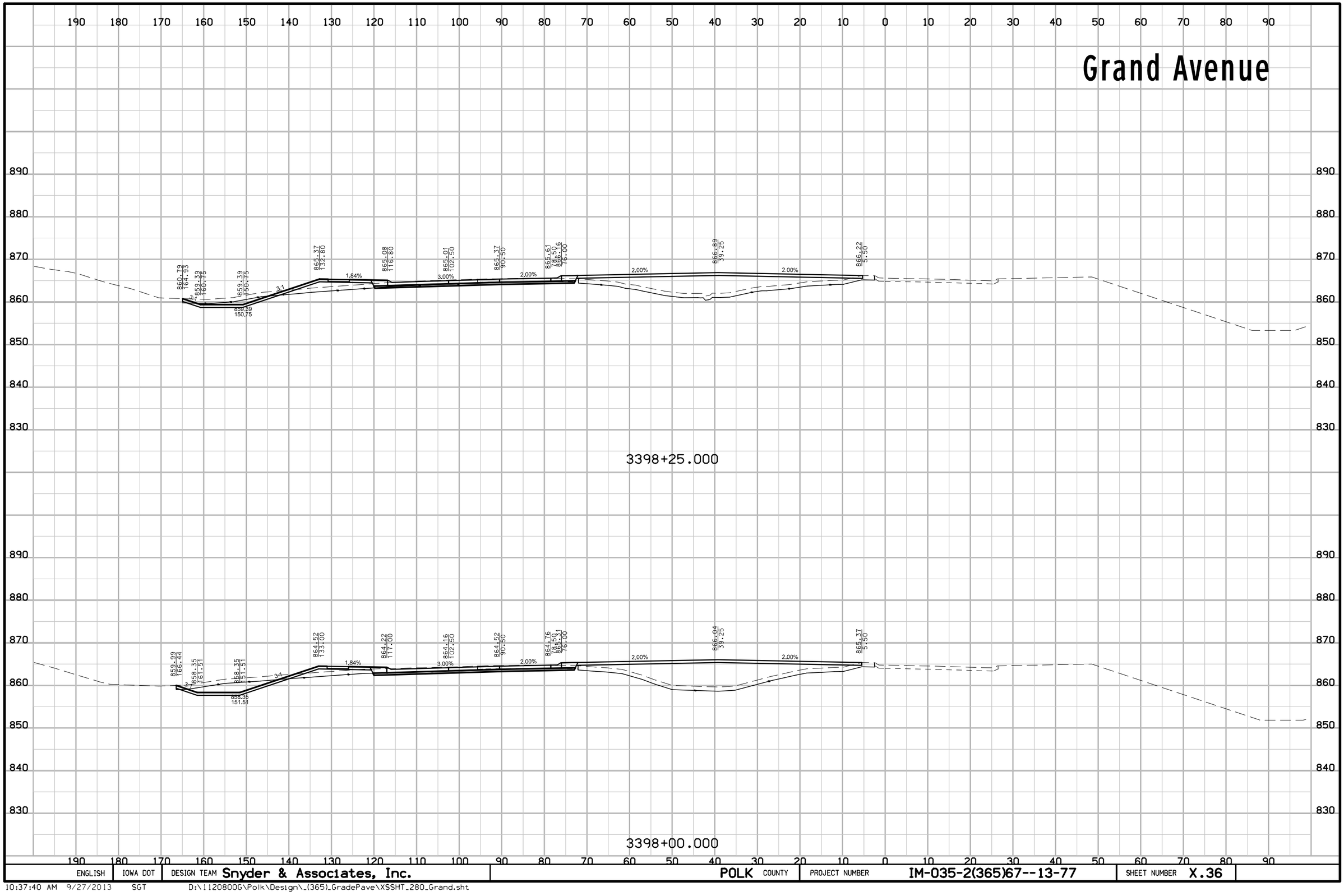
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.36

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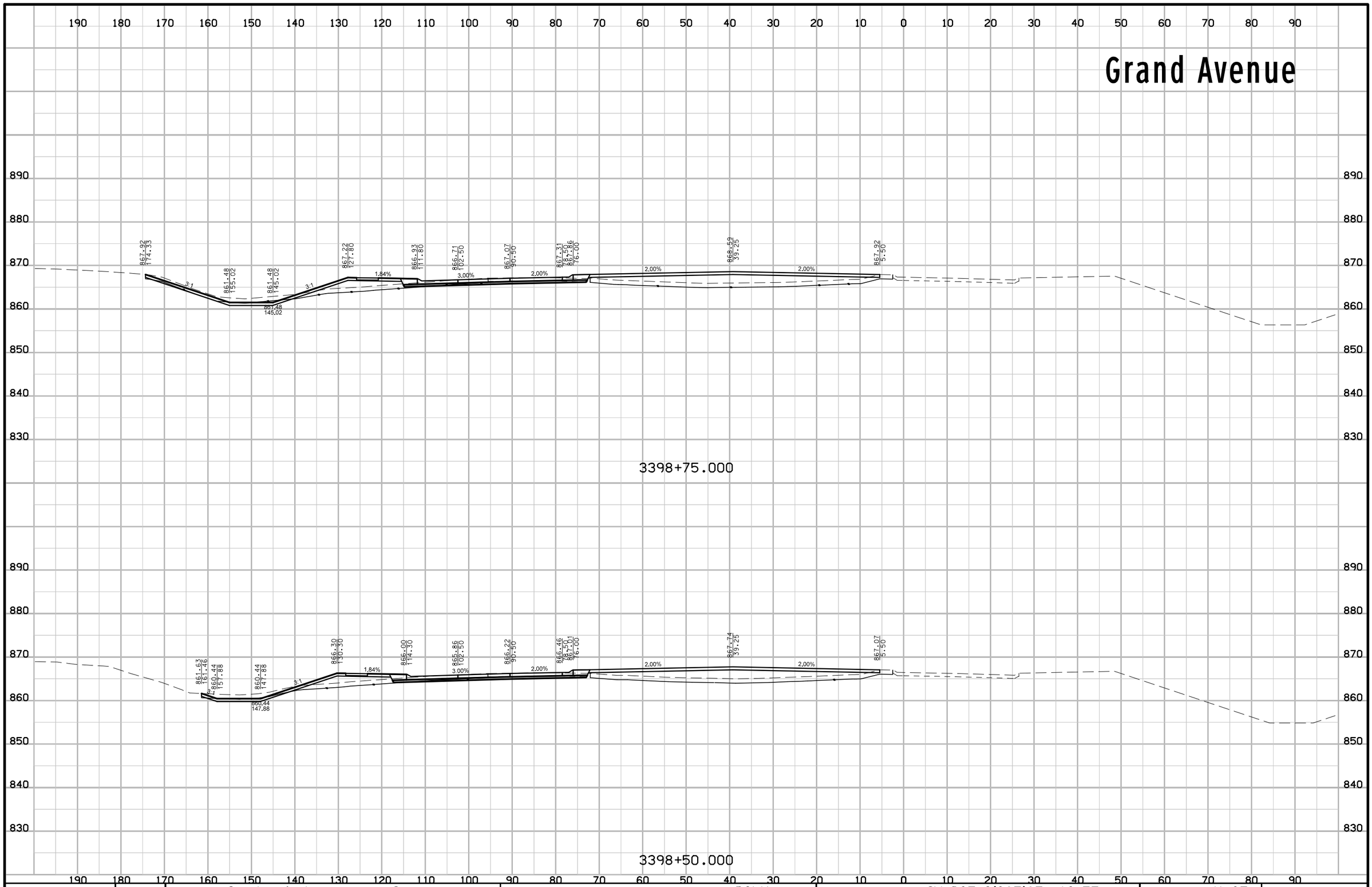
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.37

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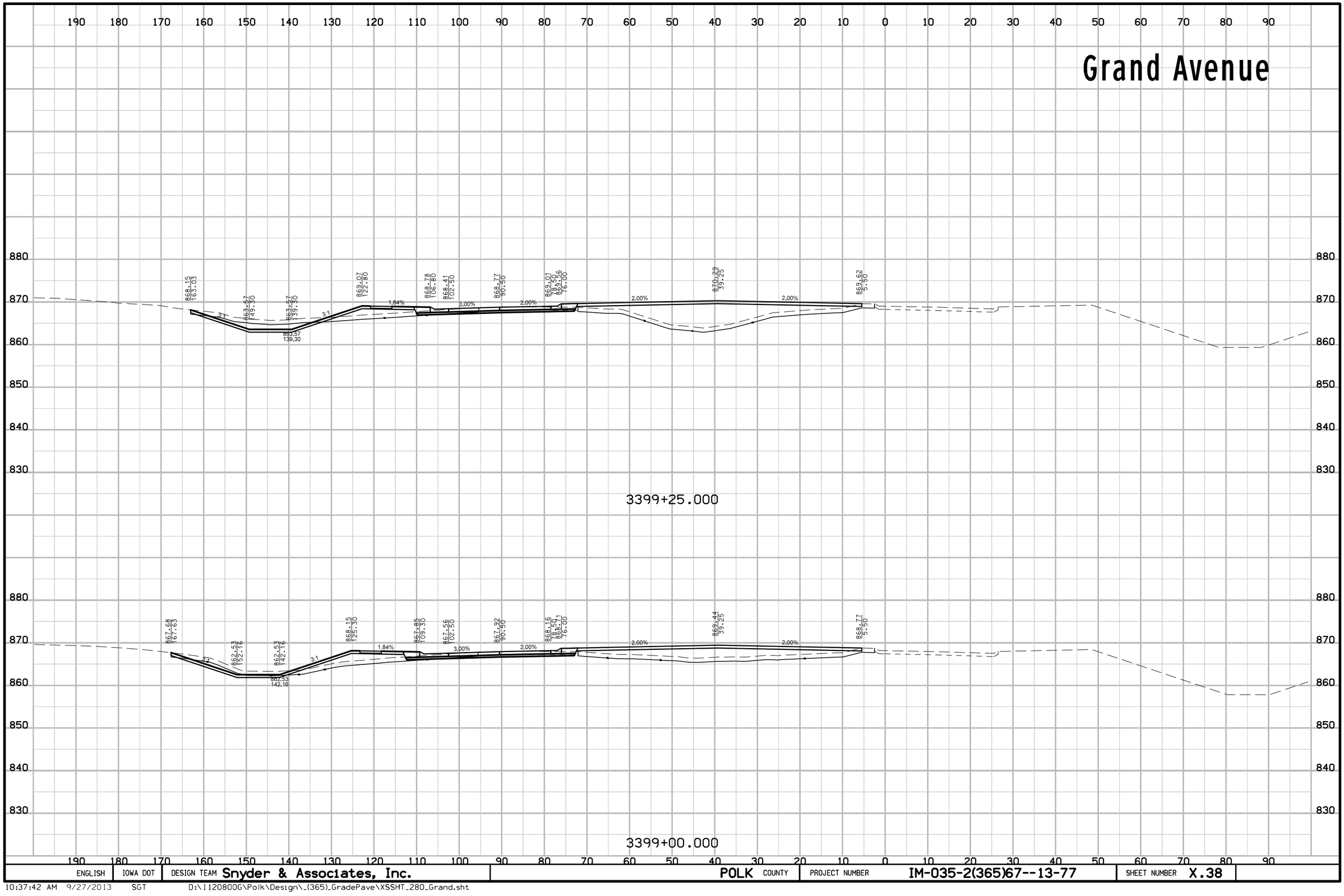
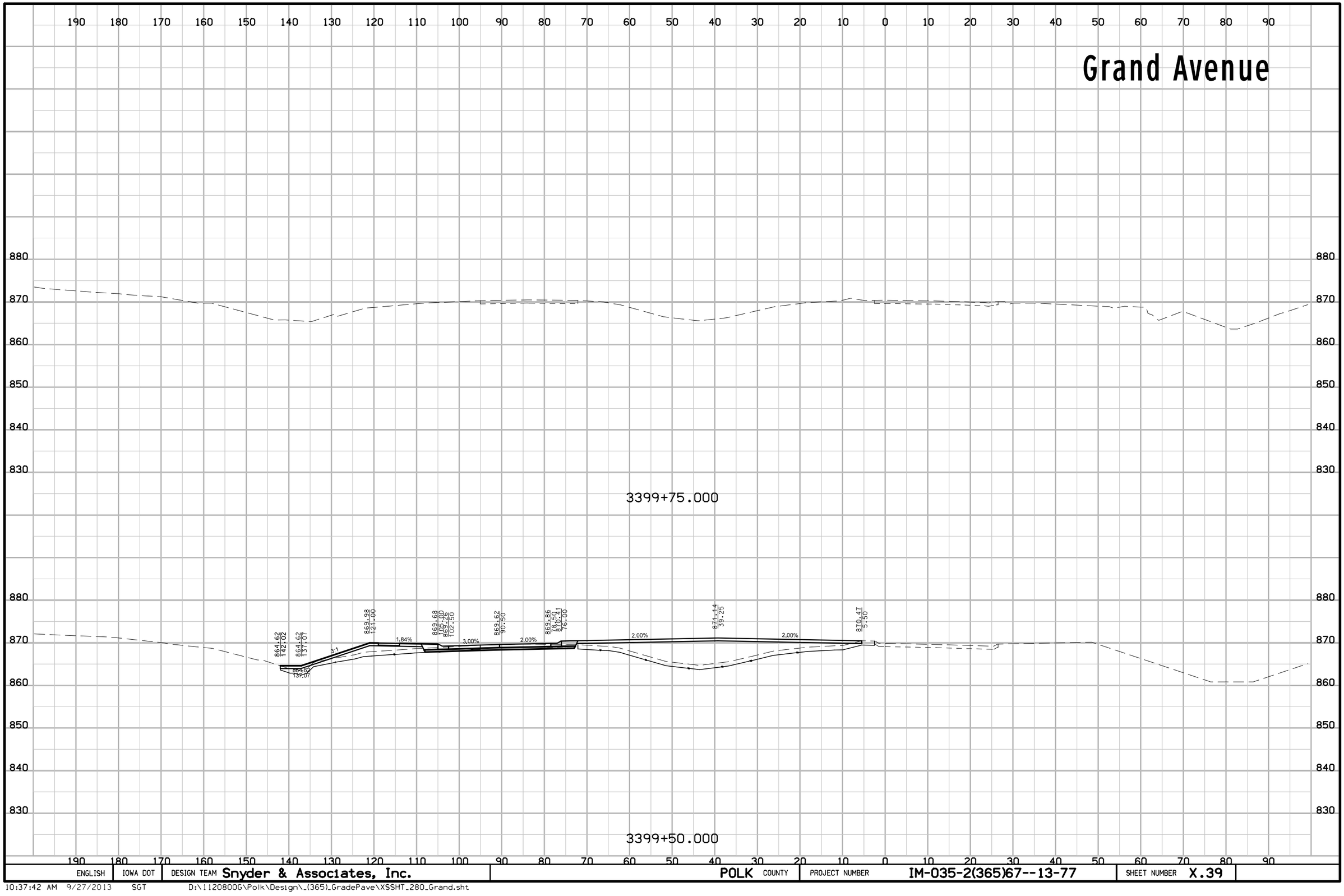
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.38

10:37:42 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_280_Grand.sht

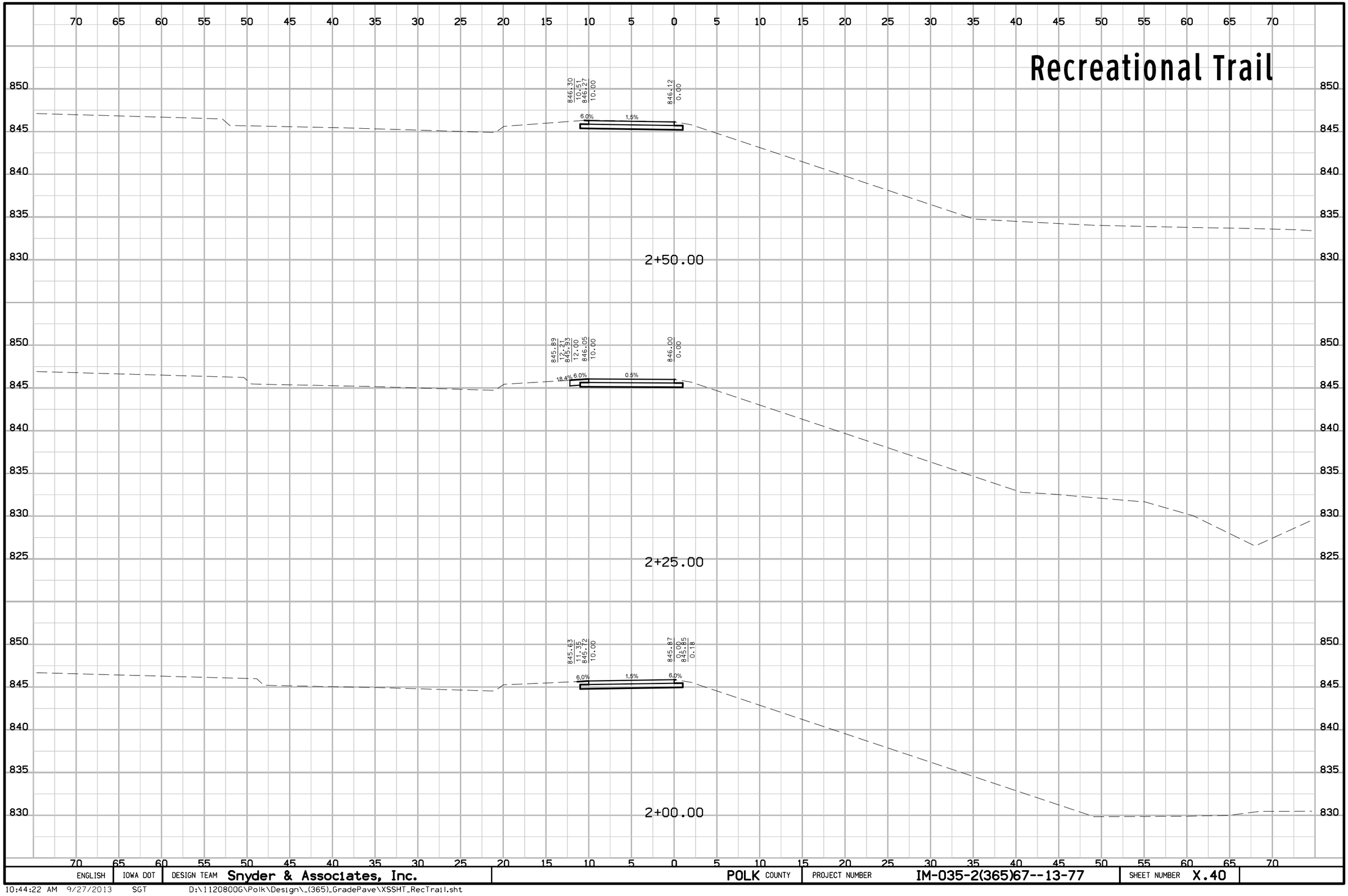
Grand Avenue



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.39

10:37:42 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_280_Grand.sht

Recreational Trail



ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	X.40

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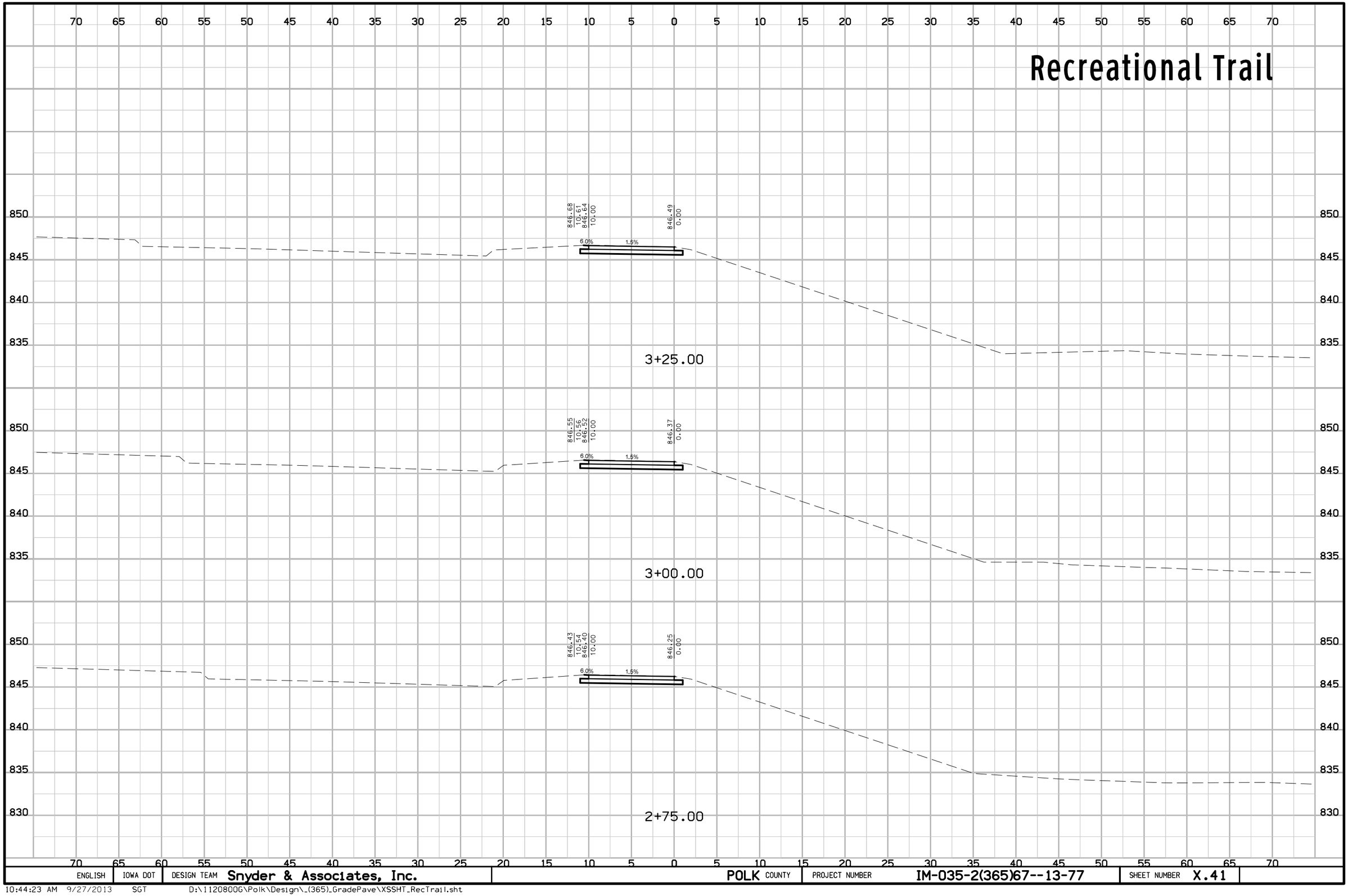
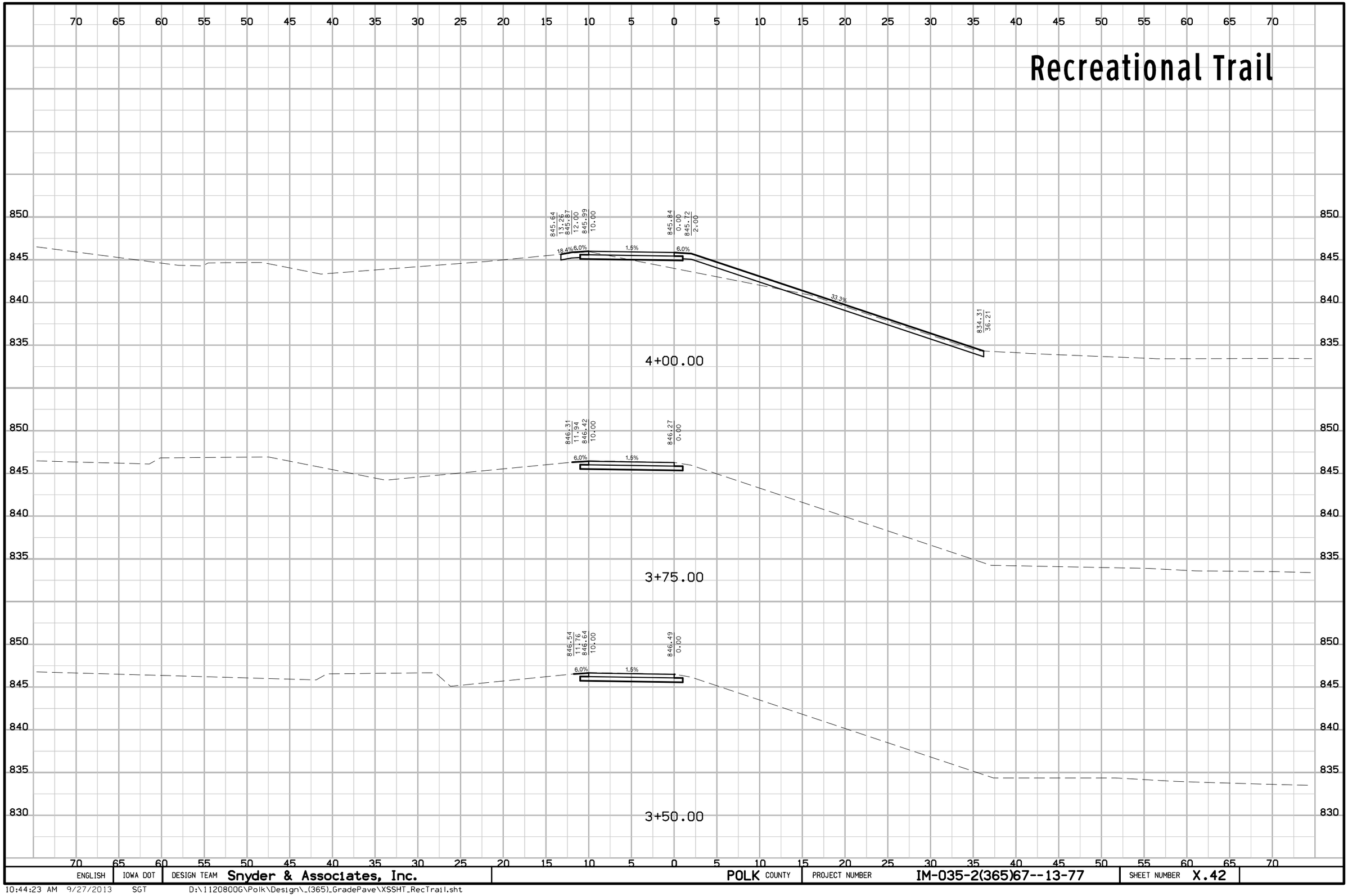
Recreational Trail



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.41

10:44:23 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_RecTrail.sht

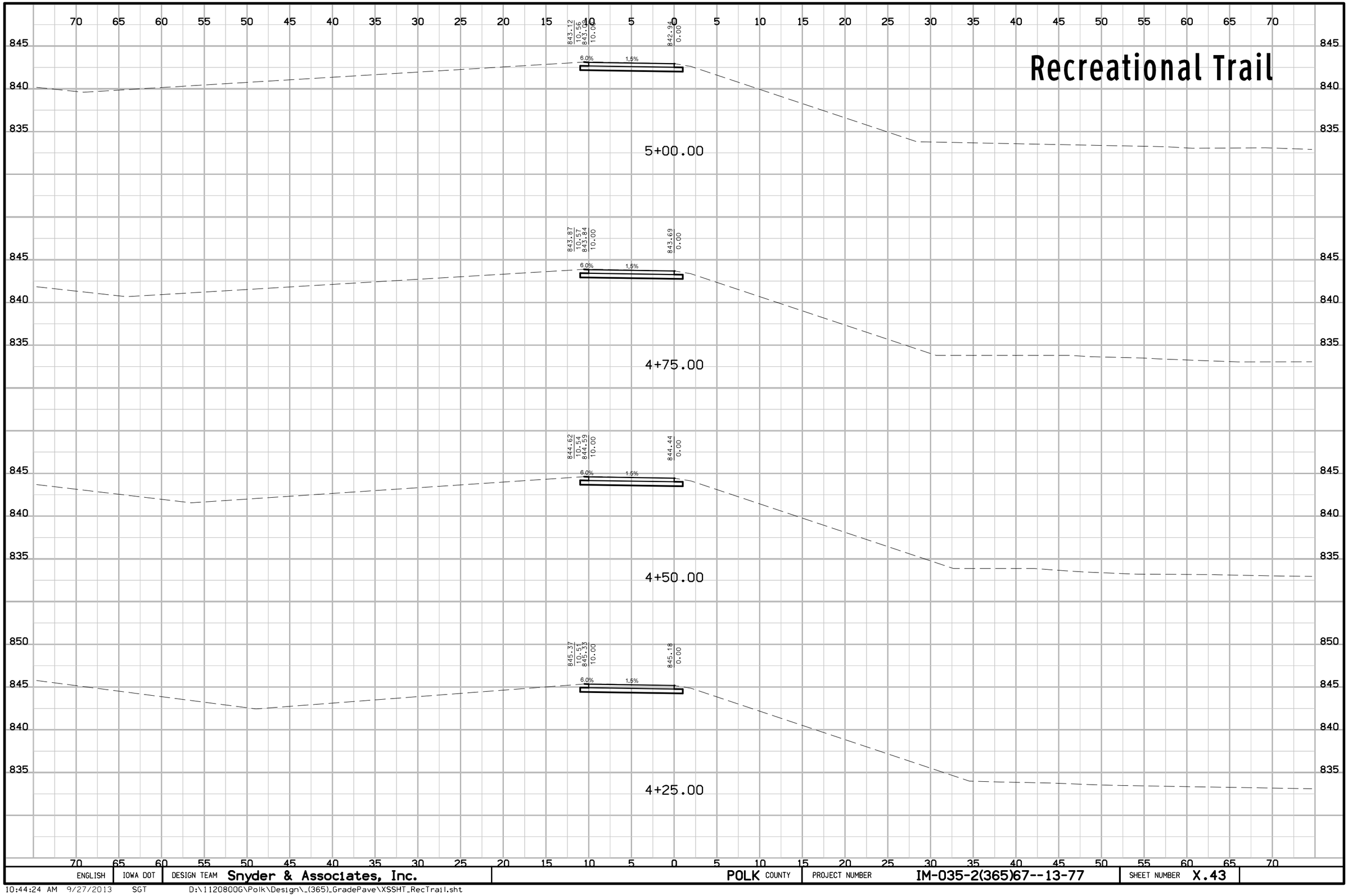
Recreational Trail



ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	X.42

10:44:23 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_RecTrail.sht

Recreational Trail



ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	X.43

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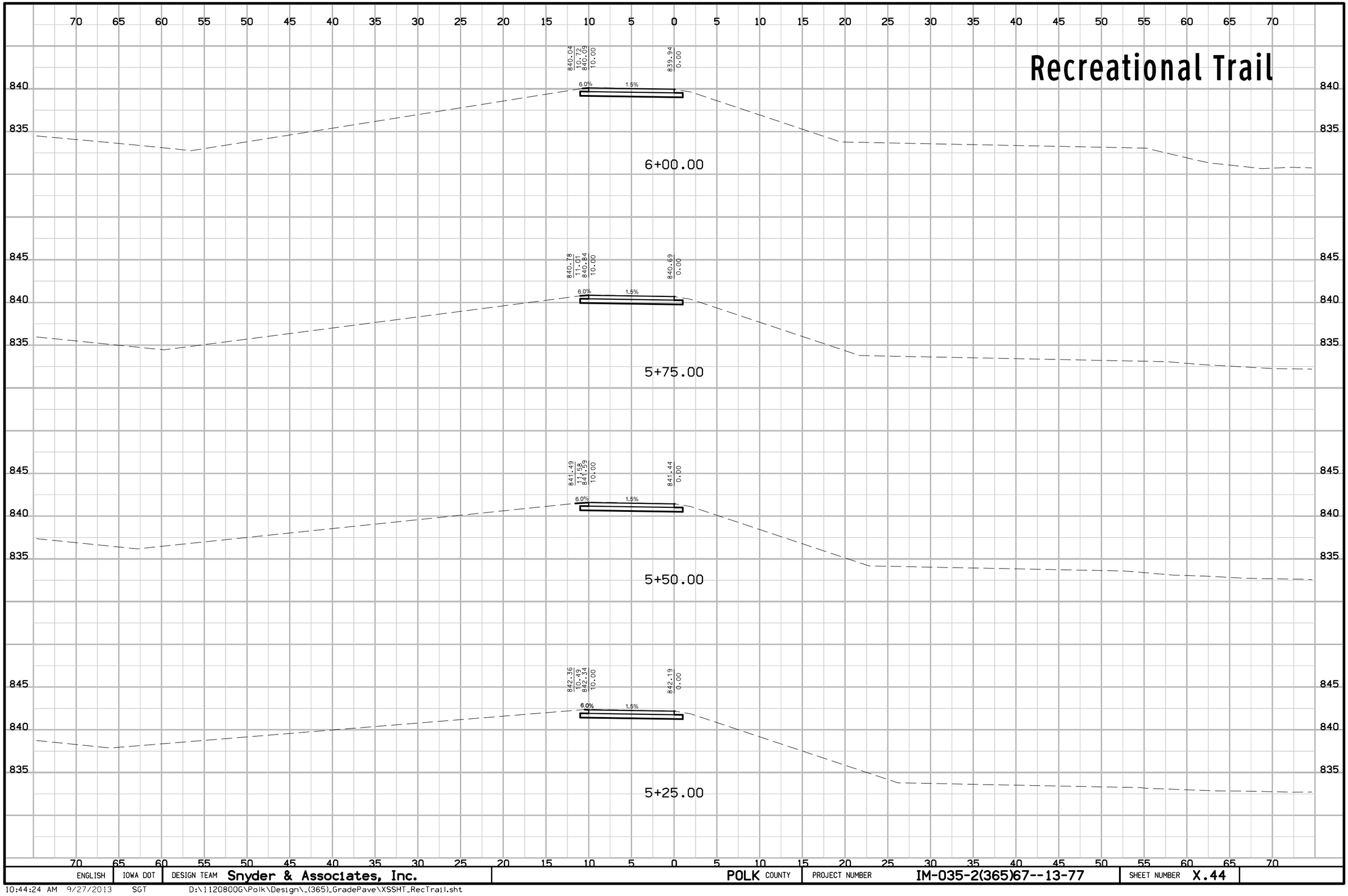
Recreational Trail



ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	X.44

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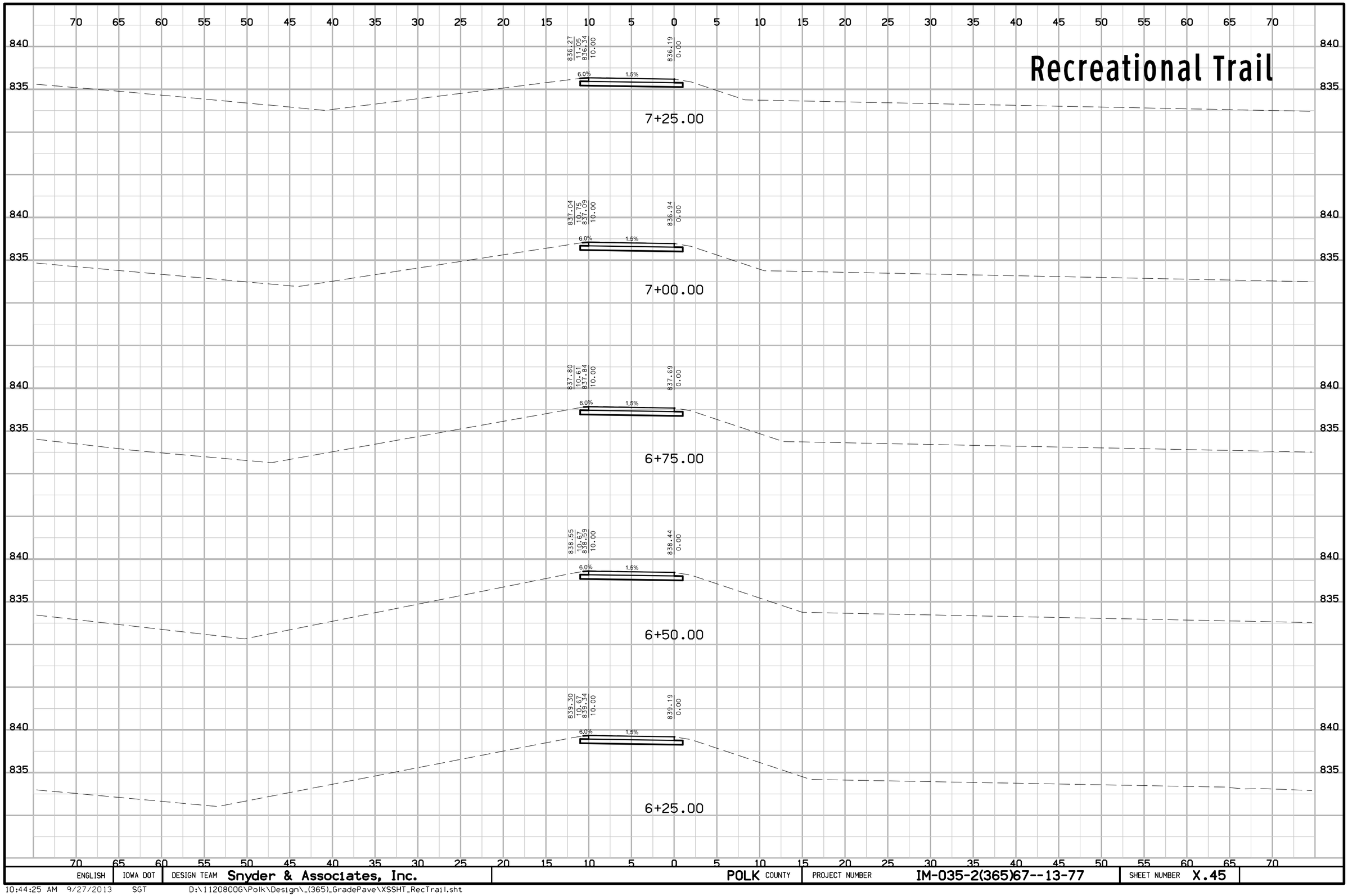
Recreational Trail



ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	X.45

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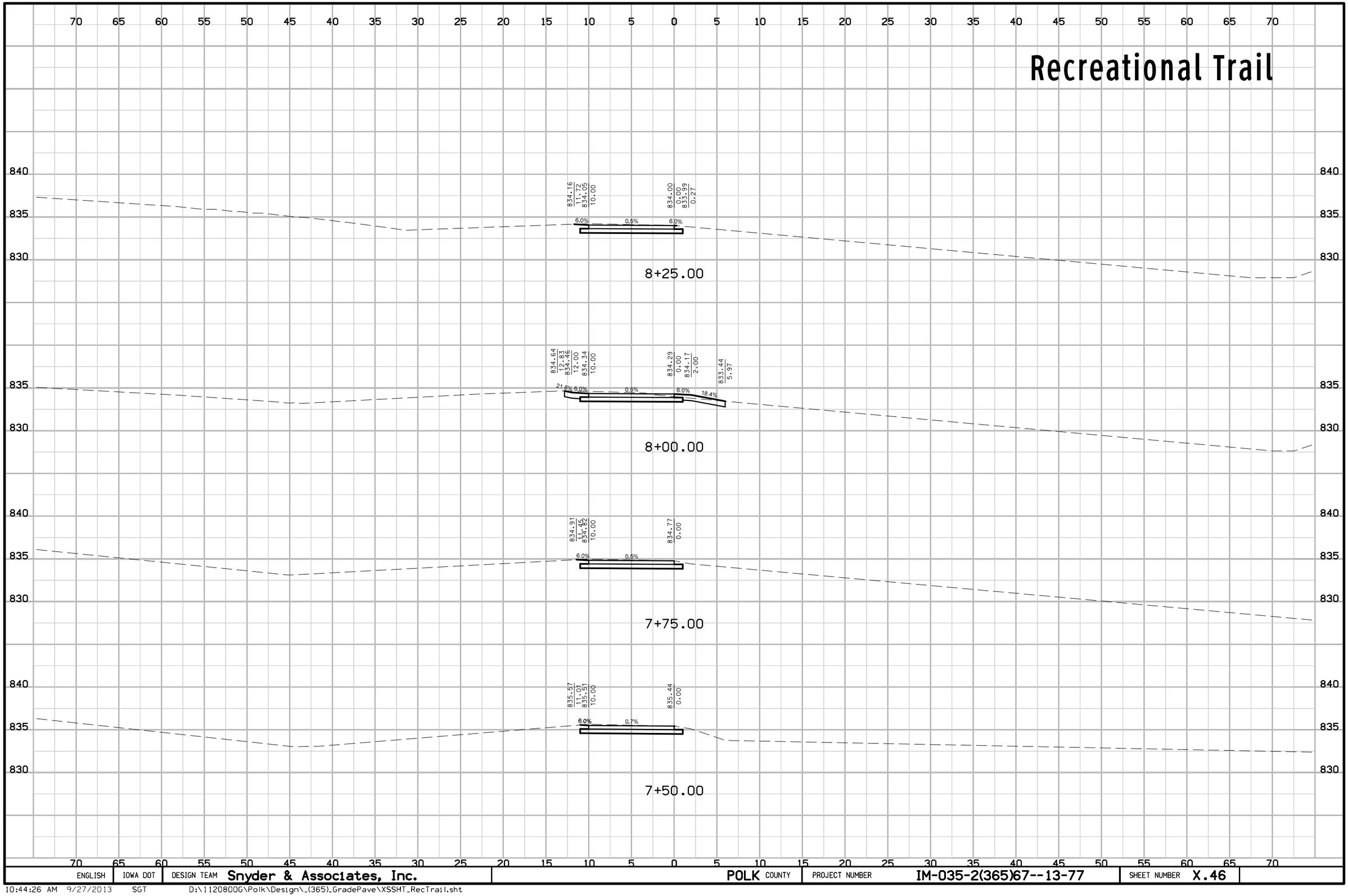
Recreational Trail



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.46

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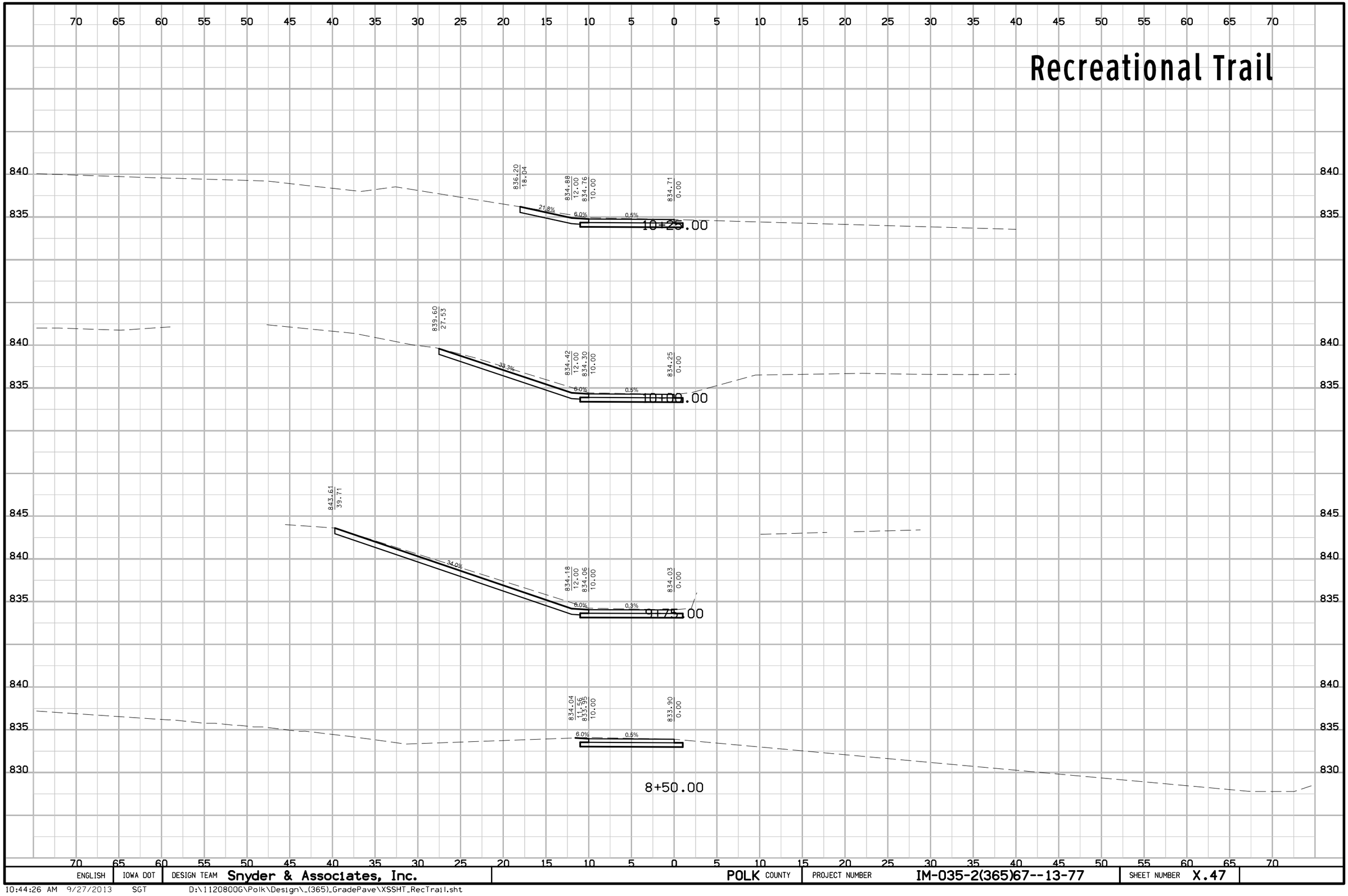
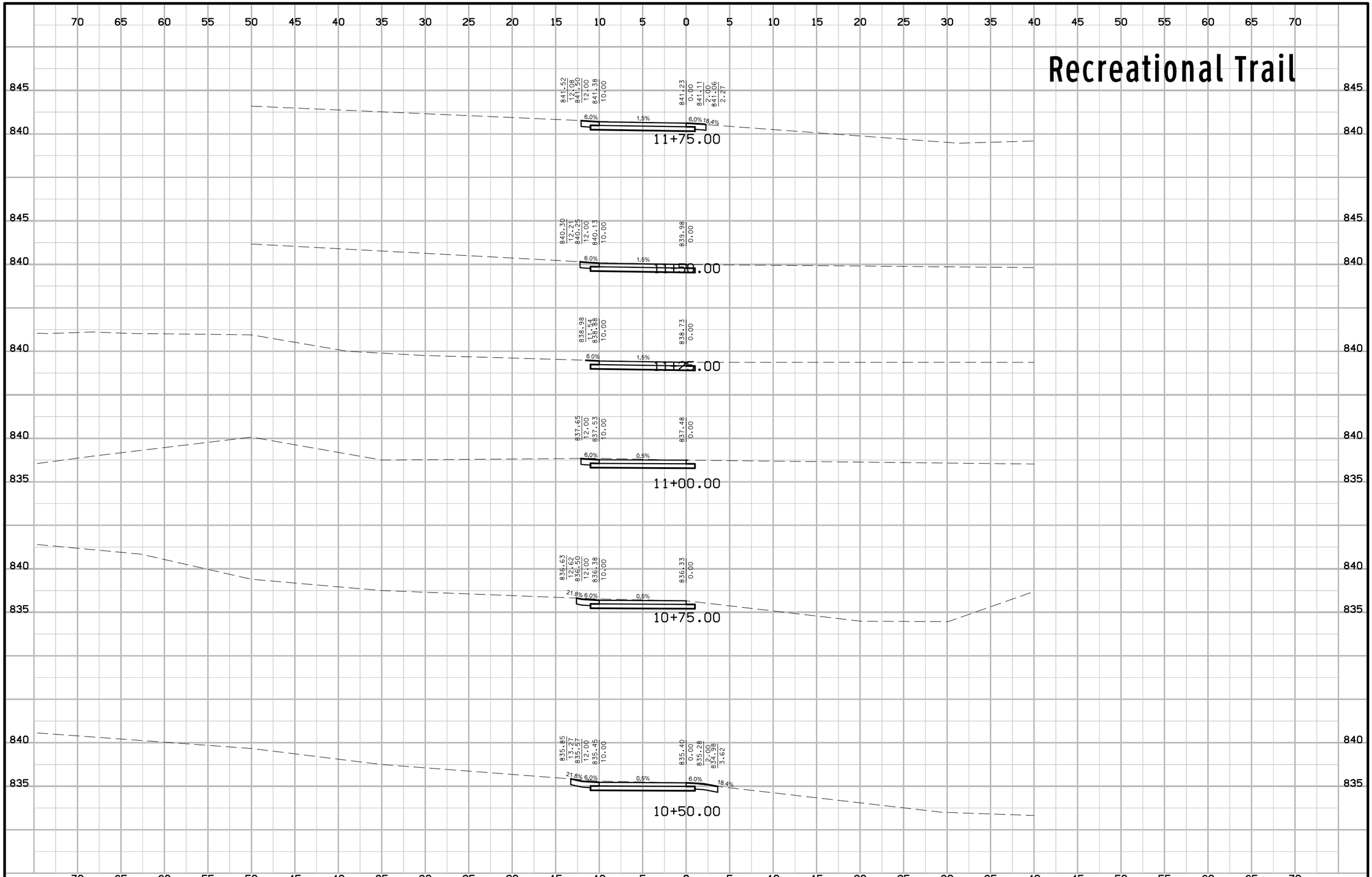
Recreational Trail



ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	X.47

10:44:26 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_RecTrail.sht

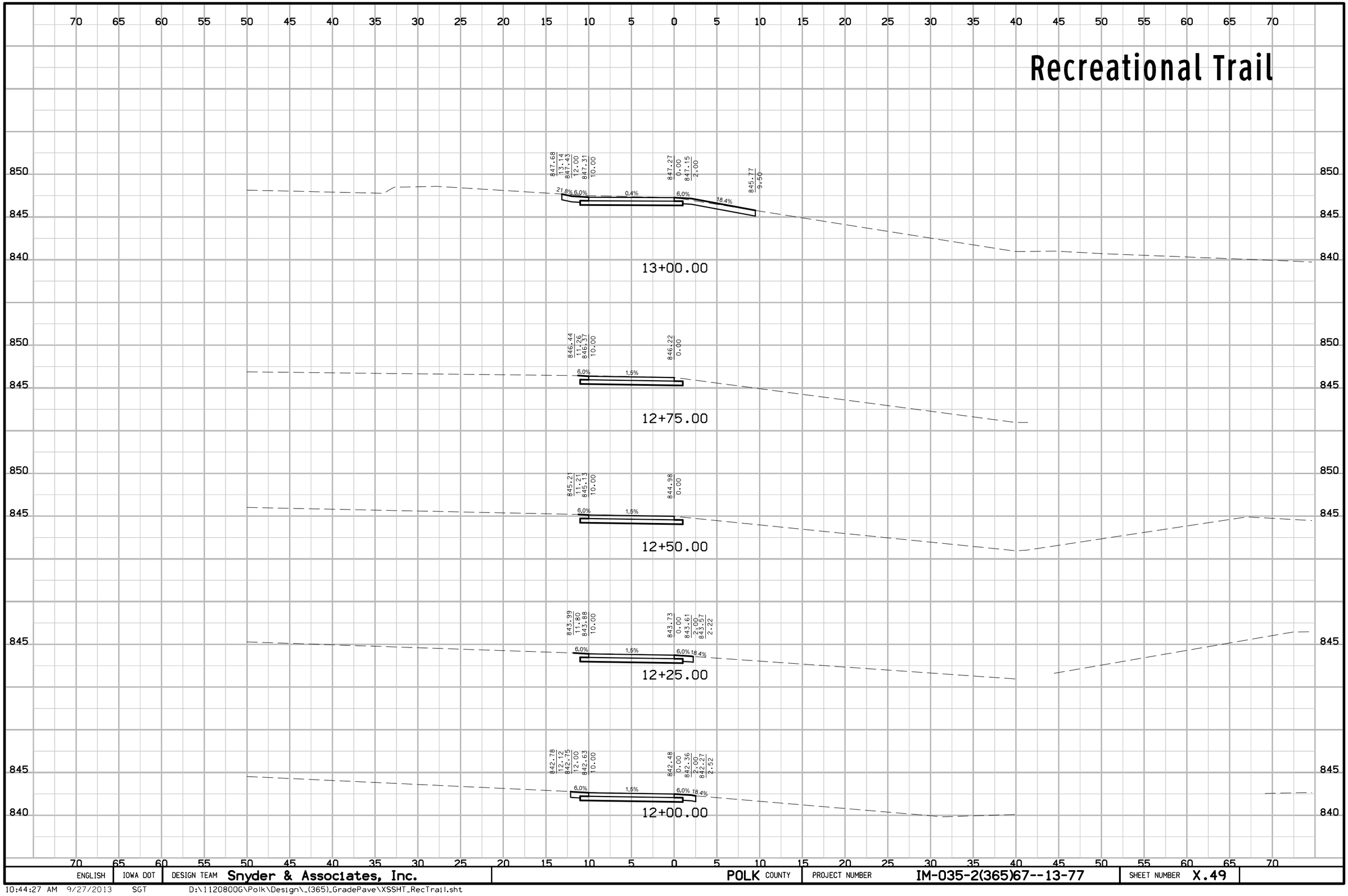
Recreational Trail



ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	X.48

10:44:27 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_RecTrail.sht

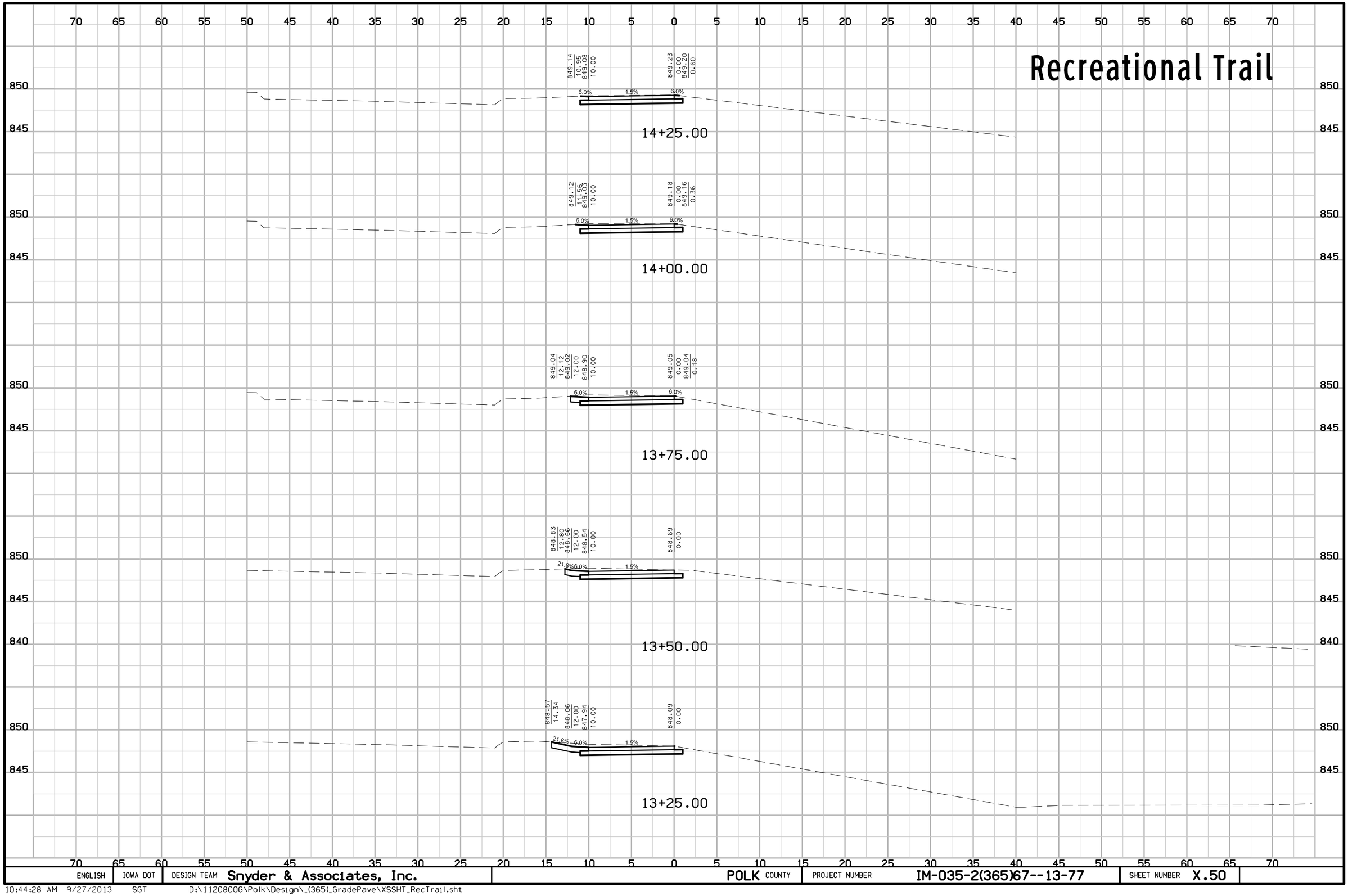
Recreational Trail



ENGLISH	IOWA DOT	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-035-2(365)67--13-77	SHEET NUMBER	X.49

10:44:27 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_RecTrail.sht

Recreational Trail



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.50	

10:44:28 AM 9/27/2013 SGT D:\1120800G\Polk\Design_(365)_GradePave\XSSHT_RecTrail.sht

Recreational Trail

70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70

855
850
845

849.22
10.18
849.23
10.00

849.38
0.00
849.50
2.00
850.21
4.22

6.0% 1.5% 6.0% 31.8%

15+05.00

849.16
10.42
849.18
10.00

849.33
0.00
849.39
0.91

6.0% 1.5% 6.0%

14+75.00

849.13
10.00

849.28
0.00
849.21
1.16

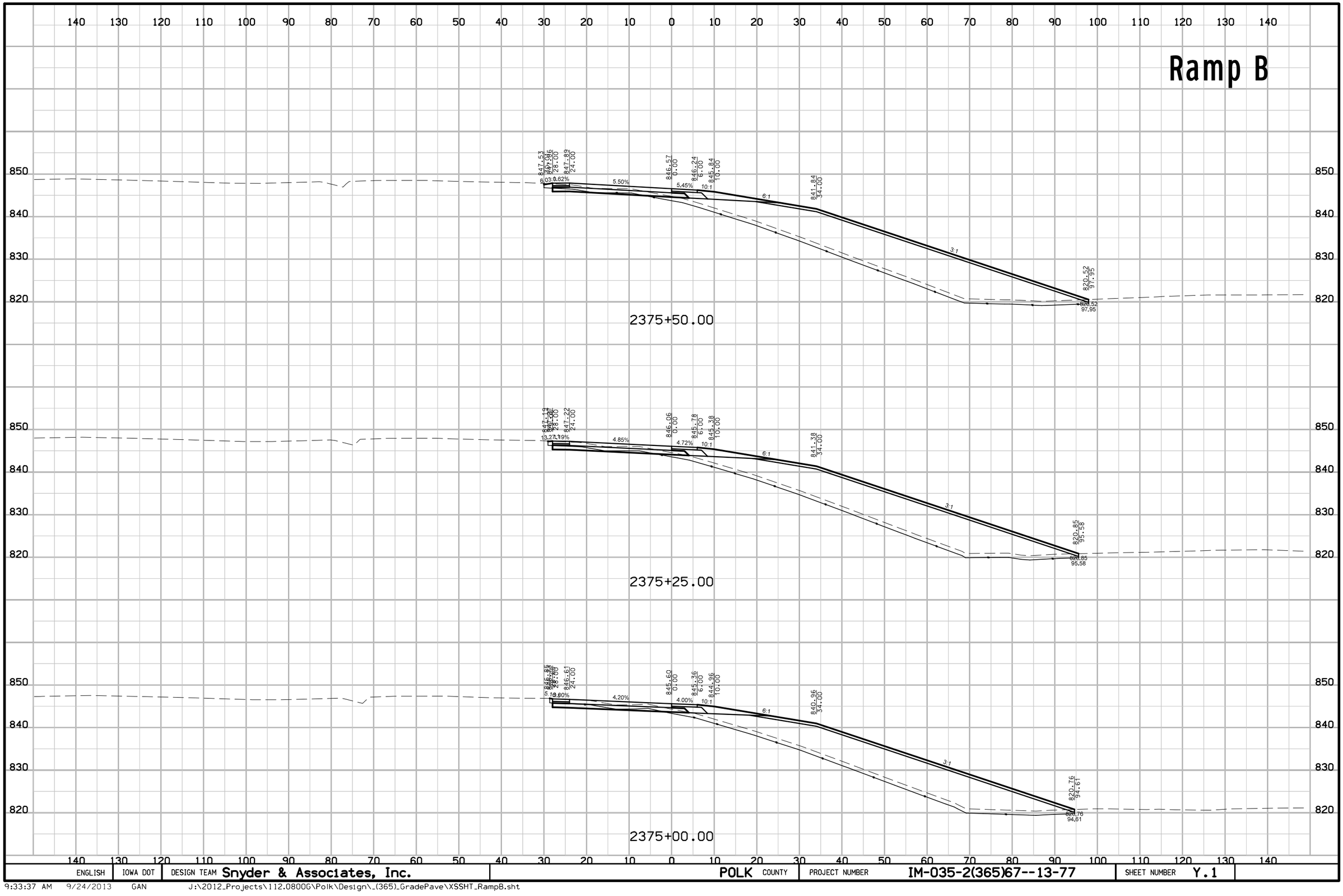
1.5% 6.0%

14+50.00

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER X.51

10:44:29 AM 9/27/2013 SGT D:\11208006\Polk\Design_(365)_GradePave\XSSHT_RecTrail.sht

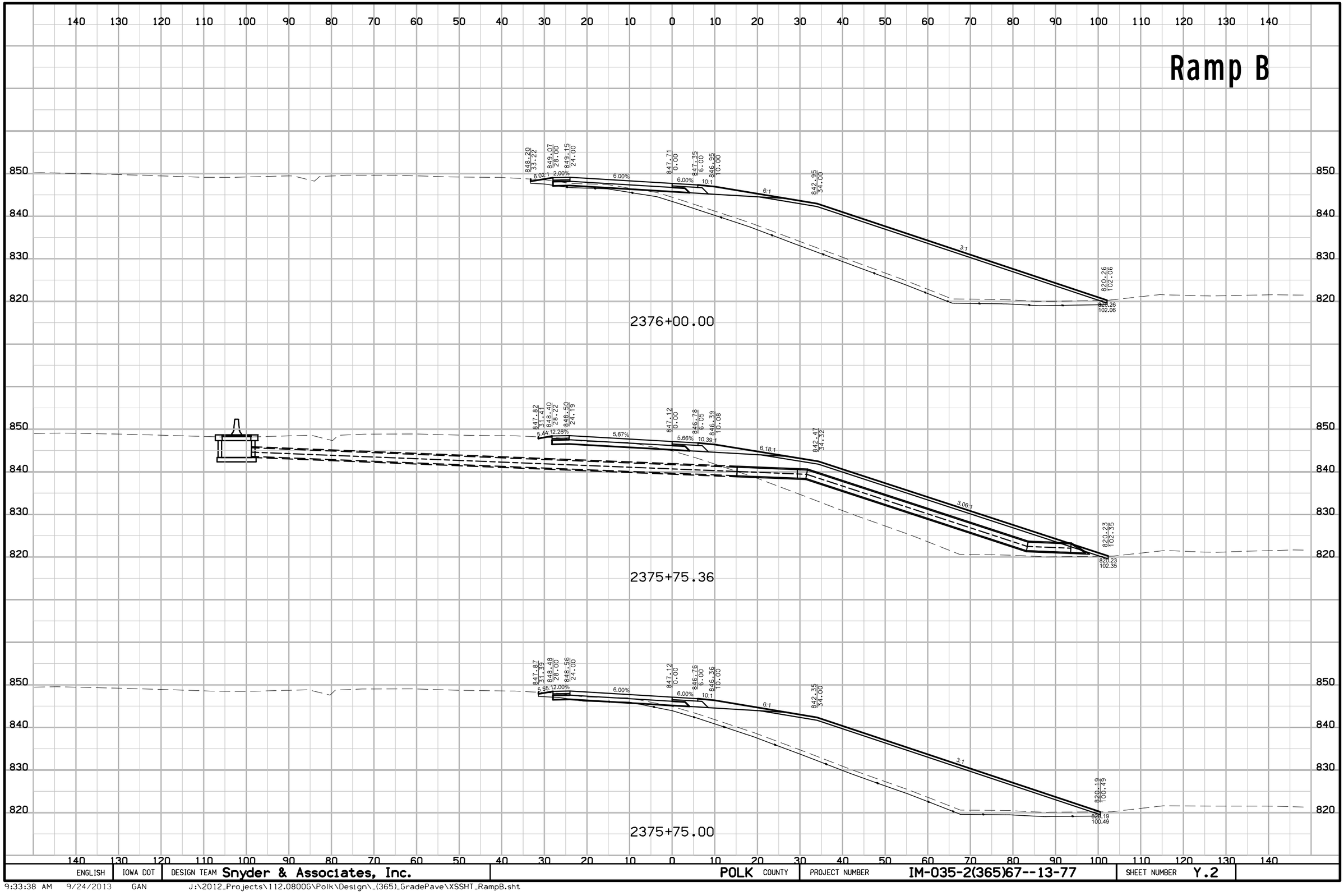
Ramp B



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER Y.1

9:33:37 AM 9/24/2013 GAN J:\2012_Projects\112.0800G\Polk\Design_(365)_GradePave\XSSHT_RampB.sht

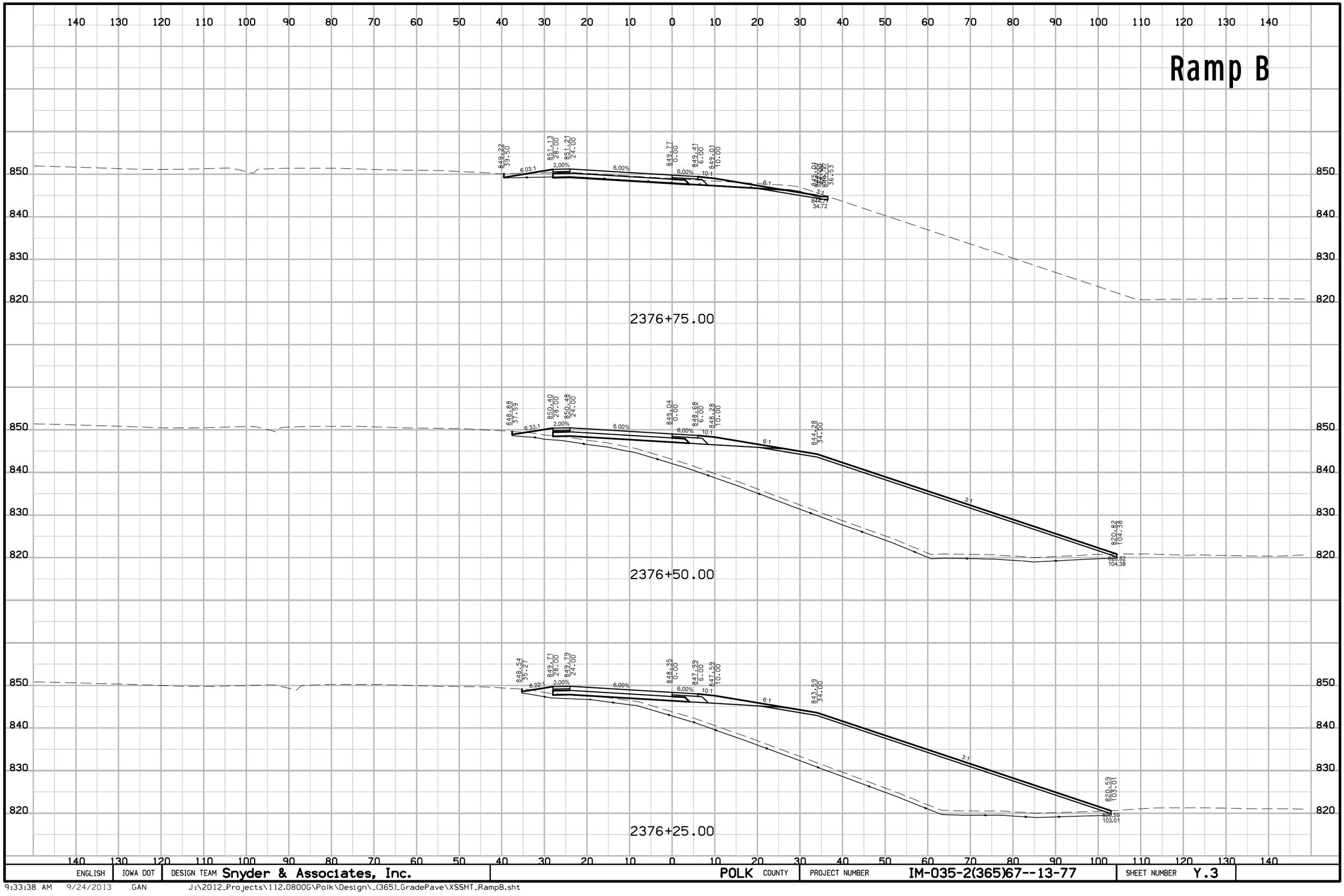
Ramp B



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER Y.2

9:33:38 AM 9/24/2013 GAN J:\2012_Projects\112.0800G\Polk\Design_(365)_GradePave\XSSHT_RampB.sht

Ramp B



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER Y.3

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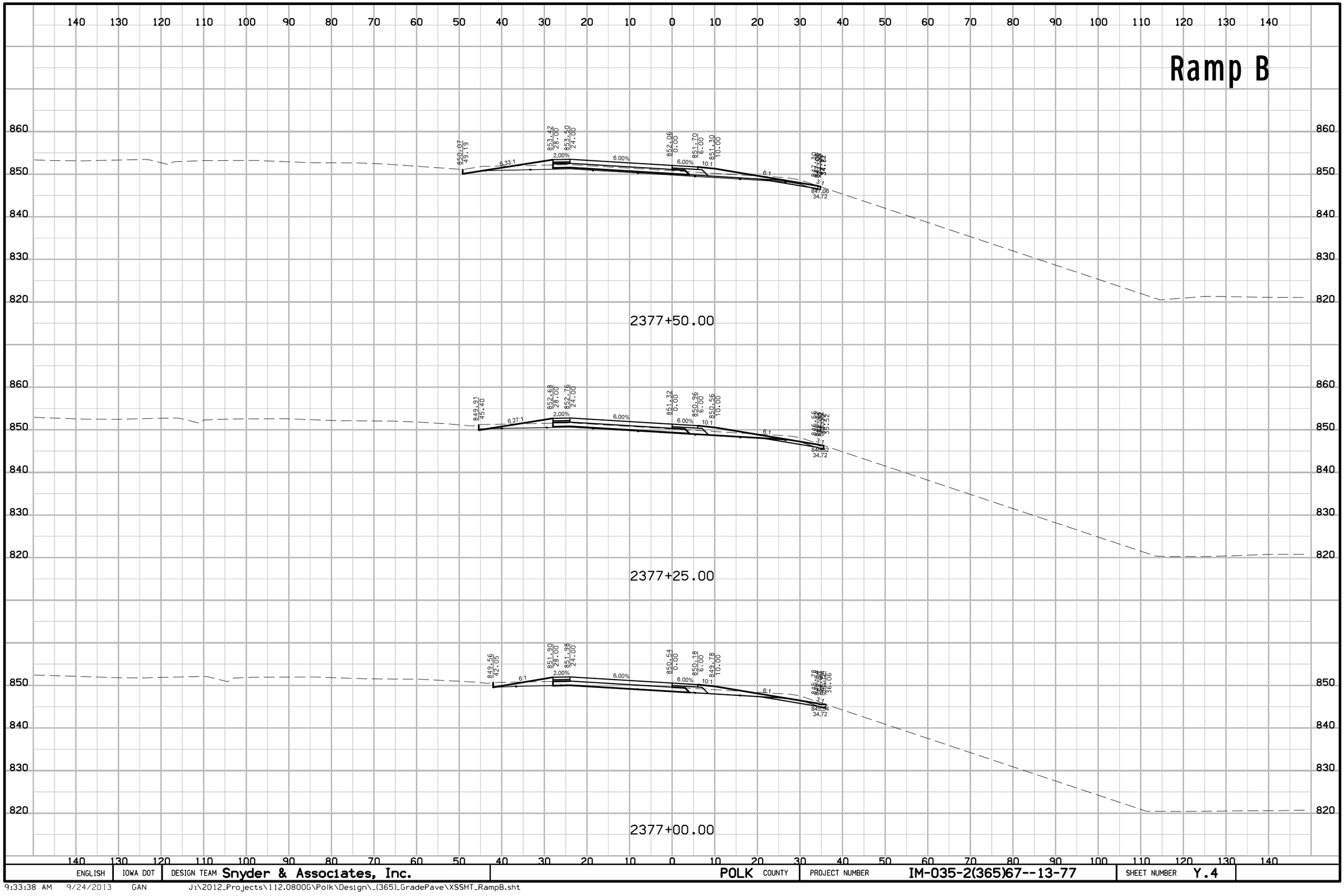
Ramp B



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER Y.4

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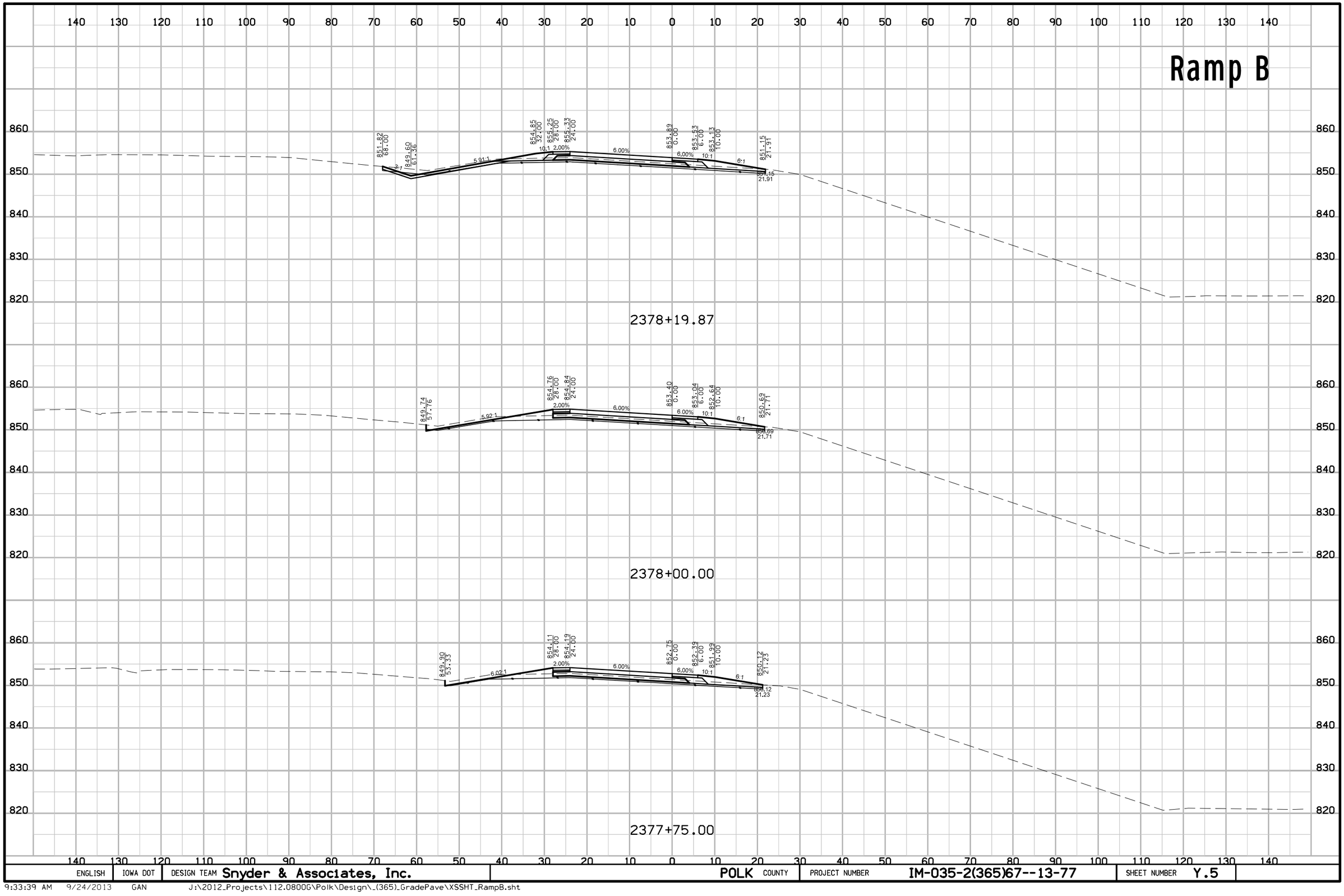
Ramp B



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER Y.5

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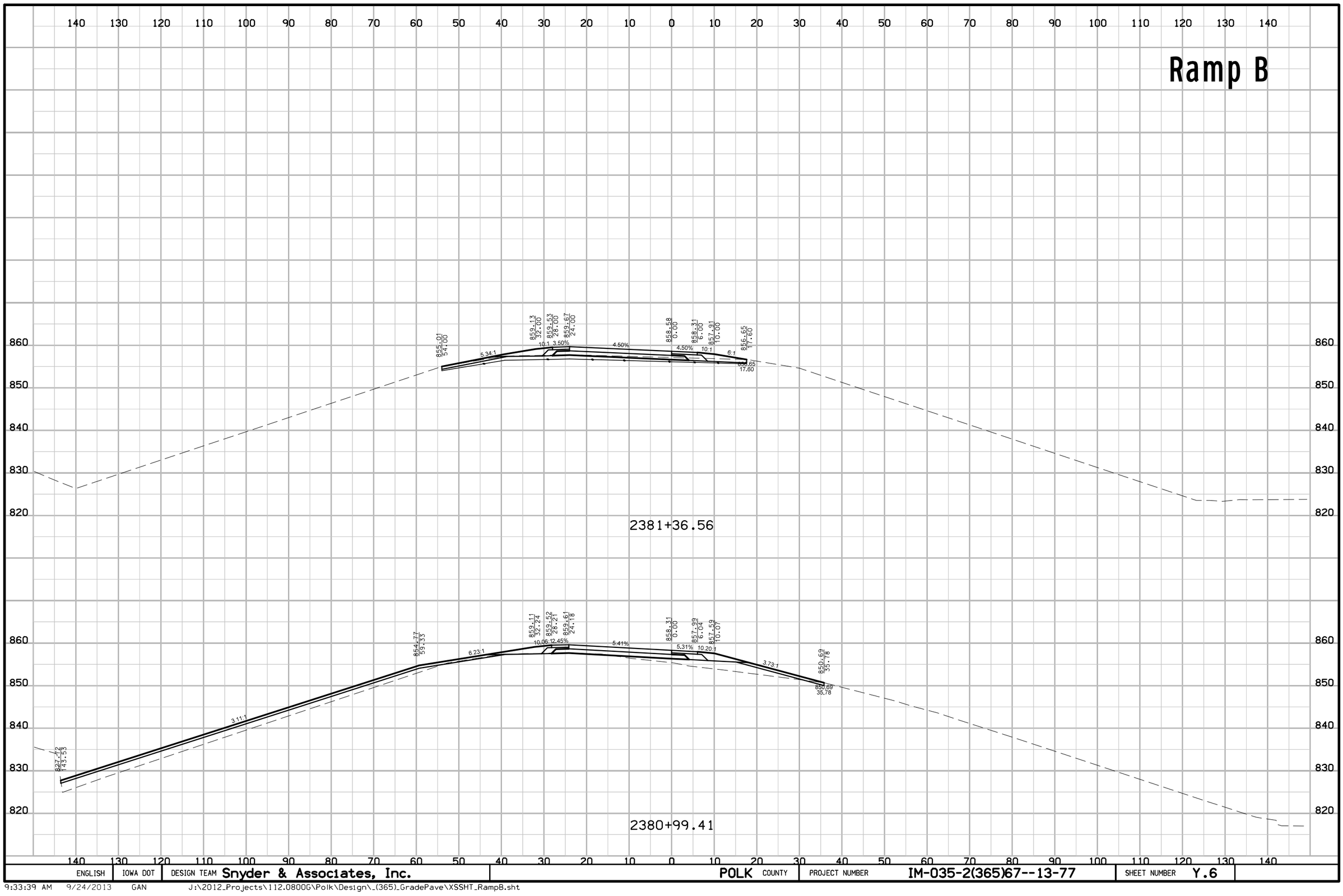

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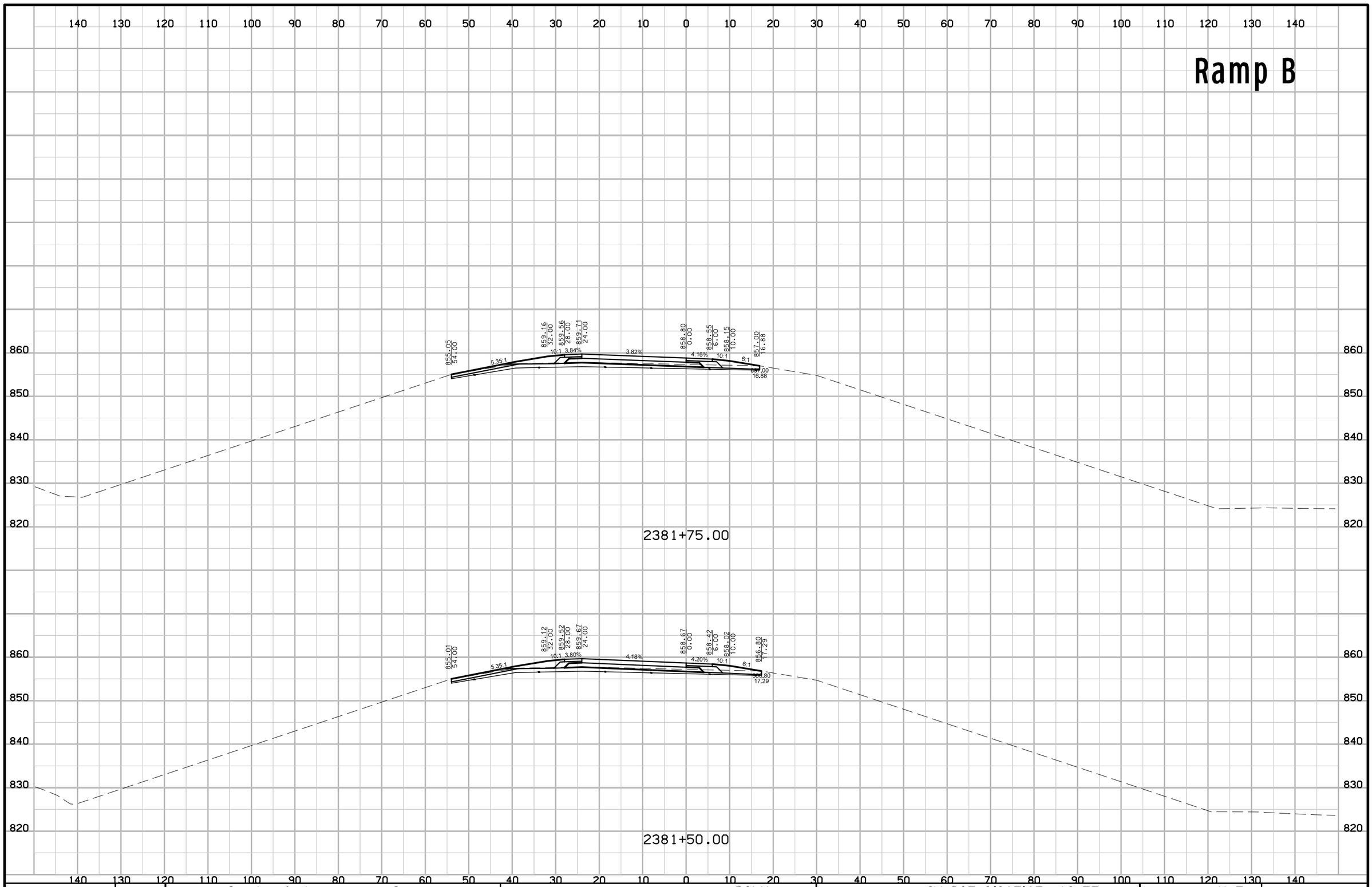

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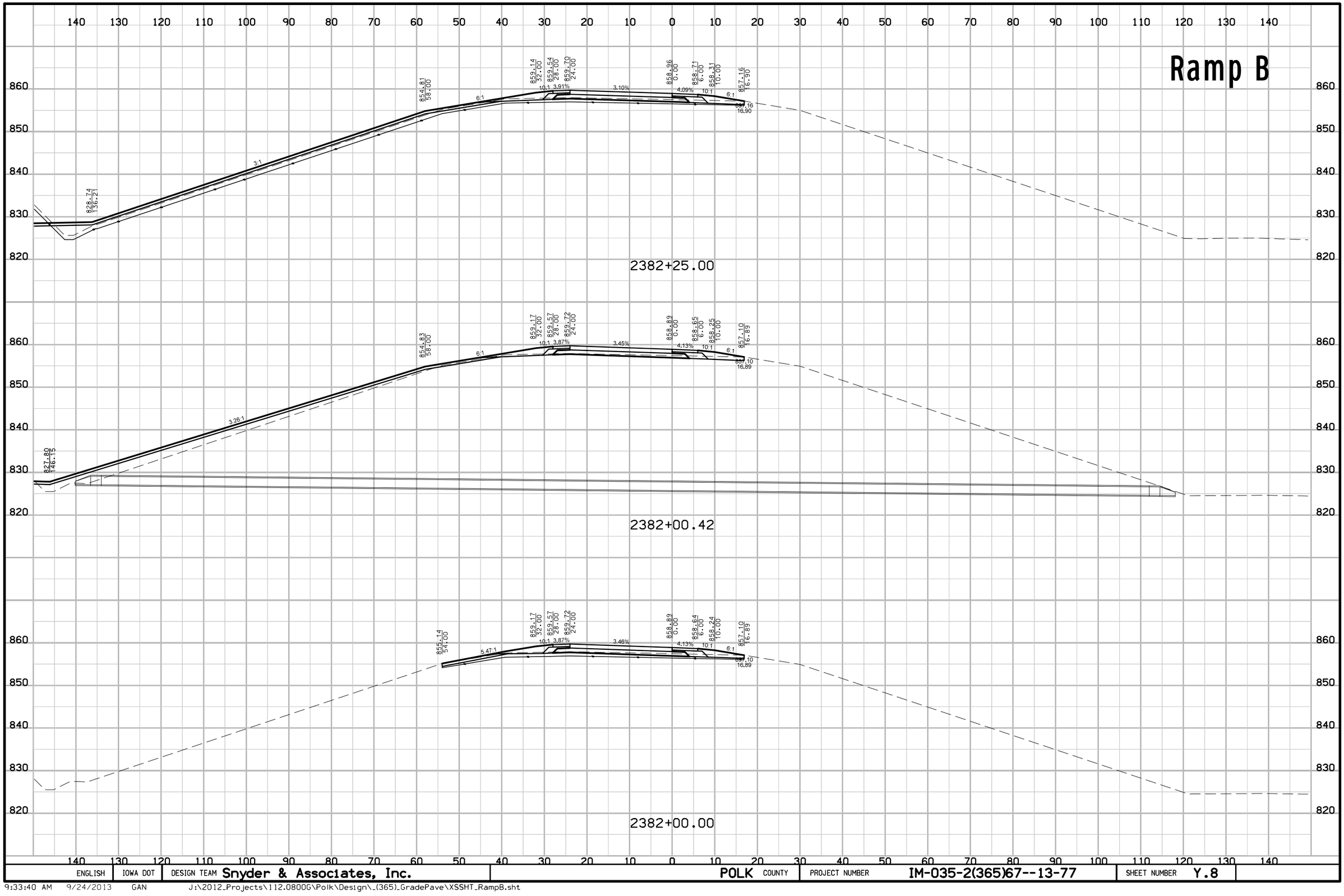

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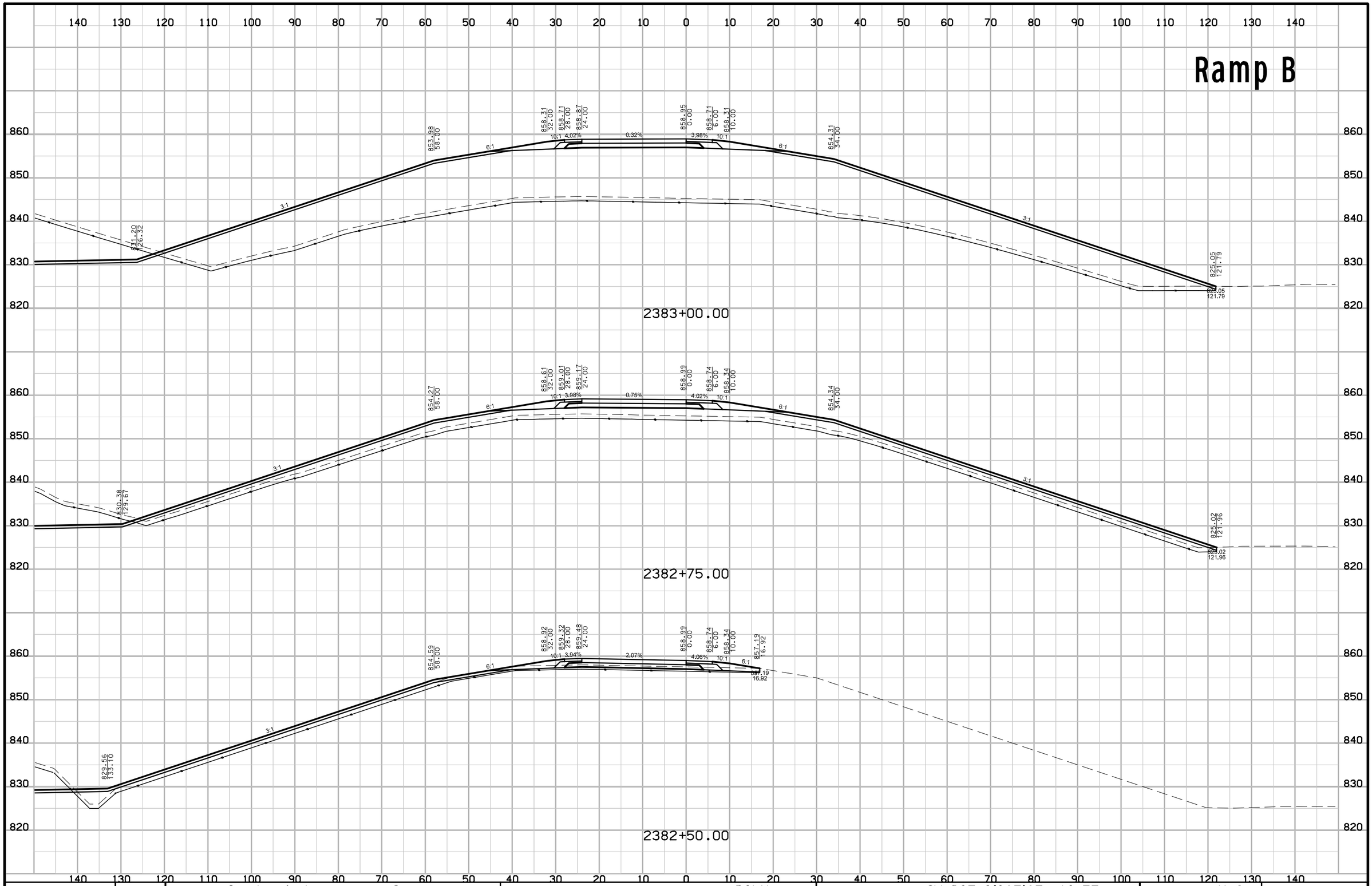

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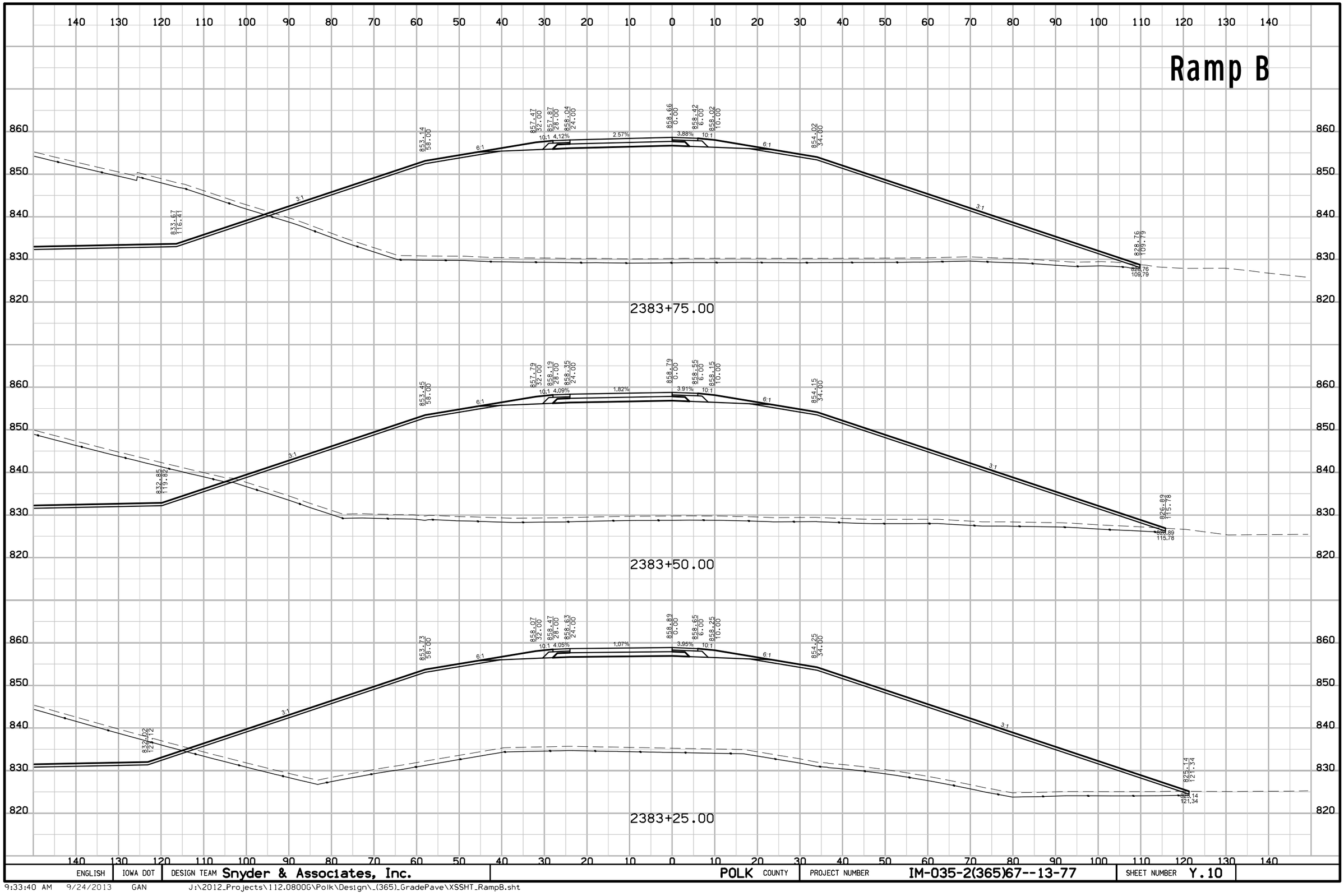

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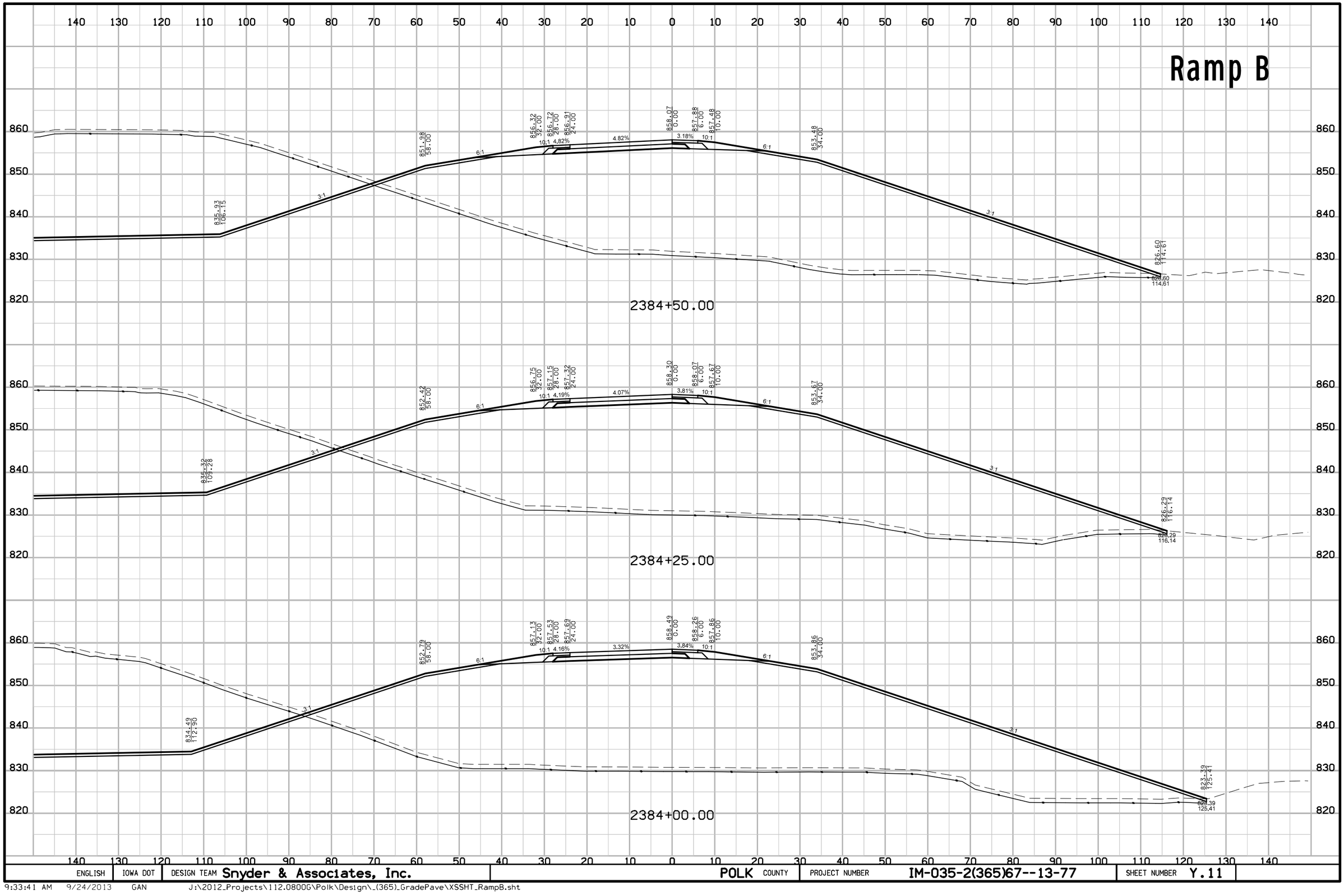

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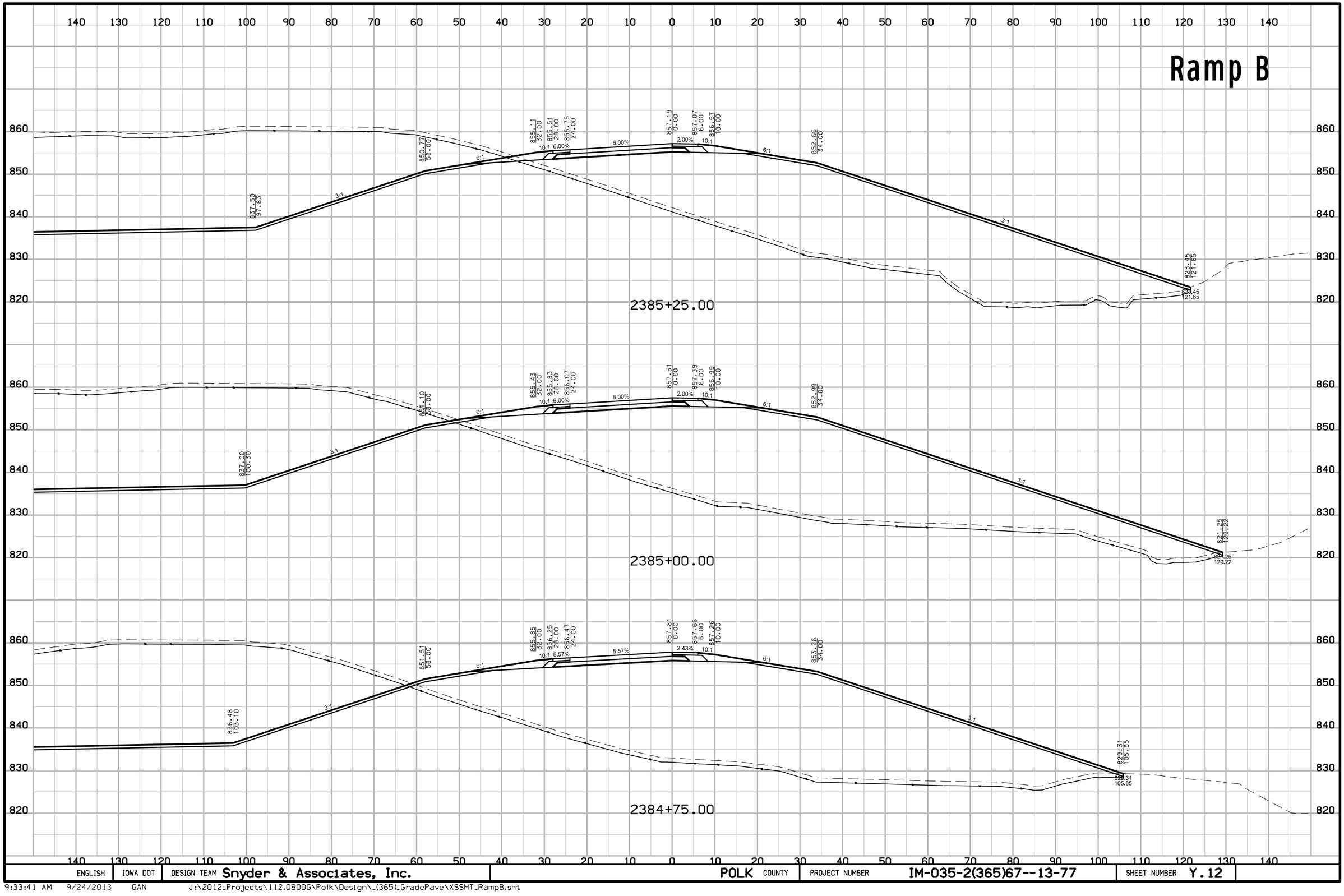

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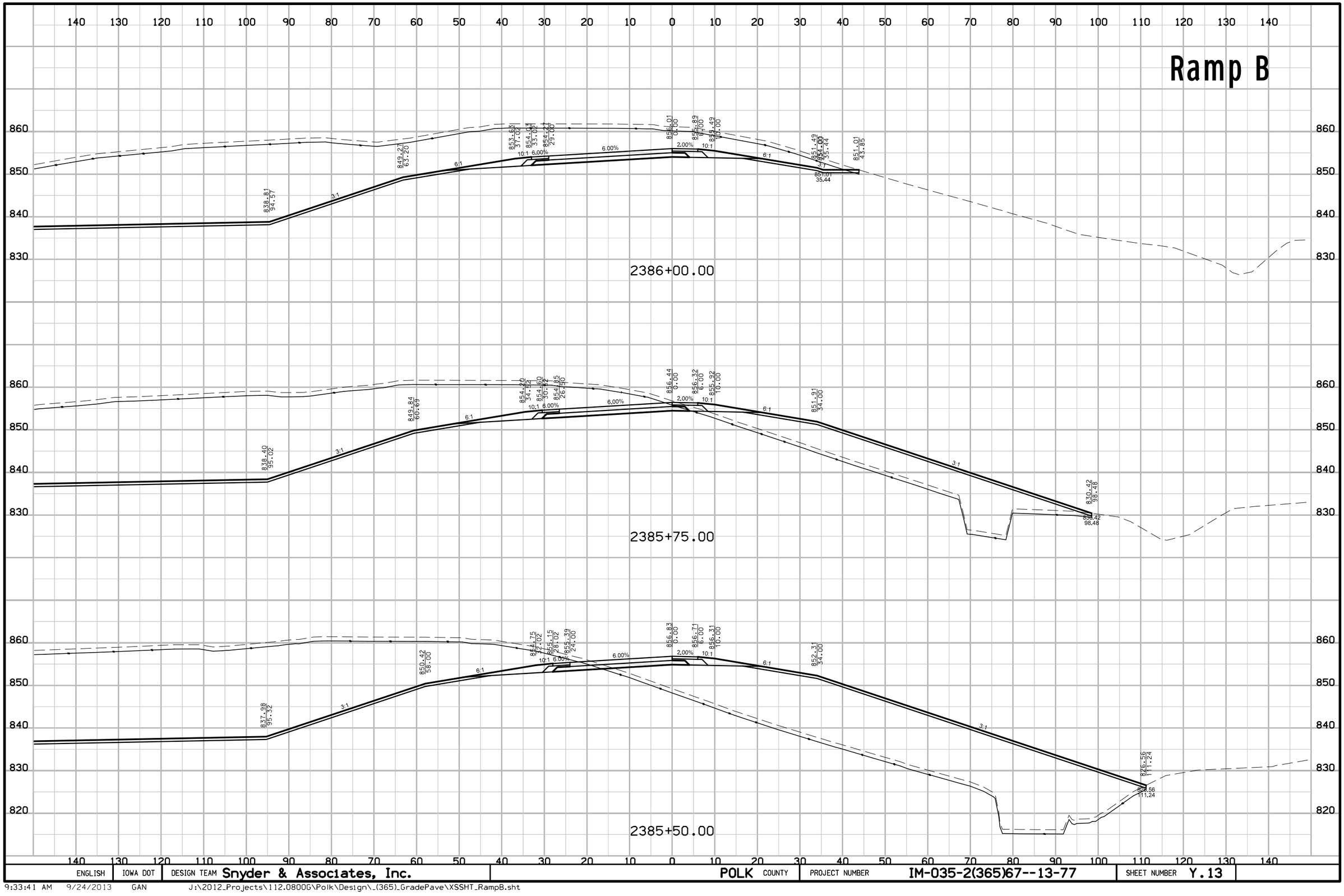

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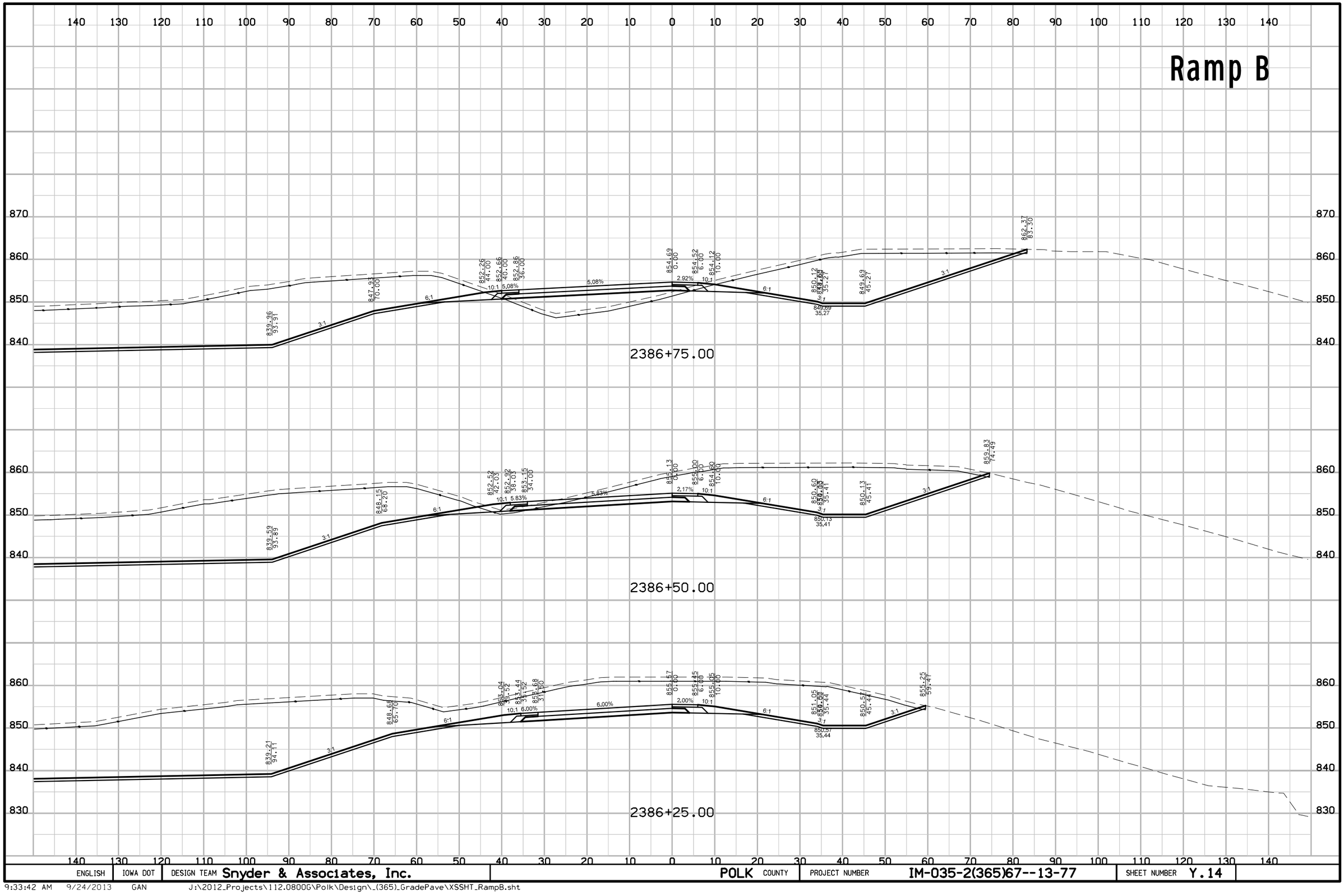

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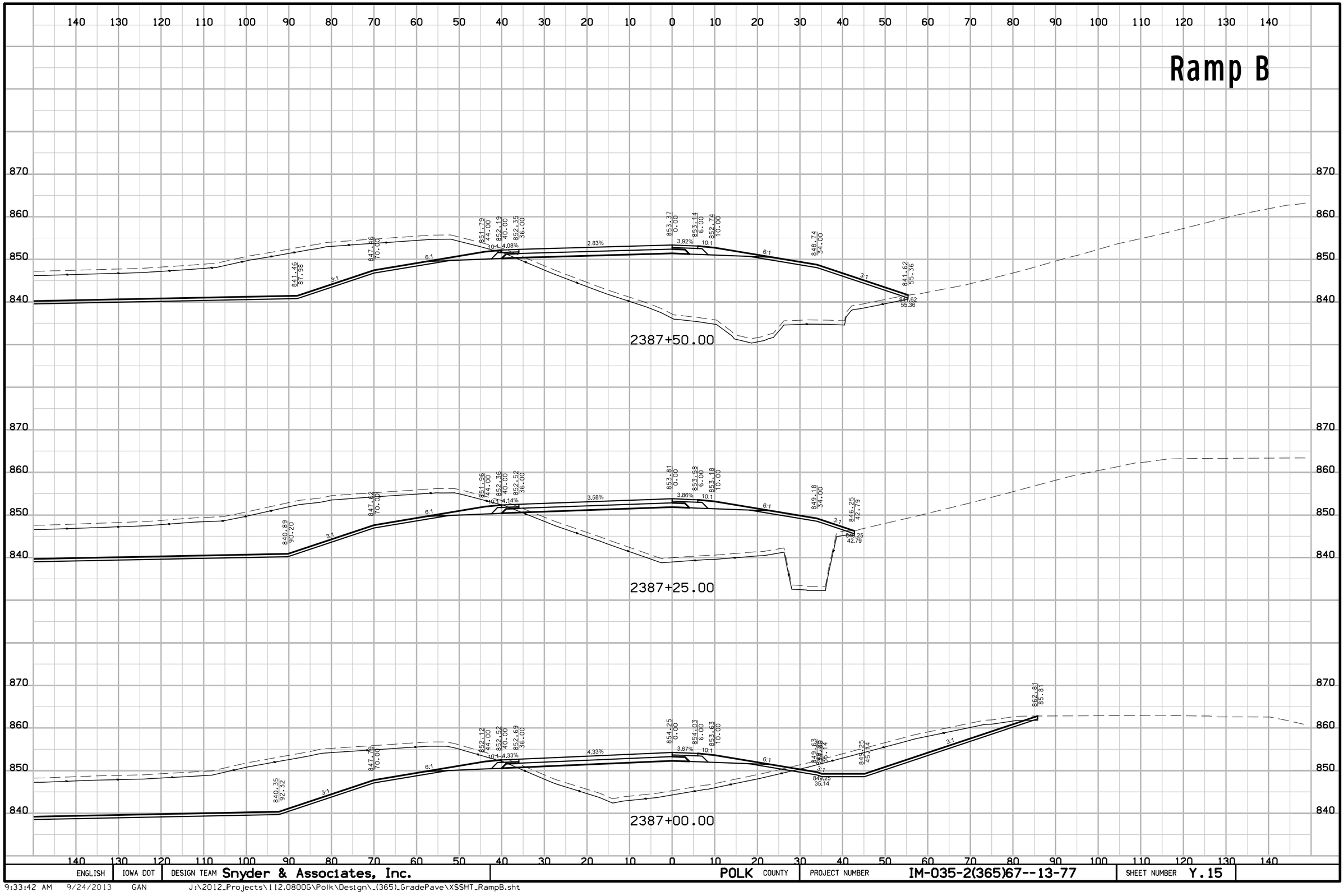

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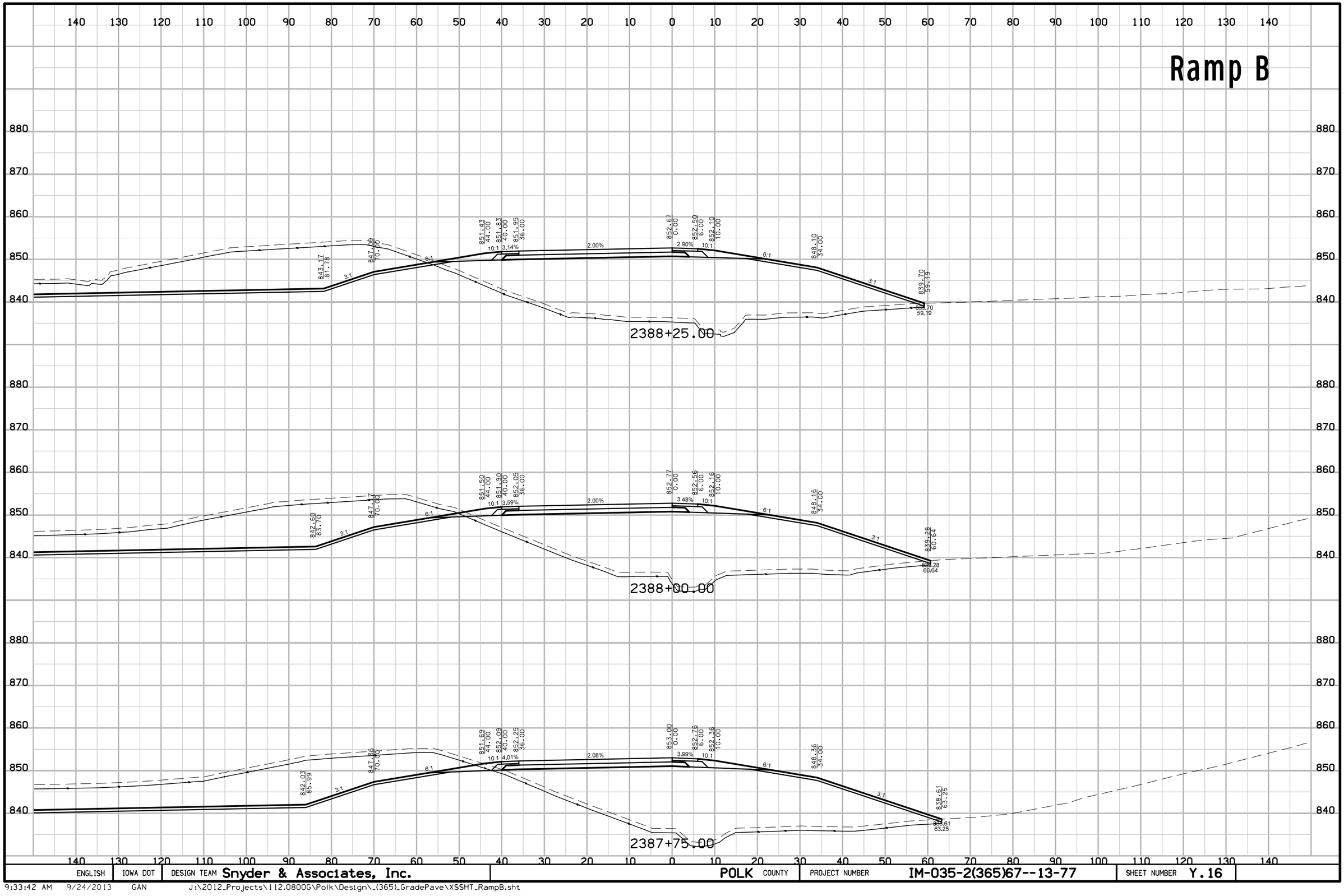

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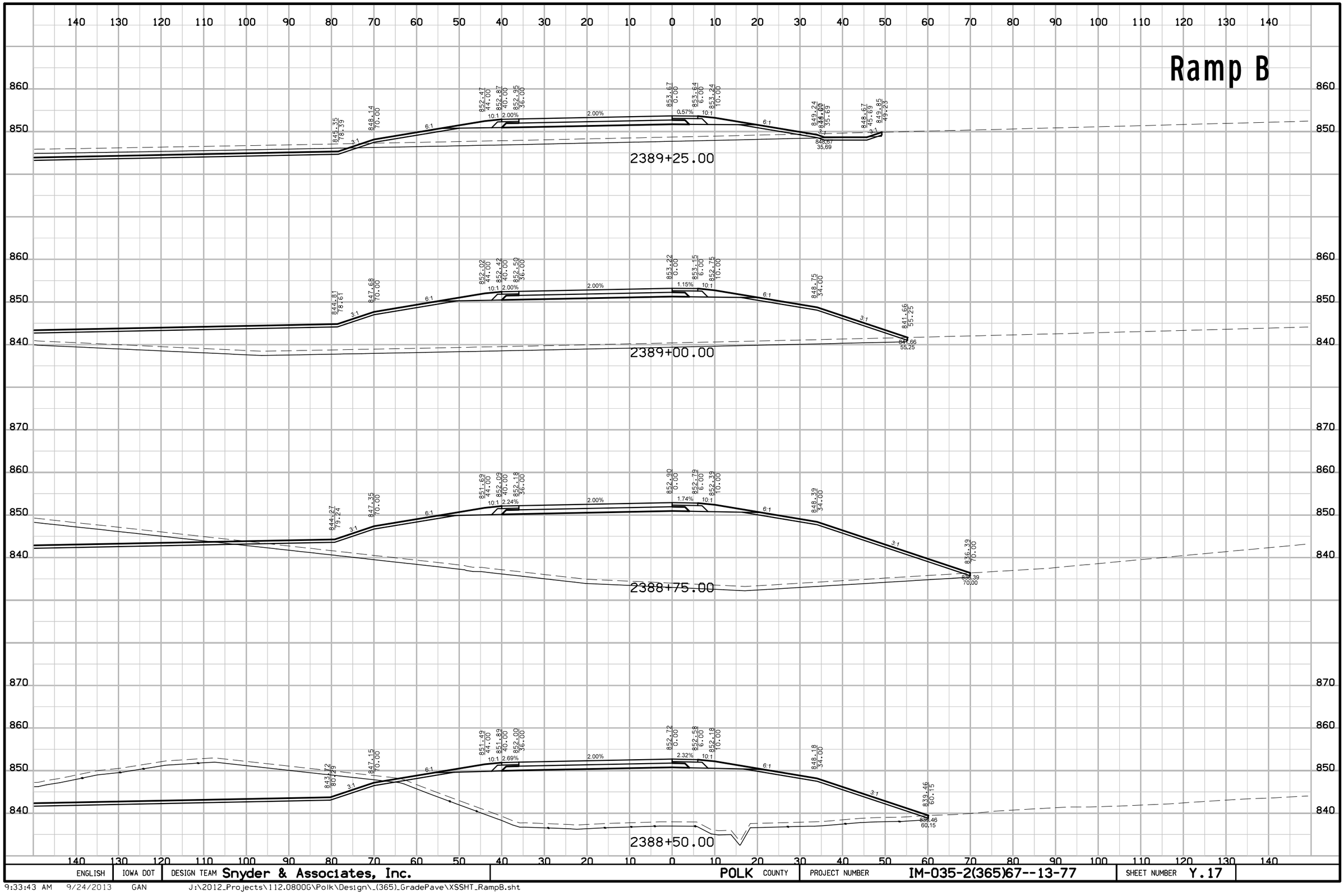

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER Y.17	

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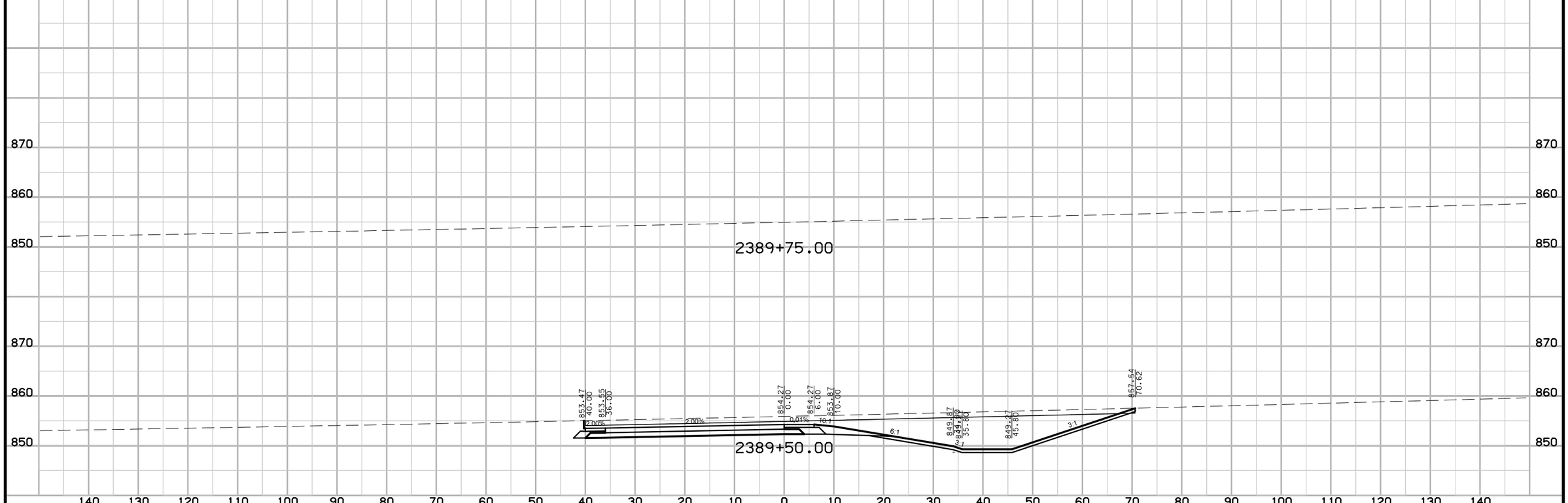

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER Y.18

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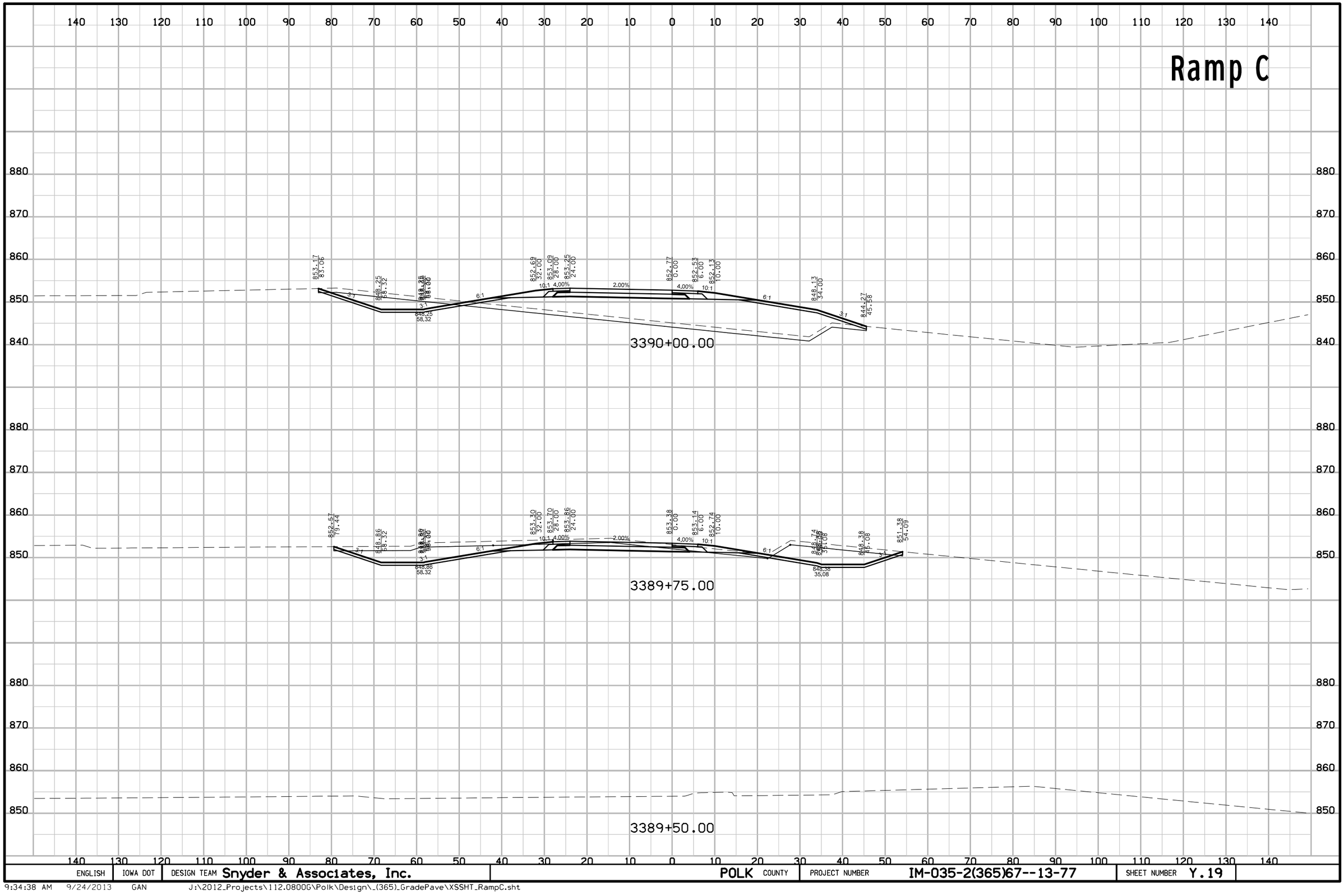

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER Y.19

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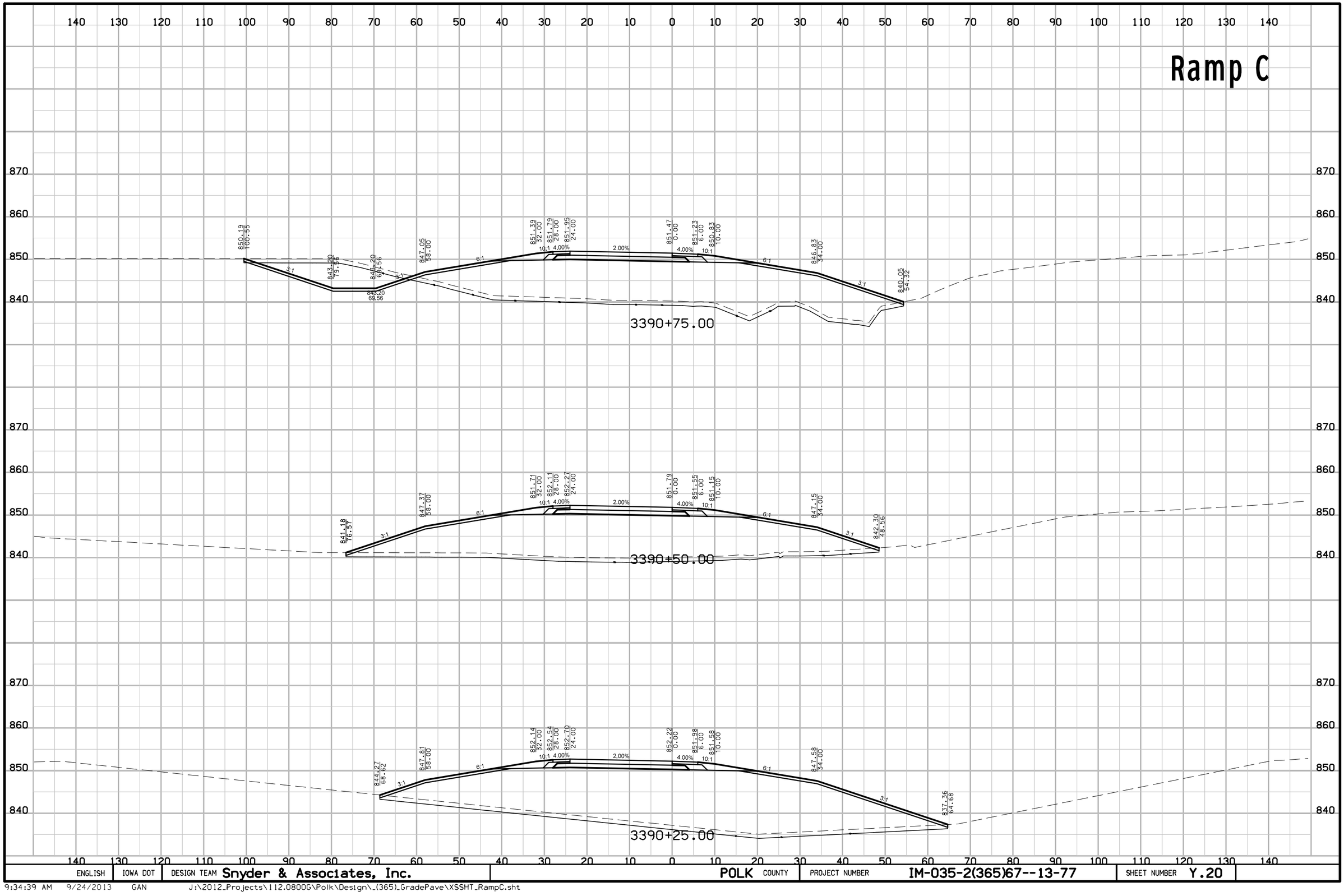

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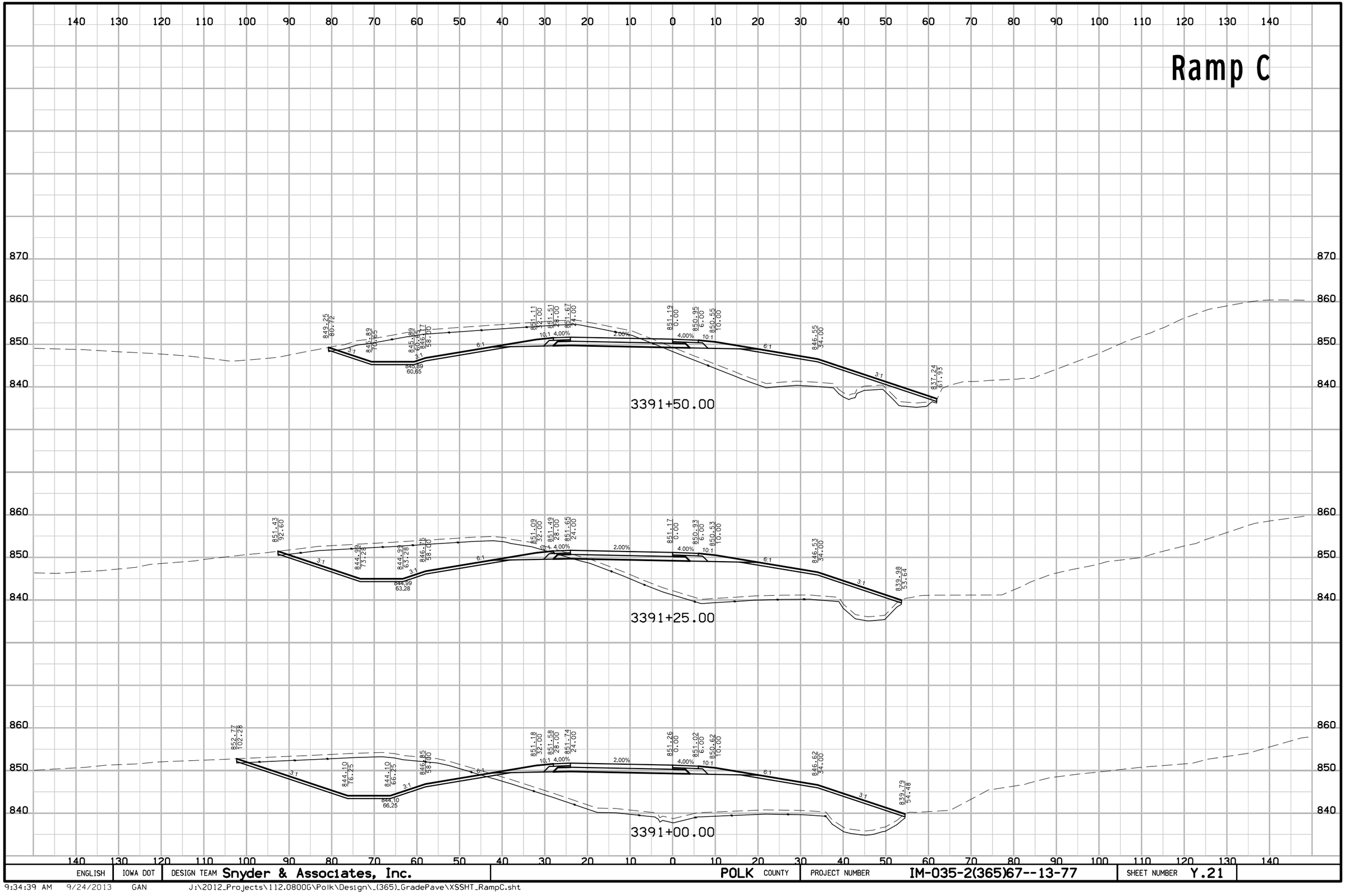

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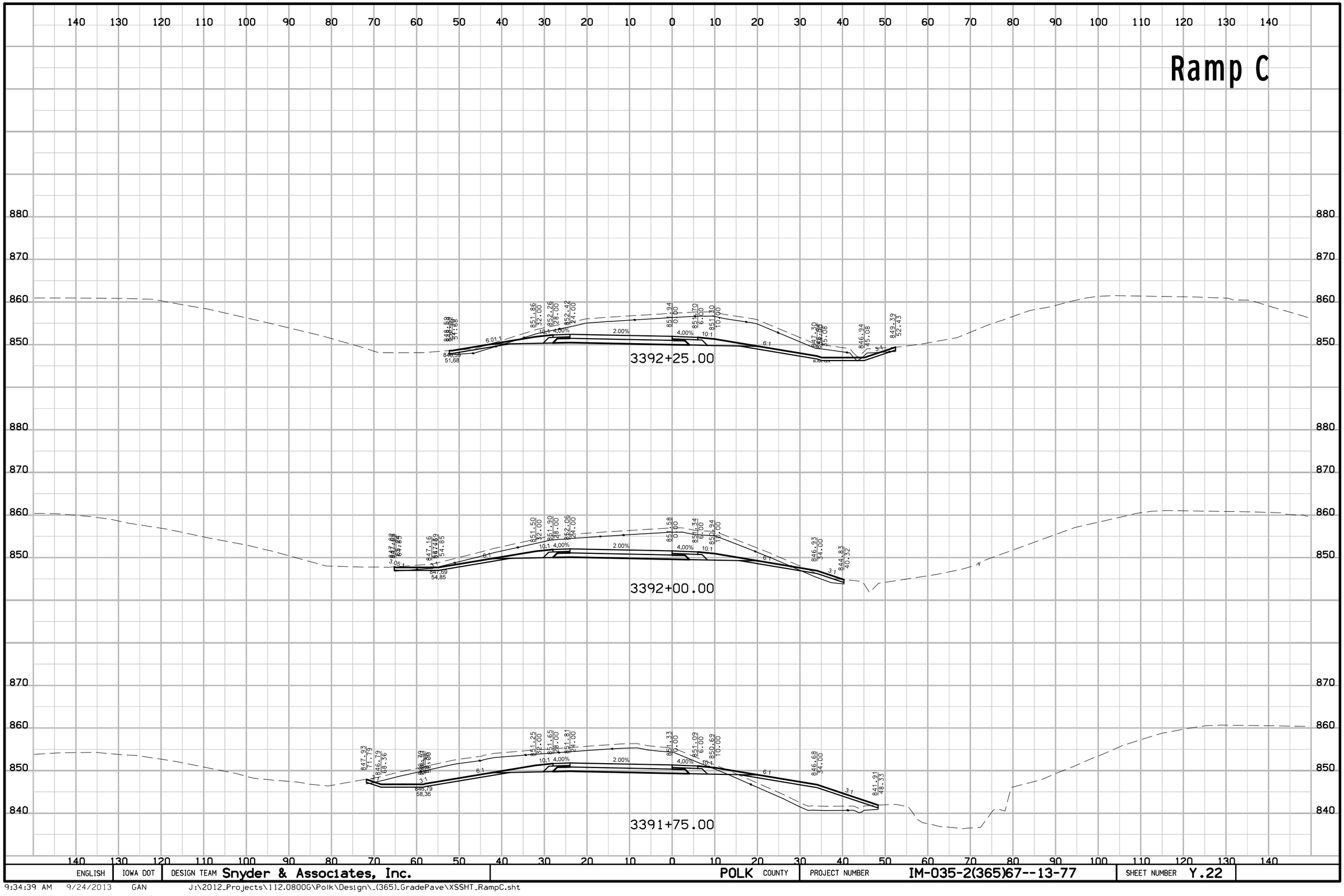

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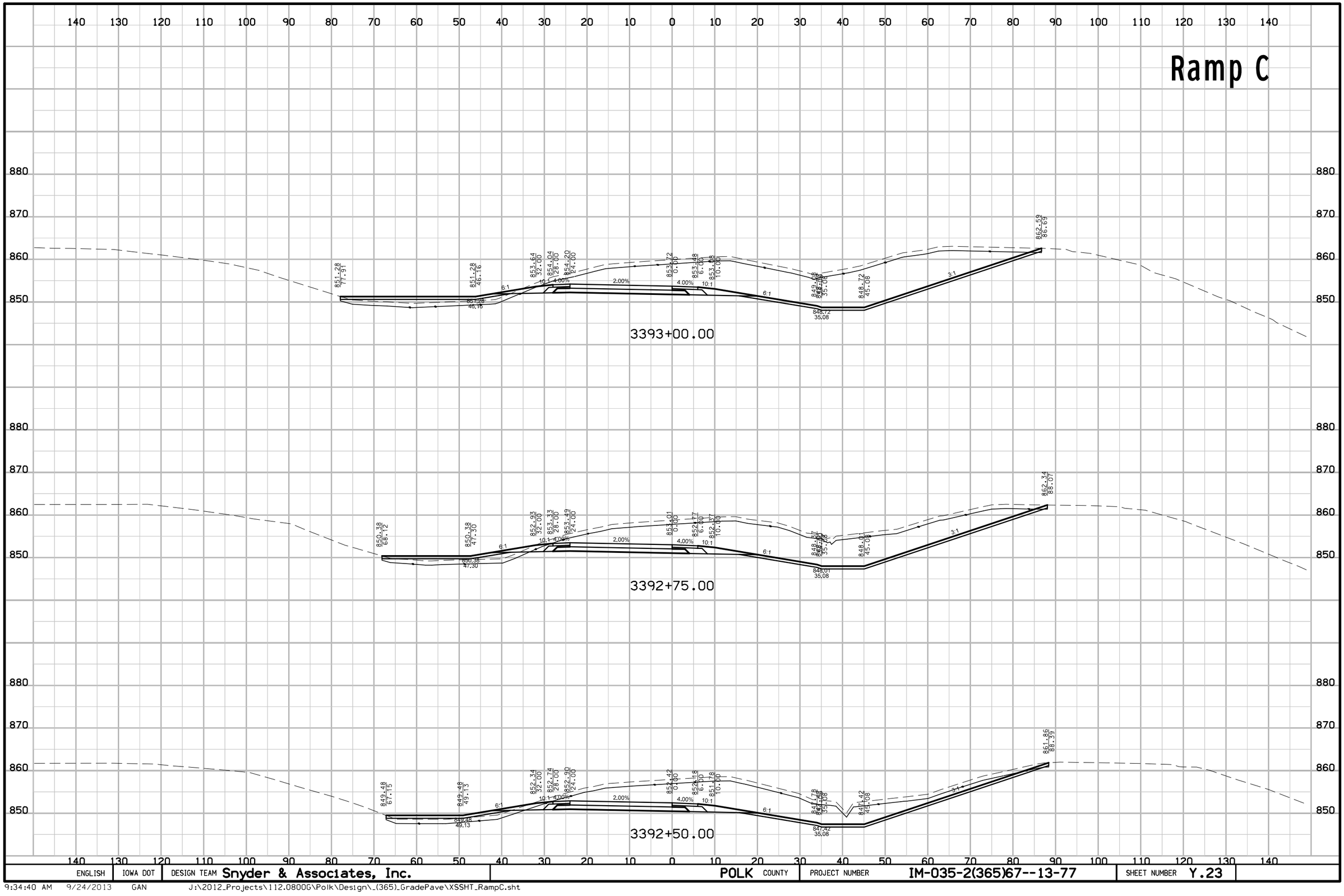

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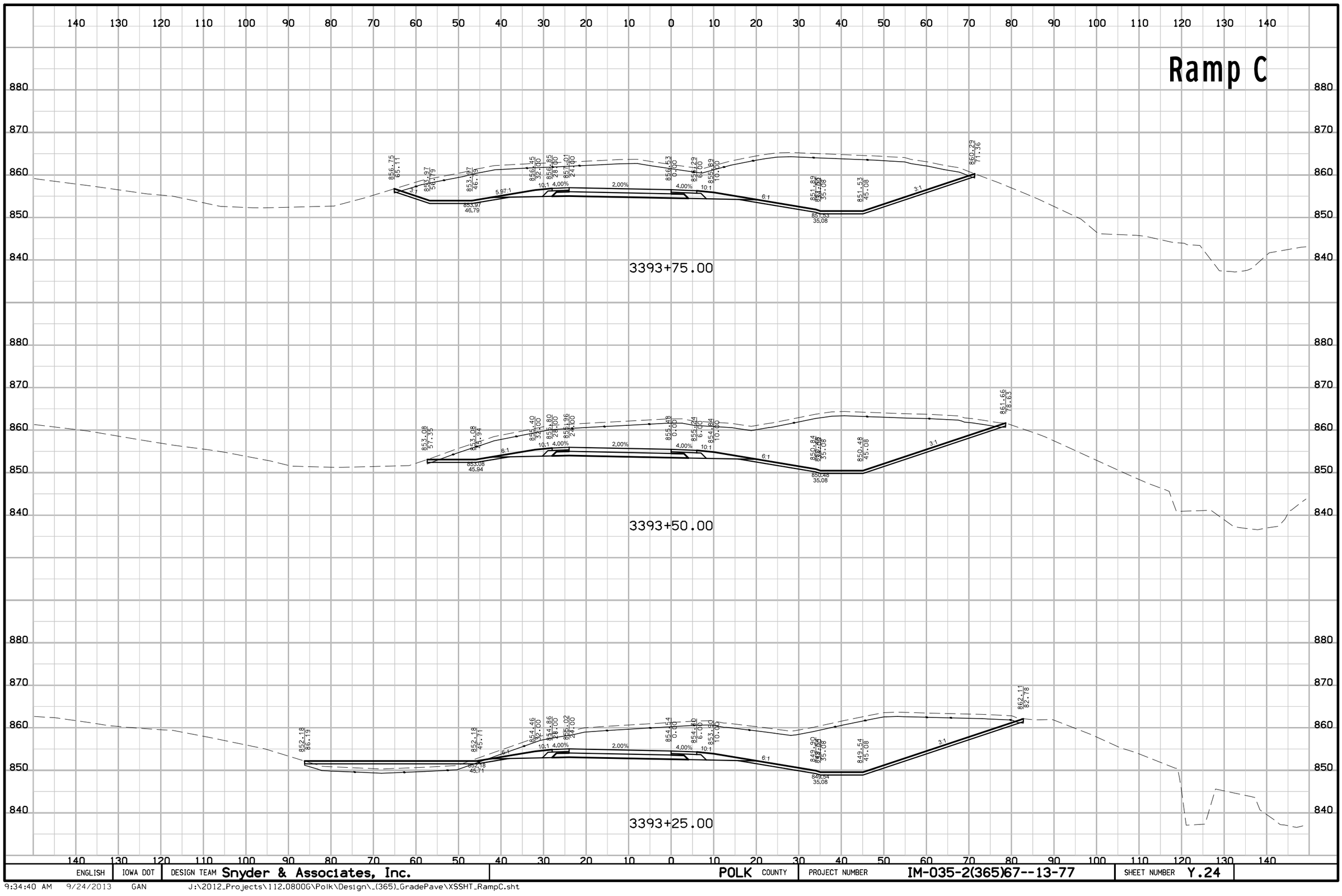

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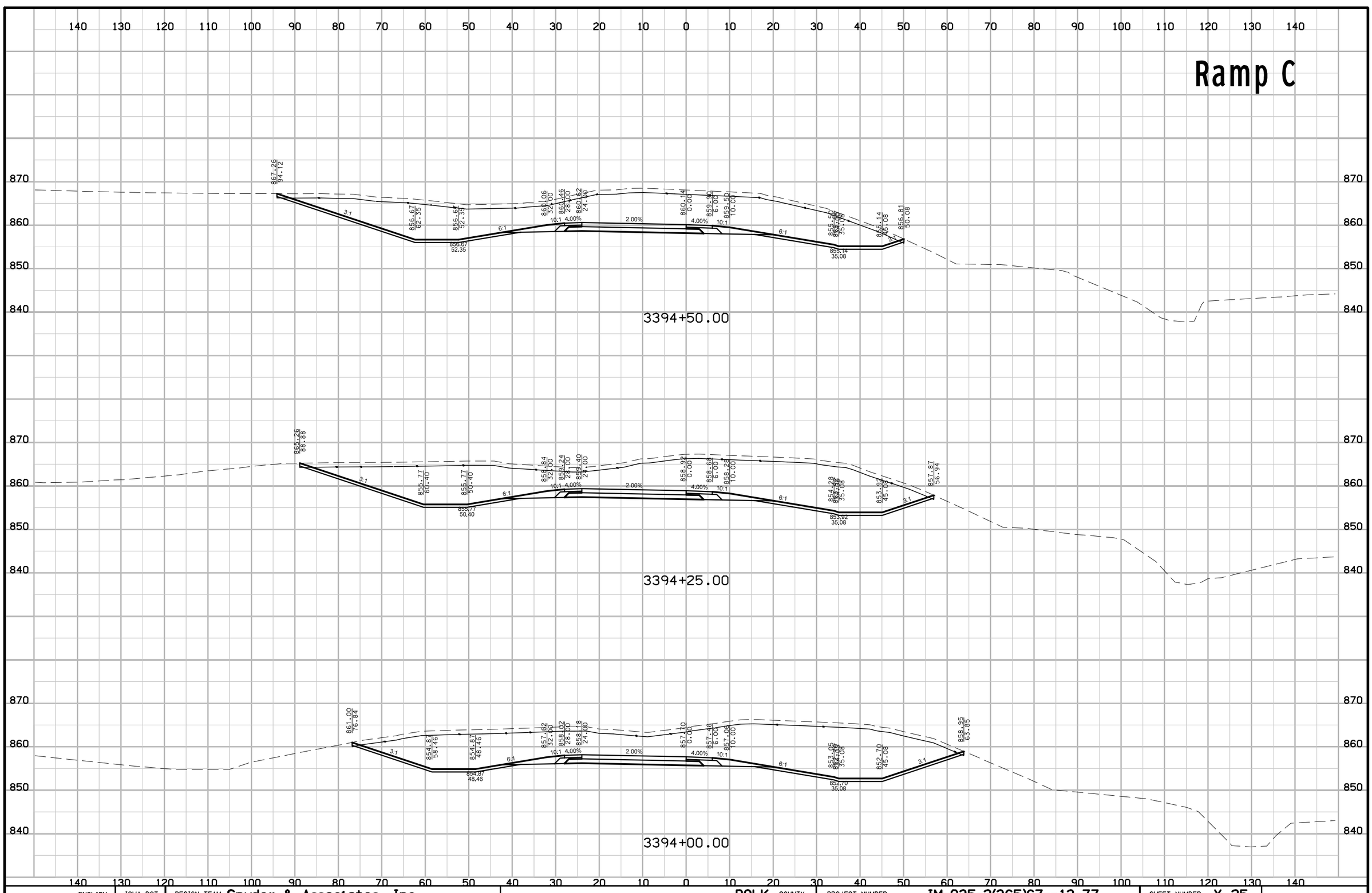

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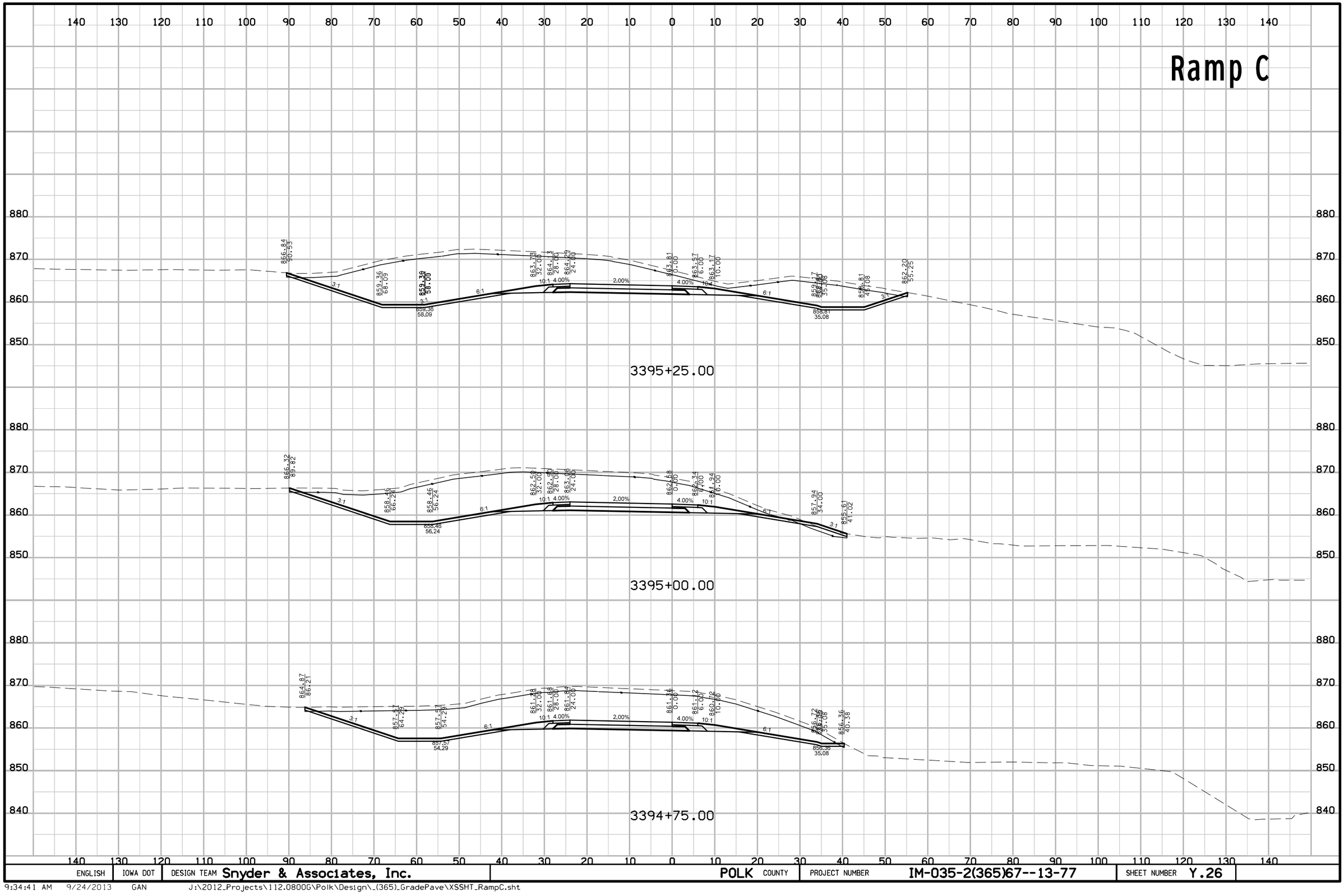

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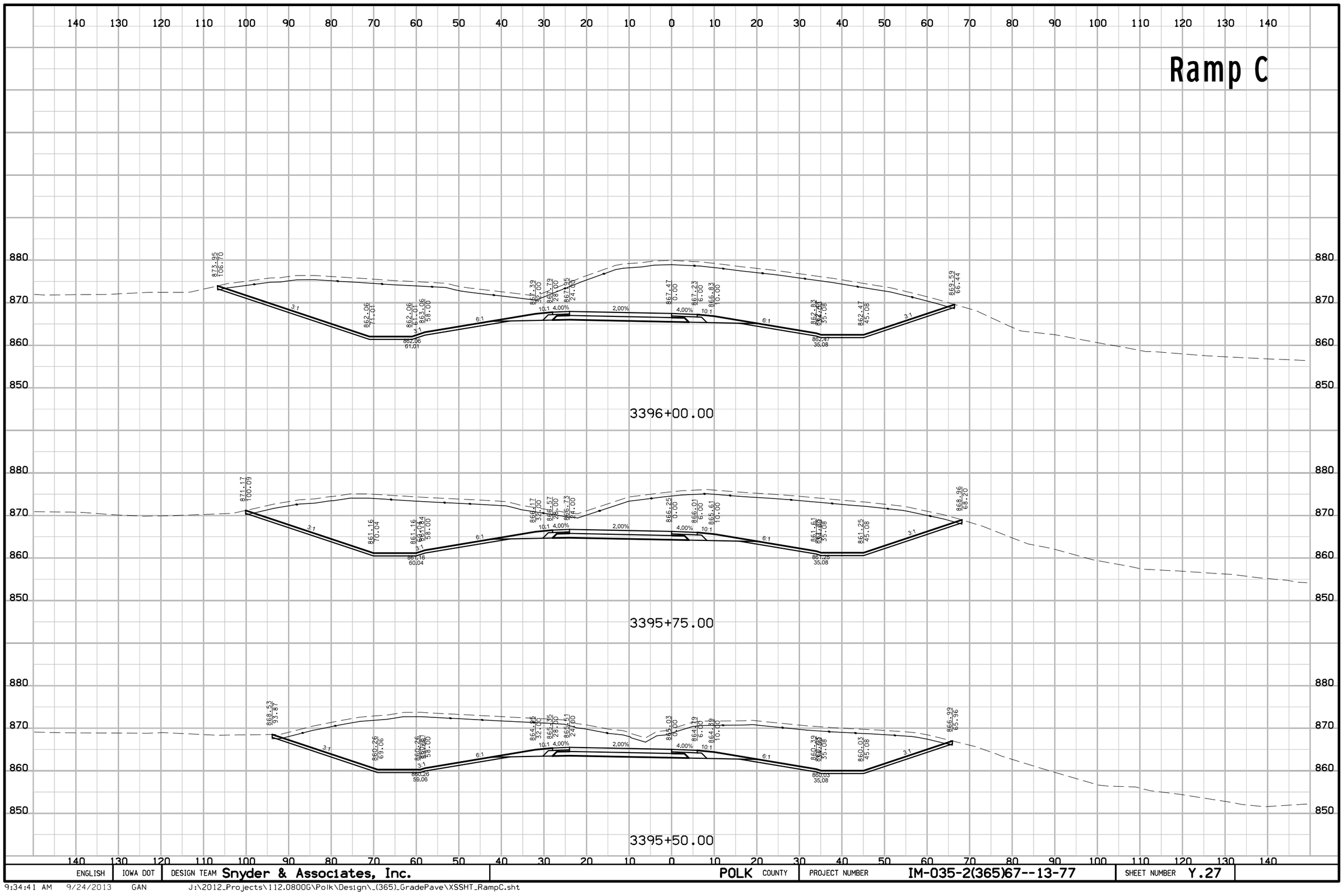

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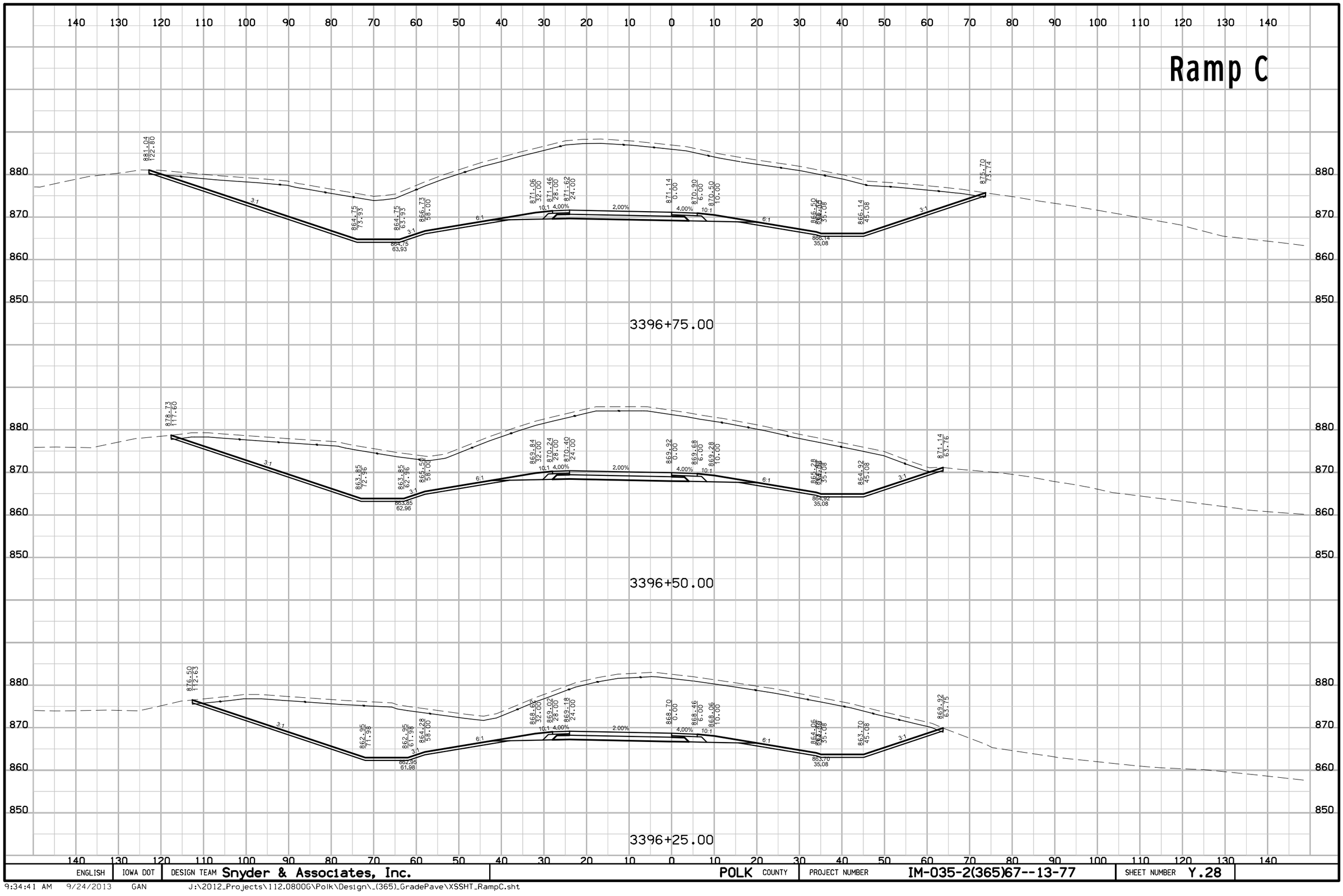

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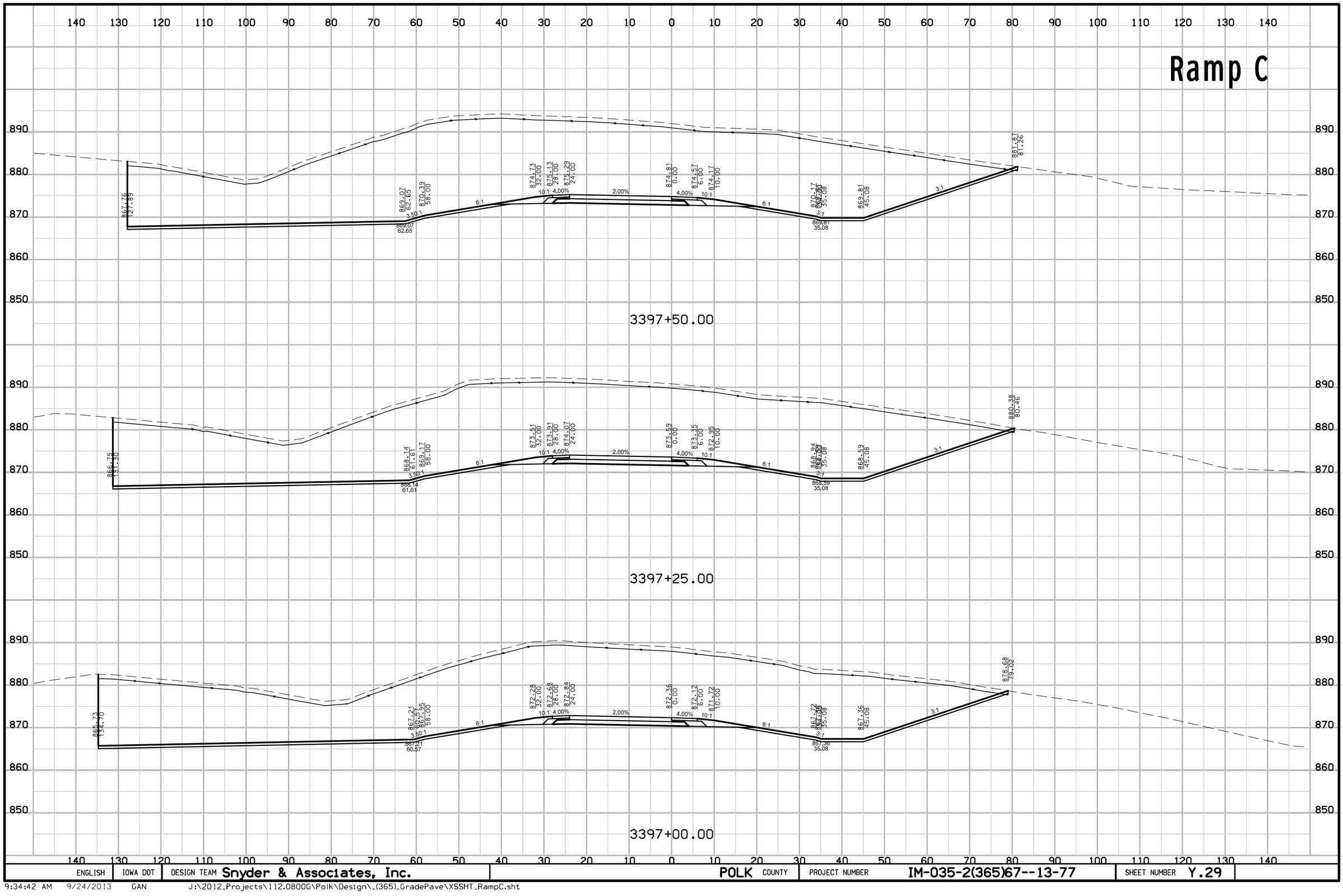

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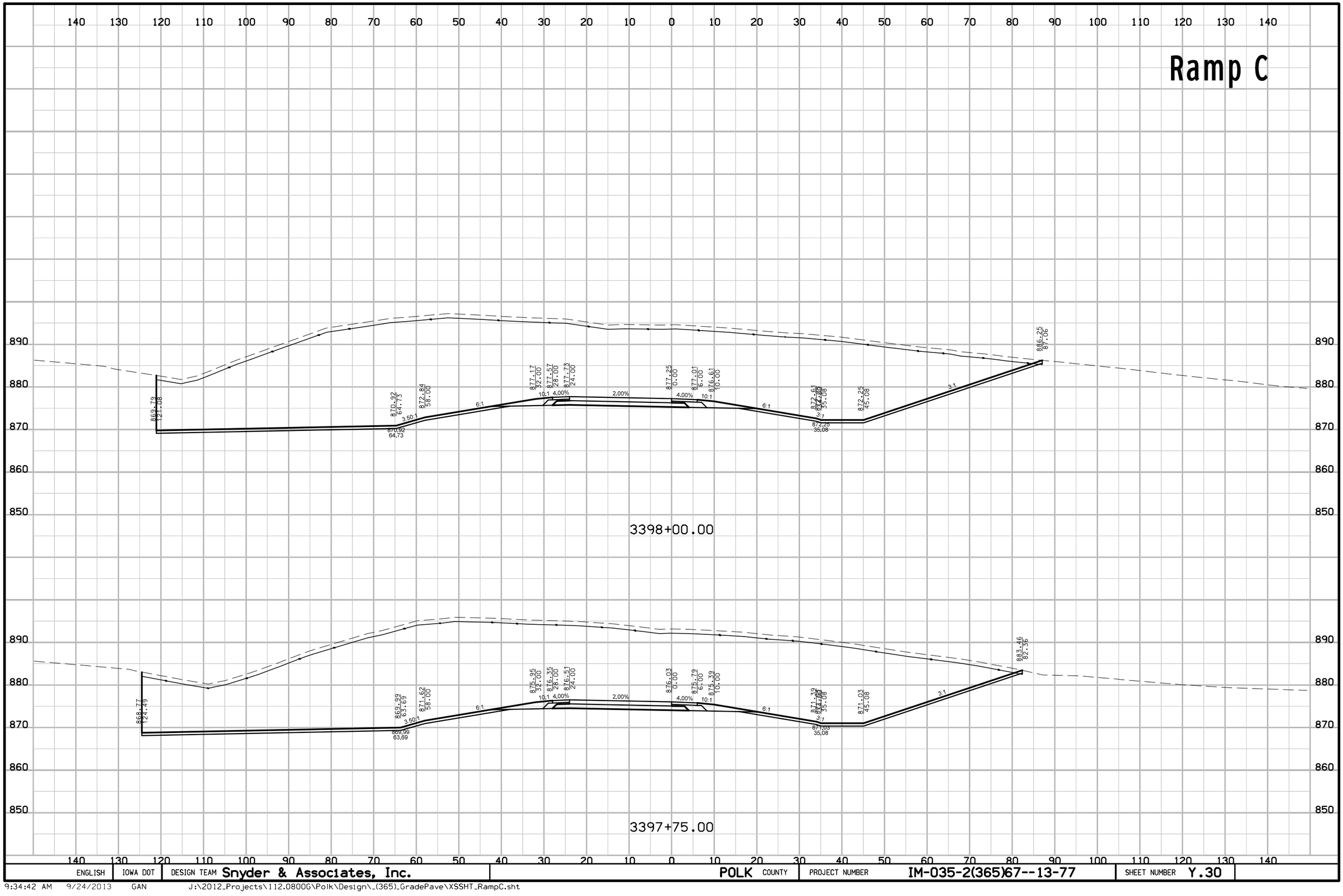

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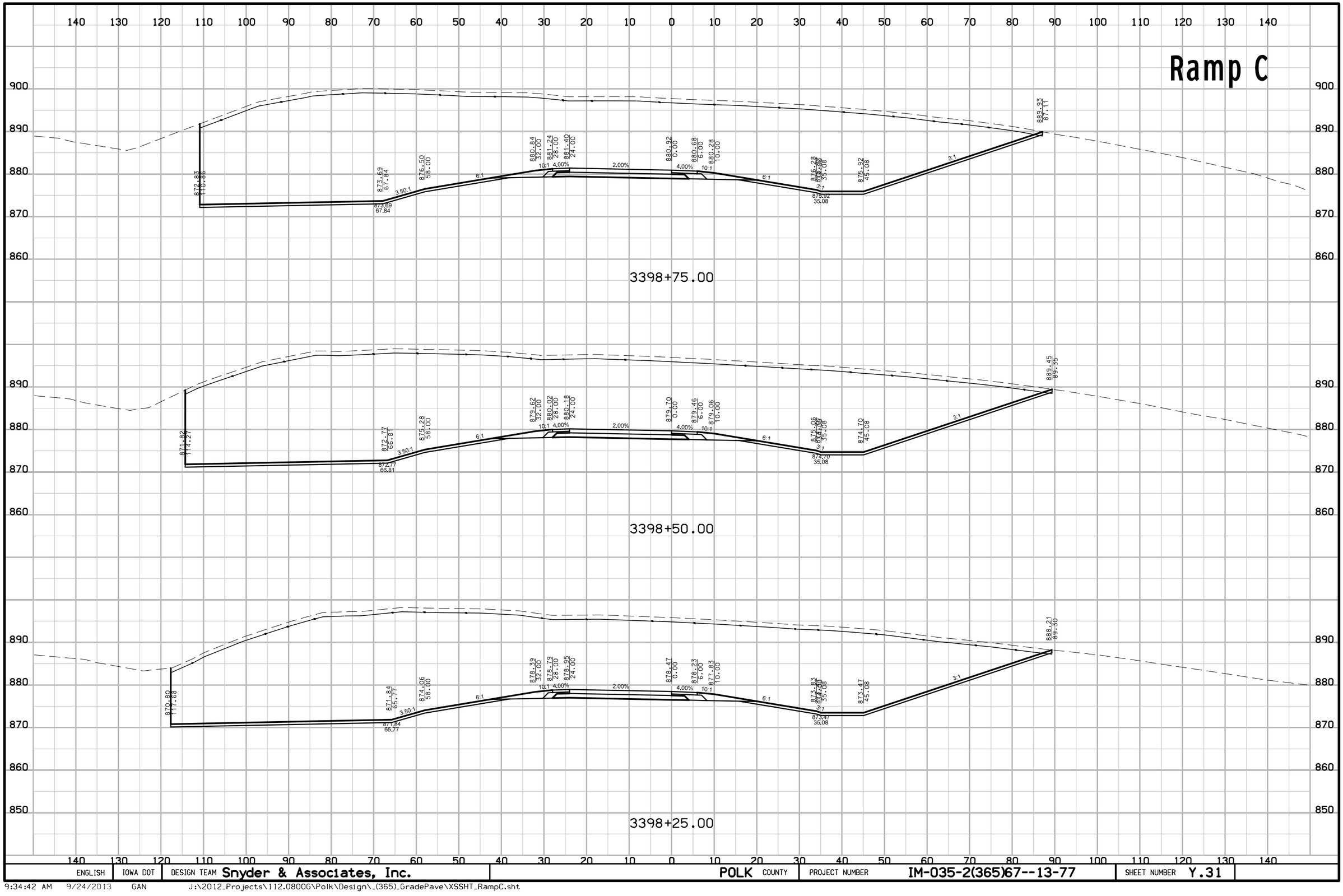

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ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER Y.32

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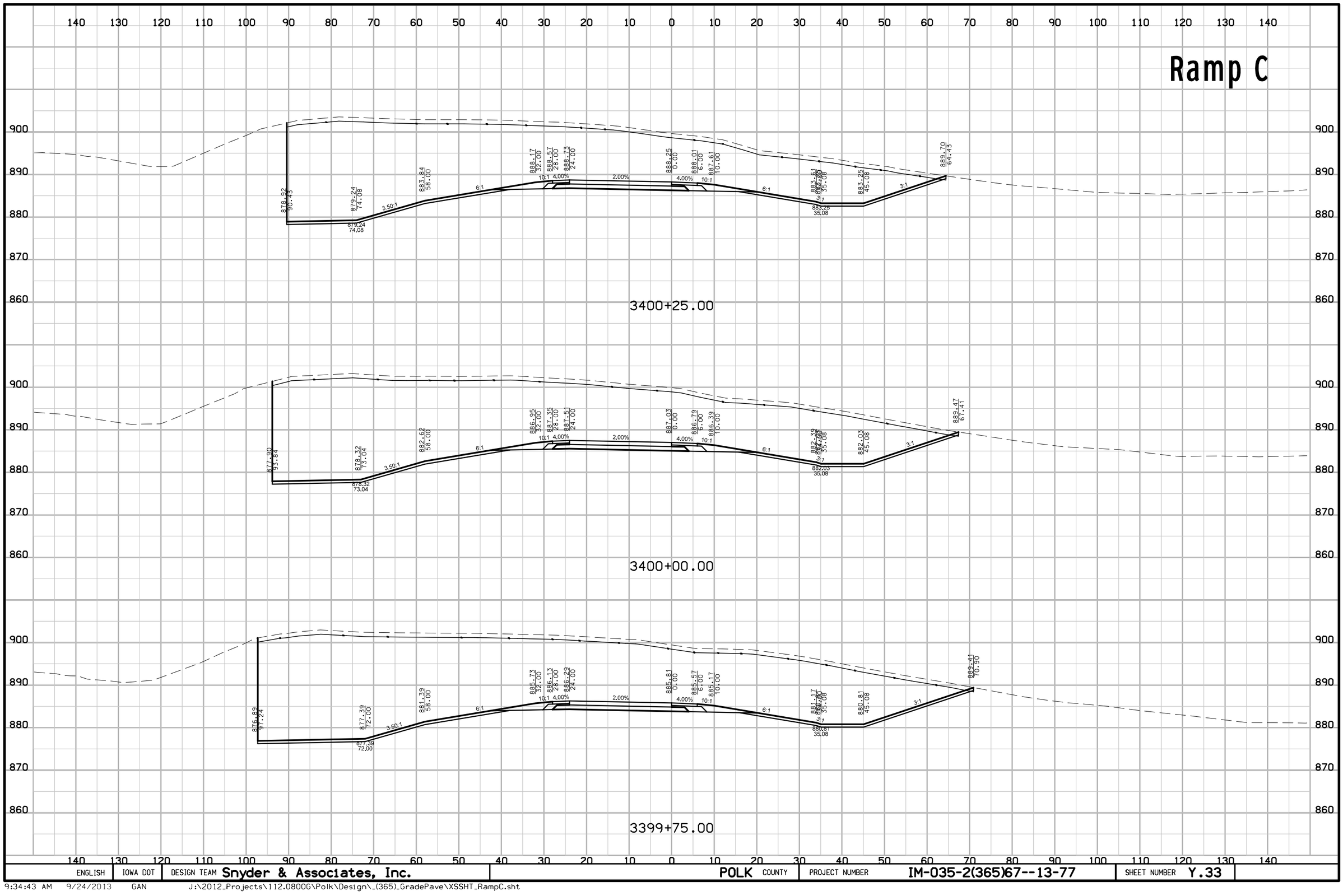

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER Y.33

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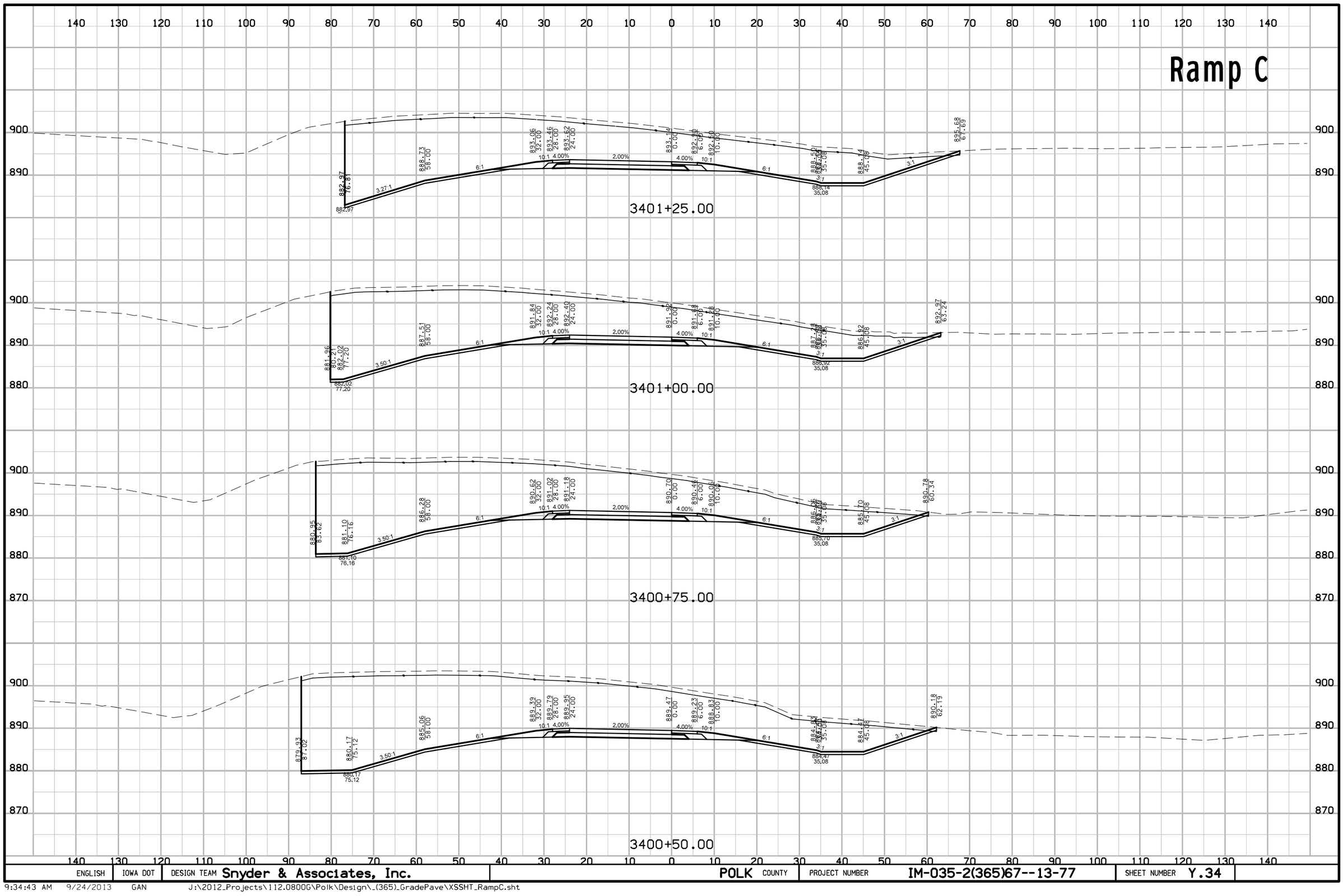

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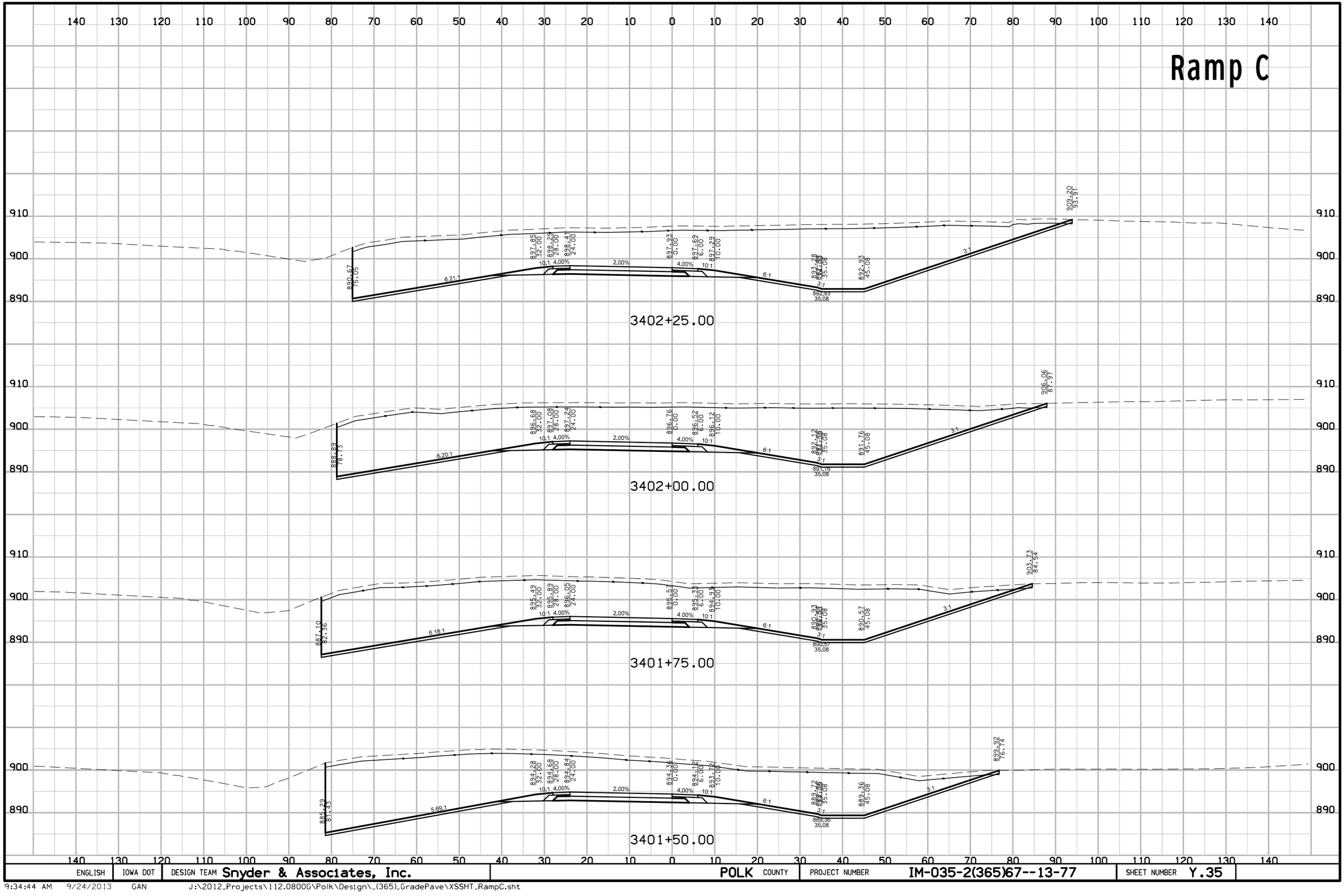

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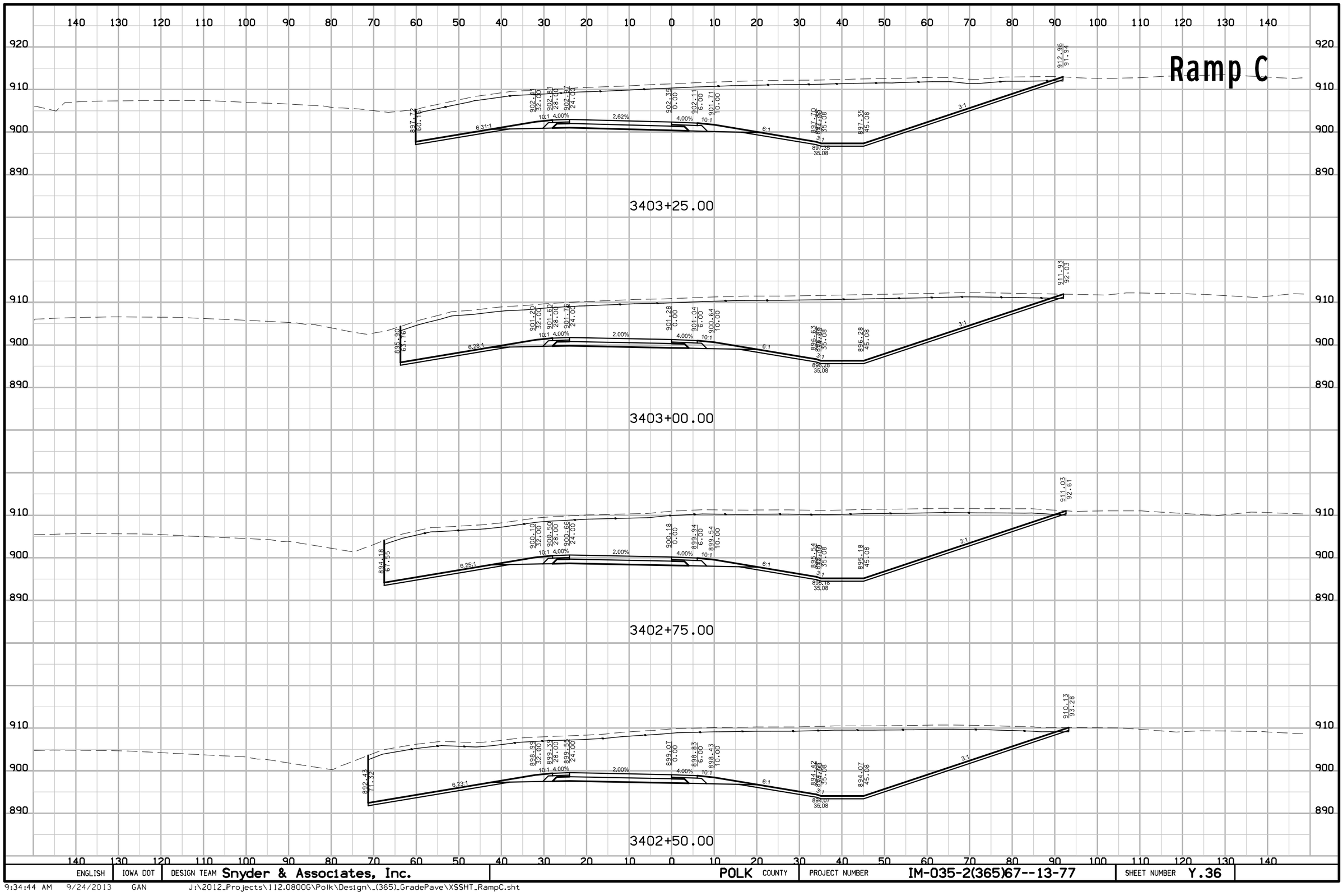

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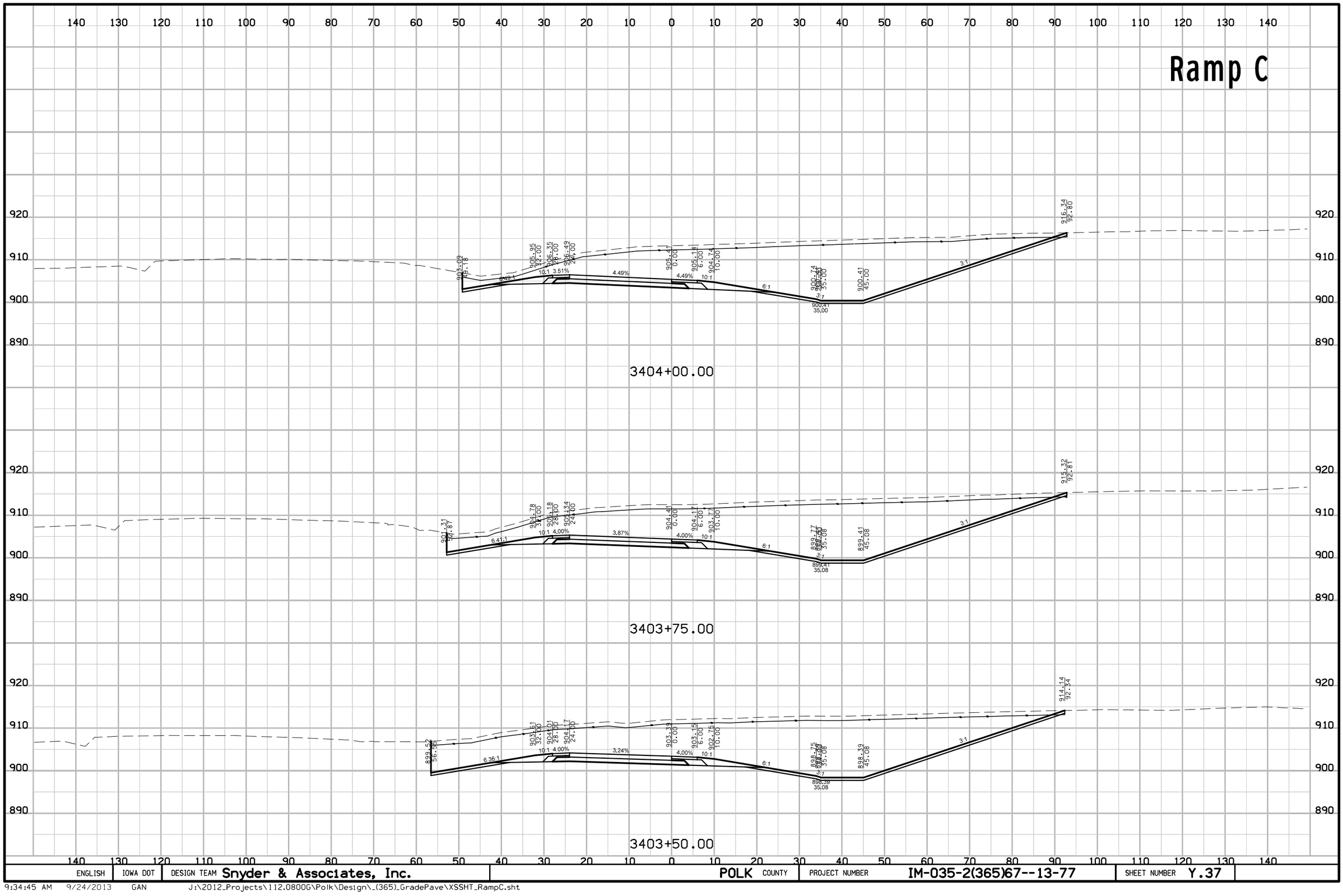

ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER Y.37

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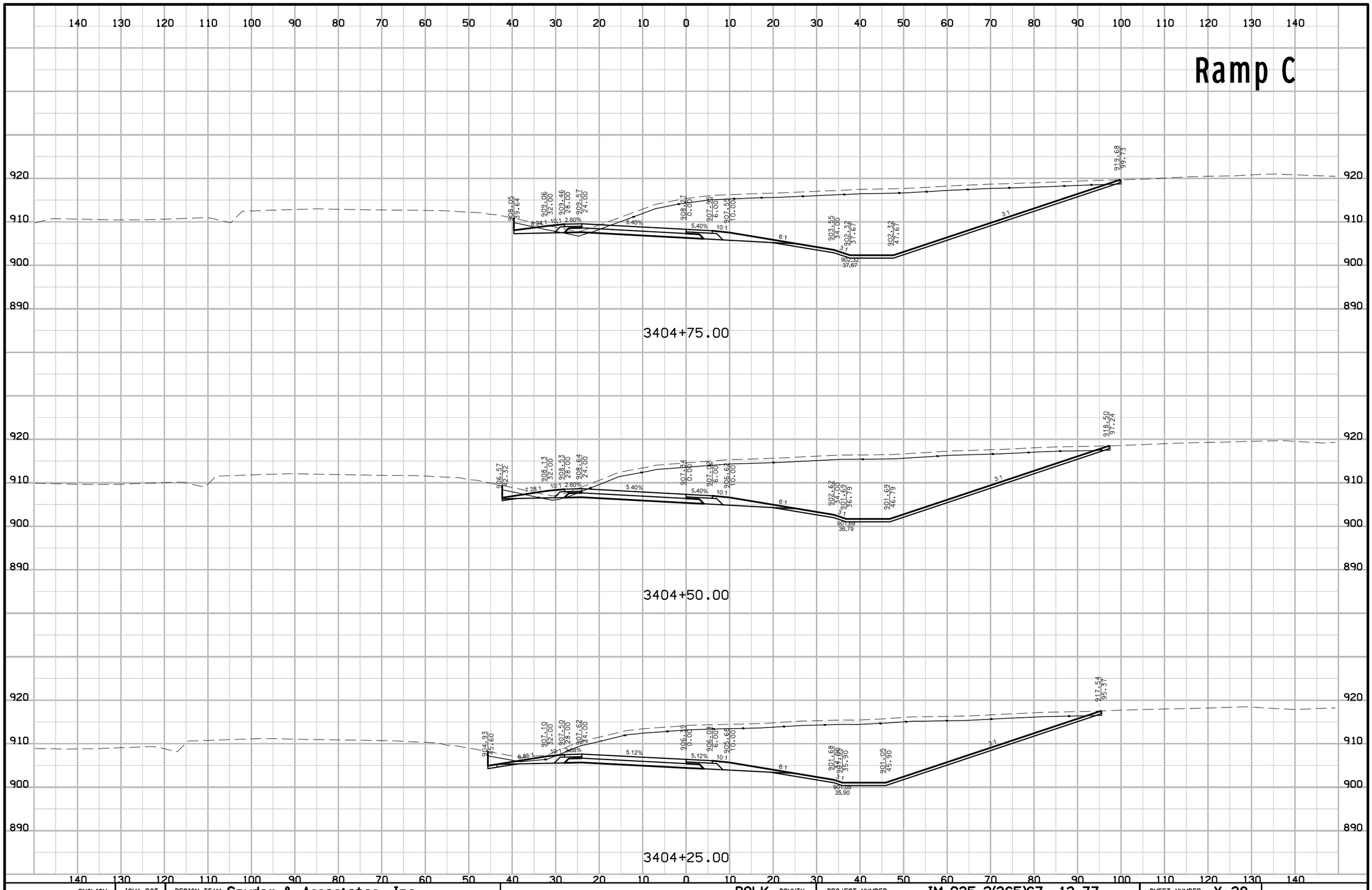
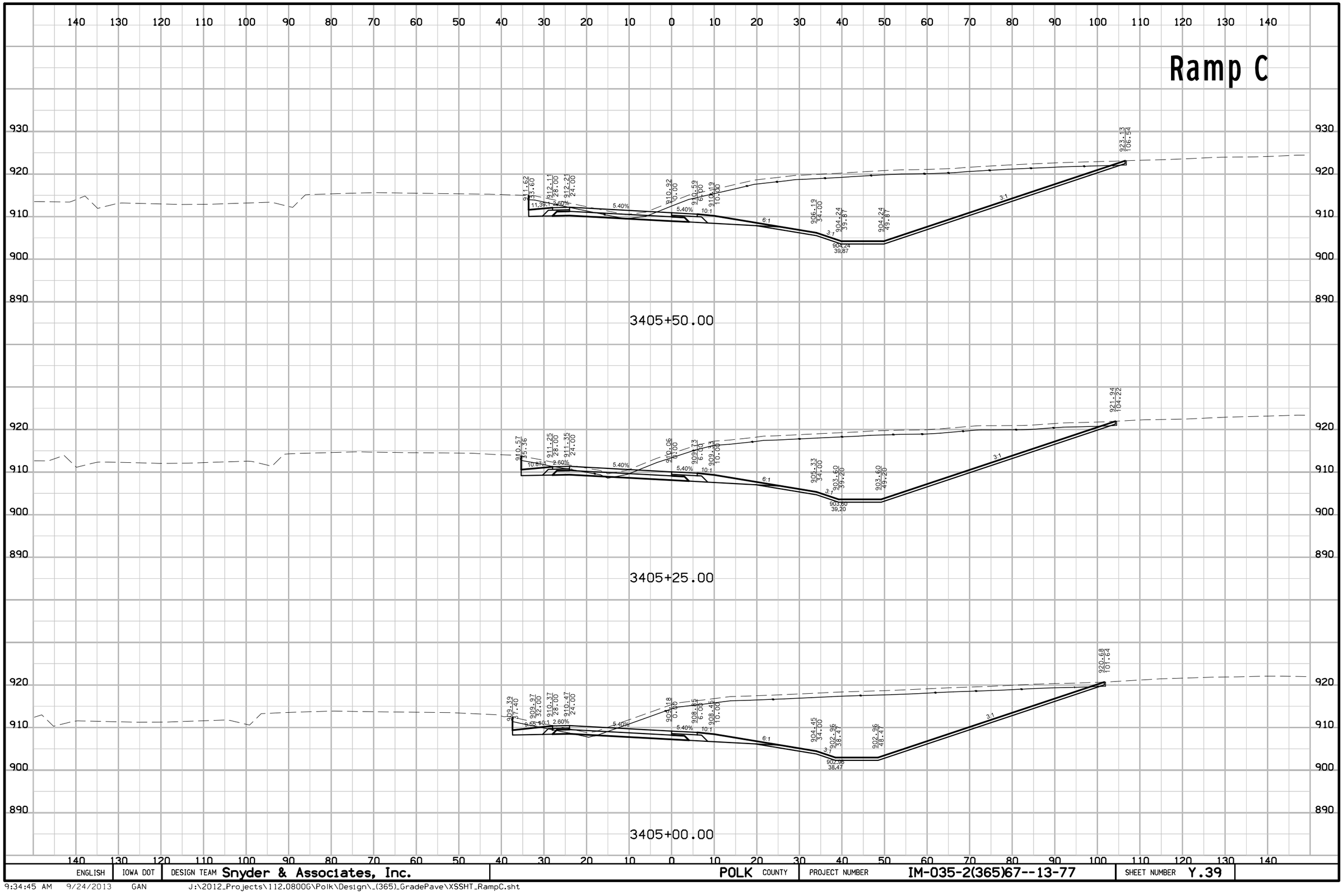


ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER Y.38

Ramp C



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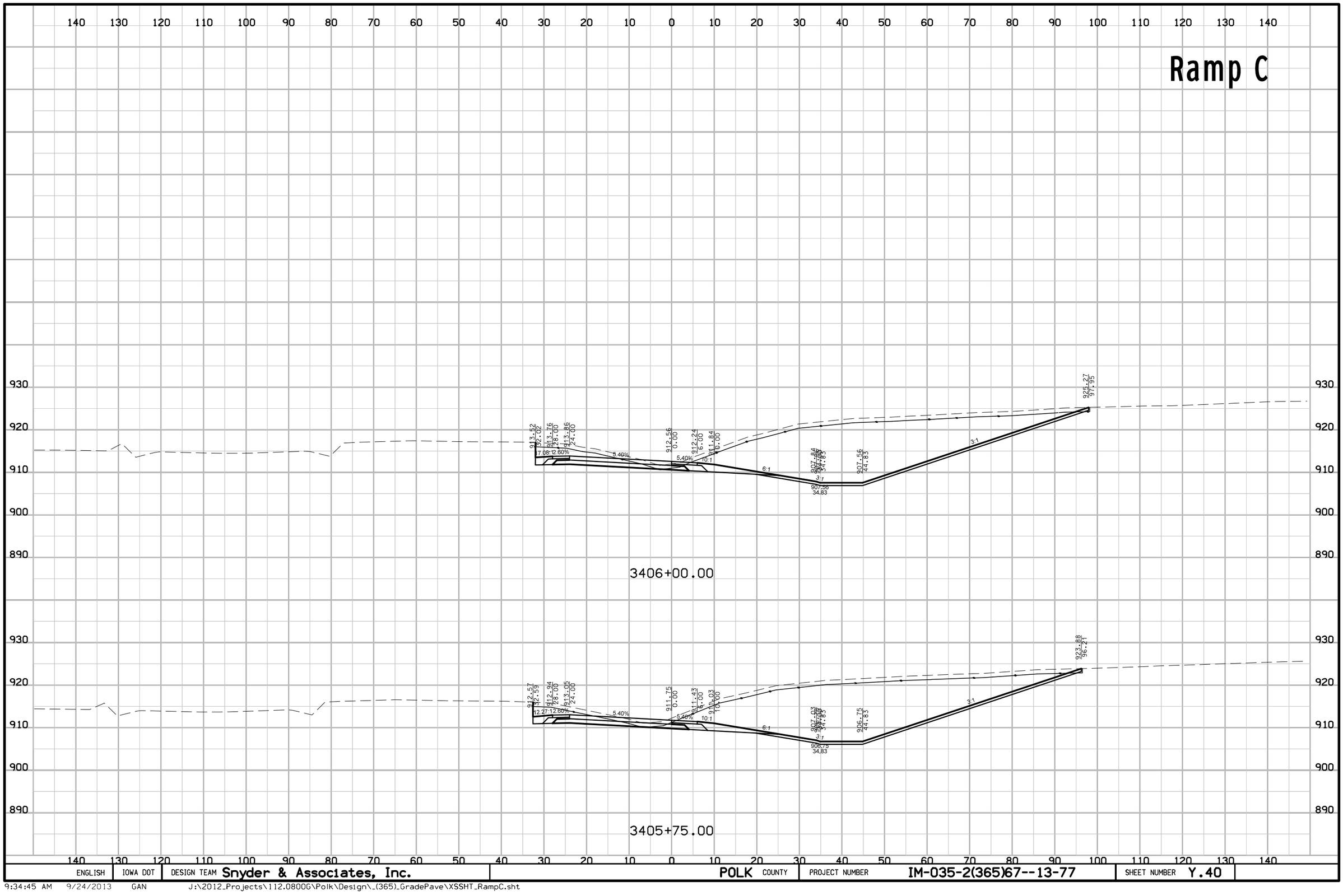
Ramp C



ENGLISH	IOWA DOT	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-035-2(365)67--13-77	SHEET NUMBER Y.40

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