LETTING DATE

LINN/CEDAR Co. PCC PAVEMENT - GRADE AND NEW NHS-030-7(76)--19-57

INDEX OF SHEETS

No.	DESCRIPTION
A Sheets	**Title Sheets**
* A.1	Title Sheet
A.2	Location Map Sheet
A.3 - 7	Design Criteria
B Sheets	**Typical Cross Sections and Details**
B.1 - 13	Typical Cross Sections and Details
C Sheets	**Quantities and General Information**
C.1 - 3	Tabulations
D Sheets	**Mainline Plan and Profile Sheets**
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 55	U.S. Highway 30
E Sheets	**Side Road Plan and Profile Sheets**
* E.1 - 74	Side Road Sheets
F Sheets	**Detour or Temporary Pavement Sheets**
* F.1 - 6	Detour Plan & Profile
G Sheets	**Survey Sheets**
G.1	Reference Ties and Bench Marks
G.2 - 10	Horizontal Control Tab. & Super for all Alignments
J Sheets	**Traffic Control and Staging Sheets**
* J.1	Traffic Control Plan
* J.2 - 8	Staging Details
K Sheets	**Interchange Sheets**
* K.1 - 2	Interchange Layout Sheets - Iowa Highway 1
* K.3 - 6	Iowa Highway 1 - Plan and Profile Sheets
* K.7 - 8	Interchange Layout Sheets - Adams Avenue
* K.9 - 12	Adams Avenue - Plan and Profile Sheets
M Sheets	**Storm Sewer Sheets**
M.1	Storm Sewer Tabulations
U Sheets	**500 Series, Mod.Stds. and Detail Sheets**
U.1 - 3	500 Series, Modified Standards and Detail Sheets
V Sheets	**Bridge and Culvert Plat Plans**
* V.1 - 118	Bridge and Culvert Plat Plans
W Sheets	**Mainline Cross Sections**
W.1	Cross Sections Legend & Symbol Information Sheet
W.2 - 269	Mainline Hwy 30 Cross Sections
X Sheets	**Side Road Cross Sections**
X.1 - 115	Side Road Cross Sections
Y Sheets	**Ramp Cross Sections**
Y.1 - 27	Ramp Cross Sections

* Color Plan Sheets

IOWA DOT

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

LINN/CEDAR COUNTY

PCC PAVEMENT - GRADE AND NEW

U.S. Highway 30 Bypass
West of Mount Vernon to East of Lisbon

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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

NO MILEAGE SUMMARY

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

REVISIONS

TOTAL 720
PROJECT IDENTIFICATION NUMBER
95-57-030-050
PROJECT NUMBER
NHS-030-7(76)--19-57
R.O.W. PROJECT NUMBER

Anticipated Project Development Schedule:

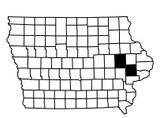
D2 - Design Field Exam
August 27, 2013

D3 - Plans for Preliminary Bridges and Structures
October 9, 2013

B1 - Bridges and Structures Layout
November 6, 2013

D5 - Plans to Right of Way
December 6, 2013

For Project Location Map
Refer to Sheet A.2



DESIGN DATA URBAN

2009	AADT	10,600	V.P.D.
2035	AADT	16,700	V.P.D.
2035	DHV	1,450	V.P.H.
TRUCKS		10	%
Total Design ESALs		--	

INDEX OF SEALS

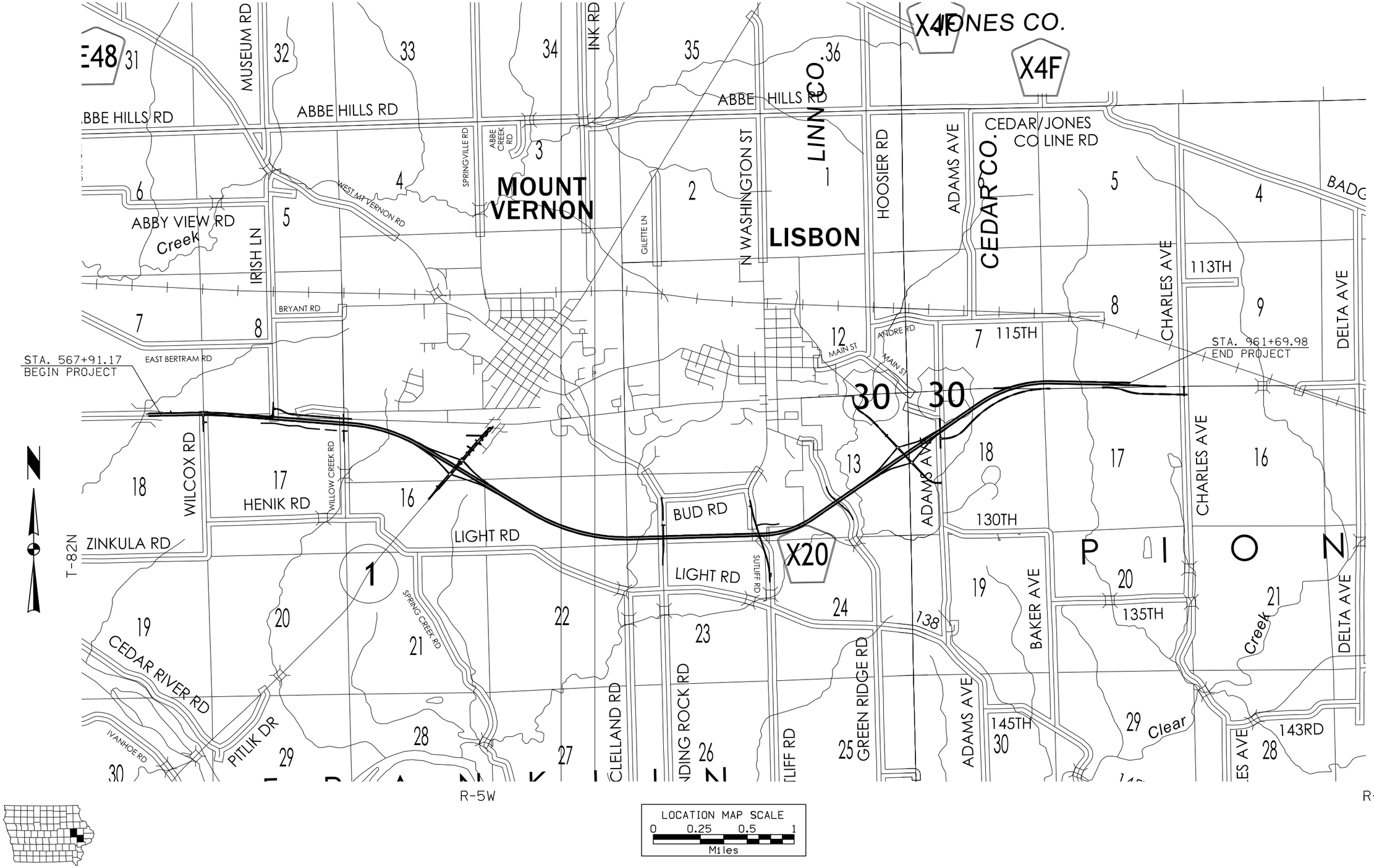
SHEET NO.	NAME	TYPE
A.1	Cindy A. Spencer	Primary Signature Block

PRELIMINARY PLANS

Subject to change by final design.

D5 PLAN – Date: 7-25-14

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER A.1



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER A.2

2:41:12 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076a01.sht

Project Number: NHS-030-7(76)--19-57
Route: U.S. 30
Date of Information: 3/11/2013
Date of Base Design Manual Information: 6/13/2012

Last Updated 6/13/2012			Acceptable Values	Preferred Values	Project Values	Comments
Last Updated 6/13/2012			**Acceptable Design Criteria Based Upon Roadway Type (requires approval according to Section 1C-8)**	**Preferred Design Criteria Based Upon Roadway Type**		
			Roadway Type	Roadway Type		
Design Element			Expressways/ Freeways	Expressways/ Freeways	Mt. Vernon / Lison Bypass	
design speed (mph)			Cannot be less than the posted speed limit	70	70	
full depth paved width (ft)		outside lane	12	14', 12' if using full depth paved shoulders	14	
		inside lane(s)	12	12	12	
design lane width (ft)			12	12	12	
auxiliary-lane width (ft) (includes turn lanes)			10	12	12	
parking-lane width (ft)				–	N/A	
pavement cross-slope (%)			1.5% minimum, 3% maximum	2%, However, when adjacent lanes slope in the same direction, increase slope by 0.5% per lane up to 3%	2%	
effective shoulder width and type (see Section 3C-4)			See Shoulder Tables	See Shoulder Tables	10 ft effective outside (4 ft paved, 4 ft granular); 6 ft inside (6 ft paved)	
shoulder cross-slope (%)			not less than the adjacent lane, 2 to 6% for paved, 4 to 6% for granular, 6 to 8% for earth	4% unless shoulders will be used for staging or potential future lanes.	4%	
foreslope (see Roadway Typical Cross Sections)	adjacent to shoulder		3:1	10:1 for 4' then 6:1	10:1 for 4', then 6:1 to CZ	
	beyond standard ditch depth and design clearzone		3:1	3.5:1	3.5:1	
	Curbed roadways		behind curbs, then not steeper	4% toward roadway for 12', then not steeper than 4:1	N/A	
normal outside ditch (depth × width) (ft)			--	5 x 10	5 x 10	
normal median ditch depth (ft)			3' minimum	4	4	
normal median width (ft) (if applicable)			no barrier: 50 barrier: 10	64	64	
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)			2.5:1	3:1	3:1	
bridge width—new (ft)			design lane widths + effective shoulder widths	design lane widths + effective shoulder widths or curb to curb street width	40 ft.	
bridge width—for Use as Constructed bridges (ft)			design lane widths + 2 ft offset each side		N/A	
transverse slopes	w/ drainage structures		6:1	8:1	8:1	
	w/o drainage structures		6:1	10:1	10:1	
	at sideroads		6:1	6:1	6:1	
Vertical clearance (ft) (above lanes & shoulders)(see Section 8A-2)		Over primary	16	16.5	16.5	
		over non-primary	14	16.5 at interchange locations, 15 at all other locations	16.5	
		over railroad	23.3	23.3	N/A	
		sign truss	17	17.5	17.5	
Structural Capacity			Contact Office of Bridges and Structures	--		
Level of Service			B for Rural, C for Urban	--	B	

Project Number: NHS-030-7(76)--19-57
Route: U.S. 30
Date of Information: 3/11/2013
Date of Base Design Manual Information: 6/13/2012

last update: 6/13/2012			Acceptable Values	Preferred Values	Project Values	Comments
last update: 6/13/2012			**Acceptable Design Criteria Based Upon Design Speed (requires approval according to Section 1C-**	**Preferred Design Criteria Based Upon Design Speed**		
Design Element			Design Speed, mph (Acceptable design speed is equal to posted speed limit and a minimum of 70mph for Interstates)	Design Speed, mph (Preferred design speed is 5mph over posted speed limit and a minimum of 70mph for Interstates)		
			70	70	70	
Stopping sight distance (ft) (see Section 6D-1)			730	730	730	
Minimum horizontal curve radius (ft)		e_{max} = 4%	--	--		
		e_{max} = 6%	2040	2040	2040	
		e_{max} = 8%	1810			
Minimum vertical curve length (ft)			210	210	210	
Minimum rate of vertical curvature (K)		crest	247	401	401	
		sag	181	181	181	
Minimum gradient (%)			0.3% with a curb, 0.0% without a curb	0.5	0.5	
Maximum gradient (%) on ramps				4%	N/A	
		Upgrades	–			
		Downgrades	Equal to the maximum upgrade gradient.			
Maximum gradient (%) on roadways other than ramps			4	3	3%	
Clearzone			See "Acceptable Clear Zone" table in Section 8A-2	See "Preferred Clear Zone" table in Section 8A-2	34 feet	
Curb type			4" Sloped is maximum 6" Sloped for all other	4" Sloped is maximum height for interstate	4" sloped where necessary	

Project Number: NHS-030-7(76)--19-57
Route: Iowa 1
Date of Information: 3/11/2013
Date of Base Design Manual Information: 6/13/2012

Last Updated 6/13/2012			Acceptable Values		Preferred Values		Project Values	Comments
Last Updated 6/13/2012			**Acceptable Design Criteria Based Upon Roadway Type (requires approval according to Section 1C-8)**		**Preferred Design Criteria Based Upon Roadway Type**			
Design Element			SUDAS Functional Class Arterial Residential	SUDAS Functional Class Arterial Commercial/Industrial	SUDAS Functional Class Arterial Residential	SUDAS Functional Class Arterial Commercial/Industrial	Mt. Vernon / Lison Bypass - Iowa 1	
design speed (mph)			Cannot be less than the posted speed limit		5 miles above the posted speed limit		40	
full depth paved width (ft)		outside lane	11		12			
		inside lane(s)	11		12			
design lane width (ft)			11		12		12	
auxiliary-lane width (ft) (includes turn lanes)			11		12		16 (TWLTL)	
parking-lane width (ft)			10		–		N/A	
pavement cross-slope (%)			1.5% minimum		2% not to exceed 3%		2.5%	
effective shoulder width and type (see Section 3C-4)			2' curb & gutter	8' for rural section or 2' curb & gutter	3' curb & gutter	10' for rural section or 3' curb & gutter	3 foot curb and gutter	
shoulder cross-slope (%)			4		4		N/A	
foreslope (see Roadway Typical Cross Sections)	adjacent to shoulder		4:1		4% for 12' behind curbs, then not steeper than 6:1		N/A	Urban section assumed
	beyond standard ditch depth and design clearzone							
	Curbed roadways						4% toward roadway in CZ, then 4:1	1.5% slope on proposed sidewalk / trail. Sidewalk (E side, 5' wide) and trail (W side, 10' wide) to be located 6' behind BOC w/ 2' beyond to breakover point
normal outside ditch (depth × width) (ft)			--		--		N/A	
normal median ditch depth (ft)							N/A	
normal median width (ft) (if applicable)			15		16		N/A	
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)			3:1		4:1		3:1	
bridge width—new (ft)			lane width + 3 ft clearance each side		lane width + 4 ft clearance each side			
bridge width—for Use as Constructed bridges (ft)			26				N/A	
transverse slopes	w/ drainage structures		--		--		8:1	
	w/o drainage structures						10:1	
	at sideroads						6:1	
Vertical clearance (ft) (above lanes & shoulders)(see Section 8A-2)		Over primary	16		16.5		16.5	
		over non-primary	14		16.5 at interchange locations, 15 at all		16.5	
		over railroad	23.3		23.3		N/A	
		sign truss	17		17.5		17.5	
Structural Capacity			Contact Office of Bridges and Structures		--			
Level of Service			D/E		C/D		C	

Project Number: NHS-030-7(76)--19-57
Route: Iowa 1
Date of Information: 3/11/2013
Date of Base Design Manual Information: 6/13/2012

Last update: 6/13/2012		Acceptable Values	Preferred Values	Project Values	Comments
Last update: 6/13/2012		**Acceptable Design Criteria Based Upon Design Speed (requires approval according to Section**	**Preferred Design Criteria Based Upon Design Speed**		
Design Element		Design Speed, mph (Acceptable design speed is equal to posted speed limit and a minimum of 70mph for Interstates)	Design Speed, mph (Preferred design speed is 5mph over posted speed limit and a minimum of 70mph for Interstates)		
		40	40	40	
Stopping sight distance (ft) (see Section 6D-1)		305	305	305	
Minimum horizontal curve radius (ft)	e_{max} = 4%	533	533	N/A	Urban Design
	e_{max} = 6%	485	485	N/A	No Super
	e_{max} = 8%	444		N/A	
Minimum vertical curve length (ft)		120	120	120	
Minimum rate of vertical curvature (K)	crest	44	70	70	
	sag	64	64	64	
Minimum gradient (%)		0.3% with a curb,	0.5	0.5%	
Maximum gradient (%) on ramps			4%	N/A	
	Upgrades	6			
	Downgrades	Equal to the maximum upgrade			
Maximum gradient (%) on roadways other than ramps		6	5	5%	
Clearzone		See "Acceptable Clear Zone" table in Section 8A-2	See "Preferred Clear Zone" table in Section 8A-2	10'	6' between BOC and sidewalk/trail. Actual CZ will be larger than 10' due to pedestrian accommodations
Curb type		6" Standard	6" Standard		

Project Number:	NHS-030-7(76)--19-57
Route:	Sutliff
Date of Information:	3/11/2013
Date of Base Design Manual Information:	6/13/2012

Last Updated 6/13/2012			Acceptable Values	Preferred Values	Project Values	Comments
Last Updated 6/13/2012			**Acceptable Design Criteria Based Upon Roadway Type (requires approval according to Section 1C-8)**	**Preferred Design Criteria Based Upon Roadway Type**		
			Roadway Type	Roadway Type		
Design Element			Rural Two-Lane Highways	Rural Two-Lane Highways	Mt. Vernon / Lison Bypass - Sutliff	
design speed (mph)			Cannot be less than the posted speed limit	60	50	Per I.M. 3.210
full depth paved width (ft)		outside lane	12	14	12	
		inside lane(s)				
design lane width (ft)			11	12	12	
auxiliary-lane width (ft) (includes turn lanes)			10	12	12	
parking-lane width (ft)				--	N/A	
pavement cross-slope (%)			1.5% minimum, 3% maximum	2%, However, when adjacent lanes slope in the same direction, increase slope by 0.5% per lane up to 3%	2%	
effective shoulder width and type (see Section 3C-4)			See Shoulder Tables	See Shoulder Tables	6 ft HMA	Width per I.M. 3.210. Paving to provide bike lane per handoff meeting
shoulder cross-slope (%)			not less than the adjacent lane, 2 to 6% for paved, 4 to 6% for granular, 6 to 8% for earth	4	4%	Per I.M. 3.210
foreslope (see Roadway Typical Cross Sections)	adjacent to shoulder		3:1	10:1 for 4' then 6:1	3:1	Per I.M. 3.210
	beyond standard ditch depth and design clearzone		3:1	3.5:1	3:1	
	Curbed roadways		ehind curbs, then not stee	4% toward roadway for 12', then not steeper than 4:1	N/A	
normal outside ditch (depth × width) (ft)			--	5 x 10	5 x 10	
normal median ditch depth (ft)			--	--	N/A	
normal median width (ft) (if applicable)			--	--	N/A	
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)			2.5:1	3:1	2.5:1	
bridge width—new (ft)			design lane widths + effective shoulder widths	design lane widths + effective shoulder widths or curb to curb street width	36	
bridge width—for Use as Constructed bridges (ft)			design lane widths + 2 ft offset each side		N/A	
transverse slopes	w/ drainage structures		6:1	8:1	8:1	
	w/o drainage structures		6:1	10:1	10:1	
	at sideroads		6:1	6:1	6:1	
Vertical clearance (ft) (above lanes & shoulders)(see Section 8A-2)		Over primary	16	16.5	16.5	
		over non-primary	14	16.5 at interchange	16.5	
		over railroad	23.3	23.3	N/A	
		sign truss	17	17.5	17.5	
Structural Capacity			Contact Office of Bridges and Structures	--		
Level of Service			B	--		

Project Number:	NHS-030-7(76)--19-57
Route:	Sutliff
Date of Information:	3/11/2013
Date of Base Design Manual Information:	6/13/2012

last update: 6/13/2012		Acceptable Values	Preferred Values	Project Values	Comments
last update: 6/13/2012		**Acceptable Design Criteria Based Upon Design Speed (requires approval according to Section 1C-**	**Preferred Design Criteria Based Upon Design Speed**		
Design Element		Design Speed, mph (Acceptable design speed is equal to posted speed limit and a minimum of 70mph for Interstates)	Design Speed, mph (Preferred design speed is 5mph over posted speed limit and a minimum of 70mph for Interstates)		
		50	50		
Stopping sight distance (ft) (see Section 6D-1)		425	425	425	
Minimum horizontal curve radius (ft)	e_{max} = 4%	--	--	N/A	
	e_{max} = 6%	833	833	833	
	e_{max} = 8%	758		N/A	
Minimum vertical curve length (ft)		150	150	150	
Minimum rate of vertical curvature (K)	crest	84	136	136	
	sag	96	96	96	
Minimum gradient (%)		0.3% with a curb, 0.0%	0.5	0.5%	
Maximum gradient (%) on ramps			4%	N/A	
	Upgrades	5			
	Downgrades	Equal to the maximum upgrade gradient.			
Maximum gradient (%) on roadways other than ramps		5	4	7%	Per I.M. 3.210
Clearzone		See "Acceptable Clear Zone" table in Section 8A-2	See "Preferred Clear Zone" table in Section 8A-2	16 ft	
Curb type		4" Sloped is maximum 6" Sloped for all other	4" Sloped is maximum height for interstate		

Project Number: NHS-030-7(76)--19-57
Route: Adams
Date of Information: 3/11/2013
Date of Base Design Manual Information: 6/13/2012

Last Updated 6/13/2012			Acceptable Values	Preferred Values	Project Values	Comments
Last Updated 6/13/2012			**Acceptable Design Criteria Based Upon Roadway Type (requires approval according to Section 1C-8)**	**Preferred Design Criteria Based Upon Roadway Type**		
			Roadway Type	Roadway Type		
Design Element			Transitional Facilities	Transitional Facilities	Mt. Vernon / Lison Bypass - Adams	
design speed (mph)			Cannot be less than the posted speed limit	5 miles above the posted speed limit	50	
full depth paved width (ft)		outside lane	match rural	match rural	14	
		inside lane(s)	match rural			
design lane width (ft)			11	12	12	
auxiliary-lane width (ft) (includes turn lanes)			10	12	12	
parking-lane width (ft)				--	N/A	
pavement cross-slope (%)			1.5% minimum, 3% maximum	2%, However, when adjacent lanes slope in the same direction, increase slope by 0.5% per lane up to 3%	2%	
effective shoulder width and type (see Section 3C-4)			See Shoulder Tables	Discuss at PMT	10 ft shoulder / 2 ft on slab, 8 ft granular	
shoulder cross-slope (%)			not less than the adjacent lane, 2 to 6% for paved, 4 to 6% for granular, 6 to 8% for earth	4	4%	
foreslope (see Roadway Typical Cross Sections)	adjacent to shoulder		4% toward curb	2% toward curb	10:1 for 4 feet, then 6:1	Rural section through transitional area assumed
	beyond standard ditch depth and design clearzone		3:1	match urban	3.5:1	
	Curbed roadways		behind curbs, then not steeper	4% toward roadway for 12', then not steeper than 4:1	N/A	
normal outside ditch (depth × width) (ft)			--	5 x 10	5 x 10	
normal median ditch depth (ft)			--	--	N/A	
normal median width (ft) (if applicable)			--	--	N/A	
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)			2.5:1	4:1	3:1	Per rural criteria
bridge width—new (ft)			design lane widths + effective shoulder widths	design lane widths + effective shoulder widths or curb to curb street width		
bridge width—for Use as Constructed bridges (ft)			design lane widths + 2 ft offset each side		N/A	
transverse slopes	w/ drainage structures		6:1	8:1	8:1	
	w/o drainage structures		6:1	10:1	10:1	
	at sideroads		6:1	6:1	6:1	
Vertical clearance (ft) (above lanes & shoulders)(see Section 8A-2)		Over primary	16	16.5	16.5	
		over non-primary	14	16.5 at interchange	16.5	
		over railroad	23.3	23.3	N/A	
		sign truss	17	17.5	17.5	
Structural Capacity			Contact Office of Bridges and Structures	--		
Level of Service			B for design speeds of 55 or greater B, C for design speeds less than 55	--		

Project Number: NHS-030-7(76)--19-57
Route: Adams
Date of Information: 3/11/2013
Date of Base Design Manual Information: 6/13/2012

last update: 6/13/2012		Acceptable Values	Preferred Values	Project Values	Comments
last update: 6/13/2012		**Acceptable Design Criteria Based Upon Design Speed (requires approval according to Section 1C-**	**Preferred Design Criteria Based Upon Design Speed**		
Design Element		Design Speed, mph (Acceptable design speed is equal to posted speed limit and a minimum of 70mph for Interstates)	Design Speed, mph (Preferred design speed is 5mph over posted speed limit and a minimum of 70mph for Interstates)		
		50	50		
Stopping sight distance (ft) (see Section 6D-1)		425	425	425	
Minimum horizontal curve radius (ft)	e_{max} = 4%	--	--	N/A	
	e_{max} = 6%	833	833	833	
	e_{max} = 8%	758		N/A	
Minimum vertical curve length (ft)		150	150	150	
Minimum rate of vertical curvature (K)	crest	84	136	136	
	sag	96	96	96	
Minimum gradient (%)		0.3% with a curb, 0.0%	0.5	0.5%	
Maximum gradient (%) on ramps			4%	N/A	
	Upgrades	5			
	Downgrades	Equal to the maximum upgrade gradient.			
Maximum gradient (%) on roadways other than ramps		5	4	4%	
Clearzone		See "Acceptable Clear Zone" table in Section 8A-2	See "Preferred Clear Zone" table in Section 8A-2	18 ft.	Review once traffic numbers are analyzed
Curb type		4" Sloped is maximum 6" Sloped for all other	4" Sloped is maximum height for interstate		

Project Number: NHS-030-7(76)--19-57
Route: U.S. 30 Ramps
Date of Information: 3/11/2013
Date of Base Design Manual Information: 6/13/2012

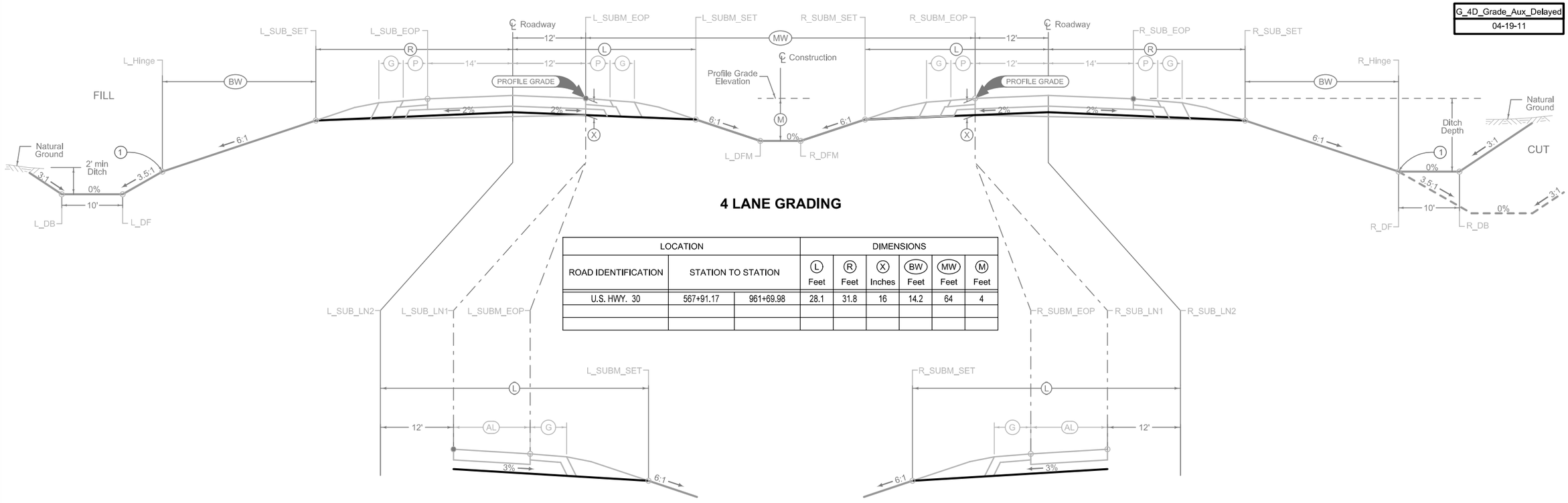
Last Updated 6/13/2012			Acceptable Values	Preferred Values	Project Values	Comments
Last Updated 6/13/2012			**Acceptable Design Criteria Based Upon Roadway Type (requires approval according to Section 1C-8)**	**Preferred Design Criteria Based Upon Roadway Type**		
Design Element			Roadway Type	Roadway Type		
			Ramps	Ramps		
			one lane	one lane	Mt. Vernon / Lison Bypass - Ramps	
design speed (mph)			See Ramp Tables	See Ramp Tables	Varies	
full depth paved width (ft)		outside lane			16	
		inside lane(s)				
design lane width (ft)					16	
auxiliary-lane width (ft) (includes turn lanes)			10	12	12	
parking-lane width (ft)					N/A	
pavement cross-slope (%)			1.5% minimum, 3% maximum	2%	2% typ	
effective shoulder width and type (see Section 3C-4)			See Ramp Tables	See Ramp Tables	4 ft inside, 6 ft outside (all granular)	
shoulder cross-slope (%)			not less than the adjacent lane, 2 to 6% for paved, 4 to 6% for granular, 6 to 8% for earth	4	4%	
foreslope (see Roadway Typical Cross Sections)	adjacent to shoulder		4:1 for interstates, 3:1 for others	10:1 for 4' then 6:1	10:1 for 4 ft, then 6:1 to CZ	
	beyond standard ditch depth and design clearzone		3:1	3.5:1	3.5:1	
	Curbed roadways		not steeper than 3:1	Curbed roadways are not preferred	N/A	
normal outside ditch (depth × width) (ft)			--	5 x 10	5 x 10	
normal median ditch depth (ft)			--	--	N/A	
normal median width (ft) (if applicable)			--	--	N/A	
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)			2.5:1	3:1	3:1	
bridge width—new (ft)			design lane widths + effective shoulder widths	design lane widths + effective shoulder widths	26	
bridge width—for Use as Constructed bridges (ft)			design lane widths + 2 ft offset each side		N/A	
transverse slopes	w/ drainage structures		6:1	8:1	N/A	
	w/o drainage structures		6:1	10:1	N/A	
	at sideroads		6:1	6:1	6:1	
Vertical clearance (ft) (above lanes & shoulders)(see Section 8A-2)		Over primary	16	16.5	16.5	
		over non-primary	14	16.5 at interchange	16.5	
		over railroad	23.3	23.3	N/A	
		sign truss	17	17.5	17.5	
Structural Capacity			Contact Office of Bridges and Structures	--		
Level of Service			--	--		

Project Number: NHS-030-7(76)--19-57
Route: U.S. 30 Ramps
Date of Information: 3/11/2013
Date of Base Design Manual Information: 6/13/2012

last update: 6/13/2012		Acceptable Values		Preferred Values		Project Values	Comments
last update: 6/13/2012		**Acceptable Design Criteria Based Upon Design Speed (requires approval according to Section 1C-**		**Preferred Design Criteria Based Upon Design Speed**			
Design Element		Design Speed, mph (Acceptable design speed is equal to posted speed limit and a minimum of 70mph for Interstates)		Design Speed, mph (Preferred design speed is 5mph over posted speed limit and a minimum of 70mph for Interstates)			
		45	60	45	60	45 / 60 at gore	
Stopping sight distance (ft) (see Section 6D-1)		360	570	360	570		
Minimum horizontal curve radius (ft)	e_{max} = 4%	711	--	711	--	N/A	
	e_{max} = 6%	643	1330	643	1330	643 / 1330	
	e_{max} = 8%	587	1200			N/A	
Minimum vertical curve length (ft)		135	180	135	180	135 / 180	
Minimum rate of vertical curvature (K)	crest	61	151	98	245	98 / 245	
	sag	79	136	79	136	79 / 136	
Minimum gradient (%)		0.3% with a curb, 0.0%		0.5		0.5%	
Maximum gradient (%) on ramps				4%		4%	
	Upgrades	5	5				
	Downgrades	Equal to the maximum upgrade gradient.					
Maximum gradient (%) on roadways other than ramps		6	4	5	3	N/A	
Clearzone		See "Acceptable Clear Zone" table in Section 8A-2		See "Preferred Clear Zone" table in Section 8A-2		24 ft	Review once traffic numbers are analyzed
Curb type		4" Sloped is maximum 6" Sloped for all other		6" Standard	4" Sloped is maximum	4" sloped if necessary	

2:41:37 PM 7/25/2014 V81_IDOTRoadD:\1120610\Cadd\Design\57030076a01.sht

G_4D_Grade_Aux_Delayed
04-19-11



4 LANE GRADING

LOCATION			DIMENSIONS					
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	(BW) Feet	(MW) Feet	(M) Feet
U.S. HWY. 30	567+91.17	961+69.98	28.1	31.8	16	14.2	64	4

Auxiliary Lane Grading

LOCATION			(L)
ROAD IDENTIFICATION	STATION TO STATION		Feet
U.S. HWY. 30	588+89.48	595+04.48	41.26
U.S. HWY. 30	595+04.48	596+84.48	VAR.

Auxiliary Lane Grading

LOCATION			(L)
ROAD IDENTIFICATION	STATION TO STATION		Feet
U.S. HWY. 30	605+85.71	607+65.71	VAR.
U.S. HWY. 30	607+65.71	609+65.71	41.26

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.

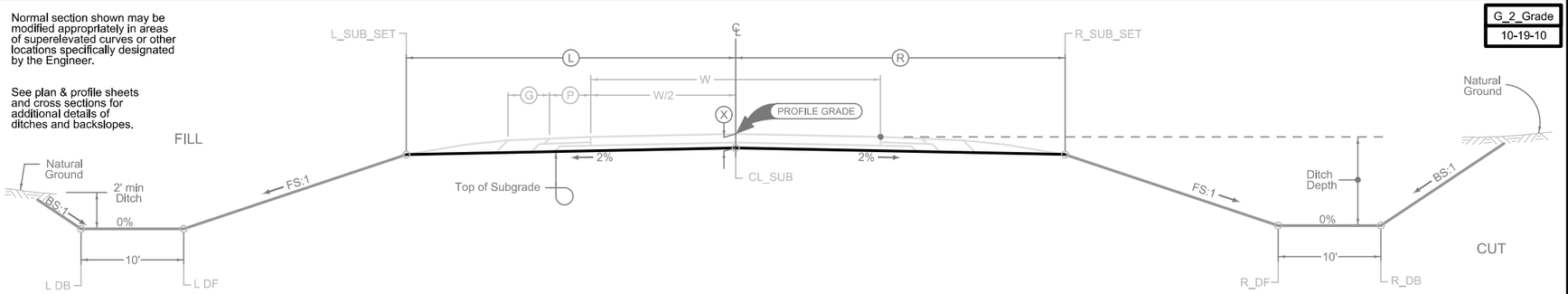
MAINLINE U.S. 30

LOCATION			DIMENSIONS				
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	FS	BS
WILCOX	1584+26.94	1587+70.87	18.5	18.5	14	3	2.5
IRISH	2614+98.71	2618+82.62	18.5	18.5	14	3	2.5
SUTLIFF	8788+63.95	8819+78.00	21.3	21.3	14	3	2.5
CHARLES	17977+91.00	17981+31.83	19.5	19.5	14	3	2.5
KIRKWOOD 3	15859+37.37	15905+93.08	25.1	25.1	14	3	2.5
KIRKWOOD 4	16951+42.71	16982+22.34	25.1	25.1	14	3	2.5
ADAMS	11851+70.50	11861+41.00	25.2	25.2	14	3	2.5
ADAMS	11861+40.00	11865+40.00	VAR	VAR	14	3	2.5
ADAMS	11874+00.00	11878+00.00	VAR	VAR	14	3	2.5
ADAMS	11878+00.00	11900+05.91	25.2	25.2	14	3	2.5
EXISTING ADAMS	19879+30.00	19890+50.00	24.3	24.3	14	3	2.5

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

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

G_2_Grade
10-19-10



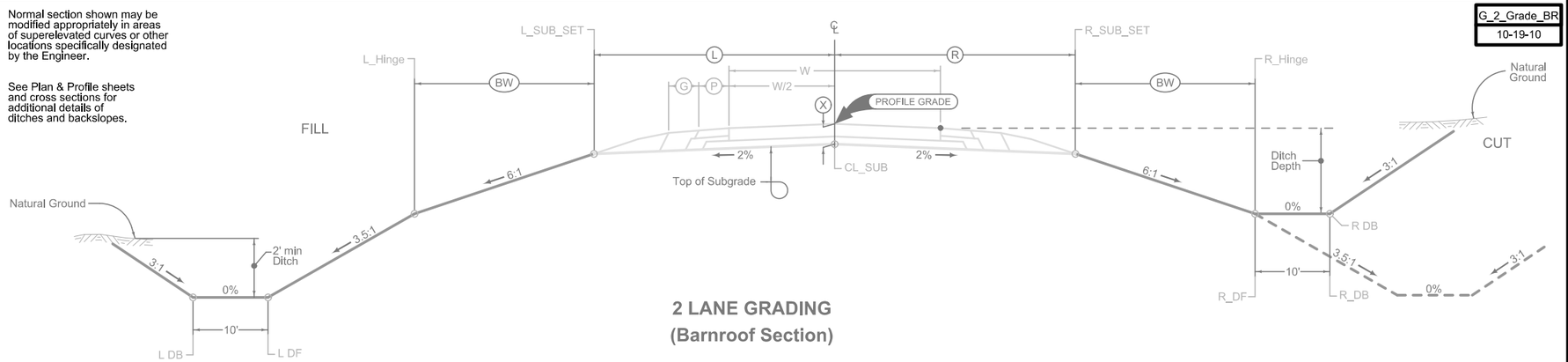
2 LANE GRADING

LOCATION			DIMENSIONS				
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	(BW) Feet	
ADAMS	11865+40.00	11874+00.00	30.7	30.7	14	1.3	
EAST TRANS.	18961+69.98	18975+15.54	30.7	30.7	14	11.3	

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

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

G_2_Grade_BR
10-19-10



2 LANE GRADING
(Barnroof Section)

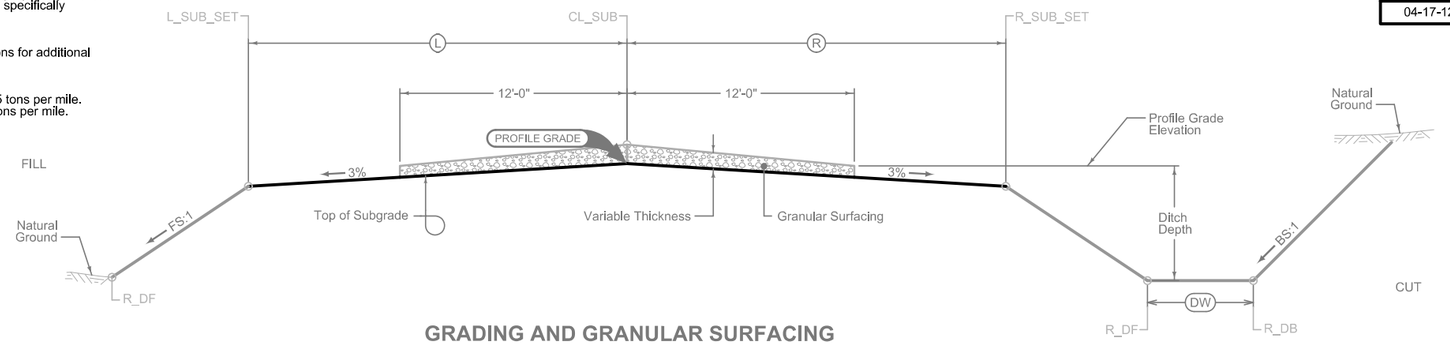
LOCATION			DIMENSIONS					
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	FS	BS	(DW) Feet	
WILCOX	1581+67.00	1584+26.94	15	15	3	2.5	10	
IRISH	2618+82.62	2620+34.28	15	15	3	2.5	10	
WILLOW CREEK	4634+45.00	4642+94.39	13	13	3	2.5	10	
WILLOW CREEK ACCESS	5607+06.29	5638+22.06	11	11	3	2.5	N/A	
STANDING ROCK	7760+77.25	7786+07.16	13	13	3	2.5	10	
SUTLIFF ACCESS	9810+18.00	9818+65.45	11	11	3	2.5	N/A	
GREEN RIDGE	10829+66.35	10845+85.00	13	13	3	2.5	10	

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

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

Place Granular Surfacing as follows:
Grading design application rate is 4435 tons per mile.
Paving design application rate is ___ tons per mile.

G_2_GradeGran
04-17-12



GRADING AND GRANULAR SURFACING

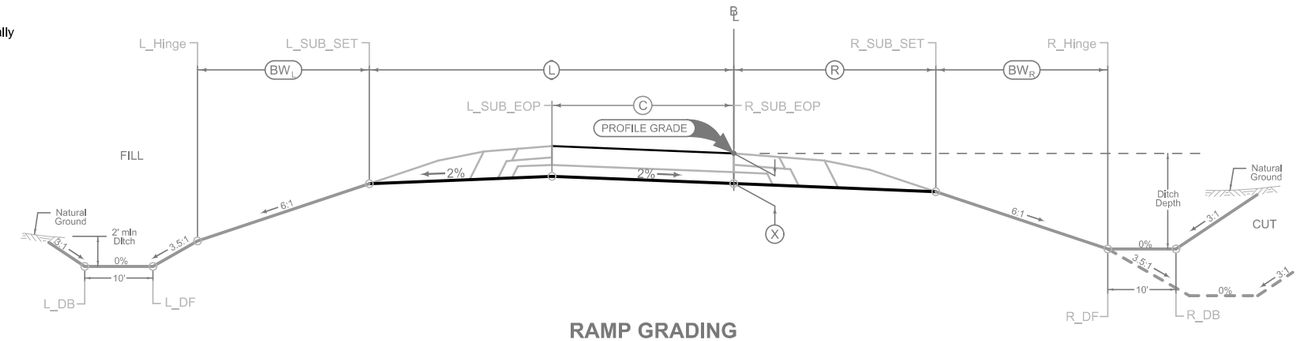
MINOR ROADWAYS

2:42:05 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076b01.sht

LOCATION				DIMENSIONS					
INTERCHANGE	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(C) Feet	(X) Inches	(BW_L) Feet	(BW_R) Feet
IA. HWY. 1	A	1587+72.83	1600+43.85	33.8	19.5	16	22	6.2	4.5
	B	2574+60.63	2586+37.76	33.8	19.5	16	22	6.2	4.5
	C	3575+14.96	3587+52.48	33.8	19.5	16	22	6.2	4.5
	D	4486+55.31	4498+39.51	33.8	19.5	16	22	6.2	4.5
ADAMS	A	1568+91.27	1580+71.36	33.8	19.5	16	22	6.2	4.5
	B	2558+69.15	2570+49.25	33.8	19.5	16	22	6.2	4.5
	C	3557+58.43	3569+26.91	33.8	19.5	16	22	6.2	4.5
	D	4570+13.60	4581+82.08	33.8	19.5	16	22	6.2	4.5

Section view is in direction of traffic.

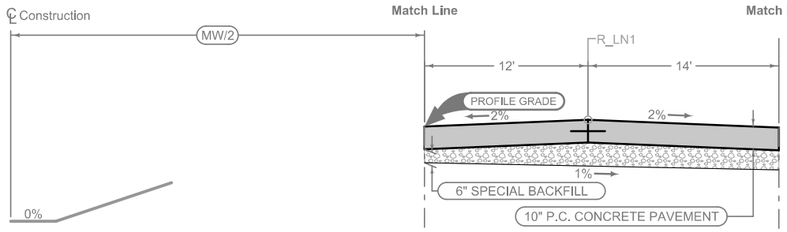
Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.



RAMP GRADING

G_1R_Grade
10-18-11

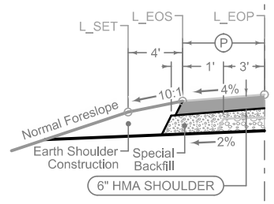
INTERCHANGE RAMPS

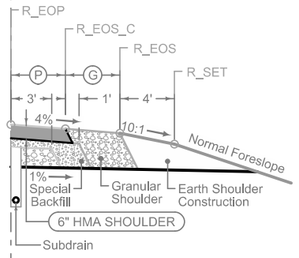


HMA Shoulder

Shoulder Jointing:
Longitudinal joint: B

Direction of Travel	BEGIN STATION	END STATION	(P) Feet
			4_P_HMA_ 04-16-13
B	567+91.17	961+69.98	6





Combination Shoulder

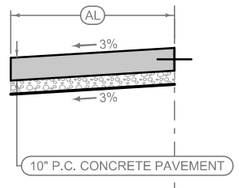
Shoulder Jointing:
Longitudinal joint: B

Direction of Travel	BEGIN STATION	END STATION	(P) Feet	(G) Feet
				4_C_ 10-19-10
B	567+91.17	961+69.98	4	4

Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

STATION TO STATION		(AL) Feet
		2_AuxLane_PCC_ 10-19-10
588+89.48	595+04.48	12
595+04.48	596+84.48	VAR.
605+85.71	607+65.71	VAR.
607+65.71	609+65.71	12



Section shown in the direction of traffic.

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

ROAD IDENTIFICATION	BEGIN STATION	END STATION	(MW) Feet
			4DP_ 10-19-10
U.S. 30	567+91.17	961+69.98	64

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

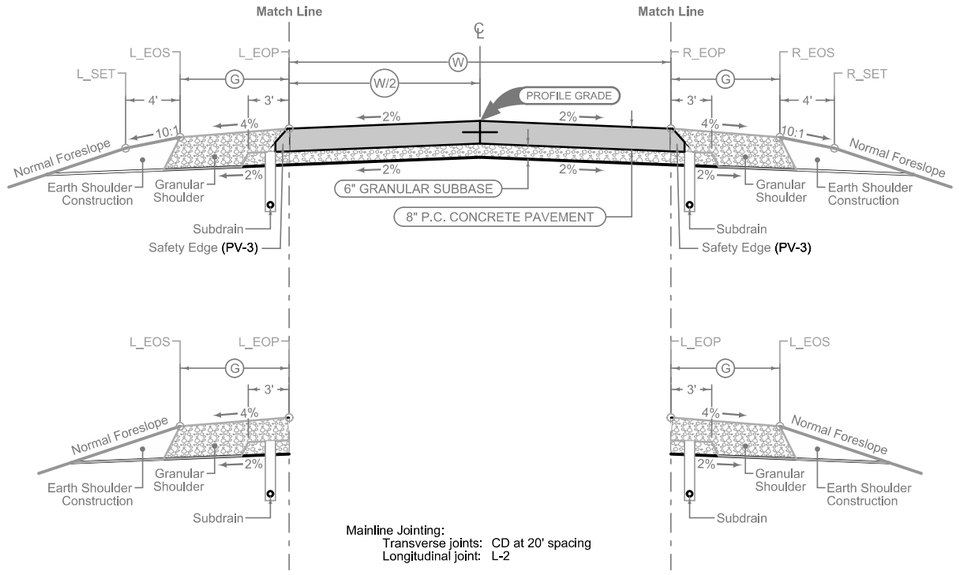
MAINLINE U.S. 30

Granular Shoulder with Safety Edge

STATION TO STATION		2_G_ 04-16-13 Ⓖ Feet
11865+70.26	11873+70.26	8
18961+69.98	18975+15.54	8

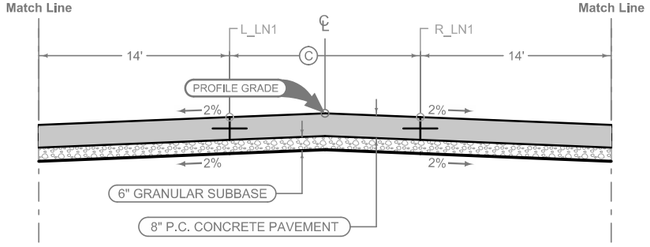
Modified Granular Shoulder

STATION TO STATION		2_G_ 04-16-13 Ⓖ Feet
1584+26.94	1587+70.87	3
2614+98.71	2618+82.62	3
11851+70.50	11865+70.26	8
11873+70.26	11900+05.91	8
15859+37.37	15905+93.08	10
16951+42.71	16982+22.34	10
17977+91.00	17981+31.83	4



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

LOCATION			Ⓦ Feet
ROAD IDENTIFICATION	STATION TO STATION		
WILCOX	1584+26.94	1587+70.87	24
IRISH	2614+98.71	2618+82.62	24
ADAMS	11851+70.50	11861+40.00	28
ADAMS	11878+00.00	11900+05.91	28
KIRKWOOD 3	15859+37.37	15905+93.08	24
KIRKWOOD 4	16951+42.71	16982+22.34	24
CHARLES	17977+91.00	17981+31.83	24
EAST TRANS.	18961+69.98	18975+15.54	28



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

LOCATION			Ⓒ Feet
ROAD IDENTIFICATION	STATION TO STATION		
ADAMS	11861+40.00	11865+40.00	VAR.
ADAMS	11865+40.00	11874+00.00	16
ADAMS	11874+00.00	11878+00.00	VAR.

Granular Shoulder with Safety Edge

STATION TO STATION		2_G_ 04-16-13 Ⓖ Feet
11865+70.26	11873+70.26	8
18961+69.98	18975+15.54	8

Modified Granular Shoulder

STATION TO STATION		2_G_ 04-16-13 Ⓖ Feet
1584+26.94	1587+70.87	3
2614+98.71	2618+82.62	3
11851+70.50	11865+70.26	8
11873+70.26	11900+05.91	8
15859+37.37	15905+93.08	10
16951+42.71	16982+22.34	10
17977+91.00	17981+31.83	4

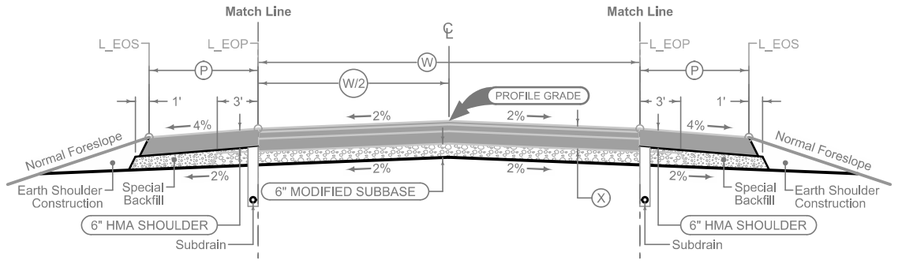
See Tab 100-24 for pavement quantities.
See Tab 112-9 for shoulder quantities.

MINOR ROADWAYS

HMA Shoulder

Shoulder Jointing:
Longitudinal joint: B

STATION TO STATION		2_P_HMA_ 10-19-10 Ⓟ Feet
8788+63.95	8819+78.00	6



HMA Shoulder

Shoulder Jointing:
Longitudinal joint: B

STATION TO STATION		2_P_HMA_ 10-19-10 Ⓟ Feet
8788+63.95	8819+78.00	6

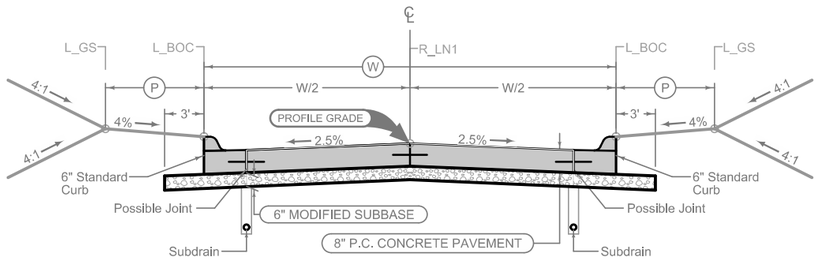
Modified Granular Shoulder

STATION TO STATION		2_G_ 04-16-13 Ⓖ Feet
19879+30.00	19890+50.00	6

Modified Granular Shoulder

STATION TO STATION		2_G_ 04-16-13 Ⓖ Feet
19879+30.00	19890+50.00	6

LOCATION			Ⓦ	Ⓧ
ROAD IDENTIFICATION	STATION TO STATION		Feet	Inches
SUTLIFF	8788+63.95	8819+78.00	24	8
EXISTING ADAMS	19879+30.00	19890+50.00	24	8

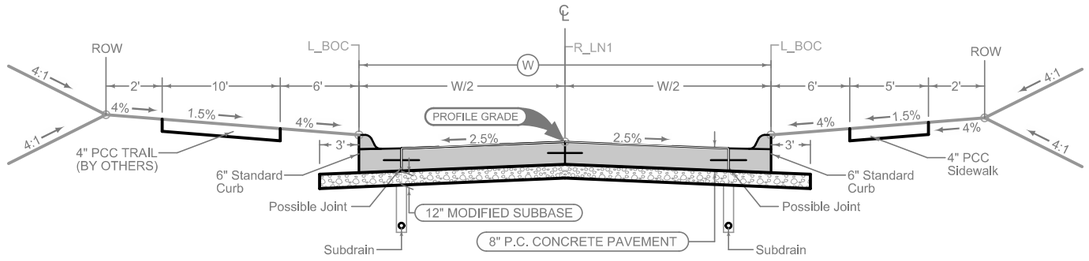


Mainline Jointing:
Transverse joints: CD at 20' spacing
Longitudinal joint: L-2

ROAD IDENTIFICATION	BEGIN STATION	END STATION	Ⓦ Feet	Ⓟ Feet	4DP_ 10-19-10
W. CONNECTOR	3618+12.84	3647+88.73	31	8	
WILLOW CREEK	4643+25.54	4644+66.39	31	8	
VIRGIL AVE.	20699+91.58	20701+05.00	28	8	

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

MINOR ROADWAYS

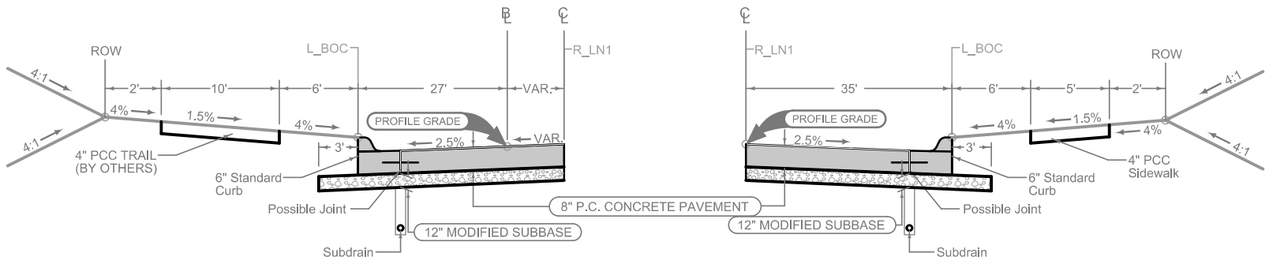


Mainline Jointing:
Transverse joints: CD at 20' spacing
Longitudinal joint: L-2

			4DP_ 10-19-10
ROAD IDENTIFICATION	BEGIN STATION	END STATION	Ⓦ Feet
IA. HWY. 1	6676+81.95	6703+87.72	70

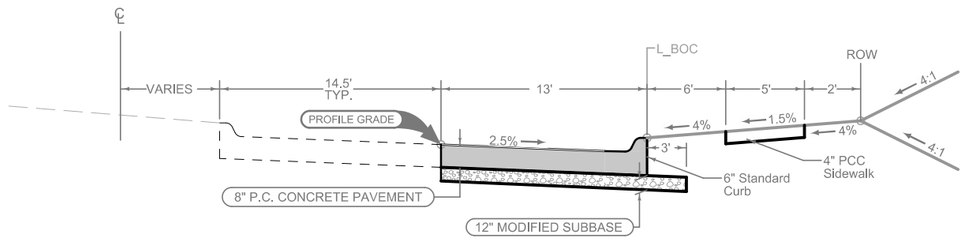
Mainline Jointing:
Transverse joints: CD at 20' spacing
Longitudinal joint: L-2

ROAD IDENTIFICATION	BEGIN STATION	END STATION
IA. HWY. 1 (SBL)	6803+87.72	6806+36.95



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

ROAD IDENTIFICATION	BEGIN STATION	END STATION
IA. HWY. 1	6703+87.72	6706+37.07



Urban Widening - Right

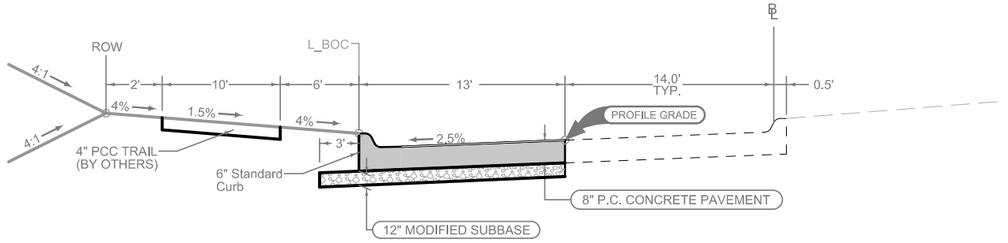
Mainline Jointing:
Transverse joints: CD at 20' spacing
Longitudinal joint: L-2

ROAD IDENTIFICATION	BEGIN STATION	END STATION
IA. HWY. 1	6706+37.07	6707+71.86

Urban Widening - Left

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

ROAD IDENTIFICATION	BEGIN STATION	END STATION
IA. HWY. 1	6806+36.95	6806+62.87



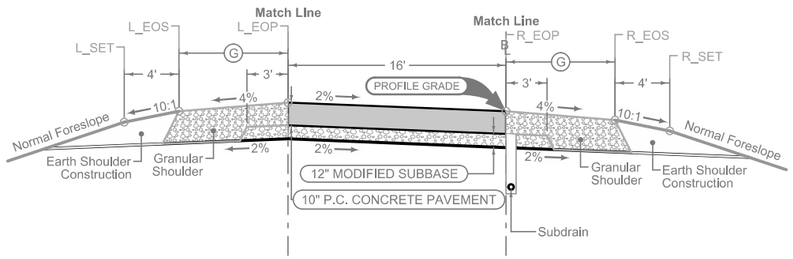
See Tab 100-24 for pavement quantities.

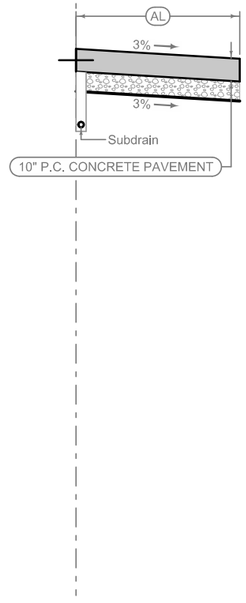
See Tab 112-9 for shoulder quantities.

MINOR ROADWAYS

Granular Shoulder

		1R_G_ 10-19-10
BEGIN STATION	END STATION	(G) Feet
1587+72.83	1600+43.85	4
2574+60.63	2586+37.76	4
3575+14.96	3587+52.48	4
4486+55.31	4498+39.51	4
1568+91.27	1580+71.36	4
2558+69.15	2570+49.25	4
3557+58.43	3569+26.91	4
4570+13.60	4581+82.08	4





Granular Shoulder

		1R_G_ 10-19-10
BEGIN STATION	END STATION	(G) Feet
1587+72.83	1600+43.85	6
2574+60.63	2586+37.76	6
3575+14.96	3587+52.48	6
4486+55.31	4498+39.51	6
1568+91.27	1580+71.36	6
2558+69.15	2570+49.25	6
3557+58.43	3569+26.91	6
4570+13.60	4581+82.08	6

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	1591+42.80	1589+32.87	VAR
WB	1589+32.87	1587+72.83	12
EB	2582+67.73	2584+77.72	VAR
EB	2584+77.72	2586+37.76	12

LOCATION		
ROAD IDENTIFICATION	STATION TO STATION	
IA. HWY. 1 - RAMP A	1587+72.83	1600+43.85
RAMP B	2574+60.63	2586+37.76
RAMP C	3575+14.96	3587+52.48
RAMP D	4486+55.36	4498+39.51
ADAMS - RAMP A	1568+86.78	1580+71.36
RAMP B	2558+69.15	2570+53.74
RAMP C	3557+58.43	3569+30.94
RAMP D	4570+09.58	4581+82.08

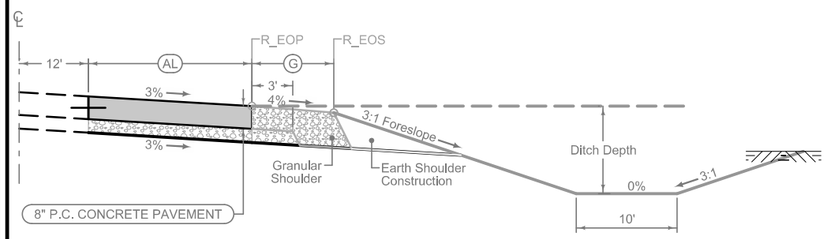
Section shown in the direction of traffic.

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

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

INTERCHANGE RAMPS

AUX-1
MODIFIED

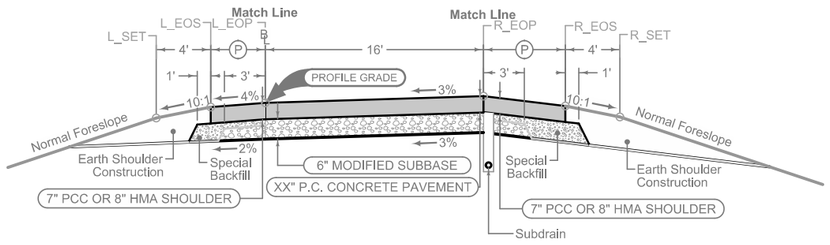


Auxiliary Lane - Existing U.S. 30

Longitudinal joint: L or KT
Transverse joint: Match Mainline

STATION TO STATION		(AL) Feet	(G) Feet
828+18.02	829+86.00	Var	8.0
829+86.00	831+36.00	12.0	8.0

TURN-1
MODIFIED



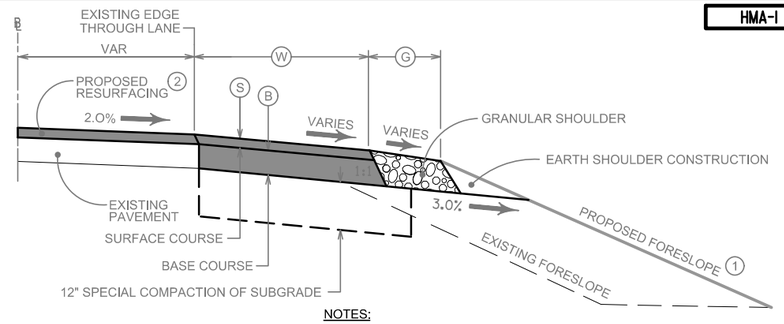
Irish Lane Turn Lane

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

BEGIN STATION	END STATION	(P) Feet
-	-	3

DESIGN RATES	
ITEM	RATE
SURFACE COURSE	145 LBS./CU. FT.
TACK COAT	0.05 GAL./SQ. YD.

HMA-1



1. TRANSITION FORESLOPE FROM 4:1 AT END OF FOUR LANE SECTION TO MATCH EXISTING FORESLOPE AT END OF CONSTRUCTION.
2. MILL EXISTING PAVEMENT AS NECESSARY TO ACCOMMODATE RESURFACING. MINIMUM SURFACING THICKNESS OF 2 INCHES. THICKER SURFACE MAY BE NECESSARY.

LOCATION		SIDE	(S) IN.	(B) IN.	(W) FT.	(G) FT.
STATION TO STATION						
6671+22.70	6676+81.95	LT	2	6	0 - 8.19	10
6671+22.70	6676+81.95	RT	2	6	0 - 3.65	10

NOTES:

NORMAL SECTION SHOWN MAY BE MODIFIED APPROPRIATELY IN AREAS OF SUPERELEVATED CURVES OR OTHER LOCATIONS SPECIFICALLY DESIGNATED BY THE ENGINEER.

DETAILS SHALL BE SIMILIAR FOR CONSTRUCTION ON EITHER SIDE (BY STATIONING) OF ROADWAY.

PGL FOLLOWS INSIDE LANE LINE. THIS WILL TYPICALLY NOT BE AT CENTERLINE OF ROADWAY.

TYPICAL HALF SECTION HMA WIDENING

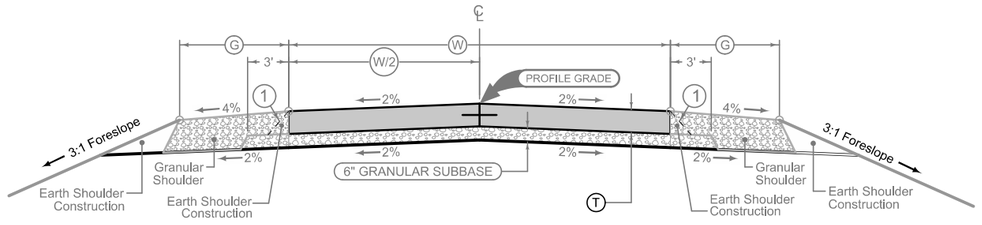
LOCATION		DIMENSIONS						6" Special Backfill
		HMA			PCC			
ROAD IDENTIFICATION	STATION TO STATION	(W) Feet	(T) Inches	(G) Feet	(W) Feet	(T) Inches	(G) Feet	Tons/Station
WEST DETOUR	12588+13.69 — 12612+04.59	24	11	10	24	10	10	105
EAST DETOUR	13910+57.94 — 13923+53.82	24	11	10	24	10	10	105

Quantity calculations based on vertical pavement edges.

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

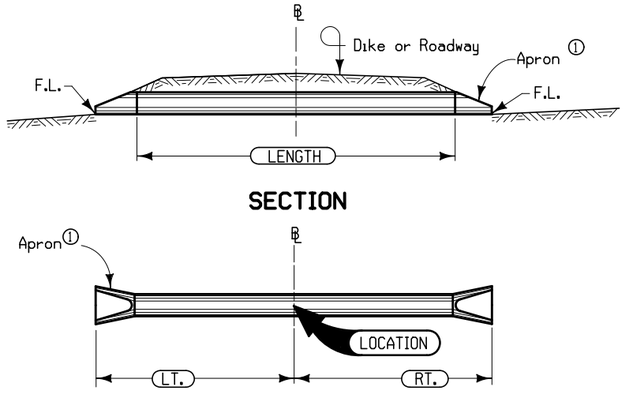
(1) Possible HMA 1:1 slope

D_Detour
MODIFIED



DETOUR PAVING

1101
04-30-02



Notes:

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

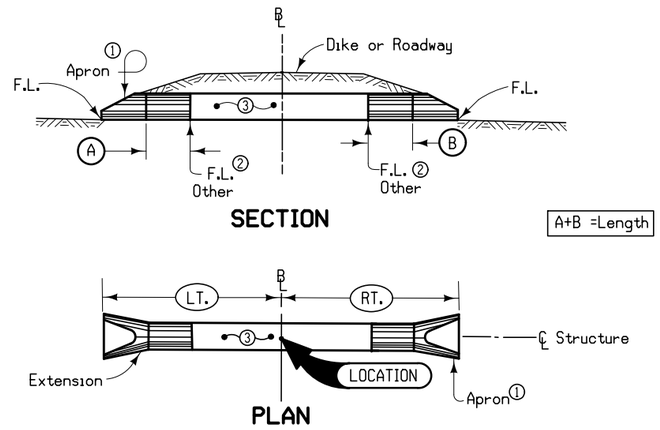
Skew angle is the angle which one end of the pipe is ahead (by stationing) of line perpendicular to the ℄ (example skew Rt. ahead 30°).

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.

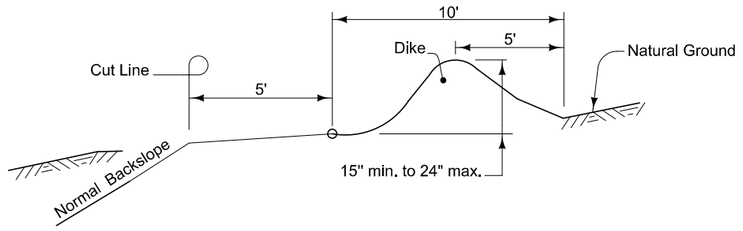
① See Standard Road Plan RF-3 for concrete, RF-5 for metal.

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

③ Existing structure.

PIPE EXTENSION

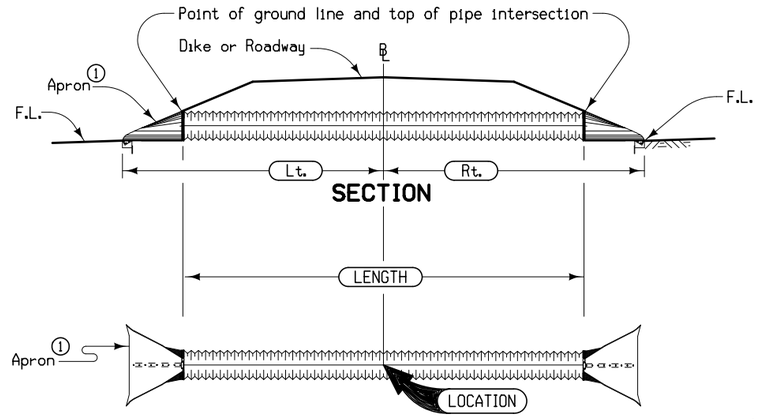
4101
04-20-10



Refer to plans for locations of intercepting ditches. Dike for intercepting ditch shall be made by taking earth from roadway side. Do not excavate back of dike.

TYPICAL CROSS SECTION INTERCEPTING DITCH

1601
10-16-12



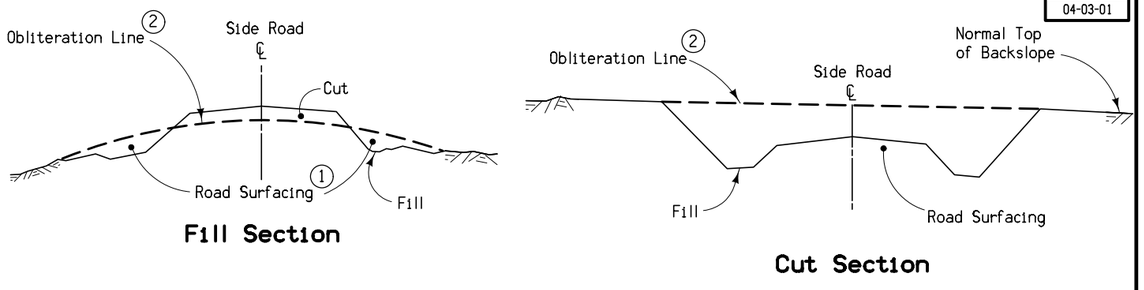
℄ shall be ℄ of roadway, dike, survey, or other; as detailed on plans.

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

① See Standard Road Plan RF-3 for Concrete or RF-5 for Metal and Polyethylene.

UNCLASSIFIED PIPE CULVERT

4302
04-03-01



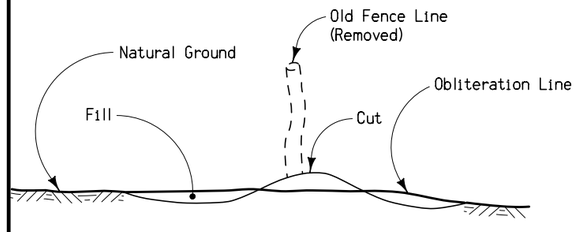
① Existing road surfacing (granular material) shall be placed as shown unless otherwise directed by the Engineer or provided for in the detail project plans.

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

4301
08-20-96

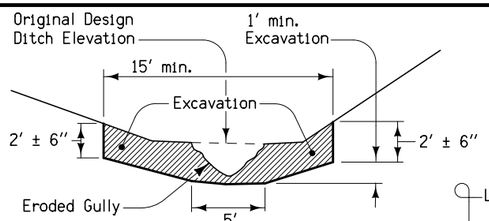


TYPICAL DETAILS FOR OBLITERATION OF OLD FENCE RIDGE

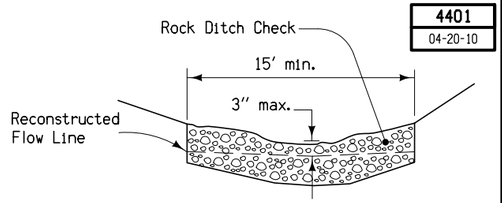
Notes:

The work of obliterating or reshaping old fence ridges shall be done at the direction of the Engineer.

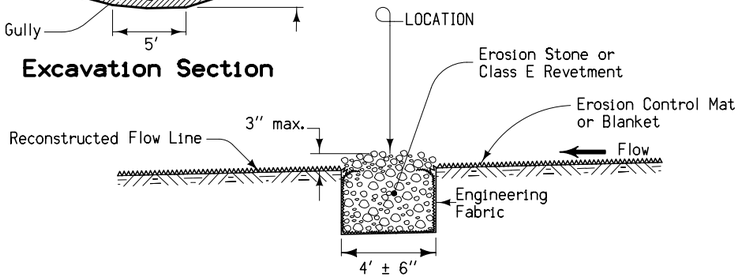
4401
04-20-10



Excavation Section



Ditch Check Section

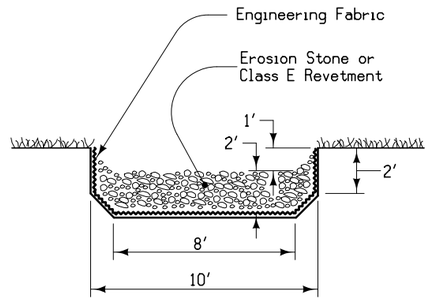


Longitudinal Section at Centerline of Ditch

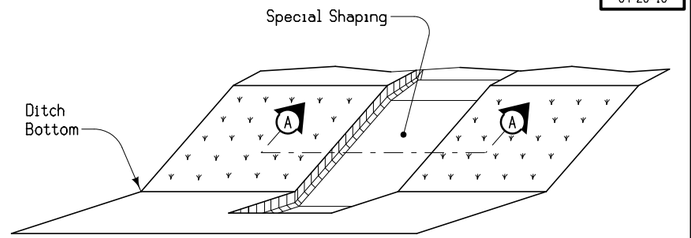
Refer to Tabulation 100-23
for additional information.

ROCK DITCH CHECK

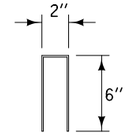
4403
04-20-10



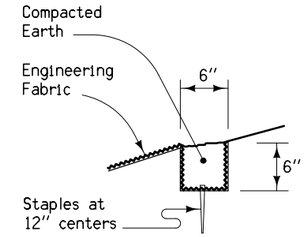
Section A-A



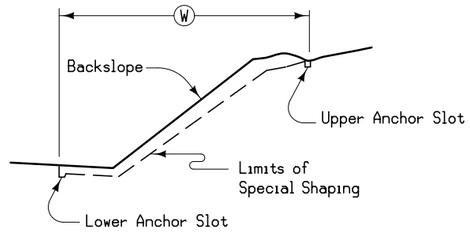
Isometric View



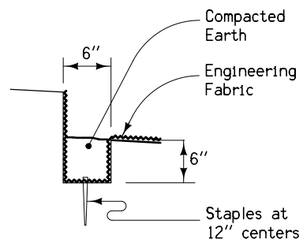
Staple
(No. 11 wire)



Upper Anchor Slot



Typical Section

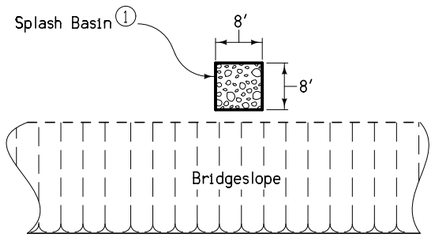


Lower Anchor Slot

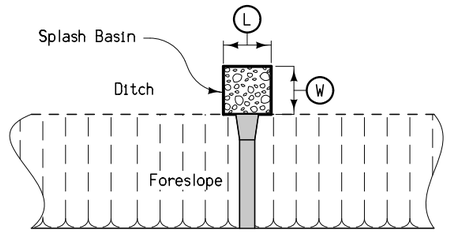
Refer to Tabulation 100-23 for additional information.

ROCK FLUME

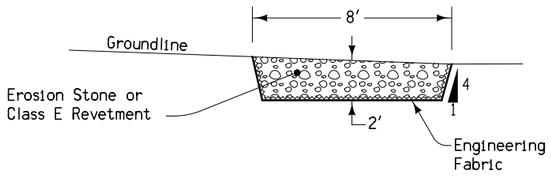
4404
04-20-10



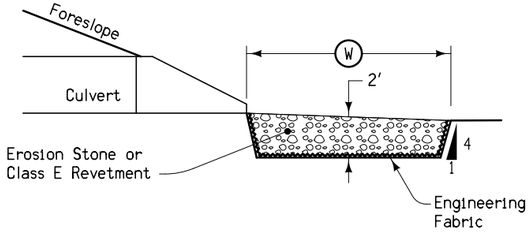
Splash Basin Under Bridge Drain
Plan View



Splash Basin at Culvert Outlet
Plan View



Splash Basin Under Bridge Drain
Typical Section



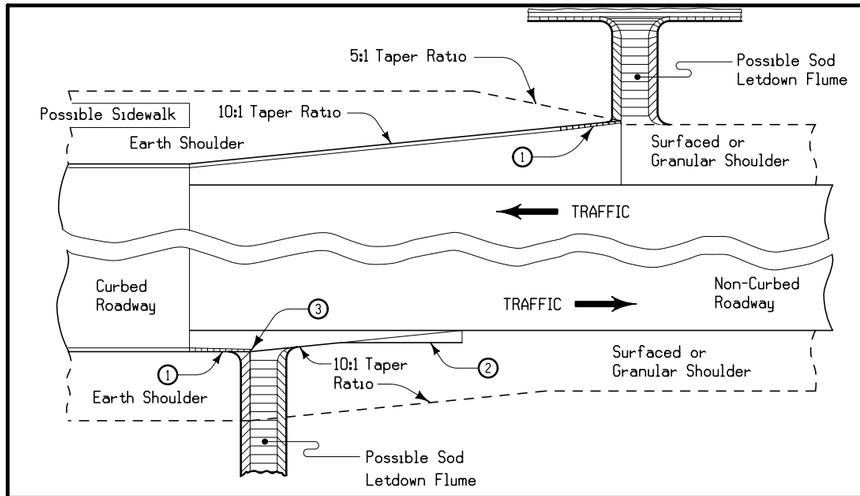
Splash Basin at Culvert Outlet
Typical Section

① Center splash basin directly under bridge drain.

Refer to Tabulation 100-23 for additional information.

ROCK SPLASH BASIN

6147
11-10-92



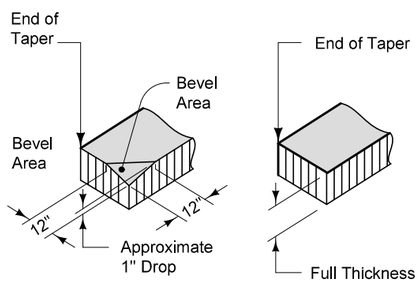
① Runout curb in 10.0′

② End of Taper Details see Typical Detail 7101

③ End earth shoulder at the end of the curb transition when no flume is needed.

TRANSITION
BETWEEN CURBED AND
NON-CURBED ROADWAYS

7101
10-19-10

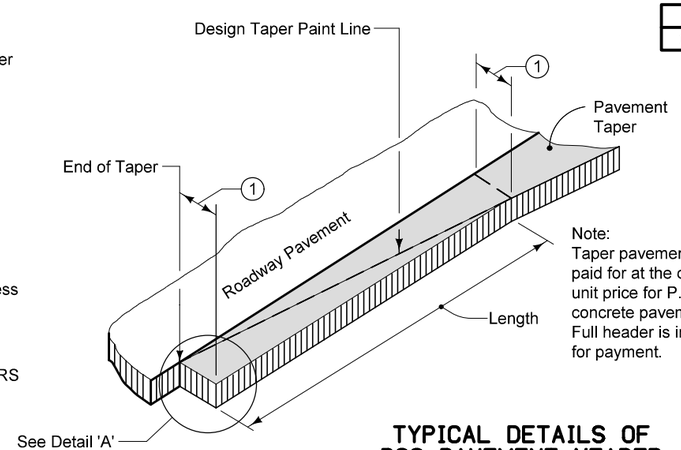


DETAIL 'A'

FOR
GRANULAR SHOULDERS

DETAIL 'A'

FOR
PAVED SHOULDERS

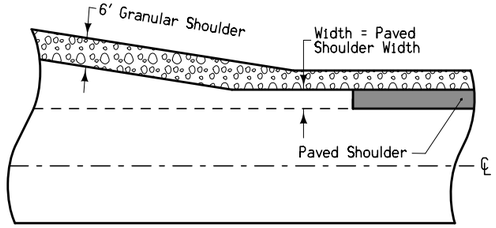


Note:
Taper pavement to be paid for at the contract unit price for P.C. concrete pavement. Full header is included for payment.

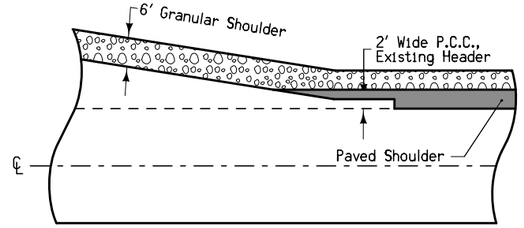
(1) Normal width is 2'-0". Construct 4'-0" width when butting into 4' wide HMA shoulders (See Typical 7154A).

TYPICAL DETAILS OF PCC PAVEMENT HEADER

7154A
10-20-09



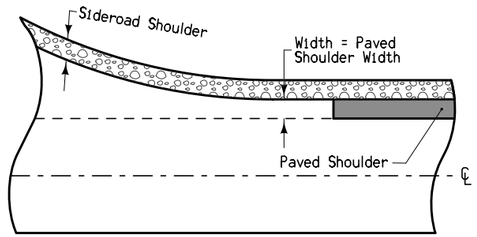
With Newly Constructed Turn Lanes



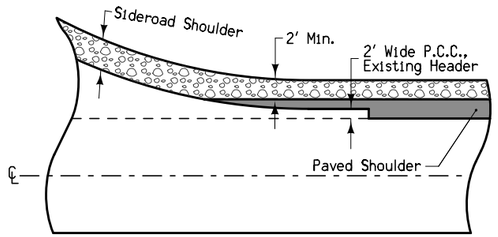
At UAC Turn Lanes

PAVED SHOULDER DETAIL AT TURN LANES

7154B
10-20-09



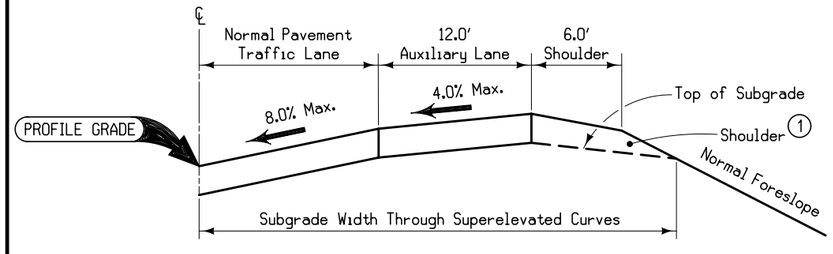
With Newly Constructed Returns



At UAC Returns

PAVED SHOULDER DETAIL AT RETURNS

2013
09-29-92



Notes:

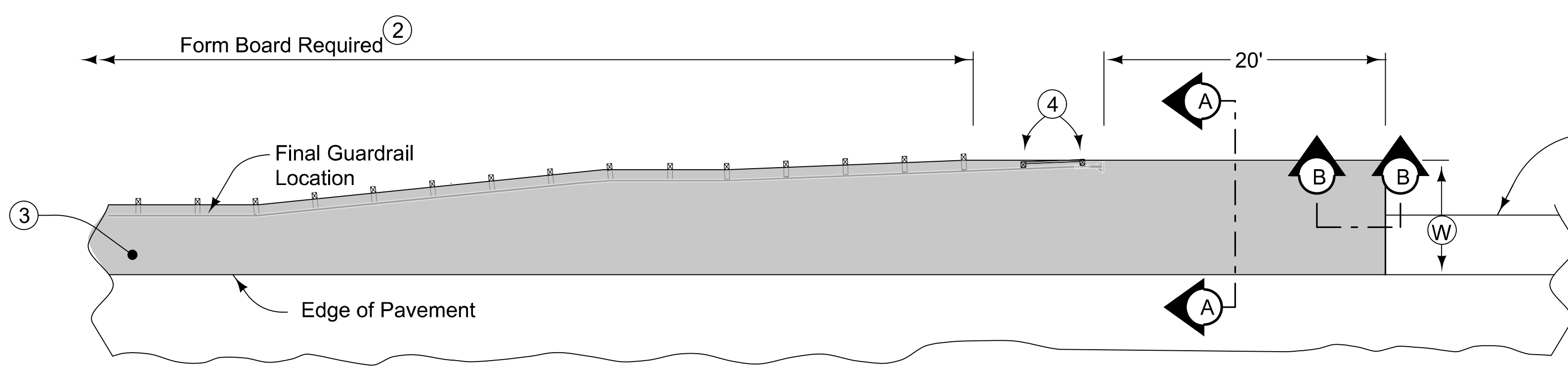
On the high side of superelevated curves, the surface of auxiliary lane pavement shall be maintained at the same slope as the adjacent traffic lane until the superelevation reaches 4.0%. When the traffic lane pavement slope is greater than 4.0%, the auxiliary slope will remain constant at 4.0%.

On the low side of superelevated curves, the surface of auxiliary lane pavement shall slope the same as the adjacent lane pavement.

(1) Refer to other drawings for details of shoulder design and construction.

TYPICAL HALF SECTION OF AUXILIARY LANE THROUGH AREAS OF SUPERELEVATION

7156
04-19-11



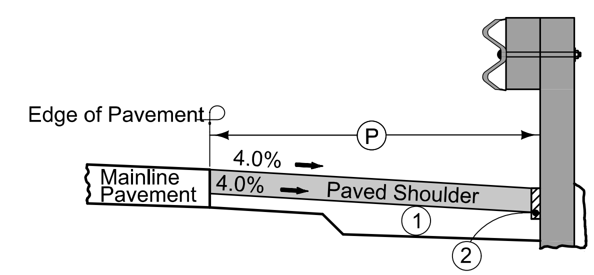
6" HMA Paved Shoulder at guardrail. 7" PCC may be substituted with the following jointing layout:

Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse joints in shoulder at mid-panel of the mainline pavement. Place longitudinal joint at W/2 from edge of mainline pavement when W is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

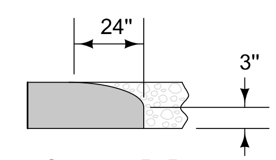
Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal & reinstallation of guardrail will be allowed with no additional payment.

1. 6" subgrade treatment.
2. When guardrail posts are installed prior to construction of paved shoulder, nail 1" x 6" untreated form boards along the face of guardrail posts for the length shown. This board is to prevent shoulder material from contacting the sides of the posts and altering the function of the guardrail. Form board not required for final 2 posts.
3. Continue paved shoulder to existing paved shoulder or 20' beyond the end of guardrail.
4. Shoulder may be notched for final 2 posts or post sleeves may be installed through pavement.

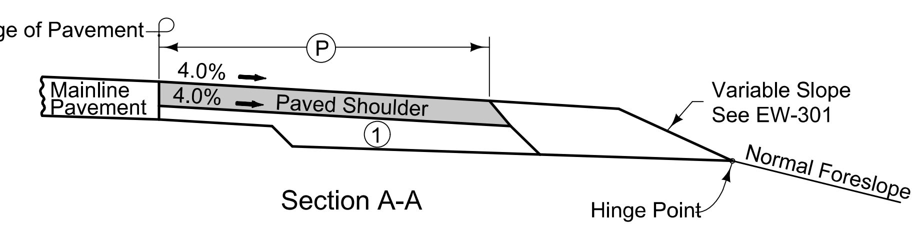
Location				(P)	Subgrade Treatment (1)		Paved Shoulder	Remarks
Road Identification	Station To Station		Side	Feet	Special Backfill Tons	Modified Subbase CY	SY	



Typical Section with Form Board



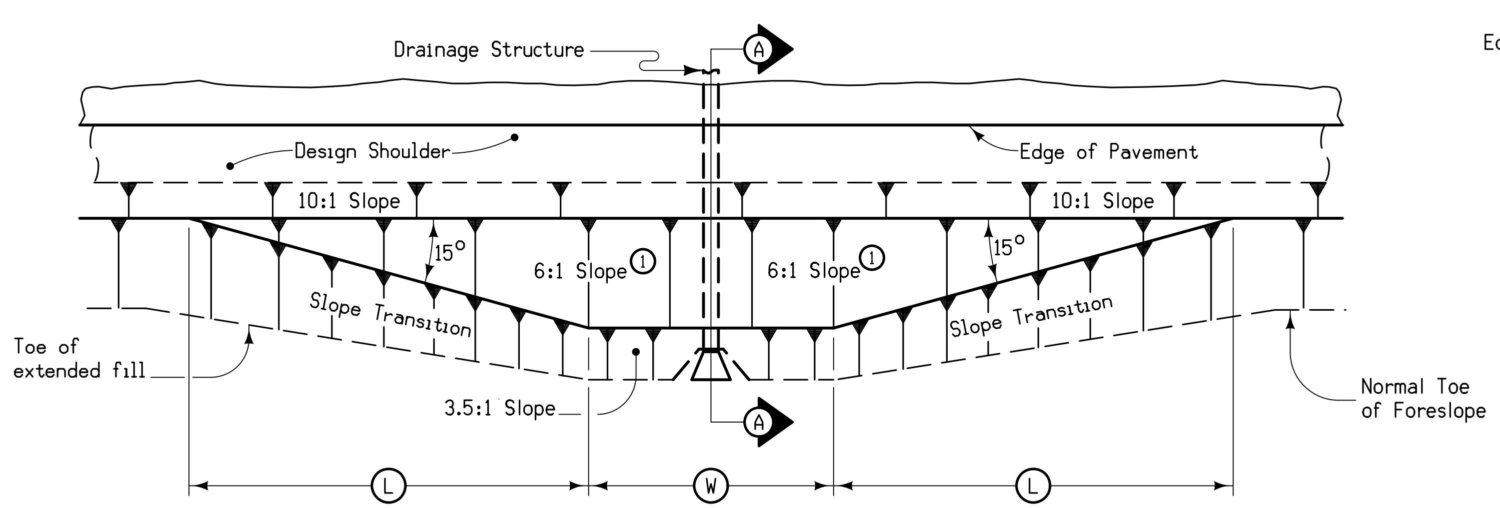
Section B-B
Roll down at granular shoulder or earth.



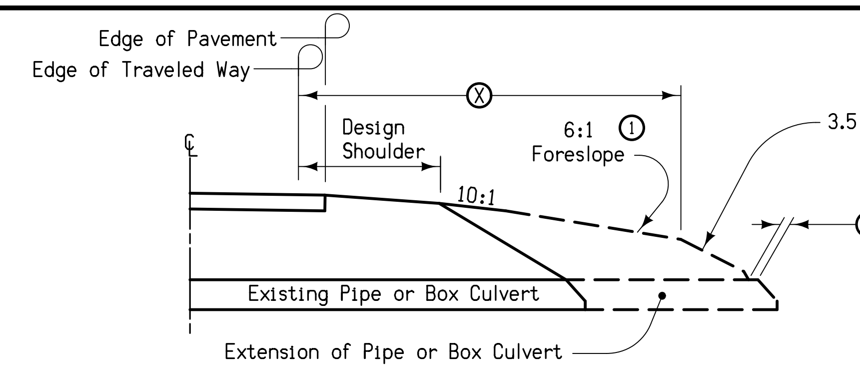
Section A-A

PAVED SHOULDER AT GUARDRAIL

4311
04-17-12



PLAN VIEW



SECTION A-A

STRUCTURE LOCATION		(W)	(L)	(X)
STATION	SIDE	Feet	Feet	Feet

Notes:

At locations where an extended or newly constructed drainage structure extends beyond the normal foreslope cover, the foreslope shall be flattened as indicated so as to cover the structure. Minimum earth cover is 6".

1. 6:1 Maximum - Slope may be flatter.
2. 6" Minimum for pipe installations or to top of headwall on R.C.B.

(W) = Pipe or R.C.B. width plus 20 feet each side.

DETAILS OF
BARNROOF FORESLOPE
AT DRAINAGE STRUCTURE

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.	Dike 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	
2.5	576+90.00 L	2000D	24	RCP	70	C	2.4		1	1	2								3		763.30	764.34			49.8	32.5					Med	576+70.00	765.84	M						Rmv+repl existing pipe
16.4	583+50.00	2000D	36	RCP	194	C	7.5		1	1	2								3		773.47	770.96			100.6	109.4														
3.3	588+89.00 L	2000D	24	RCP	84	C	3.7		1	1	2								3		786.22	789.67			53.8	42.5														
2.8	607+15.37	2000D	24	RCP	192	C	6.6		1	1	2								3		807.48	809.33			106.0	98.3				11										Construct w/ W. Detour.
2.2	615+31.00 L	2000D	24	RCP	72	C	3.2		1	1	2								3		801.17	803.84			51.7	32.6					Med	615+51.00	805.34	M						
15.5	619+27.40	2000D	36	RCP	20	C			1		1	2				1			3		793.44		793.32	791.22	108.8	145.4				15										20 degree elbows
		3000D	30	RCP	220	C	14.4			1	1								3			782.96								15									
3.5	625+26.40 R	2000D	24	RCP	78	C	4.1		1	1	2								3		793.69	789.18			32.6	57.7														
26.3	627+81.56	3750D	42	RCP	316	C	24.0		1	1	2						C-1	2	3		781.95	768.90	780.48	776.00	252.8	190.8	58.0	258.0		21										Remove 3 sections at outlet
49.5	633+01.68	3750D	48	RCP	446	B	27.6		1	1	2								3		782.16	778.30			277.0	185.0			15											Jack thru ex. highway
1.7	632+00.00 R	2000D	24	RCP	78	C	4.1		1	1	2								3		804.86	800.40			32.6	57.7					Med	631+80.00	806.36	M						Rock flume @ outlet
10.2	646+29.08	3750D	36	RCP	354	B	24.6			1	1								3		790.00	786.00			176.9	182.1				24	L	647+42.00	796.70	F						SW-511 at inlet
2.5	654+00.00 L	2000D	24	RCP	82	C	5.0		1	1	2								3		786.10	790.77			61.7	32.6					Med	654+20.00	792.27	M						Rock flume @ outlet
	657+34.24		6x8	RCB	325		26.0																														
	659+70.94		8x7	RCB	343		24.6																														
3.0	659+56.00 L	2000D	24	RCP	82	C	4.1		1	1	2								3		777.63	782.30			61.7	32.6														Rock flume @ outlet
3.5	669+00.00 R	2000D	24	RCP	74	C	3.2		1	1	2								3		801.40	797.10			32.3	54.0					Med	668+80.00	802.90	M						Rock flume @ outlet
9.6	668+38.97	2000D	30	RCP	20	C			1		1	2				1			3			794.60	792.40	794.50	165.4	108.9				19										20 degree elbows
		3000D	24	RCP	242	C	17.0			1	1								3		780.93									19									
12.8	684+96.09	3750D	36	RCP	438	B	29.5		1	0	1								3		808.05	805.82			221.0	225.0			35											SW-513 at outlet
8.5	694+65.95	3000D	30	RCP	440	C	18.4		1	1	2								3		813.30	811.10			217.1	235.2				1										
2.5	700+00.00 L	2000D	24	RCP	108	C	3.0		1	1	2								3		816.05	819.32			87.7	32.6					Med	700+20.00	820.82	M						See storm sewer sheet
2.7	713+30.00 L	2000D	24	RCP	74	C	3.6		1	1	2								3		792.26	795.77			53.9	32.4					Med	713+50.00	797.27	M						
83.3	717+31.43	2000D	60	RCP	188	C	6.0		1	1	2								3		787.85	784.58			96.9	107.1				11										
2.8	726+60.00 L	2000D	24	RCP	70	C	2.8		1	1	2								3		785.15	787.13			49.8	32.5					Med	726+80.00	788.63	M						
18.8	727+96.63	2000D	36	RCP	20	C			1		1	2				1			3		782.17		782.05	779.95	97.6	128.6				11										20 degree elbows
		2000D	30	RCP	192	C	11.5			1	1								3			775.05								11									
2.9	740+55.00 L	2000D	24	RCP	70	C	2.2		1	1	2								3		776.28	778.06			49.8	32.5					Med	740+75.00	779.56	M						
15.1	740+75.00	2000D	36	RCP	196	C	8.2		1	1	2								3		776.15	769.30			95.3	116.7					L	741+06.00	778.65	M						
140.4	751+83.82	2000D	66	RCP	258	C	10.7		1	1	2								3		756.61	753.30			132.6	141.9				32										
3.2	755+80.00 L	2000D	24	RCP	70	C	2.2		1	1	2								3		757.60	759.58			49.8	32.5					Med	756+00.00	761.08	M						
4.0	761+27.00 L	2000D	24	RCP	78	C	4.1		1	1	2								3		748.30	752.72			57.8	32.5														Rock flume @ outlet
1478.0	761+21.00	TRI	10X8	RCB	240																																	
3.7	775+85.00 L	2000D	24	RCP	74	C	3.6		1	1	2								3		776.42	779.89			53.9	32.4					Med	775+65.00	781.39	M						
235.8	779+96.00		6x8	RCB																																		
30.1	797+71.00	3000D	42	RCP	276	C	15.8		1	1	2								3		795.50	790.75			135.7	156.3			24											
2.4	805+50.00 L	2000D	24	RCP	70	C	2.3		1	1	2								3		802.66	804.00			49.8	32.5					Med	805+70.00	805.50	M						
12.6	810+93.73	2000D	30	RCP	196	C	7.4		1	1	2								3		798.03	795.85			96.7	111.6				10										
5.1	816+70.70 L	2000D	24	RCP	72	C	2.8		1	1	2								3		794.53	798.62			51.7	32.6														
70.0	818+30.24	3000D	54	RCP	304	C	20.8		1	1	2								3		783.00	776.90			140.7	179.3				24										
110.3	822+84.18		5x6	RCB																																		
2.8	830+50.00 L	2000D	24	RCP	76	C	3.9		1	1	2								3		822.98	827.23			56.0	32.3					Med	830+30.00	828.73	M						Rock flume @ outlet
14.0	832+41.07	2000D	36	RCP	20	C			1		1	2				1			3		806.20		806.08	803.98	202.0	280.2			26											20 degree elbows
		3750D	30	RCP	448	*	40.6			1	1								*			781.20							26										Rock flume @ outlet
2.8	850+20.00 L	2000D	24	RCP	82	C	4.0		1	1	2								3		848.00	852.30			61.5	32.8					Med	850+00.00	853.80	M						Rock flume @ outlet
7.1	863+65.00	2000D	30	RCP	178	C	3.2		1	1	2								3		857.00	857.96			95.2	95.2														
3.5	863+85.00 L	2000D	24	RCP	70	C	2.6		1	1	2								3		857.50	859.13			49.8	32.5					Med	863+65.00	860.63	M						
26.3	880+70.79	2000D	42	RCP	288	C	8.0		1	1	2								3		872.10	870.94			141.8	162.2			12											
3.1	881+28.00 L	2000D	24	RCP	110	C	4.3		1	1	2								3		874.75	880.16			89.3	33.0					Med	881+08.00	881.66	M						Rock flume @ outlet
5.2	895+65.61	2000D	24	RCP	216	C	7.9		1	1	2								3		898.36	896.60			108.0	120.3				24										Ditch outlet to daylight
3.3	896+60.00 L	2000D	24	RCP	70	C	3.0		1	1	2								3		901.90	904.26			49.8	32.5					Med	896+40.00	905.76	M						
19.1	899+43.10	2000D	36	RCP	220	C	8.3		1	1	2								3		904.74	899.20			110.3	125.7			25											
8.7	921+82.82	2000D	30	RCP	272	B	12.2		1	1	2								3		904.72	899.57	901.47		143.2	141.1				32										Partial constr w/ E. Detour
2.3	922+93.00 L	2000D	24	RCP	76	C	4.4		1	1	2								3		906.60	909.64			55.9	32.4					Med	923+13.00	911.14	M						
2.2	933+63.00 L	2000D	24	RCP	70	C	2.4		1	1	2								3		877.43	878.24			49.8	32.5					Med	933+83.00	879.74	M						
	942+30.97	TWIN	9x10	RCB	283				1																													
3.6	944+33.00 L	2000D	24	RCP	76	C	3.8		1	1	2								3		850.66	854.61			55.8	32.5														
3.1	952+00.00 L	2000D	24	RCP	70	C	2.7		1	1	2								3		862.37	864.03			49.8	32.5					Med	951+80.00	965.53	M						
4.2	1587+30.50	2000D	29x18	RCAP	64	C			1	1	2								3		786.56	788.18			39.9	36.1			1		R	1586+85.00	789.68	M						Recheck for return profiles
3.9	2615+44.27	2000D	24	RCP	92	C	3.7		1	1	2								3		803.01	801.79			60.9	43.4														
21.7	5617+71.45	2000D	36	UNCL	84	C	4.8		1	1	2								3		780.83	778.45			42.6	57.4				51										Willow Creek Access
87.1	5625+49.43	3000D	60	UNCL	54	C	5.2		1	1	2								3		767.80	767.20			34.0	36.0			28											Willow Creek Access
3.0	5637+95.98	2000D	24	UNCL	40	C	4.1		1	1	2								3		783.65	783.40			25.6	25.7				6										Willow Creek Access
8.8	6676+00.65	2000D	36	RCP	24	C			1	1	2								3		801.24	807.13	802.71	806.60	76.2	52.2	20.0	4.0											Iowa 1
4.9	1588+53.27	2000D	24	RCP	68	C	3.9		1	1	2								3		811.39	810.00			32.9	47.4														Iowa 1 Ramp A
1.2	1593+60.00	2000D	24	RCP	80	C	5.8		1	1	2								3		814.99	818.33			43.7	48.6														Iowa 1 Ramp A
16.0	2583+32.05	2000D	36	RCP	158	C	14.0		0	1	1								3		805.82	804.95			89.0	77.0			21											SW-513 at inlet
1.6	3580+25.00	2000D	24	RCP	92	C	7.6		1	1	2								3		812.50	817.64			53.0	51.3														Rock flume @ outlet
1.5	3586+67.16	2000D	24	RCP	72	C	4.3		1	1	2								3		811.31	809.00			28.5	55.8			22											Iowa 1 Ramp C
1.5	4487+26.57	2000D	24	RCP	68	C	3.3		1	1	2								3		813.50	812.18			47.1	33.2			22											Iowa 1 Ramp D
2.3	4492+50.00	2000D	24	RCP	102	C	9.0		1	1	2								3		816.73	813.67			59.9	54.4														Iowa 1 Ramp D
2.9	7766+59.00	2000D	24	UNCL	56	C	6.2		1	1	2								3		778.50	779.98			36.4	31.9														Standing Rock

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.	Dike 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	
2.0	7769+83.00	3750D	24	RCP	170	B	23.7		1	1	2								3		766.85	770.34			96.4	85.9														
6.4	7772+52.00	3750D	24	RCP	168	B	23.6		1	1	2								3		767.02	770.35			95.1	85.1														Standing Rock
3.3	7784+64.50	2000D	24	UNCL	48	C	4.9		1	1	2								3		777.20	779.90			34.4	25.9			6										Standing Rock
2.9	8803+25.00	3750D	24	RCP	160	C	21.9		1	1	2								3		801.99	799.00			81.7	90.6													Sutliff
8.4	9811+27.79	3000D	30	UNCL	138	B	19.3		1	1	2								3		820.80	812.80			64.6	85.7				9									Ent Pond
170.2	11854+90.82	3000D	72	RCP	224	C	21.4		1	1	2								3		836.00	838.17			121.5	119.0				41									Adams
4.0	11871+64.50	3750D	24	RCP	226	B	23.1		1	1	2								3		861.00	862.23			120.5	117.8			8										Adams - 3-lane section
10.3	11874+23.40	2000D	30	RCP	140	B	13.3		1	1	2								3		864.10	865.90			77.5	74.8			9										Adams Ave
9.9	11882+42.00	2000D	30	RCP	66	C	4.9		1	1	2								3		863.00	863.60			40.0	38.3													Adams Ave
10.0	11889+50.00	2000D	30	RCP	104	C	10.8		1	1	2								3		840.00	843.45			62.3	54.0													Adams Ave
	11895+15.25	TWIN	10x9	RCB			18.7																														See structures tab
3.5	11898+43.06	2000D	24	RCP	96	C	7.3		1	1	2								3		841.50	836.50			49.1	59.2			28										Adams Ave
3.2	2566+25.00	2000D	24	RCP	96	C	8.5		1	1	2								3		861.50	863.79			66.2	42.1													Adams Ramp B
19.5	3564+75.00	2000D	36	RCP	136	B	14.1		1	1	2								3		852.50	855.18			72.6	79.4													Adams Ramp C
4.9	4573+34.64	2000D	24	RCP	120	C	11.6		1	1	2								3		862.90	860.00			69.5	62.8				4									Adams Ramp D
1.2	16970+91.44	2000D	18	UNCL	100	C	8.7		1	1	2								3		883.50	883.92			58.2	54.0				30									Kirkwood4
20.6	16981+90.00	2000D	36	RCP	56	C	3.2		1	1	2								3		869.65	871.29			38.3	33.7				3									Kirkwood4
27.8	17981+06.15	2000D	32x32	RCAP	40	C	2.6		1	1	2								3		868.57	868.25			27.6	28.4			1										Charles
6.8	18967+61.14	2000D	30	RCP	30	C	5.0		1	1	2								3		879.18	879.91	879.53		52.4	50.4	44.0	-14.0		5									MLTransE
3.0	15860+05.50	3000D	24	RCP	124	C	14.8		1	1	2								3		887.82	893.23			74.9	61.4			10										Kirkwood 3
35.6	15872+53.69	3000D	48	RCP	220	C	18.4		1	1	2								3		893.25	889.45			115.6	120.5			47										Kirkwood 3
2.9	15884+13.66	2000D	18	RCP	108	C	9.8		1	1	2								3		918.10	917.49			58.7	61.5				33									Kirkwood 3
15.9	15899+87.41	2000D	36	RCP	94	C	10.3		1	1	2								3		896.50	896.00			55.8	54.2				5									Kirkwood 3
9.7	19883+47.85	3750D	30	RCP	200	B	22.4		1	1	2								3		884.60	886.16			104.9	107.4				33									Existing Adams
4.4	19888+14.50	3750D	24	RCP	228	B	26.5		1	1	2								3		887.05	888.25			119.2	121.1				33									Existing Adams

DRAINAGE STRUCTURES BY CULVERT CONTRACTOR

* Not a Bid Item

Location	Design Number	Size	Kind	Lgth. New Const.	No. of Aprons	Flow Line Elevation				Dimensions - Lin. Ft. Total		Dimensions - Lin. Ft. Extensions		Skew Ahead Degrees		By Road Contractor Dike Rt.	By Road Contractor Dike Location Station	By Road Contractor Dike Top. Elev.	By Road Contractor Dike Type	By Road Contractor Comp. Backfill	Floodable* Backfill (A)	Porous* Backfill (B)	Flooded Backfill (A+B)	Remarks
		Ft.		Lin. Ft.		Left	Right	Other	Other	Left	Right	Left	Right	Left	Right	Lt.				Cu. Yds.	Cu. Yds.	Cu. Yds.	Cu. Yds.	
657+34.24	1316	6x8	RCB	325	2	754.98	751.45			160	165				5									Use 0° skew headwalls
659+70.94	1416	8x7	RCB	343	2	755.57	752.75			169	174			22										Use 15° skew headwalls
761+21.00	1516	12x9	TWIN RCB	230	2	736.80	736.00			114	117			19										Use 15° skew headwalls.
779+96.00	1616	6x8	RCB	307	2	763.00	760.25			144	164				15									Use 15° skew headwalls.
822+84.18	1716	5x6	RCB	412	2	773.63	762.34			184	228			10										Use 15° skew headwalls. CIP only. Bell joints.
942+54.95	116	10x1(	TWIN RCB	270	1	844.50	838.43	839.61		270		107	162		31									Use 30° skew headwall.
11895+32.95	1816	12x9	TWIN RCB	151	2	811.65	813.20			80	71				14									Use 15° skew headwalls

MEDIAN CROSSOVERS

Refer to PV-500 Series.

* Not a bid item

Road Ident.	Location Station	Standard Road Plan	Detour Pavement	Special Backfill	Granular Shoulder	Embankment in Place	Class 10 Excavation	Class 13 Excavation	Removal of Pavement	Saw Cut*	18" Unclassified Roadway Pipe	36" CMP Slotted Drain/ 6" Grate	Beveled Pipe and Guard	Remarks
		No.	SY	TON	TON	CY	CY	CY	SY	LF	LF	LF	No.	
U.S. 30		PV-503	3515.0	1700.0	325.0				3515.0		220.0	110.0	2	
U.S. 30		PV-503	3515.0	1700.0	325.0				3515.0		220.0	110.0	2	
U.S. 30		PV-504	1320.0	645.0	235.0						112.0		2	Use 15" unclassified pipe (not 18")

ACCESS POINTS AND SAFETY RAMPS

Refer to Cross-Sections

Length of unclassified pipe calculated is based on using Reinforced Concrete Pipe.
(1) Refer to MI-210
(2) Refer to RL-8.
(3) Refer to RL-7 or RL-8.
*Predetermined for access point not constructed with this project.

Location		Type	Length of Opening (1)			W	(1) (2) PR	(2) SR	Pipe Culvert (3)					Aprons	Driveway Surface Area		Driveway Surfacing Material	Remarks
Station	Side	A, B, C, Safety Ramp, or Predetermined*	Case	1½" Dropped Curb	3" Dropped Curb				H	Size	Pipe Length	Lt.	Rt.		HMA	PCC		
			1 or 2	LF	LF	FT	FT	FT	FT	IN	LF	LF	LF	No.	SY	SY	TON	
576+21.91	L	C				20.0	-	15.0	2.0	24.0	48.8	32.6	23.2	2				Joint Ent. Remove med x-over
588+29.00	L	Safety Ramp				36.0	-	-	2.0	35x24	69.5	44.7	31.3	2				metal arch pipe under ramp
1585+08.65	R	B				30.0	50.0	-	3.5	18.0	103.9	49.5	59.6	2				
2618+00.00	L	Safety Ramp				36.0	-	-	1.5	15.0	62.8	28.7	38.4	2				
3626+49.20	L	C	2			20.0	10.0	-										No pipe
3628+51.63	L	C	2			20.0	10.0	-										No pipe
3633+50.00	L	C	1			35.0	10.0	-										Joint Entrance. No pipe.
4638+35.00	R	C				24.0	-	15.0	1.8	15.0	47.3	23.9	27.7	2				
4643+69.00	R	C	2			10.0	10.0	-										No pipe
5608+23.00	R	C				15.0	-	15.0										No pipe
5626+93.00	R	C				15.0	-	15.0	1.2	12.0	35.1	17.9	17.2	0				X-slope at pipe matches Acces
6673+82.52	R	C				20.0	-	15.0										No pipe. UAC existing ent.
6693+80.00	L	C	1			31.0	6.0	-										No pipe
6693+80.00	R	C	1			20.0	6.0	-										No pipe
6699+57.00	L	B	1			28.0	20.0	-										No pipe
6701+22.00	R	B	1			30.0	20.0	-										No pipe
6703+33.00	R	B	1			32.0	20.0	-										No pipe
6705+43.00	R	B	1			34.0	15.0	-										No pipe
6806+06.00	L	B	1			33.0	20.0	-										No pipe
7775+77.00	L	C				24.0	-	15.0										No pipe
7775+77.00	R	C				20.0	-	15.0	6.2	24.0	118.0	52.9	72.2	2				
7786+07.00	L	C				20.0	-	15.0										No pipe. UAC Existing ent.
8790+46.00	R	C				20.0	-	15.0	2.2	24.0	48.1	24.2	32.8	2				
8791+23.00	R	B				28.0	35.0	-	2.2	24.0	56.7	26.0	37.7	2				Quarry entrance?
8817+68.00	L	C				20.0	-	15.0	2.1	18.0	48.5	23.0	30.7	2				
10836+31.00	R	C				20.0	-	15.0										No pipe
11859+71.00	L	C				20.0	-	15.0	6.9	30.0	126.5	55.5	71.0	2				
11879+71.00	L	C				20.0	-	15.0	2.7	15.0	59.0	33.1	30.2	2				
11879+71.00	R	C				20.0	-	15.0	2.3	15.0	53.0	30.9	26.5	2				
11885+00.00	R	C				20.0	-	15.0										No pipe
16951+79.00	R	C				20.0	15.0	-										No pipe. Rebuild apron only.
17978+35.00	R	Safety Ramp				36.0	-	-	1.8	18.0	65.4	36.6	33.9	2				
20700+48.85	L	B	1			24.0	12.0	-										No pipe
20700+56.13	R	B	1			24.0	12.0	-										No pipe
832+00.00	L	Safety Ramp				36.0	-	-		24.0	55.0	25.7	29.3	2				Existing U.S. 30

* 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						L	W	Material			Remarks
Road Identification	Station	Side	Mandatory* Location (yes or no)	Rock Ditch Check	Rock Ditch	Rock Flume	Rock Splash Basin	Rock Slope Protection				Erosion Stone	Class E Revetment	Eng. Fabric	
		Lt./Rt.								FT	FT	TON	TON	SY	
U.S. 30	632+00.00	Rt.	Yes			X				10.0	88.6	110.3			at pipe outlet
U.S. 30	654+00.00	Lt.	Yes			X				10.0	38.3	47.5			at pipe outlet
U.S. 30	657+18.50	Lt.	Yes				X			10.0	13.8		31.6	51.9	RCB inlet
U.S. 30	657+51.50	Rt.	Yes				X			20.0	13.8		46.8	71.6	RCB outlet
U.S. 30	659+56.00	Lt.	Yes			X				10.0	67.2	89.4			at pipe outlet
U.S. 30	660+41.00	Lt.	Yes				X			10.0	15.5		32.1	51.8	RCB inlet
U.S. 30	658+95.00	Rt.	Yes				X			VAR	VAR		118.1	152.0	RCB outlet
U.S. 30	669+00.00	Rt.	Yes			X				10.0	10.9	13.3			at pipe outlet
U.S. 30	761+27.00	Lt.	Yes			X				10.0	29.1	36.0			at pipe outlet
U.S. 30	761+60.00	Lt.	Yes				X			10.0	42.5		80.5	95.2	RCB inlet
U.S. 30	760+81.50	Rt.	Yes				X			55.0	42.5		290.9	327.7	RCB outlet
U.S. 30	779+52.00	Lt.	Yes				X			10.0	13.6		32.0	52.7	RCB inlet
U.S. 30	780+45.00	Rt.	Yes				X			20.0	13.6		47.0	72.2	RCB outlet
U.S. 30	816+70.70	Lt.	Yes			X				10.0	33.2	41.2			at pipe outlet
U.S. 30	830+50.00	Lt.	Yes			X				10.0	8.3	10.1			at pipe outlet
U.S. 30	831+18.30	Rt.	Yes			X				10.0	19.4	23.9			on skew @ outlet
U.S. 30	850+20.00	Lt.	Yes			X				10.0	74.6	92.8			at pipe outlet
U.S. 30	881+28.00	Lt.	Yes			X				10.0	11.8	14.5			at pipe outlet
U.S. 30	941+86.00	Lt.	Yes				X			10.0	46.8		90.4	106.2	RCB inlet
Iowa 1 Ramp C	3580+25.00	Lt.	Yes			X				10.0	13.1	16.1			at pipe outlet
Adams	11895+16.00	Lt.	Yes				X			50.0	42.5		267.5	301.9	RCB outlet
Adams	11895+52.00	Rt.	Yes				X			10.0	42.5		80.5	95.2	RCB inlet
Adams	11898+15.00	Rt.	Yes			X				10.0					on skew @ outlet

SURVEY SYMBOLS

- San. SAA Sanitary Sewer Line Co. 1
- T1 TLA Underground Telephone Line Co. 1
- E1 ELA Underground Electric Line Co. 1
- T2 TLB Underground Telephone Line Co. 2
- TV TVA Underground TV Cable Co. 1
- G GLA Underground Gas Line Co. 1
- FO FOA Underground Fiber Optic Co. 1
- T3 TLC Underground Telephone Line Co. 3
- FO2 FOB Underground Fiber Optic Co. 2
- E2 ELB Underground Electric Line Co. 2
- FO3 FOC Underground Fiber Optic Co. 3
- G2 GLB Underground Gas Line Co. 2
- St.S. STA Storm Sewer Line Co. 1
- FO4 FOD Underground Fiber Optic Co. 4
- G3 GLC Underground Gas Line Co. 3
- DU Centerline Draw or Stream (Up)
- D Centerline Draw or Stream (Down)
- EP Edge of Paved Roads (ML or SR)
- SNP Unpaved Shoulder
- CU Back of Curb
- DIK Centerline of Dike or Dam
- RIP Rip-Rap
- GU Gutter In Front of Curb
- SWK Sidewalk
- CON Concrete or A/C Slab
- ENP Edge Paved Entrance & Park Lot
- ENT Centerline BL of Entrance
- ENU Edge Unpaved Entrance & Parking
- BNK Stream Bank
- EG Edge of Gravel Road
- EW Edge of Water
- SH Paved Shoulder
- SNK Sink Hole
- TPD Telephone Pedestal
- PPA Power Pole Co. 1
- SI Sign
- PIP Pipe Culvert
- FW Wire Fence
- PLG Location of General Photo
- TLNR Tree Line Right
- IN Storm Sewer Intake
- MIS Miscellaneous
- LUM Luminaire
- TDC Tree Deciduous
- BLD Building or Foundation
- PR Electic Riser Pole
- UB Utility Box
- SL Speed Limit Sign
- MH Utility Access (Manhole)
- FHD Fire Hydrants
- WV Water Valve
- RET Retaining Walls
- FCL Chain Link and Security Fence
- CUL Culvert
- EB Electrical Box
- SHR Shrub
- SEP Septic Tank
- TEV Evergeen Tree
- TLNL Tree Line Left
- BIN Grain Bin
- LP L.P. Tank
- FWD Wood Fence
- GV Gas Valve
- WEL Well
- GDL Guard Rail Steel
- FLG Flag Poles
- WHD Water Hydrant
- HDG Hedge Row
- BB Billboard
- OUT Tile Outlet
- GP Guard Post (Less Than 4 Posts)
- TV Satelite TV Dish
- MM Mile Marker Post
- TVP TV Pedestal
- LC Lot Corner
- INB Storm Sewer Beehive Intake
- TFR Tree Fruit

UTILITY LEGEND

- PPA Power Pole Co. 1
- E1 - Unlabeled Electric
- E2 - Alliant Energy
- FO - Iowa Network Services
- FO2 - CenturyLink
- FO3 - Windstream
- FO4 - Iowa Health Systems
- Petro - Magellan
- G2 - Buckeye Partners (12" Steel Petroleum, Gas and Diesel)
- G3 - Alliant Energy
- San. - Sanitary Sewer Line
- St.S. - Storm Sewer Line
- T1 - Windstream
- T2 - Iowa Department of Transportation
- T3 - CenturyLink
- TV - Mediacom
- Cipco - CIPCO Transmission Lines
- ITC - ITC Transmission Lines

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)	Existing Utilities
SHADING	**Design Color No.**	
Yellow	(4)	Highlight for Critical Notes or Features
Red	(3)	Delineates Restricted Areas
Lavender	(9)	Temporary Pavement Shading
Gray, Light	(48)	Proposed Pavement Shading
Gray, Med	(80)	Proposed Granular Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)	Grading Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

- Reference Point — Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

RIGHT-OF-WAY LEGEND

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

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	D.1

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC

FRANKLIN TWP.
T-82N R-5W
SEC. 7

Sta. 564+17.66
Twin 12' X 10' X 200.5' RCB
D.A. = 859 Ac

Sta. 566+63.69
24" X 79.9' RCP
D.A. = Median
(U.A.C.)

End 52' Lt. (U.A.C.)

30" X 60.4' CMP

24" X 43.8' CMP

Ent. +26 Rt. (U.A.C.)

STA 567+91.17
BEGIN CONSTRUCTION

Sta. 570+85.86
15" X 255.8' CMP
D.A. = Median
(Remove)

Sta. 576+90.00 WBL
Install 24" X 70' 2000D RCP WBL
F.L. = Lt. 763.30
Rt. 764.34

576+70 Med. Prop.
Type "M" Dike
Elev. =765+84

Sta. 576+46.80
24" X 66' RCP
D.A. = Median
(Remove)

+21.91 Lt.Prop. Type "C" Joint Ent.

Sta 576+70 Med.
Install Type "M" Dike
Top Elev. =765.84

565 570 575

F02 F03 T3

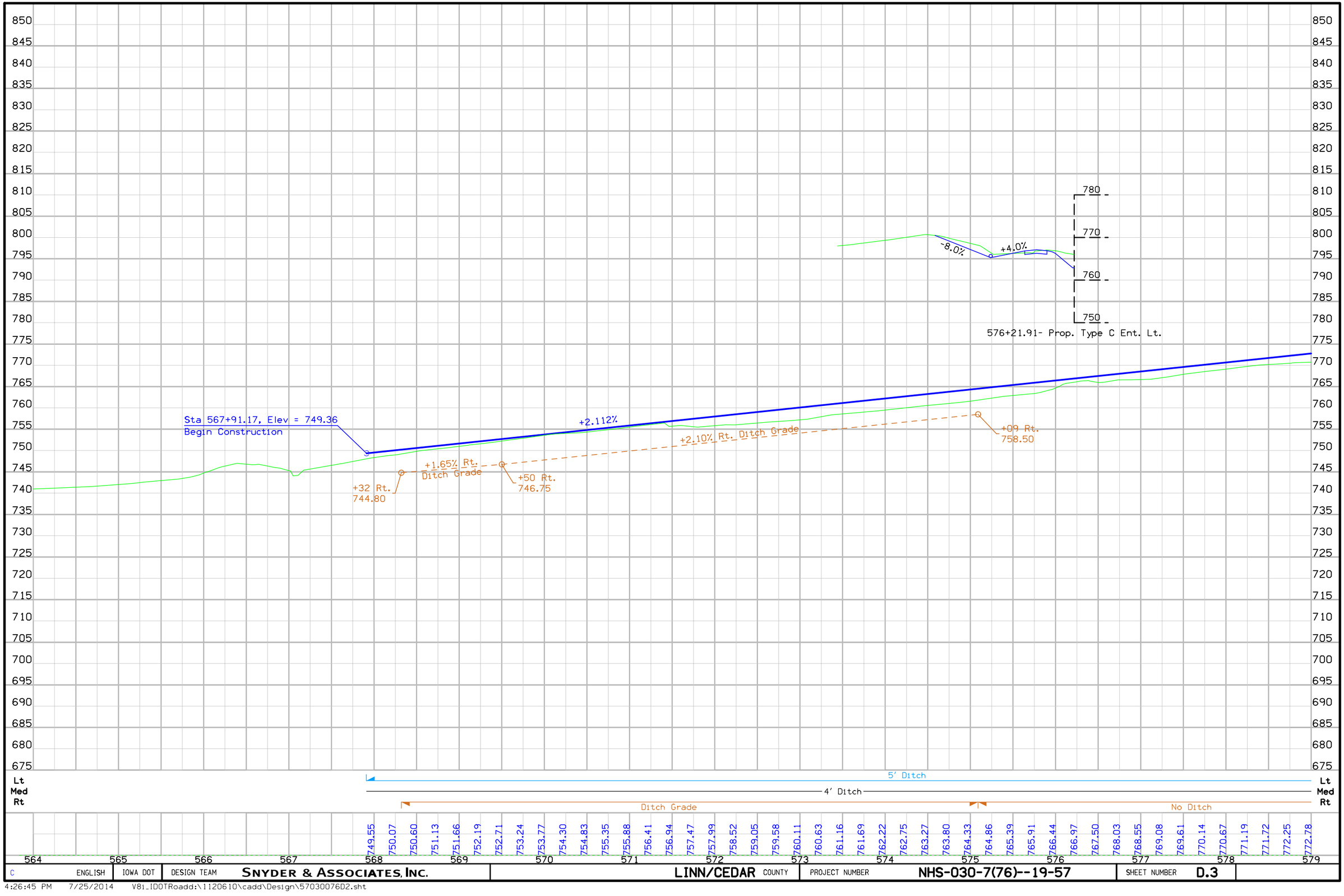
30

0 50
FEET

FRANKLIN TWP.
T-82N R-5W
SEC. 18

ENGLISH	IOWA DOT	DESIGN TEAM SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER D.2

4:26:06 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER D.3

4:26:45 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 7

FRANKLIN TWP.
T-82N R-5W
SEC. 8

Sta. 583+50.00
Install 36" X 194' 2000D RCP
F.L. = Lt. 773.47
Rt. 770.96

Sta. 588+89.00 WBL
Install 24" X 84' 2000D RCP
F.L. = Lt. 786.22
Rt. 789.67

+29.00 Lt.Prop. Prop. Safety Ramp

Sta. 582+57.74
54" X 117.8' RCP
D.A. = 18.8 Ac
(Remove)

580

585

POC Sta 588+28.88 (Hwy 30)
= Sta 1588+28.88 (Wilcox)

590

Sta. 589+36.19
30" X 126.2' RCP
D.A. = 3.4 Ac
(Remove)

PT Sta 592+64.53

30" X 84' CMP
(Remove)

FO2

30

SIGN

POC Sta 586+43.69

91°23'28"

88°36'32"

T3
FO3

TP

WILCOX RD.

1585

+08.65 Rt. Prop. "B" Ent. Type

Curve Data
Δ = 5° 28' 06.27" (RT)
T = 620.84
L = 1,240.74
R = 13,000.00
E = 14.82
e = NC

FRANKLIN TWP.
T-82N R-5W
SEC. 18

FRANKLIN TWP.
T-82N R-5W
SEC. 17

0 50
FEET

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	D.4

4:26:46 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

800
790
780
+8.67%
588+29.00 - Prop. Safety Ramp Lt.
+00 Rt.
782.52
+50 Lt.
773.47
+2.112%
+3.25% Lt. Ditch Grade
+00 Lt.
793.08
+2.13% Lt. Ditch Grade
+4.78% Rt. Ditch Grade
+0.40% Lt. Ditch Grade
+75 Lt.
782.51
+00 Lt.
774.07
+00 Rt.
772.96
+4.00% Rt. Ditch Grade
+50 Rt.
766.96

Lt	5' Ditch	Ditch Grade	5' Ditch
Med	4' Ditch		
Rt	No Ditch	Ditch Grade	5' Ditch

772.78 773.31 773.83 774.36 774.89 775.42 775.95 776.47 777.00 777.53 778.06 778.59 779.11 779.64 780.17 780.70 781.23 781.75 782.28 782.81 783.34 783.87 784.39 784.92 785.45 785.98 786.51 787.03 787.56 788.09 788.62 789.15 789.67 790.20 790.73 791.26 791.79 792.31 792.84 793.37 793.90 794.43 794.95 795.48 796.01 796.54 797.07 797.59 798.12 798.65 799.18 799.71 800.23 800.76 801.29 801.82 802.35 802.87 803.40 803.93 804.46

579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	D.5

4:26:49 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 8

Sta. 607+15.37
Install 24" X 192' 2000D RCP
Skew = 11° Rt. Ahd.
F.L. = Lt. 807.48
Rt. 809.33

Ent. +51 Lt.
(Close)

Curve Data
Δ = 5° 28' 06.27" (RT)
T = 620.84
L = 1,240.74
R = 13,000.00
E = 14.82
e = NC

595
600
605

30

24" X 71' CMP

Sta. 598+84.43

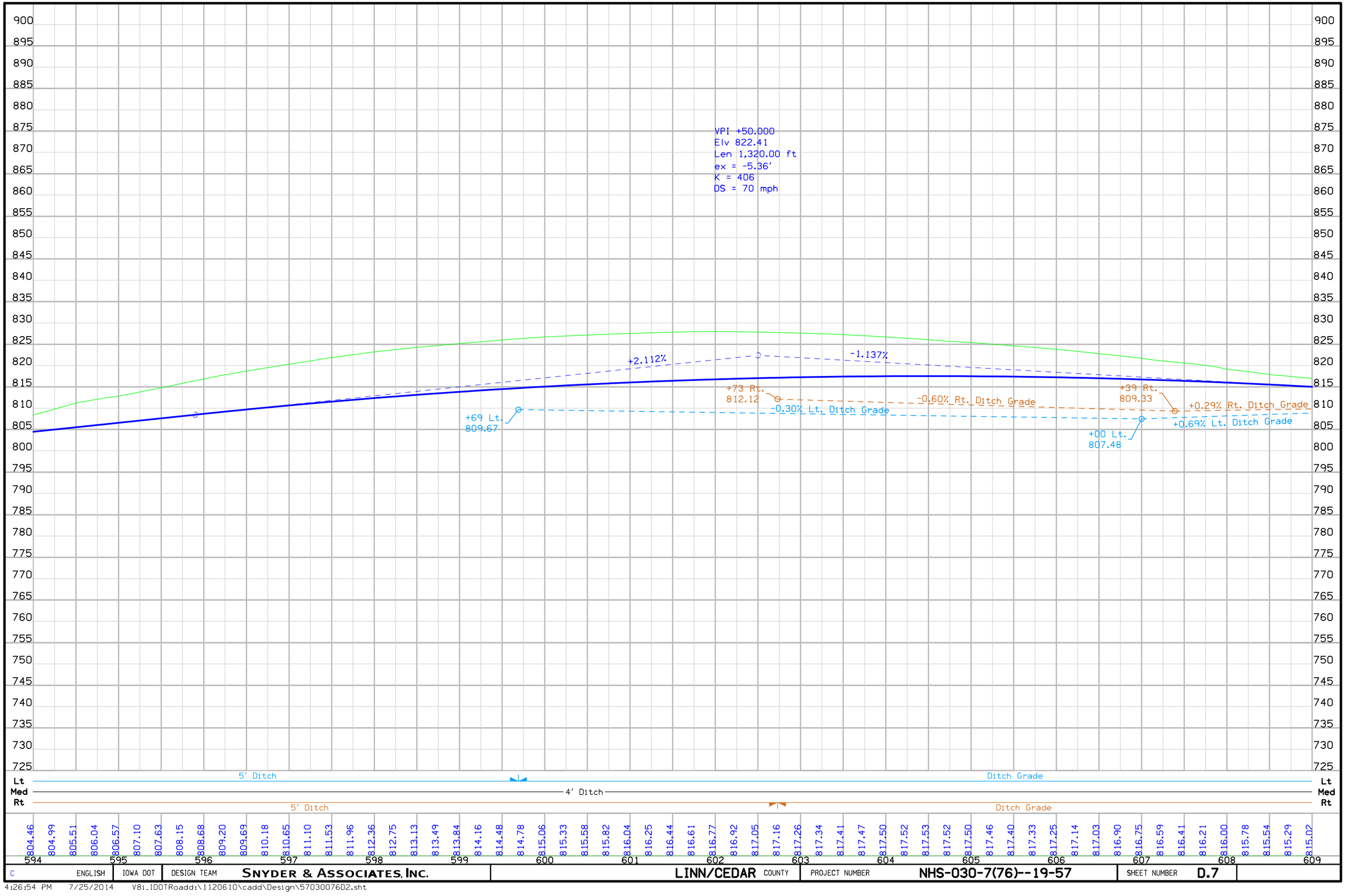
Sta. 606+64.71
30" X 79.4' RCP
D.A. = 2.5 Ac
(Remove)

FRANKLIN TWP.
T-82N R-5W
SEC. 17

0 50
FEET

C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.6

4:26:50 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.7

4:26:54 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 17

30W CONNECTOR

IRISH LN.

WILLOW CREEK ACCESS

94°51'40"

85°08'20"

90°00'00"

90°00'00"

Sta. 613+59.83 MEDIAN
Install 15" X 163' 2000D RCP

Sta. 615+31.00 WBL
Install 24" X 72' 2000D RCP
F.L. = Lt. 801.17
Rt. 803.84

615+51.00 Med.
Install Type "M" Dike
Elev. =805+34

Sta. 617+69.57
24" X 48' CMP
D.A. = 2.5 Ac

Sta. 615+85.45
24" X 208.5' RCP
D.A. = 1.5 Ac

Sta. 617+15.85
42" X 142.7' RCP
D.A. = 13.2 Ac
(Remove)

Sta. 619+27.40
Install 36" X 20' 2000D RCP + 2-20° Elbows
Install 30" X 220' 3000D RCP
Skew = 15° Rt. Ahd.
F.L. = Lt. 793.44
Other 793.32
Other 791.22
Rt. 782.96

+49.20 Lt. Prop. Type C Ent.

18" X 68.6' CMP

+23.00 Rt. Prop. Type C Ent. (Close)

Ent. Rt. (Close)

8" RCP

POT Sta 614+40.71 (Hwy 30)
= Sta 2614+40.71 (Irish Ln)

610 615 620 2615 3620 3625 5610 5615 5620

S-51 S-52 S-53 S-54 S-55A S-55 S-56 S-57 S-58 S-59
P-51 P-52 P-53 P-55A P-56 P-57

FO2 FO3 T3 SIGN TP UB

0 50 FEET

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	D.8

4:26:55 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

+12 Rt.
809.84

+61 Lt.
809.29

+00 Lt.
805.43

-2.91% Lt.
Ditch Grade

+85 Lt.
802.96

+50 Rt.
803.72

-1.14% Lt.
Ditch Grade

+25 Lt.
801.36

-2.80% Rt. Ditch Grade

-3.10% Lt. Ditch Grade

+25 Rt.
796.02

+57 Lt.
794.16

-0.50% Lt. Ditch Grade

5.42% Rt. Ditch Grade

+66 Rt.
782.96

-1.137%

+00 Lt.
793.44

+2.99% Lt.
Ditch Grade

+25 Lt.
797.18

+2.40% Rt. Ditch Grade

+91 Rt.
793.15

Lt	5' Ditch	Ditch Grade	5' Ditch	Lt
Med	4' Ditch			Med
Rt	5' Ditch	Ditch Grade		Rt

609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624
815.02	814.73	814.45	814.16	813.88	813.59	813.31	813.03	812.74	812.46	812.17	811.89	811.60	811.32	811.04	810.75
810.47	810.18	809.90	809.61	809.33	809.04	808.76	808.48	808.19	807.91	807.62	807.34	807.05	806.77	806.49	806.20
805.92	805.63	805.35	805.06	804.78	804.49	804.21	803.93	803.64	803.36	803.07	802.79	802.50	802.22	801.94	801.65
801.37	801.08	800.80	800.51	800.23	799.94	799.66	799.38	799.09	798.81	798.55	798.32	798.13			

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	D.9

4:26:58 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 17

Sta. 632+15.26
4' X 5' X 176.4' RCB
D.A. = 46.2 Ac
(Remove)

Sta. 627+81.56
Install 42" X 288' 3750D RCP
Skew = 21° Rt. Ahd.
F.L. = Lt. 781.95
Other 780.48
Other 776.00
Rt. 768.90

Sta. 633+01.68
Install 48" X 446' 3750D RCP
Skew = 15° Lt Ahead
F.L. = Lt. 782.16
Rt. 778.30

+51.63 Lt. Prop. Type "C" Ent.

+50.00 Lt. Prop. Type "C" Ent.

Ent. +51.95 Lt. (Close)

15" X 73.5' CMP (Remove)

Sta. 626+95.12
42" X 135.7' RCP
D.A. = 25 Ac
(Extend)

Sta. 630+20.45
5' X 5.5' X 50' RCB
D.A. = 0 Ac
(Remove)

18" X 30.4' CMP (Remove)

18" X 96.2' CMP

30W CONNECTOR

Sta. 625+26.40 EBL
Install 24" X 78' 2000D RCP
F.L. = Lt. 793.69
Rt. 789.18

631+80.00 Med.
Install Type "M" Dike
Elev. =806.36

Ent. +40 Rt. (Close)

Sta. 632+00 EBL
Install 24" X 78' 2000D RCP
F.L. = Lt. 804.86
Rt. 800.40

Ent. +66 Rt. (Close)

24" X 78' CMP

WILLOW CREEK ACCESS

FRANKLIN TWP.
T-82N R-5W
SEC. 17

0 FEET 50

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER D.10

4:26:58 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

VPI +50.000
Elv 795.11
ex = 3.00'
Len 660.00 ft
K = 181
DS = 70 mph

-1.137%
+2.500%
-3.85% Lt. Ditch Grade
-6.32% Rt. Ditch Grade
+4.76% Lt. Ditch Grade
-0.58% Lt. Ditch Grade
+3.28% Lt. Ditch Grade
+8.02% Rt. Ditch Grade
+3.28% Rt. Ditch Grade
-0.75% Rt. Ditch Grade
+0.75% Rt. Ditch Grade
+0.70% Lt. Ditch Grade

+70 Rt.
792.74

+00 Lt.
792.67

+51 Lt.
783.00

+40 Lt.
792.00

+09 Lt.
790.45

+00 Lt.
800.00

+52 Rt.
810.20

+47 Rt.
768.90

+00 Rt.
768.50

+71 Rt.
769.03

+54 Rt.
778.30

Lt: 5' Ditch — Ditch Grade
Med: 4' Ditch
Rt: 5' Ditch — Ditch Grade — No Ditch

624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639
798.13	797.97	797.85	797.76	797.71	797.69	797.71	797.76	797.84	797.96	798.11	798.30	798.52	798.78	799.07	799.39
799.75	800.15	800.58	801.04	801.54	802.07	802.63	803.24	803.86	804.49	805.11	805.74	806.36	806.99	807.61	808.24
808.86	809.49	810.11	810.74	811.36	811.99	812.61	813.24	813.86	814.48	815.07	815.64	816.19	816.71	817.21	817.68
818.13	818.56	818.96	819.34	819.70	820.03	820.33	820.62	820.88	821.11	821.32	821.51	821.68			

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	D.11

4:27:02 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 16

FRANKLIN TWP.
T-82N R-5W
SEC. 17

Sta. 652+94.76
4' X 5.5' X 50.2' RCB
D.A. = Ac

Sta. 645+19.31
36" X 93.2' RCP
D.A. = Ac
(U.A.C.)

Sta. 641+10.87 WBL
Construct 176'-4" x 40'-0"
Pretensioned Prestressed Concrete
Beam Bridge with 5° Skew (R.A.)

Sta. 646+29.08
Install 36" X 354' 3750D RCP
Skew = 24° Rt. Ahd.
F.L. = Lt. 790.00
Rt. 786.00

647+42.00 Lt.
Install Type "F" Dike
Elev. =796.70

18" X 95.6'

30W CONNECTOR

95°27'47"
84°32'13"

POT Sta 641+15.08 (Hwy 30)
= Sta 4641+15.08 (Willow Creek)

Sta. 641+10.87 WBL
Construct 176'-4" x 40'-0"
Pretensioned Prestressed Concrete
Beam Bridge with 5° Skew (R.A.)

Sta. 641+19.29 EBL
Construct 176'-4" x 40'-0"
Pretensioned Prestressed Concrete
Beam Bridge with 5° Skew (R.A.)

POT Sta 644+15.66

18" X 81'

WILLOW CREEK RD.

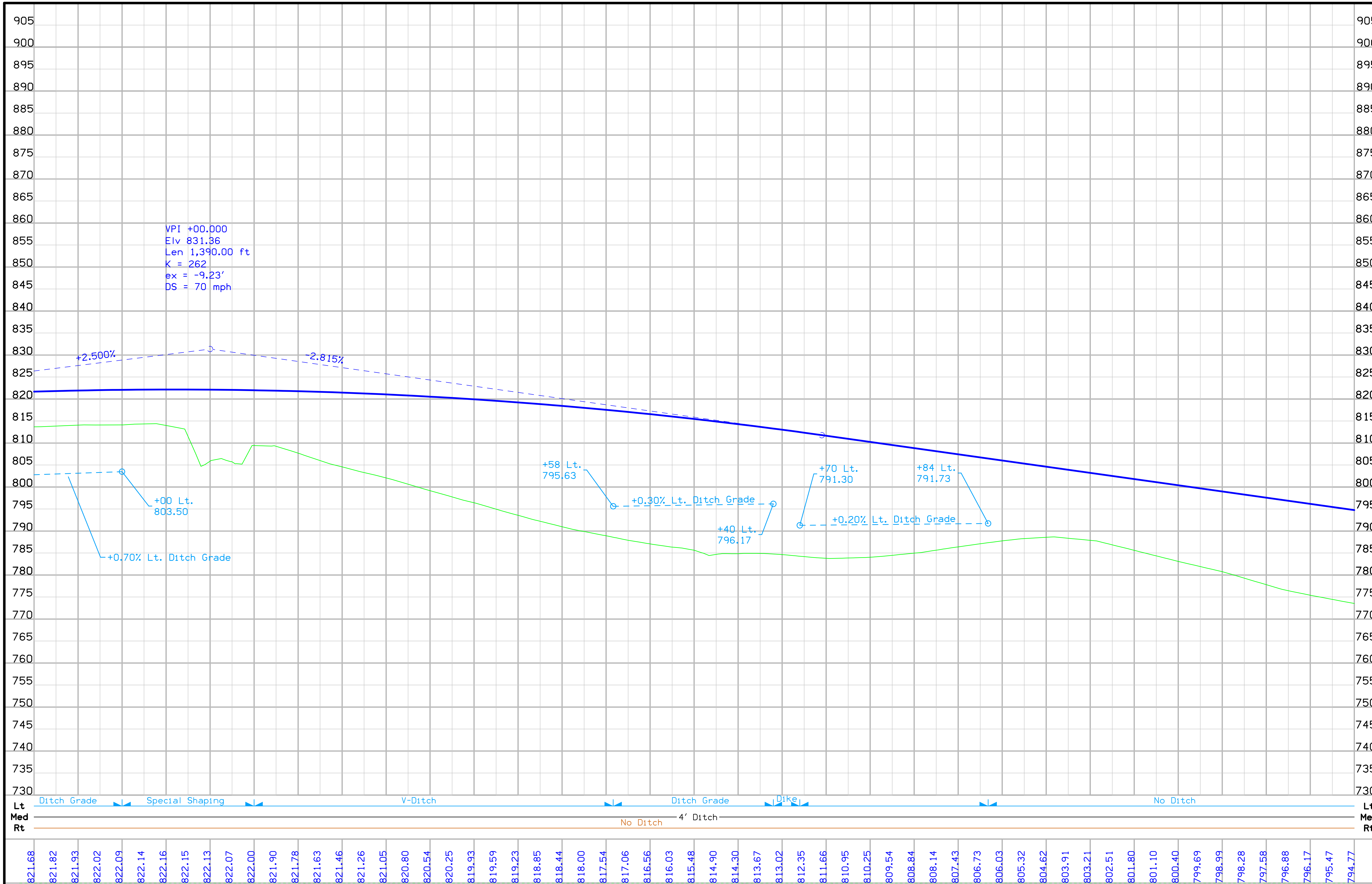
WILLOW CREEK ACCESS

Curve Data
Δ = 26° 25' 34.26" (RT)
T = 1,408.73
L = 2,767.34
R = 6,000.00
E = 163.16
e = 3.4%
l = 153'
x = 90'

0 50
FEET

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	D.12

4:27:03 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM **SNYDER & ASSOCIATES, INC.**	**LINN/CEDAR** COUNTY	PROJECT NUMBER **NHS-030-7(76)--19-57**	SHEET NUMBER **D.13**

4:27:09 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 16

Overexcavation Limits

Sta. 654+00.00 WBL
Install 24" X 82' 2000D RCP
F.L. = Lt. 786.10
Rt. 790.77

654+20.00 Med.
Install Type "M" Dike
Elev. =792.27

Sta. 657+34.24
Install 6'x8'x325' RCB
Skew = 5° Rt. Ahd.
0° HEADWALLS
F.L. = Lt. 754.98
Rt. 751.45

Sta. 659+56.00 WBL
Install 24" X 82' 2000D RCP
F.L. = Lt. 777.63
Rt. 782.30

Sta. 659+70.94
Install 8'x7'x343' RCB
Skew = 22° Lt. Ahd.
15° HEADWALLS
F.L. = Lt. 755.57
Rt. 752.75

Sta. 668+38.97
Install 30" X 20' 2000D RCP + 2-20° Elbows
Install 24" X 242' 3000D RCP
Skew = 19° Rt. Ahd.
F.L. = Lt. 780.93
Other 792.40
Other 794.50
Rt. 794.60

655

660

665

30

Curve Data
Δ = 26° 25' 34.26" (RT)
T = 1,408.73
L = 2,767.34
R = 6,000.00
E = 163.16
e = 3.4%
l = 153'
x = 90'

668+80.00 Med.
Install Type "M" Dike
Elev. =802.90

Sta. 669+00.00 EBL
Install 24" x 74' 2000D RCP
F.L. = Lt. 801.40
Rt. 797.10

Overexcavation Limits

0 50
FEET

FRANKLIN TWP.
T-82N R-5W
SEC. 16

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	D.14

4:27:09 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

VPI +50.000
Elv 779.28
Len 1,010.00 ft
ex = 7.02'
K = 182
DS = 70 mph

-2.81%
+2.74%
+00 Rt.
788.52
+46 Rt.
795.28
+76 Rt.
794.60
-0.52% Rt.
Ditch Grade
+50 Rt.
766.10
+4.98% Rt. Ditch Grade
+3.32% Lt. Ditch Grade
+25 Lt.
776.17
-2.27% Lt. Ditch Grade
+85 Lt.
784.80
+86 Lt.
780.93
+61 Lt.
780.80
+0.52% Lt. Ditch Grade
+3.79% Lt. Ditch Grade
+49 Rt.
751.50
+0.76% Rt. Ditch Grade
+9.74% Rt. Ditch Grade
+13 Rt.
752.75
+7.16% Lt. Ditch Grade
+37 Lt.
755.55

Lt	No Ditch		Ditch Grade	Lt
Med		4' Ditch		Med
Rt	No Ditch	Ditch Grade	5' Ditch	Ditch Grade Rt

654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669
794.77	794.06	793.36	792.68	792.03	791.42	790.85	790.30	789.80	789.32	788.89	788.48	788.11	787.78	787.47	787.21
786.98	786.78	786.62	786.49	786.39	786.33	786.31	786.32	786.36	786.44	786.55	786.70	786.88	787.09	787.34	787.63
787.95	788.30	788.69	789.11	789.57	790.06	790.58	791.14	791.74	792.36	793.03	793.71	794.40	795.09	795.78	796.46
797.15	797.84	798.52	799.21	799.90	800.59	801.27	801.96	802.65	803.33	804.02	804.71	805.40			

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	D.15

4:27:16 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 16

Curve Data
Δ = 26° 25′ 34.26″ (RT)
T = 1,408.73
L = 2,767.34
R = 6,000.00
E = 163.16
e = 3.4%
I = 153′
x = 90′

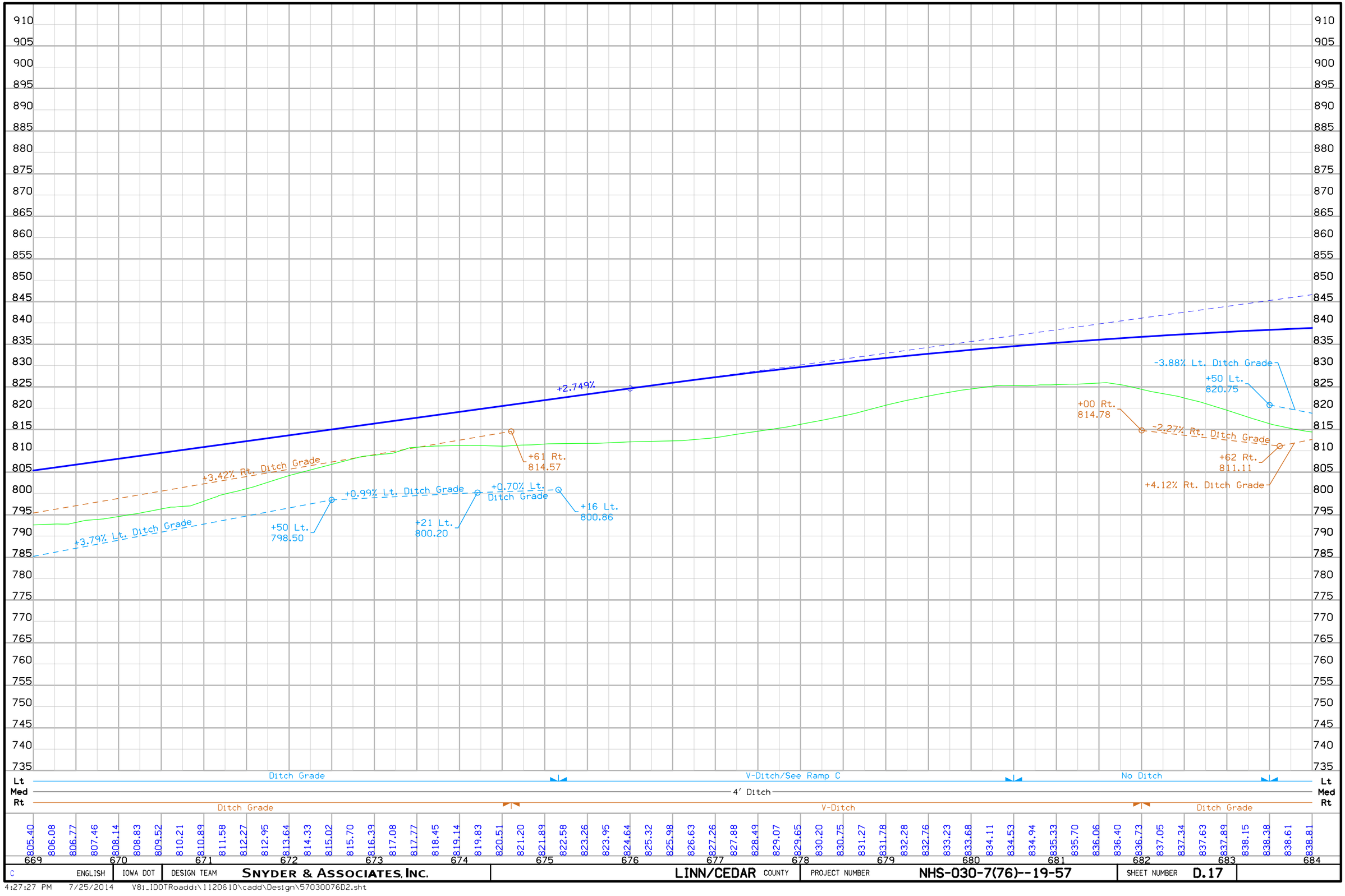
3580
3575
670
675
680
IA. HWY. 1 RAMP 'C'
30
PT Sta 671+83.33
2575
2580
IA. HWY. 1 RAMP 'B'

FRANKLIN TWP.
T-82N R-5W
SEC. 16

0 50
FEET

C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.16

4:27:17 PM 7/25/2014 V81_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.17

4:27:27 PM 7/25/2014 V81_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 16

IA. HWY. 1 RAMP 'C'

IA. HWY. 1 RAMP 'A'

IA. HWY. 1 RAMP 'B'

IA. HWY. 1 RAMP 'D'

IOWA HWY. 1

30

Sta. 684+96.09
Install 36" X 438' 3750D RCP
Skew = 35° Lt. Ahd.
F.L. = Lt. 808.05
Rt. 805.82

Sta. 694+65.95
Install 30" X 440' 3000D RCP
Skew = 1° Rt. Ahd.
F.L. = Lt. 813.30
Rt. 811.10

Sta. 687+09.85 WBL
Construct 194'-0" x 40'-0"
Pretensioned Prestresses Concrete
Beam Bridge with 10° Skew (L.A.)

POT Sta 687+04.52 (Hwy 30)
= Sta 6687+04.52 (IA Hwy. 1)

Sta. 686+94.33 EBL
Construct 194'-0" x 40'-0"
Pretensioned Prestresses Concrete
Beam Bridge with 10° Skew (L.A.)

80°04'48"
Final Plan

99°55'12"
Final Plan

Final Plan

Final Plan

Final Plan

Final Plan

3585

0699

1590

1595

685

690

695

6685

4490

4495

2585

4485

0 FEET 50

FRANKLIN TWP.
T-82N R-5W
SEC. 16

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.18

4:27:28 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

VPI +50.000
Elv 850.75
Len 1,900.00 ft
ex = -11.02'
K = 409
DS = 70 mph

+2.749%

-1.892%

+00 Rt.
816.79

+17 Lt.
810.39

-3.88% Lt. Ditch Grade

+4.12% Rt. Ditch Grade

+38 Rt.
814.16

+0.62% Rt. Ditch Grade

Lt	Ditch Grade	Special Shaping	No Ditch	V Ditch / Refer to Ramp A	Lt
Med			4' Ditch		Med
Rt	Ditch Grade	Special Shaping	No Ditch	V Ditch / Refer to Ramp D	Ditch Grade Rt

684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699
838.81	839.00	839.18	839.34	839.48	839.61	839.73	839.83	839.91	839.98	840.04	840.07	840.10	840.10	840.07	840.04
839.98	839.92	839.83	839.73	839.62	839.49	839.34	839.18	839.01	838.82	838.61	838.39	838.16	837.90	837.64	837.35
837.06	836.74	836.42	836.07	835.72	835.34	834.95	834.55	834.13	833.69	833.24	832.78	832.31	831.83	831.36	830.89
830.41	829.94	829.47	829.00	828.52	828.05	827.58	827.10	826.63	826.16	825.69	825.21				

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	D.19

4:27:37 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 15

Sta. 700+00.00 WBL
Install 24" X 108' 2000D RCP
F.L. = Lt. 816.05
Rt. 819.32

700+20.00 Med.
Install Type "M" Dike
Elev. =820.82

Sta. 713+30.00 WBL
Install 24" X 74' 2000D RCP
F.L. = Lt. 792.26
Rt. 795.77

713+50.00 Med.
Install Type "M" Dike
Elev. =797.27

1600

700

705

710

4500

30

FRANKLIN TWP.
T-82N R-5W
SEC. 16

0 50
FEET

FRANKLIN TWP.
T-82N R-5W
SEC. 15

C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.20

4:27:38 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

VPI +00.000
Elv 800.62
Len 230.00 ft
ex = 0.36'
K = 185
DS = 70 mph

+0.62% Rt. Ditch Grade
+24 Rt.
815.93

-1.892%
+50 Lt.
798.42

-2.37% Lt. Ditch Grade

-0.650%

+2.59% Rt. Ditch Grade
+50 Rt.
794.60

+00 Lt.
792.50

-0.80% Lt.
Ditch Grade

+50 Lt.
792.10

Lt
Med
Rt

V Ditch
4' Ditch
Dike
Ditch Grade

5' Ditch
4' Ditch
5' Ditch

Ditch Grade
Dike
Ditch Grade

e

825.21 824.74 824.27 823.79 823.32 822.85 822.37 821.90 821.43 820.96 820.48 820.01 819.54 819.06 818.59 818.12 817.65 817.17 816.70 816.23 815.75 815.28 814.81 814.33 813.86 813.39 812.92 812.44 811.97 811.50 811.02 810.55 810.08 809.61 809.13 808.66 808.19 807.71 807.24 806.77 806.30 805.82 805.35 804.88 804.40 803.93 803.46 802.98 802.52 802.08 801.68 801.31 800.98 800.68 800.41 800.18 799.98 799.81 799.64 799.48 799.32

699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER D.21

4:27:47 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 15

Sta. 717+31.43
Install 60" X 188' 2000D RCP
Skew = 11° Rt. Ahd.
F.L. = Lt. 787.85
Rt. 784.58

Sta. 726+60.00 WBL
Install 24" X 70' 2000D RCP
F.L. = Lt. 785.15
Rt. 787.13

726+80.00 Med.
Install Type "M" Dike
Elev. =788.63

Sta. 727+96.63
Install 36" X 20' 2000D RCP + 2-20° Elbows
Install 30" X 192' 2000D RCP
Skew = 11° Rt. Ahd.
F.L. = Lt. 782.17
Other 782.05
Other 779.95
Rt. 775.05

715

720

PC Sta 719+61.18

725

30

Curve Data
Δ = 32° 30' 23.27" (LT)
T = 2,040.74
L = 3,971.41
R = 7,000.00
E = 291.41
e = 3.0%
l = 135'
x = 90'

FRANKLIN TWP.
T-82N R-5W
SEC. 15

0 50
FEET

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	D.22

4:27:48 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

885 880 875 870 865 860 855 850 845 840 835 830 825 820 815 810 805 800 795 790 785 780 775 770 765 760 755 750 745 740 735 730 725 720 715 710

-0.650%

+09 Lt.
787.85

-1.18% Lt. Ditch Grade

-2.59% Rt. Ditch Grade

+1.16% Lt. Ditch Grade

+30 Lt.
790.42

+00 Rt.
785.55

+51 Rt.
784.58

-1.90% Rt. Ditch Grade

+77 Lt.
782.17

-2.56% Lt.
Ditch Grade

+0.20% Lt.
Ditch Grade

+50 Lt.
785.41

+20 Rt.
775.05

-0.46% Rt. Ditch Grade

+00 Rt.
774.68

Lt	Ditch Grade	5' Ditch	Dike	Ditch Grade
Med	4' Ditch			4' Ditch
Rt	Ditch Grade	No Ditch		

799.32 799.16 798.99 798.83 798.67 798.51 798.34 798.18 798.02 797.86 797.69 797.53 797.37 797.21 797.04 796.88 796.72 796.56 796.39 796.23 796.07 795.91 795.74 795.58 795.42 795.26 795.09 794.93 794.77 794.61 794.44 794.28 794.12 793.96 793.79 793.63 793.47 793.31 793.14 792.98 792.82 792.66 792.49 792.33 792.17 792.01 791.84 791.68 791.52 791.36 791.19 791.03 790.87 790.71 790.54 790.38 790.22 790.06 789.89 789.73 789.57

714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER D.23

4:27:56 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 15

Curve Data
Δ = 32° 30′ 23.27″ (LT)
T = 2,040.74
L = 3,971.41
R = 7,000.00
E = 291.41
e = 3.0%
l = 135′
x = 90′

Sta. 740+55.00 WBL
Install 24″ X 70′ 2000D RCP
F.L. = Lt. 776.28
Rt. 778.06

740+75.00 Med.
Install Type "M" Dike
Elev. =779.56

Sta. 740+75.00
Install 36″ X 196′ 2000D RCP
F.L. = Lt. 776.15
Rt. 769.30

741+06.00 Lt.
Install Type "M" Dike
Elev. =778.65

730

735

740

30

PI Sta 740+01.92

FRANKLIN TWP.
T-82N R-5W
SEC. 15

0 FEET 50

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.24

4:27:57 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

+61 Lt.
782.74

+0.20% Lt.
Ditch Grade

-0.650%

+00 Rt.
774.68

-1.60% Rt. Ditch Grade

+65 Rt.
777.50

+40 Rt.
774.70

+0.90% Rt. Ditch Grade

-1.00% Rt. Ditch Grade

+80 Rt.
774.80

-2.05% Rt. Ditch Grade

+77 Rt.
775.40

+1.59% Rt. Ditch Grade

+50 Rt.
774.93

-0.41% Rt. Ditch Grade

+88 Rt.
774.45

+60 Rt.
776.00

+75 Rt.
769.30

+2.23% Rt. Ditch Grade

+38 Rt.
774.30

+0.62% Rt. Ditch Grade

+0.50% Rt. Ditch Grade

+0.30% Rt. Ditch Grade

Lt	Ditch Grade		5' Ditch	Dike		5' Ditch	Lt
Med		4' Ditch			4' Ditch		Med
Rt	Ditch Grade			Dike		5' Ditch	Rt

789.57 789.41 789.24 789.08 788.92 788.76 788.59 788.43 788.27 788.11 787.94 787.78 787.62 787.46 787.29 787.13 786.97 786.81 786.64 786.48 786.32 786.16 785.99 785.83 785.67 785.51 785.34 785.18 785.02 784.86 784.69 784.53 784.37 784.21 784.04 783.88 783.72 783.56 783.39 783.23 783.07 782.91 782.74 782.58 782.42 782.26 782.09 781.93 781.77 781.61 781.44 781.28 781.12 780.96 780.79 780.63 780.47 780.31 780.14 779.98 779.82

729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.25

4:28:04 PM 7/25/2014 V81_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 15

FRANKLIN TWP.
T-82N R-5W
SEC. 14

Sta. 751+83.82
Install 66" X 258' 2000D RCP
Skew = 32° Rt. Ahd.
F.L. = Lt. 756.61
Rt. 753.30

Curve Data
Δ = 32° 30' 23.27" (LT)
T = 2,040.74
L = 3,971.41
R = 7,000.00
E = 291.41
e = 3.0%
l = 135'
x = 90'

Sta. 755+80.00 WBL
Install 24" X 70' 2000D RCP
F.L. = Lt. 757.60
Rt. 759.58

756+00.00 Med.
Install Type "M" Dike
Elev. =761.08

756+00.00 Lt.
Install Type "M" Dike
Elev. =759.10

745

750

755

30

P.T. Sta. 759+32.59

Cipco — E5(C)

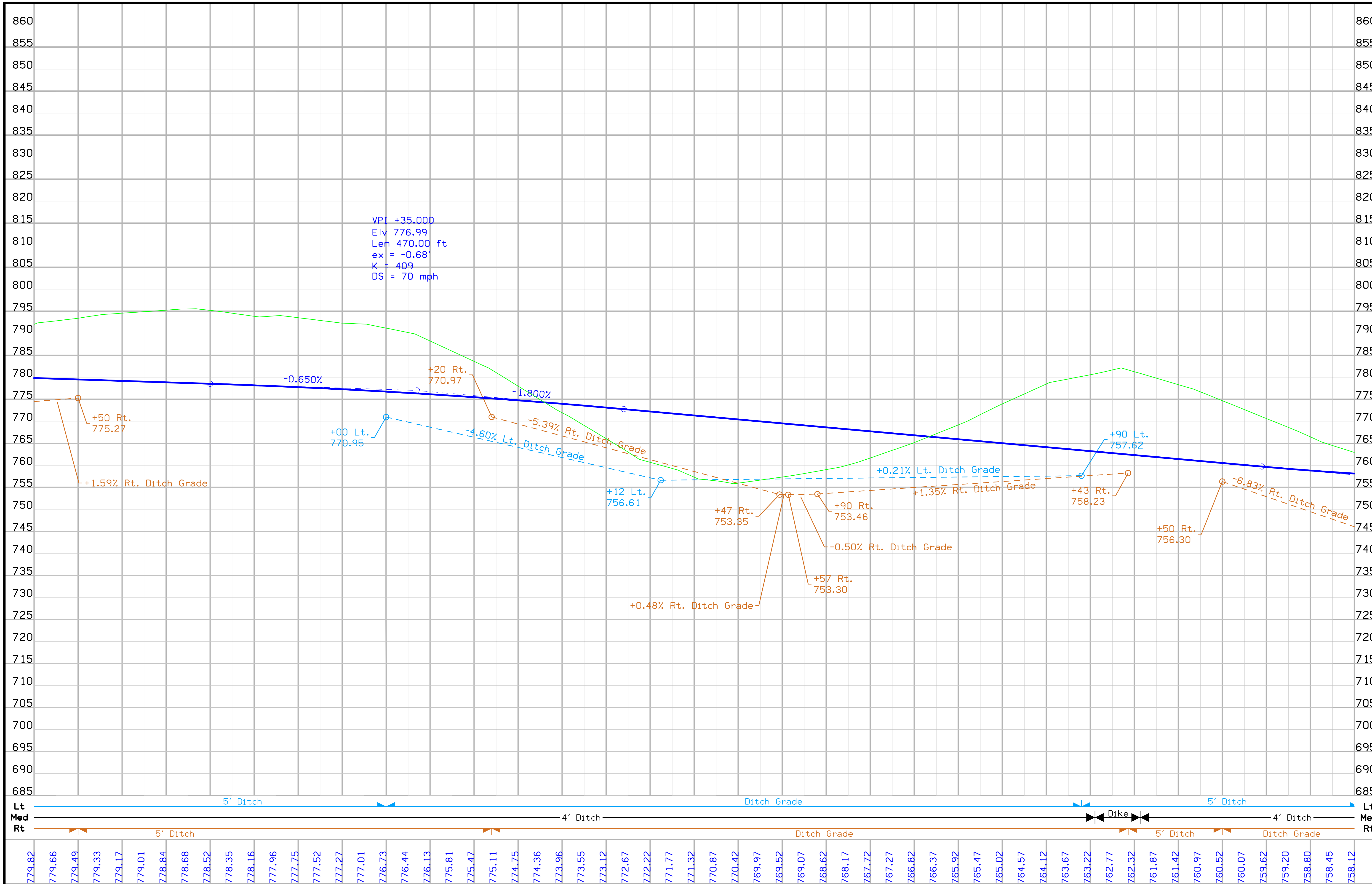
FRANKLIN TWP.
T-82N R-5W
SEC. 15

FRANKLIN TWP.
T-82N R-5W
SEC. 14

0 50
FEET

C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER D.26

4:28:04 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht



C | ENGLISH | IOWA DOT | DESIGN TEAM | SNYDER & ASSOCIATES, INC. | LINN/CEDAR COUNTY | PROJECT NUMBER NHS-030-7(76)--19-57 | SHEET NUMBER D.27

FRANKLIN TWP.
T-82N R-5W
SEC. 14

Sta. 761+21.00
Install Twin 12' X 9' X 230' RCB
Skew = 19° Lt. Ahd.
15° HEADWALLS
F.L. = Lt. 736.80
Rt. 736.00

Sta. 761+27.00 WBL
Install 24" X 78' 2000D RCP
F.L. = Lt. 748.30
Rt. 752.72

Overexcavation Limits

Cipco E5(C)

POT Sta 759+32.59

760

765

770

30

STANDING ROCK RD.

Sta. 7771+17.62
Construct 232'-0" x 30'-0"
Pretensioned Prestresses Concrete
Beam Bridge with 0° Skew

Sta. 5760+18.37
24" X 48.1' CMP
D.A. = 10.6 Ac

POT Sta 771+17.62 (Hwy 30)
= Sta 7771+17.62 (Standing Rock)

7775

Ent. +26 Lt. (Close)

89°33'20"

90°26'40"

7770

Overexcavation Limits

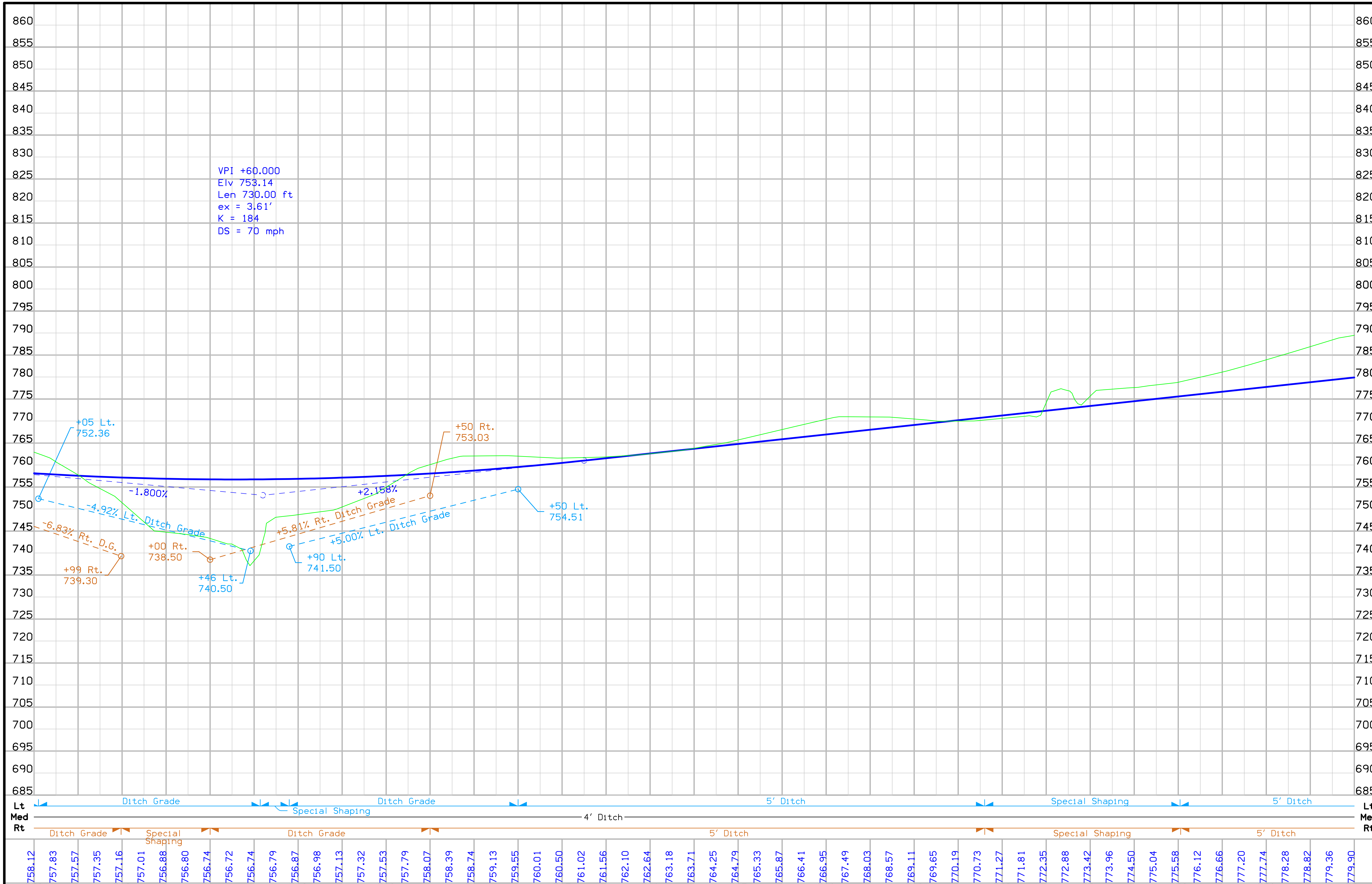
Sta 5755+30.79
35.3' CMP
= 3.6 Ac

FRANKLIN TWP.
T-82N R-5W
SEC. 14

0 50
FEET

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	D.28

4:28:07 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht



C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.29

4:28:10 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 14

Sta. 779+96.00
Install 6'x8'x307' RCB
Skew = 15° Rt. Ahd.
15° HEADWALLS
F.L. = Lt. 763.00
Rt. 760.25

Overexcavation Limits

775+65.00 Med.
Install Type "M" Dike
Elev. =781.39

Sta. 775+85.00 WBL
Install 24" X 74' 2000D RCP
F.L. = Lt. 776.42
Rt. 779.89

15" X 57' CMP

775

780

785

30

0 50
FEET

Overexcavation Limits

FRANKLIN TWP.
T-82N R-5W
SEC. 14

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	D.30

4:28:11 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

VPI +50.000
Elv 815.50
Len 1,070.00 ft
ex = -3.55'
K = 403
DS = 70 mph

+2.158%

+08 Lt.
777.19

-1.00% Lt. Ditch Grade
-0.50% Rt. Ditch Grade

+50 Rt.
774.43

+29 Lt.
774.98

-5.00% Lt. Ditch Grade
-4.89% Rt. Ditch Grade

+50 Rt.
775.93

+50 Lt.
763.93

+58 Lt.
763.93

+47 Rt.
760.31

+39 Rt.
760.31

+5.97% Lt. Ditch Grade

+6.02% Rt. Ditch Grade

+60 Lt.
799.86

+65 Rt.
803.53

Lt	5' Ditch	Ditch Grade	Special Shaping	Ditch Grade	5' Ditch	Lt
Med	4' Ditch	Dike		4' Ditch		Med
Rt	Ditch Grade		Special Shaping	Ditch Grade	5' Ditch	Rt

779.90 780.44 780.98 781.52 782.06 782.59 783.13 783.67 784.21 784.75 785.29 785.83 786.37 786.91 787.45 787.99 788.53 789.07 789.61 790.15 790.69 791.23 791.77 792.30 792.84 793.38 793.92 794.46 795.00 795.54 796.08 796.62 797.16 797.70 798.24 798.78 799.32 799.86 800.40 800.94 801.47 802.01 802.55 803.09 803.63 804.17 804.70 805.21 805.70 806.18 806.64 807.09 807.52 807.94 808.34 808.73 809.10 809.45 809.79 810.11 810.42

774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	D.31

4:28:14 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 14

Sta. 797+71.00
Install 42" X 276' 3000D RCP
Skew = 24° Lt. Ahd.
F.L. = Lt. 795.50
Rt. 790.75

Overexcavation Limits

790

795

800

30

Overexcavation Limits

FRANKLIN TWP.
T-82N R-5W
SEC. 14

0 50
FEET

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER D.32

4:28:15 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

VPI +50.000
Elv 815.50
Len 1,070.00 ft
ex = -3.55'
K = 403
DS = 70 mph

+2.158%
-0.500%
+5.21% Rt. Ditch Grade
-0.51% Lt. Ditch Grade
-0.50% Rt. Ditch Grade
+91 Lt.
807.82
+94 Rt.
807.84
+70 Lt.
806.90
+00 Rt.
806.81
-6.33% Rt. Ditch Grade
-2.49% Lt. Ditch Grade
-2.25% Rt.
Ditch Grade
+25 Rt.
792.57
+06 Rt.
790.75
+09 Rt.
790.75
0.00% Rt. Ditch Grade
+27 Lt.
795.50
+00 Rt.
800.70
+2.09% Lt. Ditch Grade
+0.50% Rt. Ditch Grade
+50 Lt.
800.16
+0.50% Lt. Ditch Grade

Lt	5' Ditch		Ditch Grade			Lt
Med			4' Ditch			Med
Rt	5' Ditch		Ditch Grade	Special Shaping	Ditch Grade	Rt

789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804
810.42	810.72	810.99	811.25	811.50	811.73	811.95	812.14	812.33	812.50	812.65	812.79	812.91	813.02	813.11	813.18
813.24	813.29	813.31	813.33	813.32	813.31	813.27	813.22	813.16	813.08	812.98	812.87	812.75	812.63	812.50	812.38
812.25	812.13	812.00	811.88	811.75	811.63	811.50	811.38	811.25	811.13	811.00	810.88	810.75	810.63	810.50	810.38
810.25	810.13	810.00	809.88	809.75	809.63	809.50	809.38	809.25	809.13	809.00	808.88	808.75			

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.33

4:28:21 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 14

FRANKLIN TWP.
T-82N R-5W
SEC. 13

SUTLIFF RD.

SUTLIFF ENTRANCE

90°00'00"

90°00'00"

106°25'53"

73°34'07"

Sta. 805+50.00 WBL
Install 24" X 70' 2000D RCP
F.L. = Lt. 802.66
Rt. 804.00

Sta. 805+70.00 Med.
Install Type "M" Dike
Elev. =805.50

Sta. 8806+52.46
Construct 252'-0" x 36'-0"
Pretensioned Prestresses Concrete
Beam Bridge with 16° Skew

PC Sta 808+28.63

POT Sta 807+03.40 (Hwy 30)
= Sta 8806+47.46 (Sutliff)

Sta. 810+93.73
Install 30" X 196' 2000D RCP
Skew = 10° Rt. Ahd.
F.L. = Lt. 798.03
Rt. 795.85

Sta. 816+70.70 (WBL)
Install 24" X 72' 2000D RCP
Skew = 10° Rt. Ahd.
F.L. = Lt. 794.53
Rt. 798.62

Sta. 818+30.24
Install 54" X 304' 3000D
Skew = 24° Rt. Ahd.
F.L. = Lt. 783.00
Rt. 776.90

PI Sta 818+61.04

Sta. 67+21.82
30" X 105.5' CMP
D.A. = 5.1 Ac

Curve Data
Δ = 32° 52' 10.61" (LT)
T = 1,032.42
L = 2,007.89
R = 3,500.00
E = 149.09
e = 5.0%
l = 225'
x = 90'

0 50
FEET

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER D.34

4:28:22 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

VPI +50.000
Elv 801.50
Len 540.00 ft
ex = 2.01'
K = 181
DS = 70 mph

+0.50% Rt. Ditch Grade
+51 Rt.
803.46
-0.50% Rt. D.G.
+0.50% Lt. Ditch Grade
+81 Rt.
802.81
+80 Lt.
802.81
+60 Rt.
802.54
-2.64% Rt. Ditch Grade
-0.68% Lt. Ditch Grade
+00 Lt.
799.22
+76 Lt.
798.03
+0.30% Lt. D.G.
+13 Rt.
795.85
+0.91% Rt. Ditch Grade
+06 Lt.
798.42
+13 Rt.
799.48
-0.500%
+2.477%
+2.00% Lt. Ditch Grade
+75 Lt.
797.08
-5.42% Lt. Ditch Grade
-7.48% Rt. Ditch Grade
+05 Lt.
783.70
+4.00% Lt.
Ditch Grade
+98 Lt.
785.00
-2.78% Lt. Ditch Grade
+70 Lt.
783.00
-1.09% Rt.
Ditch Grade
+00 Rt.
778.00

Lt	Ditch Grade	Special Shaping	Ditch Grade	5' Ditch	Ditch Grade	Lt
Med	4' Ditch — Dike	3' Ditch	10:1 Transition	4' Ditch		Med
Rt	5' Ditch			Ditch Grade		Rt

808.75 808.63 808.50 808.38 808.25 808.13 808.00 807.88 807.75 807.63 807.50 807.38 807.25 807.13 807.00 806.88 806.75 806.63 806.50 806.38 806.25 806.13 806.00 805.88 805.75 805.63 805.50 805.38 805.25 805.13 805.00 804.88 804.75 804.63 804.50 804.38 804.25 804.13 804.00 803.88 803.75 803.63 803.50 803.38 803.25 803.13 803.00 802.88 802.76 802.68 802.64 802.62 802.65 802.70 802.80 802.92 803.08 803.28 803.51 803.77 804.07

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	D.35

4:28:25 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 13

Sta. 822+84.18
Install 5'x6'x412' RCB
Skew = 10° Lt. Ahd.
15° HEADWALLS
F.L. = Lt. 773.63
Rt. 764.34

Sta. 830+50.00 WBL
Install 24" X 76' 2000D RCP
F.L. = Lt. 822.98
Rt. 827.23

Sta. 830+30.00 Med.
Install Type "M" Dike
Elev. =828.73

Sta. 832+41.07
Install 36" X 20' 2000D RCP + 2 Elbows
Install 30" X 448' 3750D RCP
Skew = 26° Lt. Ahd.
F.L. = Lt. 806.20
Other 806.08
Other 803.98
Lt. 781.20

820
825
830
835
30
P.T. Sta. 828+36.52

Curve Data
Δ = 32° 52' 10.61" (LT)
T = 1,032.42
L = 2,007.89
R = 3,500.00
E = 149.09
e = 5.0%
l = 225'
x = 90'

Overexcavation Limits

FRANKLIN TWP.
T-82N R-5W
SEC. 13

0 50
FEET

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER D.36

4:28:26 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

VPI +50.000
Elv 801.50
Len 540.00 ft
ex = 2.01'
K = 181
DS = 70 mph

+2.477%
+45 Lt.
793.30
+4.00% Lt. Ditch Grade
-8.00% Lt. Ditch Grade
+38 Rt.
783.00
+4.94% Rt. Ditch Grade
-12.82% Rt. Ditch Grade
+16 Rt.
776.97
+0.47% Rt. Ditch Grade
+01 Rt.
776.90
+55 Rt.
768.00
-6.36% Rt. Ditch Grade
+44 Rt.
762.34
+50 Rt.
762.34
+60 Lt.
776.09
-4.47% Lt. Ditch Grade
+00 Rt.
816.38
+15.44% Rt. Ditch Grade
+50 Lt.
817.49
+10.75% Lt. Ditch Grade
+60 Lt.
775.58
+5.00% Lt. Ditch Grade
+21 Lt.
773.63
+15 Lt.
773.63
+02 Lt.
824.77
-5.68% Lt. Ditch Grade
+29 Lt.
806.20
+10.00% Lt. Ditch Grade

Lt	Ditch Grade	Special Shaping	Ditch Grade	5' Ditch	Ditch Grade
Med	4' Ditch				
Rt	Ditch Grade	Special Shaping	Ditch Grade	No Ditch	

804.07 804.41 804.77 805.18 805.61 806.08 806.59 807.13 807.70 808.31 808.93 809.55 810.17 810.79 811.41 812.03 812.65 813.27 813.89 814.51 815.12 815.74 816.36 816.98 817.60 818.22 818.84 819.46 820.08 820.70 821.32 821.94 822.56 823.18 823.79 824.41 825.03 825.65 826.27 826.89 827.51 828.13 828.75 829.37 829.99 830.61 831.23 831.85 832.47 833.08 833.70 834.32 834.94 835.56 836.18 836.80 837.42 838.04 838.66 839.28 839.90

819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57

SHEET NUMBER D.37

4:28:29 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 13

Sta. 10839+07.30
Construct 280'-0" x 30'-0"
Welded Girder Bridge
Beam Bridge with 15° Skew

Sta. 846+36.75 WBL
Construct 663'-0" x 40'-0"
Pretensioned Prestresses Concrete
Beam Bridge with 0° Skew

Sta. 846+36.75 EBL
Construct 663'-0" x 40'-0"
Pretensioned Prestresses Concrete
Beam Bridge with 0° Skew

835
840
845
10840
10835

POT1 Sta 836+72.64

EQUATION:
Sta 837+21.45 BK =
Sta 836+72.64 AH

105°04'10"
74°55'50"

POT Sta 838+87.30 (U.S. 30)
= Sta 10838+87.30 (Green Ridge)

GREEN RIDGE RD.

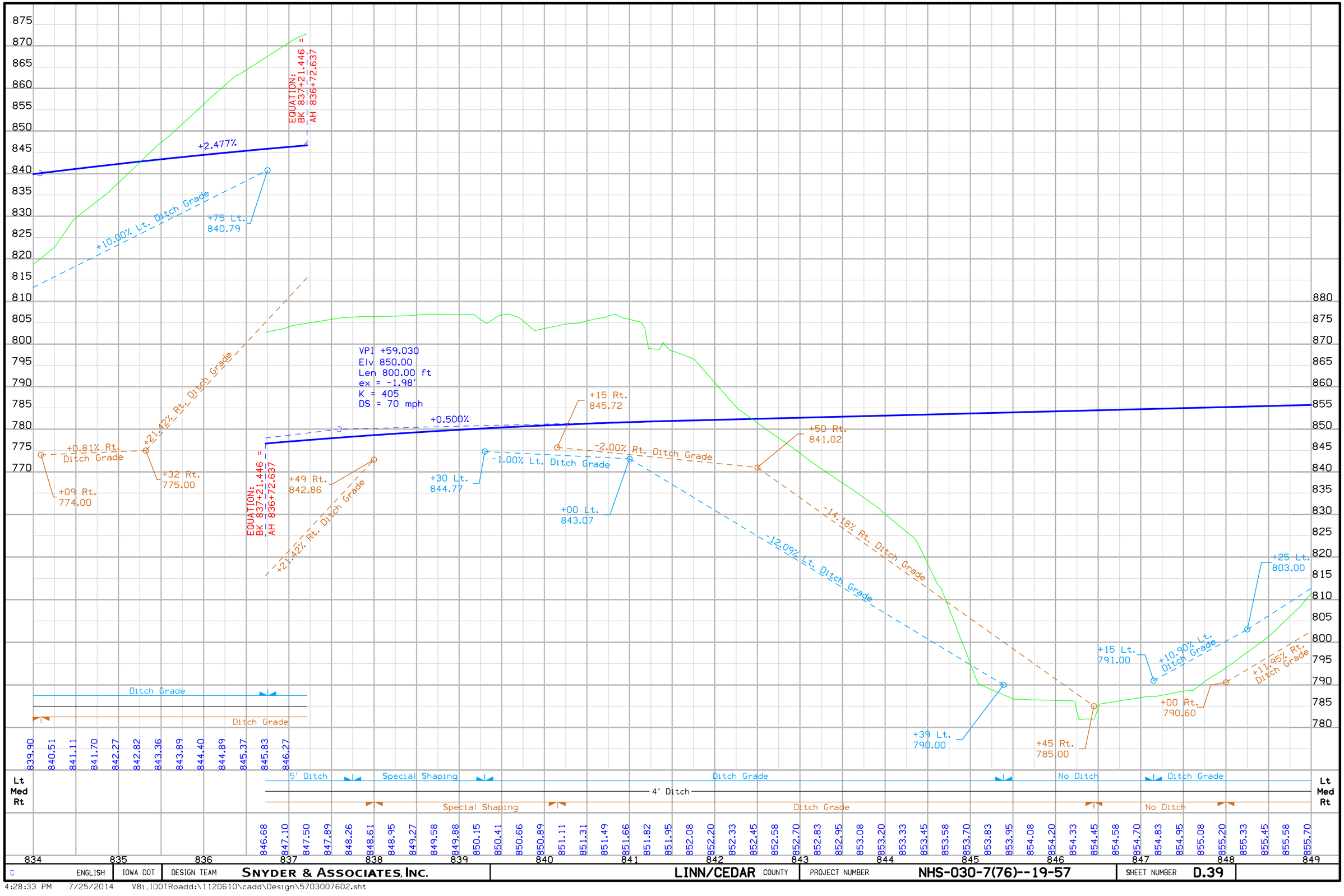
30

0 50
FEET

FRANKLIN TWP.
T-82N R-5W
SEC. 13

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	D.38

4:28:30 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.39

4:28:33 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 13

Sta. 850+20.00 WBL
Install 24" X 82' 2000D RCP
F.L. = Lt. 848.00
Rt. 852.30

Sta. 850+00.00 Med.
Install Type "M" Dike
Elev. =853.80

Sta. 846+36.75 WBL
Construct 663'-0" x 40'-0"
Pretensioned Prestresses Concrete
Beam Bridge with 0° Skew

Sta. 846+36.75 EBL
Construct 663'-0" x 40'-0"
Pretensioned Prestresses Concrete
Beam Bridge with 0° Skew

Sta. 863+65.00
Install 30" X 178' 2000D RCP
F.L. = Lt. 857.00
Rt. 857.96

Sta. 863+65.00 Med.
Install Type "M" Dike
Elev. =860.63

850
855
860
3560
2560

ADAMS AVE. RAMP 'C'

ADAMS AVE. RAMP 'B'

30

0 50
FEET

FRANKLIN TWP.
T-82N R-5W
SEC. 13

C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.40

4:28:34 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

+0.500%

+50 Lt.
844.88

+1.00% Lt. Ditch Grade

+12.89% Lt. Ditch Grade

+10 Rt.
803.75

+2.60% Rt. Ditch Grade

+15 Lt.
846.53

+4.00% Lt.
Ditch Grade

+23 Rt.
809.29

+15.86% Rt. Ditch Grade

+50 Lt.
851.93

+4.50% Rt. Ditch Grade

+60 Rt.
846.89

+00 Rt.
853.19

+0.40% Lt. Ditch Grade

+54 Lt.
853.15

+75 Lt.
856.40

+0.32% Lt.
Ditch Grade

+0.32% Lt.
Ditch Grade

+65 Lt.
857.00

Lt
Med
Rt

4' Ditch — Dike — Ditch Grade — 4' Ditch — V Ditch — Ditch Grade — Dike — 4' Ditch

Ditch Grade — 5' Ditch

855.70 855.83 855.95 856.08 856.20 856.33 856.45 856.58 856.70 856.83 856.95 857.08 857.20 857.33 857.45 857.58 857.70 857.83 857.95 858.08 858.20 858.33 858.45 858.58 858.70 858.83 858.95 859.08 859.20 859.33 859.45 859.58 859.70 859.83 859.95 860.08 860.20 860.33 860.45 860.58 860.70 860.83 860.95 861.08 861.20 861.33 861.45 861.58 861.70 861.83 861.95 862.08 862.20 862.33 862.45 862.58 862.70 862.83 862.95 863.08 863.20

849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.41

4:28:37 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP. (LINN CO.)
T-82N R-5W
SEC. 13

PIONEER TWP. (CEDAR CO.)
T-82N R-4W
SEC. 18

ADAMS AVE. RAMP 'C'

ADAMS AVE. RAMP 'A'

ADAMS AVE. RAMP 'B'

ADAMS AVE. RAMP 'D'

ADAMS AVE.

83°19'19"

63°00'00"

98°46'24"

81°13'36"

Sta. 863+65.00
Install 30" X 178' 2000D RCP
F.L. = Lt. 857.00
Rt. 857.96

Sta. 863+65.00 Med.
Install Type "M" Dike
Elev. =860.63

Sta. 863+85.00 WBL
Install 24" X 70' 2000D RCP
F.L. = Lt. 857.50
Rt. 859.13

Sta. 11869+70.26
Construct 232'-0" x 60'-0"
Pretensioned Prestresses Concrete
Beam Bridge with 9° Skew

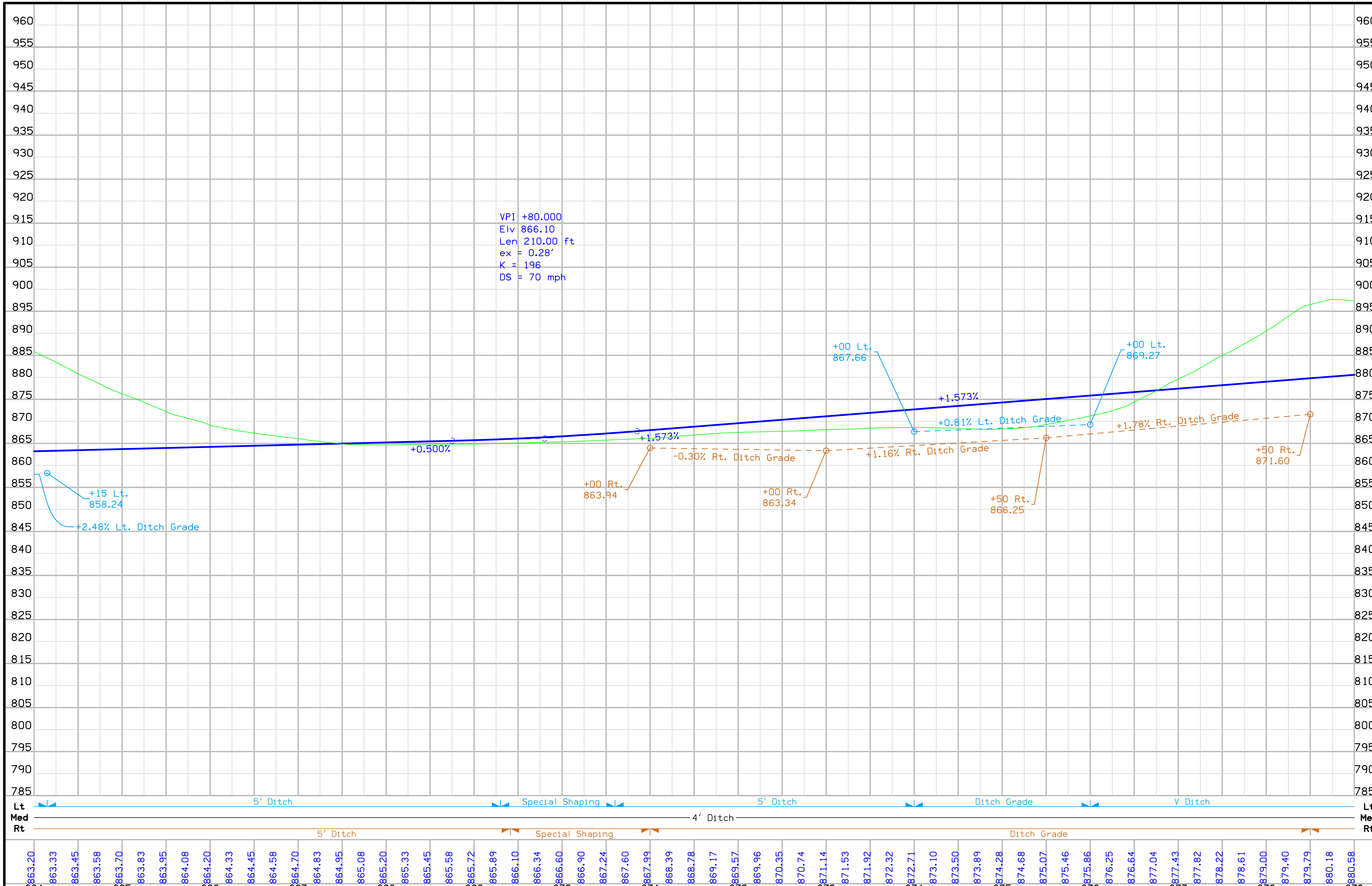
POT Sta 869+70.26 (Hwy 30)
= Sta 11869+70.26 (Adams)

1570 1575 3565 865 870 875 11870 30 2565 4575 2570 11865

0 50
FEET

C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.42

4:28:41 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht



C ENGLISH | IOWA DOT | DESIGN TEAM SNYDER & ASSOCIATES, INC. | LINN/CEDAR COUNTY | PROJECT NUMBER NHS-030-7(76)--19-57 | SHEET NUMBER D.43

PIONEER TWP.
T-82N R-4W
SEC. 18

EXISTING ADAMS AVE.

Sta. 880+70.79
Install 42" X 288' 2000D RCP
Skew = 12° Lt. Ahd.
F.L. = Lt. 872.10
Rt. 870.94

Sta. 881+28.00 WBL
Install 24" X 110' 2000D RCP
F.L. = Lt. 874.75
Rt. 880.16

Sta. 881+08.00 Med.
Install Type "M" Dike
Elev. =881.66

1580

880

885

890

ADAMS AVE. RAMP 'A'

30

ADAMS AVE. RAMP 'D'

4580

Sta. 888+48.24
24" X 112.6' CMP
D.A. = 11.6 AC
(Remove)

18" X 36.8' CMP

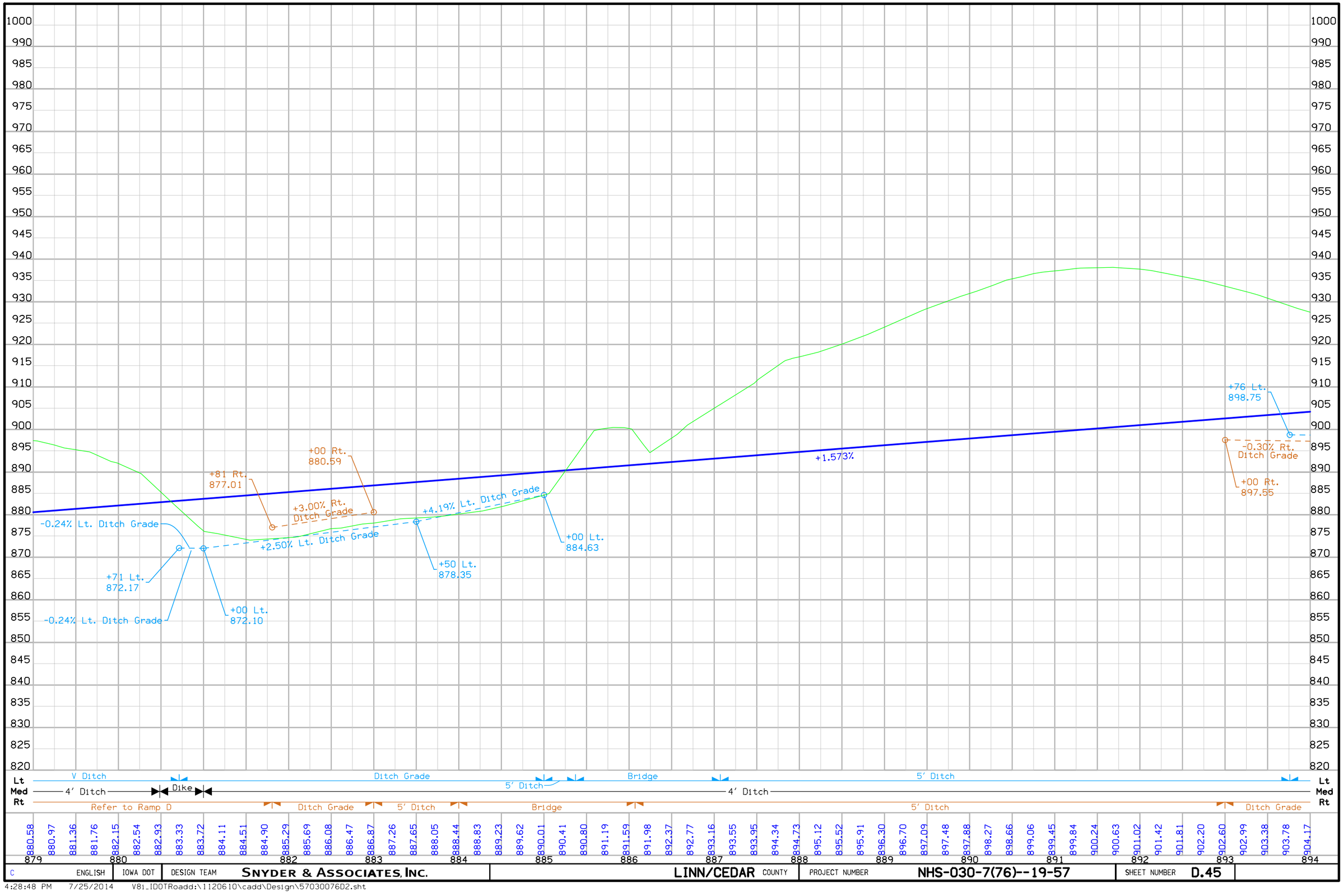
15" X 72' CMP

PIONEER TWP.
T-82N R-4W
SEC. 18

0 50
FEET

C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.44

4:28:45 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.45

4:28:48 PM 7/25/2014 V81_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

PIONEER TWP.
T-82N R-4W
SEC. 18

Sta. 896+60.00 WBL
Install 24" X 70' 2000D RCP
F.L. = Lt. 901.90
Rt. 904.26

Sta. 896+40.00 Med.
Install Type "M" Dike
Elev. =905.76

Sta. 899+43.10
Install 36" X 220' 2000D RCP
Skew = 25° Lt. Ahd.
F.L. = Lt. 904.74
Rt. 899.20

895

900

905

30

PC Sta 903+60.89

Sta. 895+65.61
Install 24" X 216' 2000D RCP
Skew = 24° Rt. Ahd.
F.L. = Lt. 898.36
Rt. 896.60

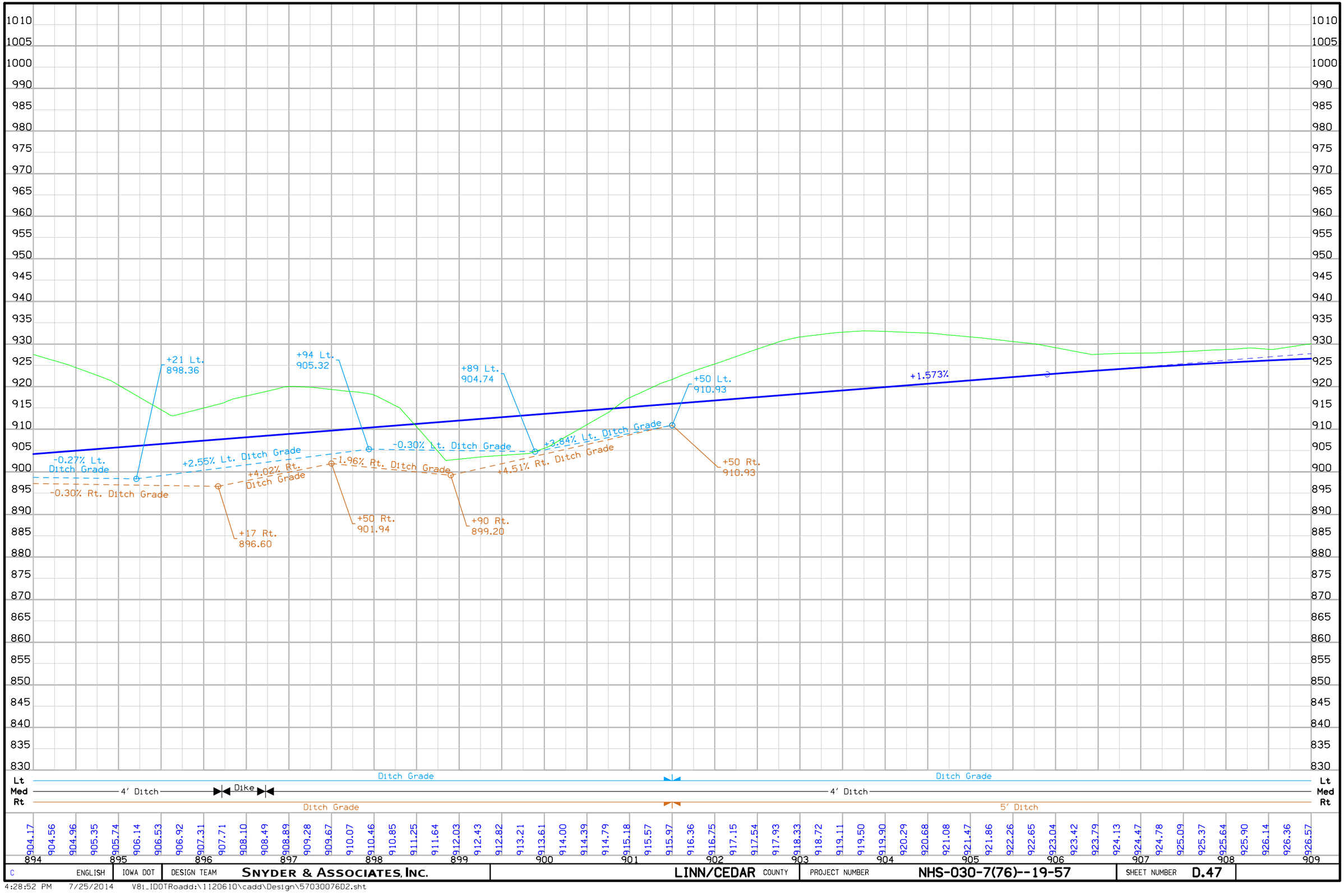
Curve Data
Δ = 35° 39' 37.42" (RT)
T = 1,479.57
L = 2,863.00
R = 4,600.00
E = 232.09
e = 4.0%
l = 180'
x = 90'

0 50
FEET

PIONEER TWP.
T-82N R-4W
SEC. 18

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.46

4:28:49 PM 7/25/2014 V81_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.47

4:28:52 PM 7/25/2014 V81_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

PIONEER TWP.
T-82N R-4W
SEC. 7

PI Sta 918+40.46

Sta. 921+82.82
Install 30" X 272' 2000D RCP
Skew = 32° Rt. Ahd.
F.L. = Lt. 904.72
Rt. 899.57

Sta. 922+93.00 WBL
Install 24" X 76' 2000D RCP
F.L. = Lt. 906.60
Rt. 909.64

Sta. 923+13.00 Med.
Install Type "M" Dike
Elev. =911.14

Curve Data
Δ = 35° 39' 37.42" (RT)
T = 1,479.57
L = 2,863.00
R = 4,600.00
E = 232.09
e = 4.0%
l = 180'
x = 90'

18" X 38.8' CMP
18" X 32.4' CMP
18" X 38.6' CMP
T1
SIGN

910
915
920
30
15890
15885
15895

EXISTING U.S. HWY. 30

Sta. 15884+13.66
Install 18" X 108' 2000D RCP
Skew = 33° Rt. Ahd.
F.L. = Lt. 918.10
Rt. 917.49

0 FEET 50

PIONEER TWP.
T-82N R-4W
SEC. 18

C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.48

4:28:52 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

VPI +00.000
Elv 937.20
Len 1,820.00 ft
ex = -10.29'
K = 402
DS = 70 mph

+1.573%

-2.950%

-0.83% Lt. Ditch Grade

+0.57% Rt. Ditch Grade

-1.00% Rt. Ditch Grade

-2.57% Rt. Ditch Grade

-3.11% Lt. Ditch Grade

-2.72% Lt. Ditch Grade

+1.03% Lt. Ditch Grade

-0.60% Lt. Ditch Grade

-1.00% Rt. Ditch Grade

+03 Lt.
923.30

+50 Rt.
920.96

+02 Rt.
921.82

+25 Rt.
918.59

+50 Lt.
918.75

+10 Lt.
904.72

+46 Lt.
907.15

+75 Lt.
905.53

+66 Rt.
899.57

Lt Med Rt

Ditch Grade

5' Ditch

4' Ditch

Ditch Grade

Dike

Ditch Grade

926.57 926.76 926.94 927.10 927.25 927.38 927.49 927.59 927.68 927.75 927.80 927.84 927.86 927.86 927.86 927.83 927.79 927.73 927.66 927.58 927.47 927.36 927.22 927.07 926.91 926.73 926.54 926.32 926.10 925.86 925.60 925.32 925.04 924.73 924.41 924.08 923.73 923.36 922.98 922.58 922.17 921.74 921.30 920.84 920.36 919.87 919.36 918.84 918.31 917.75 917.19 916.60 916.00 915.39 914.76 914.11 913.45 912.77 912.08 911.37 910.65

909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.49

4:28:55 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

PIONEER TWP.
T-82N R-4W
SEC. 7

PIONEER TWP.
T-82N R-4W
SEC. 8

N

Curve Data
Δ = 35° 39′ 37.42″ (RT)
T = 1,479.57
L = 2,863.00
R = 4,600.00
E = 232.09
e = 4.0%
| = 180′
x = 90′

Sta. 933+63.00 WBL
Install 24″ X 70′ 2000D RCP
F.L. = Lt. 877.43
Rt. 878.24

Sta. 933+83.00 Med.
Install Type "M" Dike
Elev. =879.74

925
930
935
15900
15905
15910

30

PT Sta. 932+23.89

Sta. 899+69.70
15″ X 120.3′ CPP
D.A. = 9.3
(Remove)

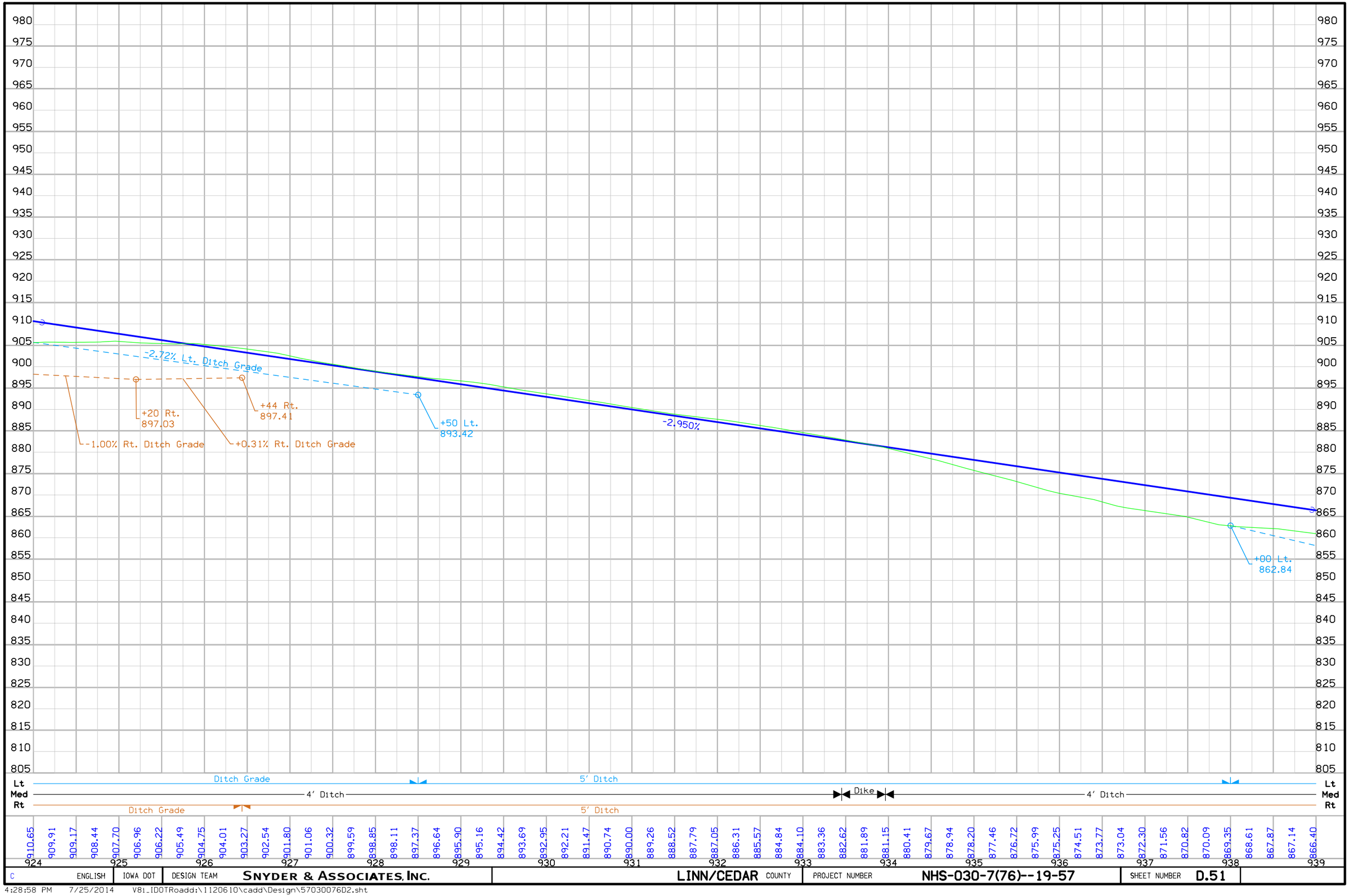
EXISTING U.S. HWY. 30

Sta. 15899+87.41
Install 36″ X 94′ 2000D RCP
Skew = 5° Rt. Ahd.
F.L. = Lt. 896.50
Rt. 896.00

0 50
FEET

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.50

4:28:56 PM 7/25/2014 V81_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.51

4:28:58 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

PIONEER TWP.
T-82N R-4W
SEC. 8

Overexcavation Limits

Sta. 944+33.00 WBL
Install 24" X 76' 2000D RCP
F.L. = Lt. 850.66
Rt. 854.61

Sta. 942+54.95
Install Twin 10' X 10' RCB Extension
Skew = 31° Rt. Ahd.
30° Headwall
F.L. = Lt. 844.50
Other 839.61
Rt. 838.43

Sta. 952+00.00 WBL
Install 24" X 70' 2000D RCP
F.L. = Lt. 862.37
Rt. 864.03

Sta. 951+80.00 Med.
Install Type "M" Dike
Elev. =965.53

940
945
950
950

30

16945
16950

(Close)

P-102
S-102
S-102A
P-102A
Sta. 941+49.18
Twin 9' X 10' X 88.1' RCB
REMOVE HEADWALL
908 AC

18" X 56.8' CMP

Sta. 926+22.14
30" X 62.5' RCP
D.A. = 7.6 Ac
(U.A.C.)

KIRKWOOD 4

18" X 71.2' CMP

Sta. 952+02 Rt.
(U.A.C.)

T1

SIGN

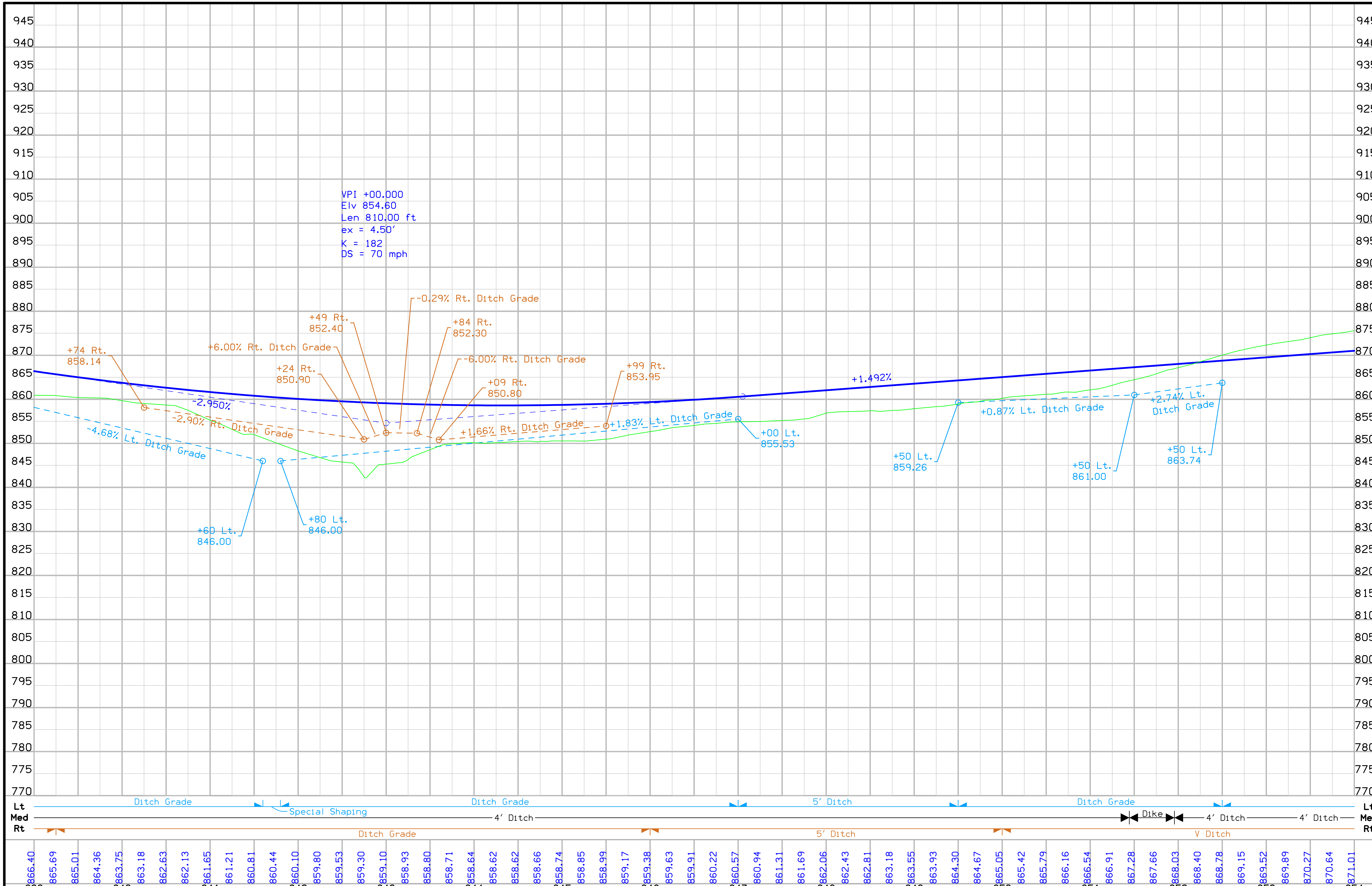
TP

0 50
FEET

PIONEER TWP.
T-82N R-4W
SEC. 17

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.52

4:28:59 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht



C ENGLISH | IOWA DOT | DESIGN TEAM **SNYDER & ASSOCIATES, INC.** | **LINN/CEDAR** COUNTY | PROJECT NUMBER **NHS-030-7(76)--19-57** | SHEET NUMBER **D.53**

4:29:01 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

PIONEER TWP.
T-82N R-4W
SEC. 8

N

Sta. 953+52.31 MEDIAN
Install 15" X 110' 2000D RCP

Sta. 957+00
Construct PV-504 Crossover

STA. 961+69.98
END CONSTRUCTION

Sta 961+69.98 (US Hwy 30)
= Sta 18961+69.98 (US 30 E Tie)

Extend Sta 18967+61.14
With 30" x 30' 2000D RCP
Skew = 5° Rt. Ahd.
F.L. = Lt. 879.18
Other 879.53
Other 879.97
Rt. 879.91

955
18960 960
18965 965
16955
16960
16965

30

EAST TRANSITION

EXISTING U.S. HWY. 30

KIRKWOOD 4

18" X 33.9' CMP

Sta. 941+83.42
30" X 60.4' RCP
D.A. = 4.9 Ac

PIONEER TWP.
T-82N R-4W
SEC. 17

0 50
FEET

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER D.54

4:29:02 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

970 965 960 955 950 945 940 935 930 925 920 915 910 905 900 895 890 885 880 875 870 865 860 855 850 845 840 835 830 825 820 815 810 805 800 795

VPI +00.000
Elv 888.92
Len 980.00 ft
Ex = -2.99'
K = 401
DS = 70 mph

Sta 961+69.98 R 2, Elev = 882.46
End Construction

+1.492%

+1.492%

-0.950%

Lt 5' Ditch
Med 4' Ditch
Rt V Ditch 5' Ditch

871.01 871.39 871.76 872.13 872.51 872.88 873.25 873.63 874.00 874.37 874.74 875.12 875.49 875.86 876.24 876.61 876.98 877.36 877.73 878.10 878.47 878.85 879.22 879.59 879.97 880.34 880.71 881.09 881.46 881.83 882.19 882.53 882.85 883.16 883.45 883.73 883.99 884.24 884.47 884.69 884.89 885.07 885.24 885.39 885.53 885.65 885.76 885.85 885.93 885.99 886.03 886.06 886.07 886.07 886.05 886.02 885.97 885.91 885.83 885.73 885.62

954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969

C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER D.55

4:29:05 PM 7/25/2014 V8i_IDOTRoadd:\1120610\cadd\Design\57030076D2.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 18

FRANKLIN TWP.
T-82N R-5W
SEC. 7

Sta. 1587+30.50
Install 29"x18"x64' 2000D RCAP
Skew = 1° Lt. Ahd.
F.L. = Lt. 786.56
Rt. 788.18

Sta. 1586+85.00 Med.
Install Type "M" Dike
Elev. =789.68

1585

585

91°23'28"

POT Sta 1580+18.55

Sta 1581+67.00
Begin Construction

WILCOX RD.

+29.00 Lt.Prop.
Prop. Safety Ramp

(Remove)

POT Sta 1588+28.88 (Wilcox Rd.)
= Sta 588+28.88 (Hwy 30)

Sta 1584+26.94
End granular Surfacing
Begin PCC Paving

+08.65 Rt. Prop.
Type "B" Ent.

88°36'32"

30

590

Sta 589+36.19
30" X 126.2' RCP
D.A. = 3.4 Ac
(Remove)

FRANKLIN TWP.
T-82N R-5W
SEC. 17

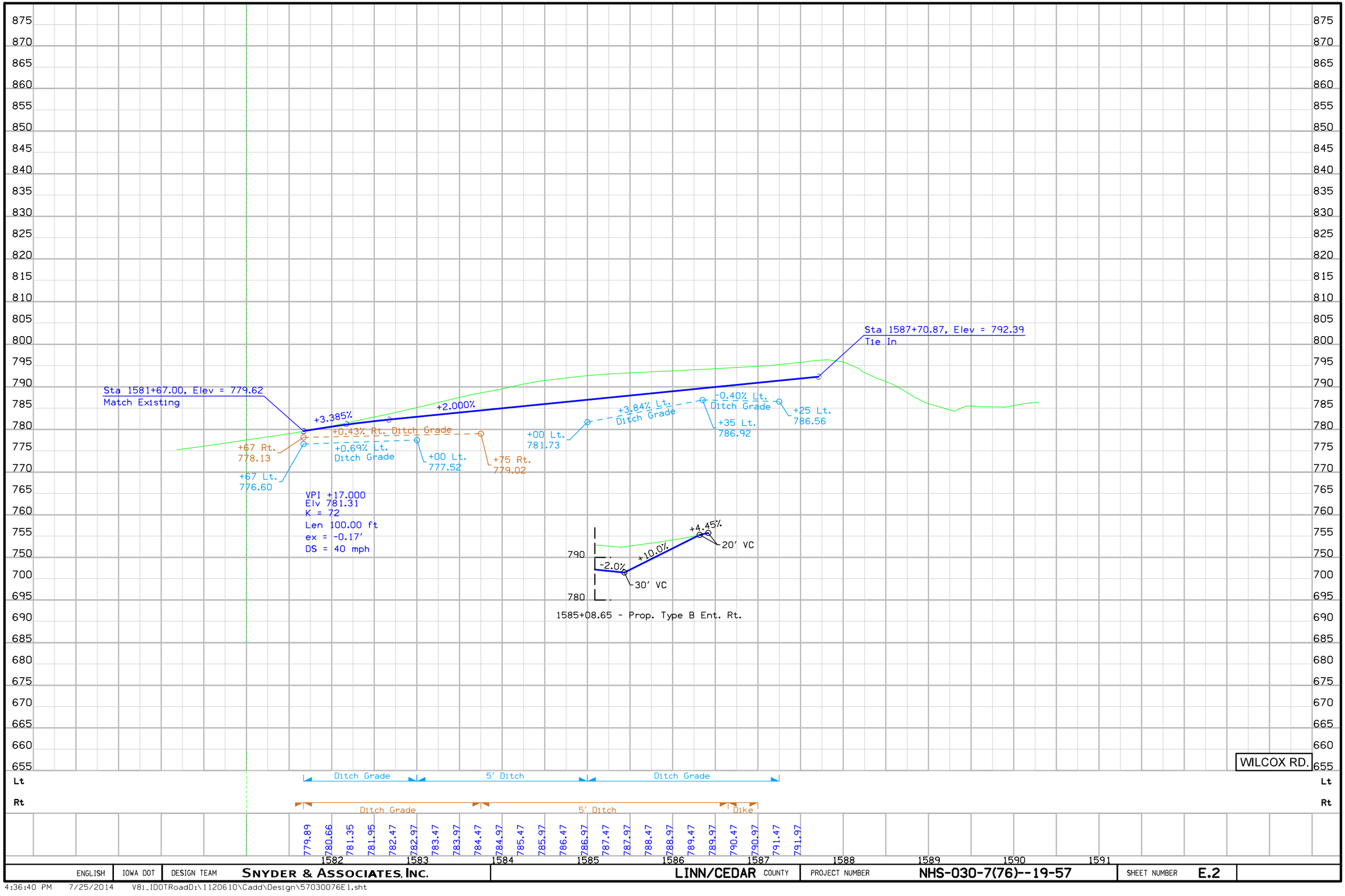
FRANKLIN TWP.
T-82N R-5W
SEC. 8

0 50
FEET

WILCOX RD.

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.1

4:36:37 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.2

4:36:40 PM 7/25/2014 V81_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 17

FRANKLIN TWP.
T-82N R-5W
SEC. 8

610

5610

2615

615

5615

3620

2620

(Close)

Sta. 2615+44.27
Install 24" X 92' 2000D RCP
F.L. = Lt. 803.01
Rt. 801.79

Curve Data
Δ = 5° 43' 15.42" (LT)
T = 212.36
L = 424.36
R = 4,250.00
E = 5.30
e = NC

POT Sta 2618+00.80 (Irish Ln.)
= Sta 614+40.71 (Old Hwy 30)

+00.00 Lt.Prop. — Prop. Safety Ramp

PC Sta 2616+09.92

Sta. 5617+69.57
24" X 48' CMP
D.A. = 2.5 Ac
(Remove)

PT Sta 2620+34.28

POT Sta 2621+62.82

Ent. +87 Lt. (U.A.C.)

IRISH LN.

Sta 2620+34.28
End Construction

PI Sta 2618+22.28

94°51'40"

Sta 2618+82.62
End PCC Paving
Begin Granular Surfacing

POT Sta 2614+40.71 (Irish Ln.)
= Sta 614+40.71 (Hwy 30)

85°08'20"

90°00'00"

Sta. 5615+85.45
24" X 108.5' RCP
D.A. = 1.5 Ac
(Remove)

Sta. 5617+15.85
42" X 142.7' RCP
D.A. = 13.2 Ac
(Remove)

OLD 30 W.

WILLOW CREEK ACCESS

Ent. +69 Rt. (U.A.C.)

P-59 P-52 P-51

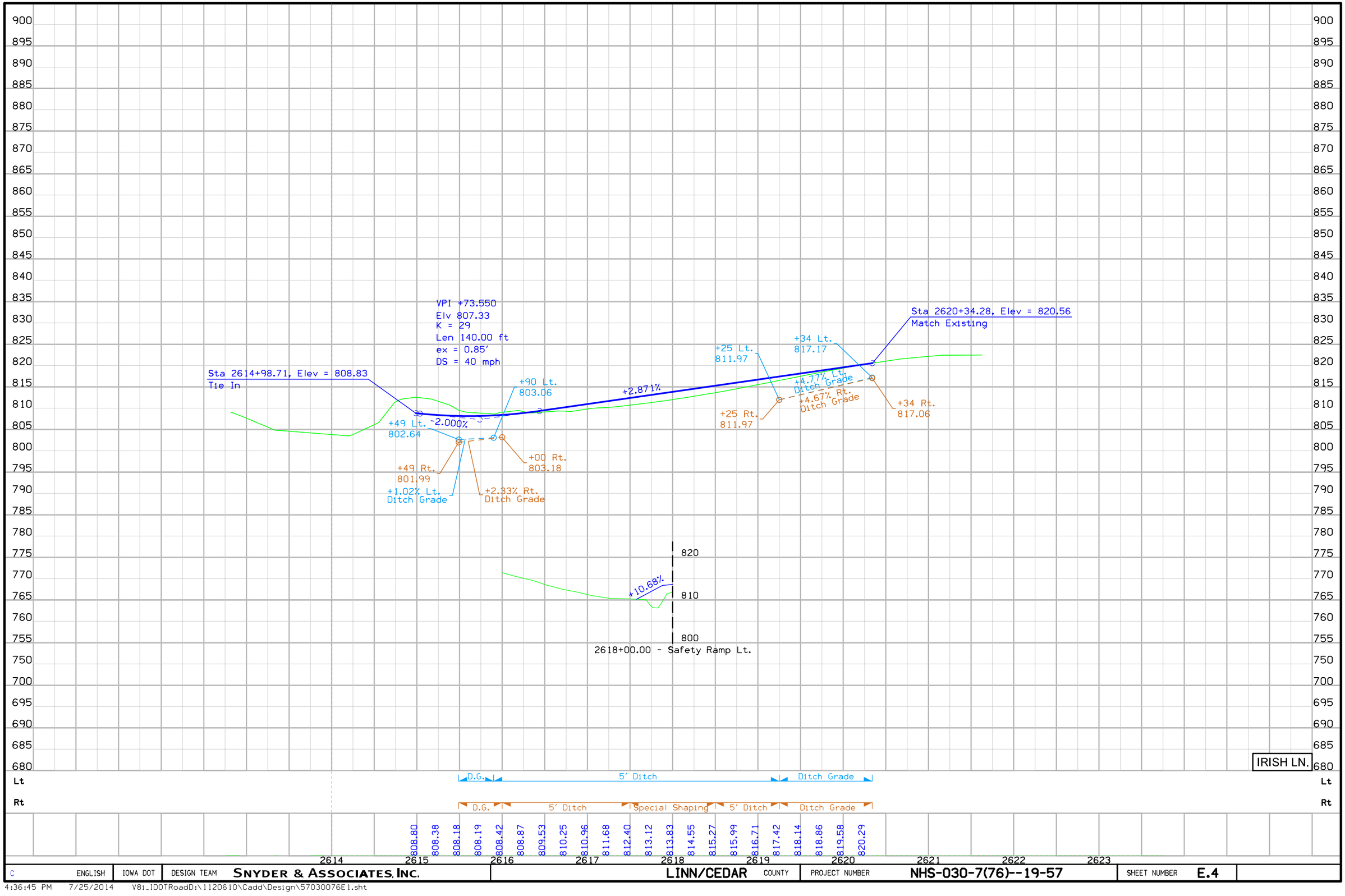
P-56 P-55

0 50
FEET

IRISH LN.

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.3

4:36:41 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.4

4:36:45 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 8

FRANKLIN TWP.
T-82N R-5W
SEC. 17

Curve Data
Δ = 21° 40′ 51.99″ (RT)
T = 97.66
L = 192.99
R = 510.00
E = 9.27
e = NC

Curve Data
Δ = 23° 58′ 07.78″ (LT)
T = 163.45
L = 322.12
R = 770.00
E = 17.16
e = NC

POT Sta 3618+00.80 (30W Connector)
= Sta 2618+00.80 (Irish Ln.)

94°51′40″

85°08′20″

PC Sta 3619+32.80

PI Sta 3620+30.46

PT Sta 3621+25.79

PC Sta 3622+50.79

PT Sta 3625+22.90

Prop. Safety Ramp
+00.00 L.Prop.

Sta. 5617+69.5
24" x 48" CMP
D.A. = 2.6 Ac

Sta. 5617+16.85
45" x 142" RCP
D.A. = 13.3 Ac

Sta. 3624+14.24

IRISH LN

30W CONNECTOR

WILLOW CREEK ACCESS

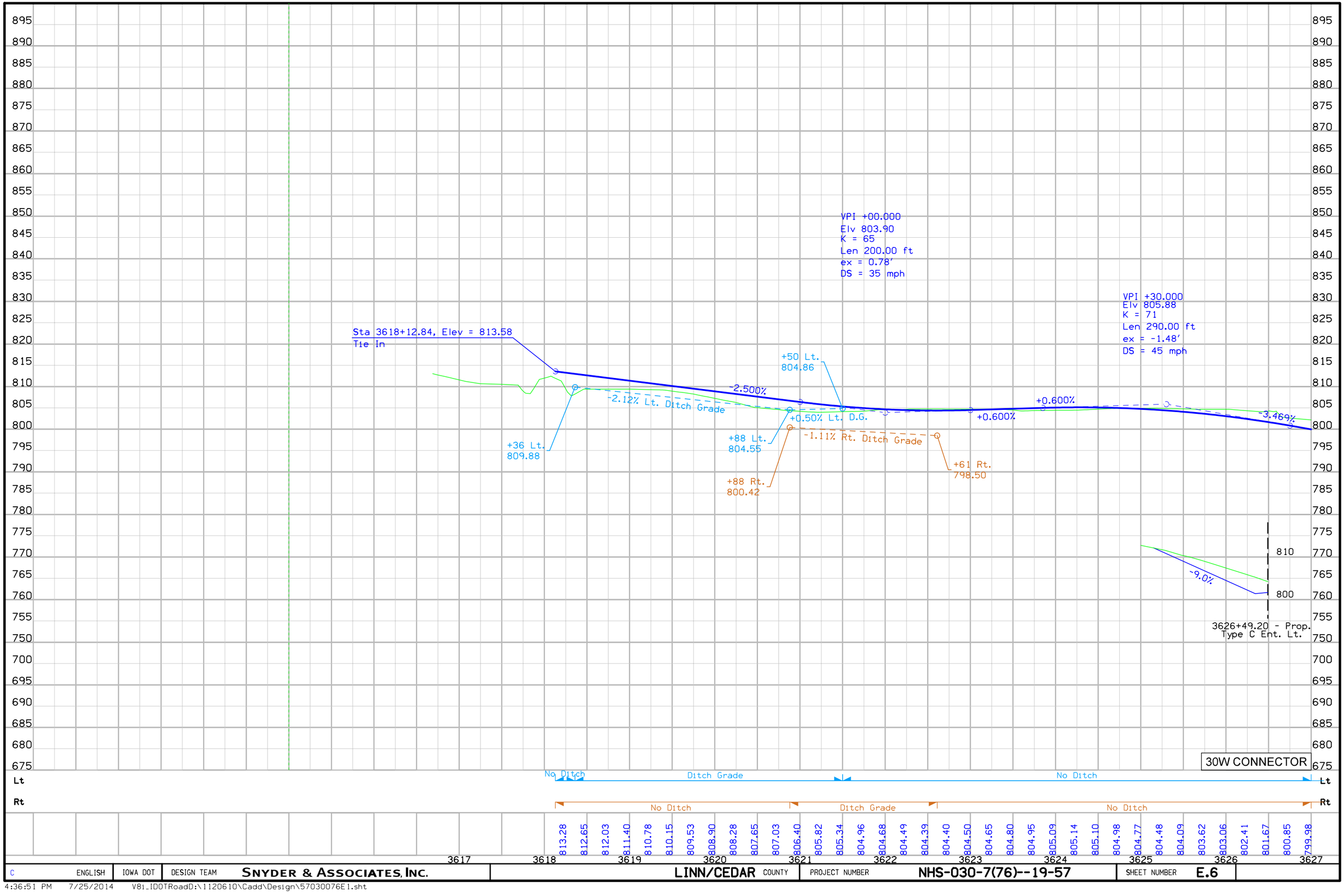
30

2620
2615
2610
3620
3625
5620
5615
5610
615
610

0 50
FEET

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER E.5

4:36:47 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER E.6

4:36:51 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 8

Sta. 632+15.26
4' X 5' X 176.4' RCB
D.A. = 46.2 Ac

+51.63 Lt. Prop. Type "C" Ent.

+50.00 Lt. Prop. Joint Type "C" Ent.

+51.95 Lt. Prop. Type "C" Ent. (Close)

30W CONNECTOR

(Remove)

Sta. 626+95.12
42" X 135.7' RCP
D.A. = 25 Ac
(Extend)

Sta. 628+20.45
5' X 5.5' RCB
D.A. = 0 Ac
(Remove)

FRANKLIN TWP.
T-82N R-5W
SEC. 17

WILLOW CREEK ACCESS

30W CONNECTOR

0 FEET 50

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.7

4:36:52 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

-9.0%

800
790

3628+51.63 - Prop. Type C Ent. Lt.

800
790

3633+50.00 - Prop. Type C Ent. Lt.

VPI +00.000
Elv 797.81
Len 150.00 ft
ex = -0.38'
K = 74
DS = 45 mph

+38 Rt.
797.00

-3.469%
+1.529%
+2.126%
-0.500%

+50 Rt.
791.00

-4.17% Rt. Ditch Grade

+42 Rt.
783.00

+3.97% Rt. Ditch Grade

+50 Rt.
791.26

-0.32% Rt. Ditch Grade

+00 Rt.
790.45

+2.75% Rt. Ditch Grade

-4.48% Lt.

+3.92% Lt. Ditch Grade

+35 Lt.
783.46

D.C.

+64 Lt.
782.16

+00 Lt.
791.40

VPI +80.000
Elv 786.80
K = 64
Len 320.00 ft
ex = 2.00'
DS = 45 mph

VPI +47.000
Elv 796.58
Len 170.00 ft
ex = 0.56'
K = 65
DS = 45 mph

30W CONNECTOR

Lt: No Ditch | Ditch Grade | No Ditch

Rt: No Ditch | Ditch Grade | No Ditch

799.98 799.12 798.25 797.38 796.51 795.65 794.78 793.91 793.04 792.18 791.38 790.68 790.08 789.57 789.16 788.85 788.64 788.52 788.50 788.58 788.76 789.03 789.40 789.78 790.16 790.55 790.93 791.31 791.69 792.08 792.46 792.84 793.22 793.60 793.99 794.37 794.75 795.13 795.52 795.90 796.28 796.66 797.00 797.26 797.43 797.52 797.52 797.44 797.31 797.19 797.06 796.95 796.92 796.99 797.16 797.42 797.78 798.24 798.76 799.30 799.83

3627 3628 3629 3630 3631 3632 3633 3634 3635 3636 3637 3638 3639 3640 3641 3642

C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER E.8

4:36:54 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 17

FRANKLIN TWP.
T-82N R-5W
SEC. 16

N

Curve Data
Δ = 2° 50′ 10.78″ (LT)
T = 74.27
L = 148.51
R = 3,000.00
E = 0.92
e = NC

POT Sta 3644+87.26 (30W Connector)
= Sta 4643+09.97 (Willow Creek Rd.)

Sta. 645+19.31
36″ X 93.2′ RCP
D.A. = Ac
(U.A.C.)

Sta. 652+94.76
4′ X 5.5′ X 50.2′ RCB
D.A. = Ac

PC Sta 3646+40.22

PT Sta 3647+88.73

Sta 3647+88.73
End Construction

PI Sta 3647+14.49

95°27′47″

84°32′13″

95°27′47″

84°32′13″

WILLOW CREEK RD.

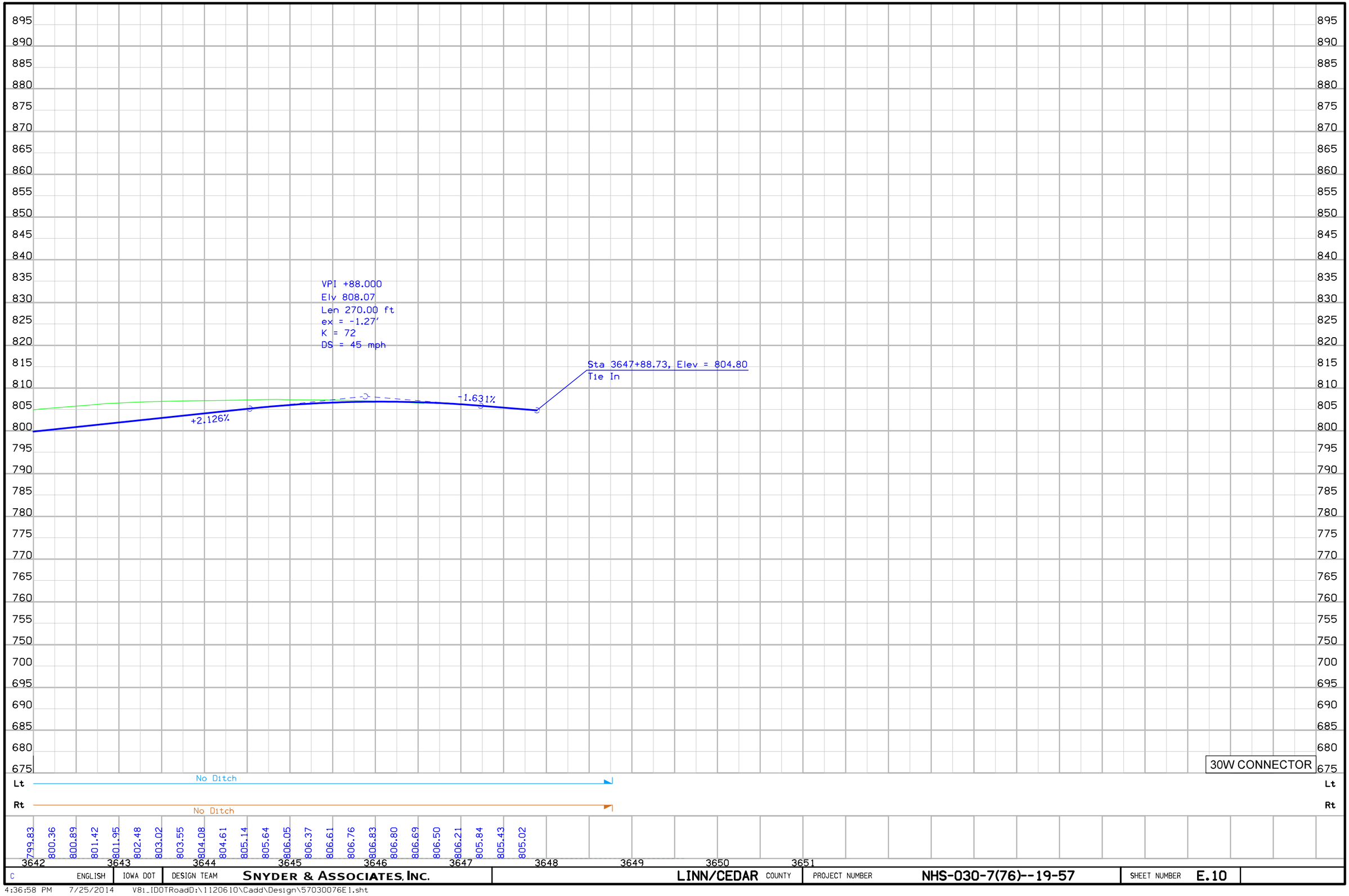
30W CONNECTOR

30W CONNECTOR

0 50
FEET

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER E.9

4:36:55 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER E.10

4:36:58 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

Sta. 606+64.71
30" X 79.4' RCP
D.A. = 2.5 Ac

Sta. 617+15.85
42" X 142.7' RCP
D.A. = 13.2 Ac

Sta. 5615+85.45
24" X 108.5' RCP
D.A. = 1.5 Ac

18" X 64.8' CMP

610
615
620
5605
5610
5615
2615

30

WILLOW CREEK ACCESS

STA 5607+06.29
BEGIN CONSTRUCTION

+23.00 Rt.Prop.
Type C Ent.

PC Sta 5611+08.76
PT Sta 5612+47.96
PI Sta 5611+81.96

PC Sta 5616+90.78
PT Sta 5617+36.33
PT Sta 5617+81.62

Curve Data
Δ = 10° 27' 25.11" (RT)
T = 73.21
L = 146.01
R = 800.00
E = 3.34
e = NC

Curve Data
Δ = 10° 24' 33.55" (LT)
T = 45.54
L = 90.84
R = 500.00
E = 2.07
e = NC

Sta. 5617+71.45
Install 36" X 84' UNCL
Skew = 51° Rt. Ahd.
Lt. 780.83
F.L. = Rt. 778.45

FRANKLIN TWP.
T-82N R-5W
SEC. 17

0 50
FEET

WILLOW CREEK ACCESS

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.11

4:36:59 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

Sta 5607+06.29, Elev = 829.58
Match Existing

-4.190%

5608+23.00 - Prop. Type C Ent. Rt.

WILLOW CREEK ACCESS

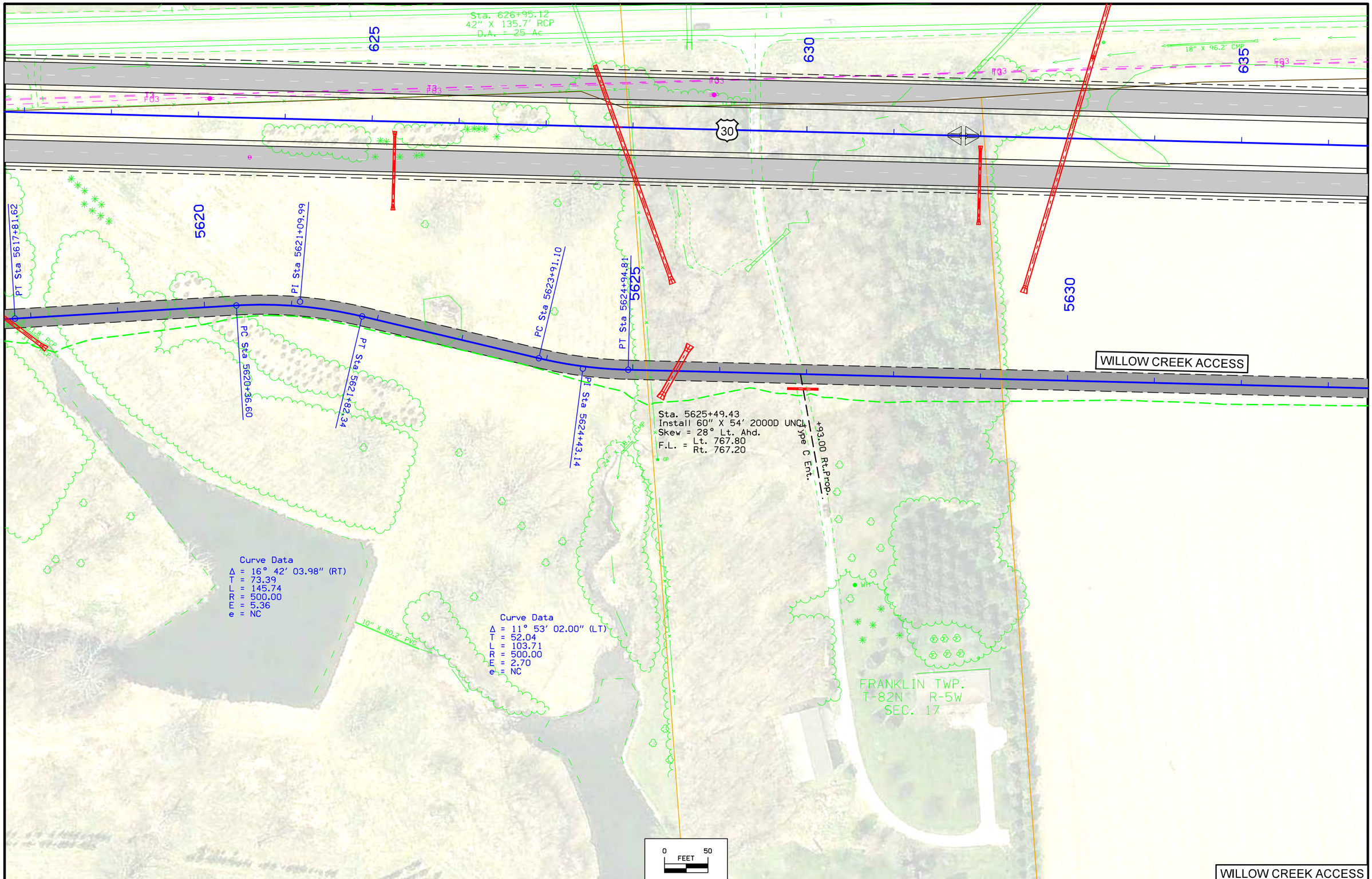
Lt — No Ditch

Rt — No Ditch — 'V' Ditch

5605	5606	5607	5608	5609	5610	5611	5612	5613	5614	5615	5616
		828.80	827.75	826.70	825.65	824.61	823.56	822.51	821.46	820.42	819.37
		818.32	817.27	816.23	815.18	814.13	813.08	812.04	810.99	809.94	808.89
		807.85	806.80	805.75	804.70	803.66	802.61	801.56	800.51	799.47	798.42
		797.37	796.32	795.28	794.23	793.18	792.13				

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.12

4:37:02 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER E.13

WILLOW CREEK ACCESS

4:37:02 PM 7/25/2014 V81_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

VPI +75.000
Elv 784.80
K = 26
Len 260.00 ft
ex = 3.19'

VPI +00.000
Elv 803.11
K = 20
Len 250.00 ft
ex = -3.92'

VPI +50.000
Elv 772.00
K = 26
Len 360.00 ft
ex = 6.17'

-4.190%
+5.634%
-6.913%
+6.792%
+8.0%

5626+93.00 - Prop. Type C Ent. Rt.

WILLOW CREEK ACCESS

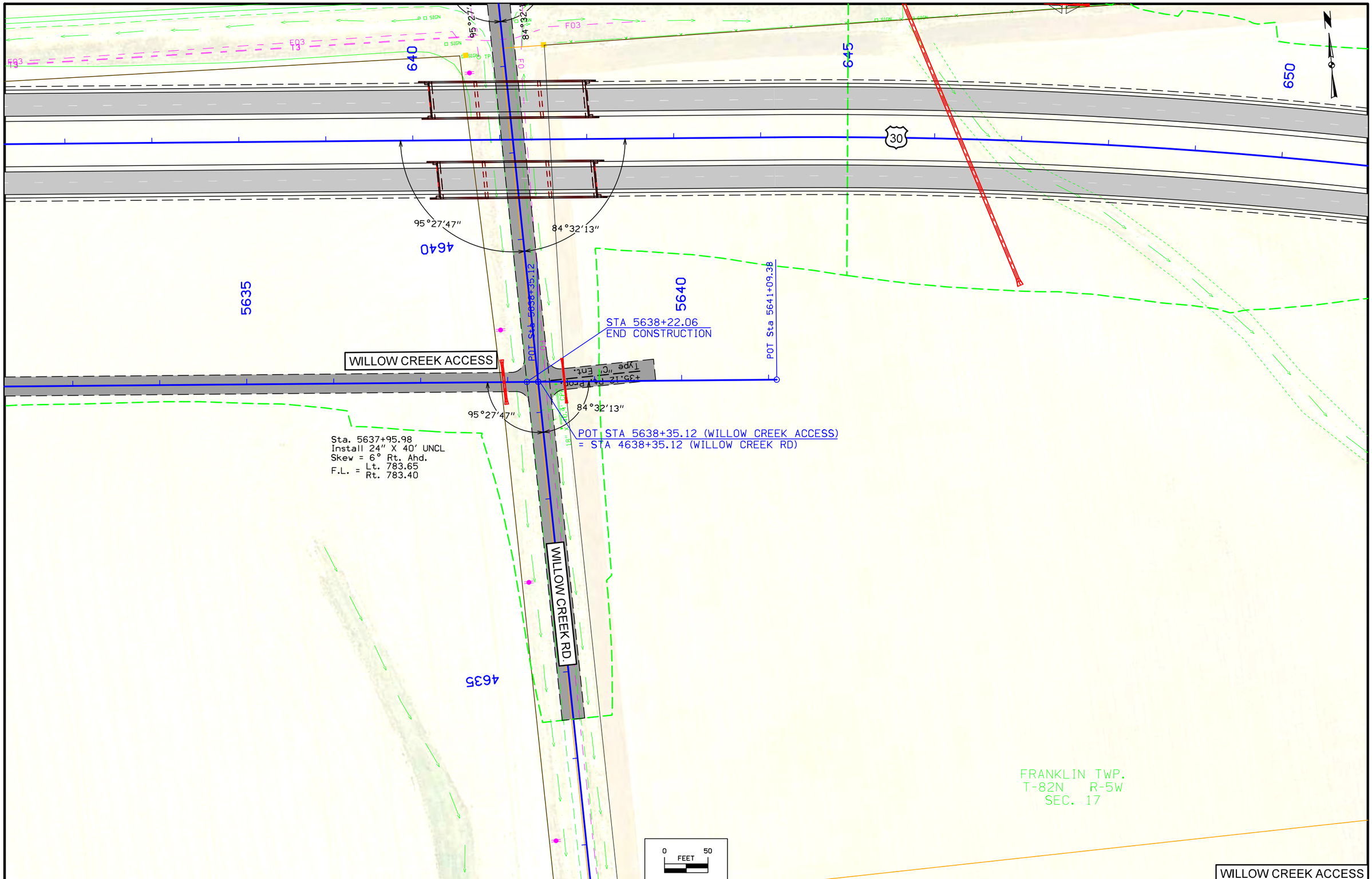
Lt Med Rt: 'V' Ditch; No Ditch

Lt Med Rt: No Ditch

5616	5617	5618	5619	5620	5621	5622	5623	5624	5625	5626	5627	5628	5629	5630	5631
792.13	791.09	790.04	789.16	788.52	788.11	787.93	787.99	788.29	788.83	789.60	790.60	791.85	793.25	794.66	796.07
797.32	798.26	798.88	799.19	799.19	798.87	798.24	797.30	796.04	794.47	792.74	791.01	789.28	787.56	785.83	784.10
782.54	781.22	780.13	779.28	778.67	778.30	778.17	778.27	778.61	779.19	780.01	781.07	782.36	783.89	785.58	787.28
788.98	790.68	792.38	794.07	795.77	797.47	799.17	800.87	802.56	804.26	805.95	807.43	808.60			

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.14

4:37:05 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER E.15

WILLOW CREEK ACCESS

4:37:06 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

VPI +60.000
Elv 813.43
K = 20
Len 230.00 ft
ex = -3.28'

VPI +20.000
Elv 787.48
K = 26
Len 200.00 ft
ex = 1.91'

-4.634%
-6.24% Lt. Ditch Grade
-4.53% Lt. Ditch Grade
-4.634%
-2.00% Lt. Ditch Grade
-2.12% Rt. Ditch Grade
+3.000%

+00 Lt.
807.85

+00 Lt.
801.61

+20 Lt.
787.11

+20 Rt.
787.11

+95 Rt.
783.40

+93 Lt.
783.65

Sta 5638+22.06, Elev = 790.54
Tie In

WILLOW CREEK ACCESS

Lt — Ditch Grade (5' Wide Ditch) — Transition

Rt — 'V' Ditch — Transition — Ditch Grade (5' Wide)

808.60	809.46	810.01	810.25	810.18	809.80	809.10	808.10	806.94	805.78	804.62	803.47	802.31	801.15	799.99	798.83	797.67	796.51	795.36	794.20	793.04	791.89	790.89	790.14	789.63	789.35	789.31	789.51	789.95
5631				5632				5633				5634				5635				5636								

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.16

4:37:10 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 17

FRANKLIN TWP.
T-82N R-5W
SEC. 16

WILLOW CREEK RD.

WILLOW CREEK ACCESS

30W CONNECTOR

Sta 4634+45.00
Begin Construction

Sta 4644+66.39
End Construction

POT STA 5638+35.12 (WILLOW CREEK ACCESS)
= STA 4638+35.12 (WILLOW CREEK RD)

POT Sta 4641+15.08 (Willow Creek Rd.)
= Sta 641+15.08 (Hwy 30)

POT Sta 4643+09.97 (Willow Creek Rd.)
= Sta 3644+87.26 (30W Connector)

+35.12 Rt. Prop. Type "C" Ent.

+69 Rt. Prop. Type "C" Ent.

18" X 40.4' CMP

10" X 20.5' CMP

Sta. 645+19.31
36" X 93.2' RCP
D.A. = Ac
(U.A.C.)

PC Sta 4644+66.39

95°27'47"

84°32'13"

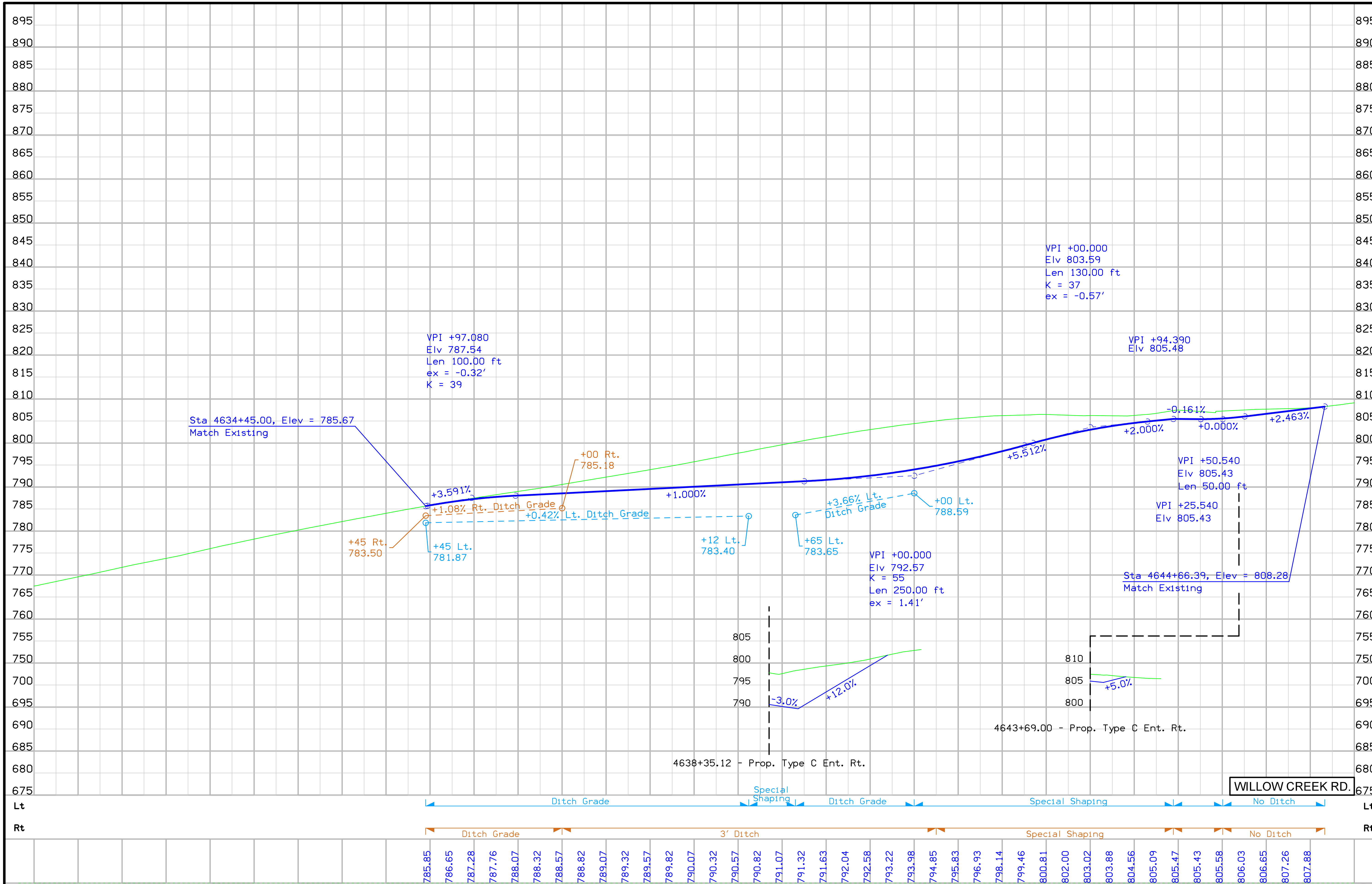
30

4630 4635 4640 640 5635 3640 3645 5640 645

0 50
FEET

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.17

4:37:11 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.18

4:37:15 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 16

Sta 6671+33.68
PC Curve 11.54' Lt.

Sta 6671+22.70
Begin Construction
Begin Widen and HMA Overlay

Sta 6674+01.32
PCC Curve 15.77' Lt.

Sta. 6676+00.65
Install 36" x 24' 2000D RCP EXTENSION
F.L. = Lt. 801.24
Other 802.71
Other 806.60
Rt. 807.13

End Widen and Overlay
Begin Urban Section
Sta 6676+81.95
PT Curve 20.00' Lt.

Sta 6676+81.95
35.00' Lt.

6670

6675

6680

(Extend)
Sta. 6676+00.65
36" X 88.4' RCP
D.A. = 9.2 Ac

Future Trail

IOWA HWY. 1

9300' R.

9300' R.

9300' R.

9300' R.

50:1 Taper

30:1 Taper

15:1 Taper

Sta 6674+19.16
PC Curve 12.50' Rt.

Sta 6679+54.17
PT Curve 20.00' Rt.

Future Sidewalk

Begin Urban Section
Sta 6676+81.95
16.02' Rt.

Sta 6676+90.04
PCC Curve 16.25' Rt.

Sta 6676+81.95
35.00' Rt.

Ent. +82.52 Rt.
(U.A.C.)

F02

F02

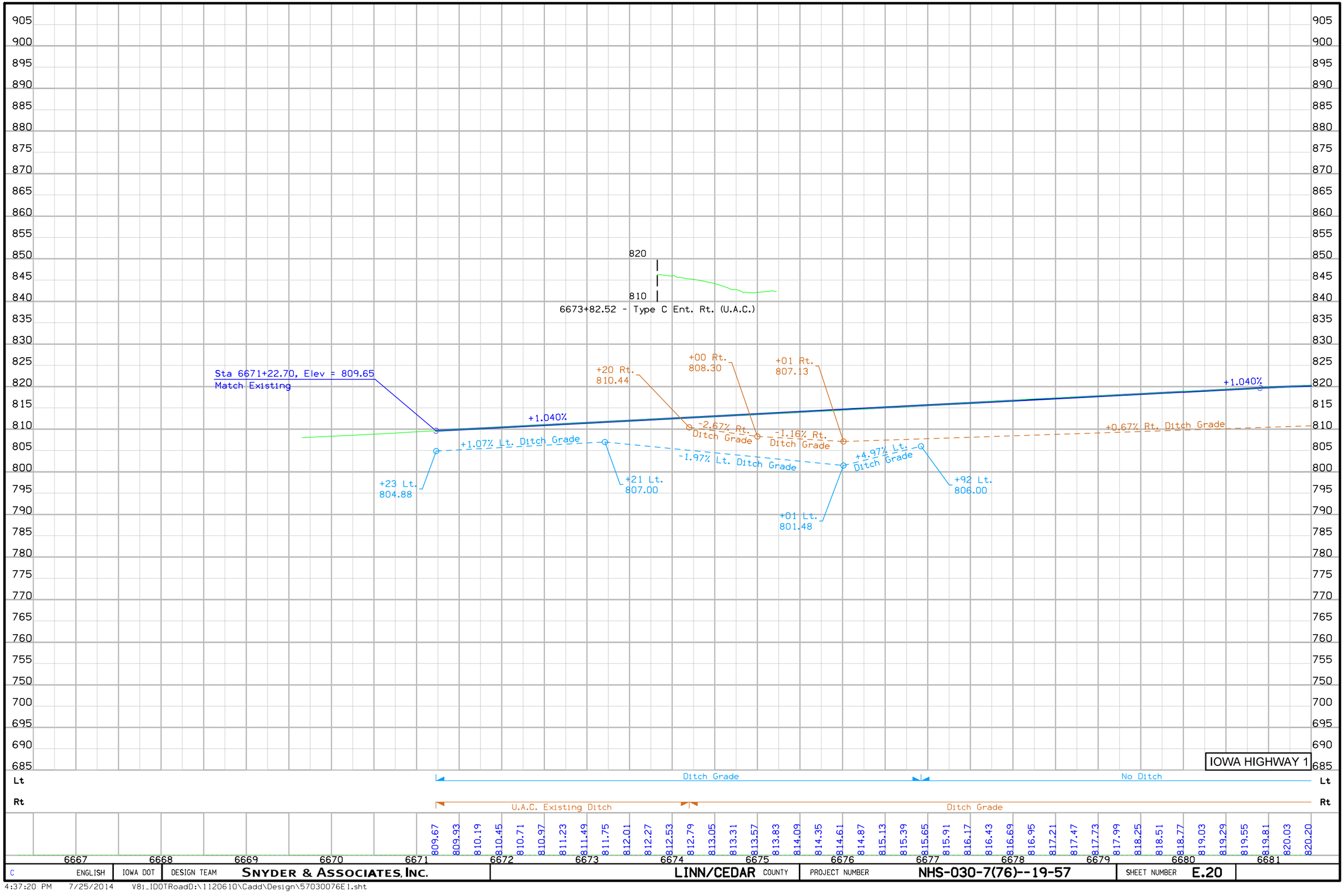
F02

0 50
FEET

IOWA HIGHWAY 1

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.19

4:37:16 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.20

4:37:20 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 16

IA. HWY. 1 RAMP 'B'

IA. HWY. 1 RAMP 'C'

IA. HWY. 1 RAMP 'D'

IA. HWY. 1 RAMP 'A'

IOWA HWY. 1

30

3585

685

6685

6690

6695

2585

4485

4490

690

1590

POT Sta 6683+53.95
=PI Sta 2586+72.90 (Ramp B)
=PI Sta 4486+17.40 (Ramp D)

POT Sta 6687+04.52 (Iowa 1)
=Sta 687+04.52 (Hwy 30)

POT Sta 6690+53.92 (Iowa 1)
=PI Sta 1587+37.69 (Ramp A)
=PI Sta 3587+90.06 (Ramp C)

Sta. 6689+68.63
30" X 66.8' RCP
D.A. = 9 Ac

Sta 6682+81.95
35.00' Lt.

Sta 6681+71.67
35.00' Rt.

Sta 6683+21.67
35.00' Rt.

+80.00 Lt. Prop. Type "C" Ent.

+80.00 Rt. Prop. Type "C" Ent.

Future Trail

Future Sidewalk

95°00'00"

111°57'17"

80°04'48"

99°55'12"

68°38'51"

85°00'00"

30:1 Taper

10:1 Taper

175'

150

12'

15'

16'

14'

6'

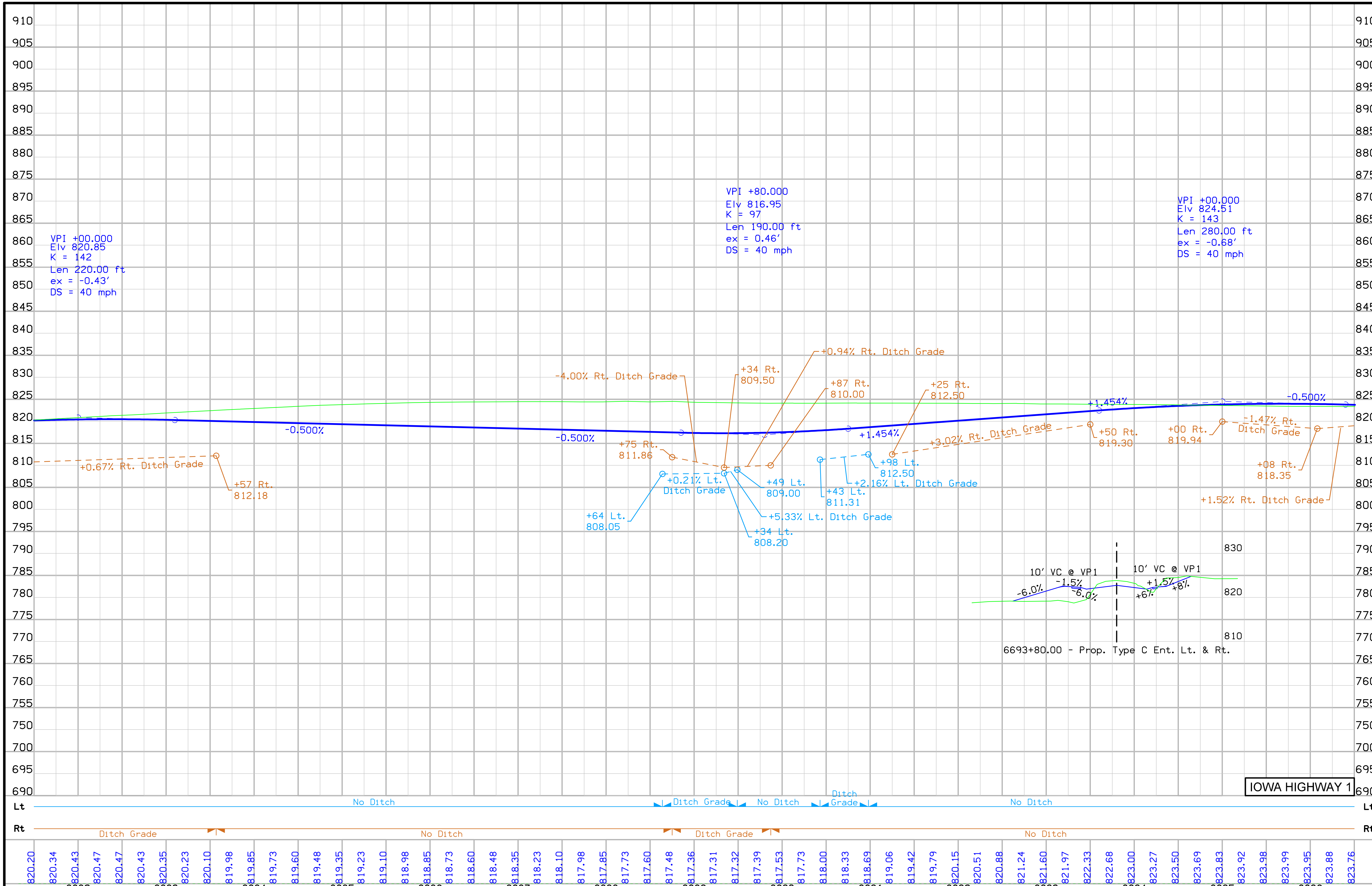
4'

0 FEET 50

IOWA HIGHWAY 1

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.21

4:37:21 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.22

4:37:25 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 16

FRANKLIN TWP.
T-82N R-5W
SEC. 15

S-26B

P-26A

E4(C)

Sta. 6696+03.33
2' X 2.2' X 71.2' RCB
D.A. = 10 Ac
(Remove)

Future Trail

57.00 Lt. Prop. Type "B" Ent.

POT Sta 6699+56.58 (Iowa Hwy. 1)
= Sta 20699+56.58 (Virgil Ave)

6700

20700

6705

6805

S-24 S-26 S-26A S-30 S-32

P-24 P-25 P-25A P-26 P-30 P-32A

15' 12' 16' 12' 15'

S-23 S-25 S-25A S-29 S-31

P-23 P-29 P-29A P-31

S-28 S-27 S-33 S-34

P-27 P-28

IOWA HWY. 1

VIRGIL AVE.

Future Sidewalk

18" X 68.8' CMP

18" X 20.7' CPP

24" X 36.9' RCP

22.00 Rt. Prop. Type "B" Ent.

33.00 Rt. Prop. Type "B" Ent.

43 Rt. Prop. Type "B" Ent.

06 Lt. Prop. Type "B" Ent.

500

POT Sta 6802+87.72

PC Sta 6803+87.72

PI Sta 6804+50.69

PC Sta 6805+13.06

PC Sta 6805+25.84

PCC Sta 6806+62.87

PI Sta 6707+31.55

PT Sta 6807+84.99

PC Sta 6705+17.08

PC Sta 6705+53.28

PI Sta 6706+53.73

PC Sta 6708+89.46

PI Sta 6706+29.77

PT Sta 6707+36.09

PC Sta 6707+71.69

PT Sta 6808+62.87

PI Sta 6708+22.51

PI Sta 6708+71.69

St.S.

TP

SIGN

EB

WV

Curve Data
Δ = 13° 43' 52.83" (RT)
T = 62.97
L = 125.34
R = 523.00
E = 3.78

Curve Data
Δ = 19° 33' 15.21" (LT)
T = 69.19
L = 137.03
R = 401.50
E = 5.92

Curve Data
Δ = 28° 32' 27.10" (LT)
T = 102.12
L = 200.00
R = 401.50
E = 12.78

Curve Data
Δ = 13° 41' 57.72" (RT)
T = 64.27
L = 127.92
R = 535.00
E = 3.85

Curve Data
Δ = 29° 27' 48.91" (LT)
T = 106.49
L = 208.27
R = 405.00
E = 13.77

Curve Data
Δ = 8° 58' 10.98" (RT)
T = 17.84
L = 35.60
R = 227.39
E = 0.70

Curve Data
Δ = 25° 11' 49.71" (RT)
T = 50.82
L = 100.00
R = 227.39
E = 5.61

0 FEET 50

IOWA HIGHWAY 1

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.23

4:37:26 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

VPI +62.390
Elv 820.70
K = 99
Len 300.00 ft
ex = 1.13'
DS = 40 mph

10' VC @ VP1
-1.5%
+8.0%
-6.0%
820
810
6699+57.00 - Prop. Type B Ent. Lt.

830
820
10' VC @ VP1
+6%
+1.5%
-5%
6703+33.00 - Prop. Type B Ent. Rt.

Sta 6706+37.07, Elev = 830.14
Tie In

-0.500%
+2.520%

+00 Rt.
819.75
+1.52% Rt. Ditch Grade

830
820
10' VC @ VP1
+6%
+1.5%
+6%
6701+22.00 - Prop. Type B Ent. Rt.

IOWA HIGHWAY 1

Lt No Ditch
Rt No Ditch

823.76 823.64 823.51 823.39 823.26 823.14 823.01 822.89 822.76 822.64 822.51 822.39 822.26 822.14 822.01 821.89 821.96 821.66 822.58 822.39 822.93 822.80 823.40 823.59 824.00 824.42 824.88 825.66 825.66 826.08 826.90 825.43 826.06 826.69 827.32 827.95 828.58 829.21 829.84

6697 6698 6699 6700 6701 6702 6703 6704 6705 6706

C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.24

4:37:29 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 23

Curve Data
Δ = 7° 12′ 49.69″ (RT)
T = 157.59
L = 314.76
R = 2,500.00
E = 4.96
e = 2.8%
I = 58′
x = 41′

Curve Data
Δ = 6° 54′ 04.99″ (LT)
T = 150.75
L = 301.13
R = 2,500.00
E = 4.54
e = 2.8%
I = 58′
x = 41′

Sta 7760+77.25
Begin Construction

Sta. 7766+59.00
Install 24″ X 56′ UNCL.
F.L. = Lt. 778.50
Rt. 779.98

Sta. 7769+83.00
Install 24″ X 170′ 3750D
F.L. = Lt. 766.85
Rt. 770.34

Sta. 7772+52.00
Install 24″ X 168′ 3750D
F.L. = Lt. 767.02
Rt. 770.35

7760
7765
7770
770
775

PI Sta 7763+16.44
PC Sta 7765+55.19
PT Sta 7768+56.32
POT Sta 7771+17.62
89°33′20″
90°26′40″

STANDING ROCK RD.

PC Sta 7761+58.85
PT Sta 7764+73.61
PI Sta 7767+05.94

Sta. 5755+30.79
15″ X 35.8′ CMP
D.A. = 3.6 Ac
(Remove)

Sta. 5760+48.37
24″ X 48.1′ CMP
D.A. = 10.6 Ac
(Remove)

POT Sta 7771+17.62 (Standing Rock)
= Sta 771+17.62 (Hwy 30)

Sta. 7771+17.62 (Standing Rock Rd.)
Construct 232′-0″ x 30′-0″ Pretensioned
Prestressed Concrete Beam Bridge

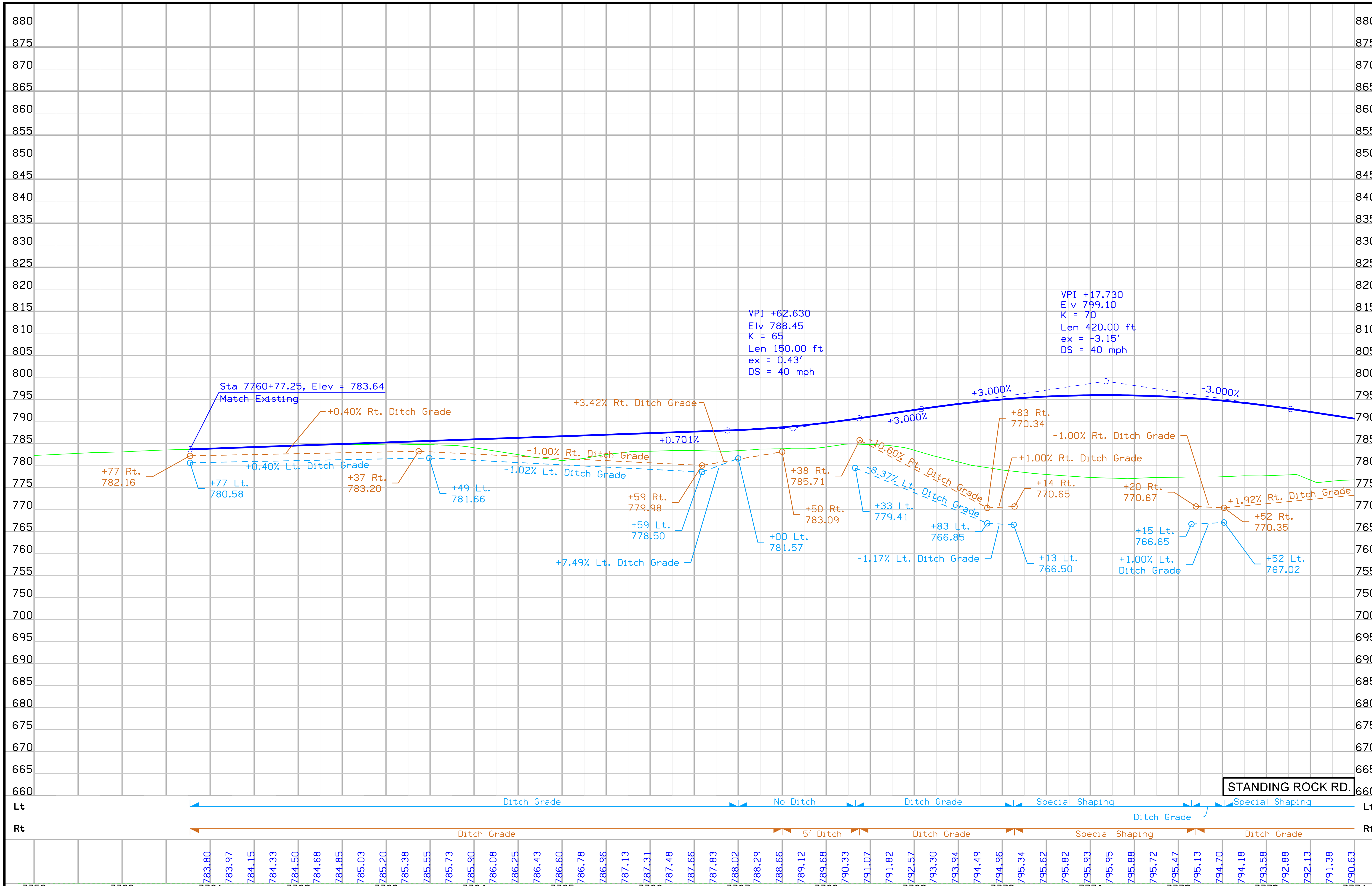
30

0 50
FEET

STANDING ROCK RD.

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.25

4:37:29 PM 7/25/2014 V81_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.26

4:37:44 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 14

Curve Data
Δ = 11° 07′ 53.13″ (LT)
T = 116.94
L = 233.14
R = 1,200.00
E = 5.68
e = 4.4%
l = 91′
x = 41′

Curve Data
Δ = 19° 06′ 49.01″ (LT)
T = 74.17
L = 146.96
R = 440.54
E = 6.20

7775
7780
7785

+77.00 Lt. Prop. Type "C" Ent.
+77.00 Rt. Prop. Type "C" Ent.
Ent. +26 Lt. (Close)
(Remove)
123.7' CMP
Sta. 5773+30.30
18" X 38.8' CMP
D.A. = 3.8 Ac
(Remove)
Ent. +29.57 Lt. (U.A.C.)
Ent. +23.35 Rt. (U.A.C.)
PT Sta 7781+89.04
PC Sta 7781+89.04
PT Sta 7784+22.18
PI Sta 7783+05.98
PC Sta 7786+07.16
PI Sta 7786+81.33
PT Sta 7787+54.12
POT Sta 7789+31.38
12" 123.7' CMP
Sta 7786+07.16
End Construction
Sta. 7784+64.50
Install 24" X 48' UNCL
Skew = 6° Lt. Ahd.
F.L. = Lt. 777.20
Rt. 779.90

STANDING ROCK RD.
BUD RD.

0 50
FEET

STANDING ROCK RD.

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.27

4:37:45 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

VPI +89.210
Elv 781.96
K = 64
Len 350.00 ft
ex = 2.38'
DS = 40 mph

VPI +35.000
Elv 790.42
K = 73
Len 310.00 ft
ex = -1.65'
DS = 40 mph

VPI +75.000
Elv 784.29
K = 64
Len 210.00 ft
ex = 0.87'
DS = 40 mph

VPI +40.000
Elv 786.77
Len 120.00 ft
K = 70
ex = -0.26'
DS = 40 mph

Sta 7786+07.16, Elev = 786.63
Match Existing

-3.000%
+2.448%
-1.803%
+1.503%
-0.208%

+1.92% Rt. Ditch Grade
+20 Rt. 779.33
+78 Rt. 783.78
-1.03% Rt. Ditch Grade
+90 Rt. 782.63
+70 Rt. 780.17
-0.30% Rt. Ditch Grade
+75 Rt. 787.20
+6.35% Rt. Ditch Grade
+60 Rt. 779.90

790
780
770
760
+12.5%
-1.53%
7775+77.00 - Prop. Type C Ent. Lt. & Rt.

790
780
770
760
7786+23.35 - Type C Ent. Lt. (U.A.C.)

STANDING ROCK RD.

Lt — Special Shaping

Rt — Ditch Grade | 5' Ditch | Ditch Grade | 5' Ditch | Ditch Grade | Special Shaping

790.63 789.88 789.13 788.38 787.63 786.89 786.23 785.67 785.20 784.84 784.57 784.39 784.32 784.34 784.46 784.67 784.99 785.40 785.91 786.50 787.09 787.59 788.00 788.33 788.58 788.73 788.81 788.79 788.69 788.51 788.24 787.88 787.45 786.99 786.54 786.09 785.71 785.43 785.24 785.16 785.17 785.28 785.49 785.79 786.14 786.40 786.57 786.65 786.64

7774 7775 7776 7777 7778 7779 7780 7781 7782 7783 7784 7785 7786 7787 7788 7789

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER E.28

4:37:48 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 23

Curve Data
Δ = 16° 28′ 46.05″ (LT)
T = 434.43
L = 862.86
R = 3,000.00
E = 31.29
e = 3.4%
l = 82′
x = 48′

8785

8790

8795

PC Sta 8789+69.35

SUTLIFF RD.

18"/24" X 47' CMP

T1

Sta 8788+63.95
Begin Construction

24" X 28' RCP

+46.00 Rt. Prop. Type "C" Ent.

+23.00 Rt. Prop. Type "B" Ent.

PT Sta 8794+03.78

MH

0 50
FEET

SUTLIFF RD.

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.29

4:37:49 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

8790+46.00 - Prop. Type C Ent. Rt.

780

-4.0% +8.0%

20' VC

770

+4.100%

+00 Rt.
795.09

+2.35% Rt. Ditch Grade

Sta 8788+63.95, Elev = 770.15
Match Existing

+64 Rt.
764.78

+4.25% Rt.
Ditch Grade

+4.58% Lt.
Ditch Grade

+50 Rt.
768.44

+50 Lt.
768.44

+64 Lt.
764.50

780

-4.0% +8.0%

20' VC

770

8791+23.00 - Prop. Type B Ent. Rt.

SUTLIFF RD.

Lt

Rt

Ditch Grade

5' Ditch

Ditch Grade

5' Ditch

Ditch Grade

770.60 771.63 772.65 773.68 774.70 775.73 776.75 777.78 778.80 779.83 780.85 781.88 782.90 783.93 784.95 785.98 787.00 788.03 789.05 790.08 791.10 792.13 793.15 794.18 795.20 796.23 797.25 798.28 799.30 800.33 801.35 802.38 803.40 804.43 805.45 806.48

8783 8784 8785 8786 8787 8788 8789 8790 8791 8792 8793 8794 8795 8796 8797

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.30

4:37:58 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 23

FRANKLIN TWP.
T-82N R-5W
SEC. 14

Sta. 8803+25.00
Install 24" X 160' 3750D RCP
F.L. = Lt. 801.99
Rt. 799.00

Sta. 6784+21.82
36" X 105.5' CMP
D.A. = 5.1 Ac
(Remove)

(Remove)

106°25'53"

73°34'07"

90°00'00"

8800

8805

805

8810

810

98'10

PT Sta 8798+32.21

SUTLIFF RD.

POT Sta 8806+92.36 (Sutliff Rd.)
= Sta 806+92.36 (Hwy 30)

POT Sta 8810+00.00 (Sutliff Rd.)
= Sta 9810+00.00 (Sutliff Access)

Sta. 8806+92.36
Construct 252'-0" x 40'-0" Pretensioned
Prestressed Concrete Beam Bridge
with 10° Skew

PC Sta 98104+95.00

+00.00 Rt. Ut. Prop.
Type "C" Ent.

PC Sta 8811+50.63

SUTLIFF ACCESS

PT Sta 9812+63.84

PT Sta 9814+27.14

30

FRANKLIN TWP.
T-82N R-5W
SEC. 13

0 50
FEET

SUTLIFF RD.

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.31

4:37:59 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

VPI +65.000
Elv 819.39
Len 290.00 ft
ex = +0.75'
K = 140
DS = 50 mph

VPI +25.000
Elv 834.85
Len 190.00 ft
ex = 0.47'
K = 97
DS = 50 mph

+4.100%
+2.034%
+2.034%
+4.000%
-3.73% Lt. Ditch Grade
+0.30% Lt. Ditch Grade
+7.65% Lt. Ditch Grade
+2.35% Rt. Ditch Grade
+8.67% Rt. Ditch Grade
+8.0% Rt. Ditch Grade

+00 Rt.
802.14

+40 Lt.
812.61

+25 Lt.
801.99

+25 Rt.
799.00

+75 Rt.
812.00

+72 Lt.
802.73

+91 Lt.
801.94

+50 Lt.
829.40

+00 Rt.
823.94

SUTLIFF RD.

Lt	5' Ditch	Ditch Grade	Special Shaping	Ditch Grade	No Ditch
Rt	Ditch Grade	No Ditch	Ditch Grade	Special Shaping	No Ditch	Ditch Grade

806.48 807.50 808.53 809.55 810.58 811.60 812.63 813.65 814.65 815.60 816.50 817.36 818.18 818.95 819.67 820.36 820.99 821.59 822.14 822.65 823.16 823.66 824.17 824.68 825.19 825.70 826.21 826.71 827.22 827.73 828.24 828.75 829.26 829.77 830.27 830.78 831.29 831.80 832.31 832.82 833.35 833.94 834.60 835.32 836.10 836.95 837.87 838.85 839.85 840.85 841.85 842.85 843.85 844.85 845.85 846.85 847.85 848.85 849.85 850.85 851.85

8798 8799 8800 8801 8802 8803 8804 8805 8806 8807 8808 8809 8810 8811 8812

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.32

4:38:02 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 14

Curve Data
Δ = 5° 53′ 19.91″ (RT)
T = 154.31
L = 308.34
R = 3,000.00
e = 3.4%
l = 82′
x = 48′

8815

8820

FI Sta 8813+04.94

PT Sta 8814+58.97

+68.00 Lt. Prop. Type "M" Ent.

Sta 8819+78.00
End Construction

POT Sta 8821+58.97

SUTLIFF RD.

15" X 37.3' CMP

15" X 84.6' CMP

15" X 32.6' CPP

Ent. 196 - Rt. (U.A.C.)

0 50
FEET

SUTLIFF RD.

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.33

4:38:03 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

Sta 8819+78.00, Elev = 880.97
Match Existing

+4.000%

+5.65% Rt. Ditch Grade

+4.08% Lt. Ditch Grade

+73.80 Rt.
876.78

+78 Lt.
875.79

+00 Lt.
872.61

+00 Rt.
872.61

+8.0% Rt. Ditch Grade

+17 Rt.
857.29

8817+68.00 - Prop. Type C Ent. Lt.

+11.8% +4.0%

SUTLIFF RD.

Lt: No Ditch | 5' Ditch | Ditch Grade

Rt: Ditch Grade | 5' Ditch | Ditch Grade

851.85 852.85 853.85 854.85 855.85 856.85 857.85 858.85 859.85 860.85 861.85 862.85 863.85 864.85 865.85 866.85 867.85 868.85 869.85 870.85 871.85 872.85 873.85 874.85 875.85 876.85 877.85 878.85 879.85 880.85

8813 8814 8815 8816 8817 8818 8819 8820 8821

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.34

4:38:06 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 13

Curve Data
Δ = 9° 49′ 19.97″ (LT)
T = 42.96
L = 85.71
R = 500.00
E = 1.84
Refer to other sheets
for special shapes.

Curve Data
Δ = 22° 57′ 10.46″ (LT)
T = 162.42
L = 320.48
R = 800.00
e = 5.4%
l = 111′
x = 41′

GREEN RIDGE RD.

POT Sta 10829+47.82
PC Sta 10829+91.85
10830
PT Sta 10830+77.57
PC Sta 10830+85.05
PI Sta 10832+47.47
PT Sta 10834+05.53
10835

Sta 10829+66.35
Begin Construction

PI Sta 10830+34.8

POT Sta 10838+87.30 (Green Ridge Rd.)
= Sta 838+87.30 (Hwy 30)

105°04′10″

Sta. 10838+87.30 (Green Ridge Rd.)
Construct 299′-6″ x 30′-0″
Pretensioned Prestressed Concrete
Beam Bridge with 15° Skew (L.A.)

30

835

10840

PC Sta 10840+50.62

15" x 25.5' CMP

98.5' x 60.0' 0.9 AC

24" x 41.6' CMP

74°55′50″

431.00' Rt. Prop. Type C Ent.

15" W 40.6' HDPE

24" x 41.6' CMP

840

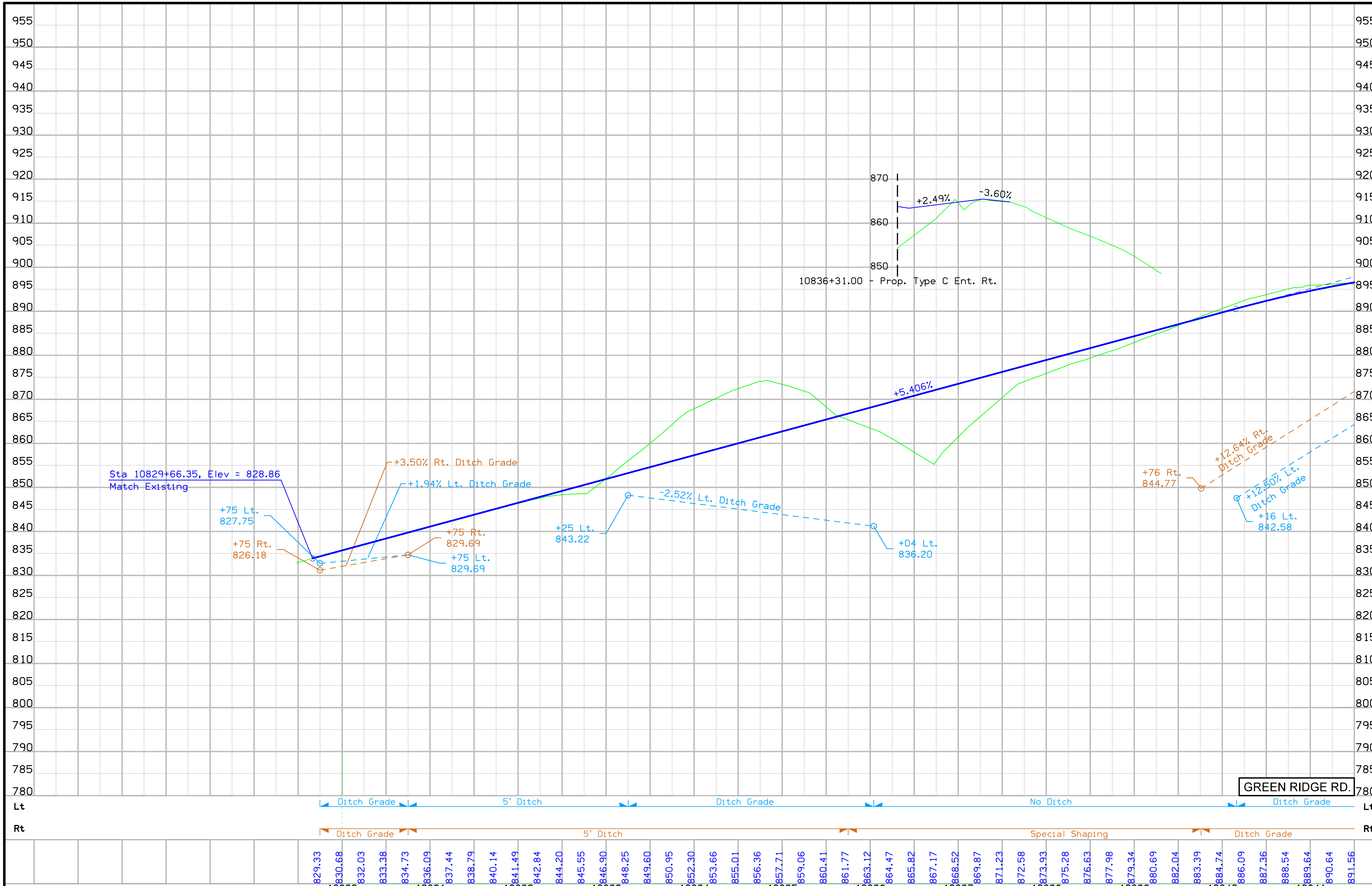
Ent. +47 Rt. (Close)

0 FEET 50

GREEN RIDGE RD.

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.35

4:38:07 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER	E.36

FRANKLIN TWP.
T-82N R-5W
SEC. 13

10845

Curve Data
Δ = 31° 38' 06.41" (RT)
T = 226.64
L = 441.71
R = 800.00
e = 5.4%
I = 111'
x = 41'

PI Sta 10842+77.26

Sta 10845+85.00
End Construction

POT Sta 10849+59.15

PC Sta 10840+50.62

PT Sta 10844+92.33

15" X 30.8' HDPE

15" X 40.8' HDPE

15" X 68' CMP

15" X 26.7' CMP

Ent. +36 Rt.
(U.A.C.)

Ent. +78 Rt.
(U.A.C.)

Ent. +41 Rt.
(Close)

GREEN RIDGE RD.

0 50
FEET

GREEN RIDGE RD.

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.37

4:38:11 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

C	ENGLISH	IOWA DOT	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER **E.38**

FRANKLIN TWP.
T-82N R-5W
SEC. 18

Overexcavation Limits

+70.00 Lt.Prop.
Type "C" Ent.

11860

ADAMS AVE.

PI Sta 11855+55.46

11855

PT Sta 11857+84.24

PC Sta 11852+94.84

POT Sta 11851+58.99

Sta. 11854+90.82
Install 72" X 224' 3000D RCP
Skew = 41° Rt. Ahd.
F.L. = Lt. 836.00
Rt. 838.17

Overexcavation Limits

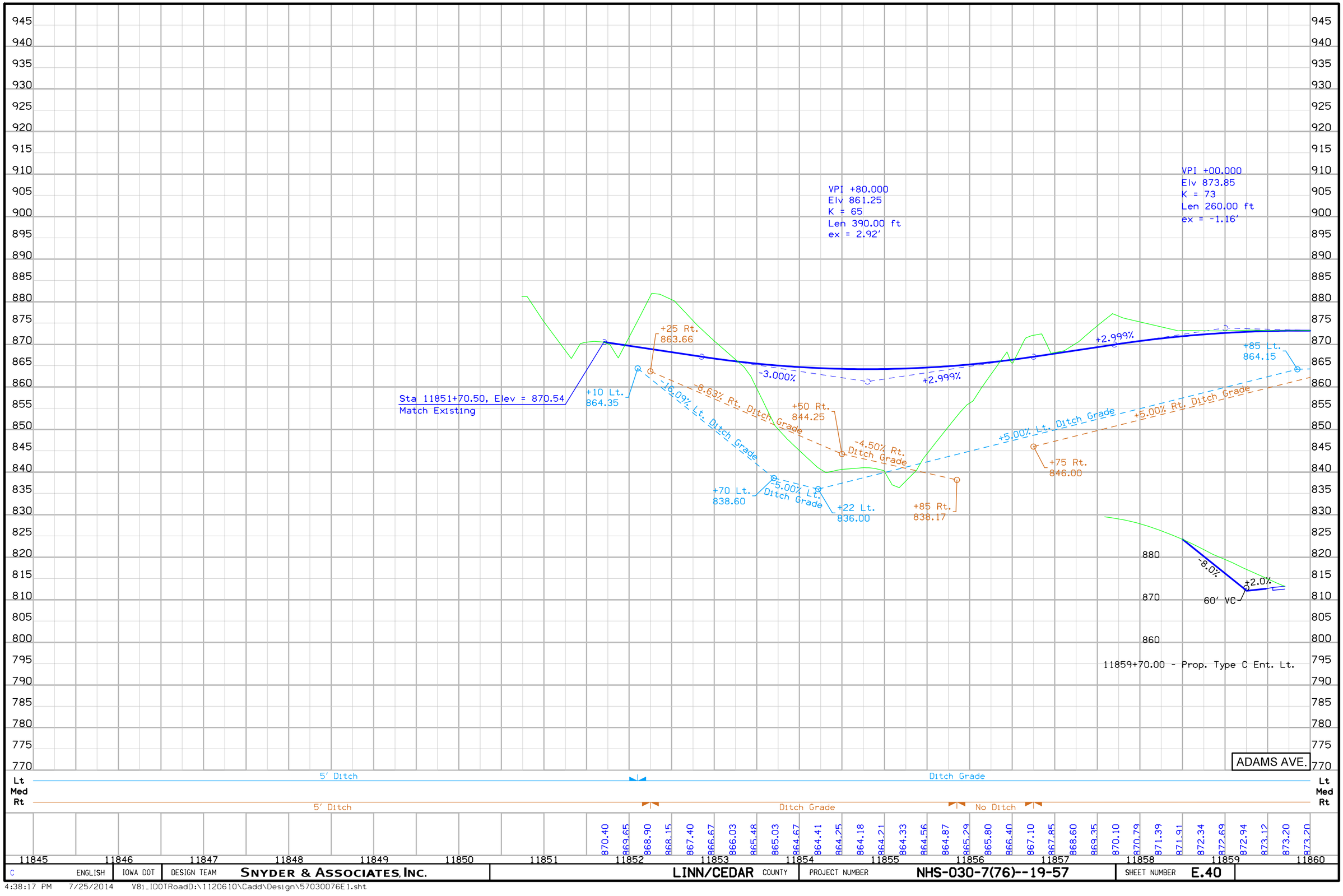
Curve Data
Δ = 48° 45' 59.16" (RT)
T = 260.63
L = 489.40
R = 575.00
E = 56.31
e = 6.0%
l = 124'
x = 41'

0 50
FEET

ADAMS AVE.

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.39

4:38:17 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.40

4:38:17 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 18

FRANKLIN TWP.
T-82N R-5W
SEC. 13

865

3565

Sta. 11874+23.40
Install 30" X 140' 2000D RCP
Skew = 9° Lt. Ahd.
F.L. = Lt. 864.10
Rt. 865.90

ADAMS AVE. RAMP 'B'

Sta. 11869+70.26
Construct 232'-0" x 60'-0"
Prestensioned Prestresses Concrete
Beam Bridge with 9° Skew

30

Sta. 11871+64.50
Install 24" X 226' 3750D RCP
Skew = 8° Lt. Ahd.
F.L. = Lt. 861.00
Rt. 862.23

ADAMS AVE. RAMP 'C'

11860

2570

11865

11870

POT Sta 11869+70.26

11875

63°00'00"

98°46'24"

83°19'19"

ADAMS AVE.

4570

870

PI Sta 2570+73.94 (Ramp B)=
PI Sta 4569+91.41 (Ramp D)=
POT Sta 11865+70.26 (Adams)

83°19'19"

81°13'36"

63°00'00"

POT Sta 869+70.26 (Hwy 30)
= Sta 11869+70.26 (Adams)

PI Sta 1568+66.58 (Ramp A)=
PI Sta 3569+49.10 (Ramp C)=
POT Sta 11873+70.26 (Adams)

ADAMS AVE. RAMP 'D'

ADAMS AVE. RAMP 'A'

1570

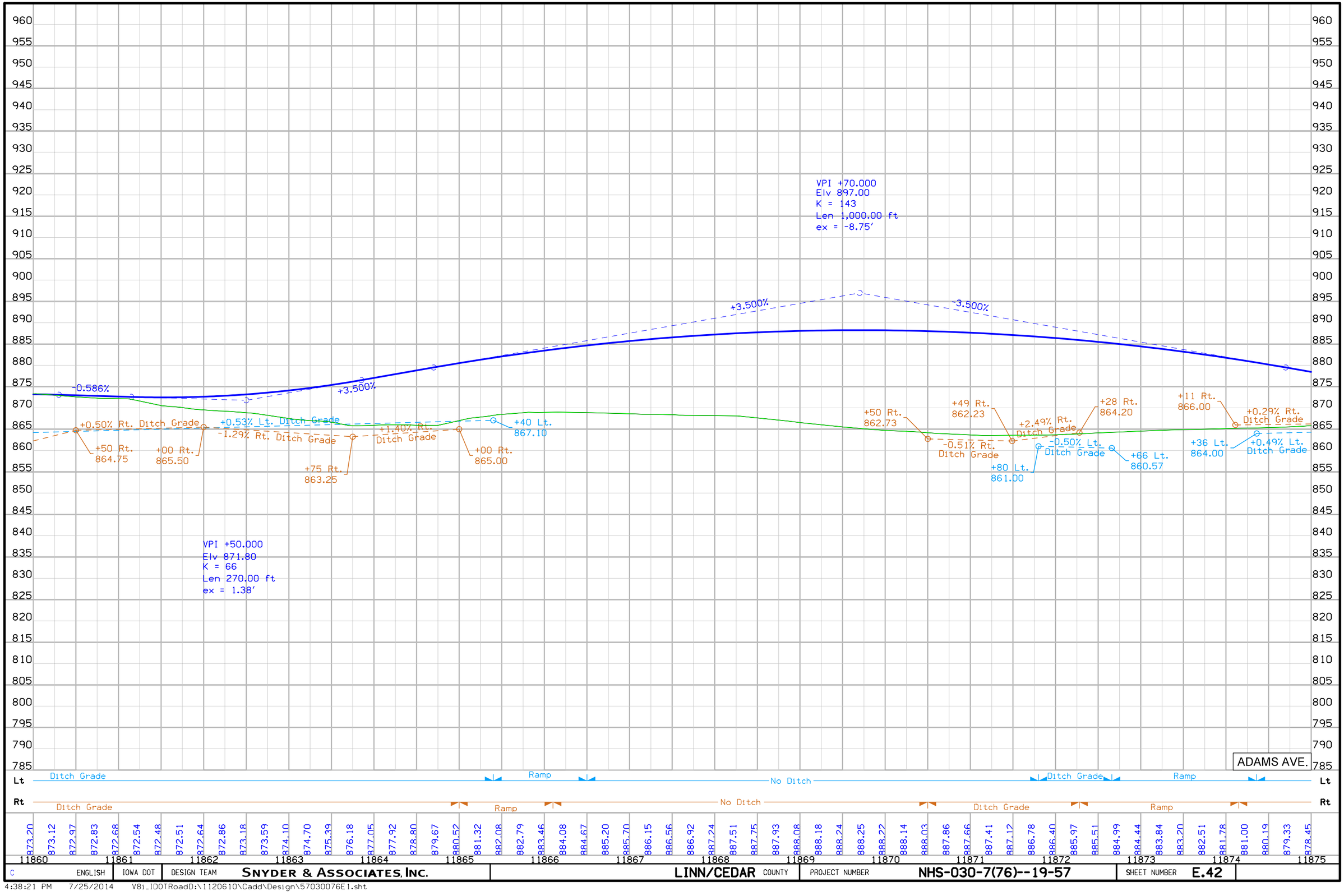
(RT)

0 FEET 50

ADAMS AVE.

C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.41

4:38:21 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.42

4:38:21 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 13

Sta. 11882+42.00
Install 30" x 66' 2000D RCP
F.L. = Lt. 863.00
Rt. 863.60

Sta. 11889+50.00
Install 30" X 104' 2000D RCP
F.L. = Lt. 840.00
Rt. 843.45

11875

11880

11885

11890

+71.00 Lt.Prop. Type "C" Ent.

+71.00 Rt.Prop. Type "C" Ent.

+00.00 Rt.Prop. Type "C" Ent.

PC Sta 11886+23.36

PI Sta 11889+00.79

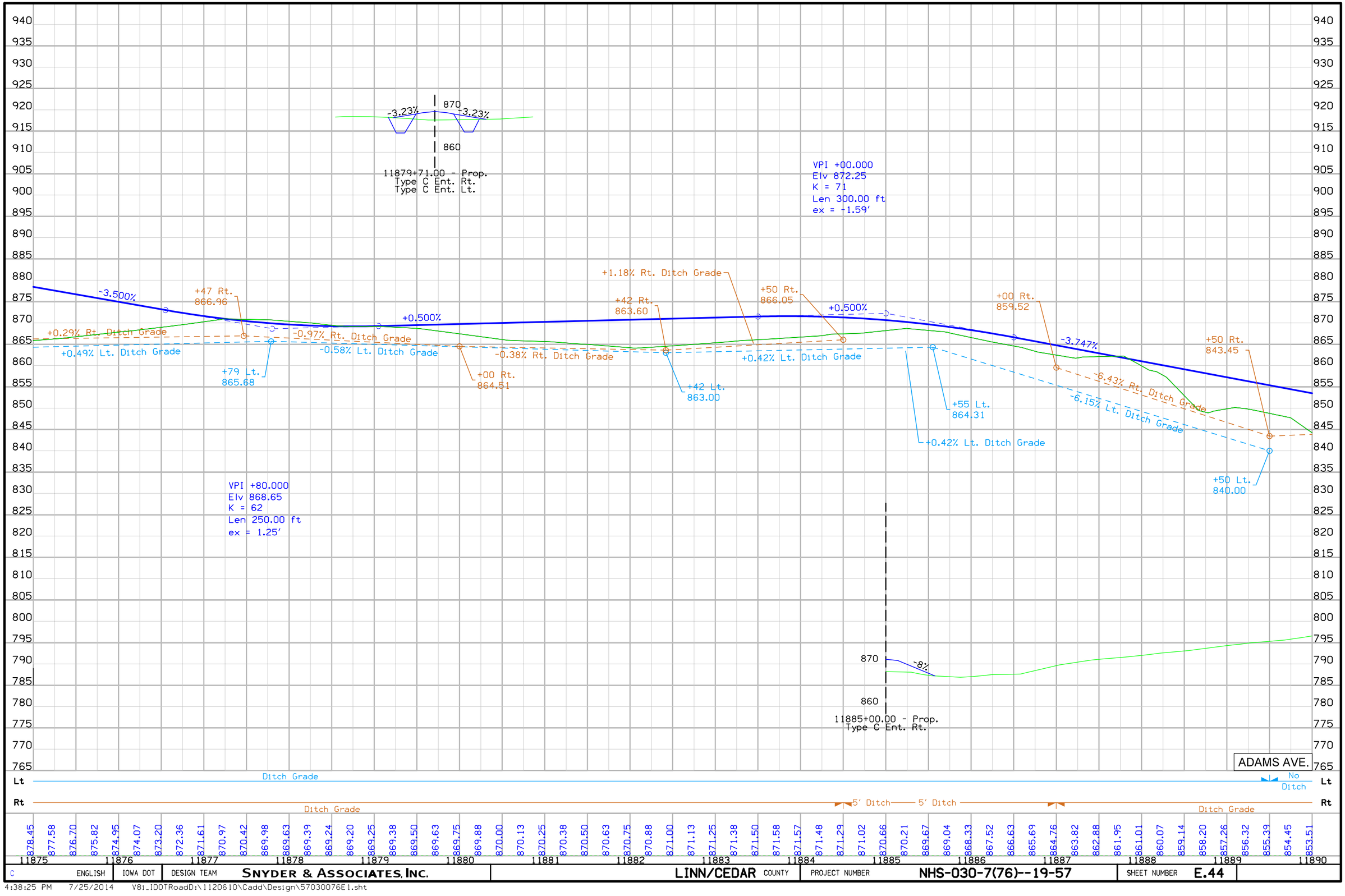
ADAMS AVE.

ADAMS AVE.

0 FEET 50

C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.43

4:38:24 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.44

4:38:25 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 13

Overexcavation Limits

Sta. 11895+32.95
Install Twin 12' X 9' X 151' RCB
Skew = 14° Rt. Ahd.
15° Headwalls
F.L. = Lt. 811.65
Rt. 813.20

11895

PI Sta 11896+25.42

Curve Data
Δ = 53° 06' 34.69" (RT)
T = 324.85
L = 602.51
R = 650.00
E = 76.66
e = 5.8%
l = 120'
x = 41'

Sta. 11898+43.20
Install 24" X 96'+2000 RCP
Skew = 28° Lt. Ahd.
F.L. = Lt. 841.50
Rt. 836.50

11890

PT Sta 11891+75.96

ADAMS AVE.

PC Sta 11893+00.56

Curve Data
Δ = 12° 39' 53.02" (LT)
T = 277.43
L = 552.60
R = 2,500.00
E = 15.35
e = 2.8%
l = 58'
x = 41'

Overexcavation Limits

11900

PT Sta 11899+03.07

PC Sta 11900+41.11

24" X 96' CMP

24" X 43'-8" CMP

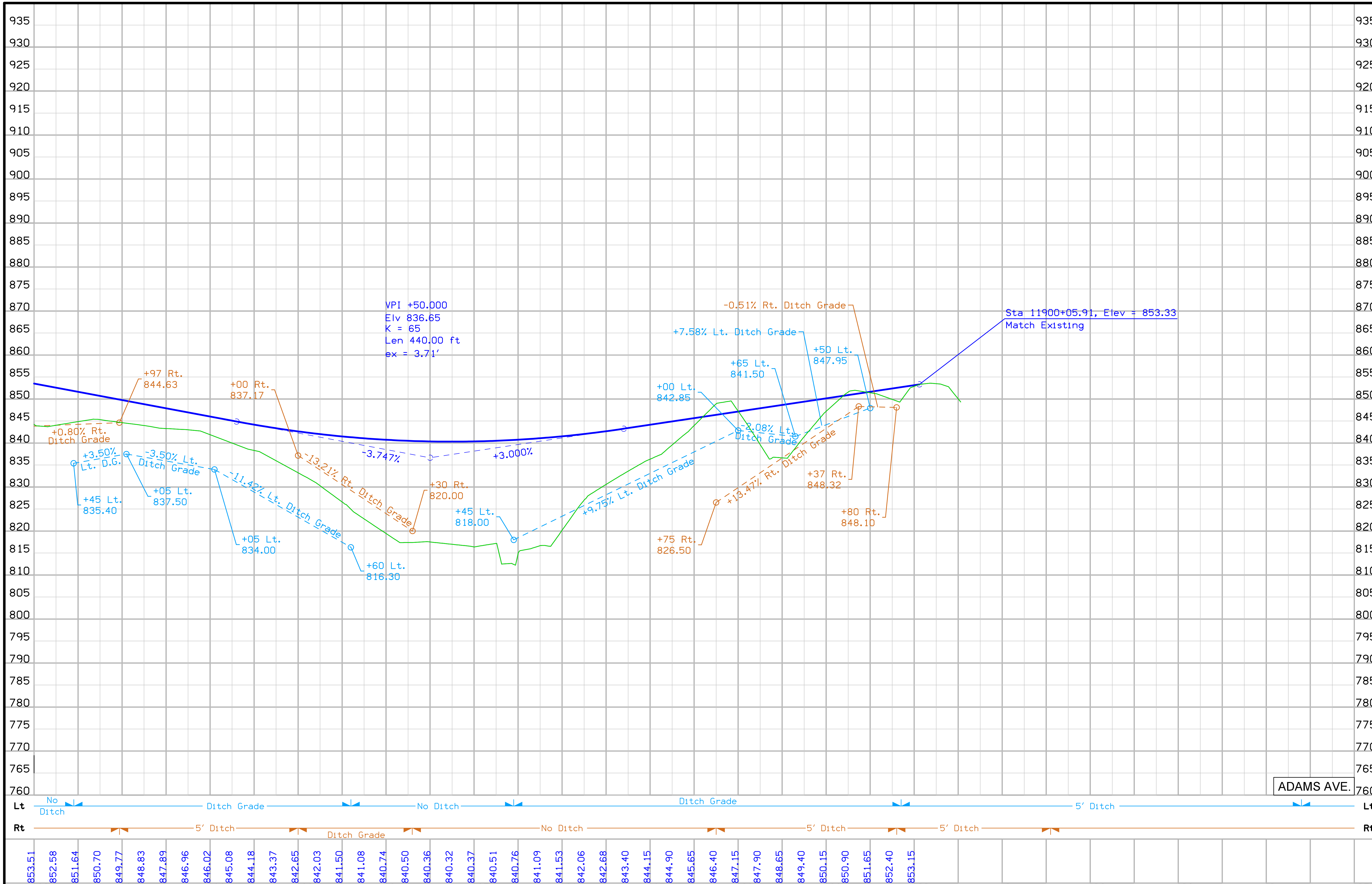
24" X 36'-8" CMP

0 FEET 50

ADAMS AVE.

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.45

4:38:28 PM 7/25/2014 V81_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER E.46

4:38:29 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

PIONEER TWP.
T-82N R-4W
SEC. 8

Sta. 957+00
Construct PV-504 Crossover

945 950 955 960

16945 16950 16955 16960

30

Sta 926+22.14
30" X 62.5' RCP
D.A. = 7.6 Ac
(U.A.C.)

PI Sta 16956+01.02

18" X 33.9' CMP

EXISTING U.S. HWY. 30

KIRKWOOD 4

49.18
X 88.1 RCB
03 Ac

18" X 71.2' CMP

T1

Sta 16951+42.71
Begin Construction

279.00 Rt. Prop.
Type "C" Ent.

PC Sta 16952+64.91

Sta 16+02 Rt.
(U.A.C.)

PT Sta 16959+30.91

Curve Data
Δ = 19° 04' 46.21" (RT)
T = 336.11
L = 666.00
R = 2,000.00
E = 28.05
e = 4.4%
l = 106'
x = 48'

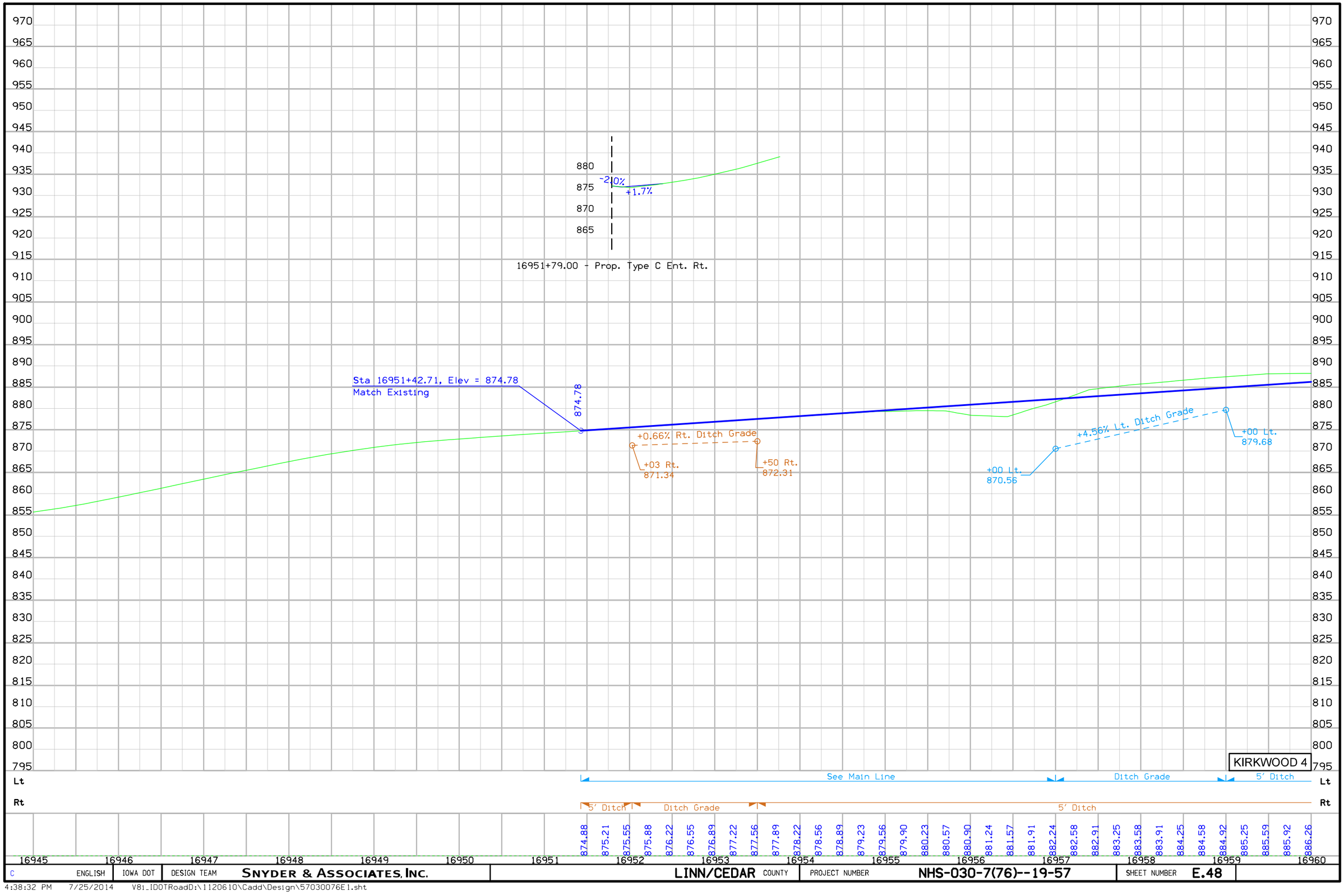
PIONEER TWP.
T-82N R-4W
SEC. 17

0 50
FEET

KIRKWOOD 4

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.47

4:38:30 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.48

4:38:32 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

PIONEER TWP.
T-82N R-4W
SEC. 8

960
965
970
975
16960
16965
16970
16975

EAST TRANSITION

Sta. 941+83.42
30" X 60.4' RCP
D.A. = 4.9 Ac

SIGN

PC Sta 16960+79.31

PT Sta 16966+63.36

Sta. 16970+91.44
Install 18" X 100' UNCL
Skew = 30° Rt. Ahd.
F.L. = Lt. 883.50
Rt. 883.92

KIRKWOOD 4

PI Sta 16963+73.43

Curve Data
Δ = 16° 43' 54.29" (LT)
T = 294.12
L = 584.05
R = 2,000.00
E = 21.51
e = 4.4%
l = 106'
x = 48'

PIONEER TWP.
T-82N R-4W
SEC. 17

0 50
FEET

KIRKWOOD 4

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.49

4:38:33 PM 7/25/2014 V81_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

975 970 965 960 955 950 945 940 935 930 925 920 915 910 905 900 895 890 885 880 875 870 865 860 855 850 845 840 835 830 825 820 815 810 805 800

VPI +80.000
Elv 898.04
K = 171
Len 540.00 ft
ex = -2.13'
DS = 60 mph

+76 Lt.
888.44

+1.339%

-1.820%

+92 Lt.
885.30

+30 Rt.
886.77

+0.62% Rt. Ditch Grade

+41 Rt.
889.30

-1.94% Rt. Ditch Grade

-1.01% Lt. Ditch Grade

+0.77% Lt. Ditch Grade

+0.50% Rt. Ditch Grade

+14 Rt.
884.90

+62 Lt.
883.53

+18 Rt.
883.92

KIRKWOOD 4

Lt 5' Ditch Ditch Grade 5' Ditch Lt

Rt 5' Ditch Ditch Grade 5' Ditch Rt

886.26 886.59 886.93 887.26 887.60 887.93 888.27 888.60 888.94 889.27 889.61 889.94 890.27 890.61 890.94 891.28 891.61 891.95 892.28 892.62 892.95 893.29 893.62 893.96 894.29 894.62 894.91 895.17 895.39 895.58 895.73 895.84 895.91 895.95 895.95 895.92 895.85 895.74 895.60 895.42 895.20 894.94 894.65 894.33 893.96 893.56 893.13 892.67 892.22 891.76 891.31 890.85 890.40 889.94 889.49 889.03 888.58 888.12 887.67 887.21 886.76

16960 16961 16962 16963 16964 16965 16966 16967 16968 16969 16970 16971 16972 16973 16974 16975

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.50

4:38:36 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

PIONEER TWP.
T-82N R-4W
SEC. 8

87°43'58"

92°16'02"

Sta. 959+53.68
5' X 3' X 87.3' RCB
D.A. = 71.5 Ac

SIGN

80' X 52.2' RCP

EXISTING U.S. HWY 30

CHARLES AVE.

17980

16975

16980

16985

87°11'09"

92°48'51"

Sta. 16981+90.00
Install 36"x56' 2000D RCAP
Skew = 3° Rt. Ahd.
F.L. = Lt. 869.65
Rt. 871.29

KIRKWOOD 4

POT Sta 16987+97.82

Sta 16982+22.34
End Construction

POT Sta 16982+34.36 (Kirkwood 4)
= Sta 17978+35.02 (Charles Ave.)

17975

CMP

PIONEER TWP.
T-82N R-4W
SEC. 17

0 FEET 50

KIRKWOOD 4

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.51

4:38:36 PM 7/25/2014 V81_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

VPI +14.869
Elv 875.57
K = 39
Len 150.00 ft
ex = 0.72'

877.72

Sta 16982+22.34, Elev = 877.72
Tie In

-1.820%

+2.000%

-0.36% Rt. Ditch Grade

-1.24% Lt.
Ditch Grade

+30 Rt.
871.87

+00 Lt.
870.75

+89 Lt.
869.65

+92 Rt.
871.29

KIRKWOOD 4

Lt — 5' Ditch — Ditch Grade

Rt — 5' Ditch — Ditch Grade

16975	16976	16977	16978	16979	16980	16981	16982	16983	16984	16985	16986	16987
886.76	886.30	885.85	885.39	884.94	884.48	884.03	883.57	883.12	882.66	882.21	881.75	881.30	880.84	880.39	879.94	879.48	879.03	878.57	878.12	877.66	877.21	876.76	876.45	876.30	876.31	876.48	876.80	877.27

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.52

4:38:40 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

PIONEER TWP.
T-82N R-4W
SEC. 17

PIONEER TWP.
T-82N R-4W
SEC. 8

KIRKWOOD 4

16980

17980

980

17985

POT Sta 17974+92.10

17975

Begin Construction
Sta 17977+91.00

87°11'09"

CHARLES AVE.

PI Sta 17981+54.63

87°43'58"

POT Sta 17986+15.04

18" X 28.3' CMP

35.00 Rt. Prof.
Safety Ramp

92°48'51"

92°48'51"

End Construction
Sta 17981+31.83

92°16'02"

POT Sta 16982+34.36 (Kirkwood 4)
= Sta 17978+35.02 (Charles Ave.)

POT Sta 17981+93.43 (Charles Ave.)
= Sta 981+93.43 (Hwy 30)

Sta. 17981+06.15
Install 52"x32"x40' 2000D RCAP
Skew = 1° Lt. Ahd.
F.L. = Lt. 868.57
Rt. 868.25

EXISTING U.S. HWY 30

985

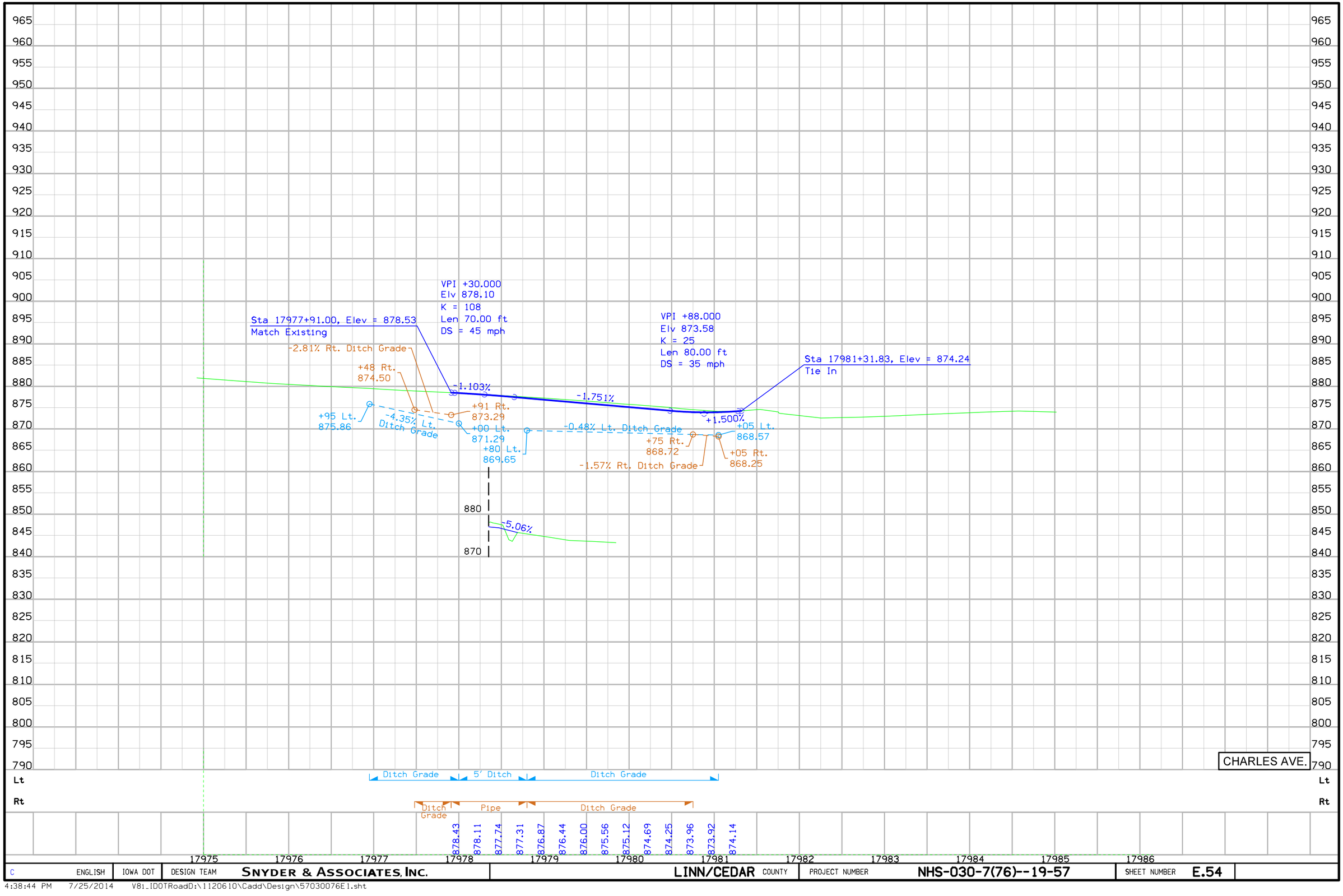
Sta. 959+53.68
5' X 3' X 87.3' RCB
D.A. = 71.5 Ac

0 50
FEET

CHARLES AVE.

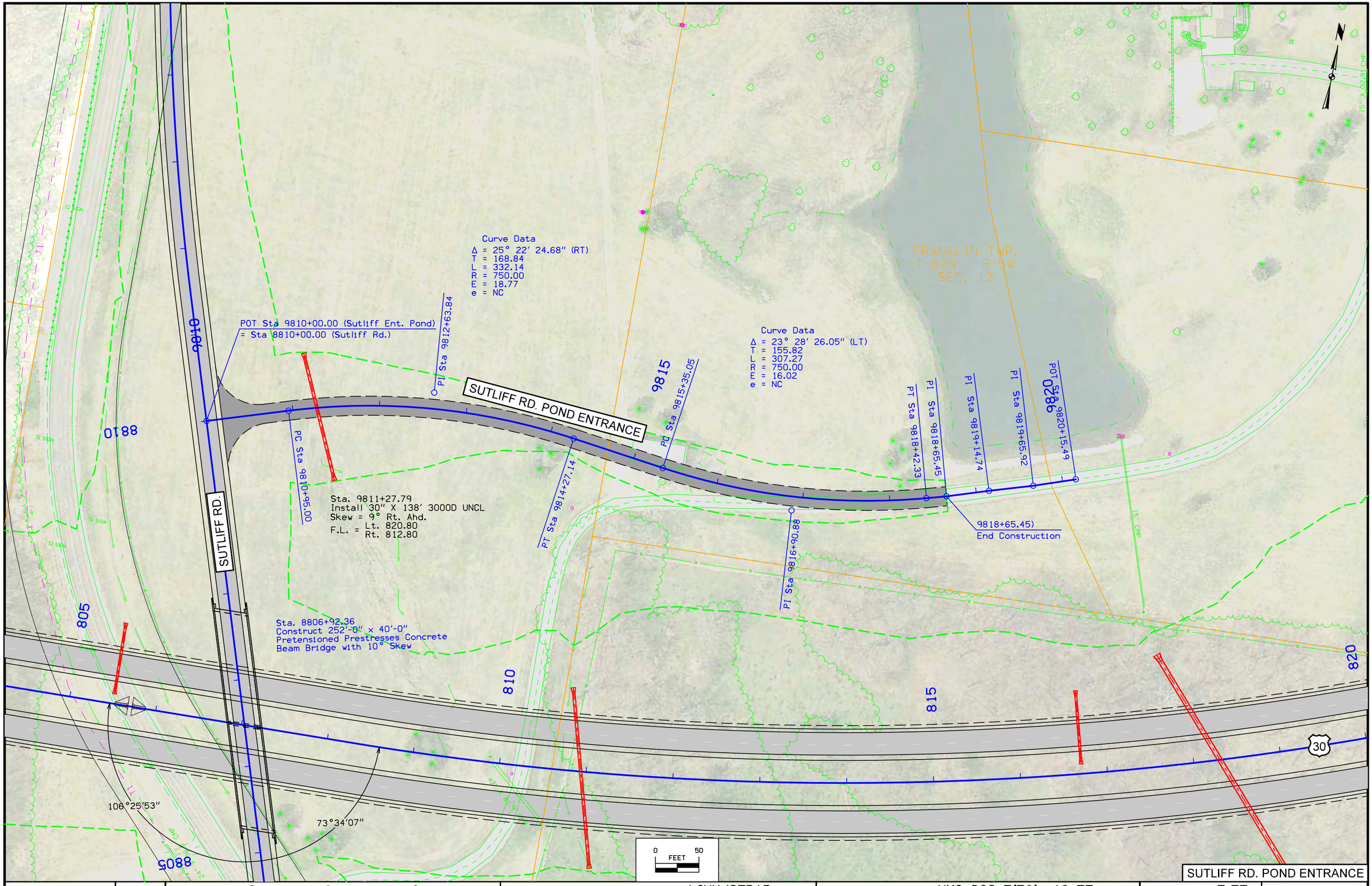
C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.53

4:38:41 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



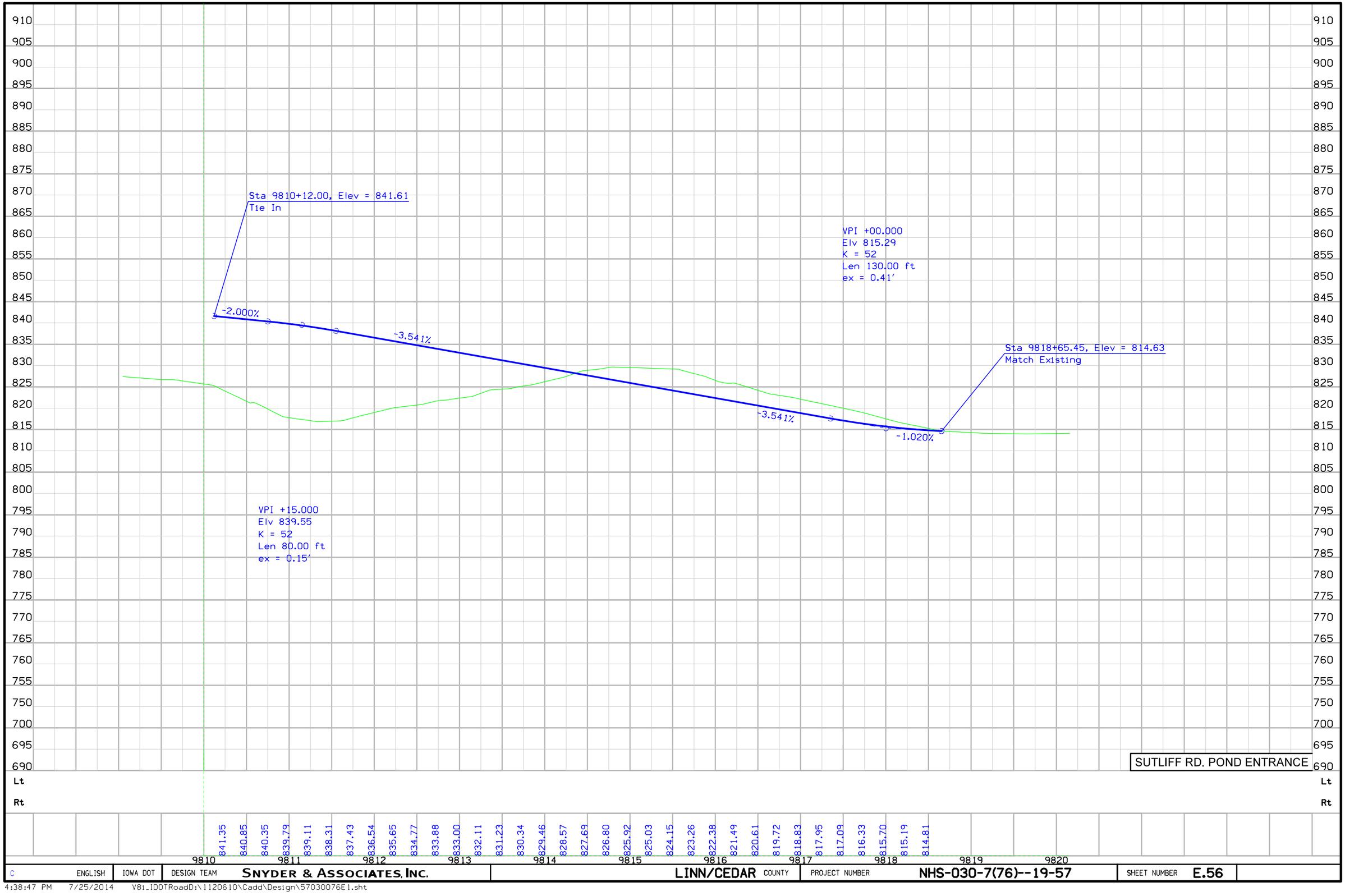
C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER E.54

4:38:44 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER E.55

4:38:44 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.56

4:38:47 PM 7/25/2014 V81_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

PIONEER TWP.
T-82N R-4W
SEC. 8

Curve Data
Δ = 3° 00′ 29.75″ (RT)
T = 249.45
L = 498.79
R = 9,500.00
E = 3.27
e = NC

Sta. 957+00
Construct PV-504 Crossover

Sta 18961+69.98 (ML Trans. E)
= Sta 961+69.98, 44.00′ Rt. (Hwy 30)

ML TRANS. EAST

955
16955
18960 960
16960
18965 965
16965

PI Sta 18956+69.98
PI Sta 18964+19.43
PC Sta 18961+69.98
PRC Sta 18966+68.77

30

KIRKWOOD 4

916+22.34
A = 7.6 Ac
(U.A.C.)

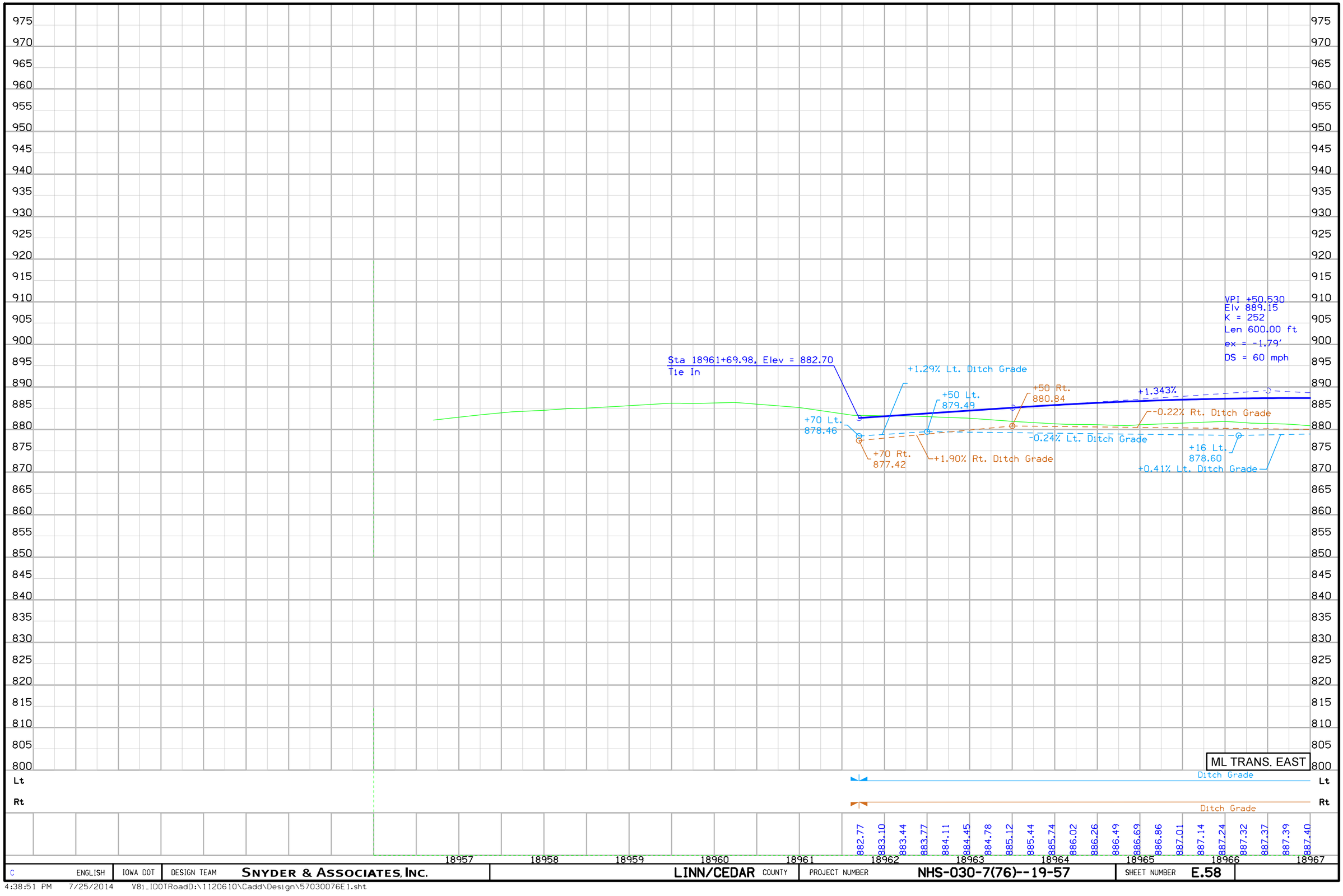
PIONEER TWP.
T-82N R-4W
SEC. 17

0 FEET 50

ML TRANS. EAST

C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER E.57

4:38:48 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.58

4:38:51 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

PIONEER TWP.
T-82N R-4W
SEC. 8

Curve Data
Δ = 5° 06′ 25.17″ (LT)
T = 423.67
L = 846.77
R = 9,500.00
E = 9.44
e = NC

Extend Sta 18967+61.14
With 30″ x 30′ 2000D RCP
Skew = 5° Rt. Ahd.
F.L. = Lt. 879.18
Other 879.53
Other 879.97
Rt. 879.91

18970 970

18975 975

PT Sta 18975+15.54

18980 980

POT Sta 18980+15.54

17985

ML TRANS. EAST

PC Sta 18966+68.77

Sta. 941+83.42
30″ X 60.4′ RCP
D.A. = 4.9 Ac

PI Sta 18970+92.44

Sta 18975+15.54
End Construction

16970

16975

16980

17980

CHARLES AVE

KIRKWOOD 4

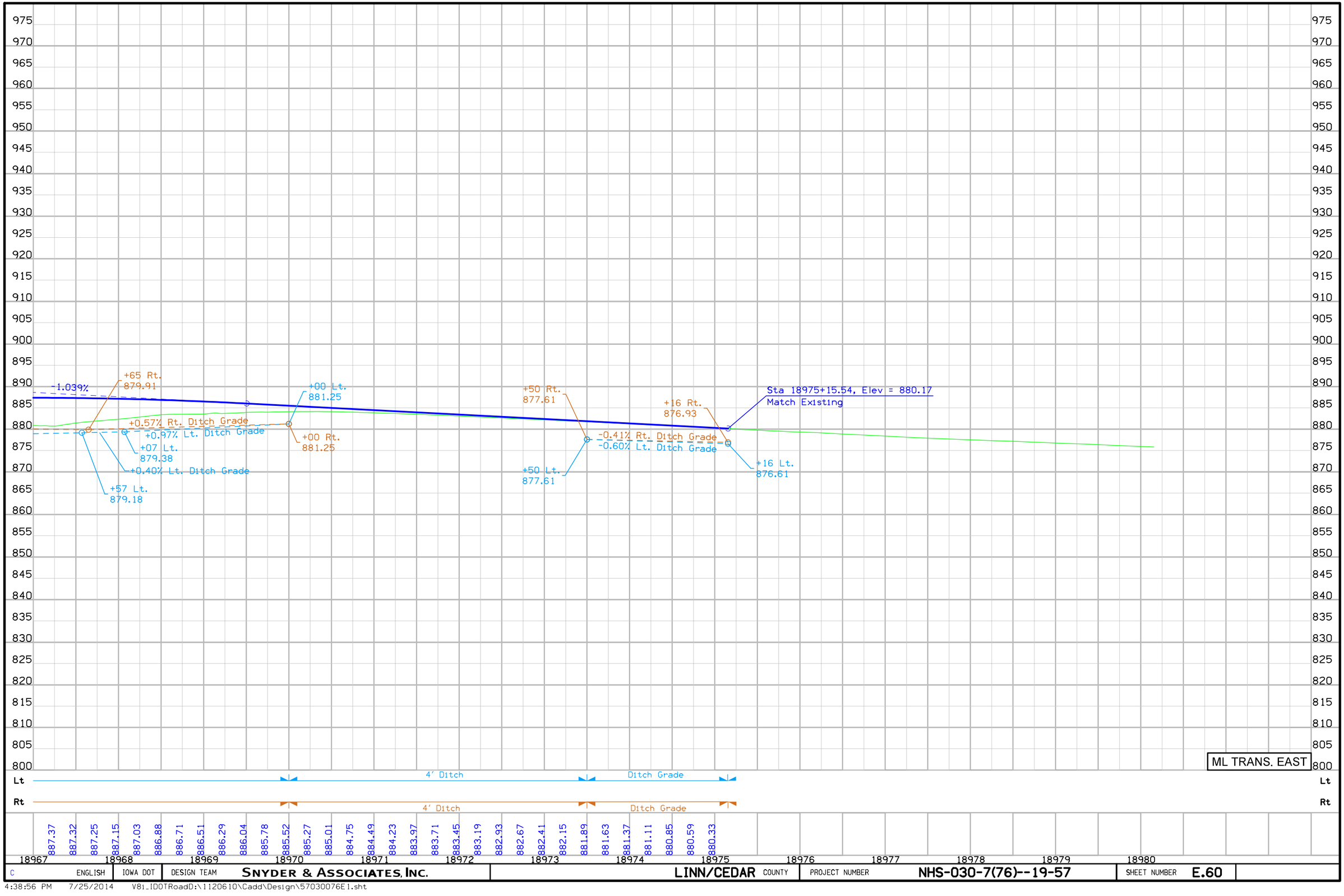
PIONEER TWP.
T-82N R-4W
SEC. 17

0 50
FEET

ML TRANS. EAST

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.59

4:38:52 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



ML TRANS. EAST

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.60

4:38:56 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 16

FRANKLIN TWP.
T-82N R-5W
SEC. 15

ITC — E4(C)

E4(C)

POT Sta 20699+56.58 (Virgil Ave)
Sta 6699+56.58 (Iowa Hwy. 1)

Sta 20699+91.58
Begin Construction

Sta 20701+05.00
End Construction

+48.85 Rt. Prop.
Type "B" Ent.

+56.13 Lt. Prop.
Type "B" Ent.

20700

6700

6695

VIRGIL AVE.

IOWA HWY. 1

Sta. 6696+03.33
2' X 2.2' X 71.2' RCB
D.A. = 10 Ac

24" X 27.8' RCP

18" X 20.7' CPP

24" X 36.9' RCP

0 50
FEET

VIRGIL AVE.

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.61

4:38:56 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

905 900 895 890 885 880 875 870 865 860 855 850 845 840 835 830 825 820 815 810 805 800 795 790 785 780 775 770 765 760 755 750 700 695 690 685

VPI +80.000
Elv 824.87
K = 24
Len 50.00 ft
ex = 0.13'

Sta 20701+05.00, Elev = 825.52
Match Existing

Sta 20699+91.58, Elev = 821.35
Tie In

+2.584%

+4.701%

+2.000%

VPI +15.000
Elv 821.82
K = 17
Len 46.00 ft
ex = -0.16'

830
820
+56.13 Lt.Prop.
Type "B" Ent.

830
820
+48.85 Rt.Prop.
Type "B" Ent.

VIRGIL AVE.

Lt

Rt

No Ditch

No Ditch

821.54 822.34 823.46 824.55 825.39

20698 20699 20700 20701 20702 20703

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.62

4:39:00 PM 7/25/2014 V81_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 13

Sta 829+18.02
Begin Construction

POT Sta 832+00.00 (Existing U.S. 30)
= Sta 11900+14.11 (Adams Ave)

Sta 832+61.56
End Construction

+00 Lt.Prop. Safety Dike

825

830

835

24" X 36.9' CMP

24" X 43.8' CMP

EXISTING U.S. 30

11900

18" X 66.7' CMP

WH

441

Ent. 19 Ft. (U.A.C.)

90°00'00"

90°00'00"

ADAMS AVE.

S68°

0 50 FEET

EXISTING U.S. 30

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.63

4:39:02 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

945 940 935 930 925 920 915 910 905 900 895 890 885 880 875 870 865 860 855 850 845 840 835 830 825 820 815 810 805 800 795 790 785 780 775 770

+18 Rt.
856.97

-2.62% Rt. Ditch Grade

+62 Rt.
847.95

-12.5% +4%

855

845

+00 Lt.Prop.
Prop. Safety Dike

EXISTING U.S. 30

Lt (Use as Constructed) Exisiting Ditch Lt

Rt (Use as Constructed) Exisiting Ditch Ditch Grade (Use as Constructed) Exisiting Ditch Rt

824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.64

4:39:03 PM V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

Sta. 19885+81.18
Construct 302'-0" x 36'-0"
Pretensioned Prestressed Concrete
Beam Bridge with 33° Skew

PIONEER TWP.
T-82N R-4W
SEC. 18

Sta. 19883+47.85
Install 30" X 200' 3750D RCP
Skew = 33° Rt. Ahd.
F.L. = Lt. 884.60
Rt. 886.16

POT Sta. 19882+85.33 (Ex. Adams)
= Sta. 15860+74.63 (Kirkwood 3)

Sta. 8884+48.24
24" X 112.6' CMP
D.A. = 11.6 Ac
(Remove)

Sta. 19888+14.50
Install 24" X 228' 3750D RCP
Skew = 33° Rt. Ahd.
F.L. = Lt. 887.05
Rt. 888.25

Sta 19879+30.00
Begin Construction

Sta 19890+50.00
End Construction

19880

19885

19890

885

890

30

+00.00 Lt. Prop. Type "C" Ent.

+00.00 Rt. Prop. Type "C" Ent.

90°00'00"

40°00'00"

15860

+28.06 Rt. (Close)

POT Sta 885+81.18 (Hwy 30)
= Sta 19885+81.18 (Existing Adams)

KIRKWOOD 3

EXISTING ADAMS AVE.

EXISTING ADAMS AVE.

EXISTING ADAMS AVE.

0 50
FEET

PIONEER TWP.
T-82N R-4W
SEC. 18

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.65

4:39:05 PM 7/25/2014 V81_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

1000
995
990
985
980
975
970
965
960
955
950
945
940
935
930
925
920
915
910
905
900
895
890
885
880
875
870
865
860
855
850
845
840
835
830
825

+4%
1000
900
+00 Lt.Prop.
Type "C" Ent.

1000
+4%
900
+00 Lt.Prop.
Type "C" Ent.

Sta 19879+30.00, Elev = 902.33
Match Existing

+45 Rt.
901.35

+50 Rt.
900.30

-1.00% Rt.
Ditch Grade

-3.98% Rt. Ditch Grade

+30 Lt.
898.56

-3.87% Lt. Ditch Grade

+91 Lt.
884.60

-1.26% Lt.
Ditch Grade

+86 Lt.
883.40

+1.978%

VPI +65.001
Elv 914.89
k = 61.5
Len = 90 ft
ex =

+05 Rt.
886.16

-0.53% Rt.
Ditch Grade

+00 Rt.
886.66

+0.514%

+48 Lt.
885.54

+46 Rt.
888.51

+1.48% Lt.
Ditch Grade

+50 Lt.
887.05

VPI +78.001
Elv 916.50
K = 66
Len 230.00 ft
ex = 1.01'

Sta 19890+50.00, Elev = 923.40
Match Existing

+50 Lt.
921.80

+4.012%

+50 Rt.
920.73

+11.58% Lt. Ditch Grade

-0.19% Rt.
Ditch Grade

+19.11% Rt. Ditch Grade

+80 Rt.
888.25

EXISTING ADAMS AVE.

Lt Ditch Grade Mainline Ditch Grade

Rt Ditch Grade Ditch Grade Mainline Ditch Grade

902.73	903.22	903.71	904.21	904.70	905.20	905.69	906.19	906.68	907.18	907.67	908.16	908.66	909.15	909.65	910.14	910.64	911.13	911.63	912.12	912.62	913.11	913.60	914.10	914.52	914.84	915.06	915.20	915.33	915.46	915.58	915.71	915.84	915.98	916.20	916.52	916.93	917.44	918.04	918.74	919.53	920.42	921.39	922.40	923.40

19877 19878 19879 19880 19881 19882 19883 19884 19885 19886 19887 19888 19889 19890 19891 19892

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.66

4:39:06 PM V81_IDOTRoadD:\112061O\Cadd\Design\57030076E1.sht

ADAMS AVE. RAMP 'A'

ADAMS AVE. RAMP 'D'

EXISTING ADAMS AVE.

KIRKWOOD 3

30

19885

19880

15860

15865

15885

15890

Sta. 15860+05.50
Install 24" X 124' 3000D RCP
Skew = 10° Lt. Ahd.
F.L. = Lt. 887.82
Rt. 893.23

POT Sta 15858+37.37

POT Sta 15859+37.37

PC Sta 15860+82.44

90°00'00"

90°00'00"

Sta. 8884+48.24
24" x 112.6' CMP
D.A. = 11.6 Ac
(Remove)

POT Sta. 15859+25.37 (Kirkwood 3)
= Sta. 19882+85.33 (Ex. Adams)

Sta 15859+37.37
Begin Construction

PIONEER TWP.
T-82N R-4W
SEC. 18

Curve Data
Δ = 45° 09' 58.71" (LT)
T = 440.87
L = 835.60
R = 1,060.00
E = 88.03
e = 6.0%
l = 153'
x = 51'

PI Sta 15865+23.31

PT Sta 15869+18.04

0 50
FEET

KIRKWOOD 3

C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER E.67

4:39:07 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

Sta 15859+37.37
Begin Construction

909.12

VPI +00.000
Elv 901.86
K = 67
Len 220.00 ft
ex = 0.90'

-2.000%

+1.289%

+00 Rt.
893.23

+1.61% Rt. Ditch Grade

+23 Lt.
887.82

+3.05% Lt. Ditch Grade

+24 Lt.
897.01

+25 Rt.
898.45

-1.29% Rt. Ditch Grade

+36 Lt.
901.76

KIRKWOOD 3

Lt Ditch Grade 5' Ditch Ditch Grade Lt

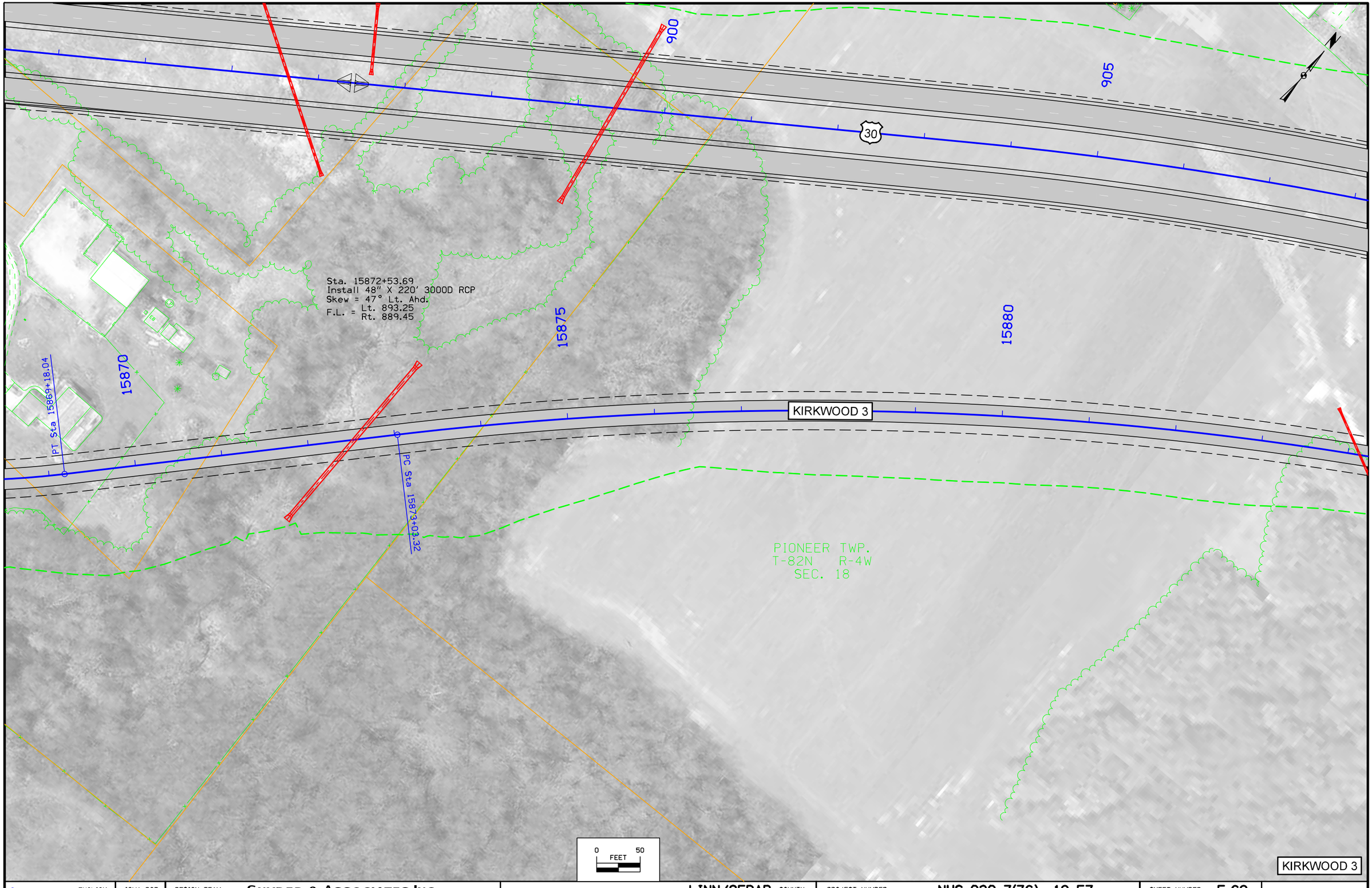
Rt Ditch Grade Rt

908.86 908.36 907.86 907.36 906.86 906.36 905.86 905.36 904.86 904.36 903.87 903.46 903.13 902.90 902.77 902.73 902.78 902.92 903.16 903.48 903.80 904.12 904.44 904.76 905.09 905.41 905.73 906.05 906.37 906.70 907.02 907.34 907.66 907.99 908.31 908.63 908.95 909.27 909.60

15854 15855 15856 15857 15858 15859 15860 15861 15862 15863 15864 15865 15866 15867 15868 15869

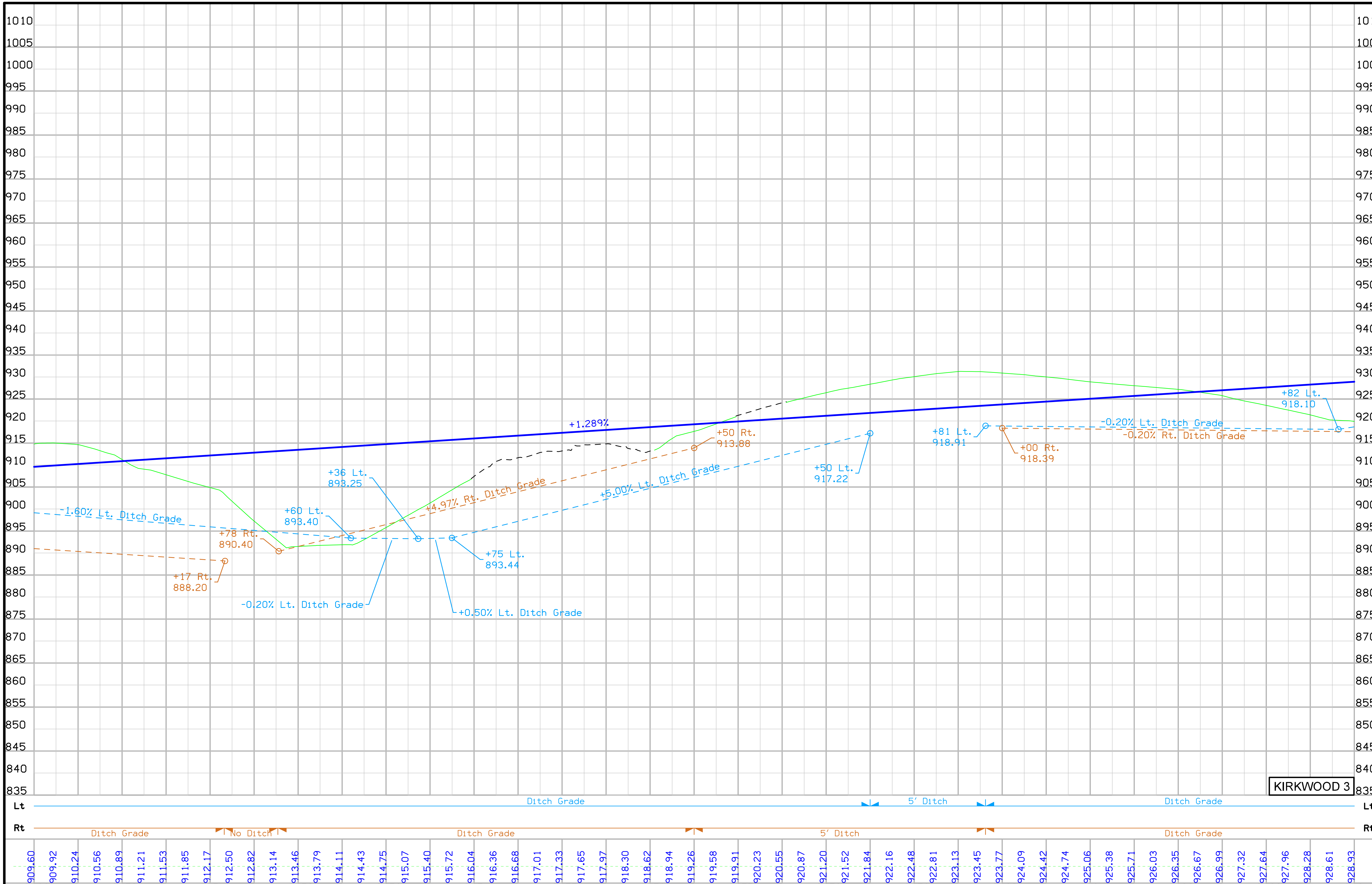
C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.68

4:39:18 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.69

4:39:19 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER E.70

4:39:29 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

PIONEER TWP.
T-82N R-4W
SEC. 7

PIONEER TWP.
T-82N R-4W
SEC. 7

PI Sta 15889+83.52

PI Sta 15925+12.21

910

915

920

15885

15890

15895

30

EXISTING U.S. HWY. 30

KIRKWOOD 3

18" x 32' CMP

18" x 38.6' CMP

SIGN

T1

Sta. 15884+13.66
Install 18" X 108' 2000D RCP
Skew = 33° Rt. Ahd.
F.L. = Lt. 918.10
Rt. 917.49

Curve Data
Δ = 45° 34' 10.79" (RT)
T = 1,680.20
L = 3,181.36
R = 4,000.00
E = 338.56
e = 3.2%
l = 82'
x = 51'

PIONEER TWP.
T-82N R-4W
SEC. 18

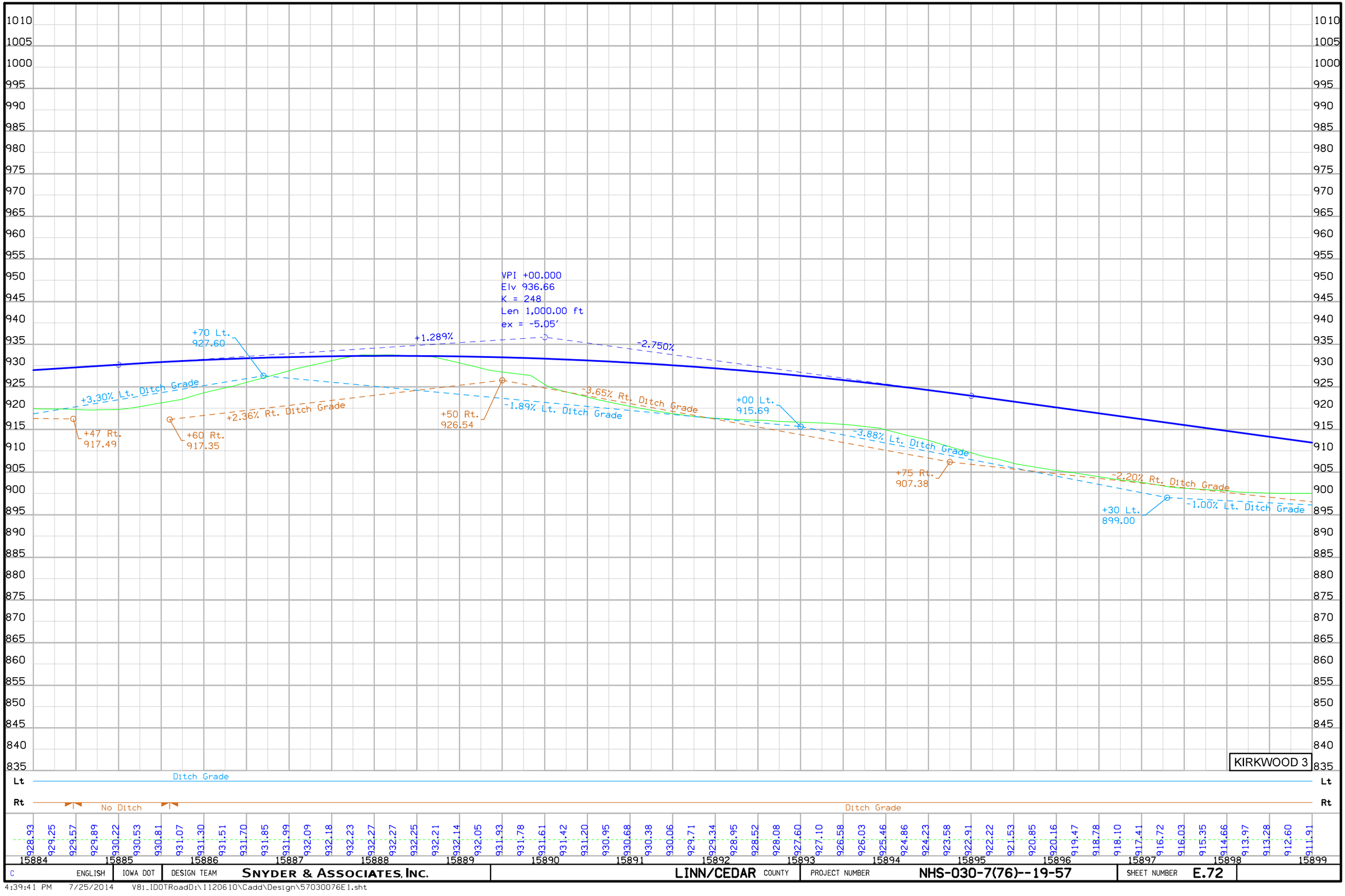
PIONEER TWP.
T-82N R-4W
SEC. 18

0 50
FEET

KIRKWOOD 3

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.71

4:39:30 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht



C ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER E.72

4:39:41 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

PIONEER TWP.
T-82N R-4W
SEC. 8

925
930
935
940

30

15900
15905
15910

Sta. 899+69.70
15" X 120.3' CPP
D.A. = 9.3
(Remove)

KIRKWOOD 3

POT Sta 15913+00.00

PT Sta 15904+84.68

Sta 15905+93.08
End Construction

Sta. 15899+87.41
Install 36" X 94' 2000D RCP
Skew = 5° Rt. Ahd.
F.L. = Lt. 896.50
Rt. 896.00

PIONEER TWP.
T-82N R-4W
SEC. 17

0 50
FEET

KIRKWOOD 3

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.73

4:39:42 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

+71 Lt.
899.27

-2.750%

+1.45% Lt. Ditch Grade

+0.54% Rt. Ditch Grade

-2.42% Lt. Ditch Grade

-1.91% Rt. Ditch Grade

892.85

Sta 15905+93.08
End Construction

+93 Lt.
889.05

+80 Lt.
896.50

+92 Rt.
896.00

+35 Rt.
897.31

+00 Rt.
892.78

+93 Rt.
889.09

KIRKWOOD 3

Lt Ditch Grade

Rt Ditch Grade | 5' Ditch | Ditch Grade

911.91 911.22 910.53 909.85 909.16 908.47 907.78 907.10 906.41 905.72 905.03 904.35 903.66 902.97 902.28 901.60 900.91 900.22 899.53 898.85 898.16 897.47 896.78 896.10 895.41 894.72 894.03 893.35

15899 15900 15901 15902 15903 15904 15905 15906 15907 15908 15909 15910 15911 15912 15913 15914

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	E.74

4:39:52 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076E1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 7

Curve Data
Δ = 2° 07′ 02.56″ (RT)
T = 147.91
L = 295.78
R = 8,003.84
E = 1.37
e = NC

Curve Data
Δ = 3° 13′ 34.63″ (RT)
T = 364.87
L = 729.54
R = 12,956.00
E = 5.14
e = NC

Sta. 589+36.19
30″ X 126.2′ RCP
D = 3.4 Ac

30″ X 84.2′ CMP

PI Sta 12589+61.60

PI Sta 12594+74.34

PC Sta 12588+13.69

PCC Sta 12591+09.47

PT Sta 12598+39.02

18″ X 154.2′ RCP

STA 12588+13.69
BEGIN CONSTRUCTION

WILCOX RD.

U.S. 30 WEST DETOUR

FRANKLIN TWP.
T-82N R-5W
SEC. 18

0 50 FEET

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER F.1

U.S. 30 WEST DETOUR

3:43:38 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076F1.sht

BEGIN CONSTRUCTION
BEGIN PAVING
STA 12588+13.69
ELEV 797.10

VPI +44.201
Elv 826.75
ex = -5.02'
K = 249
Len 1,000.00 ft

+2.877%
-1.137%

+00 Rt.
808.74

+4.43% Rt.
Ditch Grade

+00 Rt.
813.17

U.S. 30 WEST DETOUR

Lt

Rt

(Use as Constructed) Exisiting Ditch | Ditch Grade | 5' Ditch

797.43 798.15 798.87 799.59 800.31 801.03 801.74 802.46 803.18 803.90 804.62 805.34 806.06 806.78 807.50 808.22 808.94 809.66 810.38 811.09 811.81 812.53 813.23 813.91 814.56 815.18 815.79 816.36 816.91 817.44 817.94 818.41 818.86 819.29 819.69 820.06 820.41 820.74 821.03 821.31 821.56 821.78 821.98 822.16 822.30 822.43 822.53 822.60

12586 12587 12588 12589 12590 12591 12592 12593 12594 12595 12596 12597 12598 12599 12600

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	F.2

3:43:39 PM V81_IDOTRoadD:\1120610\Cadd\Design\57030076F1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 7

Sta. 12605+78.51
Construct 24" X 192' 2000D RCP
Skew = 11° Rt. Ahd.
F.L. = Lt. 807.48
Rt. 809.33

Ent. +51 Lt. (Close)

24" X 171' CMP

12600 605 12605 610 12610 615

FO2 FO3 T3

30

U.S. 30 WEST DETOUR

Sta. 606+64.71
30" X 79.4' RCP
D.A. = 2.5 Ac
(Remove)

5605

Sta. 5617+69.57
24" X 48' CMP
D.A. = 2.5 Ac

IRISH LN.

Sta. 5615+85.45
24" X 108.5' RCP
D.A. = 1.5 Ac

Ent. +08 Lt.

Sta. 6
42" X
D.A.
(Re

90°00'00"

90°00'

PC Sta 12612+04.59

18" X 64.6' CMP

5610

STA 12612+04.59
END CONSTRUCTION
= STA 612+50.00 (ML)

WILLOW CREEK ACCESS

+23.00 Rt.Prop. Type C Ent. (Close)

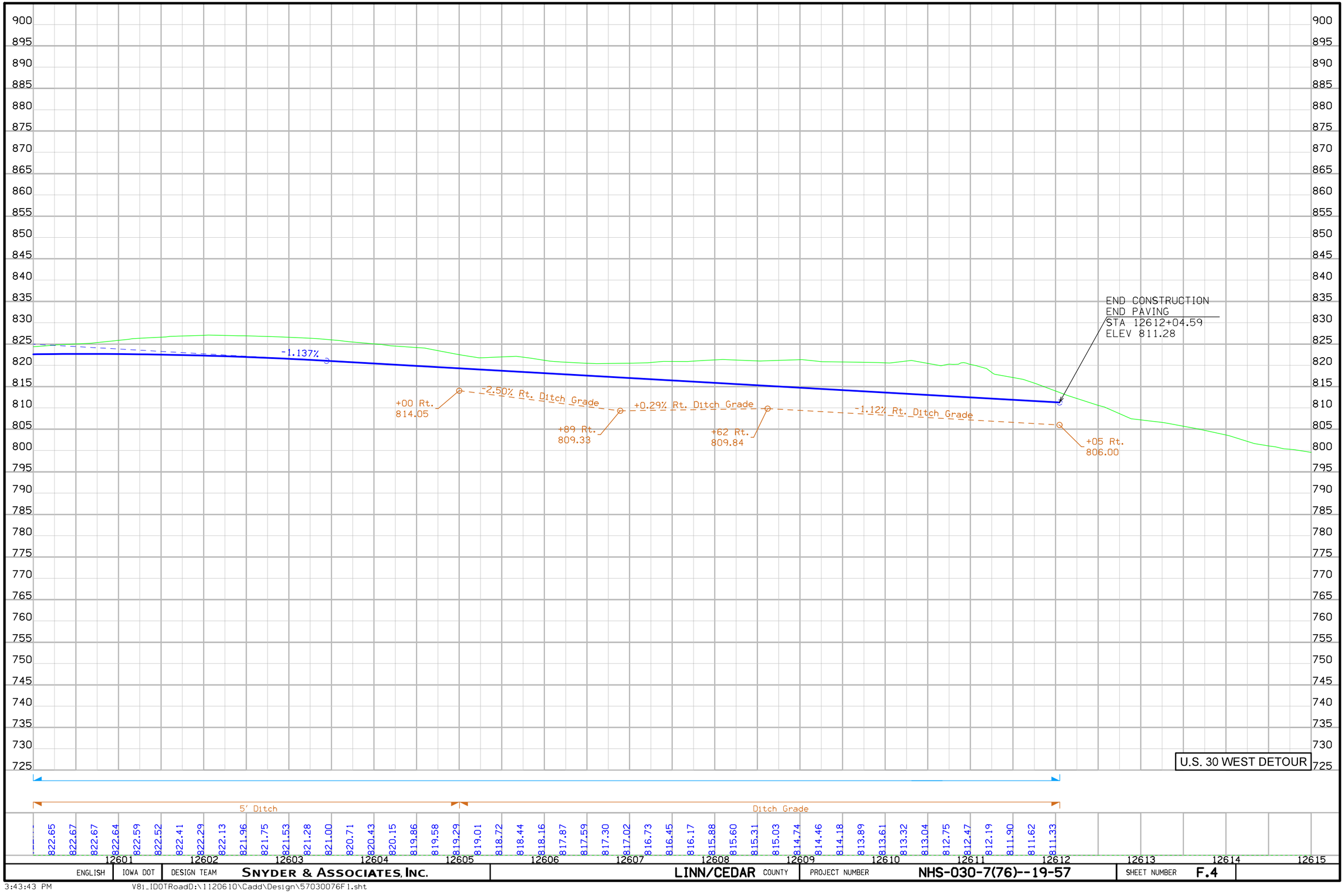
0 50
FEET

FRANKLIN TWP.
T-82N R-5W
SEC. 18

U.S. 30 WEST DETOUR

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	F.3

3:43:42 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076F1.sht



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	F.4

3:43:43 PM V81_IDOTRoadD:\1120610\Cadd\Design\57030076F1.sht

PIONEER TWP.
T-82N R-4W
SEC. 7

N

Curve Data
Δ = 15° 13′ 18.80″ (LT)
T = 280.61
L = 557.91
R = 2,100.00
E = 18.66
e = 5.4%
I = 144′
x = 53′

Curve Data
Δ = 6° 51′ 02.10″ (RT)
T = 277.96
L = 555.26
R = 4,644.00
E = 8.31
e = 4.0%
I = 107′
x = 53′

Sta. 13921+57.60
Construct 30″ X 168′ 2000D RCP
Skew = 32° Rt. Ahd.
F.L. = Lt. 904.72
Rt. 901.47

STA. 13910+57.94
BEGIN CONSTRUCTION

STA. 13923+53.82
END CONSTRUCTION

13910
915
920
925
910

POT Sta 13910+57.94
PC Sta 13912+11.94
PI Sta 13914+92.54
PT Sta 13917+69.85
PC Sta 13919+50.00
PI Sta 13922+27.96
PT Sta 13925+05.26

U.S. 30 EAST DETOUR

EXISTING U.S. HWY. 30

30

SIGN
T1

PIONEER TWP.
T-82N R-4W
SEC. 18

0 FEET 50

U.S. 30 EAST DETOUR

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	F.5

3:43:46 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076F1.sht

BEGIN CONSTRUCTION
BEGIN PAVING
STA 13910+57.94
ELEV 937.43

VPI +61.380
Elv 934.49
ex = -1.10'
K = 295
Len 510.00 ft

-0.730%

-2.457%

+58 Rt.
933.24

+58 Lt.
933.31

-2.59% Rt. Ditch Grade

-3.03% Lt. Ditch Grade

+10 Rt.
918.95

END CONSTRUCTION
END PAVING
STA 13923+53.82
ELEV 912.56

-2.79% Lt.
Ditch Grade

-0.65% Lt.
Ditch Grade

+0.98% Lt. Ditch Grade

+76 Lt.
905.53

+00 Lt.
904.72

+47 Lt.
907.15

+54 Lt.
906.96

U.S. 30 EAST DETOUR

Lt: Ditch Grade

Rt: Ditch Grade | No Ditch

13910	13911	13912	13913	13914	13915	13916	13917	13918	13919	13920	13921	13922	13923	13924	13925
	937.31	937.13	936.95	936.76	936.58	936.40	936.21	936.00	935.77	935.52	935.25	934.95	934.64	934.30	933.95
933.57	933.17	932.75	932.31	931.84	931.36	930.85	930.33	929.78	929.21	928.62	928.01	927.40	926.78	926.17	925.55
924.94	924.33	923.71	923.10	922.48	921.87	921.25	920.64	920.03	919.41	918.80	918.18	917.57	916.95	916.34	915.73
915.11	914.50	913.88	913.27	912.65											

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	F.6

3:43:46 PM V81_IDOTRoadD:\1120610\Cadd\Design\57030076F1.sht

Survey Information

General Information

Measurement units for this survey are US survey feet. This survey was performed for the design of the Mt. Vernon / Lisbon By-Pass project in Linn and Cedar County. Project horizontal and vertical datums were provided from the Design Survey Office based upon the 2001 Mt. Vernon/ Lisbon By-pass project. This survey is a Full Field Survey.

At the time of the survey, three alignments (A, E and F) for the new road were being considered. Survey was performed for all three alternate routes. Because of this, some of the stationing normally found in the sur file, pink sheets, etc. is incomplete and/or subject to change. It is expected that in December 2012 an alignment will be chosen and at that time, necessary station data will be updated accordingly.

Horizontal Control

The project coordinate system used was the same as that used on preliminary survey project on the Mt. Vernon-Lisbon bypass and U. S. 30 in Cedar and Clinton Counties. The survey coordinate system for this project is Modified Iowa State Plane South Zone in U.S Survey Feet units. State plane coordinates were modified to remove grid to ground distortion by scaling about point G083 by a factor of 1.000020987. The coordinates of G083 are N=694668.52 E=2319361.99. The datum is NAD83(1996-HARN).

Vertical Control

Vertical datum for this survey is relative to NAVD88. Geoid 09. US Survey feet.

The survey control is relative to IaRTN reference stations. Multiple Iowa RTN observations were completed on CP315. After review of these observations, the shots were averaged to establish the site BM elevation. A level run was then completed through project control points and benchmarks. The error was allowable and the error was distributed proportionately among the project monuments.

Vertical equations are as follows:

Datum Benchmark
BM #1 this survey Elevation = 888.678 NAVD 88
BM #25A Project #366(6) Elevation = 888.18
Found IHC plug on top of RCBC headwall.

Datum Benchmark
BM #2 this survey Elevation = 887.369 NAVD 88
BM #24C Project #366(6) Elevation = 885.24
Found IHC plug on top of northwest barrier wall of bridge over the South Raccoon River.

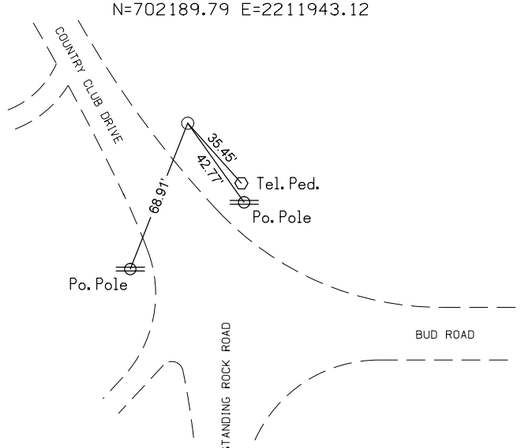
Alignment Information

At the time of the survey, three alignments (A, E and F) for the new road were being considered. Survey was performed for all three alternate routes. Because of this, some of the alignments and stationing normally found in the sur file, pink sheets, etc. is incomplete and/or subject to change. It is expected that in December 2012 an alignment will be chosen and at that time, necessary station data will be updated accordingly.

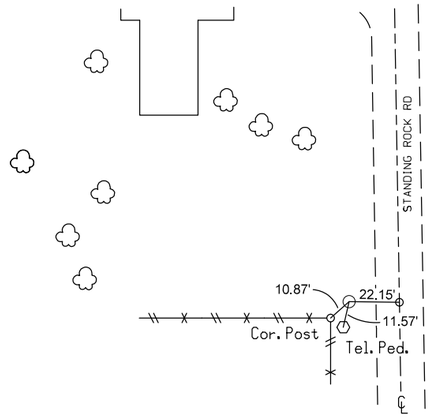
VERTICAL CONTROL

Point	North	East	Elevation	Station	Offset	Feature	Description
511	704994.014	2203125.720	790.740	671+41.08	-32.334	BM	CUT X IN RCP IN FRONT OF HOUSE 1201
512	704958.729	2201357.080	784.880	653+74.38	57.729	BM	SPIKE IN POWER POLE SOUTH SIDE HWY30 LAST POWER POLE GOING WEST
513	705161.943	2200003.552	809.020	640+15.21	-103.506	BM	SPIKE IN POWER POLE NW QUAD WILLOW CR & HWY30
514	703670.380	2204690.621	808.420	687+46.38	1242.010	BM	1/2IN REBAR IN FIELD ENTRANCE
515	705234.956	2197443.864	825.350	614+54.49	-97.104	BM	SPIKE IN POWER POLE NE QUAD IRISH LN & HWY30
516	705255.921	2196224.914	825.350	602+35.47	-80.257	BM	SPIKE IN POWER POLE NORTH SIDE HWY30 TOP OF HILL AT JOG IN FENCE
517	705264.545	2194813.478	791.610	588+27.25	-69.185	BM	SPIKE IN POWER POLENORTH SIDE HWY30 AT WILCOX
518	705264.369	2190329.278	750.280	543+43.75	-139.553	BM	CUT X NORTH END RCP NORTH DITCH AT CEDAR RIVER SIGN
519	705288.657	2192477.674	743.370	564+92.13	-129.140	BM	CUT X IN HEADWALL TWIN RCB NORTH DITCH
520	703893.060	2194790.446	763.310	587+83.21	1301.789	BM	CUT X IN RCP
521	704064.509	2200026.728	780.680	640+72.34	992.682	BM	SPIKE IN POWER POLE 3RD NORTH FROM BRIDGE ON WILCOX CR
522	704834.782	2205255.718	828.780	692+75.00	60.602	BM	CUT X IN LIGHT POLE BASE NW COR BP STATION
523	704347.675	2205631.837	830.017	696+66.08	535.781	BM	ARROW ON HYDRANT IN FRONT OF SLEEP INN
524	703744.837	2204777.467	825.049	688+30.87	1164.889	BM	SPIKE IN POWER POLE 2ND POWER POLE SOUTH OF CLINIC
525	702374.186	2203573.691	810.045	676+70.28	2572.301	BM	CUT X IN RCP 200FT SOUTH OF FARM ENTRANCE EAST SIDE
526	701705.292	2202992.241	803.374	671+09.91	3258.948	BM	CUT X IN RCP 700FT SOUTH OF FARM ENTRANCE EAST SIDE
527	700730.308	2202027.639	803.040	661+75.45	4263.378	BM	SPIKE IN POWER POLE 1ST POWER POLE NORTH OF LIGHT ON HWY1
528	700033.587	2202767.382	777.820	669+37.13	4936.836	BM	SPIKE IN POWER POLE COR SPRING CR & LIGHT
529	700117.649	2204060.010	764.690	682+26.52	4812.628	BM	SPIKE IN GATE POST NEXT TO CP309
530	700076.944	2205384.138	807.320	695+51.27	4812.148	BM	GIN SPIKE IN CP AT SEC COR SOUTH OF CP308
531	700130.260	2206693.162	817.850	705+27.35	4743.682	BM	BENCHTITE IN GATE POST 6FT EAST OF POWER POLE
532	699655.312	2207872.081	812.770	712+58.34	5321.690	BM	SPIKE IN POWER POLE1ST EAST OF DRIVE AT 509 POWER POLE WITH TRANSFORMER
533	699172.927	2208880.540	825.380	722+02.01	5920.985	BM	SPIKE IN POWER POLE SOUTH OF CP305 CREST OF HILL
534	698706.660	2210112.513	756.610	733+65.64	6531.004	BM	SPIKE IN POWER POLE 3RD ON SOUTH SIDE WEST OF MCCLELLAND
535	698629.360	2210473.248	738.530	737+14.50	6651.013	BM	NAIL WITH WASHER IN SW CORNER BRIDGE
536	698632.213	2211442.790	758.410	746+75.93	6764.482	BM	SPIKE IN GATE POST 5FT NORTH OF CP303
537	699705.746	2212037.921	787.480	753+95.74	5770.232	BM	SPIKE IN POWER POLE 5TH POWER POLE NORTH OF LIGHT ON STANDING ROCK
538	702125.394	2211917.938	778.040	755+67.35	3353.697	BM	SPIKE IN POWER POLE EAST SIDE ROAD 1ST POWER POLE SOUTH OF 626 DRIVE
539	702125.570	2211917.810	786.360	755+67.25	3353.507	BM	SPIKE IN POWER POLE WEST SIDE ROAD AT INTAKE
700	704830.812	2206375.936	831.859	703+93.23	35.952	BM	TOP CULVERT 200FT EAST OF CAR WASH S SIDE HWY30
701	704932.486	2207808.425	838.131	718+24.95	74.637	BM	ARROW ON HYDRANT EAST SIDE HWY30 & HILL VIEW DR
702	705005.571	2208400.530	826.719	724+21.55	72.741	BM	SPIKE IN POWER POLE NEAR CP331
703	705090.902	2209028.005	796.530	730+54.72	62.908	BM	TOP CULVERT WEST SIDE OF COUNTRY CLUB DR
704	705196.278	2209854.359	828.282	738+87.71	57.271	BM	SPIKE IN POWER POLE 125FT EAST OF CP333
705	705506.336	2212500.394	851.469	765+51.82	67.232	BM	ARROW ON HYDRANT EAST OF CP335
706	705659.240	2213966.378	838.885	780+29.41	27.035	BM	TOP CULVERT EAST OF GRAVEL DRIVE NORTH SOUTH HOUSE #596
707	705667.466	2214512.661	846.342	785+75.42	46.064	BM	ARROW ON HYDRANT WEST SIDE DRIVEWAY TO NOLZ CHIROPRACTIC
708	705803.483	2215009.528	861.286	790+78.46	-65.003	BM	X BOLT ON HYDRANT IN FRONT OF LISBON SCHOOL NORTH SIDE HWY30
709	705794.765	2215360.108	858.227	794+28.16	-38.812	BM	CHISELED CROSS TOP CULVERT NORTH SIDE HWY30 EAST OF G R DR
710	705823.697	2215898.341	867.921	799+67.14	-40.890	BM	X BOLT HYDRANT AT NE QUAD HWY30 & WASHINGTON
711	705869.659	2216264.085	870.870	803+34.70	-68.840	BM	X BOLT HYDRANT AT NW QUAD HWY30 & S JACKSON
712	705843.563	2216567.152	867.797	806+36.12	-27.896	BM	CHISELED CROSS TOP INTAKE N SIDE HWY30 2ND INTAKE EAST OF S JACKSON
713	705883.822	2216782.843	867.260	808+53.53	-57.517	BM	X BOLT N SIDE HWY30 FIRST HYDRANT EAST OF S JACKSON
714	705782.668	2216888.606	865.539	809+54.20	48.708	BM	FLANGE BOLT WITH FLAG ON HYDRANT NW CORNER DOLLAR GENERAL
715	705912.310	2217307.237	866.592	813+78.69	-60.225	BM	SPIKE IN POLE 300FT EAST OF DOLLAR GENERAL N SIDE HWY30
716	705813.545	2217687.733	863.358	817+53.87	57.102	BM	ARROW ON HYDRANT IN FRONT OF HOUSE#766 S SIDE HWY30
717	705841.567	2217921.457	864.401	819+88.69	40.589	BM	CHISELED CROSS TOP CULVERT S SIDE HWY30 NW CORNER CHURCH PROPERTY
718	705838.228	2218086.173	867.013	821+53.05	52.010	BM	ARROW ON HYDRANT S SIDE HWY30 MIDDLE CHURCH PROPERTY
719	705861.757	2218486.982	868.199	825+54.53	48.188	BM	ARROW ON HYDRANT NE CORNER CHURCH PROPERTY S SIDE HWY30
720	706121.786	2220960.091	891.994	850+37.42	-90.107	BM	RAILROAD RAIL(VERTICAL) 100FT WEST OF E MAIN ST & HWY 30 N SIDE
721	706067.764	2222323.946	927.523	863+96.68	40.821	BM	CHISELED CROSS TOP CULVERT SW QUAD OF HWY30 & ADAMS AVE
722	706099.862	2223101.874	933.921	871+75.17	53.377	BM	CHISELED CROSS NE CORNER OF CONC PAD FOR SOLAR PANEL
723	706139.105	2224603.149	930.296	886+81.49	59.624	BM	REF PT 300FT EAST OF CP344 S SIDE HWY30
724	706128.887	2225625.376	904.637	897+03.77	60.393	BM	SPIKE IN POLE NEAR CP345
725	706132.867	2226752.297	891.190	908+29.03	59.908	BM	SPIKE IN POWER POLE FIRST POWER POLE WEST OF CP346
726	706177.017	2228907.444	882.584	929+84.63	59.916	BM	RAILROAD RAIL(VERTICAL) ROW MARKER POST 150FT EAST OF MILE POST 270
727	706228.161	2230104.937	882.837	941+83.05	28.092	BM	CHISELED CROSS ON FIRST 30IN RCP EAST OF CP348
728	706221.341	2232839.978	868.623	969+18.42	59.935	BM	RAILROAD RAIL(VERTICAL) ROW MARKER POST AT T IN FENCE 300FT W OF CP351
729	705743.013	2222409.944	929.861	864+63.92	369.968	BM	CUT CROSS TOP INTAKE AT MEADOWVIEW & ADAMS N SIDE
730	705199.113	2222354.532	929.389	863+77.42	909.797	BM	SPIKE IN POWER POLE NW QUAD ADAMS & 122ND ST
731	703604.532	2222494.540	880.119	864+25.77	2509.782	BM	PK NAIL IN SOUTH BOUND LANE AT 230 ADAMS AVE
732	701946.436	2222435.102	842.383	862+71.37	4161.743	BM	SPIKE IN POWER POLE 261 ADAMS AVE
733	701488.991	2222556.499	834.080	863+66.34	4625.395	BM	SPIKE IN POWER POLE SE QUAD VALLEY FORGE & ADAMS AVE
734	701059.776	2222560.882	838.025	863+46.11	5054.156	BM	SPIKE IN POWER POLE NE QUAD VALLEY FORGE & 130TH ST
735	699817.227	2222544.406	844.805	862+58.42	6293.716	BM	SPIKE IN POWER POLE SW QUAD EVERETT CT & ADAMS AVE
736	698094.914	2222694.113	879.481	863+09.13	8021.779	BM	CUT CROSS IN 135TH ST NORTHSIDE 25FT FROM END OF CONCRETE
737	697037.897	2222650.630	833.310	862+05.12	9074.564	BM	SPIKE IN POWER POLE AT ADAMS CT & ADAMS AVE
738	696838.955	2222161.024	840.445	856+98.97	9244.876	BM	SPIKE IN POWER POLE AT 10 138TH STREET
739	697149.529	2221261.468	845.611	848+97.93	8886.126	BM	SPIKE IN POWER POLE 50FT WEST OF CP359 ON S SIDE ROAD
740	697351.015	2220052.824	809.293	837+00.64	8625.543	BM	SPIKE IN POWER POLE NE QUAD GREEN RIDGE RD & LIGHT ROAD
741	697375.254	2218560.733	810.432	822+11.53	8528.078	BM	SPIKE IN POWER POLE 75FT WEST OF CP361 ON N SIDE
742	697461.021	2217271.746	805.920	809+28.31	8379.130	BM	SPIKE IN POWER POLE AT 150 LIGHT ROAD WEST SIDE OF DRIVE
743	697916.404	2216179.604	765.824	798+53.72	7870.616	BM	SPIKE IN POWER POLE SE QUAD SUTLIFF RD & LIGHT RD
744	699202.523	2216079.415	782.454	798+17.80	6581.101	BM	SPIKE IN POWER POLE 50FT EAST OF CP364
745	700536.903	2215733.524	817.798	795+38.89	5231.131	BM	X ON LIGHT POLE BASE 597 SUTLIFF RD
746	701400.439	2215339.455	853.655	791+88.38	4349.016	BM	SURVEY MARKER NAIL 2FT FROM EOP AT END OF NORTHBOUND GUARDRAIL
747	702244.236	2215281.710	886.570	791+72.79	3503.389	BM	SPIKE IN POWER POLE 200FT SOUTH OF BUD RD & SUTLIFF RD
748	702344.228	2214510.452	876.427	784+07.48	3365.056	BM	SPIKE IN POWER POLE AT 257 BUD RD S SIDE
749	702287.292	2213855.497	836.692	777+50.50	3389.257	BM	SPIKE IN POWER POLE 30FT WEST OF CP367 N SIDE
750	698723.077	2220028.248	843.702	837+43.45	7253.929	BM	SPIKE IN POWER POLE 1ST POLE SOUTH OF 533 GREENRIDGE RD DRIVEWAY
751	699478.071	2220032.164	852.122	837+84.43	6500.038	BM	SPIKE IN POWER POLE 555 GREENRIDGE RD
752	699962.208	2219647.946	821.602	834+24.45	5997.621	BM	SPIKE IN POWER POLE 100FT SE OF 577 GREENRIDGE RD DRIVE
753	700660.066	2219096.602	786.992	829+08.03	5273.536	BM	SPIKE IN POWER POLE 200FT SE OF 606 GREENRIDGE RD DRIVE
754	701227.130	2219182.781	822.371	830+21.94	4711.387	BM	SPIKE IN 20IN WHITE PINE E SIDE 500FT NORTH OF 606 GREENRIDGE RD DRIVE
755	701761.211	2218900.800	860.049	827+66.52	4164.106	BM	SPIKE IN 24IN OAK ON E SIDE NEXT TO CABLE BOX
756	702251.034	2218285.112	893.972	821+75.63	3644.646	BM	SPIKE IN POWER POLE 125FT NORTH OF 657 GREENRIDGE RD DRIVE
757	702499.341	2218168.121	893.591	820+70.97	3390.894	BM	SPIKE IN POWER POLE 665 GREENRIDGE RD
758	703670.082	2217619.041	882.512	815+80.03	2194.607	BM	SPIKE IN POWER POLE W SIDE ROAD 200FT SOUTH OF 721 GREENRIDGE RD
759	704238.827	2217253.406	869.062	812+42.76	1608.597	BM	SPIKE IN POWER POLE ACROSS FROM 203 CEMETARY RD
760	704431.584	2216620.953	870.358	806+20.53	1385.022	BM	ARROW ON HYDRANT AT REGAL RIDGE CT & CEMETARY
761	704559.093	2216260.746	868.393	802+67.02	1239.981	BM	ARROW ON HYDRANT S JACKSON & CEMETARY RD
762	704751.703	2215914.219	869.119	799+29.57	1030.587	BM	X BOLT ON HYDRANT S WASHINGTON & CEMETARY
763	703848.777	2215812.825	892.152	797+83.27	1927.333	BM	SPIKE IN POWER POLE W SIDE OF WASHINGTON RD ACROSS FROM #716
764	703124.159	2215640.545	907.336	795+75.06	2642.457	BM	FLANGE BOLT WITH FLAG ON HYDRANT AT HILL RIDGE & S WASHINGTON
765	702629.624	2215329.448	893.288	792+39.69	3120.861	BM	X BOLT ON HYDRANT AT 908 SUTLIFF RD

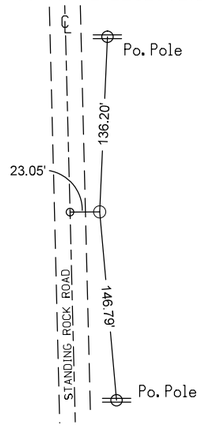
STA. 756+00.09, 3292.79′ Rt.
CP No. 300, SET 1/2″ REBAR
N=702189.79 E=2211943.12



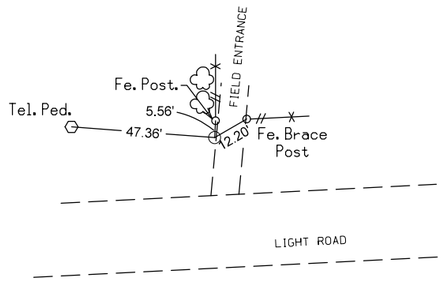
STA. 754+52.64, 4603.88′ Rt.
CP No. 301, SET 1/2″ REBAR
N=700870.49 E=2211954.27



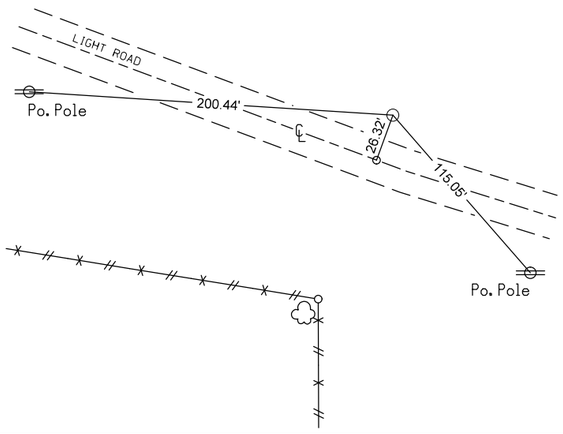
STA. 753+73.66, 5905.26′ Rt.
CP No. 302, SET 1/2″ REBAR
N=699569.04 E=2212032.22



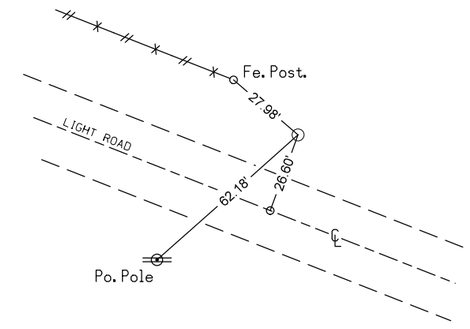
STA. 746+75.12, 6769.32′ Rt.
CP No. 303, SET 1/2″ REBAR
N=698627.31 E=2211442.57



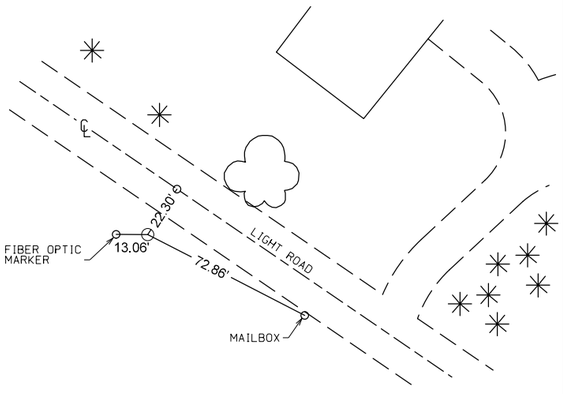
STA. 733+00.62, 6435.93′ Rt.
CP No. 304, SET 1/2″ REBAR
N=698793.25 E=2210036.56



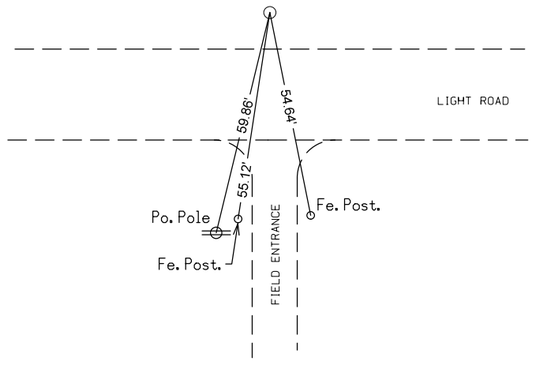
STA. 722+53.25, 5885.86′ Rt.
CP No. 305, SET 1/2″ REBAR
N=699213.92 E=2208927.22



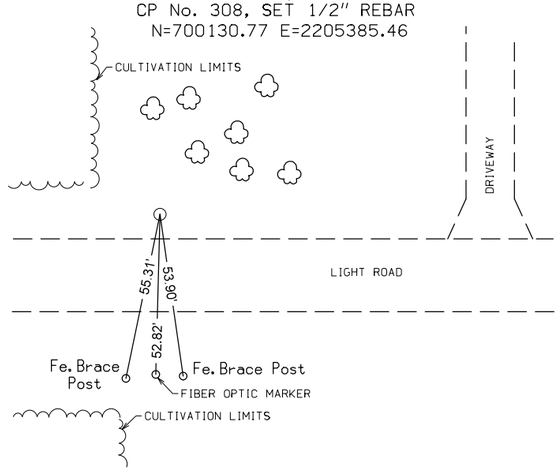
STA. 711+50.76, 5222.36′ Rt.
CP No. 306, SET 1/2″ REBAR
N=699741.09 E=2207753.43



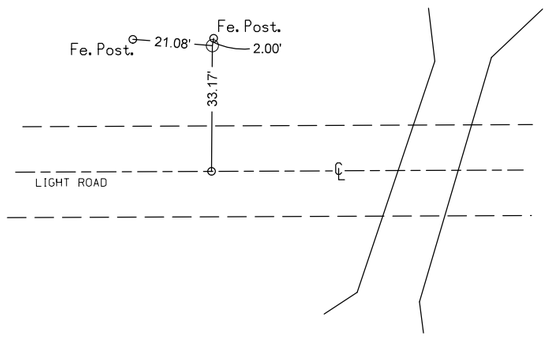
STA. 705+33.17, 4690.33′ Rt.
CP No. 307, SET 1/2″ REBAR
N=700183.99 E=2206701.66



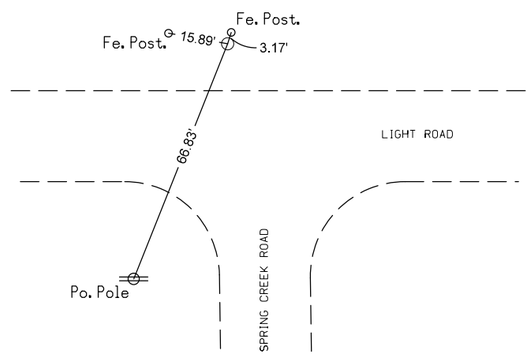
STA. 695+50.92, 4758.31′ Rt.
CP No. 308, SET 1/2″ REBAR
N=700130.77 E=2205385.46



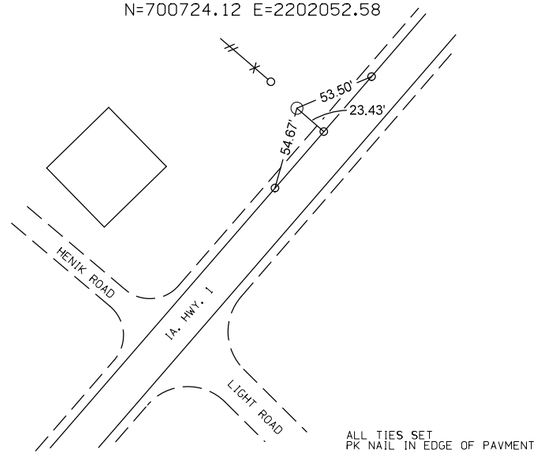
STA. 682+26.46, 4814.23′ Rt.
CP No. 309, SET 1/2″ REBAR
N=700116.05 E=2204059.90



STA. 669+60.50, 4874.00′ Rt.
CP No. 310, SET 1/2″ REBAR
N=700095.67 E=2202792.69



STA. 662+00.57, 4268.80′ Rt.
CP No. 311, SET 1/2″ REBAR
N=700724.12 E=2202052.58

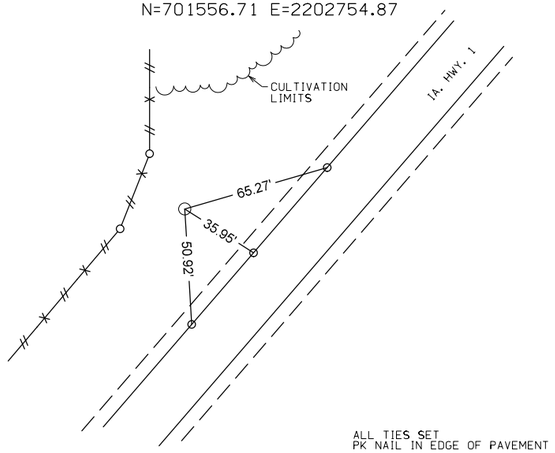


ALL TIES SET
PK NAIL IN EDGE OF PAVMENT

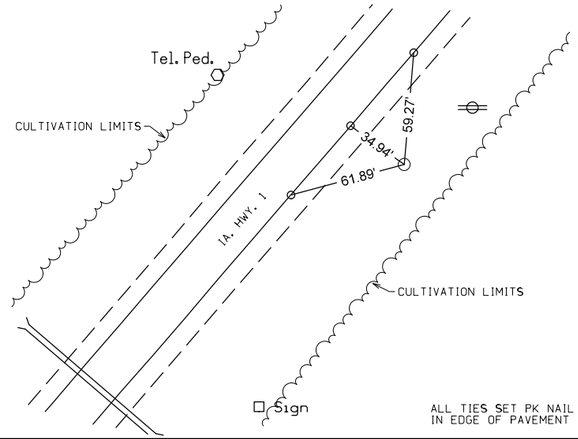
C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER G.4

2:56:34 PM 7/25/2014 V81_IDOTRoadd:\1120610\cadd\PrelimSurvey\57030076.sur

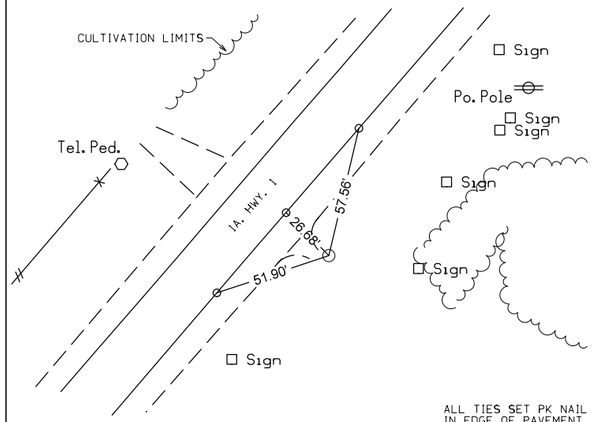
STA. 668+77.27, 3414.84' Rt.
CP No. 312, SET 1/2" REBAR
N=701556.71 E=2202754.87



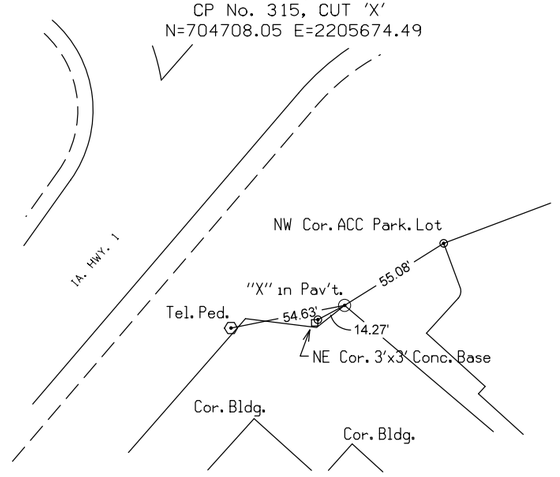
STA. 677+98.53, 2425.61' Rt.
CP No. 313, SET 1/2" REBAR IN EAST DITCH
N=702516.82 E=2203706.44



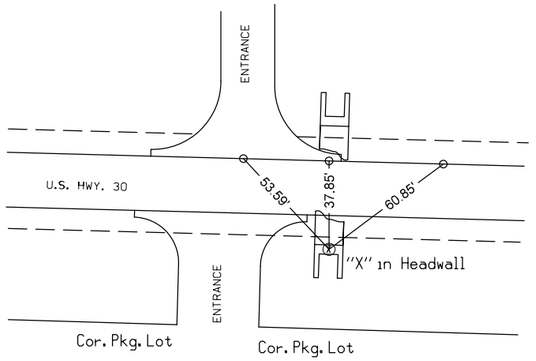
STA. 687+46.38, 1242.01' Rt.
CP No. 314, SET 1/2" REBAR IN FIELD ENTRANCE
N=703670.38 E=2204690.62



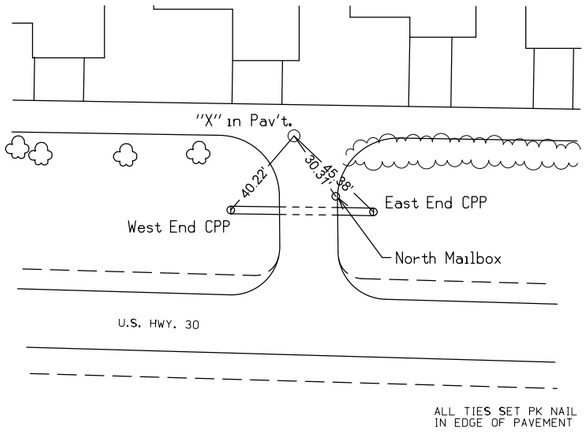
STA. 696+97.51, 174.26' Rt.
CP No. 315, CUT 'X'
N=704708.05 E=2205674.49



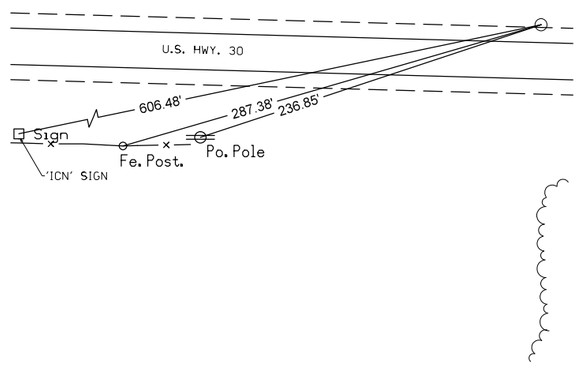
STA. 683+28.41, 26.37' Rt.
CP No. 316, CUT 'X' IN SOUTH RCBC HEADWALL
N=704898.42 E=2204310.65



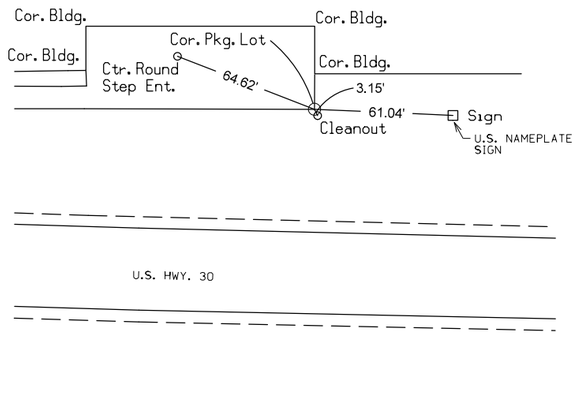
STA. 669+28.22, 78.36' Lt.
CP No. 317, CUT 'X' IN DRIVEWAY
N=705046.64 E=2202914.39



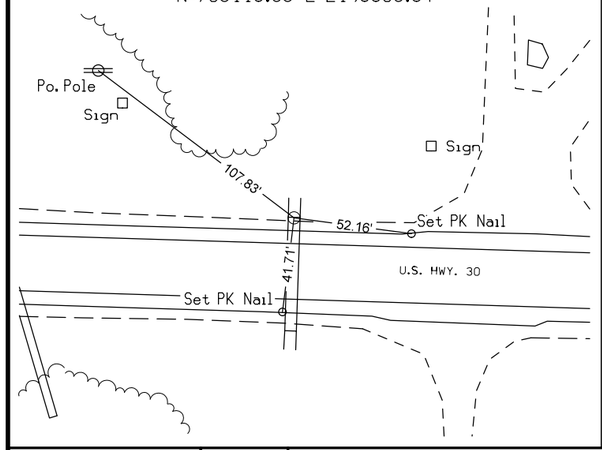
STA. 655+96.56, 23.88' Lt.
CP No. 318, SET 1/2" REBAR
N=705033.42 E=2201581.67



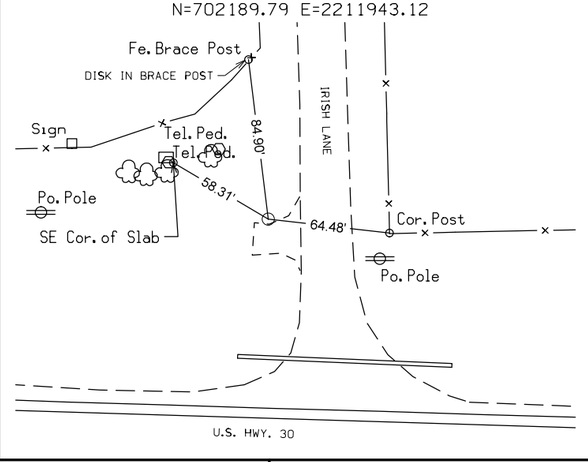
STA. 643+02.25, 72.00' Lt.
CP No. 319, SET PK NAIL IN CORNER OF ACC LOT
N=705121.56 E=2200289.47



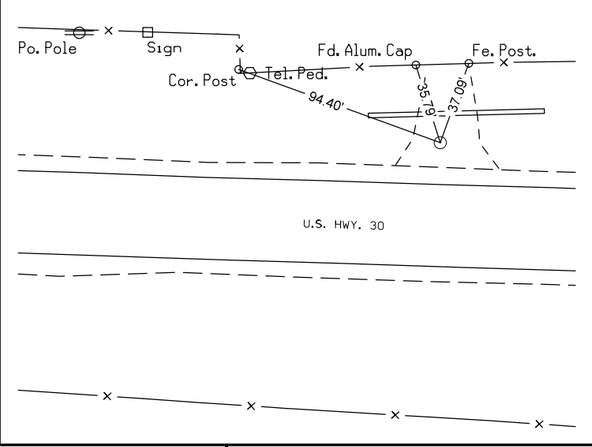
STA. 628+20.42, 23.12' Lt.
CP No. 320, FOUND MONUMENT IN RCBC HEADWALL
N=705118.65 E=2198806.84



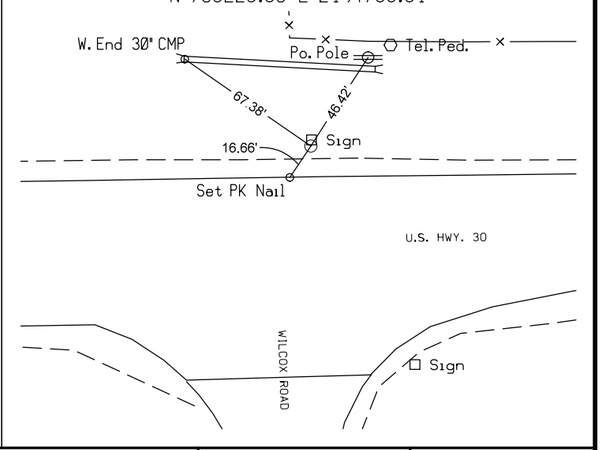
STA. 613+94.00, 117.23' Lt.
CP No. 321, SET 1/2" REBAR
N=702189.79 E=2211943.12



STA. 601+09.28, 36.05' Lt.
CP No. 322, SET 1/2" REBAR
N=705215.65 E=2196097.41



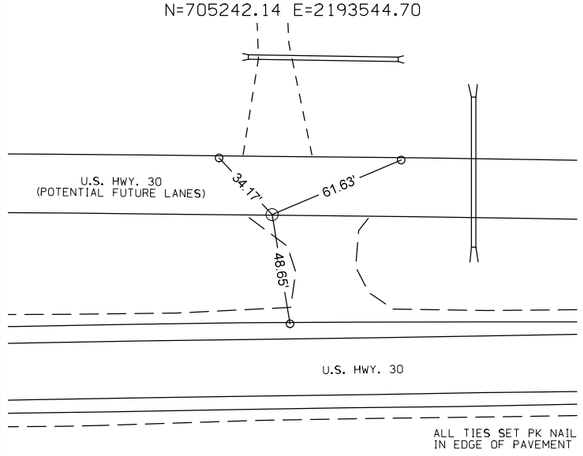
STA. 588+02.04, 30.82' Lt.
CP No. 323, SET 1/2" REBAR
N=705225.80 E=2194788.81



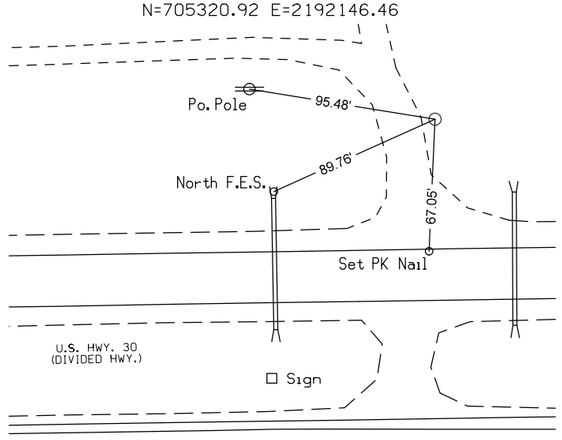
C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER G.5

2:56:36 PM 7/25/2014 V81_IDOTRoadd:\1120610\cadd\PrelimSurvey\57030076.sur

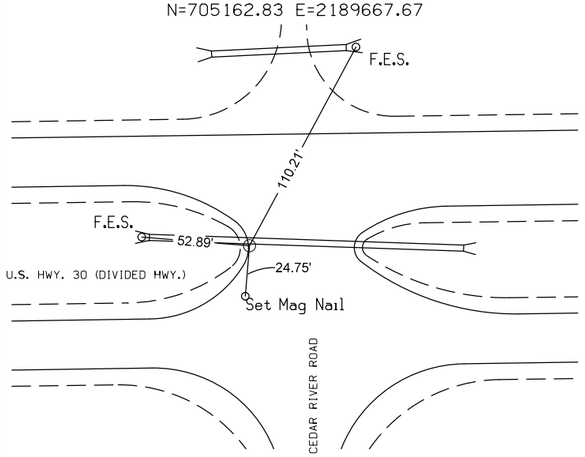
STA. 575+58.32, 66.26' Lt.
CP No. 324, SET CUT 'X' IN CONCRETE
N=705242.14 E=2193544.70



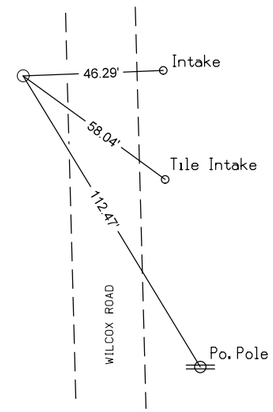
STA. 561+61.45, 166.48' Lt.
CP No. 325, SET 1/2" REBAR
N=705320.92 E=2192146.46



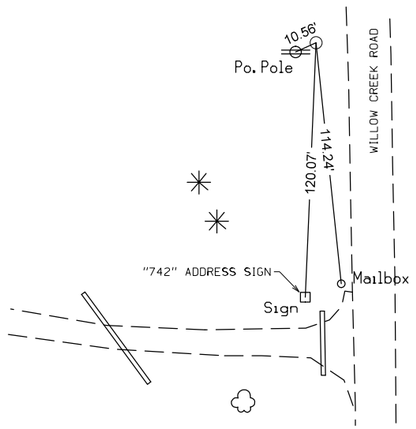
STA. XXX+XX.XX, 1987.40' Lt.
CP No. 326, SET CUT 'X' IN PCC AT CEDAR RIVER ROAD
N=705162.83 E=2189667.67



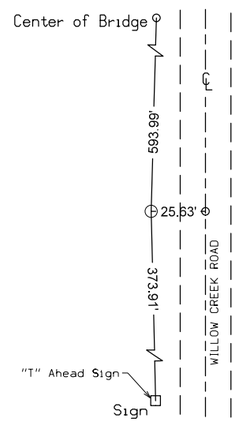
STA. 587+83.21, 1301.79' Rt.
CP No. 327, CUT 'X' IN RCP
N=703893.06 E=2194790.45



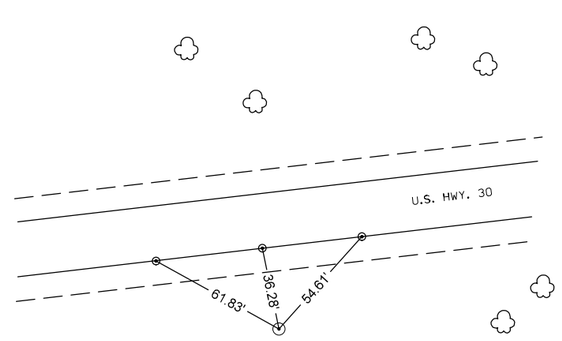
STA. 640+95.89, 1288.56' Rt.
CP No. 328, SET 1/2" REBAR
N=703768.04 E=2200041.11



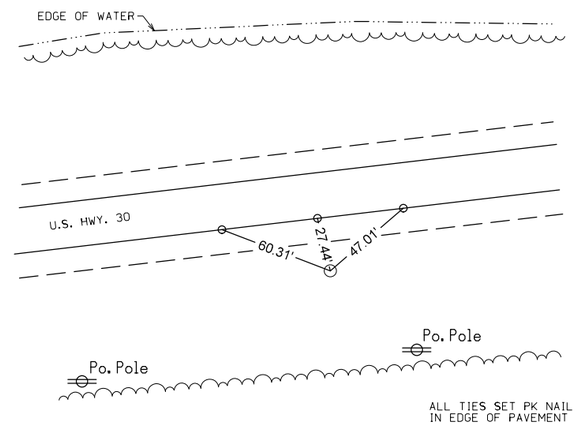
STA. 641+59.09, 2639.28' Rt.
CP No. 329, SET 1/2" REBAR IN WEST DITCH
N=702416.02 E=2200062.49



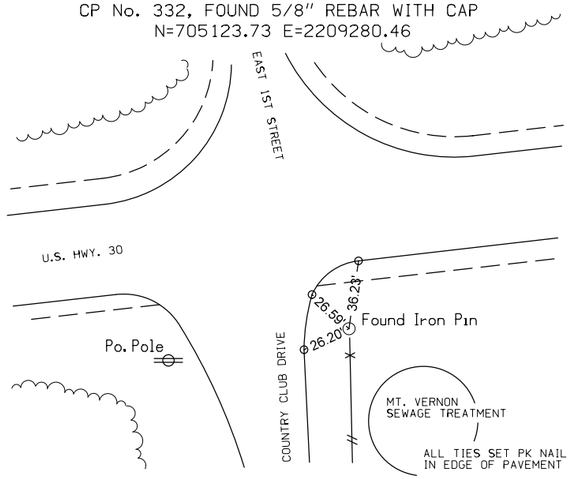
STA. 711+22.75, 47.83' Rt.
CP No. 330, SET 1/2" REBAR
N=704875.30 E=2207108.04



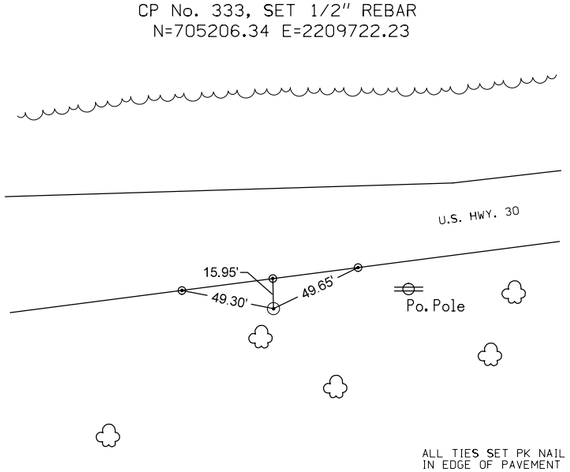
STA. 724+60.72, 39.00' Rt.
CP No. 331, SET 1/2" REBAR
N=705043.74 E=2208435.39



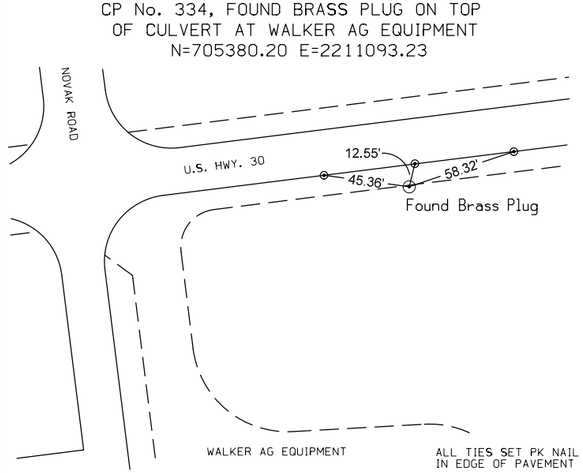
STA. 733+09.25, 60.47' Rt.
CP No. 332, FOUND 5/8" REBAR WITH CAP
N=705123.73 E=2209280.46



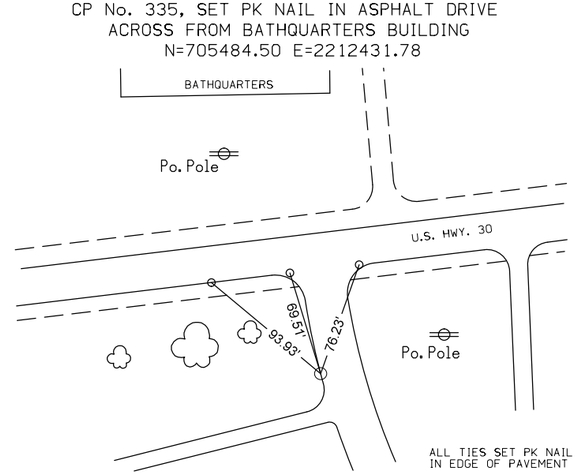
STA. 737+57.74, 31.44' Rt.
CP No. 333, SET 1/2" REBAR
N=705206.34 E=2209722.23



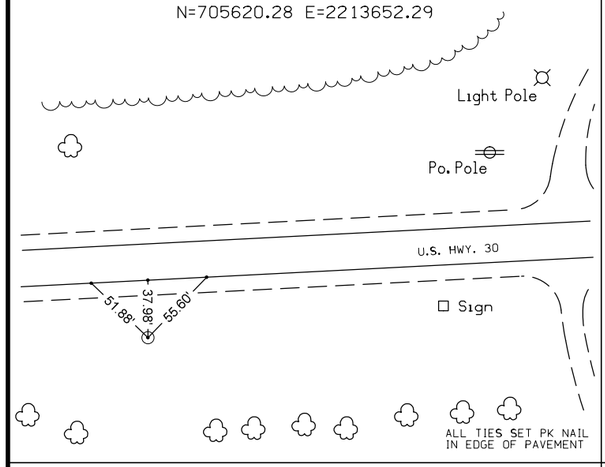
STA. 751+39.69, 23.38' Rt.
CP No. 334, FOUND BRASS PLUG ON TOP
OF CULVERT AT WALKER AG EQUIPMENT
N=705380.20 E=2211093.23



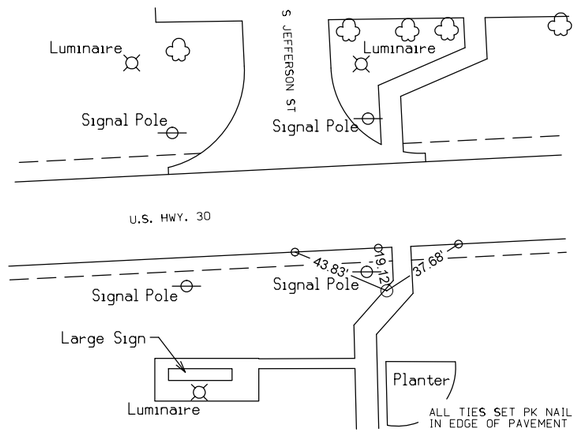
STA. 764+81.07, 80.67' Rt.
CP No. 335, SET PK NAIL IN ASPHALT DRIVE
ACROSS FROM BATHQUARTERS BUILDING
N=705484.50 E=2212431.78



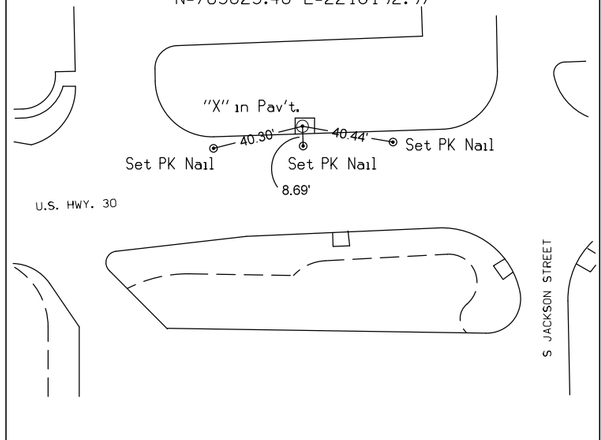
STA. 777+13.76, 50.28′ Rt.
CP No. 336, SET 1/2″ REBAR
N=705620.28 E=2213652.29



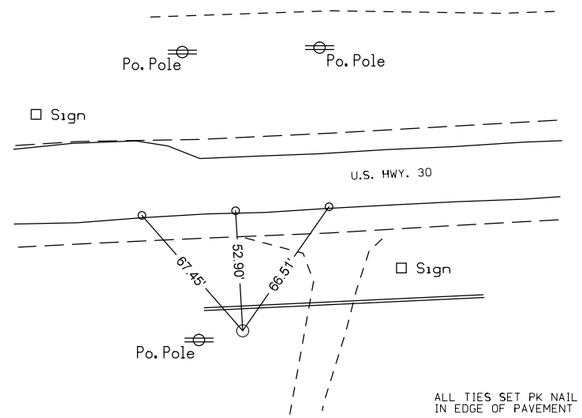
STA. 789+69.53, 37.98′ Rt.
CP No. 337, SET CUT 'X' IN SIDEWALK
N=705695.19 E=2214905.87



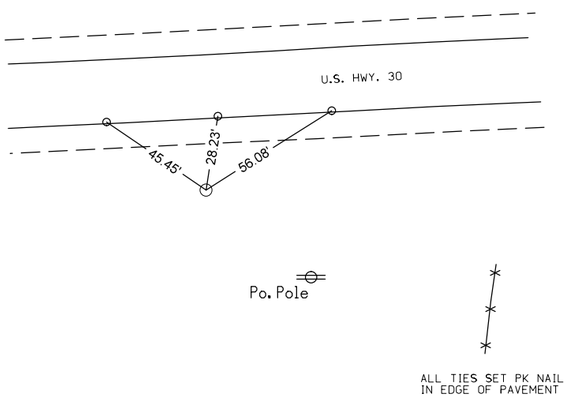
STA. 802+61.50, 28.21′ Lt.
CP No. 338, SET CUT 'X' ON INTAKE
N=705825.48 E=2216192.97



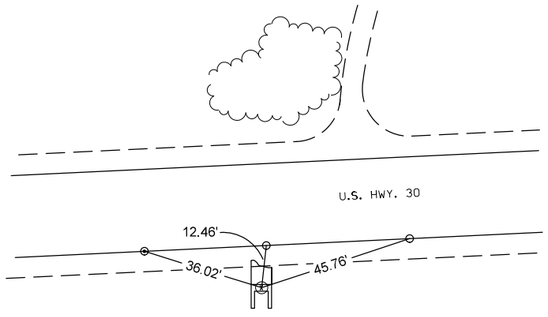
STA. 816+23.29, 62.10′ Rt.
CP No. 339, SET 1/2″ REBAR
N=705802.15 E=2217557.55



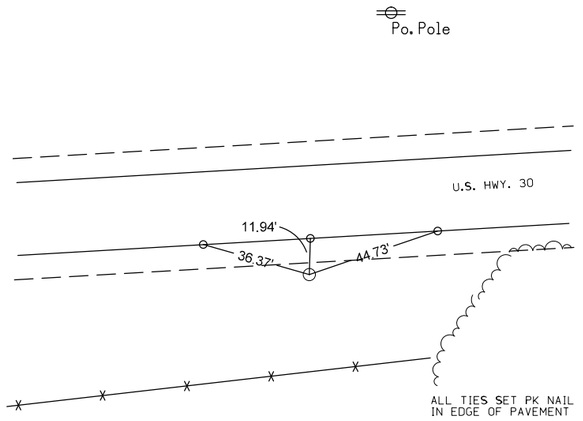
STA. 829+90.92, 35.60′ Rt.
CP No. 340, SET 1/2″ REBAR
N=705895.75 E=2218922.23



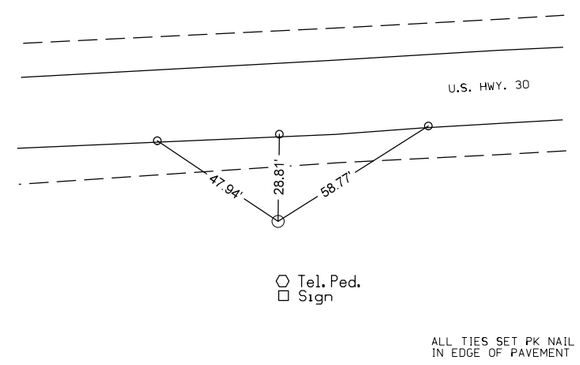
STA. 843+28.34, 18.96′ Rt.
CP No. 341, FOUND IUC BRASS PLUG ON HEADWALL
N=705978.04 E=2220257.22



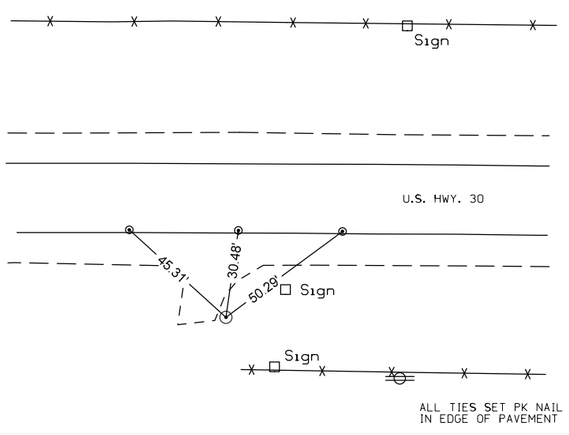
STA. 856+54.27, 22.66′ Rt.
CP No. 342, SET 1/2″ REBAR
N=706043.07 E=2221581.74



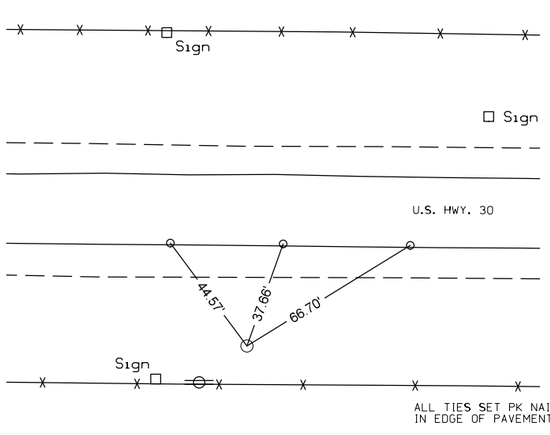
STA. 871+64.43, 39.77′ Rt.
CP No. 343, SET 1/2″ REBAR
N=706112.83 E=2223090.37



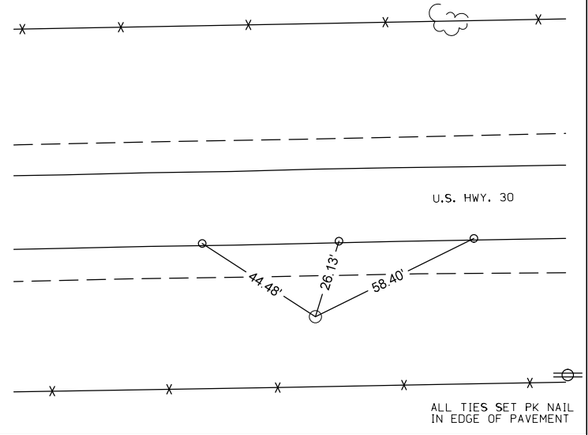
STA. 884+11.65, 41.74′ Rt.
CP No. 344, SET 1/2″ REBAR
N=706159.48 E=2224333.49



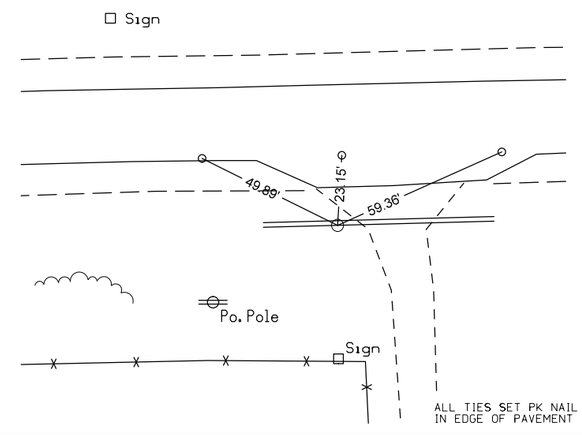
STA. 897+20.52, 46.95′ Rt.
CP No. 345, SET 1/2″ REBAR
N=706142.17 E=2225642.25



STA. 910+26.57, 36.86′ Rt.
CP No. 346, SET 1/2″ REBAR
N=706159.97 E=2226949.32



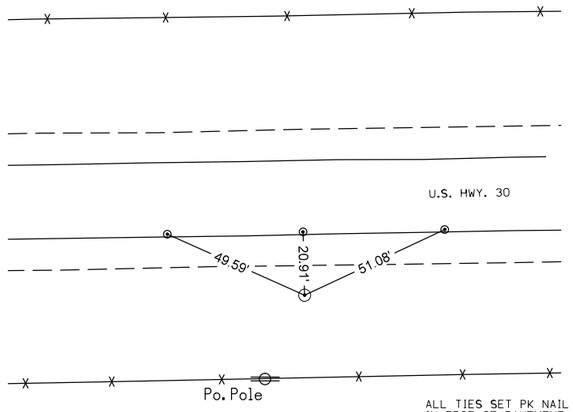
STA. 923+03.18, 34.76′ Rt.
CP No. 347, SET 1/2″ REBAR
N=706188.22 E=2228225.62



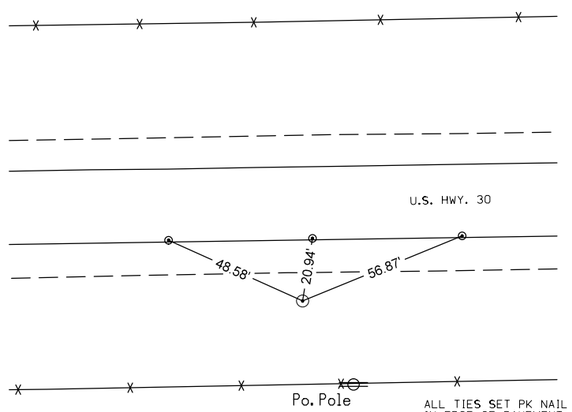
C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER G.7

2:56:39 PM 7/25/2014 V81_IDOTRoadd:\1120610\cadd\PrelimSurvey\57030076.sur

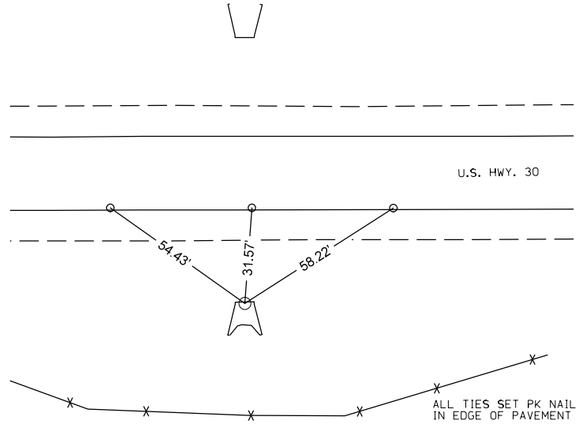
STA. 936+05.22, 32.08' Rt.
CP No. 348, SET 1/2" REBAR
N=706214.86 E=2229527.24



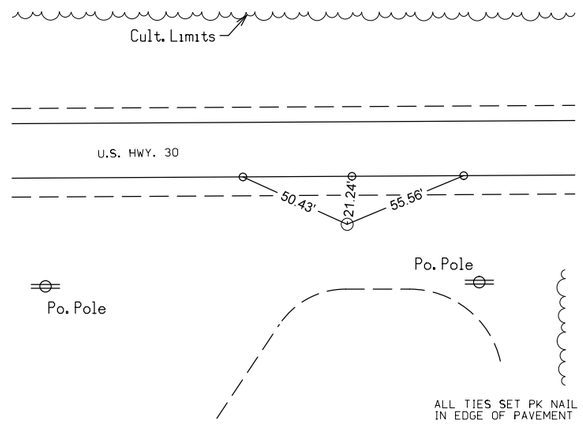
STA. 949+10.61, 32.23' Rt.
CP No. 349, SET 1/2" REBAR
N=706235.76 E=2230832.46



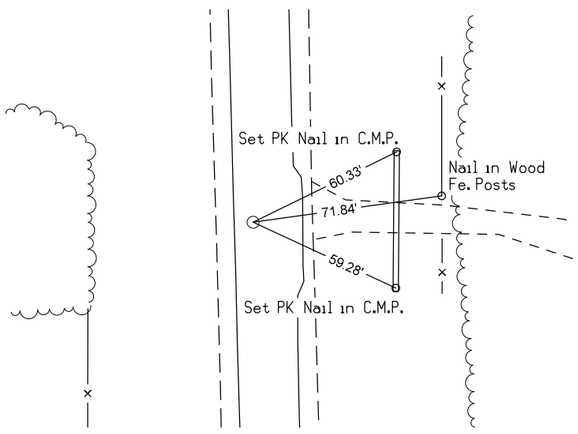
STA. 959+53.67, 43.19' Rt.
CP No. 350, SET 1/2" REBAR
N=706236.68 E=2231874.98



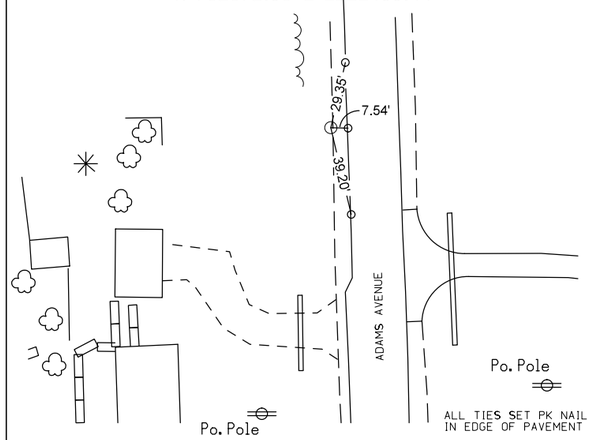
STA. 972+33.08, 32.80' Rt.
CP No. 351, SET 1/2" REBAR
N=706250.14 E=2233154.49



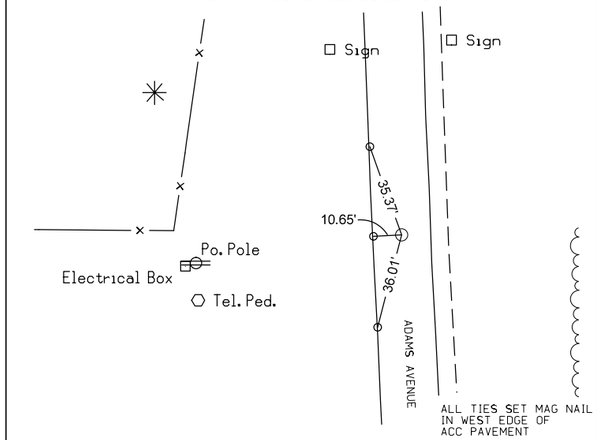
STA. 863+92.43, 1360.16' Rt.
CP No. 352, SET PK NAIL IN ACC (ADAMS AVENUE)
N=704750.35 E=2222395.34



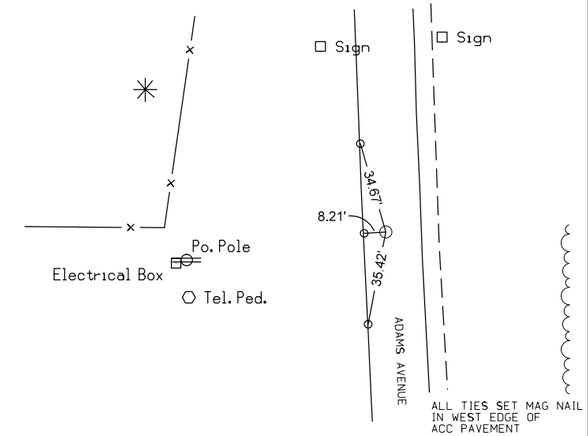
STA. 863+08.93, 4037.63' Rt.
CP No. 353, SET 1/2" REBAR
N=702072.50 E=2222465.49



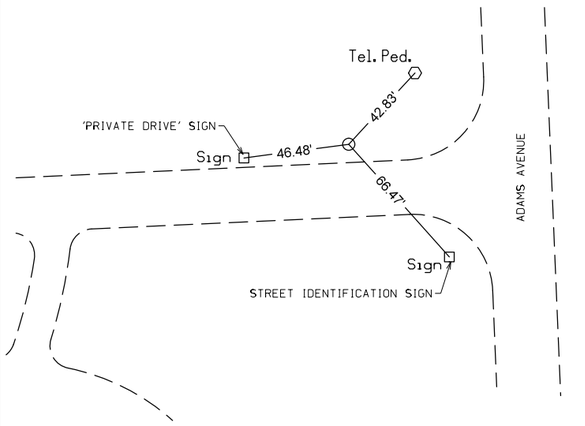
STA. 863+00.35, 5365.64' Rt.
CP No. 354, SET PK NAIL IN C.L. OF ADAMS AVENUE
N=700746.18 E=2222533.06



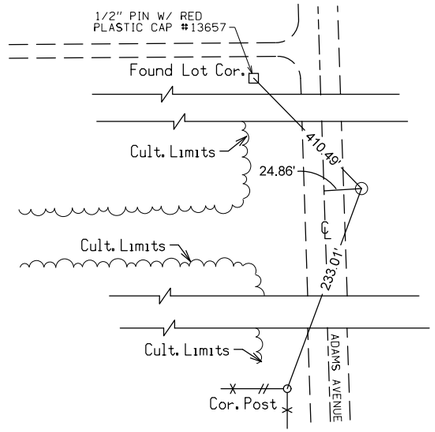
STA. 862+97.90, 5365.55' Rt.
CP No. 355, SET PK NAIL ±2' WEST OF C.L. OF ADAMS AVE.
N=700746.13 E=2222530.61



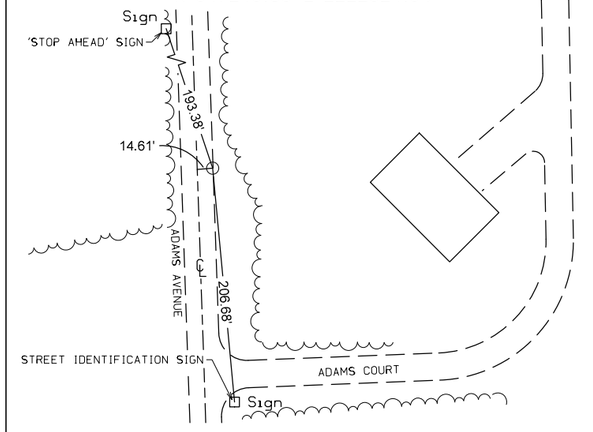
STA. 862+25.51, 6231.02' Rt.
CP No. 356, SET CUT 'X' IN NE CORNER OF MAILBOX BASE
N=699877.94 E=2222507.96



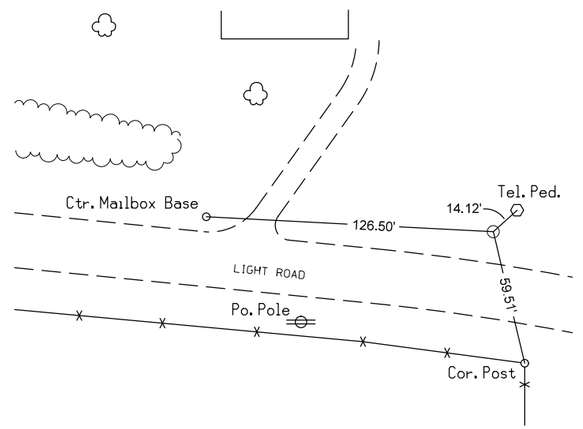
STA. 863+12.30, 7559.69' Rt.
CP No. 357, SET 1/2" REBAR
N=698556.43 E=2222670.78



STA. 861+90.99, 8866.25' Rt.
CP No. 358, SET 1/2" REBAR
N=697245.06 E=2222624.59



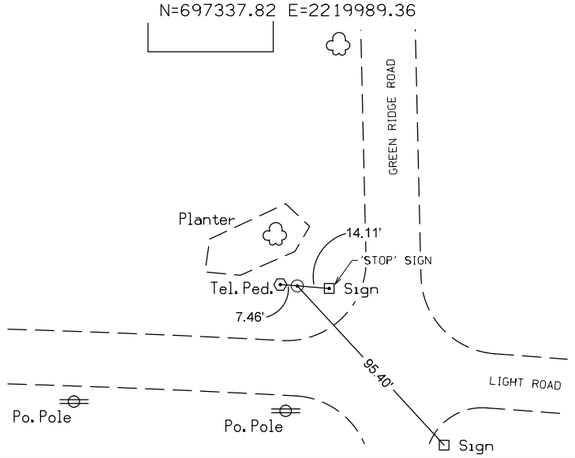
STA. 849+89.77, 8849.56' Rt.
CP No. 359, SET 1/2" REBAR
N=697190.56 E=2221351.40



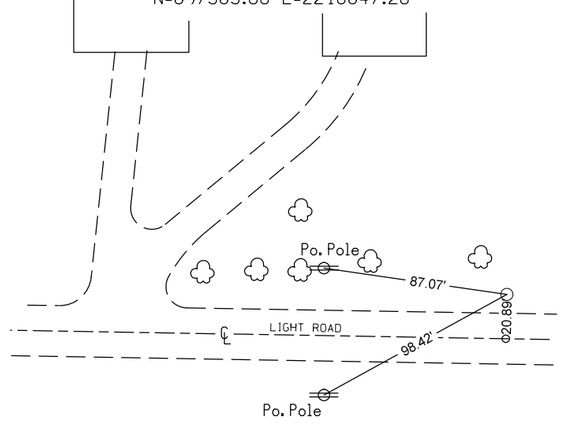
C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER G.8

2:56:40 PM 7/25/2014 V81_IDOTRoadd:\1120610\cadd\PrelimSurvey\57030076.sur

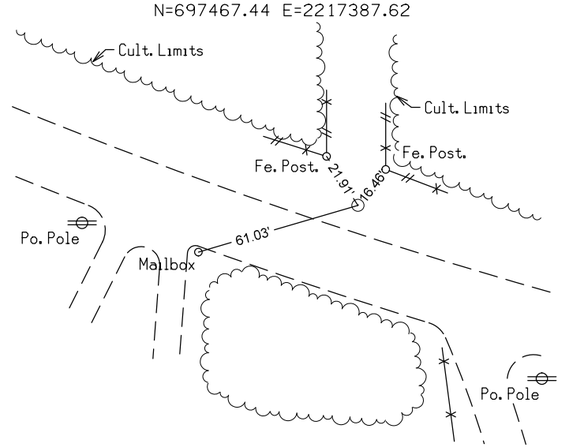
STA. 836+36.60, 8635.61′ Rt.
CP No. 360, SET 1/2″ REBAR
N=697337.82 E=2219989.36



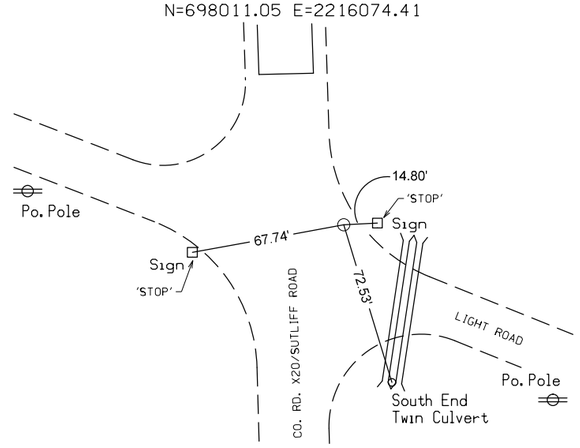
STA. 822+97.29, 8544.56′ Rt.
CP No. 361, SET 1/2″ REBAR
N=697363.00 E=2218647.20



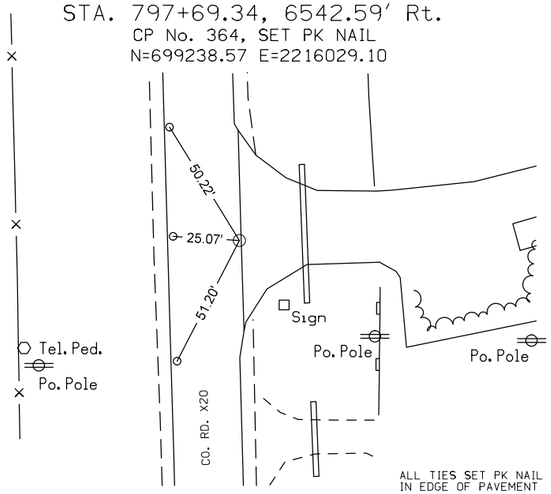
STA. 810+44.36, 8378.40′ Rt.
CP No. 362, SET 1/2″ REBAR
N=697467.44 E=2217387.62



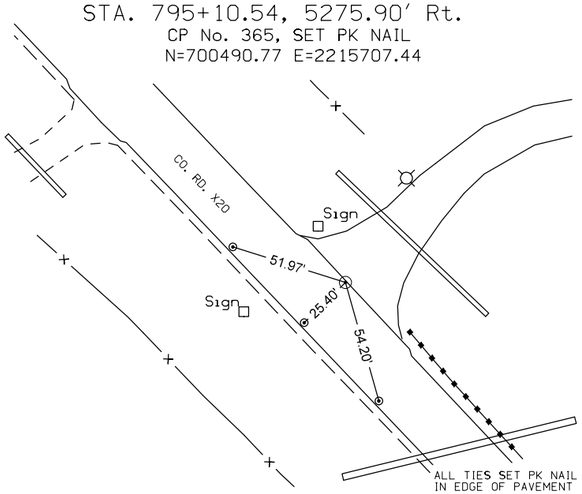
STA. 7497+53.38, 7770.85′ Rt.
CP No. 363, SET PK NAIL
N=698011.05 E=2216074.41



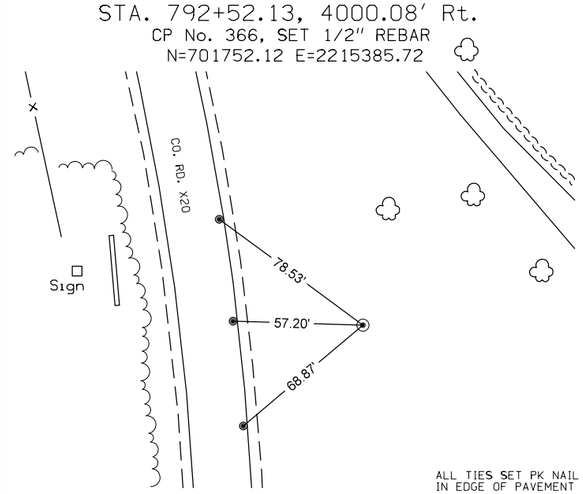
STA. 797+69.34, 6542.59′ Rt.
CP No. 364, SET PK NAIL
N=699238.57 E=2216029.10



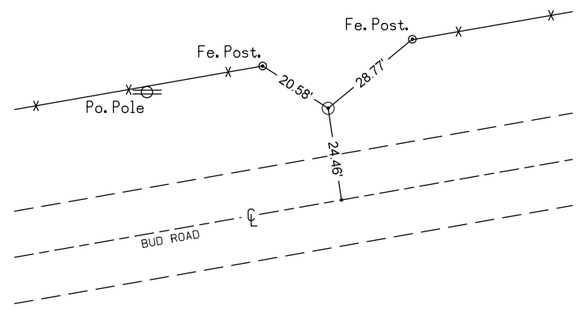
STA. 795+10.54, 5275.90′ Rt.
CP No. 365, SET PK NAIL
N=700490.77 E=2215707.44



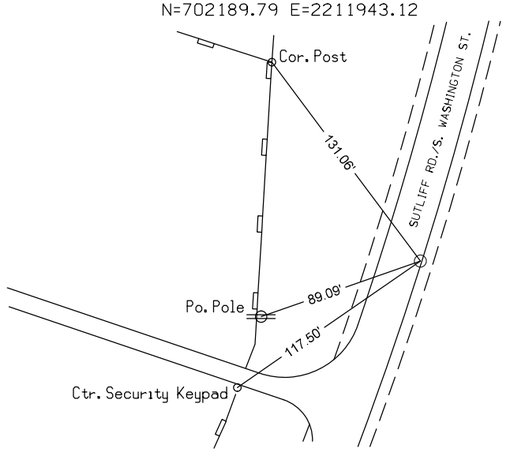
STA. 792+52.13, 4000.08′ Rt.
CP No. 366, SET 1/2″ REBAR
N=701752.12 E=2215385.72



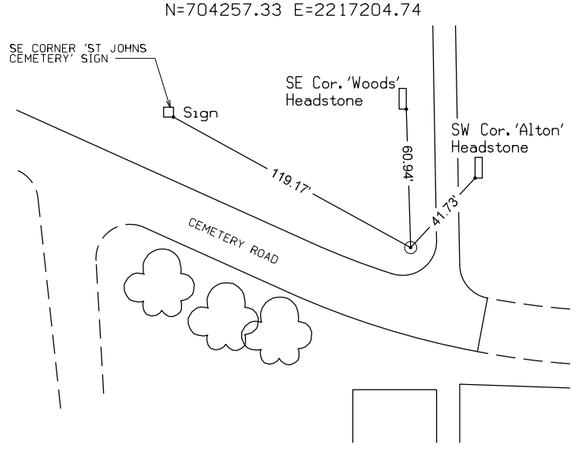
STA. 777+86.73, 3396.19′ Rt.
CP No. 367, SET 1/2″ REBAR
N=702282.17 E=2213892.03



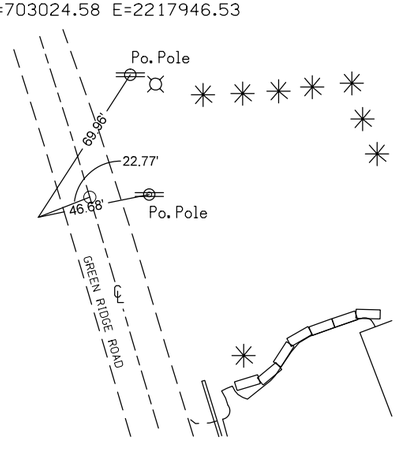
STA. 797+86.01, 2154.64′ Rt.
CP No. 368, SET MAG NAIL IN ACC ROADWAY
N=702189.79 E=2211943.12



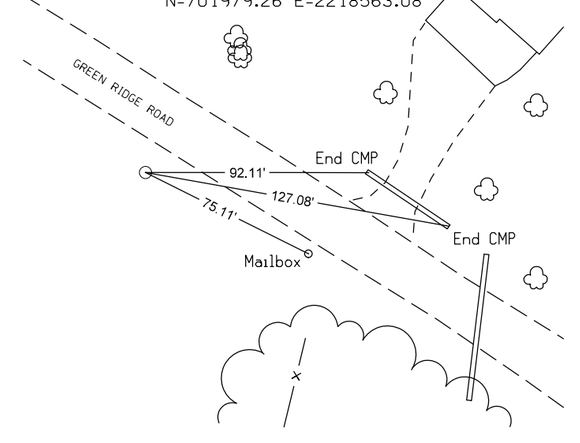
STA. 811+95.06, 1587.73′ Rt.
CP No. 369, SET CUT 'X'
N=704257.33 E=2217204.74



STA. 818+75.43, 2855.41′ Rt.
CP No. 370, SET 1/2″ REBAR
N=703024.58 E=2217946.53



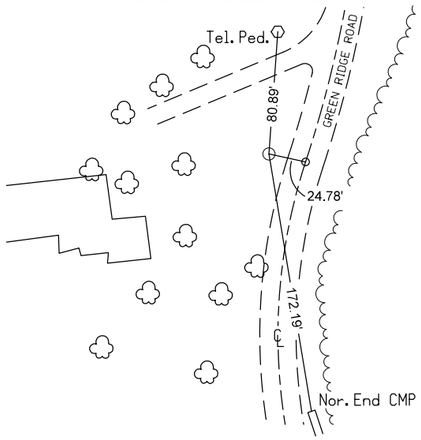
STA. 824+39.92, 3929.74′ Rt.
CP No. 371, SET 1/2″ REBAR
N=701979.26 E=2218563.08



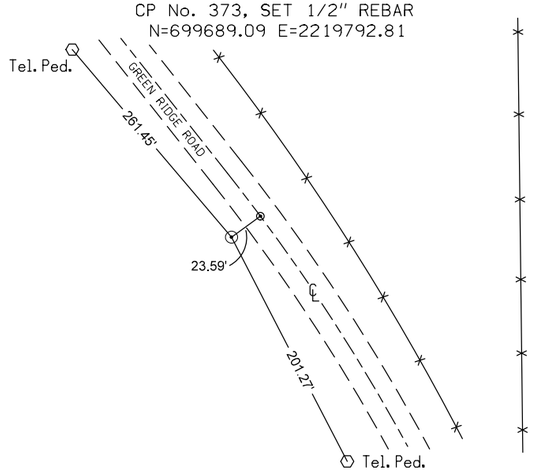
C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER G.9

2:56:42 PM 7/25/2014 V81_IDOTRoadd:\1120610\cadd\PrelimSurvey\57030076.sur

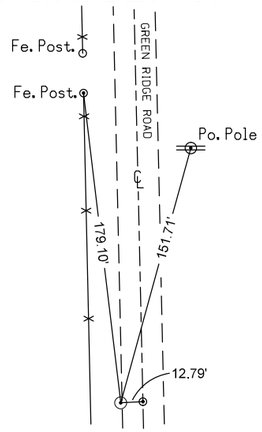
STA. 829+27.98, 5108.64′ Rt.
CP No. 372, SET 1/2″ REBAR
N=700825.74 E=2219108.44



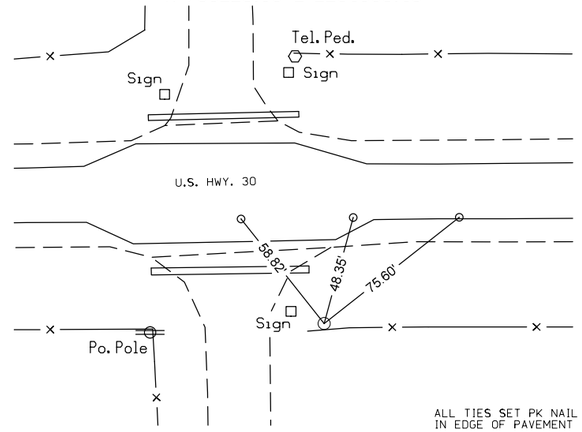
STA. 835+55.73, 6277.52′ Rt.
CP No. 373, SET 1/2″ REBAR
N=699689.09 E=2219792.81



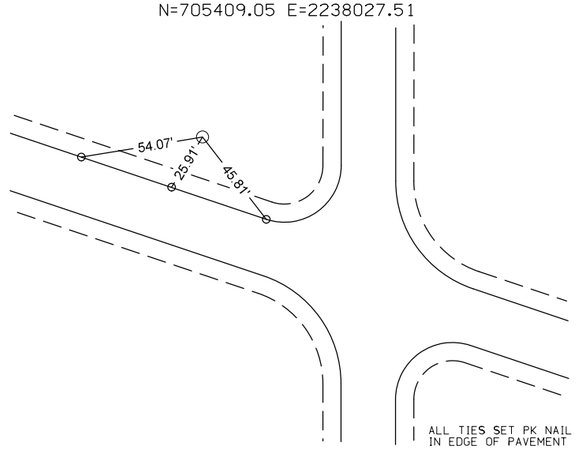
STA. 836+88.34, 7657.96′ Rt.
CP No. 374, SET 1/2″ REBAR
N=698316.83 E=2219993.04



STA. 956+61.82, 58.59′ Rt.
CP No. G432, FOUND 5/8″ REBAR WITH ALUMINUM DOT CAP
N=706220.86 E=2231583.15



STA. 1022+40.90, 36.19′ Lt.
CP No. G434, FOUND 5/8″ REBAR WITH ALUMINUM DOT CAP
N=705409.05 E=2238027.51



REVISED | 10/29/15 | PAR | IC

F03
T3

WAYNE W. & DIANA L.
NOVAK REV TRUST

WAYNE W. & DIA
NOVAK REV TR

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 10/29/15
Color Legend:

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

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER H.0	

12:48:36 PM 10/29/2015 mgogert pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

REVISED | 10/29/15 | PAR | IC

REVISED | 10/29/15 | PAR | IC

MARTI CORPORATION

MONTI S. &
MOLLIE W. MARTI

IB

DARRELL E.
JORDAN, ETAL

Sta. 560+79.11
24" X 66.7' RCP
D.A. = Median

Sta. 559+73.08
48" RCP with
4' X 3' RCB Outlet
D.A. = 29 Ac

18" X 56.2' CMP

Sta. 562+00.40
24" X 67.7' RCP
D.A. = Median

FO2

555

560

POT Sta 552+41.17

FO3

15" 30.9' CMP

WAYNE W. & DIANA L.
NOVAK REV TRUST

IB

DARRELL E.
JORDAN, ETAL

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 10/29/15
Color Legend:
- **Property Lines**
- **Temporary Easement**
- **Permanent Acquisition**

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.1

12:47:50 PM 10/29/2015 mgogert pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

AL

1B
DARRELL E.
JORDAN, ETAL

Sta. 564+17.66
Twin 12' X 10' X 200.5' RCB
D.A. = 859 Ac

Sta. 566+63.69
24" X 79.9' RCP
D.A. = Median
(U.A.C.)

570+00
℄144'±℄

571+77±℄
℄155'

40' Access Easement

1A
ANDREW T. &
REAGAN A. MORF

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

FRANKLIN TWP.
T-82N R-5W
SEC. 7

575+70
℄160'

576+21±℄
℄160'

576+21±℄
℄145'

2S
RONALD N &
BEVERLY J.
ARMSTRONG

576+50
℄160'

Sta. 576+90.00 WBL
Install 24" X 70' 2000D RCP WBL
F.L. = Lt. 763.30
Rt. 764.34

576+70 Med. Prop.
Type "M" Dike
Elev. =765+84

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

40' Access Easement

21.9' Lt. Prop. 6" Joint Ent.

(Remove)
Sta. 576+46.80
24" X 88' RCP
D.A. = Median

565 570 575

F02 F03 T3

30" X 80.4' CMP

Ent. +52 Rt. (U.A.C.)

24" X 43.8' CMP

Ent. +26 Rt. (U.A.C.)

STA 567+91.17
BEGIN CONSTRUCTION

568+15
℄120'

567+60
℄94'±℄

Sta. 570+85.86
15" X 255.8' CMP
D.A. = Median
(Remove)

575+10±℄
℄138'(ExCorner)

FRANKLIN TWP.
T-82N R-5W
SEC. 18

Sta 576+70 Med.
Install Type "M" Dike
Top Elev. =765.84

1E
RESIDUARY TRUST OF
ROBERT HENIK

1B
DARRELL E.
JORDAN, ETAL

0 FEET 50

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 10/16/14
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.2

3:18:54 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

2
RONALD N. &
BEVERLY J. ARMSTRONG

2S
RONALD N. &
BEVERLY J. ARMSTRONG

3
IRISH LANE
FARMS, LTD

Sta. 583+50.00
Install 36" X 194' 2000D RCP
F.L. = Lt. 773.47
Rt. 770.96

582+35
℄170'

588+27±℄
℄135'

Sta. 588+89.00 WBL
Install 24" X 84' 2000D RCP
F.L. = Lt. 786.22
Rt. 789.67

23.00 Lt.Prop. Safety Ramp

FRANKLIN TWP.
T-82N R-5W
SEC. 7

FRANKLIN TWP.
T-82N R-5W
SEC. 8

Sta. 582+57.74
54" X 117.8' RCP
D.A. = 18.8 Ac
(Remove)

580

585

590

POC Sta 588+28.88 (Hwy 30)
= Sta 1588+28.88 (Wilcox)

Sta. 589+36.19
30" X 126.2' RCP
D.A. = 3.4 Ac
(Remove)

Sta. 592+64.53

30" X 84' CMP
(Remove)

F02

SIGN

POC Sta. 586+43.69

91°23'28"

88°36'32"

590+10
℄131'±℄

Curve Data
Δ = 5° 28' 06.27" (RT)
T = 620.84
L = 1,240.74
R = 13,000.00
E = 14.82
e = NC

589+27±℄
℄140'

592+30
℄126'±℄

F03

I3

FRANKLIN TWP.
T-82N R-5W
SEC. 18

1585

FRANKLIN TWP.
T-82N R-5W
SEC. 17

+08.65 Rt. POC
8" Type B" Ent.

IE
RESIDUARY TRUST OF
ROBERT HENIK

2A
POLLARD JD MIDWEST
REAL ESTATE, LLC

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 10/16/14
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

0 FEET 50

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.3

3:19:38 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

3
IRISH LANE
FARMS, LTD

3
IRISH LANE
FARMS, LTD

596+00
℄170′

602+00
℄165′

607+00
℄143′±℄

Sta. 607+15.37
Install 24" X 192' 2000D RCP
Skew = 11° Rt. Ahd.
F.L. = Lt. 807.48
Rt. 809.33

Curve Data
Δ = 5° 28′ 06.27" (RT)
T = 620.84
L = 1,240.74
R = 13,000.00
E = 14.82
e = NC

595
600
605

FRANKLIN TWP.
T-82N R-5W
SEC. 8

24"/X/71'/ CMP

Sta. 598+84.43

Sta. 606+64.71
30" X 79.4' RCP
D.A. = 2.5 Ac
(Remove)

595+20
℄135′

596+00±℄
℄150′

598+25
℄170′

601+75
℄175′

604+35
℄200′

2A
POLLARD JD MIDWEST
REAL ESTATE, LLC

3
IRISH LANE
FARMS, LTD

FRANKLIN TWP.
T-82N R-5W
SEC. 17

3
IRISH LANE
FARMS, LTD

0 FEET 50

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 10/16/14
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.4

3:20:21 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

3

IRISH LANE FARMS, LTD

6

DARRELL E & DONNA J JORDAN

6A

DWAYNE G. THOMPSON

FRANKLIN TWP. T-82N R-5W SEC. 17

REVISED	6/17/15	PAR	6
REVISED	9/28/15	PAR	5

Sta. 613+59.83 MEDIAN
Install 15" X 163' 2000D RCP

Sta. 615+27
Install 24" X 92' 2000D RCP
F.L. = Lt. 801.17
Rt. 801.84

615+28.00 Med.
Install Type "M" Dike
Elev. 805.34

Sta. 615+27
Install 24" X 92' 2000D RCP
F.L. = Lt. 801.17
Rt. 801.84

Sta. 617+69.57
24" X 48.2' RCP
D.A. = 1.5 Ac
(Remove)

Sta. 615+35.84
24" X 92' RCP
D.A. = 1.5 Ac
(Remove)

+00.00 Lt. Prop.
Prop. Safety Ramp

Ext. +00 Lt. (Close)

Sta. 619+27.40
Install 36" X 20' 2000D RCP + 2-20° Elbows
Install 30" X 220' 3000D RCP
Skew = 15° Rt. Ahd.
F.L. = Lt. 793.44
Other 793.32
Other 791.22
Rt. 782.96

Sta. 617+15.85
42" X 142.7' RCP
D.A. = 13.2 Ac

+49.20 Lt. Prop. Type C Ent.

18" X 68.6' CMP

POT Sta 614+40.71 (Hwy 30)
= Sta 2614+40.71 (Irish Ln)

610+19±℄
℄175'

+23.00 Rt.Prop. Type C Ent.

614+93±℄
℄145'

4

CLIFFORD D. & BARBARA NEAL

FRANKLIN TWP. T-82N R-5W SEC. 17 LOT 1

+00.00 Rt.Prop. Type C Ent.

620+75
℄190'

5

MARY E. WOLRAB REV TRUST

610 615 620 3620 3625 2615 5610 5615 5620

0 FEET 50

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 9/28/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.5

2:11:45 PM 9/25/2015 mgogert pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

REVISED	11/4/15	PAR	8B

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 11/4/15
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

FRANKLIN TWP.
T-82N R-5W
SEC. 17

LARRY J. & BEVERLY J. THOLE

8A SCOTT A. WEBER

Sta. 627+81.56
Install 42" X 288' 3750D RCP
Skew = 21° Rt. Ahd.
F.L. = Lt. 781.95
Other 780.48
Other 776.00
Rt. 768.90

+51.63 Lt. Prop. Type "C" Ent.

+50.00 Lt. Prop. Type "C" Ent.

8 JADE INDUSTRIES, LLC

Sta. 633+01.68
Install 48" X 446' 3750D RCP
Skew = 15° Lt Ahead
F.L. = Lt. 782.16
Rt. 778.30

Sta. 632+15.26
4' X 5' X 176.4' RCB
D.A. = 46.2 Ac
(Remove)

+51.95 Lt. (Close)

8B MYRON L. & JEAN A MEYER

Lot 1

Lot 3

PERMANENT EASEMENT ONLY (X3)

Sta. 628+20.45
5' X 5.5' X 50' RCB
D.A. = 0 Ac
(Remove)

15" X 73.5' CMP
(Remove)

Sta. 626+95.12
42" X 135.7' RCP
D.A. = 25 Ac
(Extend)

18" X 30.4' CMP
(Remove)

18" X 96.2' CMP

3630 3635 3640

625 630 635

Sta. 625+26.40 EBL
Install 24" X 78' 2000D RCP
F.L. = Lt. 793.69
Rt. 789.18

631+80.00 Med.
Install Type "M" Dike
Elev. =806.36

Sta. 632+00 EBL
Install 24" X 78' 2000D RCP
F.L. = Lt. 804.86
Rt. 800.40

Ent. +40 Rt. (Close)

Ent. +66 Rt. (Close)

5625 5630 5635

624+60
℄160'

5

MARY E. WOLRAB REV TRUST

628+18±P
℄225'

Lot 2

+93.00 Rt. Prop. Type C Ent.

632+25±P
℄220'

FRANKLIN TWP.
T-82N R-5W
SEC. 17

9

JOHN L. & JANICE I. HENIK

Lot 1

0 50 FEET

REVISED	9/28/15	PAR	5,9,9A

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.6

10:52:22 AM 11/4/2015 mgogert pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

PERMANENT EASEMENT ONLY (F3)

US NAMEPLATE COMPANY, INC

FRANKLIN TWP.
T-82N R-5W
SEC. 16

CORNELL COLLEGE

Sta. 645+19.31
36" X 93.2' RCP
D.A. = Ac

Sta. 641+10.87 WBL
Construct 176'-4" x 40'-0"
Pretensioned Prestressed Concrete
Beam Bridge with 5° Skew (R.A.)

LOT 4
FRANKLIN TWP.
T-82N R-5W
SEC. 17

+69 Rt. Prop. Type "C" Ent.

POT Sta 641+15.08 (Hwy 30)
= Sta 4641+15.08 (Willow Creek)

Sta. 641+10.87 WBL
Construct 176'-4" x 40'-0"
Pretensioned Prestressed Concrete
Beam Bridge with 5° Skew (R.A.)

Sta. 641+19.29 EBL
Construct 176'-4" x 40'-0"
Pretensioned Prestressed Concrete
Beam Bridge with 5° Skew (R.A.)

PC Sta 644+15.99

641+65±ExR/W
℄140'

641+26±℄
℄140'

+35.12 Rt. Prop. Type "C" Ent.

84°32'13"

95°27'47"

640+92±℄
℄220'

Curve Data
Δ = 26° 25' 34.26" (RT)
T = 1,408.73
L = 2,767.34
R = 6,000.00
E = 163.16
e = 3.4%
l = 153'
x = 90'

PERMANENT EASEMENT ONLY (F3)

654+96±℄
℄180'

JOHN L. & JANICE I. HENIK
FRANKLIN TWP.
T-82N R-5W
SEC. 17

FRANKLIN TWP.
T-82N R-5W
SEC. 16

US NAMEPLATE COMPANY, INC

0 50 FEET

REVISED	9/28/15	PAR	9

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 9/28/15
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.7

2:13:22 PM 9/25/2015 mgogert pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 16

12
LRD CORP

N

E4(C) — E4(C) — ITC — E4(C)

656+35
℄225′

Sta. 654+00.00 WBL
Install 24″ X 82′ 2000D RCP
F.L. = Lt. 786.10
Rt. 790.77

654+01±℄
℄160′

654+20.00 Med.
Install Type "M" Dike
Elev. =792.27

Sta. 657+34.24
Install 6′x8′x325′ RCB
Skew = 5° Rt. Ahd.
0° HEADWALLS
F.L. = Lt. 754.98
Rt. 751.45

660+00
℄230′

Sta. 659+56.00 WBL
Install 24″ X 82′ 2000D RCP
F.L. = Lt. 777.63
Rt. 782.30

Sta. 659+70.94
Install 8′x7′x343′ RCB
Skew = 22° Lt. Ahd.
15° HEADWALLS
F.L. = Lt. 755.57
Rt. 752.75

667+00
℄200′

Sta. 668+38.97
Install 30″ X 20′ 2000D RCP + 2-20° Elbows
Install 24″ X 242′ 3000D RCP
Skew = 19° Rt. Ahd.
F.L. = Lt. 780.93
Other 792.40
Other 794.50
Rt. 794.60

655
660
665

668+80.00 Med.
Install Type "M" Dike
Elev. =802.90

Sta. 669+00.00 EBL
Install 24″ x 74′ 2000D RCP
F.L. = Lt. 801.40
Rt. 797.10

Curve Data
Δ = 26° 25′ 34.26″ (RT)
T = 1,408.73
L = 2,767.34
R = 6,000.00
E = 163.16
e = 3.4%
l = 153′
x = 90′

665+00
℄125′

654+96±℄
℄180′

656+50
℄240′

660+60
℄175′

658+75
℄265′

11
US NAMEPLATE
COMPANY, INC

12
LRD CORP

0 50
FEET

FRANKLIN TWP.
T-82N R-5W
SEC. 16

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 04/14/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.8

8:40:42 AM 4/14/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 16

12

LRD CORP

672+20
℄200'

Curve Data
Δ = 26° 25' 34.26" (RT)
T = 1,408.73
L = 2,767.34
R = 6,000.00
E = 163.16
e = 3.4%
I = 153'
x = 90'

3580
3675
670
676
680
PT Sta 671+83.33
2575
2580
678+00
℄200'
682+30
℄350'

12

LRD CORP

FRANKLIN TWP.
T-82N R-5W
SEC. 16

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 04/14/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

0 FEET 50

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.9

8:41:28 AM 4/14/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

12

LRD CORP

687+00
℄440′

689+00
℄405′

FRANKLIN TWP.
T-82N R-5W
SEC. 16

13

MT VERNON DEVELOPMENT
GROUP, LLC

691+80
℄335′

3585

1590

℄699

Sta. 694+65.95
Install 30″ X 440′ 3000D RCP
Skew = 1° Rt. Ahd.
F.L. = Lt. 813.30
Rt. 811.10

1595

699
℄23

Sta. 684+96.09
Install 36″ X 438′ 3750D RCP
Skew = 35° Lt. Ahd.
F.L. = Lt. 808.05
Rt. 805.82

685

Sta. 687+09.85 WBL
Construct 194′-0″ x 40′-0″
Pretensioned Prestresses Concrete
Beam Bridge with 10° Skew (L.A.)

POT Sta 687+04.52 (Hwy 30)
= Sta 6687+04.52 (IA Hwy. 1)

690

695

Sta. 686+94.33 EBL
Construct 194′-0″ x 40′-0″
Pretensioned Prestresses Concrete
Beam Bridge with 10° Skew (L.A.)

6685

698+50
℄185′

4495

REVISED	8/10/15	PAR	12
REVISED	8/10/15	PAR	13
REVISED	8/10/15	PAR	16

MT V

4490

2585

685+20
℄395′

12

4485

687+70
℄410′

690+50±1/4SectionLine
℄360′

0 50
FEET

13

FRANKLIN TWP.
T-82N R-5W
SEC. 16

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 11/23/2015
Color Legend:
- **Property Lines**
- **Temporary Easement**
- **Permanent Acquisition**

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.10

3:22:53 PM 11/23/2015 mgogert pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

13

MT VERNON DEVELOPMENT GROUP, LLC

FRANKLIN TWP.
T-82N R-5W
SEC. 15

18

ROBERT L. & ANNA M. BROULIK

699+87±℄
℄230'

Sta. 700+00.00 WBL
Install 24" X 108' 2000D RCP
F.L. = Lt. 816.05
Rt. 819.32

700+20.00 Med.
Install Type "M" Dike
Elev. =820.82

705+00
℄145'

Sta. 713+30.00 WBL
Install 24" X 74' 2000D RCP
F.L. = Lt. 792.26
Rt. 795.77

713+50.00 Med.
Install Type "M" Dike
Elev. =797.27

Future R/W Line

1600

700

705

710

4500

700+48±℄
℄180'

13

MT VERNON DEVELOPMENT GROUP, LLC

18

ROBERT L. & ANNA M. BROULIK

FRANKLIN TWP.
T-82N R-5W
SEC. 16

0 50
FEET

FRANKLIN TWP.
T-82N R-5W
SEC. 15

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 08/10/15
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.11

1:18:09 PM 8/10/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

18

ROBERT L. & ANNA M.
BROULIK

19

FRANKLIN TWP.
T-82N R-5W
SEC. 15

724+35
℄155'

Sta. 726+60.00 WBL
Install 24" X 70' 2000D RCP
F.L. = Lt. 785.15
Rt. 787.13

726+80.00 Med.
Install Type "M" Dike
Elev. =788.63

Sta. 727+96.63
Install 36" X 20' 2000D RCP + 2-20° Elbows
Install 30" X 192' 2000D RCP
Skew = 11° Rt. Ahd.
F.L. = Lt. 782.17
Other 782.05
Other 779.95
Rt. 775.05

Sta. 717+31.43
Install 60" X 188' 2000D RCP
Skew = 11° Rt. Ahd.
F.L. = Lt. 787.85
Rt. 784.58

Future R/W Line

715

720

PC Sta 719+61.18

725

Curve Data
Δ = 32° 30' 23.27" (LT)
T = 2,040.74
L = 3,971.41
R = 7,000.00
E = 291.41
e = 3.0%
I = 135'
x = 90'

728+65
℄165'

18

ROBERT L. & ANNA M.
BROULIK

FRANKLIN TWP.
T-82N R-5W
SEC. 15

18

ROBERT L. & ANNA M.
BROULIK

0 FEET 50

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 1/14/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.12

3:26:33 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

19

ROSE A. POSPISIL (LE)
JOHN J. POSPISIL (REM)

19

18

ROBERT L. & AN
BROULIK

N

729+46±P
℄160′

FRANKLIN TWP.
T-82N R-5W
SEC. 15

Curve Data
Δ = 32° 30′ 23.27″ (LT)
T = 2,040.74
L = 3,971.41
R = 7,000.00
E = 291.41
e = 3.0%
l = 135′
x = 90′

740+00
℄205′

Sta. 740+55.00 WBL
Install 24″ X 70′ 2000D RCP
F.L. = Lt. 776.28
Rt. 778.06

740+75.00 Med.
Install Type "M" Dike
Elev. =779.56

Sta. 740+75.00
Install 36″ X 196′ 2000D RCP
F.L. = Lt. 776.15
Rt. 769.30

741+06.00 Lt.
Install Type "M" Dike
Elev. =778.65

743+43±
℄285′

730

735

740

18

ROBERT L. & ANNA M.
BROULIK

730+81±P
℄150′

733+00
℄155′

FRANKLIN TWP.
T-82N R-5W
SEC. 15

740+00
℄155′

19

ROSE A. POSPISIL (LE)
JOHN J. POSPISIL (REM)

PI Sta 740+01.92

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED
FOR INFORMATION ONLY
ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 1/14/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.13

3:27:21 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

18

ROBERT L. & ANNA M.
BROULIK

743+43±℄
℄285′

FRANKLIN TWP.
T-82N R-5W
SEC. 15

750+00
℄145′

Sta. 751+83.82
Install 66″ X 258′ 2000D RCP
Skew = 32° Rt. Ahd.
F.L. = Lt. 756.61
Rt. 753.30

18

ROBERT L. & ANNA M.
BROULIK

Curve Data
Δ = 32° 30′ 23.27″ (LT)
T = 2,040.74
L = 3,971.41
R = 7,000.00
E = 291.41
e = 3.0%
l = 135′
x = 90′

756+40
℄215′

Sta. 755+80.00 WBL
Install 24″ X 70′ 2000D RCP
F.L. = Lt. 757.60
Rt. 759.58

756+00.00 Med.
Install Type "M" Dike
Elev. =761.08

756+00.00 Lt.
Install Type "M" Dike
Elev. =759.10

FRANKLIN TWP.
T-82N R-5W
SEC. 14

N

Cipco

745

750

755

Future R/W Line

Future R/W Line

744+37±℄
℄145′

18

ROBERT L. & ANNA M.
BROULIK

FRANKLIN TWP.
T-82N R-5W
SEC. 15

749+50
℄170′

19

ROSE A. POSPISIL (LE)
JOHN J. POSPISIL (REM)

FRANKLIN TWP.
T-82N R-5W
SEC. 14

757+42±℄
℄236′(PropCorn

0 FEET 50

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 1/14/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.14

3:28:07 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

18

ROBERT L. & ANNA M.
BROULIK

762+20
℄195′

Sta. 761+21.00
Install Twin 12′ X 9′ X 230′ RCB
Skew = 19° Lt. Ahd.
15° HEADWALLS
F.L. = Lt. 736.80
Rt. 736.00

Sta. 761+27.00 WBL
Install 24" X 78' 2000D RCP
F.L. Lt. 748.30
Rt. 752.72

765+00
℄140′

FRANKLIN TWP.
T-82N R-5W
SEC. 14

770+25
℄160′

769+30
℄120′

Cipco

760

765

770

775

(Close)

Ent. +26 Lt.

18

ROBERT L. & ANNA M
BROULIK

772+00
℄160′

Sta. 7771+17.62
Construct 282'-0" x 30'-0"
Pretensioned Prestresses Concrete
Beam Bridge with 0° Skew

POT Sta 771+17.62 (Hwy 30)
= Sta 7771+17.62 (Standing Rock)

Cipco

763+50
℄140′

FRANKLIN TWP.
T-82N R-5W
SEC. 14

761+00
℄230′±SecLine

orner)

18

ROBERT L. & ANNA M.
BROULIK

18

ROBERT L. & ANNA M.
BROULIK

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 1/14/15
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.15

3:28:55 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

18

ROBERT L. & ANNA M.
BROULIK

ANNA M.
IK
0

778+50
℄195'

Sta. 779+96.00
Install 6'x8'x307' RCB
Skew = 15° Rt. Ahd.
15° HEADWALLS
F.L. = Lt. 763.00
Rt. 760.25

779+50
℄235'

775+65.00 Med.
Install Type "M" Dike
Elev. =781.39

Sta. 775+85.00 WBL
Install 24" X 74' 2000D RCP
F.L. = Lt. 776.42
Rt. 779.89

FRANKLIN TWP.
T-82N R-5W
SEC. 14

15" X 57' CMP

18

ROBERT L. & ANNA M.
BROULIK

789+00
℄150'

N

775

780

785

778+75
℄190'

780+35
℄260'

FRANKLIN TWP
T-82N R-5W
SEC. 14

786+25
℄145'

18

ROBERT L. & ANNA M.
BROULIK

18

ROBERT L. & ANNA M.
BROULIK

0 50
FEET

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 1/14/15
Color Legend:
- **Property Lines**
- **Temporary Easement**
- **Permanent Acquisition**

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.16

3:29:42 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

ROBERT L. & ANNA M.
BROULIK

18

ROBERT L. & ANNA M.
BROULIK

18A

EUGENE W. & JULIA A.
ACHENBACH

FRANKLIN TWP.
T-82N R-5W
SEC. 14

797+26±℄
℄175'

Sta. 797+71.00
Install 42" X 276' 3000D RCP
Skew = 24° Lt. Ahd.
F.L. = Lt. 795.50
Rt. 790.75

803+94±℄
℄205'

Future R/W Line

790

795

800

N

T1

FRANKLIN TWP.
T-82N R-5W
SEC. 14

796+20
℄175'

797+22±℄
℄221'(PropCor)

797+22±℄
℄175'

803+90±℄
℄175'

Future R/W Line

18

ROBERT L. & ANNA M.
BROULIK

18

ROBERT L. & ANNA M.
BROULIK

0 FEET 50

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 10/16/14
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.17

3:30:29 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

34

WILMA L. WILLIAMS
REVOCABLE TRUST

9810

9815

9820

0188

810+83±℄
℄270.5'(PropCor)

FRANKLIN TWP.
T-82N R-5W
SEC. 14

FRANKLIN TWP.
T-82N R-5W
SEC. 13

94±℄

Sta. 805+50.00 WBL
Install 24" X 70' 2000D RCP
F.L. = Lt. 802.66
Rt. 804.00

Sta. 805+70.00 Med.
Install Type "M" Dike
Elev. =805.50

Sta. 8806+52.46
Construct 252'-0" x 36'-0"
Pretensioned Prestresses Concrete
Beam Bridge with 16° Skew

808+28.63

PC Sta 808+28.63

810

Sta. 810+93.73
Install 30" X 196' 2000D RCP
Skew = 10° Rt. Ahd.
F.L. = Lt. 798.03
Rt. 795.85

Sta. 816+70.70 (WBL)
Install 24" X ~~72'~~ 2000D RCP
Skew = 10° Rt. Ahd.
F.L. = Lt. 794.53
Rt. 798.62

815

817+60±℄
℄170'

15" CMP

34

WILMA L. WILLIAMS
REVOCABLE TRUST
Future R/W Line

0088

POT Sta 807+03.40 (Hwy 30)
= Sta 8806+47.46 (Sunliff)

Future R/W Line

808+25
℄175'

810+50±℄
℄140'

Sta. 818+30.24
Install 54" X 304' 3000D
Skew = 24° Rt. Ahd.
F.L. = Lt. 783.00
Rt. 776.90

PI Sta 818+67

18

ROBERT L. & ANNA M.
BROULIK

34A

SCOTT C.
SHERWOOD

816+25
℄195'

Curve Data
Δ = 32° 52' 10.61" (LT)
T = 1,032.42
L = ~~2,007.89~~
R = 3,500.00
E = 149.09
e = 5.0%
I = 225'
x = 90'

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED
FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 10/16/14
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.18

3:31:16 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 13

REVISED	9/3/15	PAR	51

34

WILMA L. WILLIAMS
REVOCABLE TRUST

821+15
℄315'

Sta. 822+84.18
Install 5'x6'x412' RCB
Skew = 10° Lt. Ahd.
15° HEADWALLS
F.L. = Lt. 773.63
Rt. 764.34

825+84±℄
℄240'

51E

ROBERT J. &
DOROTHY GAINES

830+17±℄
℄275'

Sta. 830+50.00 WBL
Install 24" X 76' 2000D RCP
F.L. = Lt. 822.98
Rt. 827.23

Sta. 830+30.00 Med.
Install Type "M" Dike
Elev. =828.73

51

ROBERT J. &
DOROTHY GAINES (FEE)
GARY GAINES (CP)

832+15
℄295'

834+31±℄
℄300'

Sta. 832+41.07
Install 36" X 20' 2000D RCP + 2 Elbows
Install 30" X 448' 3750D RCP
Skew = 26° Lt. Ahd.
F.L. = Lt. 806.20
Other 806.08
Other 803.98
Lt. 781.20

ROBERT
DOROTHY

820

825

830

PT Sta 828+36.52

826+70
℄135'

827+36±℄
℄160'

Curve Data
Δ = 32° 52' 10.61"
T = 1,032.42
L = 2,007.89
R = 3,500.00
E = 149.09
e = 5.0%
I = 225'
x = 90'

34A

SCOTT C.
SHERWOOD

823+01±℄
℄325'

51

ROBERT J. &
DOROTHY GAINES (FEE)
GARY GAINES (CP)

829+00
℄295'

FRANKLIN TWP.
T-82N R-5W
SEC. 13

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 09/03/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.19

12:16:10 PM 9/3/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

REVISED	9/3/15	PAR	51
REVISED	10/29/15	PAR	46

838+38±℄
℄330'

51E
ROBERT J. & DOROTHY GAINES

52E
STATE OF IOWA (STEVE & LINDSAY JORDAN)
839+40
℄330'

Ingress-egress easement to Parcel 46

842+34±℄
℄392'(PropCor)

842+07±℄
℄349'(PropCor)

841+48±℄
℄260'

843+10±℄
℄300'

844+25
℄335'

46
MARIE E. HUBBARD

(close) 840+00
℄260'

Sta. 10839+07.30
Construct 280'-0" x 30'-0"
Welded Girder Bridge
Beam Bridge with 15° Skew

44
DOUGLAS J. WHITE

Sta. 846+36.75 WBL
Construct 663'-0" x 40'-0"
Pretensioned Prestresses Concrete
Beam Bridge with 0° Skew

835
840
845
10840

POT1 Sta 836+72.64
EQUATION:
Sta 837+21.45 BK =
Sta 836+72.64 AH

POT Sta 838+87.30 (U.S. 30)
= Sta 10838+87.30 (Green Ridge)

837+65
℄180'

841+74±℄
℄190'

840+40±℄
℄190'

843+34±℄
℄288'(PropCor)

44
DOUGLAS J. WHITE

Sta. 846+36.75 EBL
Construct 663'-0" x 40'-0"
Pretensioned Prestresses Concrete
Beam Bridge with 0° Skew

51
ROBERT J. & DOROTHY GAINES (FEE)
GARY GAINES (CP)

10835

51C
JEFFERY & TIFFANY STULL

46
MARIE E. HUBBARD
846+50
℄365'

836+00
℄425'

FRANKLIN TWP.
82N R-5W
SEC 13

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 10/29/15
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.20

1:39:58 PM 10/29/2015 mgogert pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 13

849+00
℄300′

46 MARIE E. HUBBARD

851+50
℄165′

Sta. 850+20.00 WBL
Install 24" X 82′ 2000D RCP
F.L. = Lt. 848.00
Rt. 852.30

Sta. 850+00.00 Med.
Install Type "M" Dike
Elev. =853.80

Sta. 846+36.75 WBL
Construct 663′-0" x 40′-0"
Pretensioned Prestresses Concrete
Beam Bridge with 0° Skew

850

855

860

856+93±℄
℄200′

51A

MICHAEL D. &
LYNN L. BERGMANN

3590

Sta. 863+65.00
Install 30" X 178′ 2000D RCP
F.L. = Lt. 857.00
Rt. 857.96

Sta. 863+65.00 Med.
Install Type "M" Dike
Elev. =860.63

E4

Sta. 846+36.75 EBL
Construct 663′-0" x 40′-0"
Pretensioned Prestresses Concrete
Beam Bridge with 0° Skew

854+63±℄
℄150′

2560

46 MARIE E. HUBBARD

51A

MICHAEL D. &
LYNN L. BERGMANN

850+00
℄350′

0 50
FEET

FRANKLIN TWP.
T-82N R-5W
SEC. 13

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 04/14/15
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.21

8:43:46 AM 4/14/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

51A

MICHAEL D. &
LYNN L. BERGMANN

867+90
℄490'

3565

1570

MICHAEL D. &
LYNN L. BERGMANN

℄390'

99

MICHAEL D. &
LYNN L. BERGMANN

1575

FRANKLIN TWP. (LINN CO.)
T-82N R-5W
SEC. 13

PIONEER TWP. (CEDAR CO.)
T-82N R-4W
SEC. 18

Sta. 863+65.00
Install 30" X 178' 2000D RCP
F.L. = Lt. 857.00
Rt. 857.96

Sta. 863+65.00 Med.
Install Type "M" Dike
Elev. =860.63

Sta. 863+85.00 WBL
Install 24" X 70' 2000D RCP
F.L. = Lt. 857.50
Rt. 859.13

Sta. 11869+70.26
Construct 232'-0" x 60'-0"
Pretensioned Prestresses Concrete
Beam Bridge with 9° Skew

POT Sta 869+70.26 (Hwy 30)
= Sta 11869+70.26 (Adams)

865

870

875

11870

2565

871+50
℄465'

4575

51A

MICHAEL D. &
LYNN L. BERGMANN

869+50
℄510'

868+25±CountyLine
℄480'

2570

11865

4570

99

MICHAEL D. &
LYNN L. BERGMANN

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
ROW #: NHSN-30-8(28)--2R-16
Plan Date: 10/27/14
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.22

3:34:26 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-8(28)--2R-16
Plan Date: 1/14/15
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

99
MICHAEL D. & LYNN L. BERGMANN

106
JOHN MC PHAIL & TRACY SPERRY

101
STATE OF IOWA (JACK W. & DIANNE L. O'CONNELL)

102
STEVEN ... ERVING

883+80 ℄190'

885+55±℞ ℄190'

886+38±℞ ℄230'

888+92±℞ ℄230'

891+35 ℄255'

Sta. 880+70.79
Install 42" X 288' 2000D RCP
Skew = 12° Lt. Ahd.
F.L. = Lt. 872.10
Rt. 870.94

Sta. 881+28.00 WBL
Install 24" X 110' 2000D RCP
F.L. = Lt. 874.75
Rt. 880.16

Sta. 881+08.00 Med.
Install Type "M" Dike
Elev. =881.66

Sta. 19888+11.50
Install 24" X 133' 2000D RCP
Skew = 33° Lt. Ahd.
F.L. = Lt. 887.09
Rt. 888.25

Sta. 19883+47.85
Install 30" X 200' 3750D RCP
Skew = 33° Rt. Ahd.
F.L. = Lt. 884.60
Rt. 886.16

881+00 ℄190'

883+88±℞ ℄190'

Sta. 880+48.84
24" X 126' CMP
D.A. = 11.6 Ac

+28.08 Rt. (Proposed) 24" X 96' CMP

+45.00 Lt. (Proposed) 18" X 96' CMP

+23.00 Lt. Prop. Type "G" Ent.

90°00'00"

45°00'00"

90°00'00"

PIONEER TWP.
T-82N R-4W
SEC. 18

PIONEER TWP.
T-82N R-4W
SEC. 18

1580

880

885

890

0 50 FEET

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.23

3:35:13 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-8(28)--2R-16
Plan Date: 04/14/15
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

PIONEER TWP T-82N R-4W SEC. 18

HAIL
ERRY

PETER A. GREINER & MARGO L. GREINER FAMILY TRUST, RITA WENDLER

109

897+32±R
℄185'

899+00
℄145'

903+00
℄165'

RITA F. WENDLER

PETER A. GREINER & MARGO L. GREINER FAMILY TRUST, RITA WENDLER

109

Sta. 896+60.00 WBL
Install 24" X 70' 2000D RCP
F.L. = Lt. 901.90
Rt. 904.26

Sta. 896+40.00 Med.
Install Type "M" Dike
Elev. =905.76

Sta. 899+43.10
Install 36" X 220' 2000D RCP
Skew = 25° Lt. Ahd.
F.L. = Lt. 904.74
Rt. 899.20

895
900
905

Sta. 903+60.89

Sta. 895+65.61
Install 24" X 216' 2000D RCP
Skew = 24° Rt. Ahd.
F.L. = Lt. 898.36
Rt. 896.60

Curve Data
Δ = 35° 39' 37.42" (RT)
T = 1,479.57
L = 2,863.00
R = 4,600.00
E = 232.09
e = 4.0%
Ls = 180'
x = 90'

899+32±R
℄215'

PETER A. GREINER & MARGO L. GREINER FAMILY TRUST, RITA WENDLER

109

PIONEER TWP T-82N R-4W SEC. 18

0 FEET 50

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.24

8:44:32 AM 4/14/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

109

PIONEER TWP.
T-82N R-4W
SEC. 7

911+00
℄310'±ExR/W

10+97±ExR/W
175'

910

915

920

PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

109

PI Sta 918+40.46

920+60
℄210'

Sta. 921+82.82
Install 30" X 272' 2000D RCP
Skew = 32° Rt. Ahd.
F.L. = Lt. 904.72
Rt. 899.57

Sta. 922+93.00 WBL
Install 24" X 76' 2000D RCP
F.L. = Lt. 906.60
Rt. 909.64

Sta. 923+13.00 Med.
Install Type "M" Dike
Elev. =911.14

Curve Data
Δ = 35° 39' 37.42" (RT)
T = 1,479.57
L = 2,863.00
R = 4,600.00
E = 232.09
e = 4.0%
l = 180'
x = 90'

Sta. 15884+13.66
Install 18" X 108' 2000D RCP
Skew = 33° Rt. Ahd.
F.L. = Lt. 918.10
Rt. 917.49

909+00
℄185'

915+13±R
℄170'

922+35±R
℄170'

PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

109

108

DANIEL E. KOHL

PIONEER TWP.
T-82N R-4W
SEC. 18

0 FEET 50

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-8(28)--2R-16
Plan Date: 04/14/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.25

8:45:19 AM 4/14/2015 atinken pw:\\projectwise.dot.int.ian:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

PIONEER TWP.
T-82N R-4W
SEC. 7

PIONEER TWP.
T-82N R-4W
SEC. 8

109
PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

109
PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

N

Curve Data
Δ = 35° 39' 37.42" (RT)
T = 1,479.57
L = 2,863.00
R = 4,600.00
E = 232.09
e = 4.0%
I = 180'
x = 90'

929+50
℄170'

Sta. 933+63.00 WBL
Install 24" X 70' 2000D RCP
F.L. = Lt. 877.43
Rt. 878.24

Sta. 933+83.00 Med.
Install Type "M" Dike
Elev. =879.74

925
930
935

Sta. 932+23.89

Sta. 899+69.70
15" X 120.3' CPP
D.A. = 9.3 Ac
(Remove)

Sta. 15899+87.41
Install 36" X 94' 2000D RCP
Skew = 5° Rt. Ahd.
F.L. = Lt. 896.50
Rt. 896.00

+70.00 Rt. Prop. Type "C" Ent.

926+25
℄148'±ExR/W

937+00
℄152'±ExR/W

108
DANIEL E. KOHL

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-8(28)--2R-16
Plan Date: 04/14/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.26

8:46:03 AM 4/14/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

PIONEER TWP.
T-82N R-4W
SEC. 8

110

SCOTT F. & ANN L.
WENDLER

109

PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

940+95±℄
℄200'

939+87±℄
℄200'

Future R/W Line

Sta. 942+54.95
Install Twin 10' X 10' RCB Extension
Skew = 31° Rt. Ahd.
30° Headwall
F.L. = Lt. 844.50
Other 839.61
Rt. 838.43

Sta. 944+33.00 WBL
Install 24" X 76' 2000D RCP
F.L. = Lt. 850.66
Rt. 854.61

Sta. 952+00.00 WBL
Install 24" X 70' 2000D RCP
F.L. = Lt. 862.37
Rt. 864.03

Sta. 951+80.00 Med.
Install Type "M" Dike
Elev. =965.53

940

945

950

Sta. 936+33.14
30" X 82.5' RCP
D.A. = 7.6 Ac

Sta. 917+49.18
Twin 9' X 10' X 88.1' RCB
D.A. = 908 Ac

REMOVE HEADWALL

18" X 55.8' CMP

940+00
℄180'

108

DANIEL E. KOHL

109

PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

18" X 71.2' CMP

+29.00 Rt. Proj.
Type "E" Ent.

+102 Rt.
Ent.

W. A. G., INC

954+50
℄120'

Sta. 16952+02.60
Install 30" X 24' 2000D RCP + 2-20
Install 24" X 46' 3000D RCP
Skew = 19° Rt. Ahd.
F.L. = Lt. 864.02
Other 867.33
Rt. 871.83

PETE
MA
F
R

0 50
FEET

PIONEER TWP.
T-82N R-4W
SEC. 17

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-8(28)--2R-16
Plan Date: 04/14/15
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.27

8:46:45 AM 4/14/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-8(28)--2R-16
Plan Date: 04/14/15
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

PIONEER TWP.
T-82N R-4W
SEC. 8

109
PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

963+00
℄200'

Sta. 957+00
Construct PV-504 Crossover

STA. 961+69.98
END CONSTRUCTION

955 960 965

Extend Sta 18967+61.14
With 30" x 30' 2000D RCP
Skew = 5° Rt. Ahd.
F.L. = Lt. 879.18
Other 879.53
Other 879.97
Rt. 879.91

Sta 961+69.98 (US Hwy 30)
= Sta 18961+69.98 (US 30 E Tie)

18" X 33.9' CMP

Sta. 941+83.42
30" X 60.4' RCP
D.A. = 4.9 Ac

954+50
℄120'

109
PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

RCP + 2-20° Elbows
RCP

959+80
℄180'±ExR/W

109
PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

PIONEER TWP.
T-82N R-4W
SEC. 17

964+80
℄285'

0 50
FEET

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.28

8:47:27 AM 4/14/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

109
PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

PIONEER TWP.
T-82N R-4W
SEC. 8

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-8(28)--2R-16
Plan Date: 04/14/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

109
PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

981+88±℄
℄135'

970
975
980

end Sta 18967+61.14
30" x 30' 2000 RCP
w = 5° Rt. Ahd.
= Lt. 879.18
Other 879.53
Other 879.97
Rt. 879.91

Sta. 941+83.42
30" X 60.4' RCP
D.A. = 4.9 Ac

Sta. 16970+91.44
Install 18" X 100' UNCL
Skew = 30° Rt. Ahd.
F.L. = Lt. 883.50
Rt. 883.92

Sta. 16981+90.00
Install 36"x56' 2000D RCAP
Skew = 3° Rt. Ahd.
F.L. = Lt. 869.65
Rt. 871.29

87°11'09"

0 50
FEET

PIONEER TWP.
T-82N R-4W
SEC. 17

982+07±℄
℄285'

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	H.29

8:48:08 AM 4/14/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101h.sht

N

FRANKLIN TWP.
T-82N R-5W
SEC. 18

1E
RESIDUARY TRUST OF
ROBERT HENIK

ACQUIRE ACCESS CONTROL ON
S.R. FROM 1586+31 TO 1588+29

1586+33±℄
℄75'

Sta. 1587+30.50
Install 29"x18"x64' 2000D RCAP
Skew = 1° Lt. Ahd.
F.L. = Lt. 786.56
Rt. 788.18

Sta. 1586+85.00 Med.
Install Type "M" Dike
Elev. =789.68

1584+00
℄75'

1585

1580+35
℄28'±ExR/W

POT Sta 1580+18.55

Sta 1581+67.00
Begin Construction

1580+35
℄38'±ExR/W

1580+35
℄2.6'±℄

Sta 1584+26.94
End granular Surfacing
Begin PCC Paving

1584+00
℄80'

±08.65 Rt. Prop.
Type "B" Ent.

1584+55
℄80'

1584+80
℄150'

1585+60
℄80'

1586+73±℄
℄80'

1585+40
℄150'

2A
POLLARD JD MIDWEST
REAL ESTATE, LLC

FRANKLIN TWP.
T-82N R-5W
SEC. 17

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

585

FRANKLIN TWP.
T-82N R-5W
SEC. 7

2S
RONALD N. &
BEVERLY J. ARMSTRONG

29.00 Lt.Prop.
Prop. Safety Ramp

POT Sta 1588+28.88 (Wilcox Rd.)
= Sta 588+28.88 (Hwy 30)

3
IRISH LANE
FARMS, LTD

590

Sta. 587+35.19
30" X 126.2' RCP
D.A. = 3.4 Ac

FRANKLIN TWP.
T-82N R-5W
SEC. 8

0 FEET 50

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 10/16/14
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.1

3:41:29 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 17

FRANKLIN TWP.
T-82N R-5W
SEC. 8

610

5610

2615

615

5615

2620

3620

2616+56±℄
℄73.5'(ExCorner)

ACQUIRE ACCESS CONTROL ON
S.R. FROM 2614+41 TO 2616+39

Sta. 2615+44.27
Install 24" X 92' 2000D RCP
F.L. = Lt. 803.01
Rt. 801.79

Curve Data
Δ = 5° 43' 15.42" (LT)
T = 212.36
L = 424.36
R = 4,250.00
E = 5.30
e = NC

3
IRISH LANE FARMS, LTD

POT Sta 2618+00.80 (Irish Ln.)
= Sta 614+40.71 (Old Hwy 30)

+00.00 Lt. Prop. Prop. Safety Ramp

PC Sta 2616+09.92

Sta. 5617+69.57
24" X 48' SMR
D.A. = 2.6 Ac.

2621+50
℄34'±ExR/W

PT Sta 2620+34.28

PT Sta 2621+62.82

Ent. +87 Lt.

2621+50
℄0.9'±℄

4
FORD D. & ARA NEAL

POT Sta 2614+40.71 (Irish Ln.)
= Sta 614+40.71 (Hwy 30)

5
E. WOLRAB TRUST

TEMPORARY EASEMENT TO

Sta. 5615+85.45
24" X 48' RCP
D.A. = 1.5 Ac.

Sta. 5617+15.85
42" X 142.7' RCP
D.A. = 13.2 Ac.

PI Sta 2618+22.28

Sta 2618+82.62
End PCC Paving
Begin Granular Surfacing

Sta 2620+34.28
End Construction

2620+20
℄55'

2621+50
℄32'±ExR/W

Ent. +69 Rt.

2618+65
℄60'

6
DARRELL E & DONNA J JORDAN

REVISED	9/28/15	PAR	5

0 50
FEET

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 9/28/15
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.2

2:08:10 PM 9/25/2015 mgogert pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 6/17/14
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

FRANKLIN TWP.
T-82N R-5W
SEC. 8

FRANKLIN TWP.
T-82N R-5W
SEC. 8

6
ROBERT & EUNICE BAXA

3
IRISH LANE FARMS, LTD

6A
DWAYNE G. THOMPSON

REVISED | 6/17/15 | PAR | 6

REVISED | 6/17/15 | PAR | 6

POT Sta 3618+00.80 (30W Connector)
= Sta 2618+00.80 (Irish Ln.)

Prop. Safety Ramp
+00.00 Lt. Prop.

3620+30 ℄ 70′

Curve Data
Δ = 21° 40′ 51.99″ (RT)
T = 97.66
L = 192.99
R = 510.00
E = 9.27
e = NC

PC Sta 3619+32.80
PI Sta 3620+30.46
PI Sta 3621+25.79
PC Sta 3622+50.79

3623+18±ExR/W ℄ 40′

3625+26±P ℄ 43.8′(ExCorner)

Curve Data
Δ = 23° 58′ 07.78″ (LT)
T = 163.45
L = 322.12
R = 770.00
E = 17.16
e = NC

3623+71±P ℄ 46′

PT Sta 3625+72.90

+18.20 Lt. Prop. 18" Type "E" End.

Sta. 617+15.85
42" X 142.7' RCP
D.A. = 13.2 Ac

Sta. 561+69.55
24" X 28.2'
D.A.

PT Sta 3624+14.24

18" X 68.6' CMP

2620
3620
3625
2615
615
610
5610
5615
5620

0 FEET 50

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.3

6:33:41 AM 6/19/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 10/16/14
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

REVISED	11/4/15	PAR	8B

FRANKLIN TWP.
T-82N R-5W
SEC. 8

LARRY J. & BEVERLY J. THOLE

8A SCOTT A. WEBER

8 JADE INDUSTRIES, LLC

8B MYRON L. & JEAN A MEYER

Lot 1

Lot 2

Lot 3

PERMANENT EASEMENT ONLY (X3)

3632+70 ℄60′

3632+00 ℄30′

3631+64±P ℄35′

3633+67±P ℄60′

3633+63±P ℄50′

3635+40 ℄30′

3636+53±P ℄42′

3637+22±P ℄64′(ExCor)

3637+30 ℄130′

3637+96±P ℄105′

3638+05 ℄105′

3638+05 ℄65′ (Cube)

3638+15 ℄40′

3640+85 ℄55′

3630

3635

3640

150.00 Lt. Prop. Joint Type "C" Ent.

151.63 Lt. Prop. Joint Type "C" Ent.

S-59 P-59 S-60 P-60 S-61 P-61 S-62 P-62 S-63 P-63 S-64 S-65 P-65 S-66 P-66 S-67 P-67 S-68 P-68 S-69 P-69 S-70 P-70 S-71

Sta. 626+95.12
42″ X 135.7′ RCP
D.A. = 25 Ac
(Extend)

15″ X 73.5′ CMP
(Remove)

Sta. 632+15.26
4′ X 5′ X 176.4′ RCB
D.A. = 48.2 Ac

Sta. 630+20.45
5′ X 5.5′ X 50′ RCB
D.A. = 0 Ac
(Remove)

18″ X 30.4′ CMP
(Remove)

18″ X 96.2′ CMP

625 630 635

5620 5625 5630 5635

0 50 FEET

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.4

10:53:33 AM 11/4/2015 mgogert pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 8

FRANKLIN TWP.
T-82N R-5W
SEC. 9

REVISED | 11/4/15 | PAR | 8B

N

Curve Data
Δ = 2° 50' 10.78" (LT)
T = 74.27
L = 148.51
R = 3,000.00
E = 0.92
e = NC

PERMANENT EASEMENT ONLY (F3)

11

US NAMEPLATE COMPANY, INC

CORNELL COLLEGE

Sta 652+00.76
4' X 5.5' X 36.2' RCP
D.A. = Ac

Sta. 645+19.31
36" X 93.2' RCP
D.A. = Ac
(U.A.C.)

POT Sta 3644+87.26 (30W Connector)
= Sta 4643+09.97 (Willow Creek Rd.)

3642+85
℄50'±P℄

8B

MYRON L. & JEAN A. MEYER
LOT

4645

3645

3650

PC Sta 3646+40.22

PT Sta 3647+88.73

Sta 3647+88.73
End Construction

+69 Rt. Prop. Type "G" Ent.

95°27'47"

84°32'13"

PI Sta 3647+14.49

TV

640

645

650

4640

+35.12 Rt. Prop. Type "C" Ent.

PERMANENT

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 11/4/15
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.5

11:00:03 AM 11/4/2015 mgogert pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

Sta. 606+64.71
30" X 79.4' RCP
D.A. = 2.5 Ac

Sta. 617+15.85
42" X 142.7' RCP
D.A. = 13.2 Ac

Sta. 5615+54.76
24" X 43.5' RCP
D.A. = 0.5 Ac

610
615
620
5605
5610
5615
2615

TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE

5606+90 ℄25'

5607+06±℄ ℄25'

STA 5607+06.29
BEGIN CONSTRUCTION

5606+90 ℄25'

5607+07±℄ ℄25'

+23.00 Rt.Prop. Type C Ent.

PC Sta 5611+08.76

PT Sta 5611+81.96

5611+80±℄ ℄35'

5613+60 ℄50'

5613+60 ℄75'

PT Sta 5615+54.76

+00.00 Rt.Prop. Type C Ent.

5614+40 ℄75'

PC Sta 5616+90.78

5617+50 ℄35'

PT Sta 5617+81.62

PT Sta 5617+36.33

5618+00 ℄60'

3
IRISH LANE FARMS, LTD

4
CLIFFORD D. & BARBARA NEAL

Lot

Curve Data
Δ = 10° 27' 25.11" (RT)
T = 73.21
L = 146.01
R = 800.00
E = 3.34
e = NC

TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE

5
MARY E. WOLRAB REV TRUST

Sta. 5617+71.45
Install 36" X 84' UNCL
Skew = 51° Rt. Ahd.
F.L. = Lt. 780.83
Rt. 778.45

REVISED | 9/28/15 | PAR | 5

Curve Data
Δ = 10° 24' 33.55" (LT)
T = 45.54
L = 90.84
R = 500.00
E = 2.07
e = NC

FRANKLIN TWP.
T-82N R-5W
SEC. 17

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 9/28/15
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.6

2:08:50 PM 9/25/2015 mgogert pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

Sta. 626+95.12
42" X 135.7' RCP
D.A. = 25 Ac

625 630 635

18" X 96.2' CMP

5620 5625 5630

PT Sta 5617+81.62
PT Sta 5621+09.99
PC Sta 5623+91.10
PT Sta 5624+94.81
PC Sta 5620+36.90
PT Sta 5621+82.34
PT Sta 5624+43.14

5620+00
℄25'

8+00
0'

5621+60
℄20'

5623+80
℄20'

Sta. 5625+49.43
Install 60" X 54' 2000D UNCL
Skew = 28° Lt. Ahd.
F.L. = Lt. 767.80
Rt. 767.20

UAC Pipe
5625+22±P
℄60'

+93.00 Rt.Prop.
Type C Ent.

5629+29±P
℄50'

5

5

MARY E. WOLRAB
REV TRUST

Curve Data
Δ = 16° 42' 03.98" (RT)
T = 73.39
L = 145.74
R = 500.00
E = 5.36
e = NC

10" X 80.2' PVC

Curve Data
Δ = 11° 53' 02.00" (LT)
T = 52.04
L = 103.71
R = 500.00
E = 2.70
e = NC

LOT 2

9A

MICHAEL G. &
SANDRA E. WOLRAB

9

JOHN L. & JANICE I.
HENIK

FRANKLIN TWP.
T-82N R-5W
SEC. 17

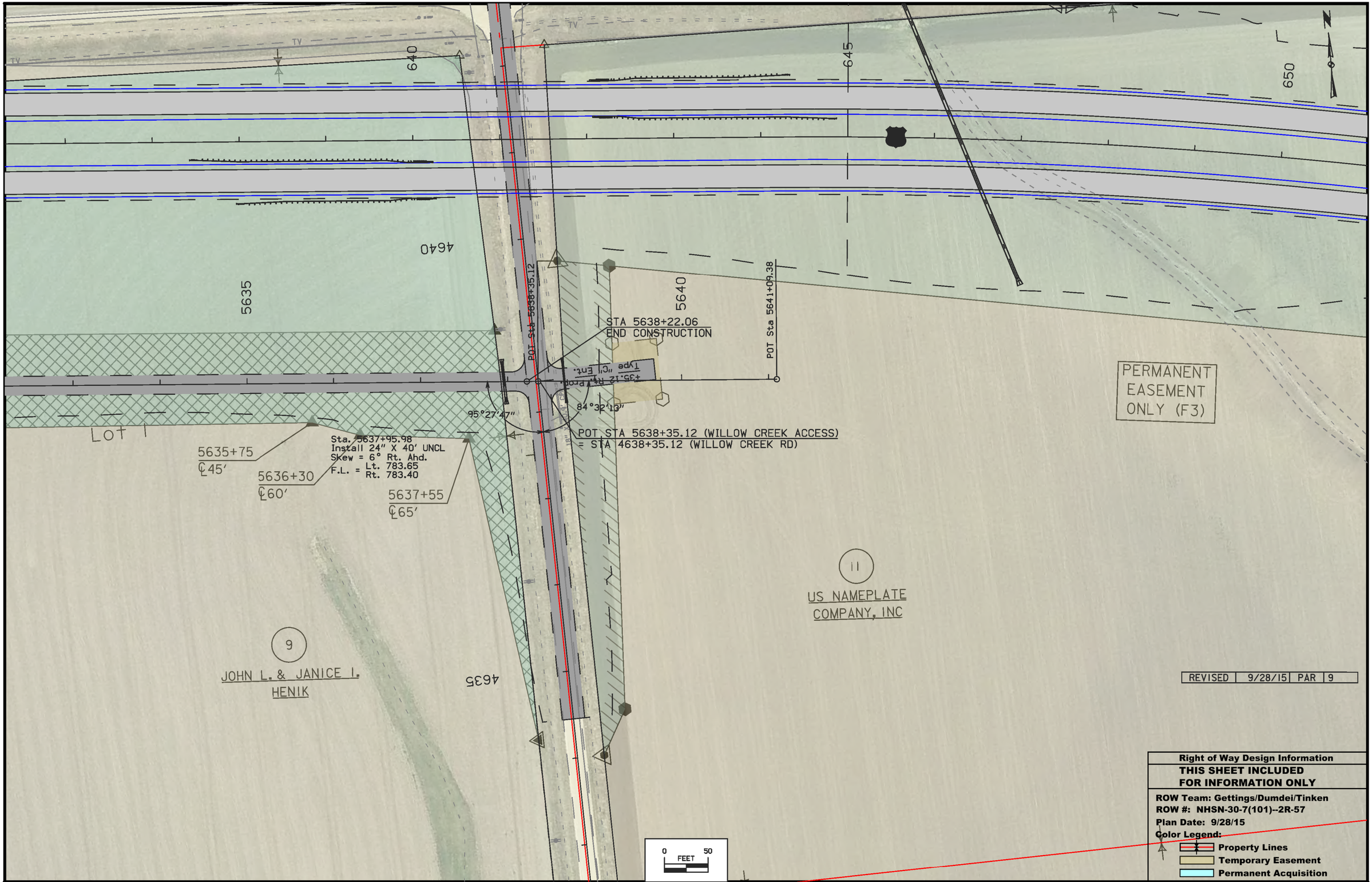
REVISED	9/28/15	PAR	5,9,9A

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 9/28/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.7

2:09:28 PM 9/25/2015 mgogert pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht



REVISED | 9/28/15 | PAR | 9

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 9/28/15
Color Legend:

- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.8

3:05:06 PM 9/25/2015 mgogert pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 9/28/15
Color Legend:
- **Property Lines**
- **Temporary Easement**
- **Permanent Acquisition**

FRANKLIN TWP.
T-82N R-5W
SEC. 17

9
JOHN L. & JANICE I. HENIK

11
US NAMEPLATE COMPANY, INC

FRANKLIN TWP.
T-82N R-5W
SEC. 16

4630
4635
4640
5635
5640
640
645
3640
3645
LOT 4

4634+25 ℄ 42'±ExR/W
Sta 4634+45.00 Begin Construction
4634+00 ℄ 31'±ExR/W
4634+50 ℄ 60'
TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE
4638+00 ℄ 140'
4638+70 ℄ 140'
4639+59±PropR/W ℄ 95'
POT STA 5638+35.12 (WILLOW CREEK ACCESS) = STA 4638+35.12 (WILLOW CREEK RD)
+35.12 Rt. Prop. Type "C" Ent.
POT Sta 4641+15.08 (Willow Creek Rd.) = Sta 641+15.08 (Hwy 30)
POT Sta 4643+09.97 (Willow Creek Rd.) = Sta 3644+87.26 (30W Connector)
Sta 4644+66.39 End Construction
+69 Rt. Prop. Type "C" Ent.
PC Sta 4644+66.39
18" X 40.4' CMP
10" X 30.5' CMP
Sta. 645+19.31
36" X 93.2' RCP
D.A. = Ac

REVISED | 9/28/15 | PAR | 9

0 50 FEET

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.9

2:10:45 PM 9/25/2015 mgogert pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 16

12
LRD CORP

6676+00
℄110'

Sta. 6676+00.65
Install 36" x 24' 2000D RCP EXTENSION
F.L. = Lt. 801.24
Other 802.71
Other 806.60
Rt. 807.13

ACQUIRE ACCESS CONTROL ON
S.R. FROM 6677+53 TO 6696+53

6673+00
℄60'

6670

6675

Sta. 6673+00.65
36" X 88.4' RCP
D.A. = 9.2 Ac

6680

12
LRD COR

P-4 (S-5)
P-2 (S-2)
P-3 (S-3)
P-1 (S-1)

13
MT VERNON DEVELOPMENT
GROUP, LLC

6674+60
℄60'

6676+75
℄110'

6681+71±℄
℄137'(ExCorner)

Ent. +82.52 Rt.

St.S.

St.S.

St.S.

13
MT VERNON DEVELOPMENT
GROUP, LLC

WILLIAM J. & DONNA F.
WARHOVER

0 FEET 50

REVISED	8/10/15	PAR	12
REVISED	8/10/15	PAR	13
REVISED	8/10/15	PAR	16

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 08/10/15
Color Legend:
- **Property Lines**
- **Temporary Easement**
- **Permanent Acquisition**

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.10

4:03:12 PM 8/10/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 16

12

LRD CORP

TEMPORARY EA
TO SHA

PERMANENT EASEMENT FOR
STORM SEWER

ACQUIRE ACCESS CONTROL ON
S.R. FROM 6677+53TO 6696+53

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

6695+67±P
℄193.8′

6694+51±P
℄90′

6695+50
℄105′

6694+10
℄110′

6693+50
℄110′

+80.00 Lt. Prop.
Type "C" Ent.

POT Sta 6683+53.95
=PI Sta 2586+72.90 (Ramp B)
=PI Sta 4486+17.40 (Ramp D)

Sta. 6689+68.53
30" X 66.8' RCP
D.A. = 9 Ac

POT Sta 6687+04.52 (Iowa 1)
=Sta 687+04.52 (Hwy 30)

POT Sta 6690+53.92 (Iowa 1)
=PI Sta 1587+37.69 (Ramp A)
=PI Sta 3587+90.06 (Ramp C)

3585
685
6685
6695
4485
2585
690
4490
1590

6693+60
℄100′

+80.00 Rt. Prop.
Type "C" Ent.

13

MT VERNON DEVELOPMENT
GROUP, LLC

REVISED	8/10/15	PAR	12
REVISED	8/10/15	PAR	13
REVISED	8/10/15	PAR	16

0 FEET 50

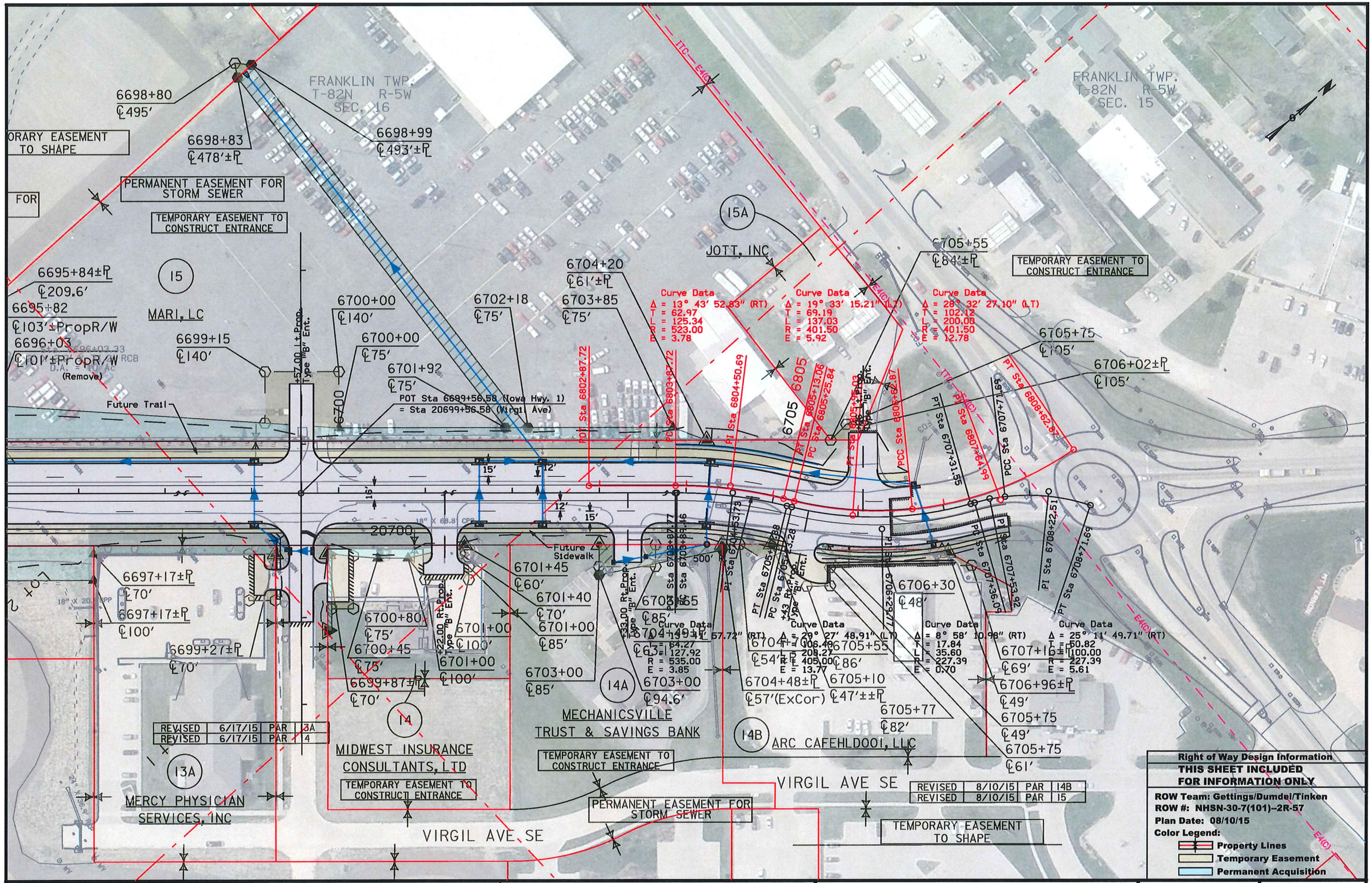
Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 08/10/15
Color Legend:
- **Property Lines**
- **Temporary Easement**
- **Permanent Acquisition**

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.11

1:08:50 PM 8/10/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht



FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.12

1:09:34 PM 8/10/2015 atinken' pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 23

ROBERT

18

ROBERT L. & ANNA M.
BROULIK

Curve Data
Δ = 7° 12' 49.69" (RT)
T = 157.59
L = 314.76
R = 2,500.00
E = 4.96
e = 2.8%
I = 58'
x = 41'

Curve Data
Δ = 6° 54' 04.99" (LT)
T = 150.75
L = 301.13
R = 2,500.00
E = 4.54
e = 2.8%
I = 58'
x = 41'

Sta 7760+77.25
Begin Construction

7760+30
℄38'±ExR/W

7760+80
℄40'

7760+30
℄28'±ExR/W

7763+50
℄50'

7764+00
℄50'±ExR/W

7763+25
℄45'

7765

7760

PI Sta 7763+16.44

PC Sta 7765+55.19

PT Sta 7764+73.61

PC Sta 7761+58.85

7766+90
℄65'

(Remove)

7768+60
℄88'±ExR/W

PT Sta 7768+56.32

PI Sta 7767+05.94

7768+65
℄65'

7769+56±PropR/W
℄130'

Sta. 7766+59.00
Install 24" X 56' UNCL.
F.L. = Lt. 778.50
Rt. 779.98

Sta. 7769+83.00
Install 24' X 170' 3750D
F.L. = Lt. 766.85
Rt. 770.34

Sta 7772+52.00
Install 24" X 168' 3750D
F.L. = Lt. 767.02
Rt. 770.35

770

PI Sta 7771+17.62

POT Sta 7771+17.62 (Standing Rock)
= Sta 771+17.62 (Hwy 30)

Sta. 7771+17.62 (Standing Rock Rd.)
Construct 232'-0" x 30'-0" Pretensioned
Prestressed Concrete Beam Bridge

7769+50±PropR/W
℄115'

(Remove)

7772+81±Pr
℄125'

18

ROBERT L. & ANNA M.
BROULIK

ROBERT

775

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 1/14/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

0 50 FEET

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.13

3:47:19 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 14

18
ROBERT L. & ANNA M.
BROULIK

18
ROBERT L. & ANNA M.
BROULIK

MATTHEW M. &
AMY E.
RECHKEMMER

Curve Data
Δ = 11° 07' 53.13" (LT)
T = 116.94
L = 233.14
R = 1,200.00
E = 5.68
e = 4.4%
I = 91'
x = 41'

Curve Data
Δ = 19° 06' 49.01" (LT)
T = 74.17
L = 146.96
R = 440.54
E = 6.20

7775
+26 Lt. (Close)
+77.00 Lt. Prop. Type "C" Ent.
(Remove) 23.7' CMP
7780
PC Sta 7781+89.04
Sta 5773+50.30
18" X 38.9' CMP
D.A. = 3.8 Ac
(Remove)
7785
PT Sta 7784+22.18
(U.A.C.)
PT Sta 7787+53.12
PT Sta 7789+31.38

+77.00 Rt. Prop. Type "C" Ent.
7776+50
℄65'
±PropR/W
7781+10
℄70'
PI Sta 7783+05.98
Sta 7784+64.50
Install 24" X 48' UNCL
Skew = 6° Lt. Ahd.
F.L. = Lt. 777.20
Rt. 779.90
7784+25
℄70'
Sta 7786+07.16
End Construction
7786+00
℄70'
PC Sta 7786+07.16
7786+40
℄14'±R
7786+81.33±ExR/W
℄56'(ExCorner)

18
RT L. & ANNA M.
BROULIK

18
ROBERT L. & ANNA M.
BROULIK

18
ROBERT L. & ANNA M.
BROULIK

0 50 FEET

For Side Road Details
Refer to Sheet No. E.27

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 1/14/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.14

3:47:59 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 23

18B

NEIL STINE

Curve Data
Δ = 16° 28' 46.05" (LT)
T = 434.43
L = 862.86
R = 3,000.00
E = 31.29
e = 3.4%
I = 82'
x = 48'

8785

8790

8795

PC Sta 8789+69.35

18"/24" X 47' CMP

8792+00
℄61'±ExR/W

8792+00
℄8.9'±R

8794+60
℄75'

8797+04±R
℄90'

Sta 8788+63.95
Begin Construction

TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE

+46.00 Rt. Prop. "C" Entr.
Type

+23.00 Rt. Prop. "B" Entr.
Type

8790+25
℄80'

8790+64±R
℄80'

8790+95
℄85'

8791+50
℄85'

PI Sta 8794+03.78

34B

PATRICK S. &
CAROL S. REILLY

34A

SCOTT C.
SHERWOOD

TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE

0 FEET 50

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 10/16/14
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.15

3:48:42 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 23

18

ROBERT L. & ANNA M.
BROULIK

8804+52±PL
℄140′

8803+50
℄140′

Sta. 8803+25.00
Install 24" X 160′ 3750D RCP
Lt. 801.98
F.L. = Rt. 799.00

8800+35
℄60′

8800

PT Sta 8798+32.21

(Remove)

PDT Sta 8806+92.36 (Sutliff Rd.)
= Sta 806+92.36 (Hwy 30)

PDT Sta 9810+00.00 (Sutliff Rd.)
= Sta 9810+00.00 (Sutliff Access)

9810

Sta. 8806+92.36
Construct 252′-0" x 40′-0" Prestressed Concrete Beam Bridge
with 10° Skew

90°00′00"

PC Sta 98104+95.00

PC Sta 8811+50.63

8810+85
℄100′

8808+72±PropR/W
℄95′

PI Sta 9812+63.84

34

WILMA L. WILLIAMS
REVOCABLE TRUST

34A

SCOTT C.
SHERWOOD

PT Sta 9814+27.14

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 10/16/14
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.16

3:49:22 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

18

ROBERT L. & ANNA M.
BROULIK

18

ROBERT L. & ANNA M.
BROULIK

Curve Data
Δ = 5° 53' 19.91" (RT)
T = 154.31
L = 308.34
R = 3,000.00
e = 3.4%
I = 82'
x = 48'

FRANKLIN TWP.
T-82N R-5W
SEC. 14

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

8817+35
℄90'

8818+00
℄90'

8815

8820

+88.00 Lt. Prop. 5/8" Ent.

Sta 8819+78.00
End Construction

POT Sta 8821+58.97

PT Sta 8814+58.97

PT Sta 8813+04.94

15" X 37.3' CMP

15" X 31.6' CMP

8820+23±℄
℄3.7'(ExCor)

8820+11±℄
℄61'(ExCorner)

8815+50
℄80'

8818+70
℄90'±ExR/W

Ent. 496 Rt. (U.A.C.)

CITY OF LISBON

34

WILMA L. WILLIAMS
REVOCABLE TRUST

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 10/16/14
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.17

3:50:00 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 13

REVISED	9/3/15	PAR	51

Curve Data
Δ = 9° 49' 19.97" (LT)
T = 42.96
L = 85.71
R = 500.00
E = 1.84
Refer to other sheets for special shapes.

Curve Data
Δ = 22° 57' 10.48" (LT)
T = 162.42
L = 320.48
R = 800.00
e = 5.4%
l = 111'
x = 41'

REVISED 9/3/15 PAR 51

51
ROBERT J. & DOROTHY GAINES (FEE)
GARY GAINES (CP)

TEMPORARY EASEMENT TO SHAPE

51
ROBERT J. & DOROTHY GAINES (FEE)
GARY GAINES (CP)

10829+50
℄36'±ExR/W

10833+15
℄135'

10833+40
℄110'

10837+10±Prop R/W
℄50'

10836+00
℄110'

10834+50
℄115'

10832+50
℄135'

PDT Sta 10838+87.30 (Green Ridge Rd.)
= Sta 838+87.30 (Hwy 30)

105°04'

10801

835

10835

Sta. 10838+87.30 (Green Ridge Rd.)
Construct 299'-6" x 30'-0"
Prestressed Prestressed Concrete
Beam Bridge with 15° Skew (L.A.)

ROT Sta 10829+47.82
PC Sta 10829+91.85
10830
PT Sta 10830+77.57
PC Sta 10830+85.05
PI Sta 10832+47.47
PT Sta 10834+05.53

46

Sta 10829+66.35
Begin Construction
10829+50
℄2.8'±R
10829+50
℄30'±ExR/W

MARIE E. HUBBARD

10829+75
℄45'

PI Sta 10830+34.81

10830+52±R
℄45'

10831+80
℄50'

51C
JEFFERY & TIFFANY STULL

10832+56±ExR/W
℄50'

433.00' Rt. Prop. Type "C" Eff.

74°55'50"

840

PC Sta 10840+50.62

(Close)

0 FEET 50

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 09/03/15
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.18

12:38:32 PM 9/3/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

REVISED	9/3/15	PAR	51
REVISED	10/29/15	PAR	46

FRANKLIN TWP.
T-82N R-5W
SEC. 13

10842+22±PropR/W
℄155′

10843+00
℄135′

10844+00
℄105′

Curve Data
Δ = 31° 38′ 06.41" (RT)
T = 226.64
L = 441.71
R = 800.00
e = 5.4%
I = 111′
X = 41′

10845

10845+00
℄50′

10846+25
℄34′±ExR/W

Sta 10845+85.00
End Construction

10846+25
℄0.6′±R

PI Sta 10842+77.26

PC Sta 10840+50.62

PT Sta 10844+92.33

POT Sta 10849+59.15

15" X 30.8' HDPE

15" X 40.6' HDPE

15" X 68' CMP

15" X 26.5' CMP

10843+30
℄55′

10846+25
℄32′±ExR/W

10845+20±R
℄50′

Ent. +36.0 Rt. (U.A.C.)

Ent. +78.0 Rt. (U.A.C.)

51E

ROBERT J. &
DOROTHY GAINES

45

ANTHONY P.
& BETSY A.
AWBREY

24' Wide Ingress-Egress Easement to Parcel 46

Ingress-egress easement to Parcel 46

KEITH S.
TECHAU

TERRY L. & MARY K.
HARRIS

DONALD K.
& LULU G.
COPPESS

LEONARD L. II &
PATRICIA F. BAKER

46

MARIE E. HUBBARD

0 FEET 50

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 10/29/15
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.19

1:41:10 PM 10/29/2015 mgogert pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

99
MICHAEL D. &
LYNN L. BERGMAN

11857+50
℄285′

11858+30
℄190′

11859+70
℄210′

11857+25
℄215′

11856+25
℄220′

+70.00 Lt.Rrop.
Type "C" Ent.

11854+85
℄210′

11853+85
℄200′

11852+61±P
℄185′

PT Sta 11855+55.46

PT Sta 11857+84.24

PC Sta 11851+94.64

POT Sta 11851+38.99

11860

11859+70
℄95′

Sta. 11854+90.82
Install 72" X 224′ 3000D RCP
Skew = 41° Rt. Ahd.
F.L. = Lt. 836.00
Rt. 838.17

11853+65
℄100′

11852+36±P
℄110′

99
MICHAEL D. &
LYNN L. BERGMAN

Prop. Safety Dike

Curve Data
Δ = 48° 45′ 59.16" (RT)
T = 260.63
L = 489.40
R = 575.00
E = 56.31
e = 6.0%
I = 124′
x = 41′

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-8(28)--2R-16
Plan Date: 10/27/14
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.20

3:57:52 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

Linn Co
Cedar Co

11859+70
℄210'

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

11859+70
℄125'

11860+50
℄121'±PropR/W

99
MICHAEL D. &
LYNN L. BERGMAN

11860

2570

11865

4570

PI Sta 2570+73.94 (Ramp B)=
PI Sta 4569+91.41 (Ramp D)=
POT Sta 11865+70.26 (Adams)

ACQUIRE ACCESS CONTROL ON
S.R. FROM 11859+70 TO 11879+70

99
MICHAEL D. &
LYNN L. BERGMAN

(RT)

FRANKLIN TWP.
T-82N R5W
SEC. 13

Sta. 11869+70.26
Construct 232'-0" x 60'-0"
Pretensioned Prestresses Concrete
Beam Bridge with 9° Skew

MIT

POT Sta 11869+70.26

11870

865

Sta. 11871+64.50
Install 24" X 226' 3750D RCP
Skew = 8° Lt. Ahd.
F.L. = Lt. 861.00
Rt. 862.23

3565

Sta. 11874+23.40
Install 30" X 140' 2000D RCP
Skew = 9° Lt. Ahd.
F.L. = Lt. 864.10
Rt. 865.90

11875

870

POT Sta 869+70.26 (Hwy 30)
= Sta 11869+70.26 (Adams)

PI Sta 4568+86.58 (Ramp A)=
PI Sta 4569+49.10 (Ramp C)=
POT Sta 11873+70.26 (Adams)

1570

51A
MICHAEL D. &
LYNN L. BERGMAN

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-8(28)--2R-16
Plan Date: 10/27/14
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

0 50
FEET

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.21

3:58:33 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 13

51A

MICHAEL D. &
LYNN L. BERGMAN

Sta. 11882+42.00
Install 30" x 66' 2000D RCP
F.L. = Lt. 863.00
Rt. 863.60

Sta. 11889+50.00
Install 30" X 104' 2000D RCP
F.L. = Lt. 840.00
Rt. 843.45

11875

11879+70
℄75'

11880

±71.00 Rt. "C"
Type "C" End

11883+61±℄
℄65'

11885

11885+50
℄65'

11886+23.36

11886+42±℄
℄80'

11890

FRANKLIN TWP.
T-82N R-5W
SEC. 13

47

DAVID & SHARON K.
HEAL

ACQUIRE ACCESS CONTROL ON
S.R. FROM 11859+70 TO 11879+70

11879+70
℄75'

11882+46±℄
℄70'

51A

MICHAEL D. &
LYNN L. BERGMAN

11885+10
℄60'

±00.00 Rt. "C"
Type "C" End

48

MICHAEL L. & DIANE E.
ROUSH

11887+00
℄65'

11888+21±℄
℄95'

11889+50
℄115'

A

L D. &
BERGMAN

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 10/27/14
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.22

3:59:11 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

47

DAVID & SHARON K.
HEAL

Sta. 11895+32.95
Install Twin 12' X 9' X 151' RCB
Skew = 14° Rt. Ahd.
15° Headwalls
F.L. = Lt. 811.65
Rt. 813.20

11894+65
℄150'

11896+65
℄130'

11893+40
℄140'

11893+10
℄105'

11891+25
℄75'

PT Sta 11896+25.42

PT Sta 11891+75.96

11890

11895

PC Sta 11893+00.56

Curve Data
Δ = 53° 06' 34.69" (RT)
T = 324.85
L = 602.51
R = 650.00
E = 76.66
e = 5.8%
I = 120'
x = 41'

11899+48±ExR/W
℄111'(ExCor)

Sta. 11898+43.20
Install 24" X 96' 2000D RCP
Skew = 28° Lt. Ahd.
F.L. = Lt. 841.50
Rt. 836.50

24" X 38' RCP

24" X 38' RCP

HMH

HMH

11900

13900

POT Sta 11900+14.11

PT Sta 11899+03.07

11893+10
℄60'

11894+00
℄130'

11896+60
℄140'

11897+00
℄90'

11899+29±ExR/W
℄85'

Curve Data
Δ = 12° 39' 53.02" (LT)
T = 277.43
L = 552.60
R = 2,500.00
E = 15.35
e = 2.8%
I = 58'
x = 41'

47

DAVID & SHARON K.
HEAL

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 10/16/14
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.23

3:59:54 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

PIONEER TWP.
T-82N R-4W
SEC. 8

109
PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

Sta. 957+00
Construct PV-504 Crossover

N

945 950 955 960

16945 16950 16955 16960

Sta 936+22.14
30" X 62.5' RCP
D.A. = 7.6 Ac

49.18
88.
8 Ac RCB

18" X 71.2' CMP

PI Sta 16956+01.02
18" X 33.9'

Sta 16951+42.71
Begin Construction

+79.00 Rt. Prop.
T.P.E. (U.A.C.)
Ent. +02 Rt.

16949+48± ℄
℄76'(ExCor)

16953+00

PC Sta 16952+84.91

16955+00
℄70'

16957+20
℄70'

PT Sta 16954+30.91

Sta. 16952+02.60
Install 30" X 24' 2000D RCP + 2-20° Elbows
Install 24" X 46' 3000D RCP
Skew = 19° Rt. Ahd.
F.I. = Lt. 864.02
Other 867.33
Other 870.83
Rt. 871.34

Curve Data
Δ = 19° 04' 46.21" (RT)
T = 336.11
L = 666.00
R = 2,000.00
E = 28.05
e = 4.4%
I = 106'
x = 48'

109
PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

W. A. G., INC

109
PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

109
PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

PIONEER TWP.
T-82N R-4W
SEC. 17

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-8(28)--2R-16
Plan Date: 04/14/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.24

9:25:44 AM 4/14/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

PIONEER TWP
T-82N R-4W
SEC. 8

960 965 970 975

16960 16965 16970 16975

PC Sta 16960+79.31

PT Sta 16966+63.36

PI Sta 16963+73.43

Sta. 941+83.42
30" X 60.4' RCP
D.A. = 4.9 Ac

Sta. 16970+91.44
Install 18" X 100' UNCL
Skew = 30° Rt. Ahd.
F.L. = Lt. 883.50
Rt. 883.92

Curve Data
Δ = 16° 43' 54.29" (LT)
T = 294.12
L = 584.05
R = 2,000.00
E = 21.51
e = 4.4%
I = 106'
x = 48'

16962+35
℄65'

16965+00
℄65'

16968+35
℄65'

16971+20
℄85'

109
PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

PIONEER TWP.
T-82N R-4W
SEC. 17

109
PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-8(28)--2R-16
Plan Date: 04/14/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.25

9:26:21 AM 4/14/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

PIONEER TWP.
T-82N R-4W
SEC. 8

Sta. 959+53.68
5' X 3' X 87.3' RCB
D.A. = 71.5 AC

N

17980

16975

16980

16985

Sta. 16981+90.00
Install 36"x56' 20000 RCAP
Skew = 3° Rt. Ahd.
F.L. = Lt. 869.65
Rt. 871.29

POT Sta 16987+97.82

Sta 16982+22.34
End Construction

POT Sta 16982+34.36 (Kirkwood 4)
= Sta 17978+35.02 (Charles Ave.)

16981+50
℄70'

(111)
CIHA FARMS, INC

(109)
PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

17975

PIONEER TWP.
T-82N R-4W
SEC. 17

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-8(28)--2R-16
Plan Date: 04/14/15
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.26

9:26:58 AM 4/14/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

PIONEER TWP.
T-82N R-4W
SEC. 17

PIONEER TWP.
T-82N R-4W
SEC. 8

109
PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

109
PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

16980

980

17980

17985

POT Sta 17974+92.10

17975

17976+50
℄33′

Begin Construction
Sta 17977+91.00

PI Sta 17981+54.63

POT Sta 17986+15.04

16" X 28.3' CMP

17976+50
℄33′

POT Sta 16982+34.36 (Kirkwood 4)
= Sta 17978+35.02 (Charles Ave.)

35.00 Rt Prop
Safety Ramp

End Construction
17979+60 17981+31.83
℄57′±PropR/W

Sta. 17981+06.15
Install 52"x32"x40' 2000D RCAP
Skew = 1° Lt. Ahd.
F.L. = Lt. 868.57
Rt. 868.25

17978+70
℄135′

17978+00
℄135′

17980+93±ExR/W
℄60′

17977+65
℄55′

POT Sta 17981+93.43 (Charles Ave.)
= Sta 981+93.43 (Hwy 30)

TEMPORARY EASEMENT TO
CONSTRUCT SAFTEY RAMP

111
CIHA FARMS, INC

Sta. 959+53.68
5' X 3' X 87.3' RCB
D.A. = 7.15 M²

985

TIM J. KOHL

0 FEET 50

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Cuva/Dumdei/Tinken
ROW #: NHSN-30-8(28)--2R-16
Plan Date: 04/14/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.27

9:27:37 AM 4/14/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 10/16/14
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

34

WILMA L. WILLIAMS
REVOCABLE TRUST

Curve Data
Δ = 25° 22' 24.68" (RT)
T = 168.84
L = 332.14
R = 750.00
E = 18.77
e = NC

FRANKLIN TWP.
T-82N R-5W
SEC. 14

POT Sta 9810+00.00 (Sutliff Ent. Pond)
= Sta 9810+00.00 (Sutliff Rd.)

PI Sta 9812+63.84

9812+90
℄45'

9810

0188

PC Sta 9810+95.00

Sta. 9811+27.79
Install 30" X 138' 3000D UNCL
Skew = 9° Rt. Ahd.
Lt. 820.80
F.L. = Rt. 812.80

PT Sta 9814+27.14

Sta. 8806+92.36
Construct 252'-0" x 40'-0"
Prestressed Prestresses Concrete
Beam Bridge with 10° Skew

34

WILMA L. WILLIAMS
REVOCABLE TRUST

Future R/W Line

0088

FRANKLIN TWP.
T-82N R-5W
SEC. 13

Curve Data
Δ = 23° 28' 26.05" (LT)
T = 155.82
L = 307.27
R = 750.00
E = 16.02
e = NC

TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE

9815

PI Sta 9815+35.05

9816+55
℄40'

PI Sta 9816+90.88

9818+75
℄25'

PT Sta 9818+42.33

PI Sta 9818+65.45

PI Sta 9819+14.74

PI Sta 9819+65.92

POT Sta 0286 9820+15.49

9818+75
℄25'

9818+55
℄107'±PropR/W

9818+65.45)
End Construction

34

WILMA L. WILLIAMS
REVOCABLE TRUST

810

815

820

0 FEET 50

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.28

3:54:35 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 16

ITC

14A
MECHANICSVILLE
TRUST & SAVINGS BANK

14
MIDWEST INSURANCE
CONSULTANTS, LTD

VIRGIL AVE. SE

20700+27±PropR/W
℄35'
Sta 20699+91.58
Begin Construction
20701+15
℄35'
Sta 20701+05.00
End Construction

+48.85 Rt.Prop.
Type "B" Ent.

20700

POT Sta 20699+56.58 (Virgil Ave)
≒ Sta 6699+56.58 (Iowa Hwy. 1)

6700

FRANKLIN TWP.
T-82N R-5W
SEC. 15

13A
MERCY PHYSICIAN
SERVICES, INC

20700+80
℄40'
20700+26±PropR/W
℄40'

+56.13 Lt.Prop.
Type "B" Ent.

Lot

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

18" X 20' CPP

24" X 36.9' RCP

15
MARI, LC

Sta. 6696+03.33
2' X 2.2' X 71.2' RCB
D.A. = 10 Ac

Tile

Lot 2

13
MT VERNON DEVELOPMENT
GROUP, LLC

6695

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-7(101)--2R-57
Plan Date: 10/16/14
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.29

3:57:10 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-8(28)--2R-16
Plan Date: 1/14/15
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

Sta. 19885+81.18
Construct 302'-0" x 36'-0"
Pretensioned Prestressed Concrete
Beam Bridge with 33° Skew

TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE

99
MICHAEL D. & LYNN L. BERGMAN

19878+75
℄120'

19878+91±ExR/W
℄77'(ExCor)

+23.00 Lt. Prop. Type "C" Ent.

19882+64±PropR/W
℄140'

Sta. 19883+47.85
Install 30" X 200' 3750D RCP
Skew = 33° Rt. Ahd.
F.L. = Lt. 884.60
Rt. 886.16

POT Sta. 19882+85.33 (Ex. Adams)
= Sta. 15860+74.63 (Kirkwood 3)

19879+70
℄120'

(Remove)

19885

885

Sta 19879+30.00
Begin Construction

+45.00 Lt. (Close)

97
BRENT A. & SUE MOLLENHAUER

19887+27±PR
℄135'

19890+55
℄40'±ExR/W

Sta. 19888+14.50
Install 24" X 228' 3750D RCP
Skew = 33° Rt. Ahd.
F.L. = Lt. 887.05
Rt. 888.25

19890

Sta 19890+50.00
End Construction

+23.00 Rt. (Close)

90°00'00"

90°00'00"

+38.06 Rt. (Close)

19880+25±PR
℄95'

19878+91±ExR/W
℄83'(ExCor)

TIMOTHY N. & TERESA L. JAMISON

+20.00 Rt. Prop. Type "C" Ent.

19880+80
℄210'

98
DANNY R. HARTMAN, JR

102
STEVEN H. EDINGER

TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE

POT Sta 885+81.18 (Hwy 30)
= Sta 19885+81.18 (Existing Adams)

101
STATE OF IOWA
(JACK W. & DIANNE L. O'CONNELL)

890

19890+65
℄140'

19890+65
℄48'±ExR/W

TEMPORARY EASEMENT TO REMOVE BUILDINGS

106
JOHN MC PHAIL & TRACY SPERRY

0 50 FEET

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.30

4:00:38 PM 1/14/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

Sta. 15860+05.50
Install 24" X 124' 3000D RCP
Skew = 10° Lt. Ahd.
F.L. = Lt. 887.82
Rt. 893.23

PIONEER TWP.
T-82N R-4W
SEC. 18

101
STATE OF IOWA
(JACK W. & DIANNE L. O'CONNELL)

POT Sta 15858+37.37

POT Sta 15859+37.37

90°00'00"

15860

PC Sta 15860+82.44

Sta 15859+37.37
Begin Construction

POT Sta. 15859+25.37 (Kirkwood 3)
= Sta. 19882+85.33 (Ex. Adams)

Curve Data
Δ = 45° 09' 58.71" (LT)
T = 440.87
L = 835.60
R = 1,060.00
E = 88.03
e = 6.0%
l = 153'
x = 51'

15860+35
℄120'

15861+30
℄105'

15863+20
℄55'

15863+40
℄105'

+75.00 Rt. Prop. L
Type "C" Ent.

15864+15
℄65'

15865+23.31
PT Sta

15864+15
℄105'

15866+19±PL
℄100'

TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE

99
MICHAEL D. & LYNN L. BERGMAN

102
STEVEN H. EDINGER

98
DANNY R. HARTMAN, JR

102
STEVEN H. EDINGER

0 FEET 50

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Gettings/Dumdei/Tinken
ROW #: NHSN-30-8(28)--2R-16
Plan Date: 1/14/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.31

7:56:27 AM 1/15/2015 sdumdei pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

Sta. 15872+53.69
Install 48" X 220' 3000D RCP
Skew = 47° Lt. Ahd.
F.L. = Lt. 893.25
Rt. 889.45

900

905

15870

15875

15880

PT Sta 15869+18.04

PC Sta 15870+03.82

+00.00 Rt. Prop. Type "G" Ent.

15875+74±PropR/W
℄90'

15873+75
℄135'

15872+87±℄
℄120'

15876+50
℄90'

15876+50
℄70'

15880+75
℄80'

PIONEER TWP.
T-82N R-4W
8

TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE

PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

109

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: Cuva/Dumdel/Tinken
ROW #: NHSN-30-8(28)--2R-16
Plan Date: 04/14/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.32

9:29:28 AM 4/14/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

PIONEER TWP.
T-82N R-4W
SEC. 7

PIONEER TWP.
T-82N R-4W
SEC. 7

PI Sta 15889+83.52

PI Sta 15925+11.21

910

915

920

15885

15890

15895

18" 35.7' CMP

18" 35.6' CMP

Sta. 15884+13.86
Install 18" x 108' 2000D RCP
Skew = 33° Rt. Ahd.
F.L. = Lt. 918.10
Rt. 917.49

15888+50
℄75'

15886+00
℄75'

Curve Data
Δ = 45° 34' 10.79" (RT)
T = 1,680.20
L = 3,181.36
R = 4,000.00
E = 338.56
e = 3.2%
T = 82'
x = 51'

15889+65±PI
℄65'

15896+80
℄85'

109

PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

108

PIONEER TWP.
T-82N R-4W
SEC. 18

DANIEL E. KOHL

PIONEER TWP.
T-82N R-4W
SEC. 18

0 50
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Cuva/Dumdei/Tinken
ROW #: NSHN-30-8(28)--2R-16
Plan Date: 04/14/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.33

9:28:50 AM 4/14/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\57030010lhe1.sht

109

PETER A. GREINER &
MARGO L. GREINER
FAMILY TRUST,
RITA WENDLER

PIONEER TWP.
T-82N R-4W
SEC. 8

N

925 930 935 940

15900 15905 15910

Sta. 899+69.70
15" X 120.3' CPP
D.A. = 9.3
(Remove)

POT Sta 15913+00.00

PT Sta 15904+84.58

+70.00 Rt. Prop. "C" End

Sta 15905+93.08
End Construction

15905+35
℄60'±ExR/W

15904+50
℄65'

Sta. 15899+87.41
Install 36" X 94' 2000D RCP
Skew = 5° Rt. Ahd.
F.L. = Lt. 896.50
Rt. 896.00

15902+25
℄65'

108

DANIEL E. KOHL

108

DANIEL E. KOHL

PIONEER TWP.
T-82N R-4W
SEC. 17

0 FEET 50

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Cuva/Dumdei/Tinken
ROW #: NSHN-30-8(28)--2R-16
Plan Date: 04/14/15
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	HE.34

9:28:13 AM 4/14/2015 atinken pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5703005095\ROW\570300101he1.sht

108-26A
08-01-08

STAGING NOTES

West End Staging, U.S. 30

Stage 1: Maintain traffic on Existing U.S. 30 and Iowa 1.
- Revise profile of Willow Creek Road. Willow Creek Road will be closed during this work.
- Construct Willow Creek Access Road.
- Widen the east embankment and pave the existing east shoulder of Iowa 1 to provide 24 feet of pavement through the project area.

Stage 2: Maintain traffic on existing U.S. 30. Iowa 1 traffic shifted to NBL and paved shoulder.
- Construct EBLs from Sta. 612+50 to Iowa 1.
- Construct WBL's from Sta. 638+50 to Iowa 1.
- Construct Iowa 1 west ramps.
- Construct (grade, storm sewer, pave) westernmost 25 feet of Iowa 1 improvements.
- Construct connection between existing U.S. 30 and EBL's (West Detour).
- Construct 2-way crossover on bypass east of Willow Creek Road and prior to Iowa 1 interchange.

Stage 3: Transition traffic from existing U.S. 30 to the EBL's via the West Detour. Use crossover east of Willow Creek Road to transition to 4-lane. Traffic can exit bypass at Iowa 1 if construction is not complete east of that point.
- Construct WBL's from BOP to portion constructed with Stage 1.
- Construct Irish Lane and U.S. 30 West Tie. Irish and existing U.S. 30 through construction area will be closed during this work.
- Construct remainder of Iowa 1 improvements. Iowa 1 traffic will utilize pavement constructed with Stage 2.

Stage 4: U.S. 30 traffic utilizes WBL's. Use crossover east of Willow Creek to transition to 4-lane.
- Construct EBL's west of Sta. 612+50.
- Construct Wilcox Road. Wilcox will be closed during construction; a temporary entrance will be necessary for the implement dealer.

East End Staging, U.S. 30
Note: construction of work between Iowa 1 and Sta. 910+00 can occurr independent of other staged construction. East end staging assumes that the bypass is completely constructed between relocated Adams Avenue and Sta. 910+00 prior to Stage 3 construction.

Stage 1: Maintain traffic on existing U.S. 30
- Construct EBL, Sta. 923+50 - EOP
- Construct WBL, Sta. 923+50 - EOP. Construct portion of culvert at Sta. 921+82.82 under EBL's.
- Construct East Connector. Use lane closures with flaggers as necessary to tie into existing U.S. 30.
- Construct connection between existing U.S. 30 and Sta. 923+50 WBL (East Detour). Use single lane closure with flaggers as necessary to tie into existing U.S. 30.

Stage 2: U.S. 30 traffic follows portion of WBL constructed during Stage 1, and connections to existing U.S. 30.
- Construct remaining portions of EBL from Sta. 910+00 to Sta. 923+50, including remainder of culvert at Sta. 921+82.82.
- Construct crossover on proposed bypass south of existing U.S. 30.
- Construct Kirkwood 3, Kirkwood 4, and Charles Avenue.

Stage 3: U.S. 30 traffic follows EBL. Traffic splits to 4-lanes south of existing U.S. 30 on crossover constructed with Stage 2.
- Construct gap in WBL from Sta. 910+00 to Sta. 923+50. Remove East Detour.

Stage 4: Bypass is completely open to traffic throughout
- Remove crossover south of existing U.S. 30.

Adams Avenue Staging

Stage 1: Adams traffic remains on existing Adams Avenue
- Construct relocated Adams Avenue, including bridge over bypass.
- Byapss construction will be gapped to allow existing Adams to remain open.

Stage 2: Adams traffic uses relocated Adams Avenue.
- Construct U.S. 30 bypass through existing Adams Avenue.
- Construct existing Adams Avenue overpass.

Green Ridge Road Staging

Stage 1: Traffic maintained on existing Green Ridge Road
- Install sheet piling and/or construct on-site run-around to allow roadway to remain open during bridge construction.

Stage 2: Traffic maintained on on-site run-around and existing roadway as available.
- Construct Green Ridge bridge
- Construct realigned Green Ridge Road

Stage 3: Traffic uses relocated Green Ridge Road
- Construct bypass through existing Green Ridge Road

Sutliff Road Staging

Stage 1: Close existing Sutliff Road from Sta. 8805+00 to EOP. Access across dam still available from south of bypass. A detour route will be necessary between Lisbon and the access across the dam.
- Construct Sutliff Road through closure area.
- Construct entrance road over dam.

Stage 2: Open relocated Sutliff Road north of Sta. 8809+00 for access across dam. Close Sutliff Road from Sta. 8792+00 - Sta. 8809+00.
- Construct bypass through former dam access road.
- Construct Sutliff bridge over the bypass.
- Construct Sutliff Road south of Sta. 8809+00. South of Sta. 8792+00, construct pavement using single lane closures with stop sign to maintain quarry access.

108-23A
08-01-08

TRAFFIC CONTROL PLAN

1. Traffic will be maintained in U.S. 30 at all times.

2. Traffic on Iowa 1 will be maintained at all times. Short-term closures will be necessary for setting bridge beams.

3. Intermittent, short-term lane closures may be necessary on U.S. 30 and Iowa 1 to construct detour pavement, shoulder strengthening, or for other work; overnight lane closures will not be allowed.

4. Wilcox Road, Irish Lane, and Charles south of U.S. 30 will be closed during staged construction. Closures shall be limited to the time necessary to construct the roadway improvements and U.S. 30 improvements immediately adjacent to the roadways. These road shall be re-opened to traffic at the earliest time as practical.

5. Sutliff Road will be closed to traffic during construction, as noted in the staging notes. Access to local properties within the construction zone shall be maintained at all times. A detour route for through traffic will be established by the County.

6. Standing Rock Road will be closed to traffic throughout construction south of Sta. 7775+00.

7. Green Ridge Road will remain open to traffic throughout construction.

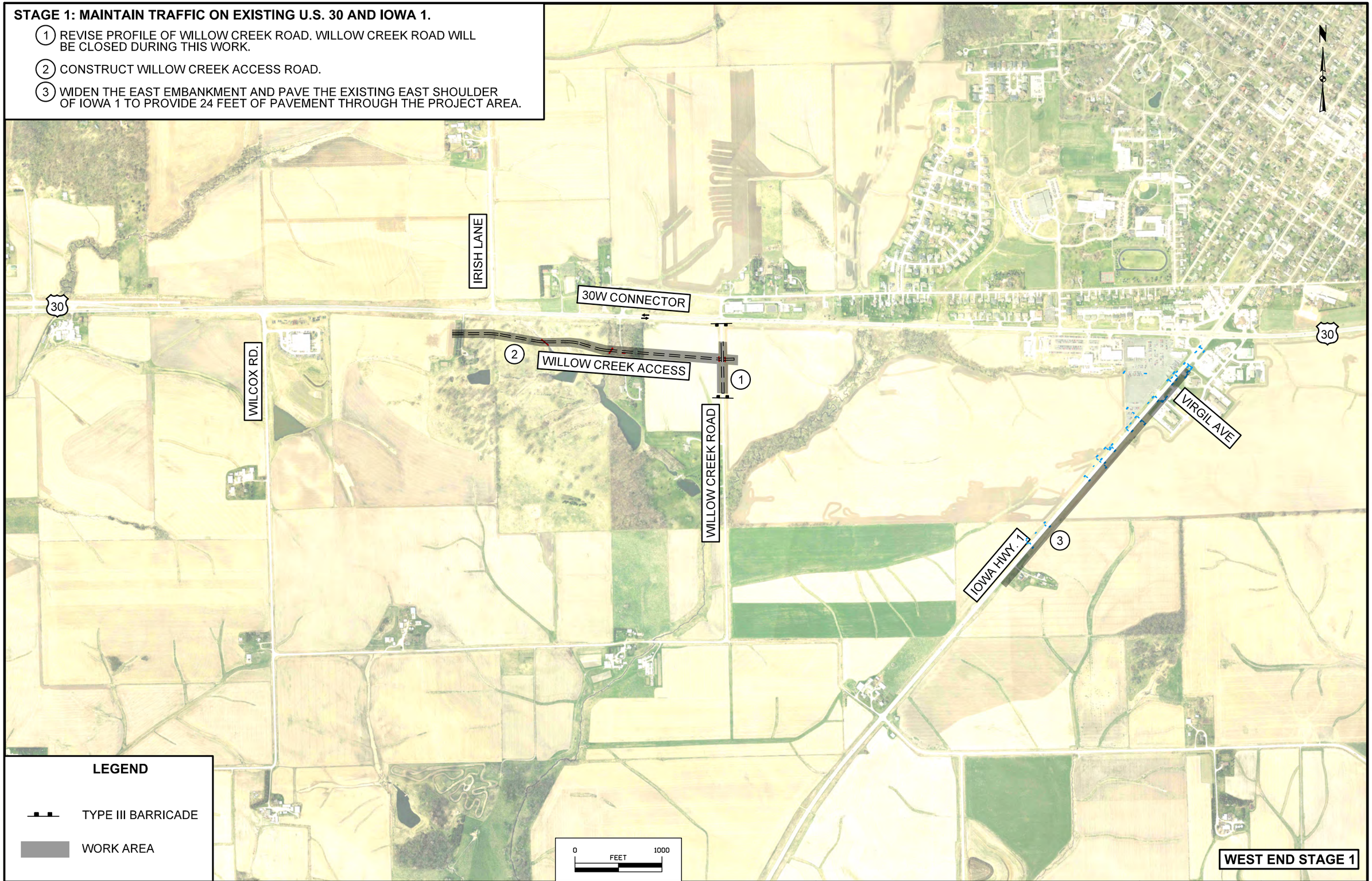
8. Adams Avenue will be open to local traffic throughout construction. Granular surfaced run-arounds will be necessary to maintain access to local properties during construction of tie-ins.

9. Traffic control will be per the TC series of Standard Road Plans as referenced elsewhere in this plan set.

10. Access to local properties will be maintained throughout construction.

STAGE 1: MAINTAIN TRAFFIC ON EXISTING U.S. 30 AND IOWA 1.

1. REVISE PROFILE OF WILLOW CREEK ROAD. WILLOW CREEK ROAD WILL BE CLOSED DURING THIS WORK.
2. CONSTRUCT WILLOW CREEK ACCESS ROAD.
3. WIDEN THE EAST EMBANKMENT AND PAVE THE EXISTING EAST SHOULDER OF IOWA 1 TO PROVIDE 24 FEET OF PAVEMENT THROUGH THE PROJECT AREA.



LEGEND

TYPE III BARRICADE

WORK AREA

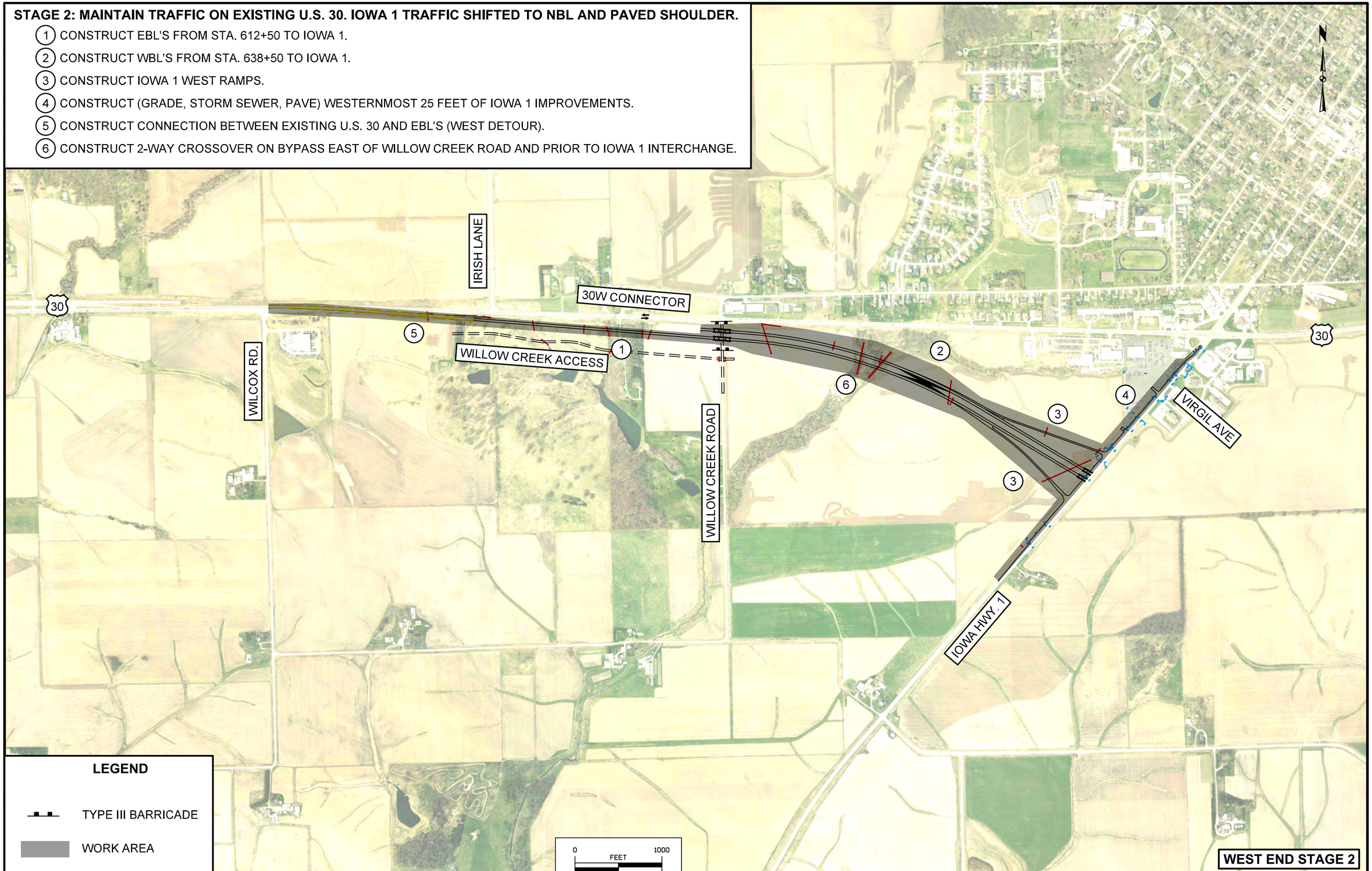
WEST END STAGE 1

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER J.2

2:57:45 PM 7/25/2014 V81_IDOTRoadD:\1120610\Cadd\Design\57030076j02.sht

STAGE 2: MAINTAIN TRAFFIC ON EXISTING U.S. 30. IOWA 1 TRAFFIC SHIFTED TO NBL AND PAVED SHOULDER.

1. CONSTRUCT EBL'S FROM STA. 612+50 TO IOWA 1.
2. CONSTRUCT WBL'S FROM STA. 638+50 TO IOWA 1.
3. CONSTRUCT IOWA 1 WEST RAMPS.
4. CONSTRUCT (GRADE, STORM SEWER, PAVE) WESTERNMOST 25 FEET OF IOWA 1 IMPROVEMENTS.
5. CONSTRUCT CONNECTION BETWEEN EXISTING U.S. 30 AND EBL'S (WEST DETOUR).
6. CONSTRUCT 2-WAY CROSSOVER ON BYPASS EAST OF WILLOW CREEK ROAD AND PRIOR TO IOWA 1 INTERCHANGE.



LEGEND

TYPE III BARRICADE

WORK AREA

0 FEET 1000

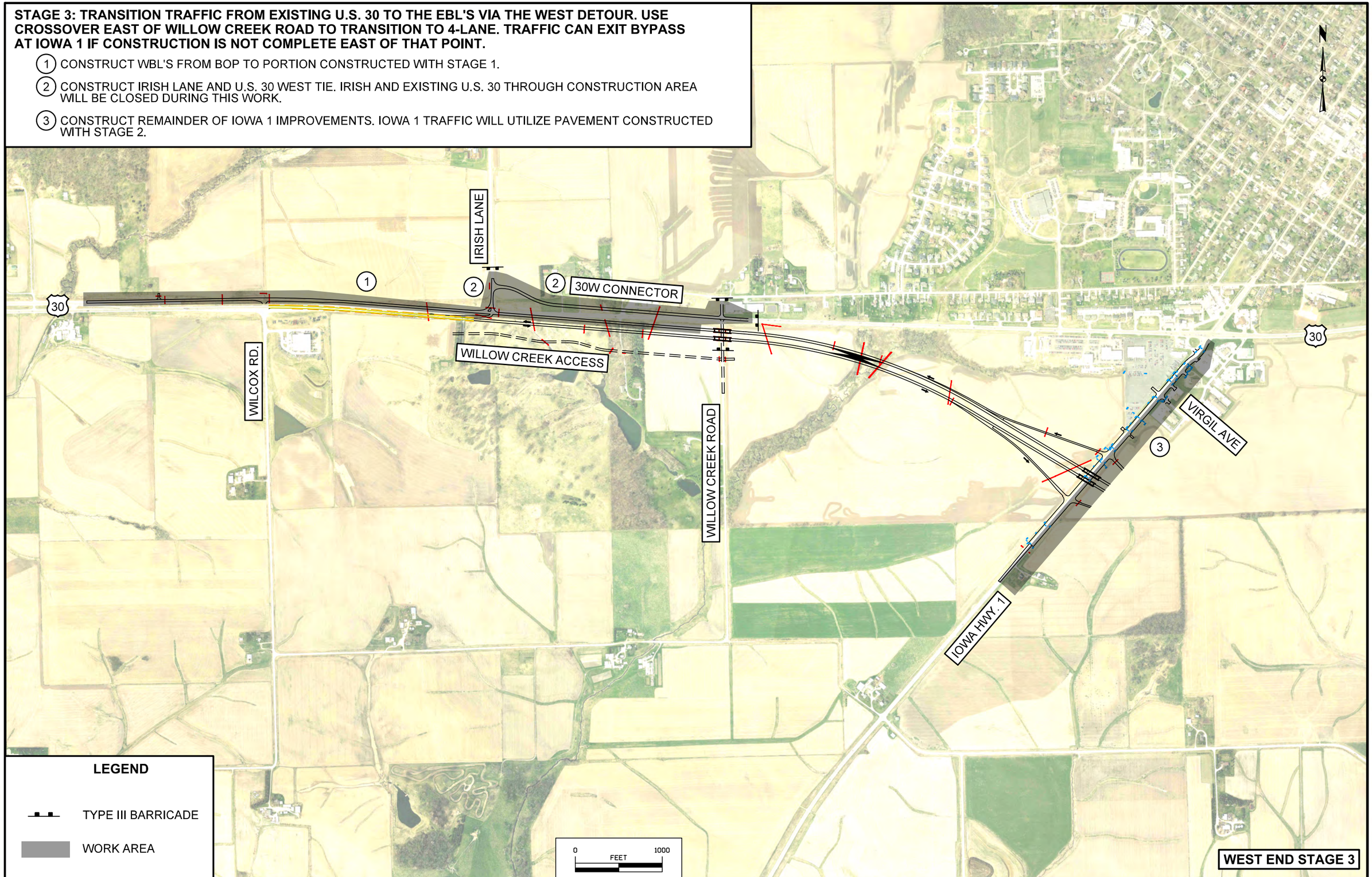
WEST END STAGE 2

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	J.3

2:57:54 PM 7/25/2014 V81_IDOTRoadD:\1120610\Cadd\Design\57030076_j02.sht

STAGE 3: TRANSITION TRAFFIC FROM EXISTING U.S. 30 TO THE EBL'S VIA THE WEST DETOUR. USE CROSSOVER EAST OF WILLOW CREEK ROAD TO TRANSITION TO 4-LANE. TRAFFIC CAN EXIT BYPASS AT IOWA 1 IF CONSTRUCTION IS NOT COMPLETE EAST OF THAT POINT.

1. CONSTRUCT WBL'S FROM BOP TO PORTION CONSTRUCTED WITH STAGE 1.
2. CONSTRUCT IRISH LANE AND U.S. 30 WEST TIE. IRISH AND EXISTING U.S. 30 THROUGH CONSTRUCTION AREA WILL BE CLOSED DURING THIS WORK.
3. CONSTRUCT REMAINDER OF IOWA 1 IMPROVEMENTS. IOWA 1 TRAFFIC WILL UTILIZE PAVEMENT CONSTRUCTED WITH STAGE 2.



LEGEND

TYPE III BARRICADE

WORK AREA

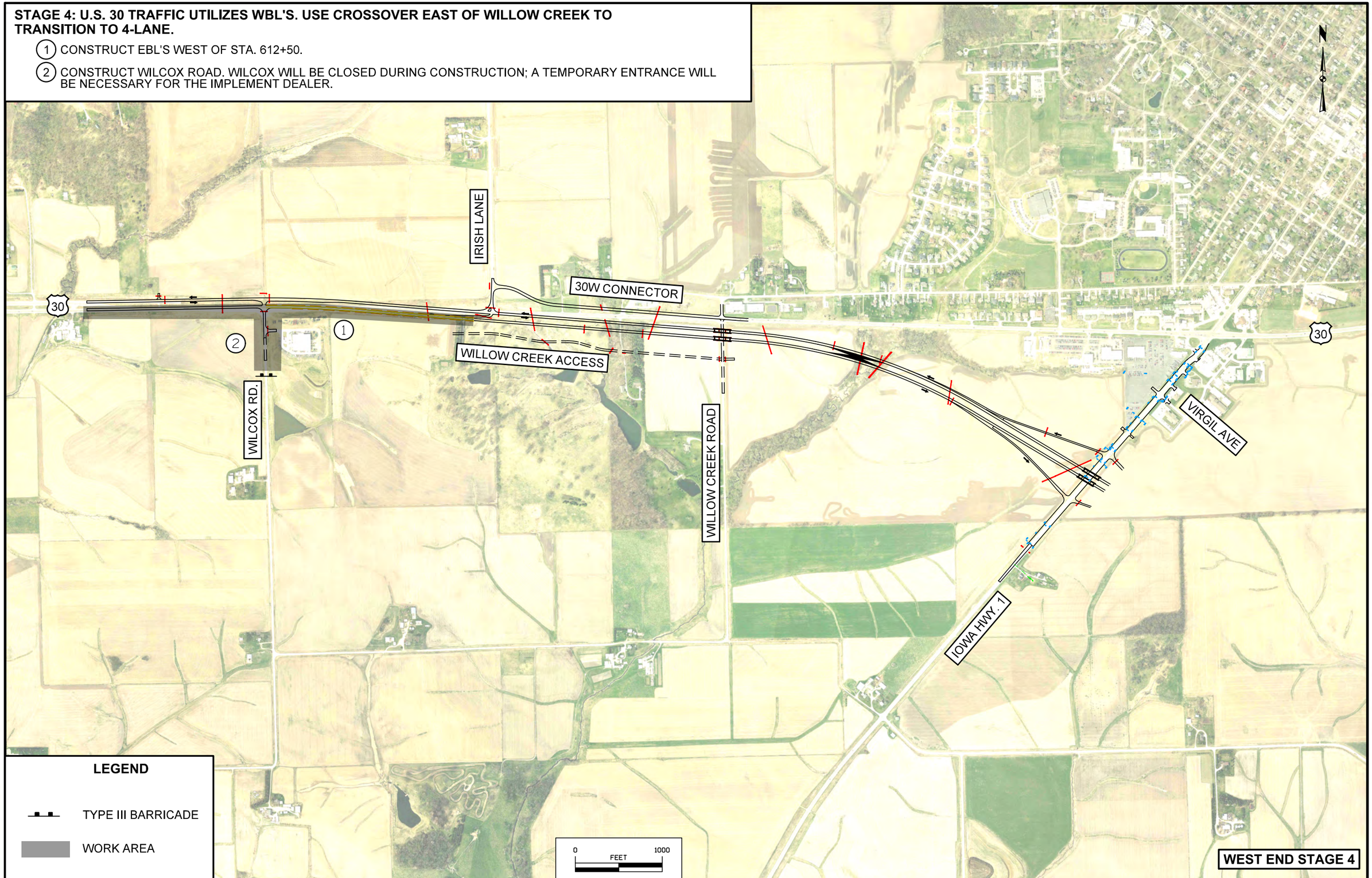
WEST END STAGE 3

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER J.4

2:58:02 PM 7/25/2014 V81_IDOTRoadD:\1120610\Cadd\Design\57030076j02.sht

STAGE 4: U.S. 30 TRAFFIC UTILIZES WBL'S. USE CROSSOVER EAST OF WILLOW CREEK TO TRANSITION TO 4-LANE.

1. CONSTRUCT EBL'S WEST OF STA. 612+50.
2. CONSTRUCT WILCOX ROAD. WILCOX WILL BE CLOSED DURING CONSTRUCTION; A TEMPORARY ENTRANCE WILL BE NECESSARY FOR THE IMPLEMENT DEALER.



LEGEND

TYPE III BARRICADE

WORK AREA

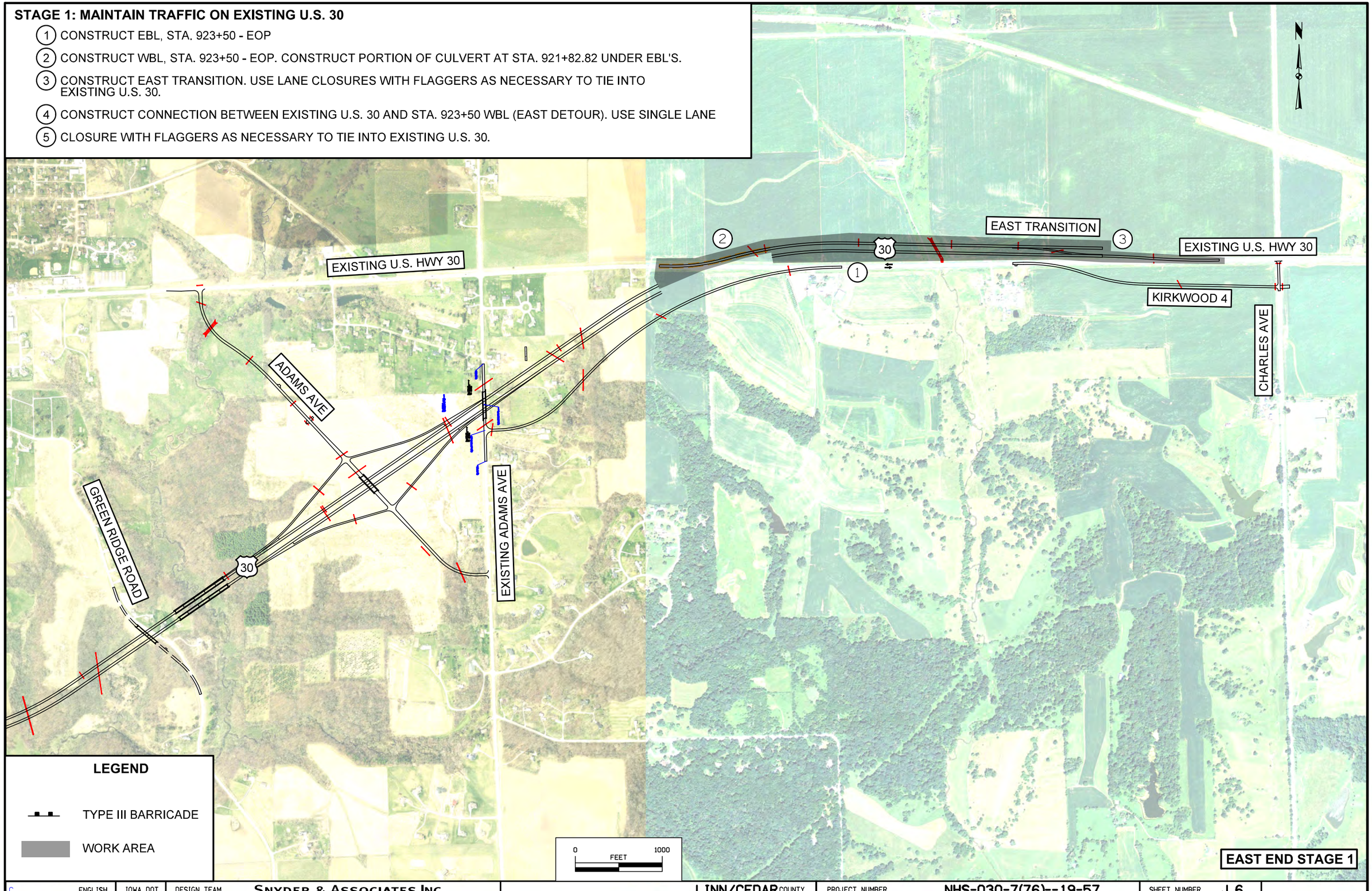
WEST END STAGE 4

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	J.5

2:58:10 PM 7/25/2014 V81_IDOTRoadD:\1120610\Cadd\Design\57030076j02.sht

STAGE 1: MAINTAIN TRAFFIC ON EXISTING U.S. 30

1. CONSTRUCT EBL, STA. 923+50 - EOP
2. CONSTRUCT WBL, STA. 923+50 - EOP. CONSTRUCT PORTION OF CULVERT AT STA. 921+82.82 UNDER EBL'S.
3. CONSTRUCT EAST TRANSITION. USE LANE CLOSURES WITH FLAGGERS AS NECESSARY TO TIE INTO EXISTING U.S. 30.
4. CONSTRUCT CONNECTION BETWEEN EXISTING U.S. 30 AND STA. 923+50 WBL (EAST DETOUR). USE SINGLE LANE
5. CLOSURE WITH FLAGGERS AS NECESSARY TO TIE INTO EXISTING U.S. 30.



LEGEND

TYPE III BARRICADE

WORK AREA

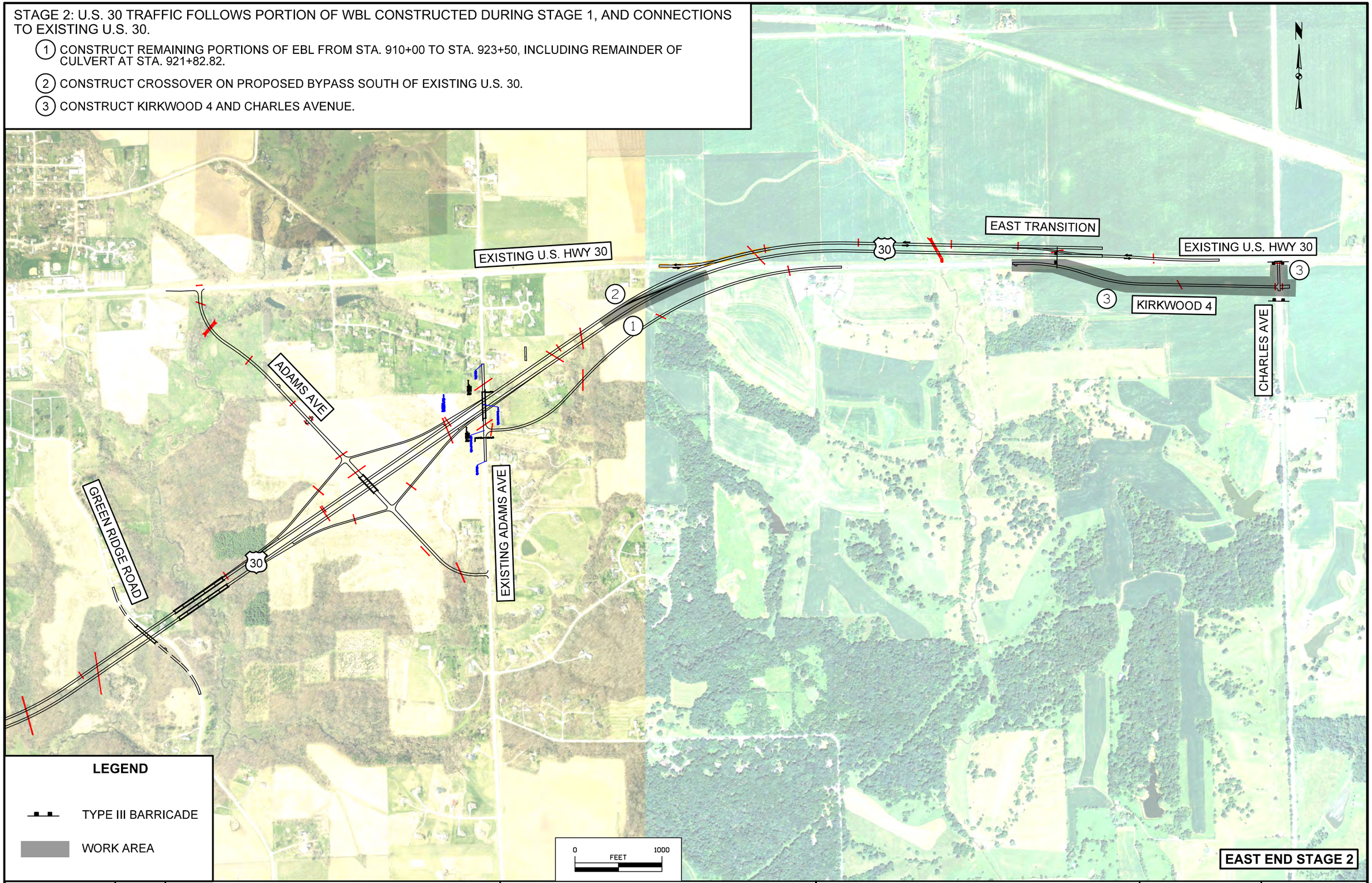
EAST END STAGE 1

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER J.6

2:58:22 PM 7/25/2014 V81_IDOTRoadD:\1120610\Cadd\Design\57030076j02.sht

STAGE 2: U.S. 30 TRAFFIC FOLLOWS PORTION OF WBL CONSTRUCTED DURING STAGE 1, AND CONNECTIONS TO EXISTING U.S. 30.

1. CONSTRUCT REMAINING PORTIONS OF EBL FROM STA. 910+00 TO STA. 923+50, INCLUDING REMAINDER OF CULVERT AT STA. 921+82.82.
2. CONSTRUCT CROSSOVER ON PROPOSED BYPASS SOUTH OF EXISTING U.S. 30.
3. CONSTRUCT KIRKWOOD 4 AND CHARLES AVENUE.



LEGEND

TYPE III BARRICADE

WORK AREA

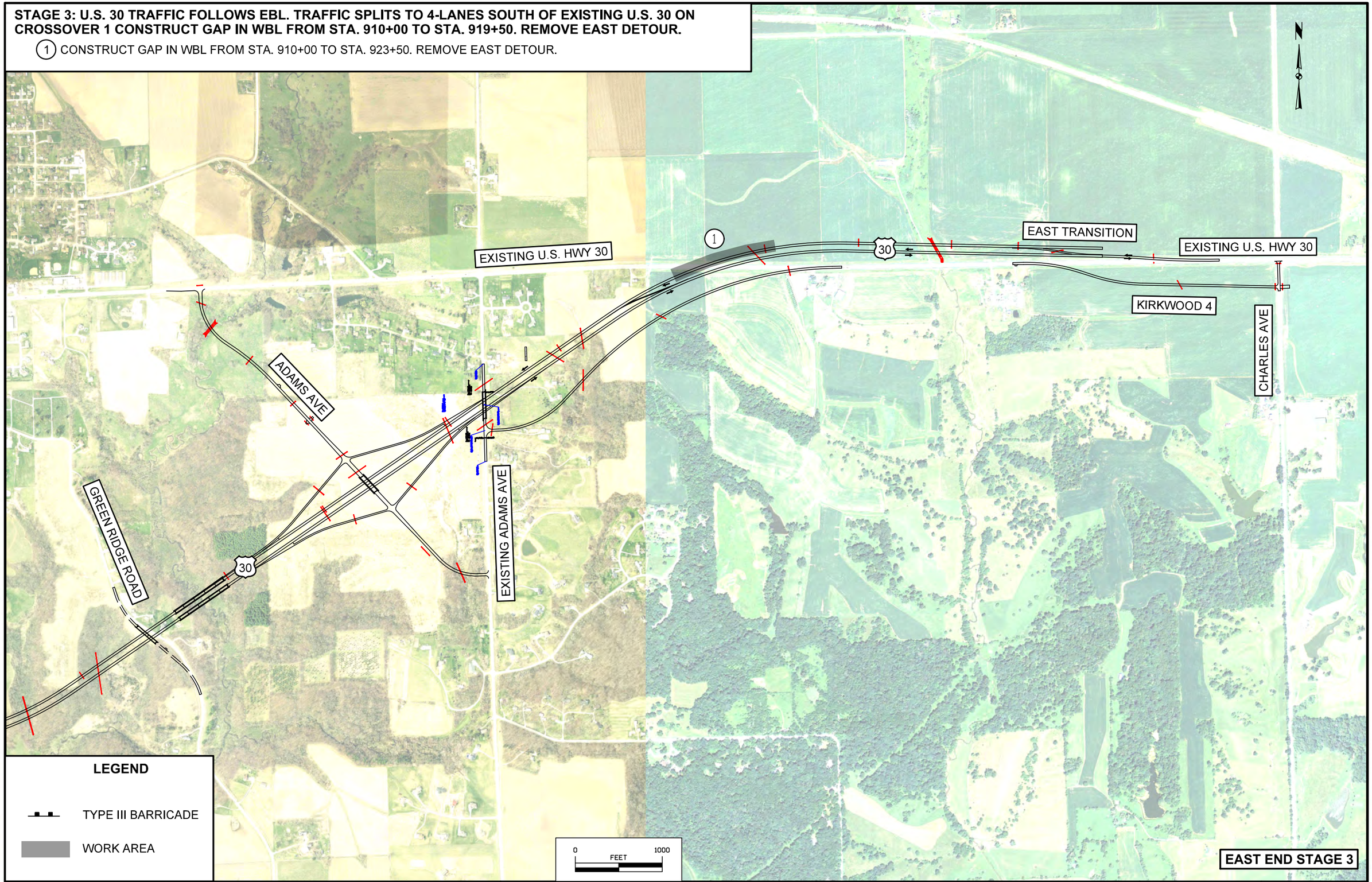
EAST END STAGE 2

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER J.7

2:58:31 PM 7/25/2014 V81_IDOTRoadD:\1120610\Cadd\Design\57030076_j02.sht

STAGE 3: U.S. 30 TRAFFIC FOLLOWS EBL. TRAFFIC SPLITS TO 4-LANES SOUTH OF EXISTING U.S. 30 ON CROSSOVER 1 CONSTRUCT GAP IN WBL FROM STA. 910+00 TO STA. 919+50. REMOVE EAST DETOUR.

(1) CONSTRUCT GAP IN WBL FROM STA. 910+00 TO STA. 923+50. REMOVE EAST DETOUR.



LEGEND

TYPE III BARRICADE

WORK AREA

EAST END STAGE 3

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER J.8

2:58:42 PM 7/25/2014 V81_IDOTRoadD:\1120610\Cadd\Design\57030076_j02.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 16

IOWA HWY. 1

POT Sta 672+86.30, 78.00' LT (Hwy. 30)
= PC Sta 3572+86.30 (Ramp C)
Point G on Sheet U.2

Curve Data
Δ = 10° 17' 11.78" (LT)
T = 180.02
L = 359.07
R = 2,000.00
E = 8.09
e = 5.4%
I = 168'
x = 62'

PI Sta 3574+66.32

PT Sta 3576+45.37

PI Sta 1587+37.69 (Ramp A)=
PI Sta 3587+90.06 (Ramp C)=
POT Sta 6690+53.92 (IA 1)

Ramp BL - Ia. Hwy 1 Ramp C

50:1 Taper for 1000'

598.51'

692.39'

11°25'57"

14°55'12"

68°38'51"

85°00'00"

80°04'48"

99°59'12"

95°00'00"

111°57'17"

26'

8'

64'

16'

14'

15:1 Taper

POC Sta 670+56.09

PT Sta 671+83.33

POT Sta 673+48.10

15:1 Taper for 600'

POT Sta 674+60.63 98.00' RT (Hwy 30)=
POT Sta 2574+60.63 (Ramp B)
Point M on Sheet U.1

PC Sta 2575+78.21

PI Sta 2578+01.82

PT Sta 2580+24.04

Ramp BL - Ia. Hwy 1 Ramp B

Ramp BL - Ia. Hwy 1 Ramp D

Curve Data
Δ = 11° 06' 21.59" (RT)
T = 223.61
L = 445.82
R = 2,300.00
E = 10.84
e = 5.2%
I = 162'
x = 62'

POT Sta 687+04.52 (Hwy 30)=
POT Sta 6687+04.52 (IA 1)

PI Sta 2586+72.90 (Ramp B)=
PI Sta 4486+17.40 (Ramp D)=
POT Sta 6683+53.95 (IA 1)

10'
6'
70'
5'
6'

0 100
FEET

Geometric Plan
Proposed Interchange of
U.S. Hwy. 30 with IA. Hwy. 1
Linn County

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER K.1

2:59:37 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076K1.sht

FRANKLIN TWP.
T-82N R-5W
SEC. 15/16

IOWA HWY. 1

PI Sta 1587+37.69 (Ramp A)=
PI Sta 3587+90.06 (Ramp C)=
POT Sta 6690+53.92 (IA 1)

Curve Data
Δ = 11° 06′ 21.59″ (LT)
T = 340.28
L = 678.43
R = 3,500.00
E = 16.50
e = 4.0%
I = 124′
x = 62′

PC Sta 1592+30.85
PI Sta 1595+71.13
PT Sta 1599+09.28

POT Sta 700+43.85 98.00′ LT (Hwy 30)=
POT Sta 1600+43.85 (Ramp A)
Point M on Standard Road Plan PV-410

POT Sta 700+56.39

POT Sta 687+04.52 (Hwy 30)=
POT Sta 6687+04.52 (IA 1)

Ramp BL - Ia. Hwy 1 Ramp C
Ramp BL - Ia. Hwy 1 Ramp A
Ramp BL - Ia. Hwy 1 Ramp D
Ia. Hwy 1 Ramp B

14′
15:1 Taper
16′
68°38′51″
85°00′00″
14°55′12″
12°02′05″
80°04′48″
99°59′12″
111°57′17″
26′
8′
64′
843.58′
583.00′
15:1 Taper for 600′
50:1 Taper for 1000′

POT Sta 702+61.34

POT Sta 700+68.18, 78.00′ RT (Hwy. 30)
= PT Sta 4500+68.18 (Ramp D)
Point G on Standard Road Plan PV-411

PC Sta 4496+88.08
PI Sta 4498+78.70

Curve Data
Δ = 10° 53′ 20.06″ (RT)
T = 190.62
L = 380.09
R = 2,000.00
E = 9.06
e = 5.4%
I = 168′
x = 62′

PI Sta 2586+72.90 (Ramp B)=
PI Sta 4486+17.40 (Ramp D)=
POT Sta 6683+53.95 (IA 1)

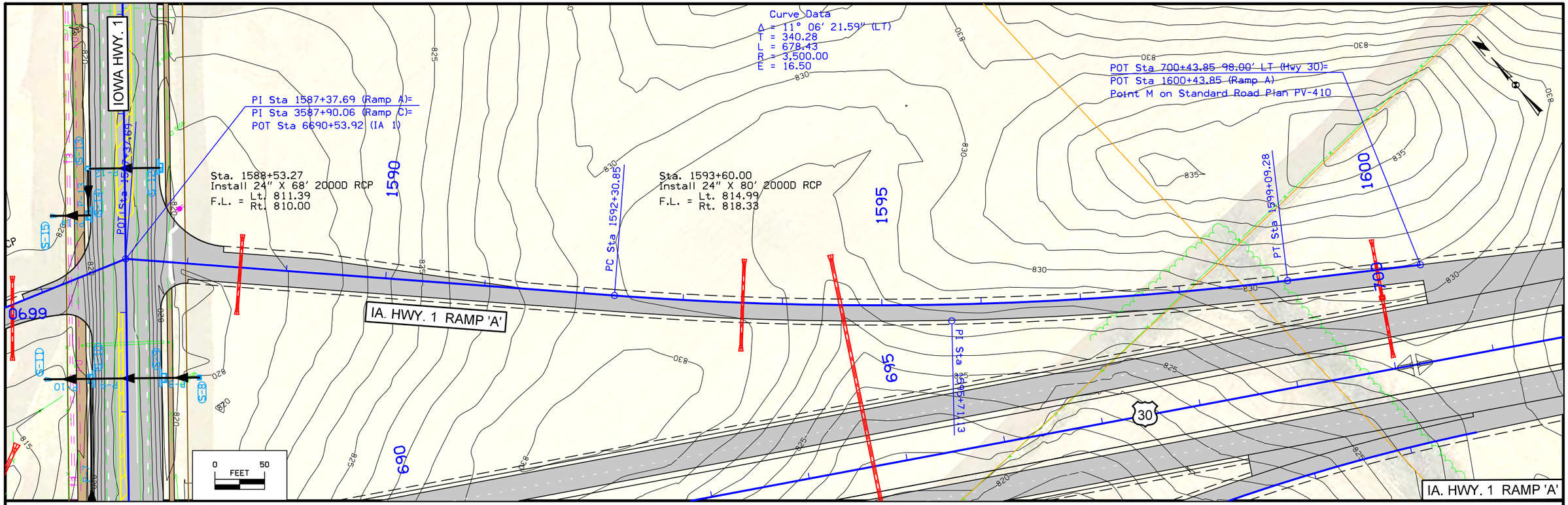
10′
6′
70′
5′
6′

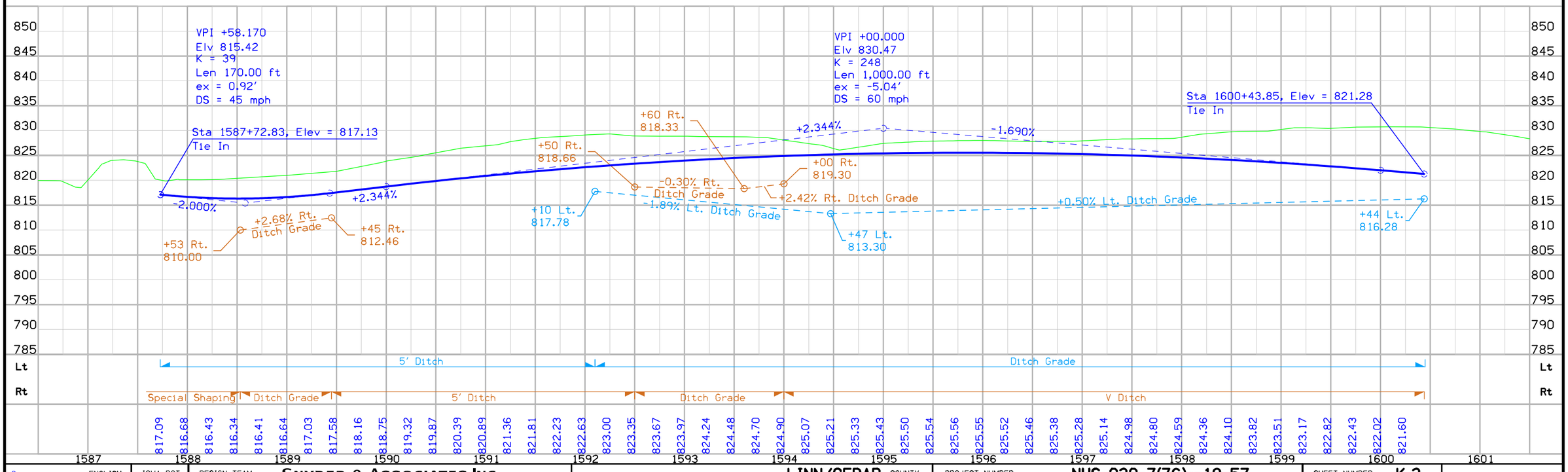
0 100
FEET

Geometric Plan
Proposed Interchange of
U.S. Hwy. 30 with IA. Hwy. 1
Linn County

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	K.2

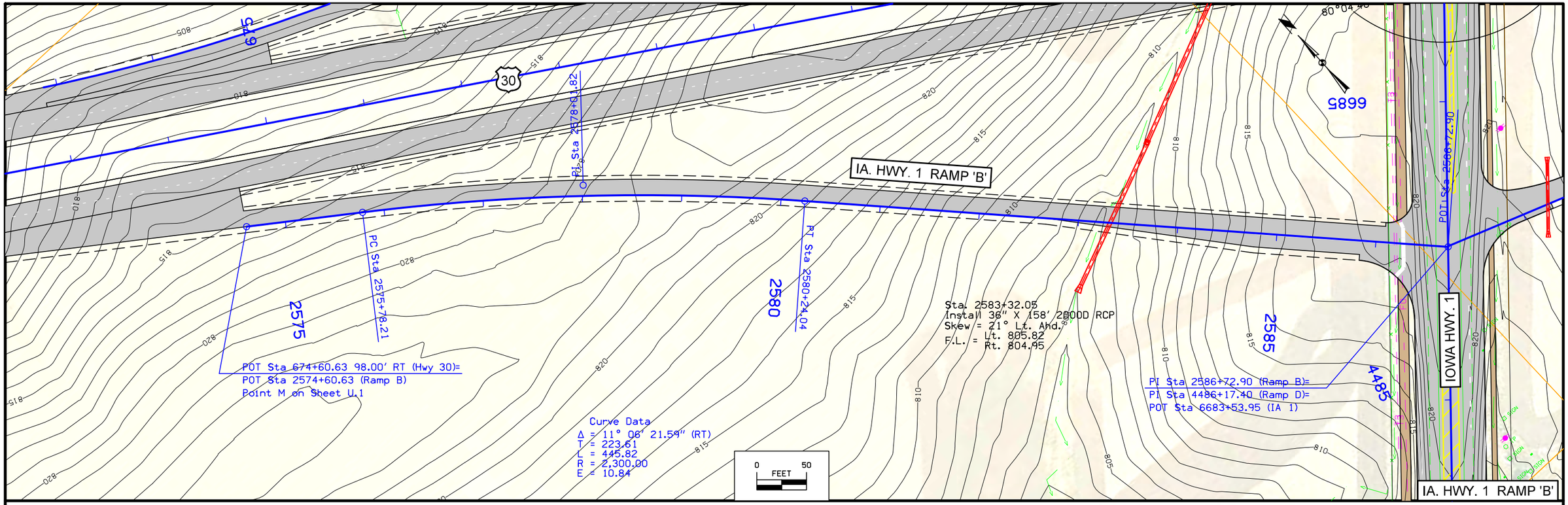
2:59:38 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076K1.sht

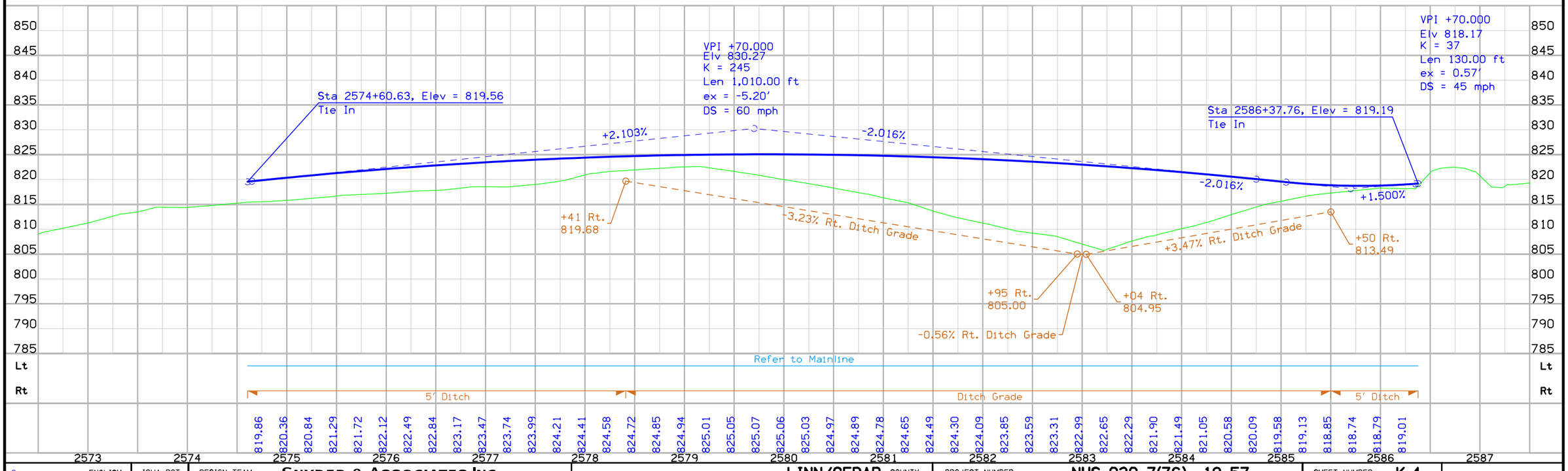




C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER K.3

2:59:40 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076K1.sht





C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER K.4

2:59:44 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076K1.sht

Curve Data
Δ = 10° 17' 11.78" (LT)
T = 180.02
L = 359.07
R = 2,000.00
E = 8.09

POT Sta 672+86.30, 78.00' LT (Hwy. 30)
= PC Sta 3572+86.30 (Ramp C)
Point G on Sheet U.2

PT Sta 3576+45.37

PI Sta 3574+66.32

Sta. 3580+25.00
Install 24" x 92' 2000D RCP
F.L. = Lt. 812.50
Rt. 817.64

PI Sta 3587+37.69 (Ramp A)=
PI Sta 3587+90.06 (Ramp C)=
POT Sta 6690+53.92 (IA 1)

Sta. 3586+67.16
Install 24" X 72' 2000D RCP
Skew = 22° Lt. Ahd.
F.L. = Lt. 811.31
Rt. 809.00

IA. HWY. 1 RAMP 'C'

IOWA HWY. 1

30

0 FEET 50

Sta 3575+14.96, Elev = 820.56
Tie In

VPI +50.000
Elv 830.19
K = 247
Len 1,030.00 ft
ex = -5.38'
DS = 60 mph

VPI +70.000
Elv 815.47
K = 38
Len 160.00 ft
ex = 0.85'
DS = 45 mph

Sta 3587+52.48, Elev = 817.01
Tie In

+1.800%
-2.375%
-2.375%
+1.872%
+3.92% Lt. Ditch Grade
+1.84% Lt. Ditch Grade
-1.00% Rt. Ditch Grade
+0.40% Rt. Ditch Grade
-4.72% Rt. Ditch Grade
-0.70% Lt. Ditch Grade
+1.35% Lt. Ditch Grade

+15 Lt. 799.54
+64 Lt. 798.50
+60 Lt. 799.80
+50 Rt. 818.39
+25 Rt. 817.64
+00 Lt. 813.13
+64 Rt. 818.59
+32 Lt. 817.39
+50 Rt. 813.63
+48 Rt. 809.00

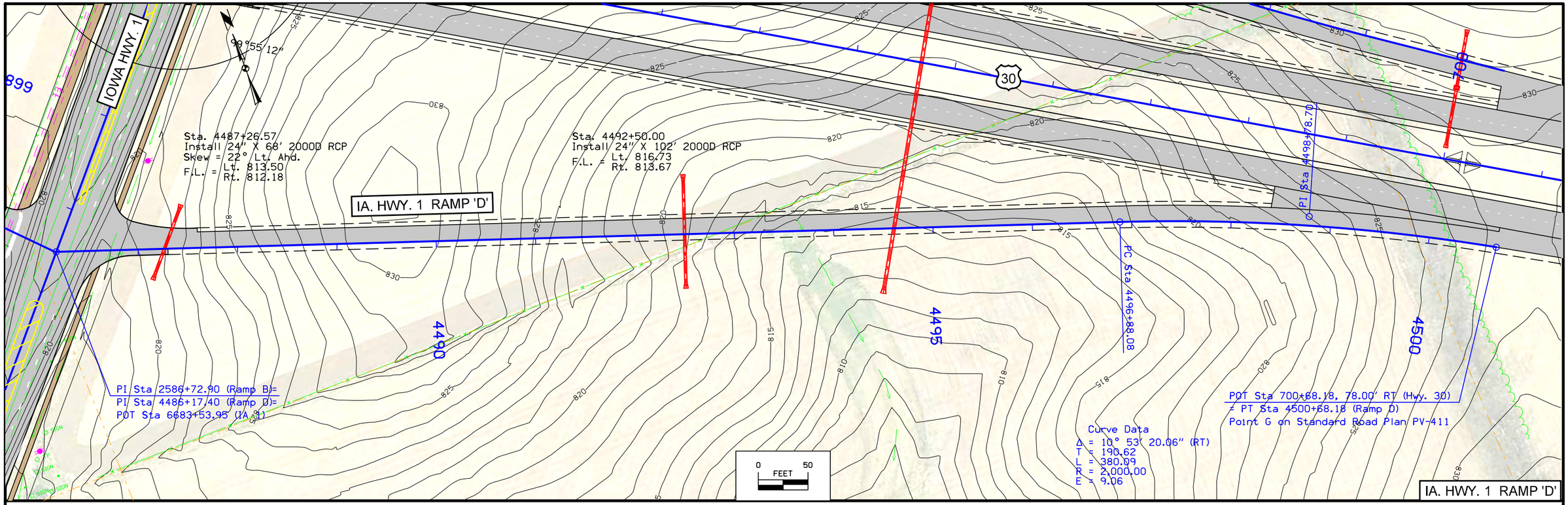
Lt: Ditch Grade | 5' Ditch
Rt: V-Ditch | Ditch Grade | 5' Ditch | Ditch Grade | Special Shaping

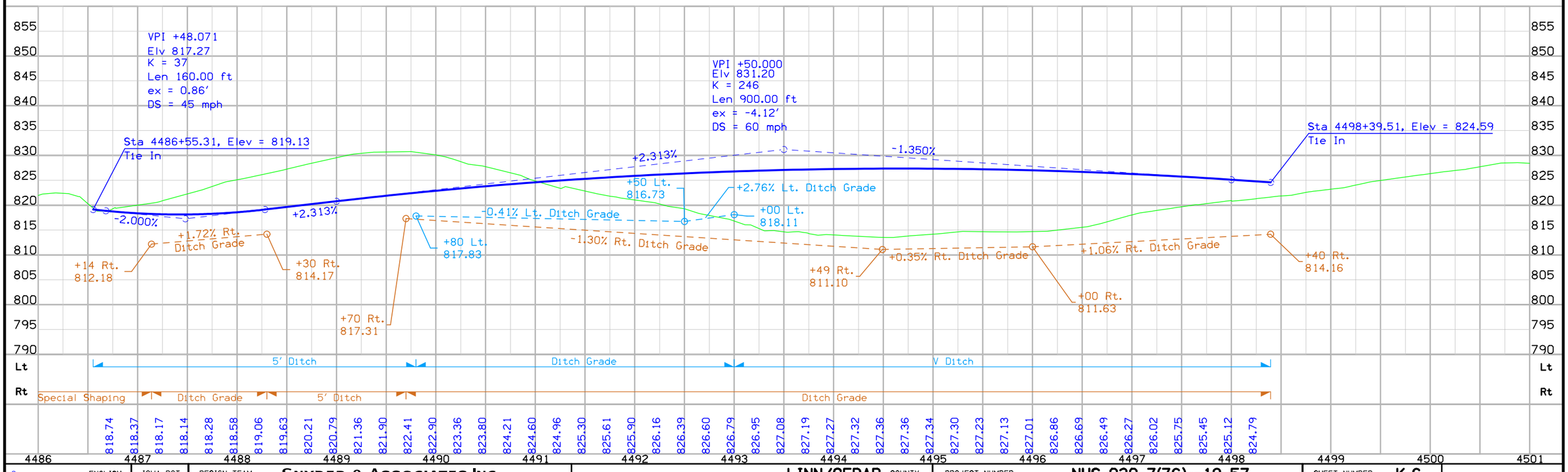
820.74 821.19 821.61 822.01 822.38 822.72 823.04 823.34 823.61 823.85 824.07 824.27 824.44 824.58 824.70 824.79 824.86 824.90 824.92 824.91 824.87 824.82 824.73 824.62 824.49 824.33 824.14 823.93 823.69 823.43 823.14 822.83 822.49 822.13 821.74 821.33 820.89 820.42 819.93 819.42 818.88 818.31 817.72 817.14 816.70 816.42 816.31 816.36 816.58 816.96

3573 3574 3575 3576 3577 3578 3579 3580 3581 3582 3583 3584 3585 3586 3587 3588

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER K.5

2:59:48 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076K1.sht





C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER K.6

2:59:52 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076K1.sht

FRANKLIN TWP. (LINN CO.)
T-82N R-5W
SEC. 13

11880

ADAMS AVE.

1570

PI Sta 1568+66.58 (Ramp A)=
PI Sta 3569+49.10 (Ramp C)=
POT Sta 11873+70.26 (Adams)

Curve Data
Δ = 14° 18′ 20.36″ (LT)
T = 250.99
L = 499.36
R = 2,000.00
E = 15.69
e = 5.4%
I = 168′
x = 62′

3565

11875

POT Sta 855+29.77, 78.00′ LT (Hwy. 30)
= PC Sta 3555+29.77 (Ramp C)
Point G on Standard Road Plan PV-411

PI Sta 3557+80.76

3560

PT Sta 3560+29.13

Ramp BL - Adams Ramp C

Ramp BL - Adams Ramp A

16′

83°19′19″

63°00′00″

845 850 855 860 865 870 875

POT Sta 870+31.27 (Hwy 30)=
POT Sta 11865+70.26 (Adams)

15°27′05″

50:1 Taper for 1000′

562.59′

26′
8′
64′
8′
26′

81°13′36″

11870

30

597.55′

18°13′36″

98°46′24″

15:1 Taper for 600′

POT Sta 854+80.36

POT Sta 858+30.77

PC Sta 2559+79.95

2560

PI Sta 2561+94.90

PT Sta 2564+07.58

16′

63°00′00″

83°19′19″

8′

8′

44′

Ramp BL - Adams Ramp B

Ramp BL - Adams Ramp D

POT Sta 858+69.15, 98.00′ RT (Hwy. 30)
= PC Sta 2558+69.15 (Ramp B)
Point M on Standard Road Plan PV-410

Curve Data
Δ = 14° 24′ 45.06″ (RT)
T = 214.95
L = 427.63
R = 1,700.00
E = 13.54
e = 5.8%
I = 180′
x = 62′

2565

PI Sta 2570+73.94 (Ramp B)=
PI Sta 4569+91.41 (Ramp D)=
POT Sta 11865+70.26 (Adams)

11865

2570

4570

0 FEET 100

Geometric Plan
Proposed Interchange of U.S. Hwy. 30 with Relocated Adams Avenue
Linn/Cedar Counties

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER K.7

2:59:55 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076K1.sht

PIONEER TWP. (CEDAR CO.)
T-82N R-4W
SEC. 18

ADAMS AVE.

PI Sta 1568+66.58 (Ramp A)=
PI Sta 3569+49.10 (Ramp C)=
POT Sta 11873+70.26 (Adams)

Curve Data
Δ = 14° 24′ 45.06″ (LT)
T = 214.95
L = 427.63
R = 1,700.00
E = 13.54
e = 5.8%
I = 180′
x = 62′

POT Sta 880+71.36, 98.00′ LT (Hwy. 30)
= POT Sta 1580+71.36 (Ramp A)
Point M on Standard Road Plan PV-410

POT Sta 881+09.74

PC Sta 1575+32.93
PI Sta 1577+47.88
PT Sta 1579+60.56

Ramp BL - Adams Ramp C
Ramp BL - Adams Ramp A
Ramp BL - Adams Ramp B
Ramp BL - Adams Ramp D

83°19′19″
63°00′00″
98°46′24″
81°13′36″
18°13′36″
15°27′05″
16′
26′
8′
64′
44′
597.55′
562.59′
15:1 Taper for 600′
50:1 Taper for 1000′

POT Sta 870+31.27 (Hwy 30)=
POT Sta 11865+70.26 (Adams)

POT Sta 884+60.15

POT Sta 884+10.74, 78.00′ RT (Hwy. 30)
= POT Sta 4584+10.74 (Ramp D)
Point G on Standard Road Plan PV-411

PC Sta 4579+11.38
PI Sta 4581+62.37

PI Sta 2570+73.94 (Ramp B)=
PI Sta 4569+91.41 (Ramp D)=
POT Sta 11865+70.26 (Adams)

Curve Data
Δ = 14° 18′ 20.36″ (RT)
T = 250.99
L = 499.36
R = 2,000.00
E = 15.69
e = 5.4%
I = 168′
x = 62′

11880 11875 11870 11865 11860
1570 1575 1580 4575 4580
3565 2565 2570 4570
865 870 875 880 885 890 895

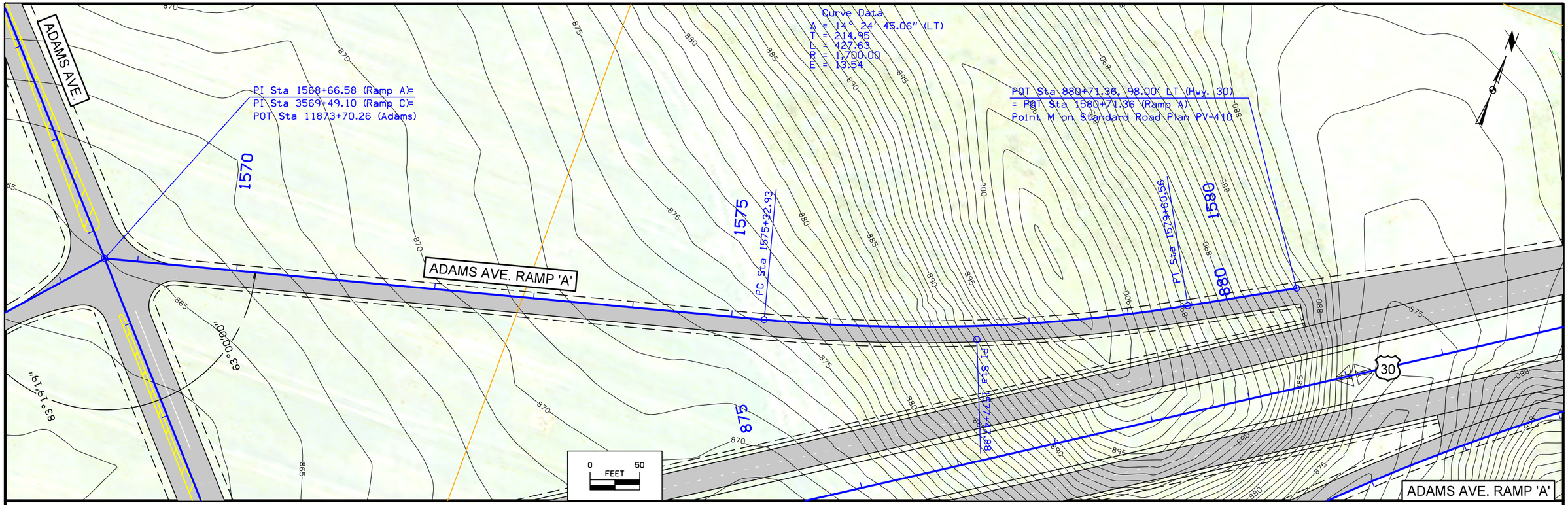
30

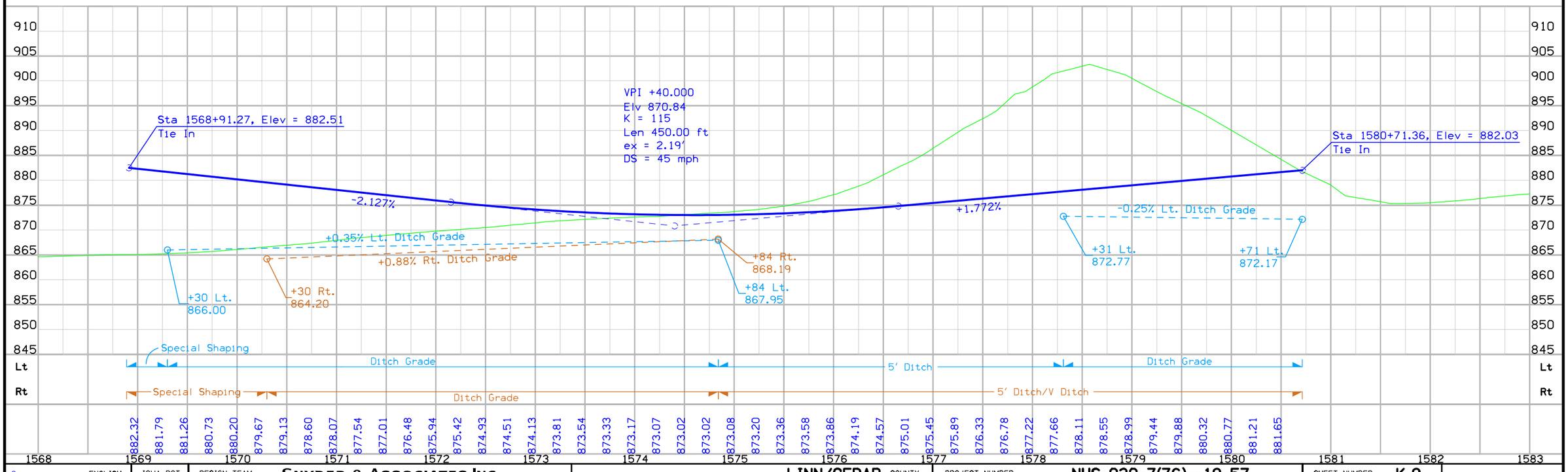
0 100
FEET

Geometric Plan
Proposed Interchange of
U.S. Hwy. 30 with Relocated
Adams Avenue
Linn/Cedar Counties

C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	K.8

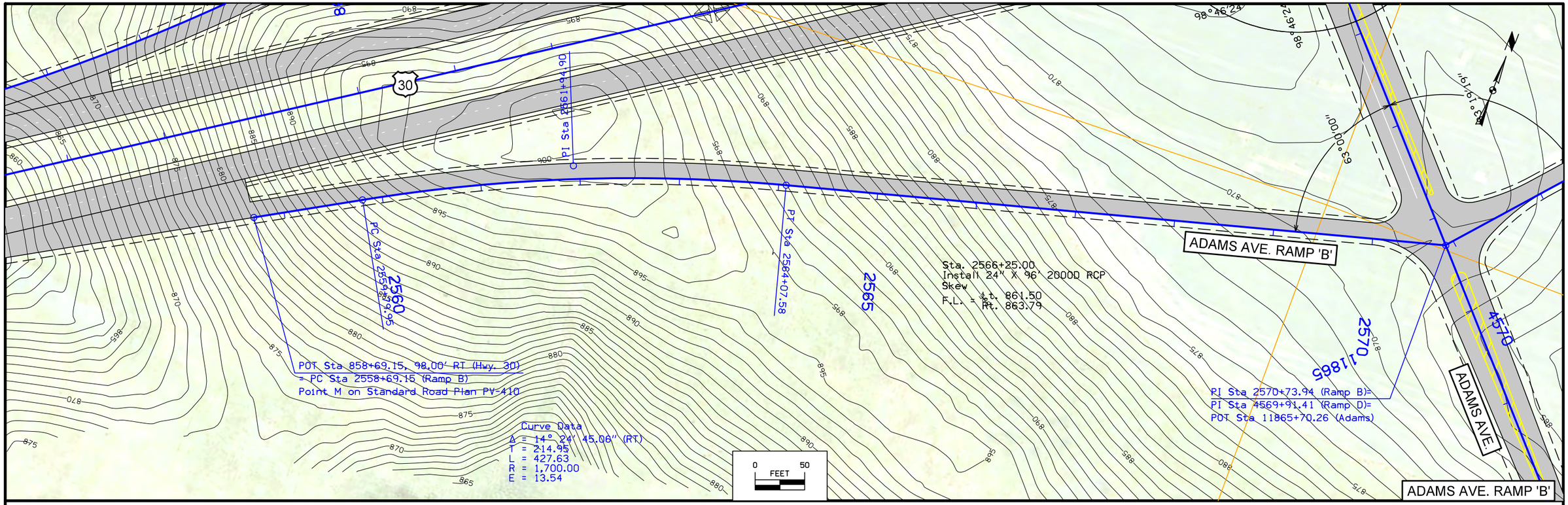
2:59:58 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076K1.sht

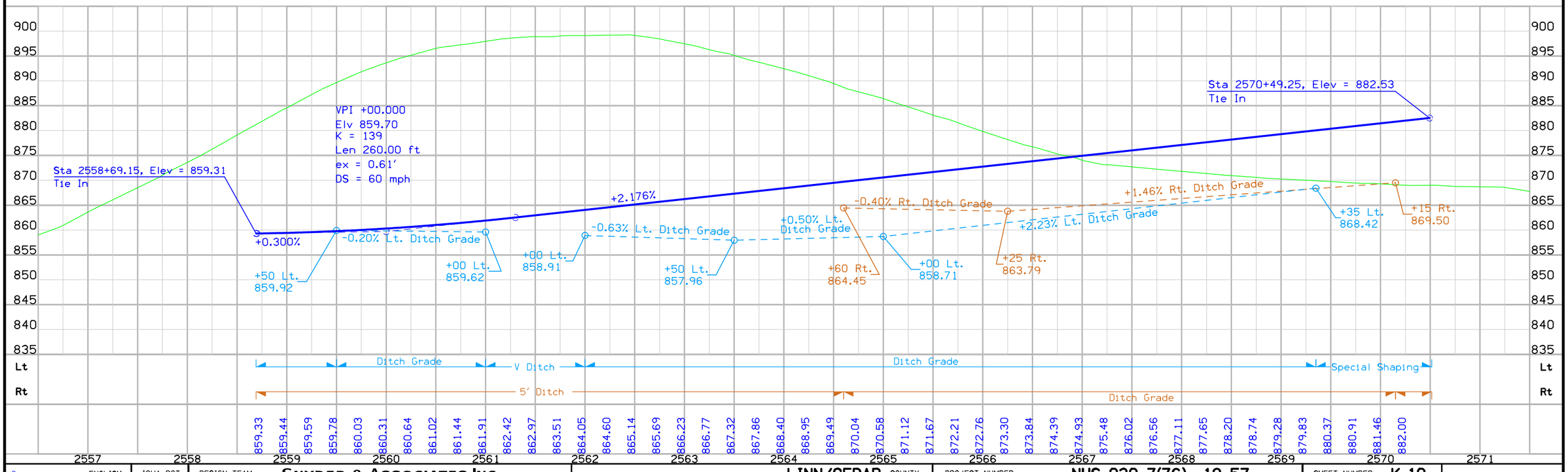




C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER K.9

2:59:59 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076K1.sht





C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER K.10

3:00:02 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076K1.sht

Curve Data
Δ = 14° 18′ 20.36″ (LT)
T = 250.99
L = 499.36
R = 2,000.00
E = 15.69

POT Sta 855+29.77, 78.00′ LT (Hwy. 30)
= PC Sta 3555+29.77 (Ramp C)
Point G on Standard Road Plan PV-411

PT Sta 3560+29.13

Sta. 3564+75.00
Install 36″ X 136′ 2000D RCP
F.I. = Lt. 852.50
Rt. 588.18

PI Sta 1568+66.58 (Ramp A)=
PI Sta 3569+49.10 (Ramp C)=
POT Sta 11873+70.26 (Adams)

11875

ADAMS AVE.

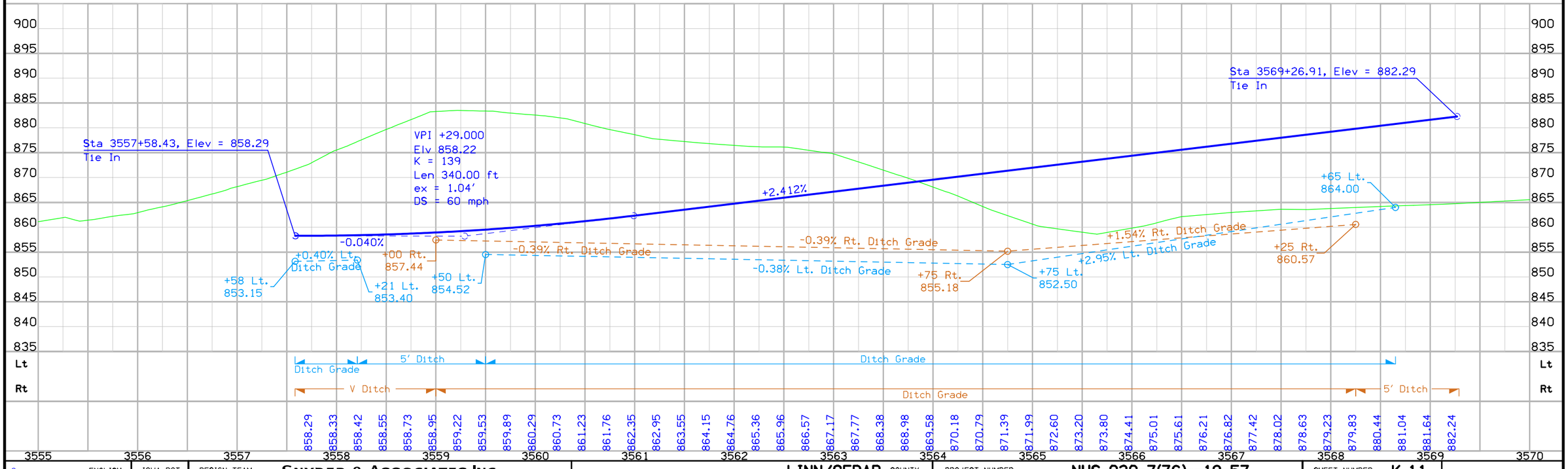
ADAMS AVE. RAMP 'C'

83°19′19″

63°00′00″

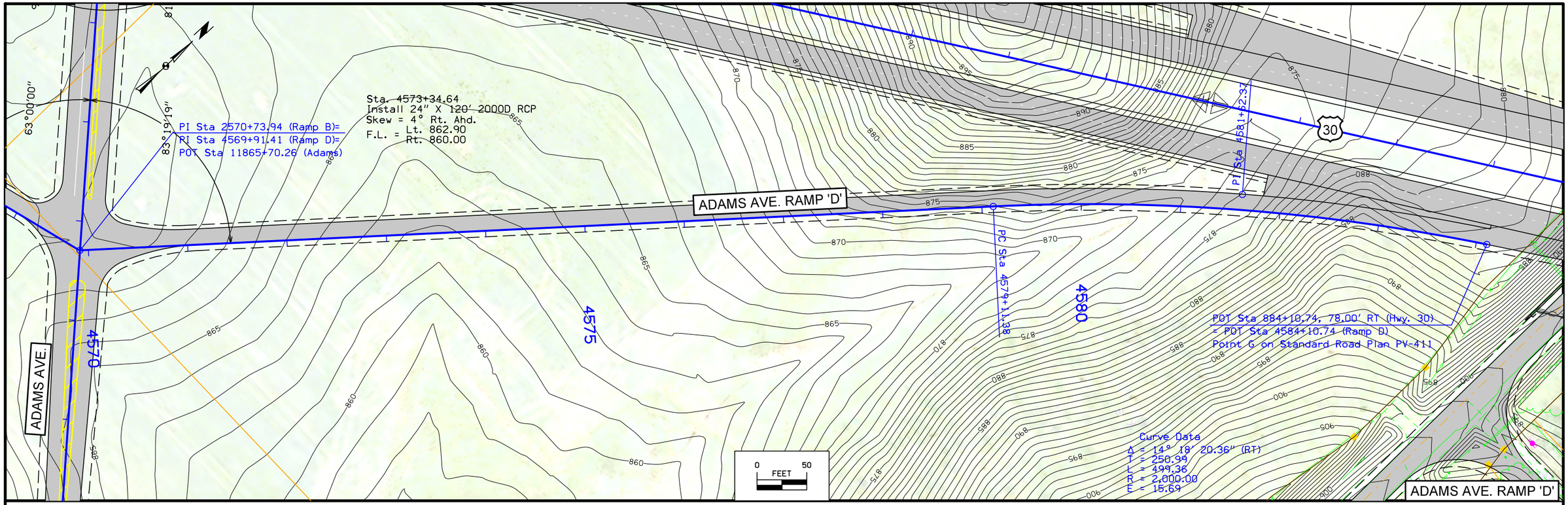
30

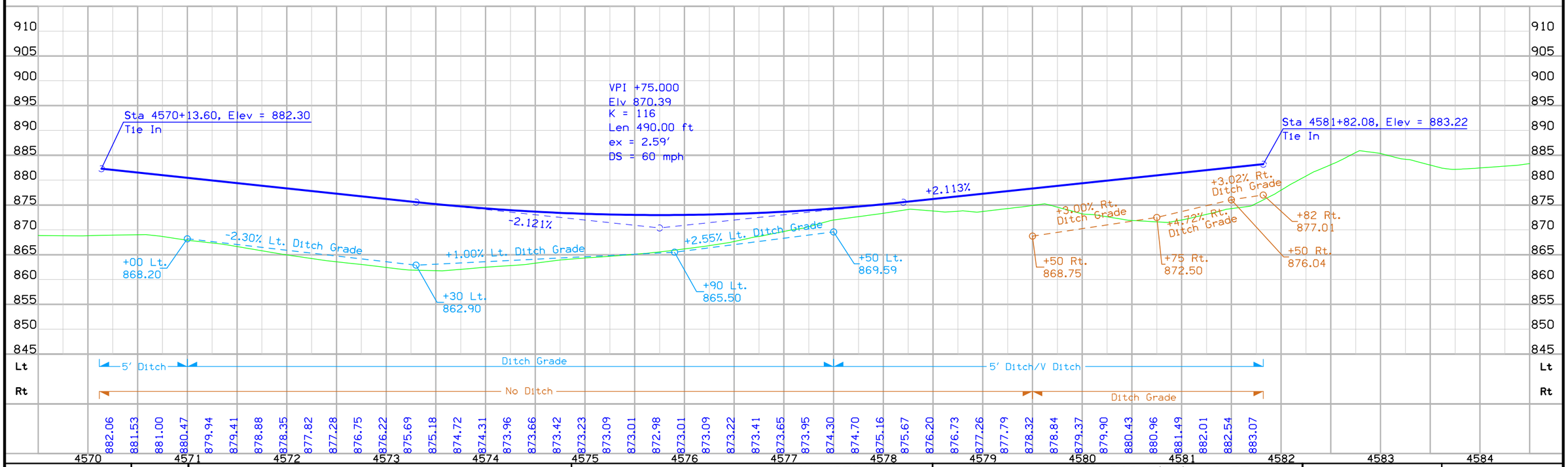
0 FEET 50



C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	K.11

3:00:05 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076K1.sht





C	ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER K.12

3:00:08 PM 7/25/2014 V8i_IDOTRoadD:\1120610\Cadd\Design\57030076K1.sht

STORM SEWER

* Bid Item
** For SW-545

For bedding and backfill purposes under Primary roads, use material complying with Article 4120.04 (Class A Crushed Stone) of the Standard Specifications for all bedding and backfill. Place and compact the material according to Article 2435.03, A and Article 2552.03, E (Class I materials).

INTAKES AND UTILITY ACCESSES

No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade Elev.	Bottom Well Elev.	Extension Length** FT	Notes
S101	700+00.00, 75.85' L	SW-511	821.90	817.56		
S102	942+75.00, 131.0' R	SW-513	850.90	843.90		FG = inlet elevation. Open 2 sides
S102A	943+60.00, 127.0' R	SW-513	850.80	843.80		FG = inlet elevation. Open 2 sides
S103	683+66.48, 185.11' R	MOD.SW-513	811.11	805.32		Open 2 sides. EXCEEDS MAX DEPTH
S104	674+70.00, 72.5' R	SW-511	819.90	815.40		
S105	2574+68.5, 28.0' R	FES		814.72		
S1	6679+65.00, 35.0' R	SW-509	817.53			
S2	6679+65.00, 35.0' L	SW-510	817.53			
S3	6676+92.00, 35.0' R	SW-509	814.69			
S4	6676+92.00, 35.0' L	SW-510	814.69			
S5	6676+92.00, 86.1' L	FES				
S6	6687+00.00, 35.0' R	SW-509	817.47			
S7	6687+00.00, 35.0' L	SW-509	817.47			
S8	6689+33.62, 72.6' R	FES				
S9	6689+33.62, 35.0' R	SW-510	816.43			
S10	6689+33.62, 35.0' L	SW-510	816.43			
S11	6689+33.62, 83.1' L	FES				
S12	6691+45.00, 35.0' R	SW-509	818.47			
S13	6691+45.00, 37.0' L	SW-401	819.85			48" DIA
S14	6690+98.00, 35.0' L	SW-510	817.79			
S15	6690+98.00, 75.0' L	FES				
S16	6694+11.50, 35.0' R	SW-507	822.25			
S17	6694+11.50, 35.0' L	SW-508	822.25			
S18	6696+07.95, 75.0' R	SW-511	818.35			
S19	6696+04.00, 38.0' R	SW-401	823.57			60" DIA
S20	6696+04.00, 37.0' L	SW-401	823.57			60" DIA
S22	6695+76.71, 194.9' L	FES				Use footing on apron
S23	6699+03.00, 35.0' R	SW-510	821.62			
S24	6699+03.00, 35.0' L	SW-510	821.62			
S25	6701+62.06, 35.0' R	SW-509	820.45			
S26	6701+62.06, 35.0' L	SW-510	820.45			
S25A	6702+35.00, 35.0' R	SW-509	820.71			
S26A	6702+35.00, 35.0' L	SW-510	820.71			
S27	20700+23.35, 14.0' L	SW-505	821.92			
S28	20700+23.35, 14.0' R	SW-506	821.92			
S29	6704+26.00, 35.0' R	SW-509	823.94			
S29A	6704+28.43, 58.2' R	SW-401	827.57			
S30	6804+26.39, 27.0' L	SW-510	823.96			
S31	6706+82.01, 35.0' R	SW-508	830.01			
S32	6806+68.15, 26.2' L	SW-508	829.73			Rebuild to lower bottom
S33	6703+15.39, 80.0' R	SW-501	825.12			
S34	6703+54.79, 73.6' R	SW-501	824.57			
S26B	6698+98.63, 481.6' L	FES				Use footing on apron
S51	3620+87.92, 38.8' L	FES				
S52	3620+87.92, 15.5' L	SW-501	806.31			
S53	3620+87.92, 15.5' R	SW-501	806.31			
S54	3620+87.92, 45.4' R	FES				
S55	3622+61.29, 15.5' L	SW-506	804.00			
S55A	3622+01.00, 15.5' L	SW-506	804.28			
S56	3622+61.29, 15.5' R	SW-505	804.00			
S57	3623+21.00, 15.5' L	SW-506	804.24			
S58	3622+61.29, 44.2' R	FES				
S59	3626+75.00, 15.5' L	SW-506	800.46			
S60	3629+25.00, 15.5' L	SW-506	791.79			
S61	3629+25.00, 15.5' R	SW-505	791.79			
S62	3631+42.10, 41.6' R	FES				

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
101A	FES	S101	2000	24	58.32	58.32	2.72	819.31	817.56		V.	Length doesn't include FES
101B	S101	FES	2000	24	49.68	49.68	2.72	817.56	816.05		V.	Length doesn't include FES
102	S102	RCB	2000	24	41.49	41.49	1.00	843.90	843.49			
102A	S102A	RCB	2000	30	23.26	23.26	1.00	843.80	843.56			
103A	FES	S103	3750	36	438	446	0.50	808.05	805.82		V.17	See culvert tab
103B	S103	FES	2000	36	158	166	0.52	805.82	804.95		V.62	See culvert tab
104	S104	S105	2000	15	48	54.08	2.14	815.90	814.74			
1	S1	S2	2000	15	70	70	1.00	813.03	812.33			
2	S2	S4	2000	15	273	273	1.05	812.23	809.36			
3	S3	S4	2000	15	70	70	1.00	810.19	809.49			
4	S4	S5	2000	18	44	50.08	3.59	807.80	806.00			
6	S6	S7	2000	15	70	70	1.00	812.97	812.27			
7	S7	S10	2000	15	234	233.62	0.50	812.17	811.00			
8	S8	S9	2000	30	38	37.6	0.35	809.50	809.37			
9	S9	S10	2000	30	70	70	1.00	809.27	808.57			
10	S10	S11	2000	30	42	48.14	0.56	808.47	808.20			
12	S12	S13	2000	15	72	72	1.00	813.97	813.25			
13	S13	S14	2000	15	47	47	0.70	813.15	812.82			
14	S14	S15	2000	15	34	40	0.55	812.72	812.50			
16	S16	S17	2000	15	70	70	1.00	817.76	817.06			
17	S17	S20	2000	15	192	192	0.50	816.96	816.00			
18	S18	S19	2000	24	35	35	1.00	814.25	813.90			
19	S19	S20	2000	24	70	70	1.00	813.80	813.10			
20	S20	S22	2000	24	152	157.7	1.97	813.00	809.90			
23	S23	S24	2000	15	70	70	1.00	816.52	815.82			
24	S24	S20	2000	18	299	299	0.60	815.62	813.83			
27	S27	S28	2000	15	28	28	1.00	817.43	817.15			
28	S28	S23	2000	15	50	50	0.86	817.05	816.62			
25	S25	S26	2000	18	70	70	1.00	815.90	815.06			
26	S26	S26A	2000	24	73	73	0.75	814.72	814.18			
25A	S25A	S26A	2000	15	70	70	1.00	816.44	815.74			
26A	S26A	S26B	2000	36	559	551	2.04	813.38	802.00			
29	S29	S30	2000	24	70	70	1.30	818.76	817.85			
29A	S29A	S29	2000	24	21	21	1.40	819.15	818.86			
30	S30	S26A	2000	36	193	193	1.30	817.05	814.54			
32	S31	S32	2000	18	69	69	1.00	825.02	824.33			
32A	S32	S30	2000	24	235	235	2.20	823.93	818.76			
33	S33	S34	2000	15	40	40	1.37	821.12	820.57			
34	S34	S29A	2000	18	68	68	1.00	820.37	819.69			
51	S51	S52	2000	18	17	23.1	1.30	801.80	801.50			
52	S52	S53	2000	18	31	31	1.40	801.40	800.97			
53	S53	S54	2000	18	24	30	1.50	800.87	800.42			
55A	S55A	S55	2000	15	60	60	0.55	799.78	799.45			
57	S57	S55	2000	15	60	60	0.48	799.74	799.45			
55	S55	S56	2000	18	31	31	1.00	799.25	798.94			
56	S56	S58	2000	18	22	28.7	1.18	798.84	798.50			
59	S59	S60	2000	15	250	250	3.59	795.96	786.98			
60	S60	S64	2000	15	217	217	1.75	786.88	783.09			
61	S61	S60	2000	15	31	31	1.00	787.29	786.98			
62	S62	S63	2000	24	20	26	0.38	783.00	782.90			
63	S63	S64	2000	24	31	31	1.00	782.80	782.49			
64	S64	S65	2000	24	24	30	0.97	782.39	782.10			

STORM SEWER

* Bid Item
** For SW-545

For bedding and backfill purposes under Primary roads, use material complying with Article 4120.04 (Class A Crushed Stone) of the Standard Specifications for all bedding and backfill. Place and compact the material according to Article 2435.03, A and Article 2552.03, E (Class I materials).

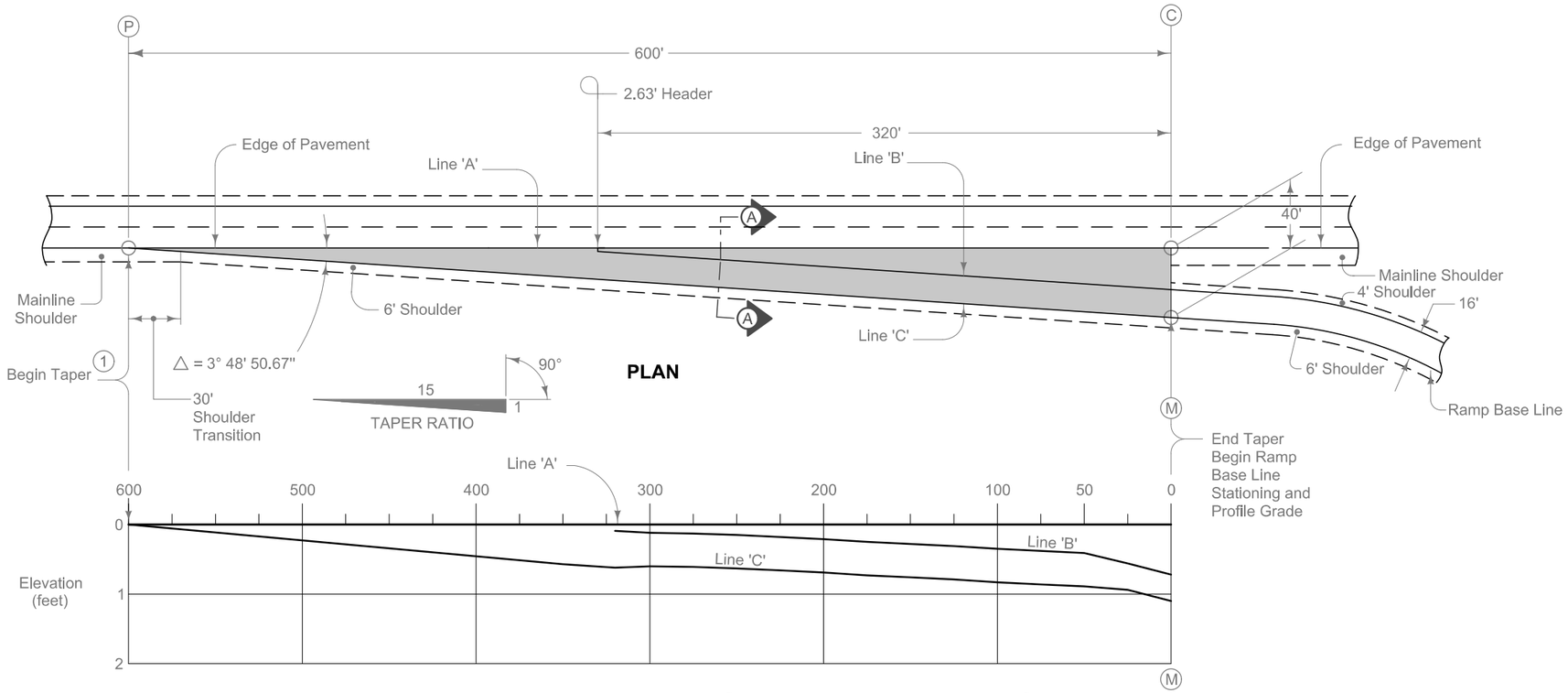
INTAKES AND UTILITY ACCESSES

No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade Elev.	Bottom Well Elev.	Extension Length** FT	Notes
S62	3631+42.10, 41.6' R	FES				
S63	3631+42.10, 15.5' R	SW-505	788.11			
S64	3631+42.10, 15.5' L	SW-506	788.11			
S65	3631+42.10, 45.5' L	FES				
S66	3633+55.00, 15.5' R	SW-505	790.62			
S67	3633+55.00, 15.5' L	SW-506	790.62			
S68	3636+00.00, 15.5' L	SW-503	794.36			
S69	3636+00.00, 37.8' R	FES				
S70	3637+35.00, 17.5' L	SW-401	797			60" DIA
S71	3637+35.00, 73.3' L	FES				
S72	3639+94.38, 15.5' R	SW-505	796.53			
S73	3639+94.38, 15.5' L	SW-506	796.53			
S74	3639+94.38, 43.7' L	FES				
S75	3644+37.00, 17.5' L	SW-401	805.05			48" DIA
S76	4643+60.02, 15.5' L	SW-503	805.33			
S77	4643+56.00, 15.5' R	SW-501	805.27			
S106	647+70.00, 159.5' L	FES				
S107	645+58.40, 161.8' L	SW-511	795.63			

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
66	S66	S67	2000	15	31	31	1.00	786.43	786.12			
67	S67	S68	2000	15	245	245	0.35	786.02	785.16			
68	S68	S70	2000	24	135	135	0.50	784.56	783.89			
69	S69	S68	2000	18	47	53	1.35	790.45	789.73			
70	S70	S71	2000	24	50	56	0.58	783.79	783.46			
72	S72	S73	2000		31	31	1.00					
73	S73	S74	2000		22	28.2						
75	S75	S73	2000		440	440.6						
76	S76	S75	2000		41	41						
77	S77	S76	2000		31	31						
106	S106	S107	2000D	15	212	218	0.4	791.3	790.43			
107	S107	FES	3750D	36	354	362	1.1	790	786		V.11	See culvert tab



NOTE: The algebraic difference between profile grade for Ramp Base Line at (M) and relative profile grade of Mainline at (C) is 0.646%.

PROFILE

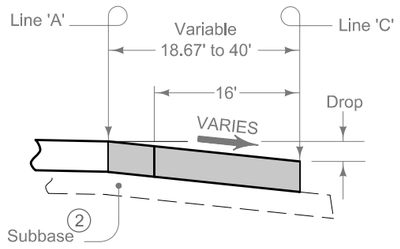
Construct ramp exit pavement the same thickness as mainline pavement.

Ramp exit pavement shown by shaded area is 1334 square yards.

For joint details, see PV-410 and PV-101.

(1) For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.

(2) Construct subbase for ramp exit pavement the same thickness as mainline subbase.



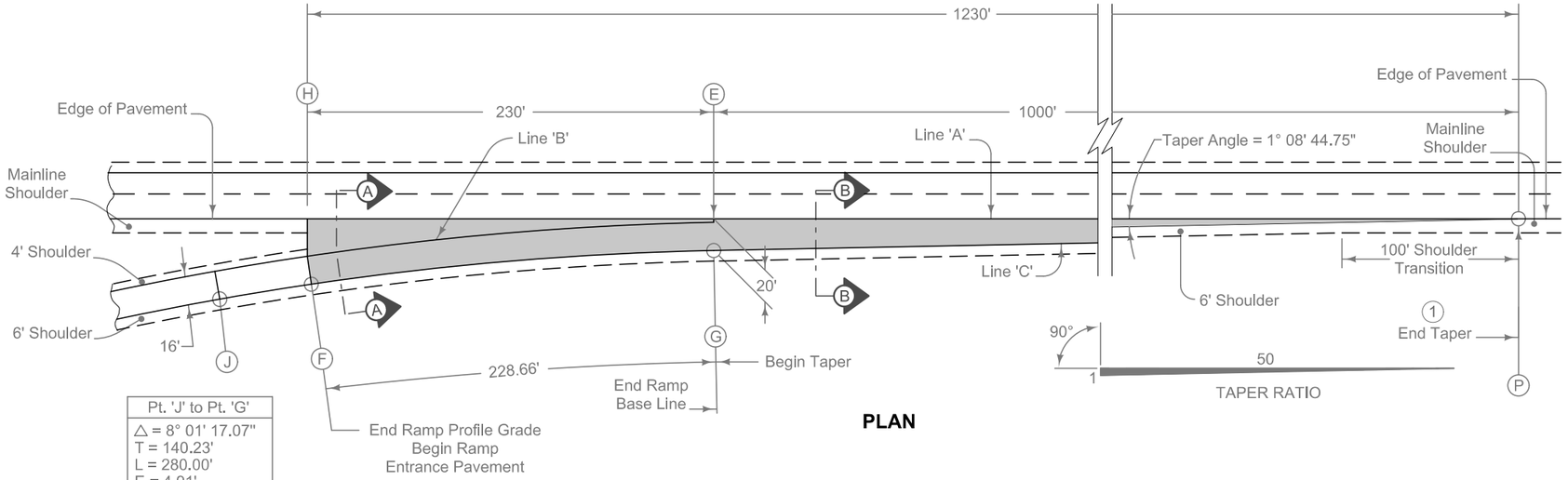
SECTION A-A

TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER

Distance From Point (E) Along Line 'A' (Ft.)		600	575	550	525	500	475	450	425	400	375	350	320	300	275	250	225	200	175	150	125	100	75	50	25	0
From Line 'A' To Line 'B'	Offset (Ft.)												2.67	4.00	5.67	7.33	9.00	10.67	12.33	14.00	15.67	17.33	19.00	20.67	22.33	24.00
	Slope (%)												3.33	2.88	2.33	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.50	3.00
	Drop (Ft.)												0.09	0.12	0.13	0.15	0.18	0.21	0.25	0.28	0.31	0.35	0.38	0.41	0.56	0.72
From Line 'B' To Line 'C'	Offset (Ft.)												Constant 16.0' Offset													
	Slope (%)												3.33	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
	Drop (Ft.)												0.53	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
From Line 'A' To Line 'C'	Offset (Ft.)	0.00	1.67	3.33	5.00	6.67	8.33	10.00	11.67	13.33	15.00	16.67														
	Slope (%)	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40														
	Drop (Ft.)	0.00	0.06	0.11	0.17	0.23	0.28	0.34	0.40	0.45	0.51	0.57	0.62	0.60	0.61	0.63	0.66	0.69	0.73	0.76	0.79	0.83	0.86	0.89	1.04	1.20

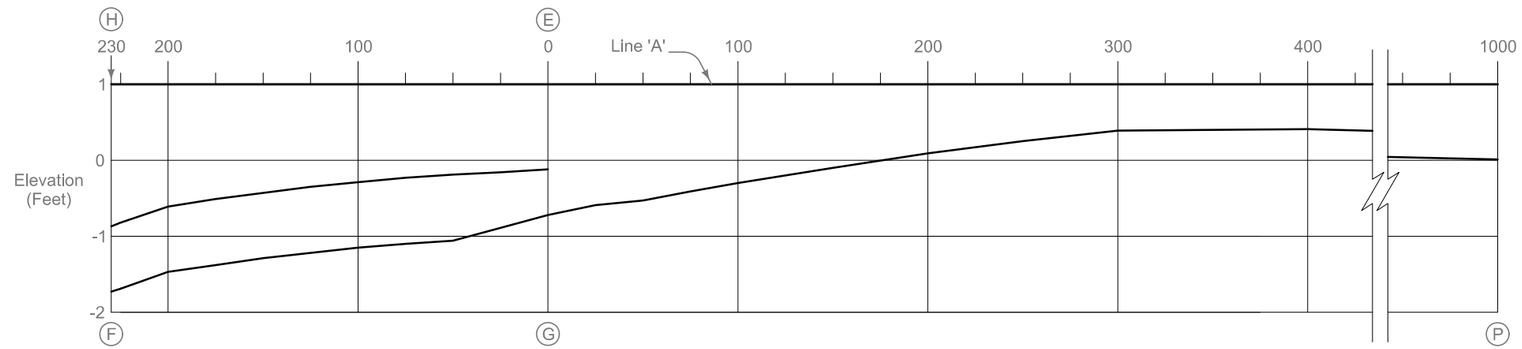
(C) (M)

IOWA 1 RAMP B
DECELERATION TAPER



Pt. 'J' to Pt. 'G'
△ = 8° 01' 17.07"
T = 140.23'
L = 280.00'
E = 4.91'
R = 2000.00'

PLAN



NOTE: The algebraic difference between profile grade for Ramp Base Line at (F) and relative profile grade of Mainline at (H) is 0.949%.

PROFILE

(H) (E)

TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER

Distance From Point (E) Along Line 'A' (Ft.)		230	225	200	175	150	125	100	75	50	25	0	25	50	75	100	125	150	200	250	300	400	500	600	700	800	900	1000
From Line 'A' To Line 'B'	Offset (Ft.)	21.76	21.10	17.95	15.11	12.59	10.38	8.48	6.90	5.62	4.66	4.0																
	Slope (%)	-4.00	-3.90	-3.40	-3.40	-3.40	-3.40	-3.40	-3.40	-3.40	-3.40	-3.00																
	Drop (Ft.)	-0.87	-0.82	-0.61	-0.51	-0.43	-0.35	-0.29	-0.23	-0.19	-0.16	-0.12																
From Line 'B' To Line 'C'	Offset (Ft.)	◄ Constant 16.0' Offset ►																										
	Slope (%)	-5.40	-5.40	-5.40	-5.40	-5.40	-5.40	-5.40	-5.40	-5.40	-4.58	-3.78																
	Drop (Ft.)	-0.86	-0.86	-0.86	-0.86	-0.86	-0.86	-0.86	-0.86	-0.86	-0.73	-0.60																
From Line 'A' To Line 'C'	Offset (Ft.)												19.5	19.0	18.5	18.0	17.5	17.0	16.0	15.0	14.0	12.0	10.0	8.0	6.0	4.0	2.0	0.0
	Slope (%)												-3.00	-2.80	-2.24	-1.69	-1.13	-0.57	0.54	1.65	2.76	3.40	3.40	3.40	3.40	3.40	3.40	3.40
	Drop (Ft.)	-1.73	-1.69	-1.47	-1.38	-1.29	-1.22	-1.15	-1.10	-1.06	-0.89	-0.72	-0.59	-0.53	-0.41	-0.30	-0.20	-0.10	0.09	0.25	0.39	0.41	0.34	0.27	0.20	0.14	0.07	0.00
Distance From Point (G) Along Line 'C' (Ft.)		228.66	223.66	198.66	173.70	148.77	123.87	99.00	74.15	49.31	24.49	0.00																

(F) (G) (P)

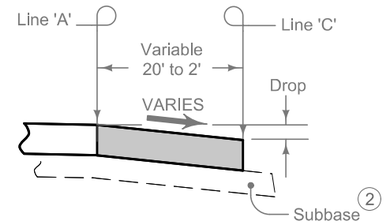
Construct ramp entrance pavement the same thickness as mainline pavement.

Ramp entrance pavement shown by shaded area is 1793 square yards.

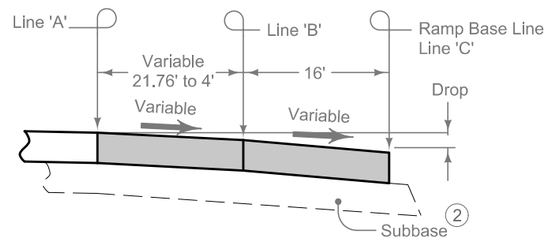
For joint details, see PV-101

(1) For header construction details at the end of taper, see Typical 7101 or Typical 7102.

(2) Construct subbase for ramp entrance pavement the same thickness as mainline subbase.

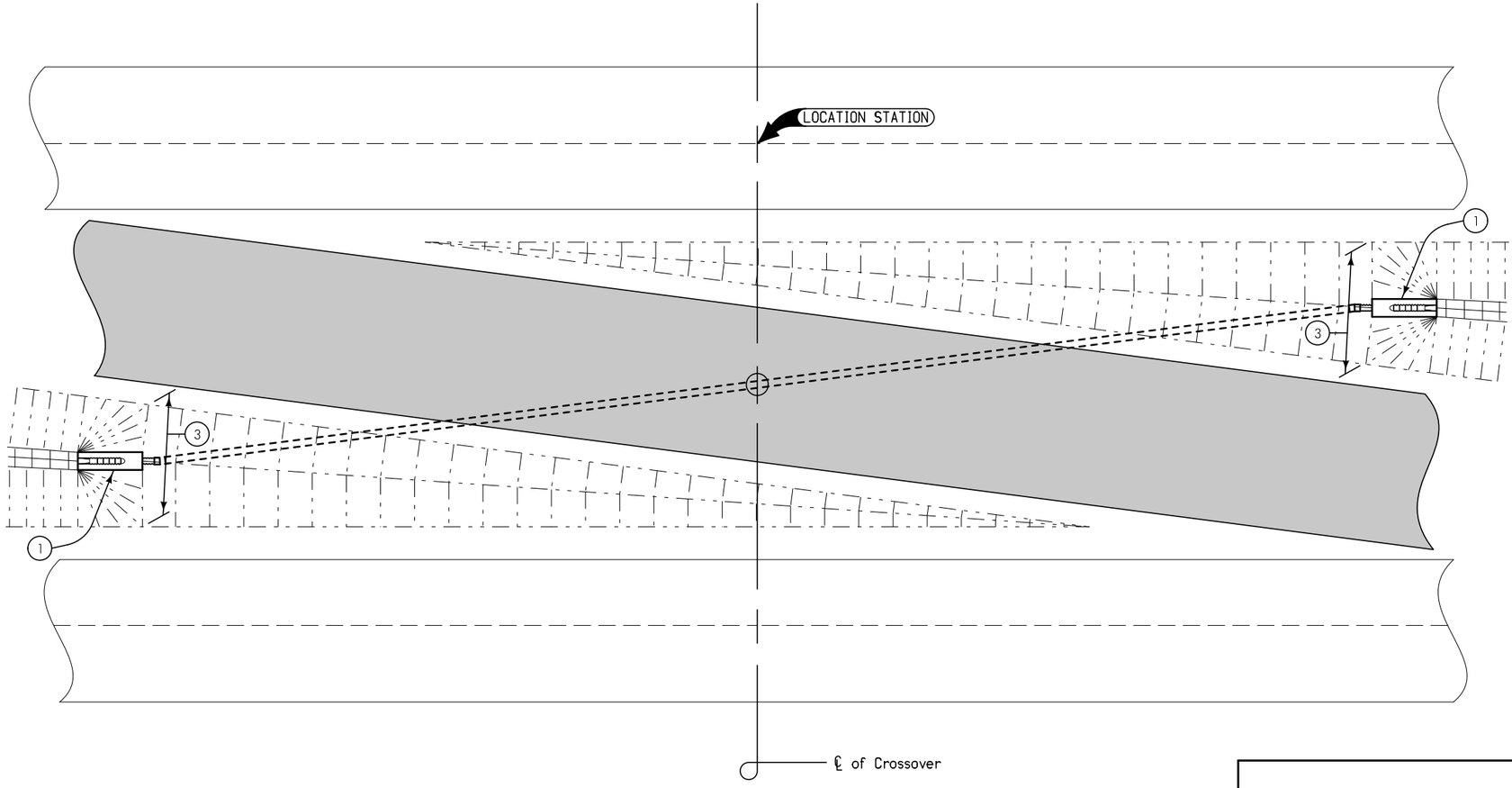


SECTION B-B



SECTION A-A

IOWA 1 RAMP C ACCELERATION TAPER



TYPICAL PLAN VIEW

1. Beveled pipe and guard. See Standard Road Plan RF-27.
2. Requires approximately 7 degree elbow.
3. Place the top edge of beveled pipe and guard at a point where the distance between the edges of the shoulders are approximately 22 feet apart.
4. Median ditch flow line.

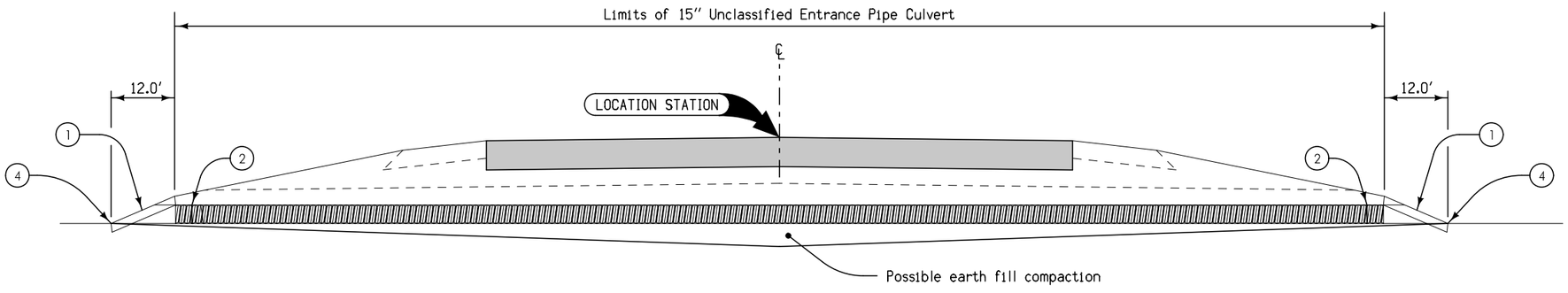
Possible Contract Items:

Culvert, Unclassified Entrance Pipe, 15" Dia.

Beveled Pipe and Guard.

TABLE OF QUANTITIES

Standard Road Plan No.	PV-501	PV-504	PV-507	PV-502	PV-505	PV-508	IRISH
Median Width	50.0′	64.0′	68.24′	50.0′	64.0′	68.24′	64.0′
Crossover Pavement Width	16.0′	16.0′	16.0′	28.0′	28.0′	28.0′	16.0′
Unit of Measurement	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.
Bid Item							
15″ dia. Unclassified Entrance Pipe Culvert	250′	112′	82′	344′	196′	162′	163′



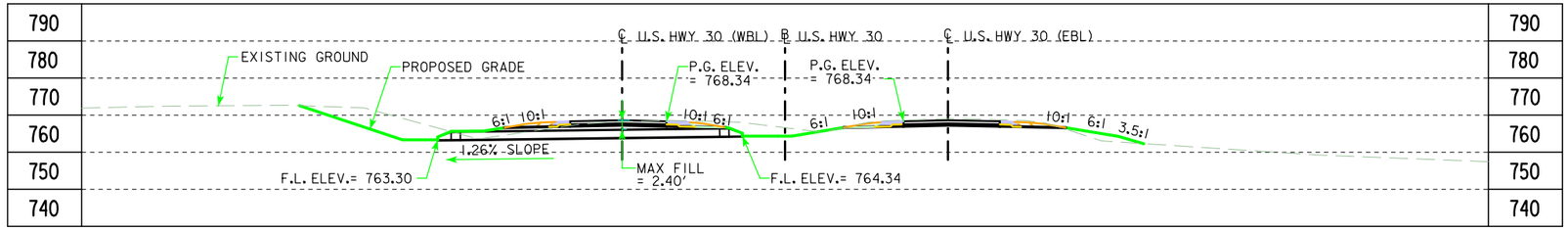
LONGITUDINAL SECTION AT PIPE CENTERLINE

MODIFIED

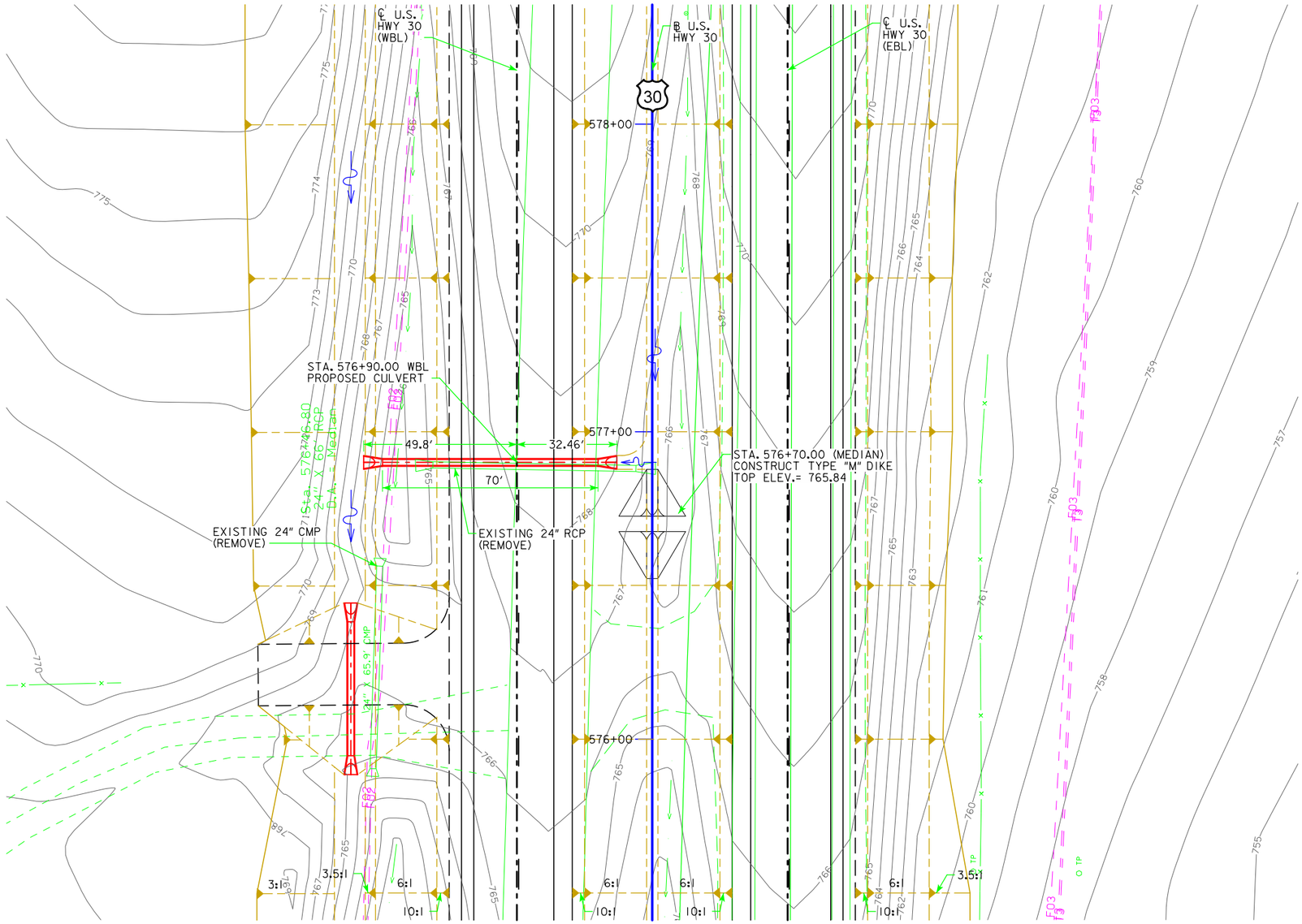
DETAIL SHEET 500-19

REVISION: Revised pipe lengths in table. MODIFIED: Added Irish Lane quantities	REVISION NO.	REVISION DATE
	4	MODIFIED

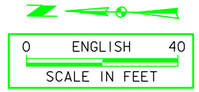
DIAGONAL PLACED DRAIN FOR MEDIAN CROSSOVERS



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #520
DESCRIPTION: CUT X IN RCP
STA. 587+83.21, 1,301.79' RT.
ELEV. = 793.31'

HYDRAULIC DATA

DRAINAGE AREA = 2.49 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 5.83 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 7
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 70' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 576+90.00 ℄ U.S. HWY. 30 WBL DECEMBER 2013

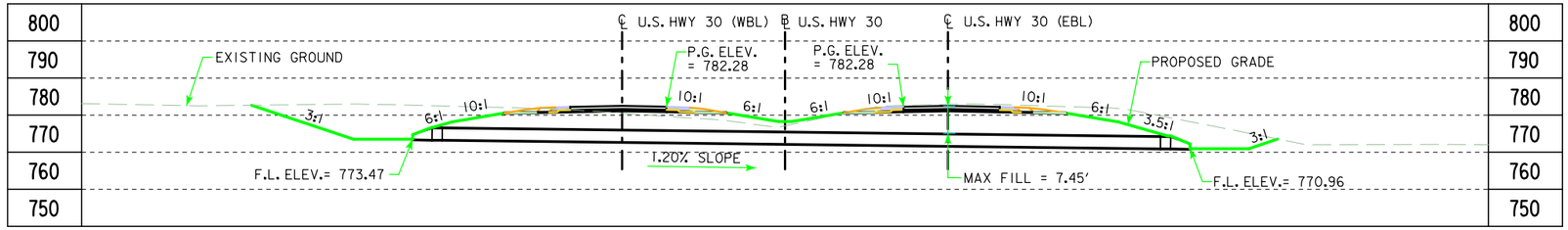
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

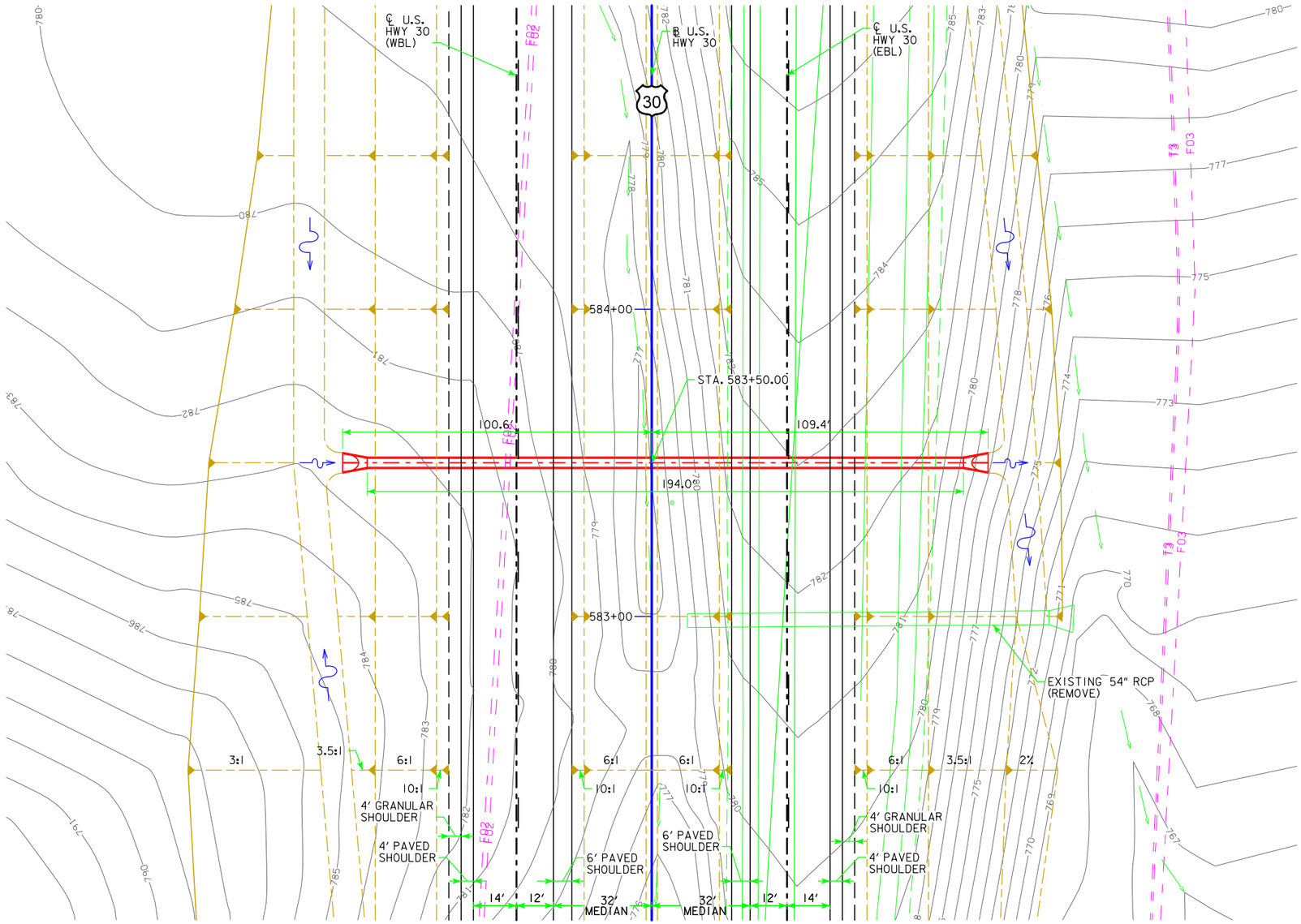
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.1

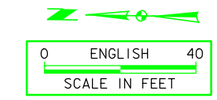
3:04:43 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #520
DESCRIPTION: CUT X IN RCP
STA. 587+83.21, 1,301.789' RT.
ELEV. = 763.31'

HYDRAULIC DATA

DRAINAGE AREA = 16.39 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 36.59 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 7/18
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 0° SKEW

36" X 194' REINFORCED CONCRETE PIPE

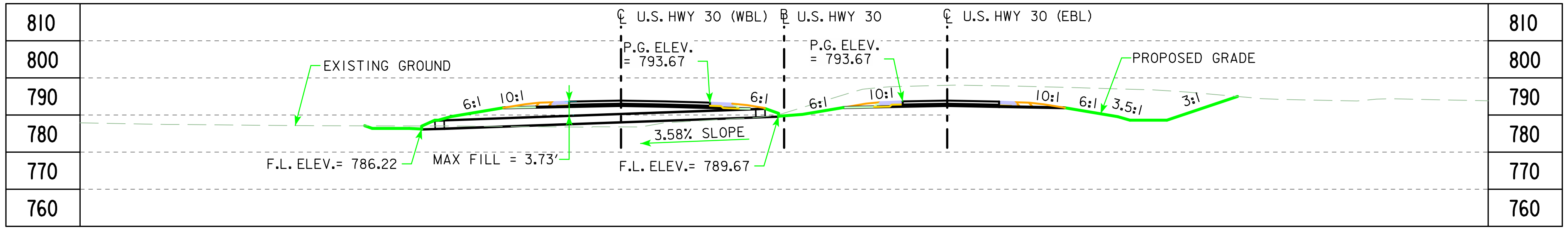
PLAT PLAN

STA. 583+50.00 ℄ U.S. HWY. 30 DECEMBER 2013

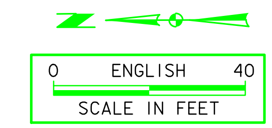
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

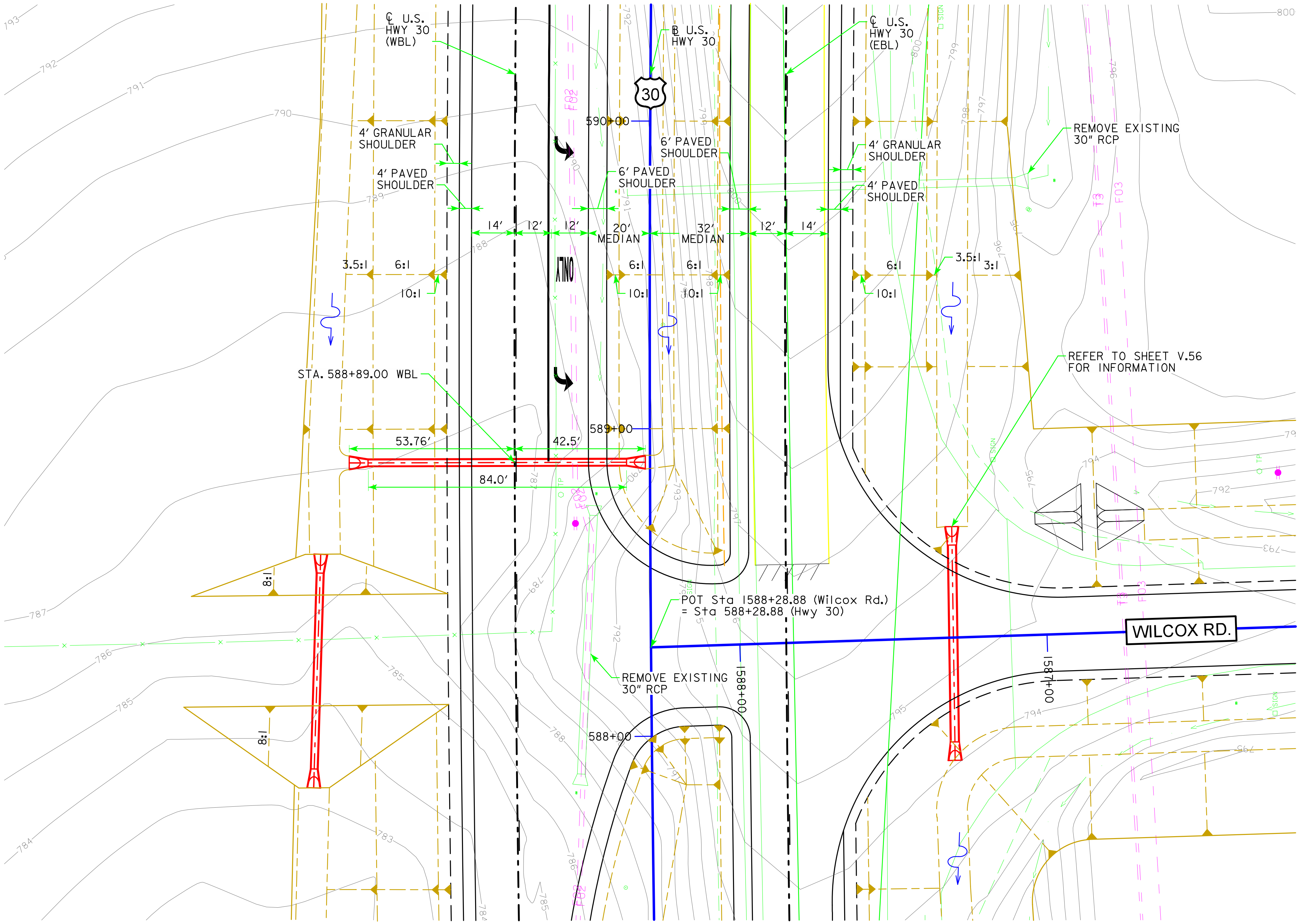
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG ℄ CULVERT



BENCH MARK: #517
DESCRIPTION: SPIKE IN POWER POLE
NORTH SIDE HWY30 AT WILCOX
STA. 588+27.25, 69.185' LT.
ELEV. = 791.610



PLAT PLAN

HYDRAULIC DATA

DRAINAGE AREA = 3.26 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 7.15 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 8
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 0° SKEW

24" X 74' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 588+89.00 ℄ U.S. HWY. 30 WBL DECEMBER 2013

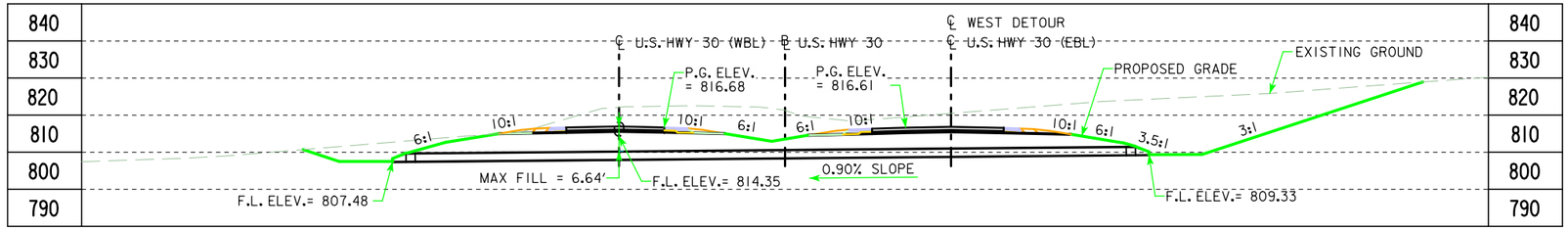
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

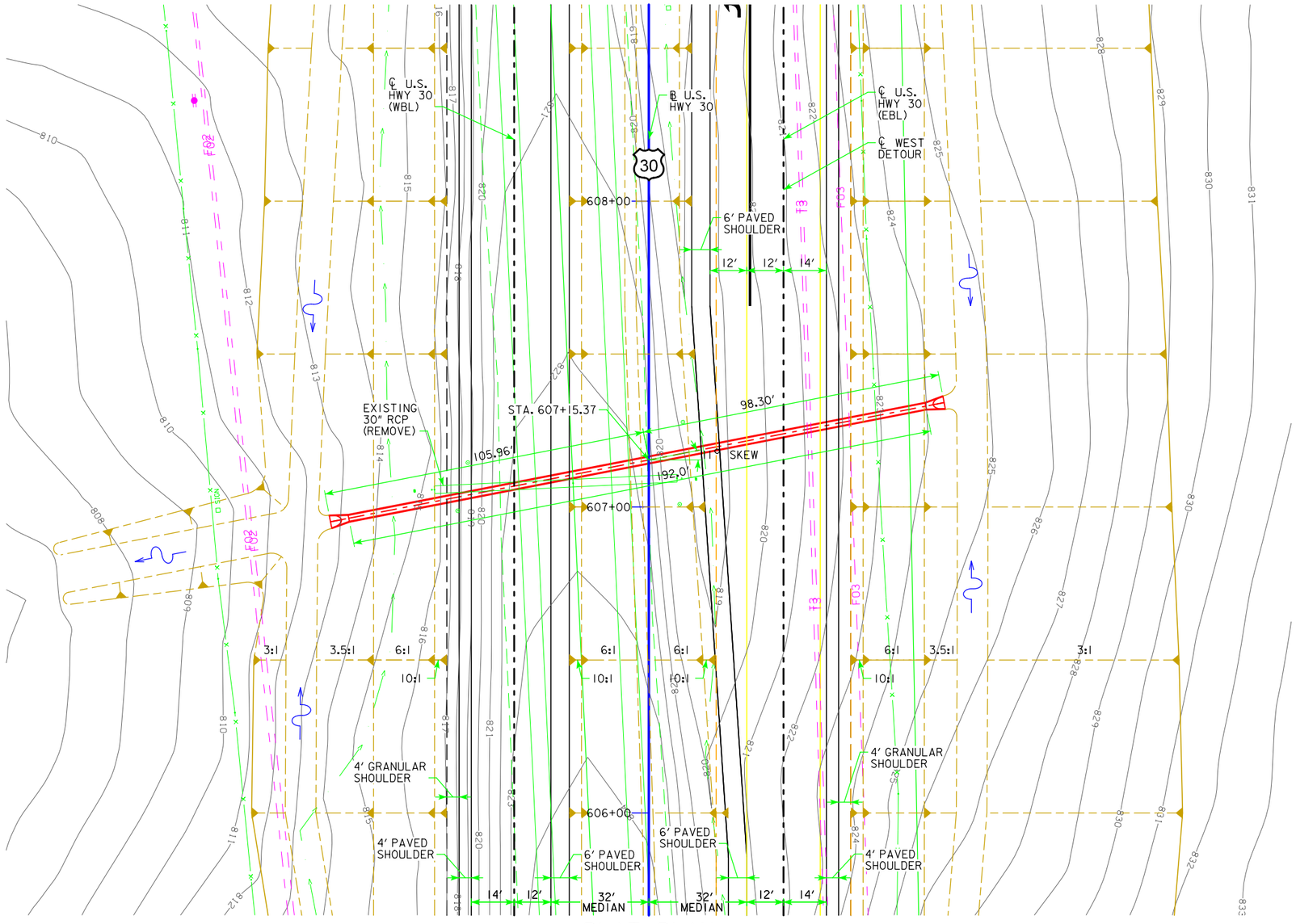
DESIGN SHEET NO. ____ OF ____ FILE NO. ________ DESIGN NO. ________

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER V.3

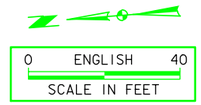
3:04:45 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #516
DESCRIPTION: SPIKE IN POWER POLE NORTH SIDE HWY30 TOP OF HILL AT JOG IN FENCE.
STA. 602+35.47, 80.25' RT.
ELEV. = 825.35

HYDRAULIC DATA

DRAINAGE AREA = 2.75 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 9.42 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 8/17
FRANKLIN TOWNSHIP
LINN COUNTY

STAGING NOTES:

CONSTRUCT ENTIRE CULVERT WITH WEST DETOUR. (WEST END STAGE 2.) WILL REQUIRE JACKING 104 LF. OF PIPE THROUGH EXISTING ROADWAY EMBANKMENT. PROPOSED CULVERT IS SIGNIFICANTLY LOWER THAN EXISTING. JACKING WILL NOT DISTURB EXISTING CULVERT.

DESIGN FOR 11° SKEW R.A.

24" X 192' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 607+15.37 ℄ U.S. HWY. 30 FEBRUARY 2014

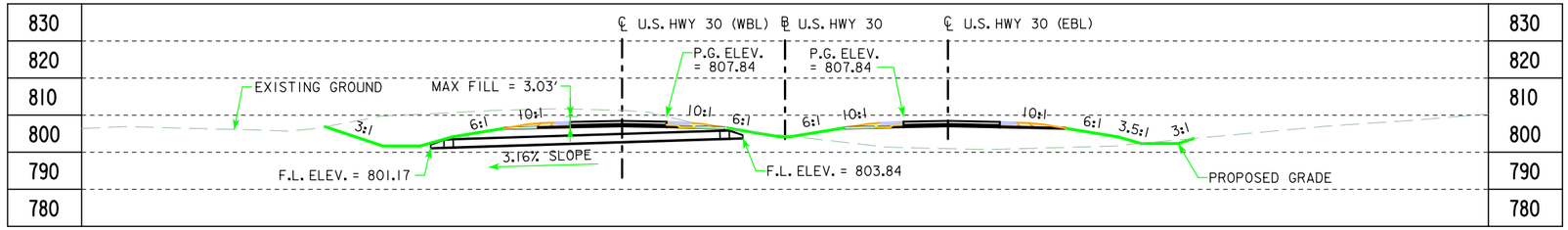
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

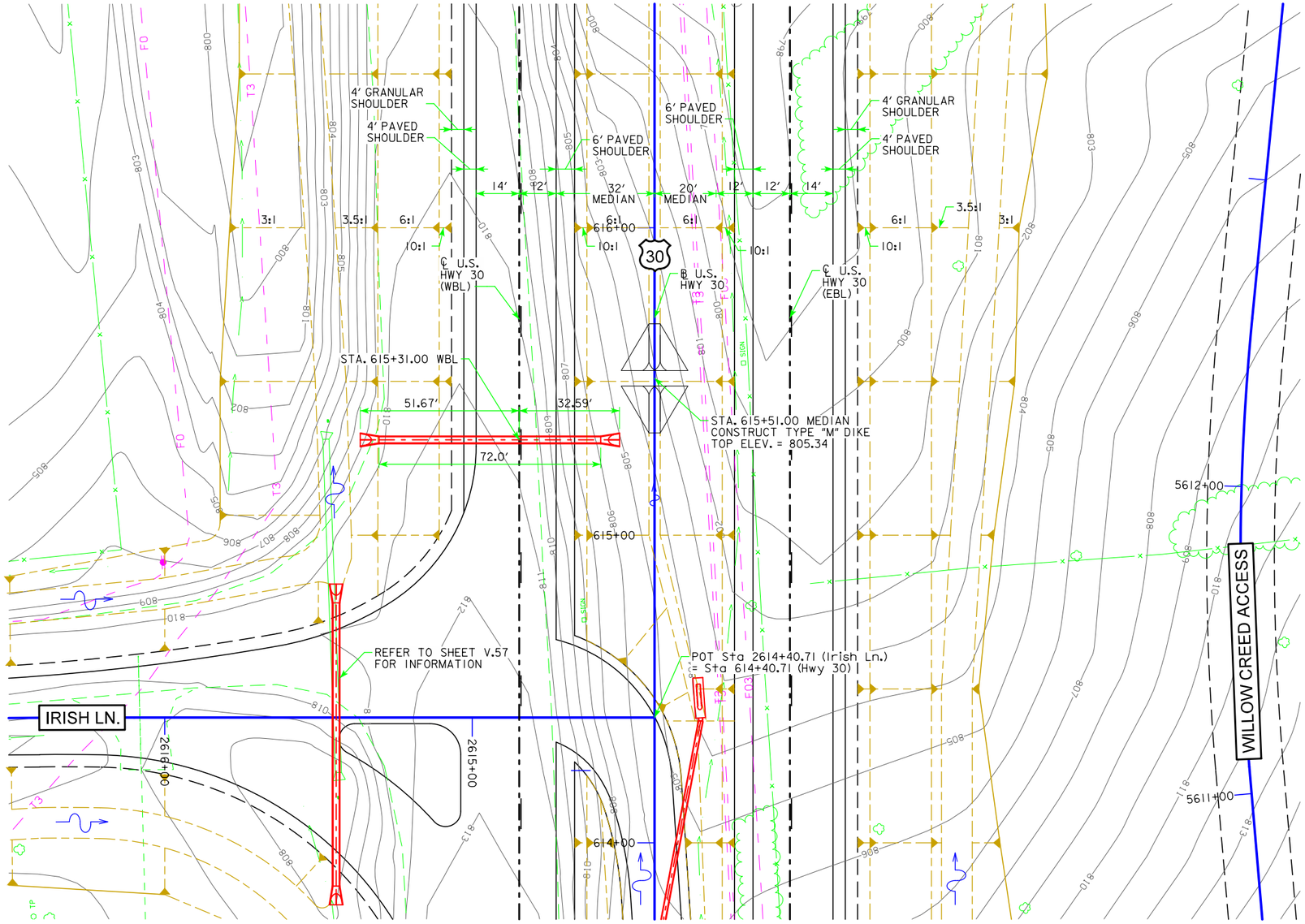
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.4

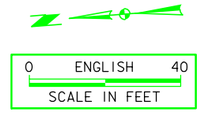
3:04:45 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #515
DESCRIPTION: SPIKE IN POWER POLE
NE QUAD IRISH LN & HWY30
STA. 614+54.49, 97.10' LT.
ELEV. = 825.35'

HYDRAULIC DATA

DRAINAGE AREA = 2.19 ACRES FLAT/ROLLING
DESIGN DISCHARGE, Q_{50}= 6.60 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 8/17
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 0° SKEW

24" X 72' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 615+31.00 ℄ U.S. HWY. 30 WBL — FEBRUARY 2014

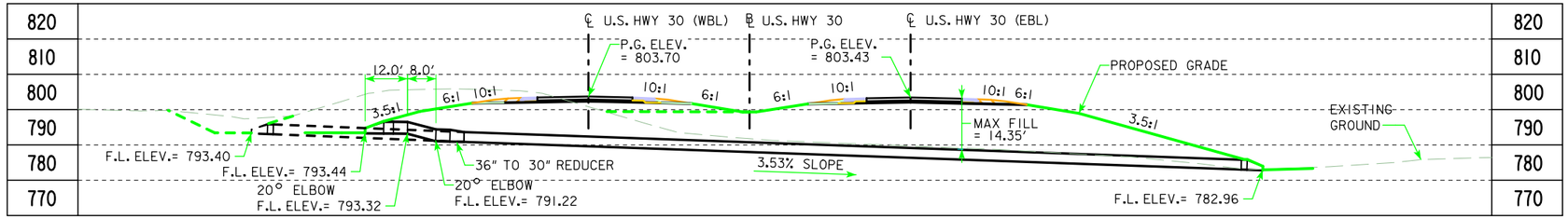
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

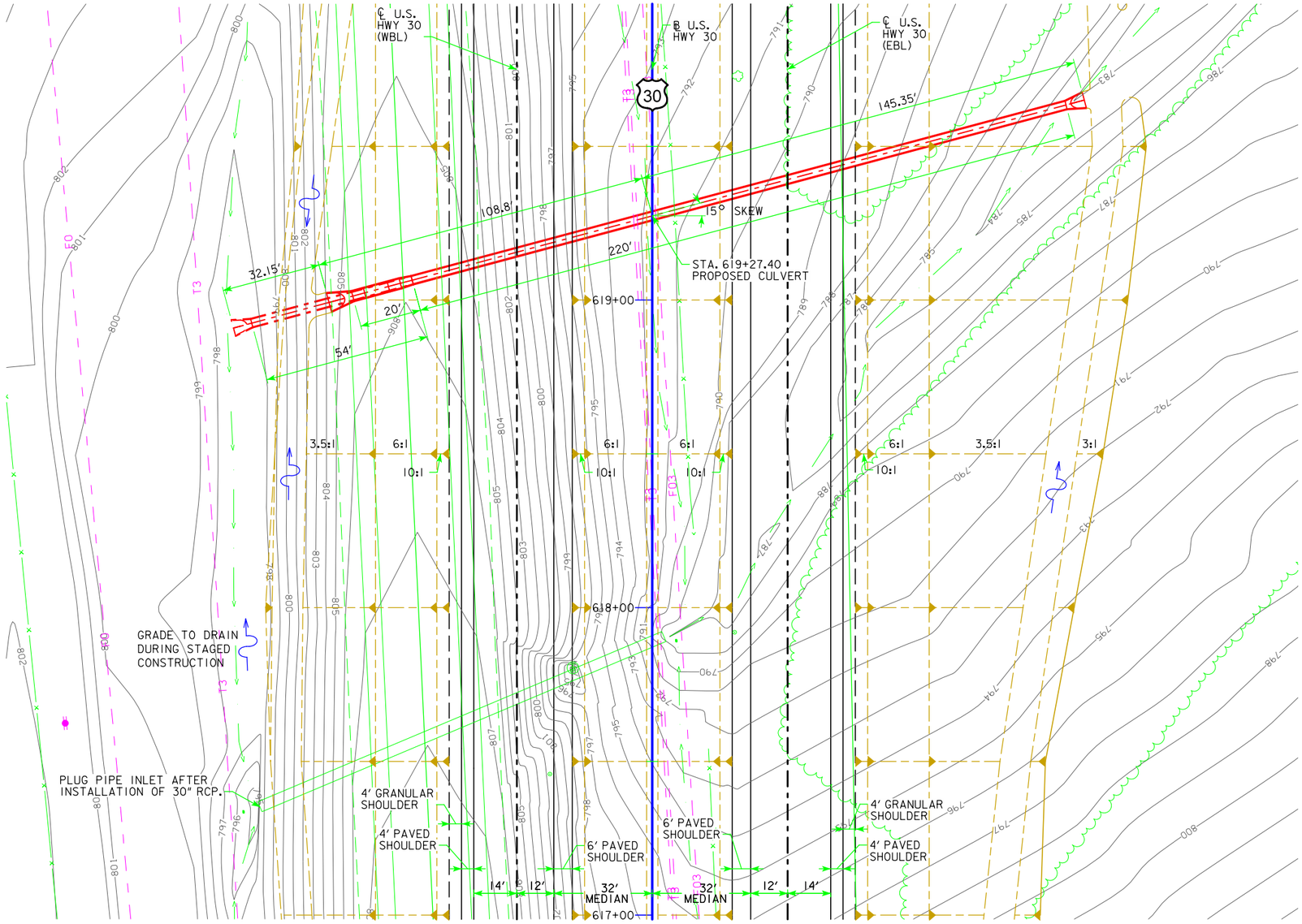
DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.5

3:04:46 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



0 ENGLISH 40
SCALE IN FEET

LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

BENCH MARK: #515
DESCRIPTION: SPIKE IN POWER POLE
NE QUAD IRISH LN & HWY30
STA. 614+54.49, 97.104' LT.
ELEV. = 825.35'

HYDRAULIC DATA

DRAINAGE AREA = 15.50 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 35.07 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 17
FRANKLIN TOWNSHIP
LINN COUNTY

STAGING NOTES

WEST END STAGE 2: CONSTRUCT 30" DIAMETER PIPE. EXTEND NORTH AT 3.53% WITH AN ADDITIONAL 54' OF 30" PIPE AND FES. WILL REQUIRE JACKING 112 LF OF PIPE THROUGH EXISTING US 30 EMBANKMENT.

WEST END STAGE 3: REMOVE 54' OF 30" RCP AND 30" FES AT NORTH END. INSTALL 36" PIPE, BENDS, AND REDUCERS.

DESIGN FOR 15° SKEW R.A.

36" X 20' AND 30" X 220' SLOPE TAPERED INLET REINFORCED CONCRETE PIPE PLAT PLAN

STA. 619+27.40 ℄ U.S. HWY. 30 FEBRUARY 2014

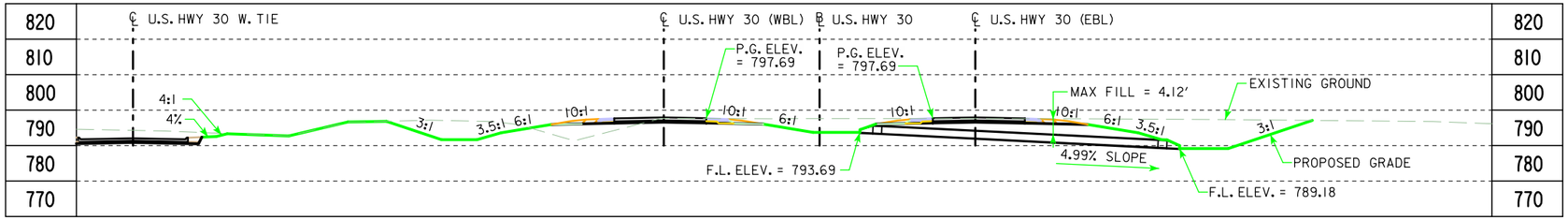
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

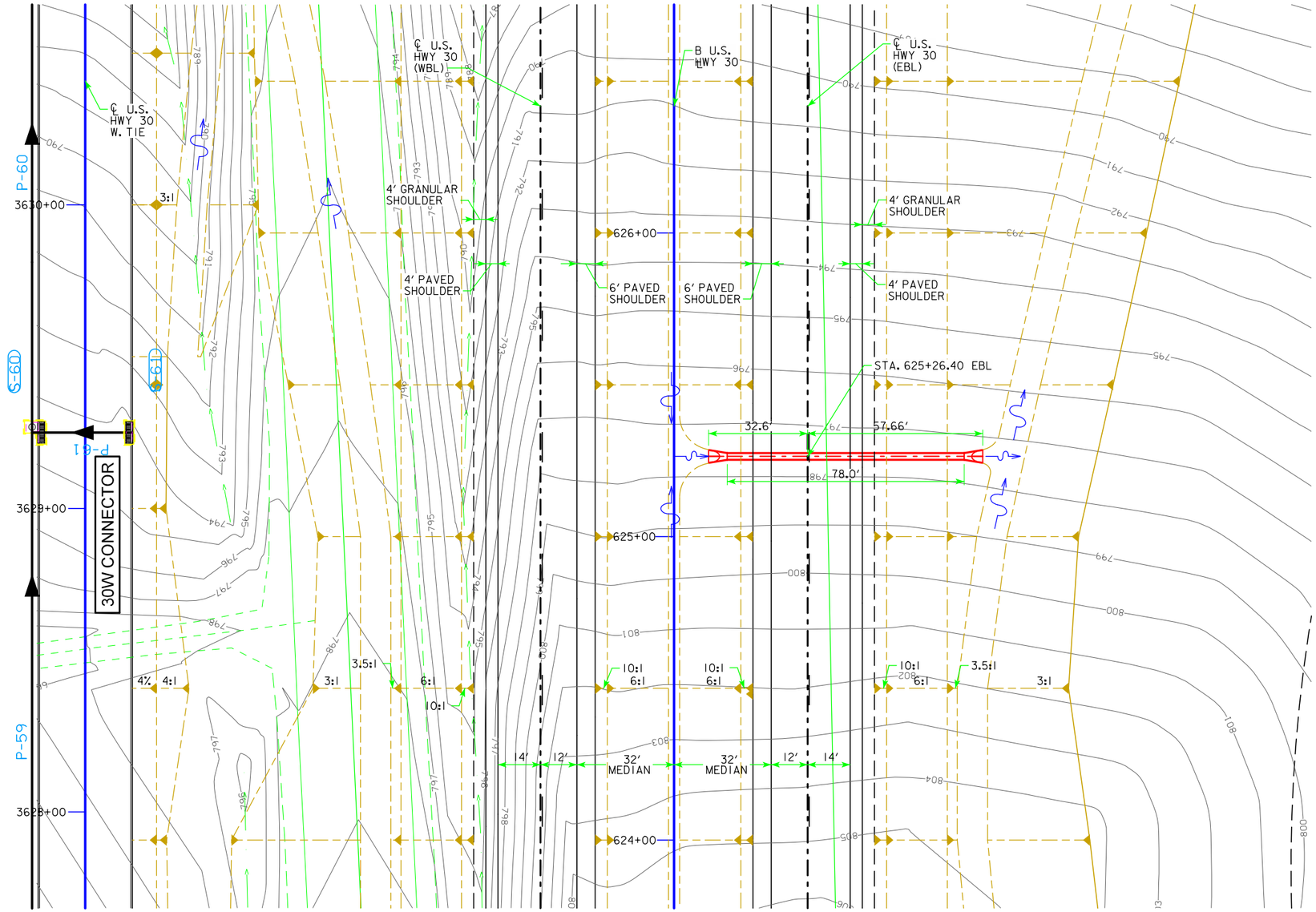
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.6

3:04:47 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

0 ENGLISH 40
SCALE IN FEET

BENCH MARK: #515
DESCRIPTION: SPIKE IN POWER POLE
NE QUAD IRISH LN & HWY30
STA. 614+54.49, 97.104' LT.
ELEV. = 825.35'

HYDRAULIC DATA

DRAINAGE AREA = 3.51 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 7.56 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 17
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 78' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 625+26.40 ℄ U.S. HWY. 30 EBL DECEMBER 2013

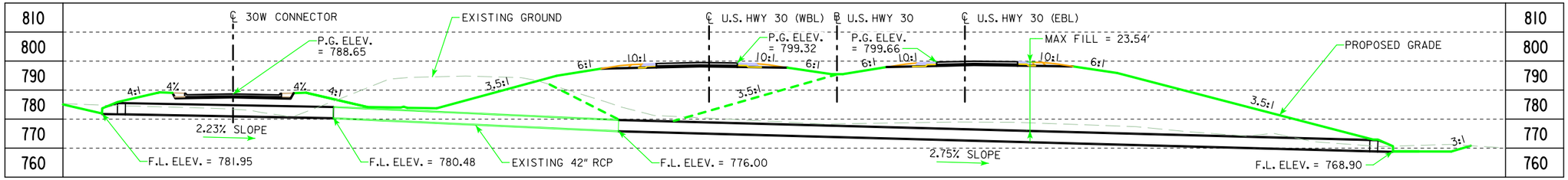
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

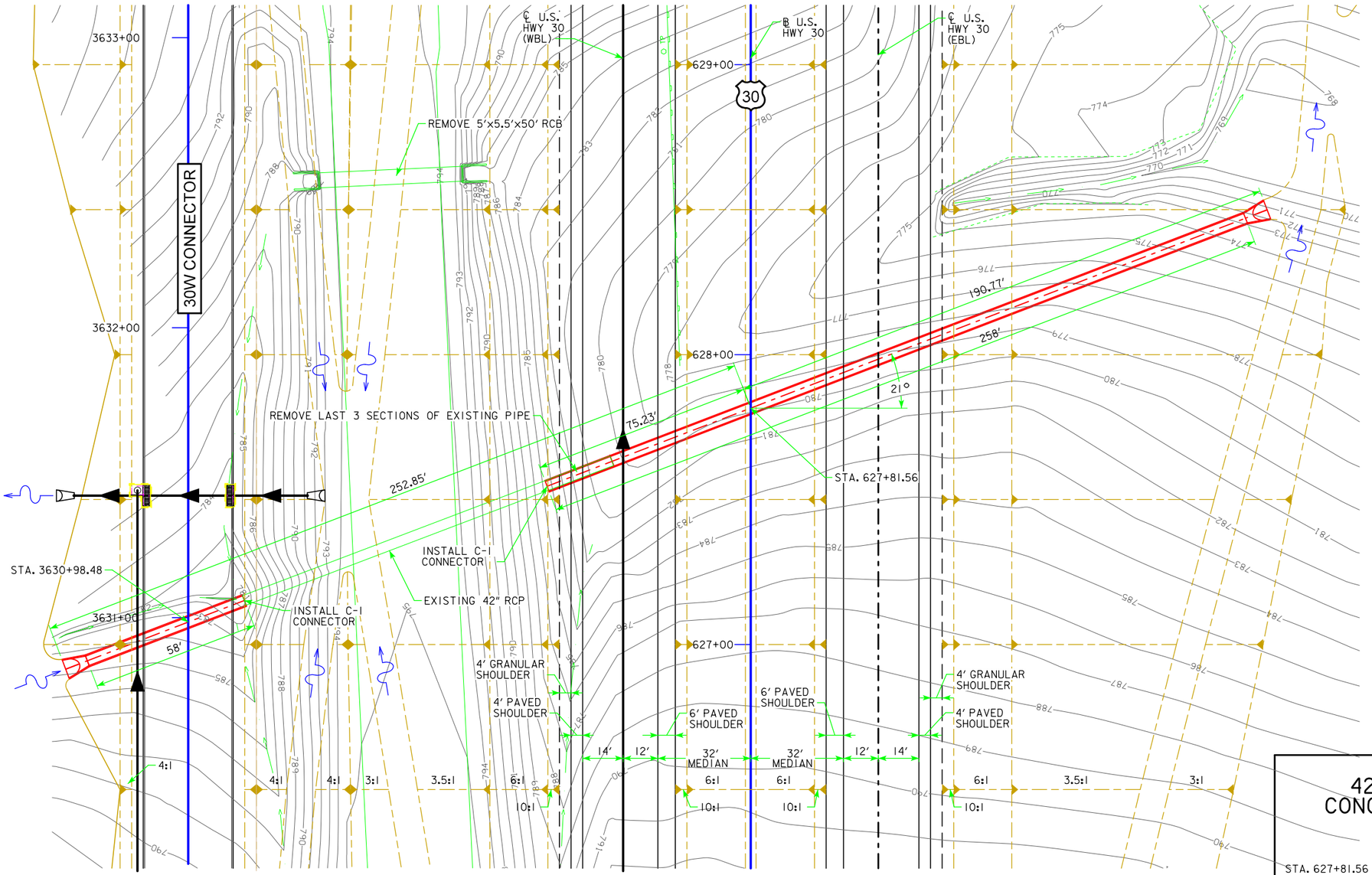
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.7

3:04:48 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

0 ENGLISH 40
SCALE IN FEET

BENCH MARK: #515
DESCRIPTION: SPIKE IN POWER POLE
NE QUAD IRISH LN & HWY30
STA. 614+54.49, 97.104' LT.
ELEV. = 825.35'

HYDRAULIC DATA

DRAINAGE AREA = 26.26 ACRES ROLLING
DESIGN DISCHARGE, Q_{50} = 52.35 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 17
FRANKLIN TOWNSHIP
LINN COUNTY

STAGING NOTES

WEST END STAGE 2: REMOVE LAST 3 SECTIONS (24') OF EXISTING PIPE UNDER EXISTING U.S. 30. INSTALL ENTIRE PIPE EXTENSION UNDER PROPOSED U.S. 30 BYPASS EXCEPT FOR 16' THAT CONNECTS TO EXISTING PIPE.

WEST END STAGE 3: INSTALL 16' OF PIPE BETWEEN EXISTING AND NEW PIPE. INSTALL NORTH EXTENSION. INSTALL C-I CONNECTORS.

DESIGN FOR 21° SKEW R.A.

42" X 316' REINFORCED CONCRETE PIPE EXTENSION

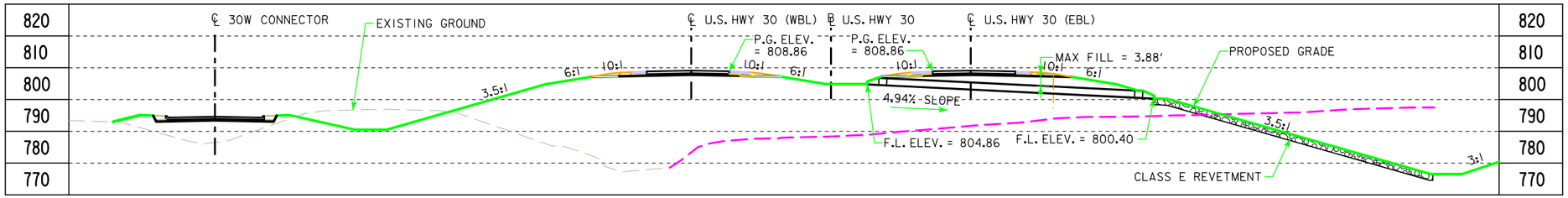
PLAT PLAN

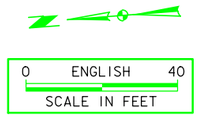
STA. 627+81.56 ℄ U.S. HWY. 30 DECEMBER 2013

LINN COUNTY

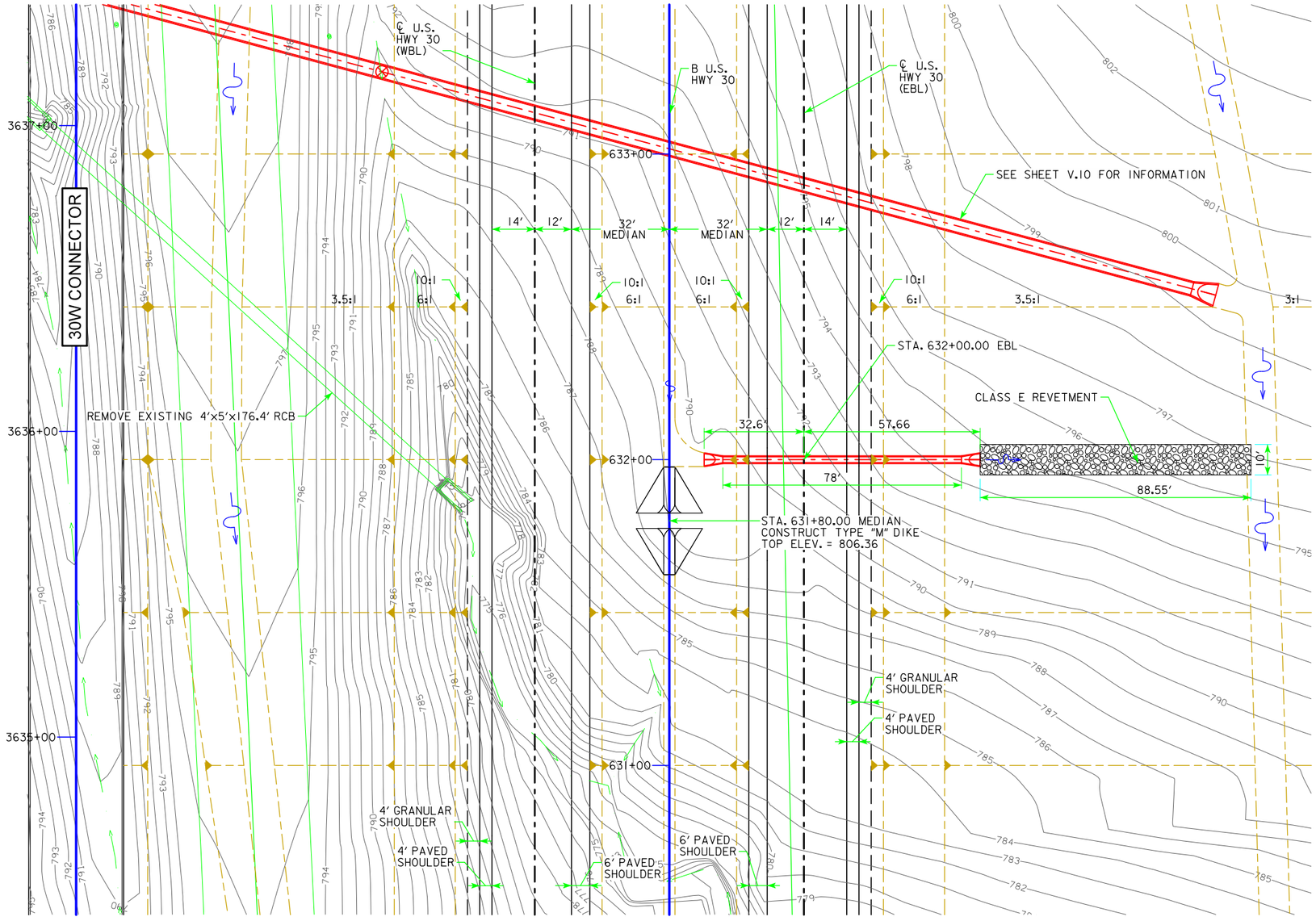
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____





LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

BENCH MARK: #513
DESCRIPTION: SPIKE IN POWER POLE
NW QUAD WILLOW CR & HWY30
STA. 640+15.21, 103.506' LT.
ELEV. = 809.020

HYDRAULIC DATA

DRAINAGE AREA = 1.69 ACRES ROLLING
DESIGN DISCHARGE, Q_{50} = 4.34 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 17
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 0° SKEW

24" X 78' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 632+00.00 ℄ U.S. HWY. 30 EBL — DECEMBER 2013

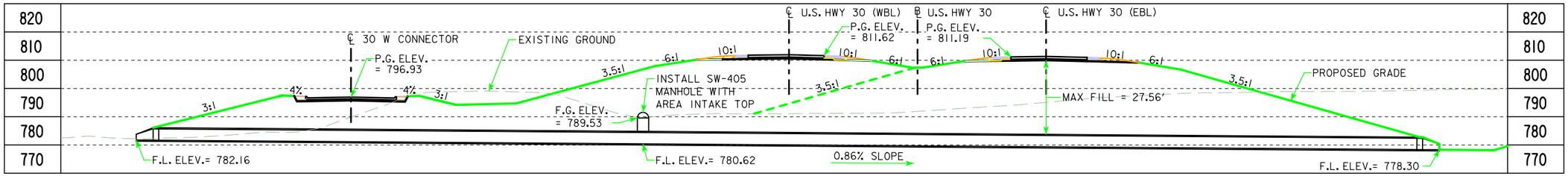
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

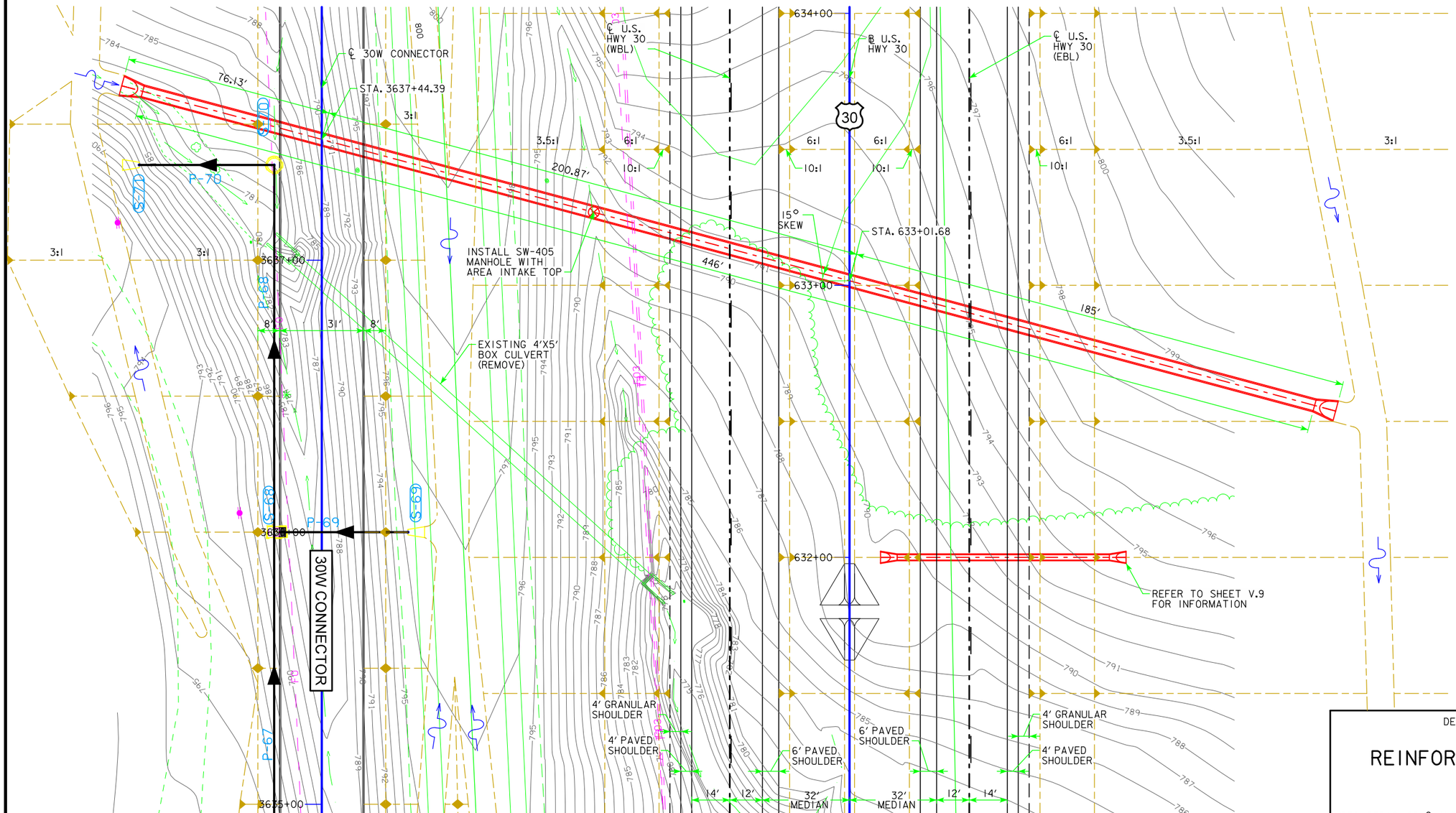
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.9

3:04:49 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

0 ENGLISH 40
SCALE IN FEET

BENCH MARK: #513
DESCRIPTION: SPIKE IN POWER POLE
NW QUAD WILLOW CR & HWY30
STA. 640+15.21, 103.506' LT.
ELEV. = 809.020

HYDRAULIC DATA

DRAINAGE AREA = 49.47 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 84.72 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 17
FRANKLIN TOWNSHIP
LINN COUNTY

STAGING NOTES

CONSTRUCT ENTIRE CULVERT WITH WEST END STAGE 2. WILL REQUIRE JACKING 122 LF OF PIPE THROUGH THE EXISTING U.S. 30 EMBANKMENT.

DURING STAGE 3 CONSTRUCTION, REMOVE INTAKE RISERS AND CAP TEE.

PRELIMINARY

DESIGN FOR 15° SKEW L.A.

48" X 446' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 633+01.68 ℄ U.S. HWY. 30 FEBRUARY 2014

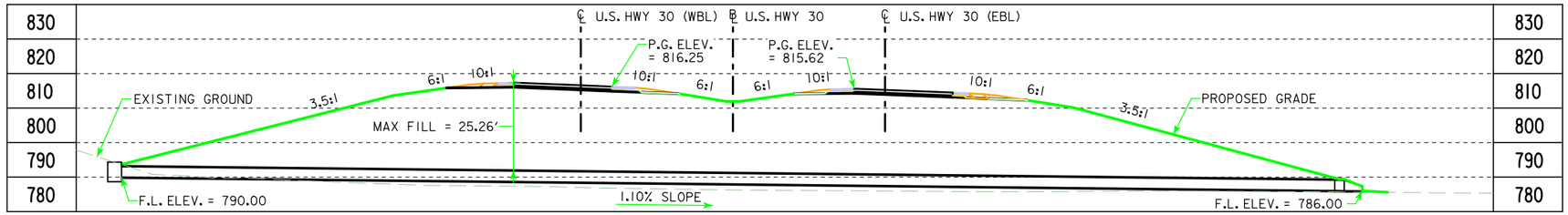
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

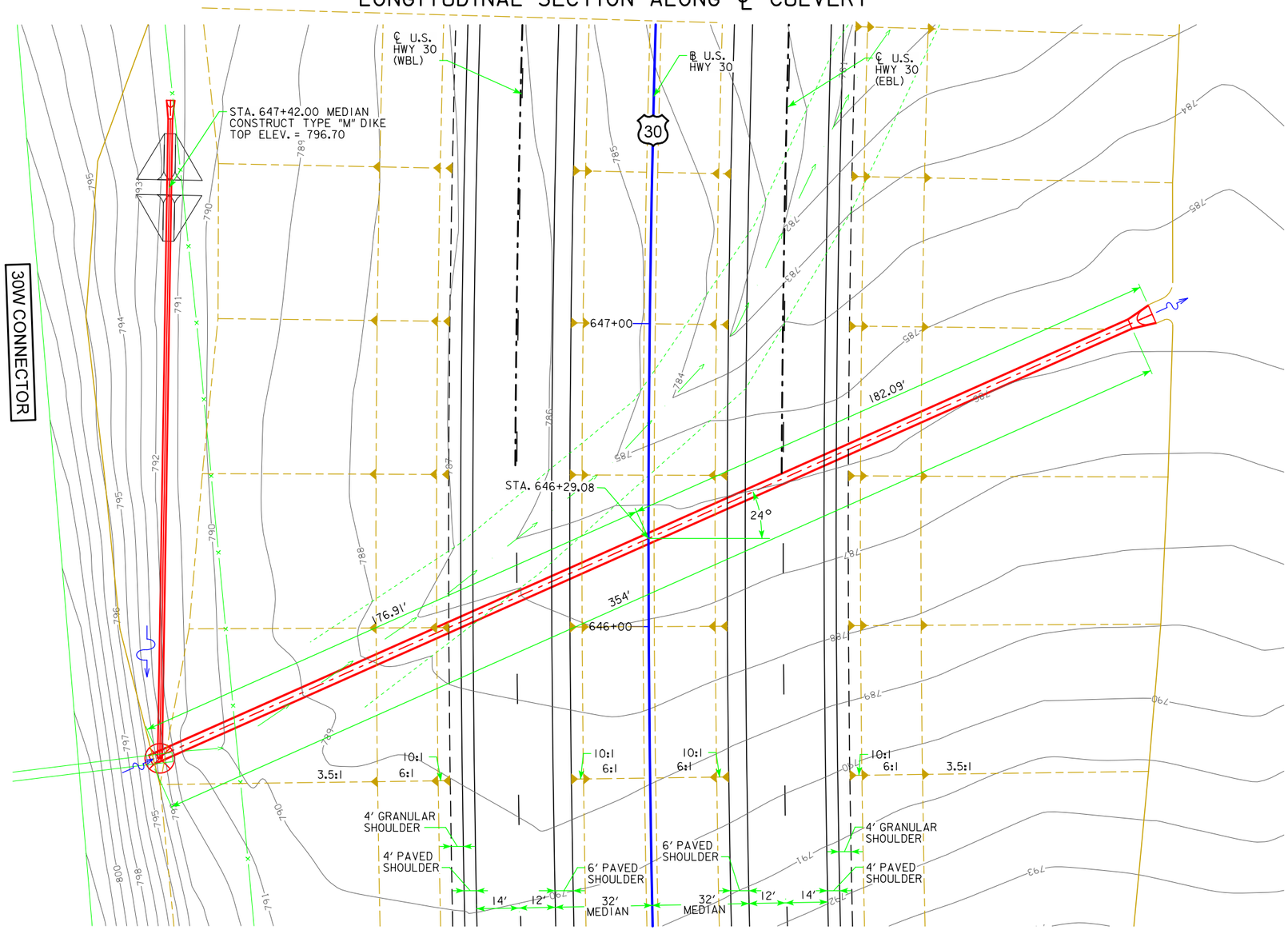
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.10

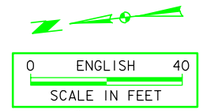
3:04:51 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #513
DESCRIPTION: SPIKE IN POWER POLE
NW QUAD WILLOW CR & HWY 30
STA. 640+15.21, 103.506' LT.
ELEV. = 809.020

HYDRAULIC DATA

DRAINAGE AREA = 10.18 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 25.48 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 24° SKEW R.A.

36" X 314' REINFORCED CONCRETE PIPE

PLAT PLAN

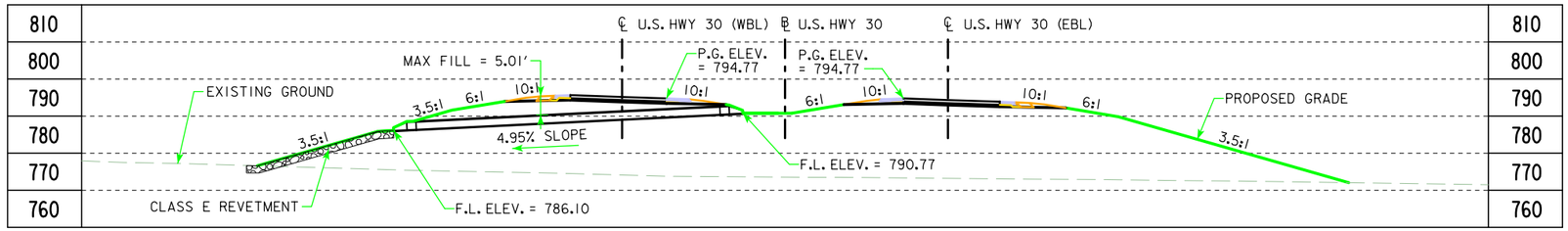
STA. 646+29.08 ℄ U.S. HWY. 30 DECEMBER 2013

LINN COUNTY

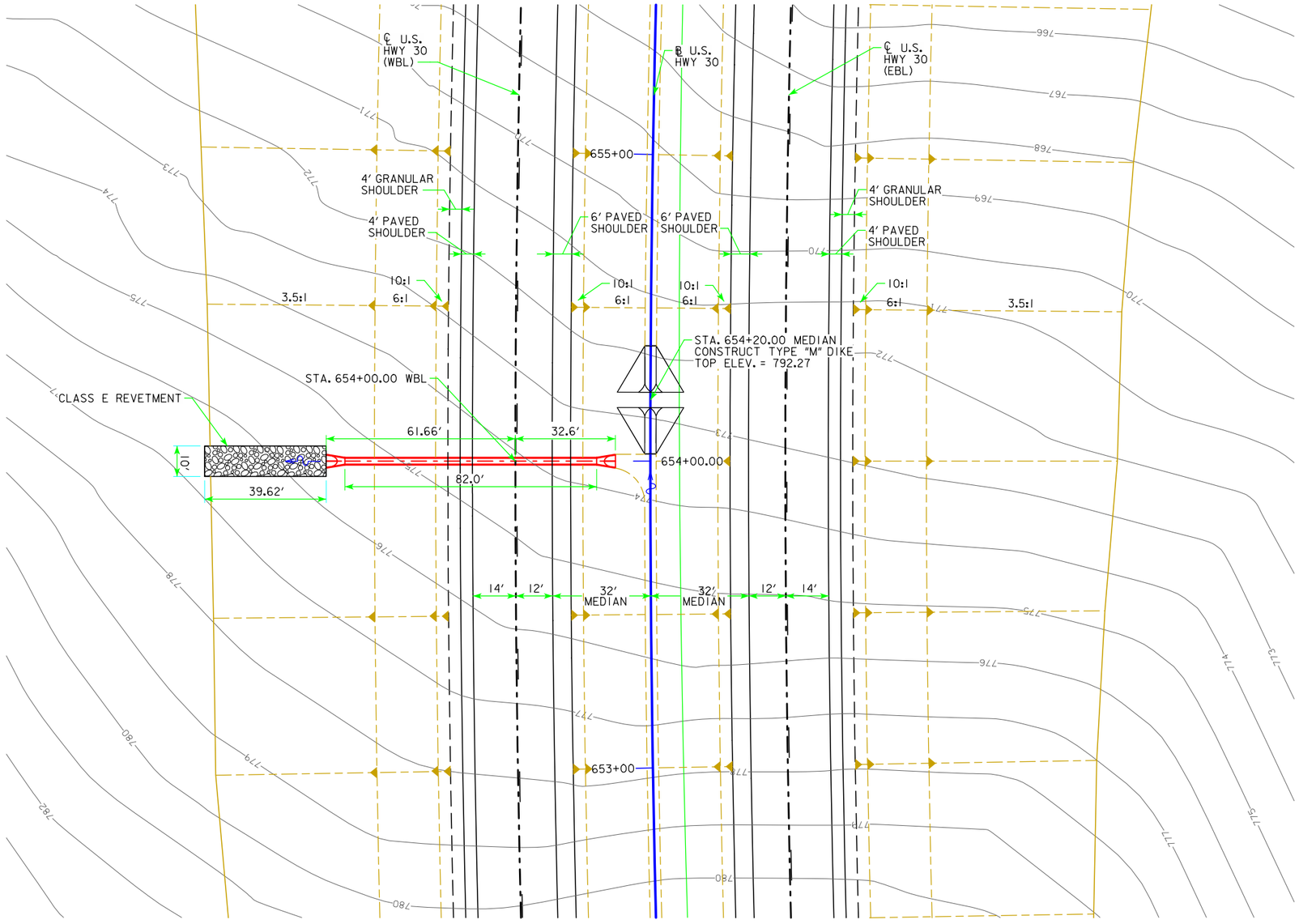
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

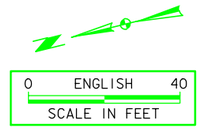
DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER V.11



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #512
DESCRIPTION: SPIKE IN POWER POLE SOUTH SIDE HWY30 LAST POWER POLE GOING WEST
STA. 653+74.38, 57.73' RT.
ELEV. = 784.88

HYDRAULIC DATA

DRAINAGE AREA = 2.48 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 5.81 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 0° SKEW

24" X 82' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 654+00.00 ℄ U.S. HWY. 30 WBL — DECEMBER 2013

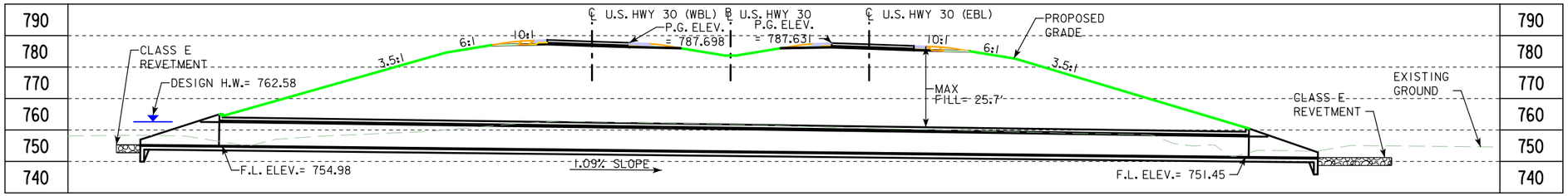
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER V.12

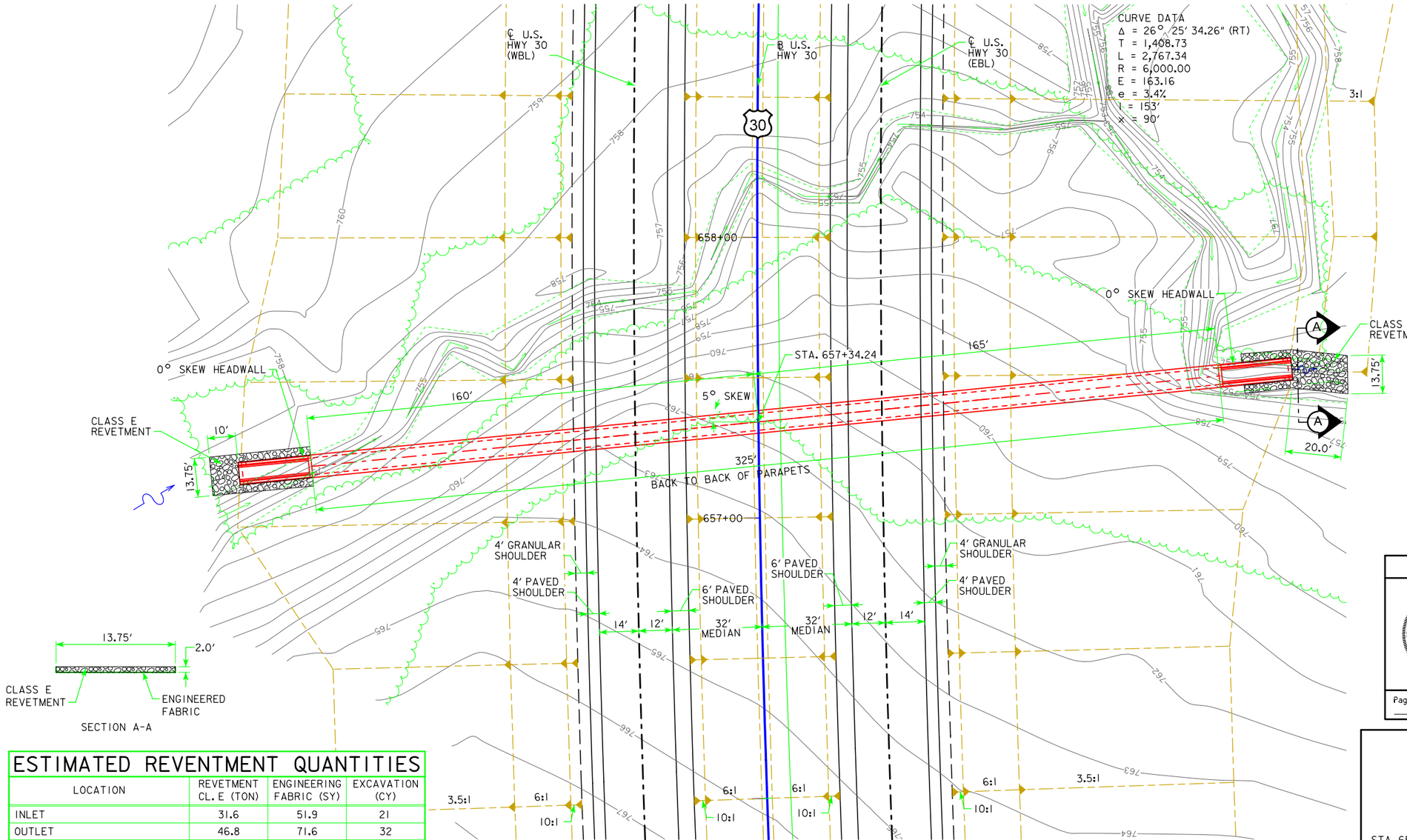
3:04:53 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



BENCH MARK: #512
DESCRIPTION: SPIKE IN POWER POLE SOUTHSIDE HWY30 LAST POWER POLE GOING WEST.
STA. 653+74.38, 57.73' RT.
ELEV. = 784.880

0 ENGLISH 40
SCALE IN FEET

LONGITUDINAL SECTION ALONG ℄ CULVERT



SITUATION PLAN

SECTION A-A

ESTIMATED REVENTMENT QUANTITIES

LOCATION	REVETMENT CL. E (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
INLET	31.6	51.9	21
OUTLET	46.8	71.6	32
TOTALS	78.4	123.5	53

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE.
QUANTITIES SHOWN FOR INFORMATION ONLY. SEE ROAD SHEETS.

PROPOSED PROFILE GRADE

VPI STA. 659+50.00
Elv = 779.28
K = 182
Len = 1,010 Ft

TRAFFIC ESTIMATE:

2009 AADT, 10,600 VPD
2035 AADT, 16,700 VPD
10% TRUCKS
DESIGN ESALs _____

HYDRAULIC DATA

DRAINAGE AREA = 0.44 SQ. MILES ROLLING
DESIGN DISCHARGE, Q_{50}= 308 cfs
Q_{100}= 370 cfs
Q_{500}= 728 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30 OVER UNNAMED CREEK
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY
LAT 41.915616
LONG -91.437896

HYDRAULIC DESIGN

LICENSED PROFESSIONAL ENGINEER Kyle D. Riley 20550 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 03-20-2014 Date

Kyle D. Riley
Printed or Typed Name

My license renewal date is December 31, 2014

Pages or sheets covered by this seal: V.13 (HYDRAULIC DATA)

DESIGN FOR 5° SKEW R.A.

6' X 8' X 325' REINFORCED CONCRETE BOX CULVERT

SITUATION PLAN

STA. 657+34.24 ℄ U.S. HWY. 30 MARCH 2014

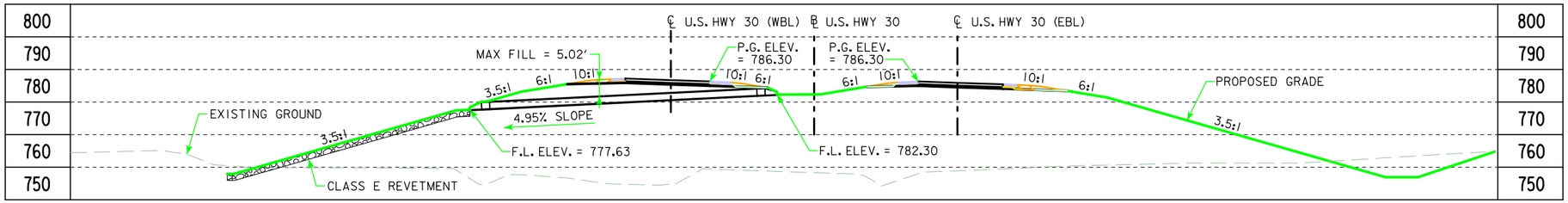
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

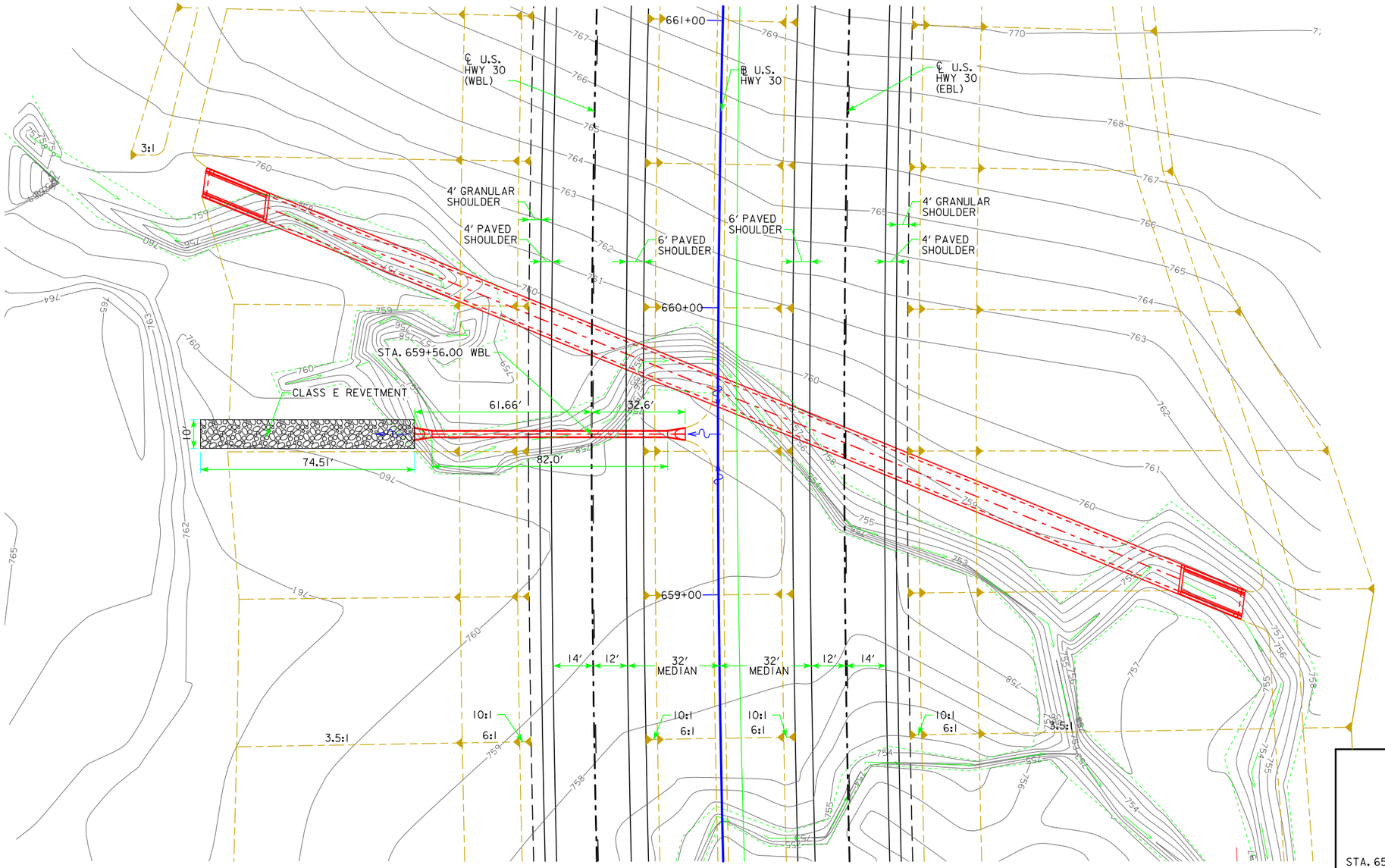
DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 1316

DESIGN TEAM Snyder and Associates, Inc. | LINN/CEDAR COUNTY | PROJECT NUMBER NHS-030-7(76)--19-57 | SHEET NUMBER V.13

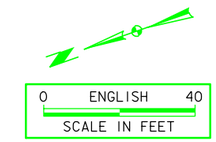
3:04:55 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



SITUATION PLAN



BENCH MARK: #527
DESCRIPTION: SPIKE IN POWER POLE IST POWER POLE NORTH OF LIGHT ON HWYI
STA. 661+75.45, 4,263.38' RT.
ELEV. = 803.04'

HYDRAULIC DATA

DRAINAGE AREA = 3.02 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 6.75 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 0° SKEW

24" X 82' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 659+56.00 ℄ U.S. HWY. 30 WBL — DECEMBER 2013

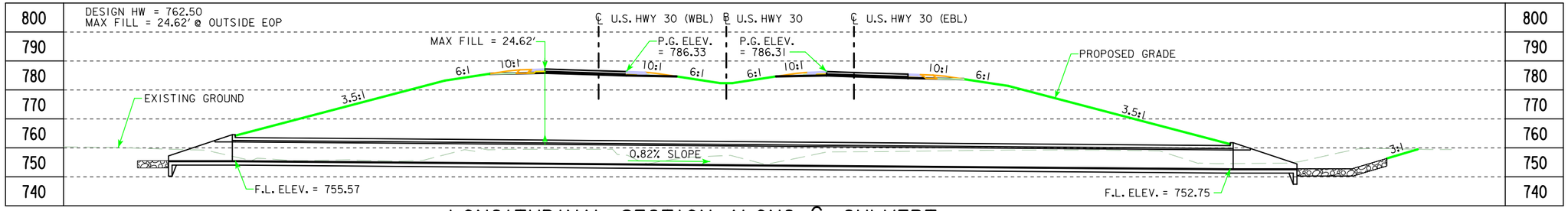
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.14

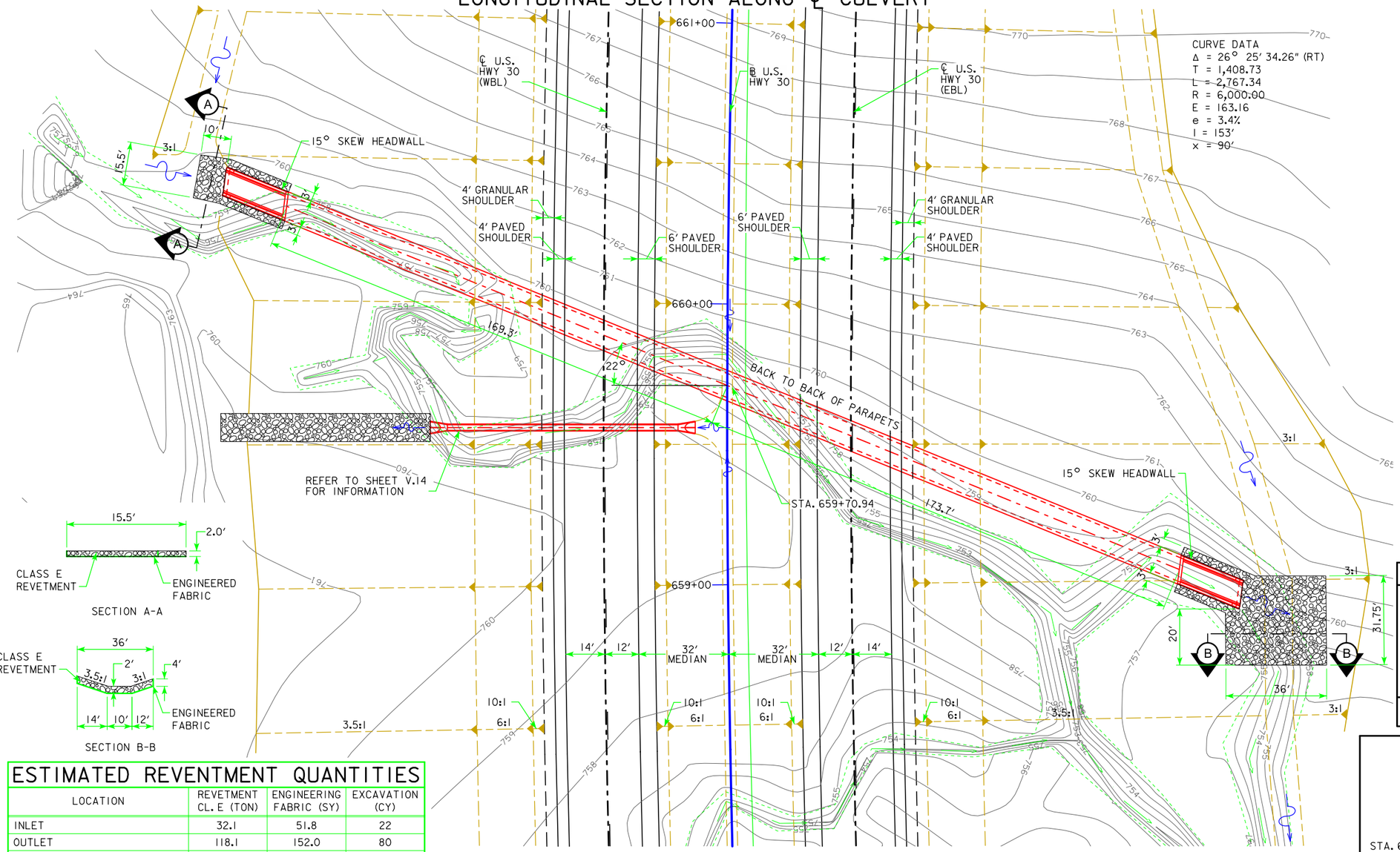
3:04:57 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



BENCH MARK: #527
DESCRIPTION: SPIKE IN POWER POLE IST POWER POLE NORTH OF LIGHT ON HWY1.
STA. 661+75.45, 4,263.38' RT.
ELEV. = 803.04'

0 ENGLISH 40
SCALE IN FEET

LONGITUDINAL SECTION ALONG ℄ CULVERT



CURVE DATA
Δ = 26° 25' 34.26" (RT)
T = 1,408.73
L = 2,767.34
R = 6,000.00
E = 163.16
e = 3.4%
I = 153'
x = 90'

PROPOSED PROFILE GRADE

VPI 659+50.00
Elv = 779.28
K = 182
Len = 1,010.00 Ft

TRAFFIC ESTIMATE:

2009 AADT, 10,600 VPD
2035 AADT, 16,700 VPD
10% TRUCKS
DESIGN ESALs ---------

HYDRAULIC DATA

DRAINAGE AREA = 0.56 MI² ROLLING
DESIGN DISCHARGE, Q_{50} = 367.0 cfs
DESIGN DISCHARGE, Q_{100} = 441.0 cfs
DESIGN DISCHARGE, Q_{500} = 827.0 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30 OVER UNNAMED CREEK
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY
Lat 41.915398
Long -91.437076

SECTION A-A

SECTION B-B

ESTIMATED REVENTMENT QUANTITIES

LOCATION	REVETMENT CL. E (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
INLET	32.1	51.8	22
OUTLET	118.1	152.0	80
TOTALS	150.2	203.8	102

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE.
QUANTITIES SHOWN FOR INFORMATION ONLY. SEE ROAD SHEETS.

SITUATION PLAN

HYDRAULIC DESIGN

PROFESSIONAL ENGINEER — Kyle D. Riley 20550 — 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.

03-20-2014
Signature Date
Kyle D. Riley
Printed or Typed Name

My license renewal date is December 31, 2014

Pages or sheets covered by this seal: V.14A (HYDRAULIC DATA)

DESIGN FOR 22° SKEW L.A.

8' X 7' X 343' REINFORCED CONCRETE BOX CULVERT

SITUATION PLAN

STA. 659+70.94 ℄ U.S. HWY. 30 WBL — MARCH 2014

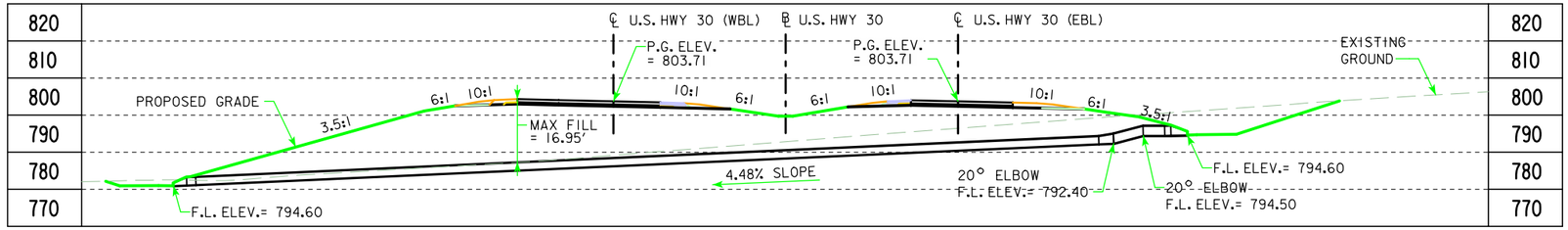
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

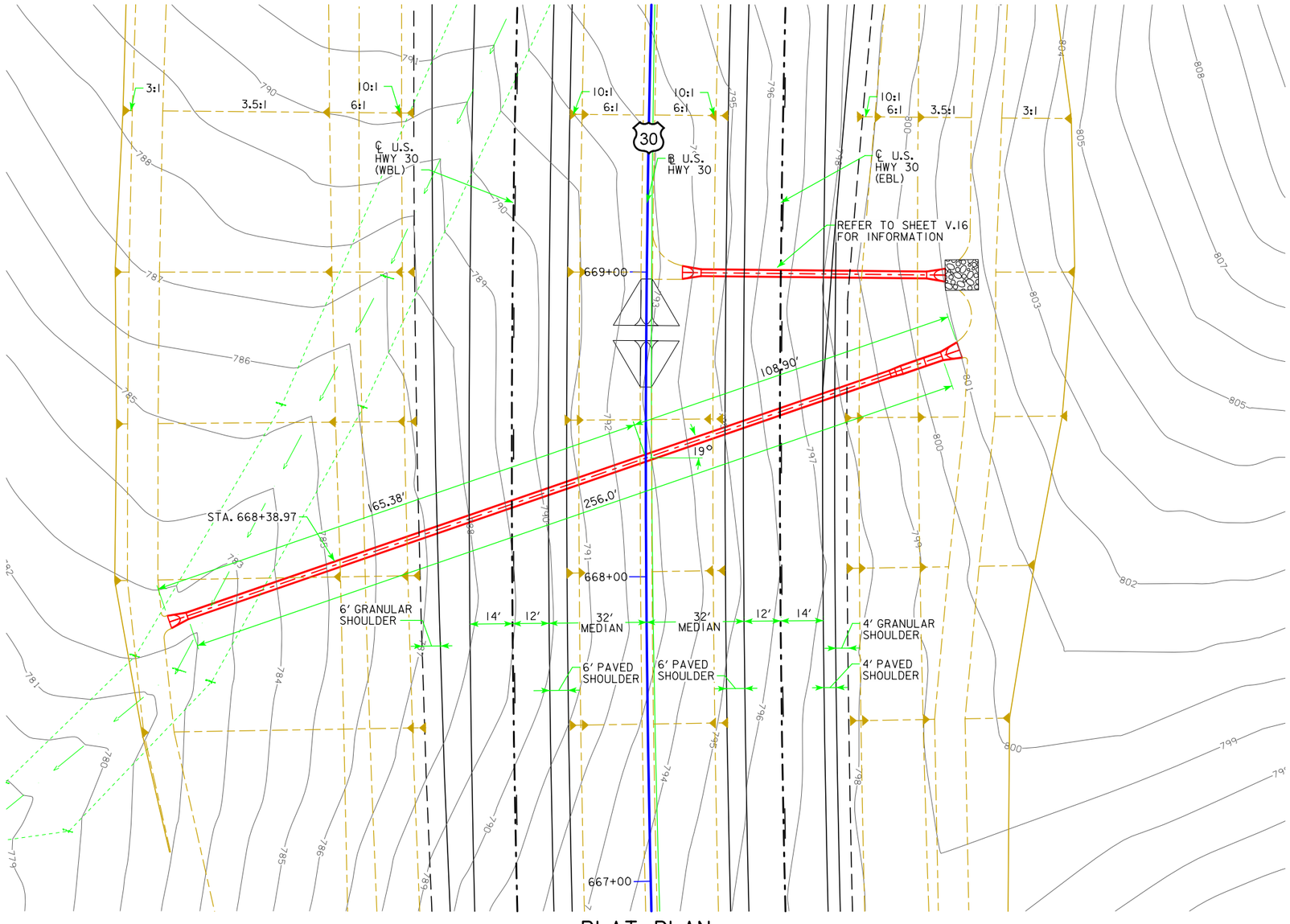
DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 1416

DESIGN TEAM Snyder and Associates, Inc. | LINN/CEDAR COUNTY | PROJECT NUMBER NHS-030-7(76)--19-57 | SHEET NUMBER V.14A

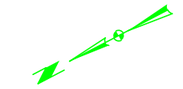
3:04:56 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #724
DESCRIPTION: CHISELED SQUARE IN WEST SIDE OF LUMINARY BASEPLATE ON NORTHEAST CORNER OF US63/180TH STREET INTERSECTION.
STA. 167+77.60, 120.89' RT.
ELEV. = 819.68

HYDRAULIC DATA

DRAINAGE AREA = 00.00 ACRES HILLY
DESIGN DISCHARGE, Q = 0.00 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 19° SKEW R.A.

30" X 20' AND 24" X 242' REINFORCED CONCRETE PIPE

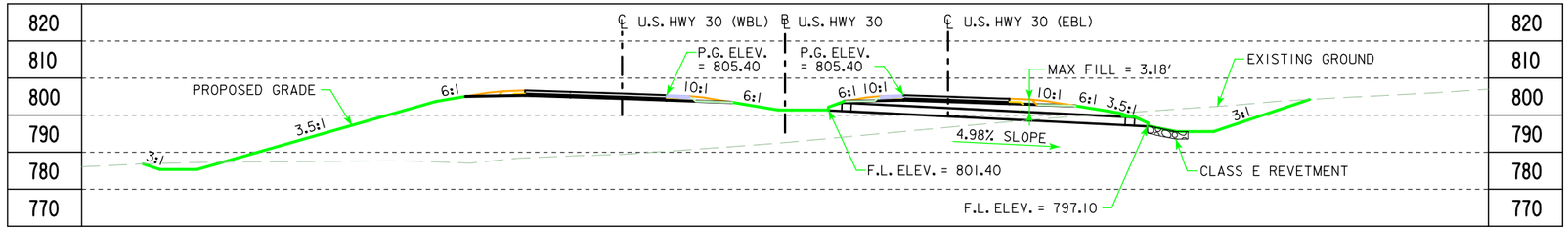
PLAT PLAN

STA. 668+38.97 ℄ U.S. HWY. 30 DECEMBER 2013

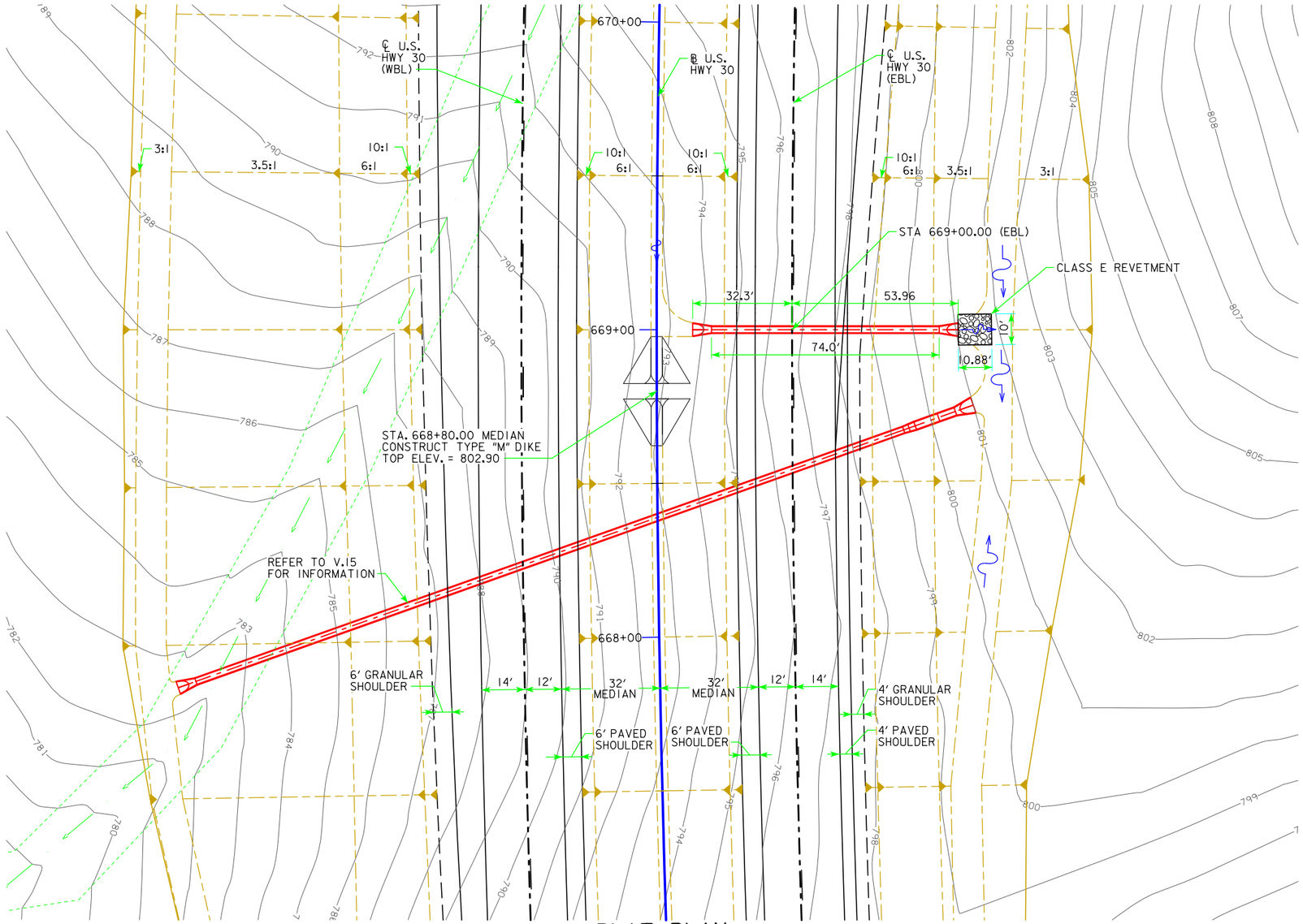
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

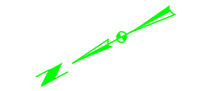
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #528
DESCRIPTION: SPIKE IN POWER POLE COR SPRING CR & LIGHT

STA. 669+37.13, 4,936.83' RT.
ELEV. = 777.82

HYDRAULIC DATA

DRAINAGE AREA = 3.53 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 7.59 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 74' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 669+00.00 ℄ U.S. HWY. 30 EBL DECEMBER 2013

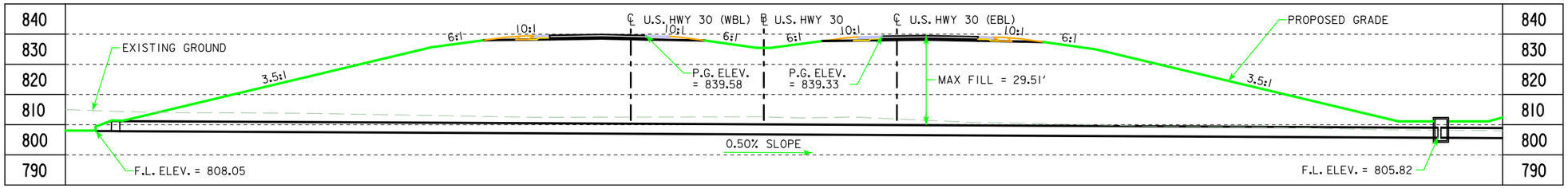
LINN COUNTY

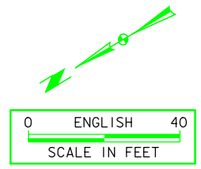
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

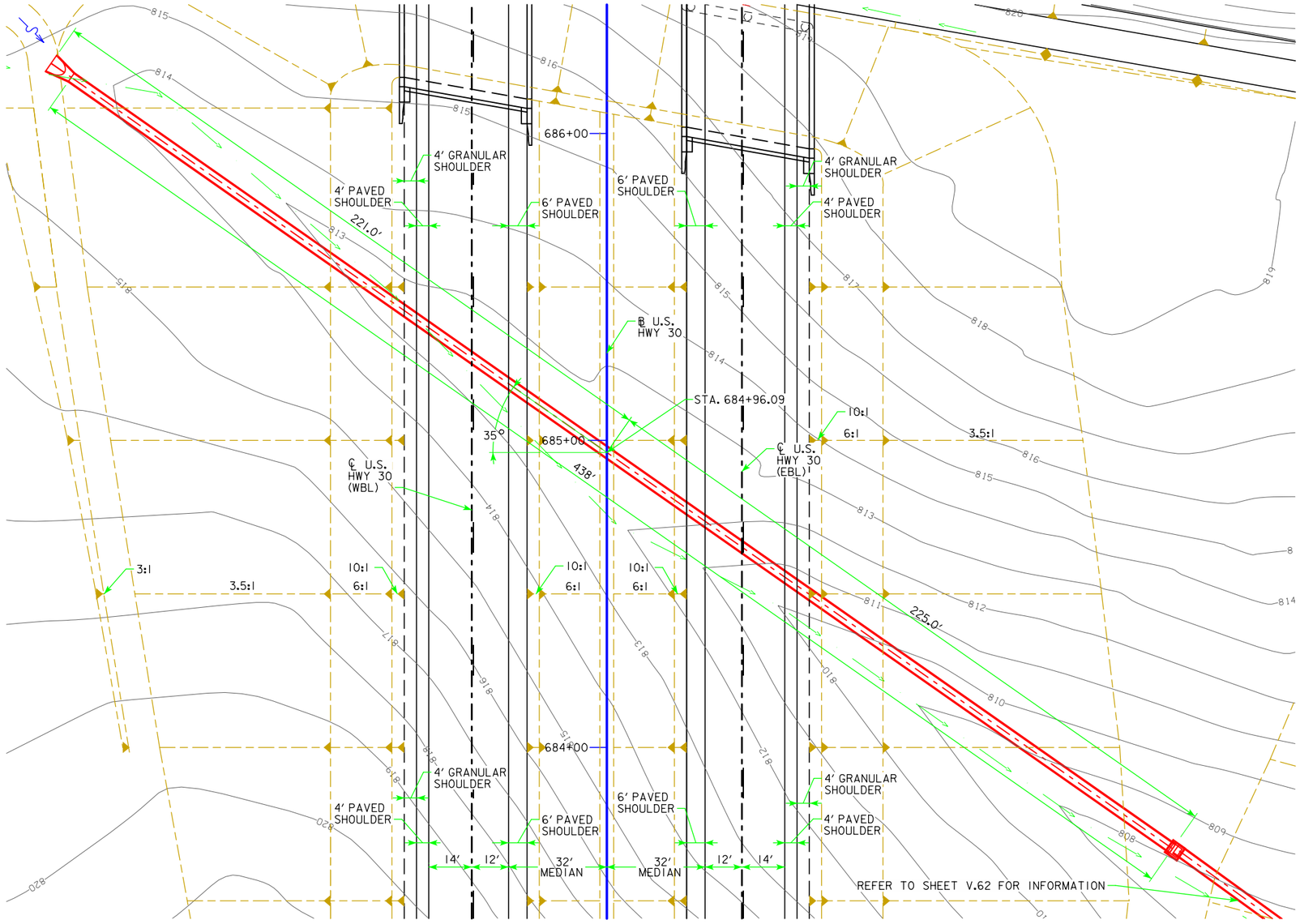
DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.16

3:04:59 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht





LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

BENCH MARK: #514
DESCRIPTION: 1/2IN REBAR IN FIELD ENTRANCE
STA. 687+46.38, 1242.010' RT.
ELEV. = 808.42

HYDRAULIC DATA

DRAINAGE AREA = 12.80 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 30.32 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 35° SKEW L.A.

36" X 438' REINFORCED CONCRETE PIPE

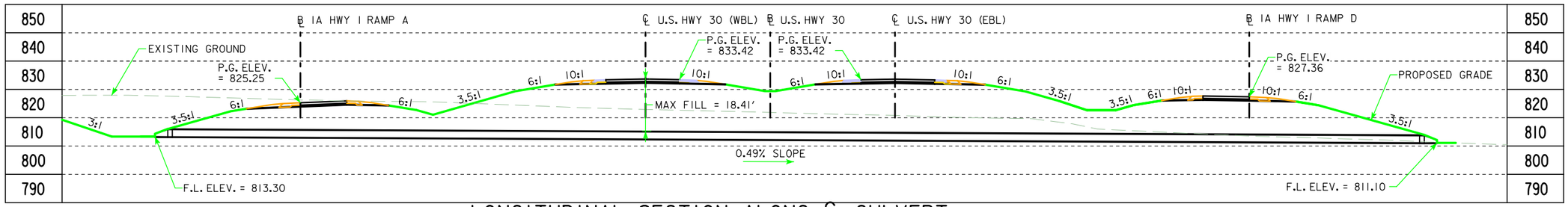
PLAT PLAN

STA. 684+96.09 ℄ U.S. HWY. 30 DECEMBER 2013

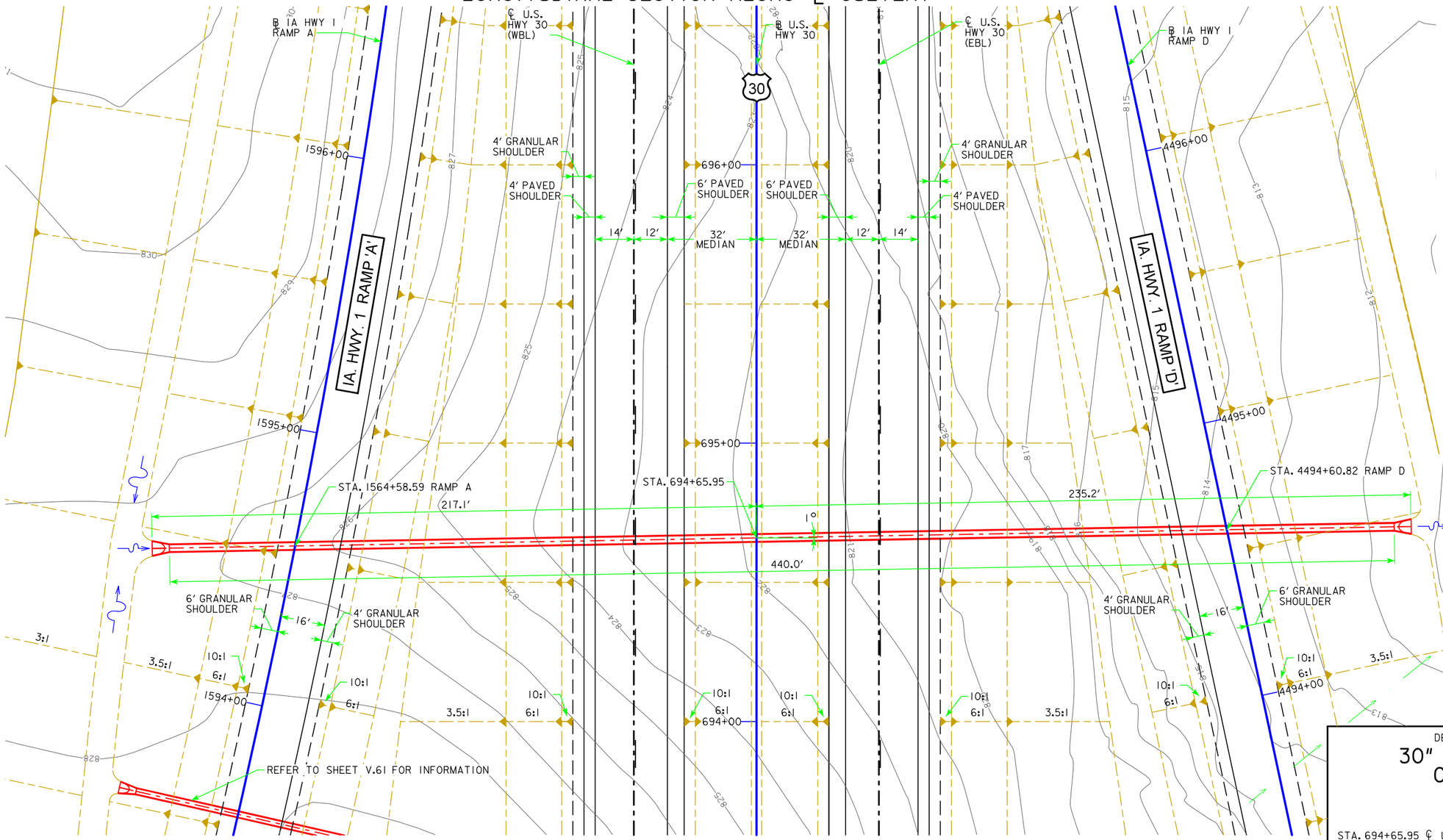
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

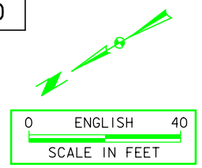
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #523
DESCRIPTION: ARROW ON HYDRANT IN FRONT OF SLEEP INN
STA. 696+66.08, 535.78' RT.
ELEV. = 830.017

HYDRAULIC DATA

DRAINAGE AREA = 8.47 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 22.16 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 1° SKEW RT AHD

30" X 440' REINFORCED CONCRETE PIPE

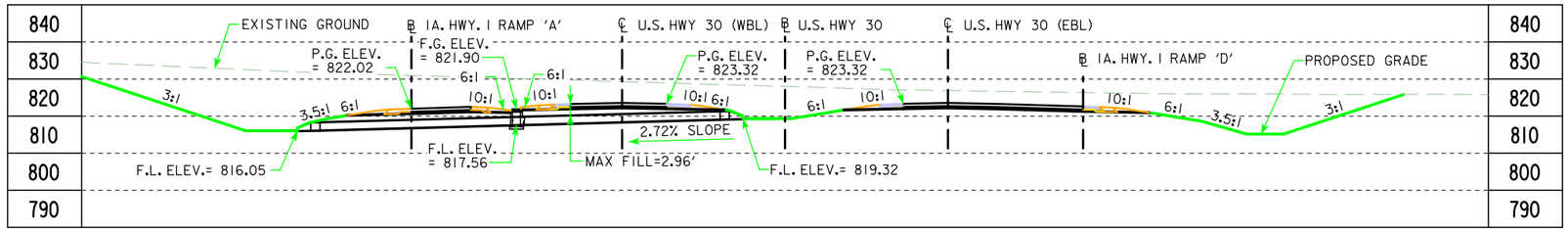
PLAT PLAN

STA. 694+65.95 ℄ U.S. HWY. 30 DECEMBER 2013

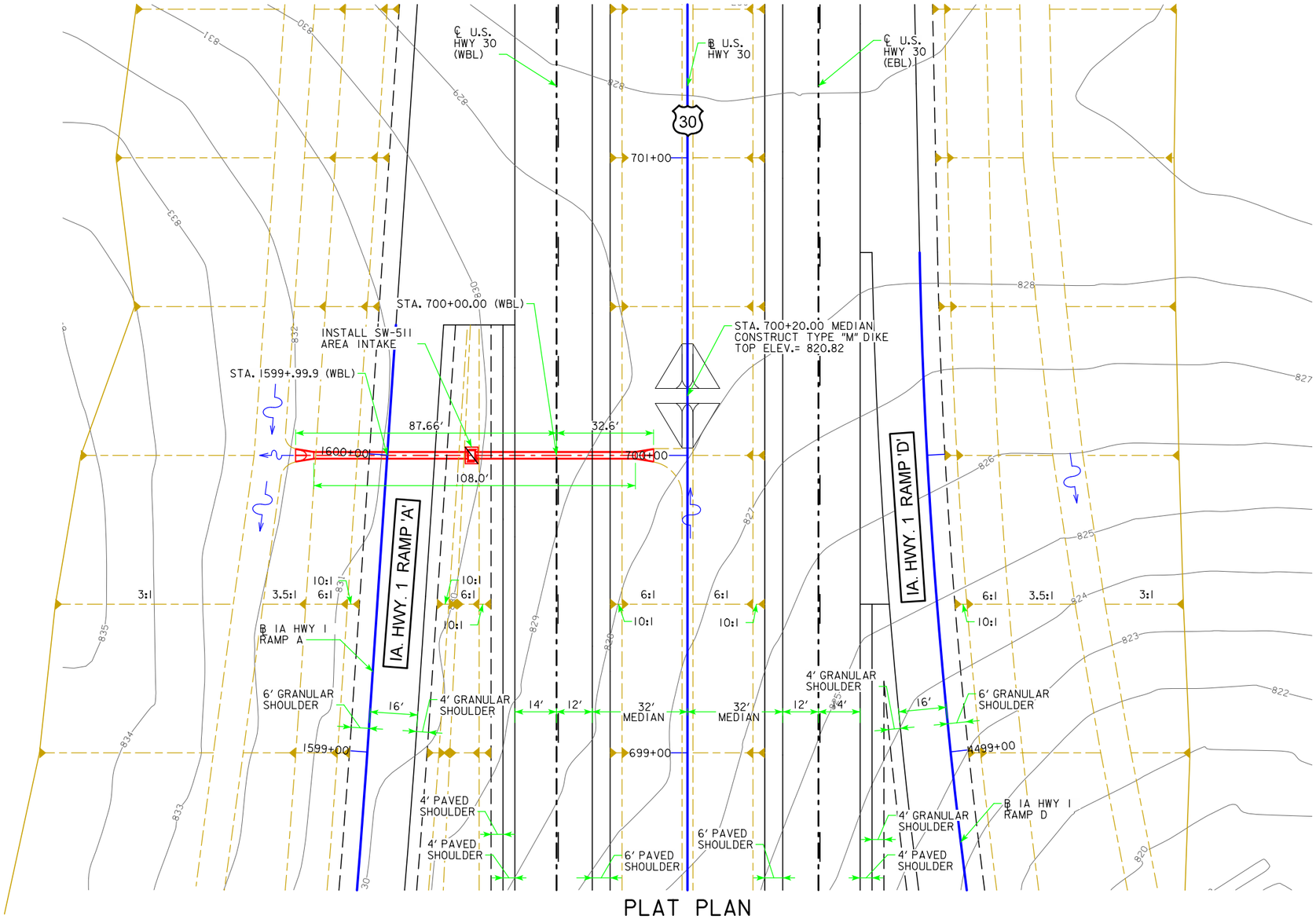
LINN/CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

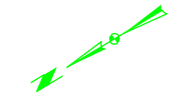
DESIGN SHEET NO. - OF - FILE NO. - DESIGN NO. -



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #528
DESCRIPTION: SPIKE IN POWER POLE COR SPRING CR & LIGHT
STA. 669+37.13, 4,936.836' RT.
ELEV. = 777.82

HYDRAULIC DATA

DRAINAGE AREA = 2.48 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 5.81 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 15
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 108' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 700+00.00 ℄ U.S. HWY. 30 (WBL) DECEMBER 2013

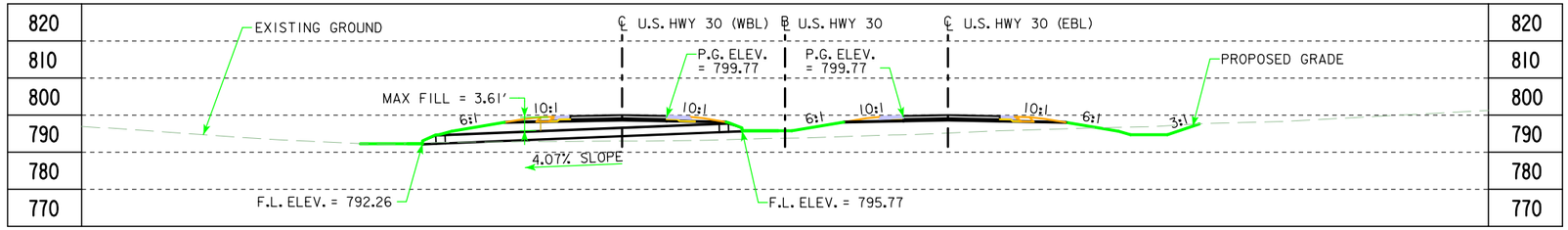
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

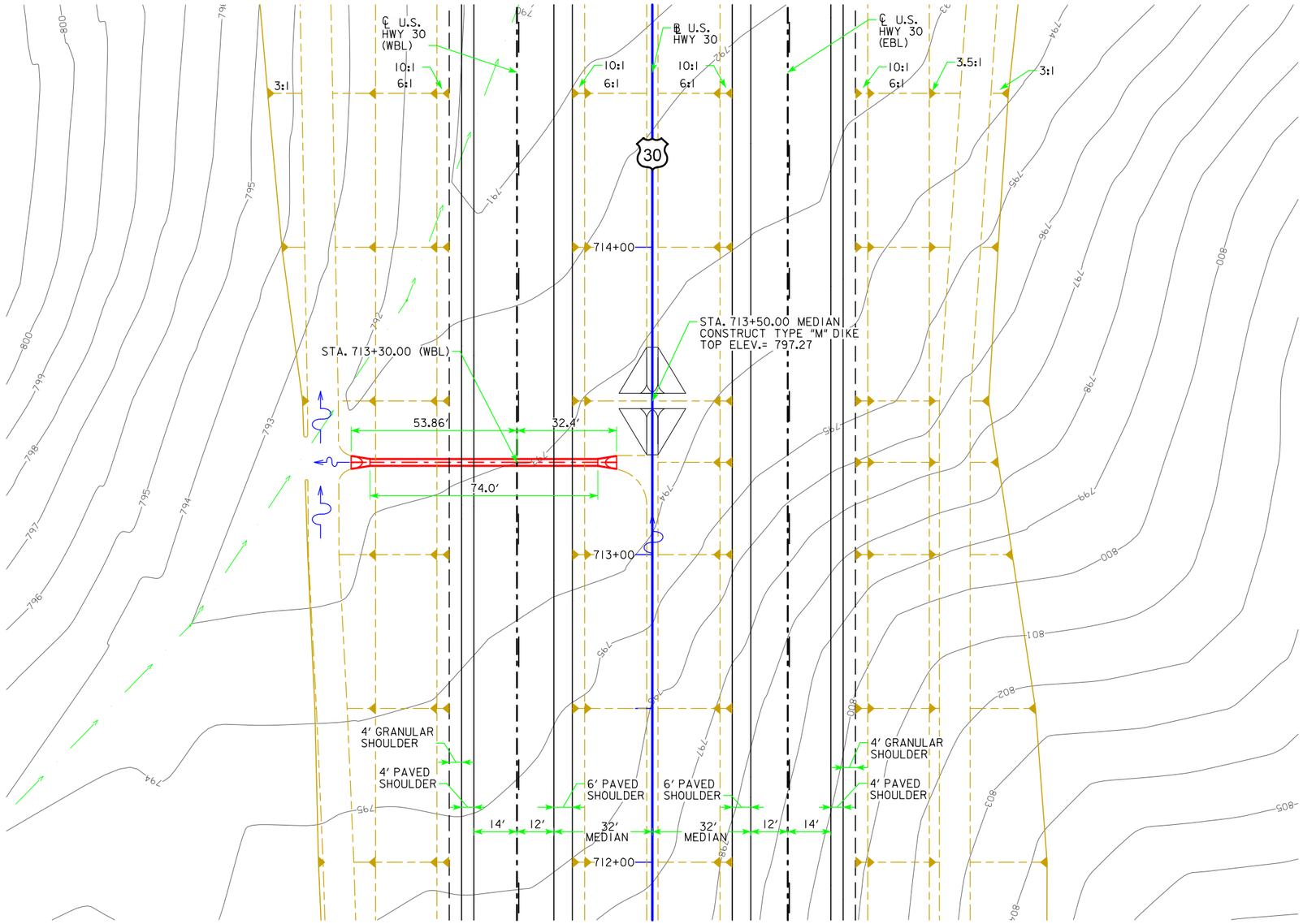
DESIGN SHEET NO. ___ OF ___ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.19

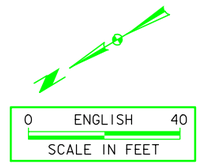
3:05:02 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #532
DESCRIPTION: SPIKE IN POWER POLE 1ST EAST OF DRIVE AT 509 POWER POLE WITH TRANSFORMER

STA. 712+58.34, 5,321.69' RT.
ELEV. = 812.77'

HYDRAULIC DATA

DRAINAGE AREA = 2.69 ACRES ROLLING
DESIGN DISCHARGE, Q_{50} = 6.18 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 15
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 74' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 713+30.00 ℄ U.S. HWY. 30 (WBL) DECEMBER 2013

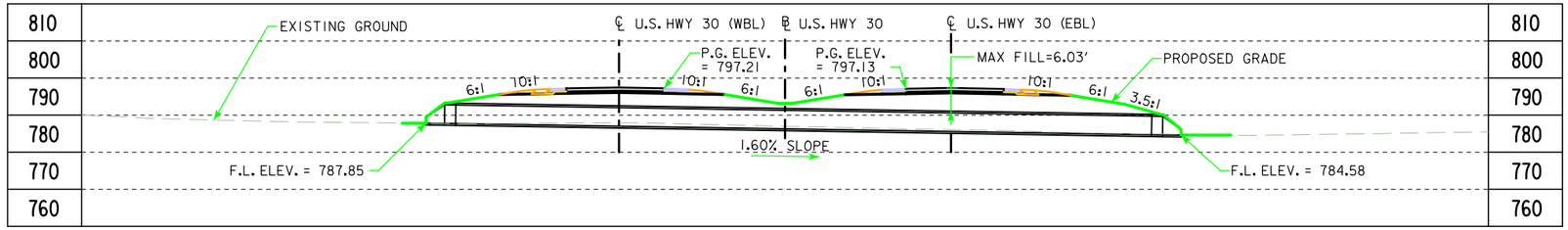
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

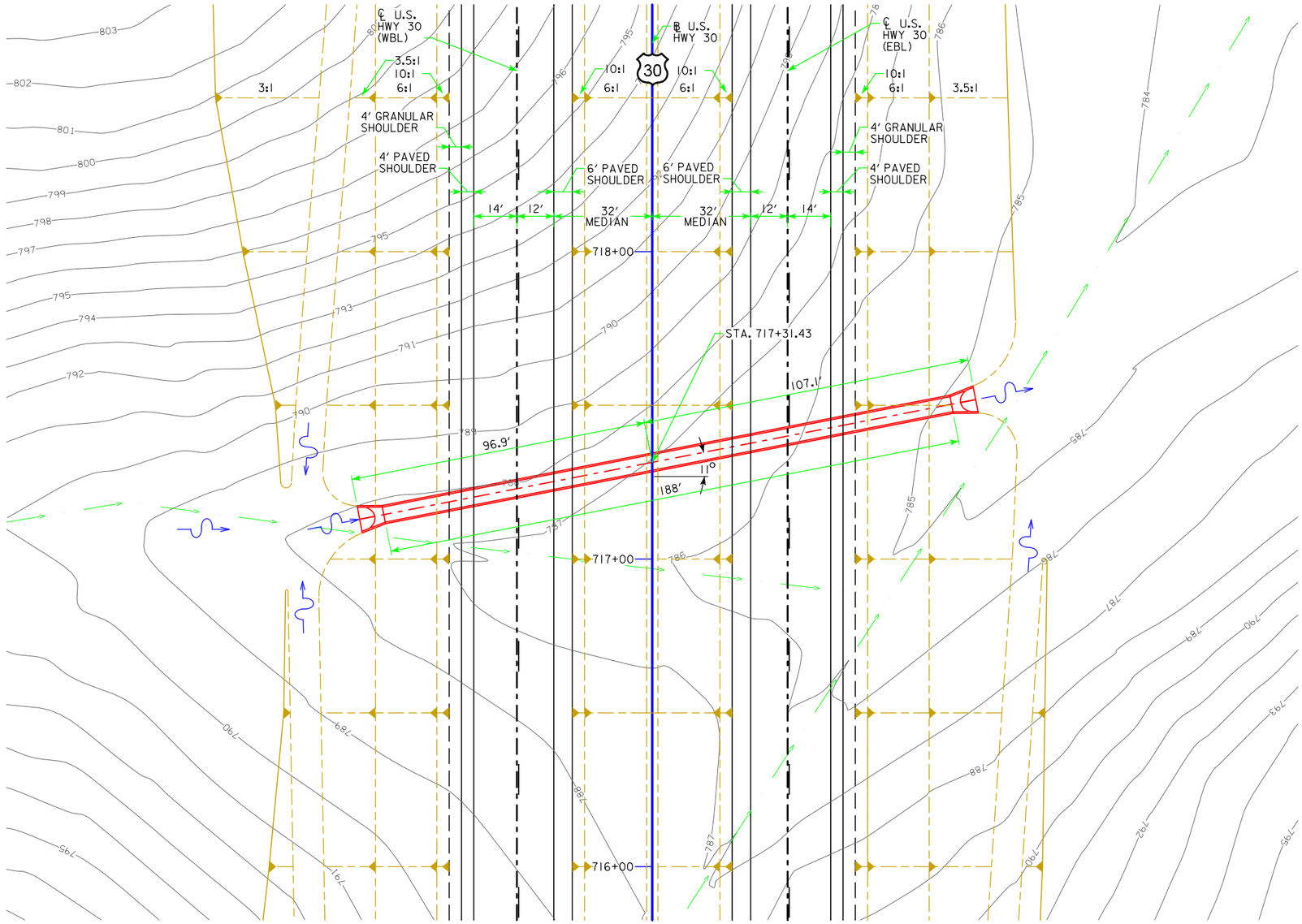
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.20

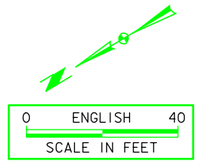
3:05:02 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #701
DESCRIPTION: ARROW ON HYDRANT
EAST SIDE HWY30 & HILL VIEW DR

STA. 718+24.95, 74.637' RT.
ELEV. = 838.13

HYDRAULIC DATA

DRAINAGE AREA = 83.30 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 125.85 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 15
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 11° SKEW R.A.

60" X 188' REINFORCED CONCRETE PIPE

PLAT PLAN

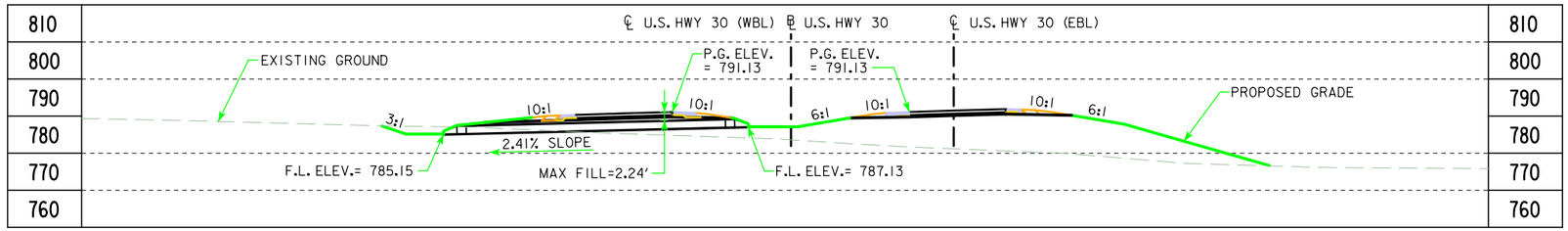
STA. 717+31.43 ℄ U.S. HWY. 30 DECEMBER 2013

LINN COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

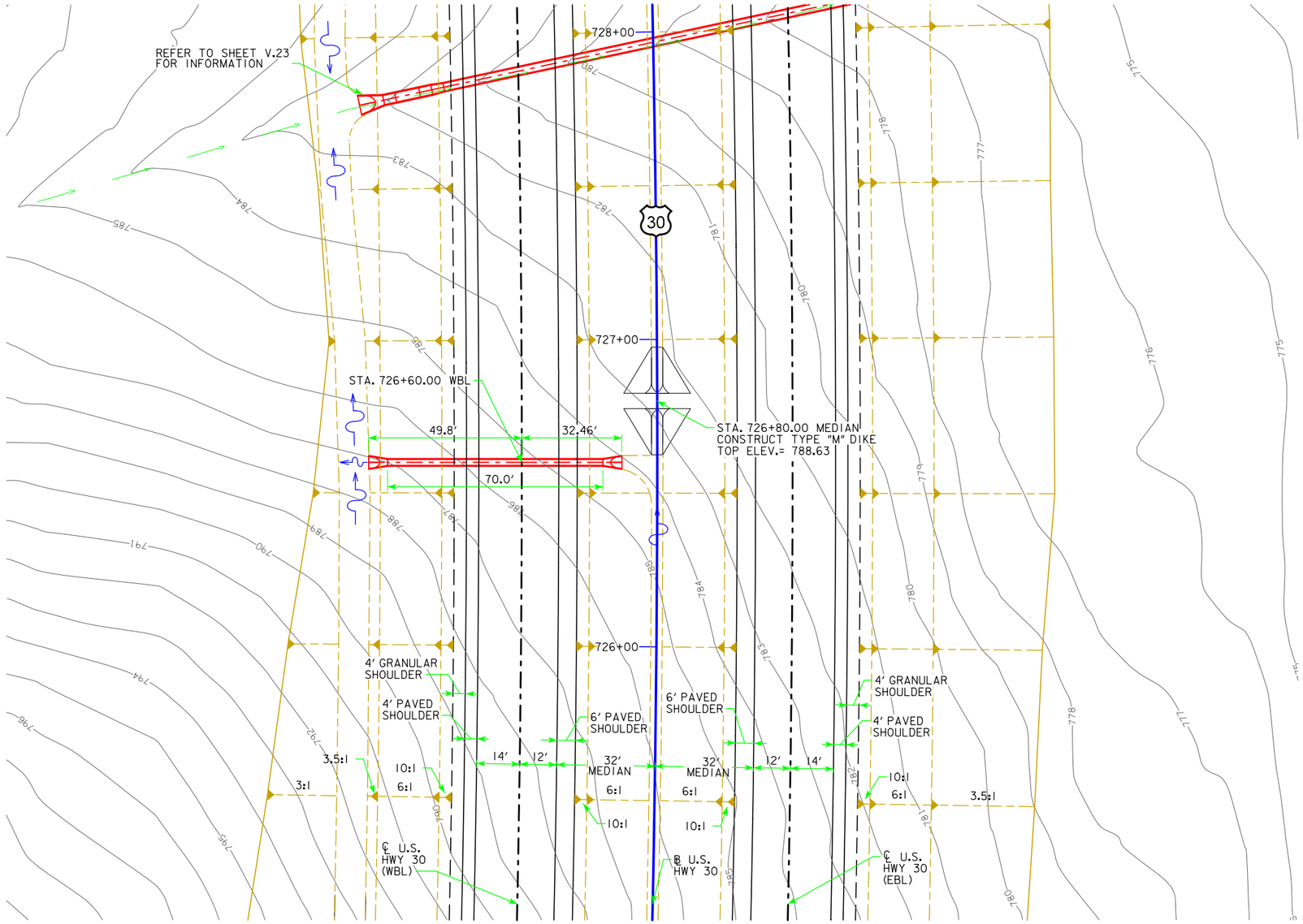
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.21

3:05:03 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

BENCH MARK: #535
DESCRIPTION: NAIL WITH WASHER IN SW CORNER BRIDGE
STA. 737+14.50, 6,651.013' RT.
ELEV. = 738.53

HYDRAULIC DATA

DRAINAGE AREA = 2.75 ACRES FLAT
DESIGN DISCHARGE, Q_{50}= 3.14 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 15
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 70' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 726+60.00 ℄ U.S. HWY. 30 WBL — DECEMBER 2013

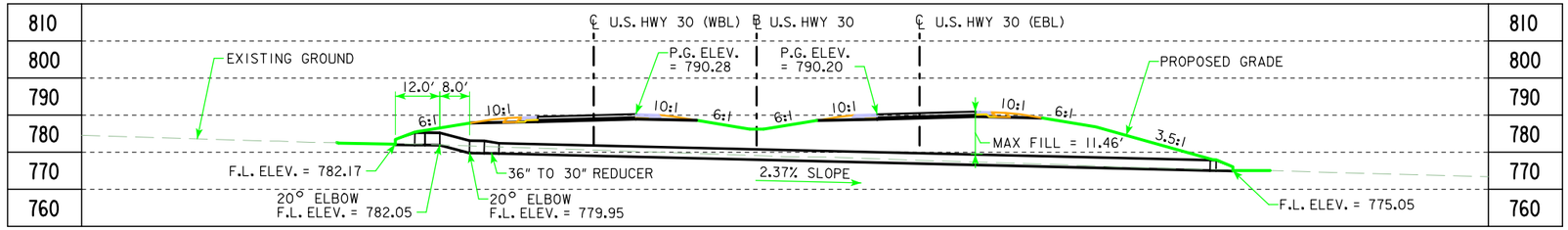
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

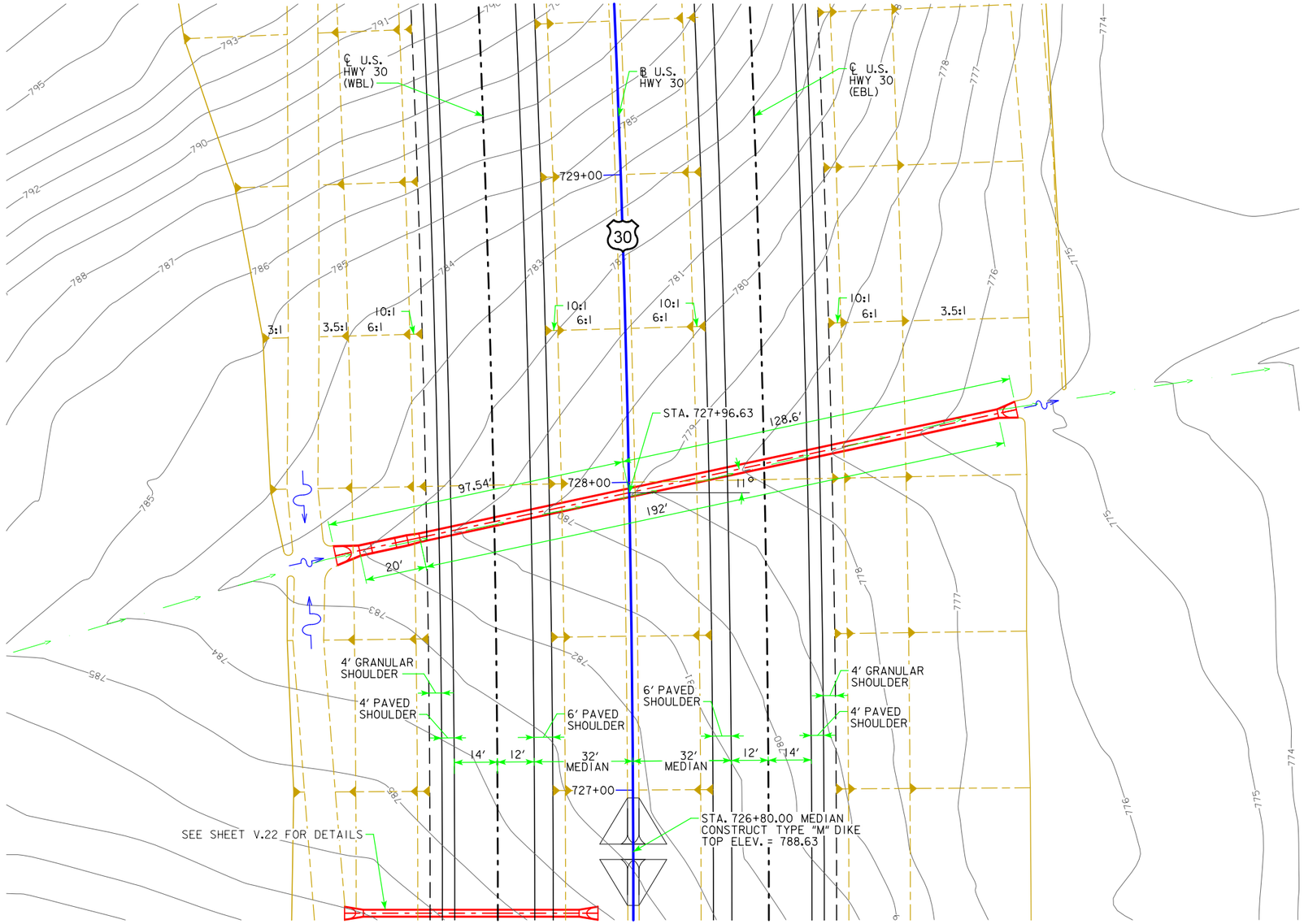
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.22

3:05:04 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

0 ENGLISH 40
SCALE IN FEET

BENCH MARK: #703
DESCRIPTION: TOP CULVERT WEST SIDE OF COUNTRY CLUB DR
STA. 730+54.72, 62.90' RT.
ELEV. = 796.53'

HYDRAULIC DATA

DRAINAGE AREA = 18.76 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 40.55 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 15
FRANKLIN TOWNSHIP
LINN COUNTY

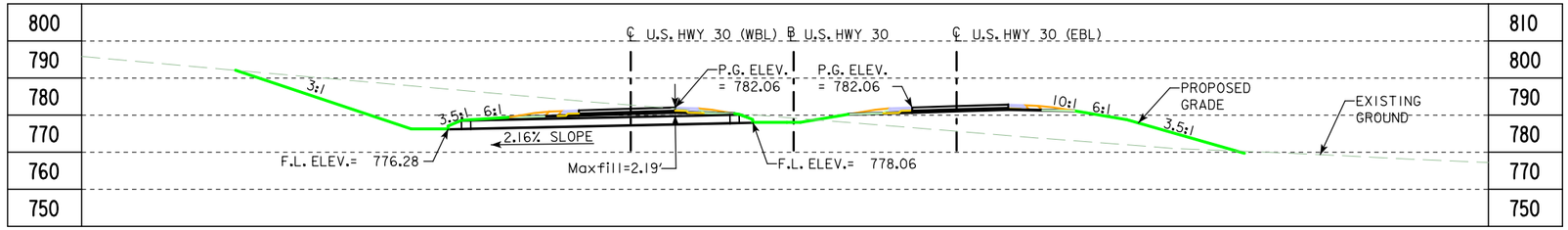
PRELIMINARY

DESIGN FOR 11° SKEW R.A.

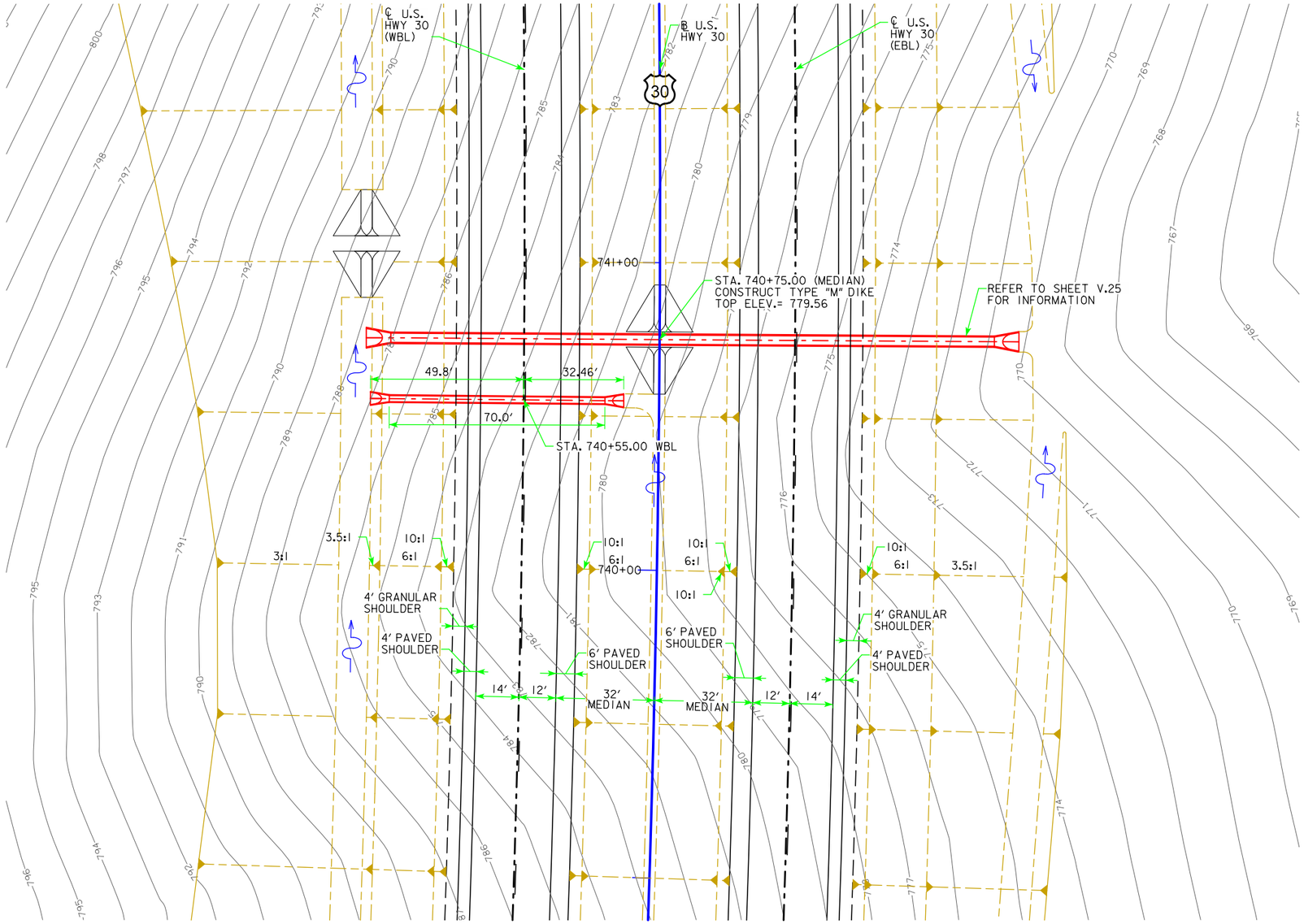
36" X 20' AND 30" X 192' SLOPE TAPERED INLET REINFORCED CONCRETE PIPE PLAT PLAN

STA. 727+96.63 ℄ U.S. HWY. 30 DECEMBER 2013

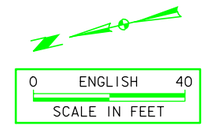
LINN COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #703
DESCRIPTION: TOP CULVERT WEST SIDE OF COUNTRY CLUB DR
STA. 730+54.72, 62.90' RT.
ELEV. = 796.53

BENCH MARK: #704
DESCRIPTION: SPIKE IN POWER POLE 125FT EAST OF CP333
STA. 738+87.71, 57.27' RT.
ELEV. = 828.28

HYDRAULIC DATA

DRAINAGE AREA = 2.87 ACRES FLAT
DESIGN DISCHARGE, Q_{50} = 6.49 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 15
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 0° SKEW

24" X 70' REINFORCED CONCRETE PIPE

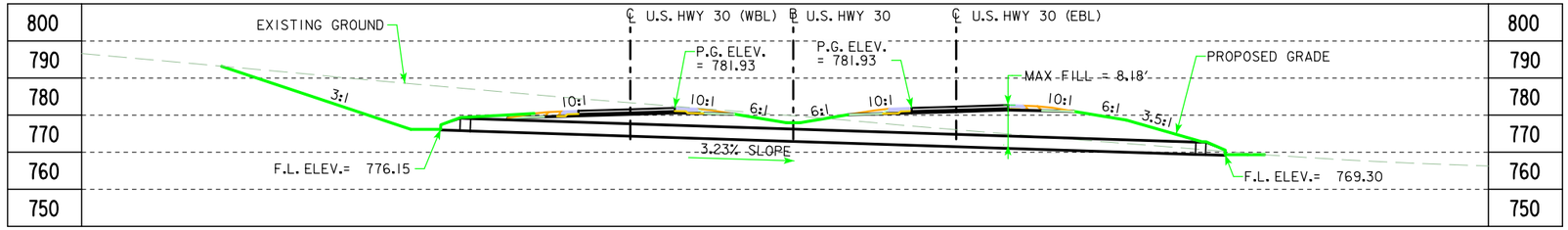
PLAT PLAN

STA. 740+55.00 ℄ U.S. HWY. 30 (WBL) DECEMBER 2013

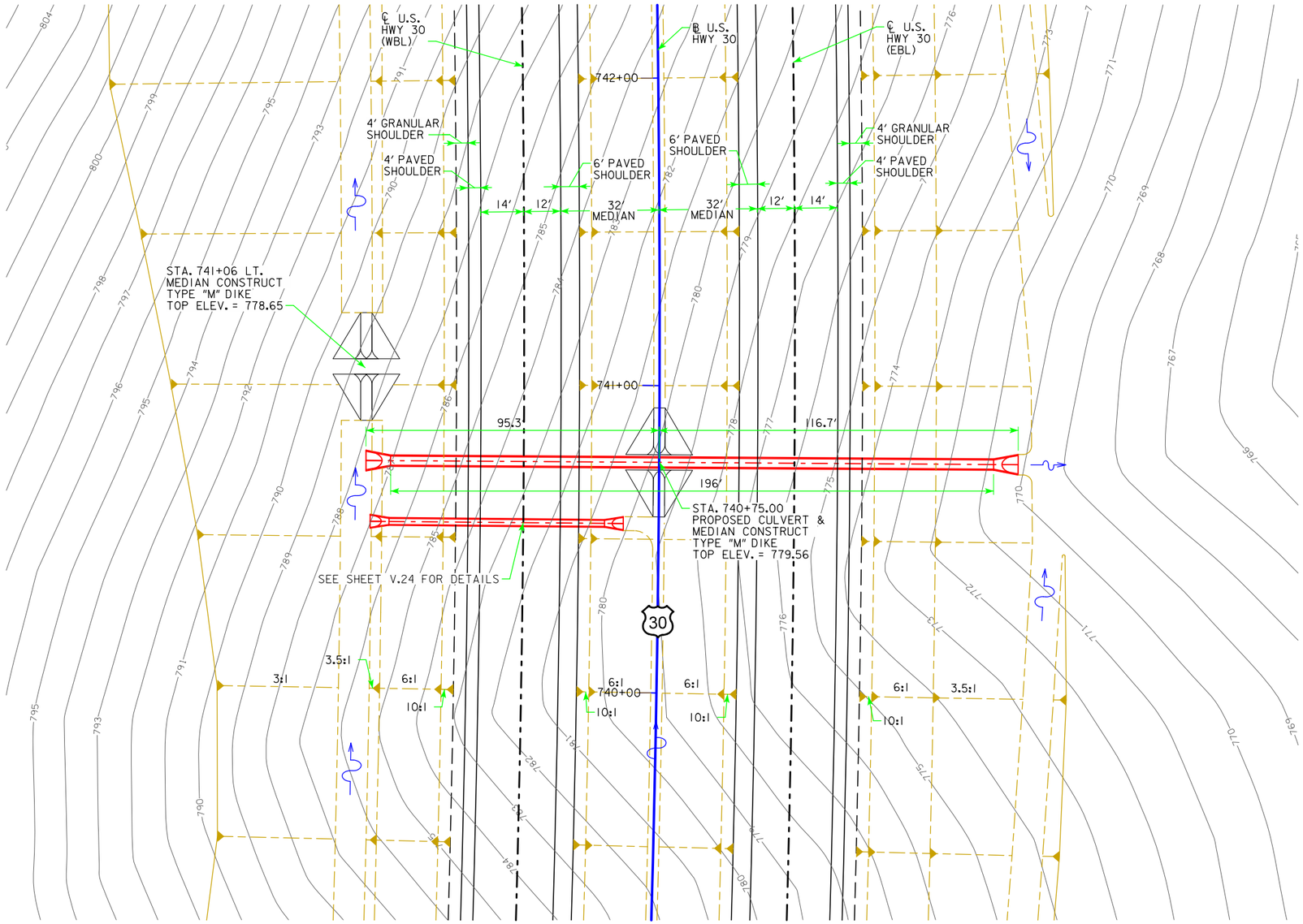
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

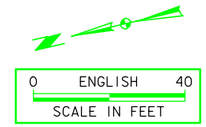
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #703
DESCRIPTION: TOP CULVERT WEST SIDE OF COUNTRY CLUB DR
STA. 730+54.72, 62.90' RT.
ELEV. = 796.53'

HYDRAULIC DATA

DRAINAGE AREA = 15.10 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 34.38 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 15
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

36" X 196' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 740+75.00 ℄ U.S. HWY. 30 DECEMBER 2013

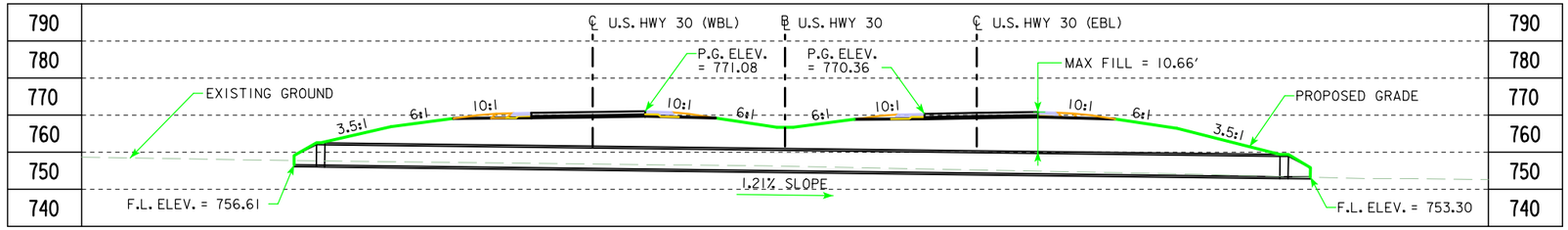
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

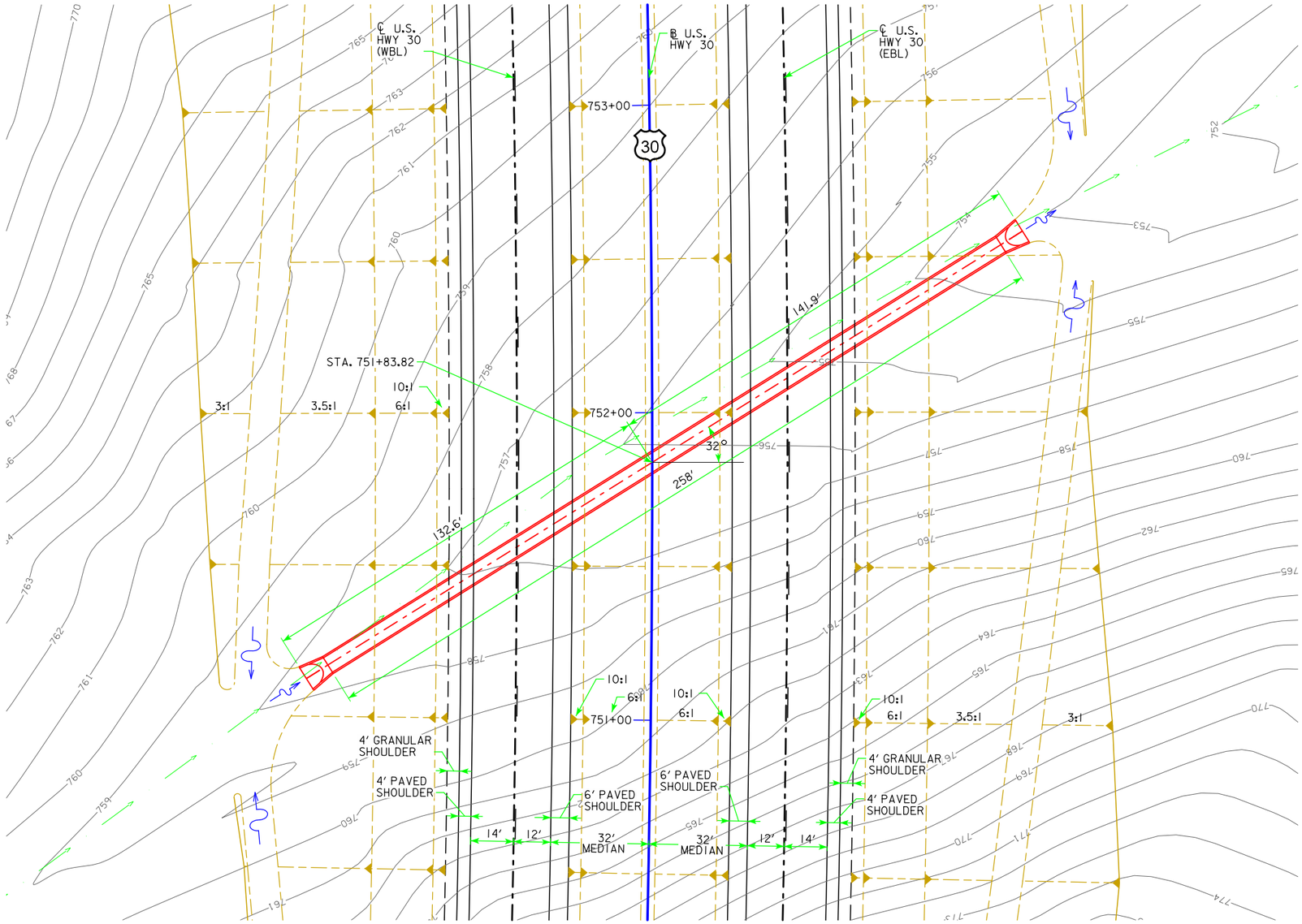
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.25

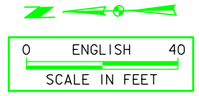
3:05:06 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #518
DESCRIPTION: CUT X NORTH END RCP NORTH DITCH AT CEDAR RIVER SIGN
STA. 543+43.75, 139.553' LT.
ELEV. = 750.28

HYDRAULIC DATA

DRAINAGE AREA = 140.43 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 187.22 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 15
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 32° SKEW R.A.

66" X 258' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 751+83.82 ℄ U.S. HWY. 30 DECEMBER 2013

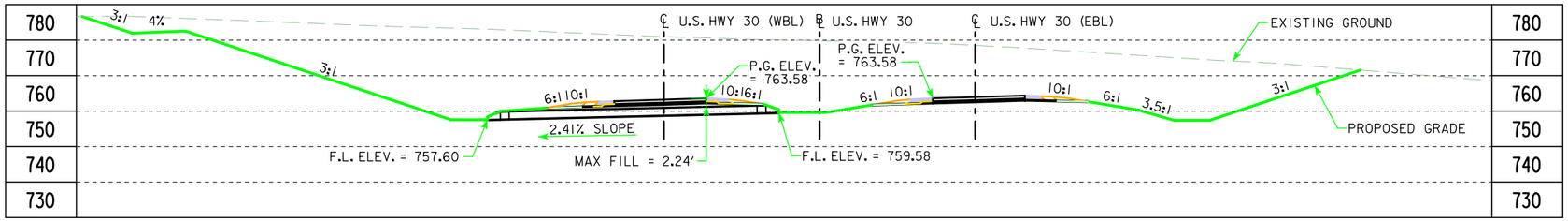
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

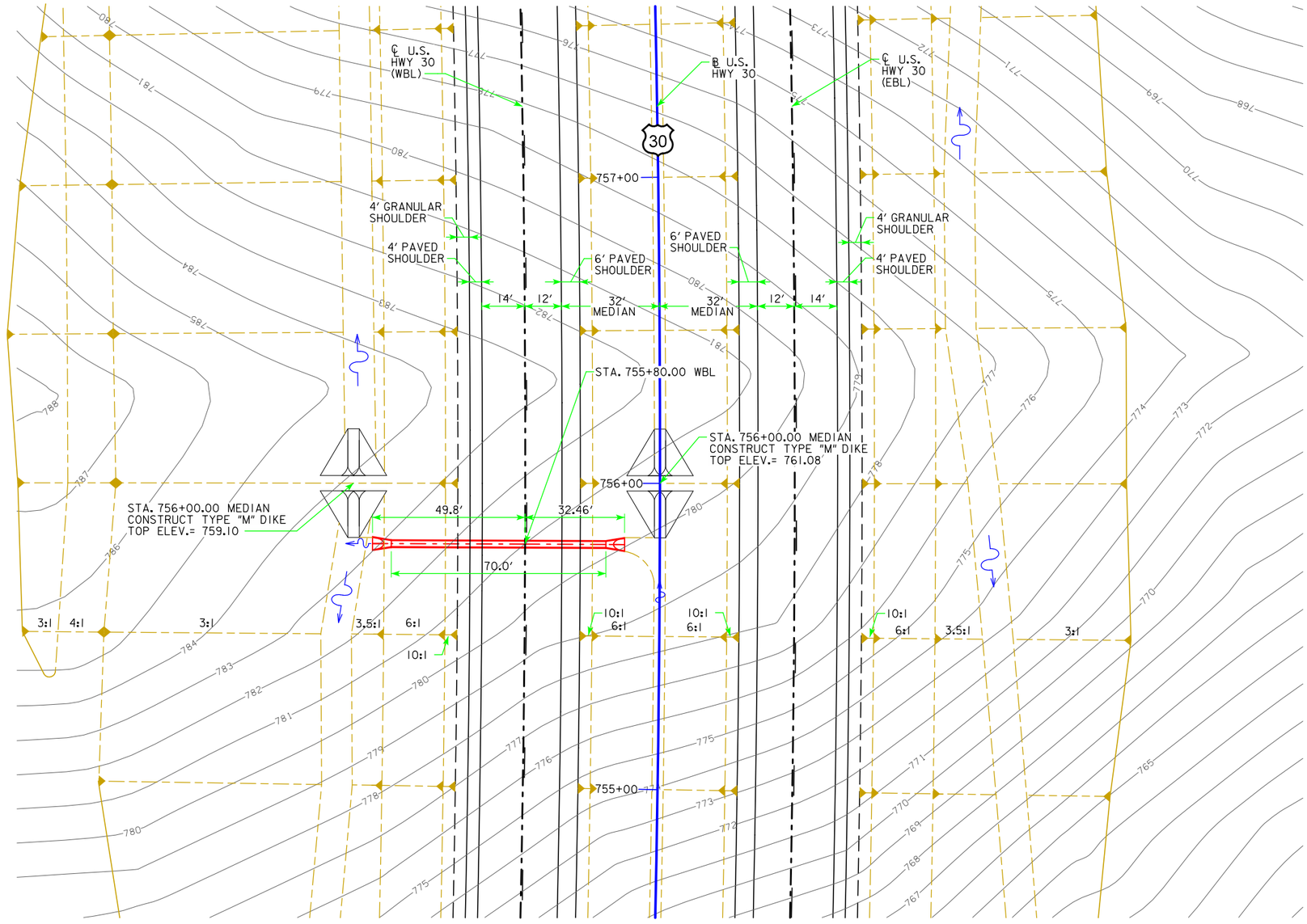
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.26

3:05:07 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

0 ENGLISH 40
SCALE IN FEET

BENCH MARK: #538
DESCRIPTION: SPIKE IN POWER POLE EAST SIDE ROAD IST POWER POLE SOUTH OF 626 DRIVE
STA. 755+67.35, 3,353.69' RT.
ELEV. = 778.04'

HYDRAULIC DATA

DRAINAGE AREA = 3.16 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 6.98 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 15
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 70' REINFORCED CONCRETE PIPE

PLAT PLAN

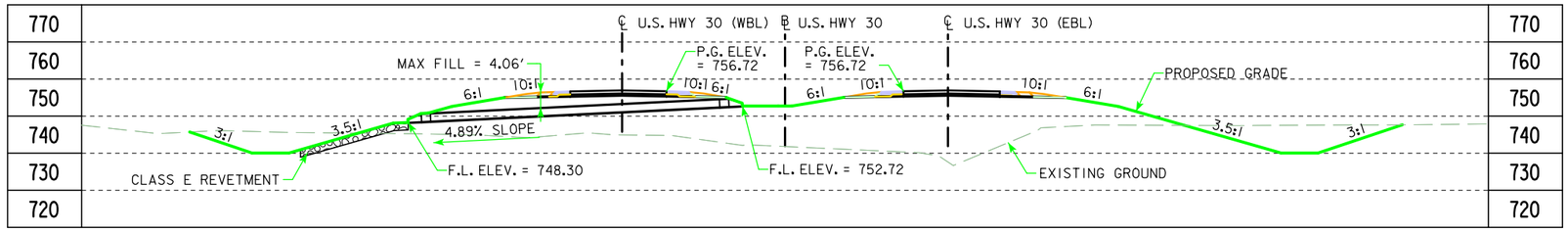
STA. 755+80.00 ℄ U.S. HWY. 30 WBL — DECEMBER 2013

LINN COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

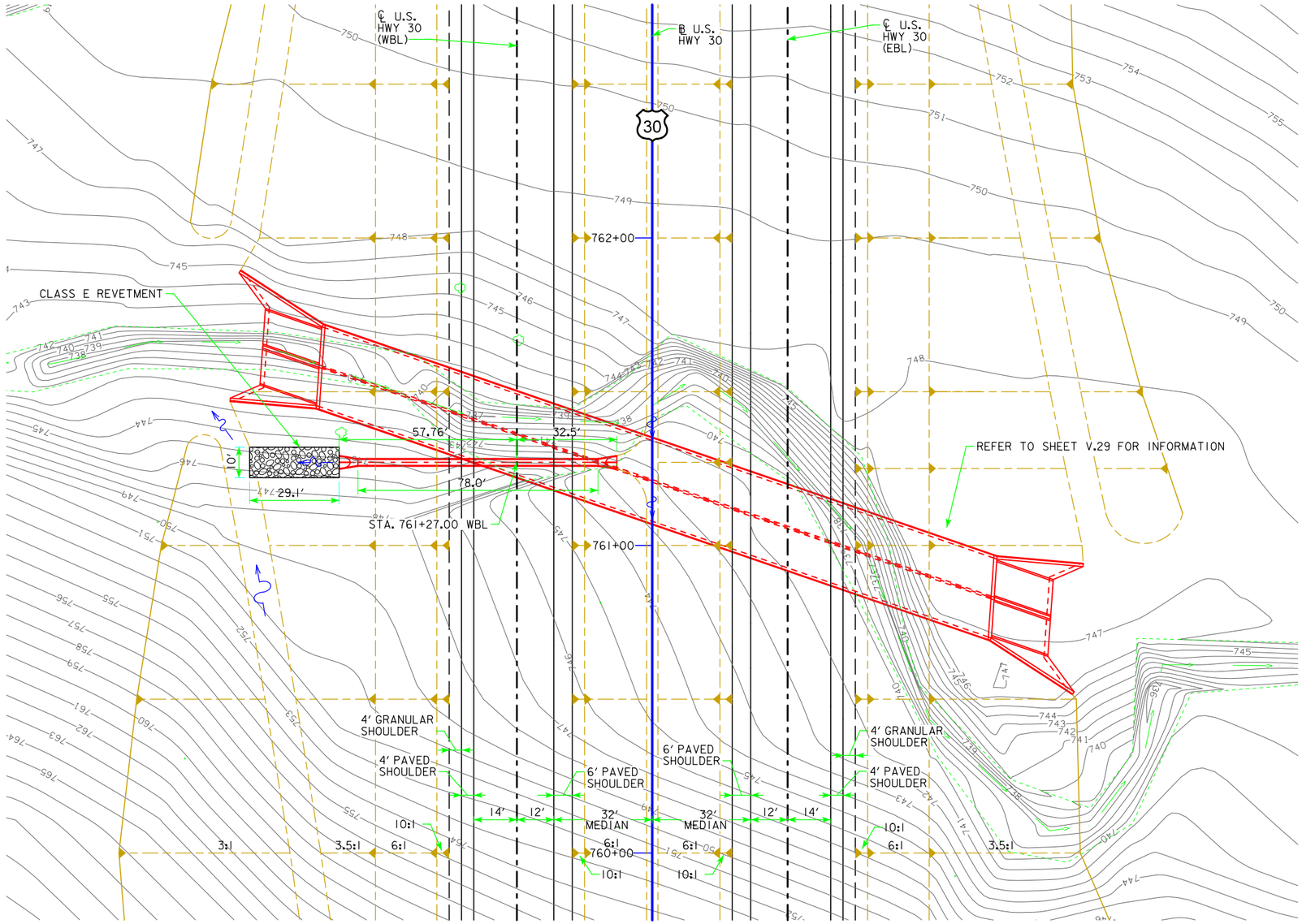
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.27

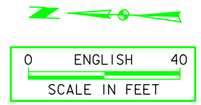
3:05:07 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #705
DESCRIPTION: ARROW ON HYDRANT EAST OF CP335
STA. 765+51.82, 67.232' RT.
ELEV. = 851.469

HYDRAULIC DATA

DRAINAGE AREA = 3.96 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 8.29 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 14
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 78' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 761+27.00 ℄ U.S. HWY. 30 WBL DECEMBER 2013

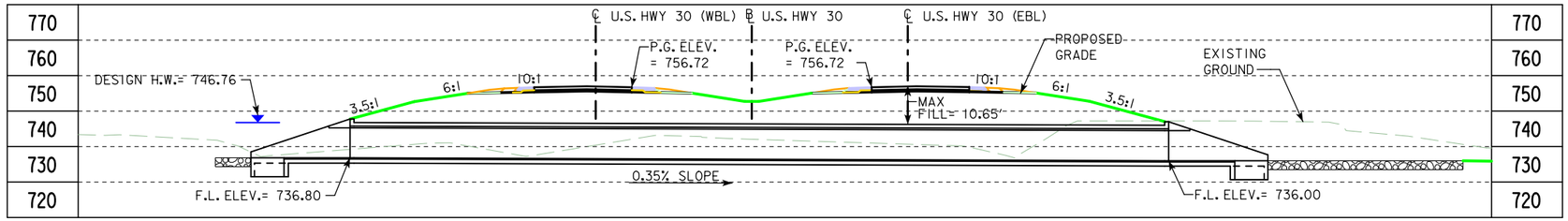
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

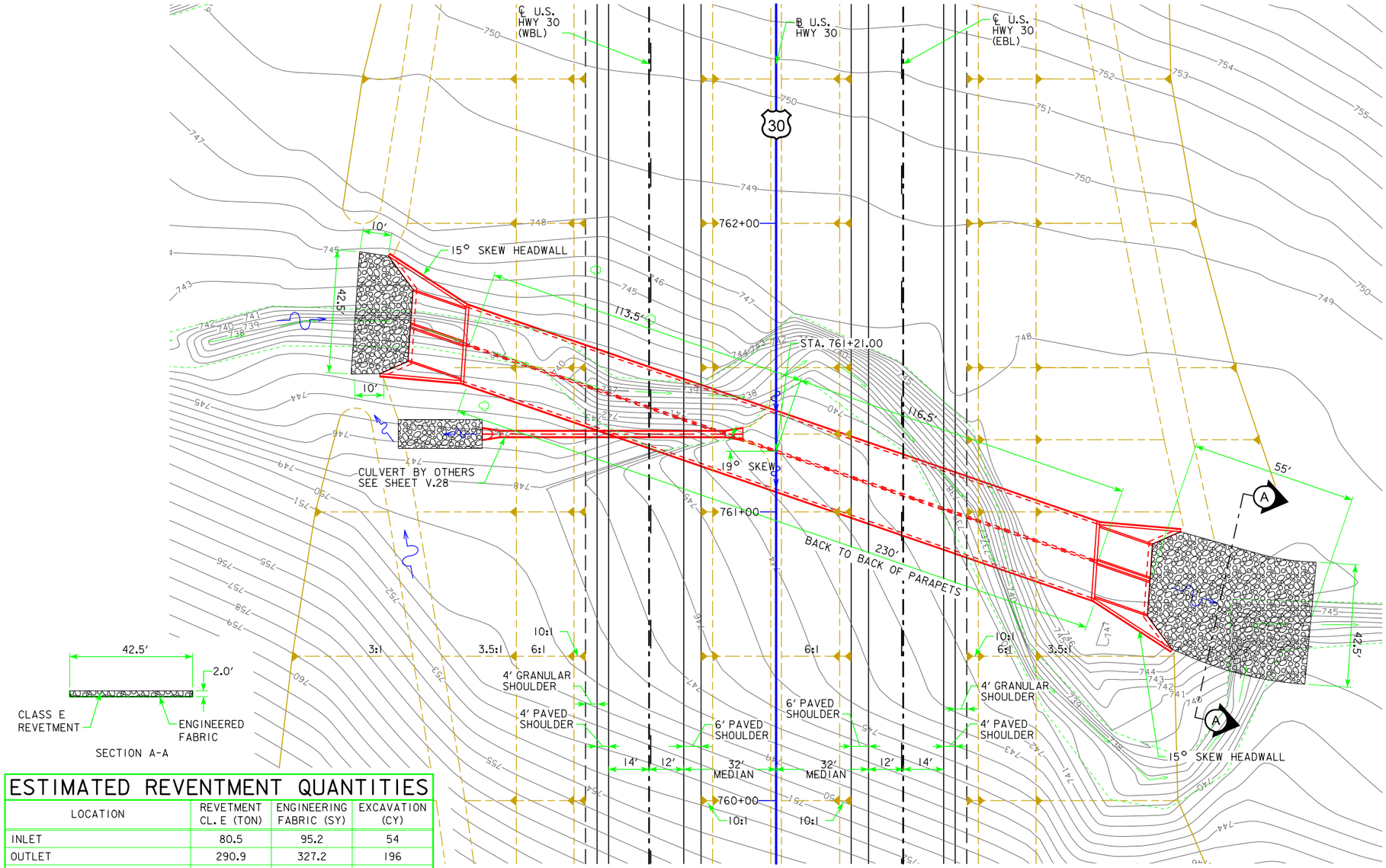
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER V.28

3:05:08 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



SITUATION PLAN

SECTION A-A

ESTIMATED REVENTMENT QUANTITIES

LOCATION	REVETMENT CL. E (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
INLET	80.5	95.2	54
OUTLET	290.9	327.2	196
TOTALS	371.1	422.9	250

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE.
QUANTITIES SHOWN FOR INFORMATION ONLY. SEE ROAD SHEETS.

BENCH MARK: #705
DESCRIPTION: ARROW ON HYDRANT
EAST OF CP335
STA. 765+51.82, 67.232' RT.
ELEV. = 851.469

0 ENGLISH 40
SCALE IN FEET

PROPOSED PROFILE GRADE ON U.S 30

VPI 761+50.00
Elv = 753.14
L= 730 FT.
K = 184 FT.

TRAFFIC ESTIMATE:

2009 AADT, 10,600 VPD
2035 AADT, 16,700 VPD
10% TRUCKS
DESIGN ESALs ---------

HYDRAULIC DATA

DRAINAGE AREA = 2.31 SQ. MILES
DESIGN DISCHARGE, Q_{50}= 1,911 CFS
Q_{100}= 2,289 CFS
Q_{500}= 3,343 CFS
DESIGN HIGH WATER EL, Q_{50}= 746.76

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30 OVER UNNAMED STREAM
T-82N R-5W
SECTION 14
FRANKLIN TOWNSHIP
LINN COUNTY
LAT 41.903957
LONG -91.403725
FHWA #700555

HYDRAULIC DESIGN

LICENSED PROFESSIONAL ENGINEER — Kyle D. Riley 20550 — 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 Kyle D. Riley Date 03-20-2014

Printed or Typed Name

My license renewal date is December 31, 2014

Pages or sheets covered by this seal: V.29 (HYDRAULIC DATA)

PRELIMINARY

DESIGN FOR 19° SKEW L.A.

TWIN 12' X 9' x 230' REINFORCED CONCRETE BOX CULVERT SITUATION PLAN

STA. 761+21.00 ℄ U.S. HWY. 30 MARCH 2014

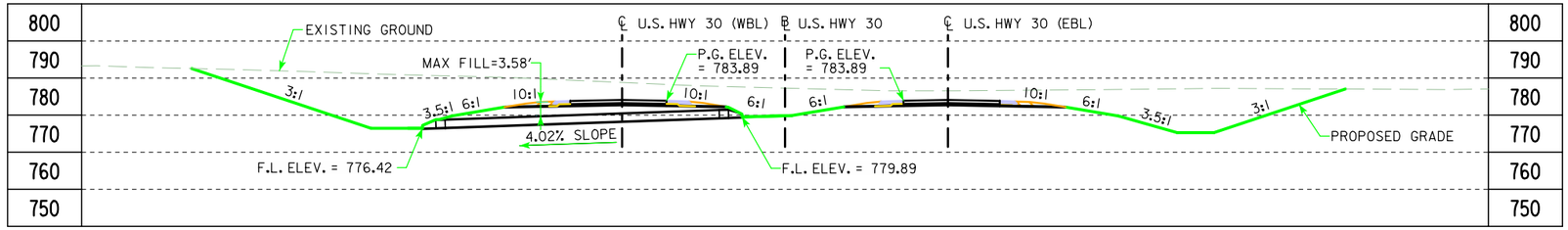
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

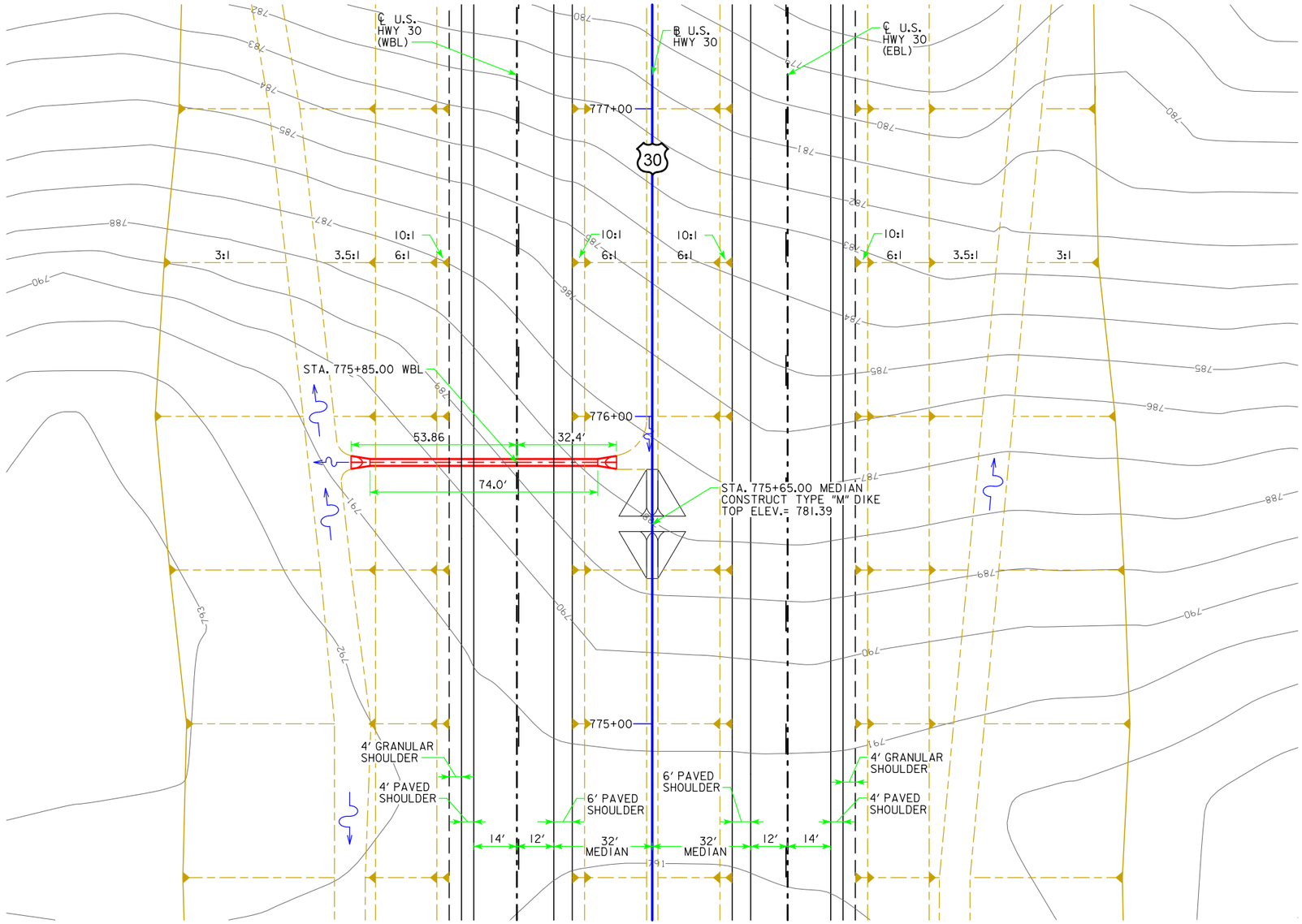
DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 1516

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER V.29

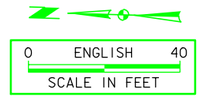
3:05:10 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #528
DESCRIPTION: SPIKE IN POWER POLE COR SPRING CR & LIGHT
STA. 669+37.13, 4,936.836' RT.
ELEV. = 777.82'

HYDRAULIC DATA

DRAINAGE AREA = 3.67 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 7.82 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 14
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 74' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 775+85.00 ℄ U.S. HWY. 30 WBL — DECEMBER 2013

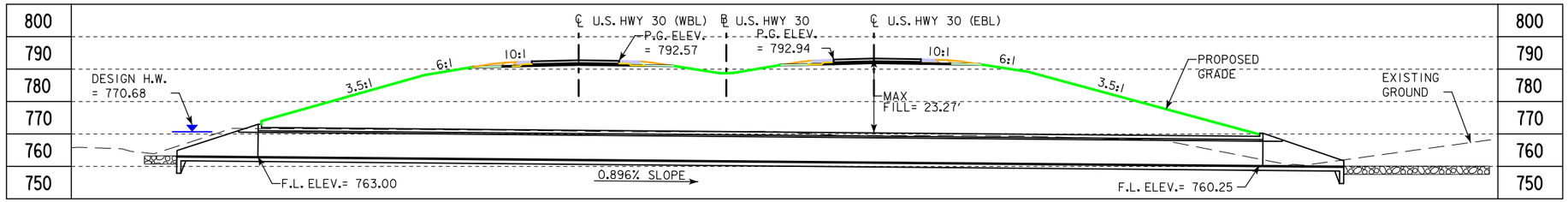
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.30

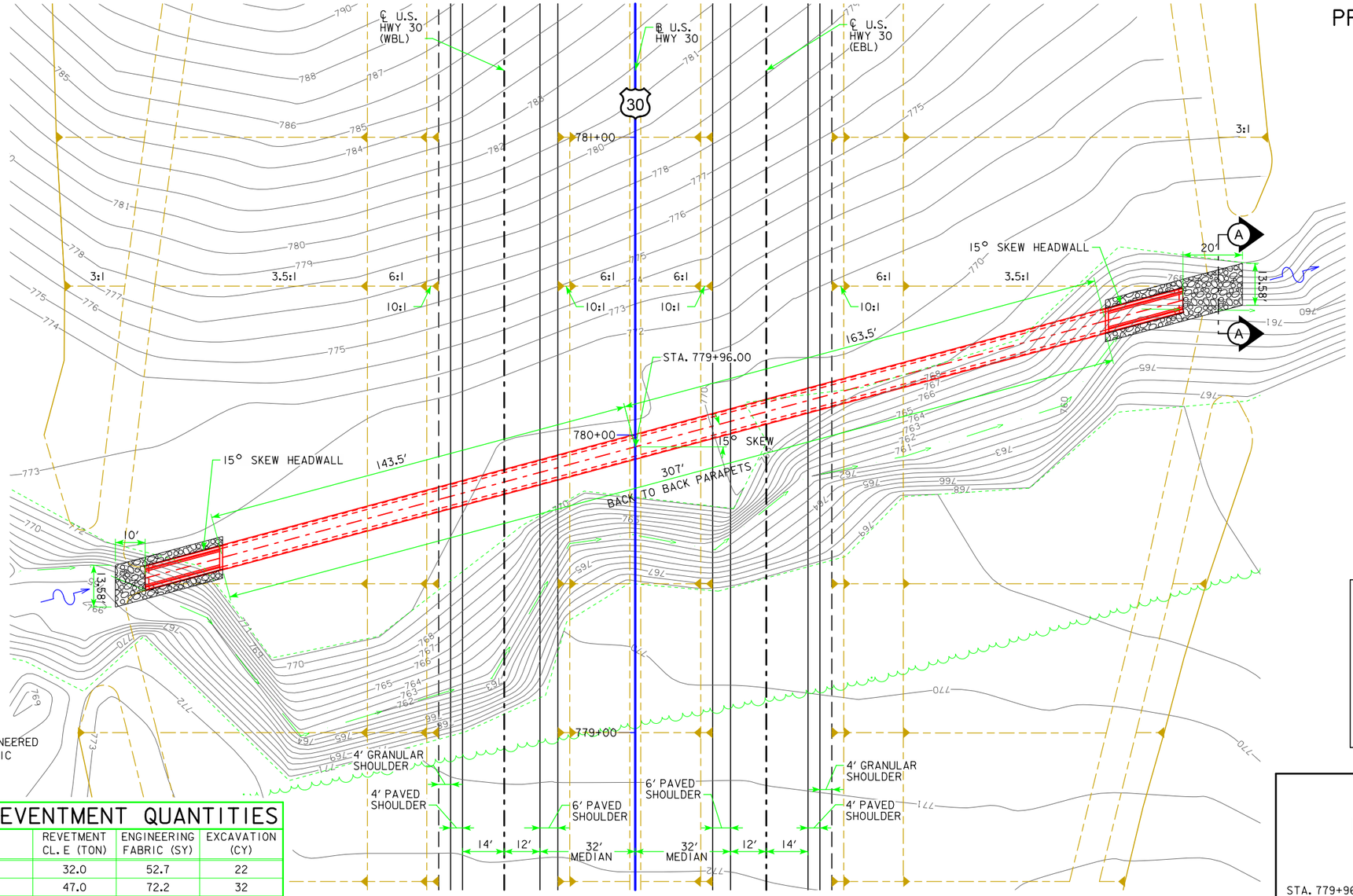
3:05:11 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



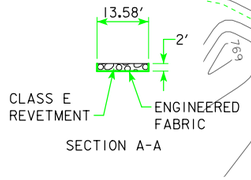
BENCH MARK: #529
DESCRIPTION:
SPIKE IN GATE POST NEXT TO CP309
STA. 682+26.52, 4,812.628' RT.
ELEV. = 764.69'

0 ENGLISH 40
SCALE IN FEET

LONGITUDINAL SECTION ALONG ℄ CULVERT



SITUATION PLAN



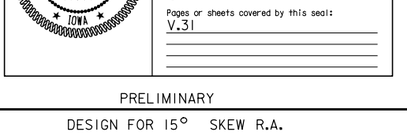
SECTION A-A

ESTIMATED REVENTMENT QUANTITIES

LOCATION	REVETMENT CL. E (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
INLET	32.0	52.7	22
OUTLET	47.0	72.2	32
TOTALS	79.0	124.9	54

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE.
QUANTITIES SHOWN FOR INFORMATION ONLY. SEE ROAD SHEETS.

PROPOSED PROFILE GRADE



TRAFFIC ESTIMATE:

2009 AADT, 10,600 VPD
2035 AADT, 16,700 VPD
10% TRUCKS
DESIGN ESALs _____

HYDRAULIC DATA

DRAINAGE AREA = 235.8 ACRES 1/2 ROLLING
1/2 HILLY
DESIGN DISCHARGE, Q_{50}= 323.84 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30 OVER UNNAMED STREAM
T-82N R-5W
SECTION 14
FRANKLIN TOWNSHIP
LINN COUNTY
LAT 41.903978
LONG -91.396837

CINDY A. SPENCER 17561 IOWA LICENSED PROFESSIONAL ENGINEER

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.

3-21-14
Cindy A. Spencer, P.E. Date

License Number 17561
My License Renewal Date is December 31, 2014

Pages or sheets covered by this seal:
V.31

PRELIMINARY

DESIGN FOR 15° SKEW R.A.

6' X 8' X 307' REINFORCED CONCRETE BOX CULVERT SITUATION PLAN

STA. 779+96.00 ℄ U.S. HWY. 30 MARCH 2014

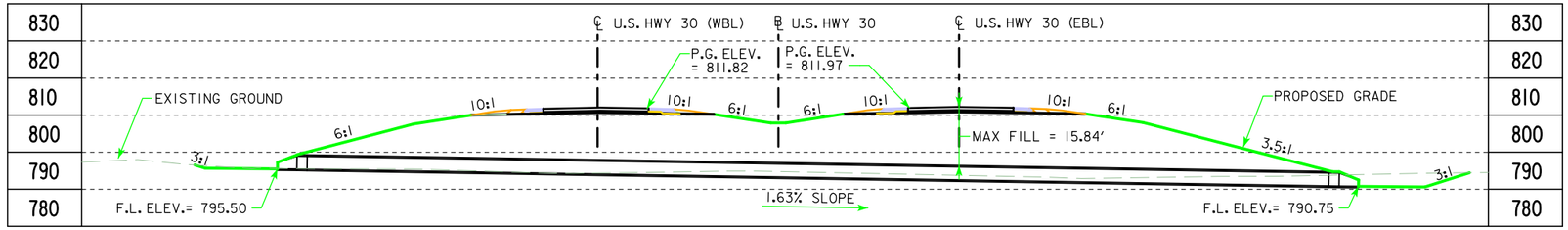
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

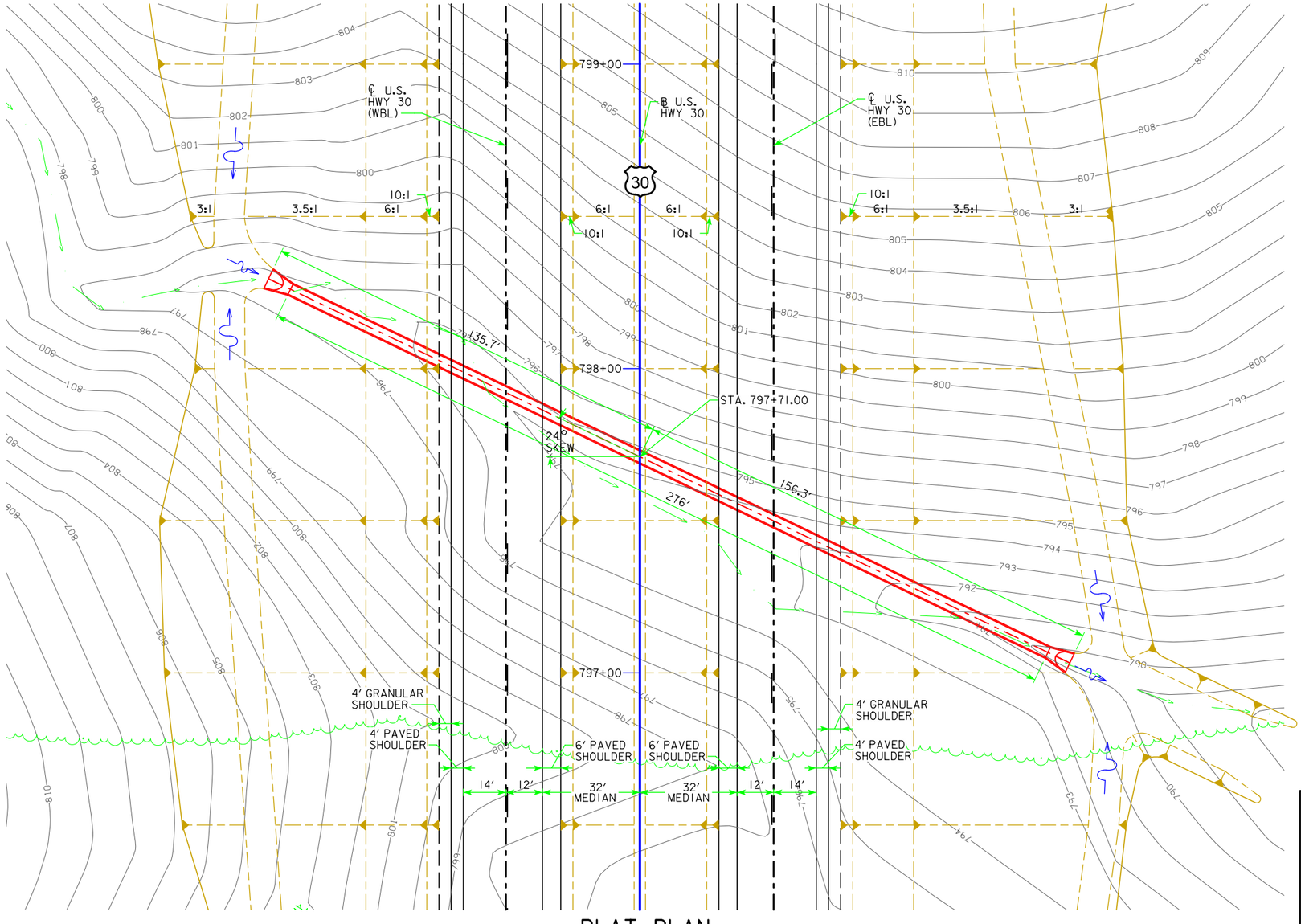
DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 1616

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER V.31

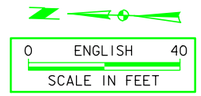
3:05:12 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #703
DESCRIPTION: TOP CULVERT WEST SIDE OF COUNTRY CLUB DR
STA. 730+54.72, 62.908' RT.
ELEV. = 796.53'

HYDRAULIC DATA

DRAINAGE AREA = 30.06 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 58.02 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 14
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 24° SKEW L.A.

42" X 276' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 797+71.00 ℄ U.S. HWY. 30 DECEMBER 2013

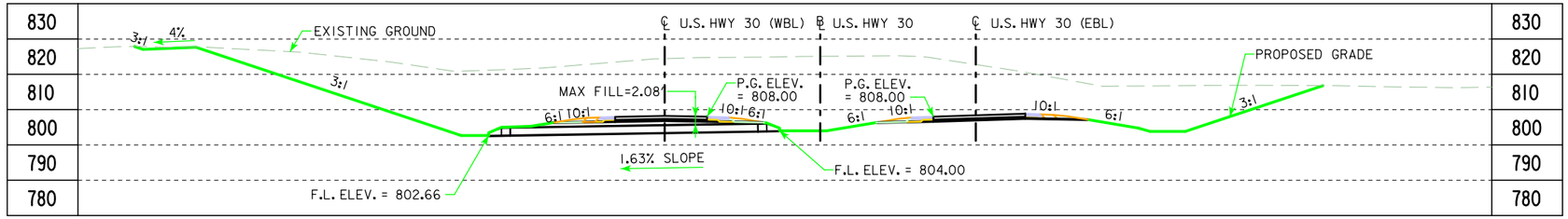
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

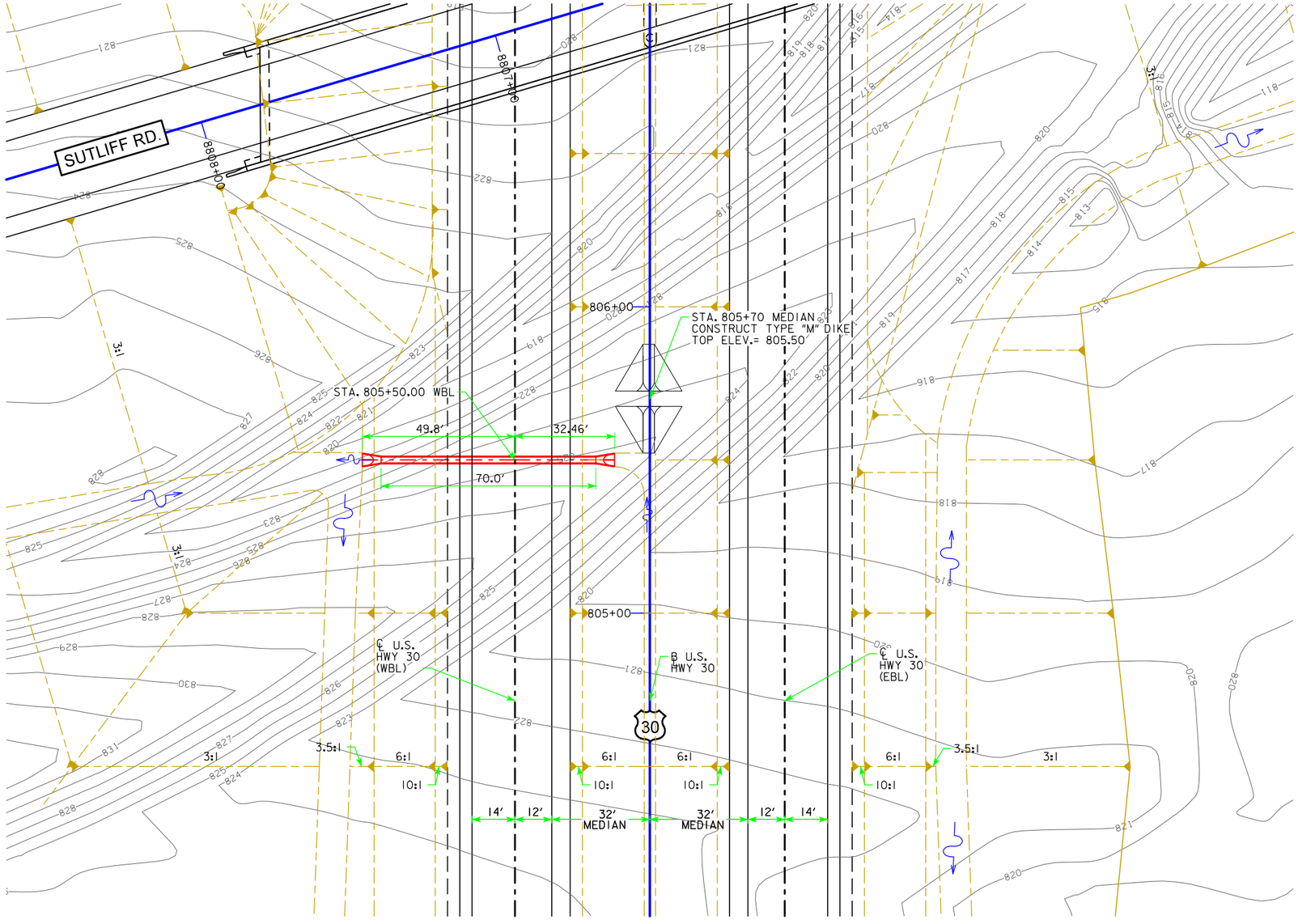
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.32

3:05:13 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

0 ENGLISH 40
SCALE IN FEET

BENCH MARK: #712
DESCRIPTION: CHISELED CROSS TOP
INTAKE N SIDE HWY 30 2ND
INTAKE EAST OF S JACKSON
STA. 806+36.12, 27.896' LT.
ELEV. = 867+797

HYDRAULIC DATA

DRAINAGE AREA = 2.40 ACRES FLAT
DESIGN DISCHARGE, Q_{50}= 5.66 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 14
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 70' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 805+50.00 ℄ U.S. HWY. 30 (WBL) DECEMBER 2013

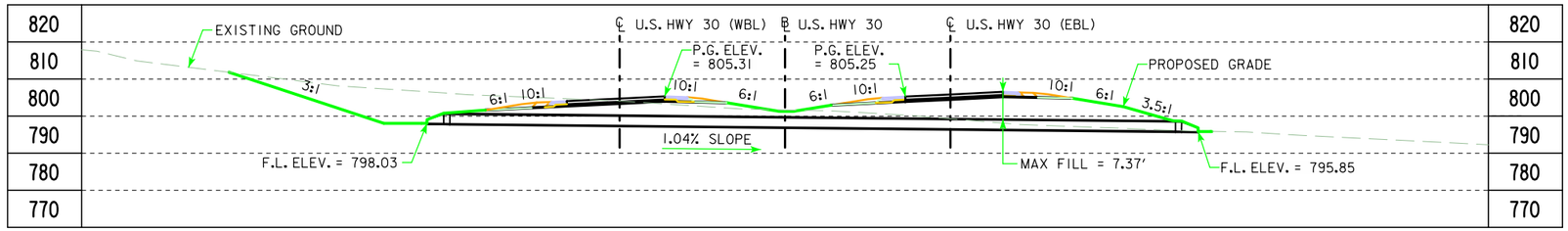
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

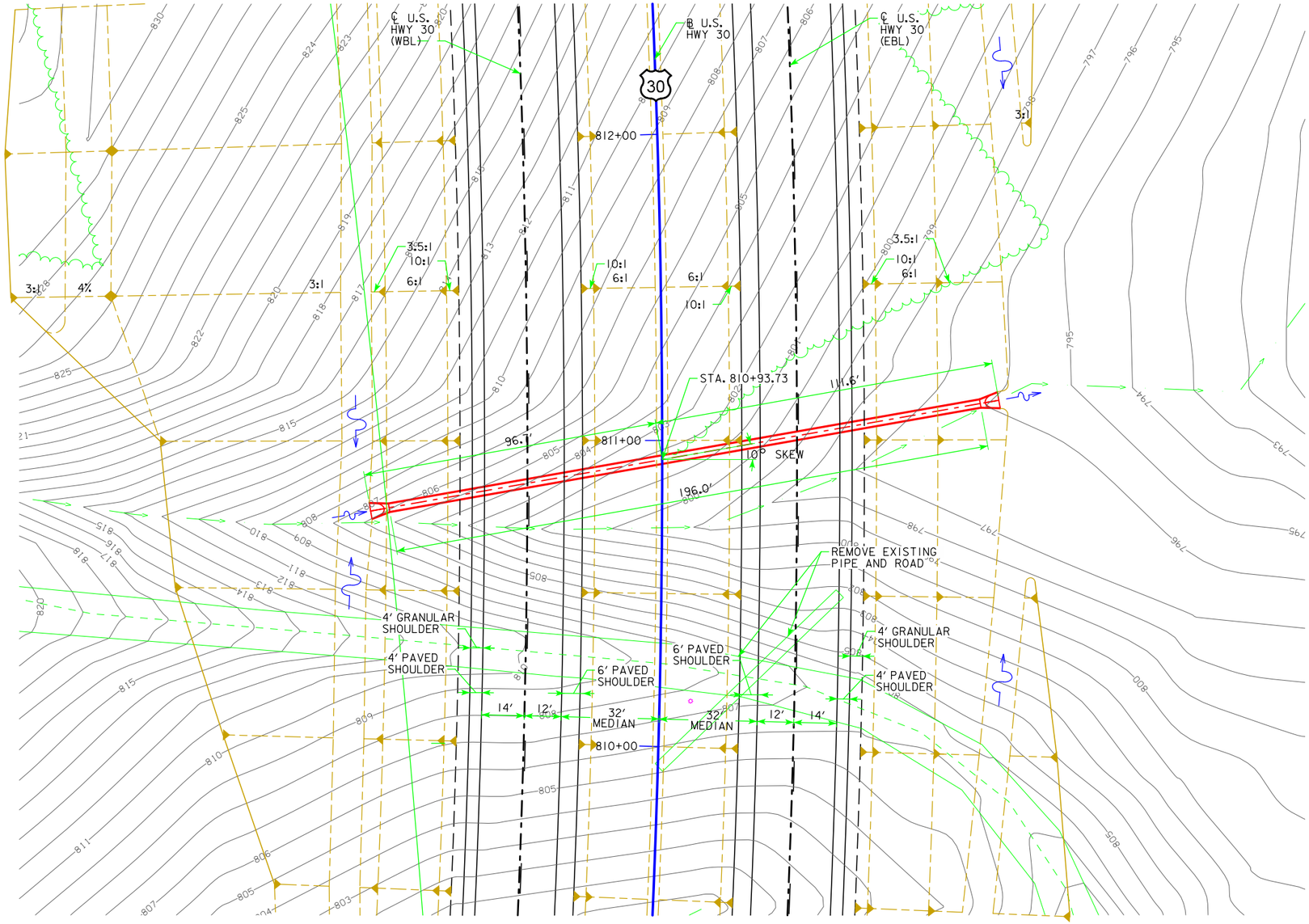
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.33

3:05:13 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

0 ENGLISH 40
SCALE IN FEET

BENCH MARK: #714
DESCRIPTION: FLANGE BOLT WITH FLAG ON HYDRANT NW CORNER DOLLAR GENERAL
STA. 809+54.20, 48.708' RT.
ELEV. = 865+539

HYDRAULIC DATA

DRAINAGE AREA = 12.58 ACRES ROLLING
DESIGN DISCHARGE, Q_{50} = 29.93 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 14
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 10° SKEW R.A.

30" X 196' REINFORCED CONCRETE PIPE

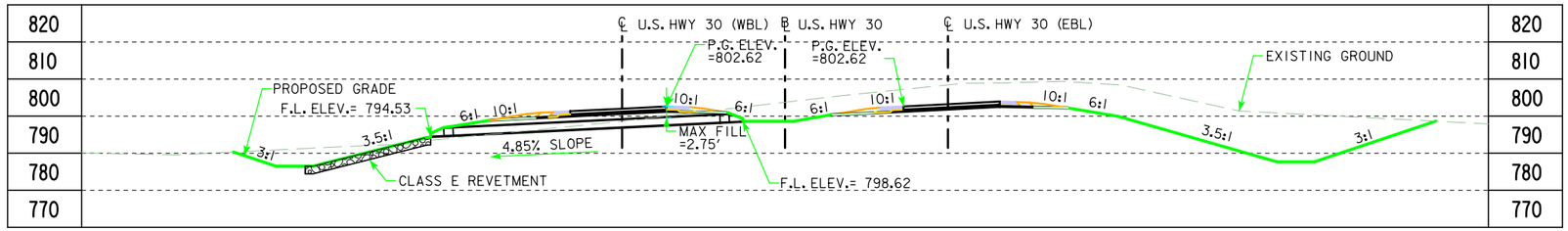
PLAT PLAN

STA. 810+93.73 ℄ U.S. HWY. 30 DECEMBER 2013

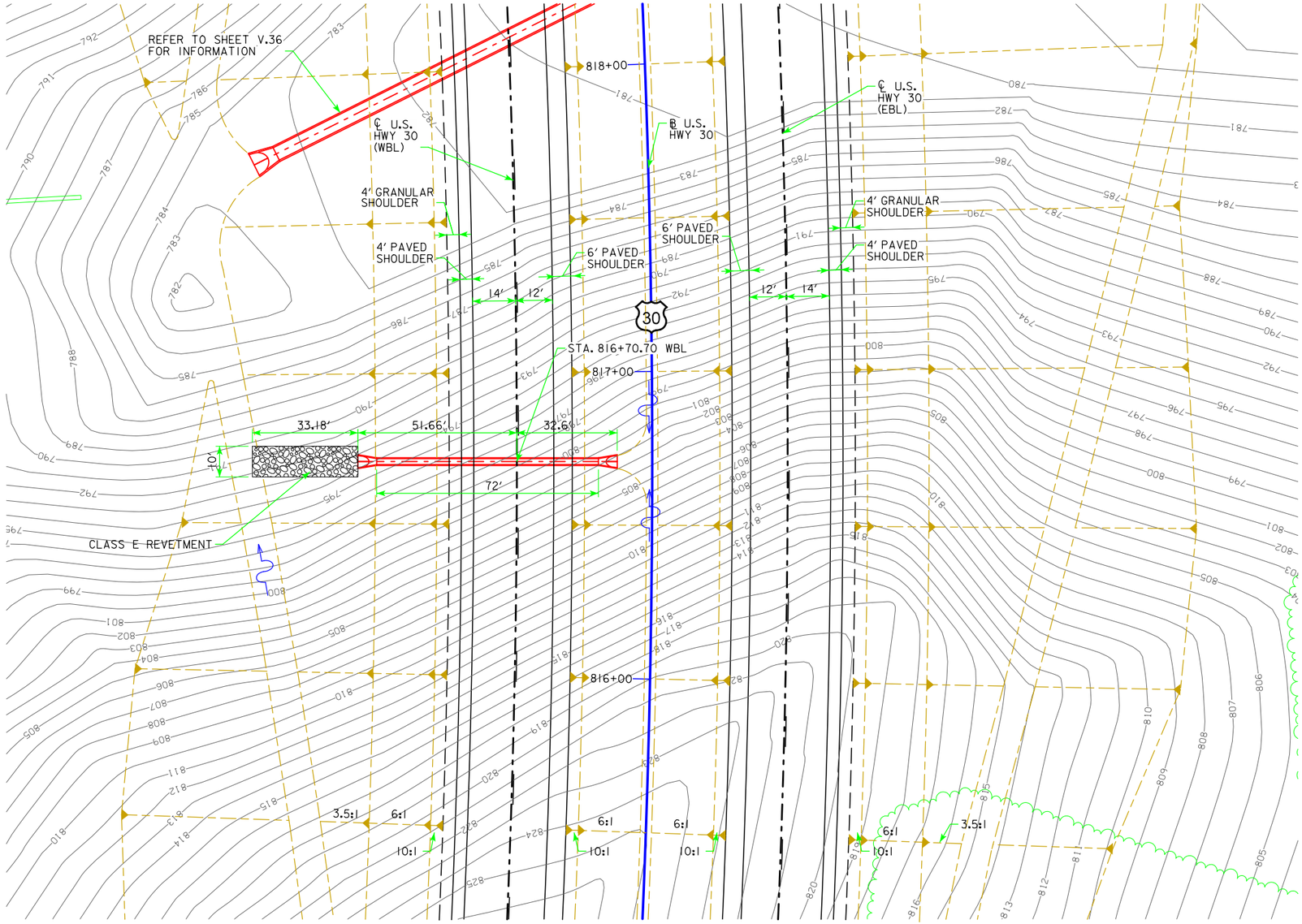
LINN COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.34

3:05:14 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

BENCH MARK: #714
DESCRIPTION: FLANGE BOLT WITH FLAG ON HYDRANT NW CORNER DOLLAR GENERAL
STA. 809+54.20, 48.708' RT.
ELEV. = 865+539

HYDRAULIC DATA

DRAINAGE AREA = 5.09 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 10.03 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 0° SKEW

24" X 72' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 816+70.70 ℄ U.S. HWY. 30 WBL DECEMBER 2013

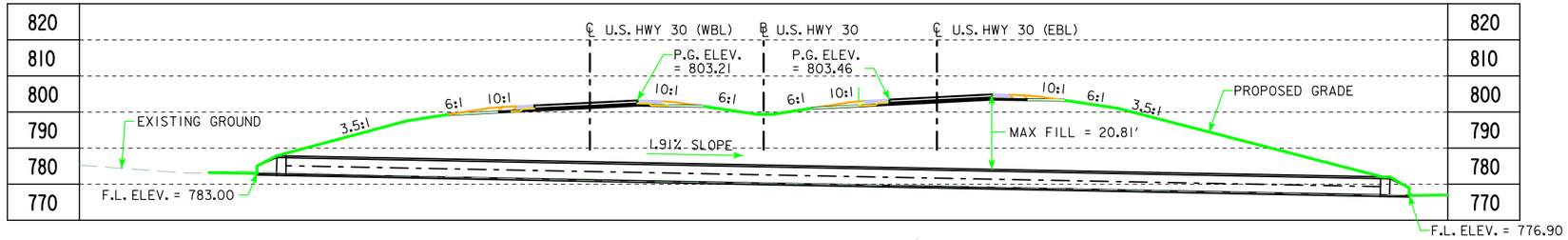
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

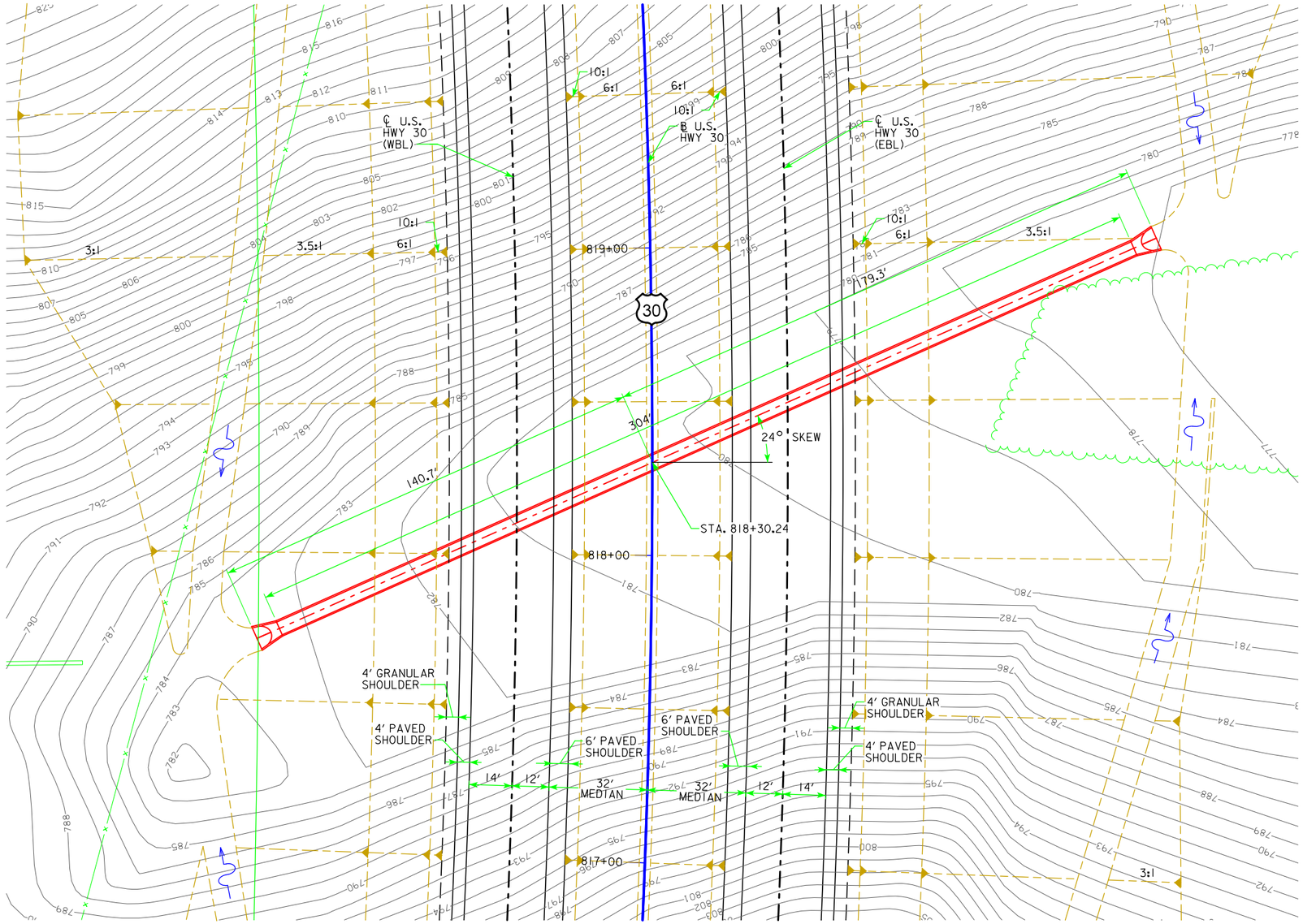
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.35

3:05:16 PM V81_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

BENCH MARK: #714
DESCRIPTION: FLANGE BOLT WITH FLAG ON HYDRANT NW CORNER DOLLAR GENERAL
STA. 818+30.24
ELEV. = XXXX

HYDRAULIC DATA

DRAINAGE AREA = 70.03 ACRES 1/2 HILLY 1/2 ROLLING
DESIGN DISCHARGE, Q_{50} = 128.72 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 24° SKEW R.A.

54" X 304' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 818+30.24 ℄ U.S. HWY. 30 DECEMBER 2013

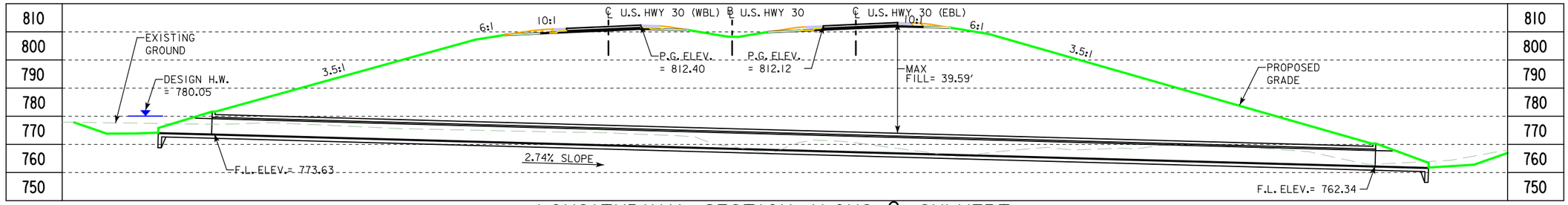
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

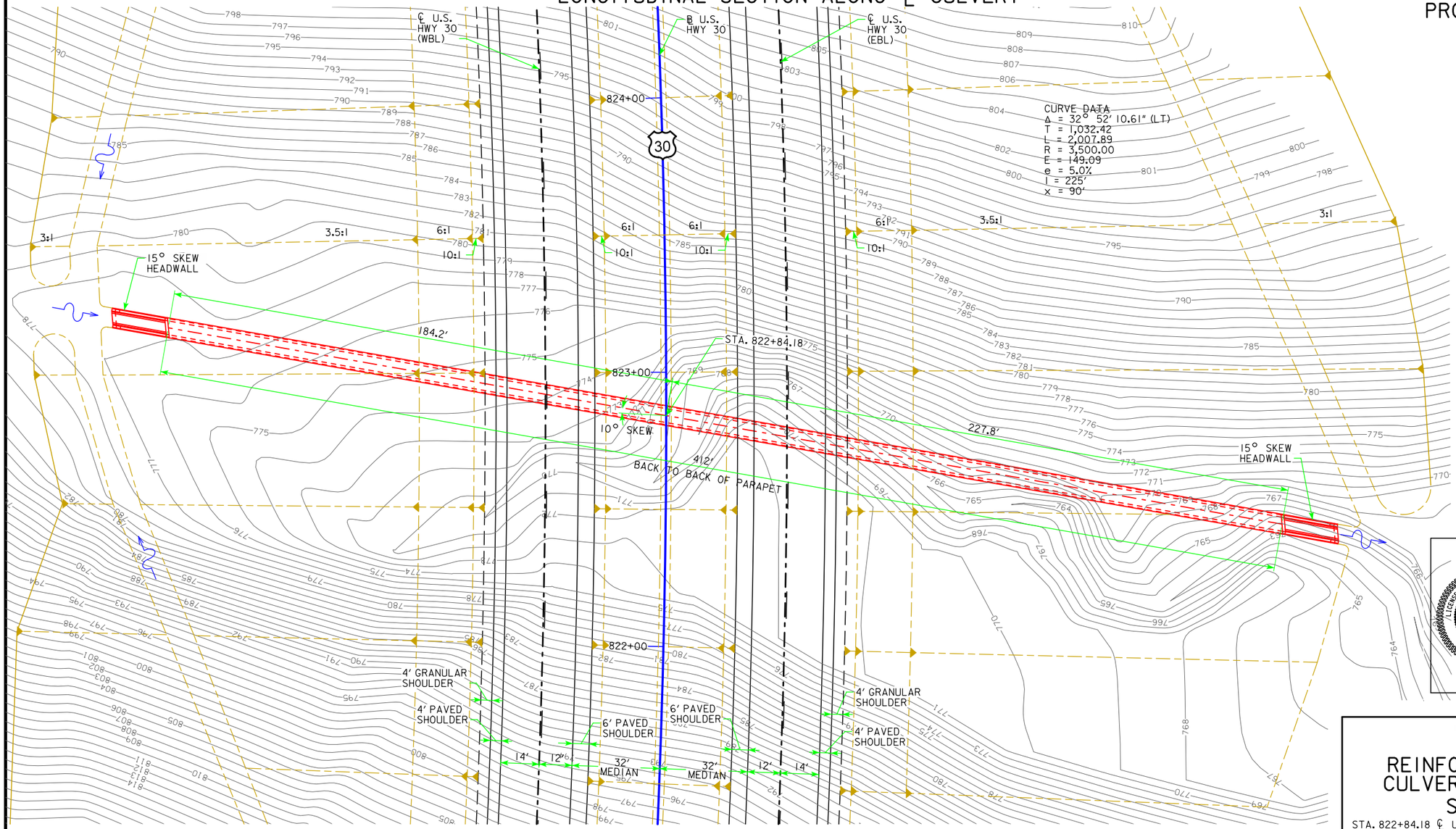
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.36

3:05:16 PM V81_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



SITUATION PLAN

PROPOSED PROFILE GRADE

+2.477%

VPI STA. 818+50.00
Elv = 850.30

TRAFFIC ESTIMATE:

2009 AADT, 10,600 VPD
2035 AADT, 16,700 VPD
10% TRUCKS
DESIGN ESALs ---------

BENCH MARK: #756
DESCRIPTION: SPIKE IN POWER POLE 125FT NORTH OF 657 GREENRIDGE RD DRIVE.
STA. 821+75.63, 3,644.646' RT.
ELEV. = 893.97

HYDRAULIC DATA

DRAINAGE AREA = 110.34 ACRES HILLY
DESIGN DISCHARGE, Q_{50}= 207.83 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30 OVER UNNAMED STREAM
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY
LAT 41.904842
LONG -91.381243

0 ENGLISH 40
SCALE IN FEET

CINDY A. SPENCER 17561 IOWA LICENSED PROFESSIONAL ENGINEER

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.

2-26-14

Cindy A. Spencer, P.E. Date

License Number 17561

My License Renewal Date is December 31, 2014

Pages or sheets covered by this seal:
V.37

PRELIMINARY

DESIGN FOR 10° SKEW L.A.

5' X 6' X 412' REINFORCED CONCRETE BOX CULVERT WITH BELL JOINTS SITUATION PLAN

STA. 822+84.18 ℄ U.S. HWY. 30 FEBRUARY 2014

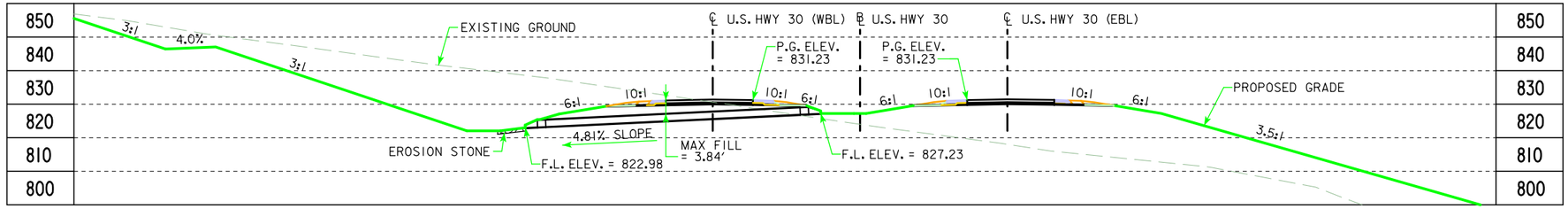
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

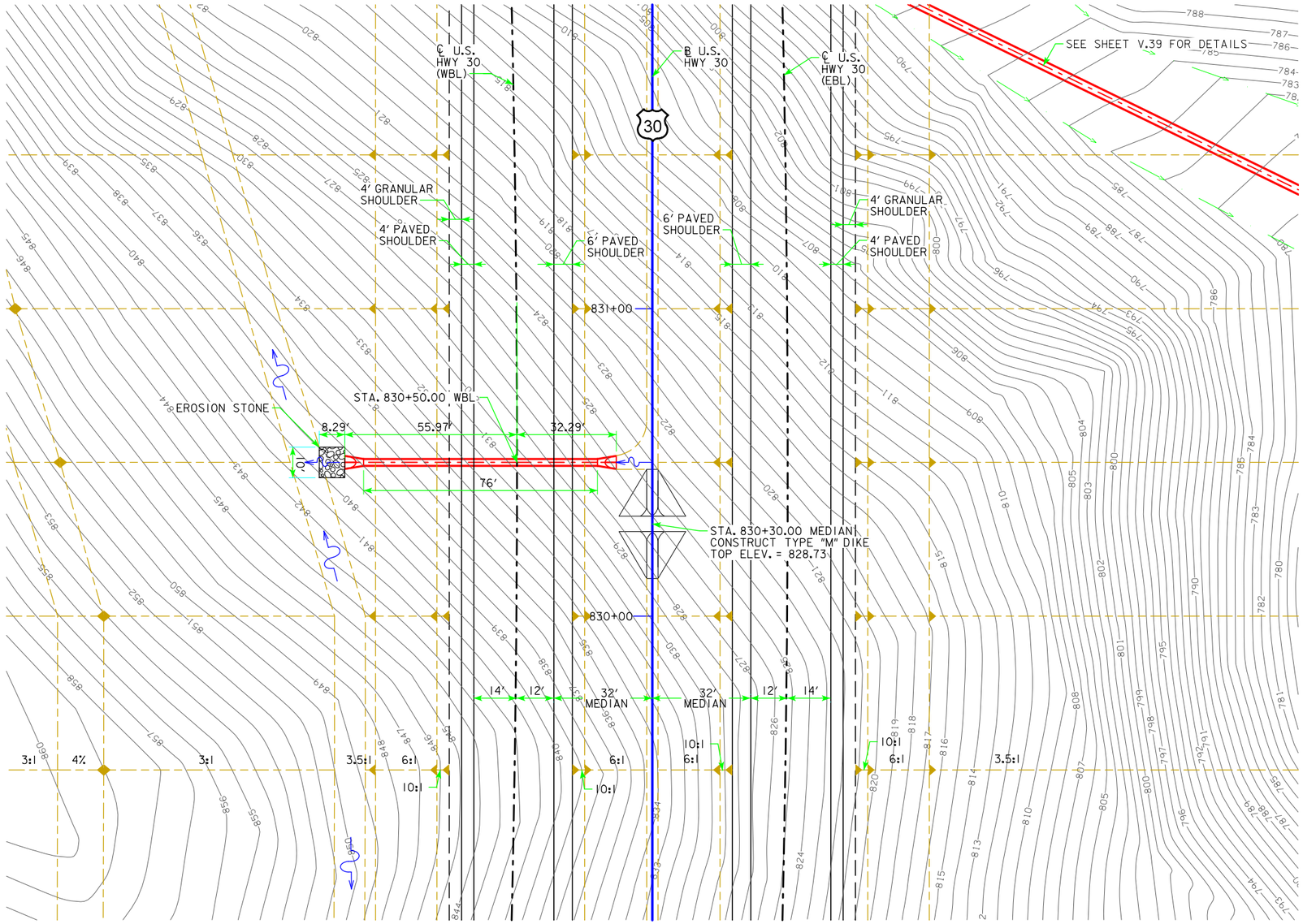
DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 1716

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.37

3:05:17 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

BENCH MARK: #754
DESCRIPTION: SPIKE IN 20IN WHITE PINE E SIDE 500FT NORTH OF 606 GREENRIDGE RD DRIVE
STA. 830+12.94, 4,711.39' RT.
ELEV. = 822.37'

HYDRAULIC DATA

DRAINAGE AREA = 2.77 ACRES ROLLING
DESIGN DISCHARGE, Q_{50} = 6.32 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY

0 ENGLISH 40
SCALE IN FEET

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 76' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 830+50.00 ℄ U.S. HWY. 30 WBL DECEMBER 2013

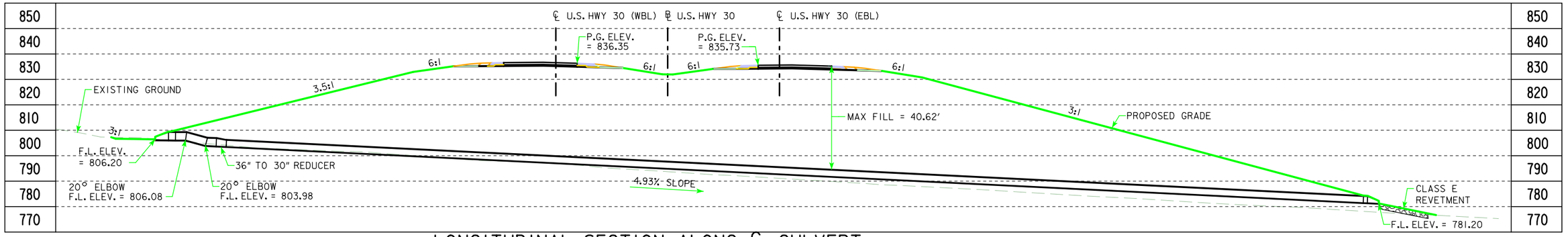
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

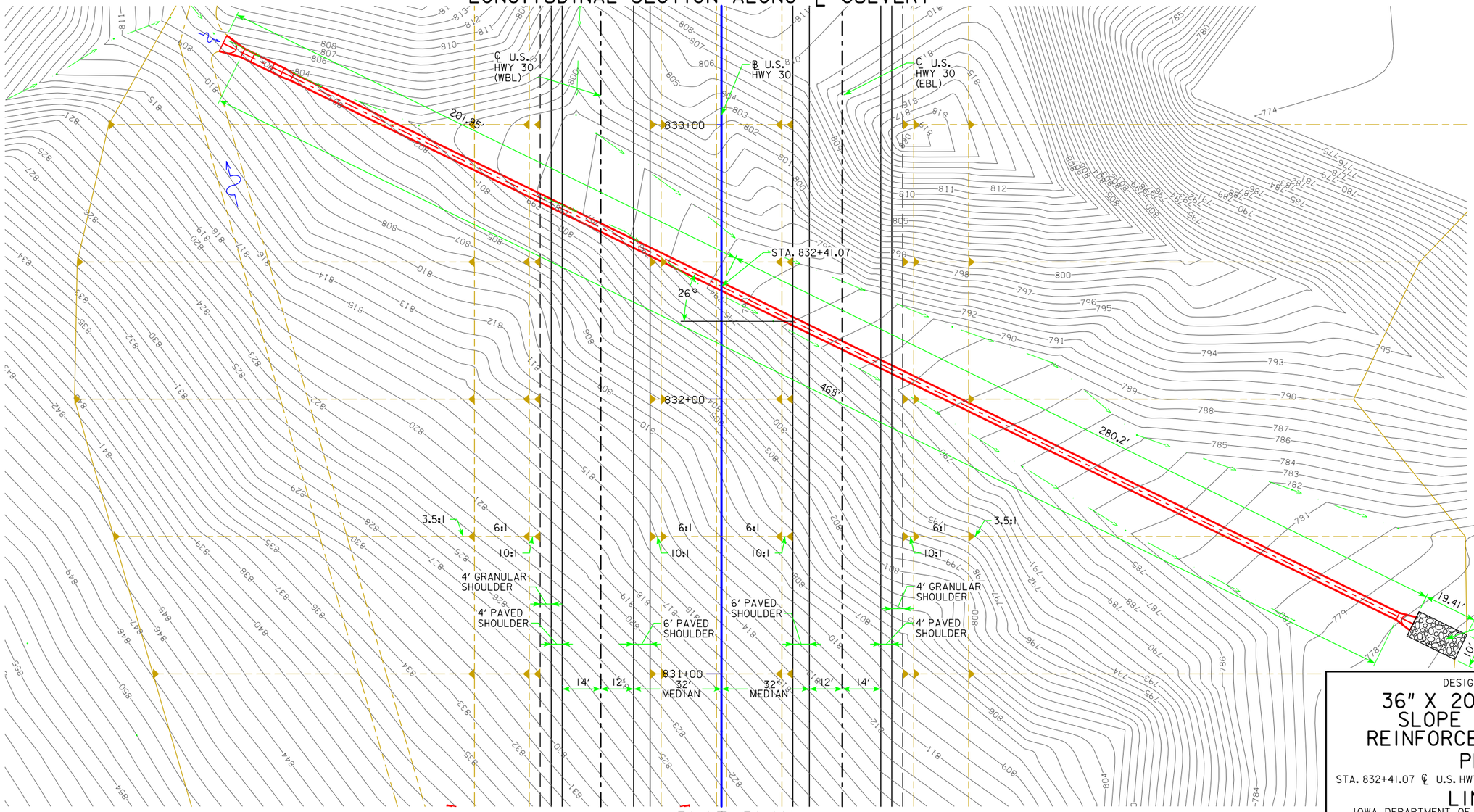
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.38

3:05:18 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

0 ENGLISH 40
SCALE IN FEET

BENCH MARK: #752
DESCRIPTION: SPIKE IN POWER POLE
100FT SE OF 577 GREENRIDGE RD DRIVE
STA. 834+24.45, 5,997.62' RT.
ELEV. = 821.60

HYDRAULIC DATA

DRAINAGE AREA = 13.98 ACRES HILLY
DESIGN DISCHARGE, Q_{50} = 43.23 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 26° SKEW L.A.

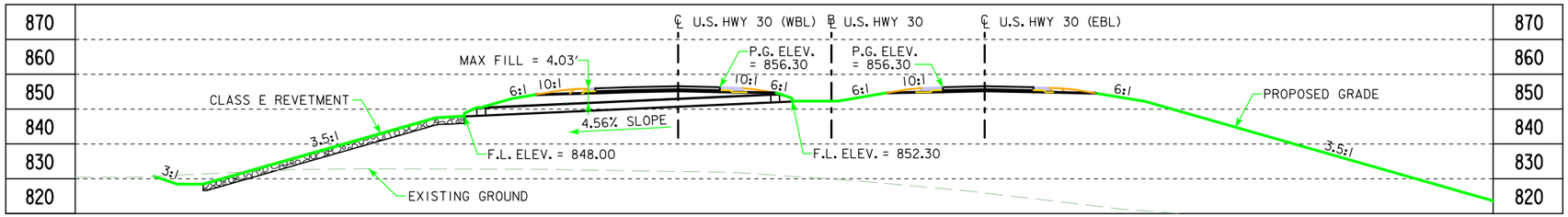
36" X 20' AND 30" X 448' SLOPE TAPERED INLET REINFORCED CONCRETE PIPE PLAT PLAN

STA. 832+41.07 ℄ U.S. HWY. 30 DECEMBER 2013

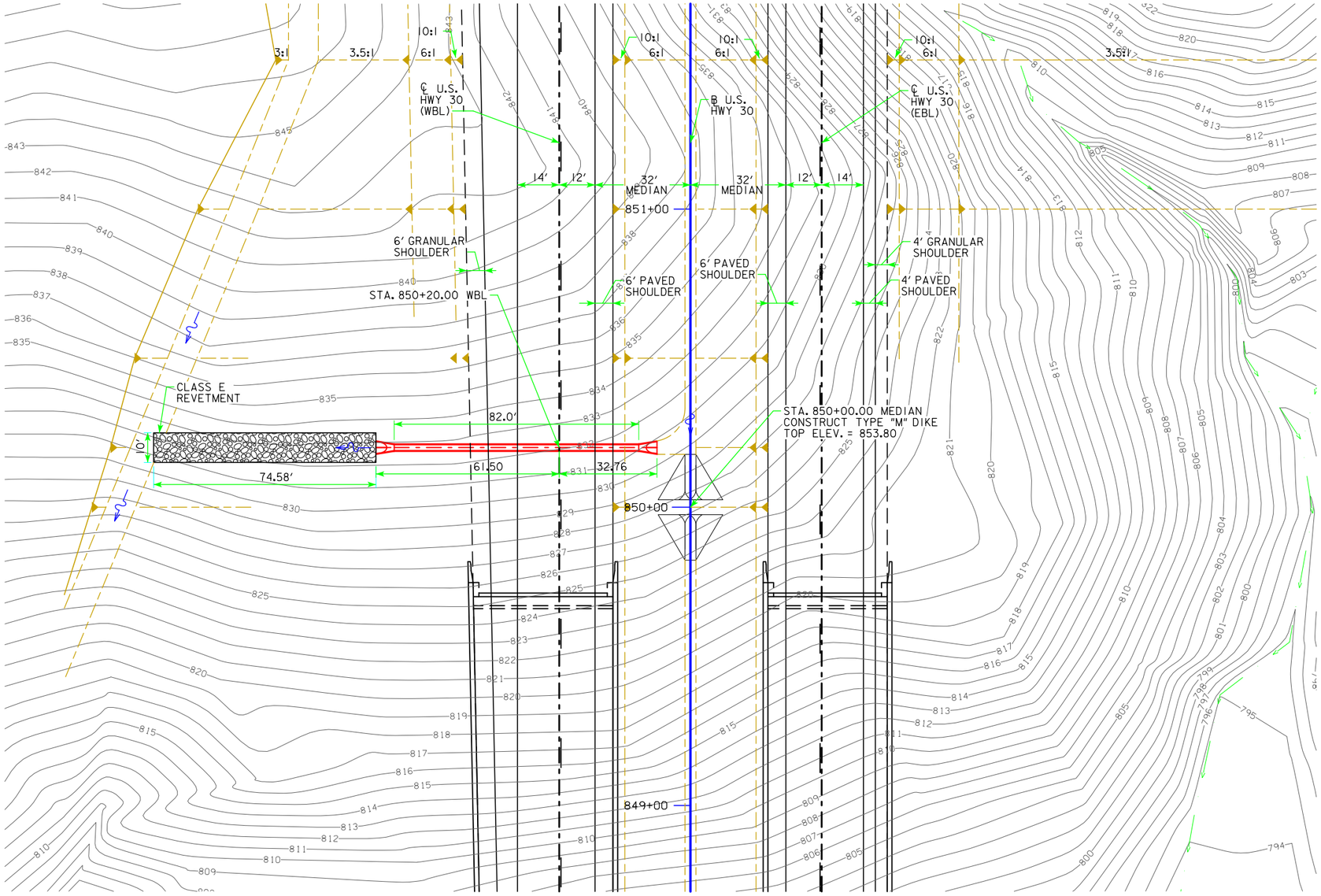
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

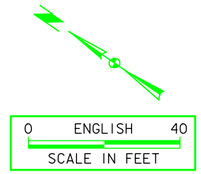
DESIGN SHEET NO. ___ OF ___ FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #751
DESCRIPTION: SPIKE IN POWER POLE 555 GREENRIDGE RD
STA. 837+84.43, 6,500.038' RT.
ELEV. = 852.12

HYDRAULIC DATA

DRAINAGE AREA = 2.80 ACRES FLAT
DESIGN DISCHARGE, Q_{50}= 6.30 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 82' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 850+20.00 ℄ U.S. HWY. 30 WBL — DECEMBER 2013

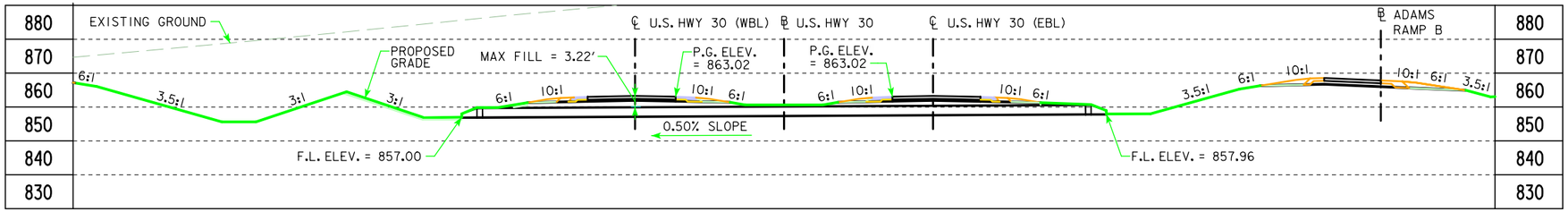
LINN COUNTY

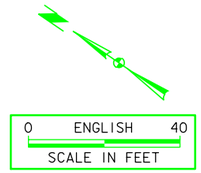
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

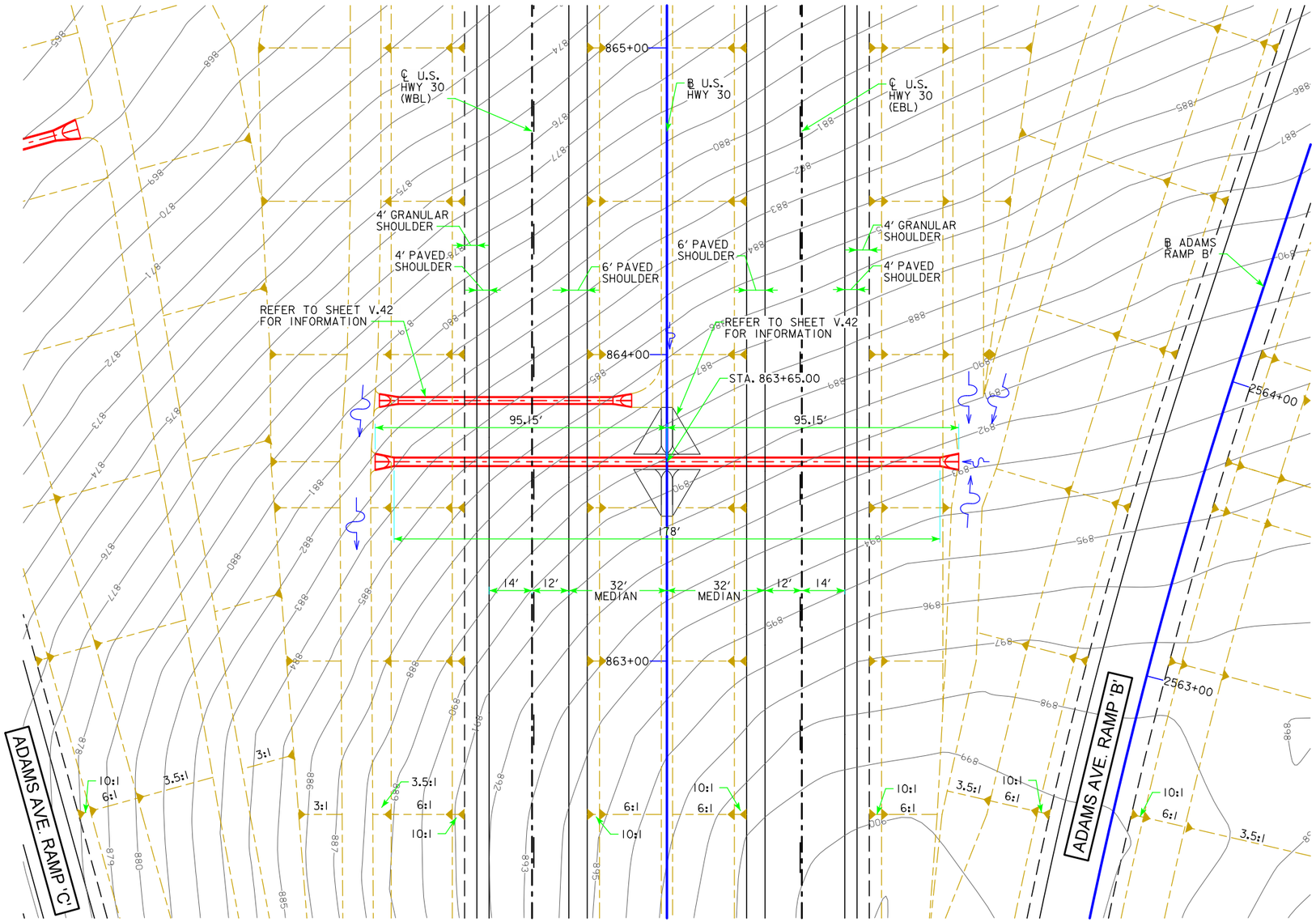
DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.40

3:05:19 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht





LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

BENCH MARK: #733
DESCRIPTION: SPIKE IN POWER POLE
SE QUAD VALLEY FORGE & ADAMS AVE
STA. 863+66.34, 4,625.395' RT.
ELEV. = 834.08

HYDRAULIC DATA

DRAINAGE AREA = 7.07 ACRES ROLLING
DESIGN DISCHARGE, Q_{50} = 19.31 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

30" X 178' REINFORCED CONCRETE PIPE

PLAT PLAN

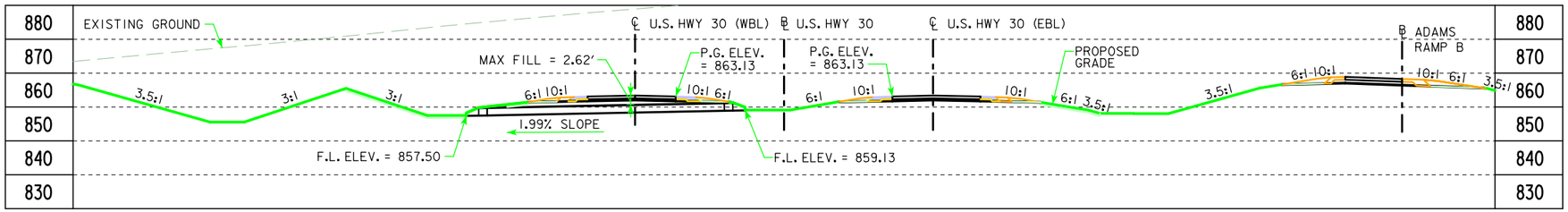
STA. 863+65.00 ℄ U.S. HWY. 30 DECEMBER 2013

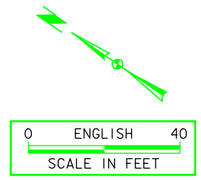
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

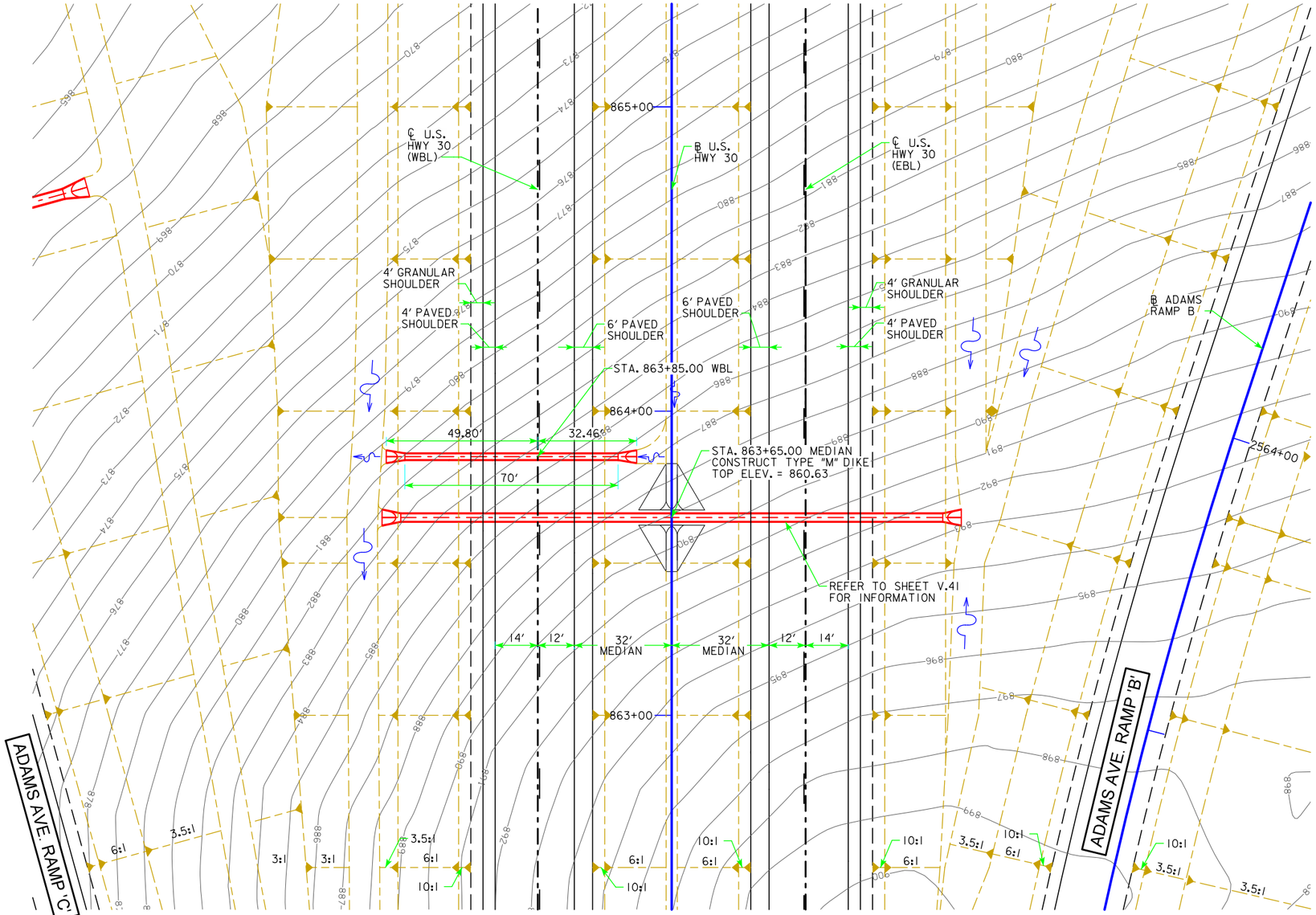
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.41





LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

BENCH MARK: #733
DESCRIPTION: SPIKE IN POWER POLE
SE QUAD VALLEY FORGE & ADAMS AVE
STA. 863+66.34, 4,625.395' RT.
ELEV. = 834.08

HYDRAULIC DATA

DRAINAGE AREA = 3.52 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 7.58 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 70' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 863+85.00 ℄ U.S. HWY. 30 WBL — DECEMBER 2013

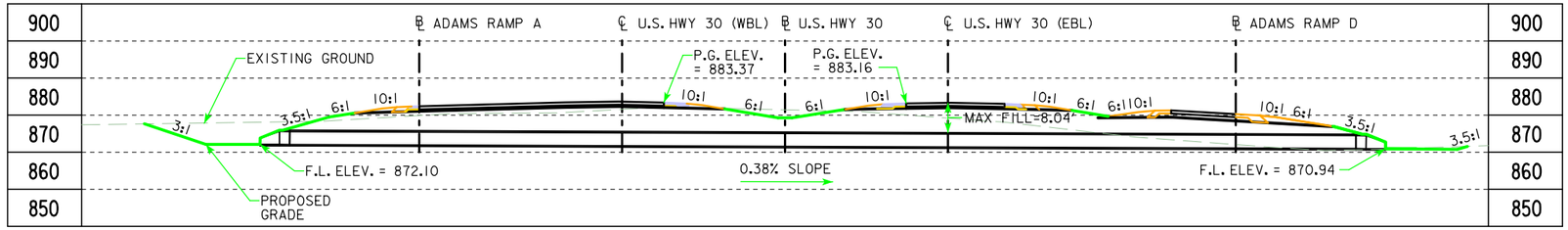
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

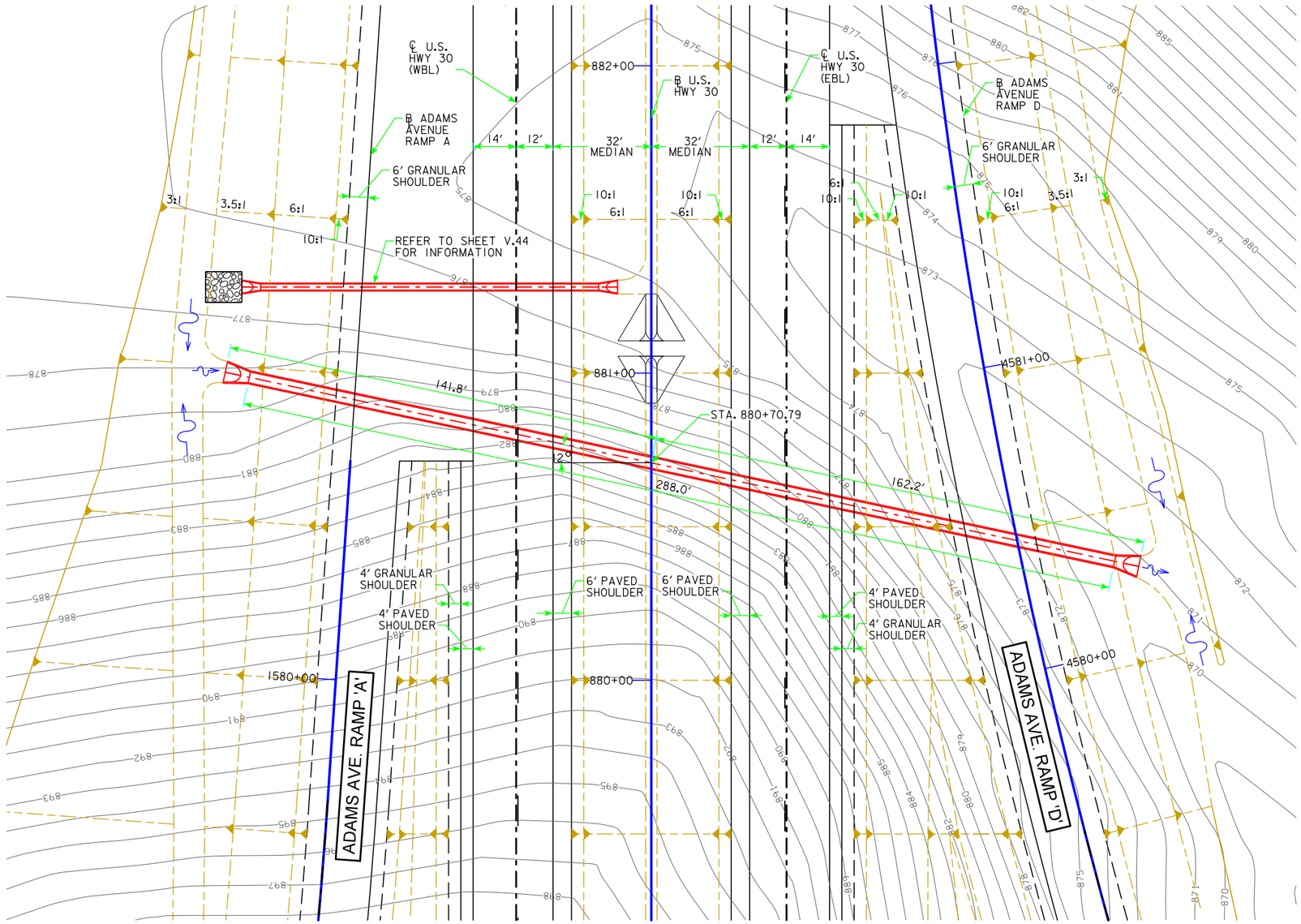
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.42

3:05:21 PM V81_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

BENCH MARK: #723
DESCRIPTION: REF PT 300FT EAST OF CP344 S SIDE HWY30
STA. 886+81.50, 59.624' RT.
ELEV. = 930.30'

HYDRAULIC DATA

DRAINAGE AREA = 26.29 ACRES 1/2 HILLY
1/2 ROLLING
DESIGN DISCHARGE, Q_{50}= 61.13 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-4W
SECTION 18
PIONEER TOWNSHIP
CEDAR COUNTY

0 ENGLISH 40
SCALE IN FEET

PRELIMINARY

DESIGN FOR 12° SKEW L.A.

42" X 288' REINFORCED CONCRETE PIPE

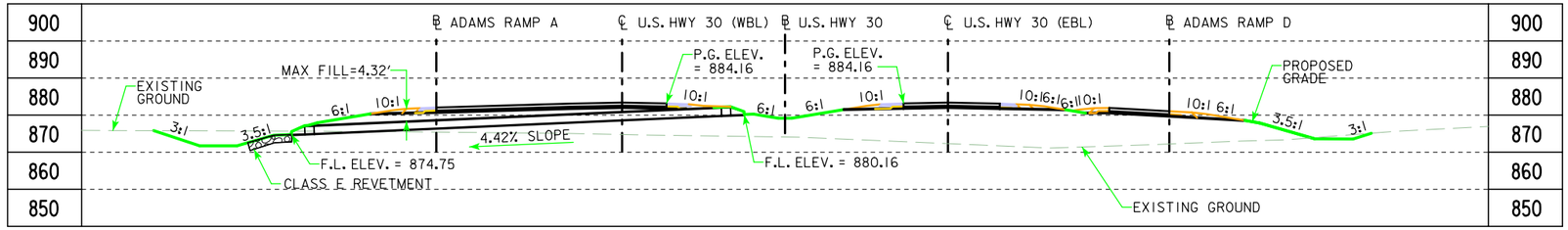
PLAT PLAN

STA. 880+70.79 ℄ U.S. HWY. 30 DECEMBER 2013

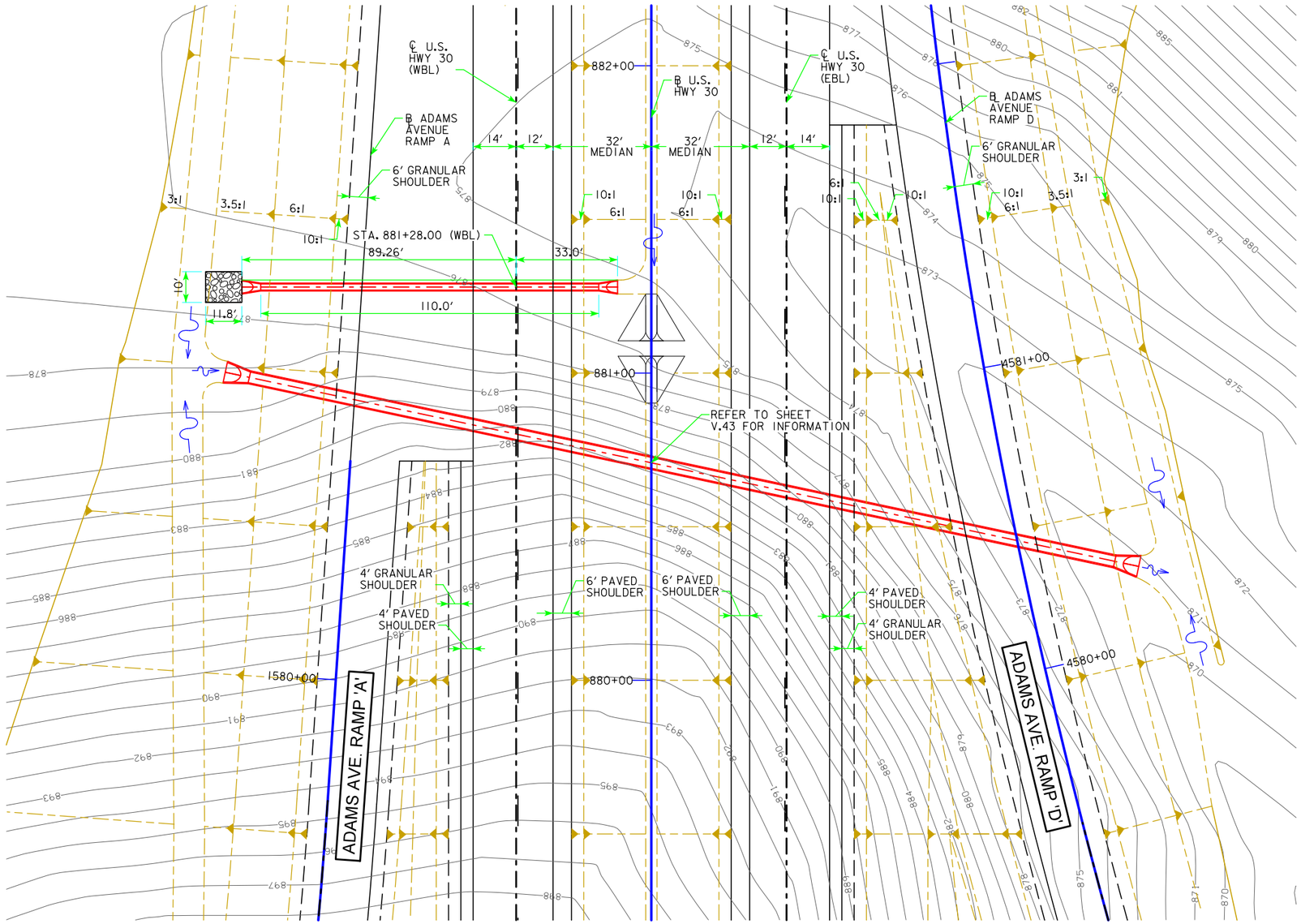
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

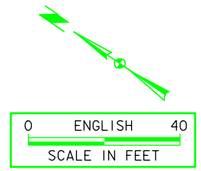
DESIGN SHEET NO. ___ OF ___ FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #723
DESCRIPTION: REF PT 300FT EAST OF CP344 S SIDE HWY30
STA. 886+81.50, 59.624' RT.
ELEV. = 930.30'

HYDRAULIC DATA

DRAINAGE AREA = 3.10 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 6.88 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-4W
SECTION 18
PIONEER TOWNSHIP
CEDAR COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 110' REINFORCED CONCRETE PIPE

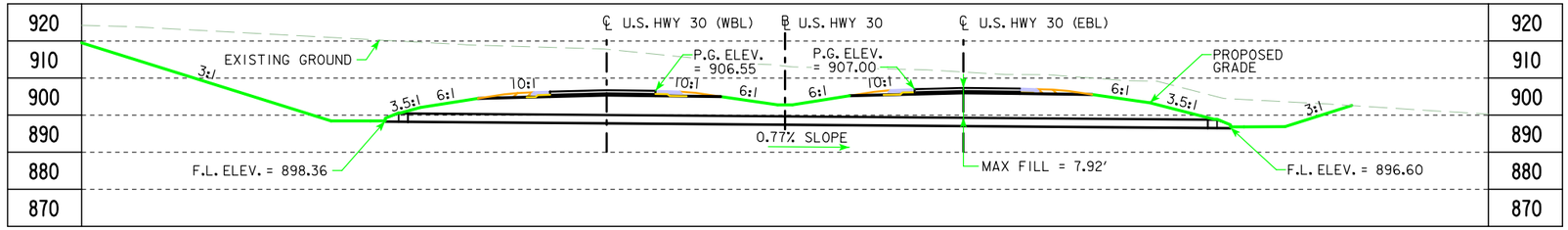
PLAT PLAN

STA. 881+28.00 ℄ U.S. HWY. 30 (WBL) DECEMBER 2013

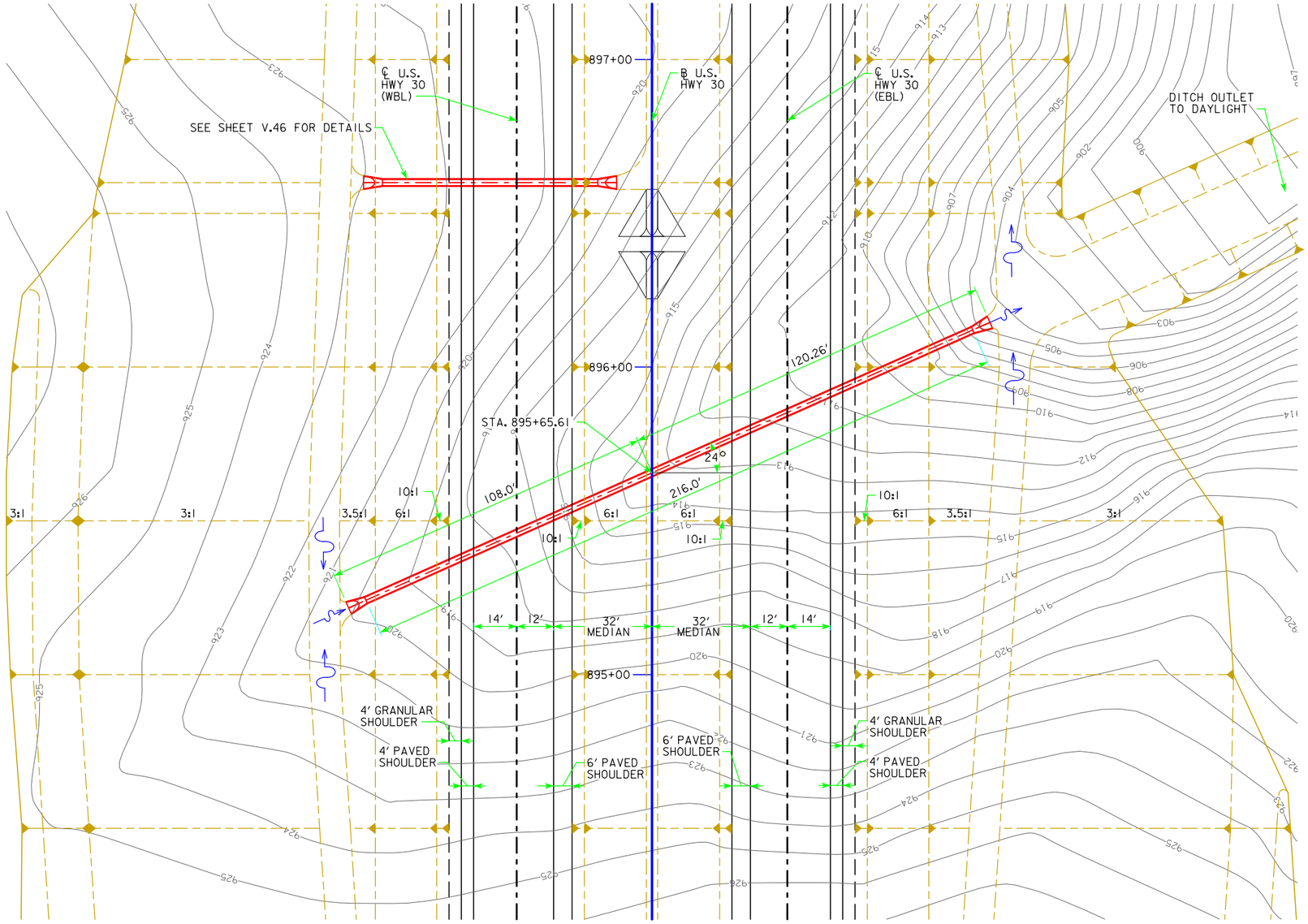
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ___ OF ___ FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

0 ENGLISH 40
SCALE IN FEET

BENCH MARK: #724
DESCRIPTION: SPIKE IN POLE NEAR CP345
STA. 897+03.77, 60.39' RT.
ELEV. = 904.64

HYDRAULIC DATA

DRAINAGE AREA = 5.19 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 12.72 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-4W
SECTION 18
PIONEER TOWNSHIP
CEDAR COUNTY

DESIGN FOR 24° SKEW R.A.

24" X 216' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 895+65.61 ℄ U.S. HWY. 30 DECEMBER 2013

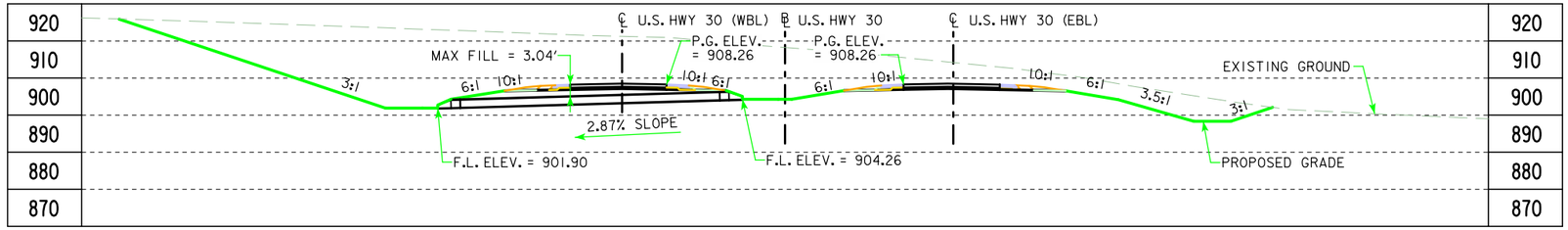
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

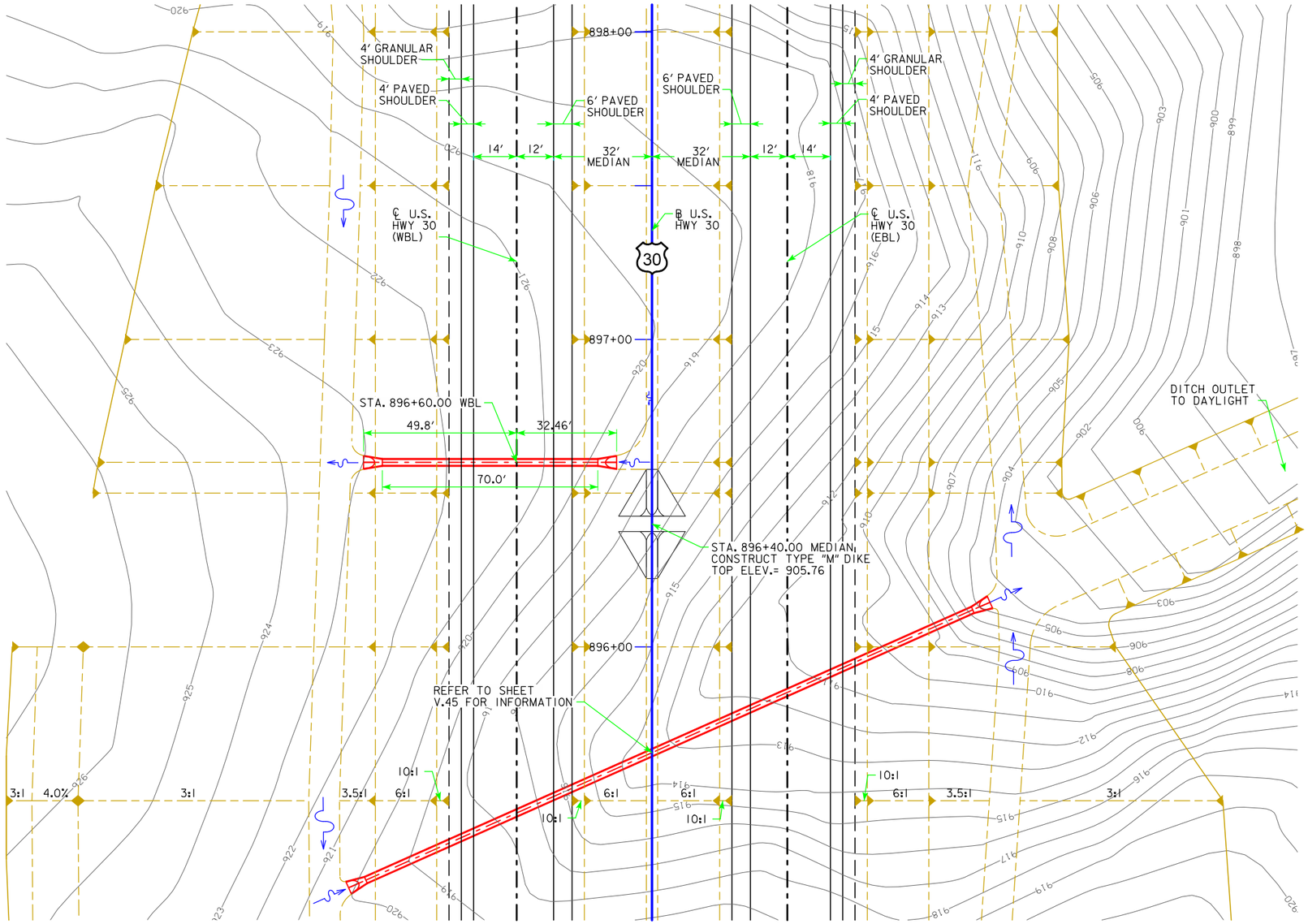
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER V.45

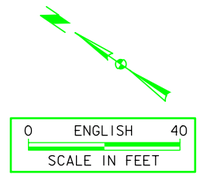
3:11:38 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #724
DESCRIPTION: SPIKE IN POLE NEAR CP345
STA. 897+03.77, 60.39' RT.
ELEV. = 904.64

HYDRAULIC DATA

DRAINAGE AREA = 3.25 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 7.13 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-4W
SECTION 18
PIONEER TOWNSHIP
CEDAR COUNTY

DESIGN FOR 0° SKEW

24" X 70' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 896+60.00 ℄ U.S. HWY. 30 WBL — DECEMBER 2013

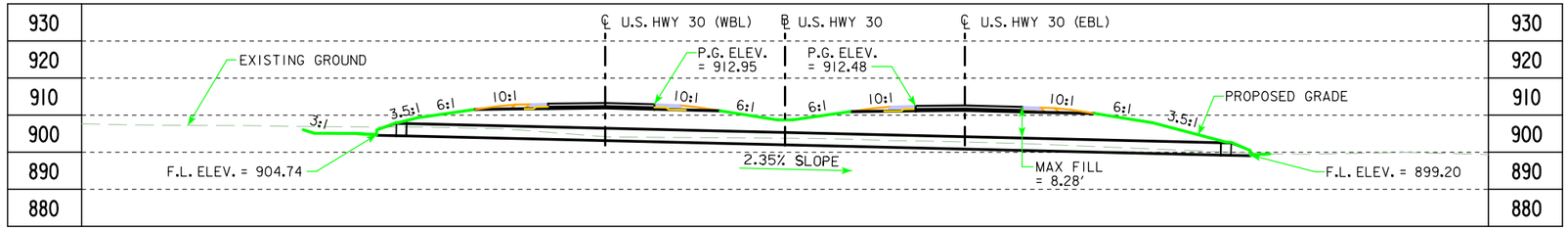
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

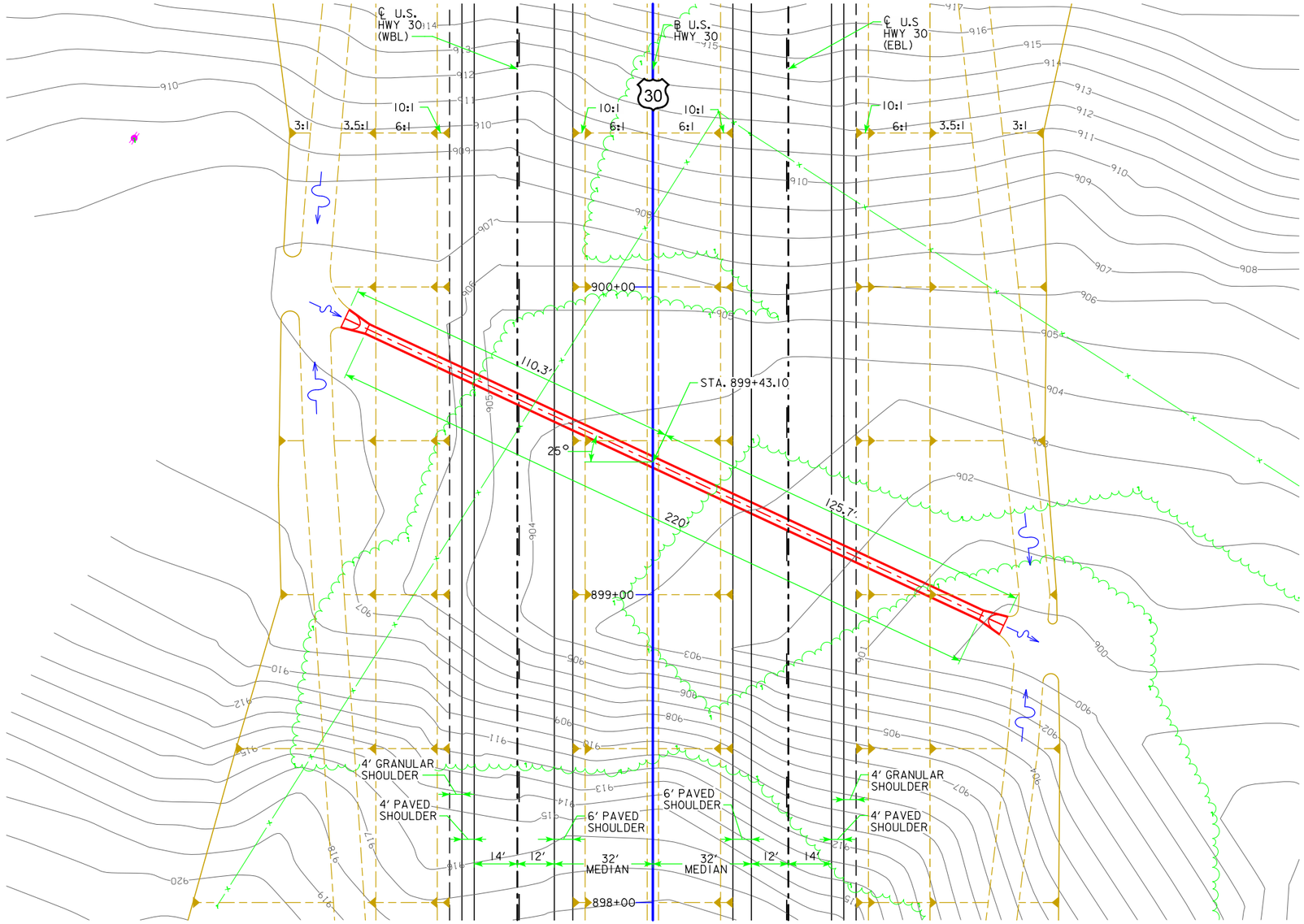
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.46

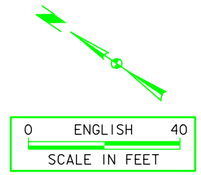
3:11:38 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #724
DESCRIPTION: SPIKE IN POLE NEAR CP345
STA. 897+03.77, 60.393' RT.
ELEV. = 904.63'

HYDRAULIC DATA

DRAINAGE AREA = 19.10 ACRES ROLLING
DESIGN DISCHARGE, Q_{50} = 41.10 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-4W
SECTION 18
PIONEER TOWNSHIP
CEDAR COUNTY

PRELIMINARY

DESIGN FOR 25° SKEW L.A.

36" X 220' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 899+43.10 ℄ U.S. HWY. 30 DECEMBER 2013

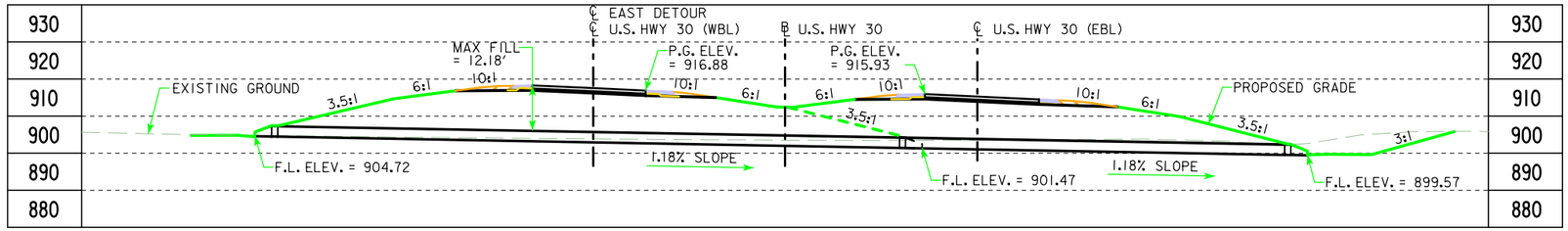
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

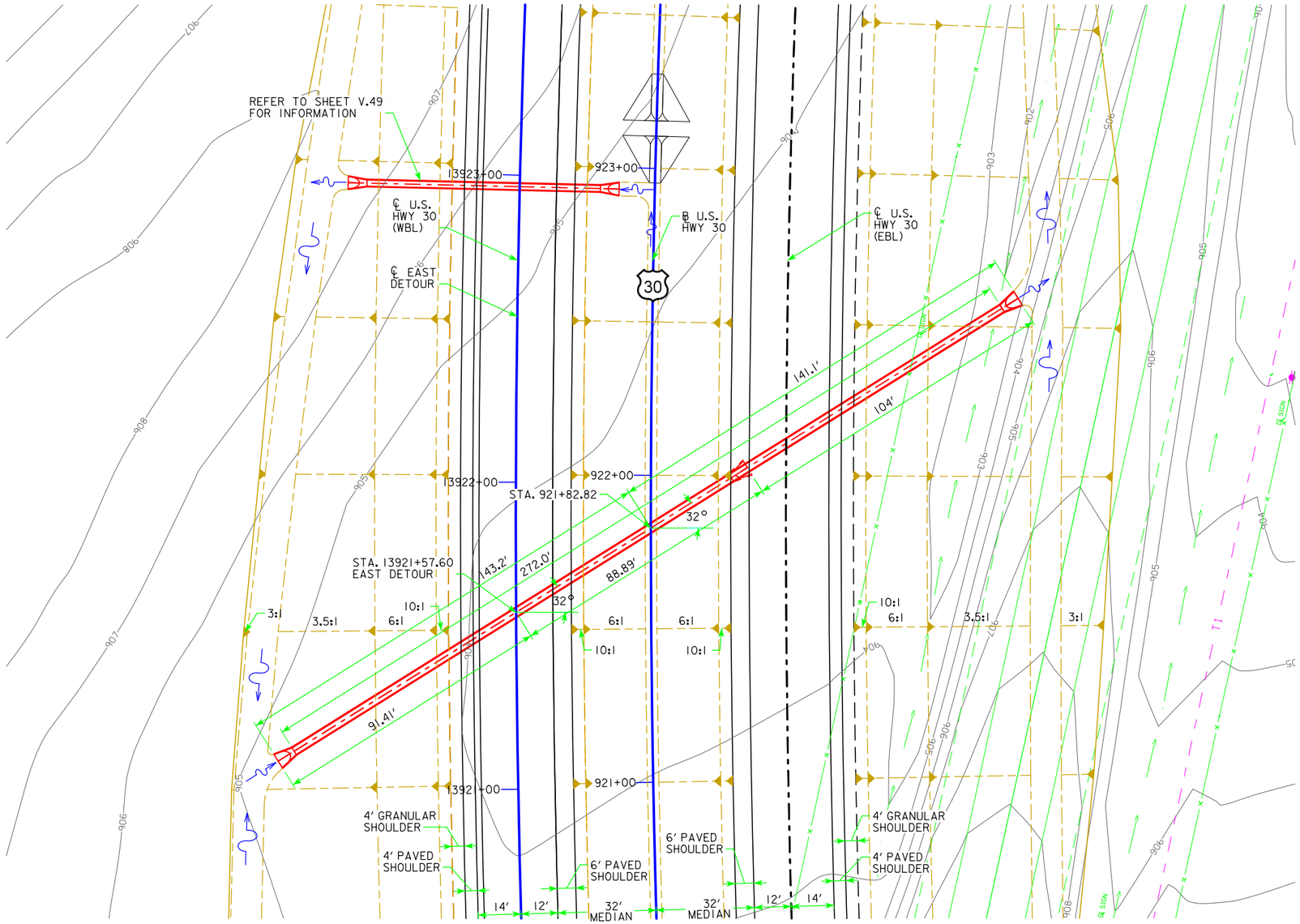
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.47

3:11:39 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

0 ENGLISH 40
SCALE IN FEET

BENCH MARK: #726
DESCRIPTION: RAILROAD RAIL(VERTICAL)
ROW MARKER POST 150FT EAST OF MILE POST 270
STA. 929+84.63, 59.92' RT.
ELEV. = 882.58

HYDRAULIC DATA

DRAINAGE AREA = 8.71 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 22.63 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-4W
SECTION 7
PIONEER TOWNSHIP
CEDAR COUNTY

STAGING NOTES

CONSTRUCT NORTHERN PORTION OF PIPE WITH EAST DETOUR (STAGE 1).

EXTEND PIPE TO SOUTH WITH STAGE 2 CONSTRUCTION.

PRELIMINARY

DESIGN FOR 32° SKEW R.A.

30" X 272' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 921+82.82 ℄ U.S. HWY. 30 FEBRUARY 2014

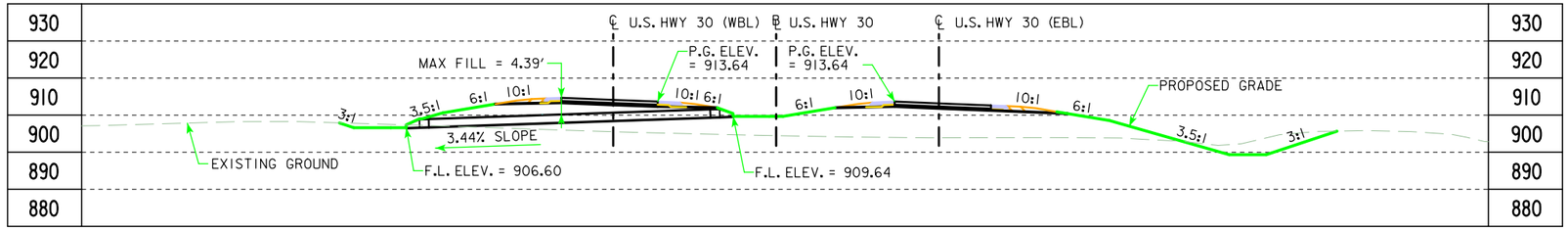
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

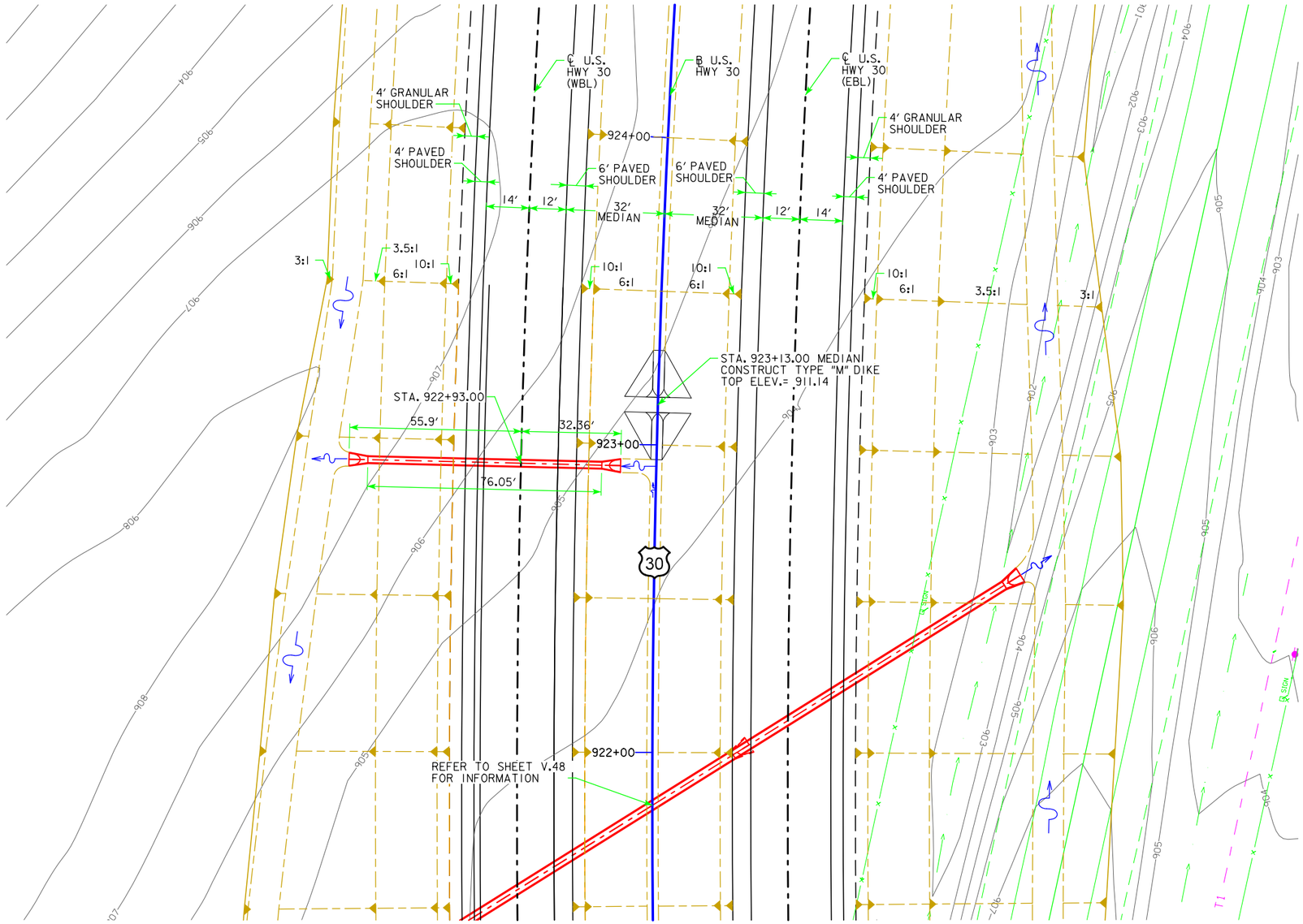
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.48

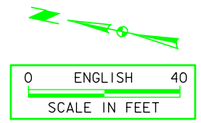
3:11:40 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #726
DESCRIPTION: RAILROAD RAIL(VERTICAL)
ROW MARKER POST 150FT EAST OF
MILE POST 270
STA. 929+84.63, 59.92' RT.
ELEV. = 882.58

HYDRAULIC DATA

DRAINAGE AREA = 2.26 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 5.41 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-4W
SECTION 7
PIONEER TOWNSHIP
CEDAR COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 76' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 922+93.00 ℄ U.S. HWY. 30 WBL — DECEMBER 2013

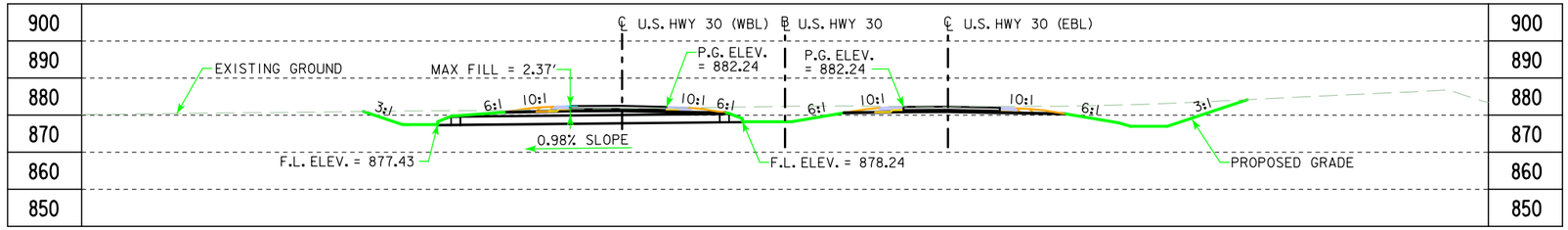
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

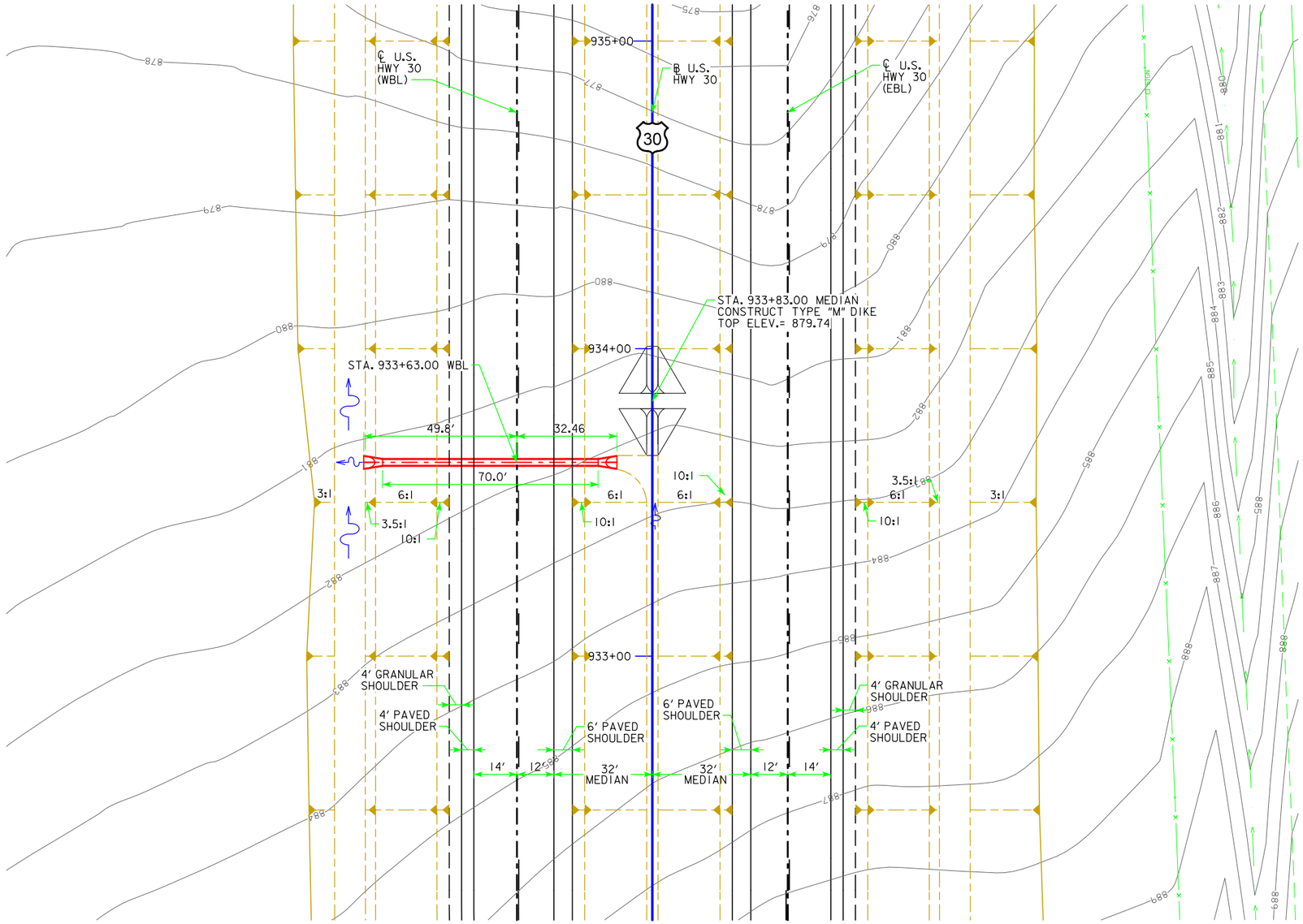
DESIGN SHEET NO. ___ OF ___ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.49

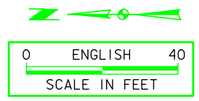
3:11:41 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #726
DESCRIPTION: RAILROAD RAIL(VERTICAL)
ROW MARKER POST 150FT EAST OF
MILE POST 270
STA. 929+84.63, 59.916' RT.
ELEV. = 882.58

HYDRAULIC DATA

DRAINAGE AREA = 2.22 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 4.75 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-4W
SECTION 8
PIONEER TOWNSHIP
CEDAR COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 70' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 933+63.00 ℄ U.S. HWY. 30 WBL

DECEMBER 2013

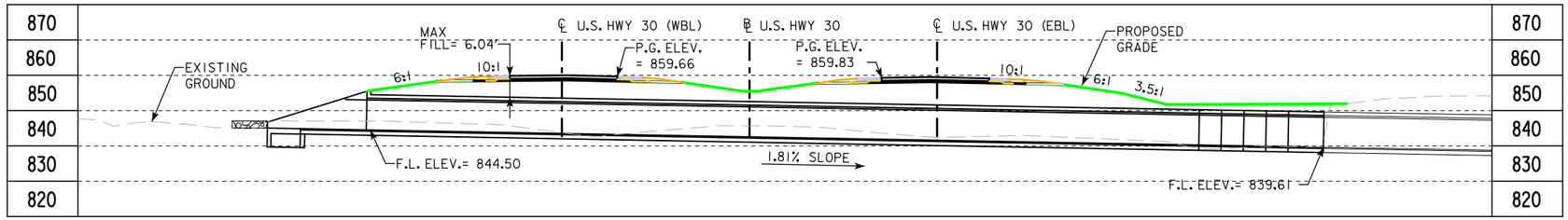
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.50

3:11:41 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT

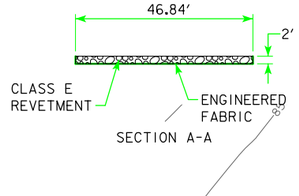
BENCH MARK: #727
DESCRIPTION: CHISELED CROSS ON FIRST 30IN RCP EAST OF CP348
STA. 914+83.05, 28.092' RT.
ELEV. = 882.84'

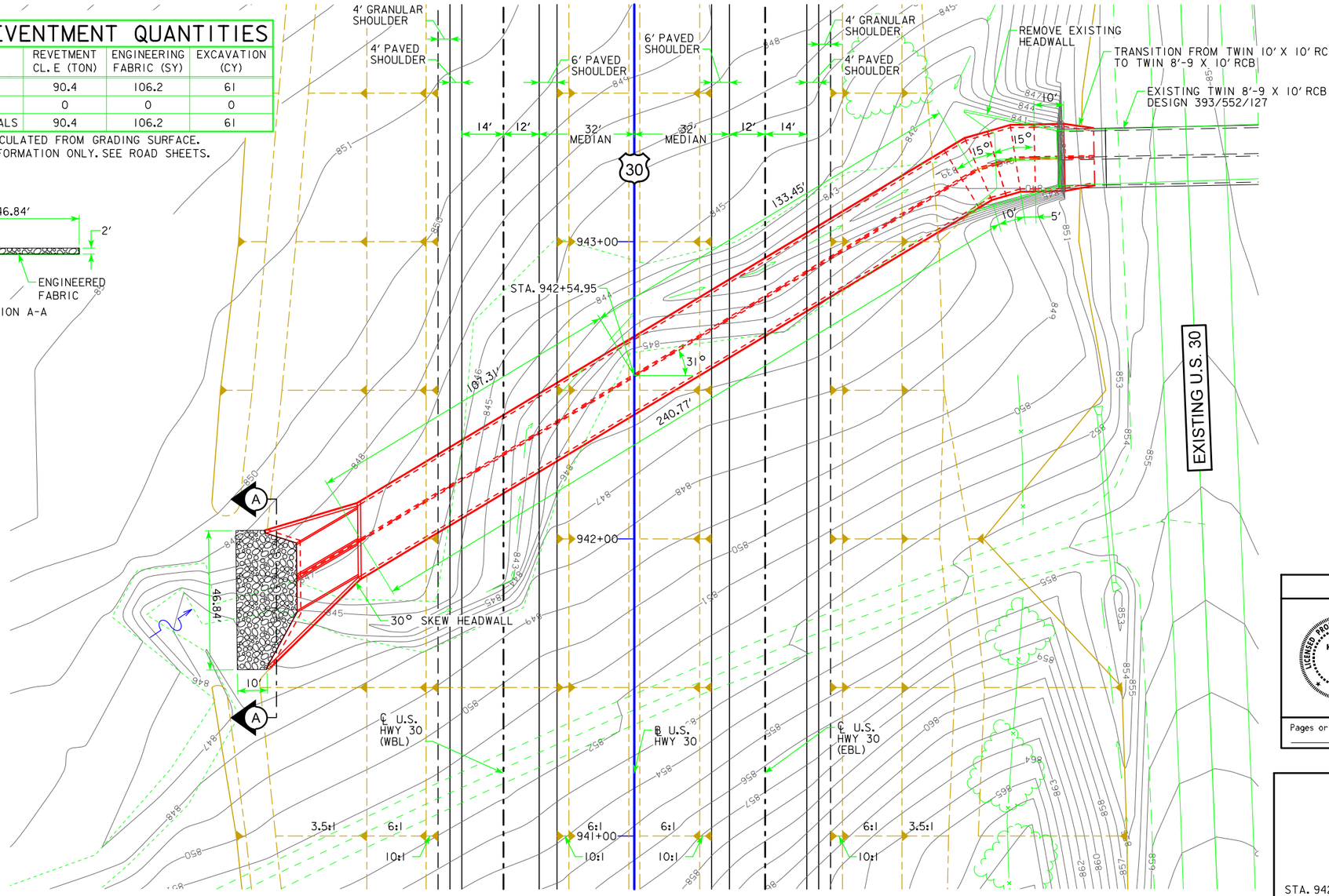
0 ENGLISH 40
SCALE IN FEET

ESTIMATED REVENTMENT QUANTITIES

LOCATION	REVETMENT CL. E (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
INLET	90.4	106.2	61
OUTLET	0	0	0
TOTALS	90.4	106.2	61

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE.
QUANTITIES SHOWN FOR INFORMATION ONLY. SEE ROAD SHEETS.





SITUATION PLAN

PROPOSED PROFILE GRADE

VPI 943+00.00
Elv = 854.60
K = 182
Len = 810 Ft

TRAFFIC ESTIMATE:

2009 AADT, 10,600 VPD
2035 AADT, 16,700 VPD
10% TRUCKS
DESIGN ESALs _____

HYDRAULIC DATA

DRAINAGE AREA = 1.42 SQ. MILES ROLLING
DESIGN DISCHARGE, Q_{50}= 840.00 CFS
Q_{100}= 1,025 CFS
Q_{500}= 1,151 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30 OVER UNNAMED STREAM
T-82N R-4W
SECTION 8/17
PIONEER TOWNSHIP
CEDAR COUNTY
LAT 41.918816
LONG -91.342469
FHWA# 700565

HYDRAULIC DESIGN

LICENSED PROFESSIONAL ENGINEER — Kyle D. Riley 20550 — 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 03-21-2014 Date

Kyle D. Riley
Printed or Typed Name

My license renewal date is December 31, 2014

Pages or sheets covered by this seal: V.51 (HYDRAULIC DATA)

PRELIMINARY

DESIGN FOR 31° SKEW R.A

TWIN 10' X 10' REINFORCED CONCRETE BOX CULVERT EXTENSION SITUATION PLAN

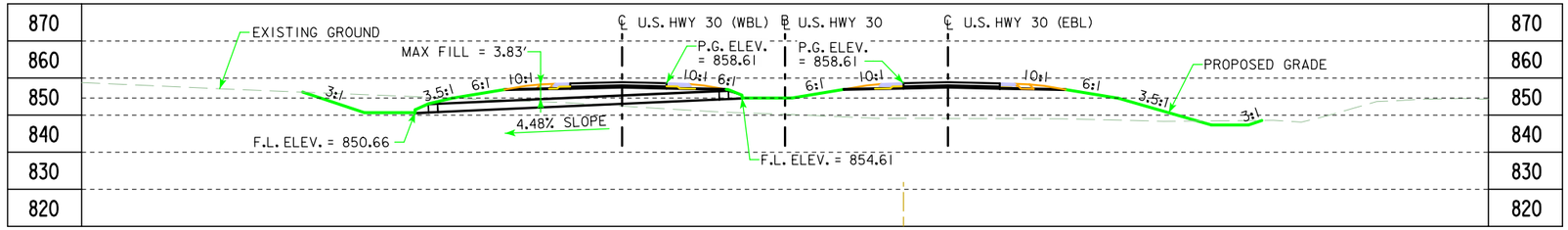
STA. 942+54.95 ℄ U.S. HWY. 30 MARCH 2014

CEDAR COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

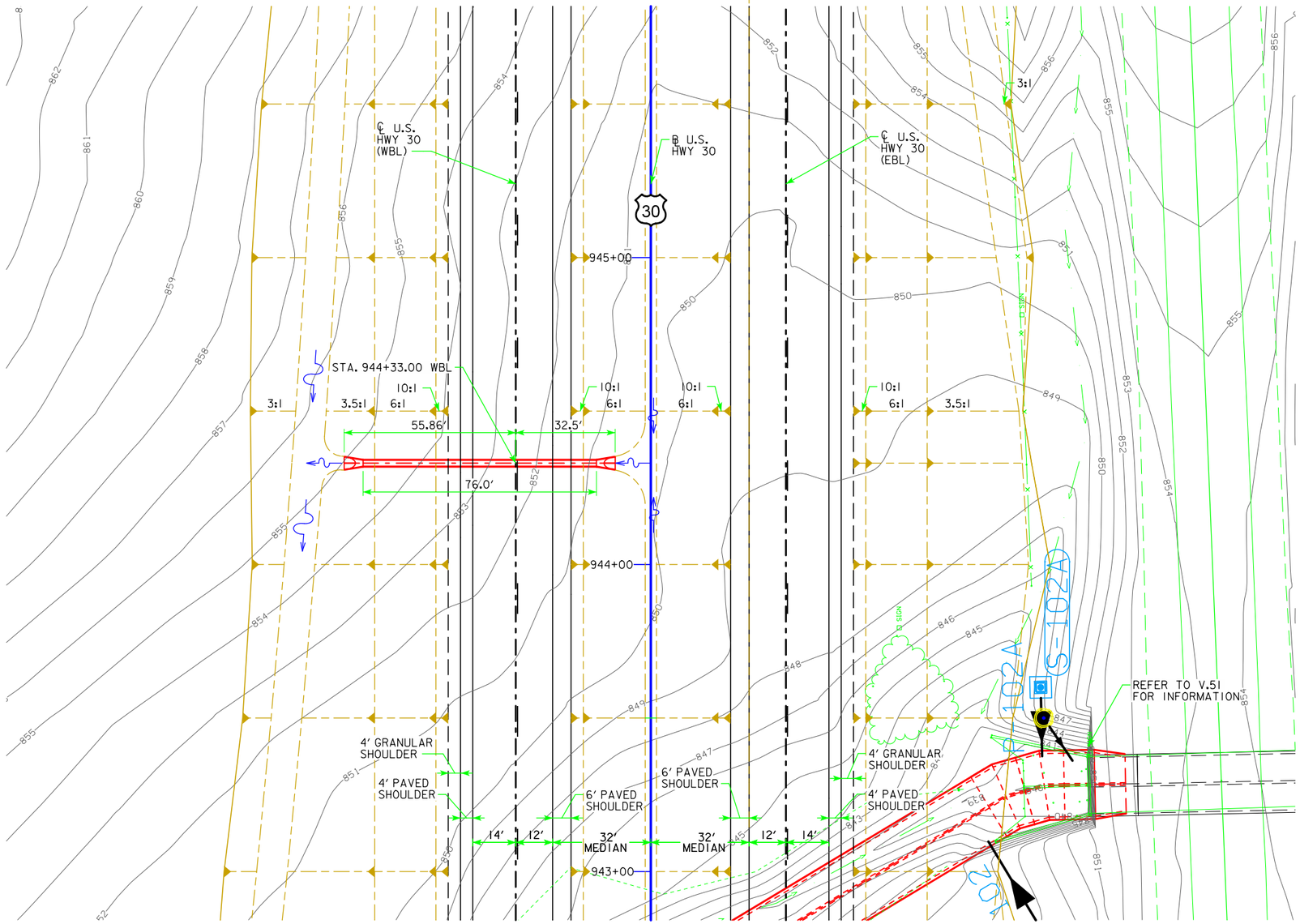
DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 116

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.51

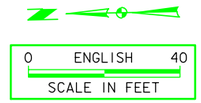
3:11:57 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #727
DESCRIPTION: CHISELED CROSS ON FIRST 30IN RCP EAST OF CP348US63/180TH STREET INTERSECTION.
STA. 941+83.05, 28.09' RT.
ELEV. = 882.83

HYDRAULIC DATA

DRAINAGE AREA = 3.63 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 7.76 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-4W
SECTION 8
PIONEER TOWNSHIP
CEDAR COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 76' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 944+33.00 ℄ U.S. HWY. 30 WBL DECEMBER 2013

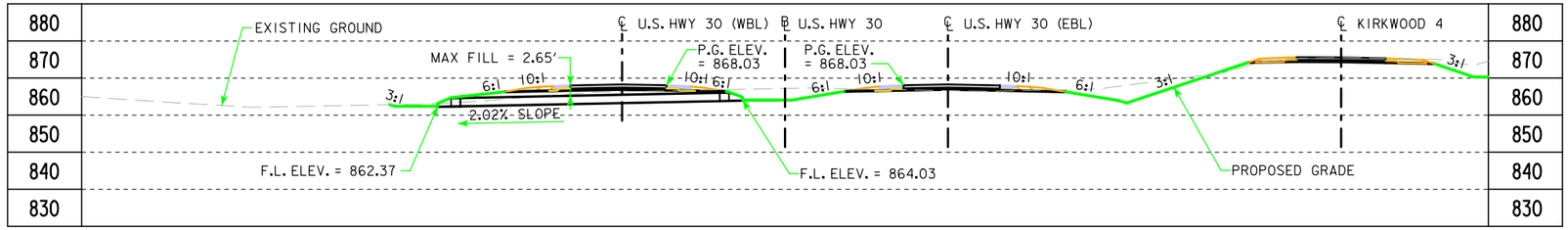
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

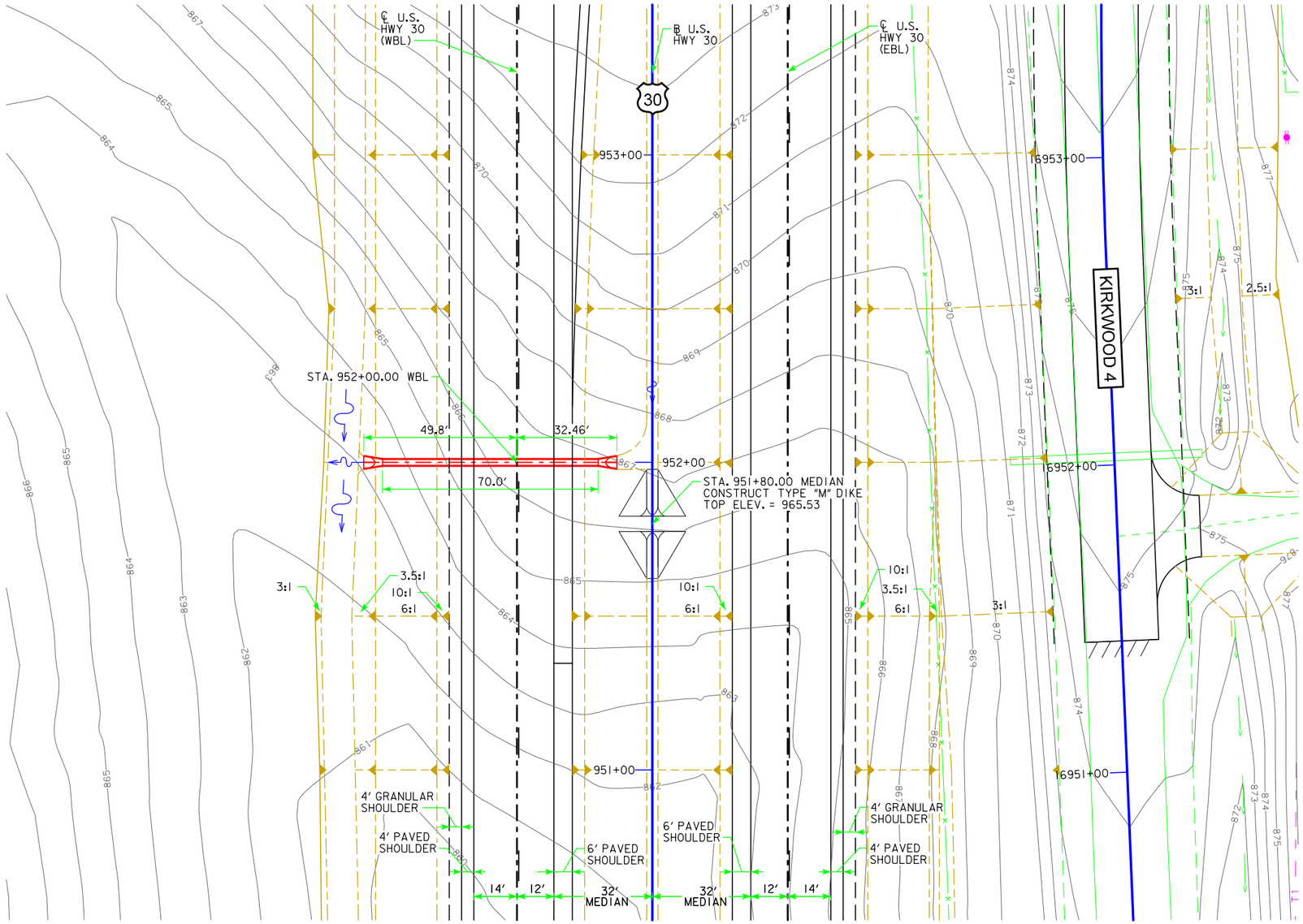
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.52

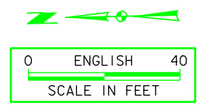
3:11:58 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #727
DESCRIPTION: CHISELED CROSS ON FIRST 30IN RCP EAST OF CP348
STA. 941+83.05, 28.092' RT.
ELEV. = 882.837

HYDRAULIC DATA

DRAINAGE AREA = 3.09 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 6.86 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-4W
SECTION 8
PIONEER TOWNSHIP
CEDAR COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 70' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 952+00.00 ℄ U.S. HWY. 30 WBL — DECEMBER 2013

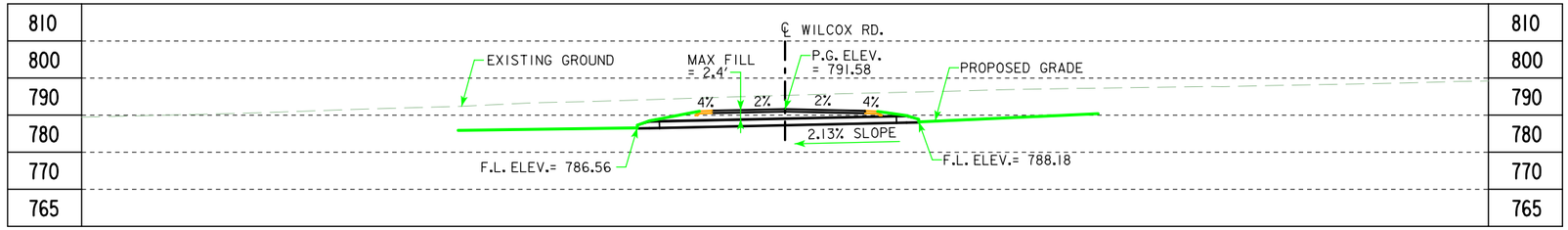
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

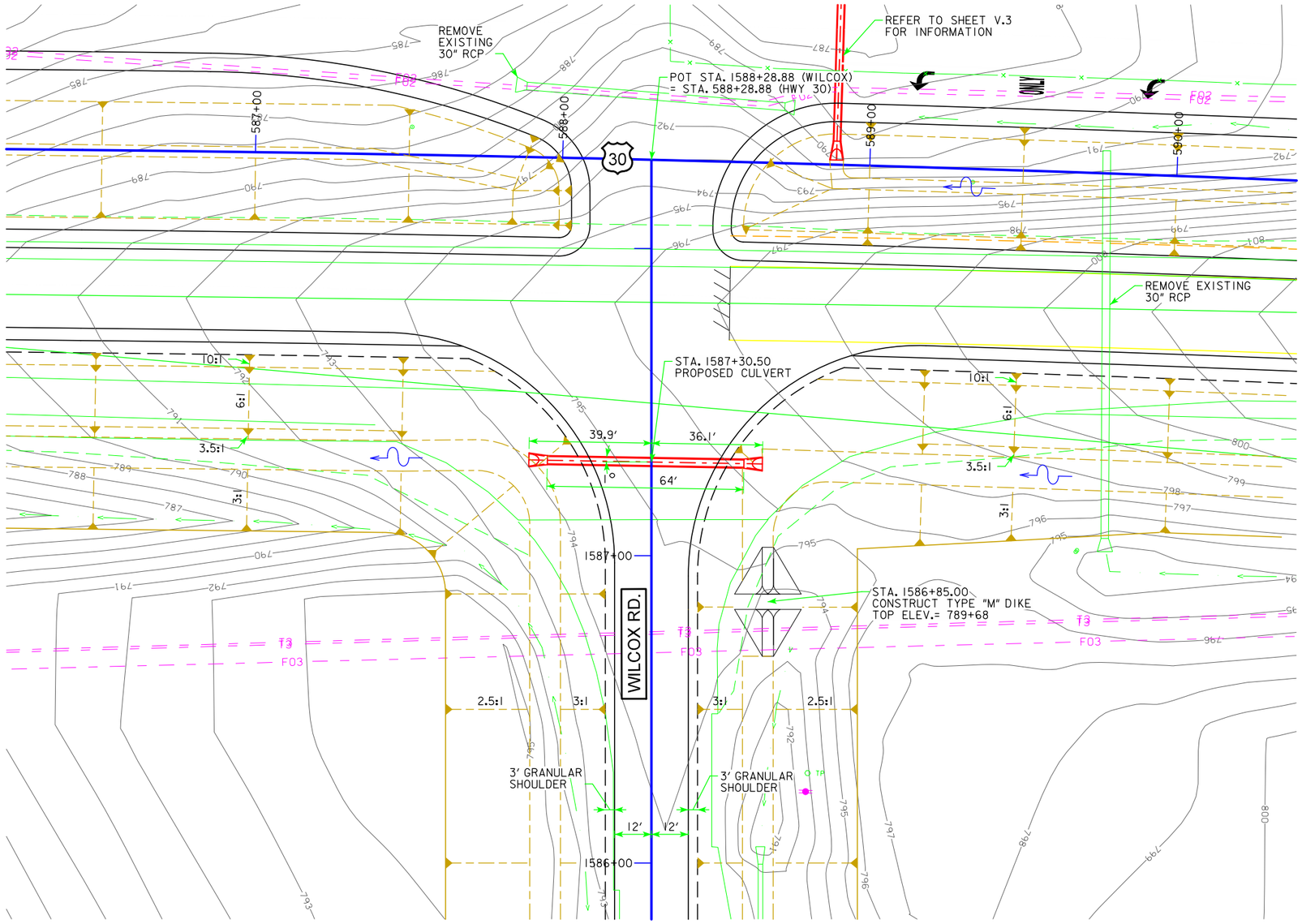
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.53

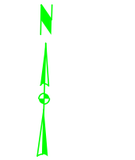
3:11:58 PM V81_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #520
DESCRIPTION: CUT X IN RCP
STA. 587+83.21, 1,301.789' RT.
ELEV. = 763.31'

HYDRAULIC DATA

DRAINAGE AREA = 4.18 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 12.95 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

WILCOX ROAD
T-82N R-5W
SECTION 17/18
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 1° L.A. SKEW

29" X 18" X 64' REINFORCED CONCRETE ARCH PIPE

PLAT PLAN

STA. 1587+30.50 ℄ WILCOX ROAD — DECEMBER 2013

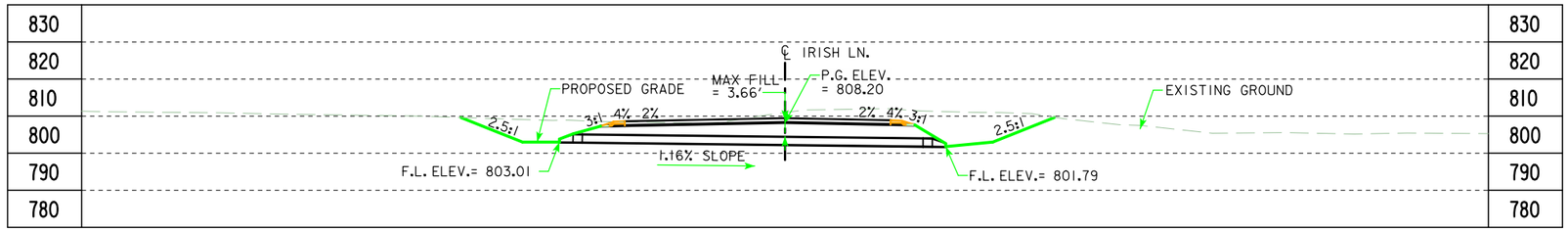
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

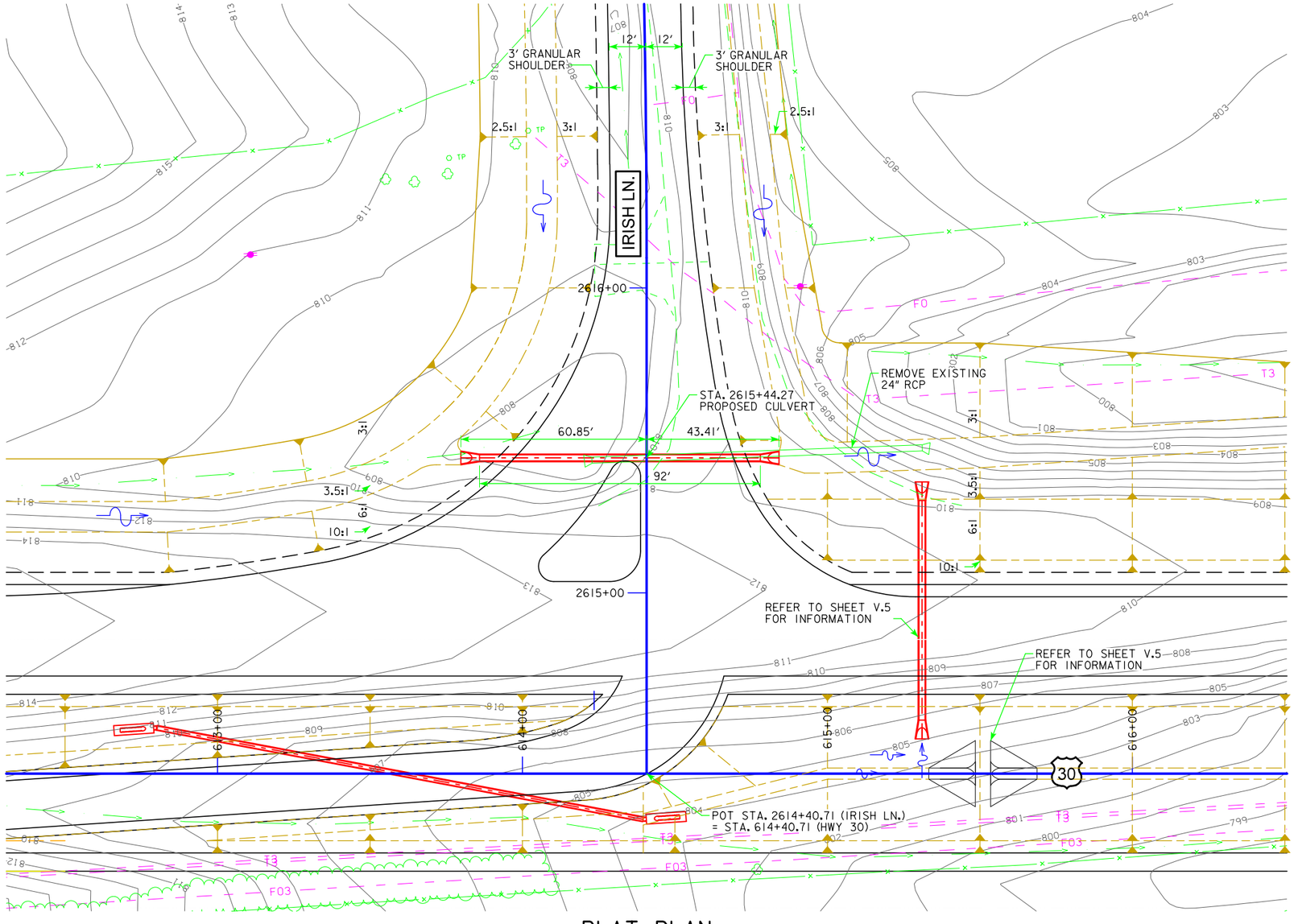
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.56

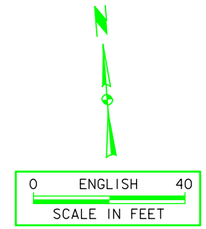
3:11:59 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #515
DESCRIPTION: SPIKE IN POWER POLE NE QUAD IRISH LN & HWY30
STA. 614+54.49, 97.104' LT.
ELEV. = 825.35'

HYDRAULIC DATA

DRAINAGE AREA = 3.91 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 12.31 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

IRISH LANE
T-82N R-5W
SECTION 17
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 92' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 2615+44.27 ℄ IRISH LANE — FEBRUARY 2013

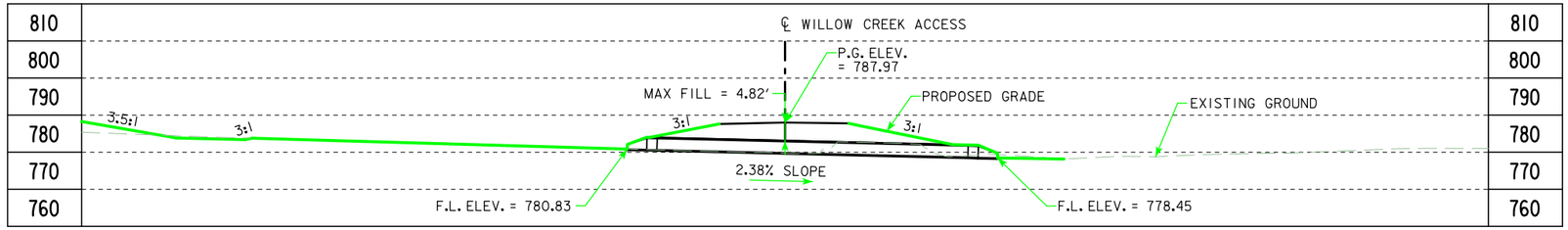
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

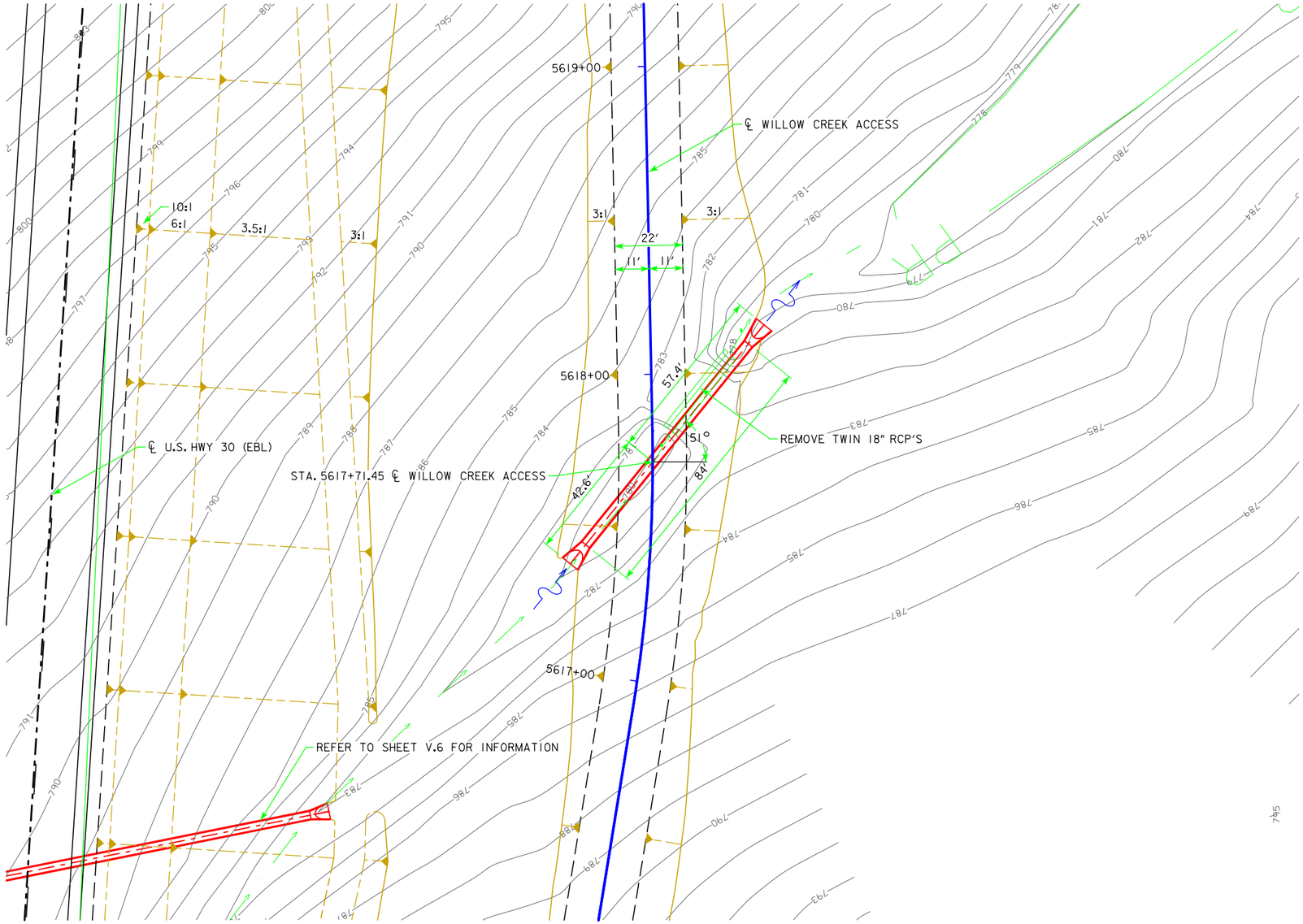
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.57

3:12:00 PM V81_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

0 ENGLISH 40
SCALE IN FEET

BENCH MARK: #516
DESCRIPTION:
SPIKE IN POWER POLE NE QUAD IRISH LN & HWY30.
STA. 614+54.49, 97.104' LT.
ELEV. = 825.350

HYDRAULIC DATA

DRAINAGE AREA = 21.71 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 45.30 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 8/17
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 51° SKEW R.A.

36" X 84' UNCLASSIFIED PIPE

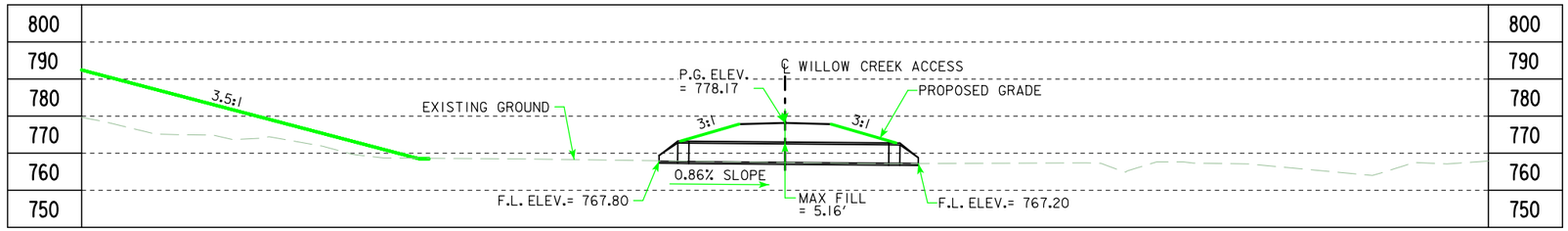
PLAT PLAN

STA. 5617+71.45 ℄ WILLOW CREEK ACCESS DECEMBER 2013

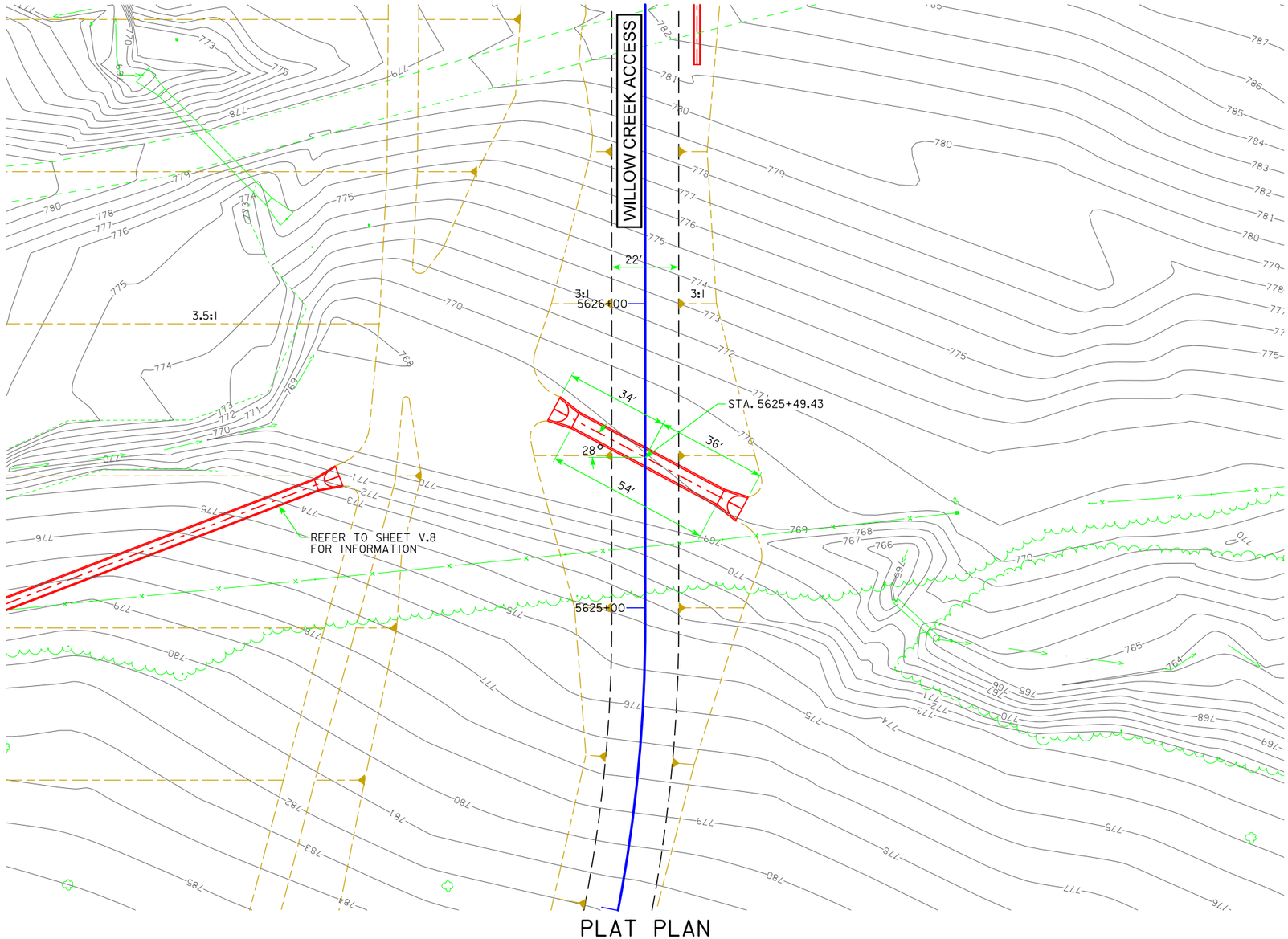
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

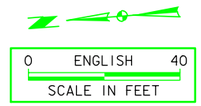
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #521
DESCRIPTION: SPIKE IN POWER POLE 3RD NORTH FROM BRIDGE ON WILCOX CR
STA. 640+72.34, 992.682' RT.
ELEV. = 780.68'

HYDRAULIC DATA

DRAINAGE AREA = 87.07 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 130.19 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 17
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 28° SKEW L.A.

60" X 54'
UNCLASSIFIED PIPE

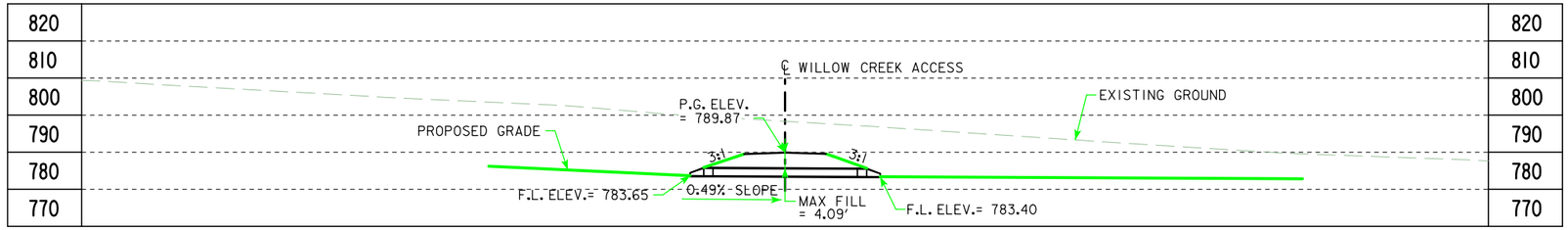
PLAT PLAN

STA. 5625+49.43 ℄ WILLOW CREEK ACCESS DECEMBER 2013

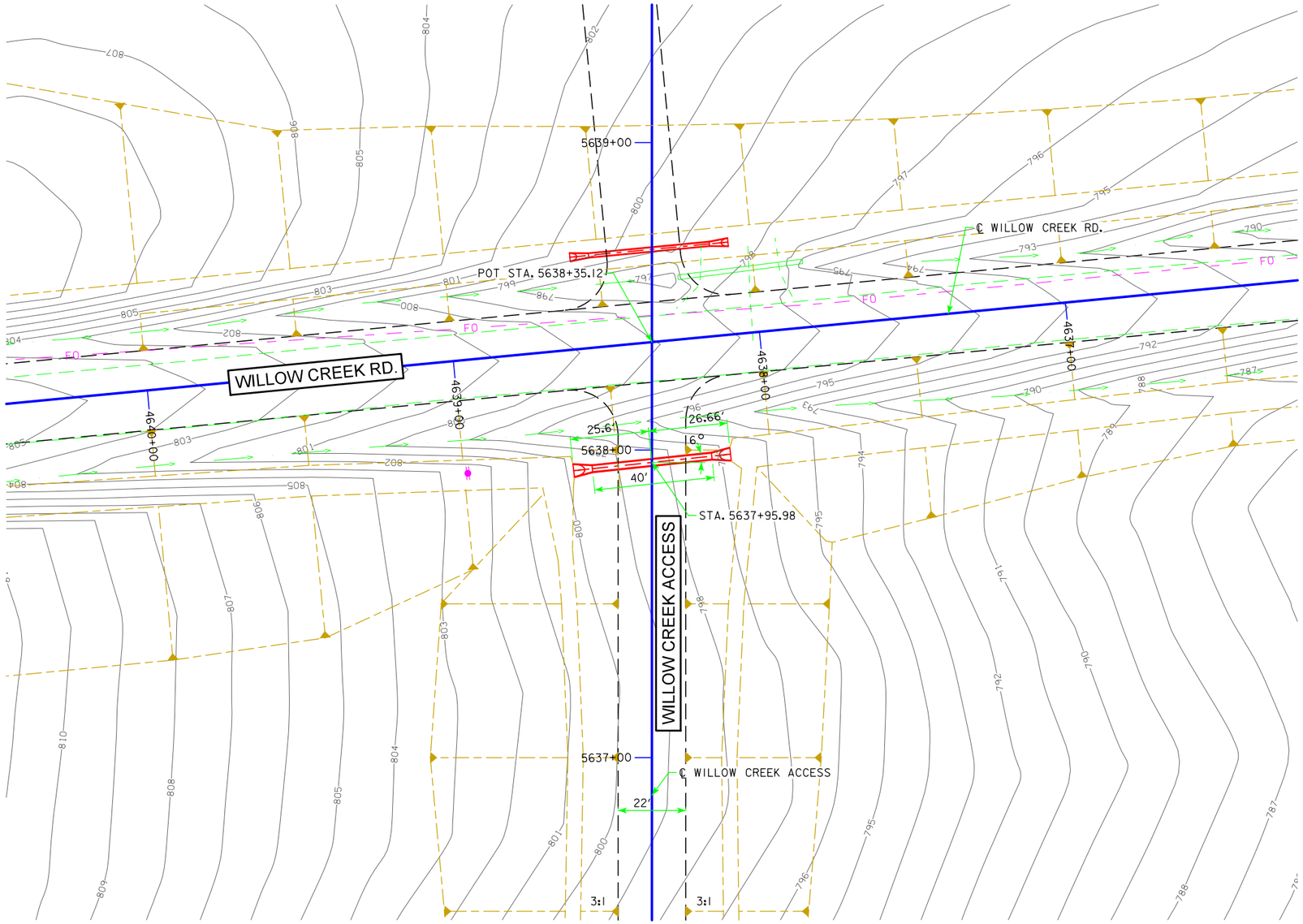
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

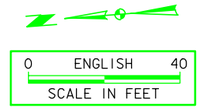
DESIGN SHEET NO. ___ OF ___ FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #518
DESCRIPTION: CUT X NORTH END RCP NORTH DITCH AT CEDAR RIVER SIGN
STA. 543+43.75, 139.553' LT.
ELEV. = 750.28'

HYDRAULIC DATA

DRAINAGE AREA = 2.99 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 10.05 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 17
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 6° SKEW R.A.

24" X 40' UNCLASSIFIED PIPE

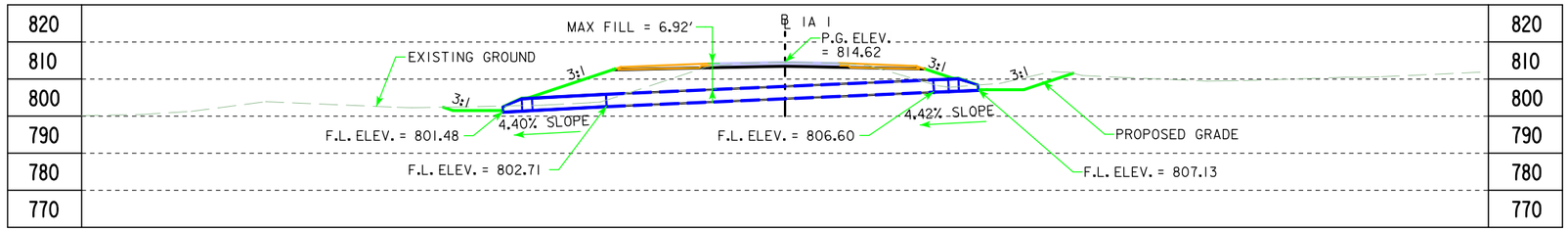
PLAT PLAN

STA. 5637+95.98 ℄ WILLOW CREEK ACCESS DECEMBER 2013

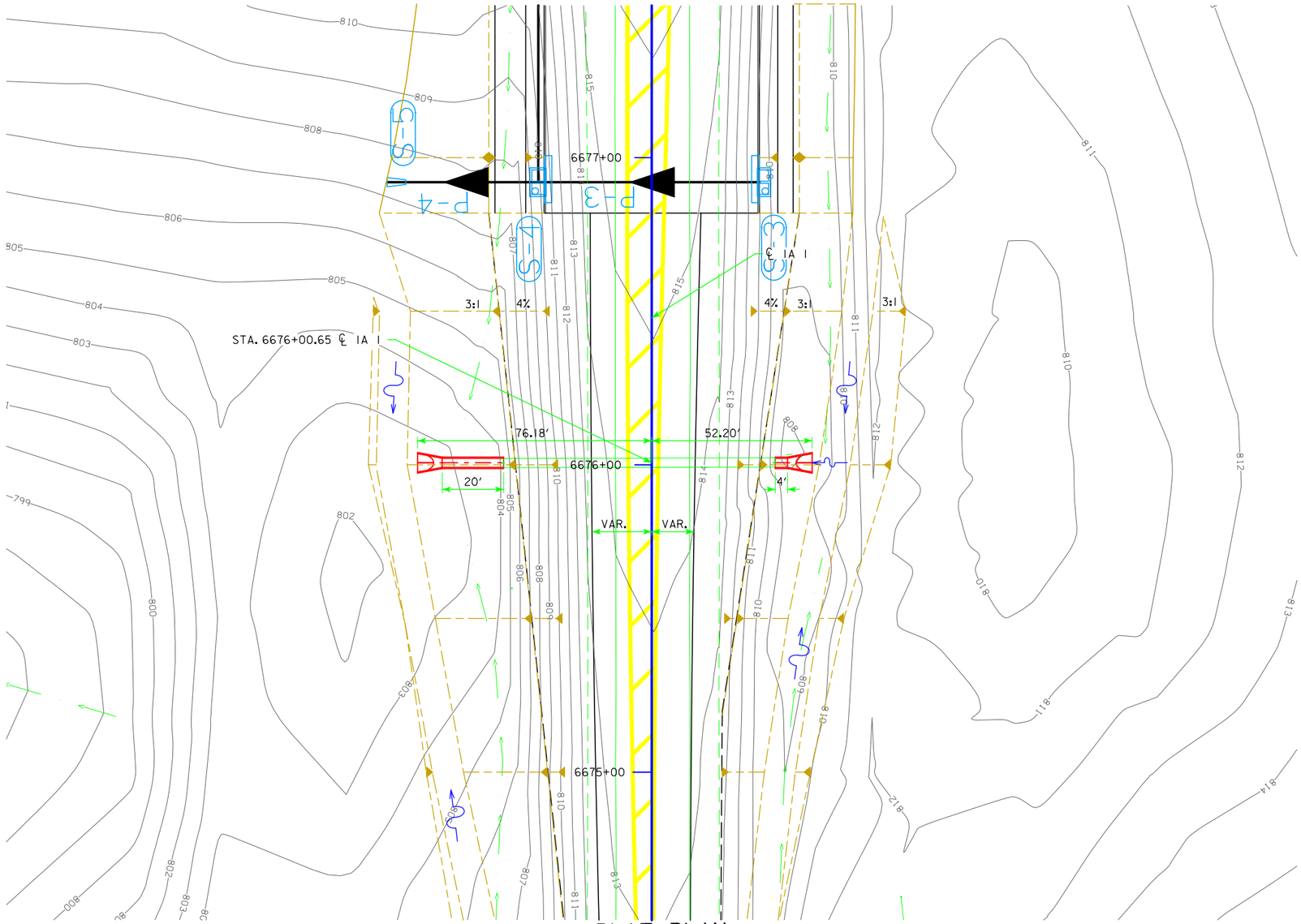
LINN COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER V.58B

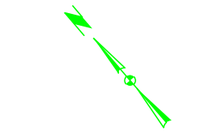
3:12:02 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #529
DESCRIPTION: SPIKE IN GATE POST NEXT TO CP309
STA. 682+26.52, 4812.628' RT.
ELEV. = 764.690

HYDRAULIC DATA

DRAINAGE AREA = 8.77 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 22.75 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

36" X 24' REINFORCED CONCRETE PIPE EXTENSION

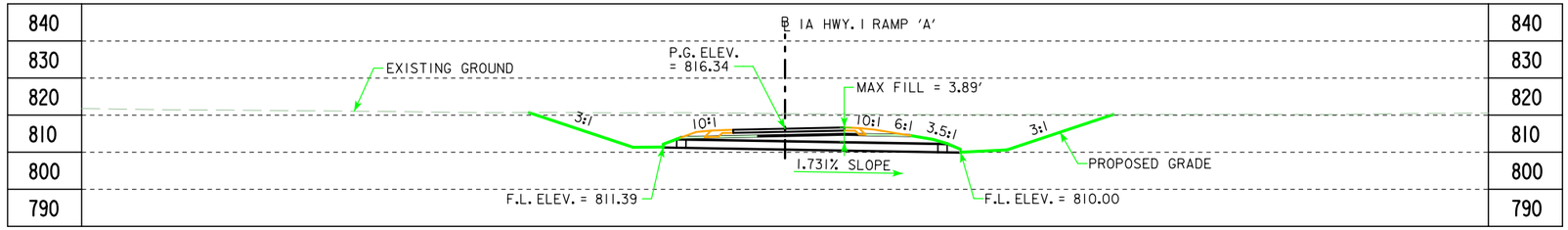
PLAT PLAN

STA. 6676+00.65 ℄ IA I — DECEMBER 2013

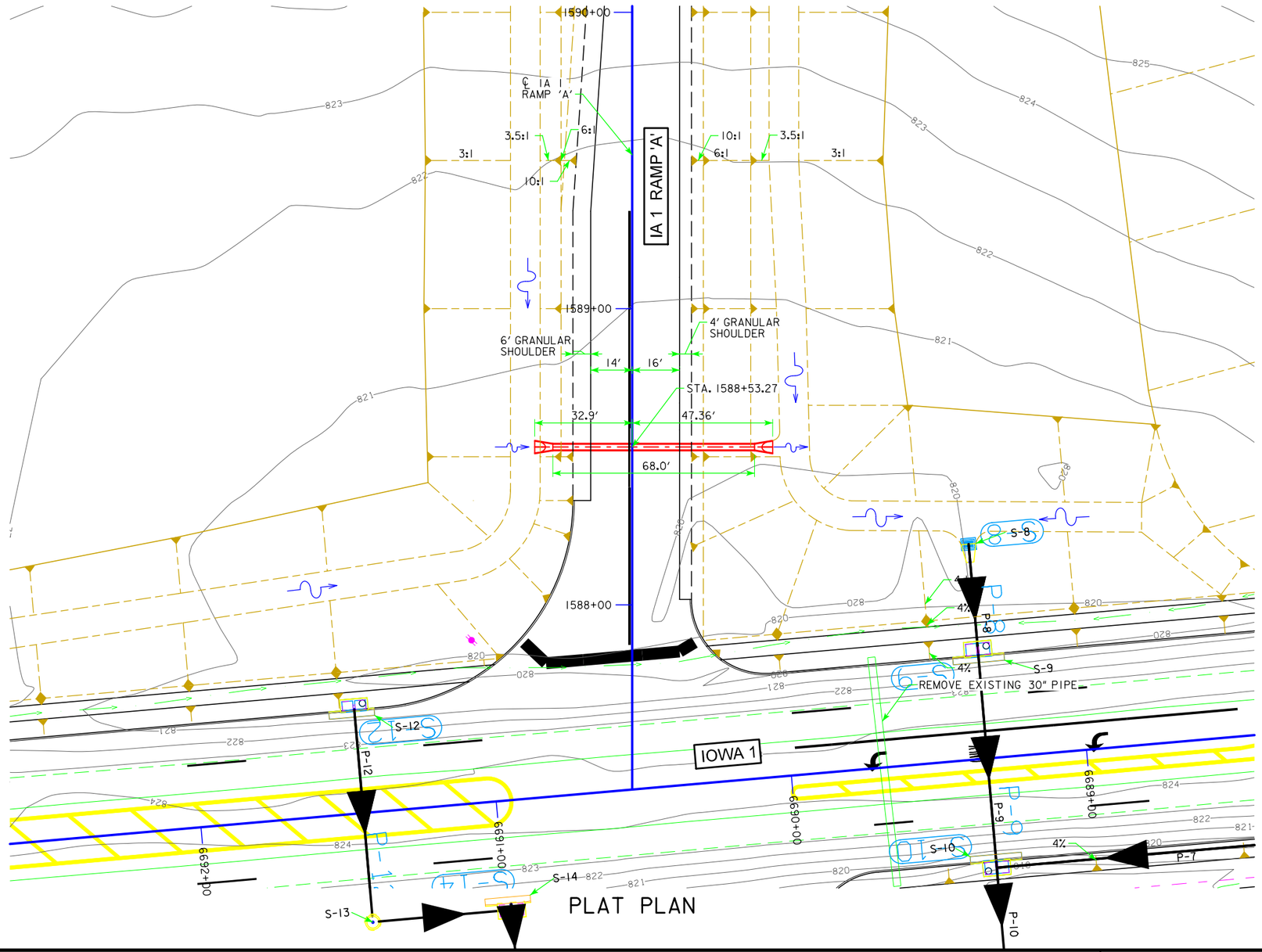
LINN COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.59

3:48:04 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



0 ENGLISH 40
SCALE IN FEET

BENCH MARK: #524
DESCRIPTION: SPIKE IN POWER POLE 2ND POWER POLE SOUTH OF CLINIC
STA. 688+30.87, 1,164.889' RT.
ELEV. = 825.05

HYDRAULIC DATA

DRAINAGE AREA = 4.92 ACRES ROLLING
DESIGN DISCHARGE, Q_{50} = 14.65 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

IOWA I RAMP 'A'
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 68' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 1588+53.27 ℄ IA I RAMP 'A' DECEMBER 2013

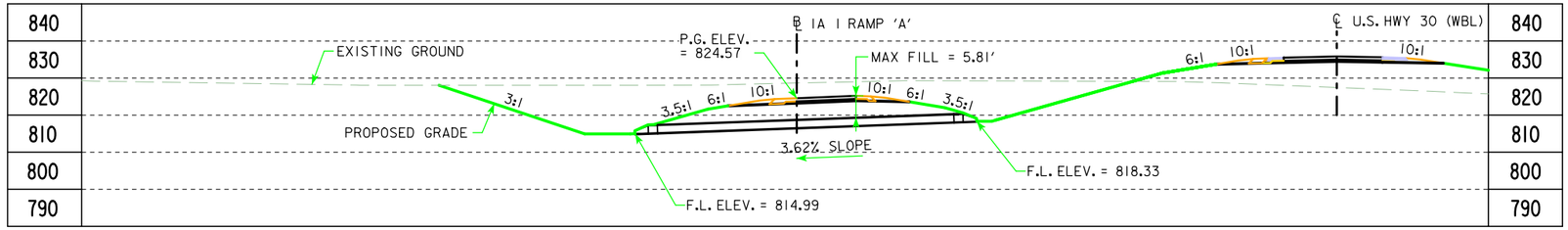
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

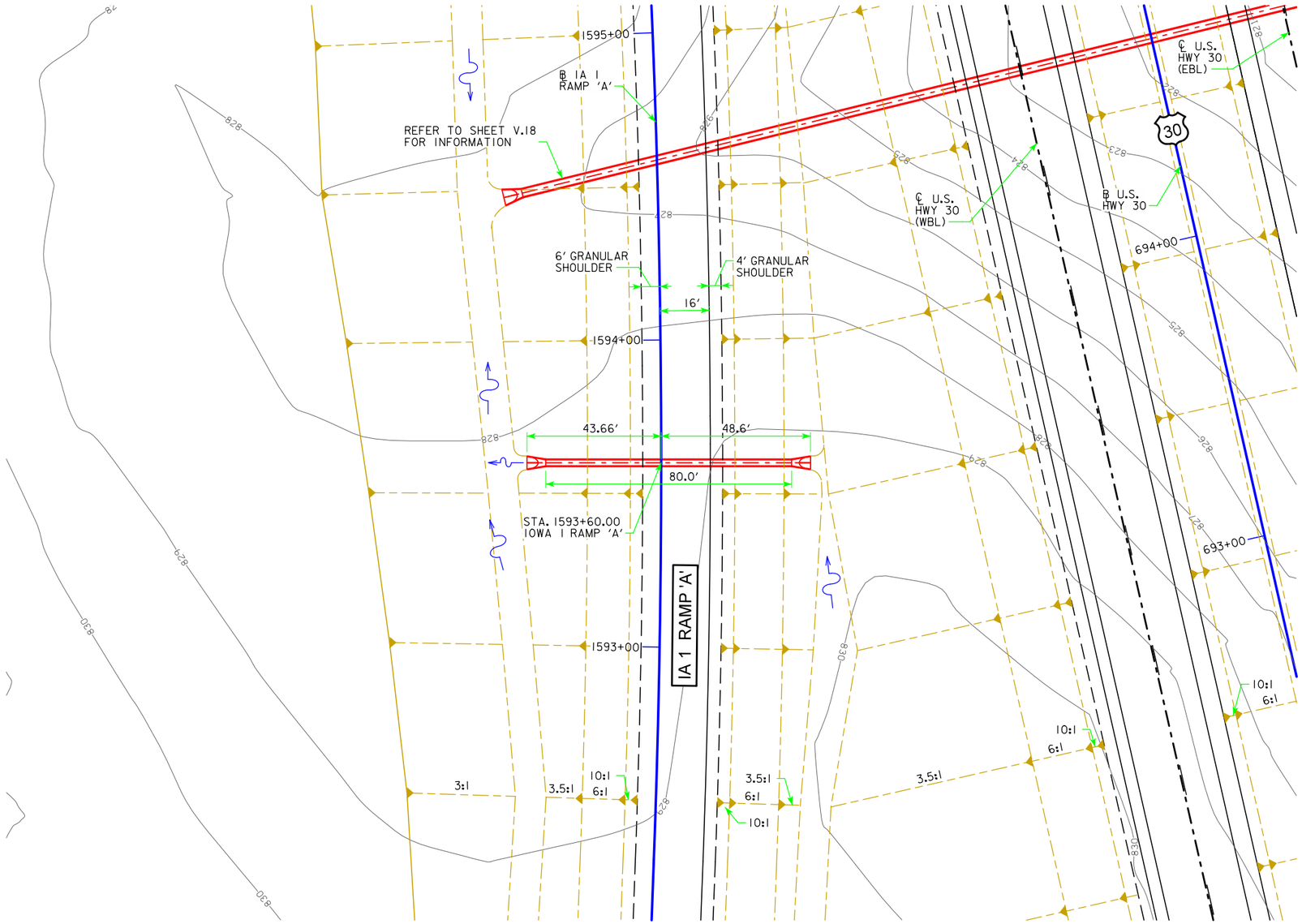
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.60

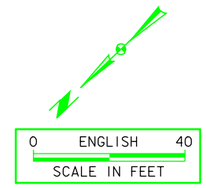
3:12:05 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #522
DESCRIPTION: CUT X IN LIGHT POLE BASE NW COR BP STATION
STA. 692+75.00, 60.60' RT.
ELEV. = 828.78

HYDRAULIC DATA

DRAINAGE AREA = 1.23 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 0.00 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

IOWA I RAMP 'A'
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 80' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 1593+60.00 ℄ IA I RAMP 'A' DECEMBER 2013

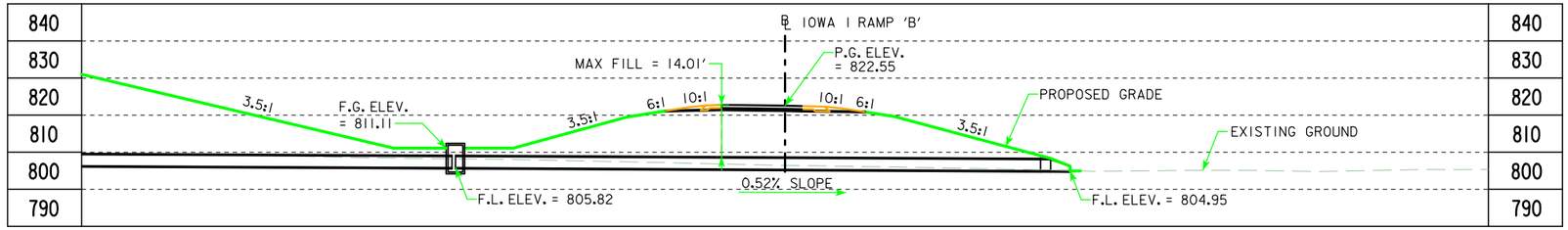
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

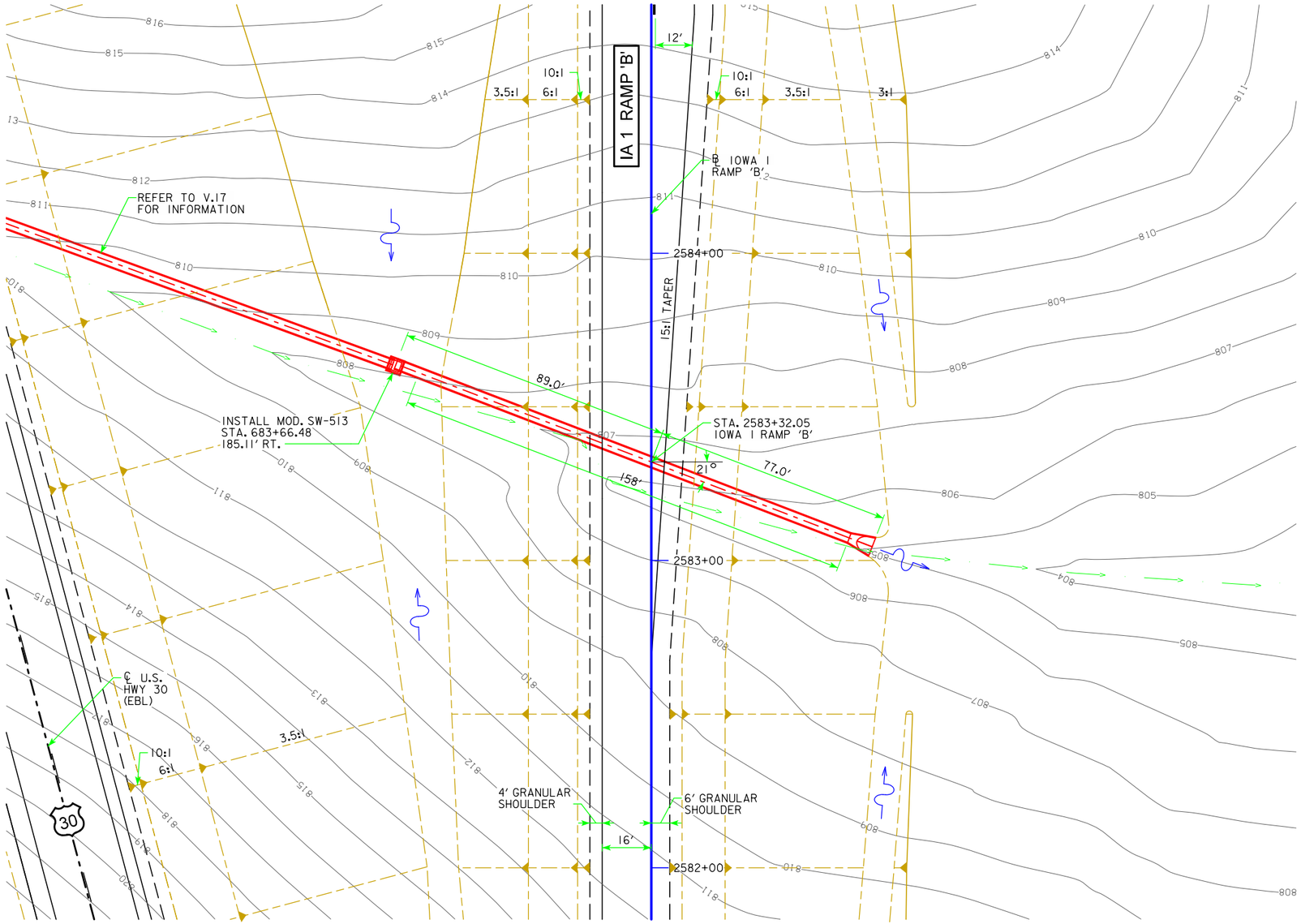
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.61

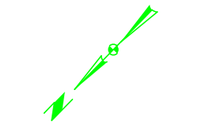
3:12:06 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #529
DESCRIPTION: SPIKE IN GATE POST NEXT TO CP309
STA. 682+26.52, 4,812.62' RT.
ELEV. = 764.69

HYDRAULIC DATA

DRAINAGE AREA = 16.03 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 35.98 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

IOWA HWY. RAMP 'B'
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 21° SKEW L.A.

36" X 158' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 2583+32.05 ℄ IA 1 RAMP B DECEMBER 2013

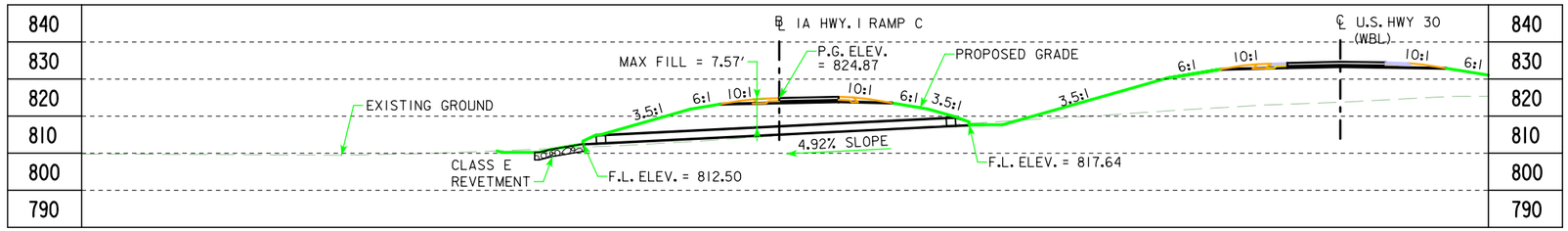
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

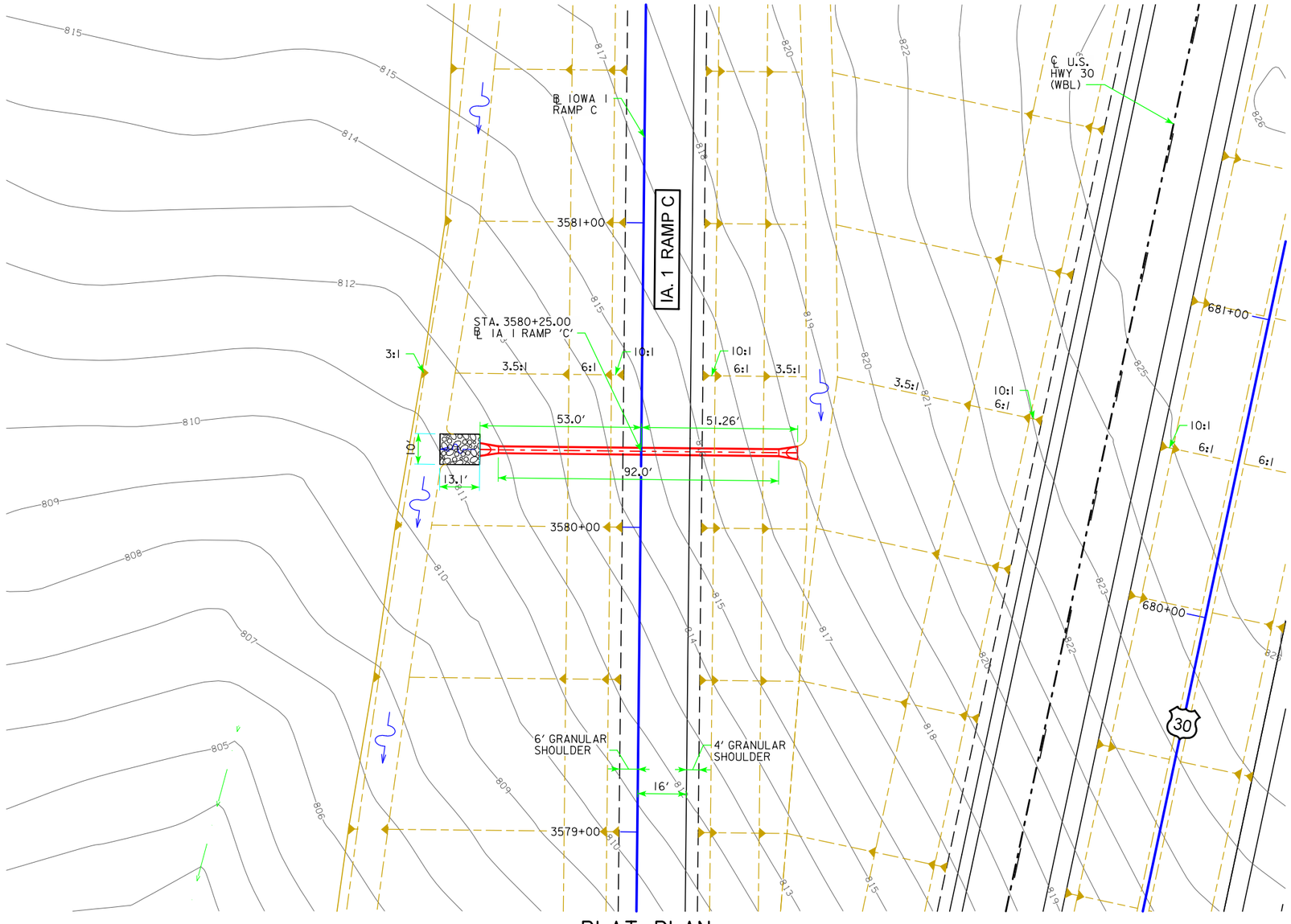
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.62

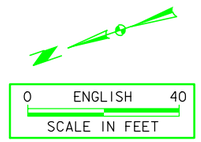
3:12:06 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #529
DESCRIPTION: SPIKE IN GATE POST NEXT TO CP309
STA. 682+26.52, 4,812.62' RT.
ELEV. = 764.69

HYDRAULIC DATA

DRAINAGE AREA = 1.61 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 6.27 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

IA HWY. 1 RAMP C
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 0° SKEW

24" X 92' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 3580+25.00 ℄ IA 1 RAMP C — DECEMBER 2013

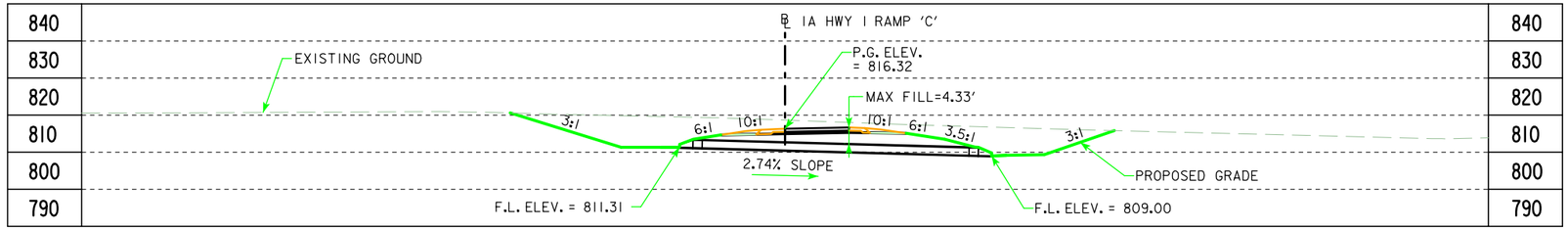
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

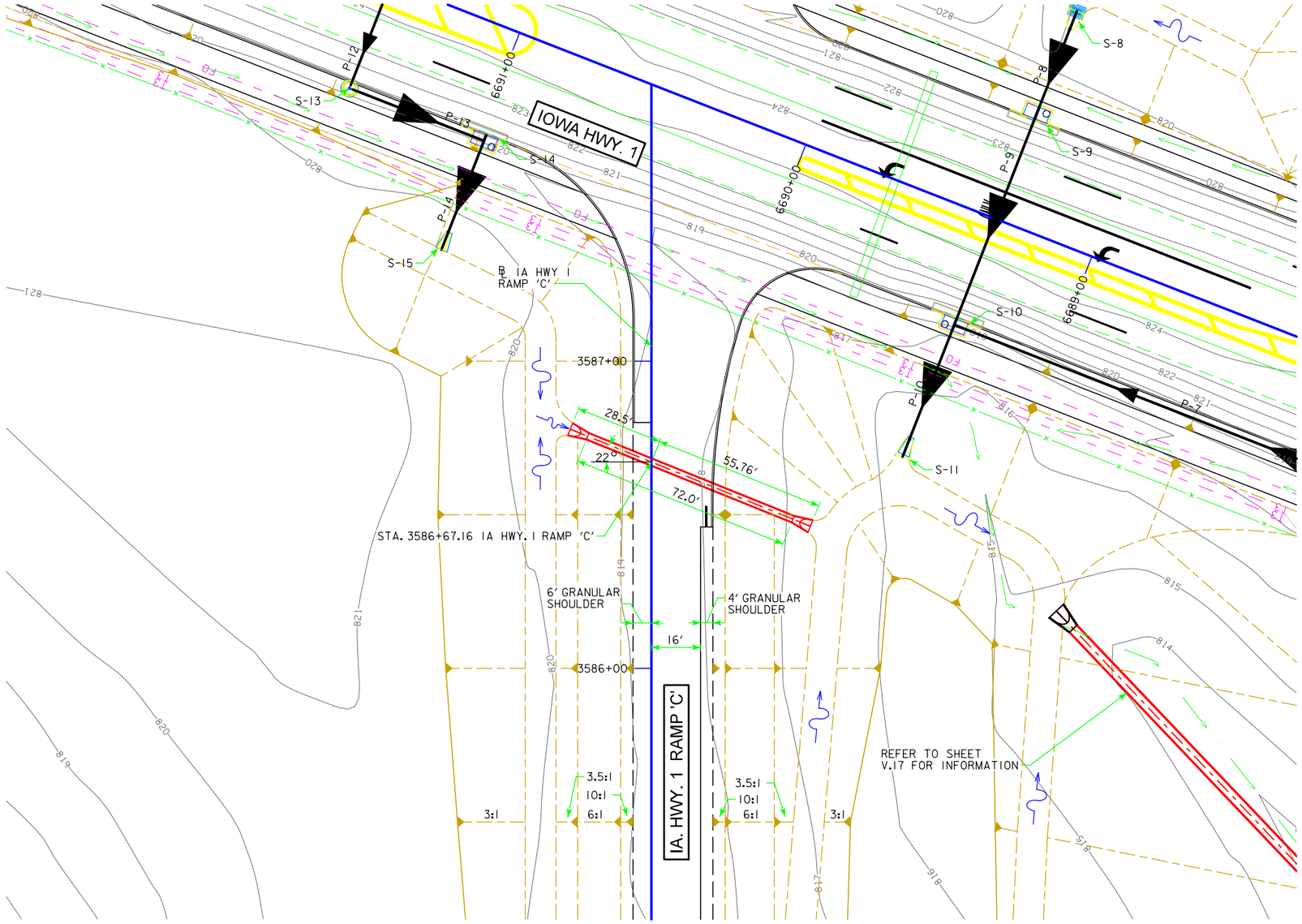
DESIGN SHEET NO. ___ OF ___ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.63

3:12:07 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

0 ENGLISH 40
SCALE IN FEET

BENCH MARK: #524
DESCRIPTION: SPIKE IN POWER POLE 2ND POWER POLE SOUTH OF CLINIC
STA. 688+30.87, 1,164.88' RT.
ELEV. = 825.05

HYDRAULIC DATA

DRAINAGE AREA = 1.52 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 6.00 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

IA HWY. 1 RAMP C
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 22° SKEW L.A.

24" X 72' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 3586+67.16 ℄ IA HWY. 1 RAMP 'C' DECEMBER 2013

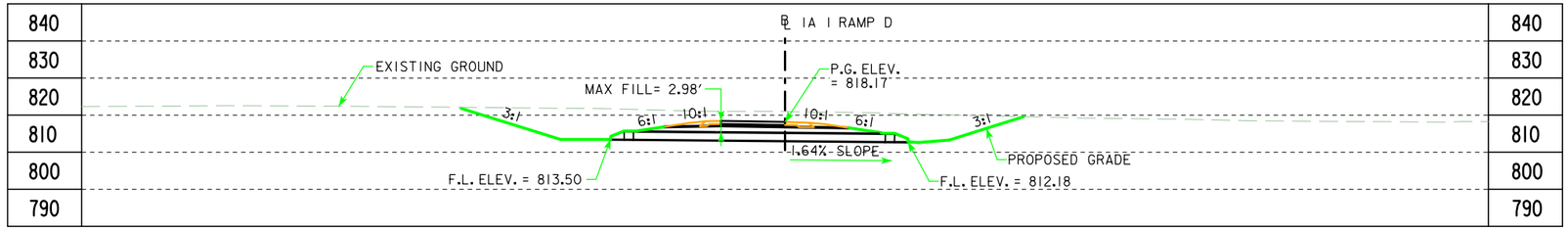
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

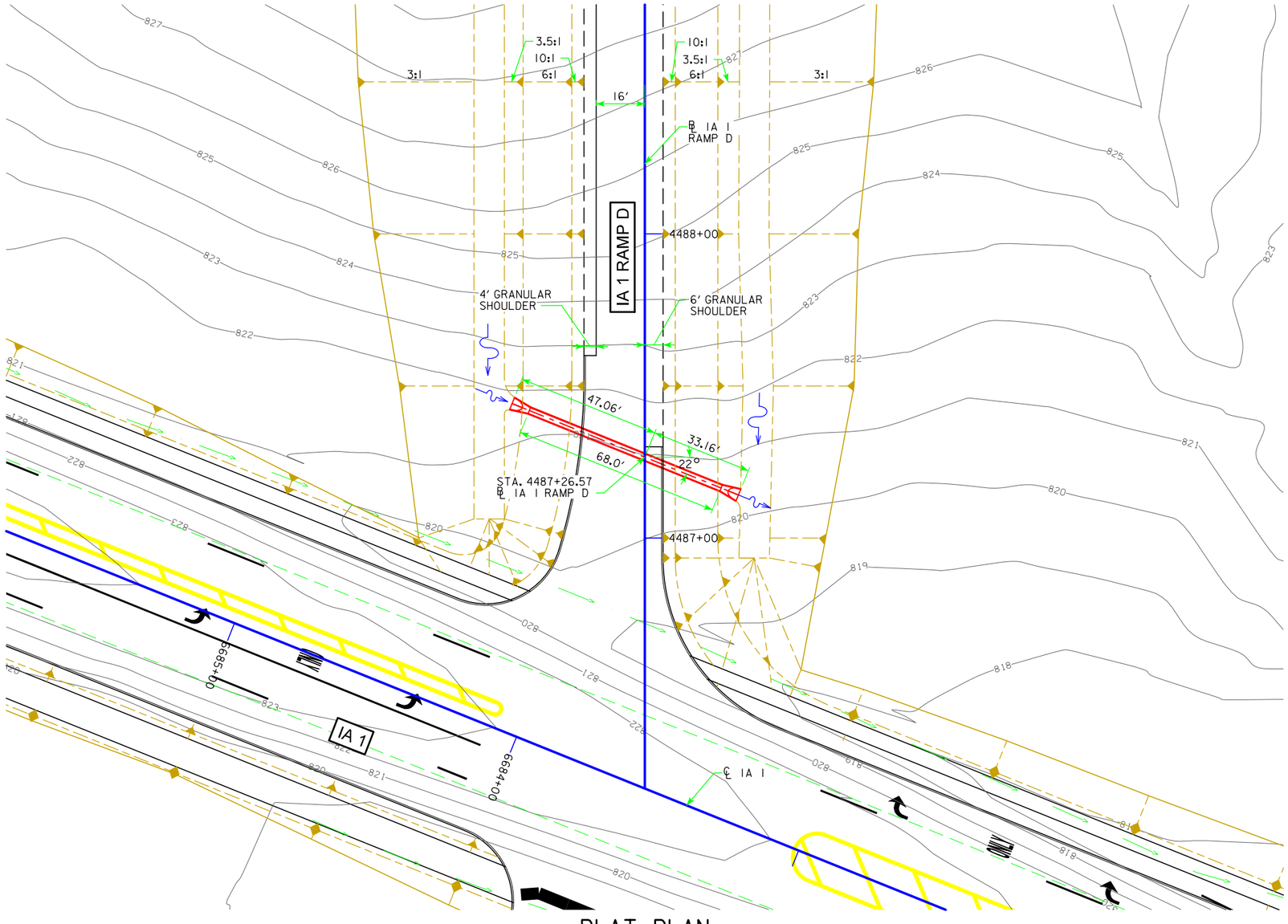
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.64

3:12:08 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

0 ENGLISH 40
SCALE IN FEET

BENCH MARK: #514
DESCRIPTION: 1/2IN REBAR IN FIELD ENTRANCE
STA. 687+46.38, 1,242.01' RT.
ELEV. = 808.42'

HYDRAULIC DATA

DRAINAGE AREA = 1.46 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 3.88 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

IA 1 RAMP D
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 22° SKEW L.A.

24" X 68' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 4487+26.57 ℄ IA 1 RAMP D — DECEMBER 2013

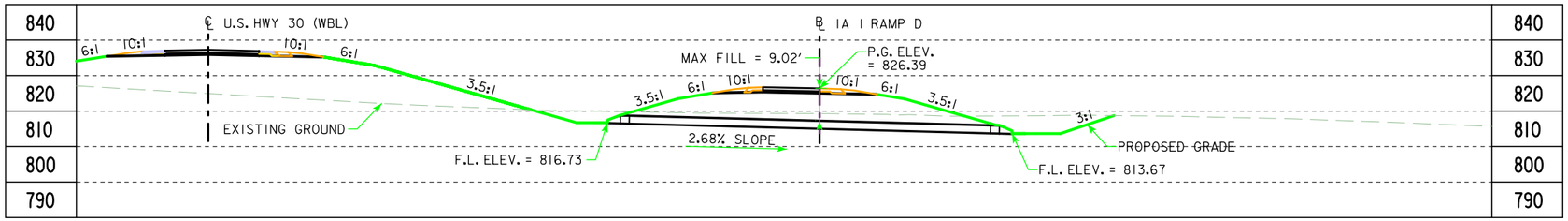
LINN COUNTY

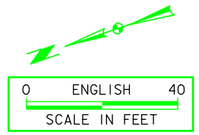
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

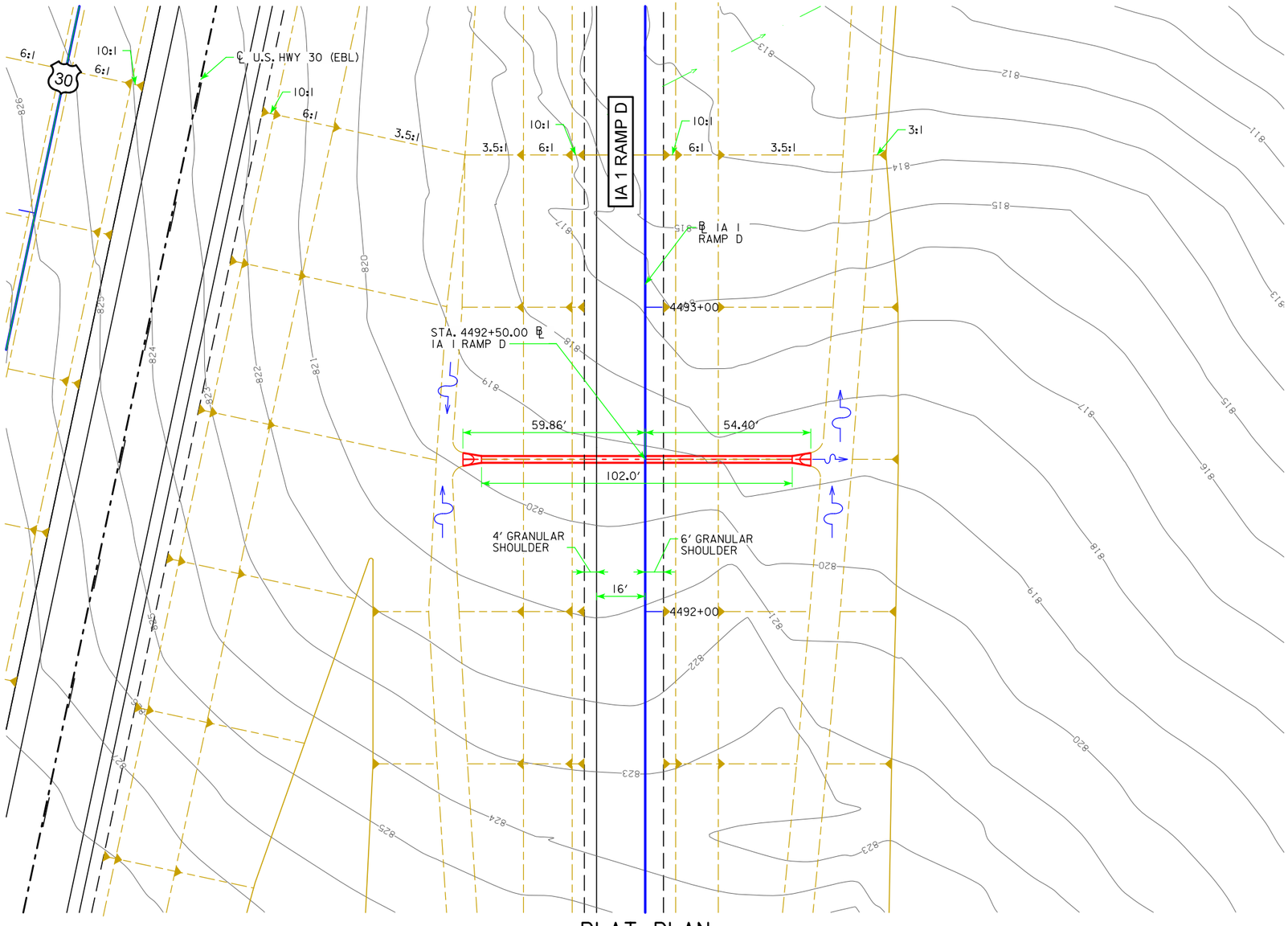
DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER V.65

3:12:08 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht





LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

BENCH MARK: #522
DESCRIPTION: CUT X IN LIGHT POLE BASE NW COR BP STATION
STA. 692+75.00, 60.60' RT.
ELEV. = 828.78

HYDRAULIC DATA

DRAINAGE AREA = 2.28 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 5.45 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

IA I RAMP D
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 102' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 4492+50.00 ℄ IA I RAMP D — DECEMBER 2013

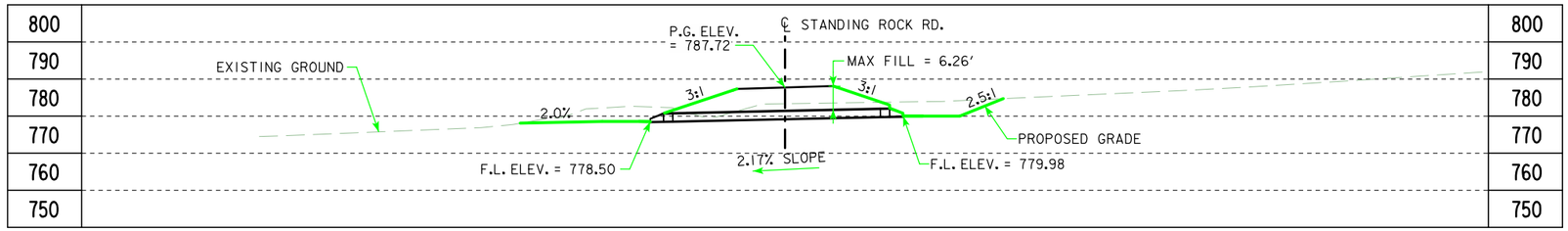
LINN/CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

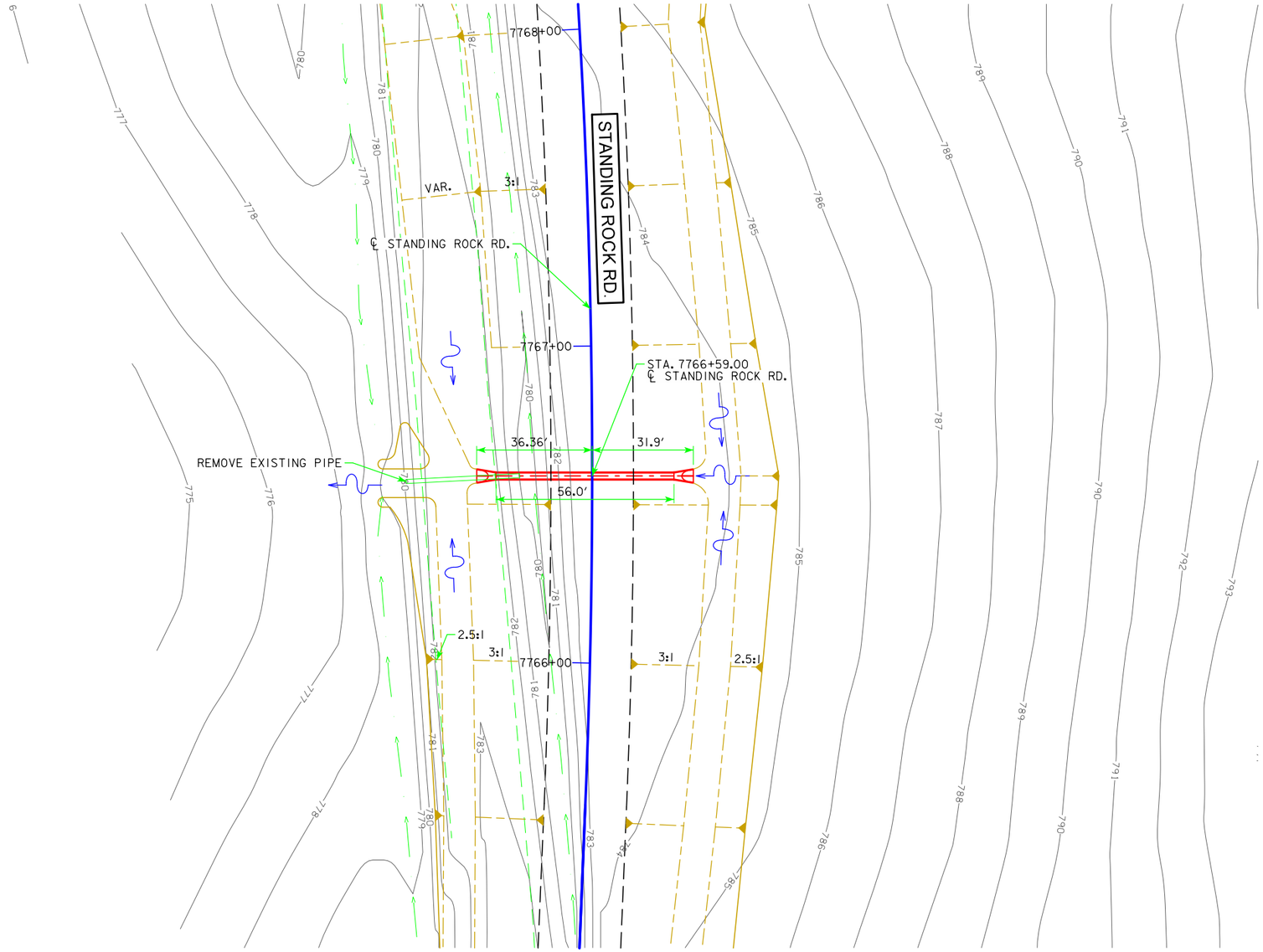
DESIGN SHEET NO. ___ OF ___ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.66

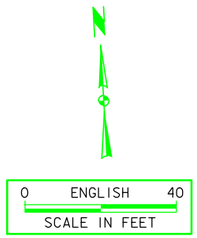
3:12:09 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #749
DESCRIPTION: SPIKE IN POWER POLE 30FT WEST OF CP367 N SIDE
STA. 777+50.50, 3,389.25′ RT.
ELEV. = 836.69

HYDRAULIC DATA

DRAINAGE AREA = 2.88 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 9.76 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

STANDING ROCK ROAD
T-82N R-5W
SECTION 23
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 56′ REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 7766+59.00 ℄ STANDING ROCK RD. DECEMBER 2013

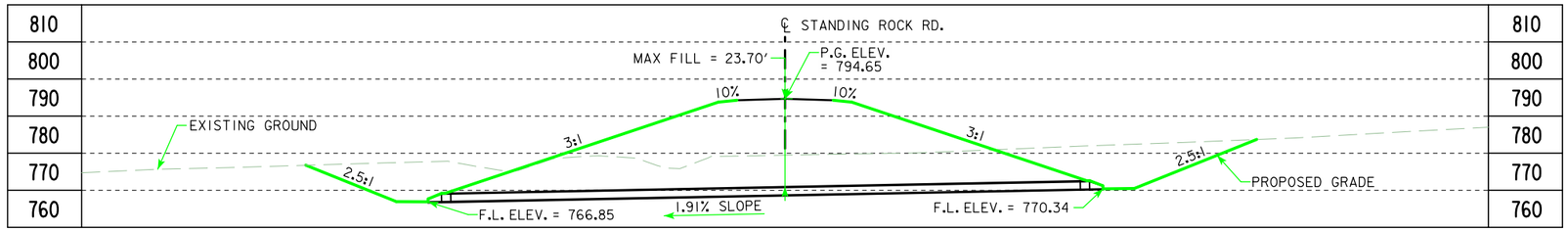
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

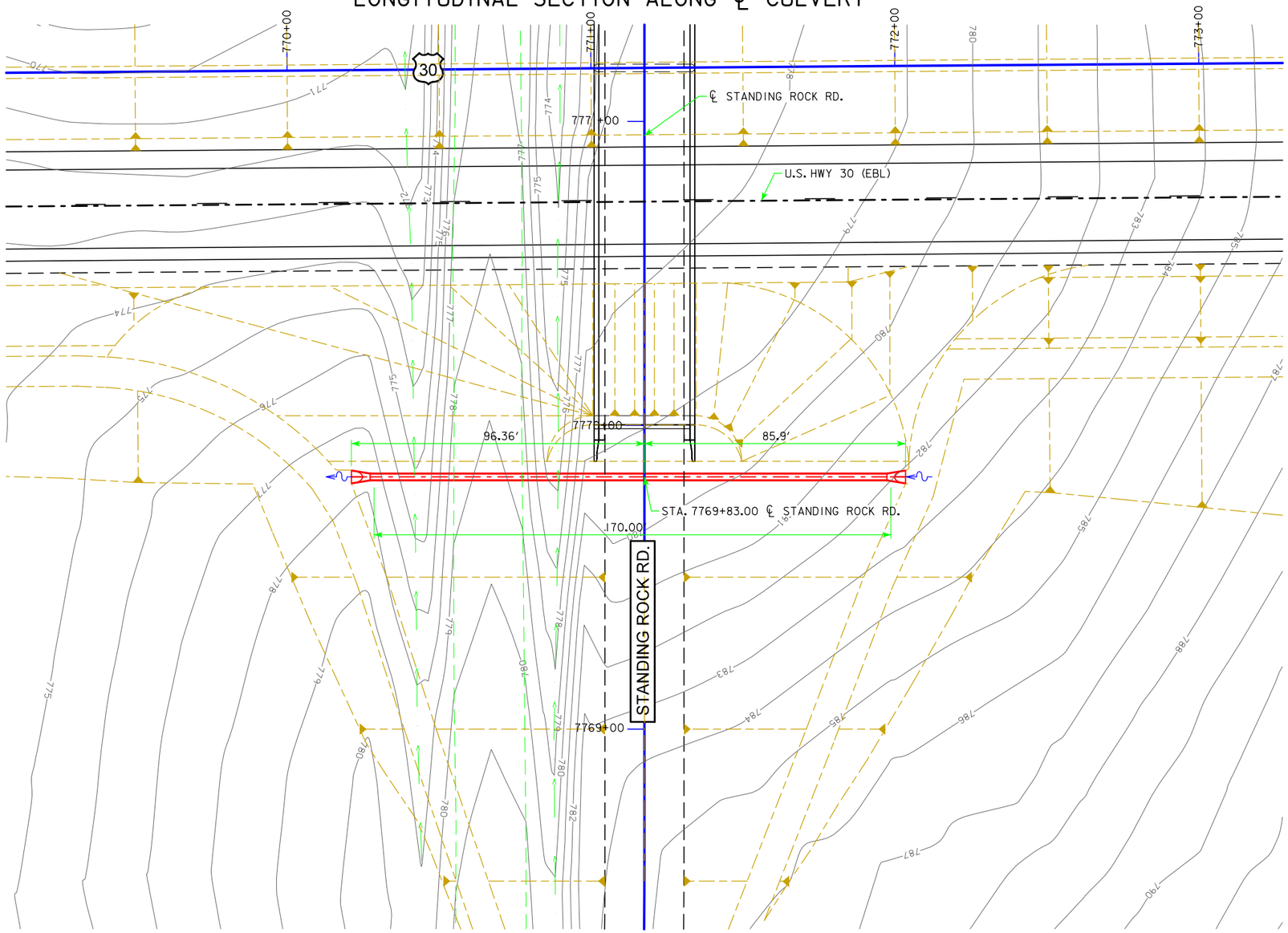
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.67

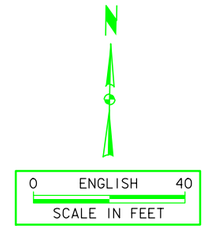
3:12:10 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #749
DESCRIPTION: SPIKE IN POWER POLE
30FT WEST OF CP367 N SIDE
STA. 777+50.50, 3,389.25' RT.
ELEV. = 836.69

HYDRAULIC DATA

DRAINAGE AREA = 2.01 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 7.43 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

STANDING ROCK ROAD
T-82N R-5W
SECTION 14
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 170' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 7769+83.00 ℄ STANDING ROCK RD. DECEMBER 2013

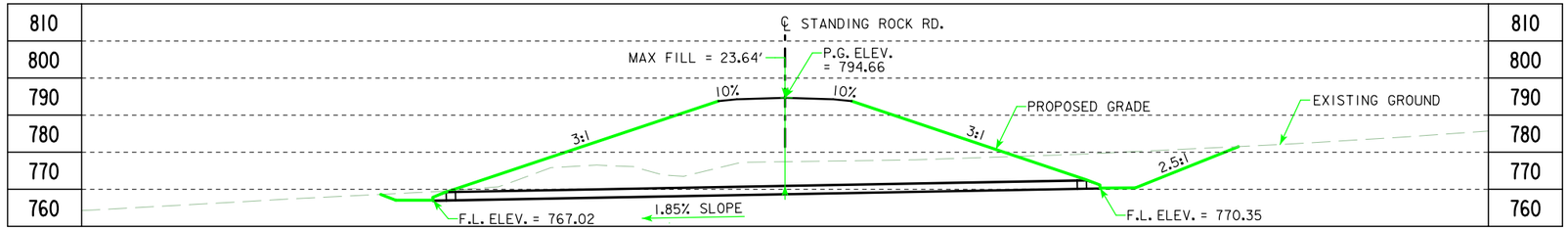
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

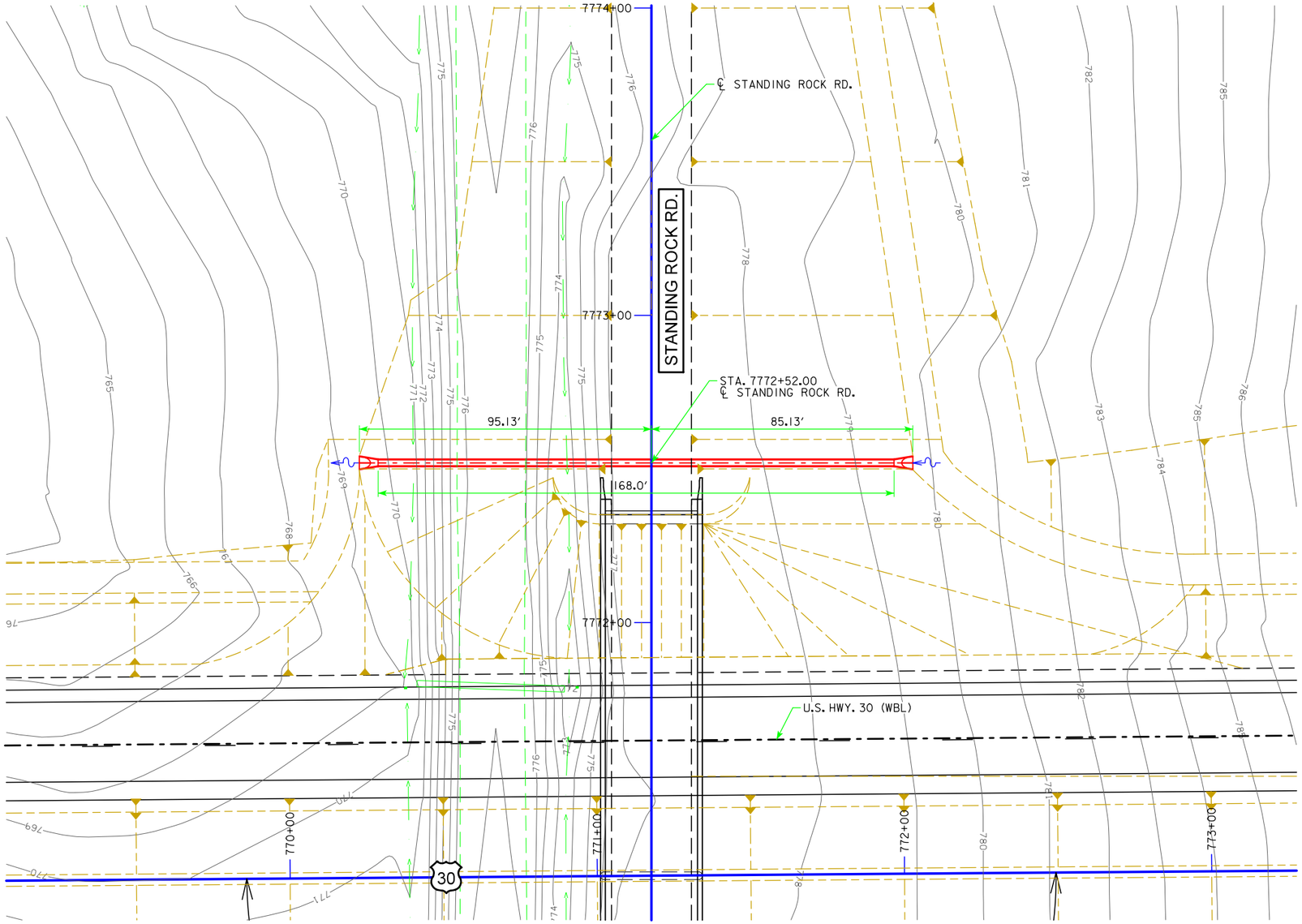
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.68

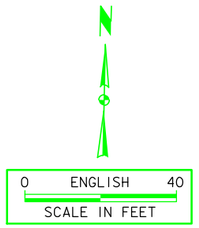
3:12:11 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #705
DESCRIPTION: ARROW ON HYDRANT EAST OF CP335
STA. 765+51.82, 67.23' RT.
ELEV. = 851.469

HYDRAULIC DATA

DRAINAGE AREA = 6.37 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 17.84 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

STANDING ROCK ROAD
T-82N R-5W
SECTION 14
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 168' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 7772+52.00 ℄ STANDING ROCK RD. DECEMBER 2013

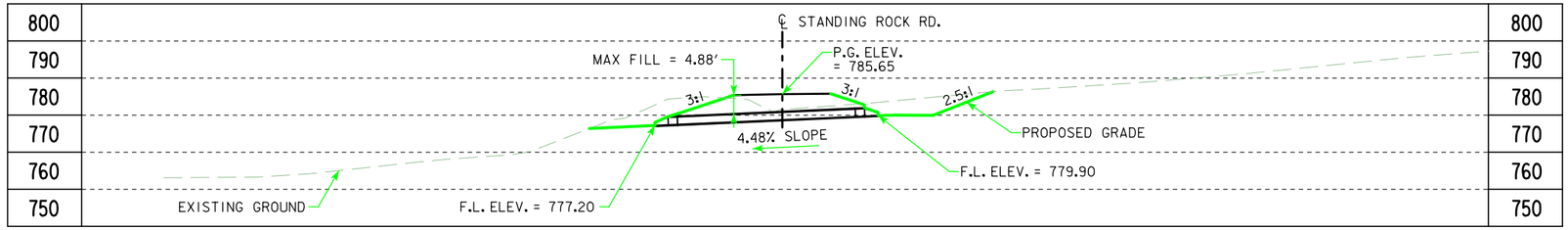
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

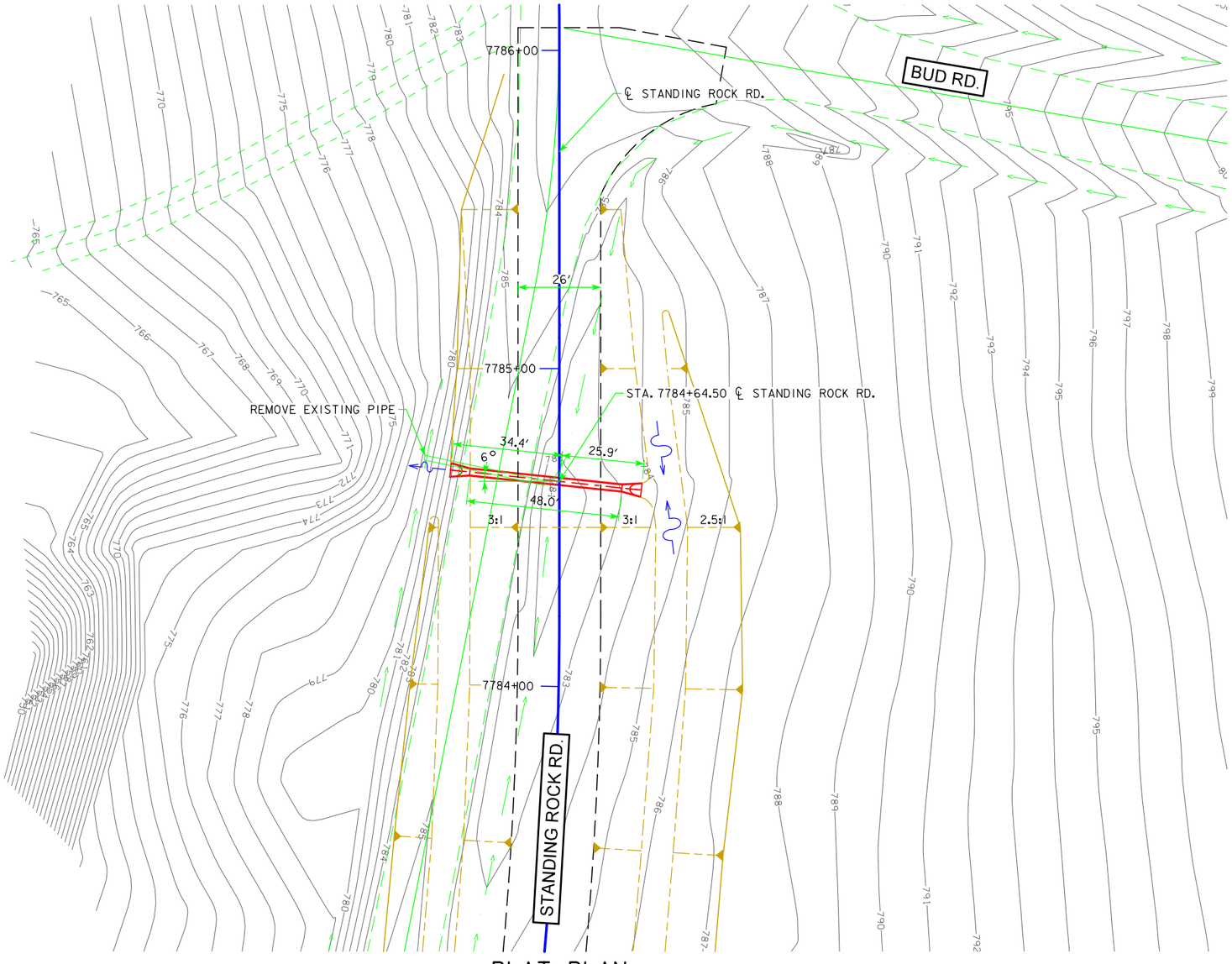
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER V.69

3:12:11 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

0 ENGLISH 40
SCALE IN FEET

BENCH MARK: #705
DESCRIPTION: ARROW ON HYDRANT
EAST OF CP335
STA. 765+51.82, 67.232' RT.
ELEV. = 851.469

HYDRAULIC DATA

DRAINAGE AREA = 3.31 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 10.85 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

STANDING ROCK ROAD
T-82N R-5W
SECTION 14
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 6° SKEW L.A.

24" X 48' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 7784+64.50 ℄ STANDING ROCK RD. DECEMBER 2013

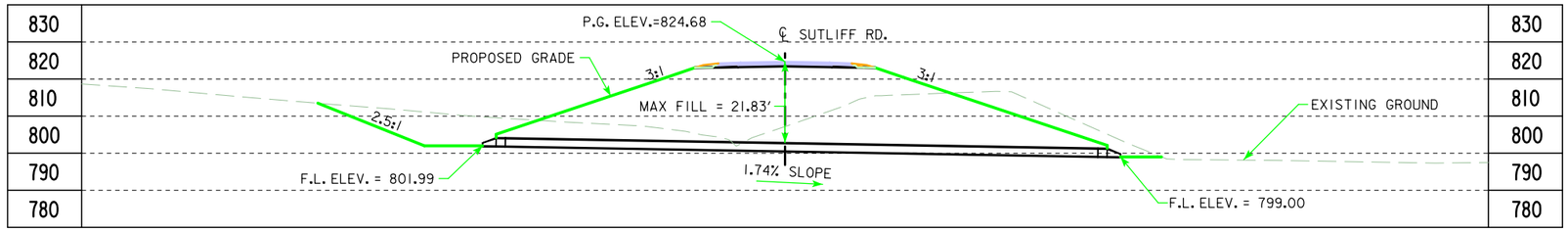
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

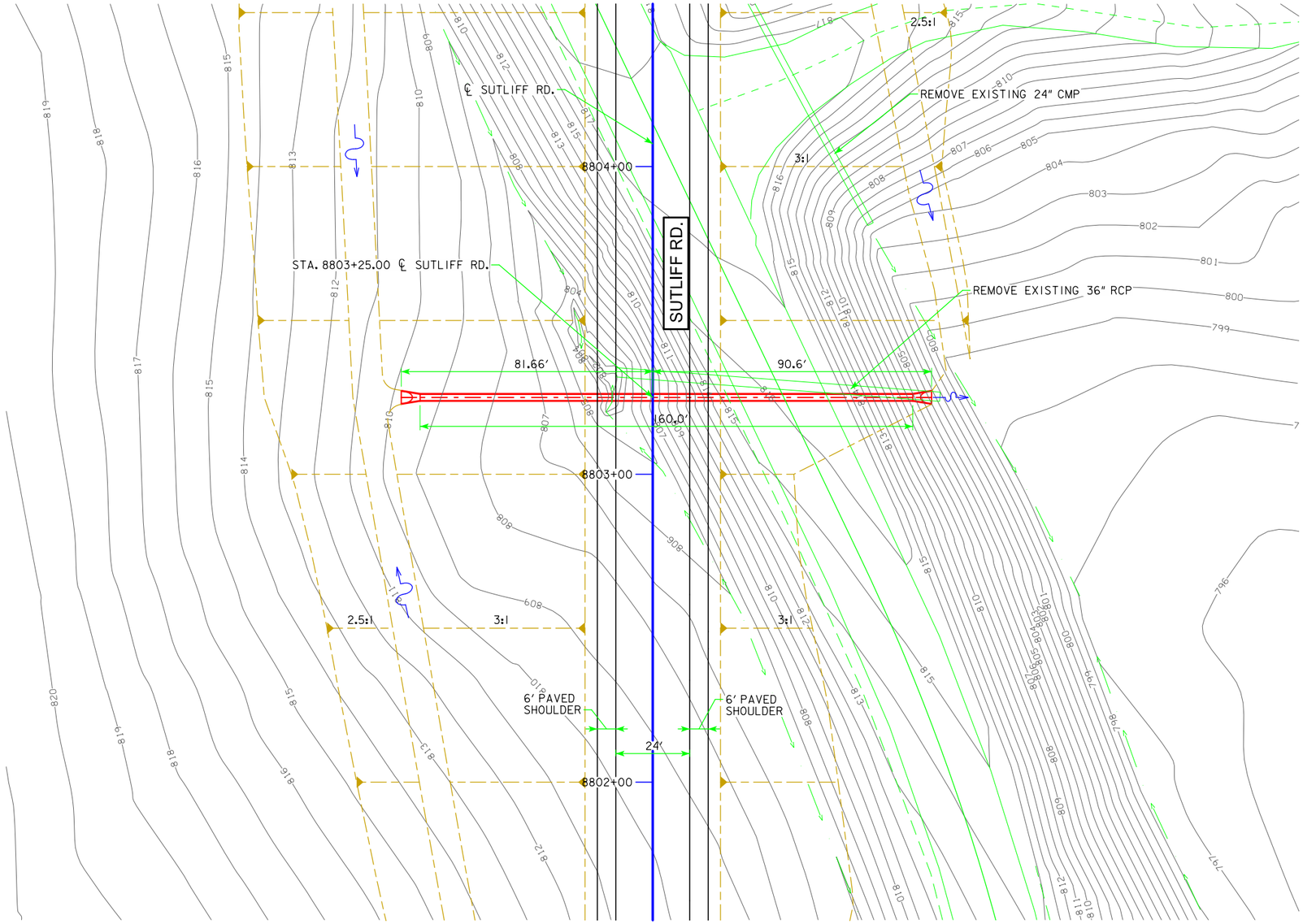
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.70

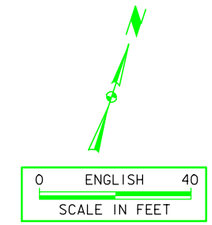
3:12:12 PM V81_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #713
DESCRIPTION: X BOLT N SIDE HWY30
FIRST HYDRANT EAST OF S JACKSON
STA. 808+53.53, 57.517' LT.
ELEV. = 867+260

HYDRAULIC DATA

DRAINAGE AREA = 2.85 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 9.68 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

SUTLIFF RD.
T-82N R-5W
SECTION 23
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 160' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 8803+25.00 ℄ SUTLIFF RD. DECEMBER 2013

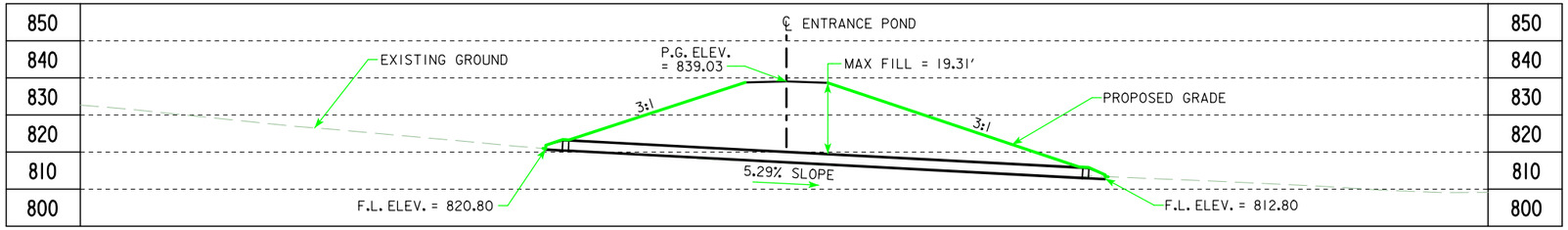
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

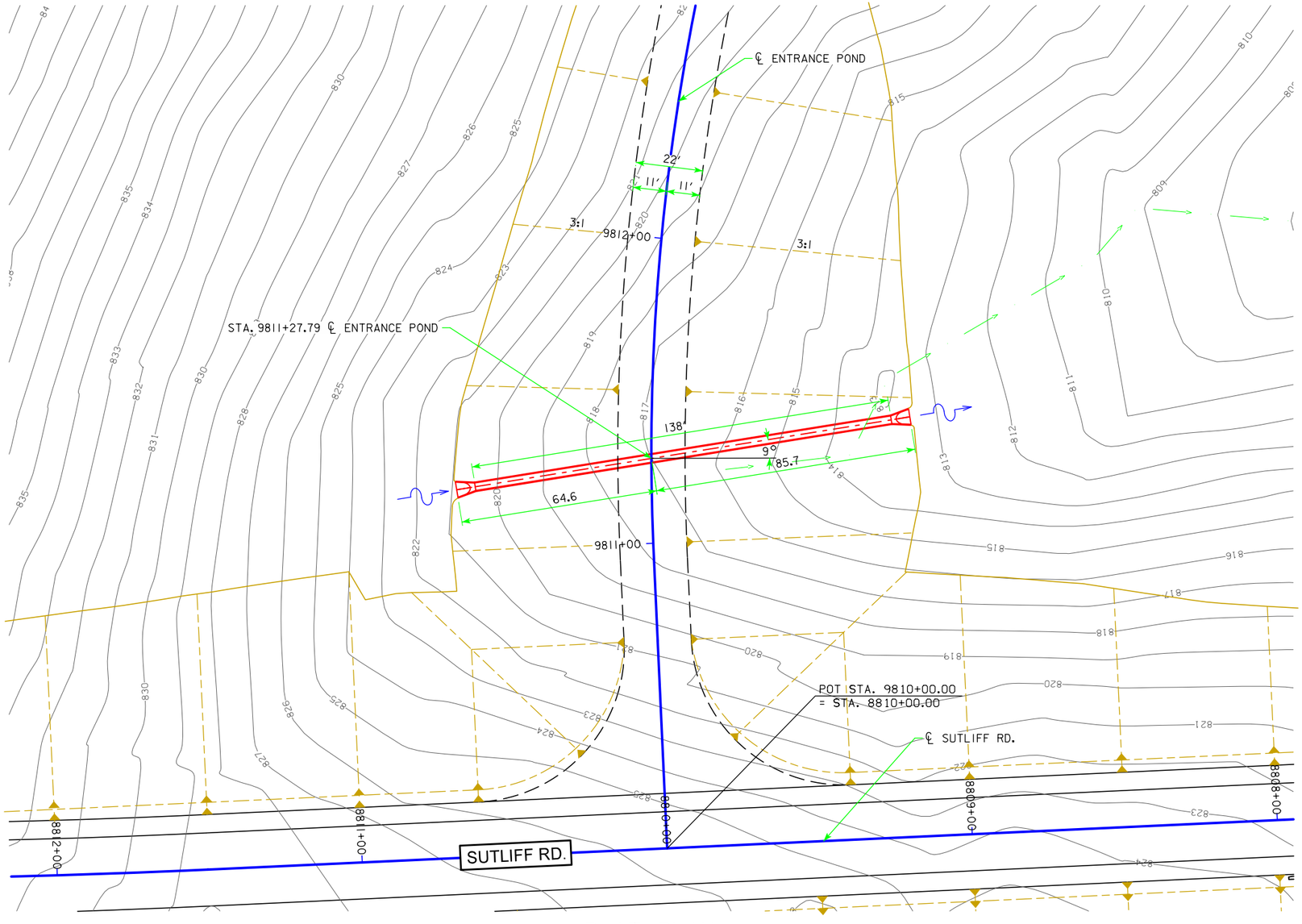
DESIGN SHEET NO. ___ OF ___ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.71

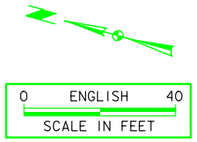
3:12:13 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #709
DESCRIPTION: CHISELED CROSS TOP
CULVERT NORTH SIDE HWY30 EAST OF G R DR
STA. 794+28.16, 38.812' LT.
ELEV. = 858.227

HYDRAULIC DATA

DRAINAGE AREA = 8.42 ACRES ROLLING
DESIGN DISCHARGE, Q_{50} = 22.06 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

U.S. 30
T-82N R-5W
SECTION 14
FRANKLIN TOWNSHIP
LINN COUNTY

DESIGN FOR 9° SKEW R.A.

30" X 138' UNCLASSIFIED PIPE

PLAT PLAN

STA. 9811+27.79 ℄ ENTRANCE POND — DECEMBER 2013

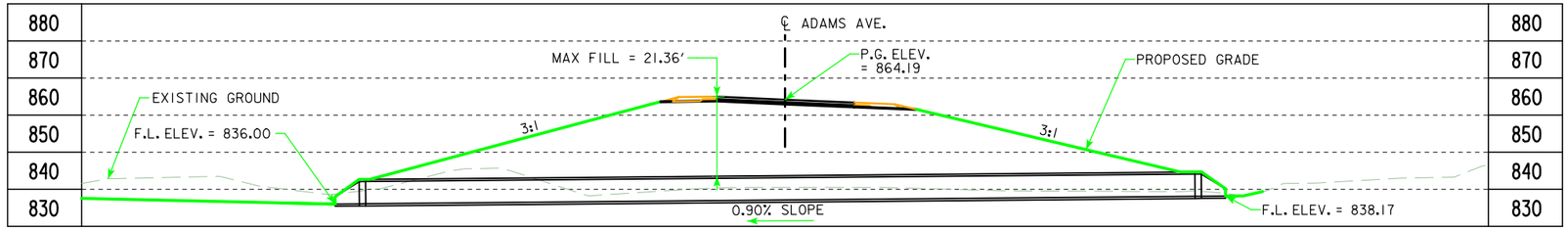
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

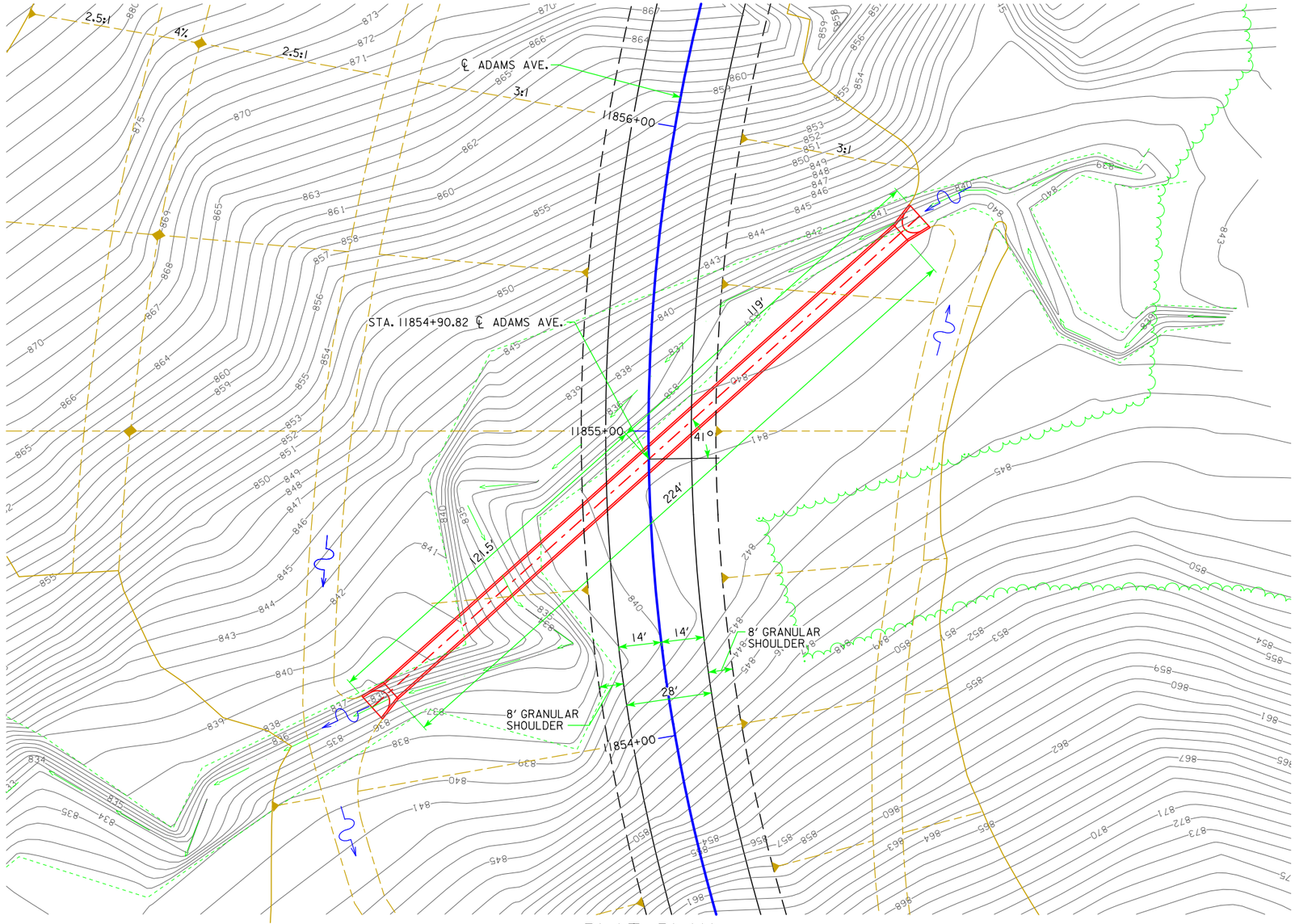
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER V.72

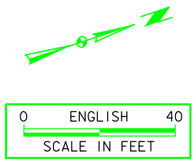
3:12:14 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #722
DESCRIPTION: CHISELED CROSS NE CORNER OF CONC PAD FOR SOLAR PANEL
STA. 871+75.17, 53.377' RT.
ELEV. = 933.921

HYDRAULIC DATA

DRAINAGE AREA = 170.18 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 216.66 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

ADAMS AVE.
T-82N R-4W
SECTION 18
POINEER TOWNSHIP
CEDAR COUNTY

PRELIMINARY

DESIGN FOR 41° SKEW R.A

72" X 224' REINFORCED CONCRETE PIPE

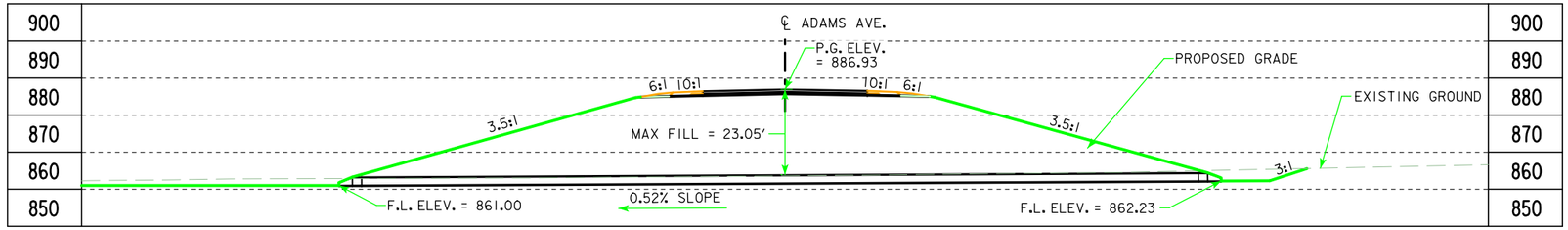
PLAT PLAN

STA. 11854+90.82 ℄ ADAMS AVE. DECEMBER 2013

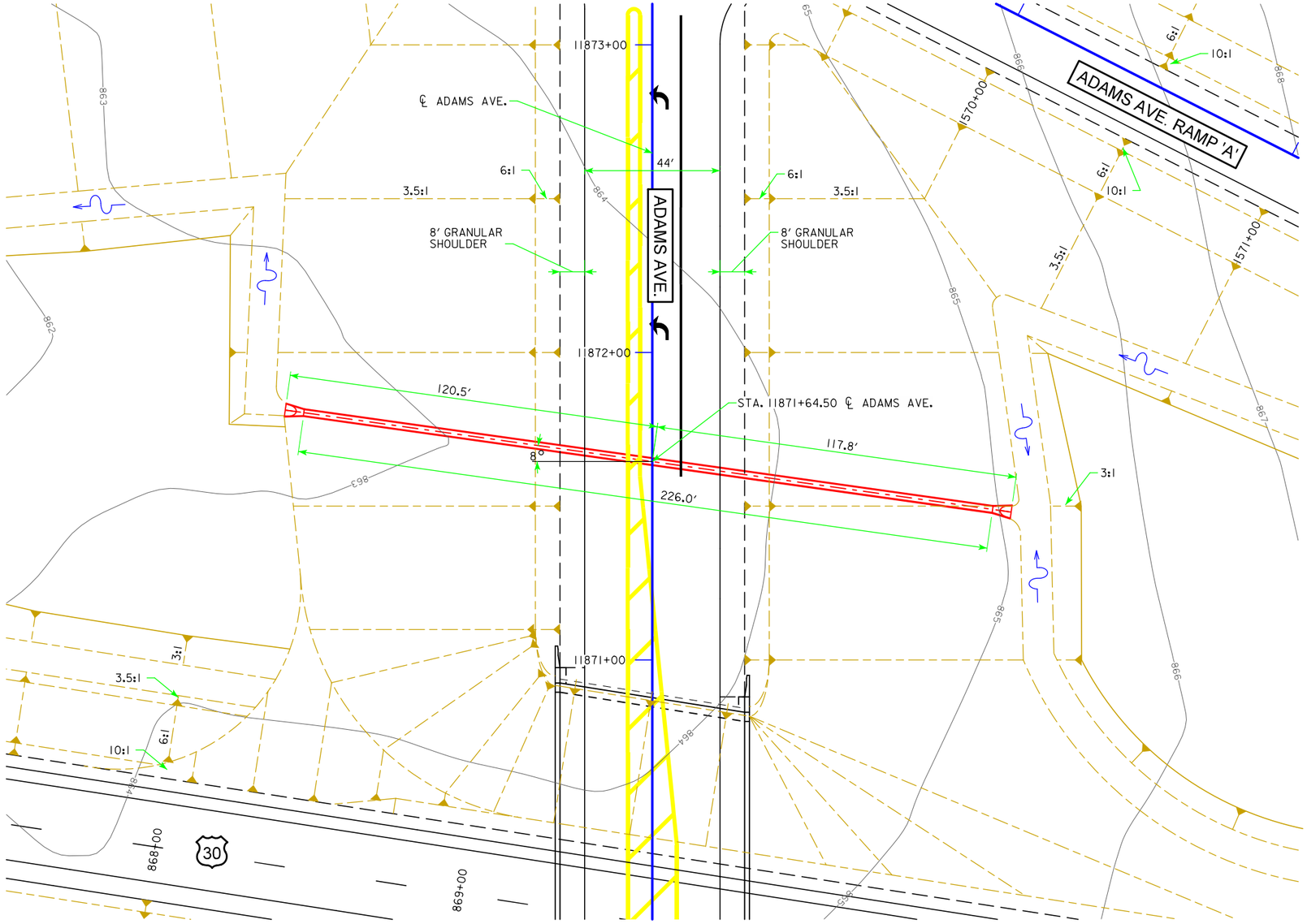
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

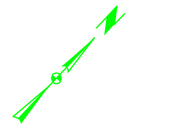
DESIGN SHEET NO. ___ OF ___ FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



0 ENGLISH 40
SCALE IN FEET

BENCH MARK: #722
DESCRIPTION: CHISELED CROSS NE CORNER OF CONC PAD FOR SOLAR PANEL
STA. 871+75.17, 53.377' RT.
ELEV. = 933.921

HYDRAULIC DATA

DRAINAGE AREA = 3.97 ACRES ROLLING
DESIGN DISCHARGE, Q_{50} = 12.46 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

ADAMS AVE.
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 8° SKEW L.A.

24" X 226' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 11871+64.50 ℄ ADAMS AVE. DECEMBER 2013

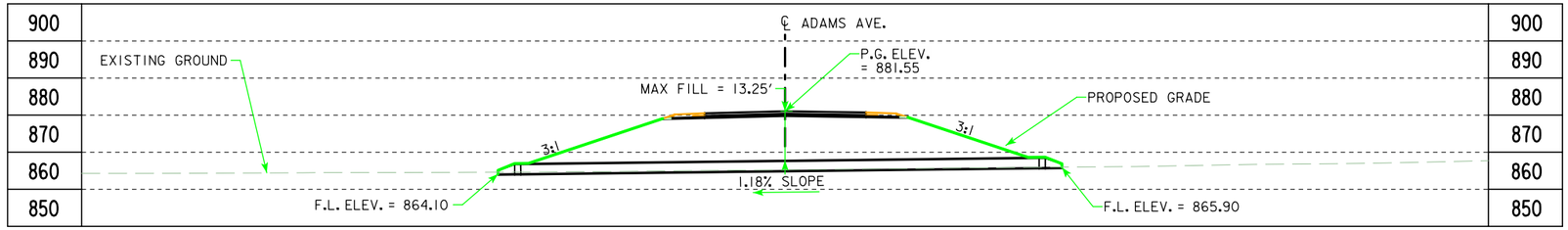
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

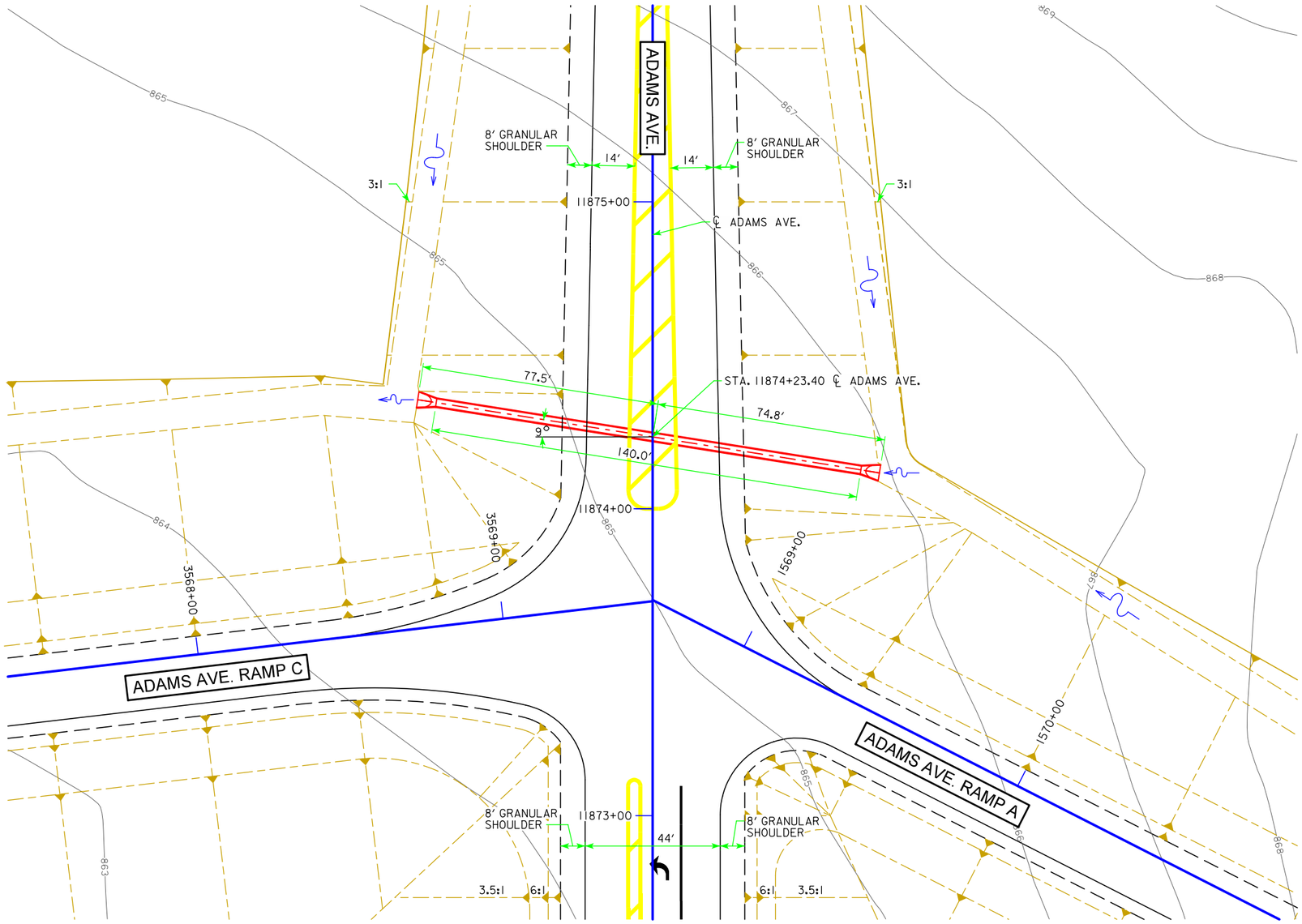
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.74

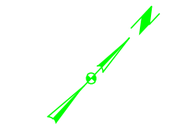
3:12:15 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #722
DESCRIPTION: CHISELED CROSS NE CORNER OF CONC PAD FOR SOLAR PANEL
STA. 871+75.17, 53.377' RT.
ELEV. = 933.921

HYDRAULIC DATA

DRAINAGE AREA = 10.25 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 25.61 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

ADAMS AVE.
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 9° SKEW L.A.

30" X 140' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 11874+23.40 ℄ ADAMS AVE. DECEMBER 2013

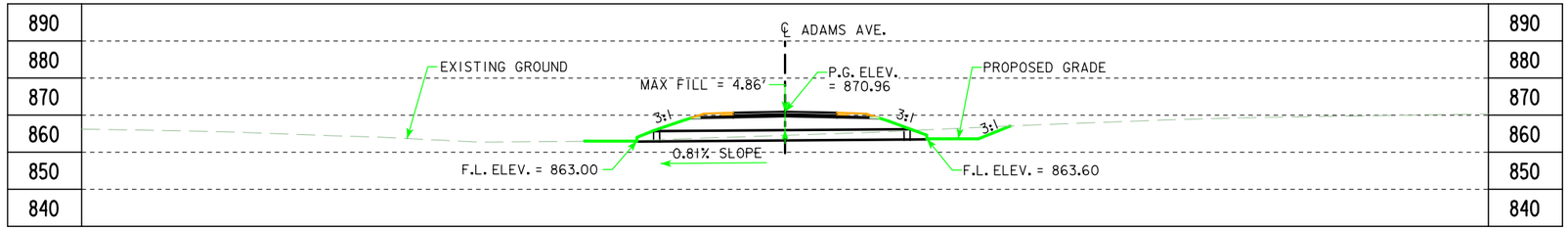
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

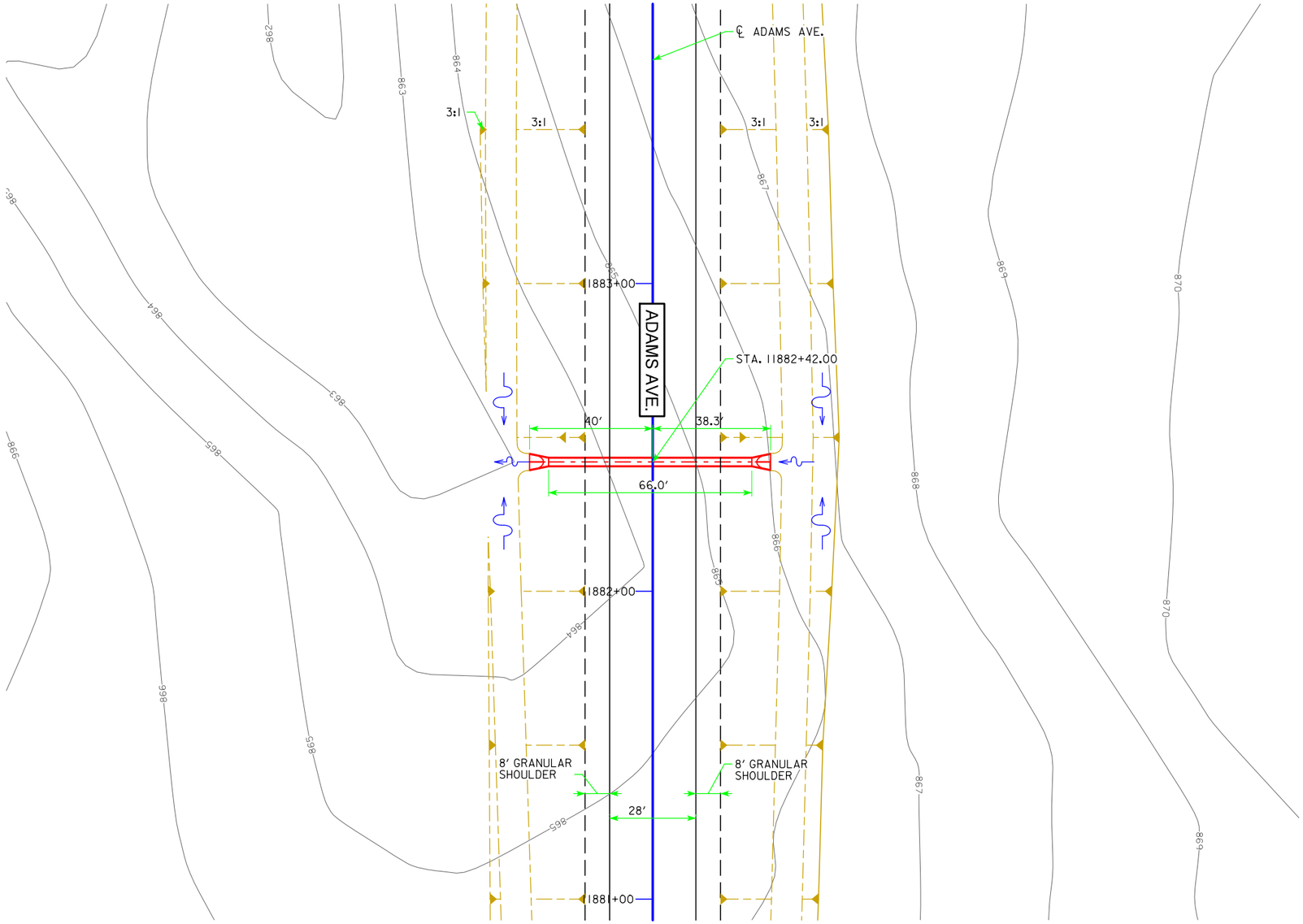
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER V.75

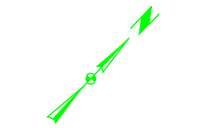
3:12:16 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #722
DESCRIPTION: CHISELED CROSS NE CORNER OF CONC PAD FOR SOLAR PANEL
STA. 871+75.17, 53.377' RT.
ELEV. = 933.921

HYDRAULIC DATA

DRAINAGE AREA = 9.94 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 25.02 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

ADAMS AVE.
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

30" X 66' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 11882+42.00 ℄ ADAMS AVE. DECEMBER 2013

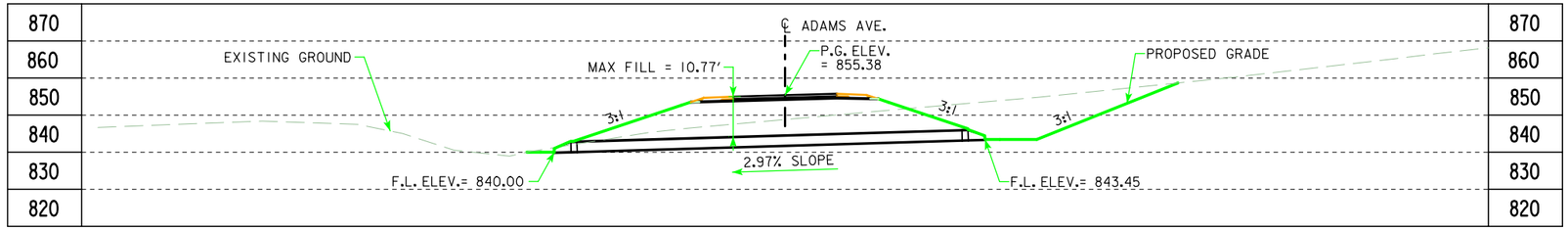
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

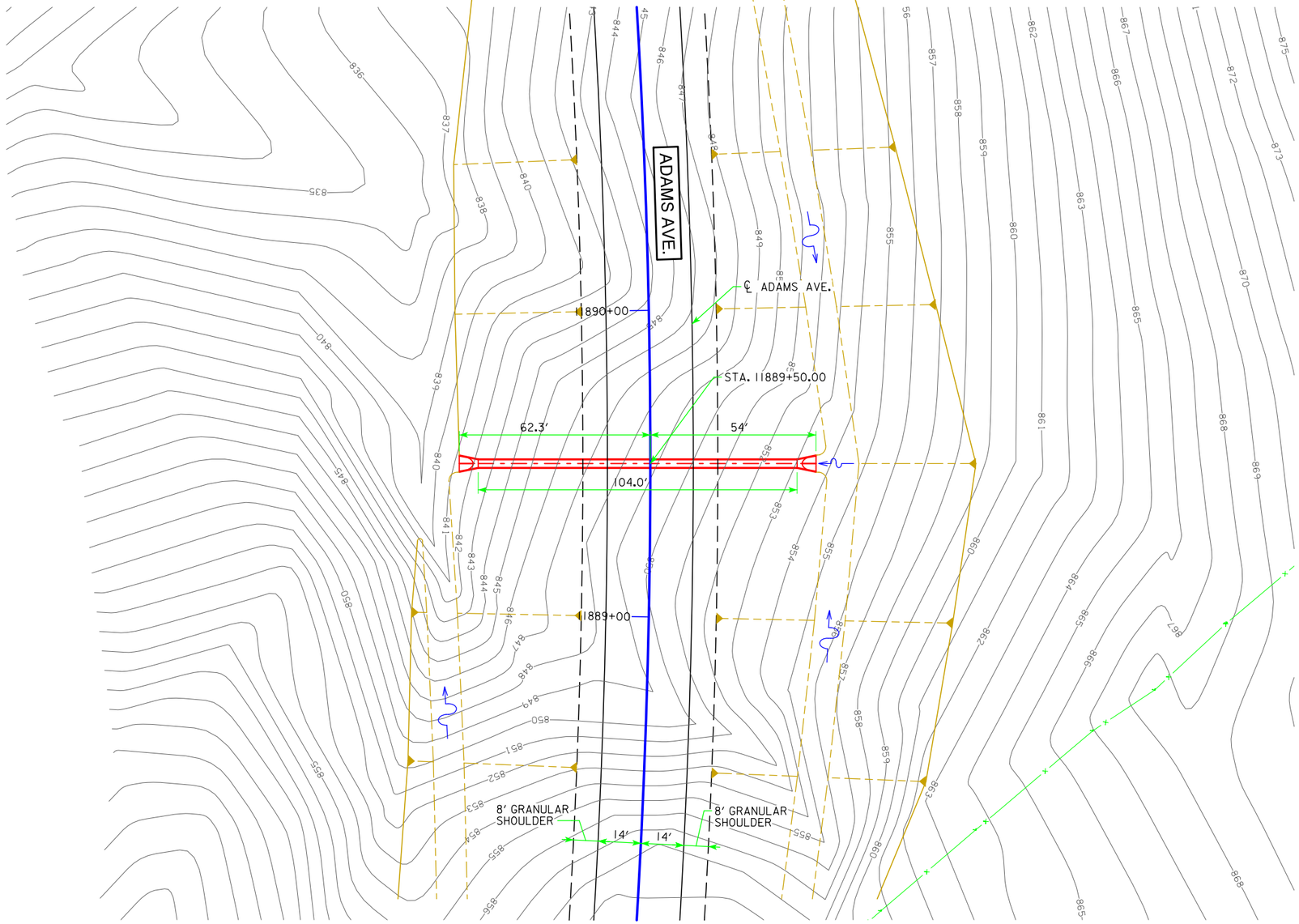
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.76

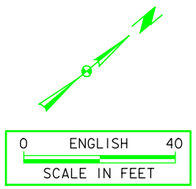
3:12:16 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #722
DESCRIPTION: CHISELED CROSS NE CORNER OF CONC PAD FOR SOLAR PANEL
STA. 871+75.17, 53.377' RT.
ELEV. = 933.92'

HYDRAULIC DATA

DRAINAGE AREA = 10.03 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 25.19 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

ADAMS AVE.
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

30" X 104' REINFORCED CONCRETE PIPE

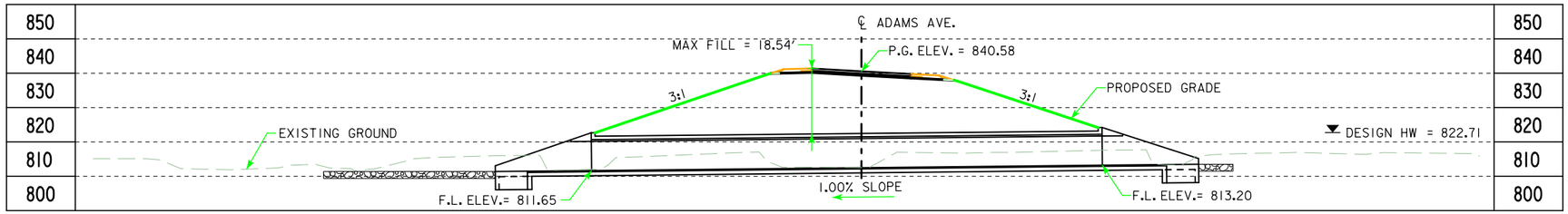
PLAT PLAN

STA. 11889+50.00 ℄ ADAMS AVE. DECEMBER 2013

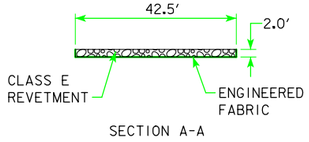
LINN COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.77

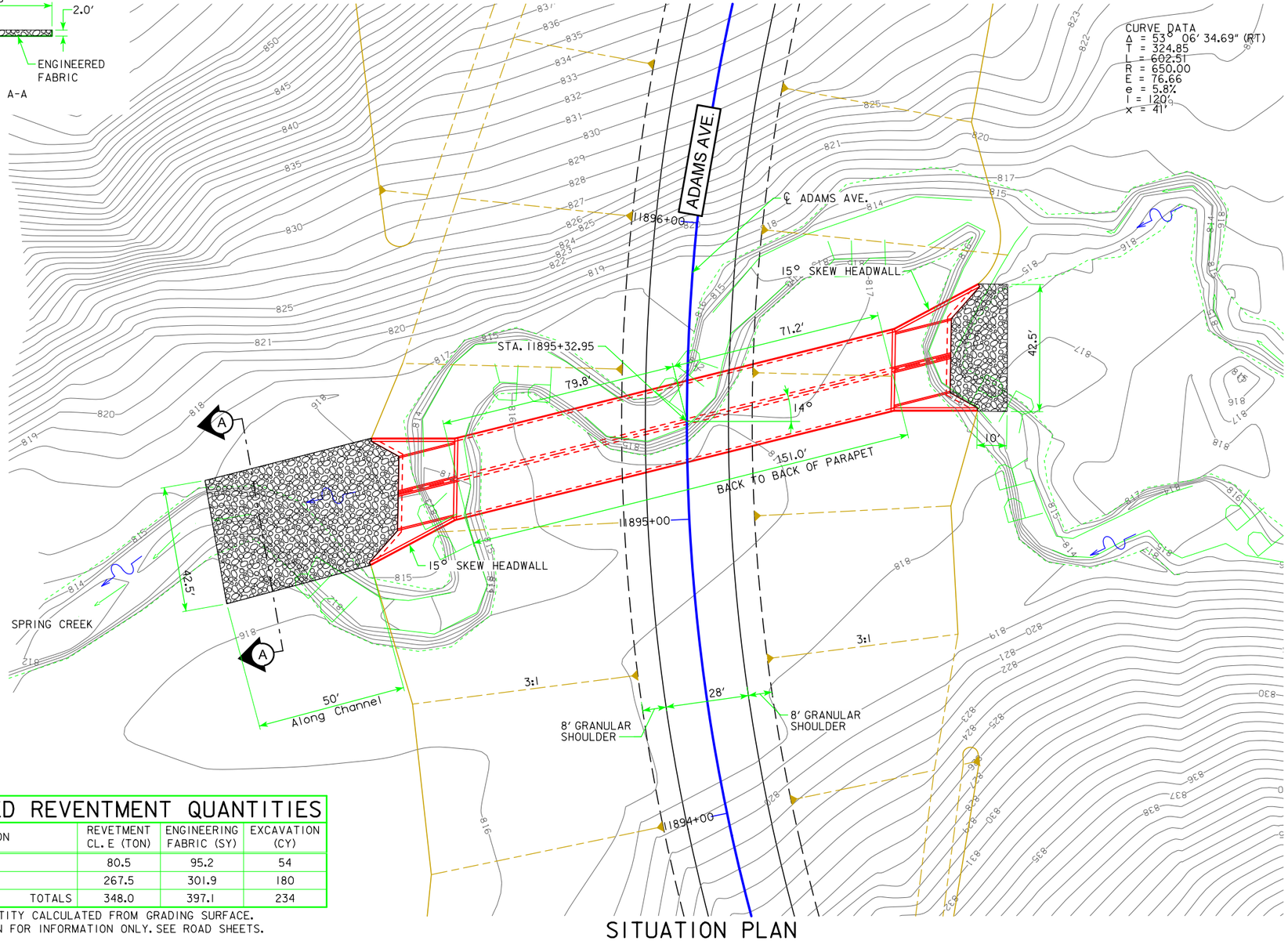
3:12:17 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



SECTION A-A



SITUATION PLAN

ESTIMATED REVENTMENT QUANTITIES

LOCATION	REVETMENT CL. E (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
INLET	80.5	95.2	54
OUTLET	267.5	301.9	180
TOTALS	348.0	397.1	234

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE.
QUANTITIES SHOWN FOR INFORMATION ONLY. SEE ROAD SHEETS.

BENCH MARK: #721
DESCRIPTION: CHISELED CROSS TOP CULVERT SW QUAD OF HWY30 & ADAMS AVEPANEL

STA. 863+96.68, 40.821' RT.
ELEV. = 927.52

0 ENGLISH 40
SCALE IN FEET

PROPOSED PROFILE GRADE

VPI 11894+50.00
Elv = 836.65
L = 440'

TRAFFIC ESTIMATE:

2009 AADT, ------ VPD
2035 AADT, ------ VPD
10% TRUCKS
DESIGN ESALs ---------

HYDRAULIC DATA

DRAINAGE AREA = 2.81 SQUARE MILES
DESIGN DISCHARGE, Q_{50}= 1785 cfs
Q_{100}= 2123 cfs
Q_{500}= 3039 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

ADAMS AVE. OVER SPRING CREEK
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY
LAT 41.916832
LONG -91.373080
FHWA #700560

HYDRAULIC DESIGN

LICENSED PROFESSIONAL ENGINEER
Kyle D. Riley
20550
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 03-20-2014 Date
Kyle D. Riley
Printed or Typed Name

My license renewal date is December 31, 2014

Pages or sheets covered by this seal: V.78 (HYDRAULIC DATA)

PRELIMINARY

DESIGN FOR 14° SKEW R.A.

TWIN 12' X 9' X 151' REINFORCED CONCRETE BOX CULVERT SITUATION PLAN

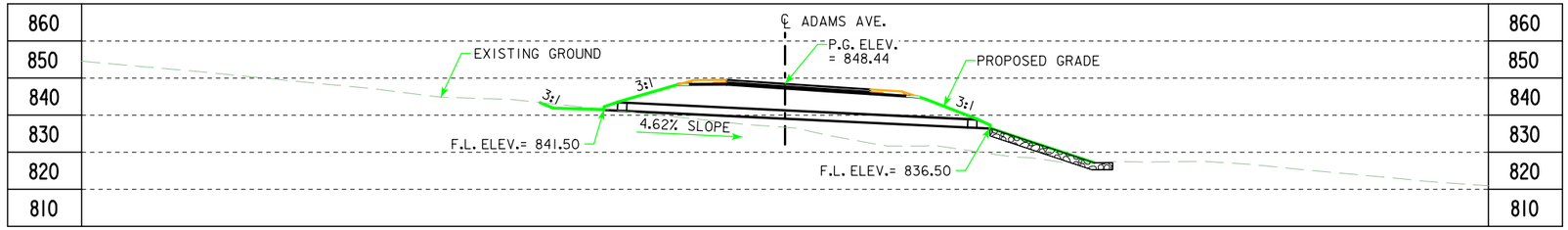
STA. 11895+32.95 ℄ ADAMS AVE. MARCH 2014

LINN COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

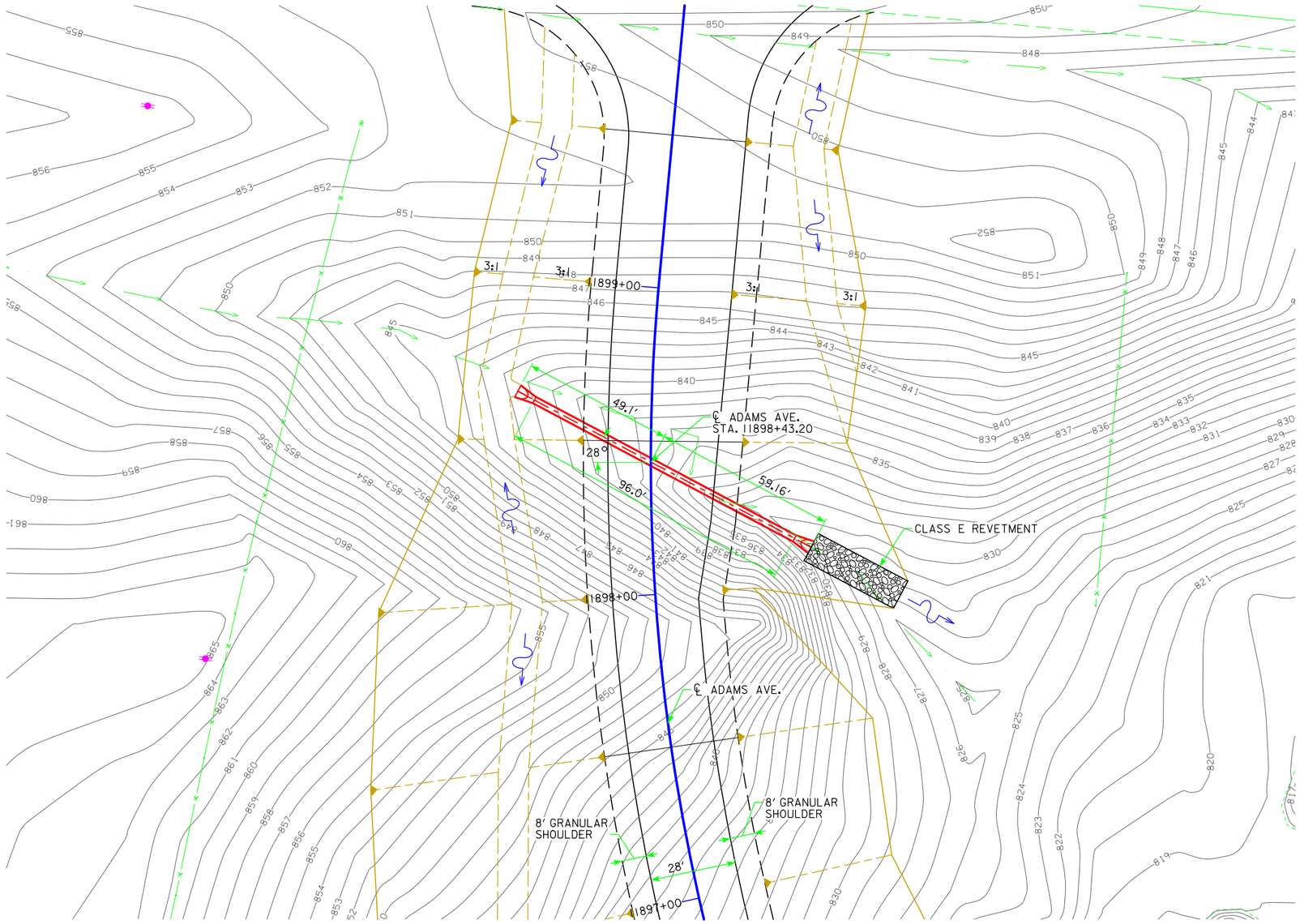
DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 1816

DESIGN TEAM Snyder and Associates, Inc. | LINN/CEDAR COUNTY | PROJECT NUMBER NHS-030-7(76)--19-57 | SHEET NUMBER V.78

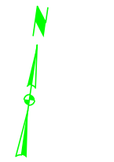
3:12:19 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



0 ENGLISH 40
SCALE IN FEET

BENCH MARK: #722
DESCRIPTION: CHISELED CROSS NE CORNER OF CONC PAD FOR SOLAR PANEL
STA. 871+75.17, 53.377' RT.
ELEV. = 933.92

HYDRAULIC DATA

DRAINAGE AREA = 3.45 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 11.20 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

ADAMS AVE.
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 28° SKEW L.A.

24" X 96' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 11898+43.20 ℄ ADAMS AVE. FEBRUARY 2014

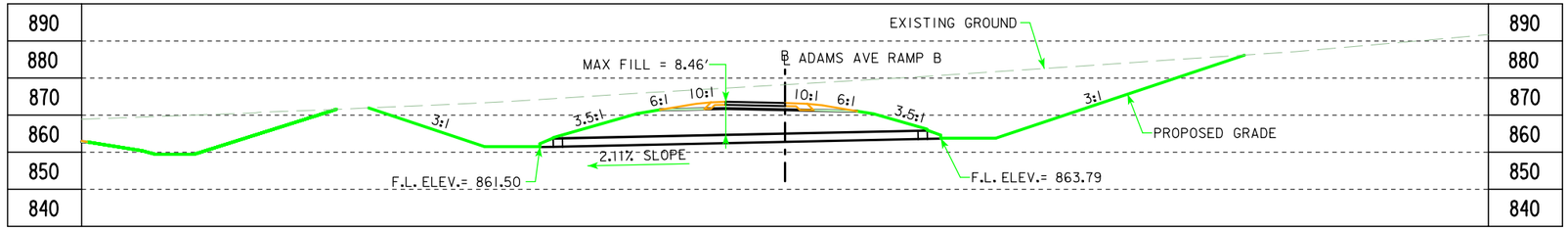
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

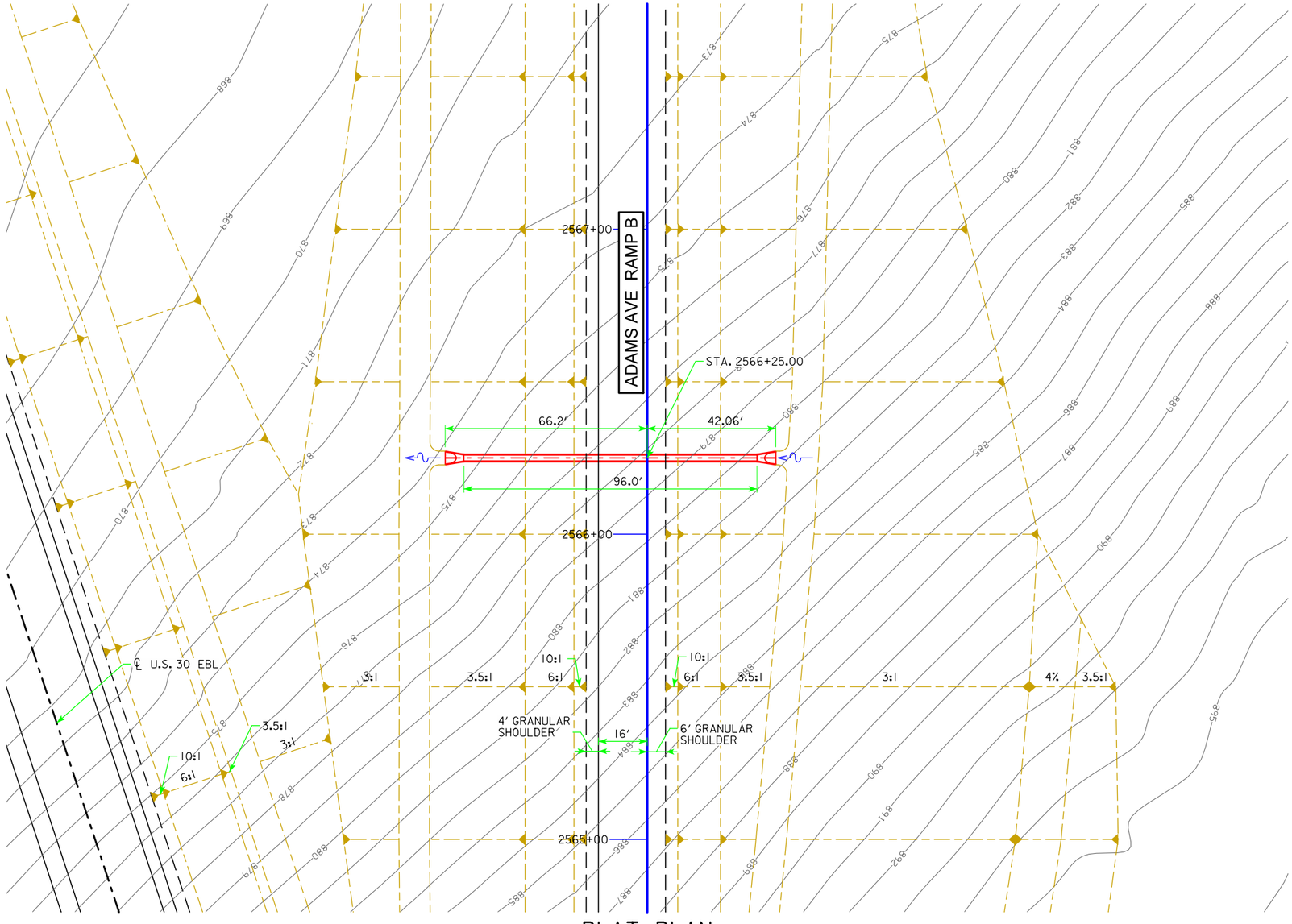
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER V.78A

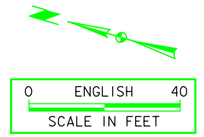
3:12:18 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #721
DESCRIPTION: XCHISELED CROSS TOP CULVERT SW QUAD OF HWY30 & ADAMS AVE
STA. 863+96.68, 40.82' RT.
ELEV. = 927.523

HYDRAULIC DATA

DRAINAGE AREA = 3.18 ACRES 1/2 HILLY 1/2 ROLLING
DESIGN DISCHARGE, Q_{50}= 12.25 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

ADAMS AVE. RAMP B
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

24" X 96' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 2566+25.00 ℄ ADAMS AVE. RAMP B — DECEMBER 2013

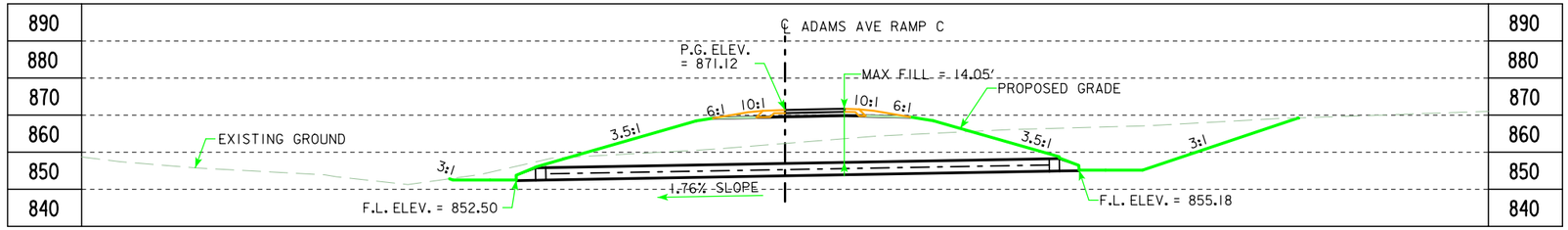
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

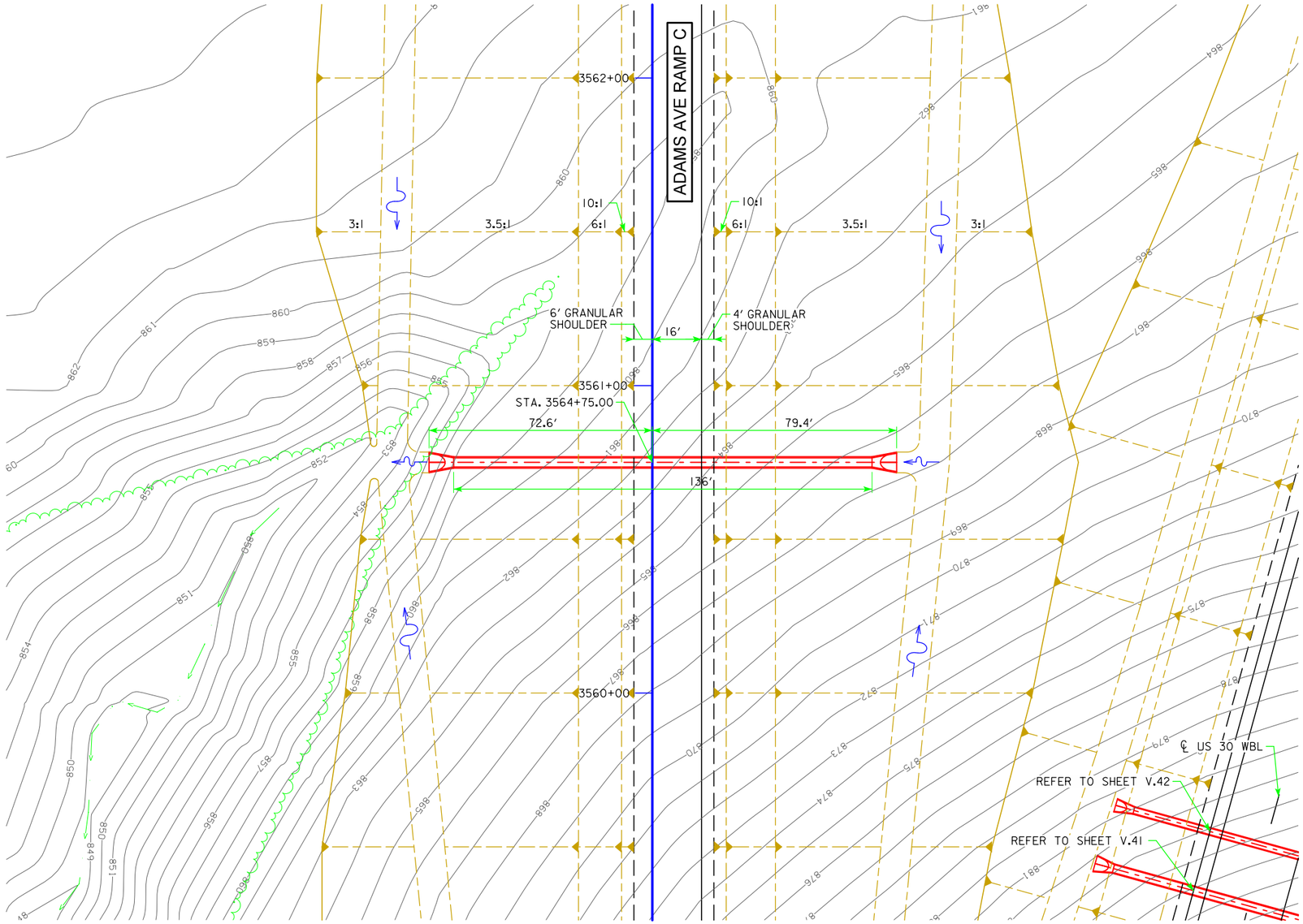
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.79

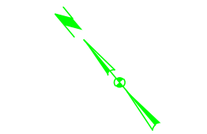
3:12:19 PM V81_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #721
DESCRIPTION: XCHISELED CROSS TOP CULVERT SW QUAD OF HWY30 & ADAMS AVE
STA. 863+96.68, 40.82' RT.
ELEV. = 927.523

HYDRAULIC DATA

DRAINAGE AREA = 19.45 ACRES 1/2 FLAT 1/2 ROLLING
DESIGN DISCHARGE, Q_{50} = 34.73 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

ADAMS AVE. RAMP C
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY

PRELIMINARY

DESIGN FOR 0° SKEW

36" X 136' REINFORCED CONCRETE PIPE

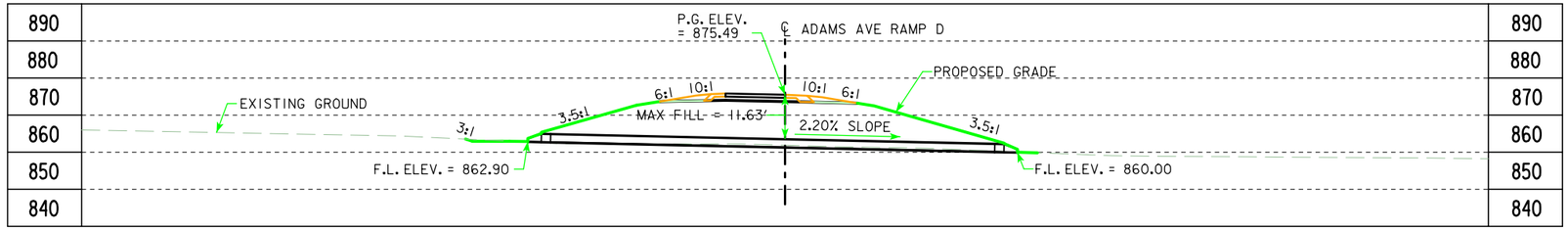
PLAT PLAN

STA. 3564+75.00 ℄ ADAMS AVE. RAMP C DECEMBER 2013

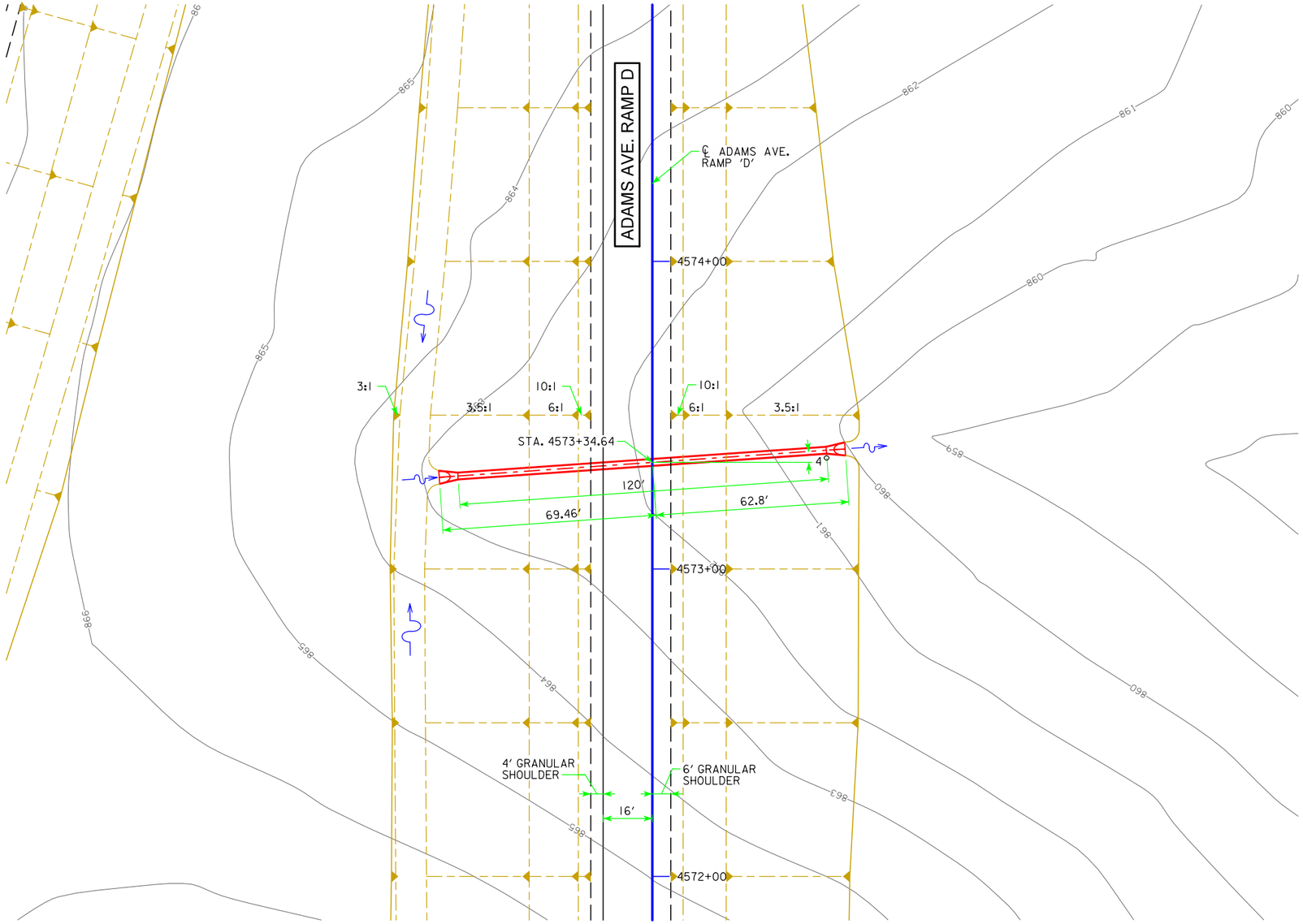
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

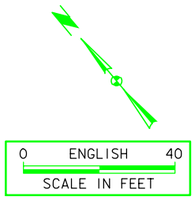
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #722
DESCRIPTION: CHISELED CROSS NE CORNER OF CONC PAD FOR SOLAR PANEL
STA. 871+75.17, 53.37' RT.
ELEV. = 933.92'

HYDRAULIC DATA

DRAINAGE AREA = 4.89 ACRES ROLLING
DESIGN DISCHARGE, Q_{50} = 14.59 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

ADAMS AVE. RAMP D
T-82N R-4W
SECTION 18
PIONEER TOWNSHIP
CEDAR COUNTY

PRELIMINARY

DESIGN FOR 4° SKEW R.A.

24" X 120' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 4573+34.64 ℄ ADAMS AVE. RAMP D — DECEMBER 2013

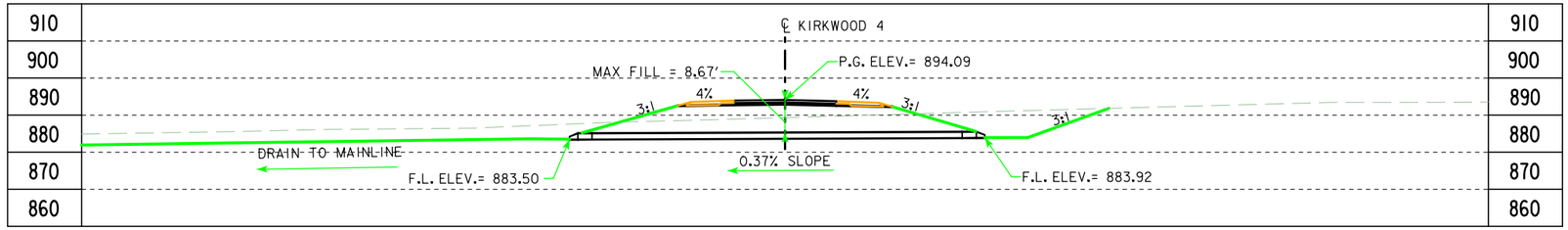
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

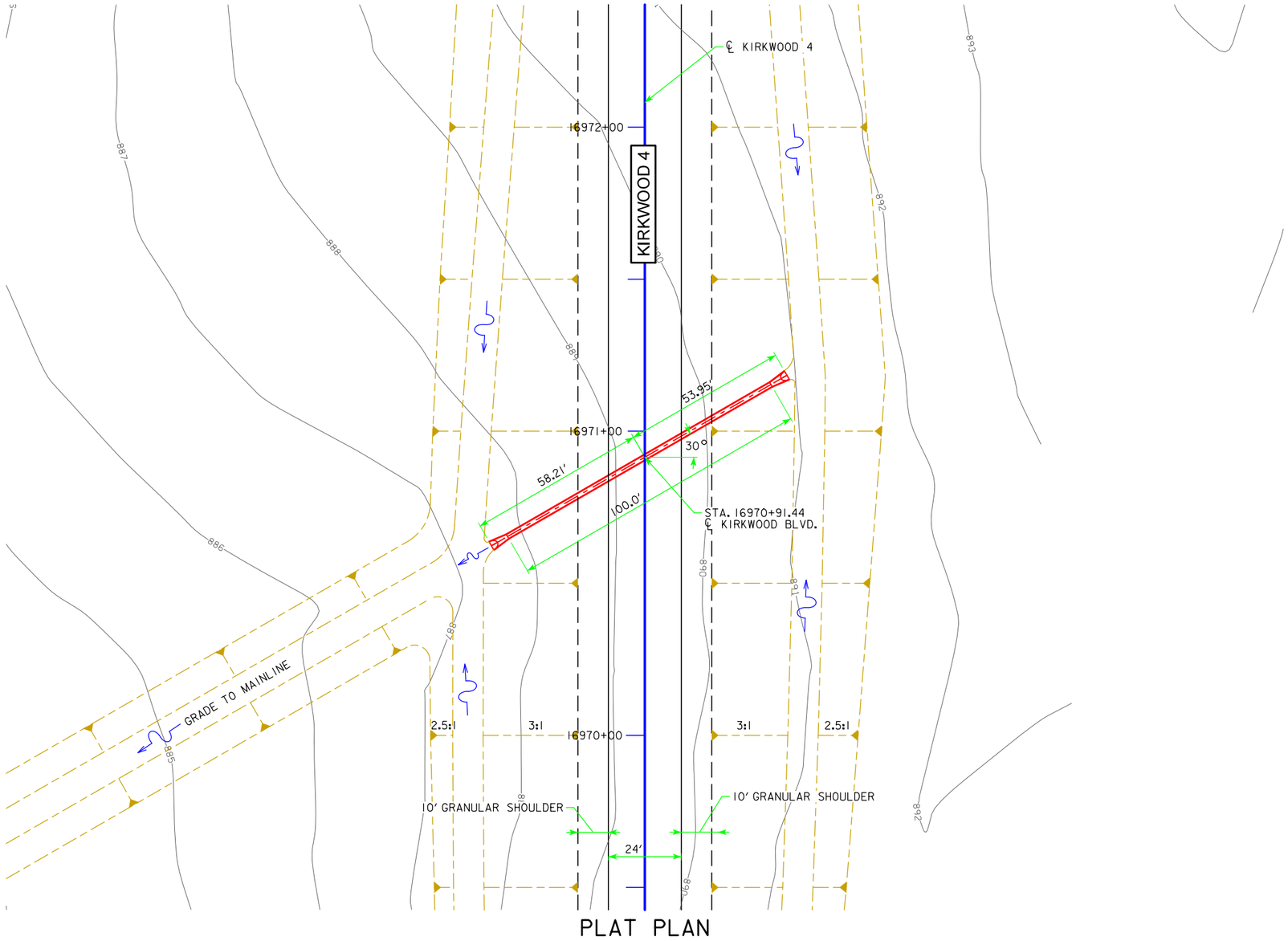
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.81

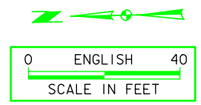
3:12:21 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #728
DESCRIPTION: RAILROAD RAIL(VERTICAL)
ROW MARKER POST AT T IN FENCE
300FT W OF CP351
STA. 969+18.42, 59.935' RT.
ELEV. = 868.62'

HYDRAULIC DATA

DRAINAGE AREA = 1.15 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 4.86 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

KIRKWOOD BLVD.
T-82N R-4W
SECTION 17
PIONEER TOWNSHIP
CEDAR COUNTY

PRELIMINARY

DESIGN FOR 30° SKEW R.A.

18" X 100'
UNCLASSIFIED PIPE

PLAT PLAN

STA. 16970+91.44 ℄ KIRKWOOD 4 MAY 2014

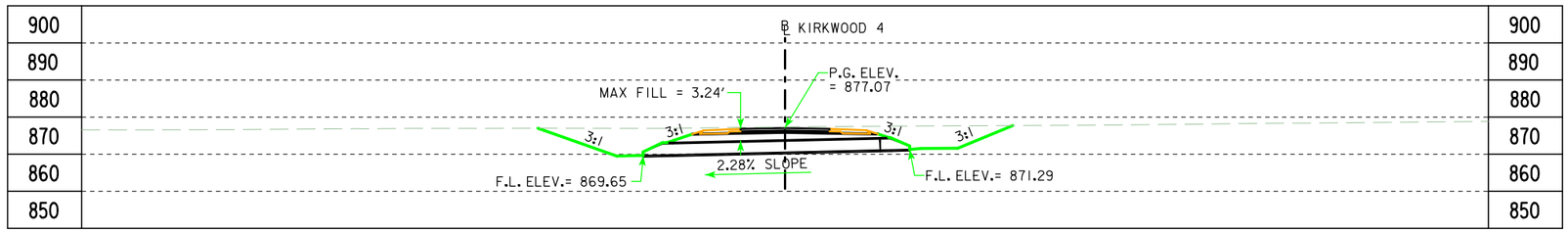
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

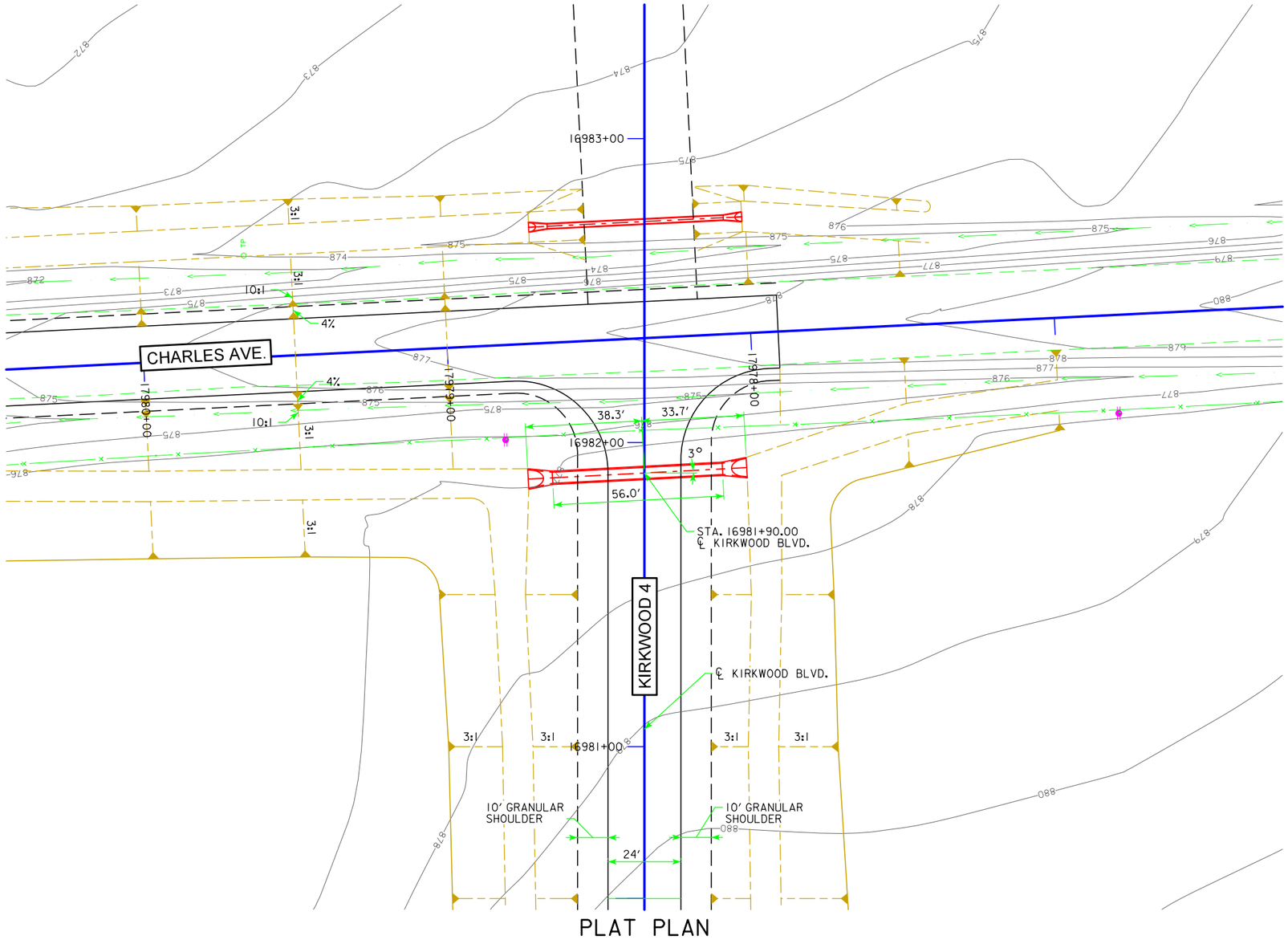
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.85

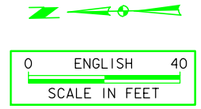
3:12:22 PM V81_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #728
DESCRIPTION: RAILROAD RAIL(VERTICAL)
ROW MARKER POST AT T IN FENCE
300FT W OF CP351
STA. 969+18.42, 59.94' RT.
ELEV. = 868.623

HYDRAULIC DATA

DRAINAGE AREA = 20.63 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 43.58 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

KIRKWOOD BLVD.
T-82N R-4W
SECTION 17
PIONEER TOWNSHIP
CEDAR COUNTY

PRELIMINARY

DESIGN FOR 3° SKEW

36" X 56' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 16981+90.00 ℄ KIRKWOOD BLVD. DECEMBER 2013

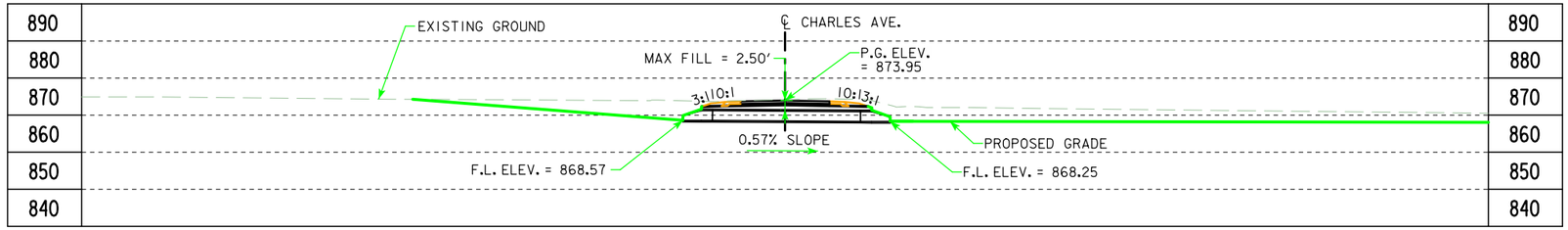
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

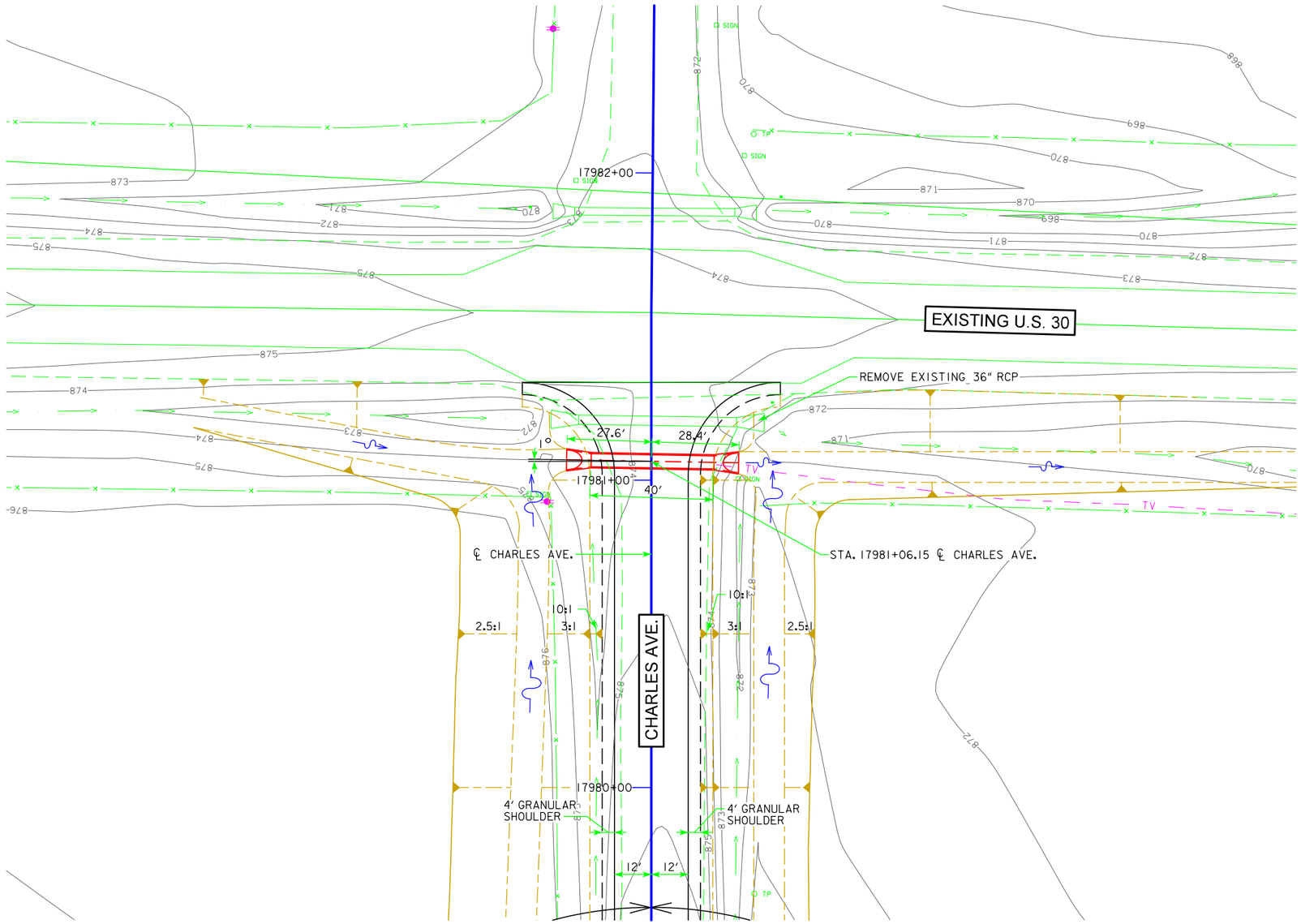
DESIGN SHEET NO. ___ OF ___ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.86

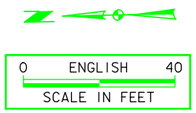
3:12:22 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #728
DESCRIPTION: RAILROAD RAIL(VERTICAL)
ROW MARKER POST AT T IN FENCE
300FT W OF CP351
STA. 969+18.42, 59.94' RT.
ELEV. = 868.623

HYDRAULIC DATA

DRAINAGE AREA = 27.76 ACRES HILLY
DESIGN DISCHARGE, Q_{50}= 54.61 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

CHARLES AVE.
T-82N R-4W
SECTION 16/17
PIONEER TOWNSHIP
CEDAR COUNTY

PRELIMINARY

DESIGN FOR 1° SKEW L.A.

52" X 32" X 40' REINFORCED CONCRETE ARCH PIPE (RCAP)

PLAT PLAN

STA. 17981+06.15 ℄ CHARLES AVE. DECEMBER 2013

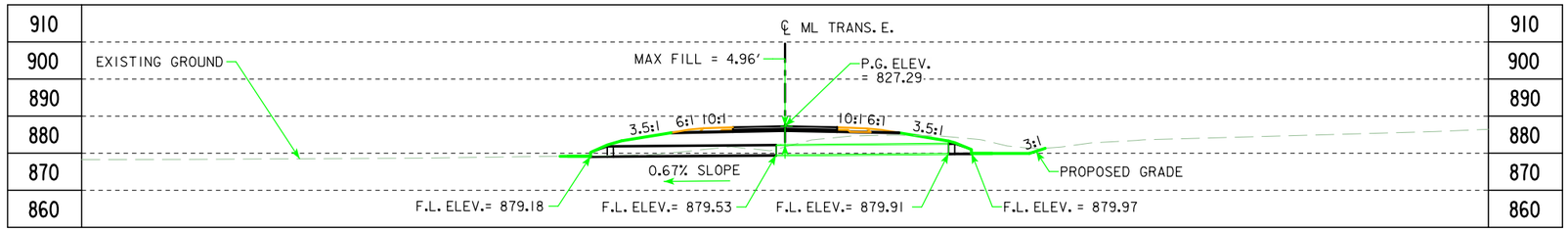
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

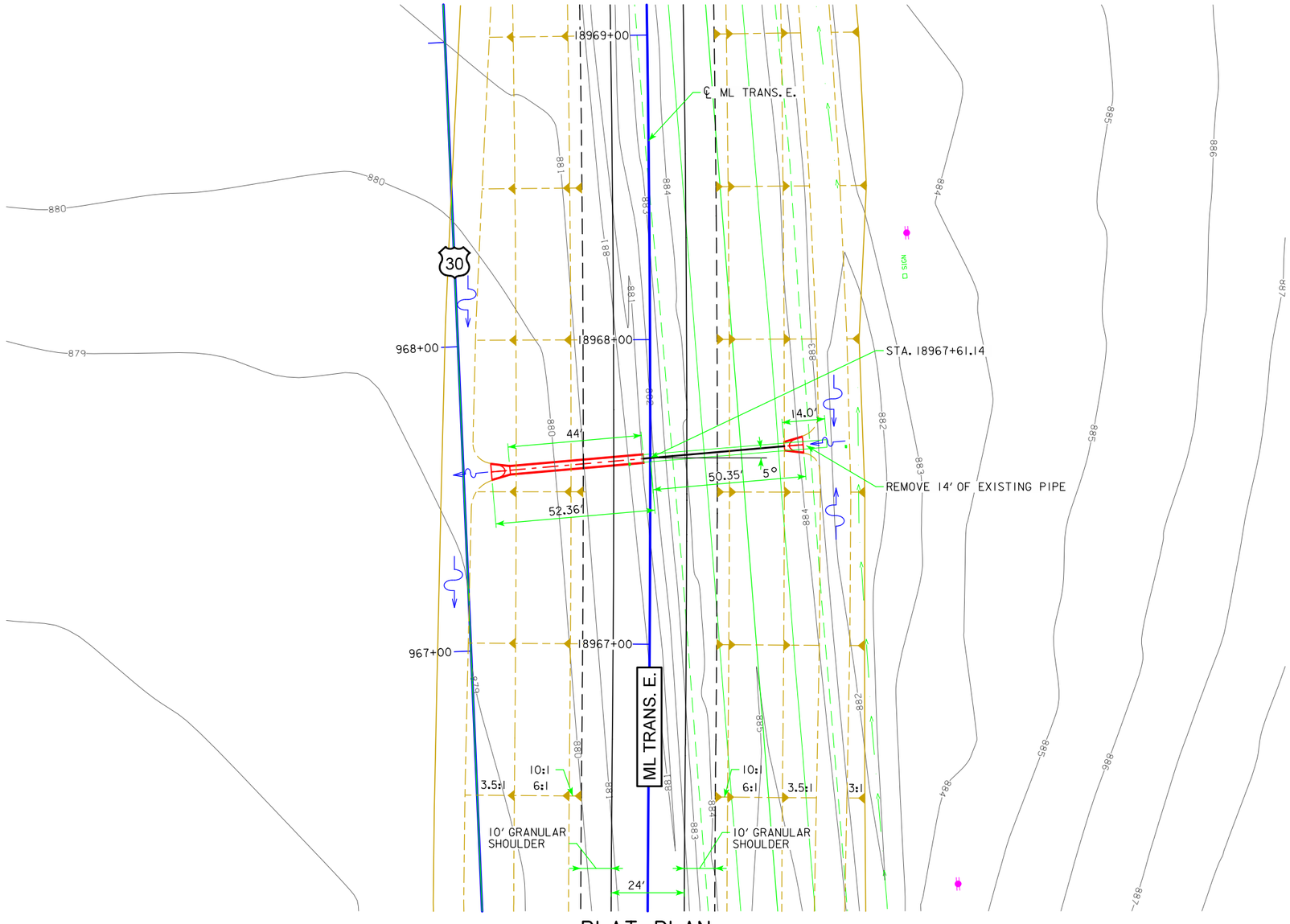
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.87

3:12:23 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN

0 ENGLISH 40
SCALE IN FEET

BENCH MARK: #728
DESCRIPTION: RAILROAD RAIL(VERTICAL)
ROW MARKER POST AT T IN FENCE
300FT W OF CP351
STA. 969+18.42, 59.94' RT.
ELEV. = 868.623

HYDRAULIC DATA

DRAINAGE AREA = 6.83 ACRES 1/2 ROLLING 1/2 FLAT
DESIGN DISCHARGE, Q_{50}= 15.68 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

ML TRANS. E.
T-82N R-4W
SECTION 8/17
PIONEER TOWNSHIP
CEDAR COUNTY

PRELIMINARY

DESIGN FOR 5° SKEW R.A.

30" X 30' REINFORCED CONCRETE PIPE EXTENSION

PLAT PLAN

STA. 18967+61.14 ℄ ML TRANS. EAST CONNECTOR DECEMBER 2013

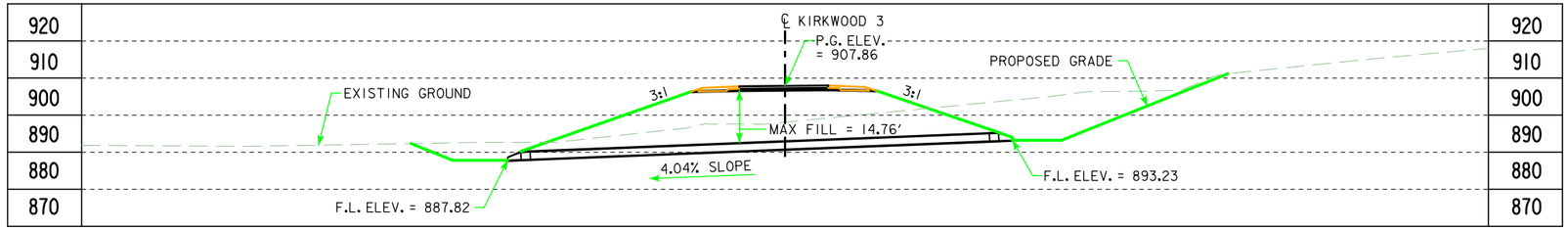
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

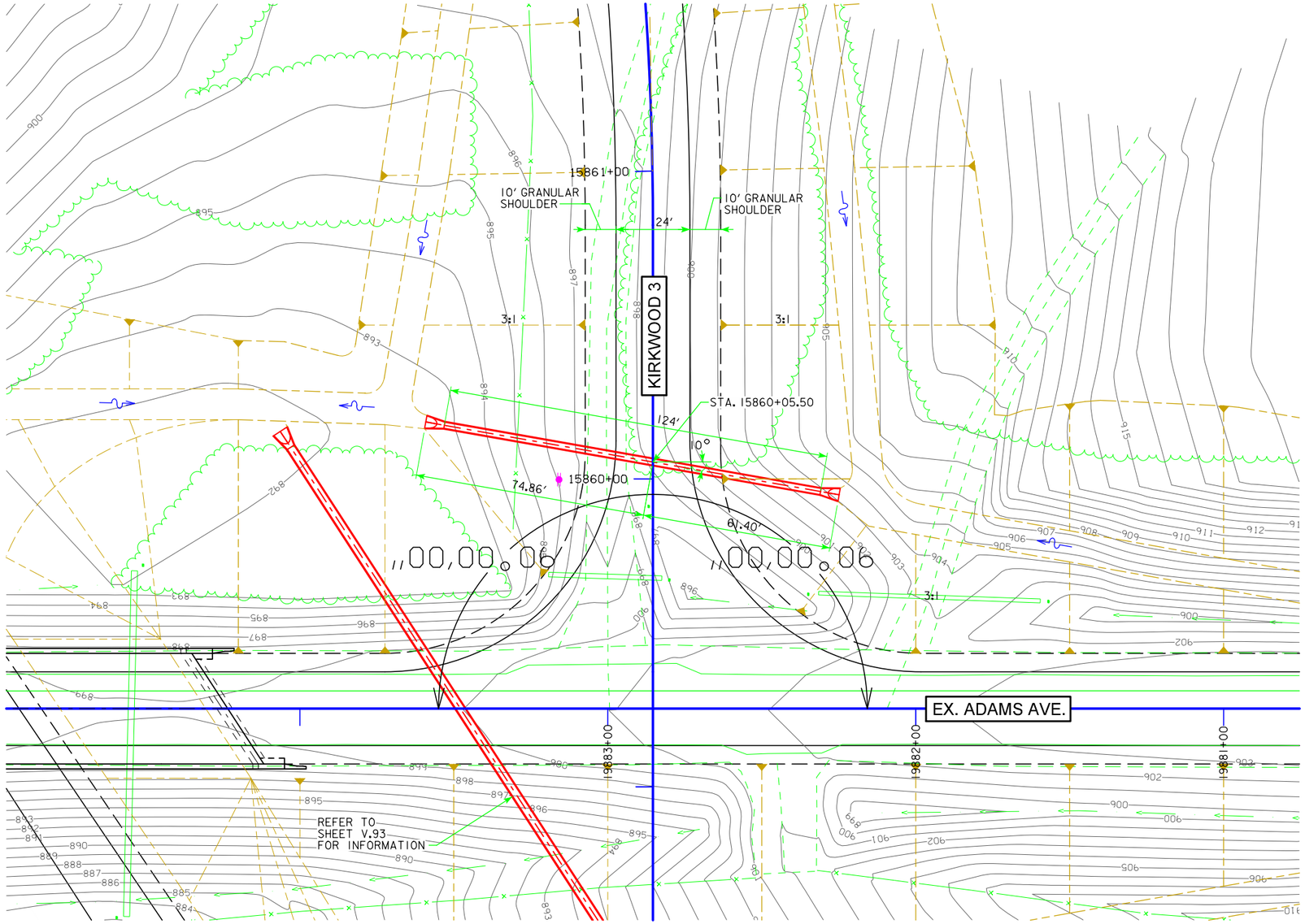
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.88

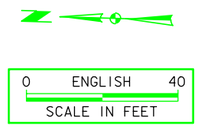
3:12:24 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #722
DESCRIPTION: CHISELED CROSS NE CORNER OF CONC PAD FOR SOLAR PANEL
STA. 871+75.17, 53.377' RT.
ELEV. = 933.921

HYDRAULIC DATA

DRAINAGE AREA = 2.95 ACRES ROLLING
DESIGN DISCHARGE, Q_{50} = 9.94 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

KIRKWOOD 3
T-82N R-4W
SECTION 18
PIONEER TOWNSHIP
CEDAR COUNTY

PRELIMINARY

DESIGN FOR 10° SKEW L.A.

24" X 124' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 15860+05.05 ℄ KIRKWOOD 3 JULY 2014

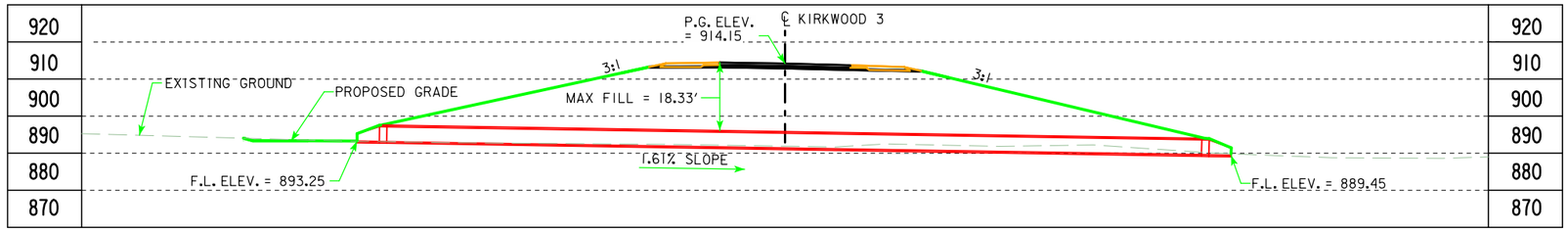
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

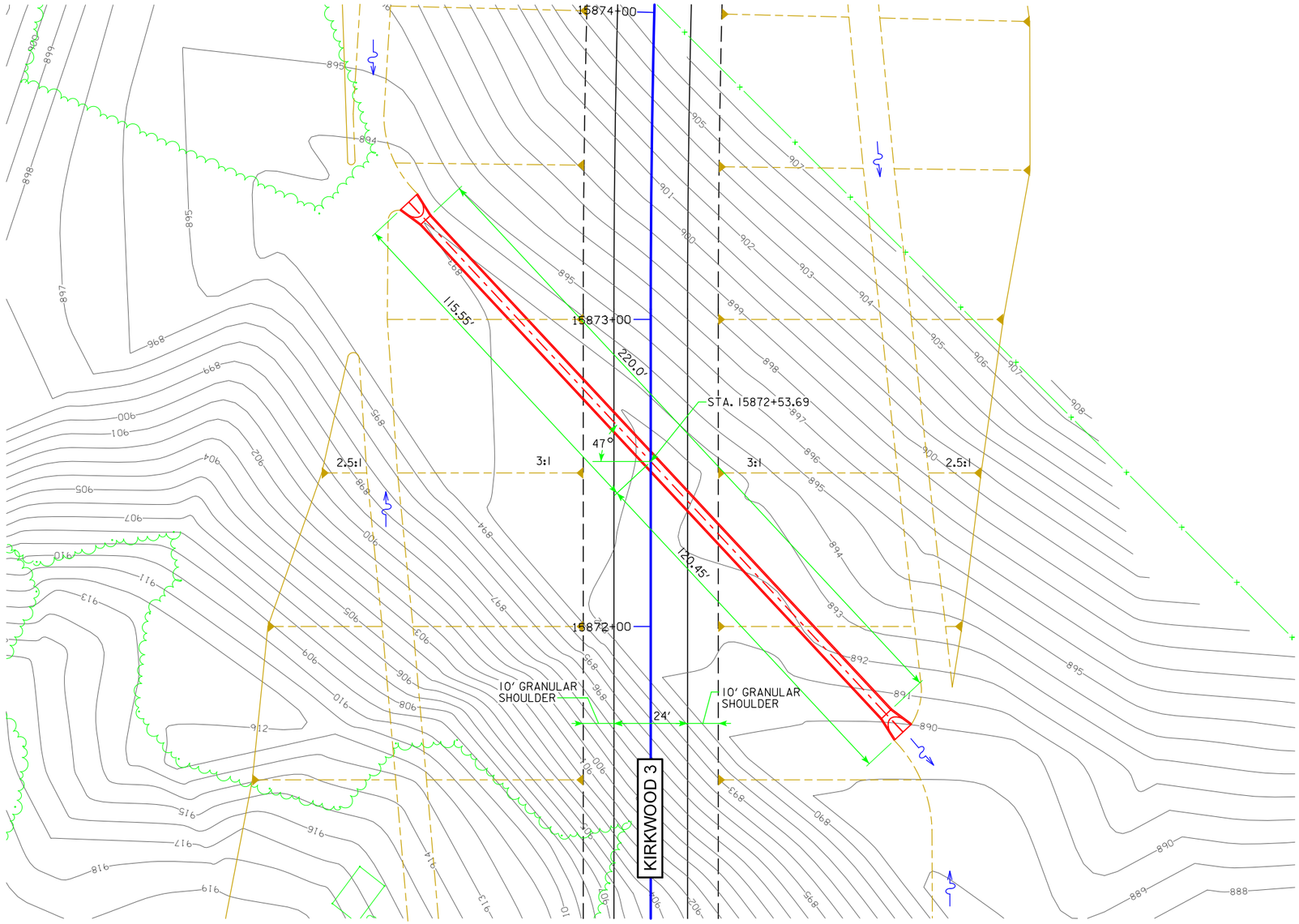
DESIGN SHEET NO. - OF - FILE NO. - DESIGN NO. -

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.89

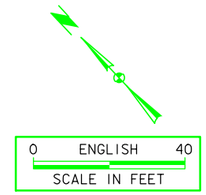
3:12:25 PM V81_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #722
DESCRIPTION: CHISELED CROSS NE CORNER OF CONC PAD FOR SOLAR PANEL
STA. 871+75.17, 53.377' RT.
ELEV. = 933.921

HYDRAULIC DATA

DRAINAGE AREA = 35.59 ACRES ROLLING
DESIGN DISCHARGE, Q_{50} = 65.96 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

KIRKWOOD 3
T-82N R-4W
SECTION 18
PIONEER TOWNSHIP
CEDAR COUNTY

PRELIMINARY

DESIGN FOR 47° SKEW L.A.

48" X 220' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 15872+53.69 ℄ KIRKWOOD 3 JULY 2014

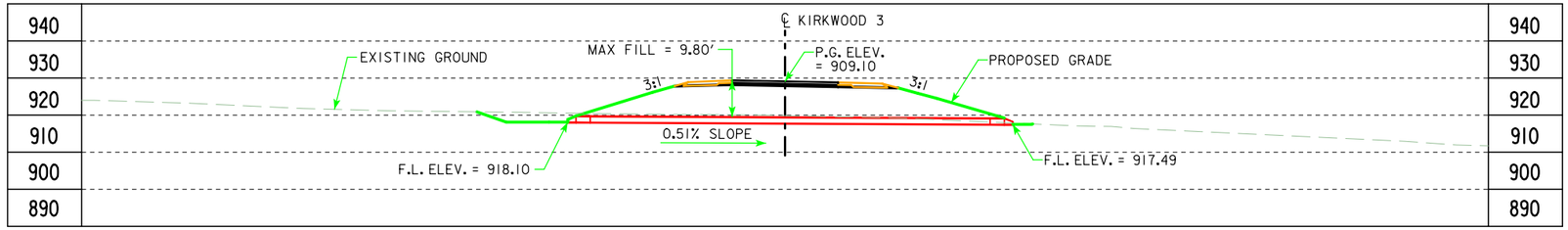
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

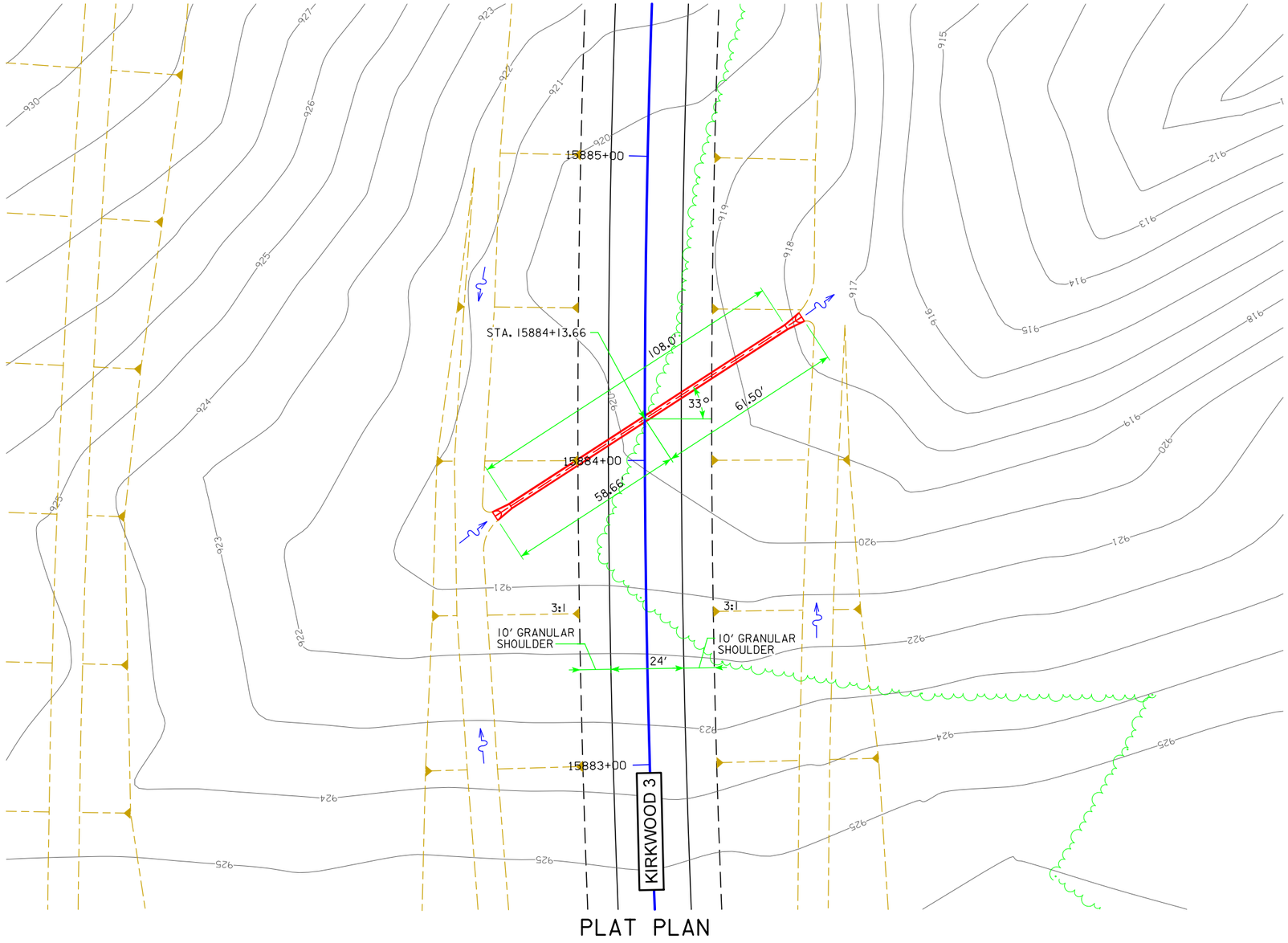
DESIGN SHEET NO. - OF - FILE NO. - DESIGN NO. -

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER V.90

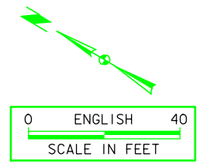
3:12:25 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #722
DESCRIPTION: CHISELED CROSS NE CORNER OF CONC PAD FOR SOLAR PANEL
STA. 871+75.17, 53.377' RT.
ELEV. = 933.921

HYDRAULIC DATA

DRAINAGE AREA = 2.91 ACRES ROLLING
DESIGN DISCHARGE, Q_{50} = 9.84 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

KIRKWOOD 3
T-82N R-4W
SECTION 18
PIONEER TOWNSHIP
CEDAR COUNTY

PRELIMINARY

DESIGN FOR 33° SKEW R.A.

18" X 108' REINFORCED CONCRETE PIPE

PLAT PLAN

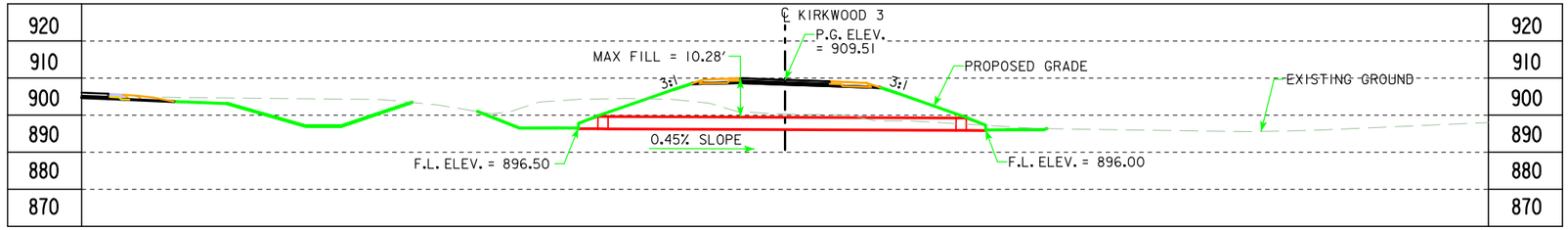
STA. 15884+13.66 ℄ KIRKWOOD 3 JULY 2014

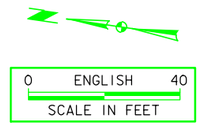
CEDAR COUNTY

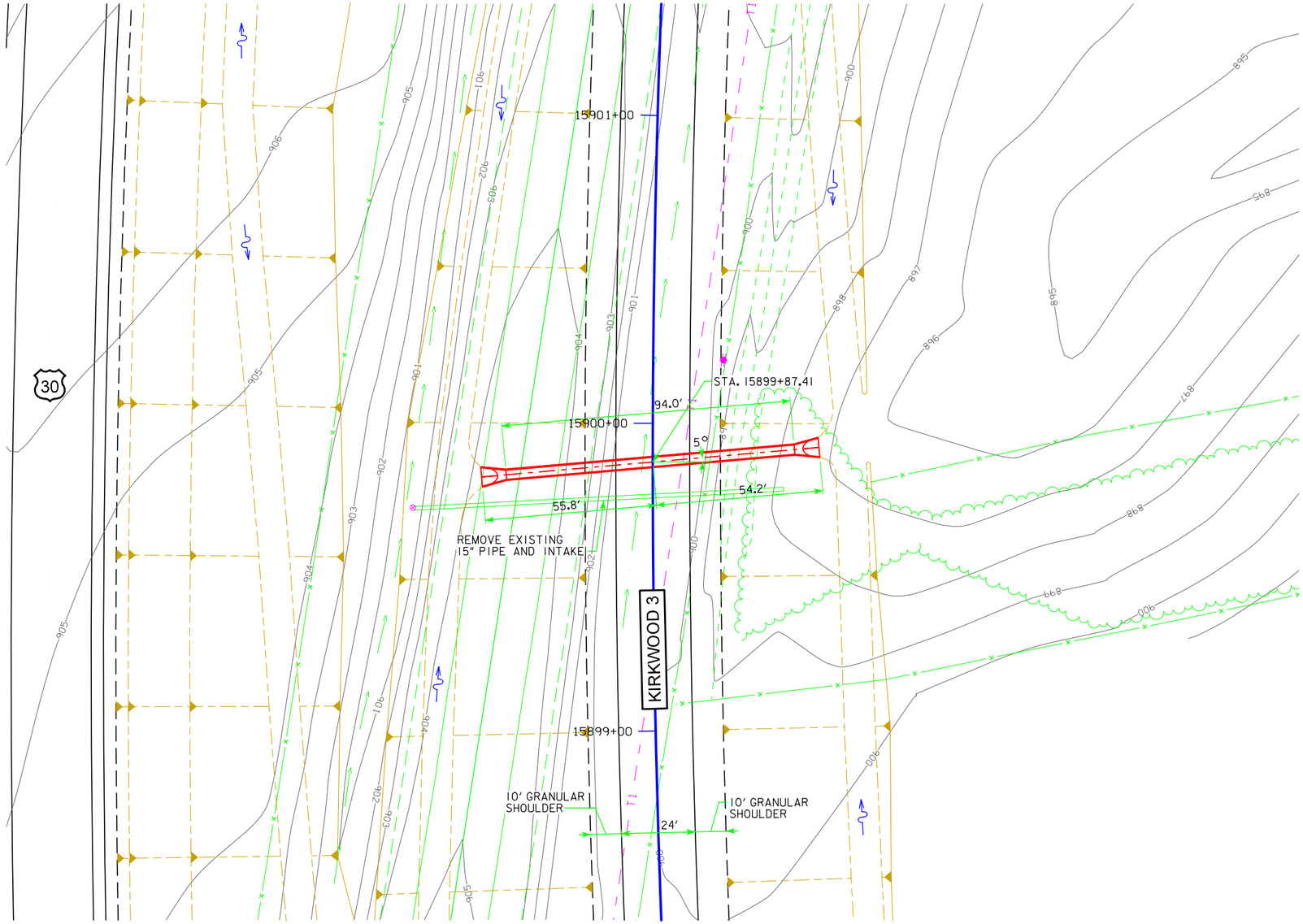
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. - OF - FILE NO. - DESIGN NO. -

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER V.91







BENCH MARK: #722
DESCRIPTION: CHISELED CROSS NE CORNER OF CONC PAD FOR SOLAR PANEL
STA. 871+75.17, 53.377' RT.
ELEV. = 933.921

HYDRAULIC DATA

DRAINAGE AREA = 15.87 ACRES ROLLING
DESIGN DISCHARGE, Q_{50} = 35.70 CFS

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

KIRKWOOD 3
T-82N R-4W
SECTION 18
PIONEER TOWNSHIP
CEDAR COUNTY

PRELIMINARY

DESIGN FOR 5° SKEW R.A.

36" X 94' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 15899+87.41 ℄ KIRKWOOD 3 JULY 2014

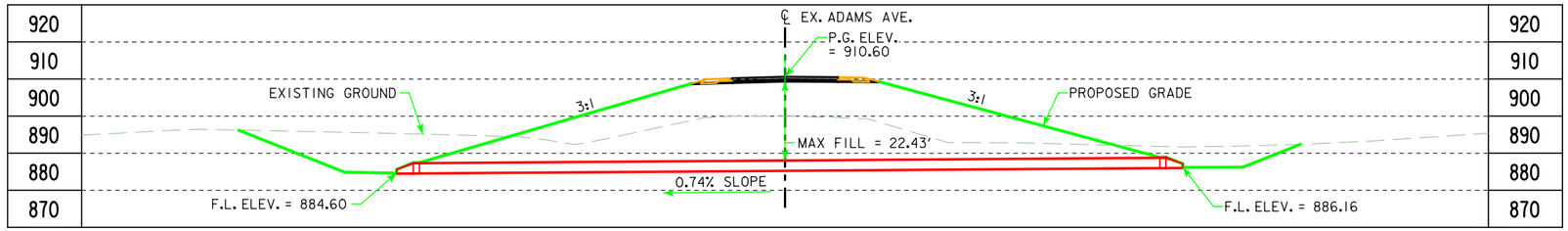
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

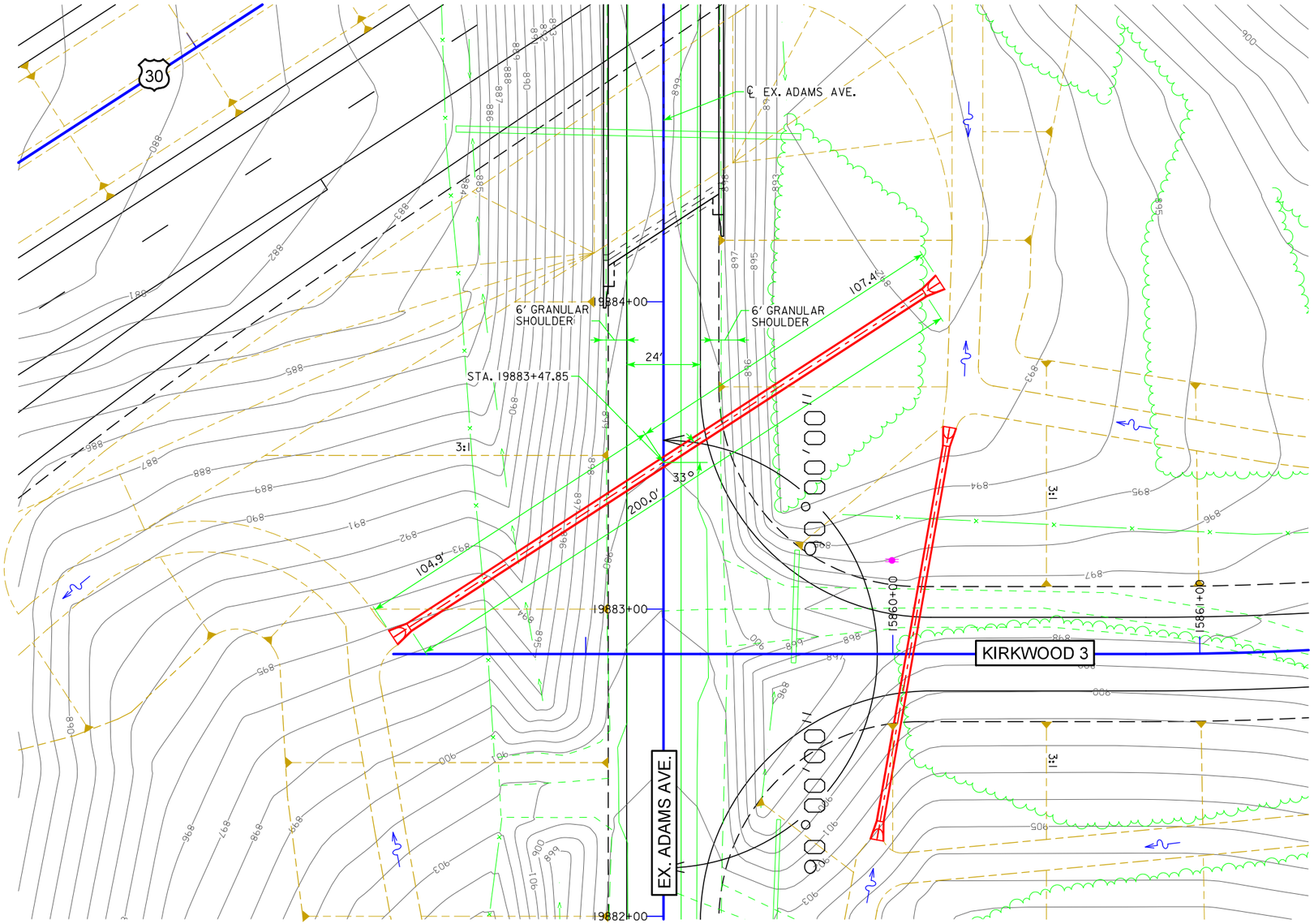
DESIGN SHEET NO. - OF - FILE NO. - DESIGN NO. -

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER V.92

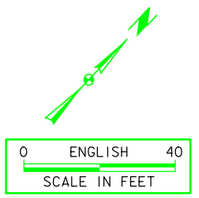
3:12:27 PM V81_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #722
DESCRIPTION: CHISELED CROSS NE CORNER OF CONC PAD FOR SOLAR PANEL
STA. 871+75.17, 53.377' RT.
ELEV. = 933.921

HYDRAULIC DATA

DRAINAGE AREA = 9.70 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 24.56 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

EXISTING ADAMS AVE.
T-82N R-4W
SECTION 18
PIONEER TOWNSHIP
CEDAR COUNTY

PRELIMINARY

DESIGN FOR 33° SKEW R.A.

30" X 200' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 19883+47.85 ℄ EX. ADAMS AVE. JULY 2014

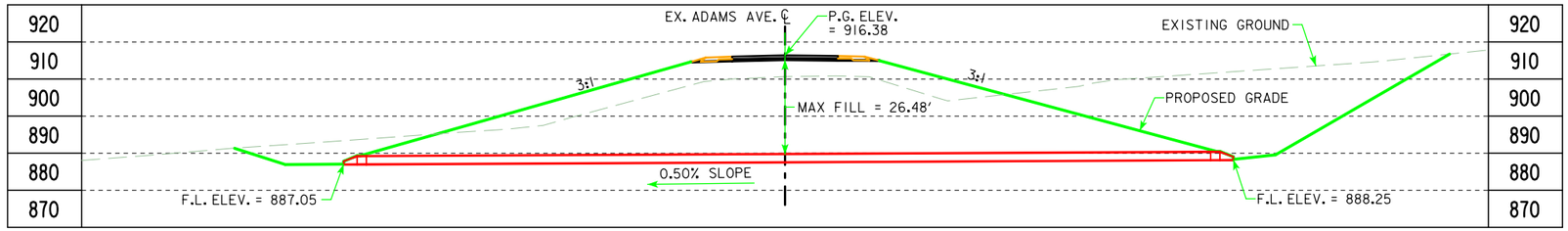
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

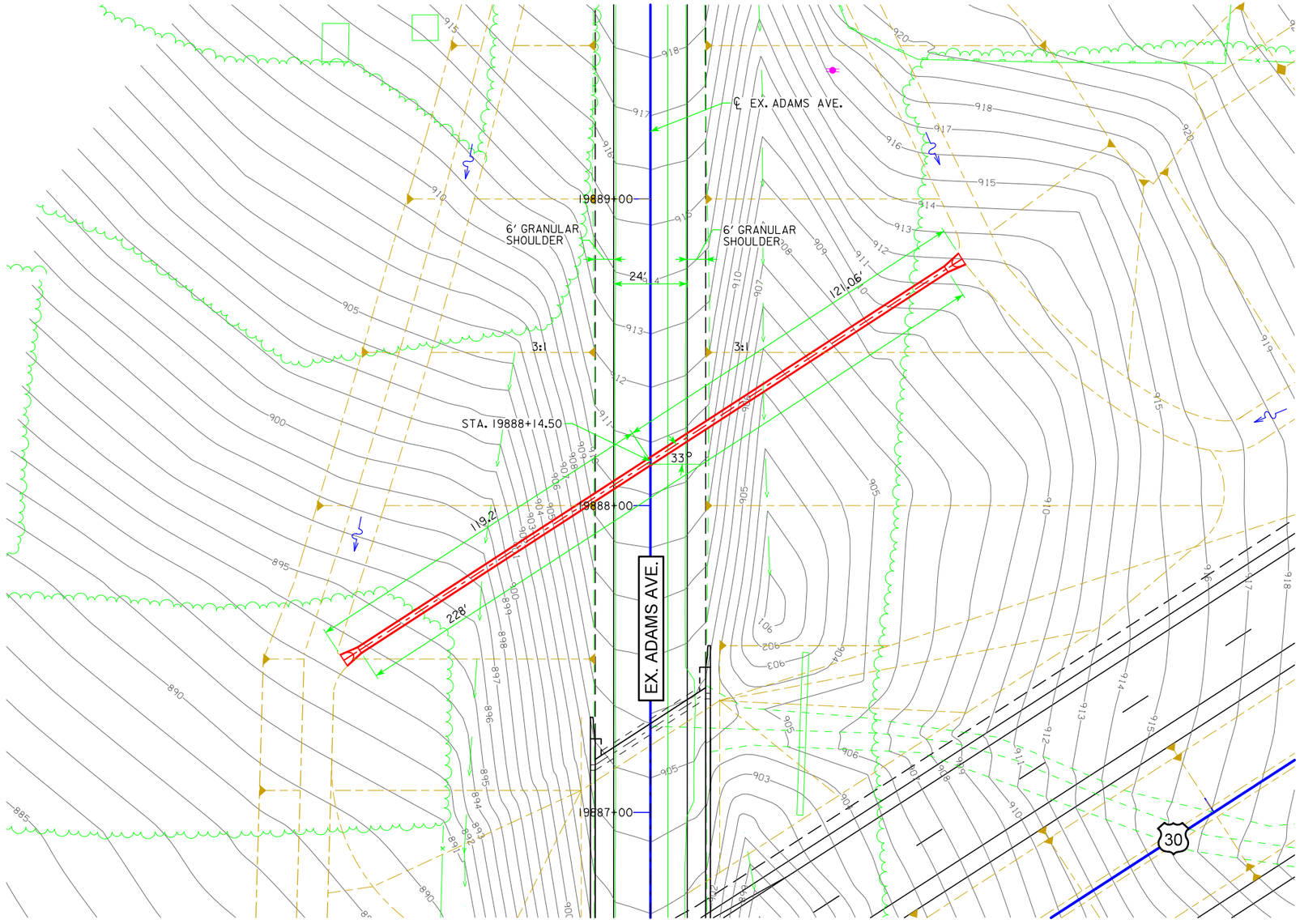
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.93

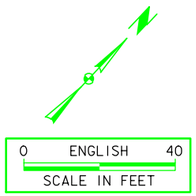
3:12:28 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



LONGITUDINAL SECTION ALONG ℄ CULVERT



PLAT PLAN



BENCH MARK: #722
DESCRIPTION: CHISELED CROSS NE CORNER OF CONC PAD FOR SOLAR PANEL
STA. 871+75.17, 53.377' RT.
ELEV. = 933.921

HYDRAULIC DATA

DRAINAGE AREA = 4.38 ACRES ROLLING
DESIGN DISCHARGE, Q_{50}= 13.42 cfs

UTILITIES LEGEND:

REFER TO SHEET D.1

LOCATION

EXISTING ADAMS AVE.
T-82N R-4W
SECTION 18
PIONEER TOWNSHIP
CEDAR COUNTY

PRELIMINARY

DESIGN FOR 33° SKEW R.A.

24" X 228' REINFORCED CONCRETE PIPE

PLAT PLAN

STA. 19888+14.50 ℄ EX. ADAMS AVE. JULY 2014

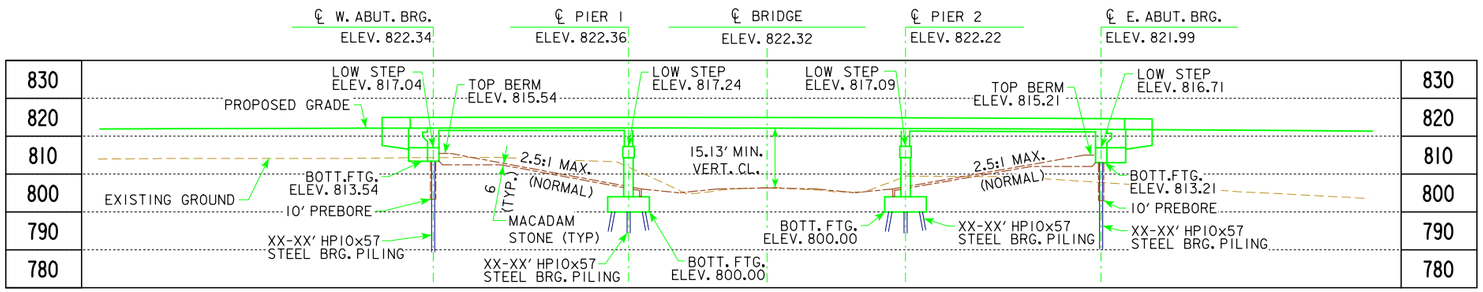
CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

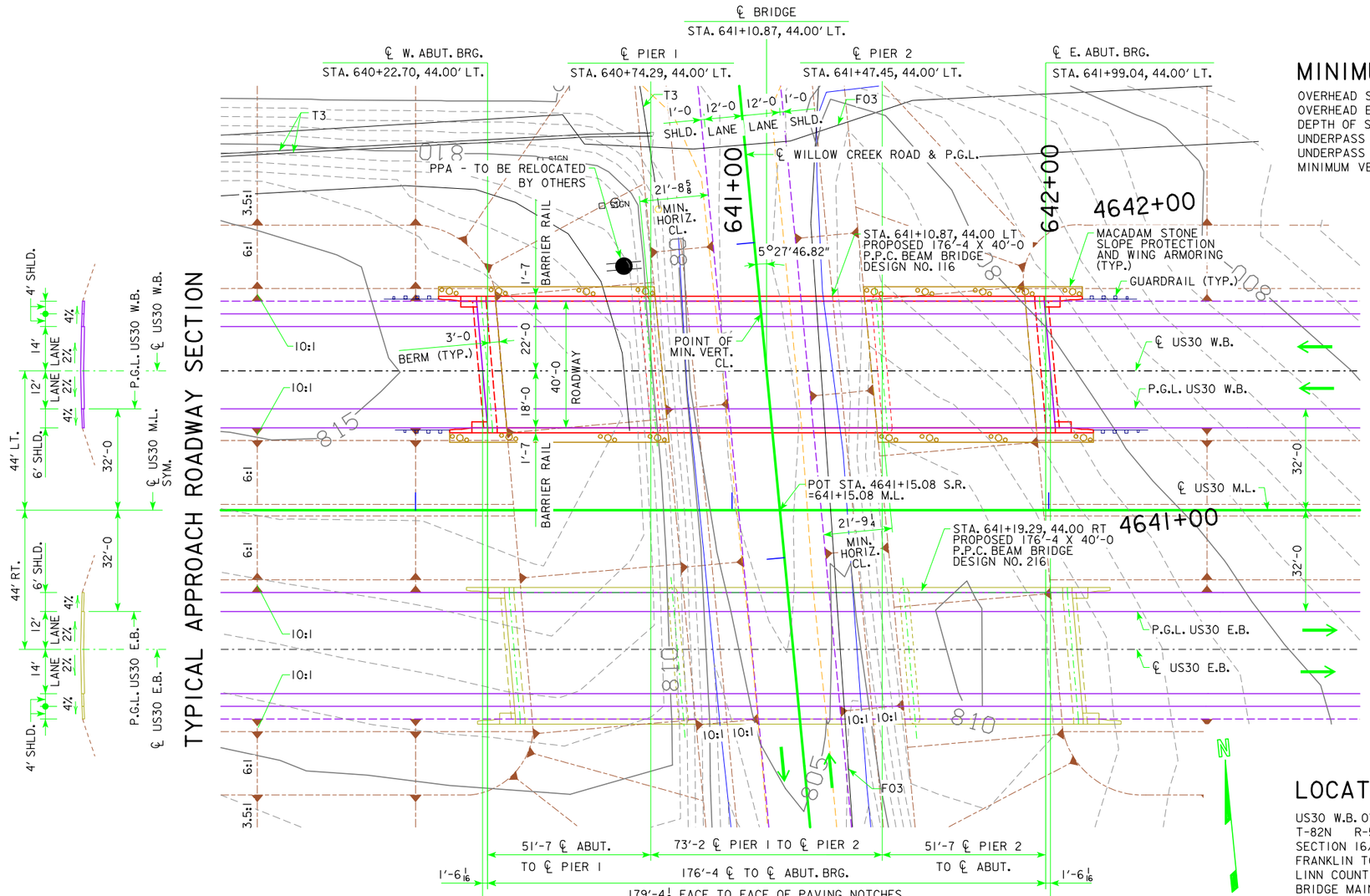
DESIGN SHEET NO. ____ OF ____ FILE NO. _____ DESIGN NO. _____

DESIGN TEAM	Snyder and Associates, Inc.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	V.94

3:12:28 PM V8i_IDOTRoad D:\1120610\Cadd\Design\57030076v1.sht



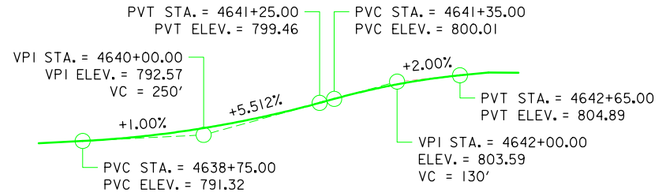
LONGITUDINAL SECTION ALONG ℄ ROADWAY - W.B.



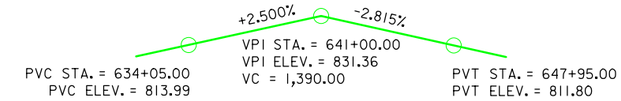
SITUATION PLAN

TYPICAL APPROACH ROADWAY SECTION

BENCH MARK NO. 513 - STA. 640+15.21, 103.506 LT, SPIKE IN POWER POLE NW QUAD WILLOW CR & HWY30, ELEV. 809.020, N. 705161.943 E. 2200003.552.



PROPOSED PROFILE GRADE WILLOW CREEK ROAD



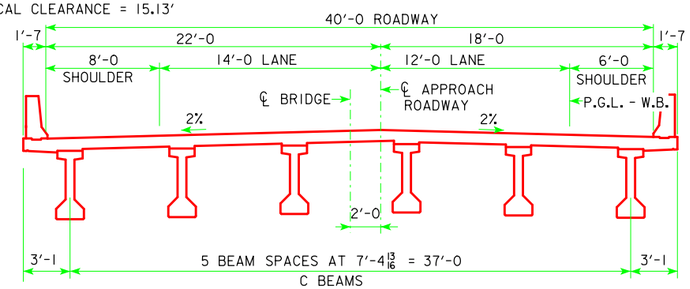
PROPOSED PROFILE GRADE US30

MINIMUM VERTICAL CLEARANCE

OVERHEAD STATION = 641+08.91 , OFFSET 64.50' LT.
OVERHEAD ELEVATION = 822.28
DEPTH OF SUPERSTRUCTURE = 4.67 '
UNDERPASS STATION = 4641+79.87, OFFSET 0.00'
UNDERPASS ELEVATION = 802.48
MINIMUM VERTICAL CLEARANCE = 15.13'

UTILITIES LEGEND:

	PPA POWER POLE CO. 1
T3	CENTURY LINK
FO	IOWA NETWORK SERVICES
F03	WINDSTREAM



PROPOSED CROSS SECTION

(W.B. IN DIRECTION OF STATIONING)

US30 TRAFFIC ESTIMATE

2009 AADT	11,300	V.P.D.
2035 AADT	16,680	V.P.D.
2035 DHV	1450	V.P.H.
TRUCKS	10	%
TOTAL DESIGN ESALs	-	

WILLOW CREEK ROAD TRAFFIC ESTIMATE

2013 AADT	40	V.P.D.
2035 AADT	100	V.P.D.
2035 DHV	-	V.P.H.
TRUCKS	3	%
TOTAL DESIGN ESALs	-	

NOTES:
ALL OFFSETS ARE MEASURED FROM ℄ OF US30 U.N.O.
TOP OF BRIDGE DECK AT CENTERLINE ROADWAY IS 0.21' ABOVE THE PROFILE GRADE TO ACCOUNT FOR DECK CROSS SLOPE AND PARABOLIC CROWN.
ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.
PIER TYPE - FRAME PIERS, WILL NOT BE DESIGNED FOR VEHICULAR COLLISION FORCE.
BEAM TYPE - C BEAMS, DEPTH = 3'-9.
TL-4 BRIDGE RAILING PROPOSED.

PRELIMINARY

LOCATION

US30 W.B. OVER WILLOW CREEK ROAD
T-82N R-5W
SECTION 16/17
FRANKLIN TOWNSHIP
LINN COUNTY
BRIDGE MAINT. NO. ?
FHWA NO. 700505
LATITUDE 41.9164570°
LONGITUDE -91.4437214°

0 ENGLISH 40
SCALE IN FEET

DESIGN FOR 5° SKEW (R.A.)

176'-4 X 40'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

51'-7 END SPANS C BEAMS 73'-2 INTERIOR SPAN

SITUATION PLAN - W.B.

STA. 641+10.87, 44.00' LT. W.B.

APRIL 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 116

DESIGN TEAM SHUCK-BRITSON INC. 400 EAST COURT AVE. SUITE 140 DES MOINES, IOWA 50309 515-243-4477

S.B.I. NO. 112.0610.01 | LINN COUNTY | PROJECT NUMBER NHSX-30-7(123)--3H-57 | SHEET NUMBER V.95

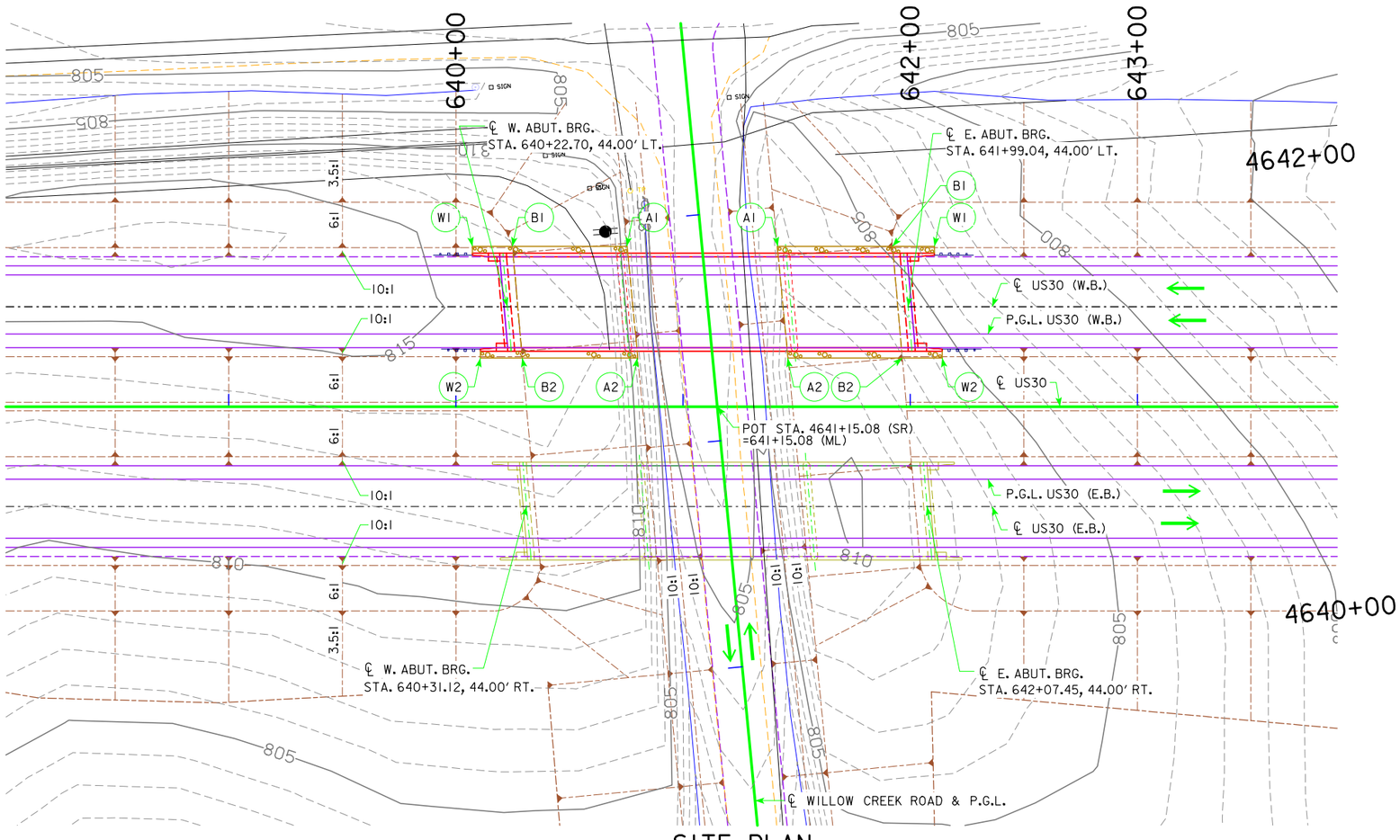
BENCH MARK NO. 513 - STA. 640+15.21, 103.506 LT, SPIKE IN POWER POLE NW QUAD WILLOW CR & HWY30, ELEV. 809.020, N. 705161.943 E. 2200003.552.

BERM SLOPE LOCATION TABLE

POINTS	WEST ABUTMENT			EAST ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	640+75.18	-70.58	802.61	641+41.48	-70.58	802.26
A2	640+79.88	-21.42	799.88	641+46.18	-21.42	799.54
B1	640+24.90	-70.58	815.54	641+92.19	-70.58	815.21
B2	640+29.20	-21.42	815.54	641+96.50	-21.42	815.21
W1	640+07.28	-70.58	821.49	642+10.61	-70.58	821.10
W2	640+10.78	-21.42	821.49	642+14.11	-21.42	821.08

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

NOTE:
FOR MACADAM STONE SLOPE PROTECTION SECTIONS AND ESTIMATED QUANTITIES SEE STANDARD SHEET 1006.



SITE PLAN

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

N

0 ENGLISH 60
SCALE IN FEET

PRELIMINARY

DESIGN FOR 5° SKEW (R.A.)

176'-4 X 40'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

51'-7 END SPANS (C BEAMS) 73'-2 INTERIOR SPAN

SITUATION PLAN - SITE (W.B.)

STA. 641+10.87, 44.00' LT (W.B. US30)

APRIL 2014

LINN COUNTY

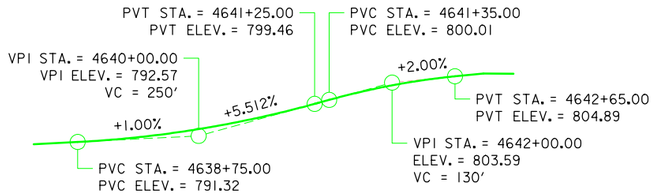
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 116

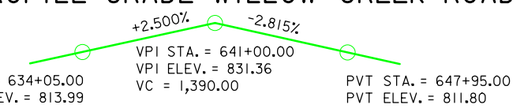
DESIGN TEAM SHUCK-BRITSON 400 EAST COURT AVE. SUITE 140 DES MOINES, IOWA 50309 515-243-4477 | S.B.I. NO. 112.0610.01 | LINN COUNTY | PROJECT NUMBER NHSX-30-7(123)--3H-57 | SHEET NUMBER V.96

7/25/2014 10:22:41 AMV8i_IDOTBridge N:\2012_Projects\112.0610.01 Mt Vernon Bypass\Cadd\57030076.str TSL_57_0116_v96 11x17_pdf.pltcfg

BENCH MARK NO. 513 - STA. 640+15.21, 103.506 LT, SPIKE IN POWER POLE NW
QUAD WILLOW CR & HWY30, ELEV. 809.020, N. 705161.943 E. 2200003.552.



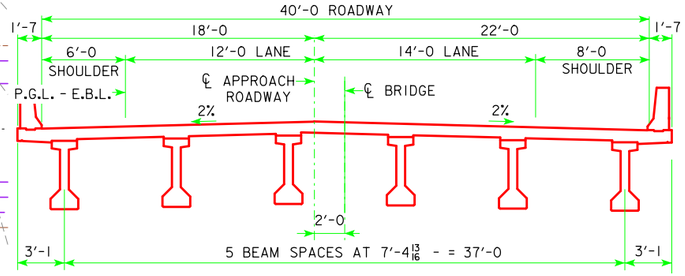
PROPOSED PROFILE GRADE WILLOW CREEK ROAD



PROPOSED PROFILE GRADE US30

MINIMUM VERTICAL CLEARANCE

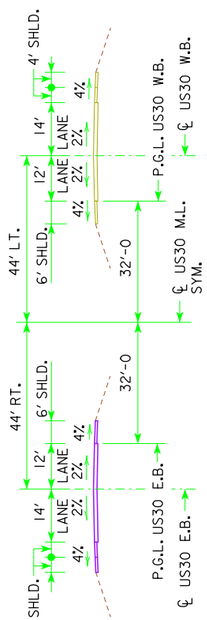
OVERHEAD STATION = 641+17.71, OFFSET 27.50' RT.
OVERHEAD ELEVATION = 822.00
DEPTH OF SUPERSTRUCTURE = 4.67'
UNDERPASS STATION = 4640+87.45, OFFSET 0.00'
UNDERPASS ELEVATION = 797.52
MINIMUM VERTICAL CLEARANCE = 19.81'

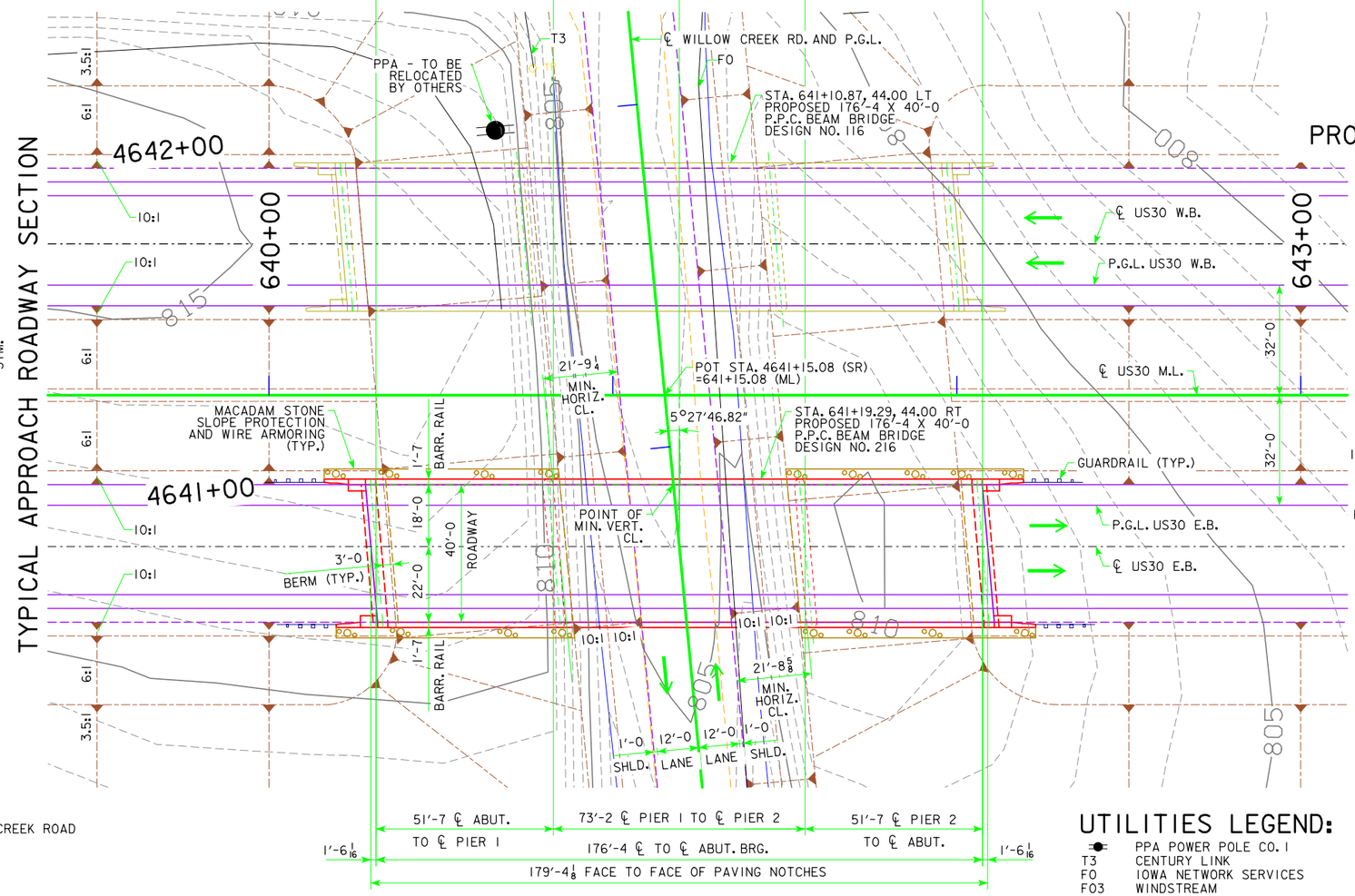


PROPOSED CROSS SECTION

(E.B. IN DIRECTION OF STATIONING)

TYPICAL APPROACH ROADWAY SECTION





51'-7 ℄ ABUT. TO ℄ PIER 1 | 73'-2 ℄ PIER 1 TO ℄ PIER 2 | 51'-7 ℄ PIER 2 TO ℄ ABUT.
1'-6 1/16 | 176'-4 ℄ TO ℄ ABUT. BRG. | 1'-6 1/16
179'-4 1/8 FACE TO FACE OF PAVING NOTCHES

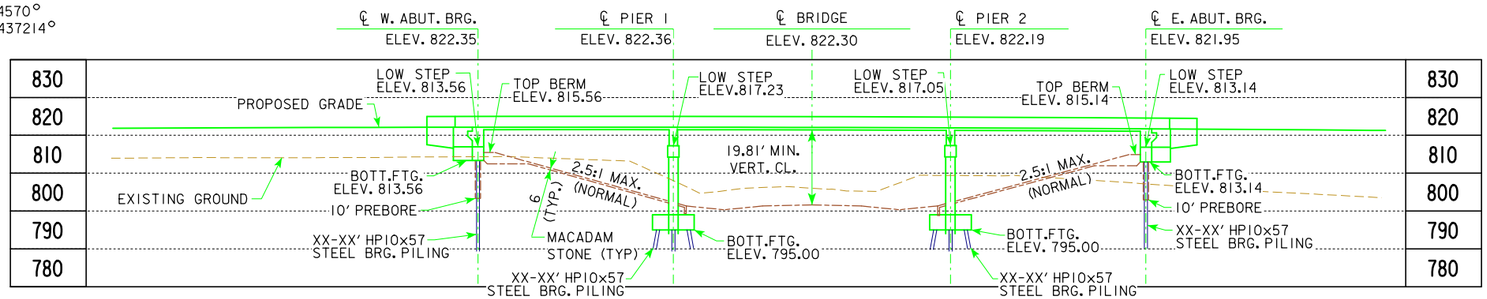
SITUATION PLAN

LOCATION

US30 E.B. OVER WILLOW CREEK ROAD
T-82N R-5W
SECTION 16/17
FRANKLIN TOWNSHIP
LINN COUNTY
BRIDGE MAINT. NO. ?
FHWA NO. 700510
LATITUDE 41.9164570°
LONGITUDE -91.4437214°

UTILITIES LEGEND:

=●=	PPA POWER POLE CO. 1
T3	CENTURY LINK
F0	IOWA NETWORK SERVICES
F03	WINDSTREAM



LONGITUDINAL SECTION ALONG ℄ ROADWAY - E.B.

N

0 ENGLISH 40
SCALE IN FEET

US30 TRAFFIC ESTIMATE

2009 AADT	11,300	V.P.D.
2035 AADT	16,680	V.P.D.
2035 DHV	1450	V.P.H.
TRUCKS	10	%
TOTAL DESIGN ESALs	-	

WILLOW CREEK ROAD TRAFFIC ESTIMATE

2013 AADT	40	V.P.D.
2035 AADT	100	V.P.D.
2035 DHV	-	V.P.H.
TRUCKS	3	%
TOTAL DESIGN ESALs	-	

NOTES:
ALL OFFSETS ARE MEASURED FROM ℄ OF US30 U.N.O.
TOP OF BRIDGE DECK AT CENTERLINE ROADWAY IS 0.21' ABOVE THE PROFILE GRADE TO ACCOUNT FOR DECK CROSS SLOPE AND PARABOLIC CROWN.
ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.
PIER TYPE - FRAME PIERS, WILL NOT BE DESIGNED FOR VEHICULAR COLLISION FORCE.
BEAM TYPE - C BEAMS, DEPTH = 3'-9.
TL-4 BRIDGE RAILING PROPOSED.

PRELIMINARY

DESIGN FOR 5° SKEW (R.A.)

176'-4 X 40'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

51'-7 END SPANS | C BEAMS | 73'-2 INTERIOR SPAN

SITUATION PLAN - E.B.

STA. 641+19.29, 44.00' RT E.B. | APRIL 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ___ OF ___ | FILE NO. 30839 | DESIGN NO. 216

DESIGN TEAM SHUCK-BRITSON INC. 400 EAST COURT AVE. SUITE 140 DES MOINES, IOWA 50309 515-243-4477 | S.B.I. NO. 112.0610.01 | LINN COUNTY | PROJECT NUMBER NHSX-30-7(123)--3H-57 | SHEET NUMBER V.97

7/25/2014 10:22:43 AMV8i_IDOTBridge N:\2012_Projects\112.0610.01 Mt Vernon Bypass\Cadd\57030076.str TSL_57_0216_v97 11x17_pdf.pltcfg

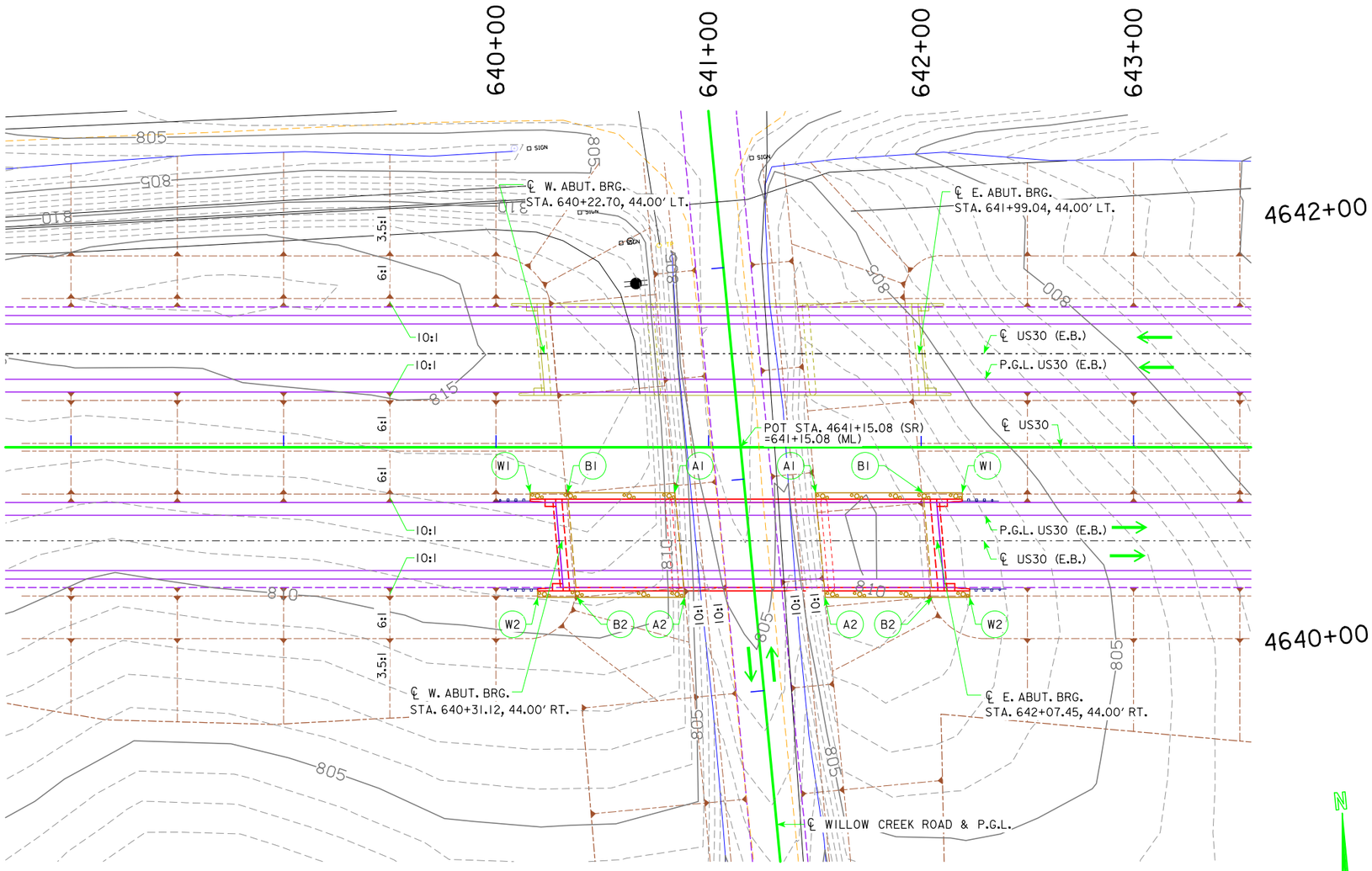
BENCH MARK NO. 513 - STA. 640+15.21, 103.506 LT, SPIKE IN POWER POLE NW QUAD WILLOW CR & HWY30, ELEV. 809.020, N. 705161.943 E. 2200003.552.

BERM SLOPE LOCATION TABLE

POINTS	WEST ABUTMENT			EAST ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	640+83.98	21.42	797.58	641+50.28	21.42	797.28
A2	640+88.68	70.58	795.33	641+54.98	70.58	795.08
B1	640+33.66	21.42	815.56	642+00.96	21.42	815.14
B2	640+37.96	70.58	815.56	642+05.26	70.58	815.14
W1	640+16.05	21.42	821.50	642+19.38	21.42	821.05
W2	640+19.54	70.58	821.51	642+22.88	70.58	821.02

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

NOTE:
FOR MACADAM STONE SLOPE PROTECTION SECTIONS AND ESTIMATED QUANTITIES SEE STANDARD SHEET 1006.



SITE PLAN

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

N

0 ENGLISH 60
SCALE IN FEET

PRELIMINARY

DESIGN FOR 5° SKEW (R.A.)

176'-4 X 40'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

51'-7 END SPANS (C BEAMS) 73'-2 INTERIOR SPAN

SITUATION PLAN - SITE (E.B.)

STA. 641+19.29, 44.00' RT (E.B. US30)

APRIL 2014

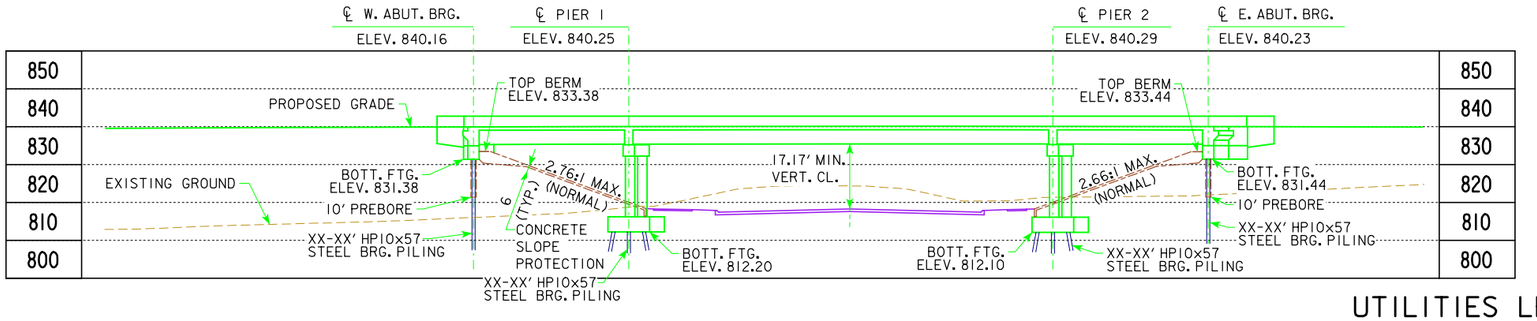
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 216

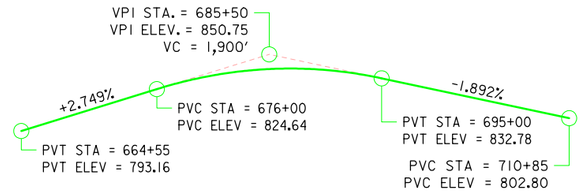
DESIGN TEAM SHUCK-BRITSON 400 EAST COURT AVE. SUITE 140 DES MOINES, IOWA 50309 515-243-4477 | S.B.I. NO. 112.0610.01 | LINN COUNTY | PROJECT NUMBER NHSX-30-7(123)--3H-57 | SHEET NUMBER V.98

7/25/2014 10:22:53 AM V8i_IDOTBridge N:\2012_Projects\112.0610.01 Mt Vernon Bypass\Cadd\57030076.str TSL_57_0216_v98 11x17_pdf.pltcfg

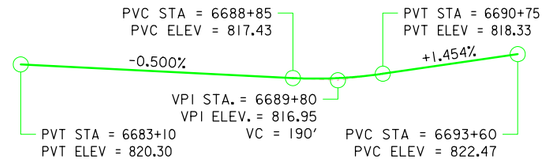


LONGITUDINAL SECTION ALONG ℄ ROADWAY - W.B.

BENCH MARK NO. 514 - STA. 687+46.38, 1242.010' RT., ½" REBAR IN FIELD ENTRANCE, ELEV. 808.42, N. 703670.380 E. 2204690.621



PROPOSED PROFILE GRADE US30



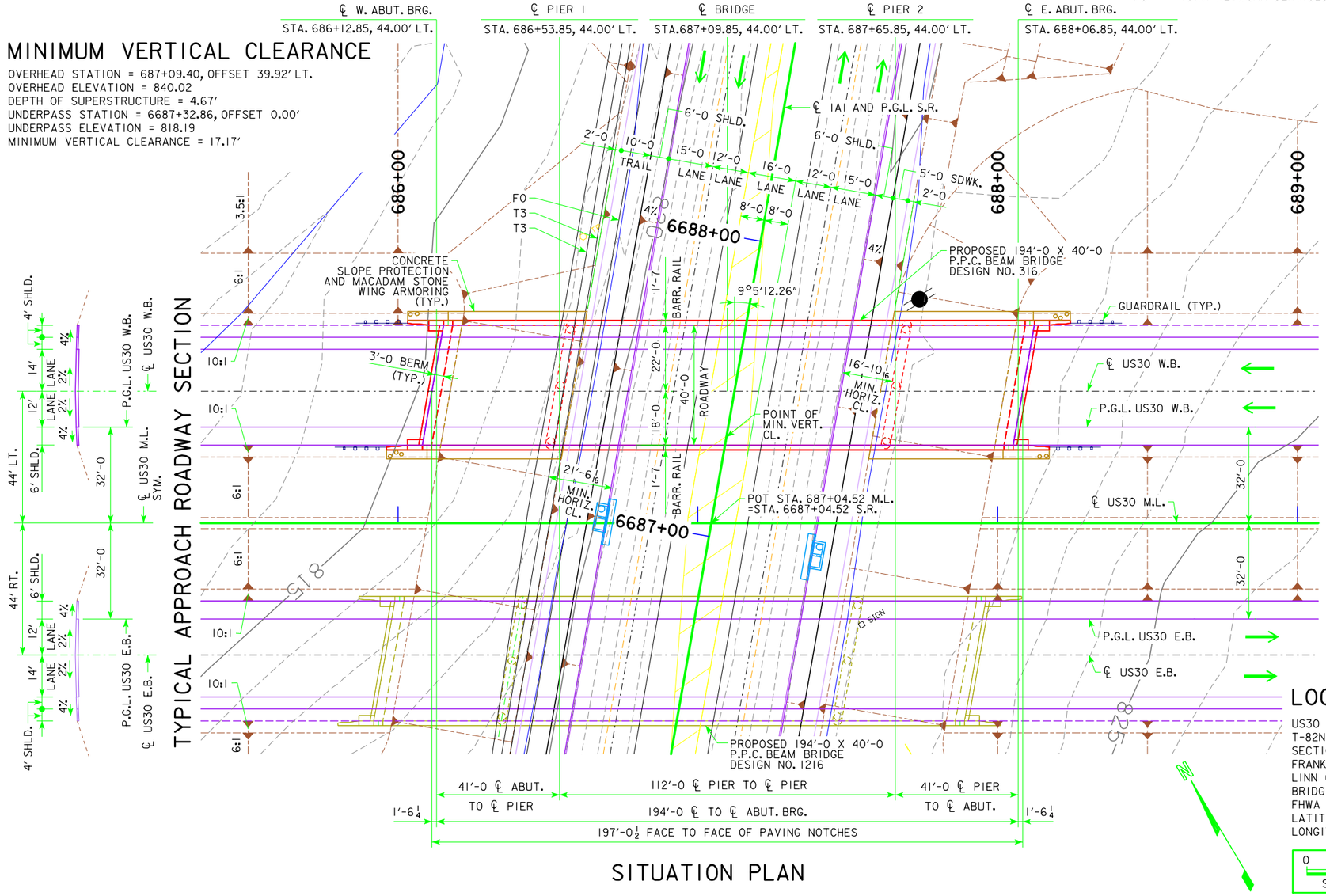
PROPOSED PROFILE GRADE IAI

UTILITIES LEGEND:

=●=	PPA POWER POLE CO. I
T3	CENTURY LINK
FO	IOWA NETWORK SERVICES

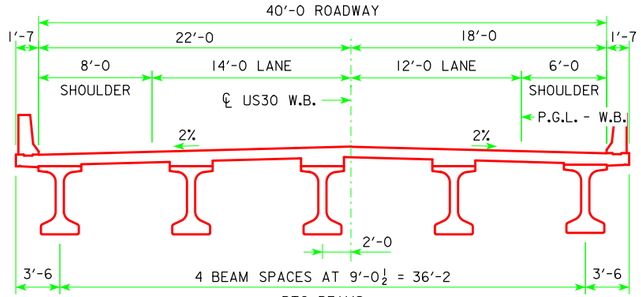
MINIMUM VERTICAL CLEARANCE

OVERHEAD STATION = 687+09.40, OFFSET 39.92' LT.
OVERHEAD ELEVATION = 840.02
DEPTH OF SUPERSTRUCTURE = 4.67'
UNDERPASS STATION = 6687+32.86, OFFSET 0.00'
UNDERPASS ELEVATION = 818.19
MINIMUM VERTICAL CLEARANCE = 17.17'



TYPICAL APPROACH ROADWAY SECTION

PROPOSED CROSS SECTION



US30 TRAFFIC ESTIMATE

2013 AADT	11,300	V.P.D.
2035 AADT	16,680	V.P.D.
2035 DHV	1,450	V.P.H.
TRUCKS	10	%
TOTAL DESIGN ESALs	-	

IAI TRAFFIC ESTIMATE

2013 AADT	6,200	V.P.D.
2035 AADT	9,400	V.P.D.
2035 DHV	-	V.P.H.
TRUCKS	7	%
TOTAL DESIGN ESALs	-	

NOTES:

ALL OFFSETS ARE MEASURED FROM ℄ OF US30 U.N.O.
TOP OF BRIDGE DECK AT CENTERLINE ROADWAY IS 0.21' ABOVE THE PROFILE GRADE TO ACCOUNT FOR DECK CROSS SLOPE AND PARABOLIC CROWN.
ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.
PIER TYPE - FRAME PIERS, DESIGNED FOR VEHICULAR COLLISION FORCE.
BEAM TYPE - BTC BEAMS, DEPTH = 3'-9.
TL-4 BRIDGE RAILING PROPOSED.

PRELIMINARY

LOCATION

US30 W.B. OVER IAI
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY
BRIDGE MAINT. NO. ?
FHWA NO. 700515
LATITUDE 41.9116907°
LONGITUDE -91.4283692°

0 ENGLISH 40
SCALE IN FEET

DESIGN FOR 10° SKEW (L.A.)

194'-0 X 40'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

41'-0 END SPANS BTC BEAMS 112'-0 INTERIOR SPAN

SITUATION PLAN - W.B.

STA. 687+09.85, 44.00' LT.

APRIL 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 316

SITUATION PLAN

BENCH MARK NO. 514 - STA. 687+46.38, 1242.010' RT., ½" REBAR IN FIELD ENTRANCE, ELEV. 808.42, N. 703670.380 E. 2204690.621

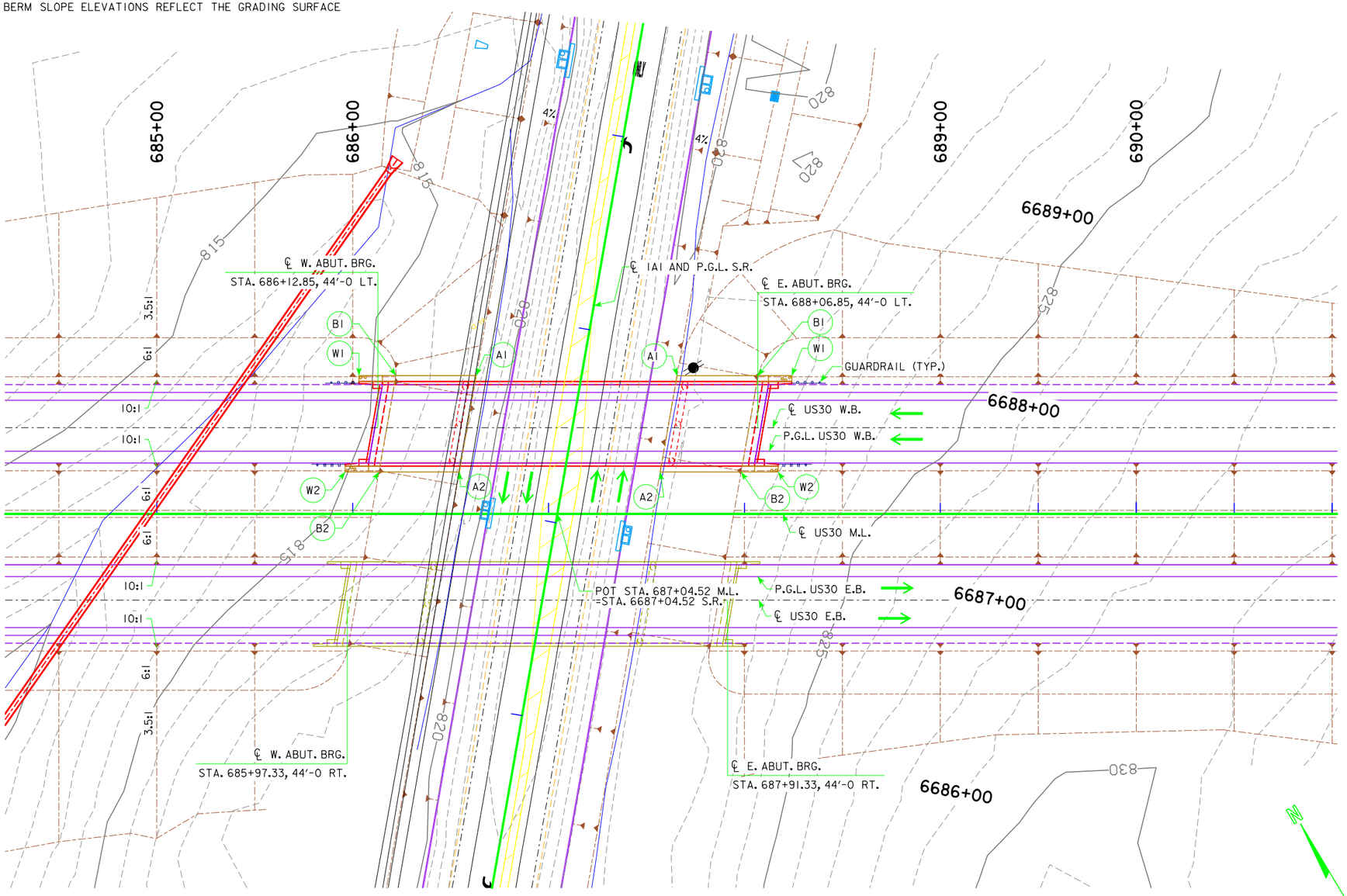
BERM SLOPE LOCATION TABLE

POINTS	WEST ABUTMENT			EAST ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	686+63.10	-70.58	818.20	687+65.63	-70.58	817.90
A2	686+54.43	-21.41	818.40	687+56.98	-21.41	817.20
B1	686+22.10	-70.58	833.38	688+06.97	-70.58	833.44
B2	686+13.44	-21.41	833.38	687+98.30	-21.41	833.44
W1	686+03.23	-70.58	839.57	688+24.23	-70.58	839.63
W2	685+96.18	-21.41	839.63	688+17.17	-21.41	839.73

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

NOTE:

FOR CONCRETE SLOPE PROTECTION SECTIONS AND ESTIMATED QUANTITIES SEE STANDARD SHEET 1006A.



SITE PLAN

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

PRELIMINARY

DESIGN FOR 10° SKEW (L.A.)

194'-0 X 40'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

41'-0 END SPANS BTC BEAMS 112'-0 INTERIOR SPAN

SITUATION PLAN - SITE (W.B.)

STA. 687+09.85, 44.00' LT.

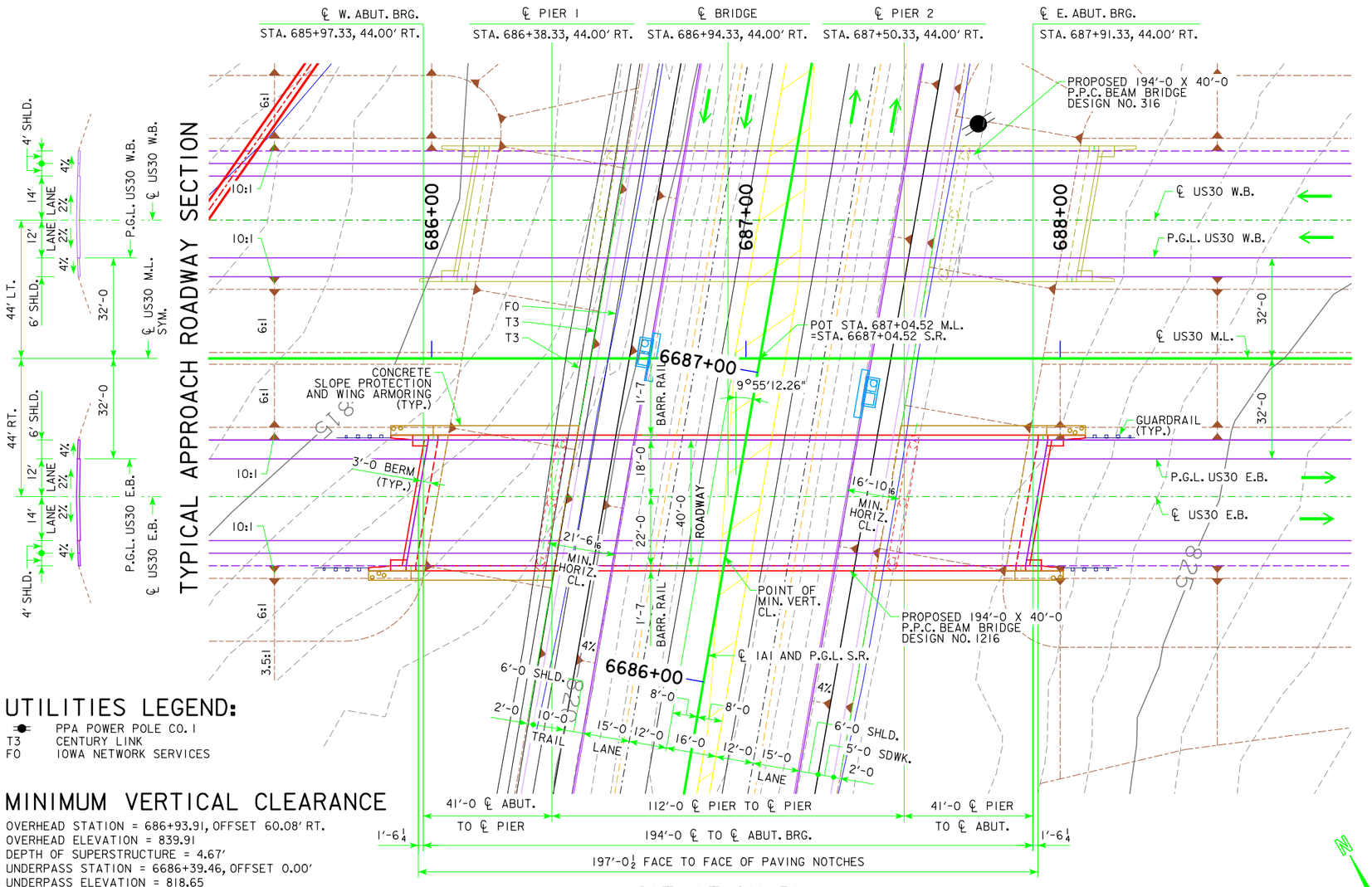
APRIL 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 316

BENCH MARK NO. 514 - STA. 687+46.38, 1242.010' RT., ½" REBAR IN FIELD ENTRANCE, ELEV. 808.42, N. 703670.380 E. 2204690.621



SITUATION PLAN

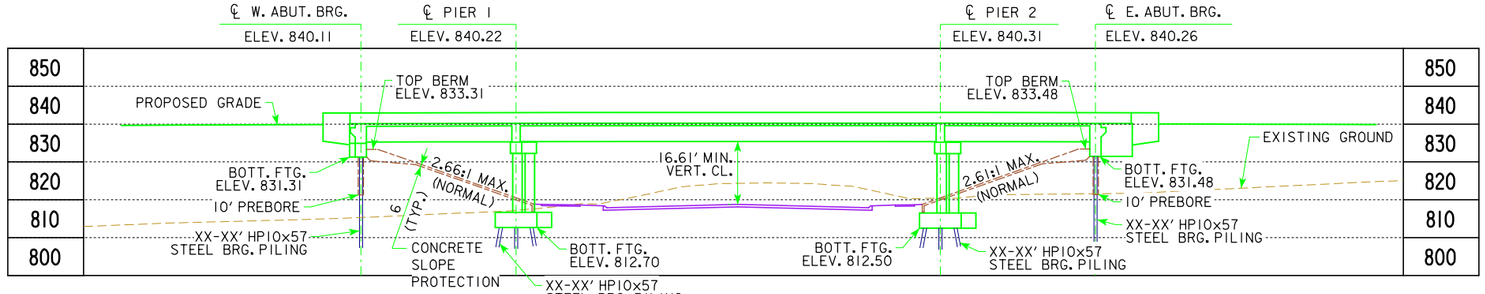
TYPICAL APPROACH ROADWAY SECTION

UTILITIES LEGEND:

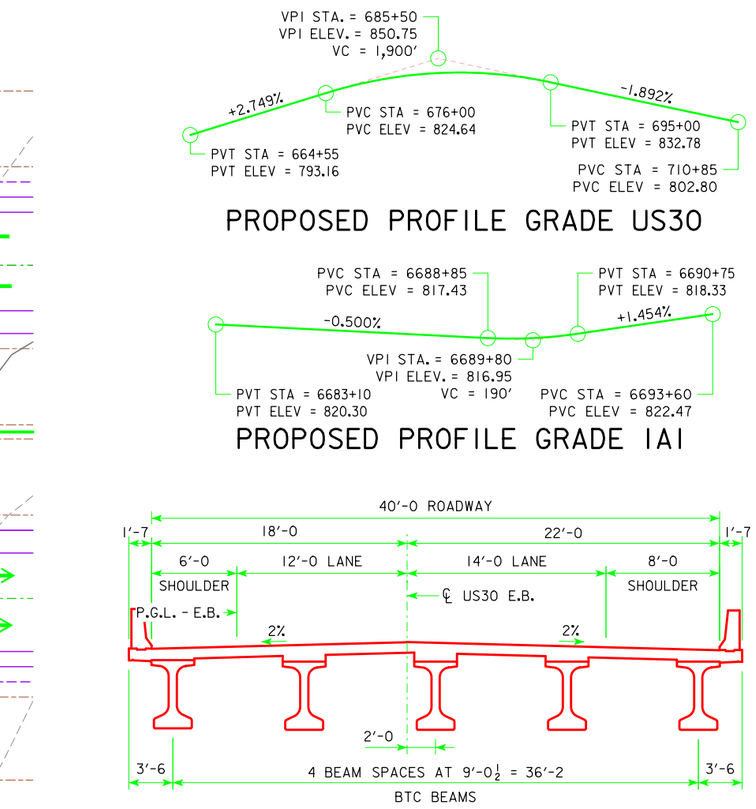
⊸	PPA POWER POLE CO. 1
T3	CENTURY LINK
FO	IOWA NETWORK SERVICES

MINIMUM VERTICAL CLEARANCE

OVERHEAD STATION = 686+93.91, OFFSET 60.08' RT.
OVERHEAD ELEVATION = 839.91
DEPTH OF SUPERSTRUCTURE = 4.67'
UNDERPASS STATION = 6686+39.46, OFFSET 0.00'
UNDERPASS ELEVATION = 818.65
MINIMUM VERTICAL CLEARANCE = 16.61'



LONGITUDINAL SECTION ALONG ℄ ROADWAY - E.B.



PROPOSED PROFILE GRADE US30

PROPOSED PROFILE GRADE IA1

PROPOSED CROSS SECTION

US30 TRAFFIC ESTIMATE

2013 AADT	11,300	V.P.D.
2035 AADT	16,680	V.P.D.
2035 DHV	1,450	V.P.H.
TRUCKS	10	%
TOTAL DESIGN ESALs	-	

IA1 TRAFFIC ESTIMATE

2013 AADT	6,200	V.P.D.
2035 AADT	9,400	V.P.D.
2035 DHV	-	V.P.H.
TRUCKS	7	%
TOTAL DESIGN ESALs	-	

NOTES:

ALL OFFSETS ARE MEASURED FROM ℄ OF US30 U.N.O.
TOP OF BRIDGE DECK AT CENTERLINE ROADWAY IS 0.21' ABOVE THE PROFILE GRADE TO ACCOUNT FOR DECK CROSS SLOPE AND PARABOLIC CROWN.
ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.
PIER TYPE - FRAME PIERS, DESIGNED FOR VEHICULAR COLLISION FORCE.
BEAM TYPE - BTC BEAMS, DEPTH = 3'-9.
TL-4 BRIDGE RAILING PROPOSED.

PRELIMINARY

LOCATION

US30 E.B. OVER IA1
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY
BRIDGE MAINT. NO.
FHWA NO. 700520
LATITUDE 41.9116907°
LONGITUDE -91.4283692°

0 ENGLISH 40
SCALE IN FEET

DESIGN FOR 10° SKEW (L.A.)

194'-0 X 40'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

41'-0 END SPANS | BTC BEAMS | 112'-0 INTERIOR SPAN

SITUATION PLAN - E.B.

STA. 686+94.33, 44.00' RT.

APRIL 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 1216

DESIGN TEAM SHUCK-BRITSON 400 EAST COURT AVE. SUITE 140 DES MOINES, IOWA 50309 515-243-4477 | S.B.I. NO. 112.0610.01 | LINN COUNTY | PROJECT NUMBER NHSX-30-7(171)--3H-57 | SHEET NUMBER V.101

7/25/2014 10:22:57 AMV8i_IDOTBridge N:\2012_Projects\112.0610.01 Mt Vernon Bypass\Cadd\57030076.str TSL_57_1216_v101 11x17_pdf.pltcfg

BENCH MARK NO. 514 - STA. 687+46.38, 1242.010' RT., ½" REBAR IN FIELD ENTRANCE, ELEV. 808.42, N. 703670.380 E. 2204690.621

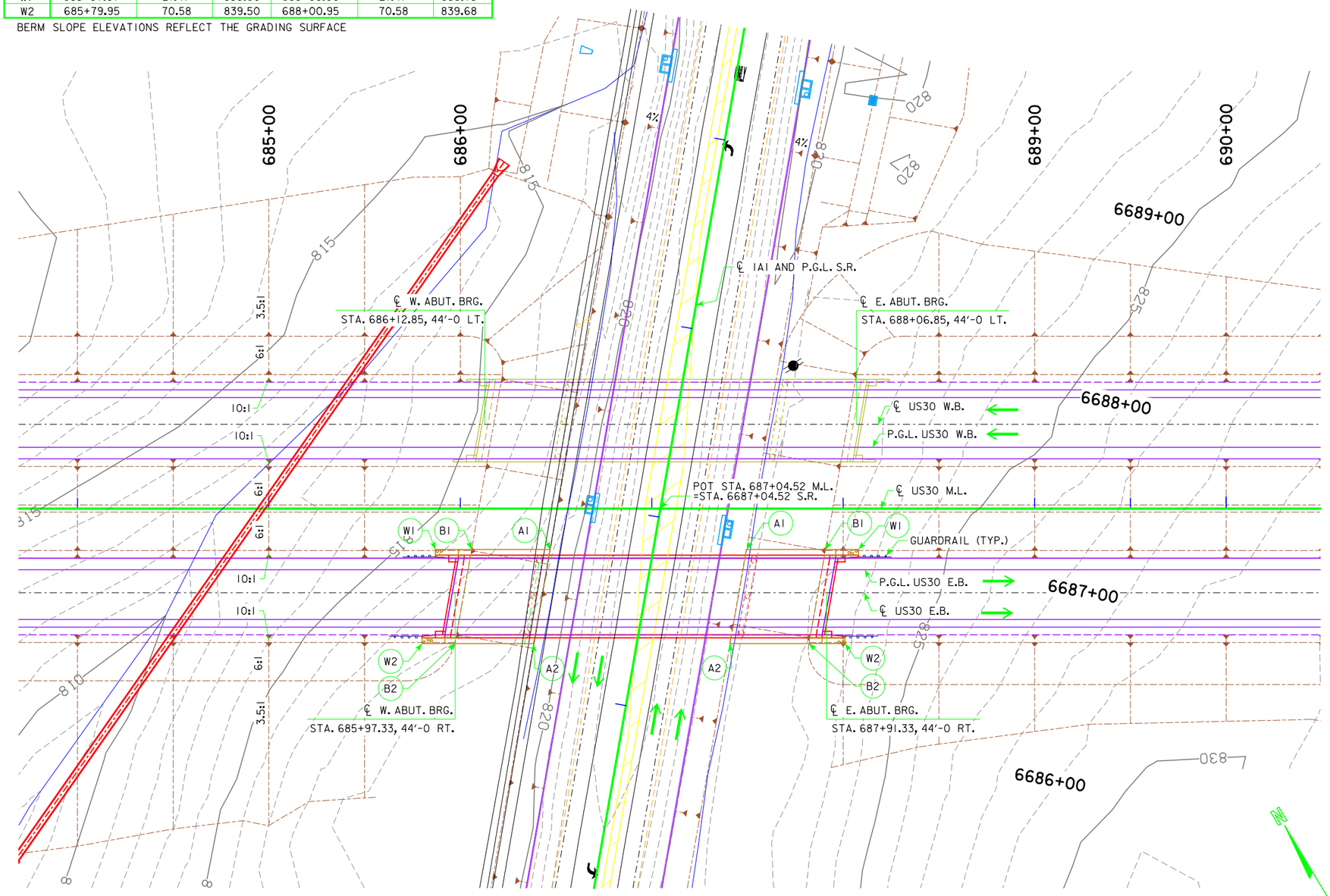
BERM SLOPE LOCATION TABLE

POINTS	WEST ABUTMENT			EAST ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	686+46.97	21.41	818.60	687+49.50	21.41	818.40
A2	686+38.37	70.58	818.80	687+40.91	70.58	818.60
B1	686+05.88	21.41	833.31	687+90.74	21.41	833.48
B2	685+97.21	70.58	833.31	687+82.07	70.58	833.48
W1	685+87.01	21.41	839.60	688+08.00	21.41	839.75
W2	685+79.95	70.58	839.50	688+00.95	70.58	839.68

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

NOTE:

FOR CONCRETE SLOPE PROTECTION SECTIONS AND ESTIMATED QUANTITIES SEE STANDARD SHEET 1006A.



SITE PLAN

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

0 ENGLISH 60
SCALE IN FEET

PRELIMINARY

DESIGN FOR 10° SKEW (L.A.)

194'-0 X 40'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

41'-0 END SPANS BTC BEAMS 112'-0 INTERIOR SPAN

SITUATION PLAN - SITE (E.B.)

STA. 686+94.33, 44.00' RT. APRIL 2014

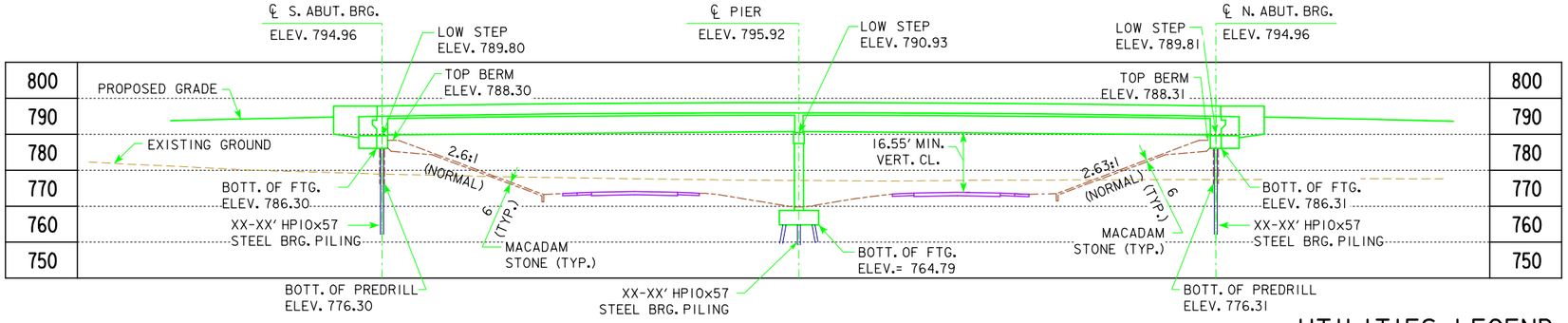
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

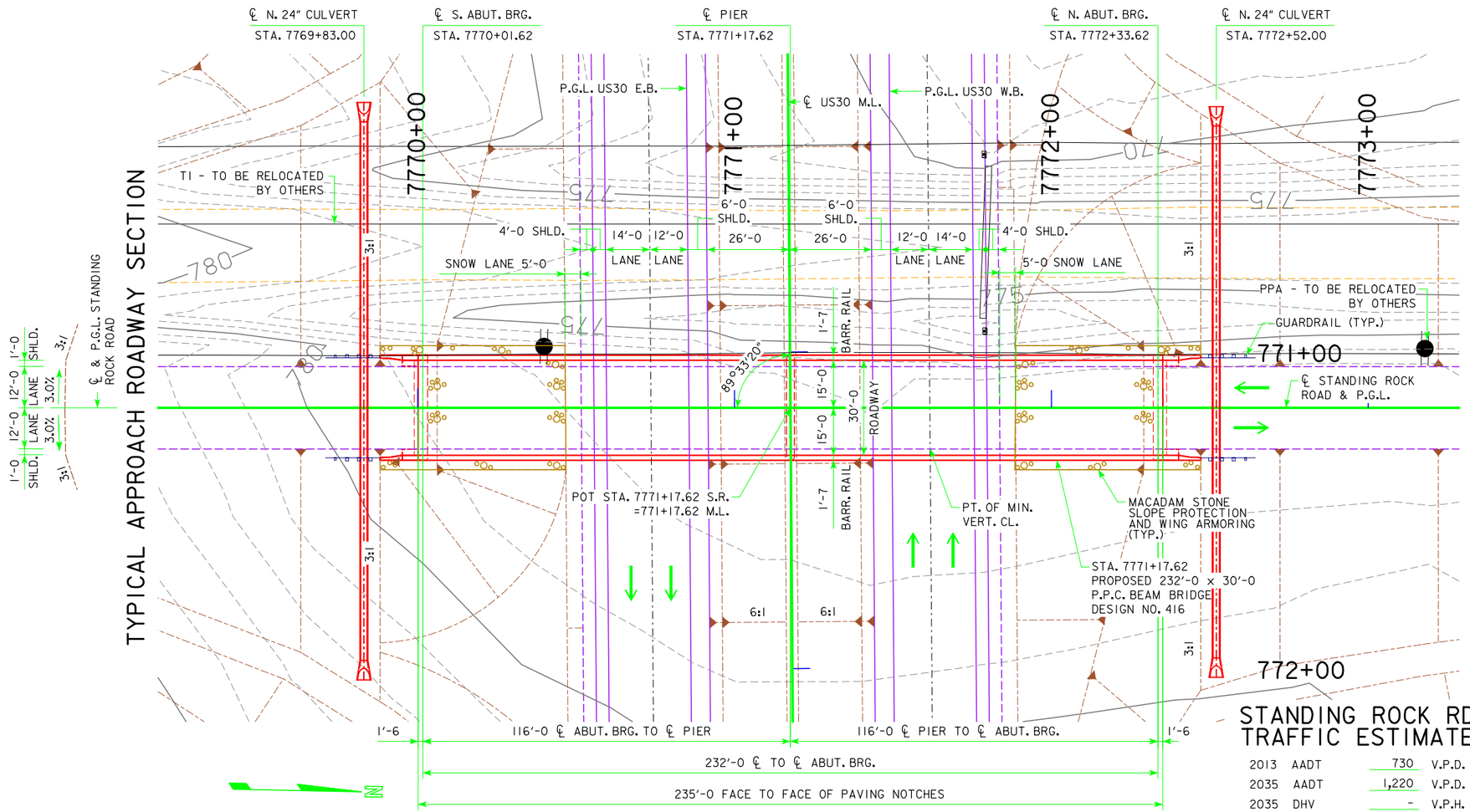
DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 1216

DESIGN TEAM SHUCK-BRITSON INC. 400 EAST COURT AVE. SUITE 140 DES MOINES, IOWA 50309 515-243-4477 | S.B.I. NO. 112.0610.01 | LINN COUNTY | PROJECT NUMBER NHSX-30-7(171)--3H-57 | SHEET NUMBER V.102

7/25/2014 10:22:58 AM V8i_IDOTBridge N:\2012_Projects\112.0610.01 Mt Vernon Bypass\Cadd\57030076.str TSL_57_1216_v102 11x17_pdf.pltcfg



LONGITUDINAL SECTION ALONG ℄ ROADWAY

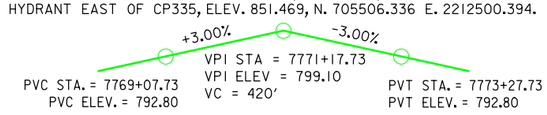


TYPICAL APPROACH ROADWAY SECTION

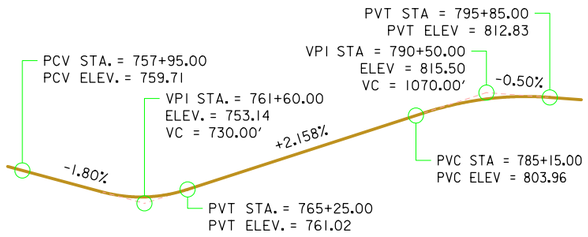
SITUATION PLAN

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

BENCH MARK NO. 705 - STA. 765+51.82, 67.232 RT, ARROW ON HYDRANT EAST OF CP335, ELEV. 851.469, N. 705506.336 E. 2212500.394.



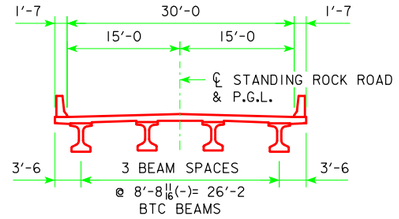
PROPOSED PROFILE GRADE STANDING ROCK ROAD



PROPOSED PROFILE GRADE US30

UTILITIES LEGEND:

PPA - POWER POLE CO. I
TI - WINDSTREAM



PROPOSED CROSS SECTION

MINIMUM VERTICAL CLEARANCE

OVERHEAD STATION = 7771+61.72, OFFSET 13.08' RT
OVERHEAD ELEVATION = 795.55
DEPTH OF SUPERSTRUCTURE = 4.67'
UNDERPASS STATION = 7771+31.05, OFFSET 44.00' RT
UNDERPASS ELEVATION = 774.33
MINIMUM VERTICAL CLEARANCE = 16.55'

LOCATION

STANDING ROCK ROAD OVER US30
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY
BRIDGE MAINT. NO. ?
FHWA NO. 700525
LATITUDE 41.9039680°
LONGITUDE -91.4000640°

US30 TRAFFIC ESTIMATE

2009	AADT	11,300	V.P.D.
2035	AADT	16,680	V.P.D.
2035	DHV	1,450	V.P.H.
	TRUCKS	10	%
	TOTAL DESIGN ESALs	-	

STANDING ROCK RD TRAFFIC ESTIMATE

2013	AADT	730	V.P.D.
2035	AADT	1,220	V.P.D.
2035	DHV	-	V.P.H.
	TRUCKS	3	%
	TOTAL DESIGN ESALs	-	

NOTES:
ALL OFFSETS ARE MEASURED FROM ℄ OF STANDING ROCK ROAD.
TOP OF BRIDGE DECK CROWN 0.03' BELOW PROFILE GRADE.
ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.
PIER TYPE - FRAME PIER DESIGNED FOR VEHICULAR COLLISION FORCE
BEAM TYPE - BTC BEAMS, DEPTH = 3'-9.
TL-4 BRIDGE RAILING PROPOSED.
2 - SPAN GRADING SHOWN.

PRELIMINARY

DESIGN FOR 0° SKEW

232'-0 X 30'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

116'-0 END SPANS (BTC BEAMS)

SITUATION PLAN

STA. 7771+17.62

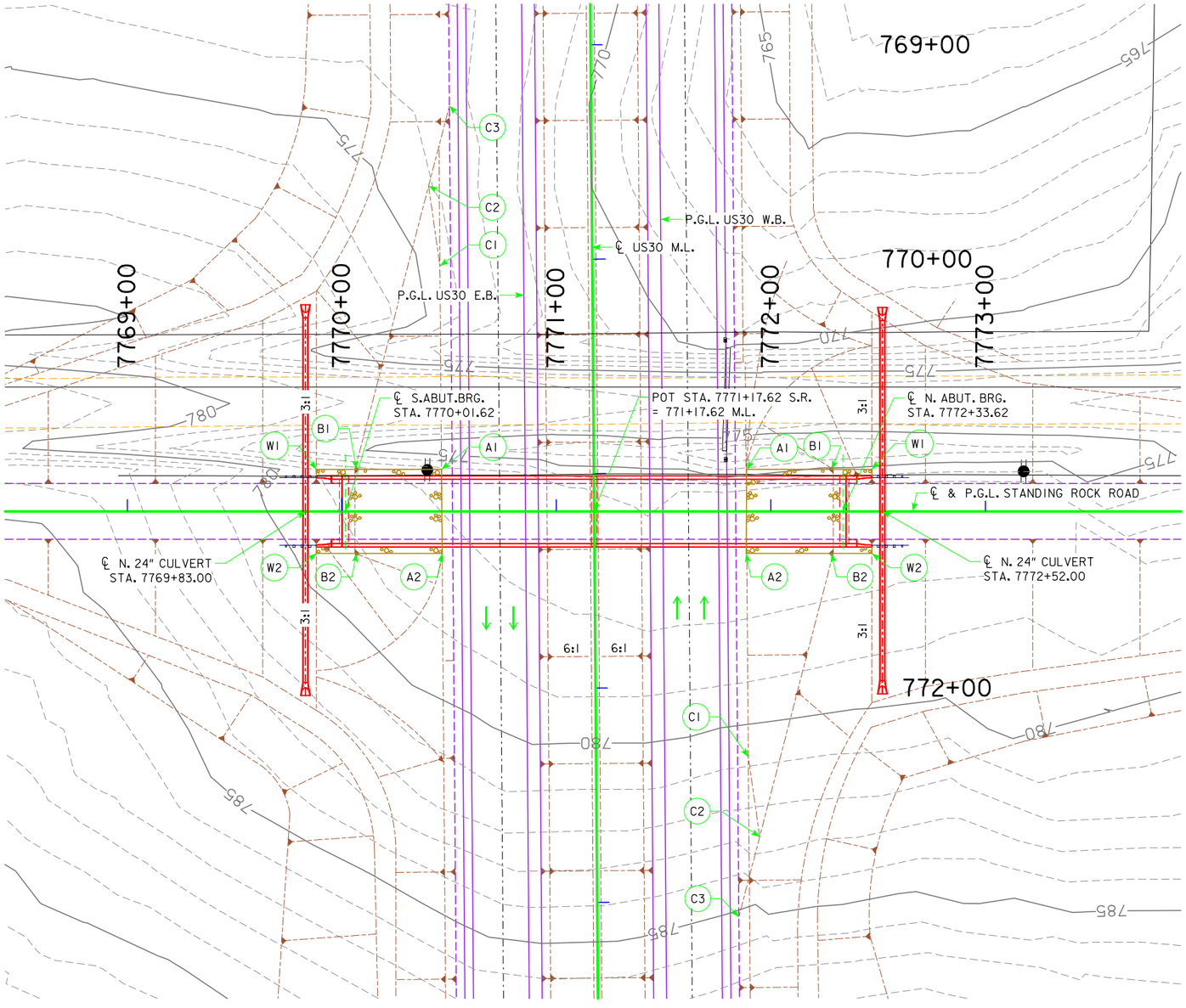
LINN COUNTY

APRIL 2014

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 416

BENCH MARK NO. 705 - STA. 765+51.82, 67.232 RT, ARROW ON HYDRANT EAST OF CP335, ELEV. 851.469, N. 705506.336 E. 2212500.394.



SITE PLAN

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

BERM SLOPE LOCATION TABLE

POINTS	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	7770+46.47	-19.58	772.81	7771+88.47	-19.58	772.83
A2	7770+46.77	19.58	773.65	7771+88.77	19.58	773.67
B1	7770+06.12	-19.58	788.30	7772+29.12	-19.58	788.31
B2	7770+06.12	19.58	788.30	7772+29.12	19.58	788.31
W1	7769+88.12	-19.58	794.21	7772+47.12	-19.58	794.21
W2	7769+88.12	19.58	794.21	7772+47.12	19.58	794.21

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

RECOVERABLE BERM LOCATION TABLE

	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV	STATION	OFFSET	ELEV
C1	770+02.59	71.00	770.76	772+32.65	-71.00	775.73
C2	769+65.27	76.00	773.53	772+69.97	-76.00	779.92
C3	769+27.95	66.00	769.35	773+07.29	-66.00	777.54

REFER TO EW-203 FOR DETAILS.

NOTE:
FOR MACADAM STONE SLOPE PROTECTION SECTIONS AND ESTIMATED QUANTITIES SEE STANDARD SHEET 1006.

N

0 ENGLISH 60
SCALE IN FEET

PRELIMINARY

DESIGN FOR 0° SKEW

232'-0 X 30'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

116'-0 END SPANS (BTC BEAMS)

SITUATION PLAN - SITE

STA. 7771+17.62 APRIL 2014

LINN COUNTY

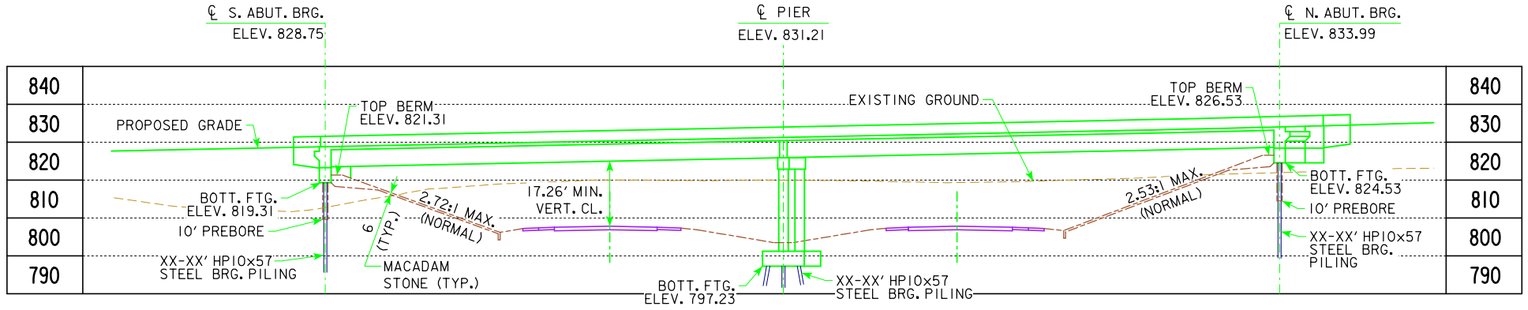
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ___ OF ___ FILE NO. 30839 DESIGN NO. 416

DESIGN TEAM SHUCK-BRITSON INC. 400 EAST COURT AVE. SUITE 140 DES MOINES, IOWA 50309 515-243-4477 S.B.I. NO. 112.0610.01 | LINN COUNTY | PROJECT NUMBER NHSX-30-7(172)--3H-57 | SHEET NUMBER V.104

7/25/2014 10:23:01 AM V8i_IDOTBridge N:\2012_Projects\112.0610.01 Mt Vernon Bypass\Cadd\57030076.str TSL_57_0416_v104 11x17_pdf.pltcfg

BENCH MARK NO. 712 - STA. 806+36.12, 27.896' LT., CHISELED CROSS TOP INTAKE N. SIDE HWY30 2ND INTAKE EAST OF S. JACKSON, ELEV. 867.80, N. 705843.563 E. 2216567.152



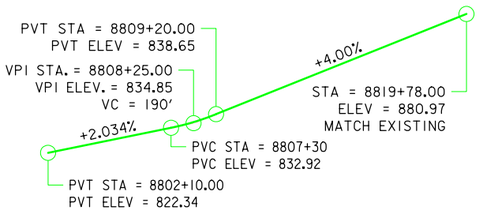
LONGITUDINAL SECTION ALONG ℄ ROADWAY

MINIMUM VERTICAL CLEARANCE

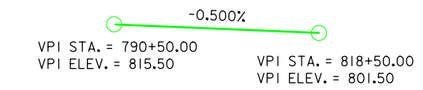
OVERHEAD STATION = 8805+96.84, OFFSET 16.08'
OVERHEAD ELEVATION = 829.92
DEPTH OF SUPERSTRUCTURE = 5.333'
UNDERPASS STATION = 807+33.15, OFFSET 44.00' RT. ℄ US30
UNDERPASS ELEVATION = 807.32
MINIMUM VERTICAL CLEARANCE = 17.26'

UTILITIES LEGEND:

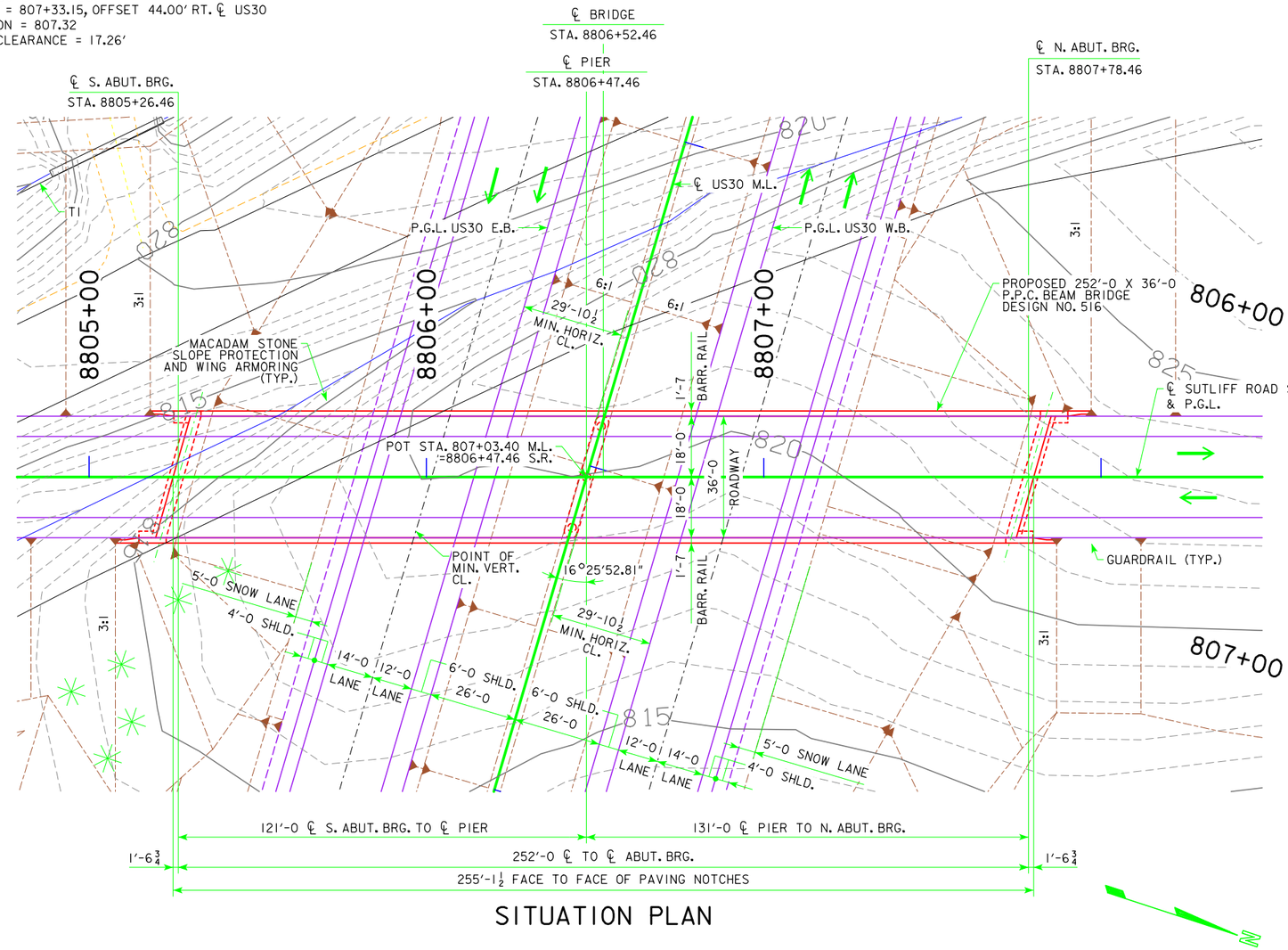
TI UNDERGROUND TELEPHONE LINE



PROPOSED PROFILE GRADE SUTLIFF ROAD

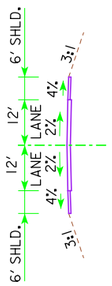


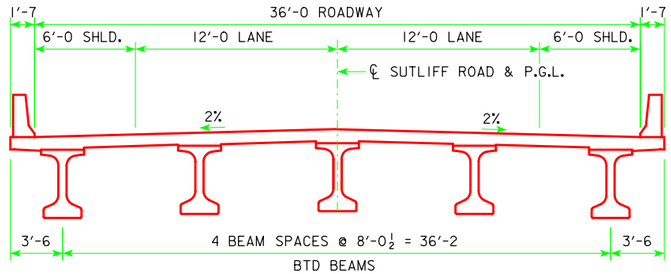
PROPOSED PROFILE GRADE US30



SITUATION PLAN

TYPICAL APPROACH ROADWAY SECTION





PROPOSED CROSS SECTION

US30 TRAFFIC ESTIMATE

2013 AADT	10,300	V.P.D.
2035 AADT	12,670	V.P.D.
2035 DHV	-	V.P.H.
TRUCKS	10	%
TOTAL DESIGN ESALs	-	

SUTLIFF RD TRAFFIC ESTIMATE

2013 AADT	740	V.P.D.
2035 AADT	1,240	V.P.D.
2035 DHV	-	V.P.H.
TRUCKS	5	%
TOTAL DESIGN ESALs	-	

NOTES:

ALL OFFSETS ARE MEASURED FROM ℄ OF SUTLIFF ROAD U.N.O.
TOP OF BRIDGE DECK CROWN 0.03' BELOW PROFILE GRADE.
ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.
PIER TYPE - FRAME PIER, DESIGNED FOR VEHICULAR COLLISION FORCE.
BEAM TYPE - BTD BEAMS, DEPTH = 4'-6.
TL-4 BRIDGE RAILING PROPOSED.
2 - SPAN GRADING SHOWN.

LOCATION

SUTLIFF ROAD OVER US30
T-82N R-5W
SECTION 16
FRANKLIN TOWNSHIP
LINN COUNTY
BRIDGE MAINT. NO.
FHWA NO. 700530
LATITUDE 41.9040072°
LONGITUDE -91.3868924°

0 ENGLISH 40
SCALE IN FEET

PRELIMINARY

DESIGN FOR 16° SKEW (L.A.)

252'-0 X 36'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

121'-0 S. SPAN BTD BEAMS 131'-0 N. SPAN

SITUATION PLAN

STATION 8806+52.46 APRIL 2014

LINN COUNTY

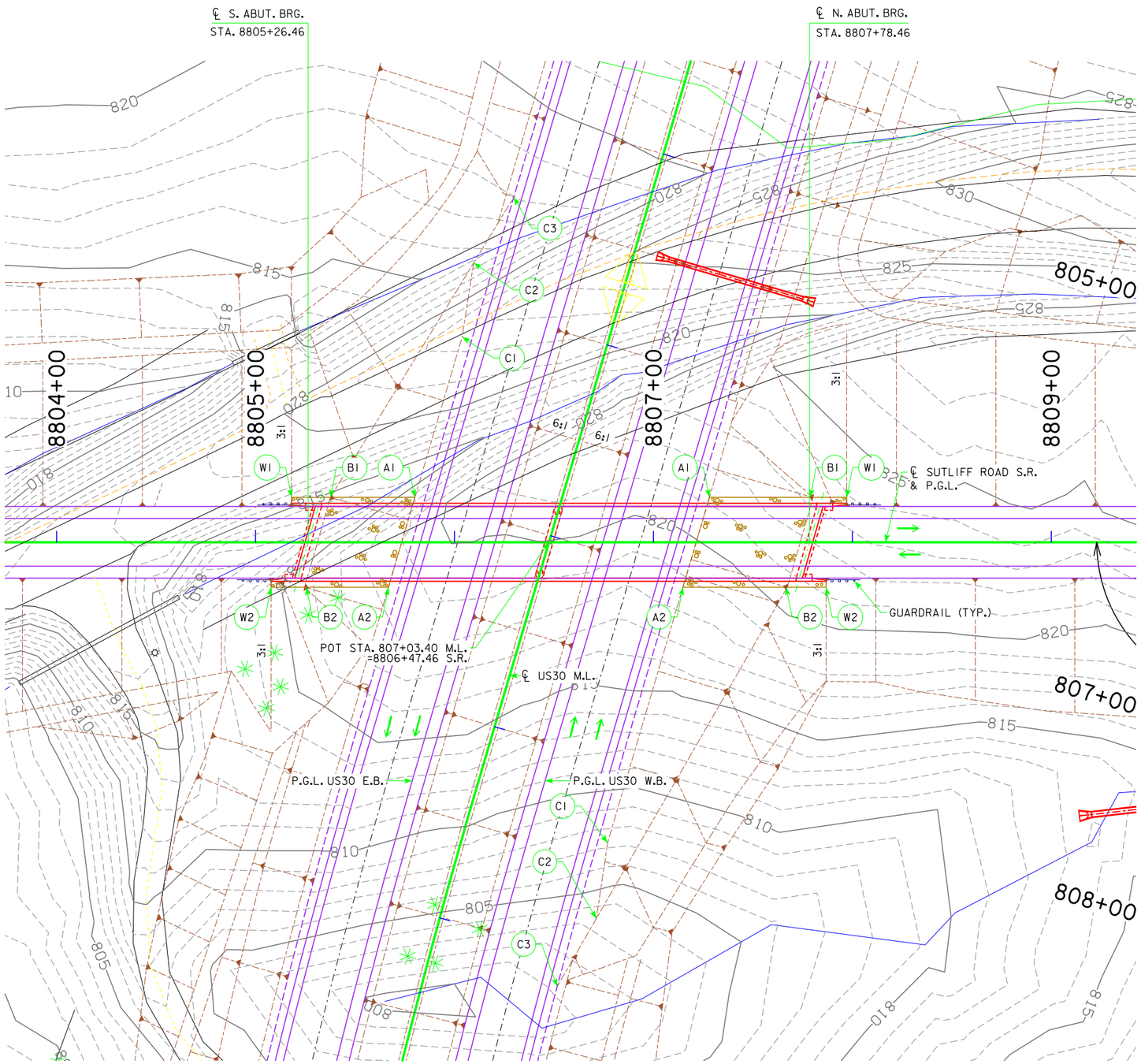
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 516

DESIGN TEAM SHUCK-BRITSON 400 EAST COURT AVE. SUITE 140 DES MOINES, IOWA 50309 515-243-4477 S.B.I. NO. 112.0610.01 | LINN COUNTY | PROJECT NUMBER NHSX-30-7(173)--3H-57 | SHEET NUMBER V.105

7/25/2014 10:23:02 AM V8i_IDOTBridge N:\2012_Projects\112.0610.01 Mt Vernon Bypass\Cadd\57030076.str TSL_57_0516_v105 11x17_pdf.pltcfg

BENCH MARK NO. 712 - STA. 803+34.70, 68.840' LT., CHISELED CROSS TOP INTAKE N. SIDE HWY30 2ND INTAKE EAST OF S. JACKSON, ELEV. 867.80, N. 705843.563 E. 2216567.152



SITE PLAN

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

BERM SLOPE LOCATION TABLE

POINTS	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	8805+80.09	-22.58	807.06	8807+28.14	-22.58	806.69
A2	8805+66.77	22.58	806.97	8807+14.82	22.58	806.33
B1	8805+37.62	-22.58	821.31	8807+80.25	-22.58	826.53
B2	8805+24.66	22.58	821.31	8807+67.30	22.58	826.53
W1	8805+18.12	-22.58	828.13	8807+97.12	-22.58	834.04
W2	8805+07.80	22.58	827.92	8807+86.80	22.58	833.76

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

RECOVERABLE BERM LOCATION TABLE

	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV	STATION	OFFSET	ELEV
C1	806+16.76	71.00	807.22	808+40.14	-71.00	805.05
C2	805+79.44	76.00	810.66	808+79.09	-76.00	808.22
C3	805+42.12	66.00	807.68	809+18.04	-66.00	804.46

REFER TO EW-203 FOR DETAILS.

NOTE:

FOR MACADAM STONE SLOPE PROTECTION SECTIONS AND ESTIMATED QUANTITIES SEE STANDARD SHEET 1006C.

N

0 ENGLISH 60
SCALE IN FEET

PRELIMINARY

DESIGN FOR 16° SKEW

252'-0 X 36'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

121'-0 S. SPAN BTD BEAMS 131'-0 N. SPAN

SITUATION PLAN - SITE

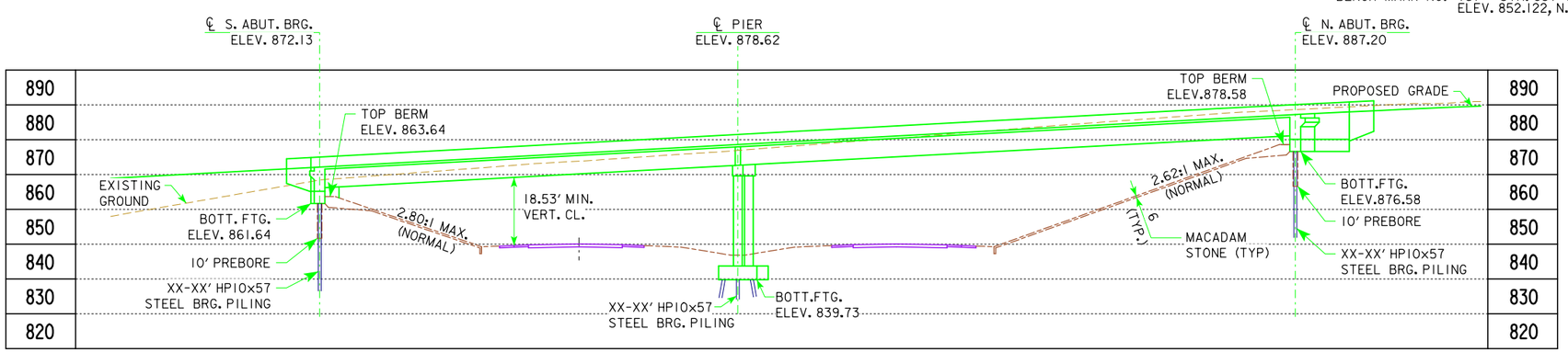
STATION 8806+52.46 APRIL 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 516

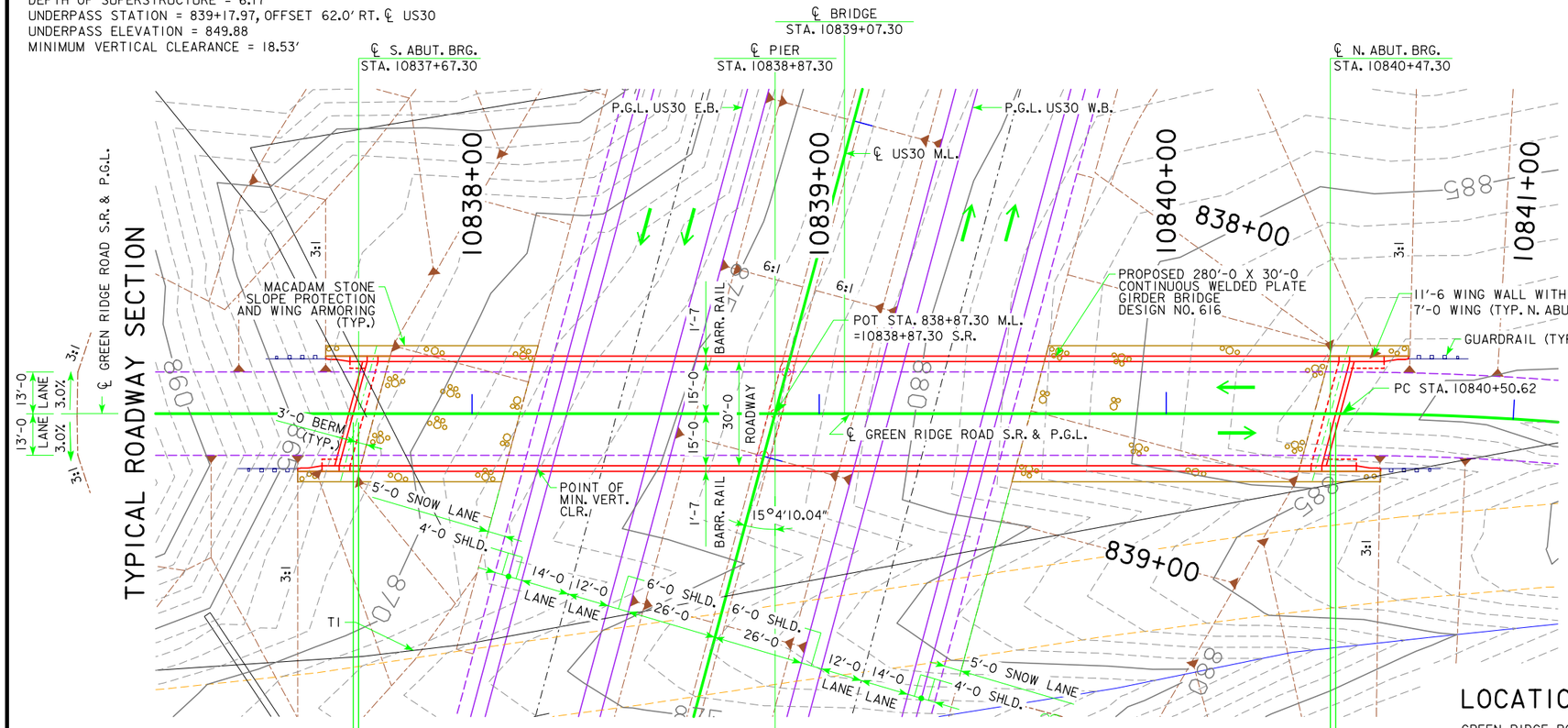
BENCH MARK NO. 751 - STA. 837+84.43, 6500.038' RT., SPIKE IN POWER POLE 555 GREENRIDGE RD,
ELEV. 852.122, N. 699478.071 E. 2220032.164



LONGITUDINAL SECTION ALONG ℄ ROADWAY

MINIMUM VERTICAL CLEARANCE

OVERHEAD STATION = 10838+19.46, OFFSET 13.50' RT.
OVERHEAD ELEVATION = 874.58
DEPTH OF SUPERSTRUCTURE = 6.17'
UNDERPASS STATION = 839+17.97, OFFSET 62.0' RT. ℄ US30
UNDERPASS ELEVATION = 849.88
MINIMUM VERTICAL CLEARANCE = 18.53'



SITUATION PLAN

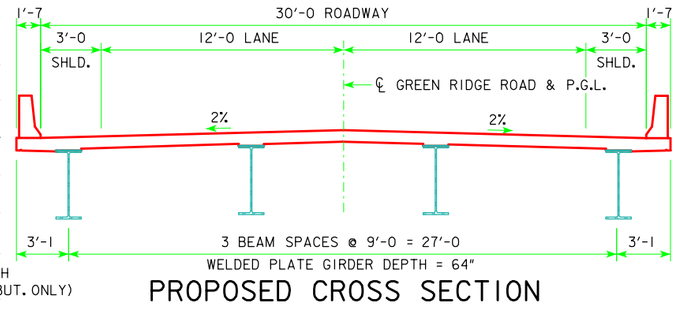
HORIZONTAL CURVE DATA

Δ = 31° 38' 06.41" (RT)
T = 226.64'
L = 441.71'
R = 800.00'
e = 5.4%
I = 111'
x = 41'

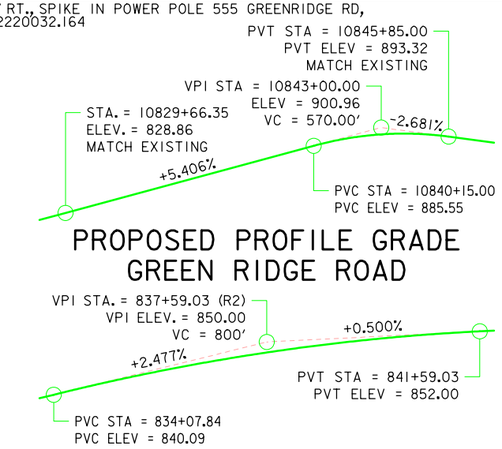
UTILITIES LEGEND:

TI UNDERGROUND TELEPHONE LINE

PROPOSED PROFILE GRADE US30



PROPOSED CROSS SECTION



US30 TRAFFIC ESTIMATE

2013 AADT	8,400	V.P.D.
2035 AADT	12,670	V.P.D.
2035 DHV	1,450	V.P.H.
TRUCKS	10	%
TOTAL DESIGN ESALs	-	

GREEN RIDGE RD TRAFFIC ESTIMATE

2013 AADT	130	V.P.D.
2035 AADT	220	V.P.D.
2035 DHV	-	V.P.H.
TRUCKS	3	%
TOTAL DESIGN ESALs	-	

NOTES:

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.
ALL OFFSETS ARE MEASURED FROM ℄ OF GREEN RIDGE ROAD U.N.O.
TOP OF BRIDGE DECK CROWN 0.03' BELOW PROFILE GRADE.
PIER TYPE - FRAME PIER, DESIGNED FOR VEHICULAR COLLISION FORCE.
BEAM TYPE - WELDED PLATE GIRDERS, DEPTH = 64".
TL-4 BRIDGE RAILING PROPOSED.
NON-STANDARD ABUTMENT WINGS ARE REQUIRED AT NORTH ABUTMENT.

LOCATION

GREEN RIDGE ROAD OVER US30
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY
BRIDGE MAINT. NO.
FHWA NO. 700535
LATITUDE 41.9072136°
LONGITUDE -91.3760785°

0 ENGLISH 40
SCALE IN FEET

PRELIMINARY

DESIGN FOR 15° SKEW (L.A.)

280'-0 X 30'-0 CONTINUOUS WELDED GIRDER BRIDGE

120'-0 S. SPAN 160'-0 N. SPAN

SITUATION PLAN

STATION 10839+07.30 APRIL 2014

LINN COUNTY

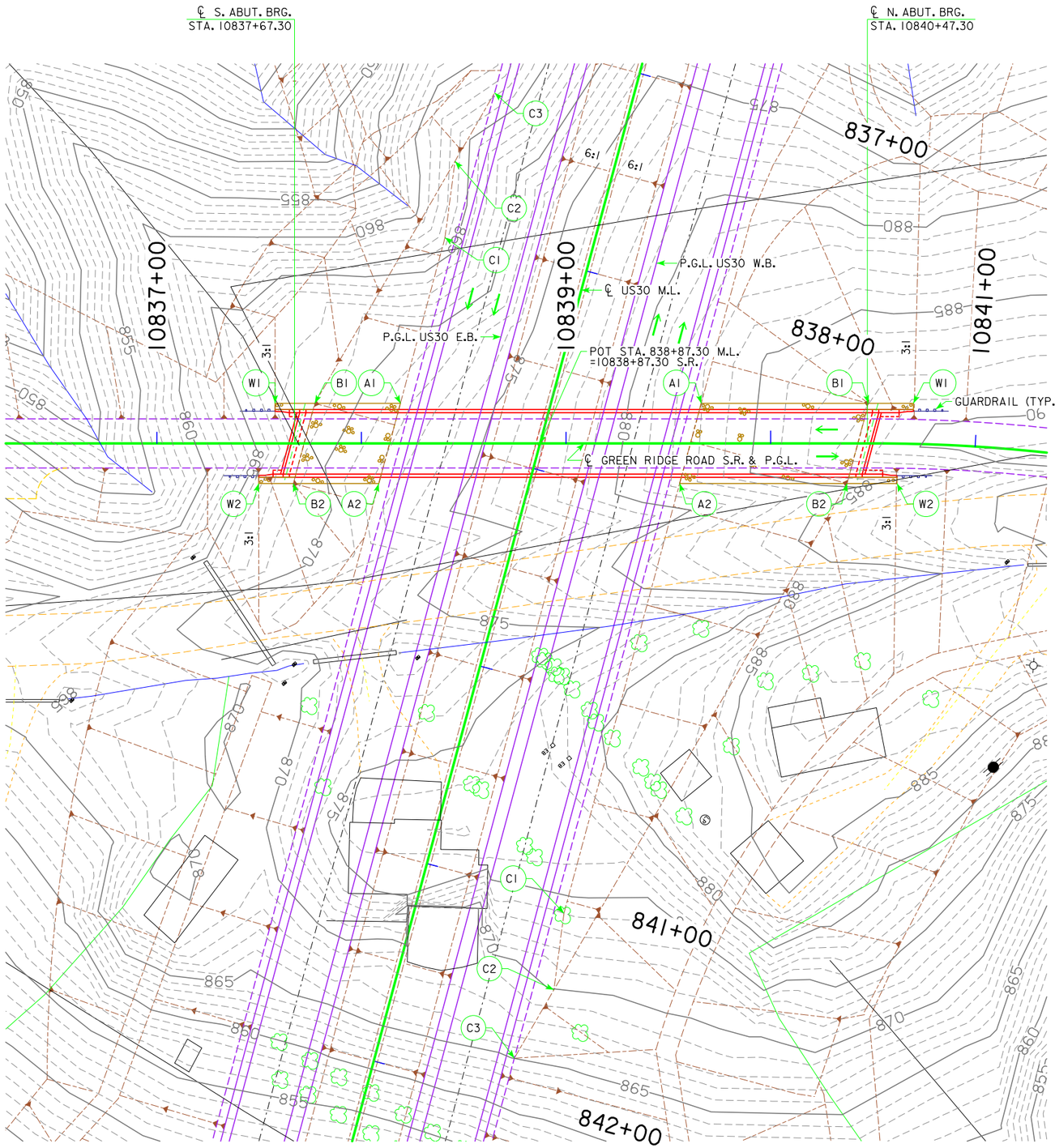
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 616

DESIGN TEAM SHUCK-BRITSON 400 EAST COURT AVE. SUITE 140 DES MOINES, IOWA 50309 515-243-4477 S.B.I. NO. 112.0610.01 | LINN COUNTY | PROJECT NUMBER NHSX-30-7(174)--3H-57 | SHEET NUMBER V.107

7/25/2014 10:23:05 AMV8i_IDOTBridge N:\2012_Projects\112.0610.01 Mt Vernon Bypass\Cadd\57030076.str TSL_57_0616_v107 11x17_pdf.pltcfg

BENCH MARK NO. 751 - STA. 837+84.43, 6500.038' RT., SPIKE IN POWER POLE 555 GREENRIDGE RD, ELEV. 852.122, N. 699478.071 E. 2220032.164



SITE PLAN

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

BERM SLOPE LOCATION TABLE

POINTS	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	10838+19.05	-19.583	849.16	10839+66.10	-19.583	848.69
A2	10838+08.50	19.583	849.61	10839+55.56	19.583	849.18
B1	10837+77.21	-19.583	863.64	10840+47.89	-19.583	878.58
B2	10837+66.71	19.583	863.64	10840+37.39	19.583	878.58
W1	10837+57.82	-19.583	871.05	10840+69.82	-19.583	888.89
W2	10837+49.78	19.583	870.62	10840+61.78	19.583	887.08

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

RECOVERABLE BERM LOCATION TABLE

	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV	STATION	OFFSET	ELEV
C1	838+02.23 (R2)	71.00	848.08	841+06.11 (R2)	71.00	851.14
C2	837+64.91 (R2)	76.00	850.81	841+43.43 (R2)	76.00	854.94
C3	837+27.59 (R2)	66.00	847.18	841+80.75 (R2)	66.00	851.75

REFER TO EW-203 FOR DETAILS.

NOTE:

FOR MACADAM STONE SLOPE PROTECTION SECTIONS AND ESTIMATED QUANTITIES SEE STANDARD SHEET 1006C.

N

0 ENGLISH 60
SCALE IN FEET

PRELIMINARY

DESIGN FOR 15° SKEW (L.A.)

280'-0 X 30'-0 CONTINUOUS WELDED GIRDER BRIDGE

120'-0 S. SPAN 160'-0 N. SPAN

SITUATION PLAN - SITE

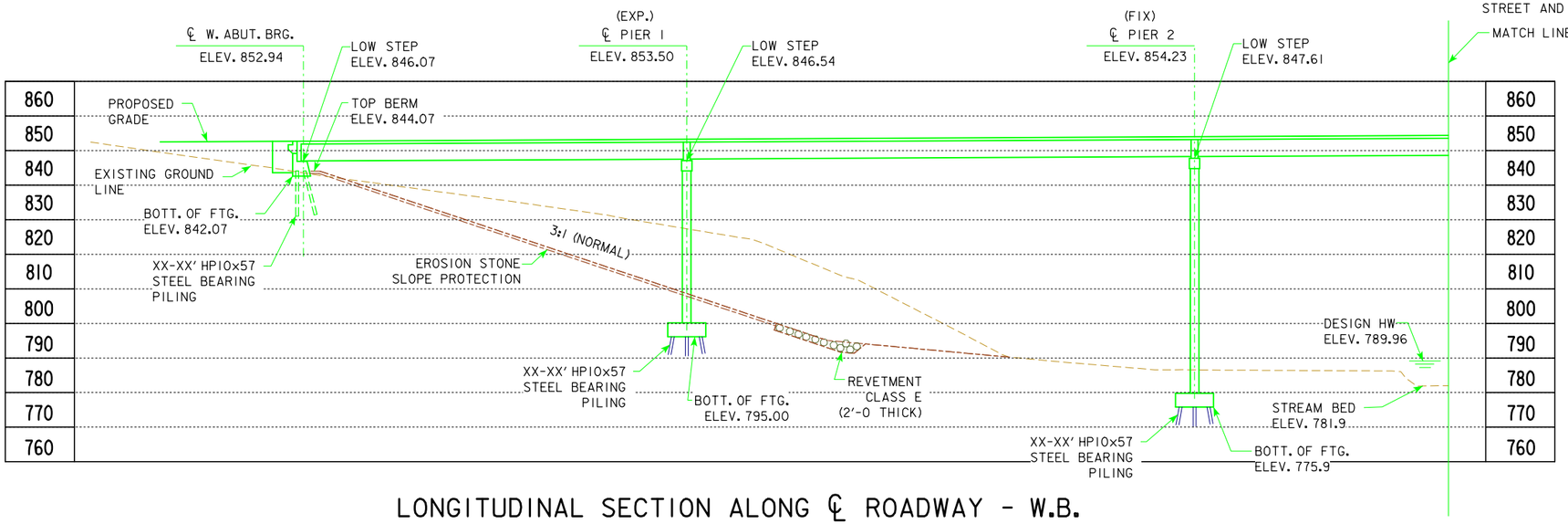
STATION 10839+07.30 APRIL 2014

LINN COUNTY

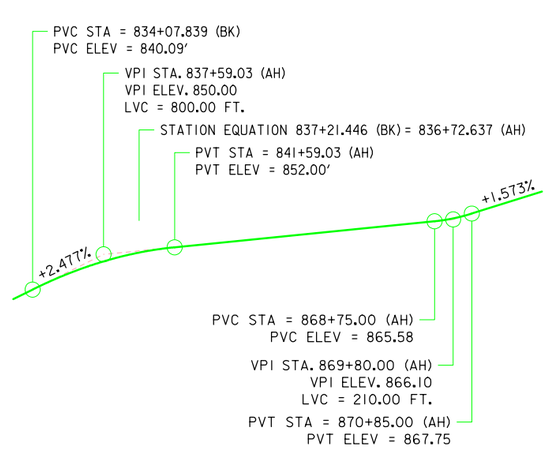
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 616

BENCH MARK NO. 720 - STA. 850+37.42, 90.107 LT., RAILROAD RAIL (VERTICAL) 100 FT. WEST OF E. MAIN STREET AND HWY30 N. SIDE, ELEV. 891.994 N. 706121.786 E. 2220960.091



LONGITUDINAL SECTION ALONG ℄ ROADWAY - W.B.

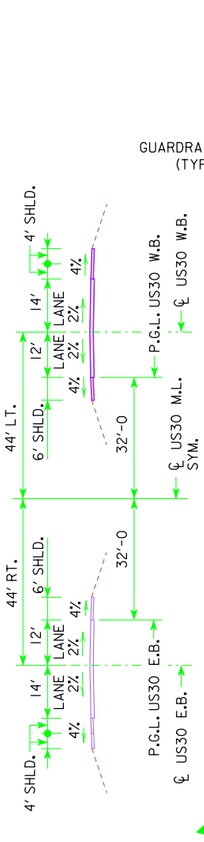


PROPOSED PROFILE GRADE

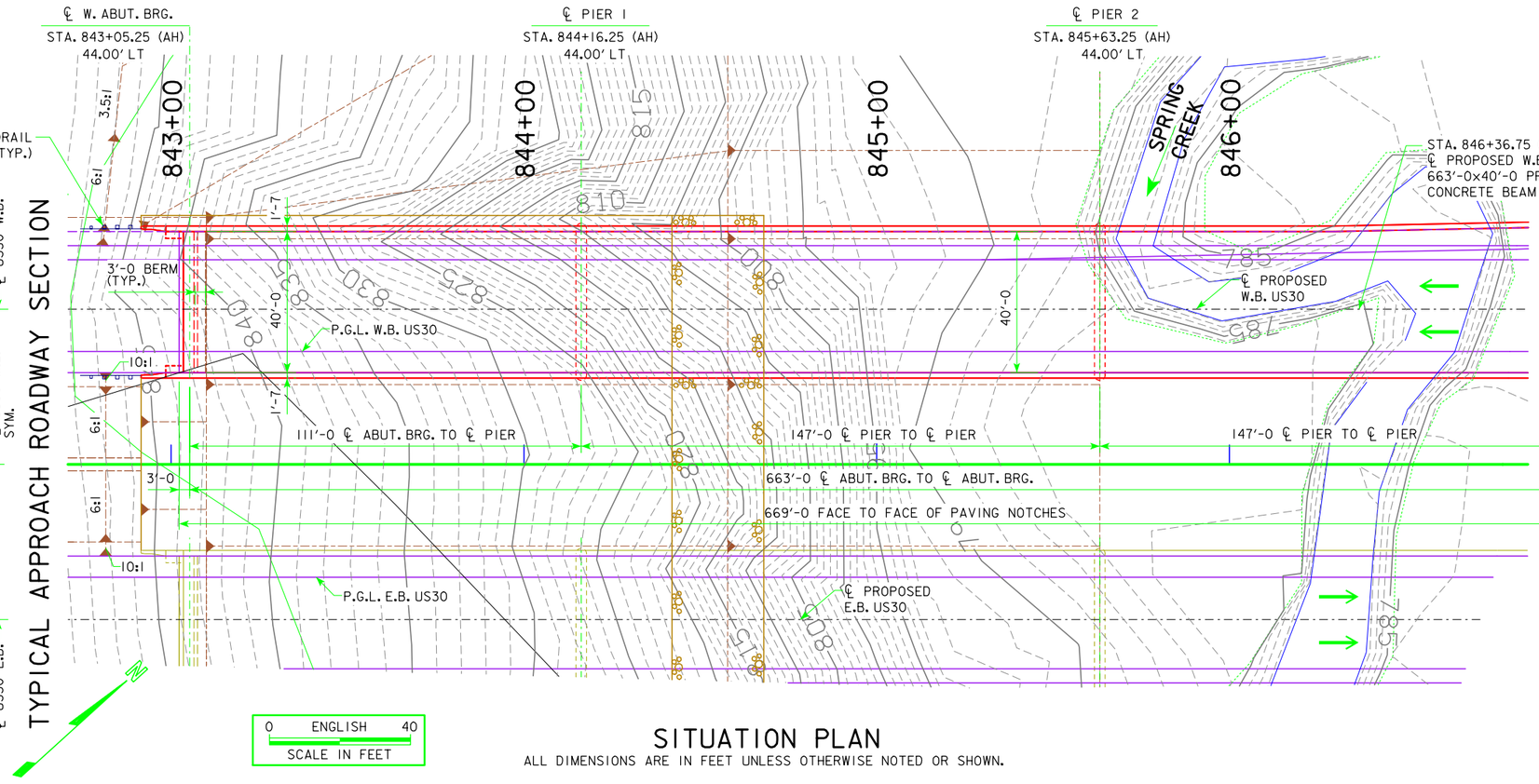
(MAINLINE US30)

US30 TRAFFIC ESTIMATE

2009	AADT	10,600	V.P.D.
2035	AADT	16,700	V.P.D.
2035	DHV	1450	V.P.H.
TRUCKS		10	%
TOTAL DESIGN ESALs		-	



TYPICAL APPROACH ROADWAY SECTION



SITUATION PLAN

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

NOTES:
ALL OFFSETS ARE MEASURED FROM ℄ OF US30.
TOP OF BRIDGE DECK AT CENTERLINE ROADWAY IS 0.21' ABOVE THE PROFILE GRADE TO ACCOUNT FOR CROSS SLOPE AND PARABOLIC CROWN.
PIER TYPE - T-PIERS
BEAM TYPE - BTE BEAMS, DEPTH = 5'-3.
BRIDGE RAIL - TL-4.

LOCATION

W.B. US30 OVER SPRING CREEK
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY
BRIDGE MAINT. NO. ?
FHWA NO. 700540
LATITUDE 41.9084380°
LONGITUDE -91.3738600°

PRELIMINARY

DESIGN FOR 0° SKEW

663'-0 x 40'-0 PRETENSIONED PRESTRESSED CONC. BEAM BRIDGE

SPANS (111'-0, 147'-0, 147'-0, 147'-0, 111'-0) (BTE BEAMS)

SITUATION PLAN (W.B.)

STATION 846+36.75 (AH), 44.00' LT

APRIL 2014

LINN COUNTY

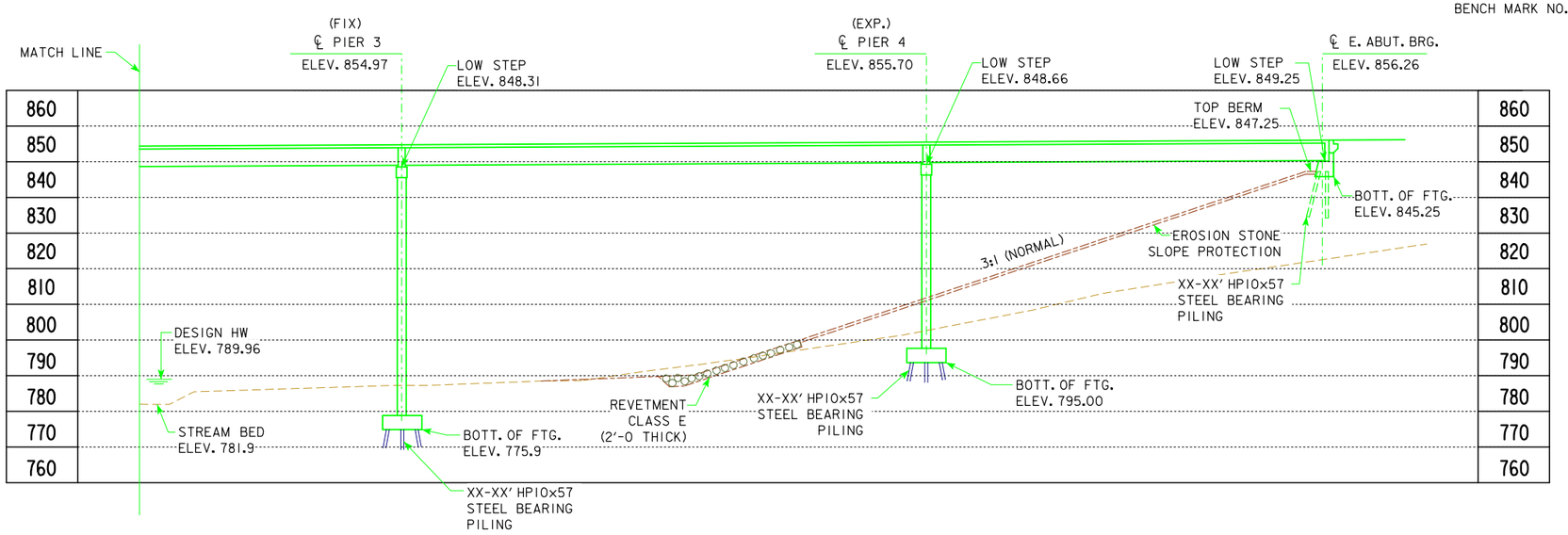
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 716

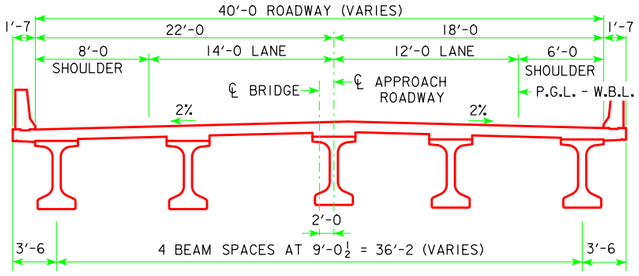
DESIGN TEAM SHUCK-BRITSON 400 EAST COURT AVE. SUITE 140 DES MOINES, IOWA 50309 515-243-4477 | S.B.I. NO. 112.0610.01 | LINN COUNTY | PROJECT NUMBER NHSX-030-7(175)--3H-57 | SHEET NUMBER V.109

7/25/2014 10:23:07 AM V8i_IDOTBridge N:\2012_Projects\112.0610.01 Mt Vernon Bypass\Cadd\57030076.str TSL_57_0716_v109 11x17_pdf.pltcfg

BENCH MARK NO. 720 - STA. 850+37.42, 90.107 LT., RAILROAD RAIL (VERTICAL) 100 FT. WEST OF E. MAIN STREET AND HWY30 N. SIDE, ELEV. 891.994 N. 706121.786 E. 2220960.091

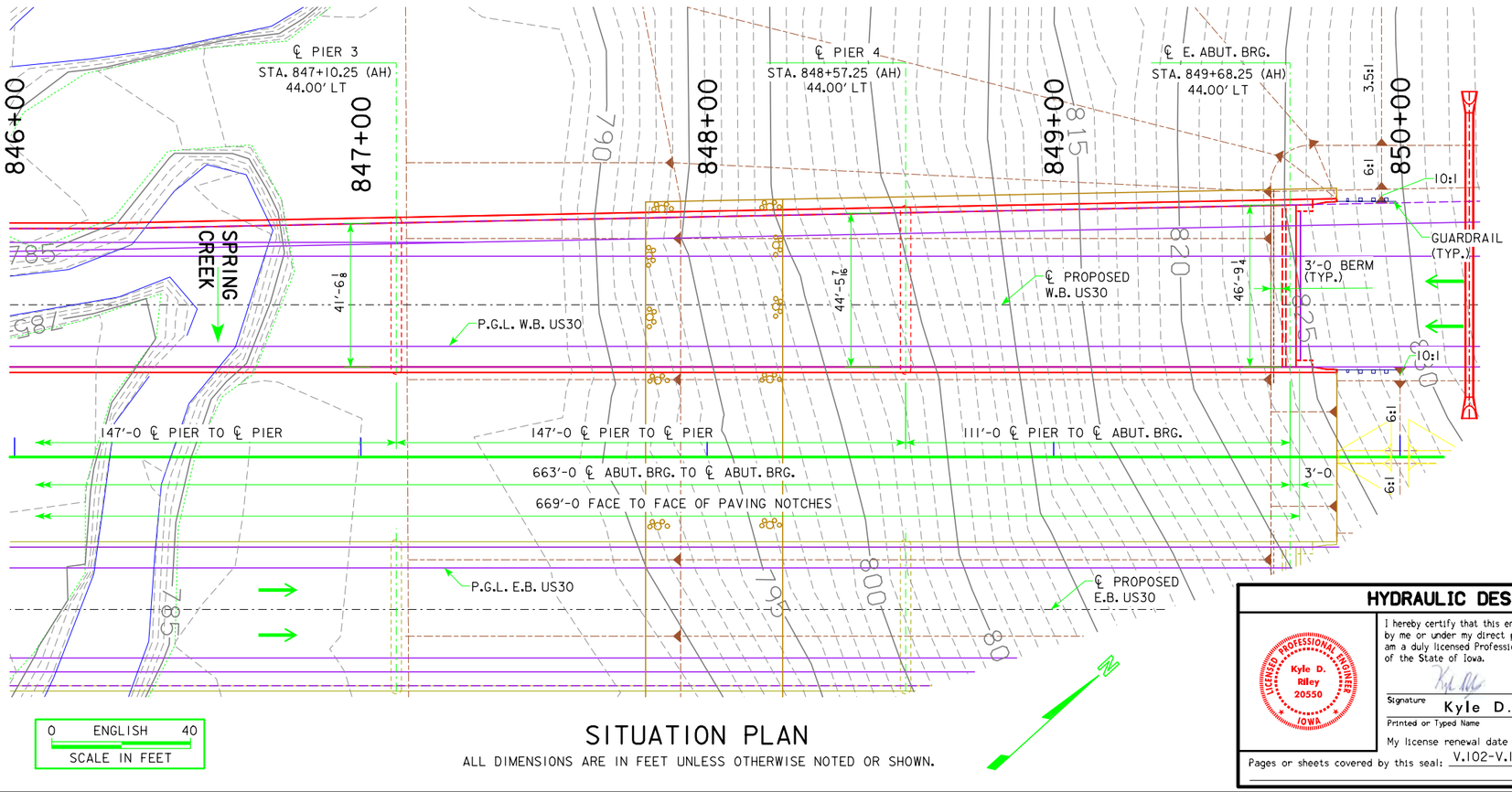


LONGITUDINAL SECTION ALONG ℄ ROADWAY - W.B.



PROPOSED CROSS SECTION

(W.B. IN DIRECTION OF STATIONING)
(PRETENSIONED PRESTRESSED CONC. BEAM)



SITUATION PLAN

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

HYDRAULIC DATA

DRAINAGE AREA= 3.30 SQ.MI.
STREAM SLOPE = 14.85 FT./MI.

Q_{50}= 1,324 CFS
NATURAL STAGE AT BRIDGE= 789.96
BACKWATER= 0.06 FT
BRIDGE VELOCITY = 3.36 FPS

Q_{100}= 1,602 CFS
NATURAL STAGE AT BRIDGE= 790.24
BACKWATER= 0.11 FT
BRIDGE VELOCITY = 3.49 FPS

Q_{200}= 1,802 CFS
NATURAL STAGE AT BRIDGE= 790.58
CALCULATED SCOUR = ELEV. 781.39

Q_{500}= 2,114 CFS
BRIDGE VELOCITY = 3.66 FPS
CALCULATED SCOUR = ELEV. 781.04
ROADWAY OVERTOP = N/A

HYDRAULIC 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.

Kyle D. Riley 20550 LICENSED PROFESSIONAL ENGINEER IOWA

12-23-2013
Signature Date
Kyle D. Riley
Printed or Typed Name

My license renewal date is December 31, 2014

Pages or sheets covered by this seal: V.102-V.104 (HYDRAULIC DATA)

PRELIMINARY

DESIGN FOR 0° SKEW

663'-0 x 40'-0 PRETENSIONED PRESTRESSED CONC. BEAM BRIDGE

SPANS (111'-0, 147'-0, 147'-0, 147'-0, 111'-0) (BTE BEAMS)

SITUATION PLAN (W.B.)

STATION 846+36.75 (AH), 44.00' LT

APRIL 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 716

DESIGN TEAM SHUCK-BRITSON 400 EAST COURT AVE. SUITE 140 DES MOINES, IOWA 50309 515-243-4477 | S.B.I. NO. 112.0610.01 | LINN COUNTY | PROJECT NUMBER NHSX-030-7(175)--3H-57 | SHEET NUMBER V.110

7/25/2014 10:23:08 AM V8i_IDOTBridge N:\2012_Projects\112.0610.01 Mt Vernon Bypass\Cadd\57030076.str TSL_57_0716_v110 11x17_pdf.pltcfg

BENCH MARK NO. 720 - STA. 850+37.42, 90.107 LT., RAILROAD RAIL (VERTICAL) 100 FT. WEST OF E. MAIN STREET AND HWY30 N. SIDE, ELEV. 891.994 N. 706121.786 E. 2220960.091

BERM SLOPE LOCATION TABLE

POINTS	WEST ABUTMENT			EAST ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	844+56.99 (AH)	-70.58	795.07	847+92.33 (AH)	-73.53	790.19
A2	844+56.99 (AH)	-21.42	795.07	847+92.33 (AH)	-21.42	790.19
B1	843+10.00 (AH)	-70.58	844.07	849+63.50 (AH)	-77.26	847.25
B2	843+10.00 (AH)	-21.42	844.07	849+63.50 (AH)	-21.42	847.25
W1	842+88.50 (AH)	-70.58	852.03	849+85.00 (AH)	-77.69	855.51
W2	842+88.50 (AH)	-21.42	852.03	849+85.00 (AH)	-21.42	855.51

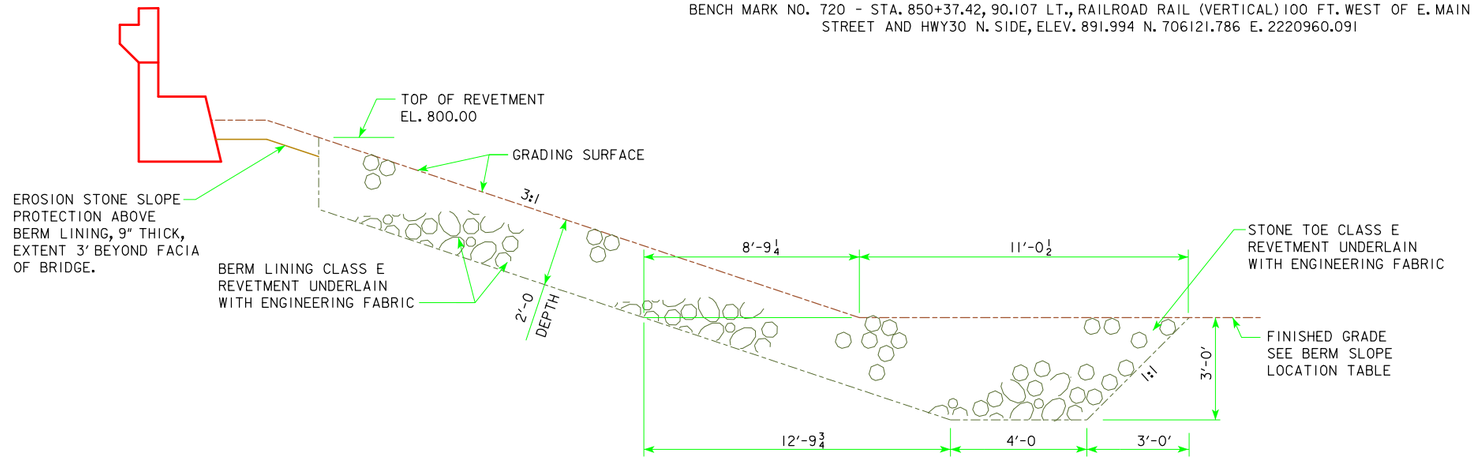
BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

ESTIMATED BERM ARMORING QUANTITIES

LOCATION	REVETMENT CL. E (TON)	EROSION STONE (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
BERM LINING - WEST ABUTMENT	130	450	1231	359
STONE TOE - WEST ABUTMENT	149	--	196	93
BERM LINING - EAST ABUTMENT	272	517	1533	489
STONE TOE - EAST ABUTMENT	156	--	205	97
TOTALS	707	967	3165	1038

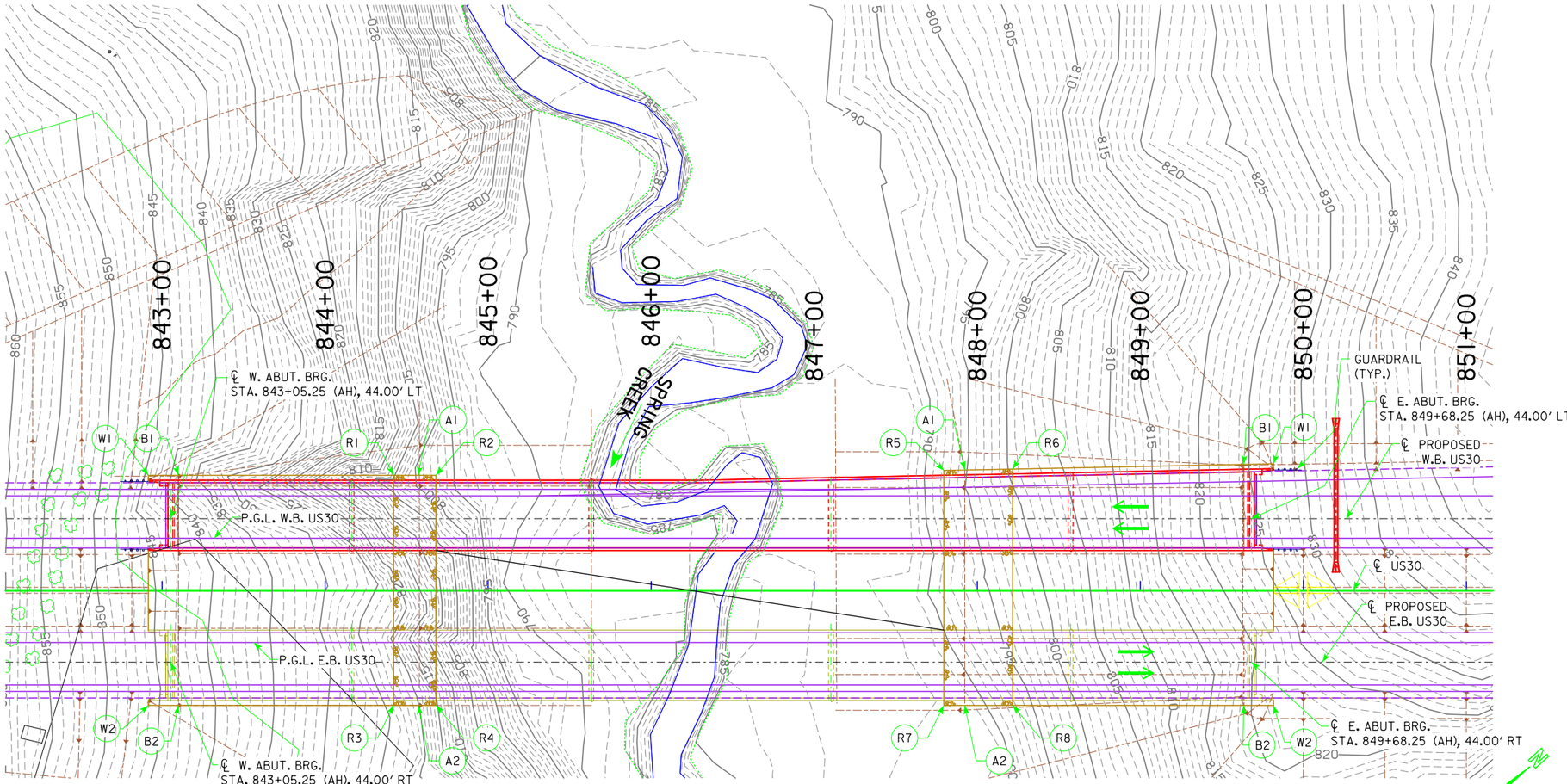
EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE.

USE WHEN QUANTITY EQUALS OR EXCEEDS QUANTITY UNDER THE BRIDGE.



REVETMENT LAYOUT:

- R1 844+42.21, -70.58', TOP OF REVETMENT
- R2 844+67.98, -70.58', BOTTOM OF REVETMENT
- R3 844+42.21, 70.58', TOP OF REVETMENT
- R4 844+67.98, 70.58', BOTTOM OF REVETMENT
- R5 847+82.18, -73.63', BOTTOM OF REVETMENT
- R6 848+21.75, -74.42', TOP OF REVETMENT
- R7 847+82.18, 70.58', BOTTOM OF REVETMENT
- R8 848+21.75, 70.58', TOP OF REVETMENT



SITE PLAN

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

PRELIMINARY

DESIGN FOR 0° SKEW

663'-0 x 40'-0 PRETENSIONED PRESTRESSED CONC. BEAM BRIDGE

SPANS (111'-0, 147'-0, 147'-0, 147'-0, 111'-0) (BTE BEAMS)

SITUATION PLAN - SITE (W.B.)

STATION 846+36.75 (AH), 44.00' LT

APRIL 2014

LINN COUNTY

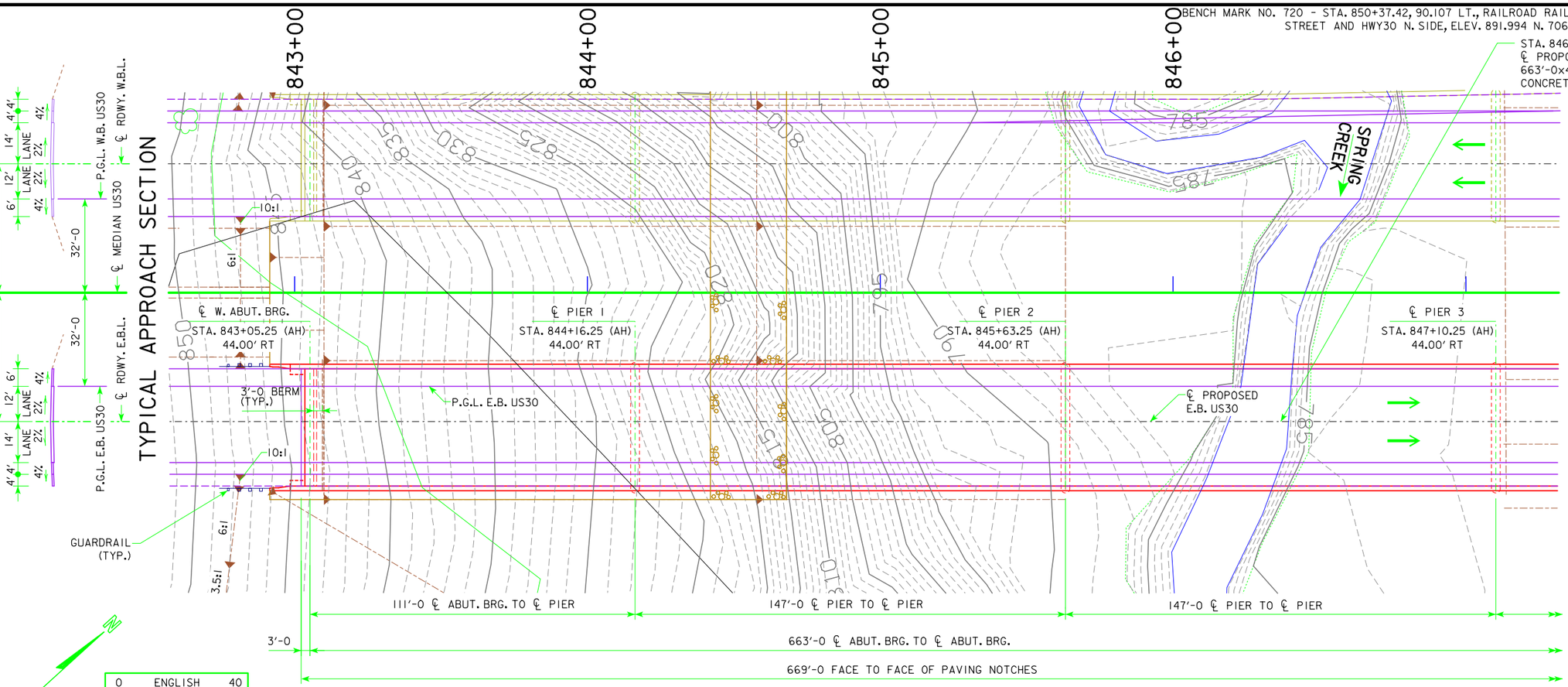
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 716

DESIGN TEAM SHUCK-BRITSON 400 EAST COURT AVE. SUITE 140 DES MOINES, IOWA 50309 515-243-4477

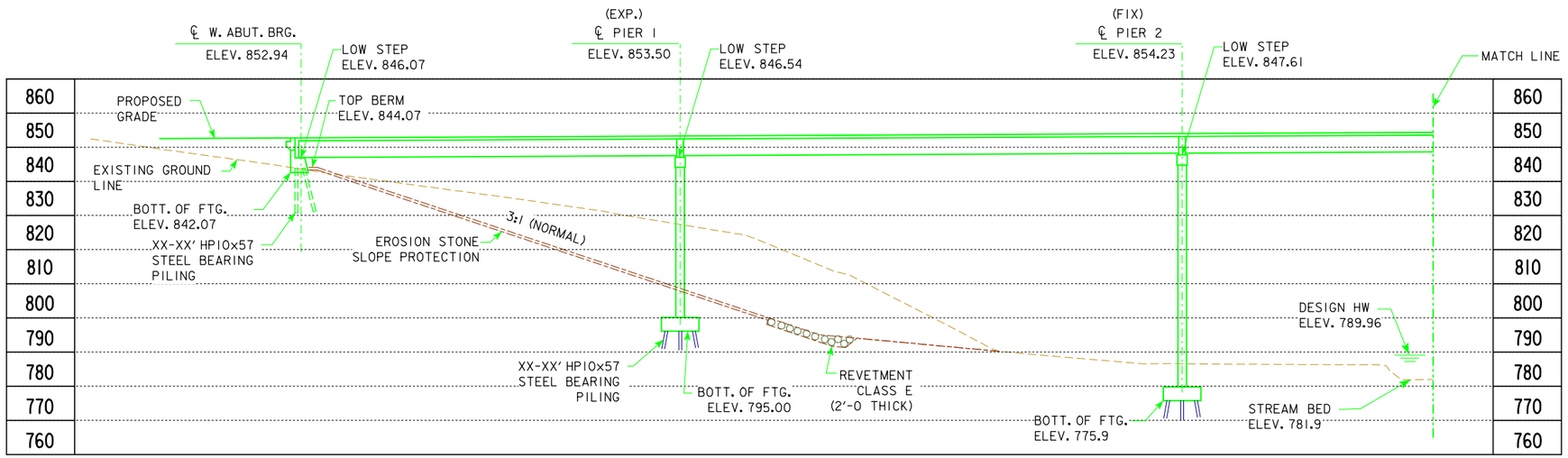
S.B.I. NO. 112.0610.01 | LINN COUNTY | PROJECT NUMBER NHSX-030-7(175)--3H-57 | SHEET NUMBER V.111

7/25/2014 10:23:10 AM V8i_IDOTBridge N:\2012_Projects\112.0610.01 Mt Vernon Bypass\Cadd\57030076.str TSL_57_0716_v111 11x17_pdf.pltcfg



SITUATION PLAN

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED OR SHOWN.



LONGITUDINAL SECTION ALONG ℄ ROADWAY - E.B.

LOCATION

E.B. US30 OVER SPRING CREEK
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY
BRIDGE MAINT. NO. ?
FHWA NO. 700545
LATITUDE 41.9084380°
LONGITUDE -91.3738600°

US30 TRAFFIC ESTIMATE

2009 AADT	10,600	V.P.D.
2035 AADT	16,700	V.P.D.
2035 DHV	1450	V.P.H.
TRUCKS	10	%
TOTAL DESIGN ESALs	_	

NOTES:
ALL OFFSETS ARE MEASURED FROM ℄ OF US30.
TOP OF BRIDGE DECK AT CENTERLINE ROADWAY IS 0.21' ABOVE THE PROFILE GRADE TO ACCOUNT FOR CROSS SLOPE AND PARABOLIC CROWN.
PIER TYPE - T-PIERS
BEAM TYPE - BTE BEAMS, DEPTH = 5'-3.
BRIDGE RAIL - TL-4.

PRELIMINARY

DESIGN FOR 0° SKEW

663'-0 x 40'-0 PRETENSIONED PRESTRESSED CONC. BEAM BRIDGE

SPANS (111'-0, 147'-0, 147'-0, 147'-0, 111'-0) (BTE BEAMS)

SITUATION PLAN (E.B.)

STATION 846+36.75 (AH), 44.00' RT

APRIL 2014

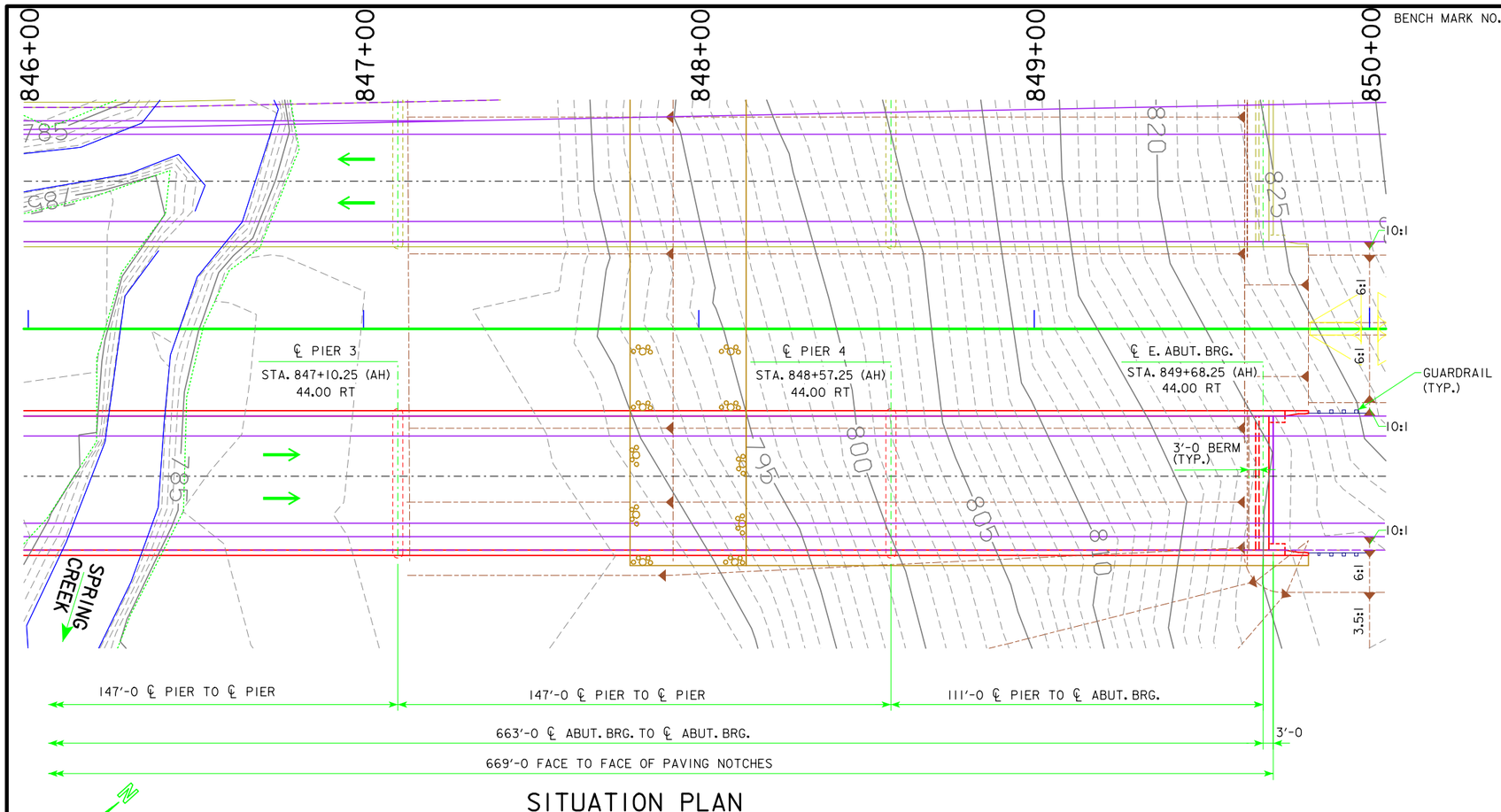
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 816

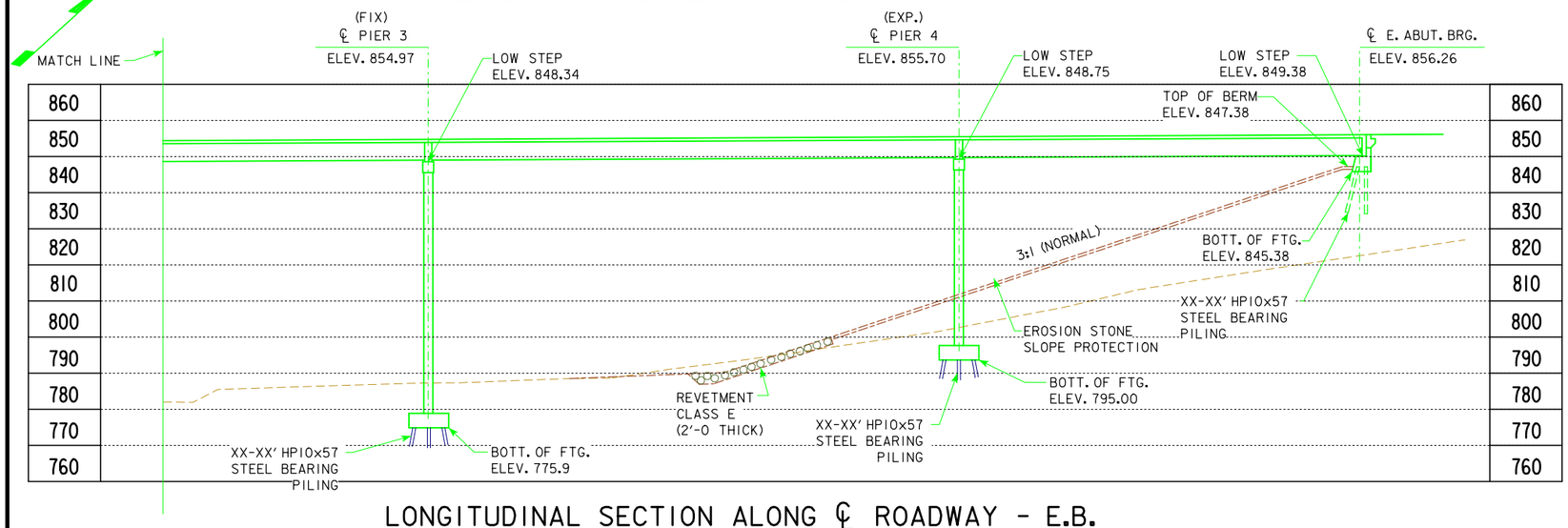
DESIGN TEAM SHUCK-BRITSON 400 EAST COURT AVE. SUITE 140 DES MOINES, IOWA 50309 515-243-4477

S.B.I. NO. 112.0610.01 | LINN COUNTY | PROJECT NUMBER NHSX-030-7(175)--3H-57 | SHEET NUMBER V.112



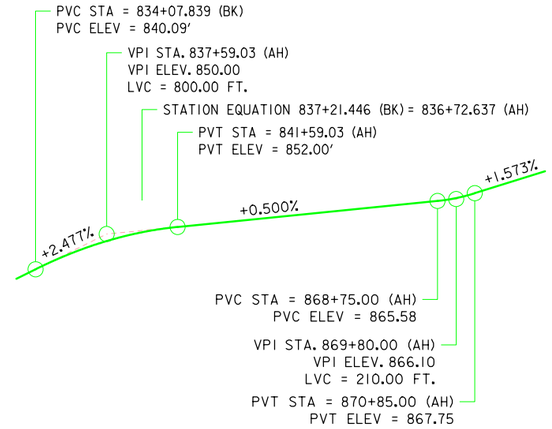
SITUATION PLAN

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED OR SHOWN.



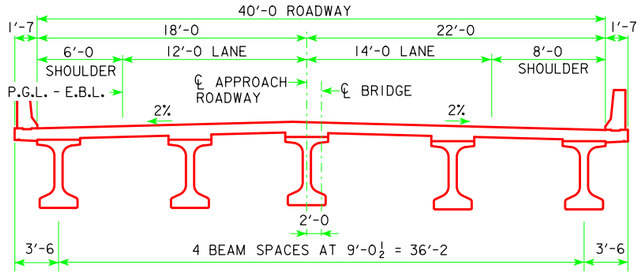
LONGITUDINAL SECTION ALONG ℄ ROADWAY - E.B.

BENCH MARK NO. 720 - STA. 850+37.42, 90.107 LT., RAILROAD RAIL (VERTICAL) 100 FT. WEST OF E. MAIN STREET AND HWY30 N. SIDE, ELEV. 891.994 N. 706121.786 E. 2220960.091



PROPOSED PROFILE GRADE

(MAINLINE US30)



PROPOSED CROSS SECTION

(E.B. IN DIRECTION OF STATIONING)
(PRETENSIONED PRESTRESSED CONC. BEAM)

HYDRAULIC DATA

DRAINAGE AREA= 3.30 SQ.MI.
STREAM SLOPE = 14.85 FT./MI.

Q_{50}= 1,324 CFS
NATURAL STAGE AT BRIDGE= 789.96
BACKWATER= 0.06 FT
BRIDGE VELOCITY = 3.36 FPS

Q_{100}= 1,602 CFS
NATURAL STAGE AT BRIDGE= 790.24
BACKWATER= 0.11 FT
BRIDGE VELOCITY = 3.49 FPS

Q = 1,802 CFS
NATURAL STAGE AT BRIDGE= 790.58
CALCULATED SCOUR = ELEV. 781.39

Q_{500}= 2,114 CFS
BRIDGE VELOCITY = 3.66 FPS
CALCULATED SCOUR = ELEV. 781.04
ROADWAY OVERTOP = N/A

PRELIMINARY

DESIGN FOR 0° SKEW

663'-0 x 40'-0 PRETENSIONED PRESTRESSED CONC. BEAM BRIDGE

SPANS (111'-0, 147'-0, 147'-0, 147'-0, 111'-0) (BTE BEAMS)

SITUATION PLAN (E.B.)

STATION 846+36.75 (AH), 44.00' RT

APRIL 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 816

0 ENGLISH 40
SCALE IN FEET

DESIGN TEAM SHUCK-BRITSON 400 EAST COURT AVE. SUITE 140 DES MOINES, IOWA 50309 515-243-4477 | S.B.I. NO. 112.0610.01 | LINN COUNTY | PROJECT NUMBER NHSX-030-7(175)--3H-57 | SHEET NUMBER V.113

7/25/2014 10:23:12 AM V8i_IDOTBridge N:\2012_Projects\112.0610.01 Mt Vernon Bypass\Cadd\57030076.str TSL_57_0816_v113 11x17_pdf.pltcfg

BERM SLOPE LOCATION TABLE

POINTS	WEST ABUTMENT			EAST ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	844+56.99 (AH)	21.42	795.07	847+92.33 (AH)	21.42	790.19
A2	844+56.99 (AH)	70.58	795.07	847+92.33 (AH)	70.58	790.19
B1	843+10.00 (AH)	21.42	844.07	849+63.50 (AH)	21.42	847.38
B2	843+10.00 (AH)	70.58	844.07	849+63.50 (AH)	70.58	847.38
W1	842+88.50 (AH)	21.42	852.03	849+85.00 (AH)	21.42	855.51
W2	842+88.50 (AH)	70.58	852.03	849+85.00 (AH)	70.58	855.51

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

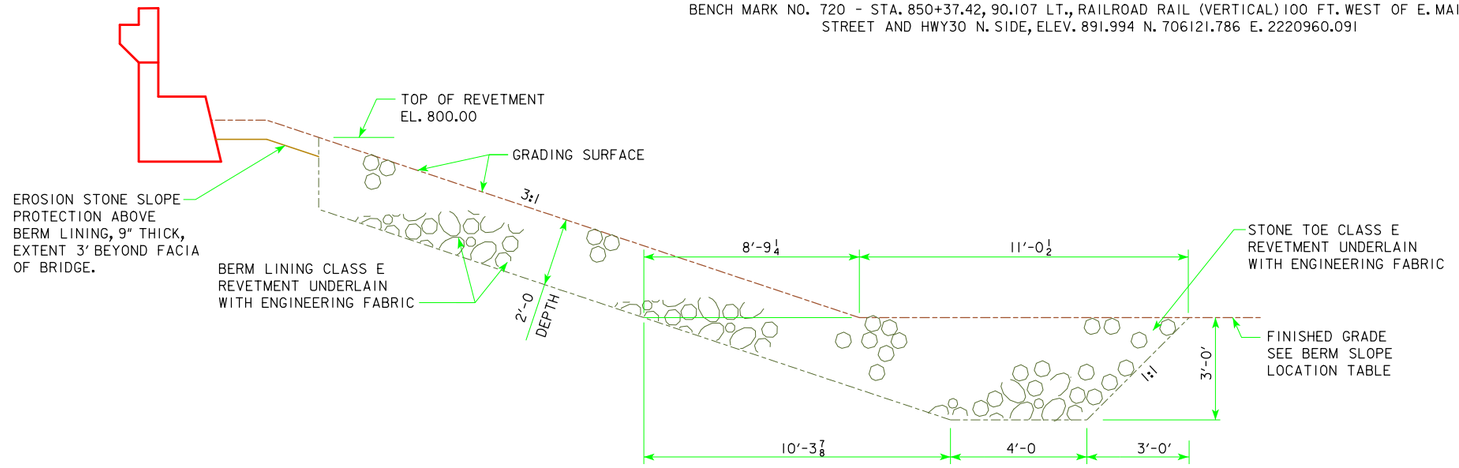
ESTIMATED BERM ARMORING QUANTITIES

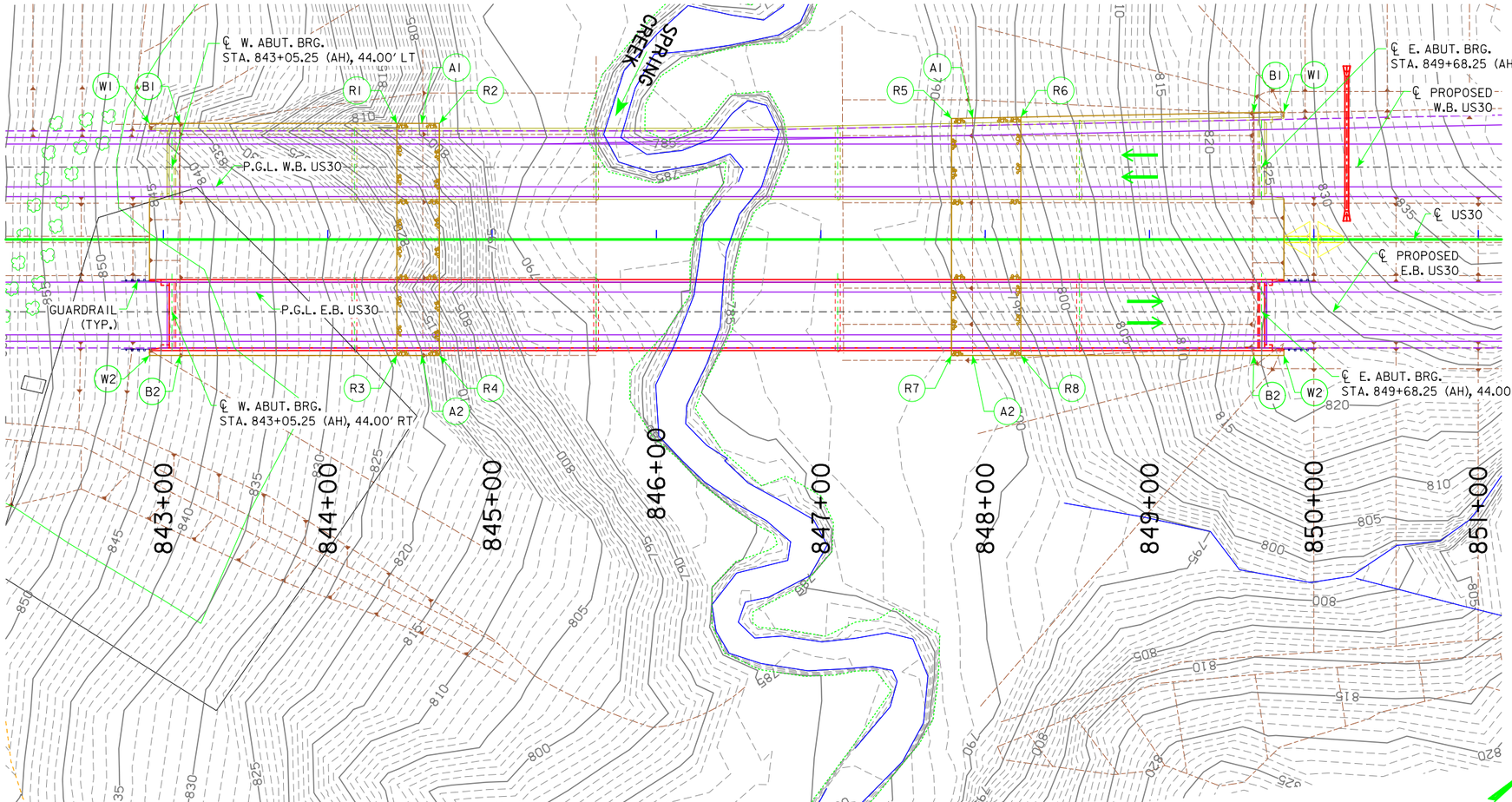
LOCATION	REVETMENT CL. E (TON)	EROSION STONE (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
BERM LINING - WEST ABUTMENT	130	450	1231	359
STONE TOE - WEST ABUTMENT	149	--	196	93
BERM LINING - EAST ABUTMENT	259	481	1432	459
STONE TOE - EAST ABUTMENT	149	--	196	93
TOTALS	687	931	3055	1004

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE.

USE WHEN QUANTITY EQUALS OR EXCEEDS QUANTITY UNDER THE BRIDGE.

BENCH MARK NO. 720 - STA. 850+37.42, 90.107 LT., RAILROAD RAIL (VERTICAL) 100 FT. WEST OF E. MAIN STREET AND HWY30 N. SIDE, ELEV. 891.994 N. 706121.786 E. 2220960.091





SITE PLAN

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

0 ENGLISH 80
SCALE IN FEET

REVETMENT LAYOUT:

- (R1) 844+42.21, -70.58', TOP OF REVETMENT
- (R2) 844+67.98, -70.58', BOTTOM OF REVETMENT
- (R3) 844+42.21, 70.58', TOP OF REVETMENT
- (R4) 844+67.98, 70.58', BOTTOM OF REVETMENT
- (R5) 847+82.18, -73.63', BOTTOM OF REVETMENT
- (R6) 848+21.75, -74.42', TOP OF REVETMENT
- (R7) 847+82.18, 70.58', BOTTOM OF REVETMENT
- (R8) 848+21.75, 70.58', TOP OF REVETMENT

PRELIMINARY

DESIGN FOR 0° SKEW

663'-0 x 40'-0 PRETENSIONED PRESTRESSED CONC. BEAM BRIDGE

SPANS (111'-0, 147'-0, 147'-0, 147'-0, 111'-0) (BTE BEAMS)

SITUATION PLAN - SITE (E.B.)

STATION 846+36.75 (AH), 44.00' RT

APRIL 2014

LINN COUNTY

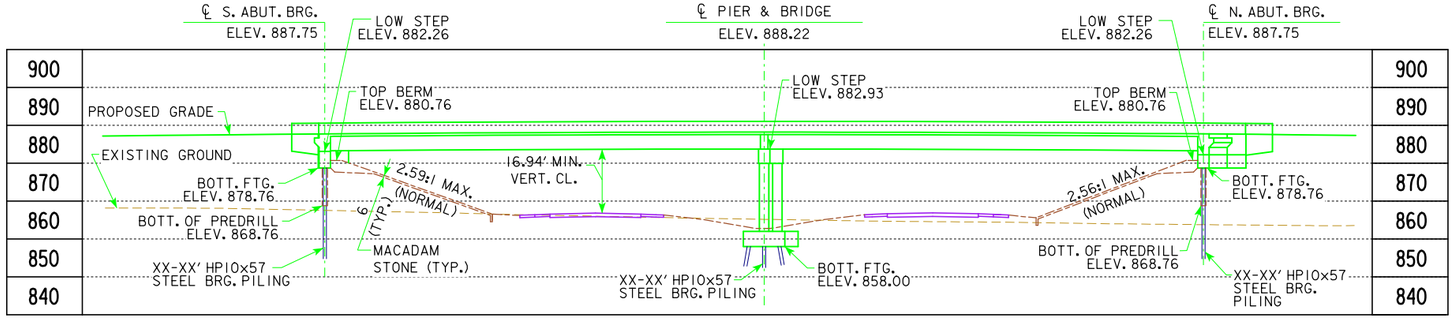
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 816

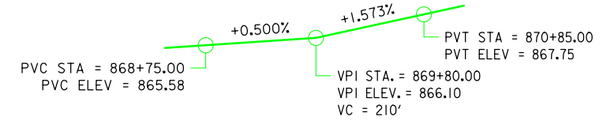
DESIGN TEAM SHUCK-BRITSON INC. 400 EAST COURT AVE. SUITE 140 DES MOINES, IOWA 50309 515-243-4477

S.B.I. NO. 112.0610.01 | LINN COUNTY | PROJECT NUMBER NHSX-030-7(175)--3H-57 | SHEET NUMBER V.114

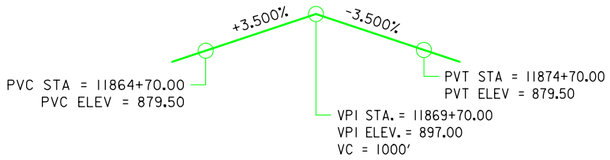
BENCH MARK NO. 722 - STA. 871+75.17, 53.377 RT, CHISELED CROSS NE CORNER OF CONC. PAD FOR SOLAR PANEL, ELEV. 933.921, N. 706099.862 E. 2223101.874.



LONGITUDINAL SECTION ALONG ℄ ROADWAY



PROPOSED PROFILE GRADE US30



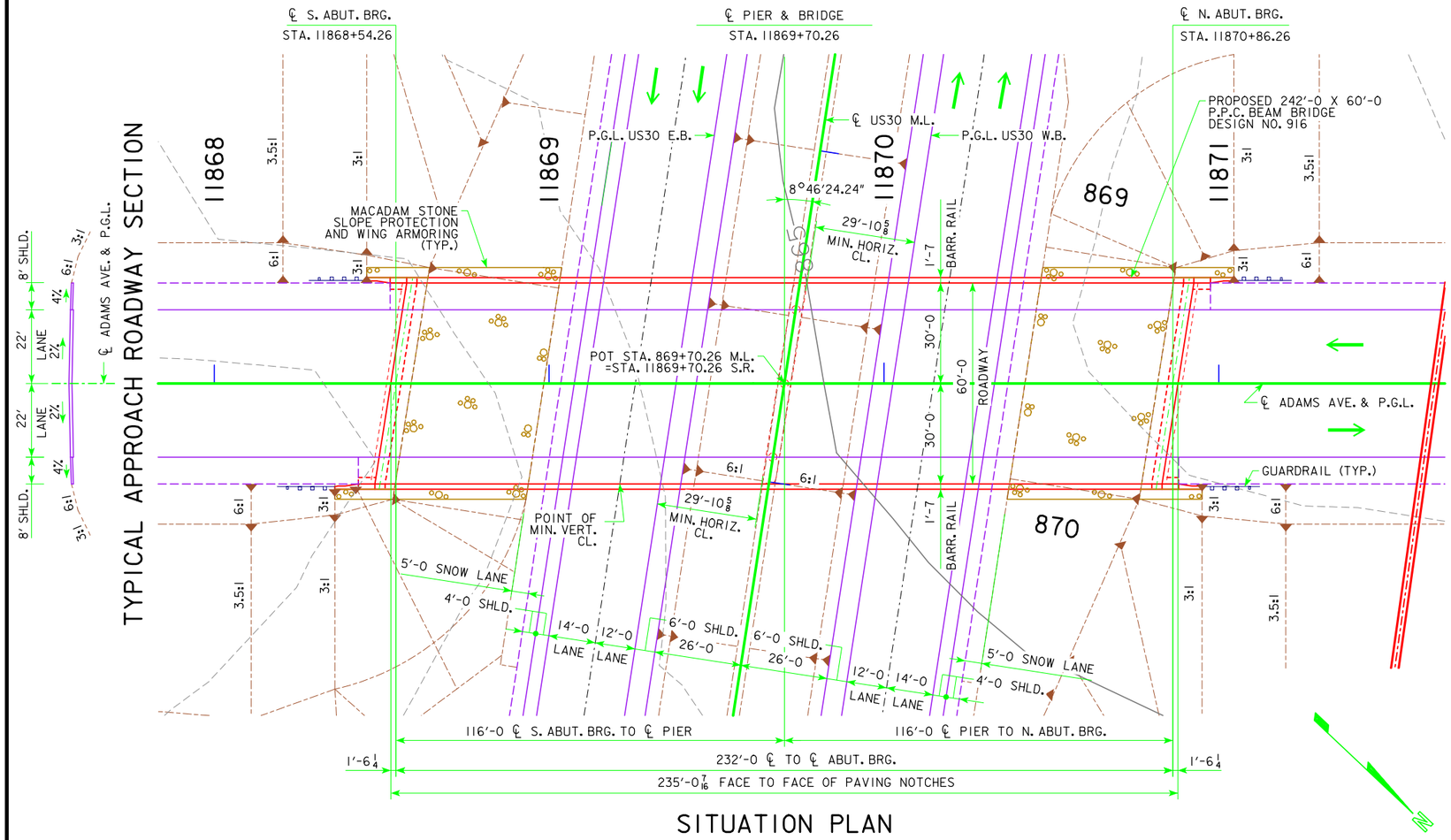
PROPOSED PROFILE GRADE ADAMS AVE.

UTILITIES LEGEND:

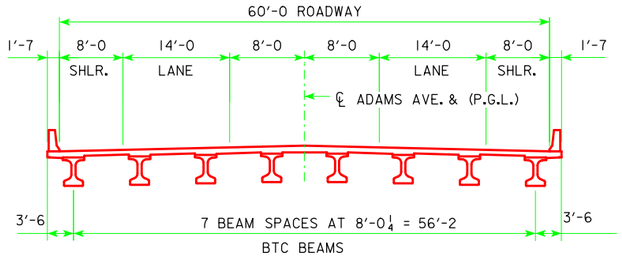
NO KNOWN UTILITIES

MINIMUM VERTICAL CLEARANCE

OVERHEAD STATION = 11869+21.40, OFFSET 28.08' RT.
OVERHEAD ELEVATION = 887.61
DEPTH OF SUPERSTRUCTURE = 4.67'
UNDERPASS STATION = 870+05.46, OFFSET 44.00' RT
UNDERPASS ELEVATION = 865.99
MINIMUM VERTICAL CLEARANCE = 16.94'



SITUATION PLAN



PROPOSED CROSS SECTION

US30 TRAFFIC ESTIMATE

2013 AADT	8,400	V.P.D.
2035 AADT	10,150	V.P.D.
2035 DHV	×	V.P.H.
TRUCKS	10	%
TOTAL DESIGN ESALs	-	

ADAMS AVE. TRAFFIC ESTIMATE

2013 AADT	790	V.P.D.
2035 AADT	3,400	V.P.D.
2035 DHV	×	V.P.H.
TRUCKS	5	%
TOTAL DESIGN ESALs	-	

NOTES:

ALL OFFSETS ARE MEASURED FROM ℄ OF ADAMS AVE.
TOP OF BRIDGE DECK CROWN 0.03' BELOW PROFILE GRADE.
PIER TYPE - FRAME PIER DESIGNED FOR VEHICULAR COLLISION FORCE
BEAM TYPE - BTC BEAMS, DEPTH = 3'-9.
TL-4 BRIDGE RAILING PROPOSED.
2 - SPAN GRADING SHOWN.

PRELIMINARY

LOCATION

ADAMS AVE. OVER US30
T-82N R-5W
SECTION 13
FRANKLIN TOWNSHIP
LINN COUNTY
BRIDGE MAINT. NO.
FHWA NO. 700550
LATITUDE 41.9118316 °
LONGITUDE -91.3665890°

0 ENGLISH 40
SCALE IN FEET

DESIGN FOR 9° SKEW

232'-0 X 60'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

116'-0 END SPANS BTC BEAMS

SITUATION PLAN

STATION 11869+70.26 APRIL 2014

LINN COUNTY

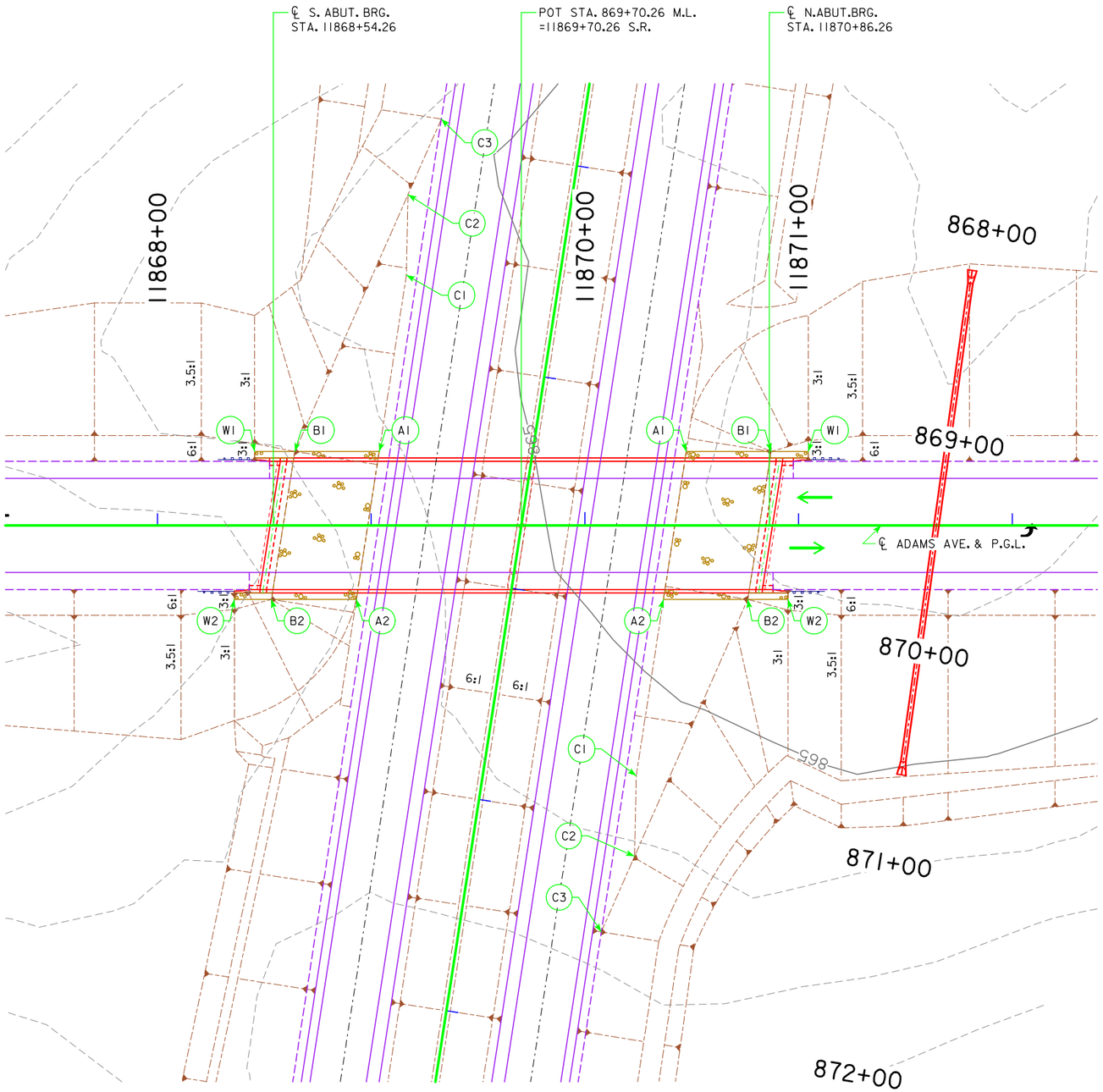
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ___ OF ___ FILE NO. 30839 DESIGN NO. 916

DESIGN TEAM SHUCK-BRITSON 400 EAST COURT AVE. SUITE 140 DES MOINES, IOWA 50309 515-243-4477 S.B.I. NO. 112.0610.01 | LINN COUNTY | PROJECT NUMBER NHSX-30-7(176)--3H-57 | SHEET NUMBER V.115

7/25/2014 10:23:14 AM V8i_IDOTBridge N:\2012_Projects\112.0610.01 Mt Vernon Bypass\Cadd\57030076.str TSL_57_0916_v115 11x17_pdf.pltcfg

BENCH MARK NO. 722 - STA. 871+75.17, 53.377 RT, CHISELED CROSS NE CORNER OF CONC. PAD FOR SOLAR PANEL, ELEV. 933.921, N. 706099.862 E. 2223101.874.



SITE PLAN

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

BERM SLOPE LOCATION TABLE

POINTS	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	11869+03.75	-34.58	865.50	11870+47.44	-34.58	865.32
A2	11868+93.08	34.58	866.23	11870+36.76	34.58	865.97
B1	11868+64.29	-34.58	880.76	11870+87.18	-34.58	880.76
B2	11868+53.34	34.58	880.76	11870+76.22	34.58	880.76
W1	11868+45.51	-34.58	886.99	11871+04.51	-34.58	886.90
W2	11868+36.01	34.58	886.90	11870+95.01	34.58	886.98

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

RECOVERABLE BERM LOCATION TABLE

	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV	STATION	OFFSET	ELEV
C1	868+62.67	71.00	864.96	870+77.83	-71.00	867.08
C2	868+25.35	76.00	868.42	871+15.15	-76.00	871.26
C3	867+88.03	66.00	864.79	871+52.47	-66.00	868.46

REFER TO EW-204 FOR DETAILS.

NOTE:
FOR MACADAM STONE SLOPE PROTECTION SECTIONS AND ESTIMATED QUANTITIES SEE STANDARD SHEET 1006.

0 ENGLISH 60
SCALE IN FEET

PRELIMINARY

DESIGN FOR 9° SKEW

232'-0 X 60'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

116'-0 END SPANS BTC BEAMS

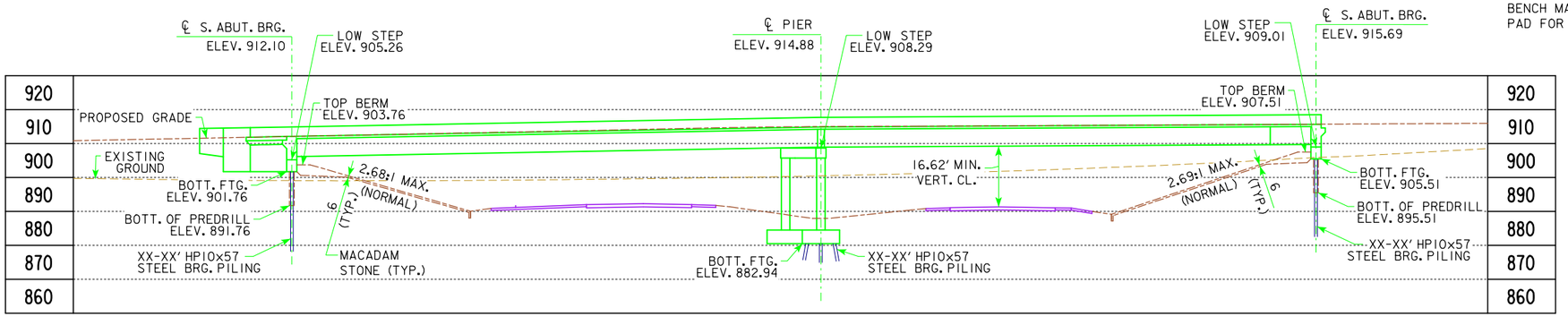
SITUATION PLAN - SITE

STATION 11869+70.26 APRIL 2014

LINN COUNTY

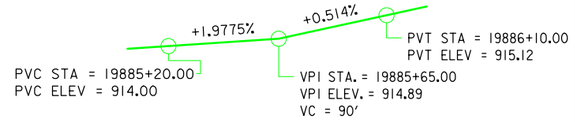
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. 916

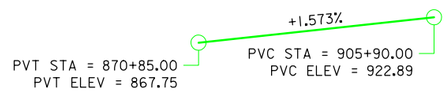


LONGITUDINAL SECTION ALONG ℄ ROADWAY

BENCH MARK NO. 722 - STA. 871+75.17, 53.377 RT, CHISELED CROSS NE CORNER OF CONC. PAD FOR SOLAR PANEL, ELEV. 933.921, N. 706099.862 E. 2223101.874.



PROPOSED PROFILE GRADE EXISTING ADAMS AVE.



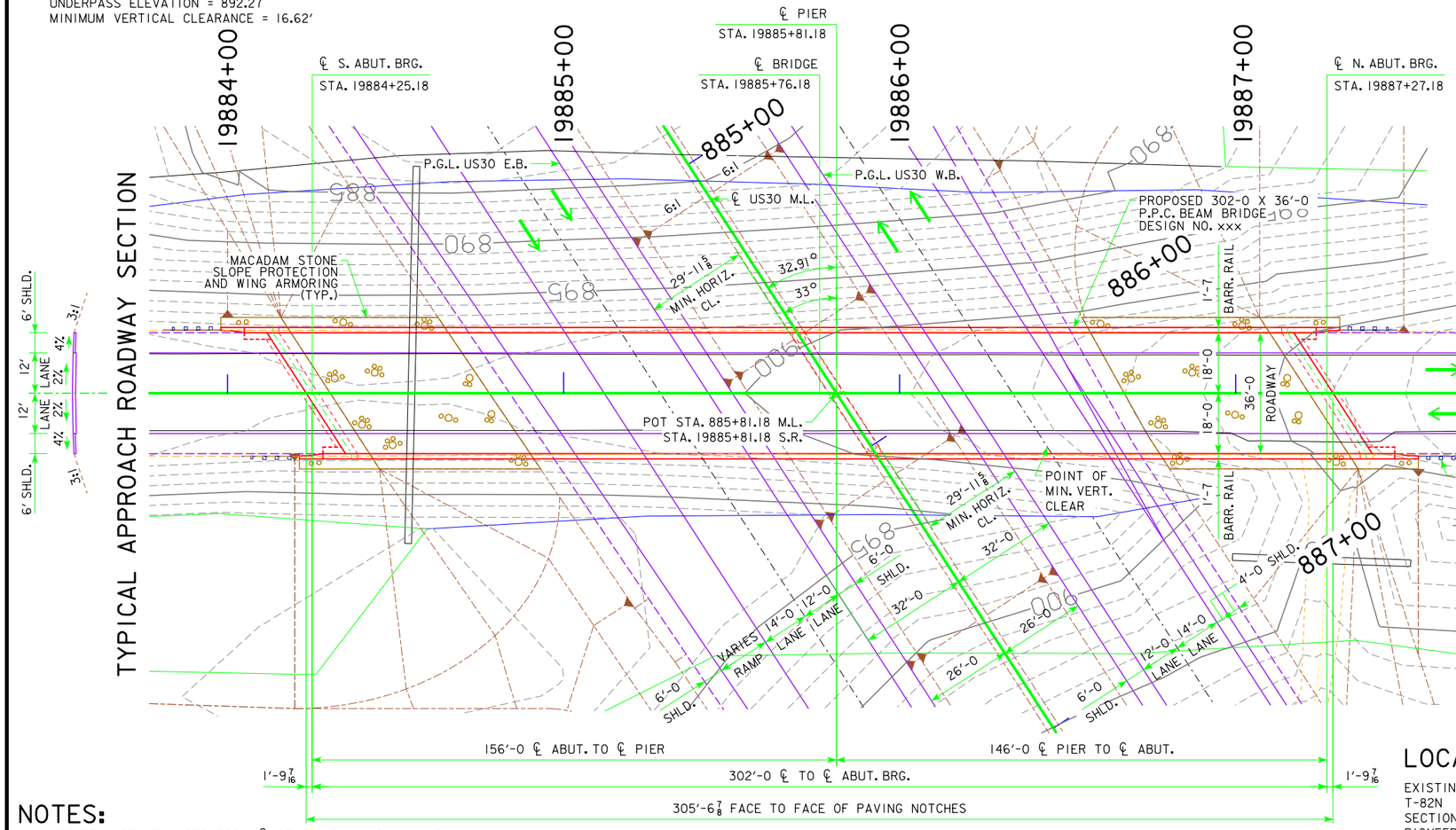
PROPOSED PROFILE GRADE US30

MINIMUM VERTICAL CLEARANCE

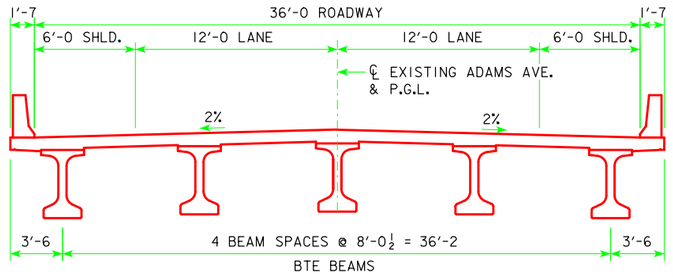
OVERHEAD STATION = 19886+43.99, OFFSET 16.08' RT.
OVERHEAD ELEVATION = 914.97
DEPTH OF SUPERSTRUCTURE = 6.08'
UNDERPASS STATION = 886+28.80, OFFSET 44.00' LT
UNDERPASS ELEVATION = 892.27
MINIMUM VERTICAL CLEARANCE = 16.62'

UTILITIES LEGEND:

⊸●	PPA POWER POLE CO. I
T3	CENTURY LINK
FO	IOWA NETWORK SERVICES



TYPICAL APPROACH ROADWAY SECTION



PROPOSED CROSS SECTION

EXISTING ADAMS AVE. TRAFFIC ESTIMATE

2015 AADT	450	V.P.D.
2035 AADT	600	V.P.D.
2035 DHV	120	V.P.H.
TRUCKS	5	%
TOTAL DESIGN ESALs	-	

US30 TRAFFIC ESTIMATE

2015 AADT	7,310	V.P.D.
2035 AADT	10,150	V.P.D.
2035 DHV	930	V.P.H.
TRUCKS	10	%
TOTAL DESIGN ESALs	-	

NOTES:

ALL OFFSETS ARE MEASURED FROM ℄ OF EXISTING ADAMS AVE.
TOP OF BRIDGE DECK CROWN 0.03' BELOW PROFILE GRADE.
PIER TYPE - FRAME PIER DESIGNED FOR VEHICULAR COLLISION FORCE.
BEAM TYPE - BTE BEAMS, DEPTH = 5'-3.
TL-4 BRIDGE RAILING PROPOSED.
2 - SPAN GRADING SHOWN.

SITUATION PLAN

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

LOCATION

EXISTING ADAMS AVE. OVER US30
T-82N R-4W
SECTION 18
PIONEER TOWNSHIP
CEDAR COUNTY
BRIDGE MAINT. NO.
FHWA NO.
LATITUDE 41.9142442 °
LONGITUDE -91.3616300°

PRELIMINARY

DESIGN FOR 33° SKEW (R.A.)

302'-0 X 36'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

156'-0 S. SPAN — BTE BEAMS — 146'-0 N. SPAN

SITUATION PLAN

STATION 19885+76.18 — JULY 2014

CEDAR COUNTY

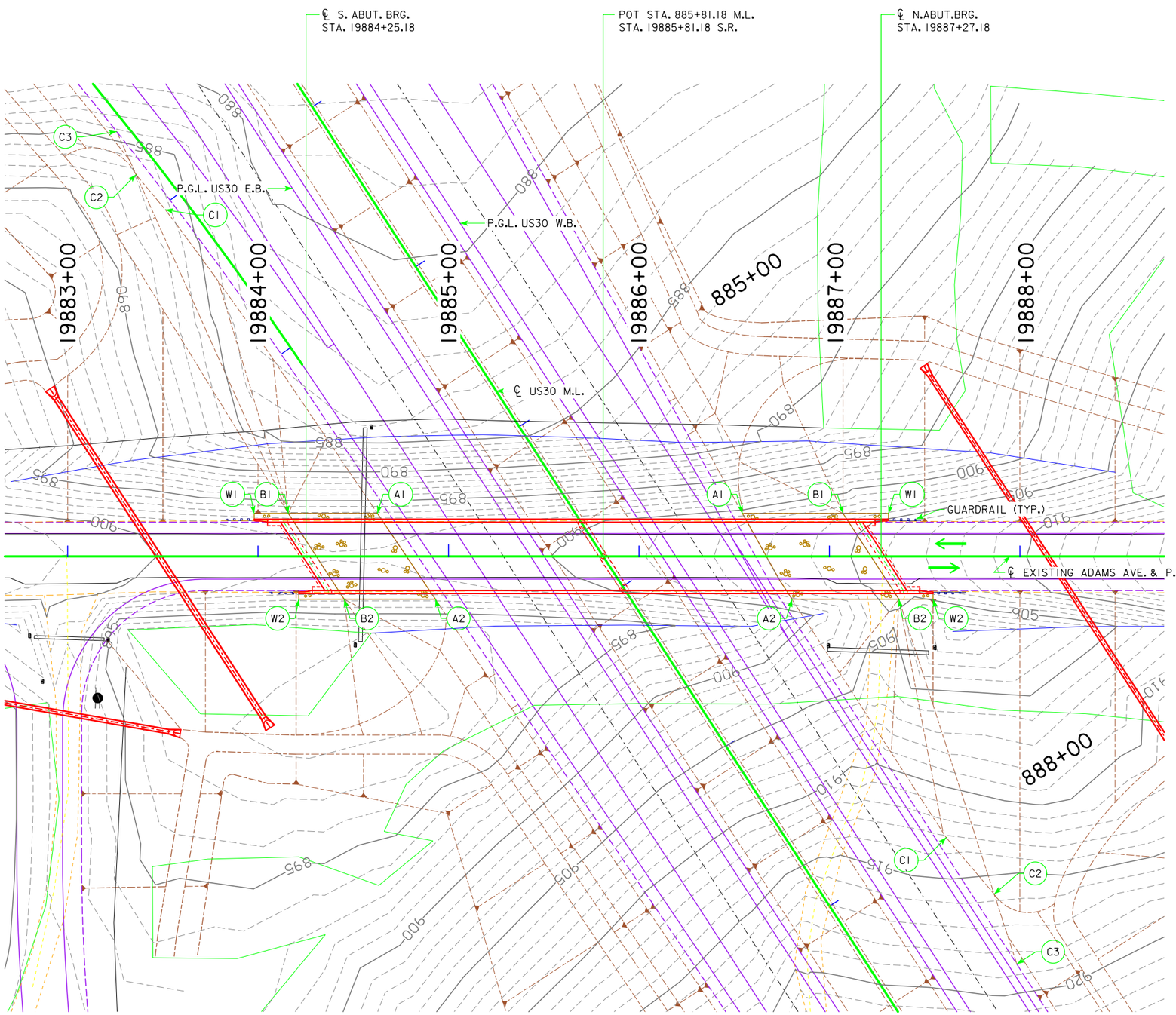
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. ?

DESIGN TEAM SHUCK-BRITSON 400 EAST COURT AVE. SUITE 140 DES MOINES, IOWA 50309 515-243-4477 — S.B.I. NO. 112.0610.01 — CEDAR COUNTY — PROJECT NUMBER NHSX-30-7(176)--3H-57 — SHEET NUMBER V.117

7/25/2014 10:23:16 AM V8i_IDOTBridge N:\2012_Projects\112.0610.01 Mt Vernon Bypass\Cadd\57030076.str TSL_57_DDDD_v117 11x17_pdf.pltcfg

BENCH MARK NO. 722 - STA. 871+75.17, 53.377 RT, CHISELED CROSS NE CORNER OF CONC. PAD FOR SOLAR PANEL, ELEV. 933.921, N. 706099.862 E. 2223101.874.



BERM SLOPE LOCATION TABLE

POINTS	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
AI	19884+62.62	-22.58	889.13	19886+54.29	-22.58	891.04
A2	19884+93.15	22.58	890.00	19886+80.36	22.58	891.87
BI	19884+15.87	-22.58	903.76	19887+07.14	-22.58	907.51
B2	19884+45.21	22.58	903.76	19887+36.48	22.58	907.51
WI	19883+97.99	-22.58	911.04	19887+30.99	-22.58	915.20
W2	19884+21.36	22.58	911.51	19887+54.36	22.58	915.32

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

RECOVERABLE BERM LOCATION TABLE

	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV	STATION	OFFSET	ELEV
C1	883+03.52	94.06	885.06	888+03.04	-71.00	894.22
C2	882+79.64	96.98	886.58	888+41.68	-76.00	897.89
C3	882+55.11	93.22	884.40	888+79.00	-66.00	895.61

REFER TO EW-203 FOR DETAILS.

NOTE:
FOR MACADAM STONE SLOPE PROTECTION SECTIONS AND ESTIMATED QUANTITIES SEE STANDARD SHEET 1006C.

SITE PLAN

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

0 ENGLISH 60
SCALE IN FEET

PRELIMINARY

DESIGN FOR 33° SKEW (R.A.)

302'-0 X 36'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

156'-0 S. SPAN — BTE BEAMS — 146'-0 N. SPAN

SITE PLAN

STATION 19885+76.18 — JULY 2014

CEDAR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 30839 DESIGN NO. ?

DESIGN TEAM SHUCK-BRITSON 400 EAST COURT AVE. SUITE 140 DES MOINES, IOWA 50309 515-243-4477 — S.B.I. NO. 112.0610.01 — CEDAR COUNTY — PROJECT NUMBER NHSX-30-7(176)--3H-57 — SHEET NUMBER V.118

7/25/2014 10:23:18 AM V8i_IDOTBridge N:\2012_Projects\112.0610.01 Mt Vernon Bypass\Cadd\57030076.str TSL_57_DDDD_v118 11x17_pdf.pltcfg

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 ROW — Existing Right-of-Way Limit

Proposed ROW — Proposed Right-of-Way Limit

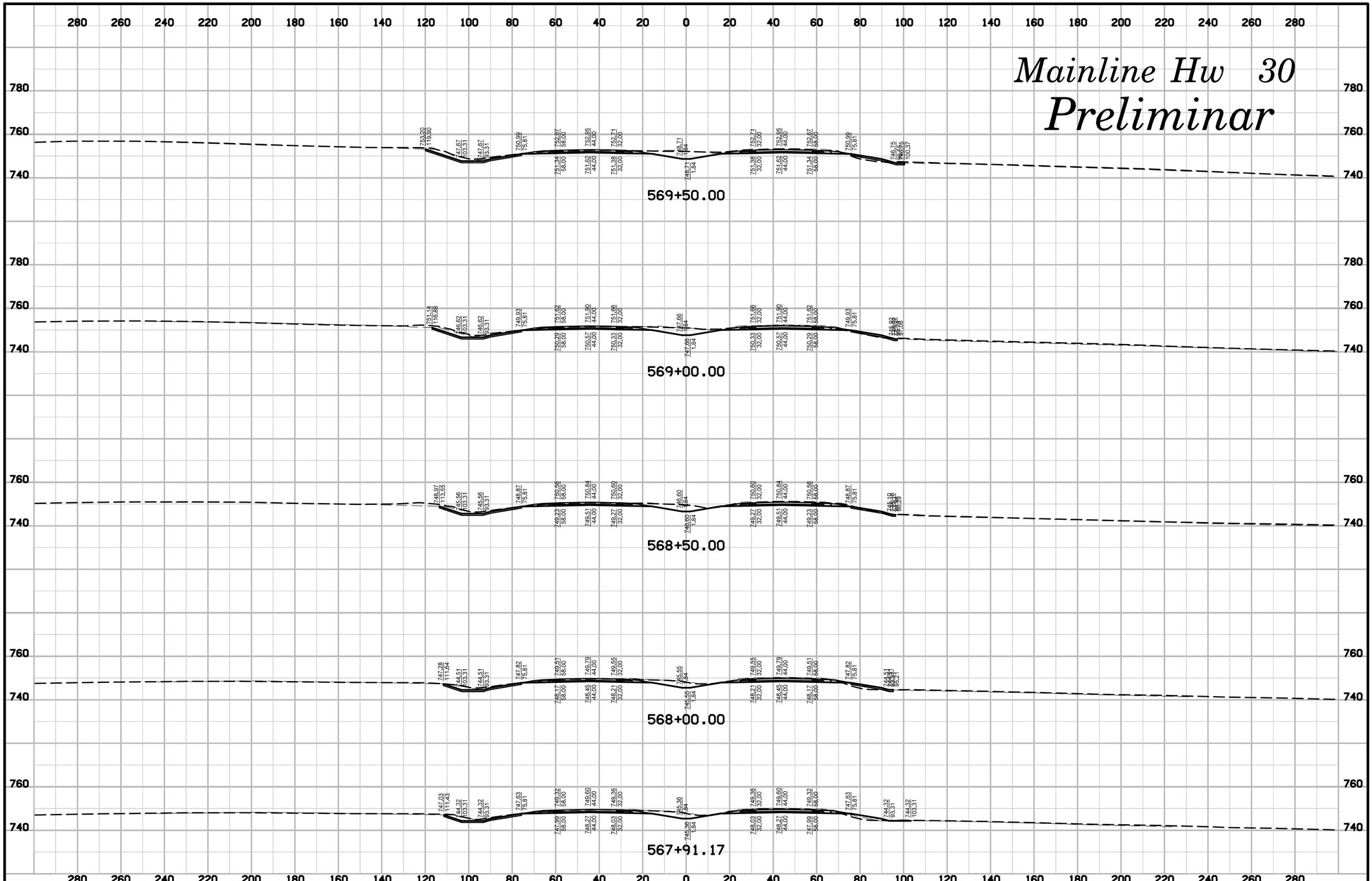
Temporary ROW — Temporary Right-of-Way Limit

CROSS SECTION LEGEND AND SYMBOL INFORMATION SHEET

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

Mainline Hw 30

Preliminar

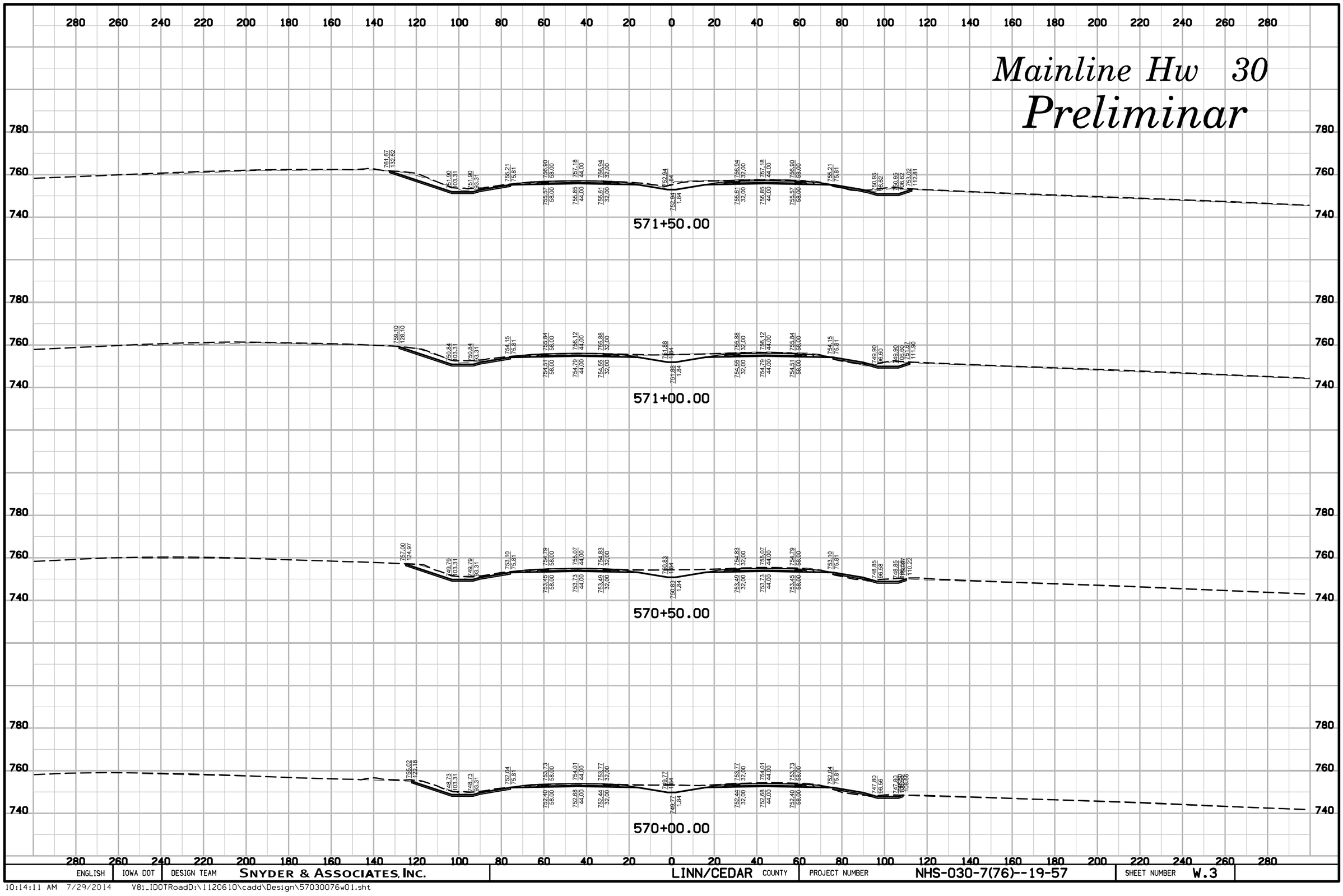


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.2

10:14:09 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

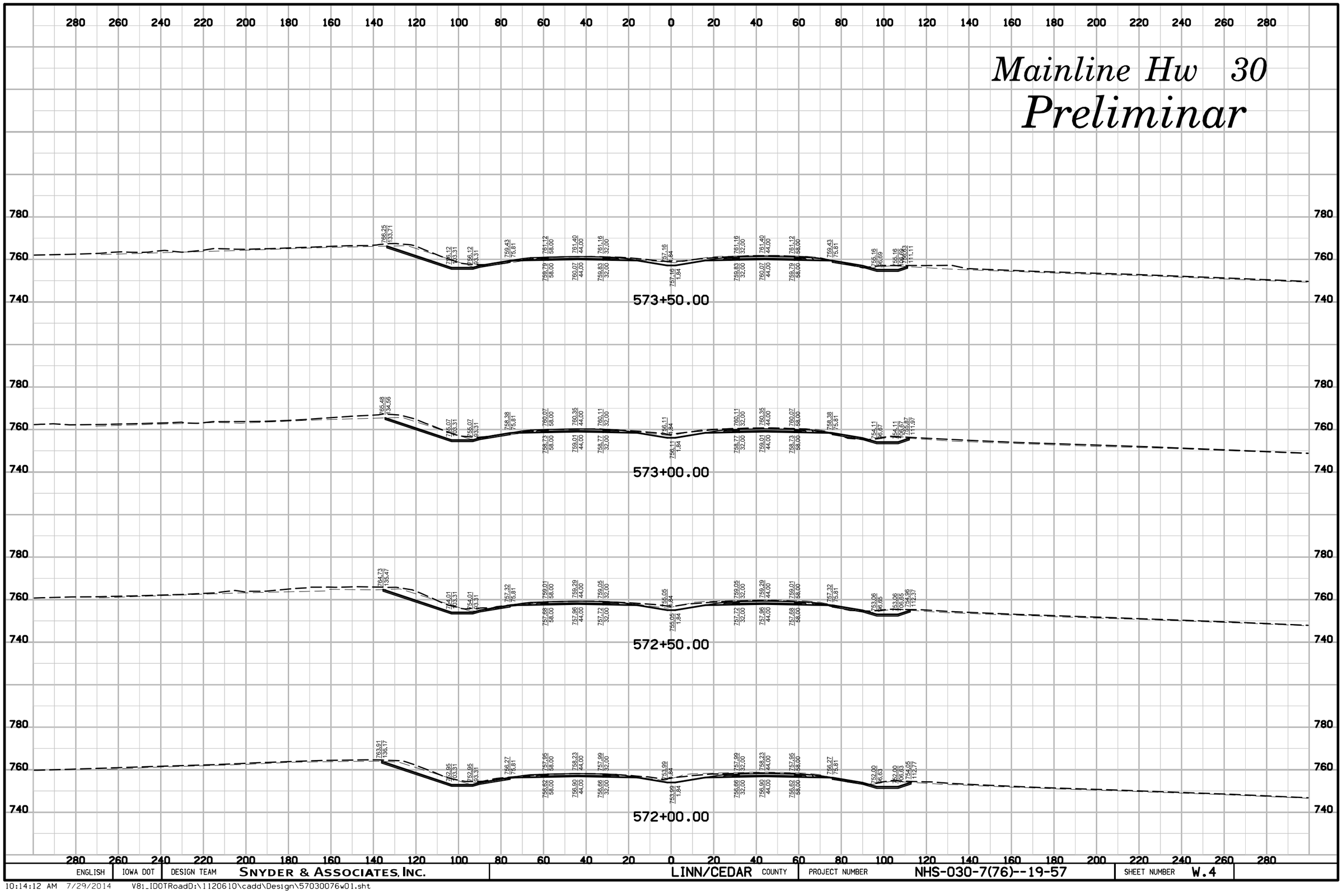


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.3

10:14:11 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

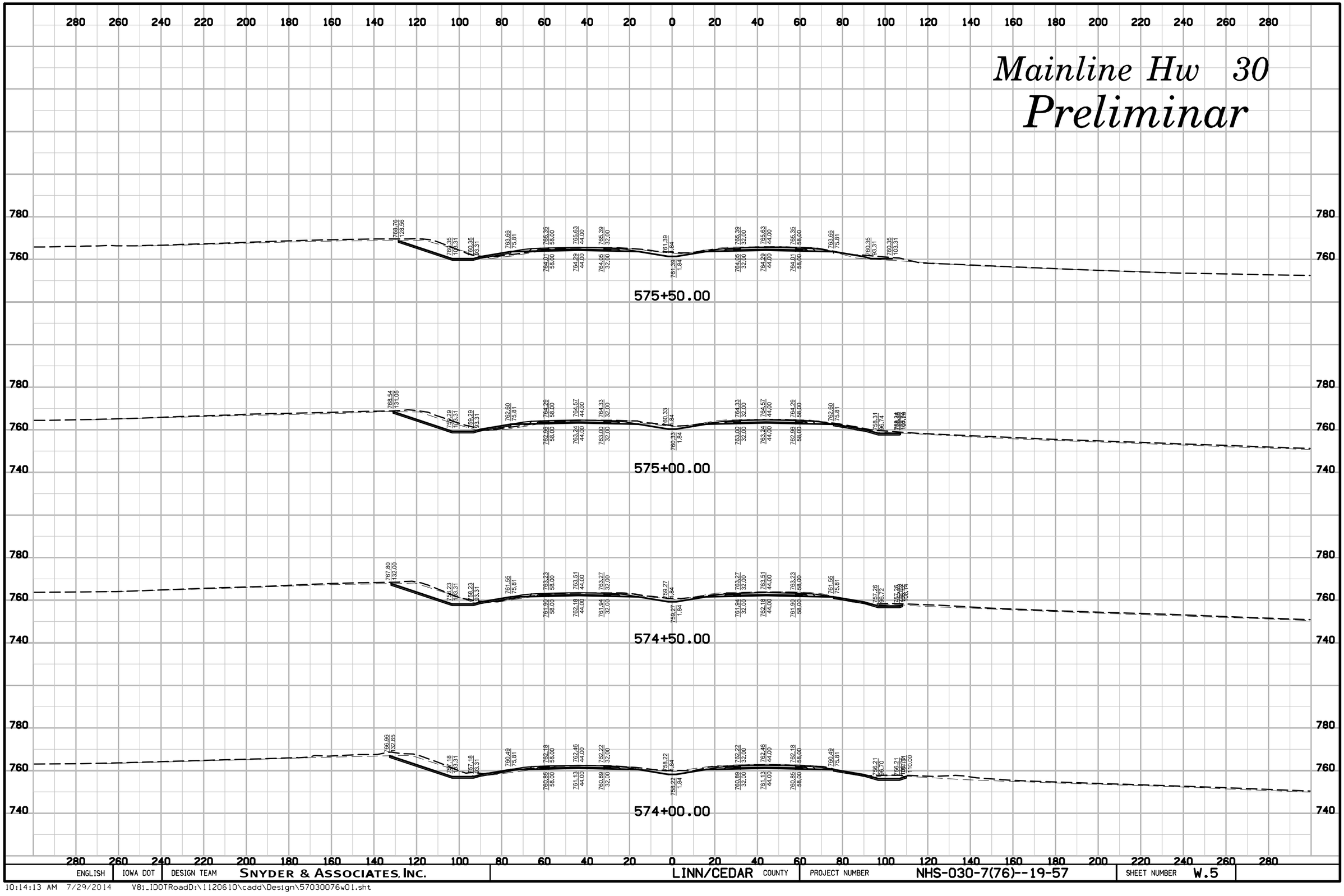


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.4

10:14:12 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

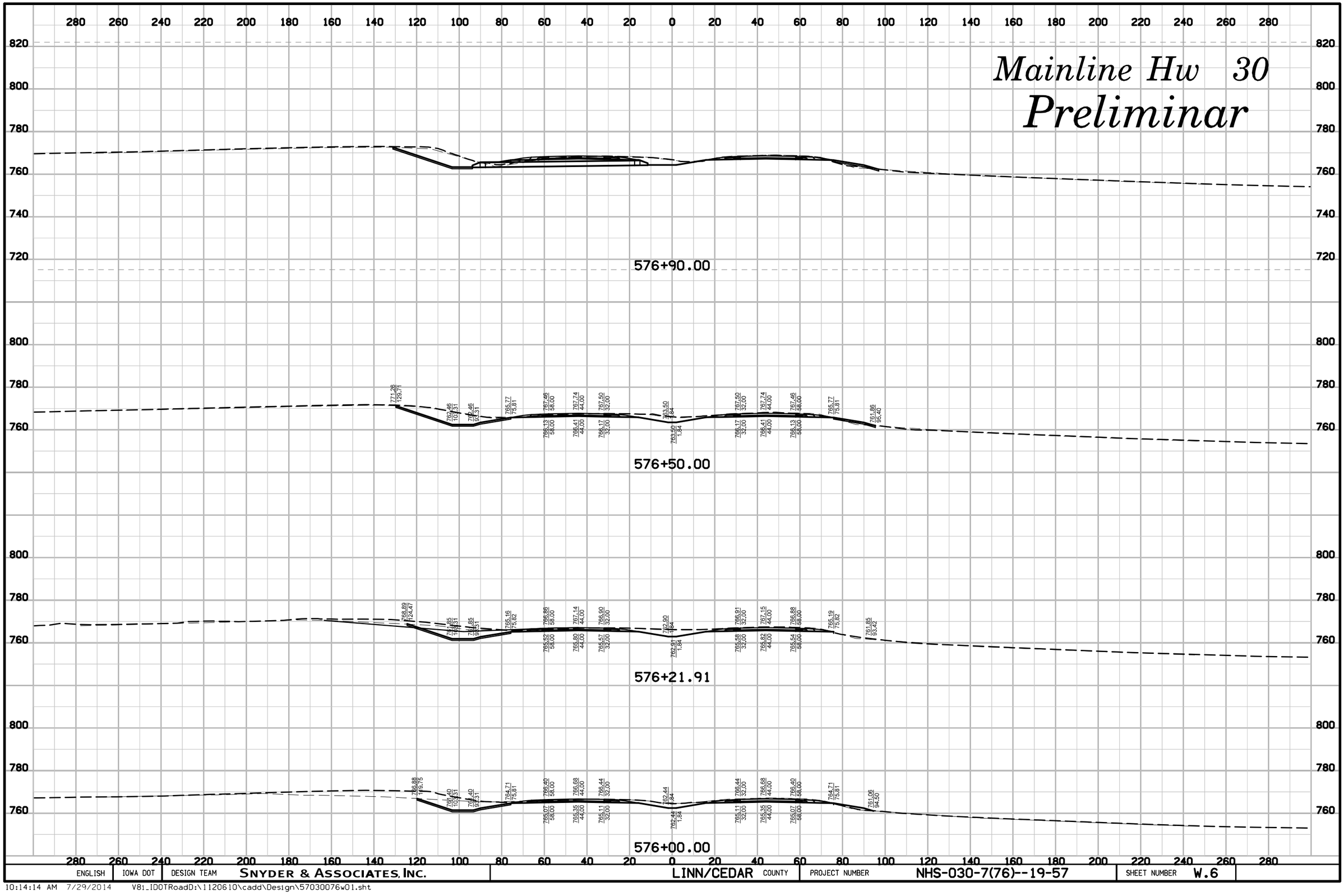


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.5

10:14:13 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

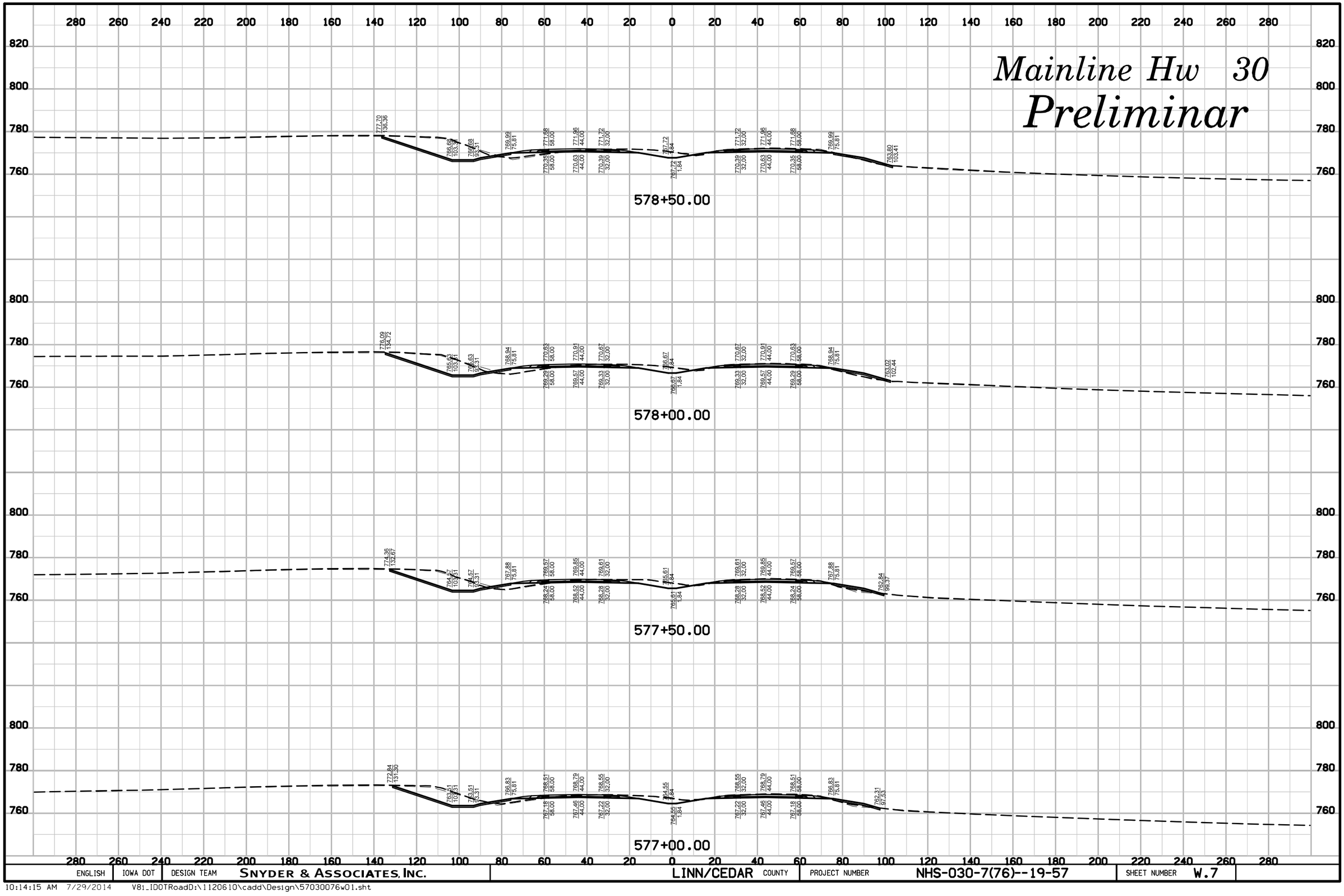


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.6

10:14:14 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

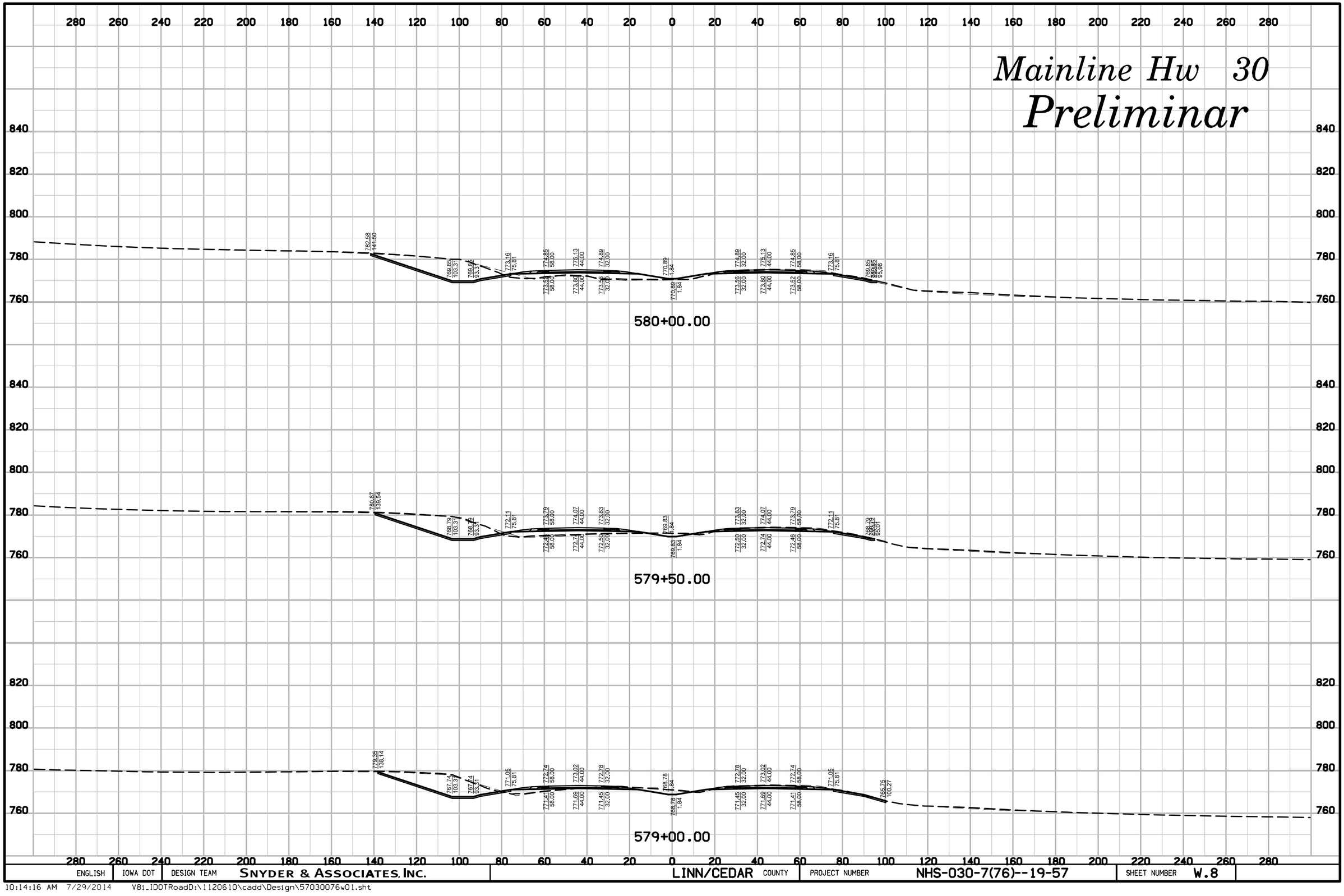


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.7

10:14:15 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

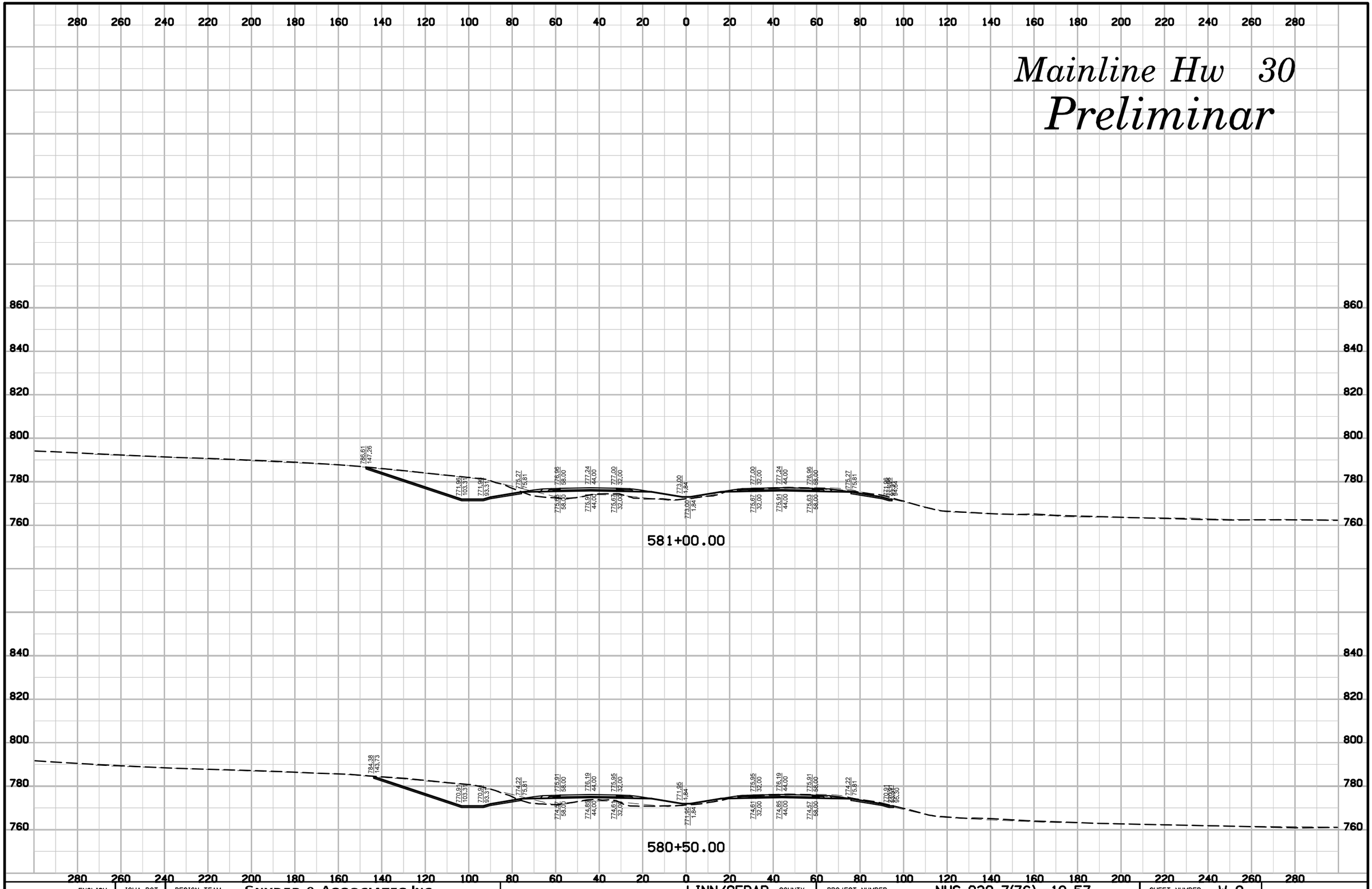


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.8

10:14:16 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

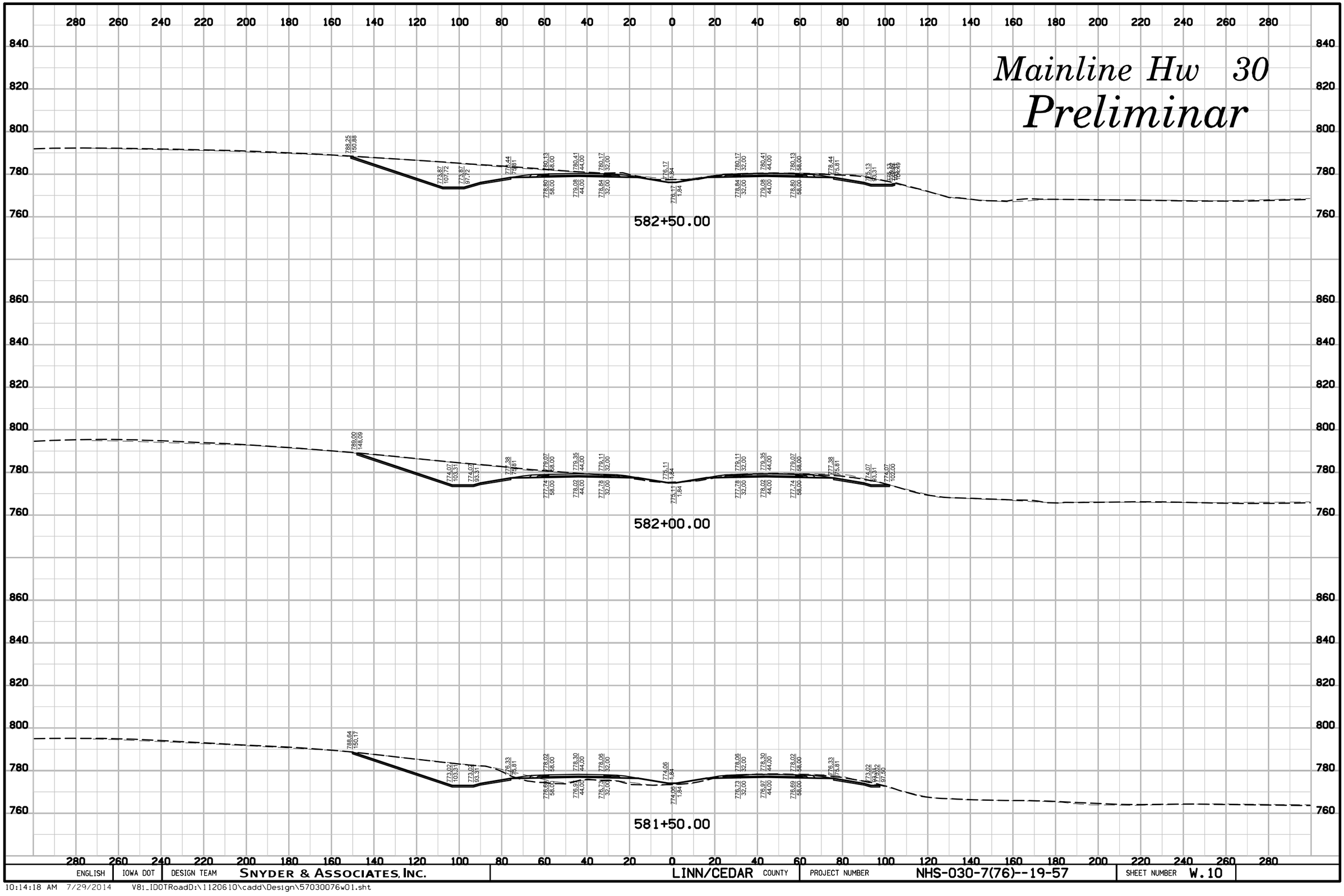


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.9

10:14:17 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.10

10:14:18 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

584+50.00

584+00.00

583+50.00

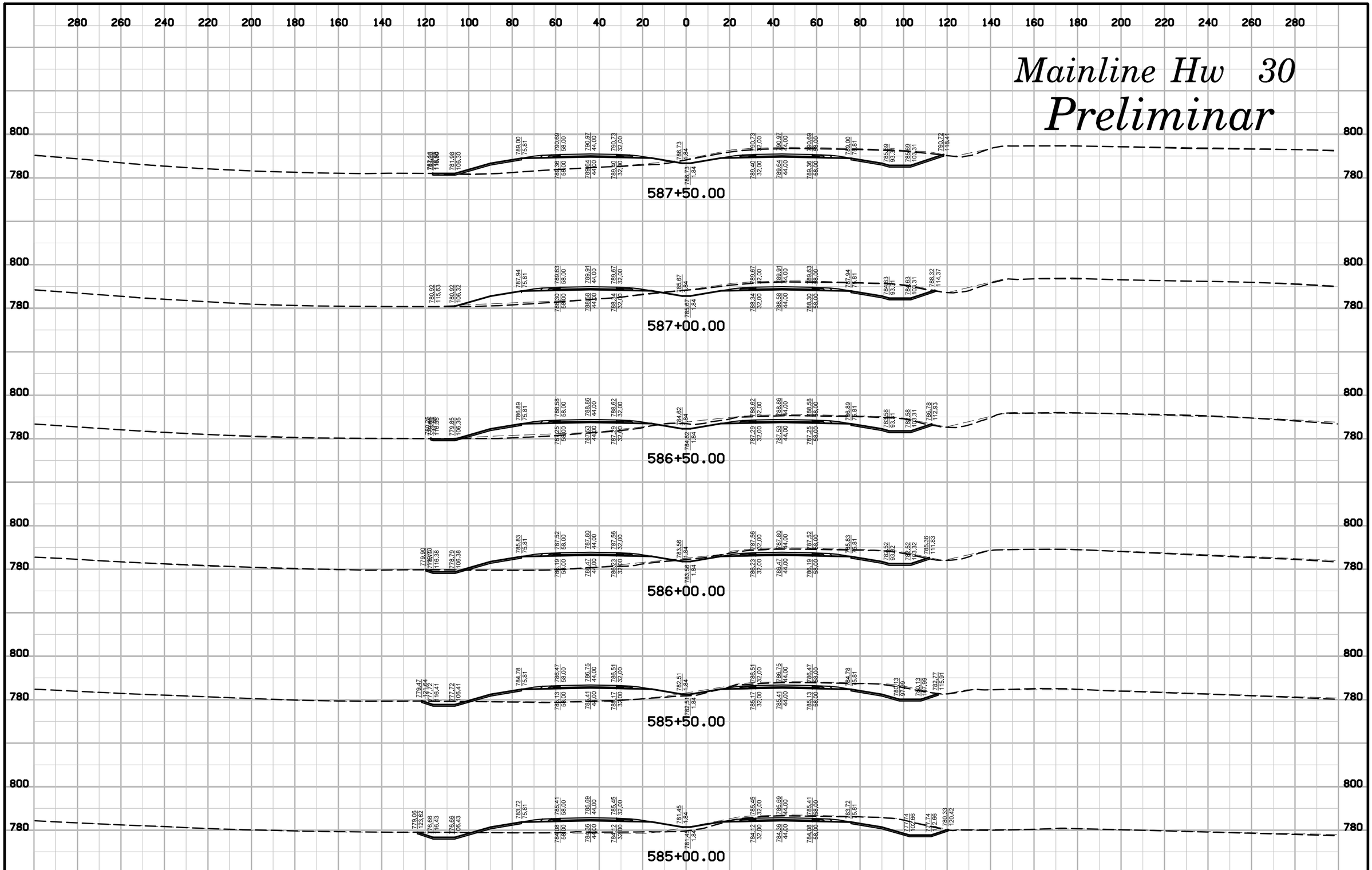
583+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.11

10:14:20 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.12

10:14:21 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

589+00.00

588+89.00

588+50.00

588+29.00

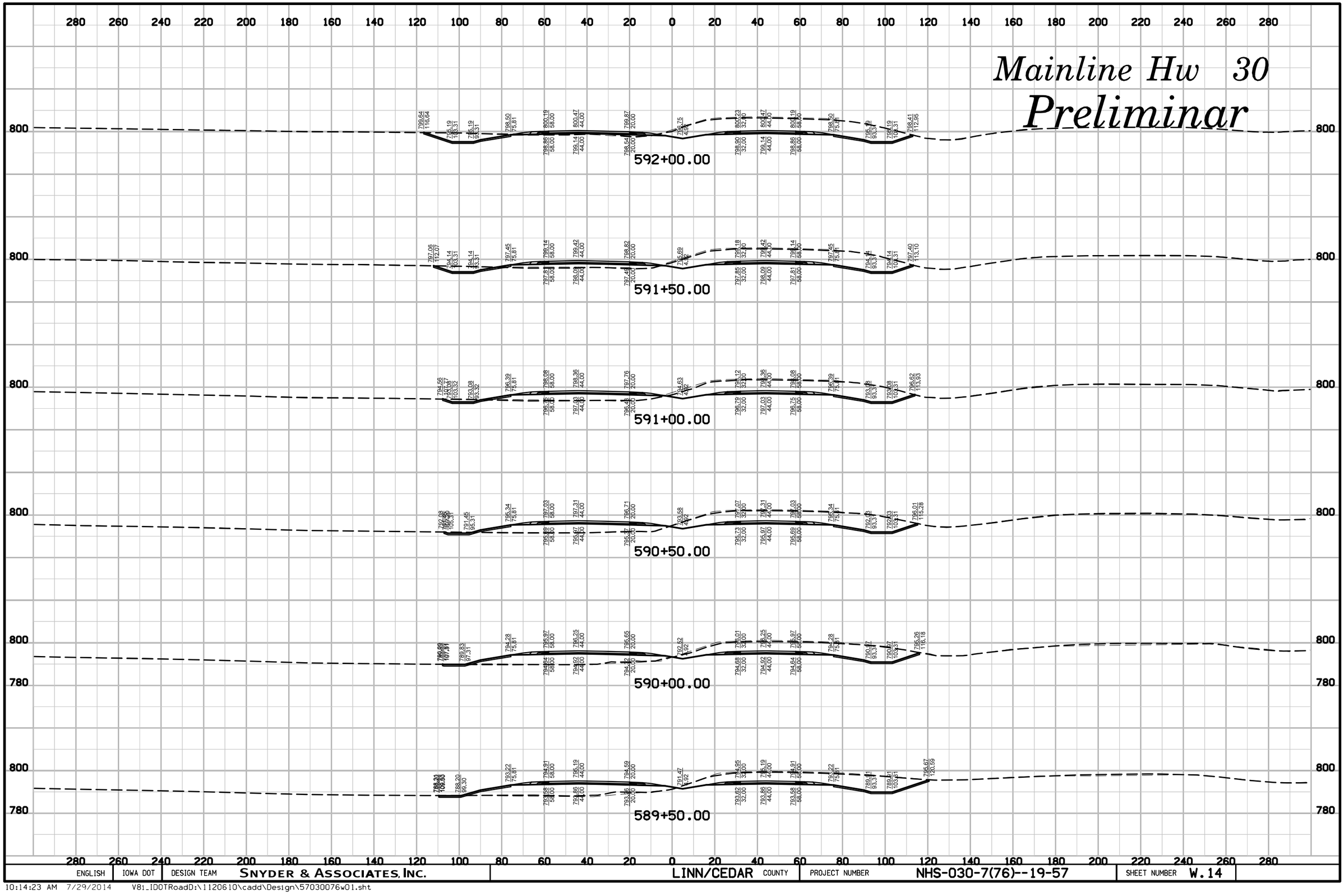
588+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.13

10:14:22 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

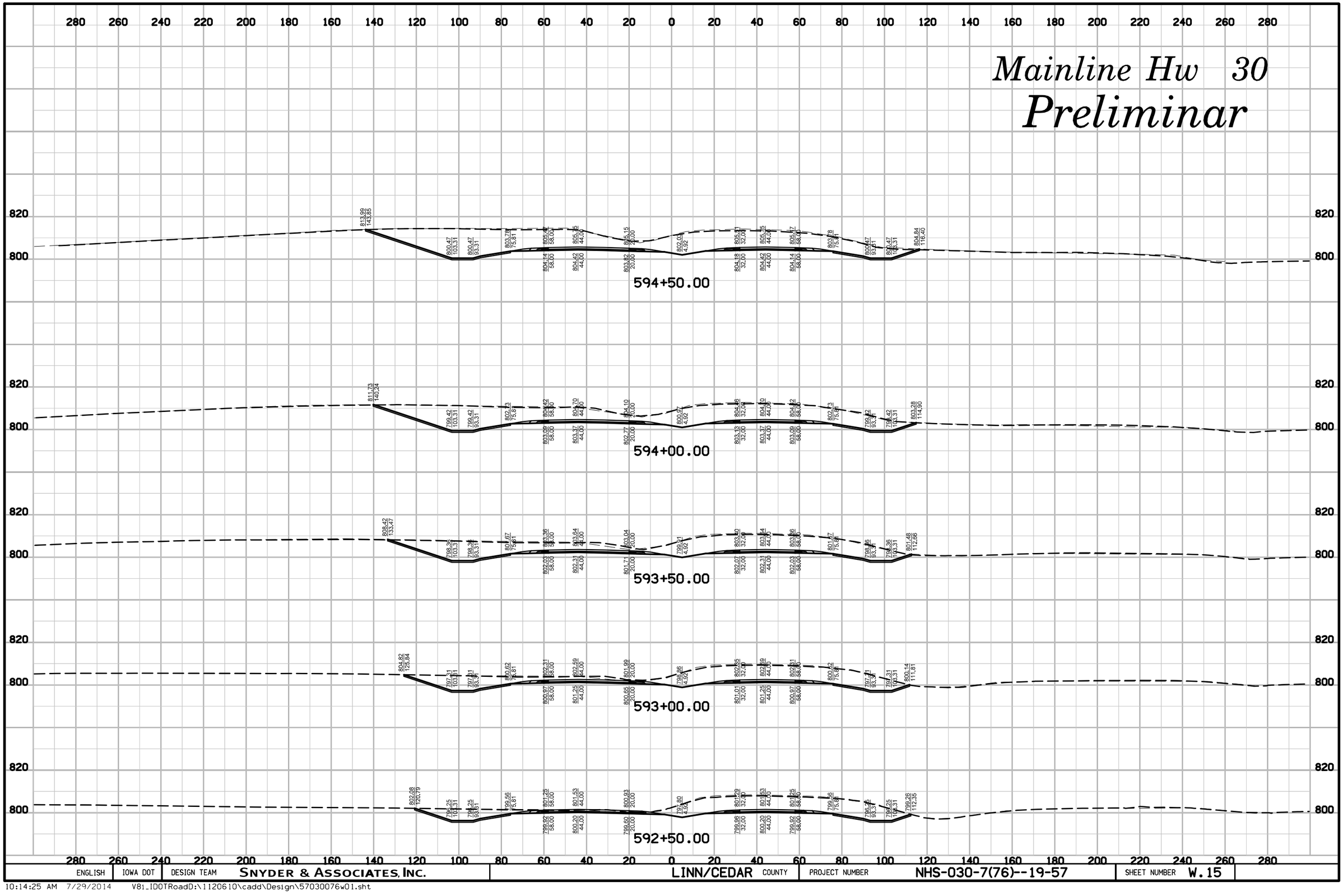


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.14

10:14:23 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.15

10:14:25 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

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

820
800

821.23 147.53
806.49 103.31 806.49 93.31 809.81 75.81 811.49 58.00 811.77 44.00 811.52 32.04 807.53 1.84 811.52 32.00 811.77 44.00 811.49 58.00 809.81 75.81 806.49 93.31 806.49 103.31
810.16 58.00 810.44 44.00 810.20 32.00 810.20 32.00 810.44 44.00 810.16 58.00
820.14 144.24

597+50.00

819.28 144.35
805.61 103.31 805.61 93.31 808.92 75.81 810.61 58.00 810.88 44.00 810.65 32.00 806.65 1.84 810.65 32.00 810.88 44.00 810.61 58.00 808.92 75.81 805.61 93.31 805.61 103.31
809.27 58.00 809.55 44.00 809.31 32.00 809.31 32.00 809.55 44.00 809.27 58.00
818.01 140.52

597+00.00

817.68 142.40
804.65 103.31 804.65 93.31 807.96 75.81 809.65 58.00 809.93 44.00 809.62 29.70 805.69 0.04 809.68 32.00 809.98 44.00 809.95 58.00 807.96 75.81 804.65 93.31 804.65 103.31
808.32 58.00 808.60 44.00 808.29 29.70 808.29 32.00 808.60 44.00 808.32 58.00
816.09 137.62

596+50.00

816.08 140.64
803.64 103.31 803.64 93.31 806.95 75.81 808.64 58.00 808.92 44.00 809.51 26.37 804.76 2.31 808.68 32.00 808.92 44.00 808.64 58.00 806.95 75.81 803.64 93.31 803.64 103.31
807.31 58.00 807.59 44.00 807.18 26.37 807.35 32.00 807.59 44.00 807.31 58.00
813.12 131.77

596+00.00

815.22 141.21
802.59 103.31 802.59 93.31 805.90 75.81 807.59 58.00 807.87 44.00 807.35 23.03 803.93 3.68 807.68 32.00 807.87 44.00 807.59 58.00 805.90 75.81 802.59 93.31 802.59 103.31
806.25 58.00 806.53 44.00 806.02 23.03 806.29 32.00 806.53 44.00 806.25 58.00
808.67 121.26

595+50.00

814.72 142.96
801.53 103.31 801.53 93.31 804.84 75.81 806.53 58.00 806.81 44.00 806.21 24.00 803.08 4.92 806.57 32.00 806.81 44.00 806.53 58.00 804.84 75.81 801.53 93.31 801.53 103.31
805.20 58.00 805.48 44.00 804.88 20.00 805.24 32.00 805.48 44.00 805.20 58.00
806.30 117.61

595+00.00

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.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.16

10:14:26 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

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

820

823.66 145.92 | 809.43 107.21 | 809.43 97.21 | 813.85 75.81 | 815.54 58.00 | 815.87 44.00 | 815.58 32.00 | 811.58 1.84 | 815.58 32.00 | 815.82 44.00 | 815.54 58.00 | 813.85 75.81 | 810.54 93.31 | 810.54 103.31 | 825.28 147.52

814.21 58.00 | 814.49 44.00 | 814.25 32.00 | 814.25 32.00 | 814.49 44.00 | 814.21 58.00

600+50.00

820

824.16 146.61 | 809.58 104.86 | 809.58 94.86 | 813.33 75.81 | 815.02 58.00 | 815.39 44.00 | 815.16 32.00 | 811.06 1.84 | 815.06 32.00 | 815.30 44.00 | 815.01 58.00 | 813.33 75.81 | 810.02 93.31 | 810.02 103.31 | 824.40 146.47

813.69 58.00 | 813.97 44.00 | 813.73 32.00 | 813.73 32.00 | 813.97 44.00 | 813.69 58.00

600+00.00

820

824.15 147.44 | 809.44 103.31 | 809.44 93.31 | 812.75 75.81 | 814.44 58.00 | 814.72 44.00 | 814.48 32.00 | 810.48 1.84 | 814.48 32.00 | 814.72 44.00 | 814.44 58.00 | 812.75 75.81 | 809.44 93.31 | 809.44 103.31 | 823.94 146.81

813.11 58.00 | 813.39 44.00 | 813.15 32.00 | 813.15 32.00 | 813.39 44.00 | 813.11 58.00

599+50.00

820

824.07 148.14 | 808.80 103.31 | 808.80 93.31 | 812.11 75.81 | 813.80 58.00 | 814.08 44.00 | 813.84 32.00 | 809.84 1.84 | 813.84 32.00 | 814.08 44.00 | 813.80 58.00 | 812.11 75.81 | 808.80 93.31 | 808.80 103.31 | 823.88 146.56

812.46 58.00 | 812.74 44.00 | 812.50 32.00 | 812.50 32.00 | 812.74 44.00 | 812.46 58.00

599+00.00

820

823.63 149.92 | 808.09 103.31 | 808.09 93.31 | 811.40 75.81 | 813.09 58.00 | 813.37 44.00 | 813.13 32.00 | 809.13 1.84 | 813.13 32.00 | 813.37 44.00 | 813.09 58.00 | 811.40 75.81 | 808.09 93.31 | 808.09 103.31 | 823.94 150.87

811.76 58.00 | 812.04 44.00 | 811.80 32.00 | 811.80 32.00 | 812.04 44.00 | 811.76 58.00

598+50.00

820

822.95 150.19 | 807.32 103.31 | 807.32 93.31 | 810.63 75.81 | 812.32 58.00 | 812.60 44.00 | 812.36 32.00 | 808.36 1.84 | 812.36 32.00 | 812.60 44.00 | 812.32 58.00 | 810.63 75.81 | 807.32 93.31 | 807.32 103.31 | 822.51 148.88

810.99 58.00 | 811.27 44.00 | 811.03 32.00 | 811.03 32.00 | 811.27 44.00 | 810.99 58.00

598+00.00

800

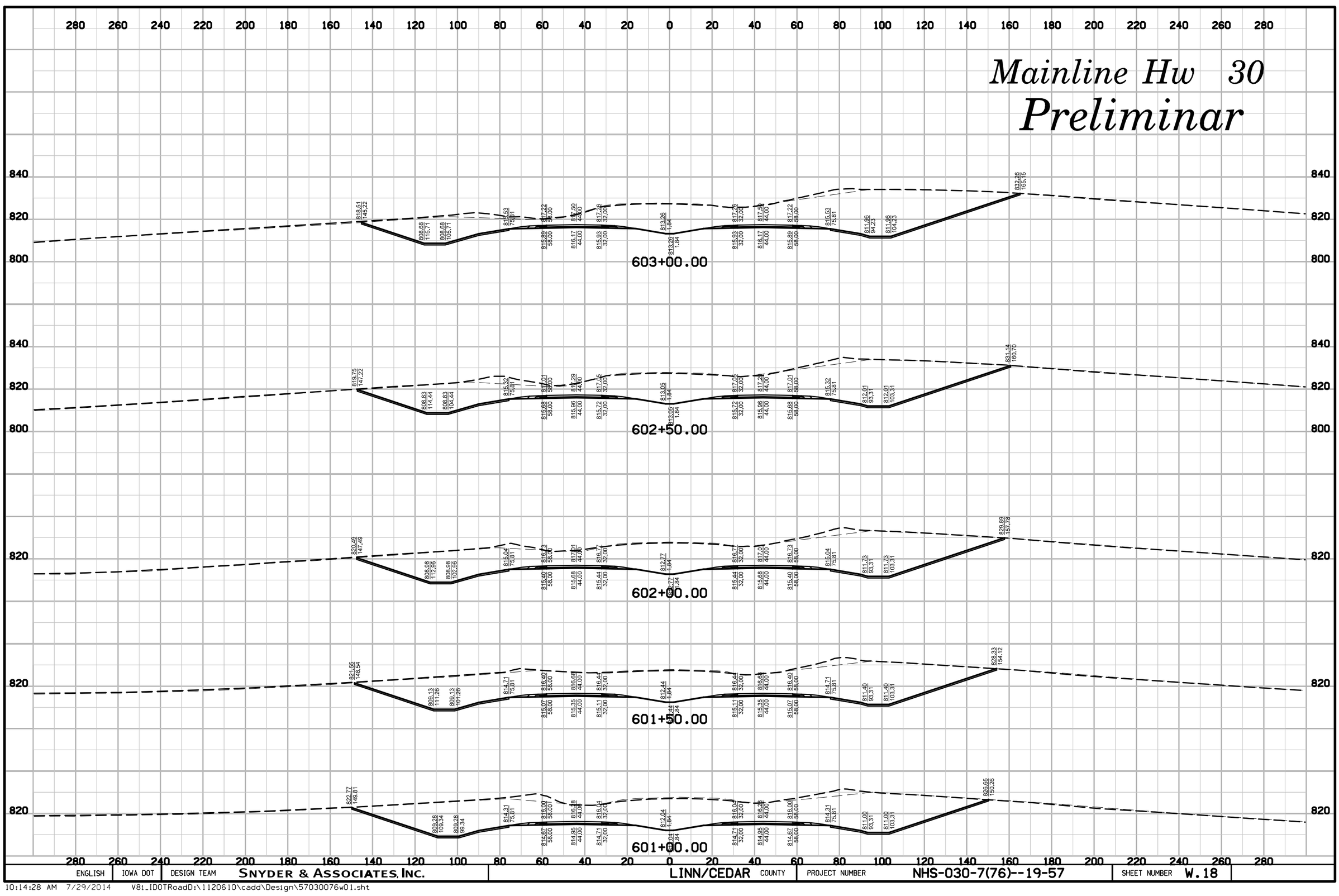
280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.17

10:14:27 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

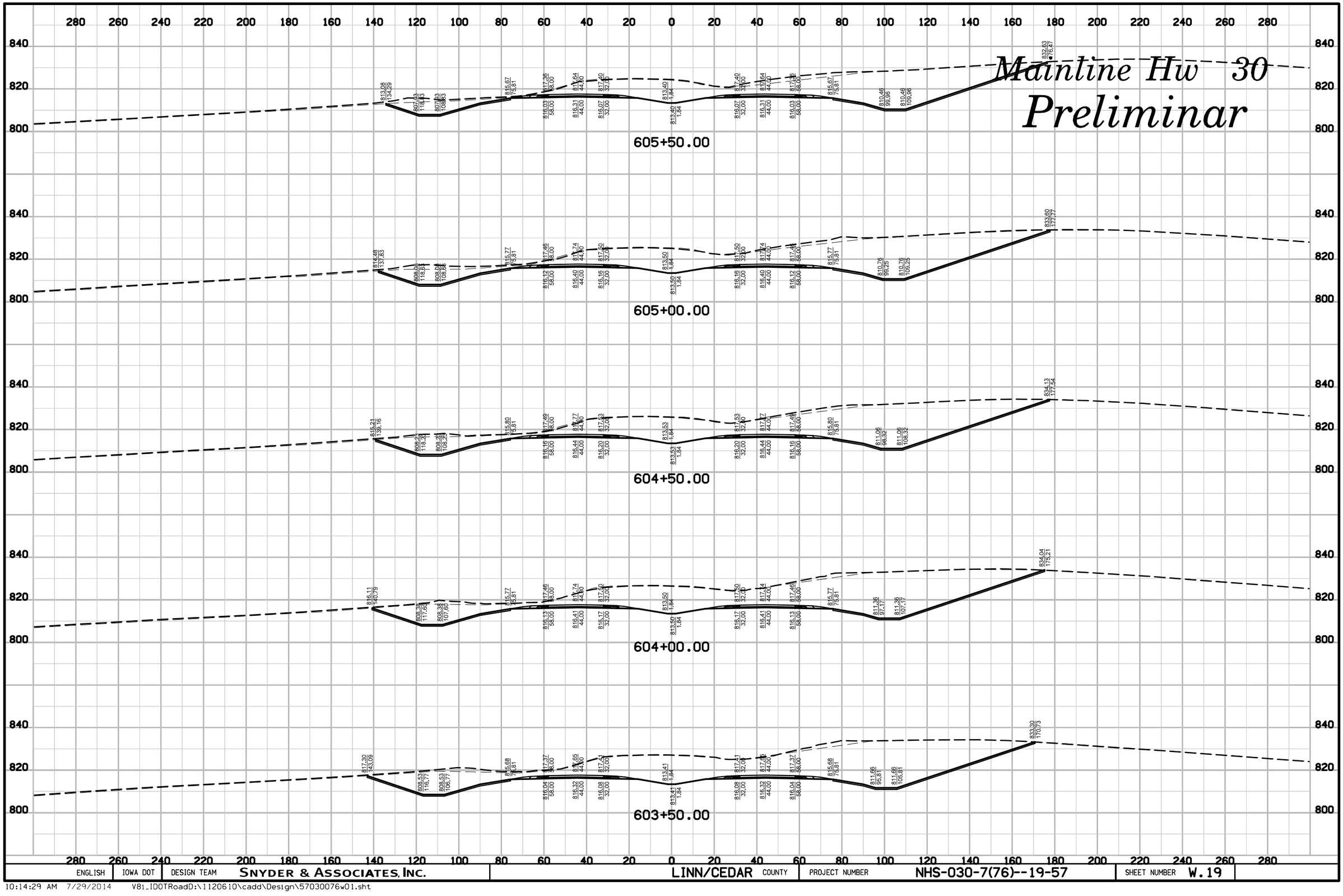
Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.18

10:14:28 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

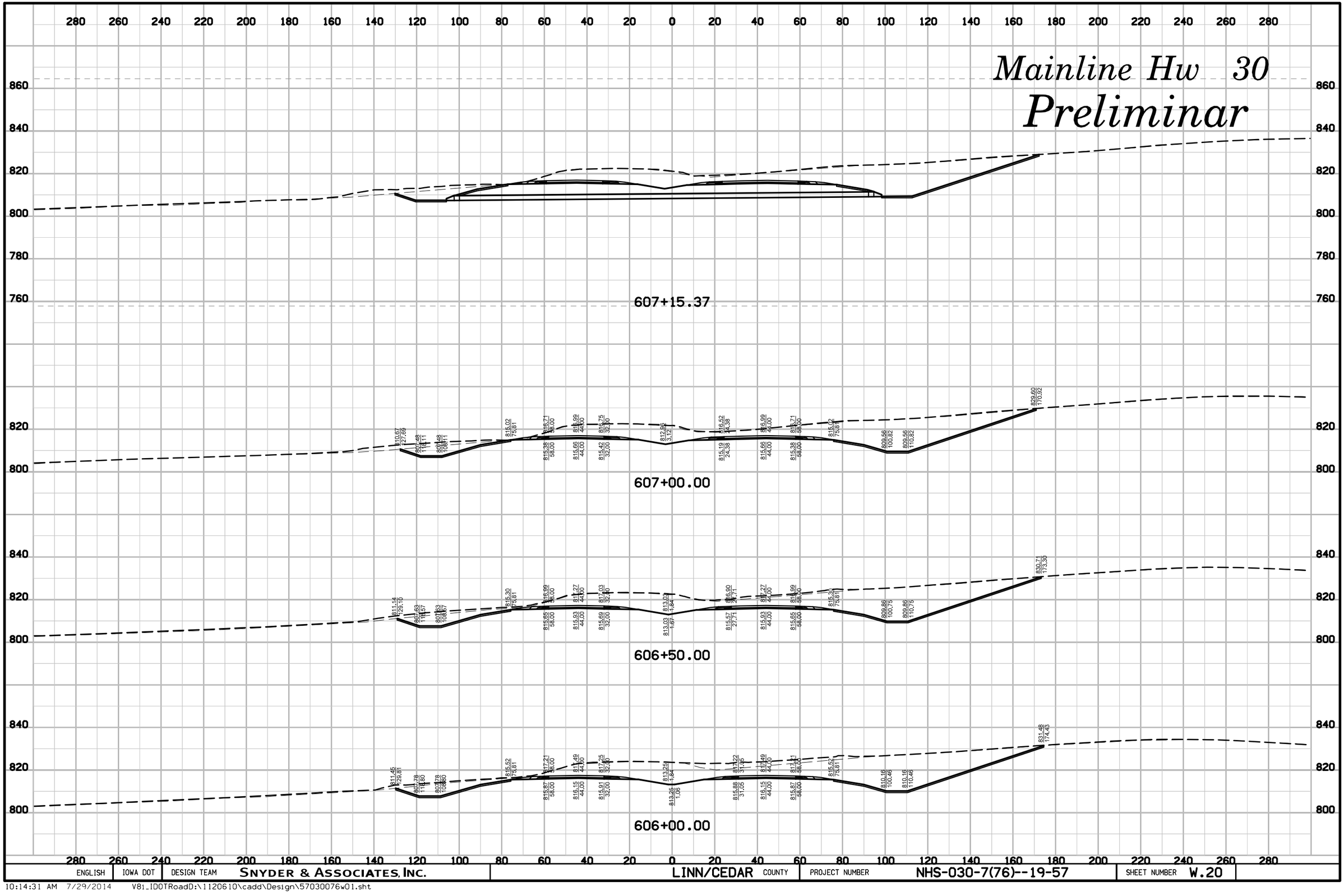


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.19

10:14:29 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

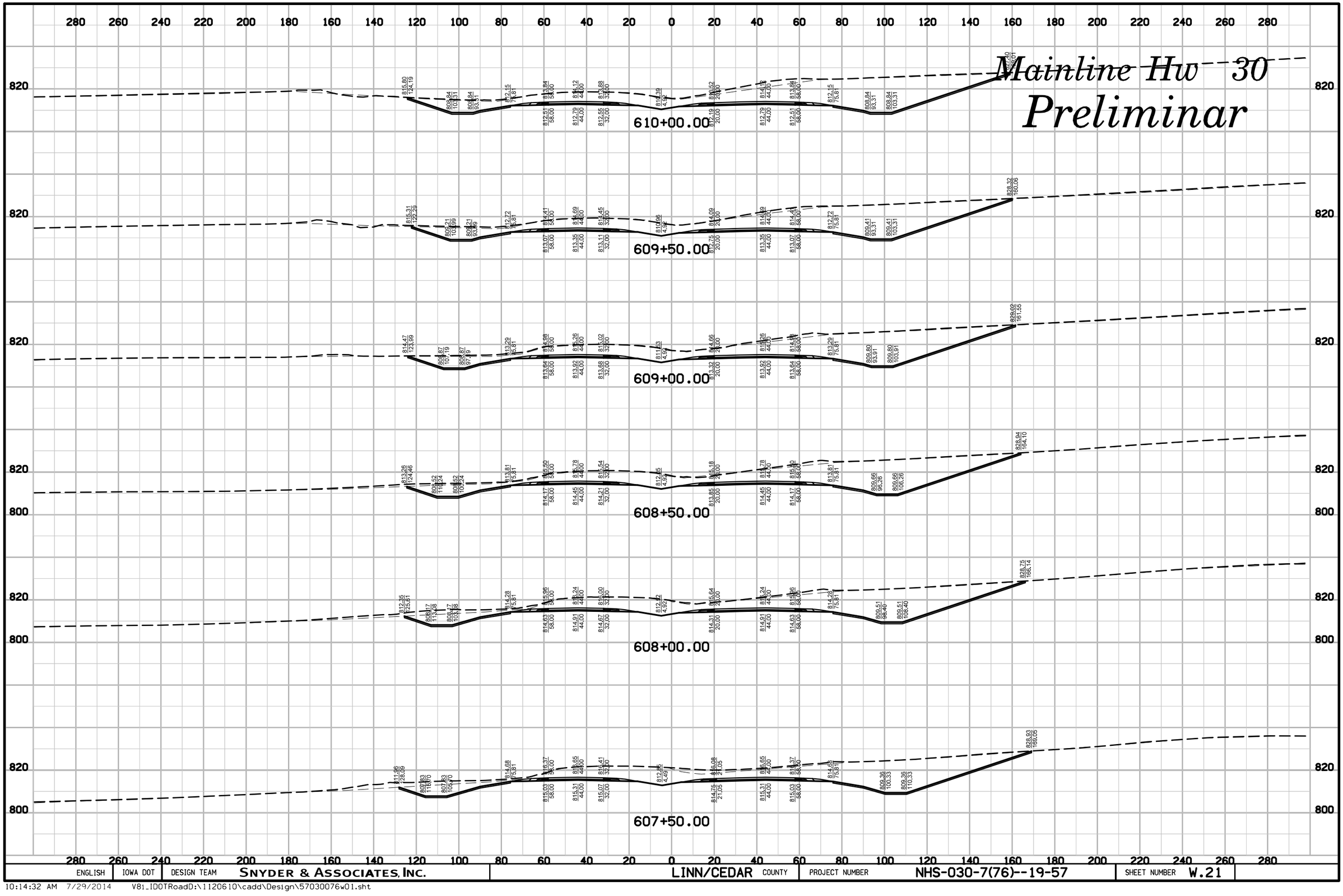
Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.20

10:14:31 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.21

10:14:32 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

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

820
800

613+00.00

810.02 117.11 | 806.43 104.31 | 806.43 93.31 | 808.74 75.81 | 810.43 58.00 | 810.71 44.00 | 810.47 32.00 | 806.98 4.92 | 810.11 20.00 | 810.71 44.00 | 810.43 58.00 | 808.74 75.81 | 806.43 93.31 | 806.43 103.31 | 812.47 124.43 | 820.96 208.29

809.09 58.00 | 809.37 44.00 | 809.13 32.00 | 809.37 44.00 | 809.09 58.00

612+50.00

811.05 118.47 | 809.00 104.31 | 806.00 93.31 | 809.31 75.81 | 811.00 58.00 | 811.28 44.00 | 811.04 32.00 | 807.55 4.92 | 810.68 20.00 | 811.28 44.00 | 811.00 58.00 | 809.31 75.81 | 806.00 93.31 | 806.00 103.31 | 815.47 131.73 | 820.06 208.29

809.66 58.00 | 809.94 44.00 | 809.70 32.00 | 809.34 4.92 | 809.94 44.00 | 809.66 58.00

612+00.00

812.18 120.16 | 805.56 104.31 | 804.56 93.31 | 809.87 75.81 | 811.56 58.00 | 811.84 44.00 | 811.60 32.00 | 806.12 4.92 | 811.24 20.00 | 811.84 44.00 | 811.56 58.00 | 809.87 75.81 | 806.56 93.31 | 806.56 103.31 | 818.84 140.13 | 822.17 212.54

810.23 58.00 | 810.51 44.00 | 810.27 32.00 | 809.91 4.92 | 810.51 44.00 | 810.23 58.00

611+50.00

814.82 126.37 | 807.13 104.31 | 807.13 93.31 | 810.44 74.81 | 812.13 58.00 | 812.41 44.00 | 812.17 32.00 | 808.69 4.92 | 811.81 20.00 | 812.41 44.00 | 812.13 58.00 | 810.44 75.81 | 807.13 93.31 | 807.13 103.31 | 821.88 147.54 | 824.27 216.80

810.80 58.00 | 811.08 44.00 | 810.84 32.00 | 809.48 4.92 | 811.08 44.00 | 810.80 58.00

611+00.00

816.24 126.92 | 807.70 104.31 | 807.70 93.31 | 811.01 74.81 | 812.70 58.00 | 812.98 44.00 | 812.74 32.00 | 808.25 4.92 | 811.38 20.00 | 812.98 44.00 | 812.70 58.00 | 811.01 75.81 | 807.70 93.31 | 807.70 103.31 | 823.74 151.43 | 826.37 221.05

811.37 58.00 | 811.65 44.00 | 811.41 32.00 | 810.05 4.92 | 811.65 44.00 | 811.37 58.00

610+50.00

816.01 126.54 | 809.27 104.31 | 809.27 93.31 | 811.58 74.81 | 813.27 58.00 | 813.55 44.00 | 813.31 32.00 | 809.82 4.92 | 811.95 20.00 | 813.55 44.00 | 813.27 58.00 | 811.58 75.81 | 808.27 93.31 | 808.27 103.31 | 825.68 155.53 | 828.47 225.31

811.94 58.00 | 812.22 44.00 | 811.98 32.00 | 810.62 4.92 | 812.22 44.00 | 811.94 58.00

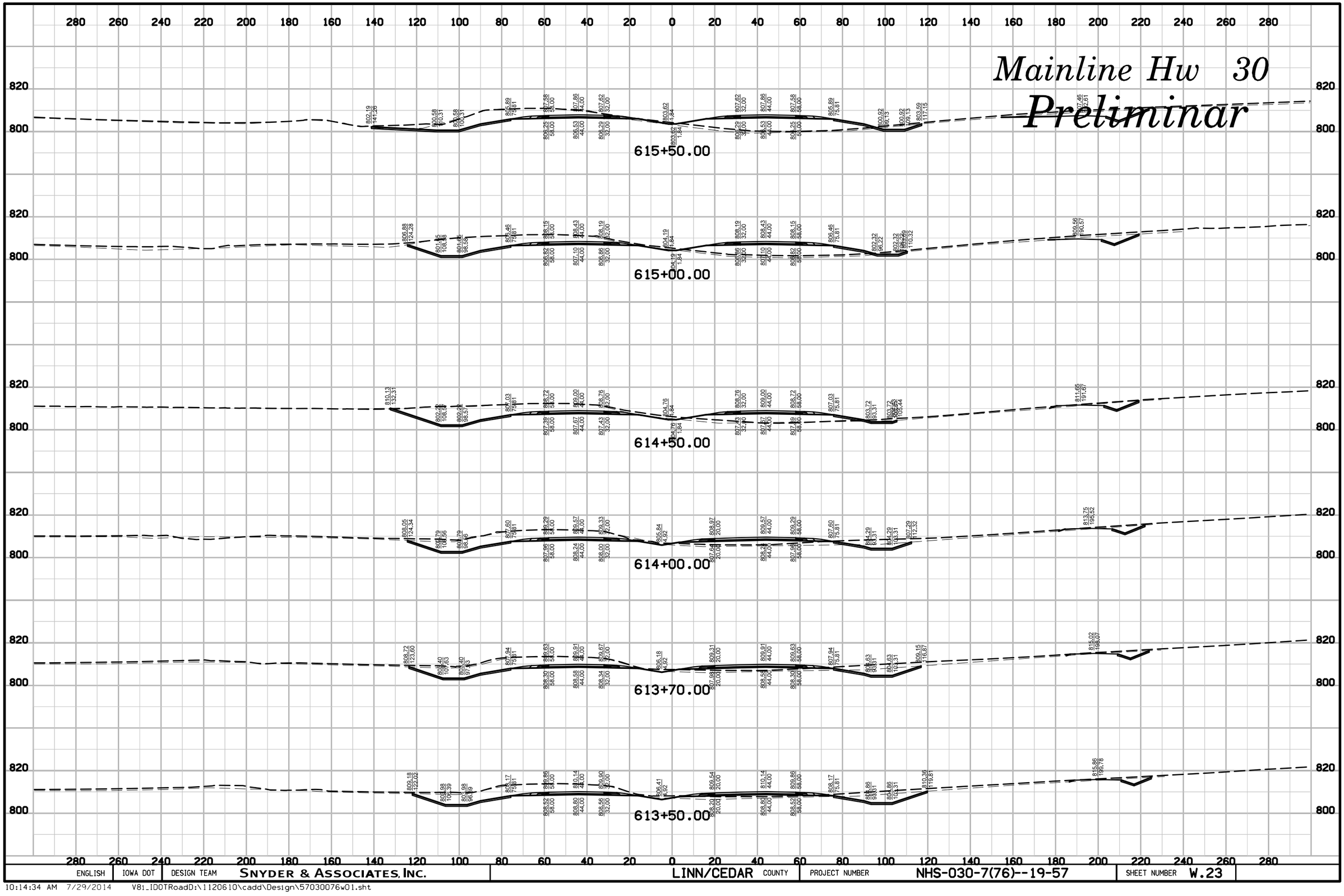
280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER W.22

10:14:33 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.23

10:14:34 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

618+00.00

617+50.00

617+00.00

616+50.00

616+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.24

10:14:35 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

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

840 820 800 780

803.26 247.57

791.44 122.89 | 792.89 119.45 | 793.44 111.34

801.91 75.81 | 803.60 58.00 | 803.88 44.00 | 803.64 32.00

802.27 58.00 | 802.55 44.00 | 802.91 32.00

799.64 1.84

803.64 32.00 | 803.88 44.00 | 803.60 58.00 | 801.91 75.81

802.31 32.00 | 802.55 44.00 | 802.27 58.00

786.54 135.54 | 786.54 145.54 | 789.56 154.61

792.73 225.81

619+00.00

803.30 269.01

793.83 122.56 | 793.83 119.45 | 793.39 112.44

802.48 75.81 | 804.17 58.00 | 804.45 44.00 | 804.21 32.00

802.84 58.00 | 803.12 44.00 | 802.88 32.00

800.21 1.84

804.21 32.00 | 804.45 44.00 | 804.17 58.00 | 802.48 75.81

802.88 32.00 | 803.12 44.00 | 802.84 58.00

789.25 28.05 | 789.25 135.06 | 792.08 146.54

794.83 221.71

618+50.00

795.52 168.04 | 794.57 148.46 | 794.08 148.41

803.23 94.97 | 804.75 75.71

803.42 75.71 | 803.57 57.44 | 803.20 41.77 | 804.09 57.44 | 804.54 41.77

800.26 2.41

800.22 2.41

803.93 41.77 | 802.60 41.77 | 804.08 57.44 | 802.73 57.44 | 803.65 75.71 | 802.31 75.71

801.79 98.97

783.35 187.94 | 784.22 201.09

618+47.48

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.25

10:14:37 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

620+00.00

619+50.00

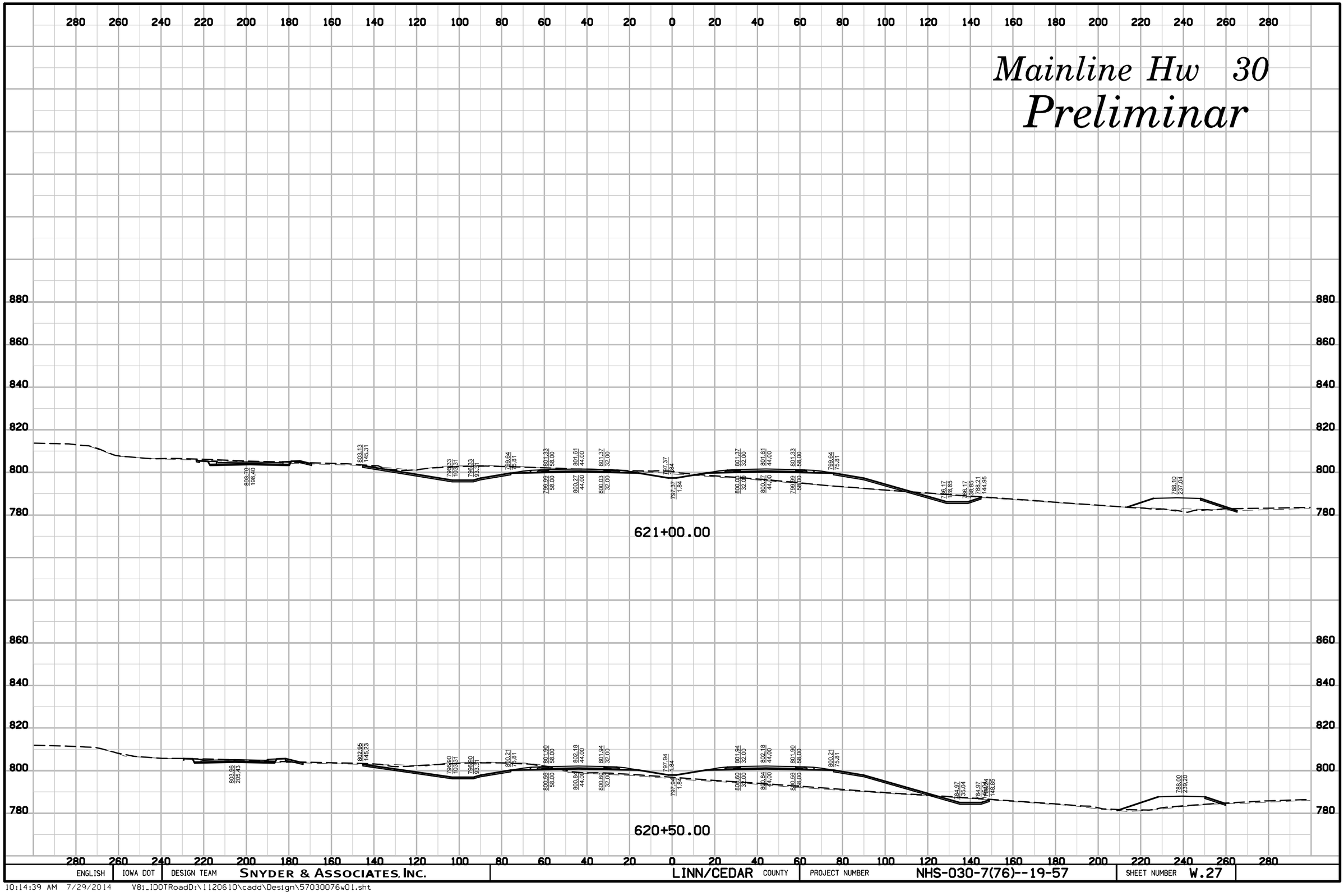
619+27.40

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.26

10:14:38 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

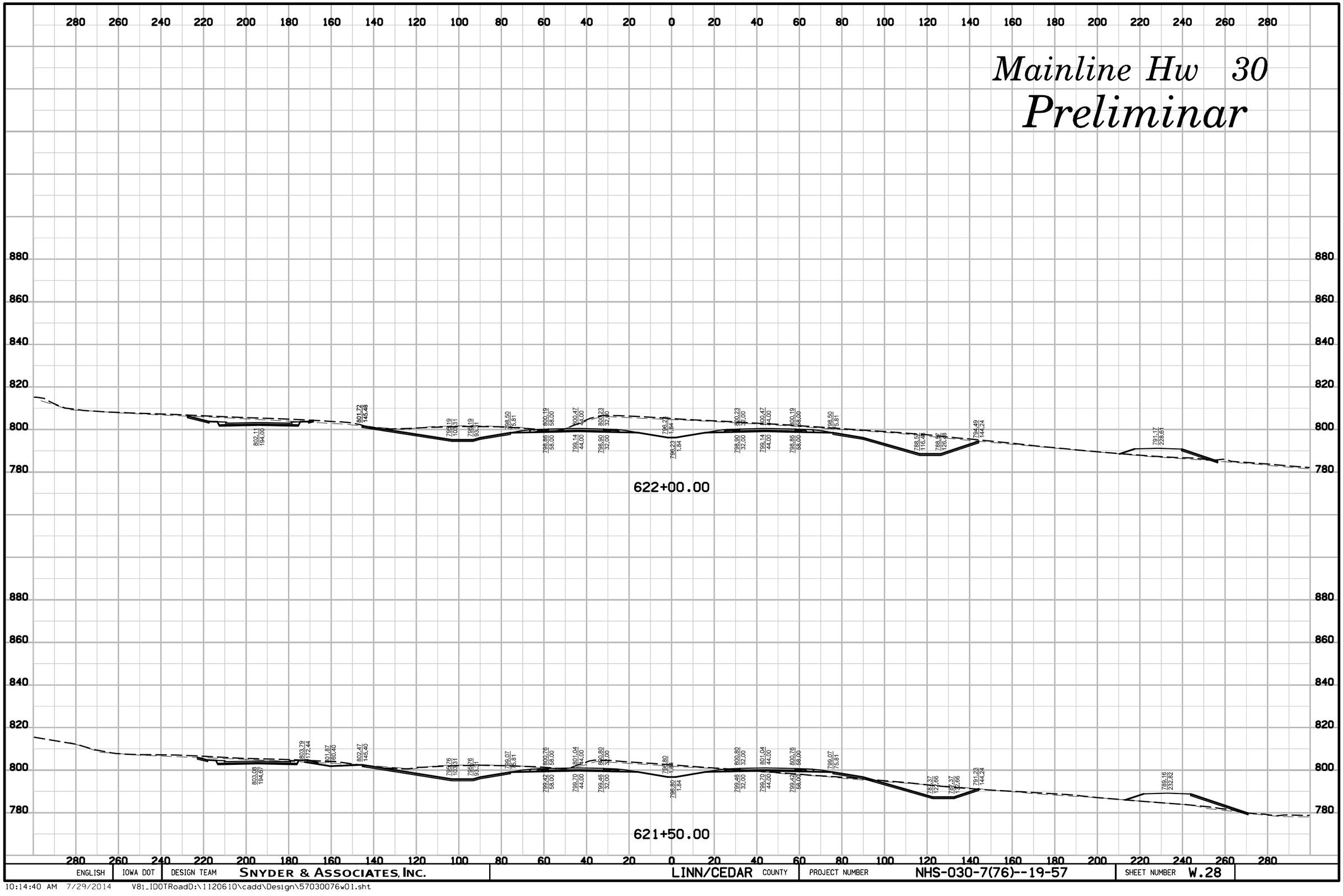


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.27

10:14:39 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

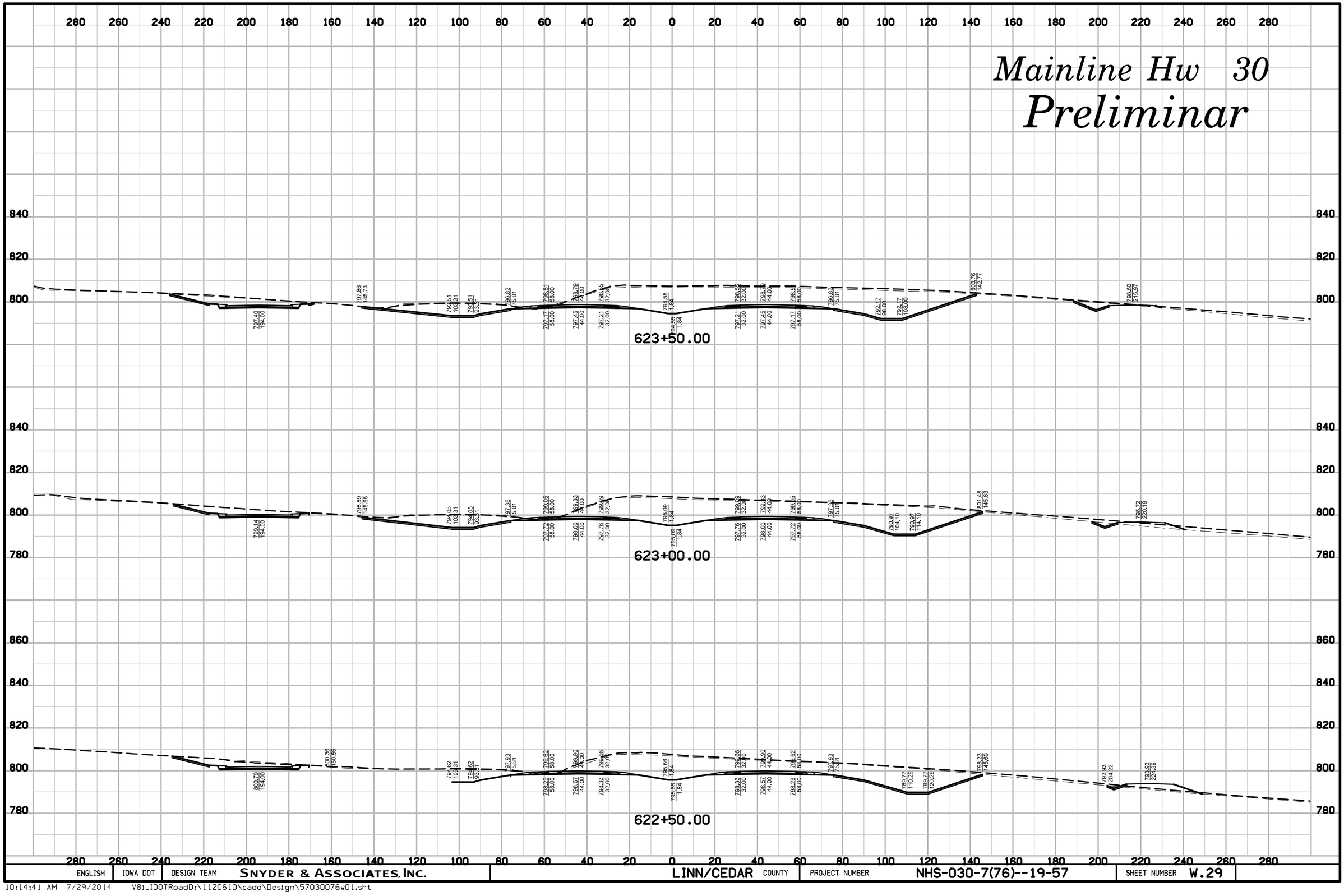


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.28

10:14:40 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.29

10:14:41 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

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

840 820 800 780 760 740

625+26.40

800

792.20 194.00 | 797.36 117.39 | 792.87 103.31 | 792.87 93.31 | 795.98 75.81 | 797.67 58.00 | 797.95 44.00 | 797.71 32.00 | 796.34 58.00 | 796.38 32.00 | 796.62 44.00 | 797.71 32.00 | 797.95 44.00 | 797.67 58.00 | 795.98 75.81 | 790.85 99.70 | 790.84 109.70 | 798.70 133.27 | 796.67 255.21

625+00.00

820 800

793.93 194.00 | 798.03 116.98 | 792.81 101.31 | 793.81 93.31 | 796.12 75.81 | 797.81 58.00 | 798.09 44.00 | 797.85 32.00 | 796.48 58.00 | 796.76 44.00 | 796.52 32.00 | 797.85 32.00 | 798.09 44.00 | 797.81 58.00 | 795.12 75.81 | 792.81 93.31 | 792.81 103.31 | 801.71 130.00 | 798.59 217.74

624+50.00

820 800

795.67 194.00 | 796.72 145.82 | 793.09 101.31 | 793.09 93.31 | 796.40 75.81 | 798.09 58.00 | 798.37 44.00 | 798.13 32.00 | 796.76 58.00 | 797.04 44.00 | 796.80 32.00 | 798.13 32.00 | 798.37 44.00 | 798.09 58.00 | 796.40 75.81 | 793.09 93.31 | 793.09 103.31 | 804.32 136.99 | 799.23 214.35

624+00.00

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.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.30

10:14:42 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

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

800
780

787.38 194.00 | 789.21 160.28 | 783.04 44.78 | 783.04 31.76 | 797.34 75.81 | 797.69 58.00 | 797.97 44.00 | 797.73 32.00 | 796.07 1.84 | 796.07 1.84 | 797.73 32.00 | 797.97 44.00 | 797.69 58.00 | 797.34 75.81 | 775.03 159.79 | 775.03 159.79 | 780.59 160.47 | 780.40 276.03

627+50.00

787.44 194.00 | 791.18 151.77 | 784.58 133.11 | 784.99 123.17 | 796.79 75.81 | 797.15 58.00 | 797.43 44.00 | 797.19 32.00 | 794.52 1.84 | 794.52 1.84 | 797.19 32.00 | 797.43 44.00 | 797.15 58.00 | 796.79 75.81 | 778.30 146.11 | 778.30 156.61 | 784.92 176.69 | 782.88 268.29

627+00.00

788.13 194.00 | 793.32 144.24 | 786.39 124.34 | 786.39 114.54 | 796.38 75.81 | 796.74 58.00 | 797.02 44.00 | 797.78 32.00 | 794.41 1.84 | 794.41 1.84 | 797.78 32.00 | 797.02 44.00 | 796.74 58.00 | 796.38 75.81 | 781.36 134.41 | 781.36 144.31 | 788.76 168.51 | 785.41 257.78

626+50.00

789.12 194.00 | 795.35 136.85 | 788.62 117.85 | 788.62 107.25 | 796.11 75.81 | 797.80 58.00 | 798.08 44.00 | 797.84 32.00 | 796.84 1.84 | 796.84 1.84 | 797.84 32.00 | 798.08 44.00 | 797.80 58.00 | 796.11 75.81 | 784.58 122.26 | 784.58 132.26 | 792.30 155.64 | 789.94 247.25

626+00.00

790.50 194.00 | 796.44 127.11 | 790.74 110.04 | 790.74 100.04 | 795.98 75.81 | 797.67 58.00 | 797.95 44.00 | 797.71 32.00 | 793.71 1.84 | 793.71 1.84 | 797.71 32.00 | 797.95 44.00 | 797.67 58.00 | 795.98 75.81 | 787.68 110.76 | 787.68 120.76 | 796.65 144.67 | 793.47 236.73

625+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.31

10:14:43 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

628+00.00

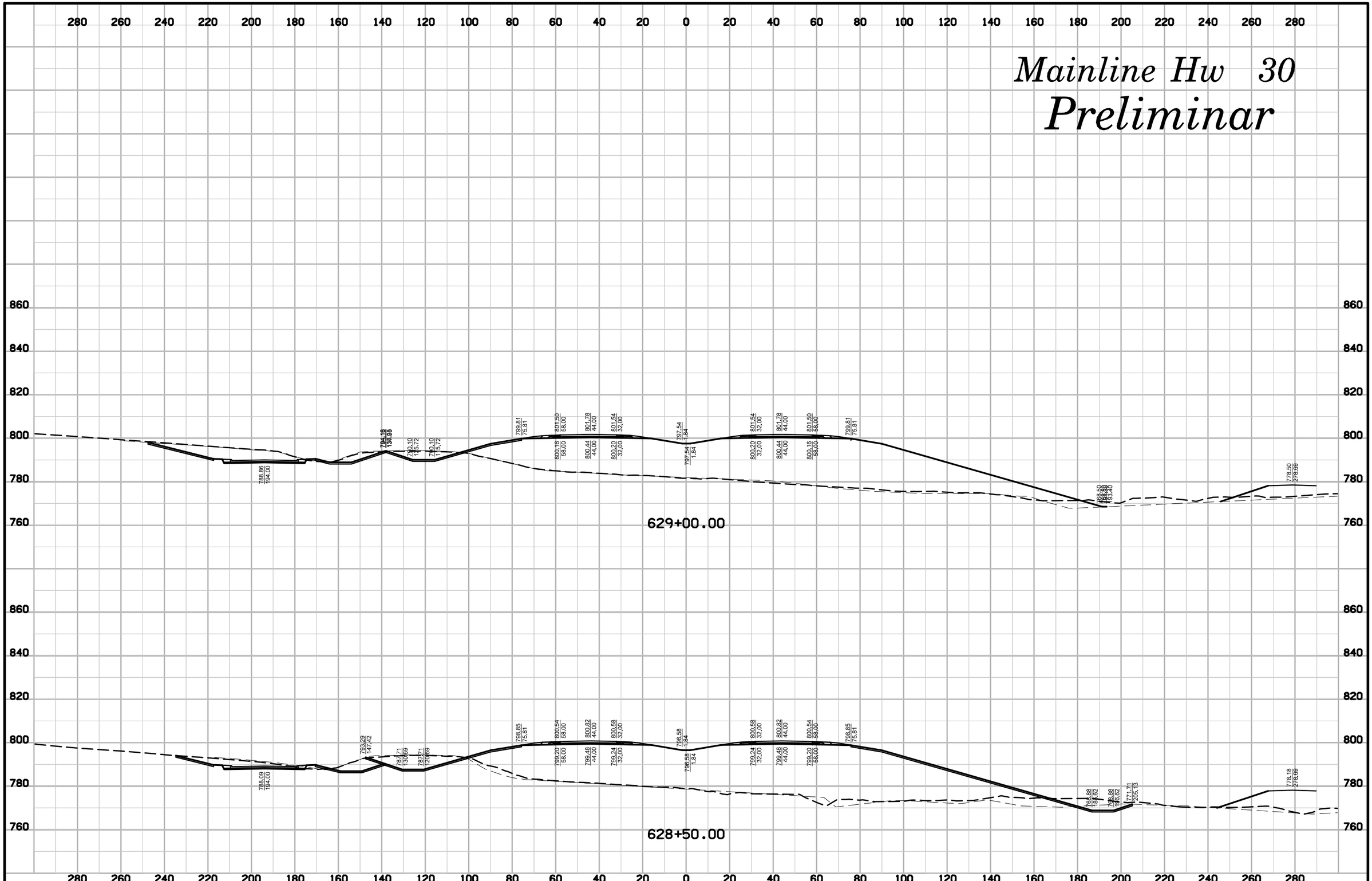
627+81.56

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.32

10:14:45 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

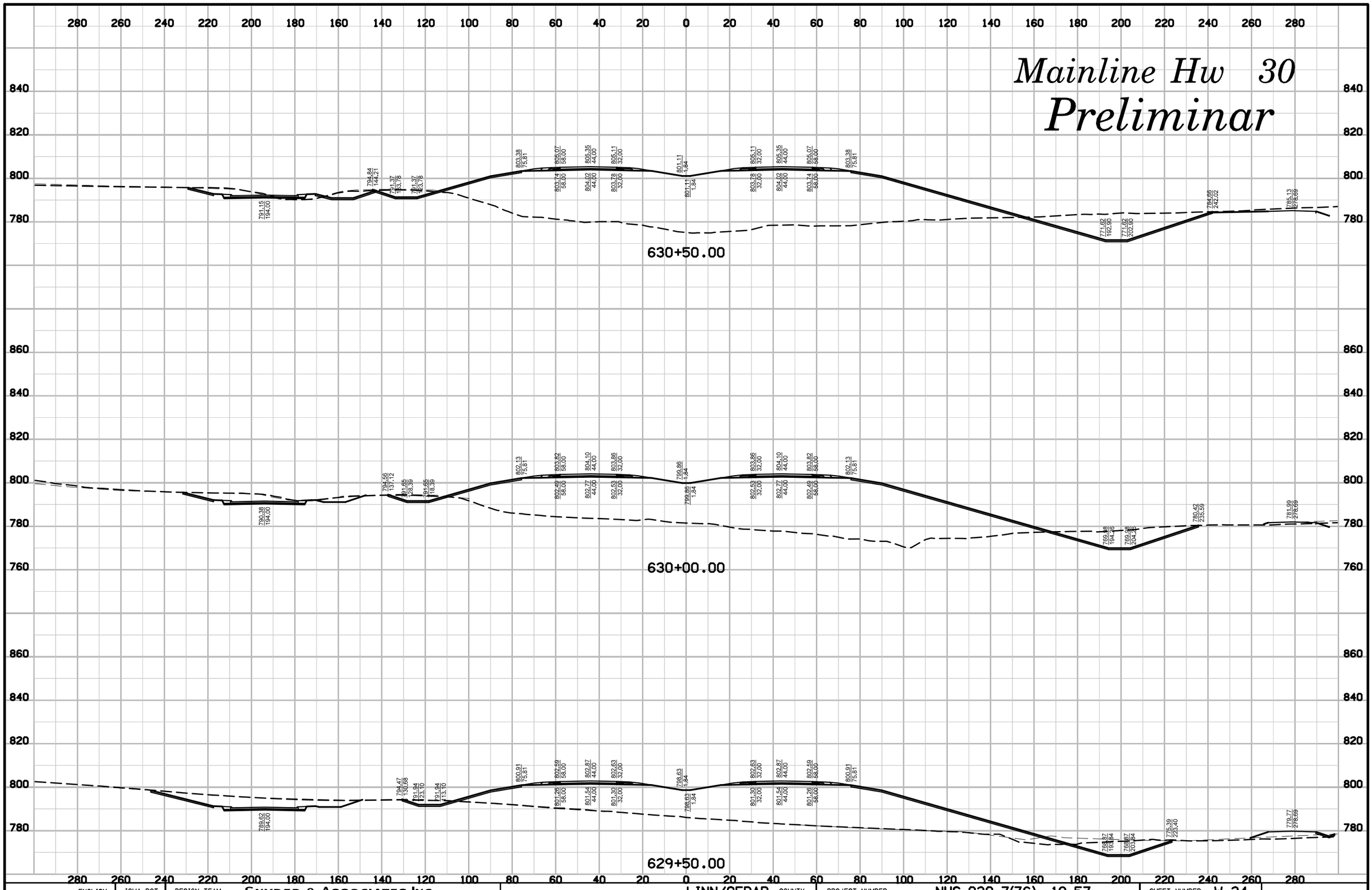


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.33

10:14:46 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

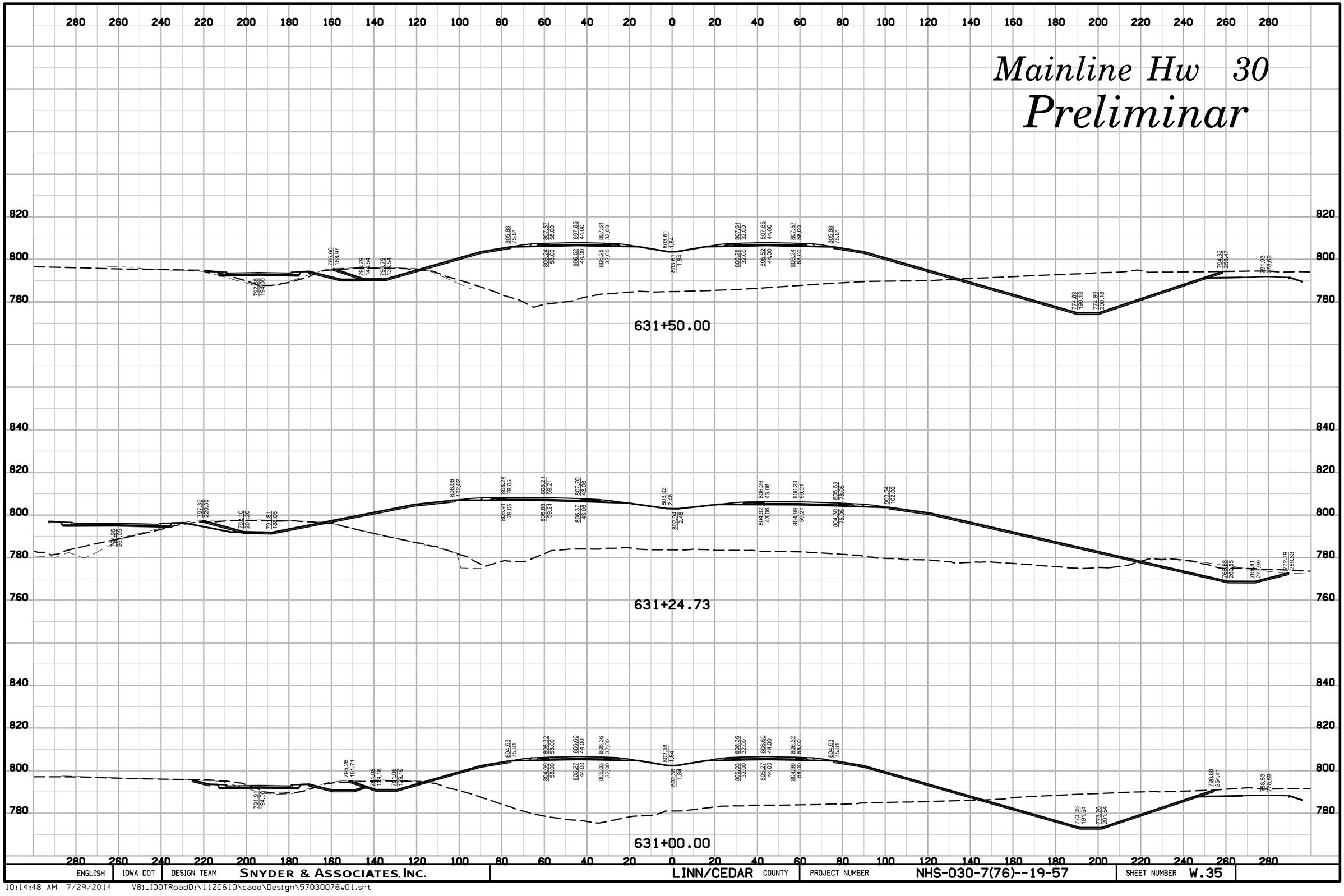


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.34

10:14:47 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

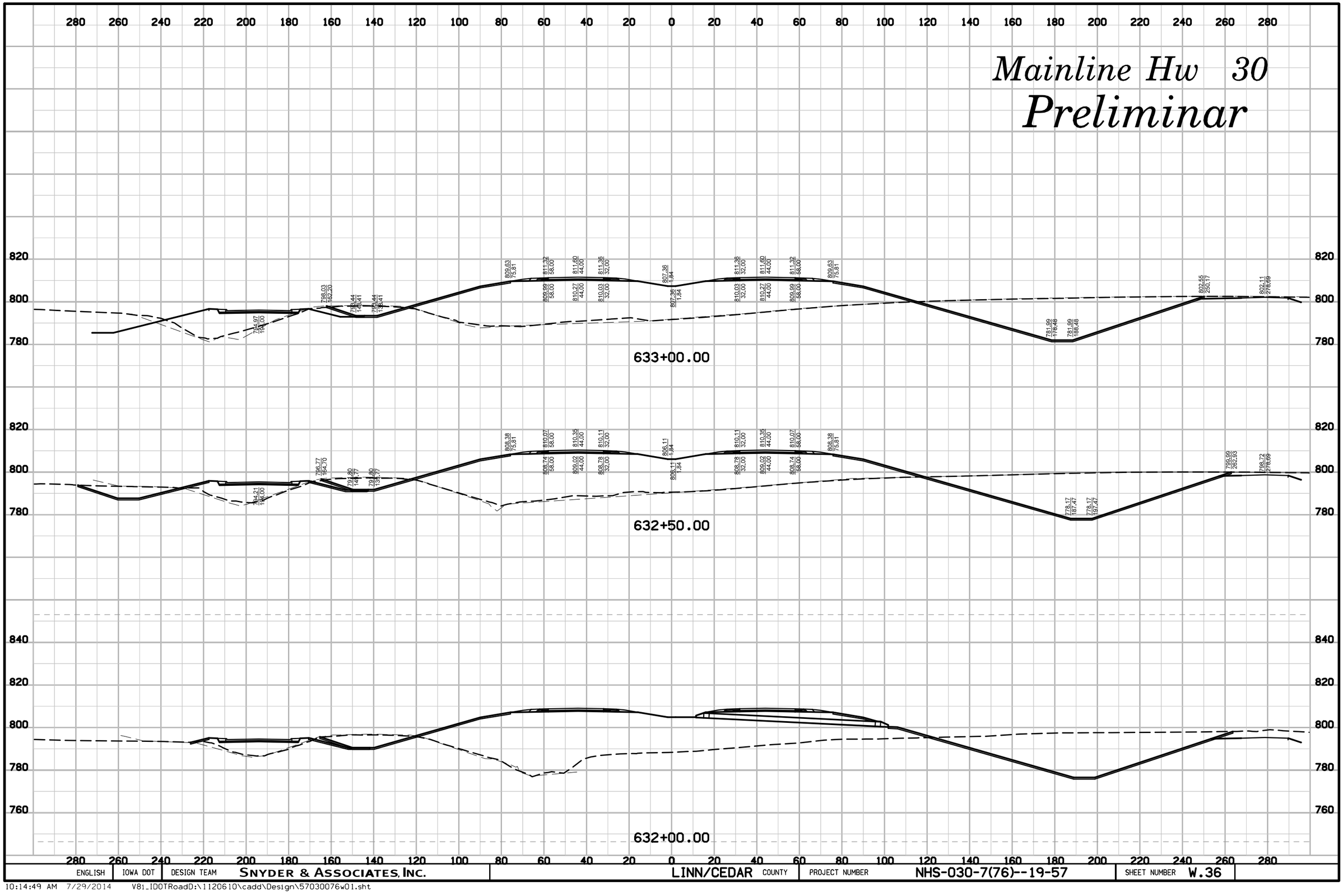


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.35

10:14:48 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

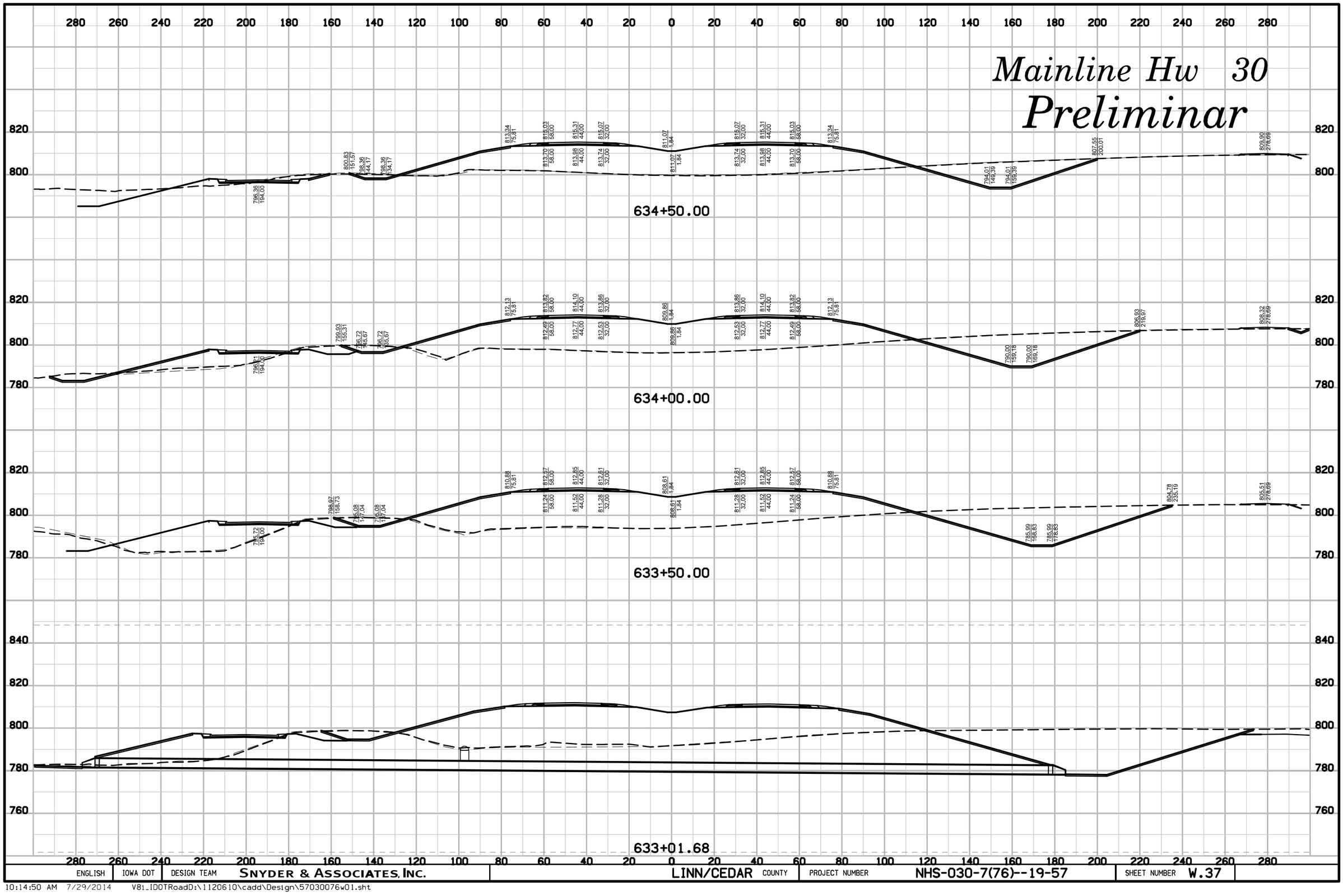


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.36

10:14:49 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.37

10:14:50 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

637+00.00

636+50.00

636+00.00

635+50.00

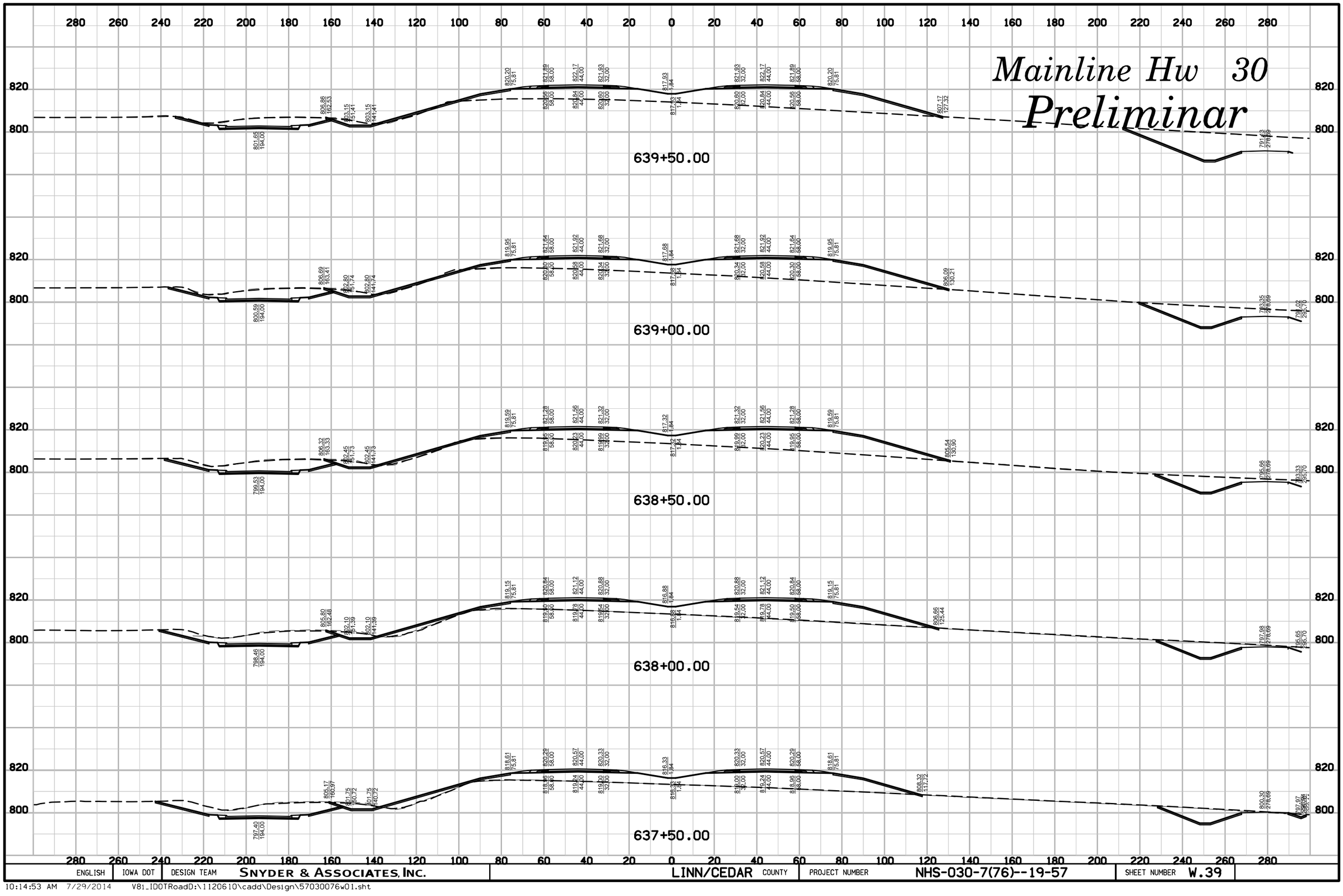
635+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.38

10:14:52 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

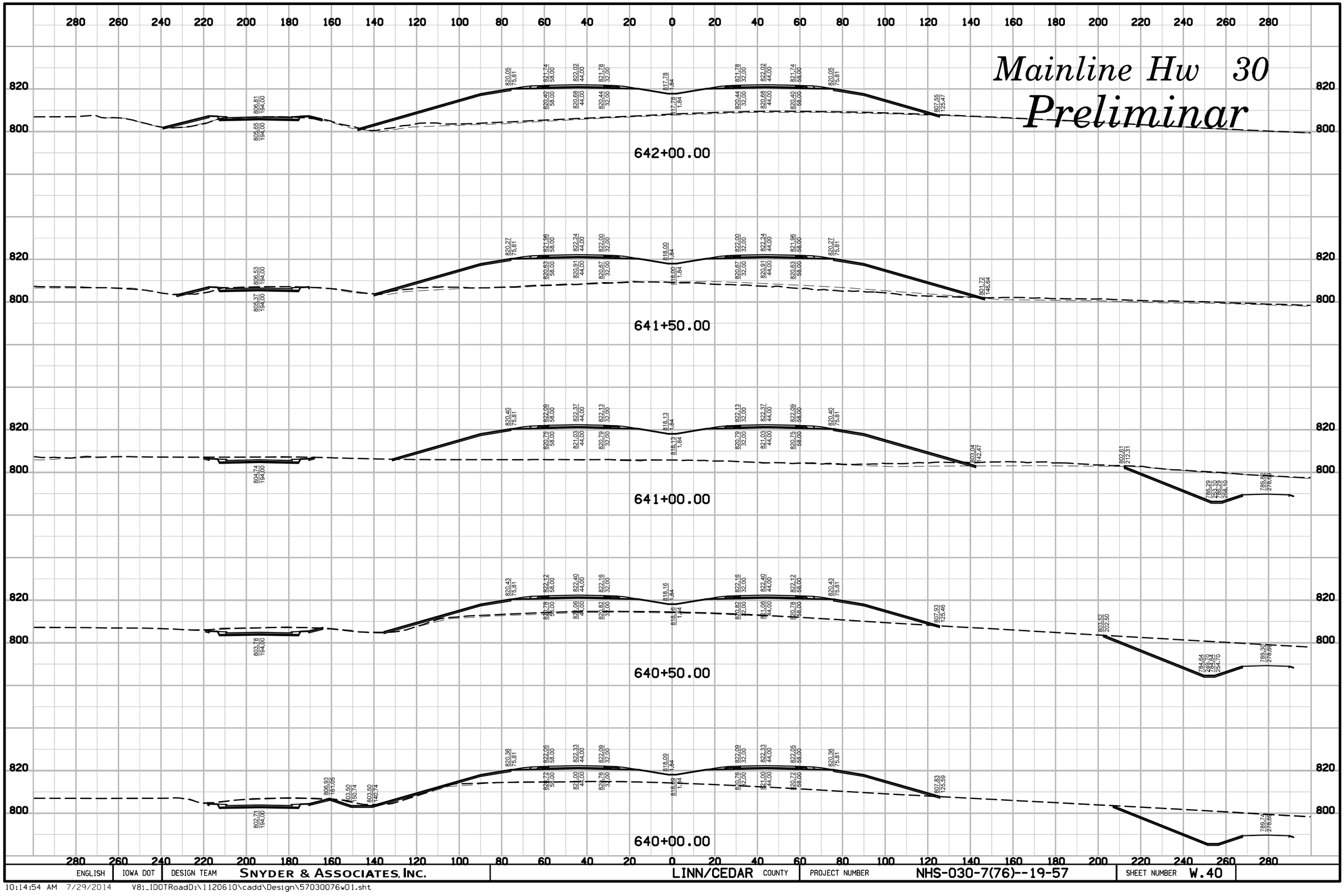


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.39

10:14:53 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

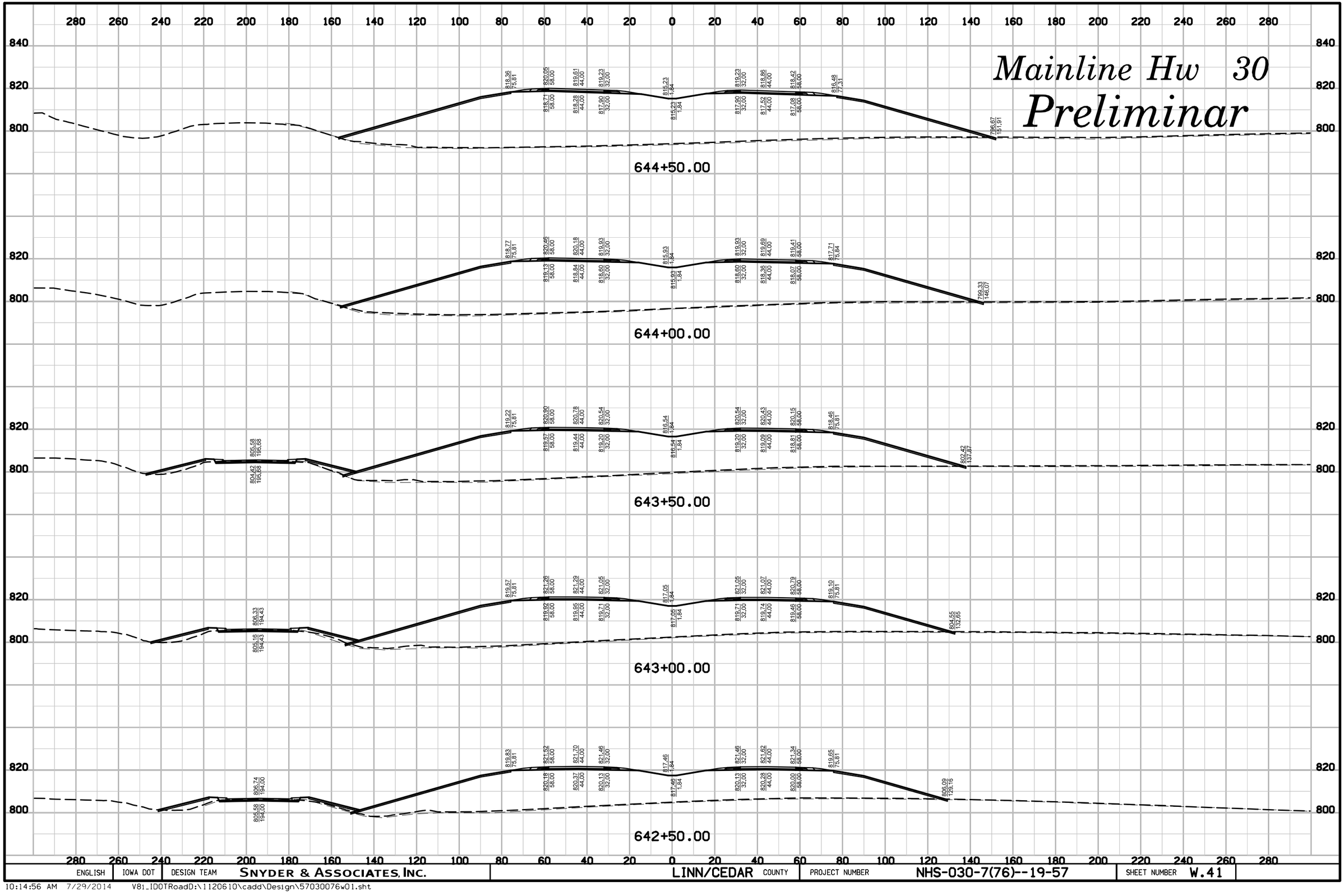


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.40

10:14:54 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

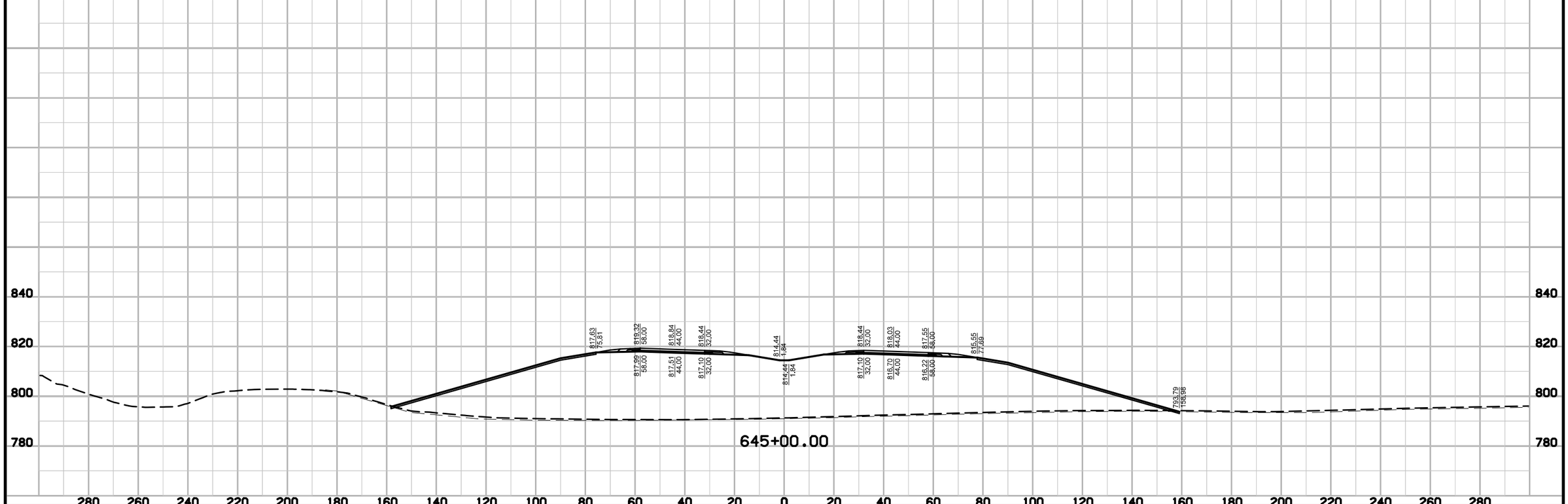


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.41

10:14:56 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

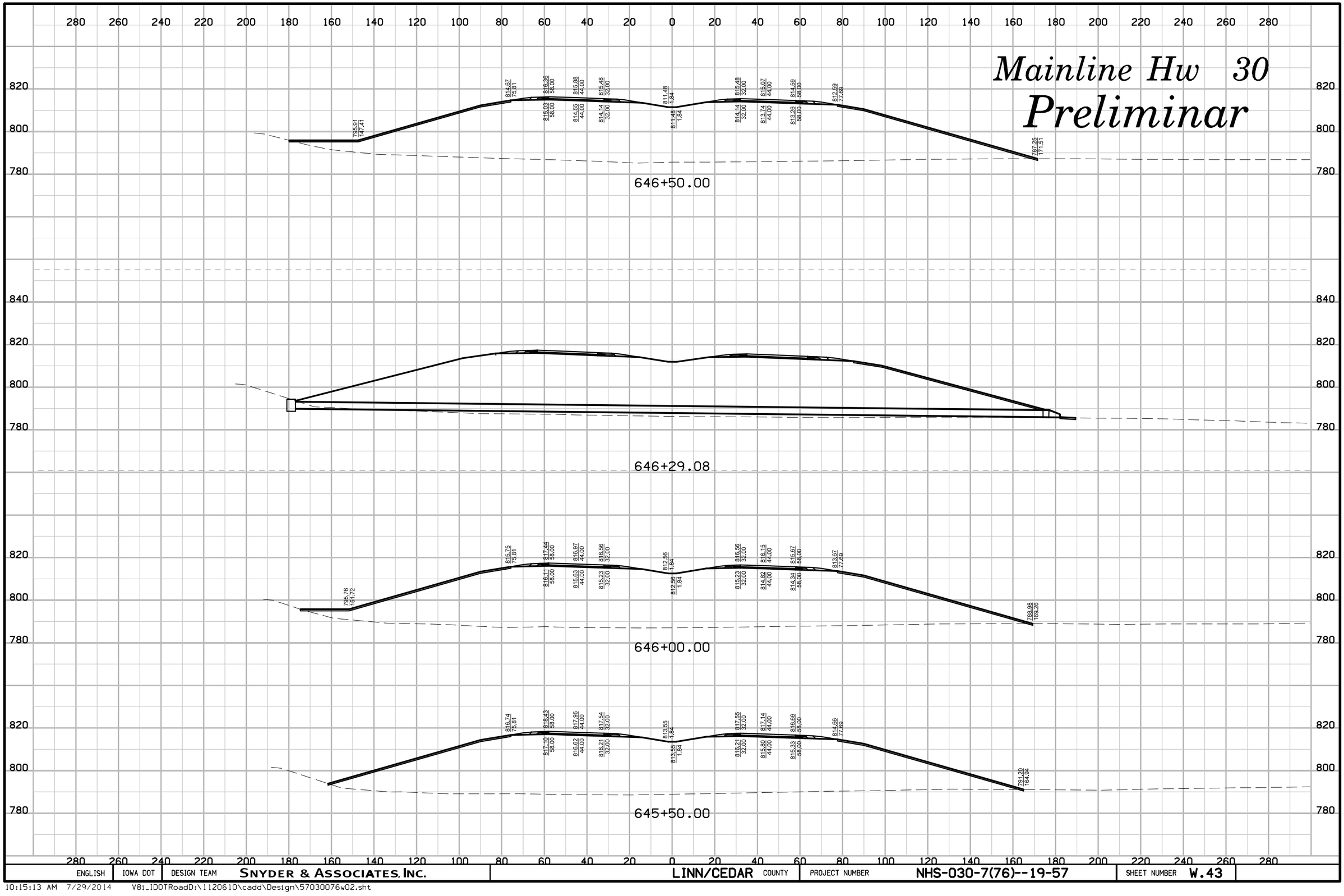


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.42

10:15:09 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w01.sht

Mainline Hw 30

Preliminar

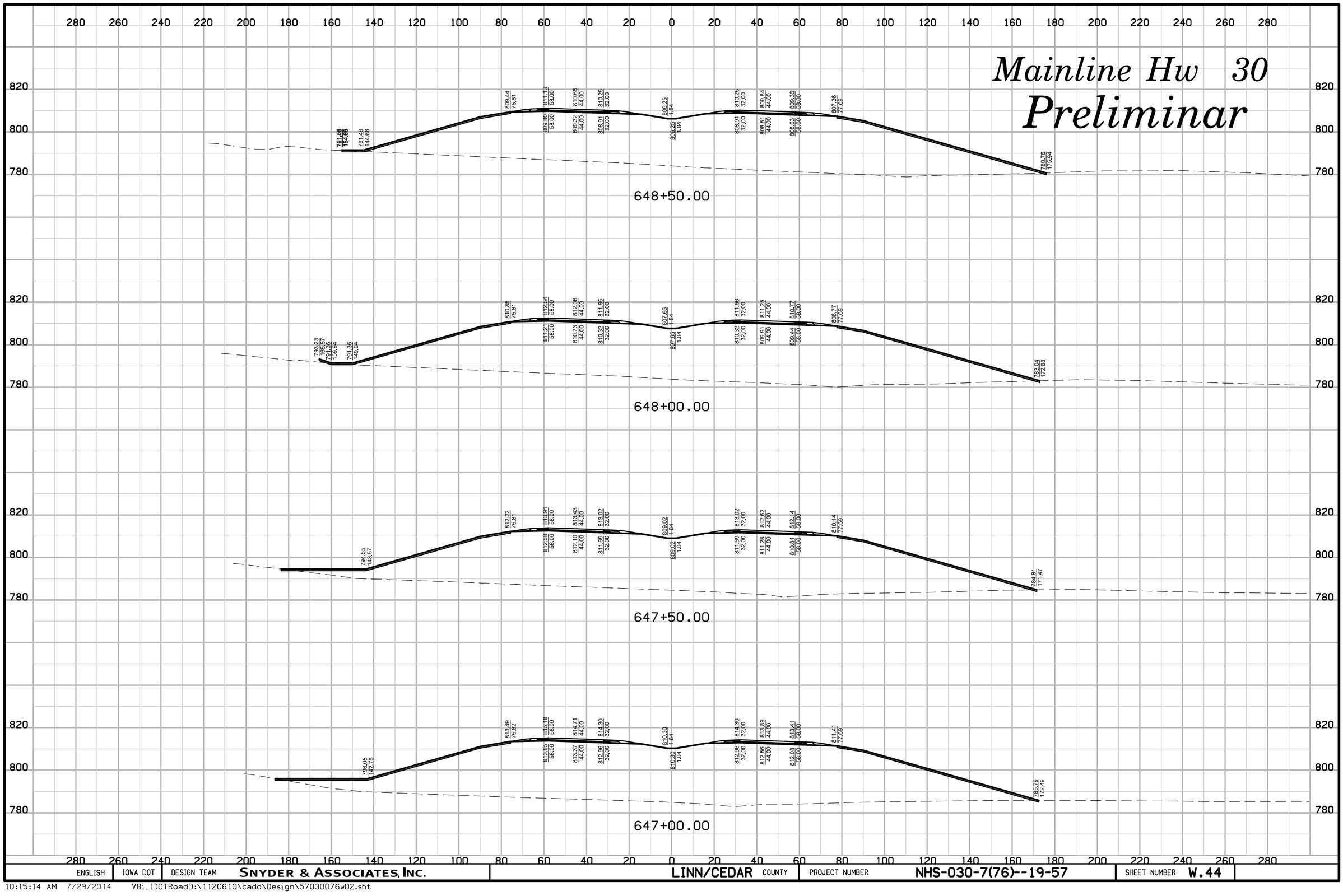


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.43

10:15:13 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

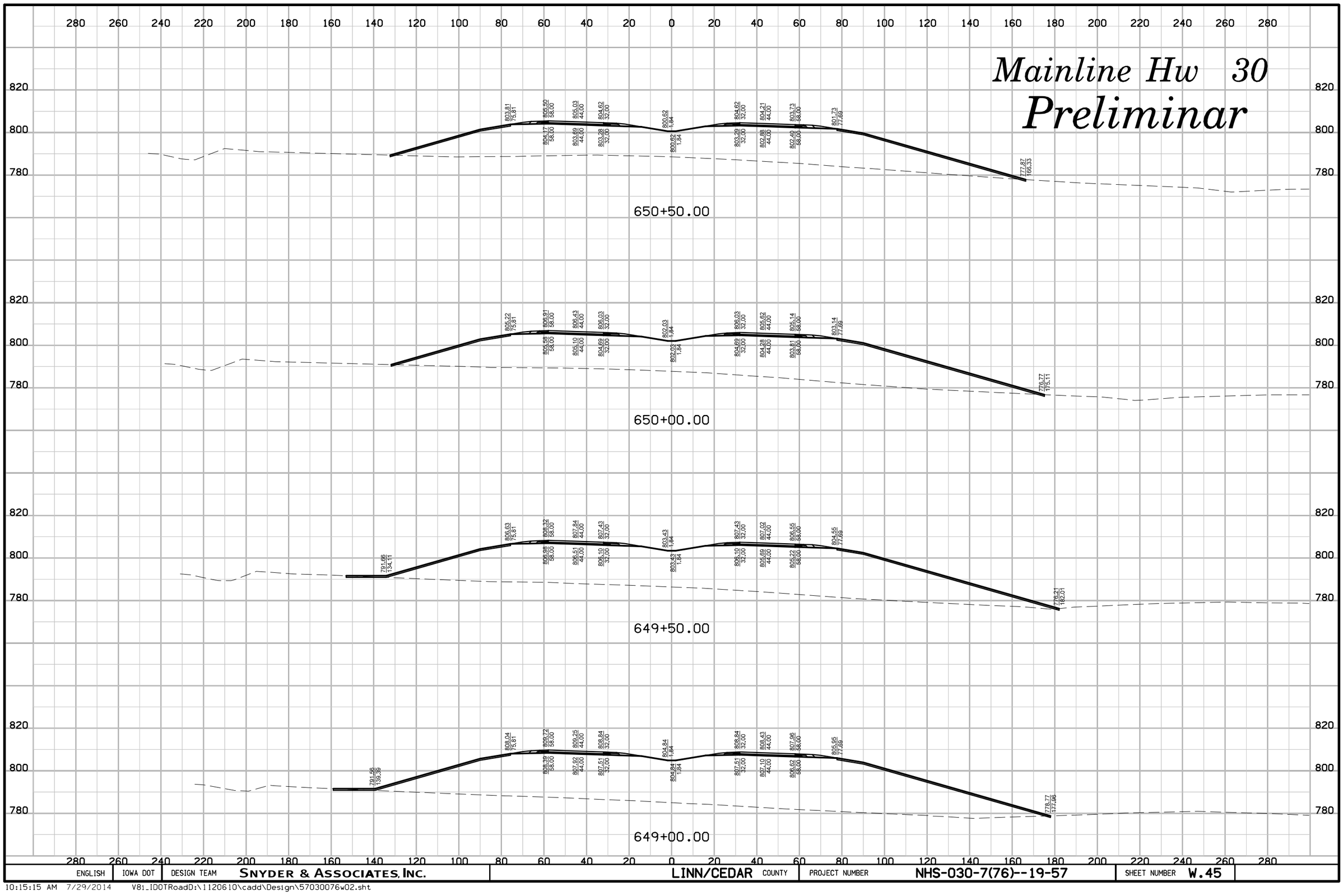


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.44

10:15:14 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

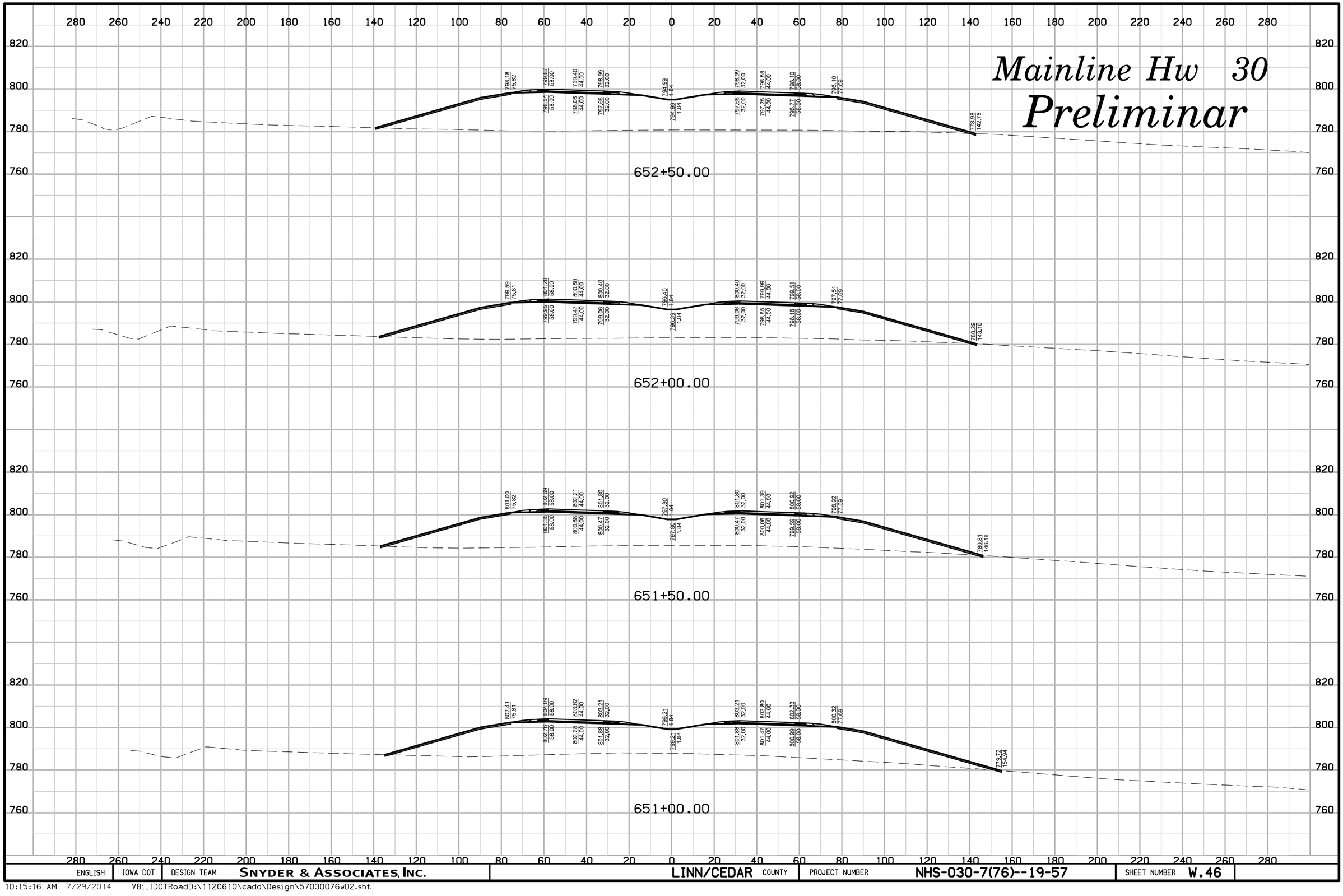


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.45

10:15:15 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

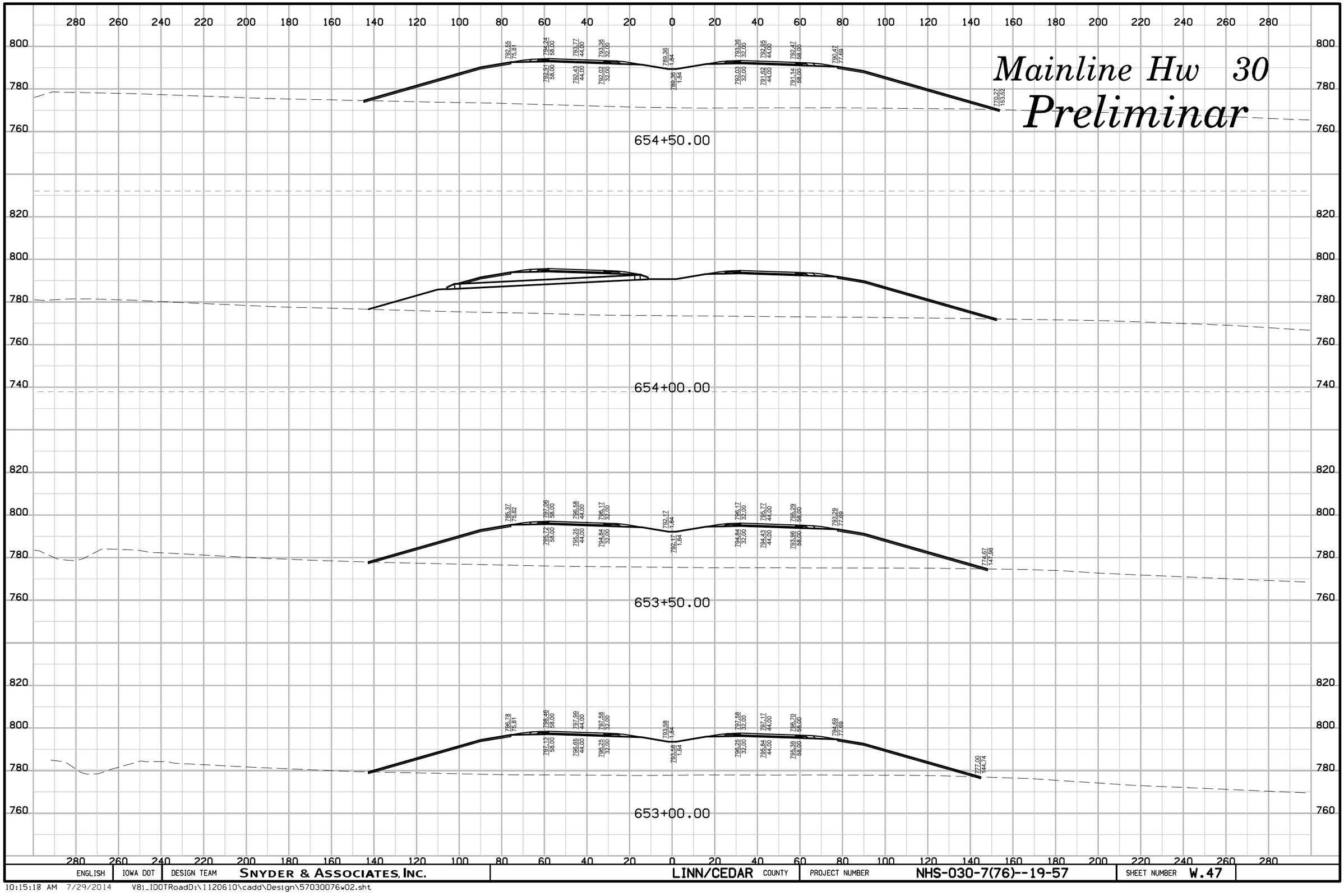
Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.46

Mainline Hw 30

Preliminar

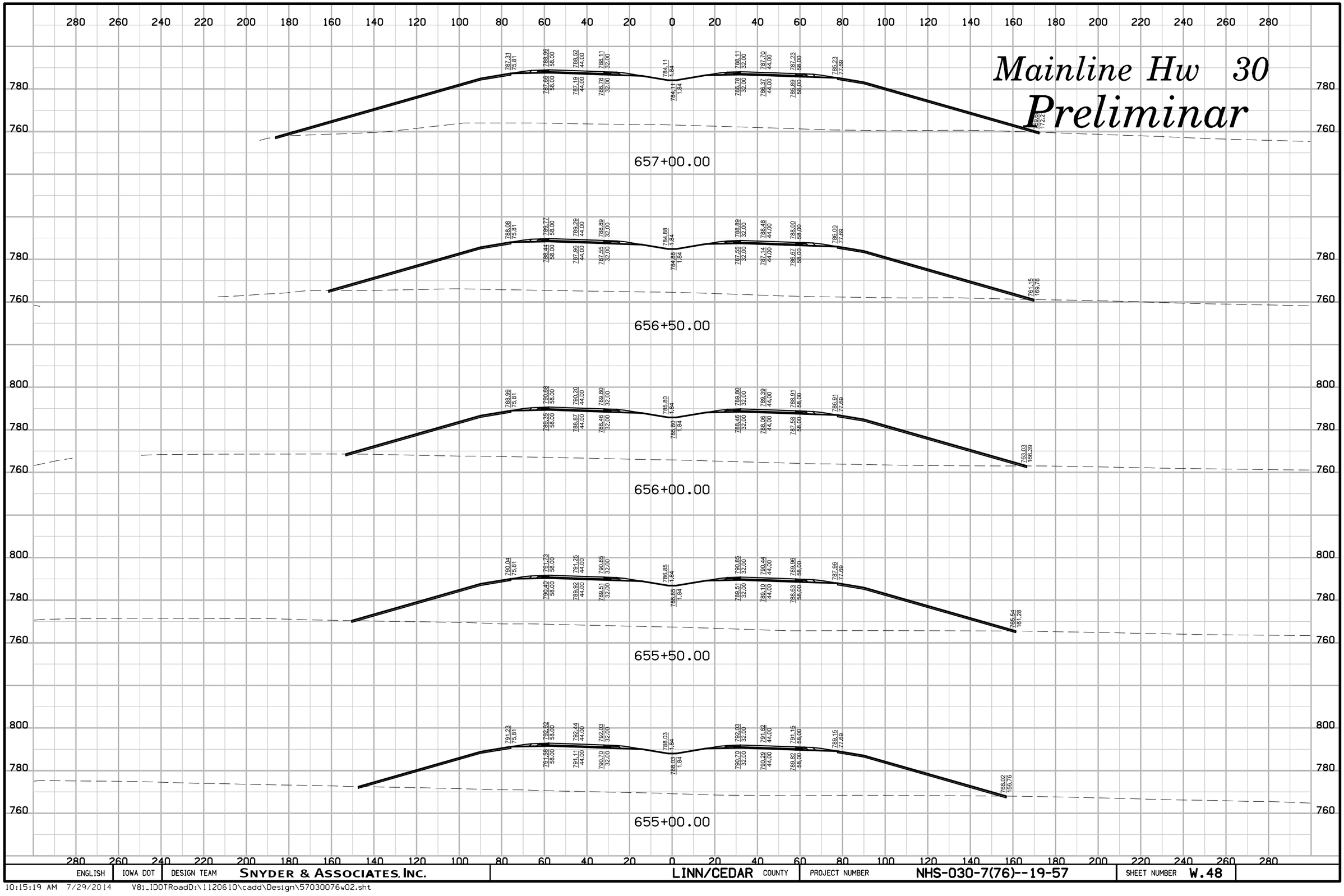


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.47

10:15:18 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.48

10:15:19 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

658+06.00

658+00.00

657+50.00

657+34.24

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.49

10:15:20 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

659+56.00

659+50.00

659+00.00

658+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.50

10:15:21 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

661+00.00

660+50.00

660+00.00

659+70.94

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.51

10:15:22 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

663+50.00

663+00.00

662+50.00

662+00.00

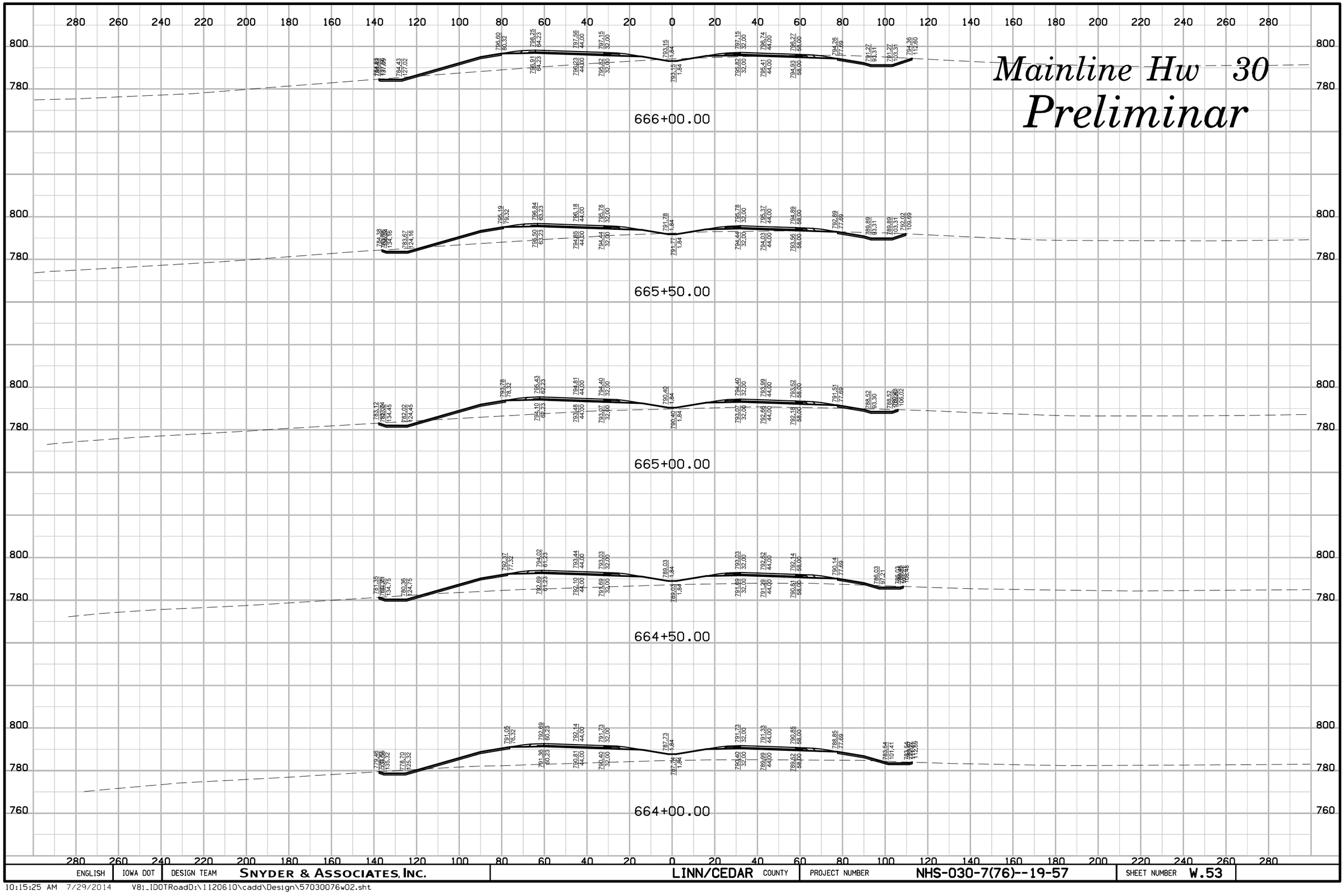
661+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.52

10:15:23 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

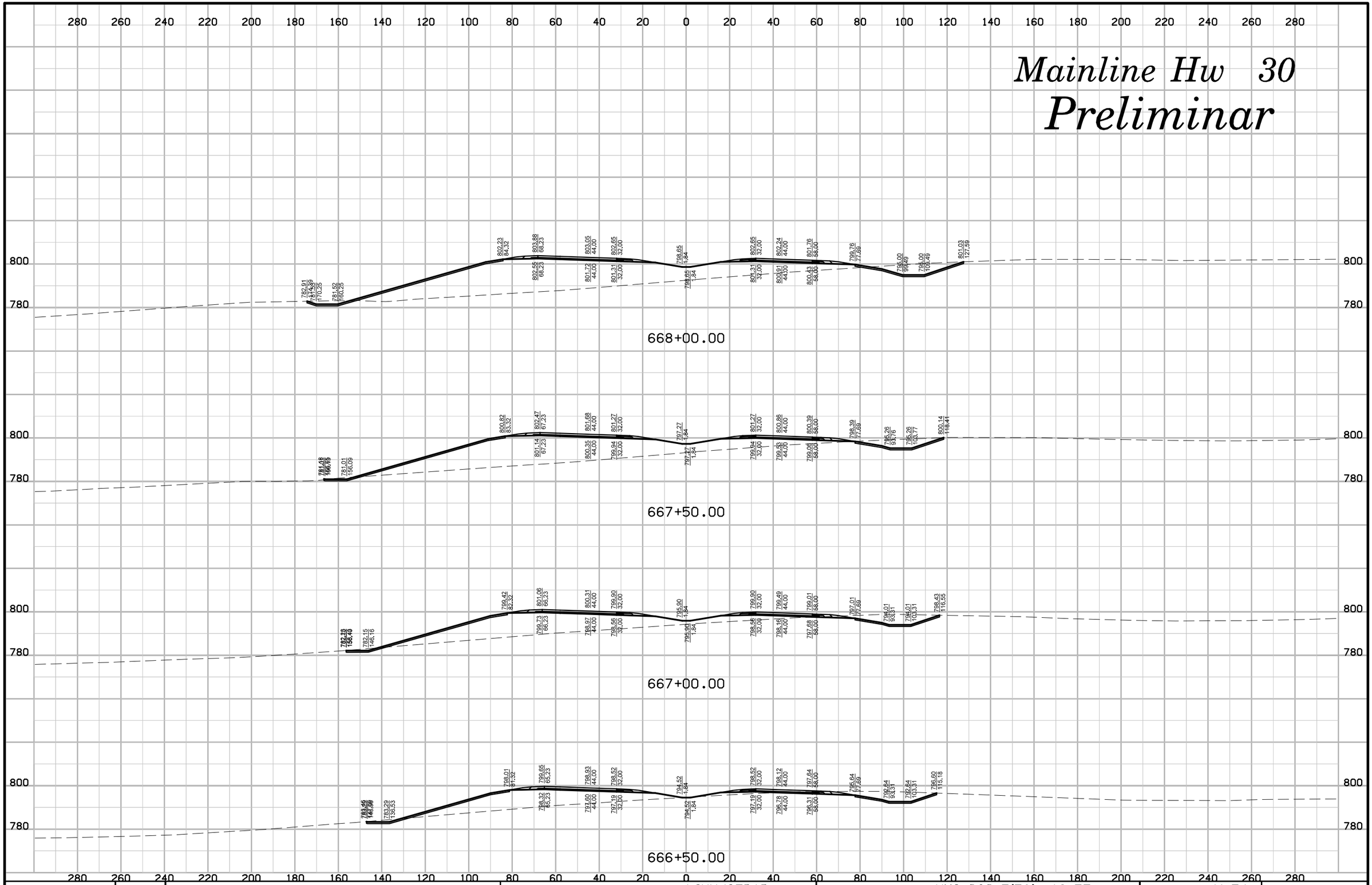


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.53

10:15:25 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.54

10:15:26 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

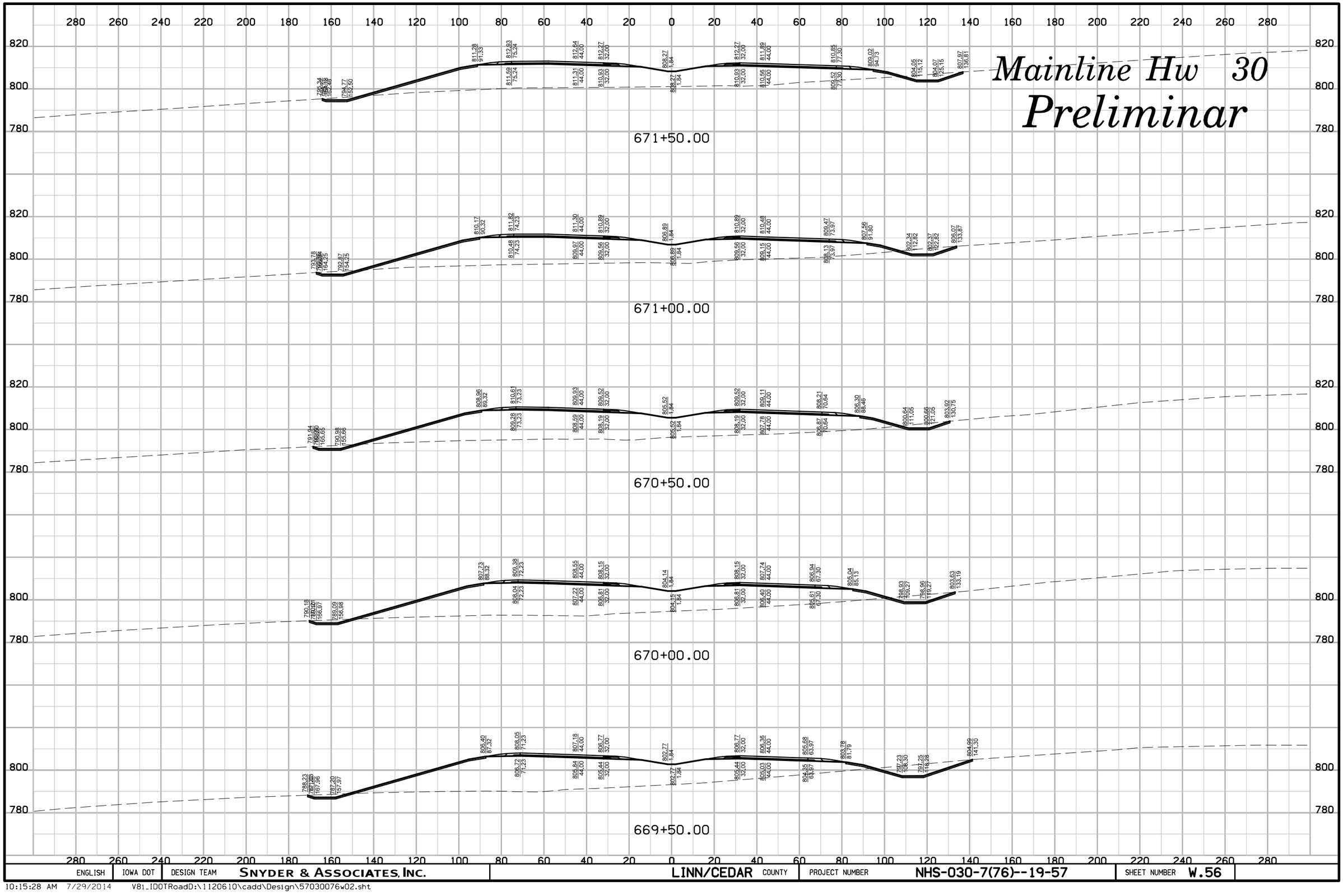
669+00.00

668+50.00

668+38.97

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.55

10:15:27 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

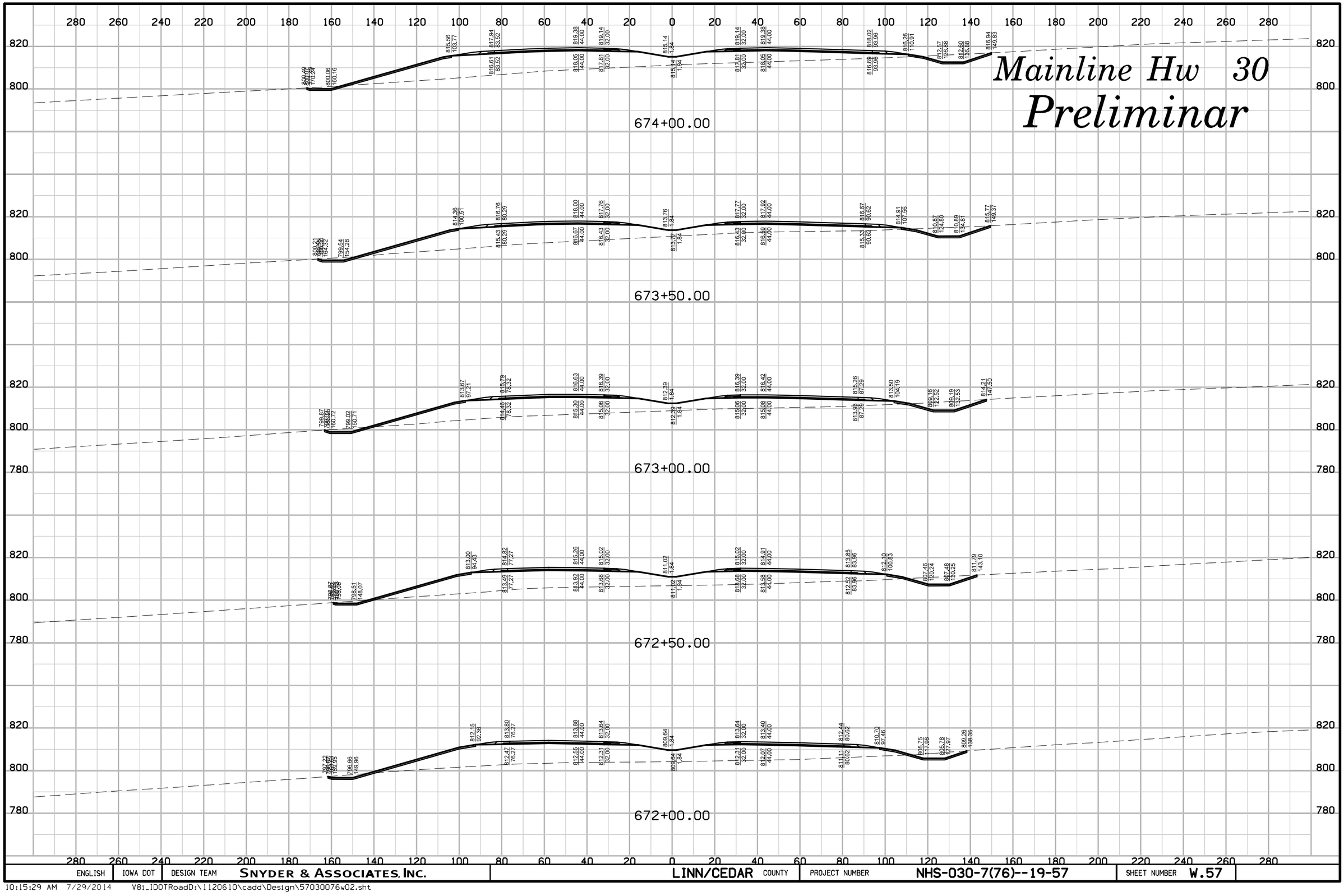


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.56

10:15:28 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

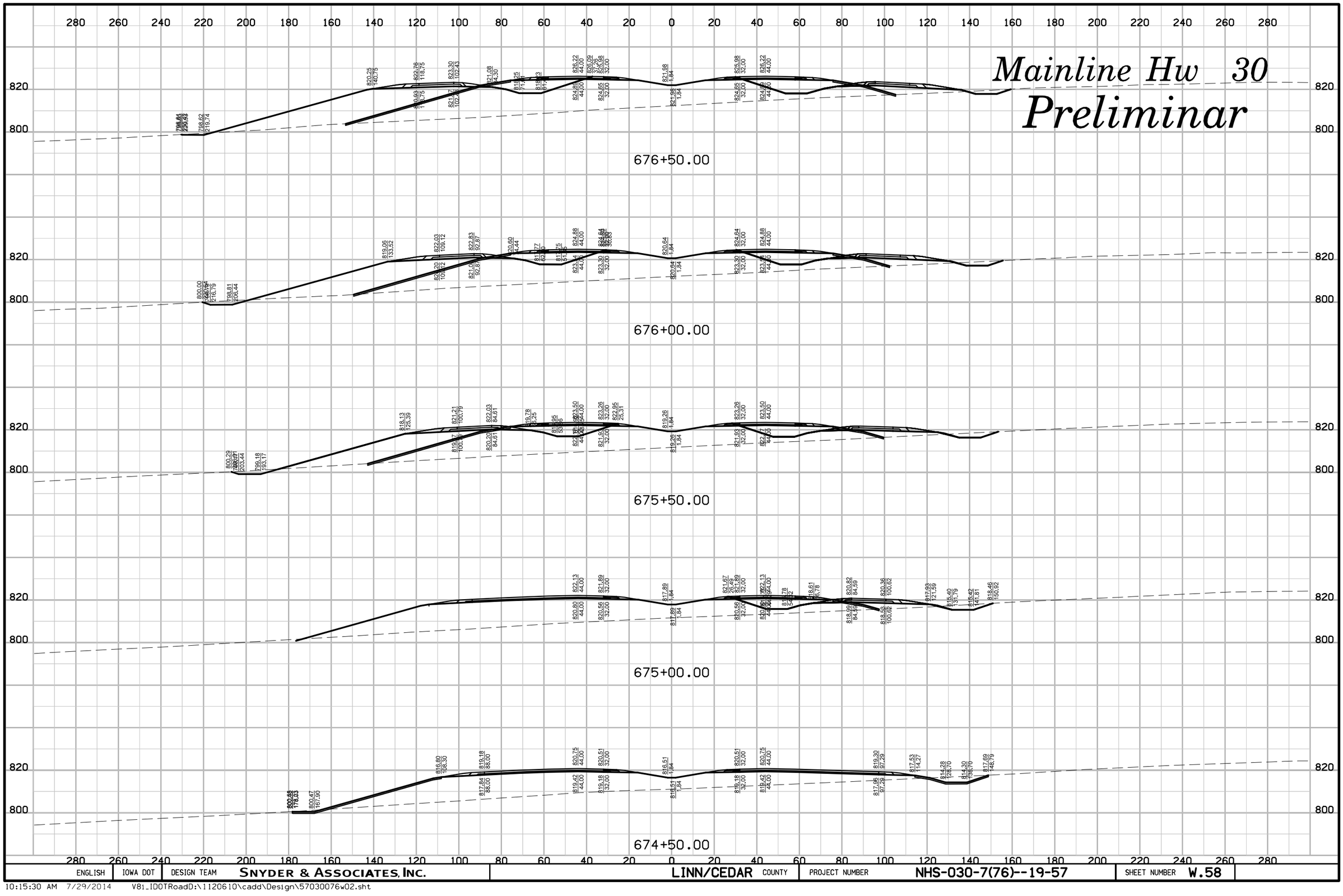


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.57

10:15:29 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.58

10:15:30 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

679+00.00

678+50.00

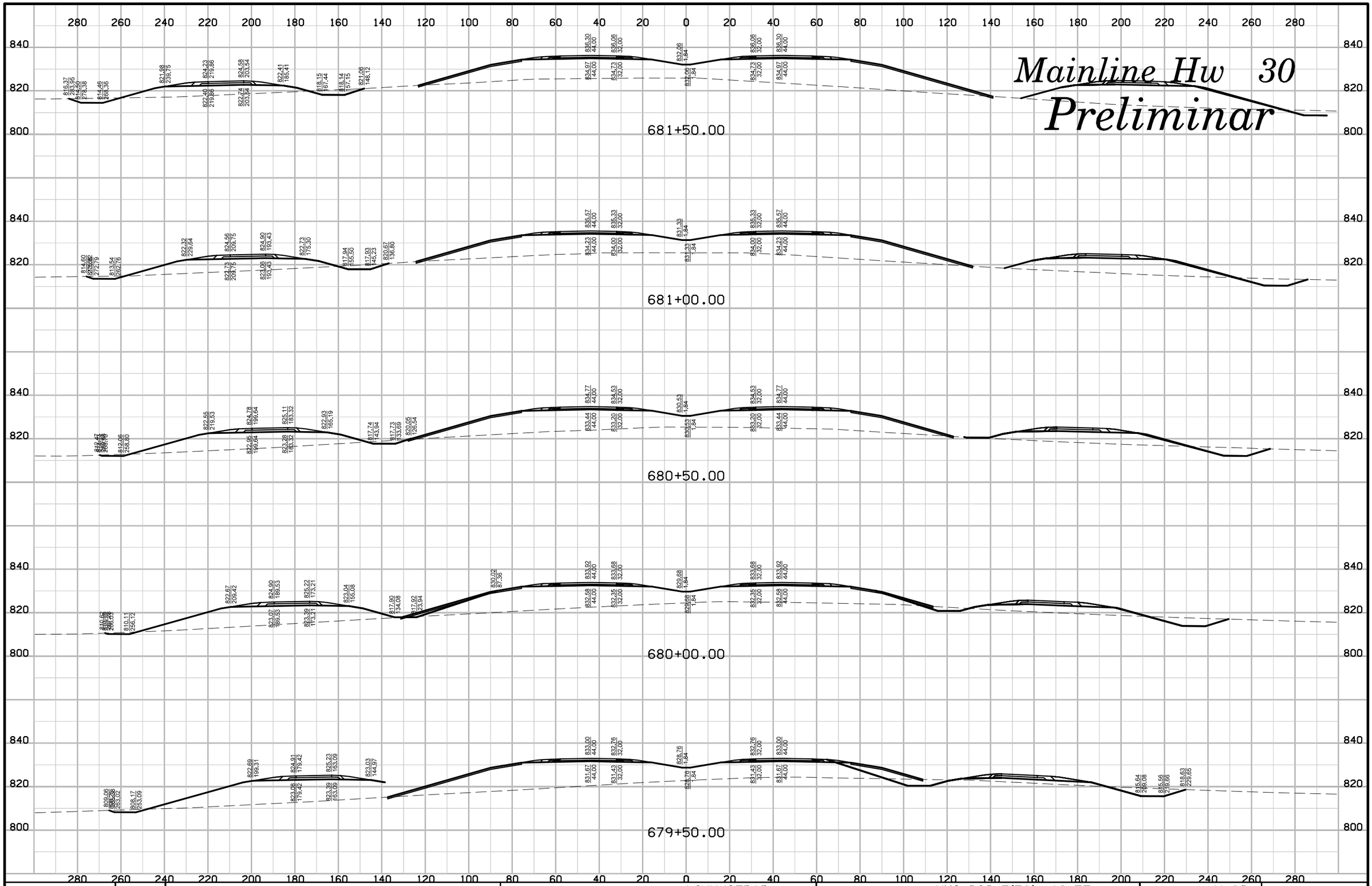
678+00.00

677+50.00

677+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.59

10:15:31 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

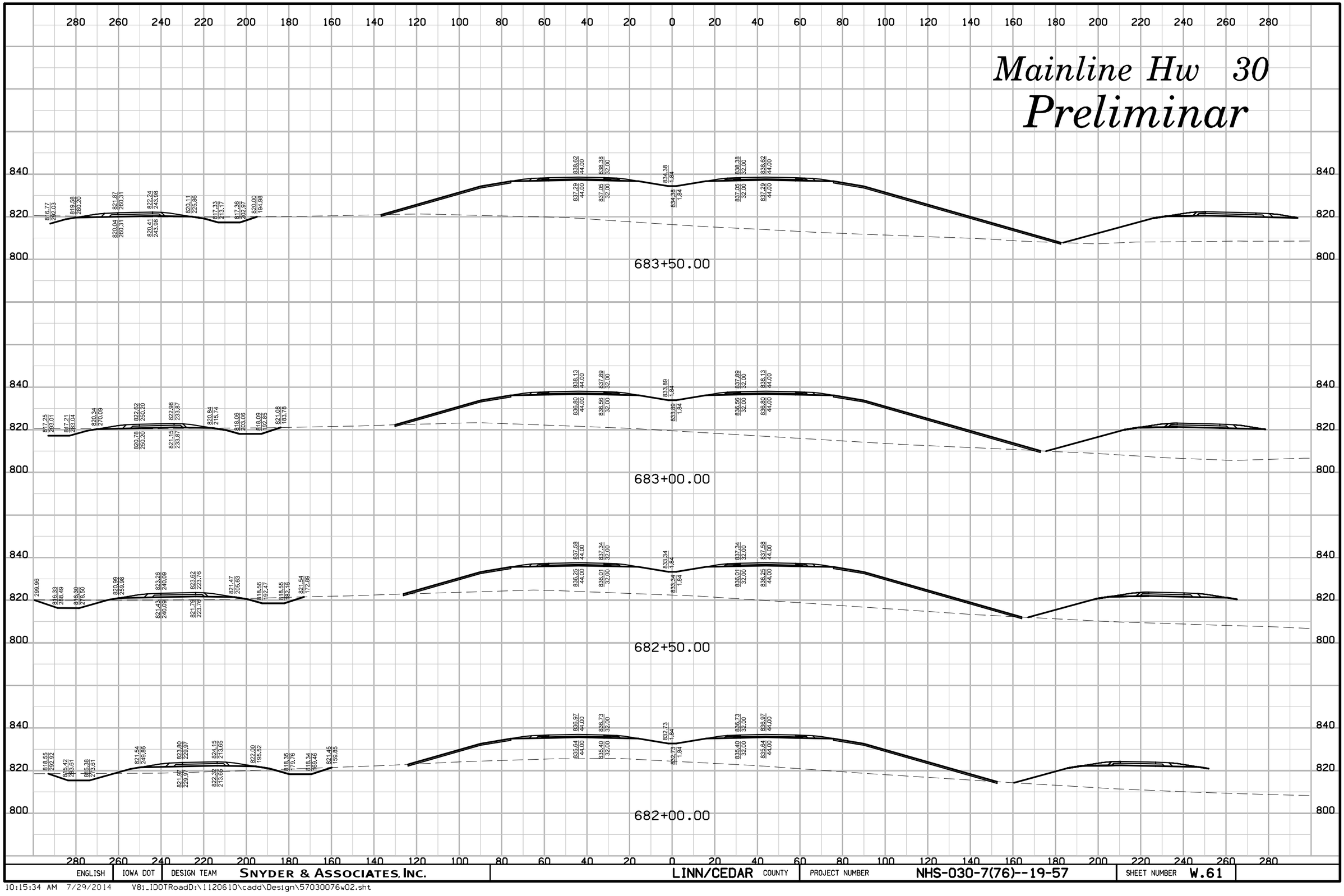


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.60

10:15:33 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.61

10:15:34 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

685+00.00

684+96.09

684+50.00

684+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.62

10:15:35 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

687+50.00

687+00.00

686+50.00

686+00.00

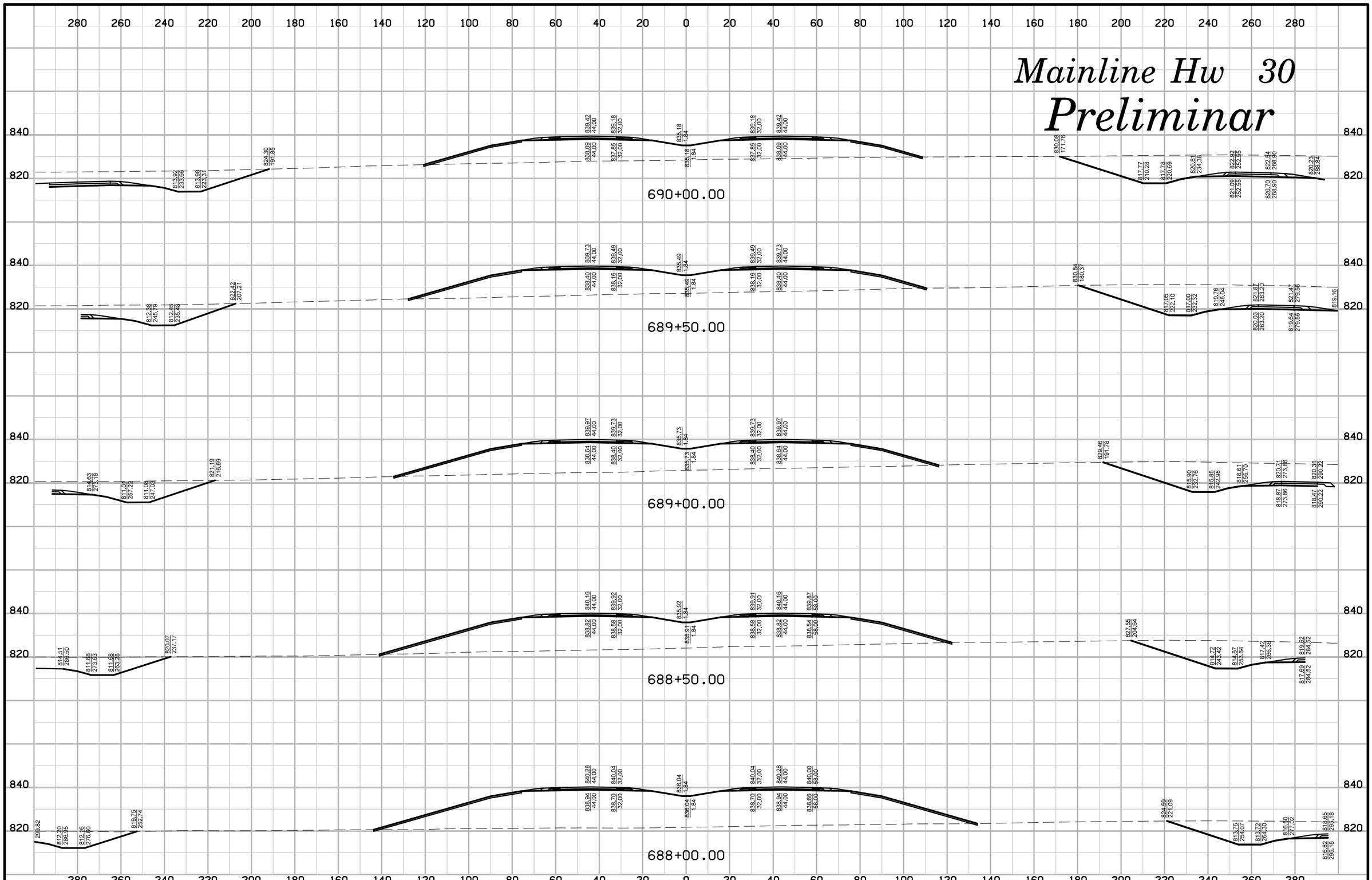
685+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.63

10:15:36 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

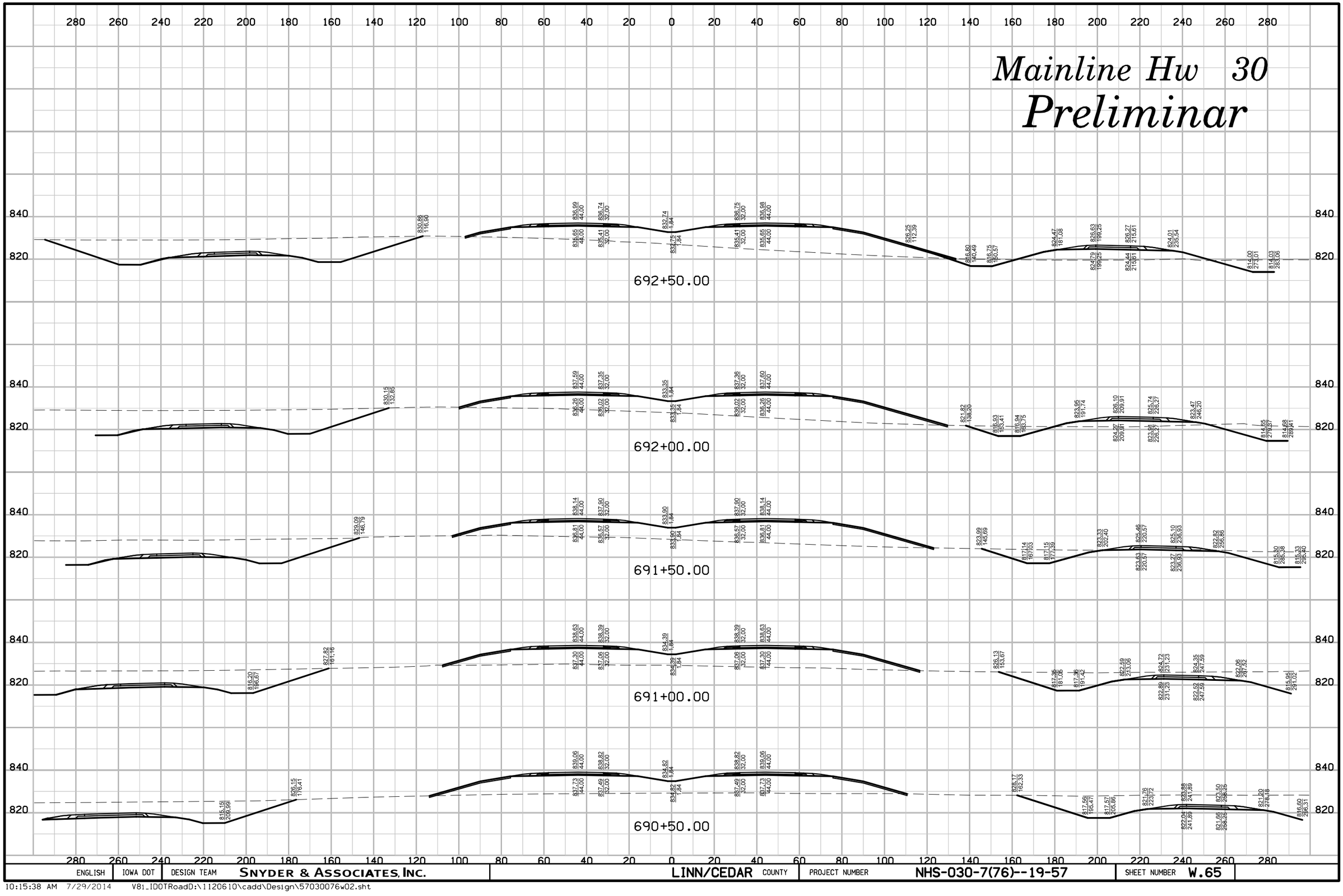


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.64

10:15:37 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

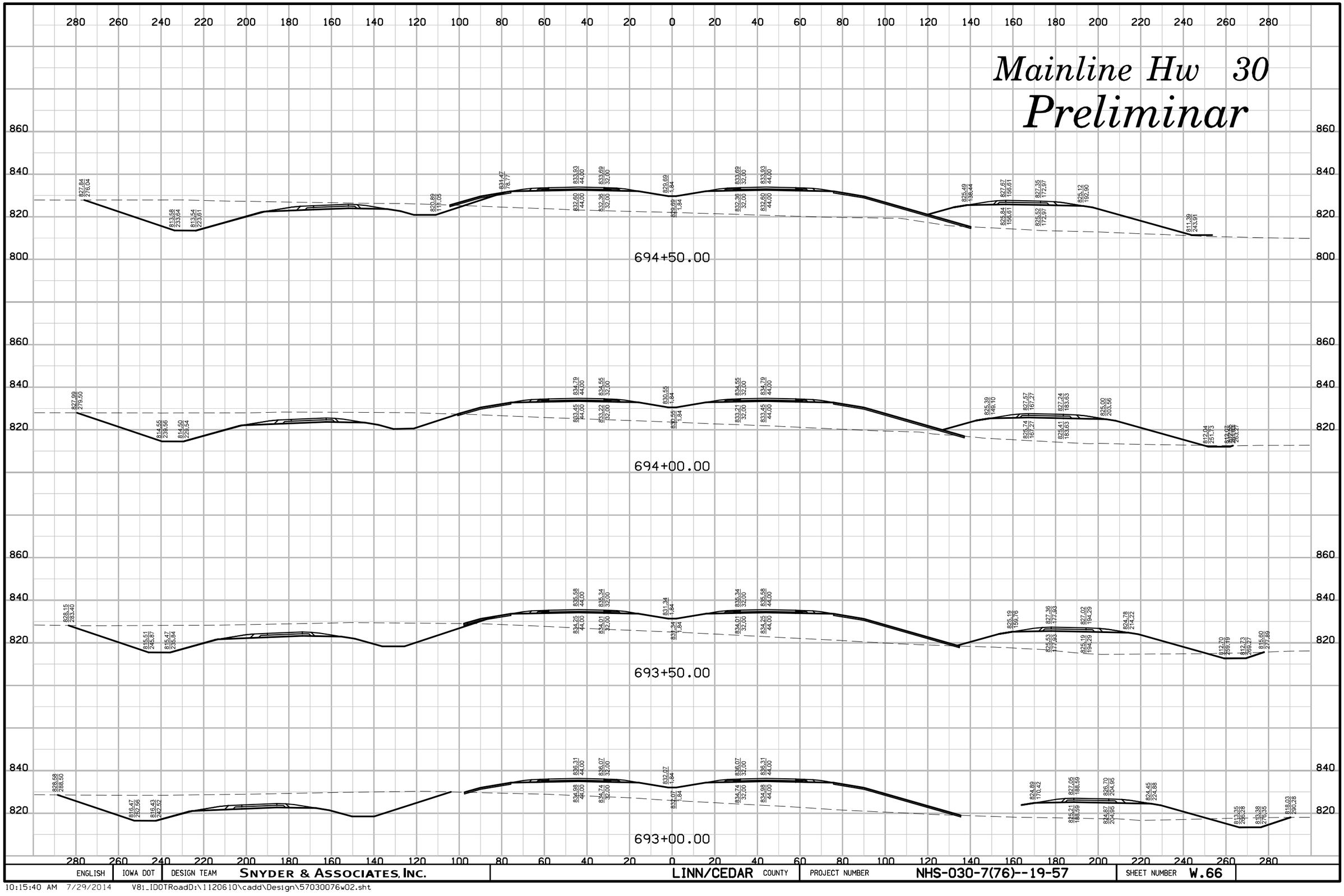
Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.65

Mainline Hw 30

Preliminar

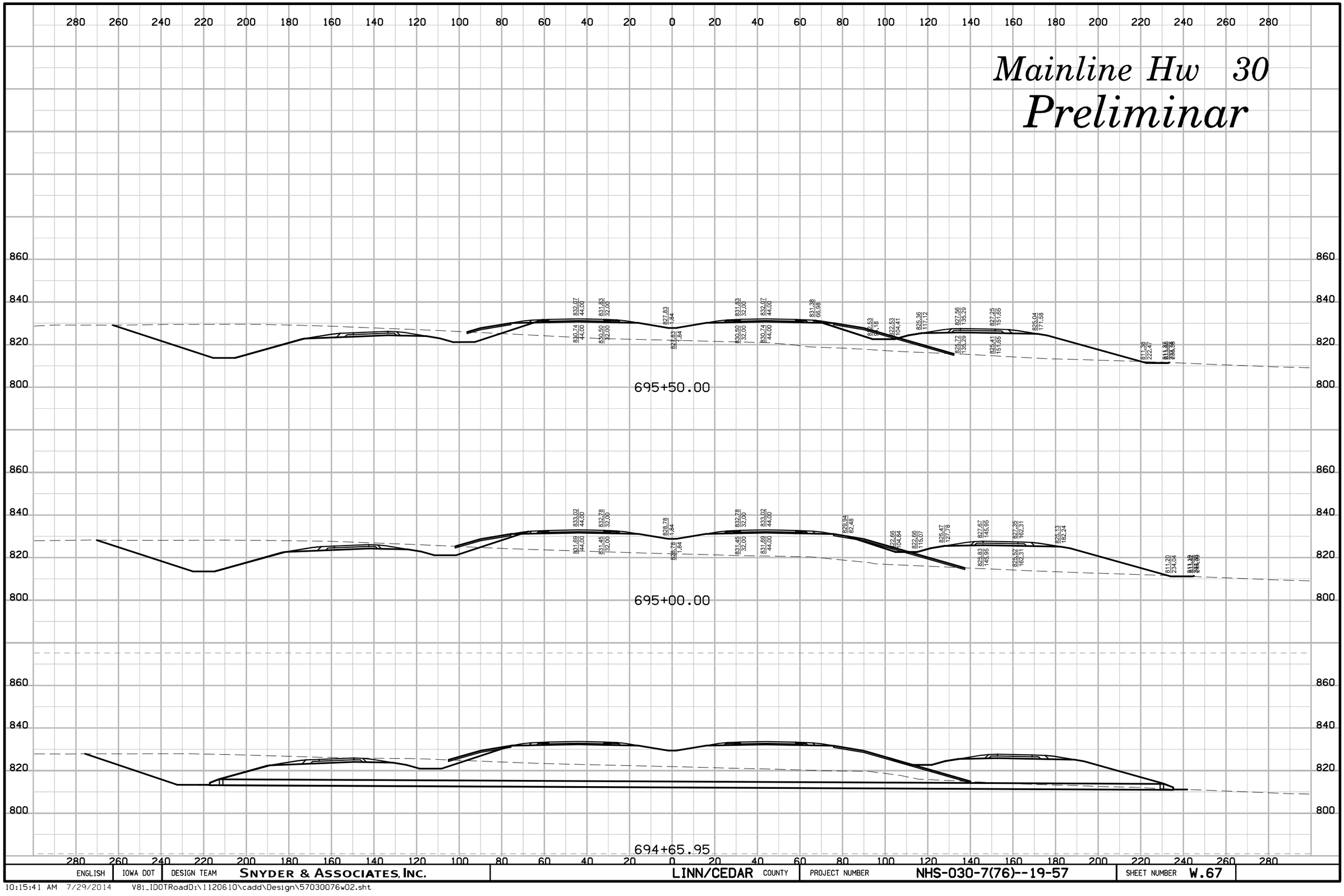


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.66

10:15:40 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

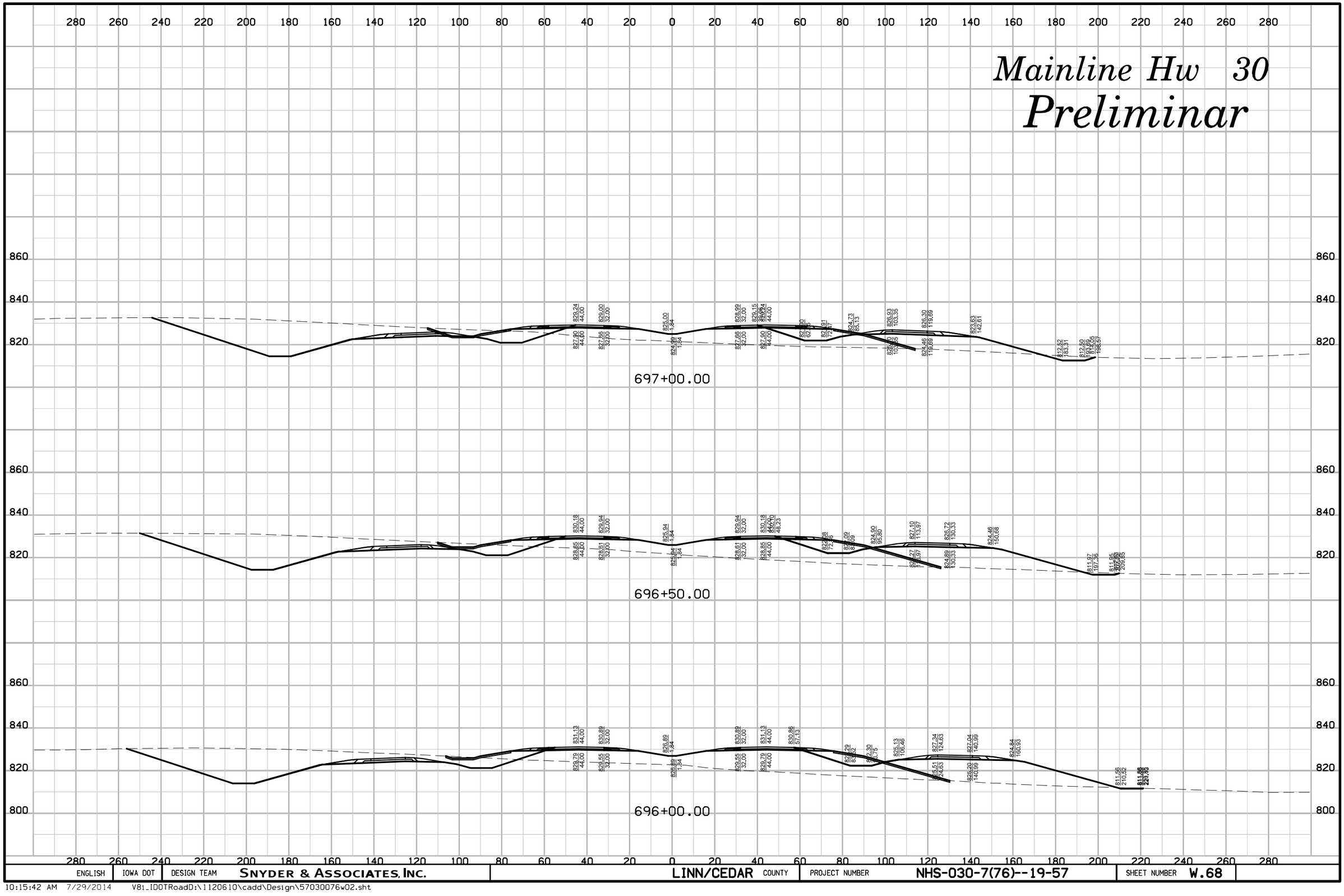


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.67

10:15:41 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

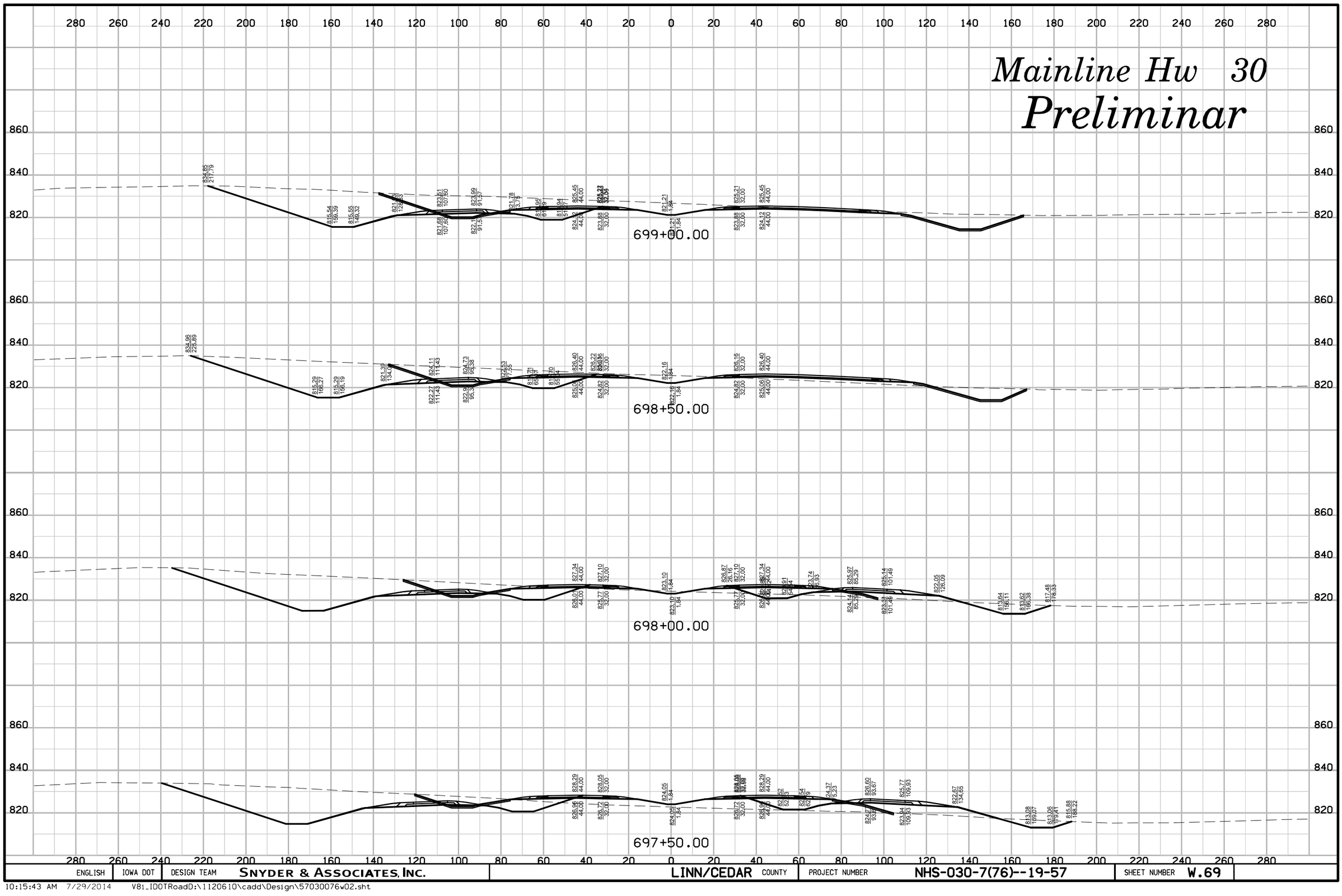
Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.68

Mainline Hw 30

Preliminar

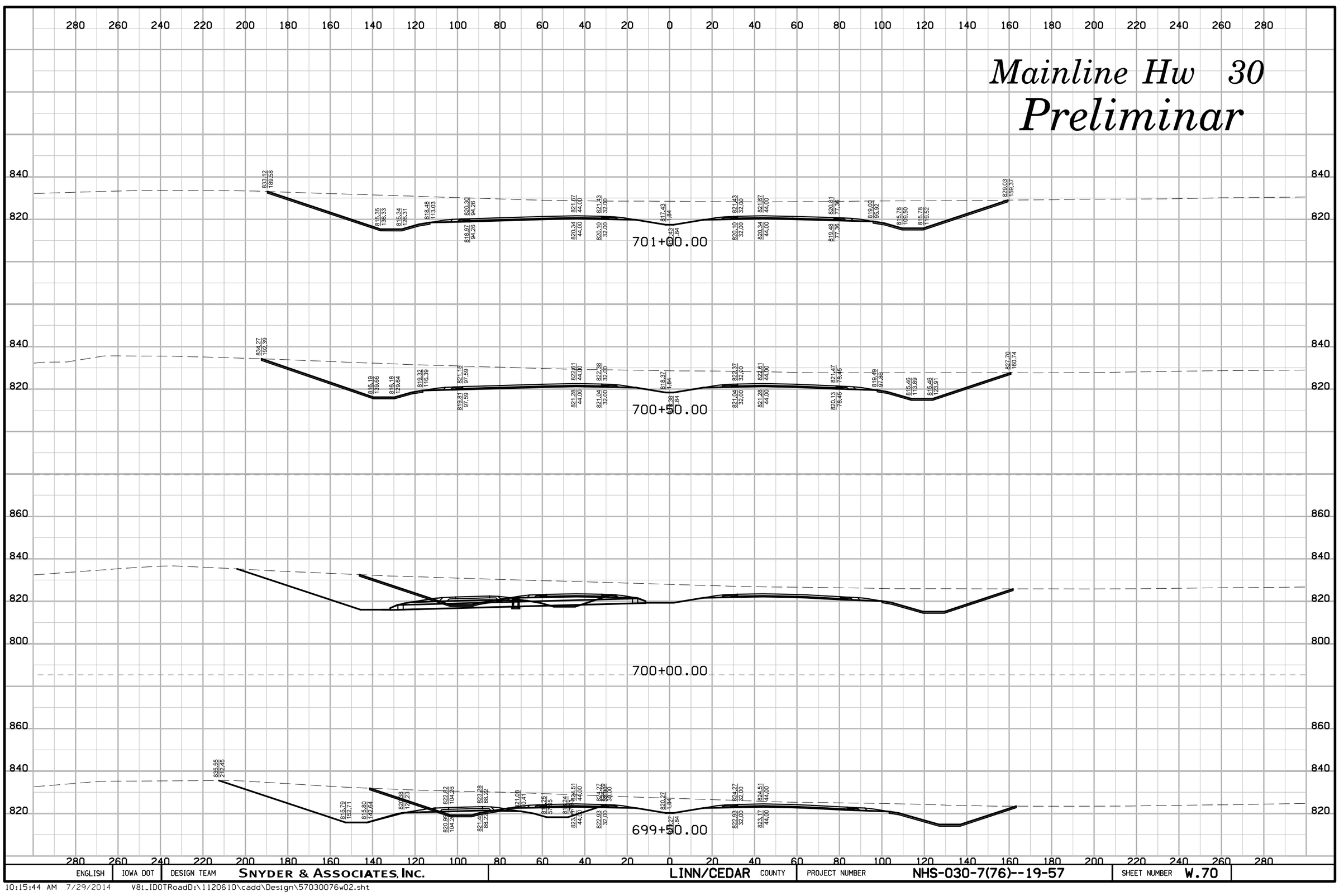


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.69

10:15:43 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

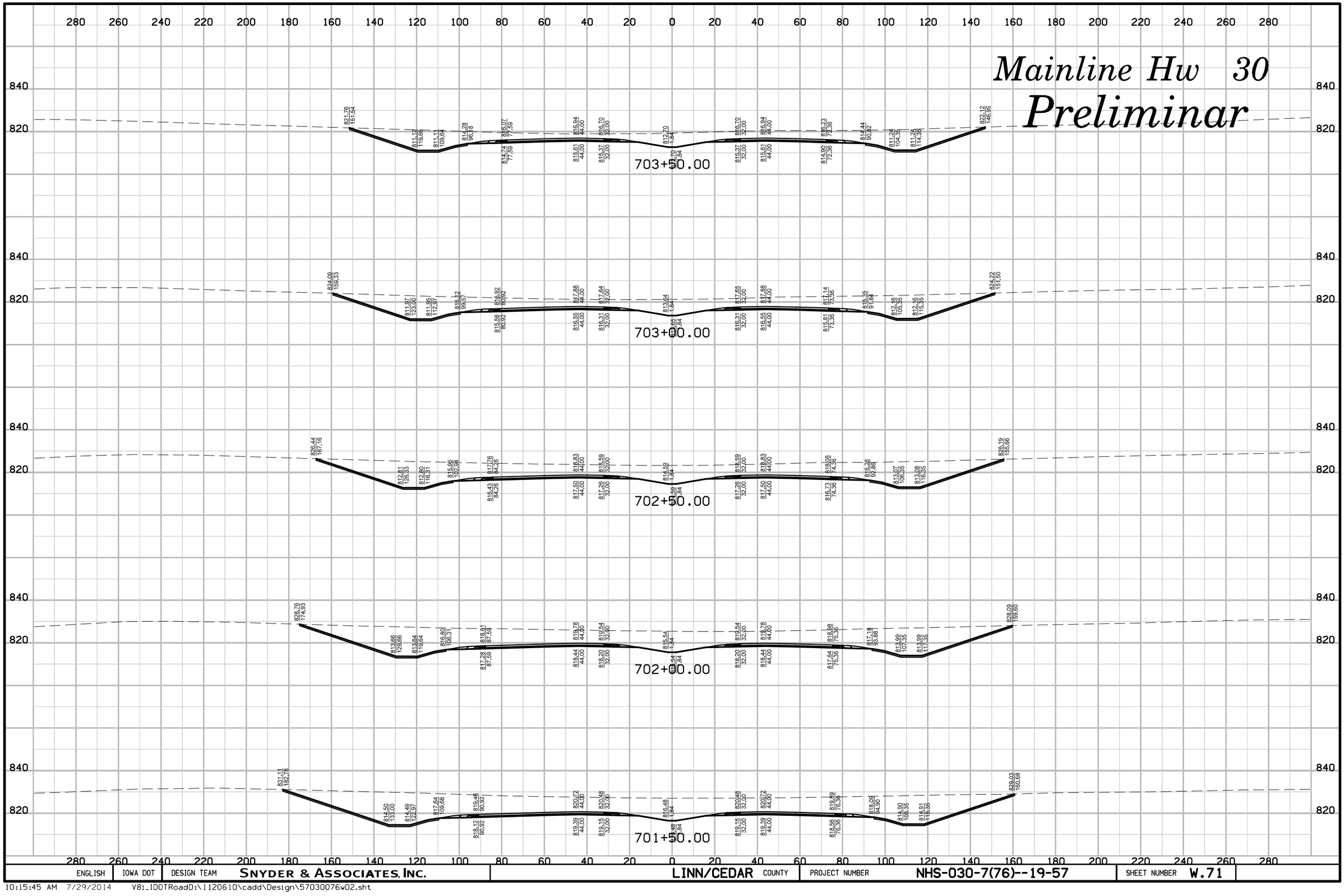
Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.70

Mainline Hw 30

Preliminar

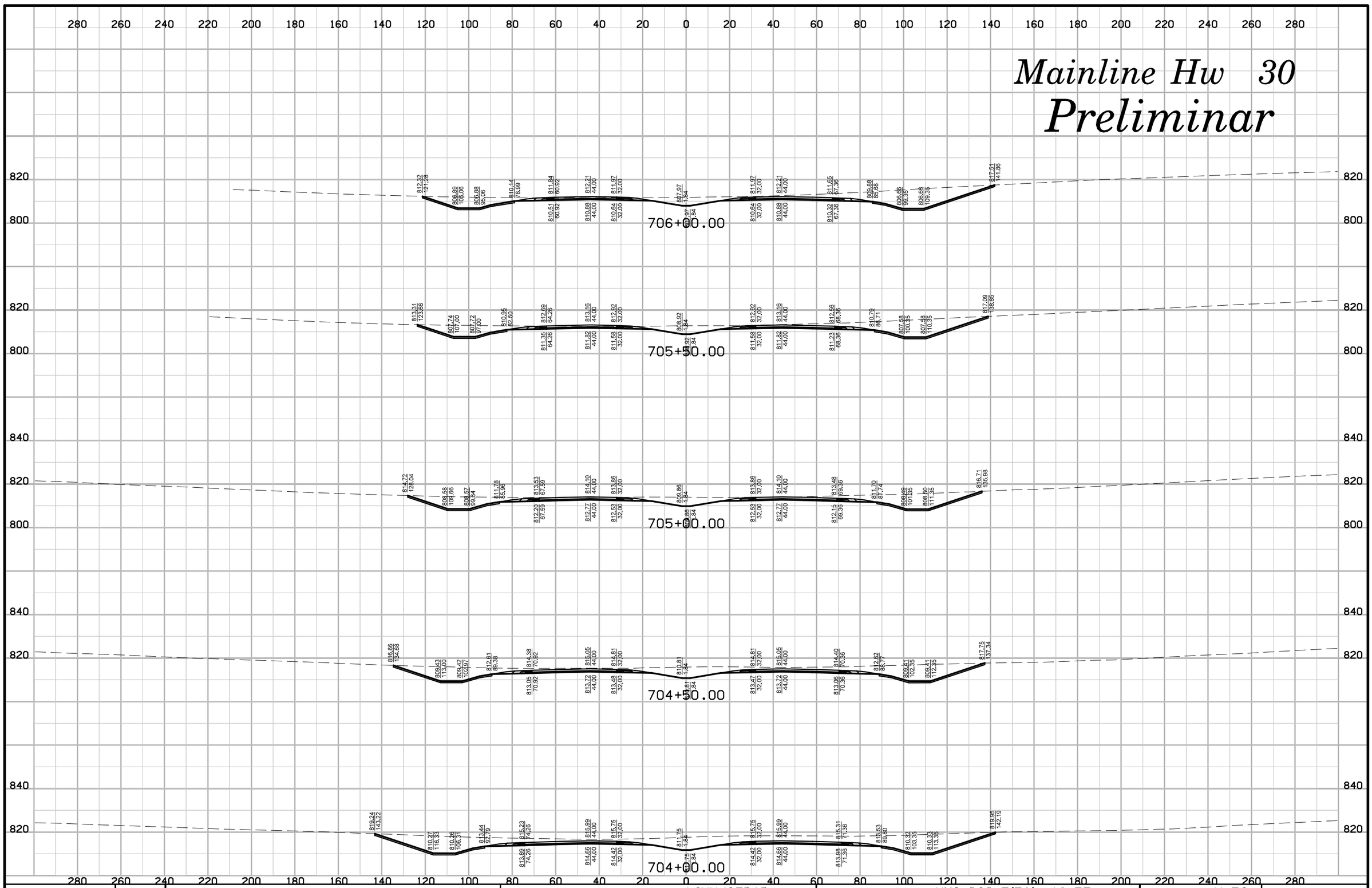


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.71

10:15:45 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.72

10:15:46 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

709+00.00

708+50.00

708+00.00

707+50.00

707+00.00

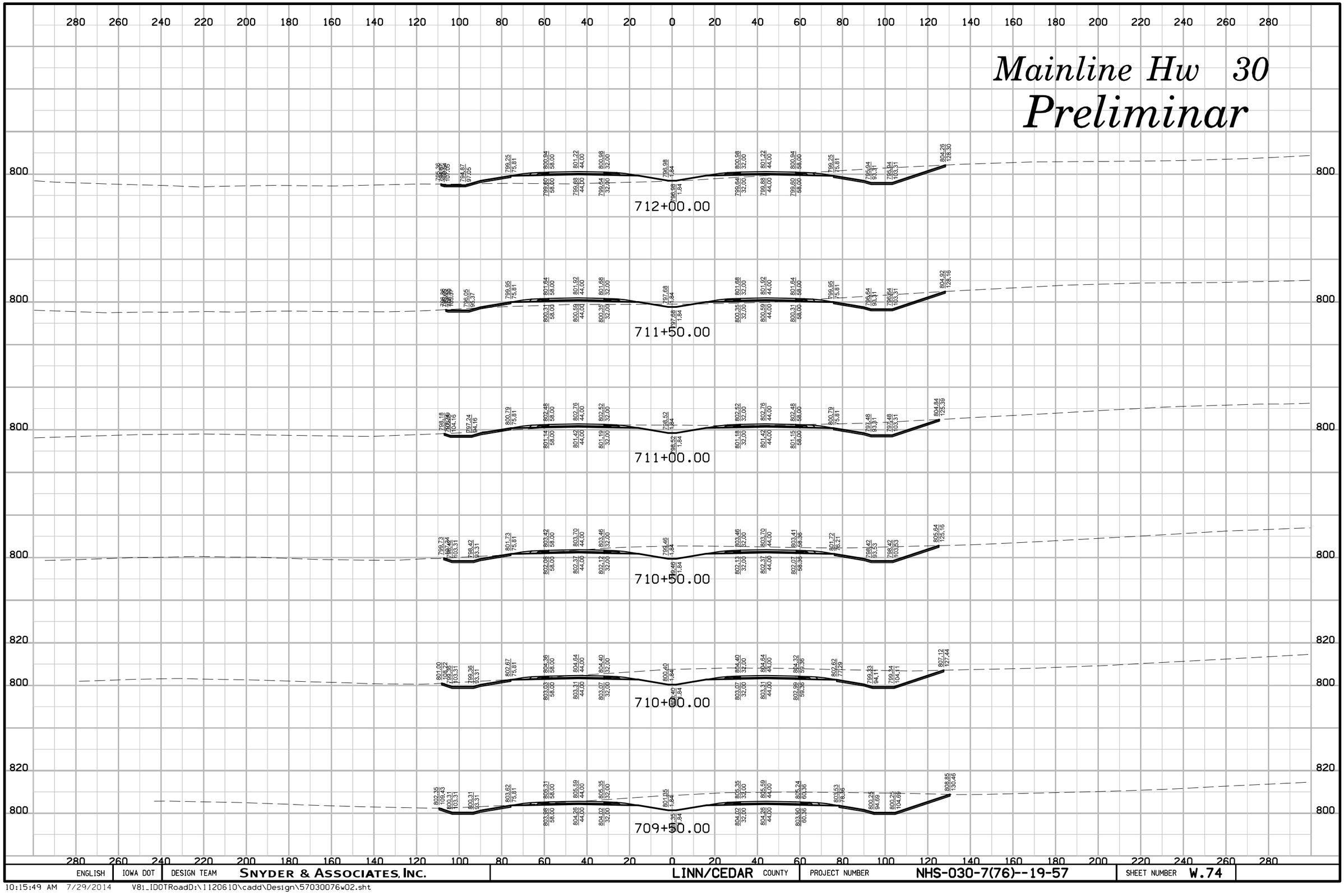
706+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.73

10:15:48 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

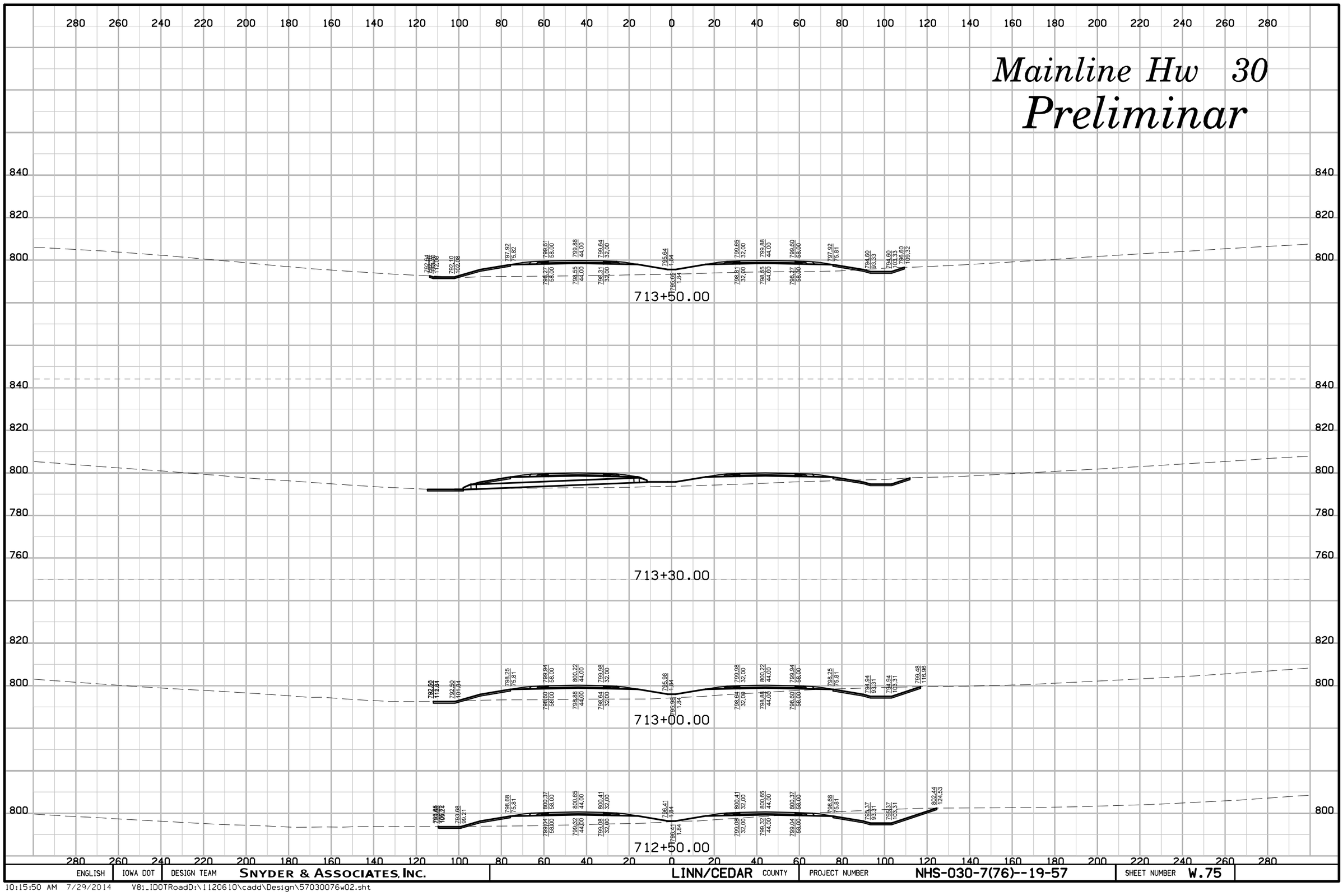


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.74

10:15:49 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

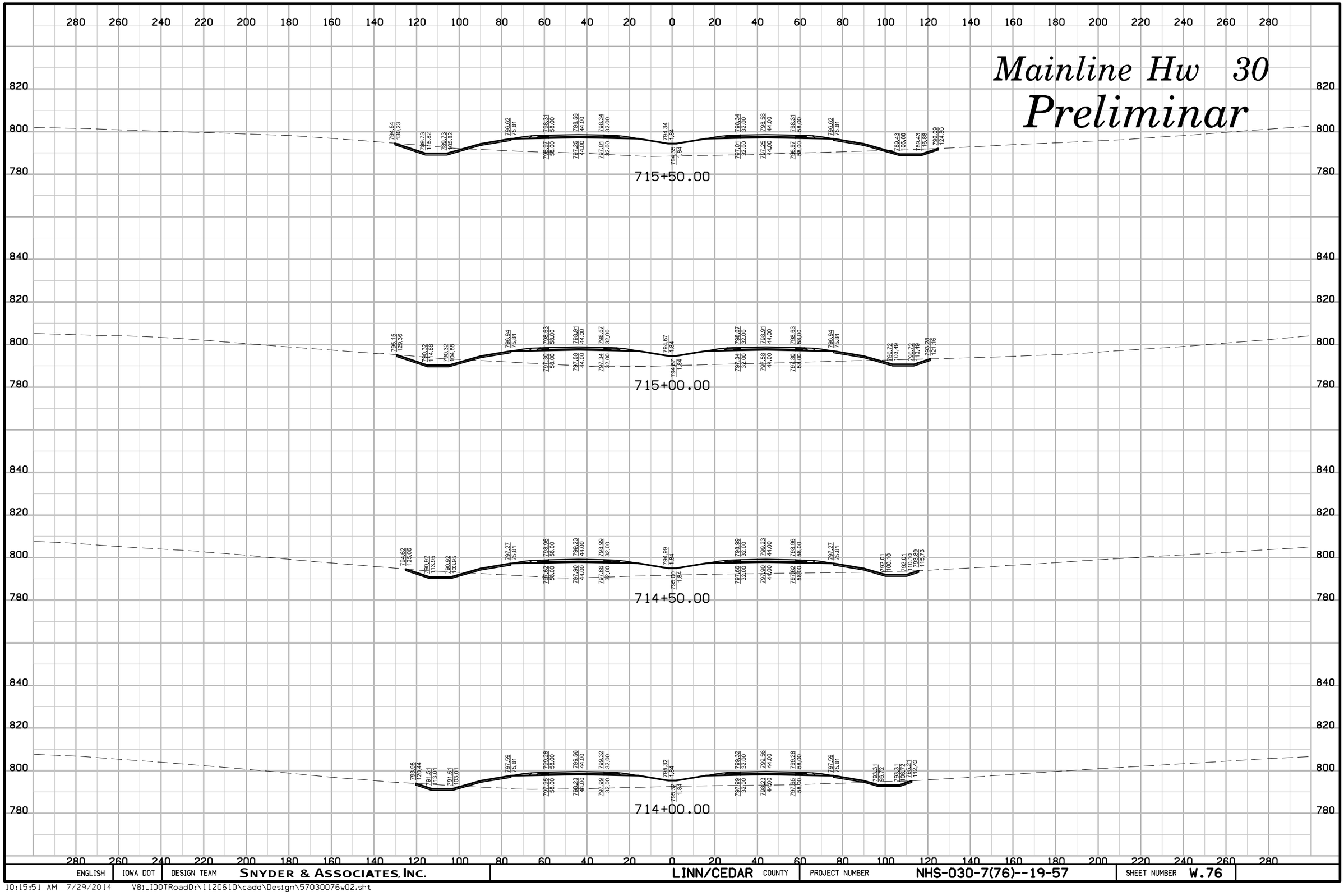


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.75

10:15:50 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

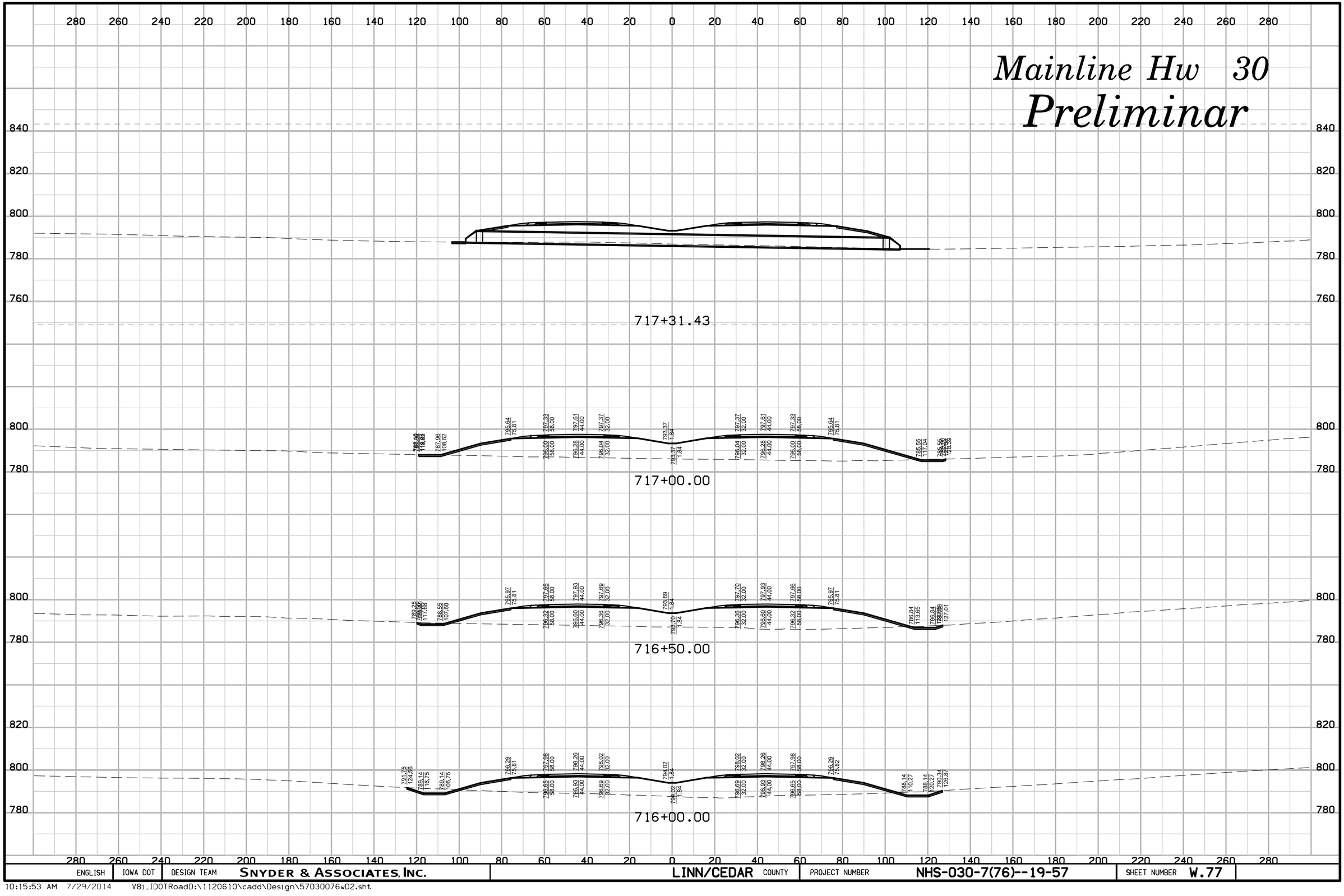


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.76

10:15:51 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

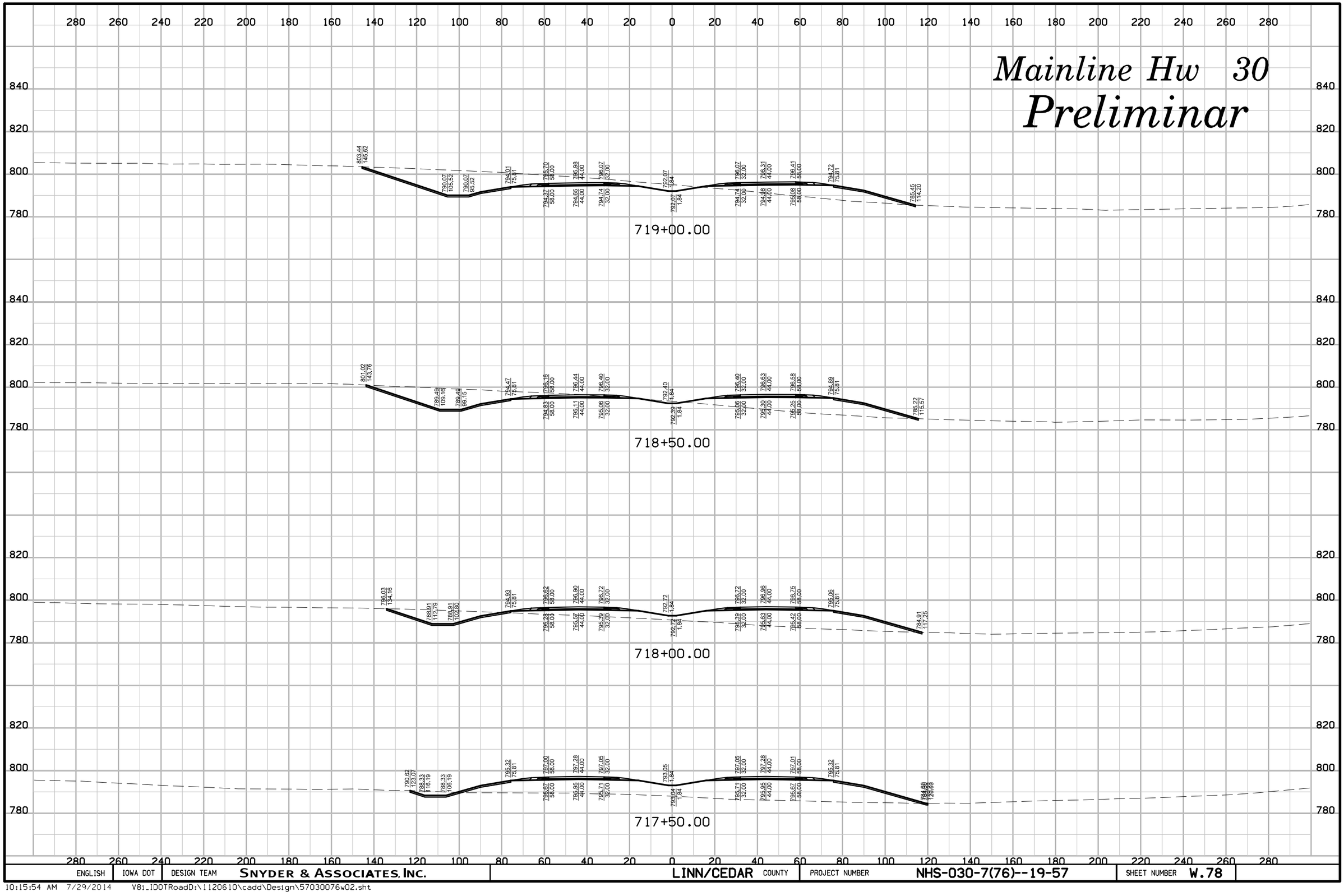


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.77

10:15:53 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

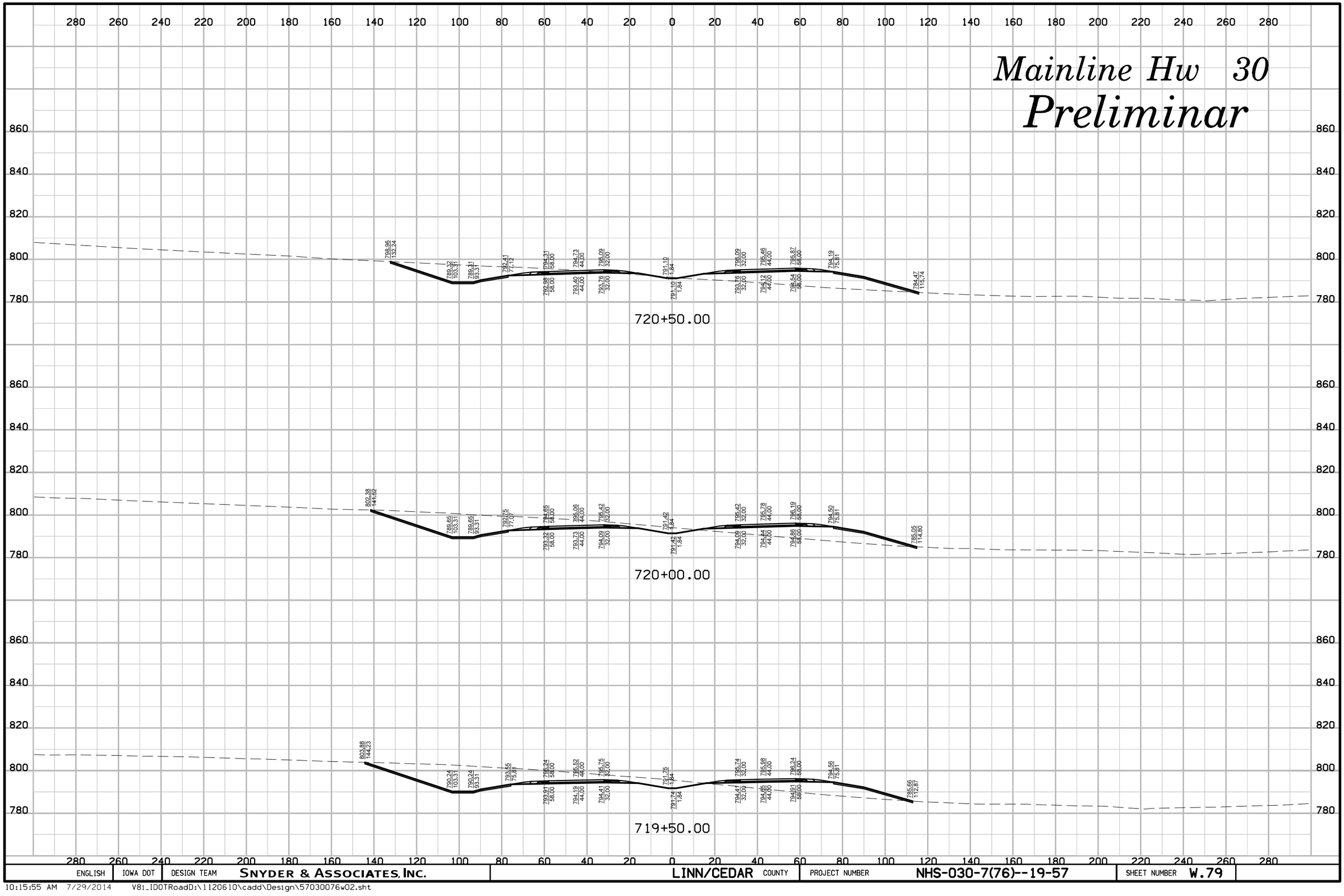


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.78

10:15:54 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

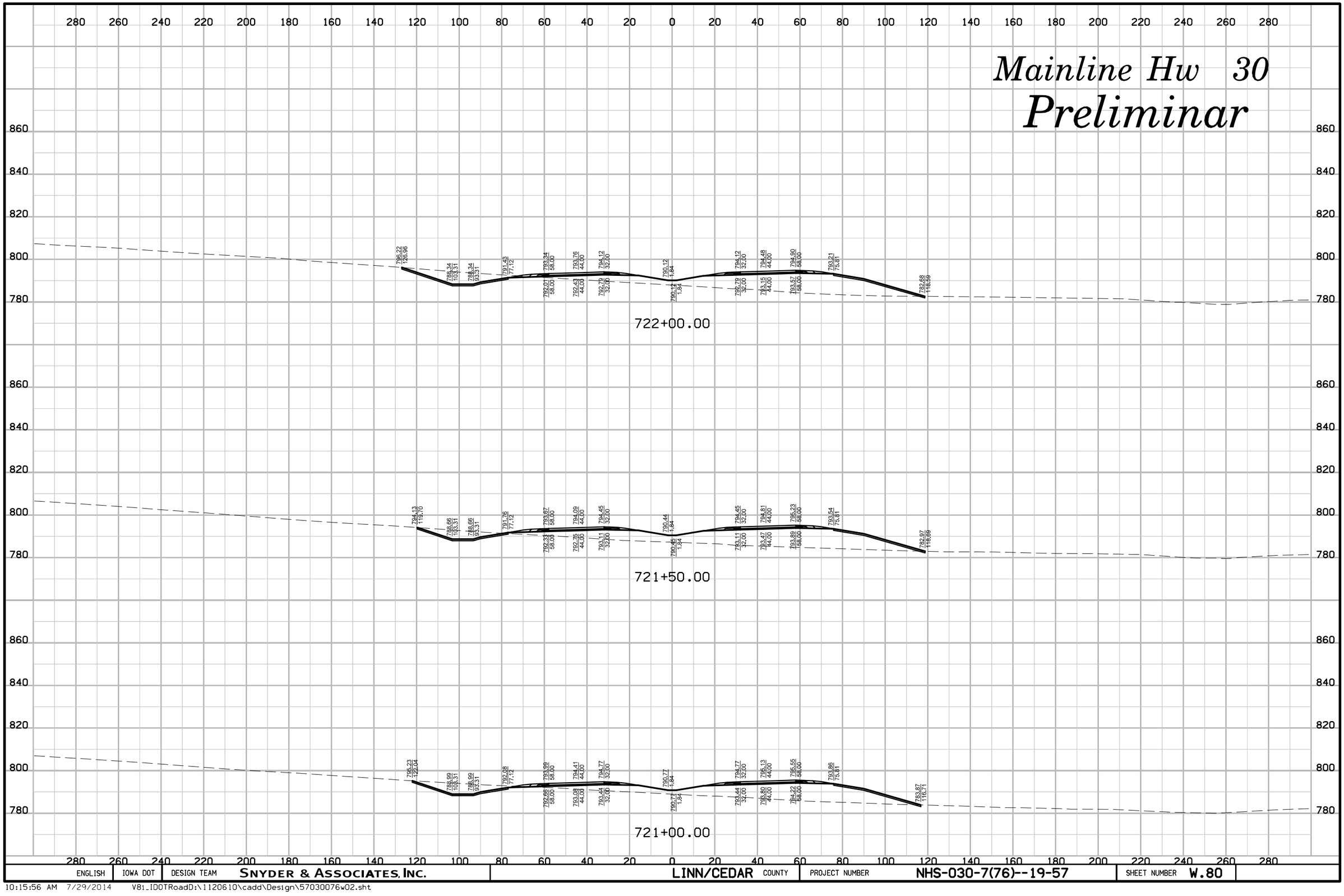


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.79

10:15:55 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

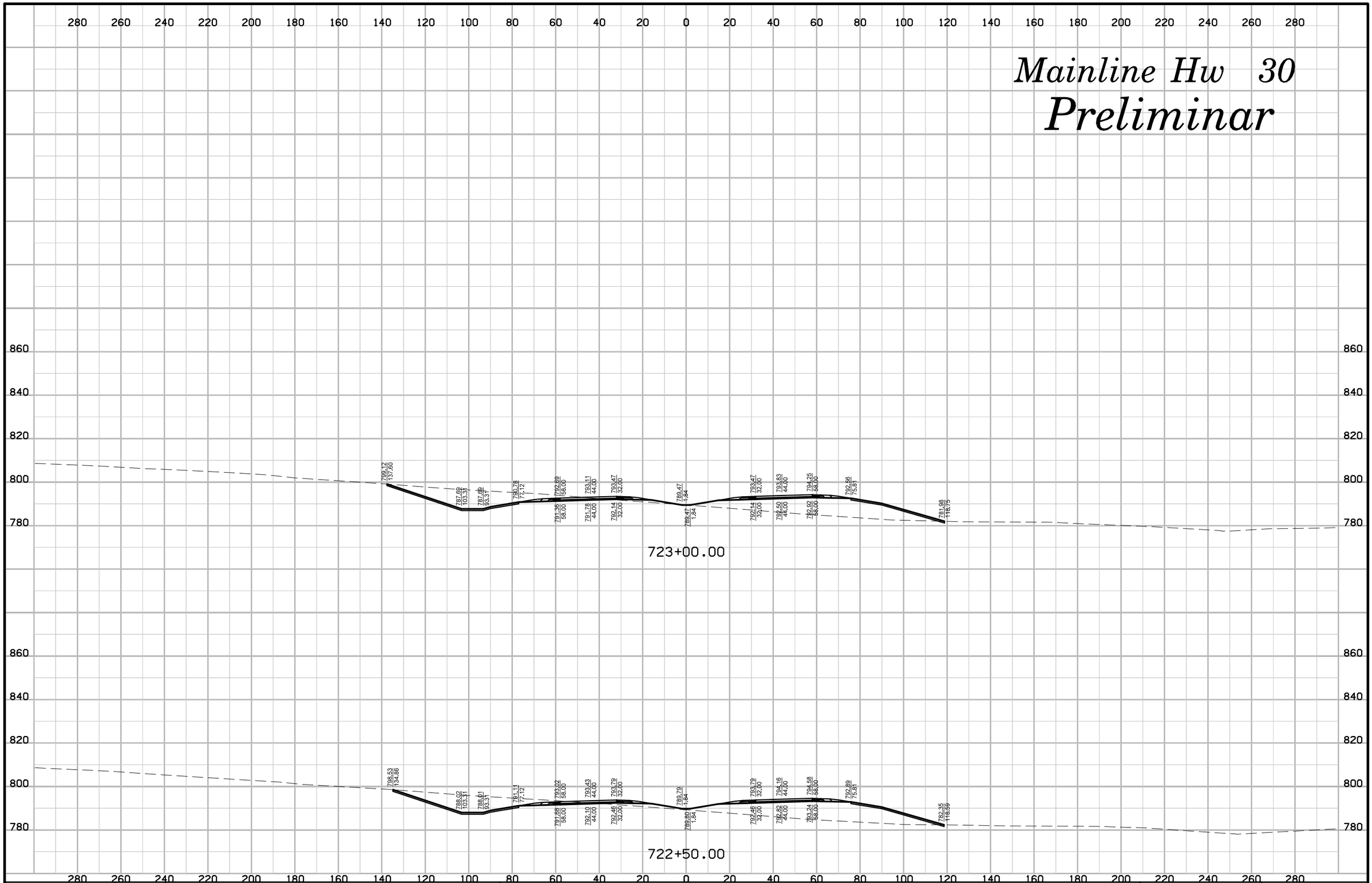


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.80

10:15:56 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

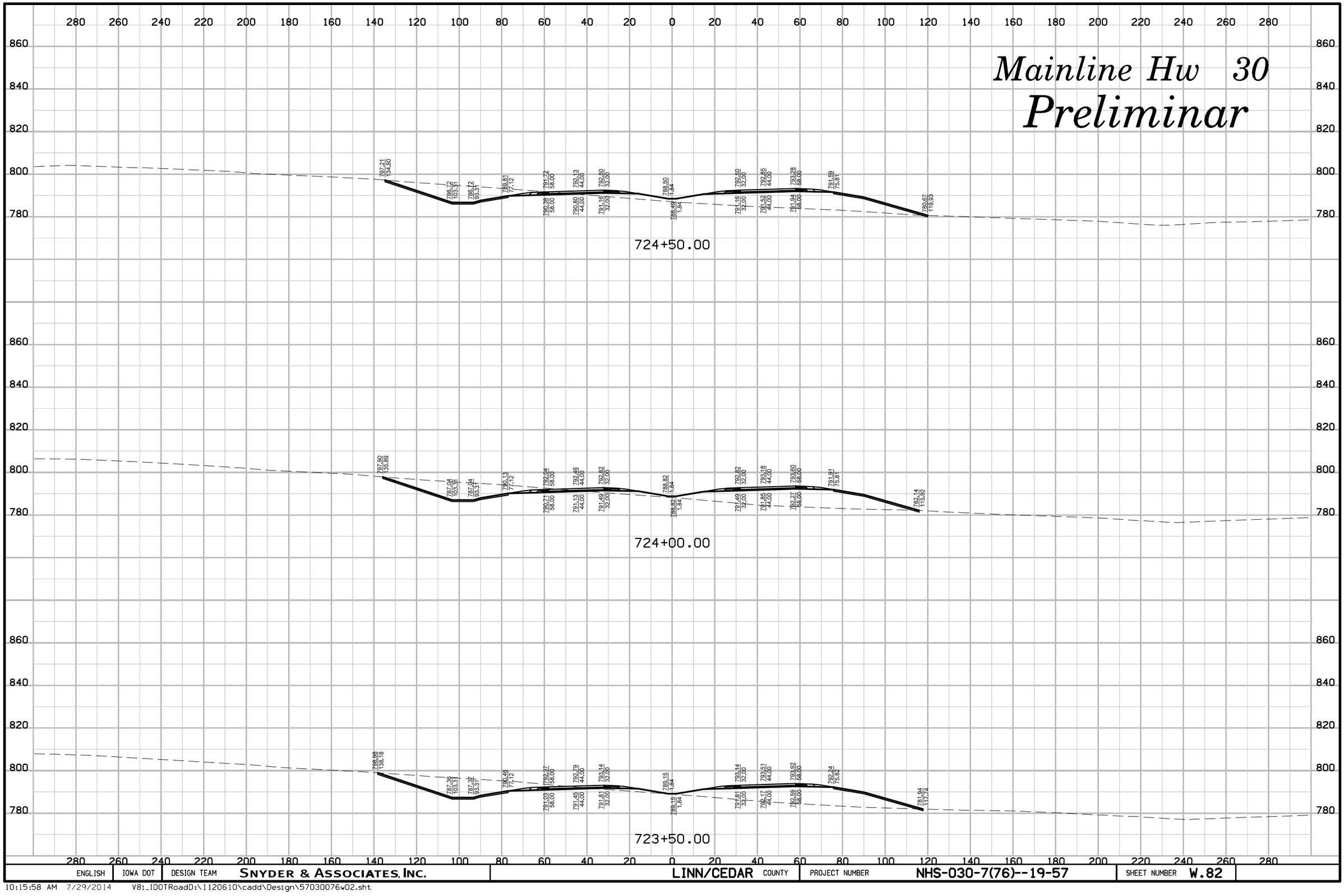


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.81

10:15:57 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

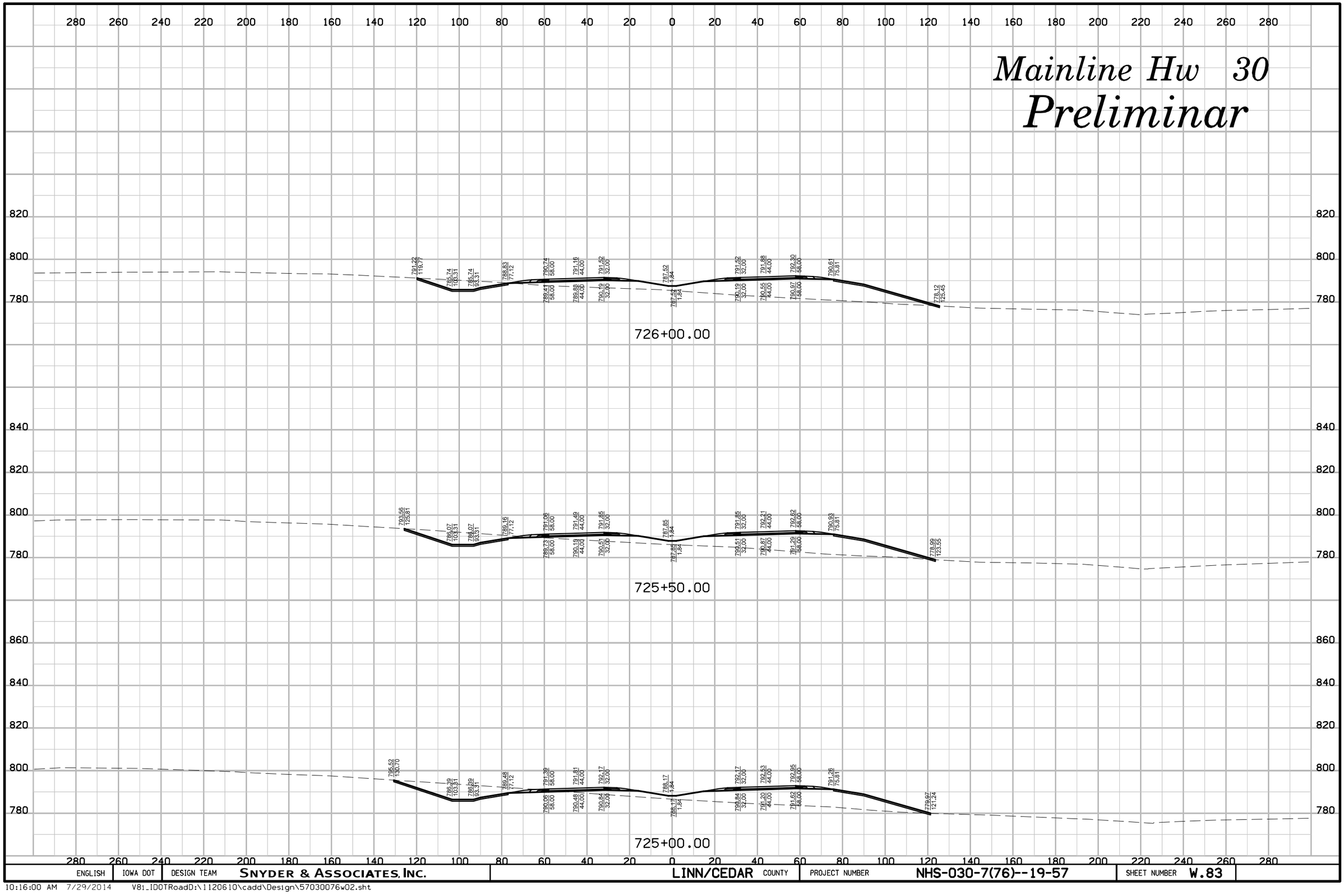


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.82

10:15:58 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

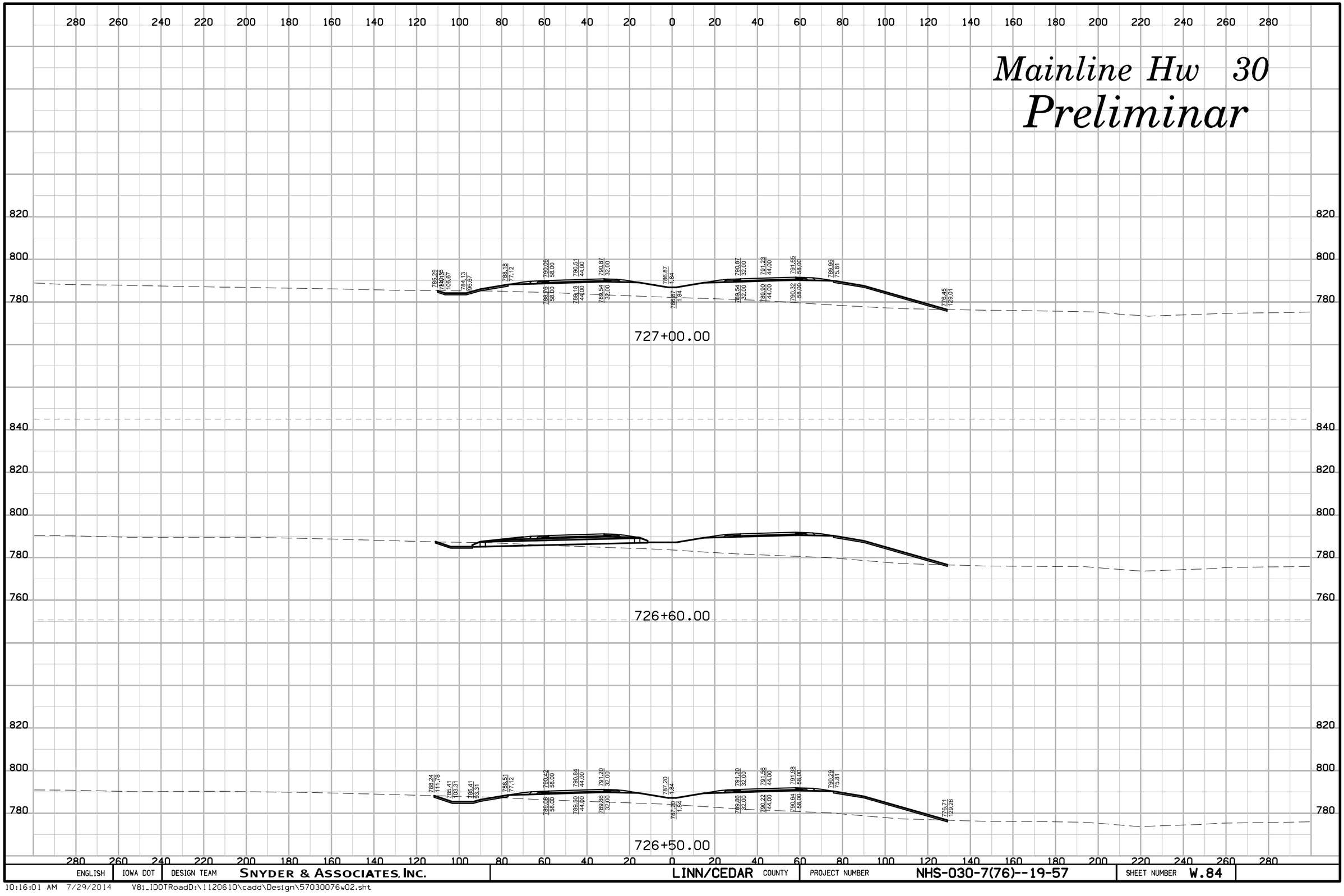


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.83

10:16:00 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

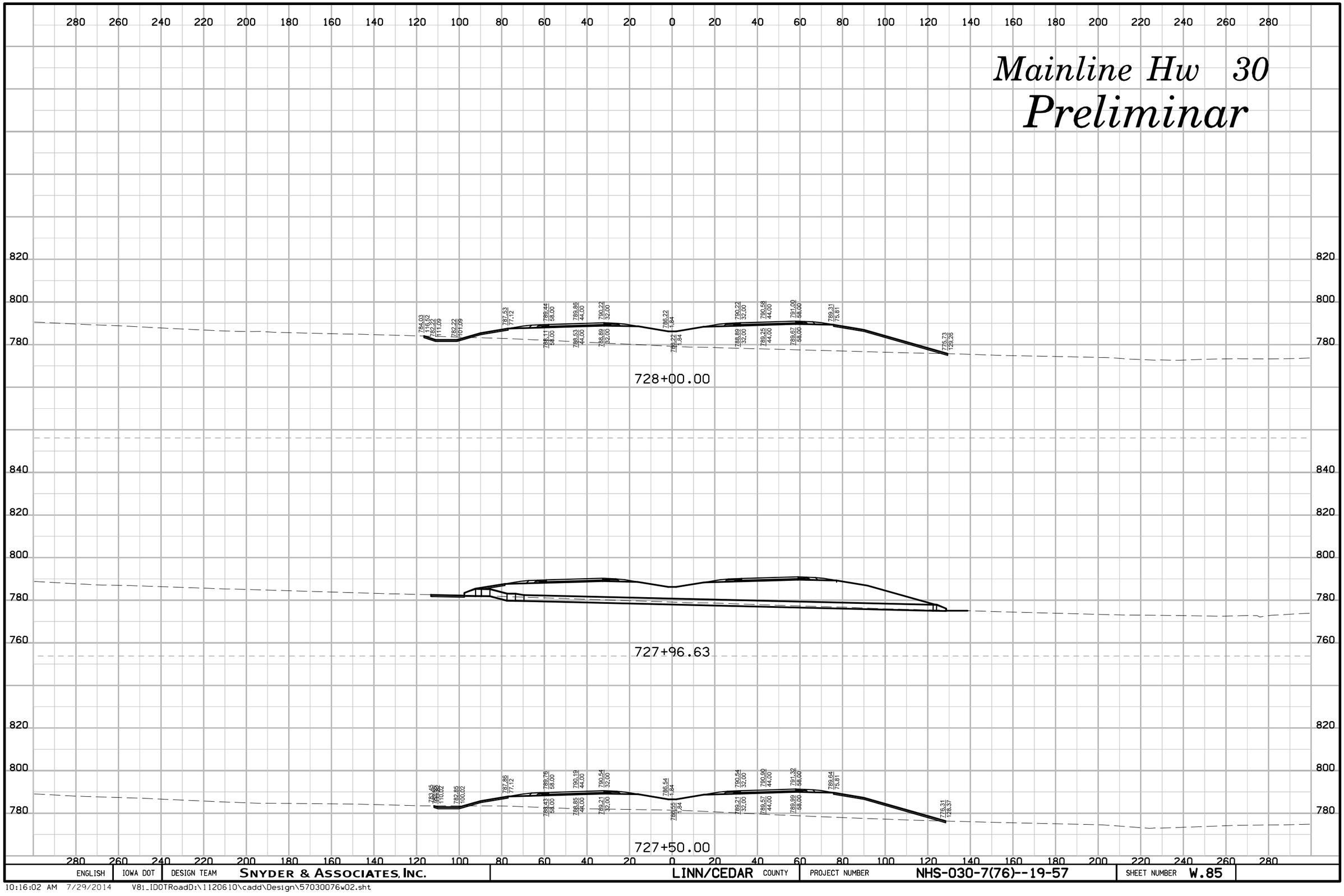


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.84

10:16:01 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

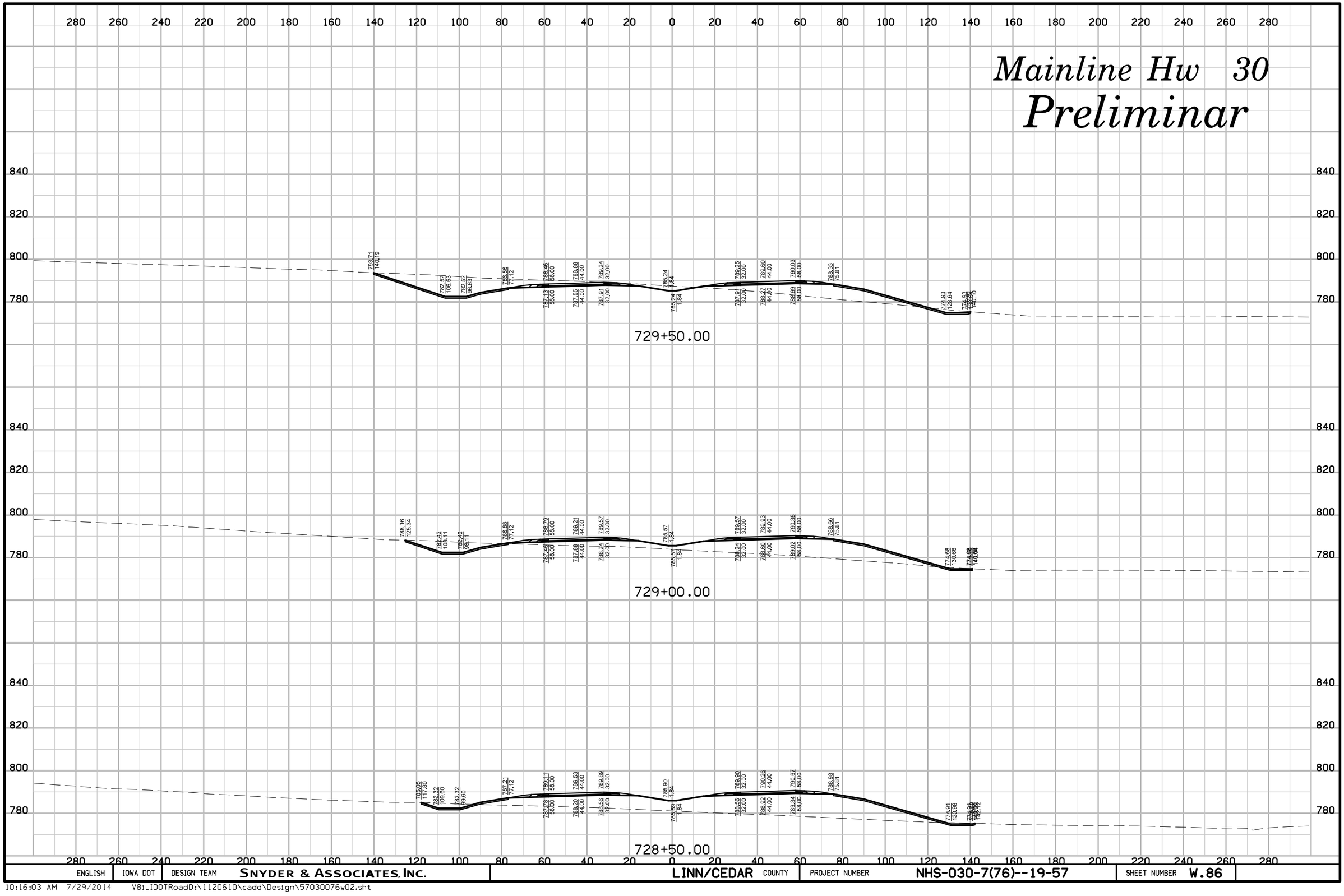


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.85

10:16:02 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

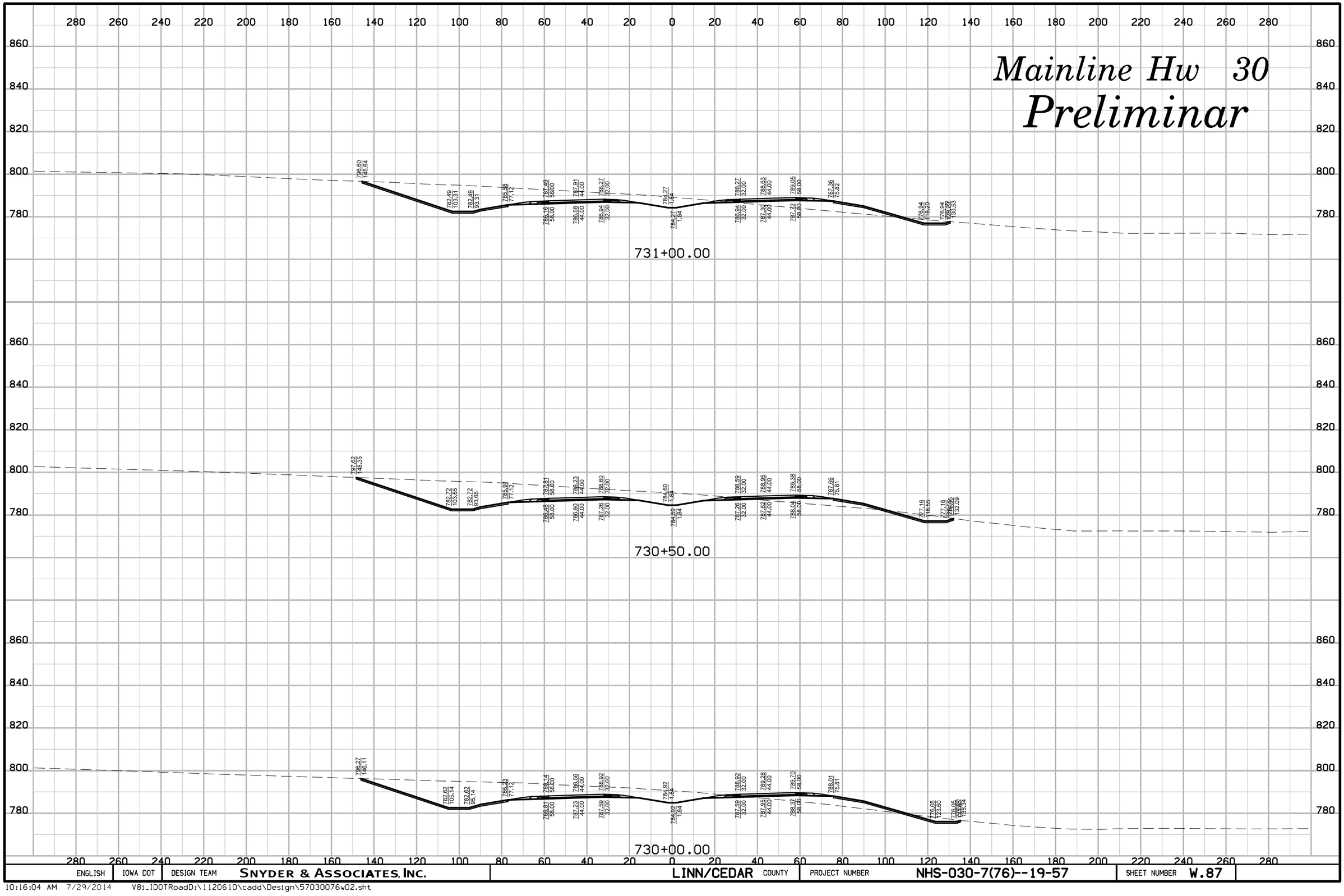


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.86

10:16:03 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

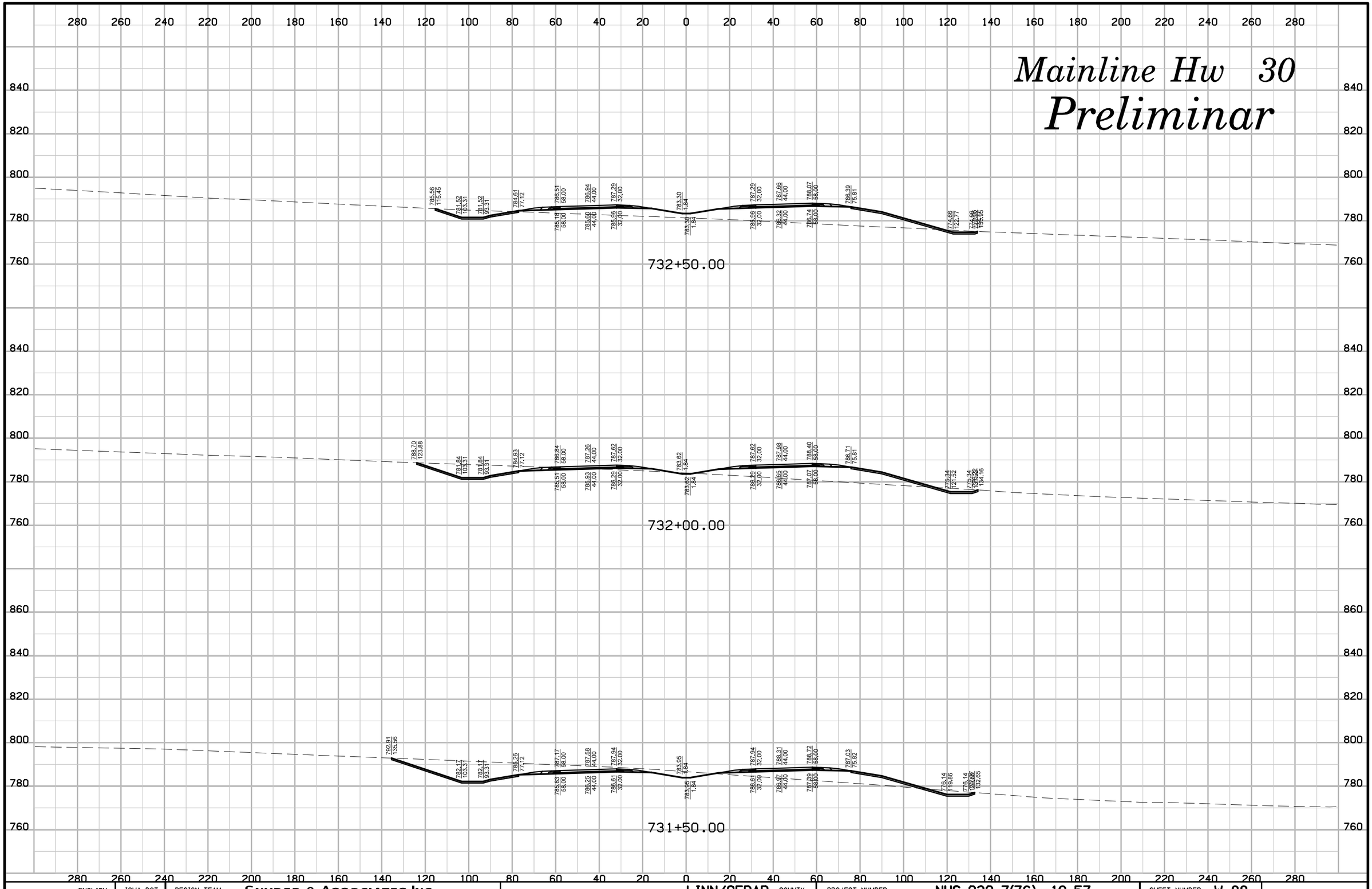


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.87

10:16:04 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.88

10:16:05 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

733+50.00

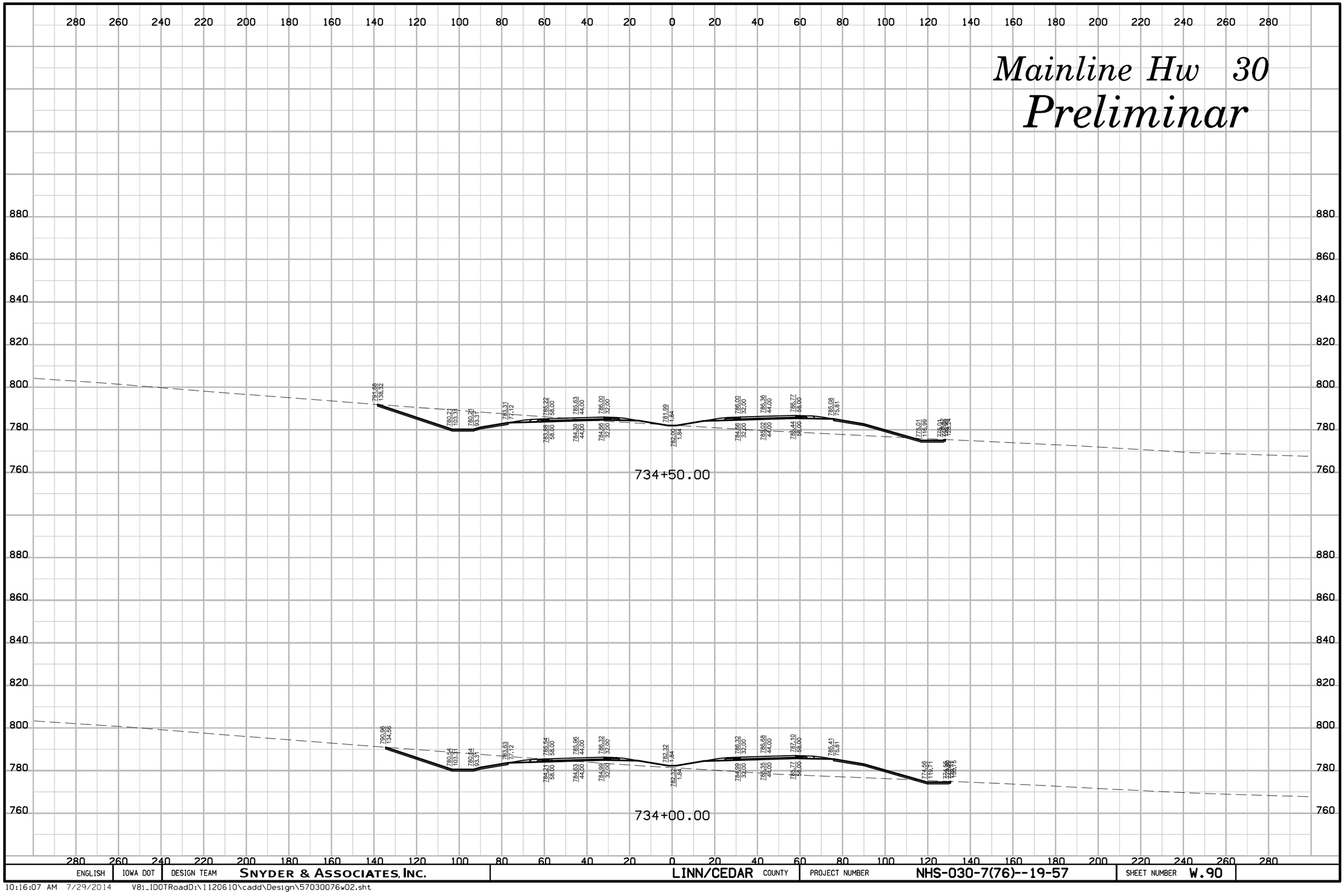
733+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.89

10:16:06 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

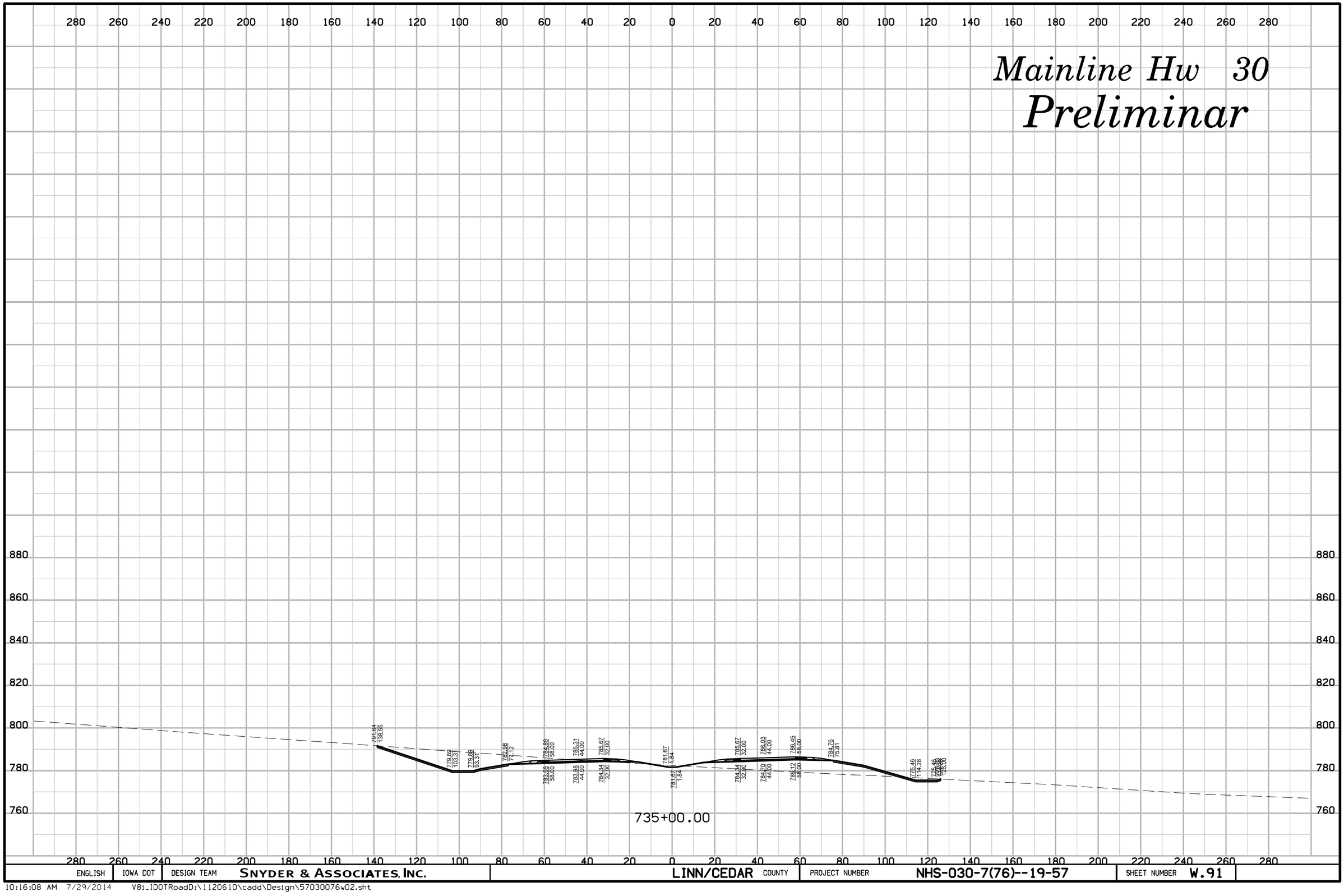


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.90

10:16:07 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

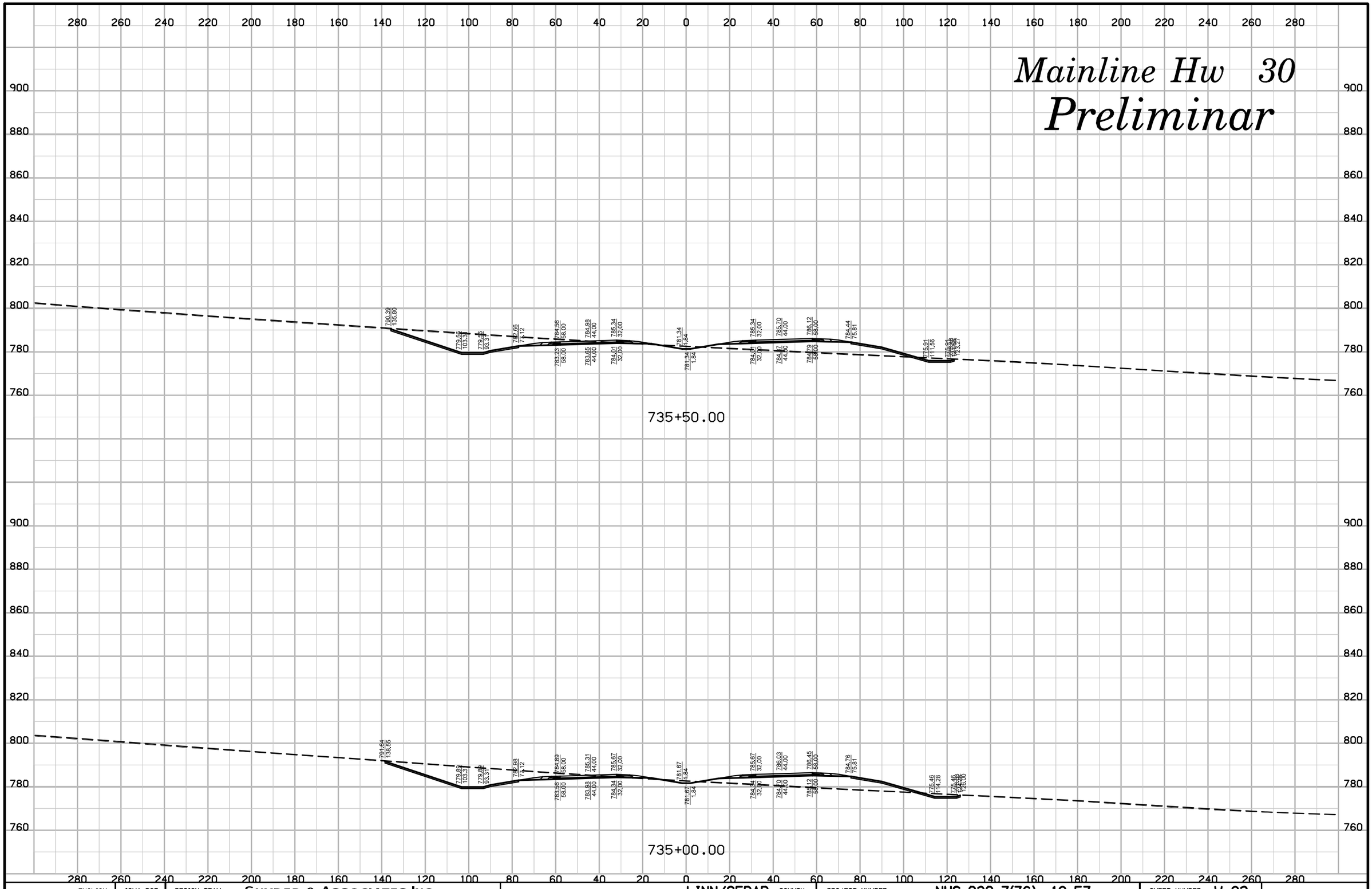


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.91

10:16:08 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w02.sht

Mainline Hw 30

Preliminar

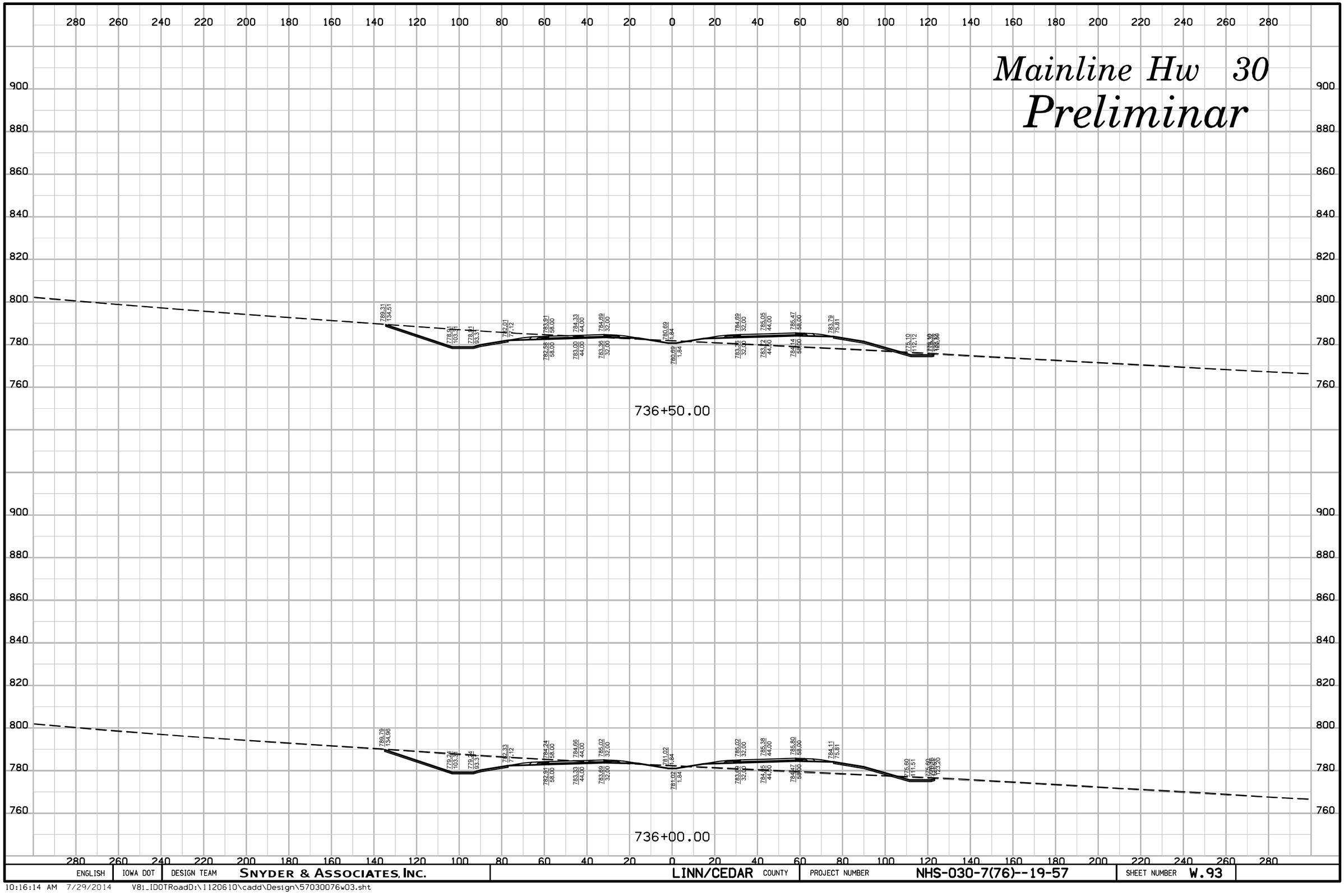


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.92

10:16:12 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

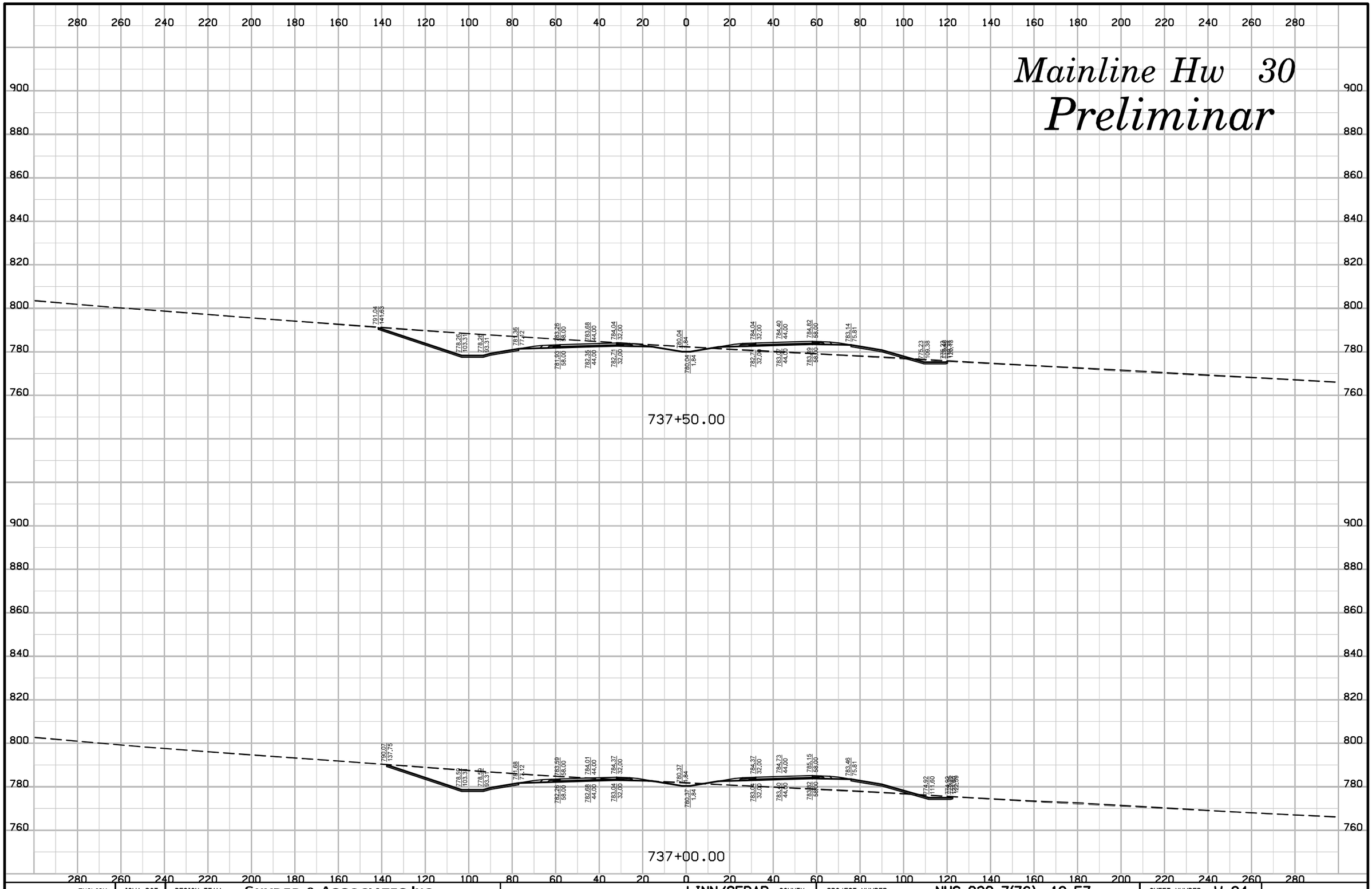


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.93

10:16:14 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

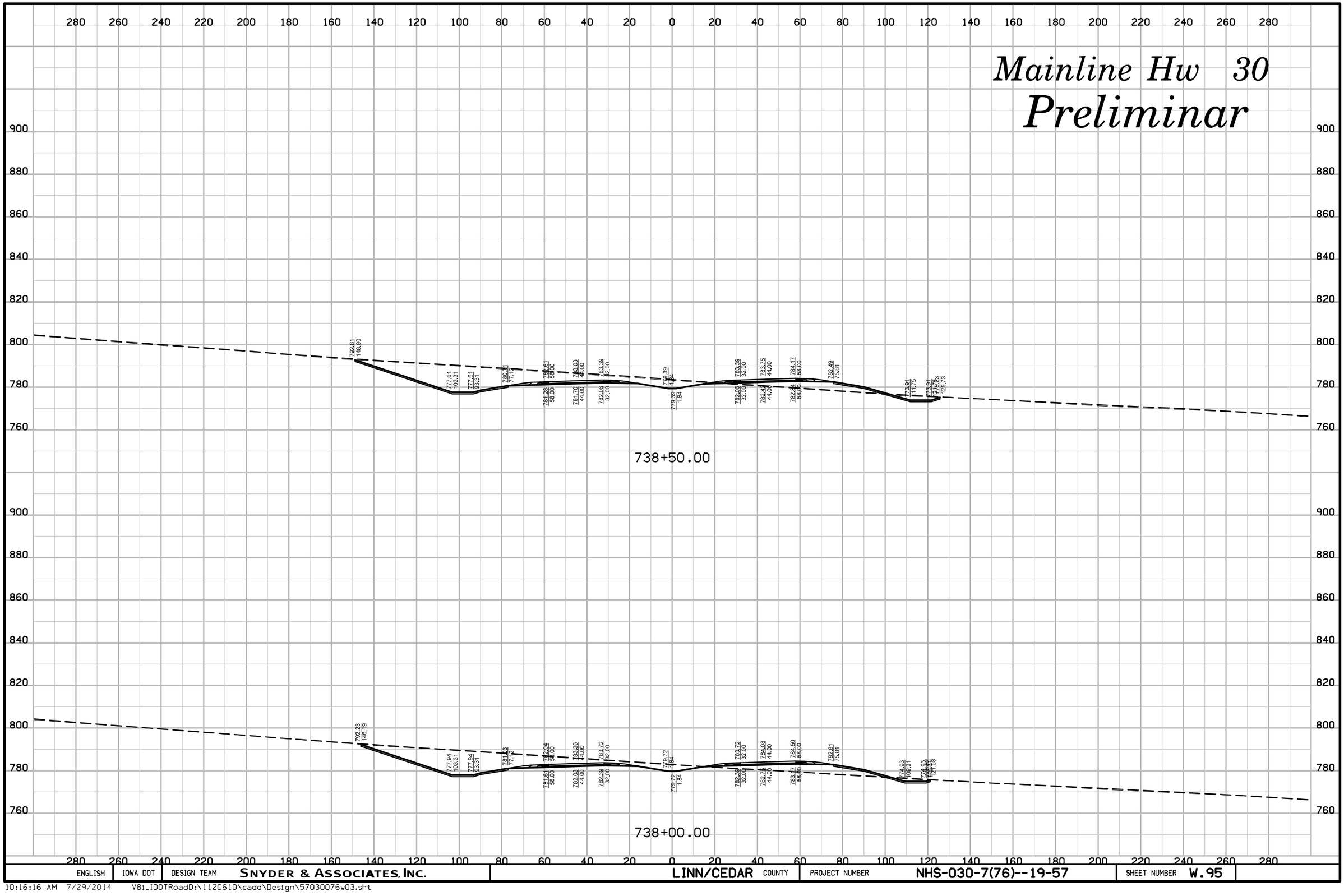


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.94

10:16:15 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

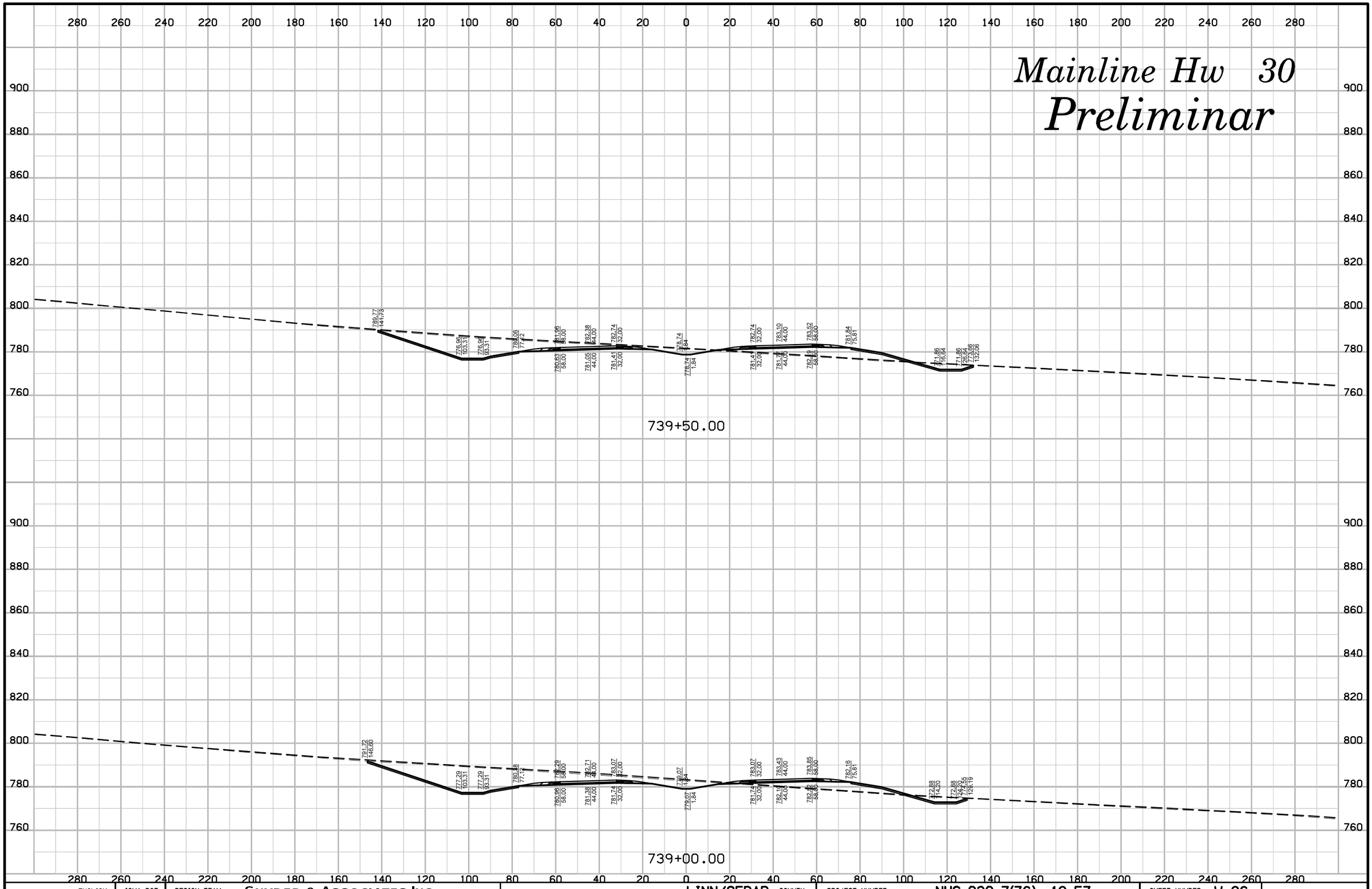


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.95

10:16:16 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

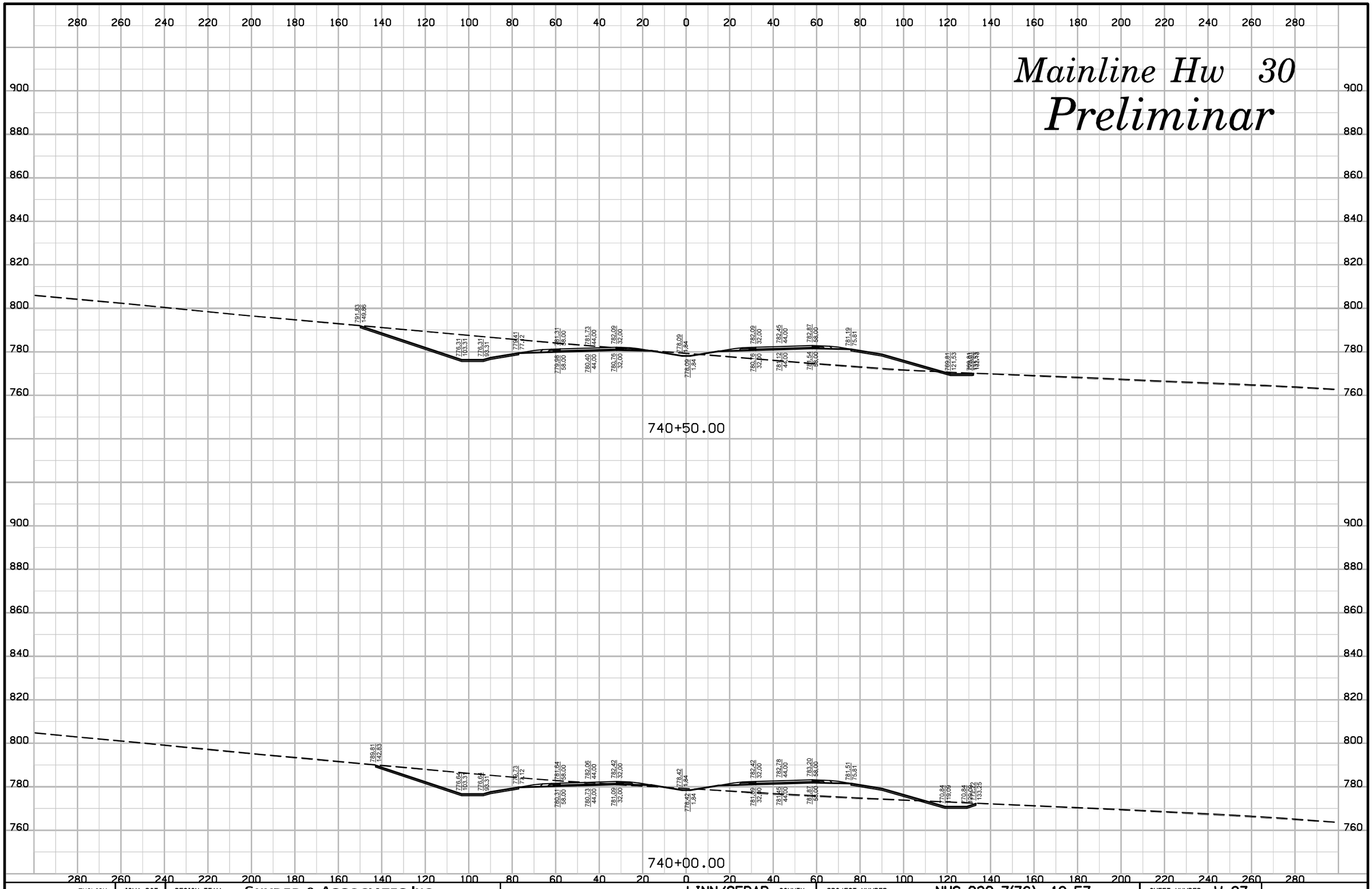


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.96

10:16:17 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.97

10:16:19 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

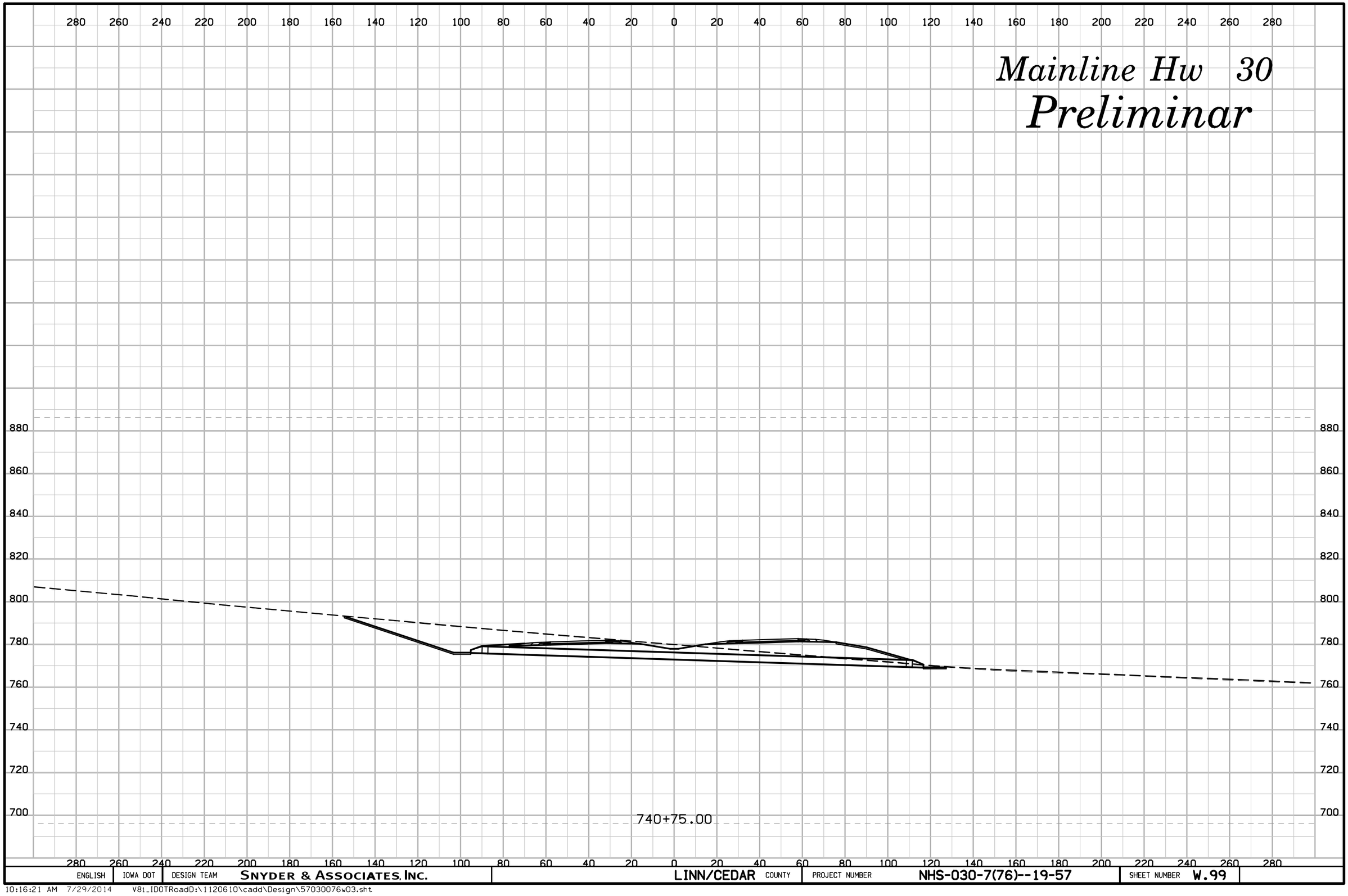
740+55.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.98

10:16:20 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.99

10:16:21 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

741+50.00

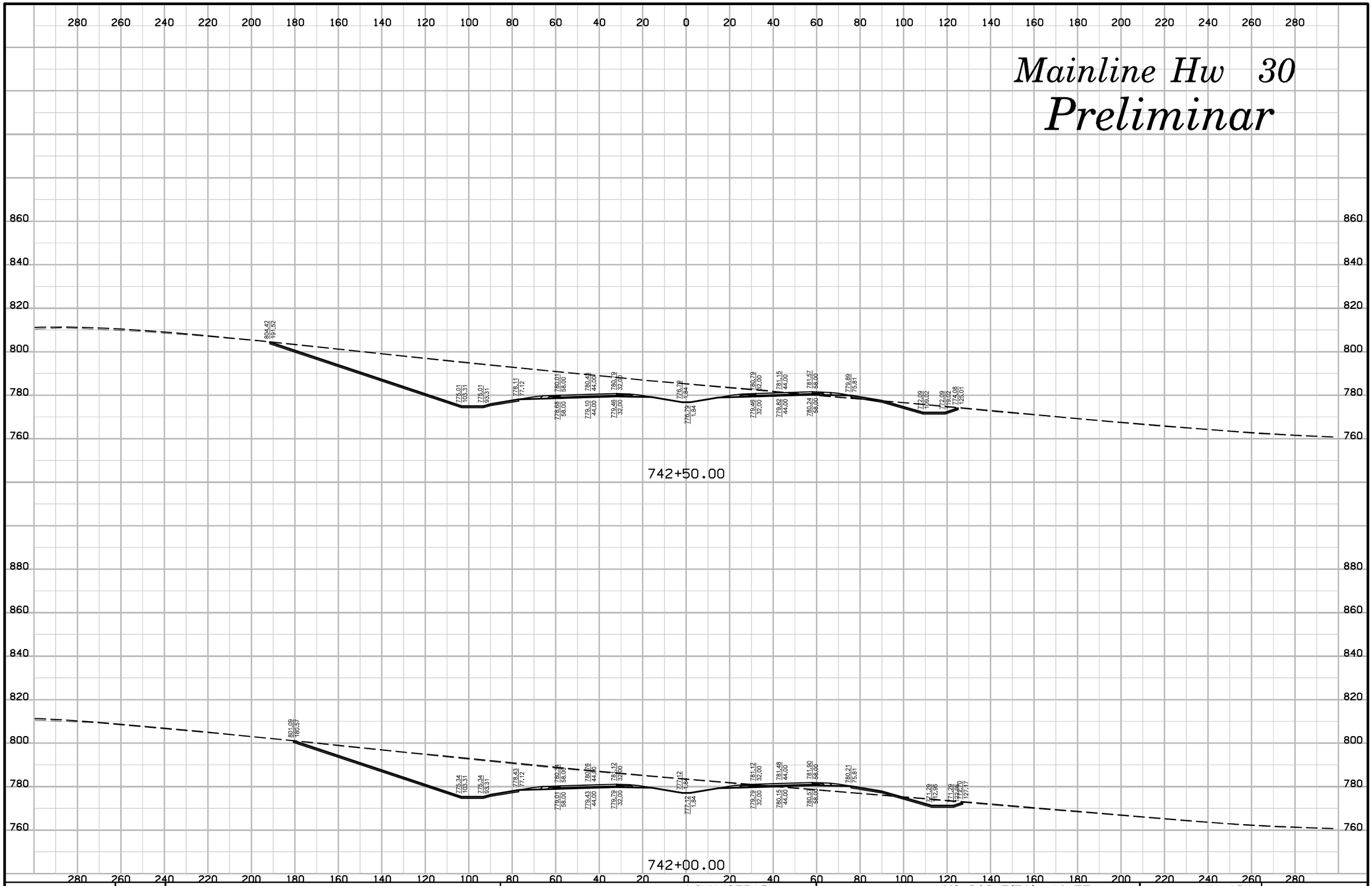
741+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.100

10:16:22 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

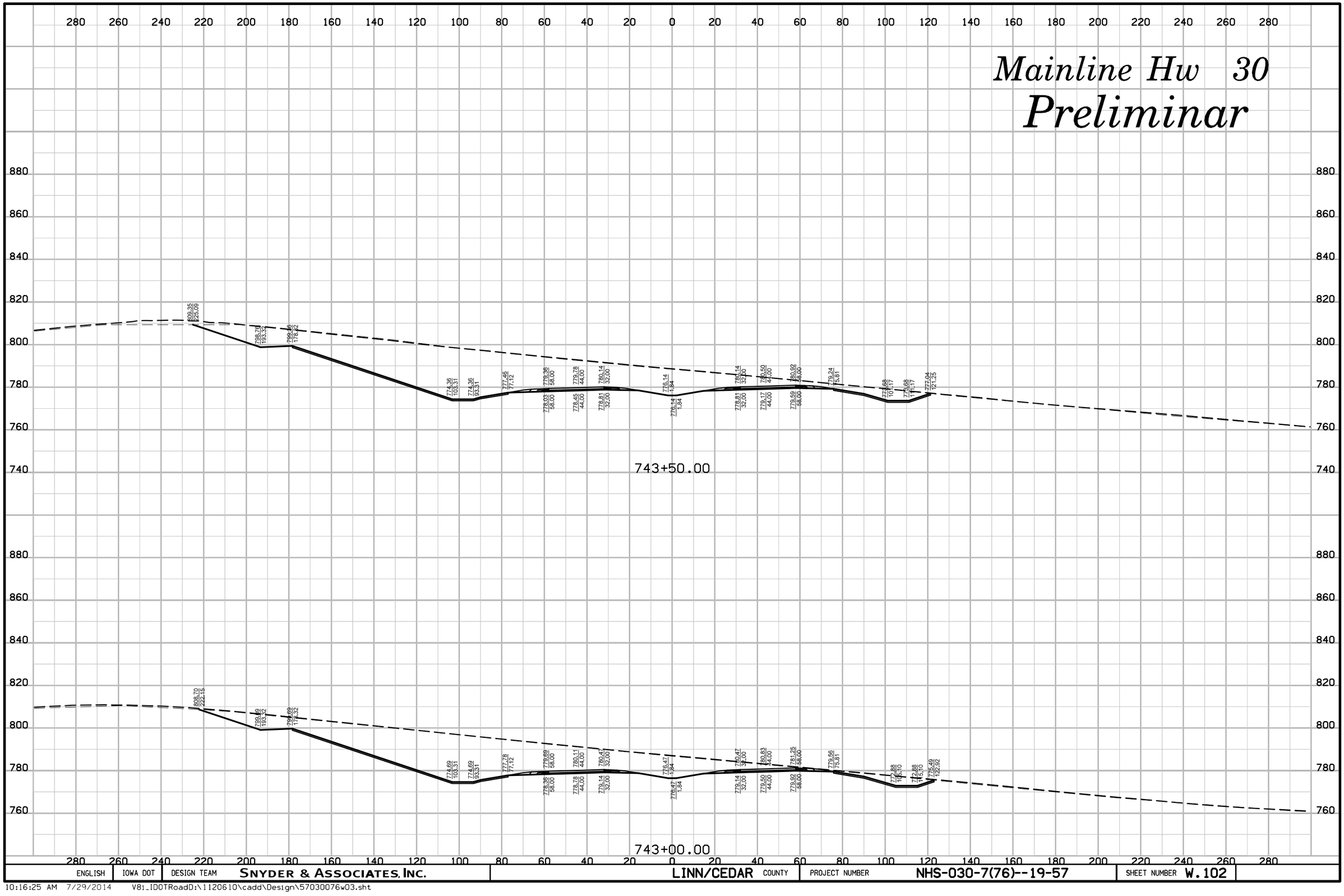


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.101

10:16:23 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.102

10:16:25 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

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

840 820 800 780 760

806.16 217.45 | 798.11 193.32 | 796.71 178.32 | 773.71 103.31 | 773.71 93.31 | 776.81 77.12 | 778.71 58.00 | 779.13 44.00 | 779.49 32.00 | 776.49 1.84 | 779.49 32.00 | 779.84 44.00 | 780.47 58.00 | 778.59 75.31 | 775.27 93.33 | 776.27 103.33 | 783.36 127.59

744+50.00

808.76 224.29 | 798.44 193.32 | 799.04 178.32 | 774.04 103.31 | 774.04 93.31 | 777.13 77.12 | 779.04 58.00 | 778.46 44.00 | 779.82 32.00 | 776.82 1.84 | 779.82 32.00 | 780.18 44.00 | 780.60 58.00 | 778.91 75.31 | 774.77 97.24 | 774.17 107.25 | 779.98 123.48

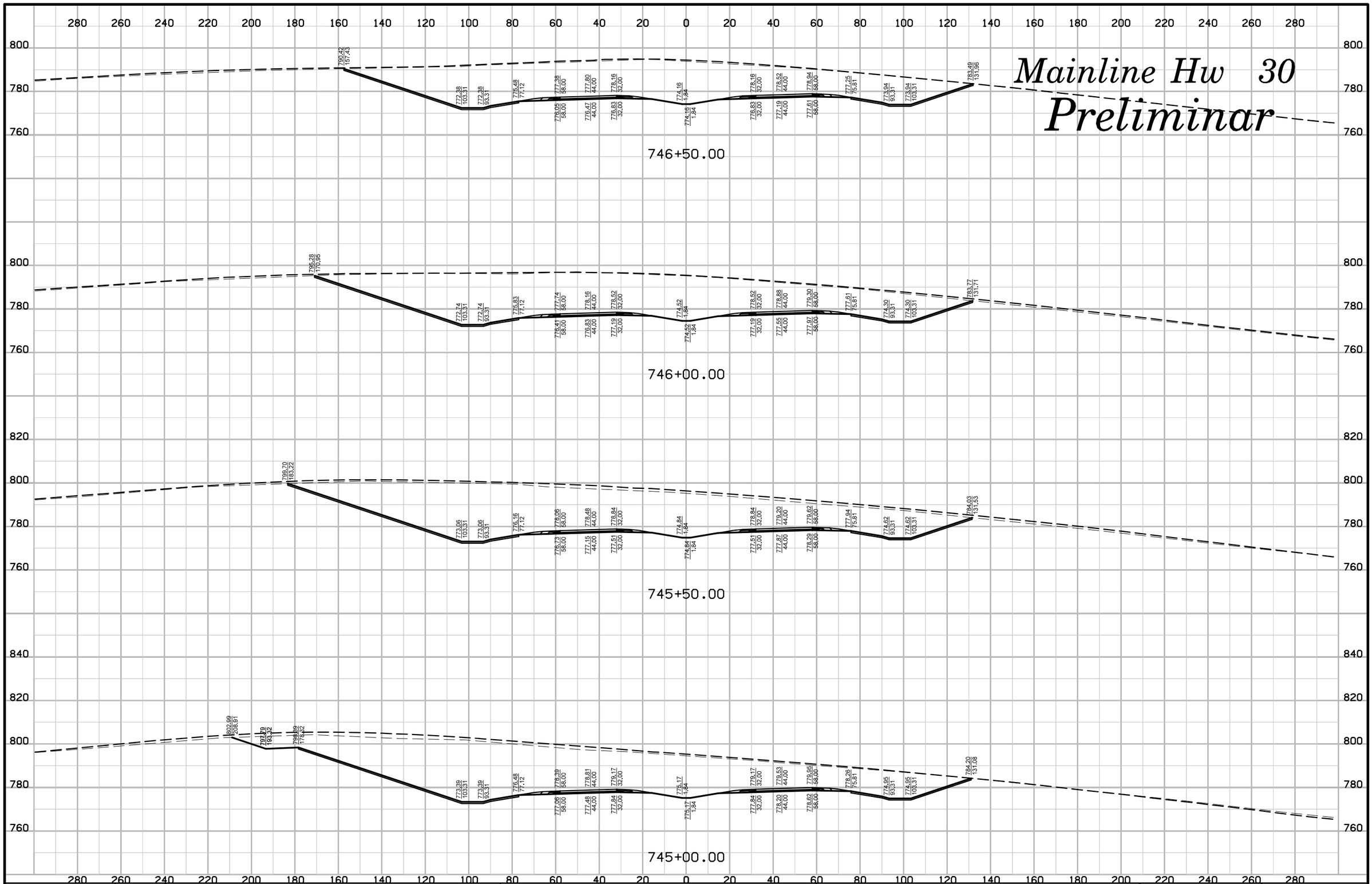
744+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER W.103

10:16:26 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

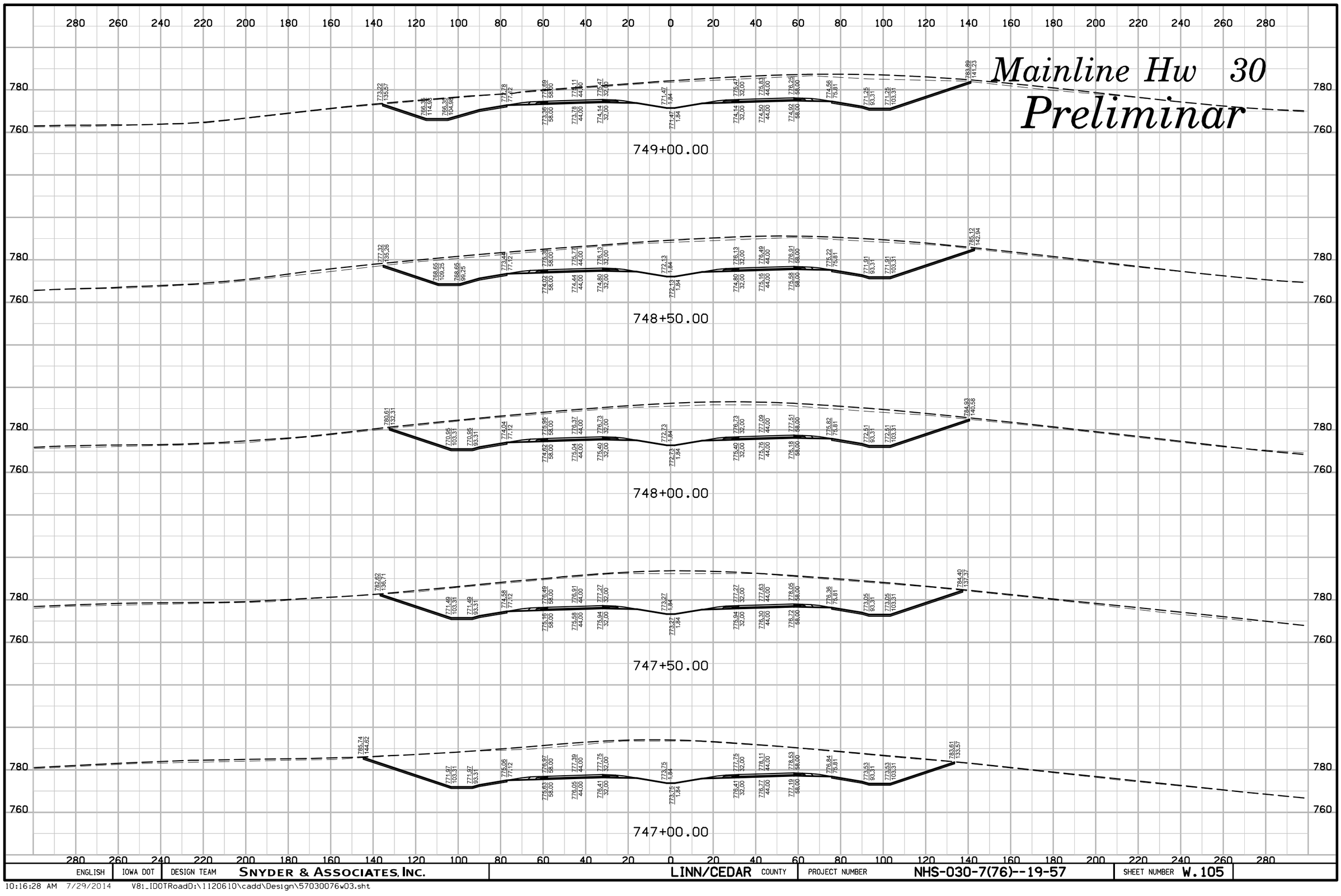
Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.104

10:16:27 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER W.105

10:16:28 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

751+00.00

750+50.00

750+00.00

749+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.106

10:16:30 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

751+83.82

751+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.107

10:16:31 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

752+50.00

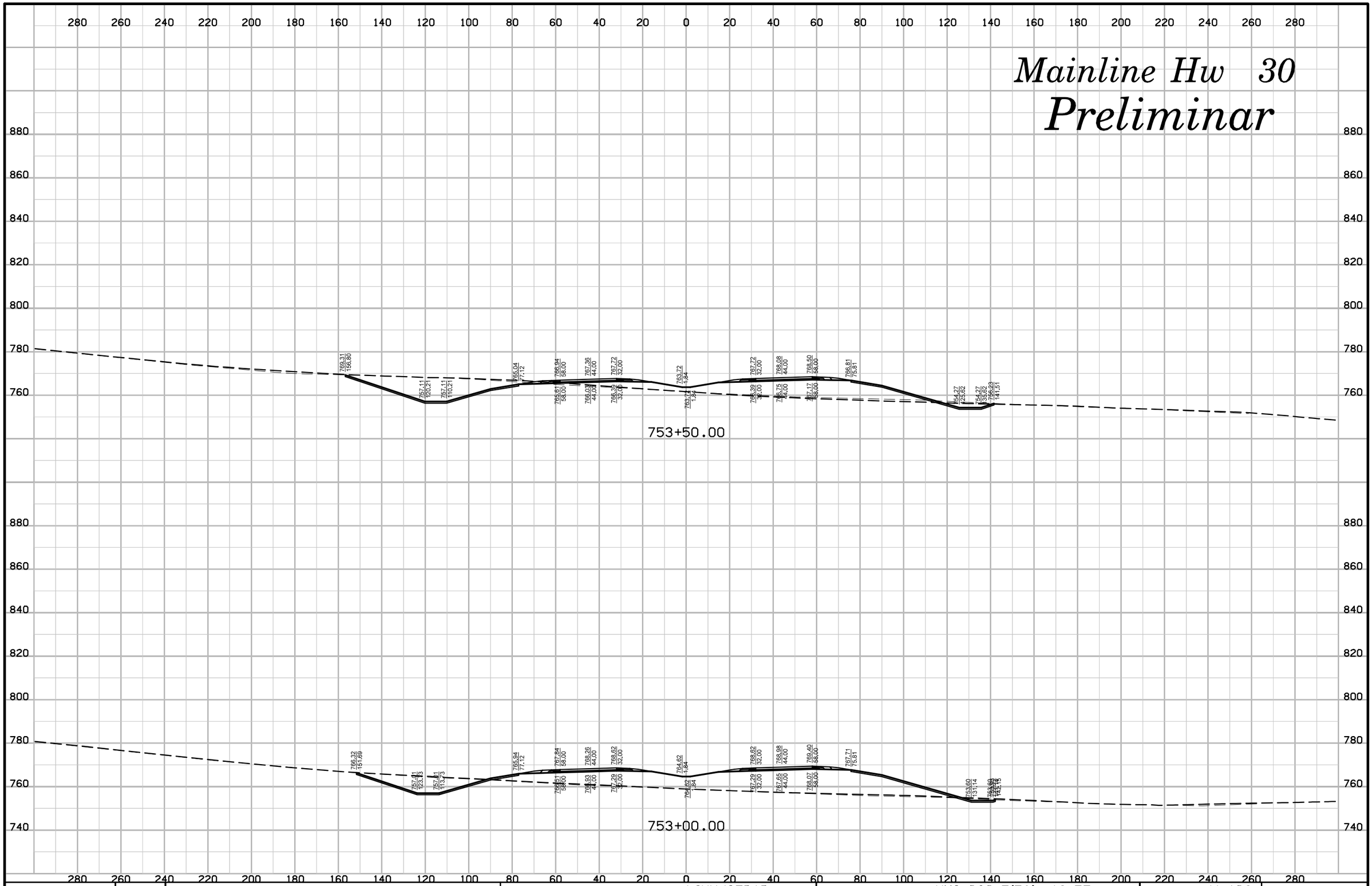
752+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.108

10:16:32 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

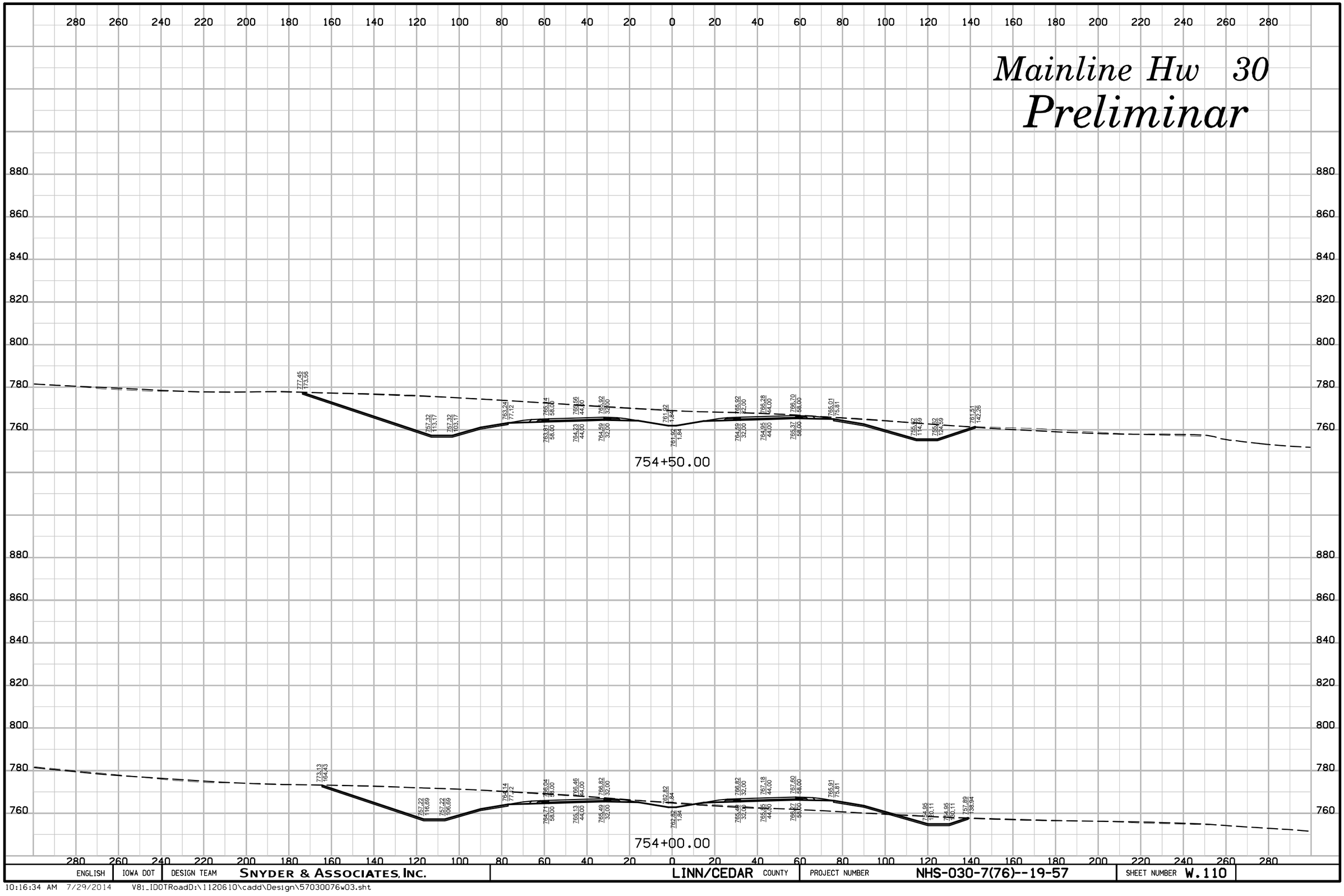


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.109

10:16:33 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.110

10:16:34 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

755+50.00

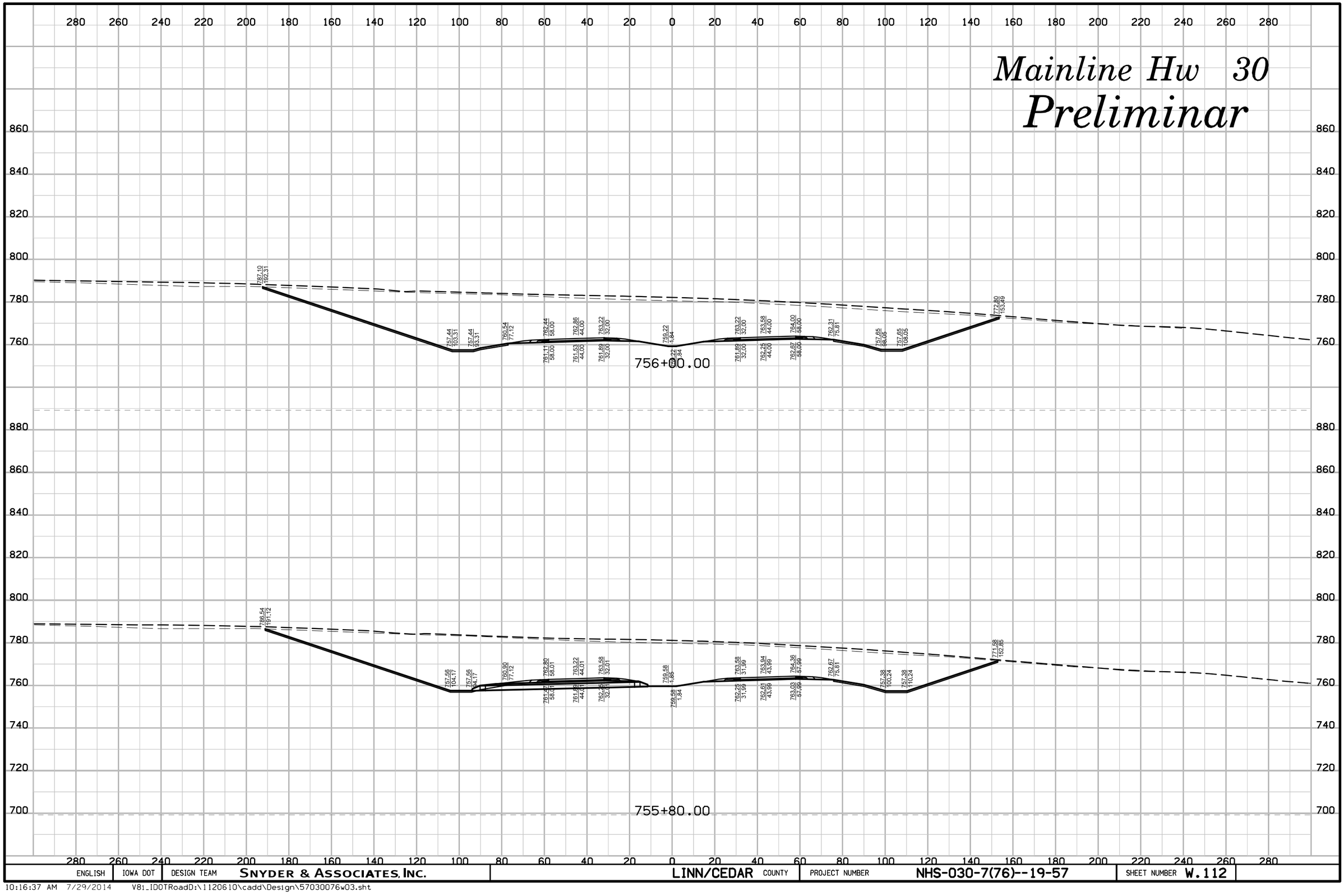
755+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.111

10:16:36 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

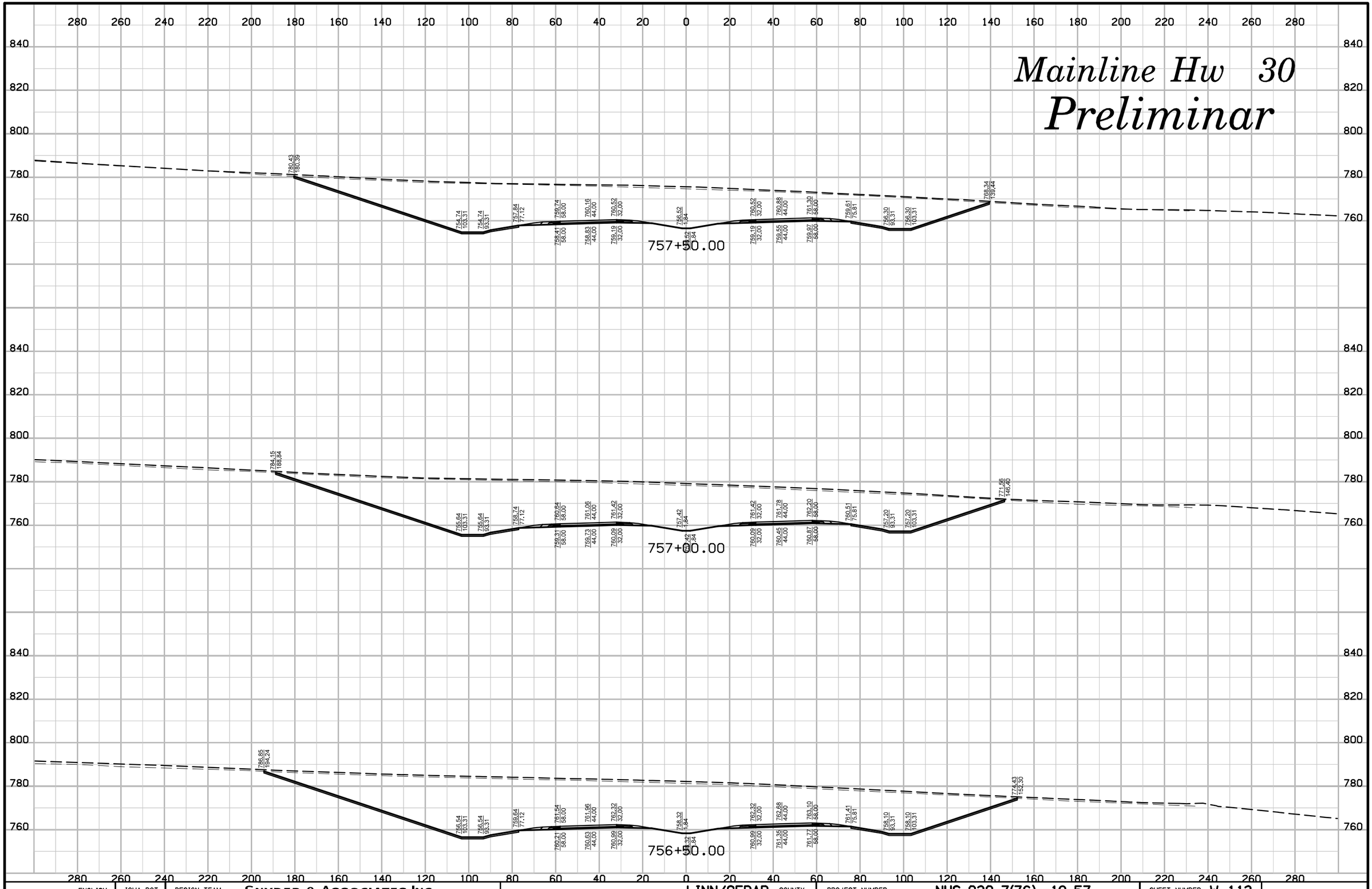


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.112

10:16:37 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

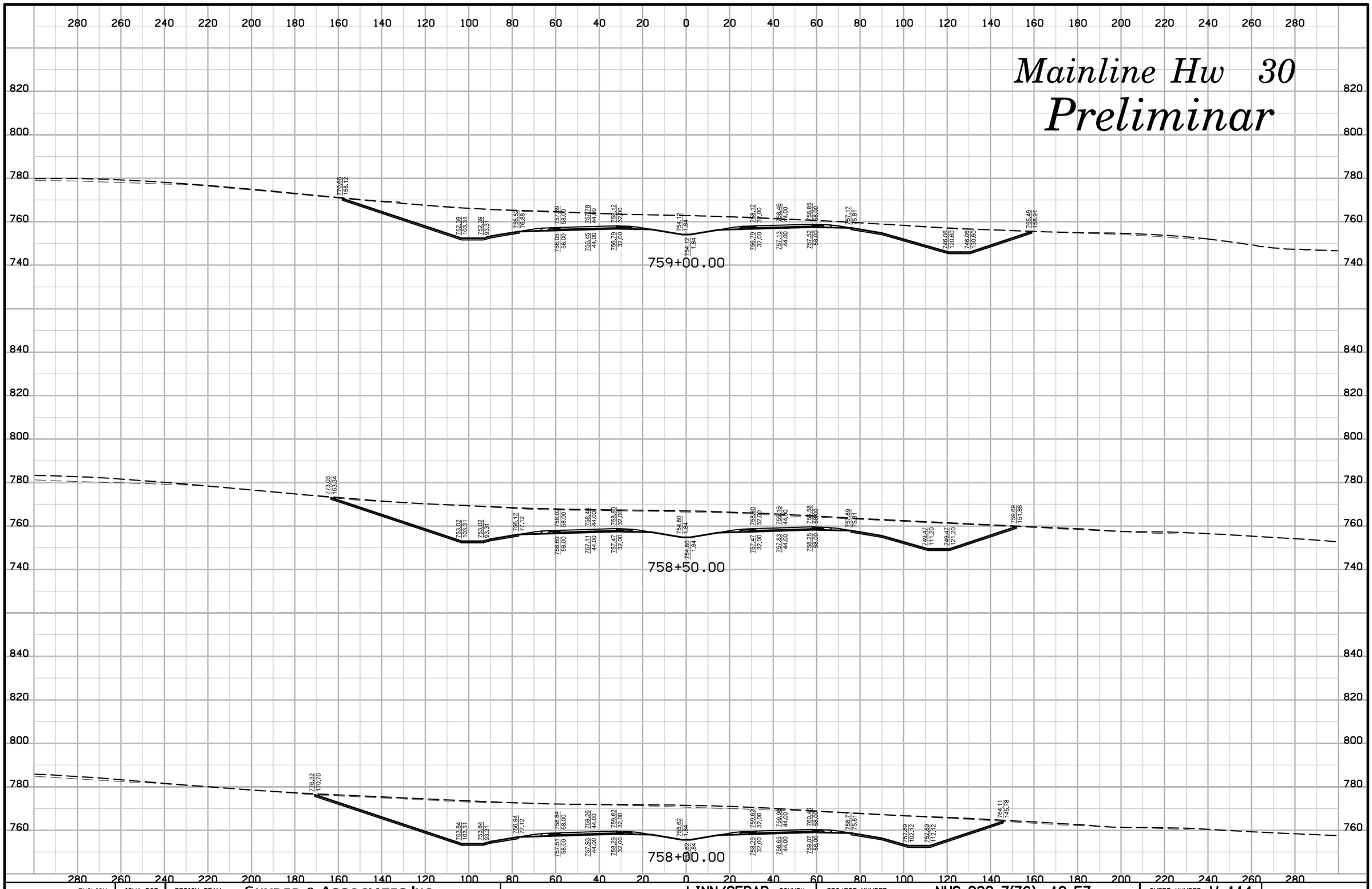


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.113

10:16:38 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.114

10:16:39 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

760+00.00

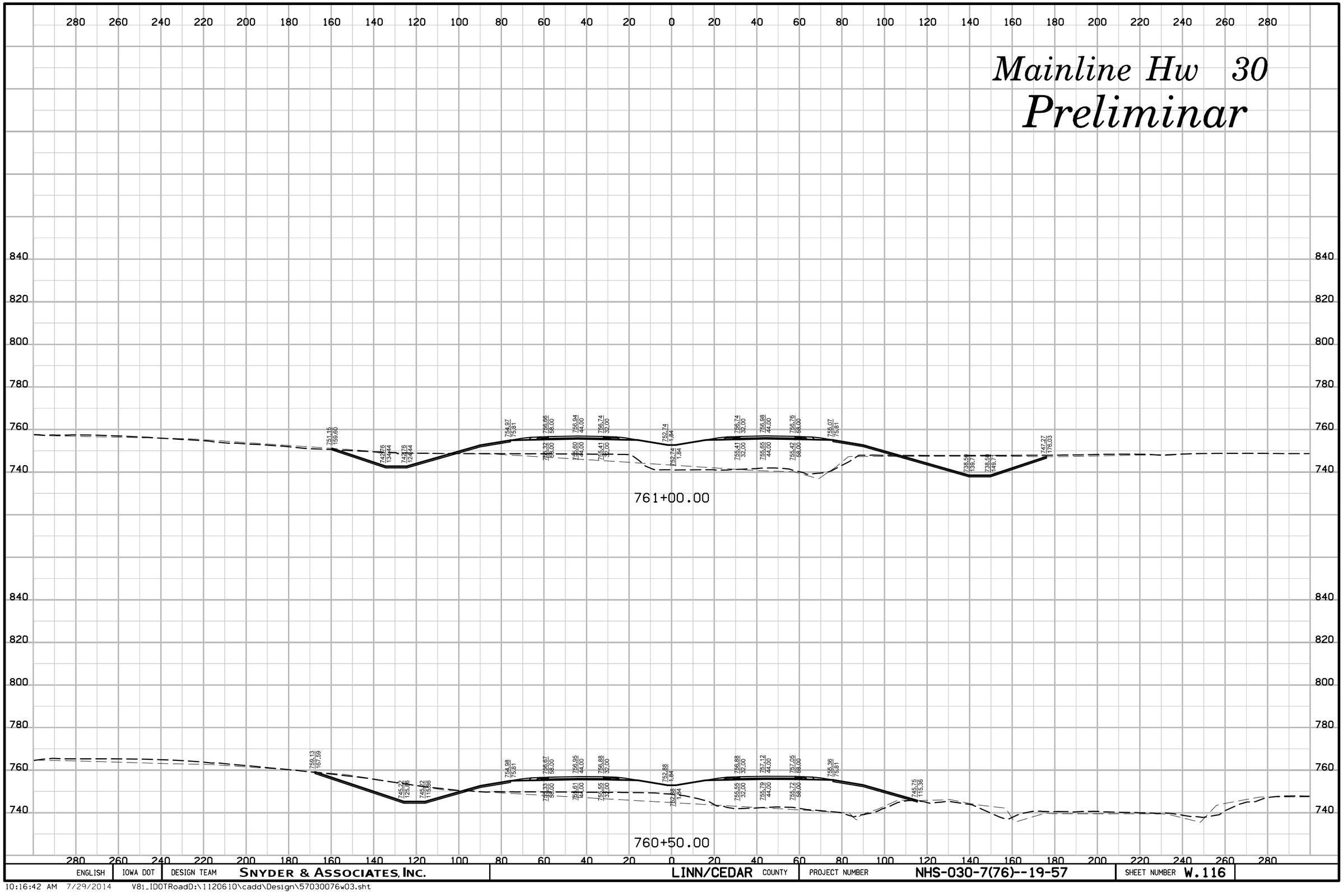
759+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.115

10:16:41 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

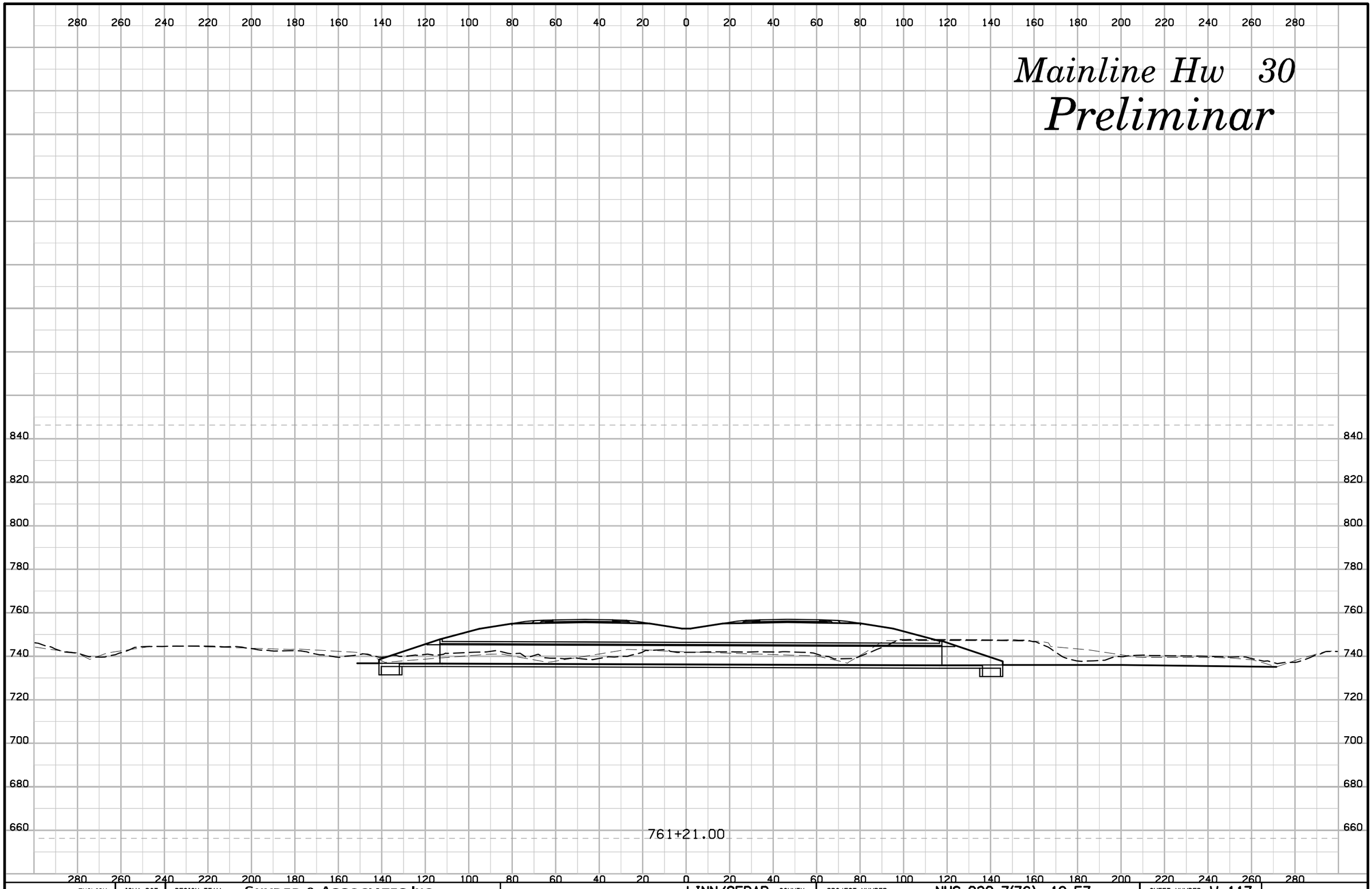


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.116

10:16:42 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

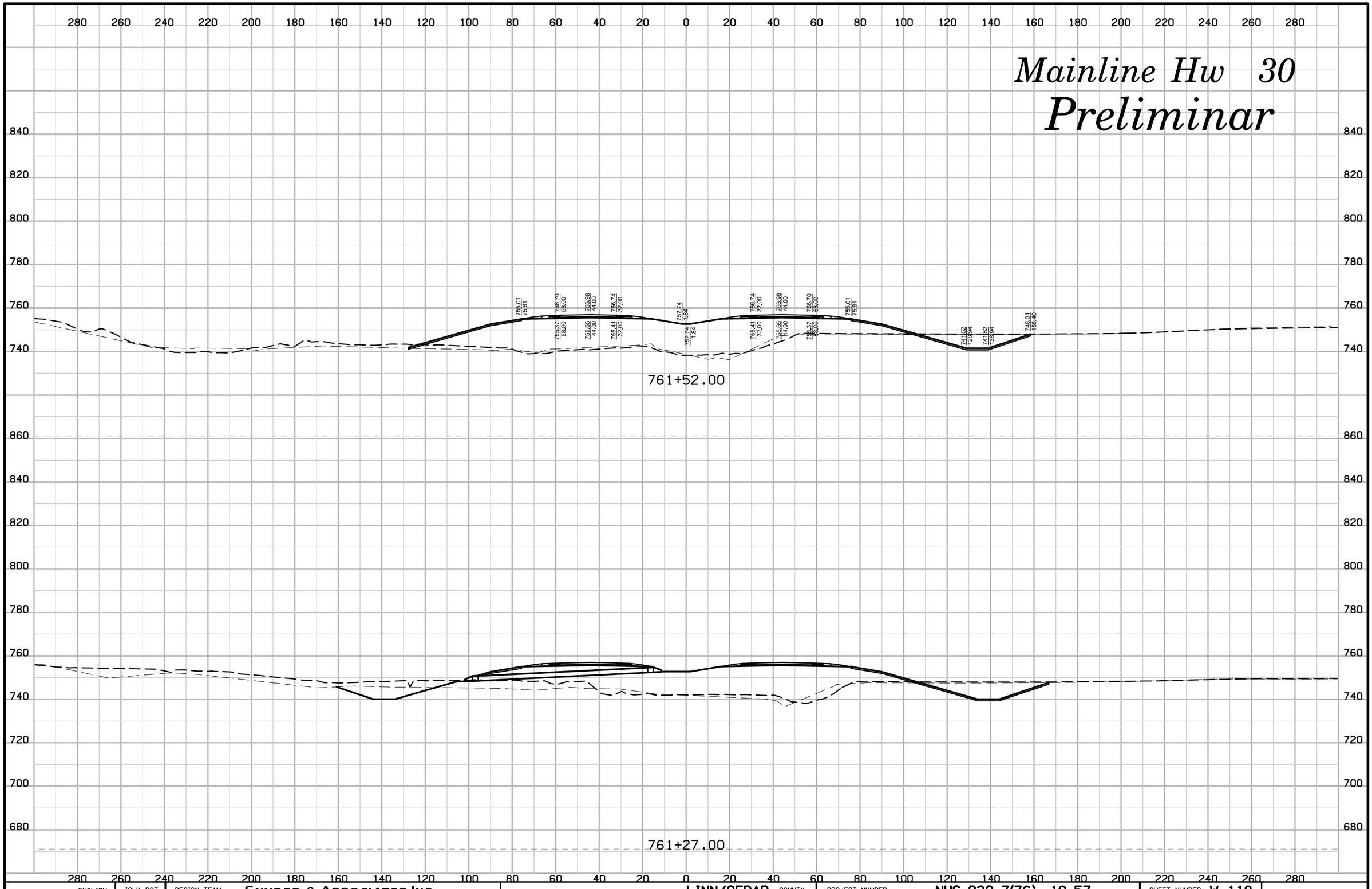


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.117

10:16:43 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

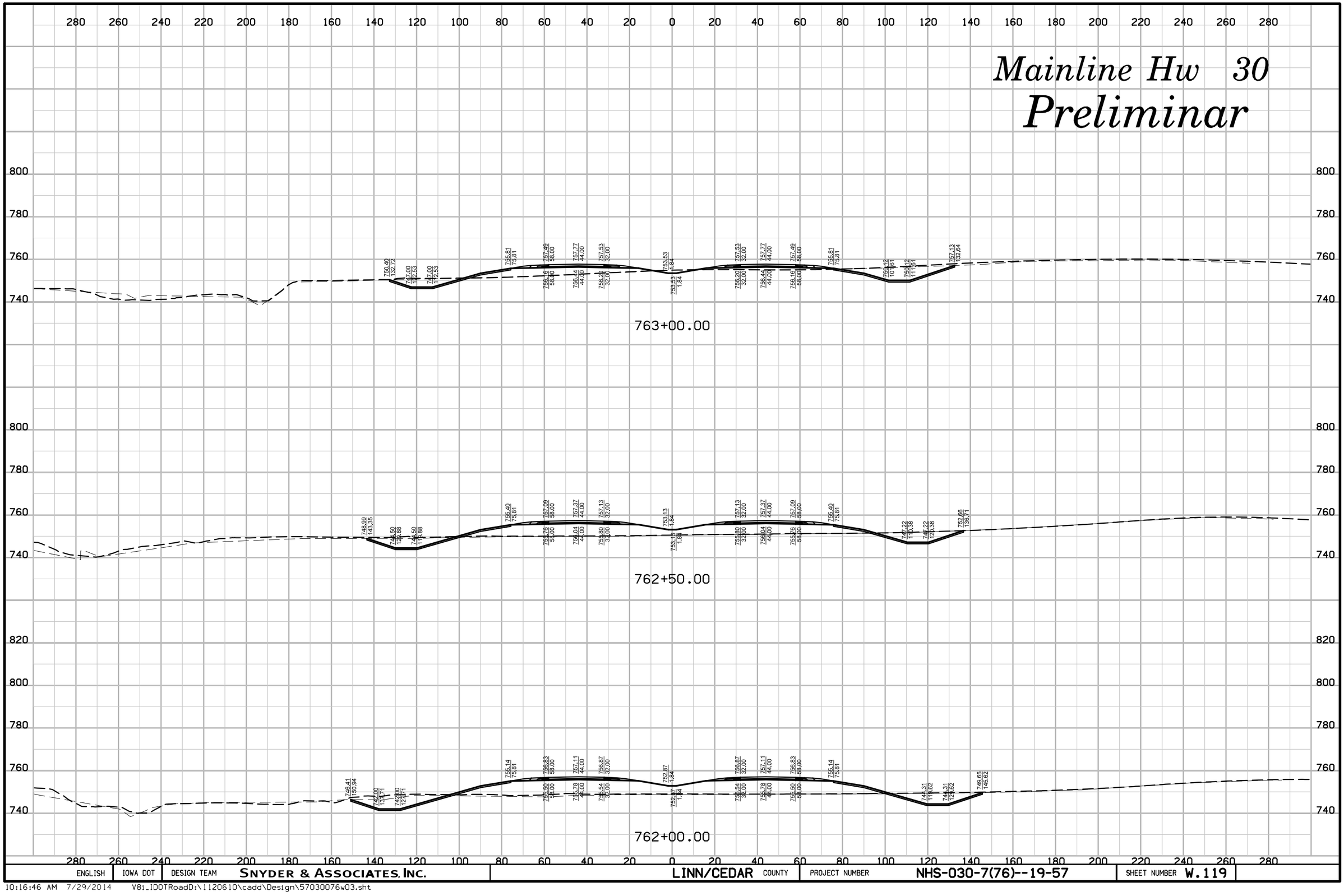


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.118

10:16:45 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

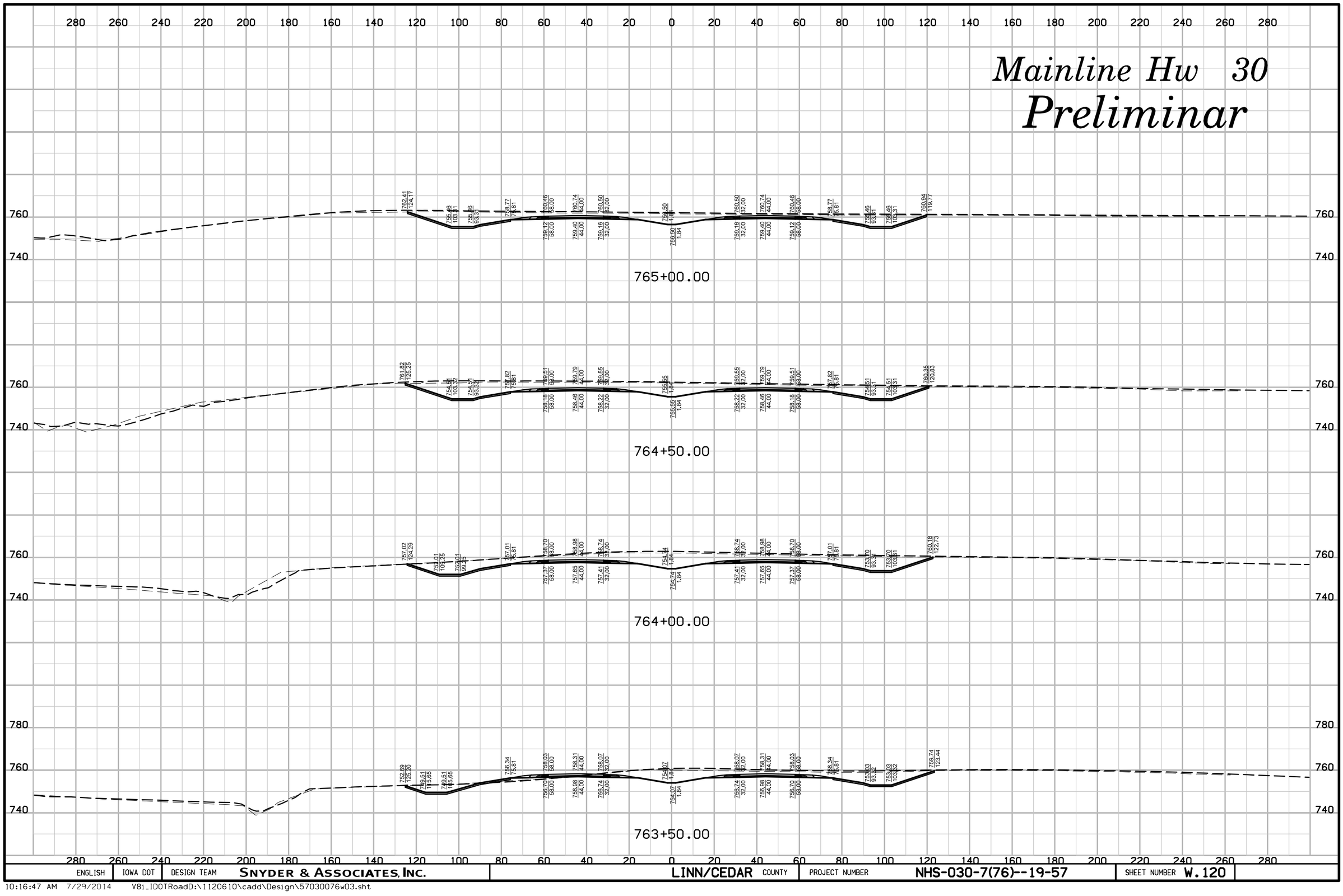


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.119

10:16:46 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

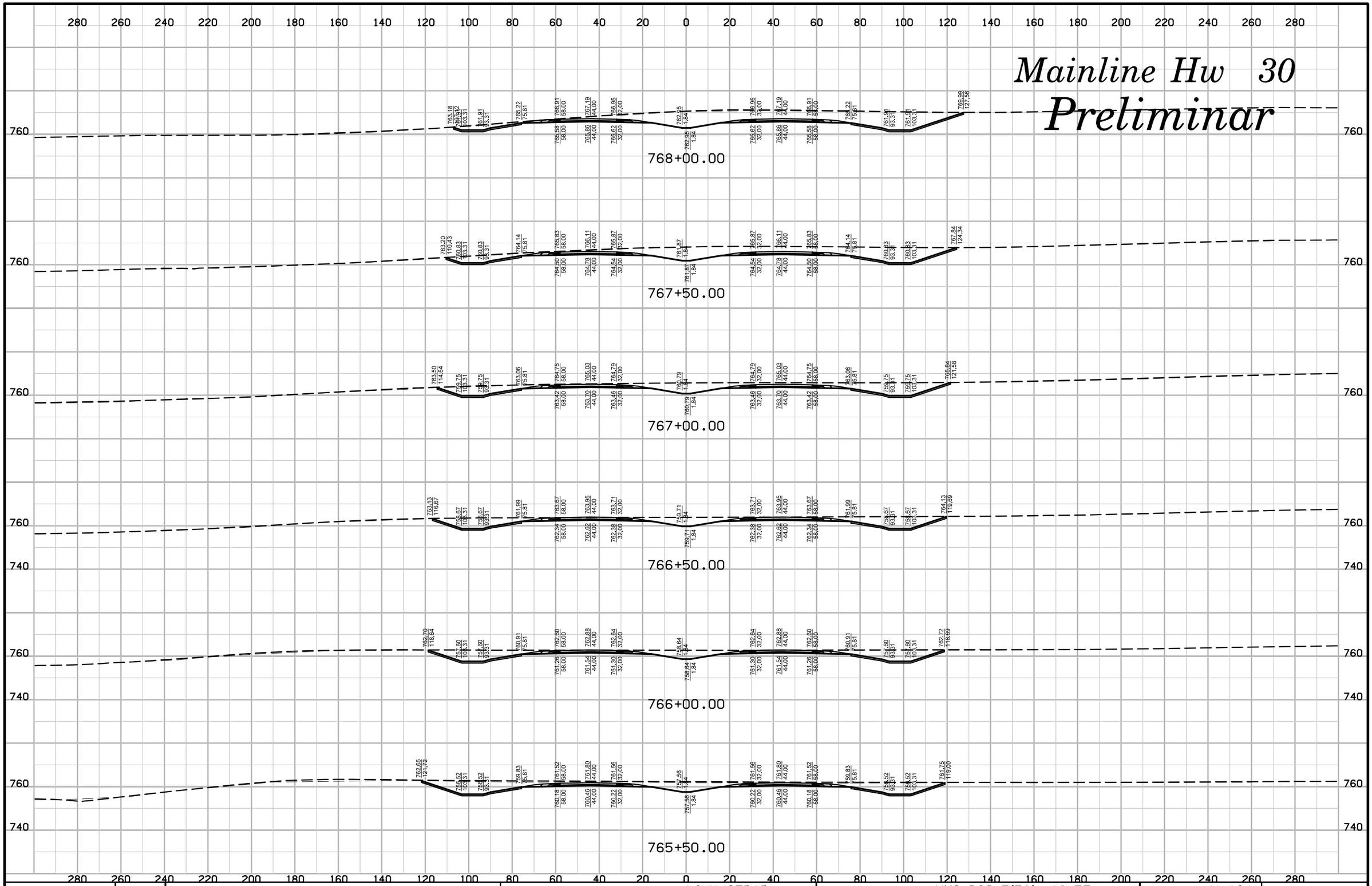
Preliminar



10:16:47 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

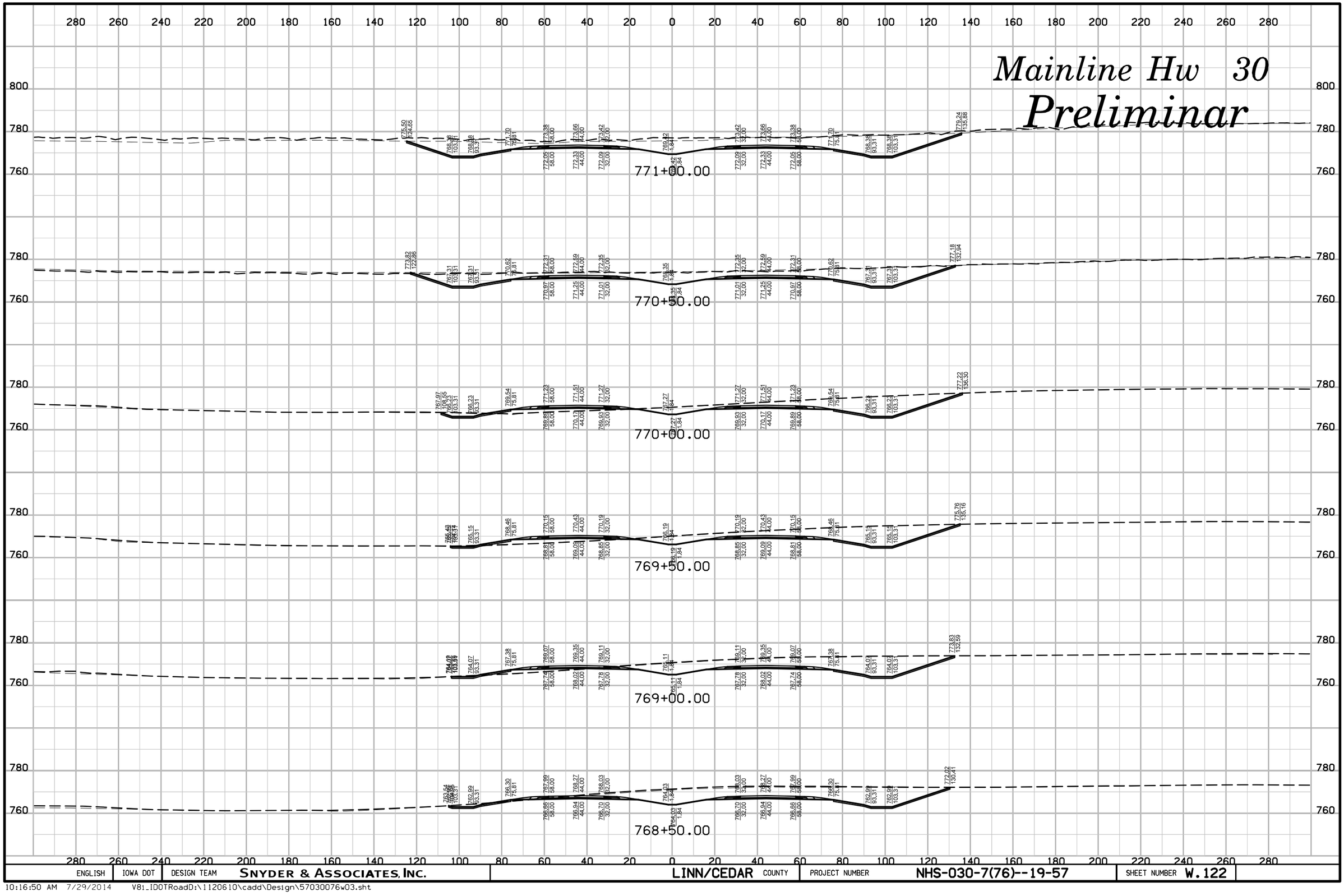


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.121

10:16:48 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

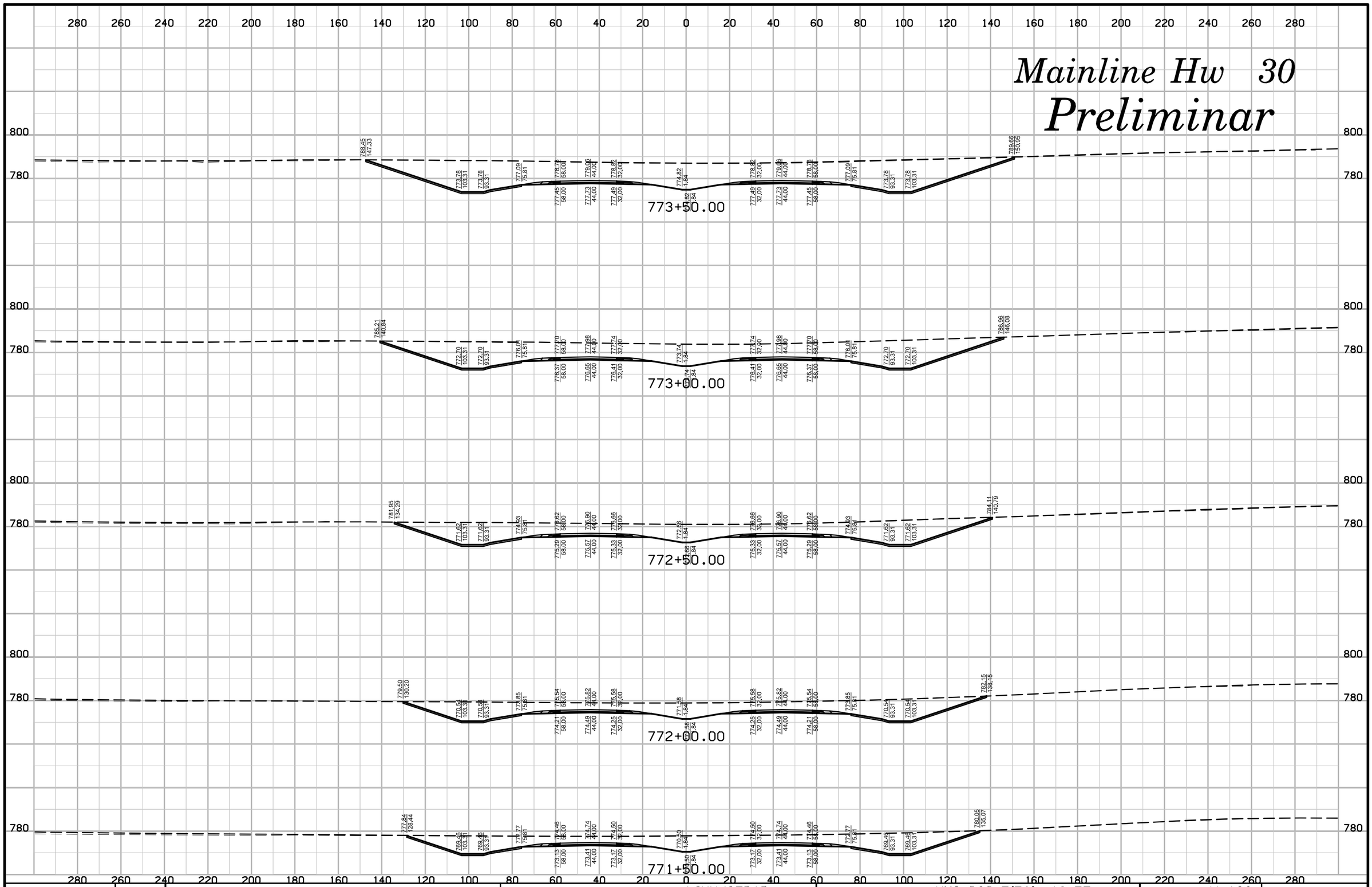


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.122

10:16:50 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

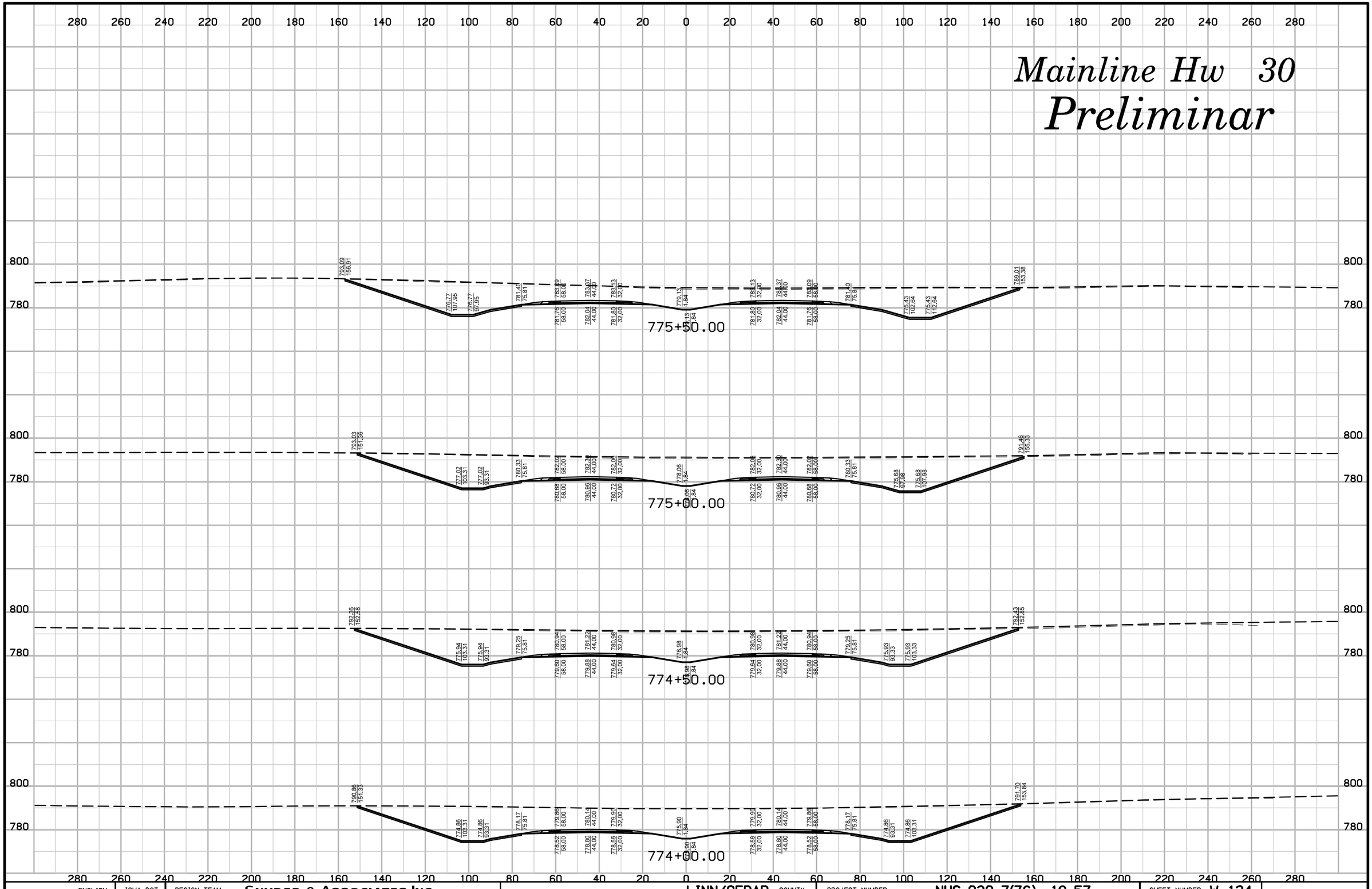


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.123

10:16:51 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.124

10:16:52 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

777+00.00

776+50.00

776+00.00

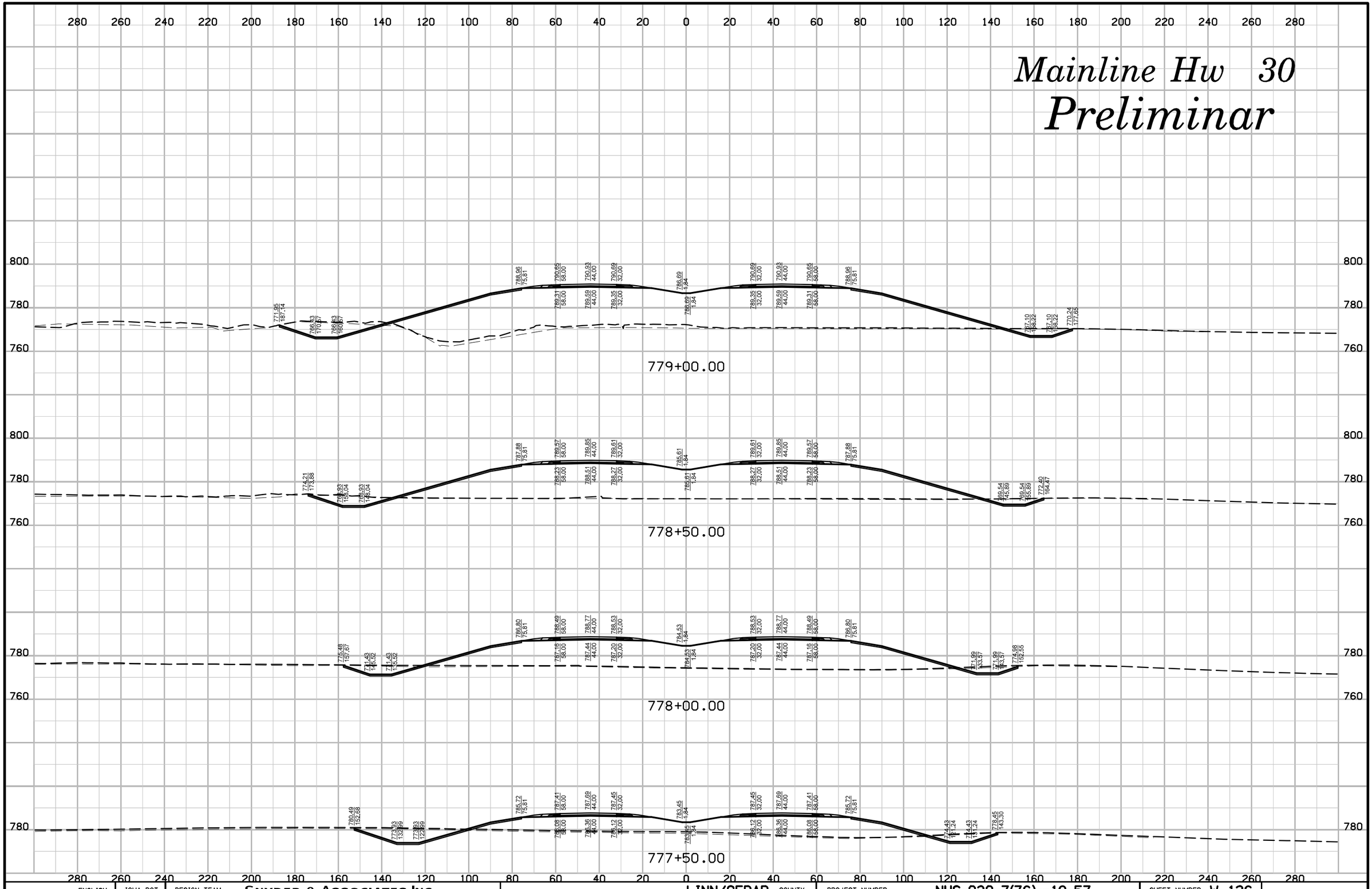
775+85.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.125

10:16:54 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

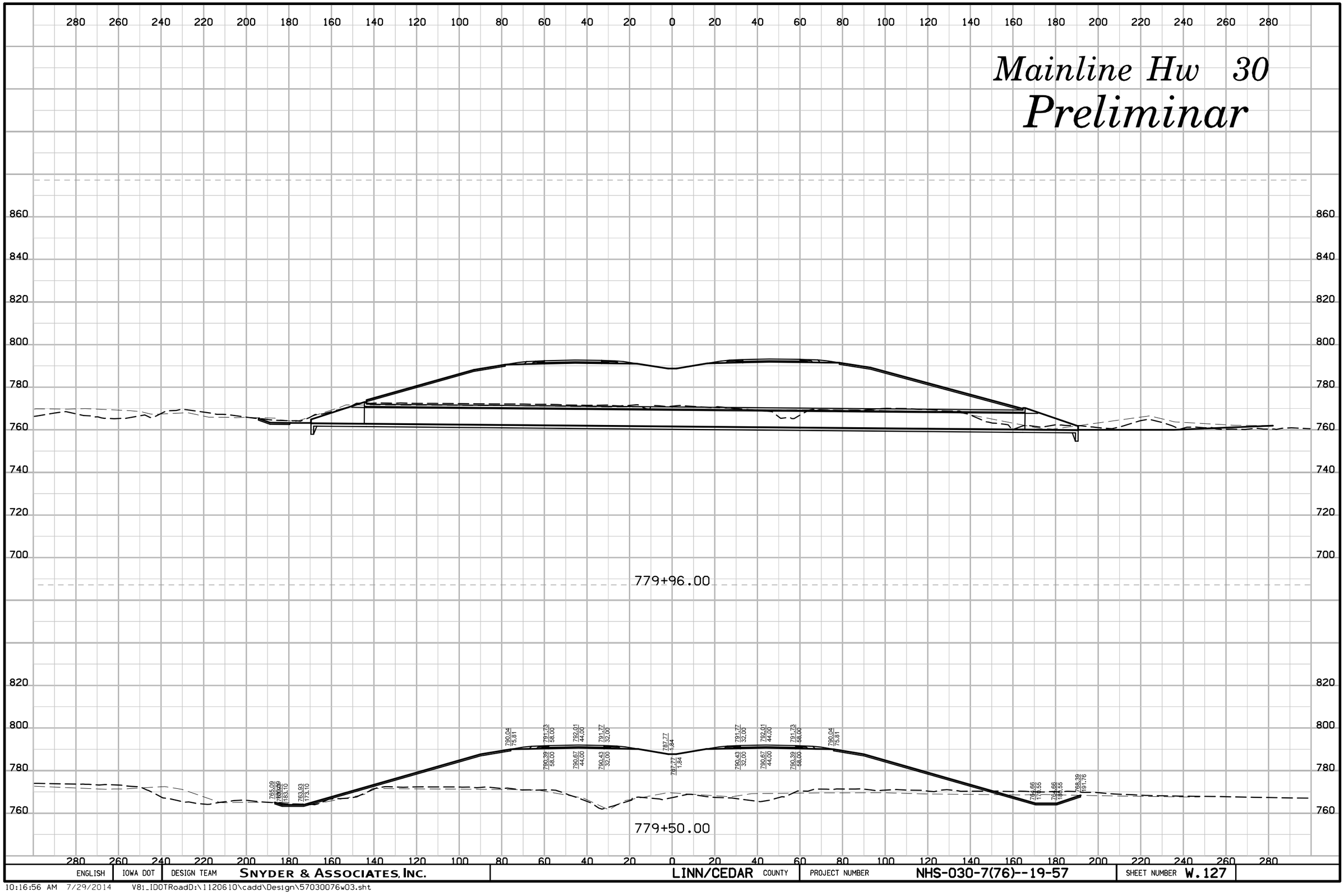


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.126

10:16:55 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.127

10:16:56 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

780+50.00

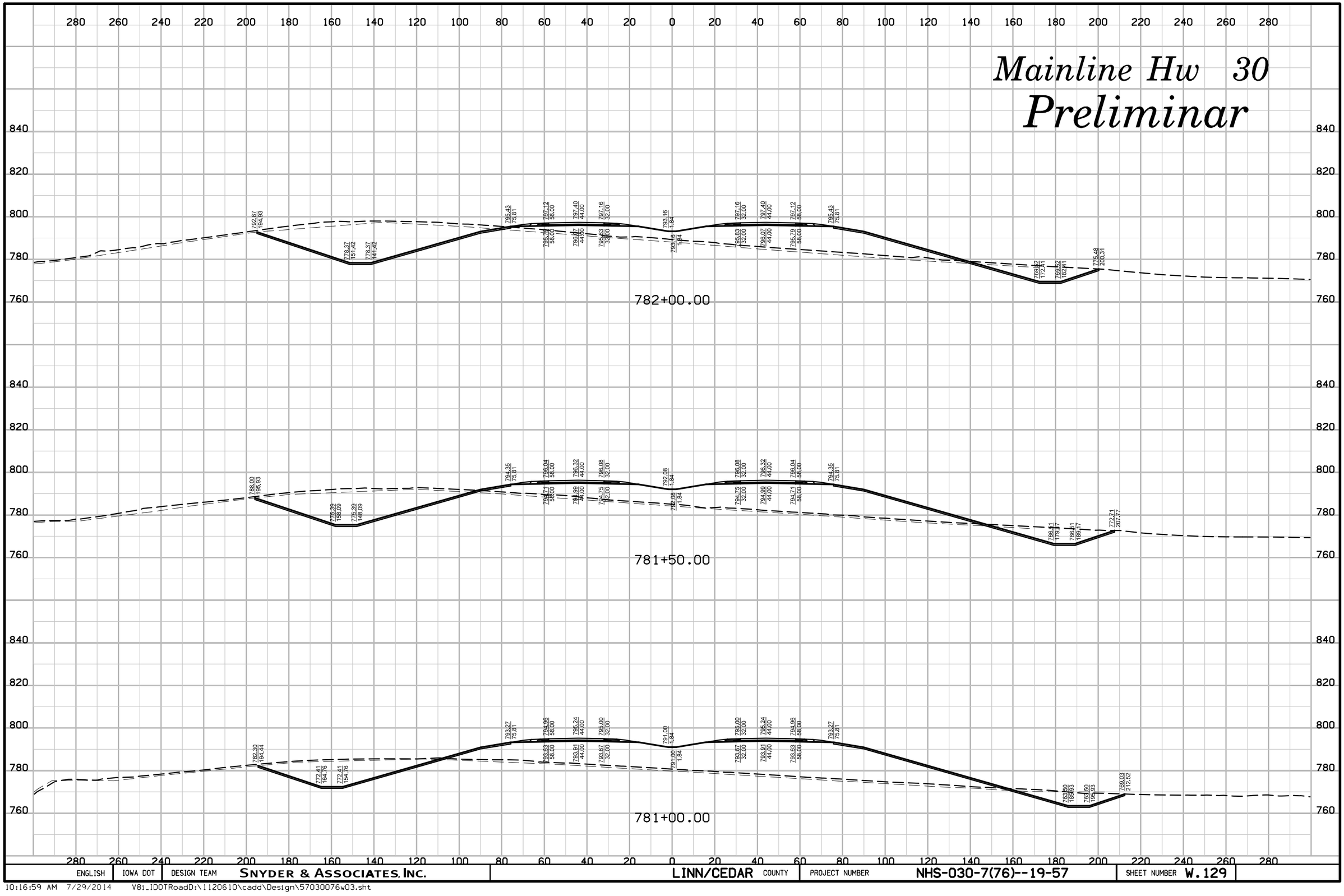
780+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.128

10:16:57 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

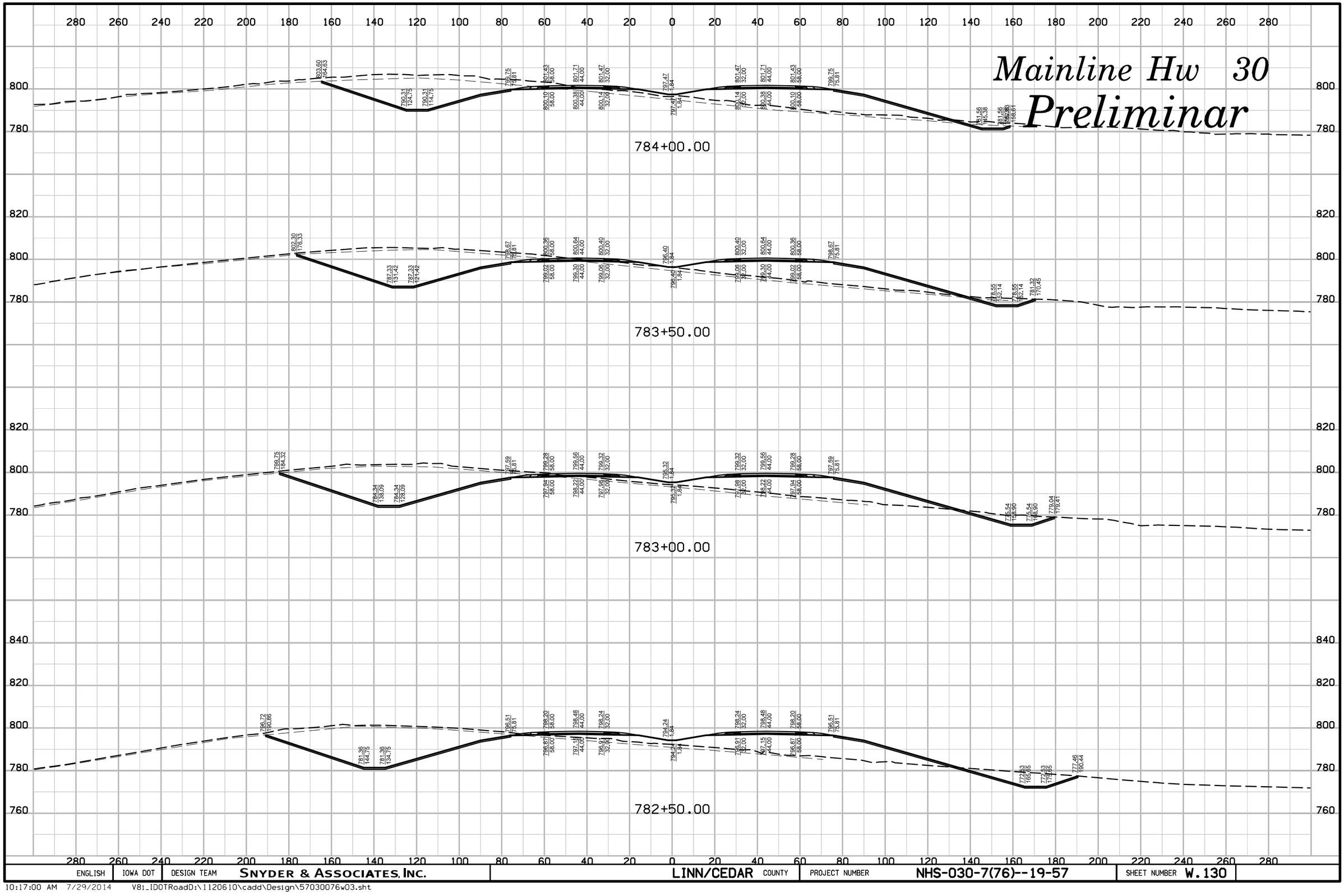


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.129

10:16:59 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

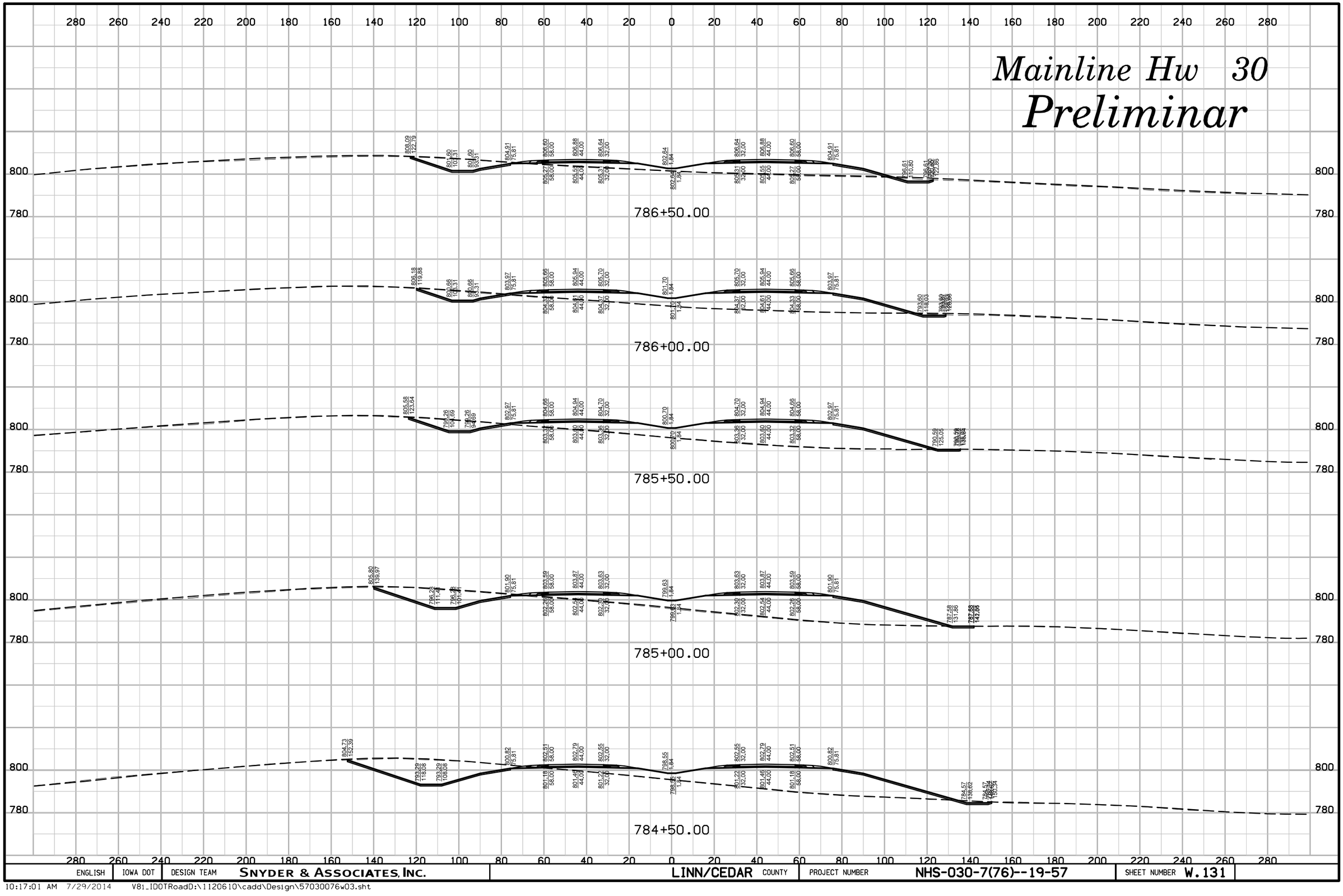


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.130

10:17:00 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

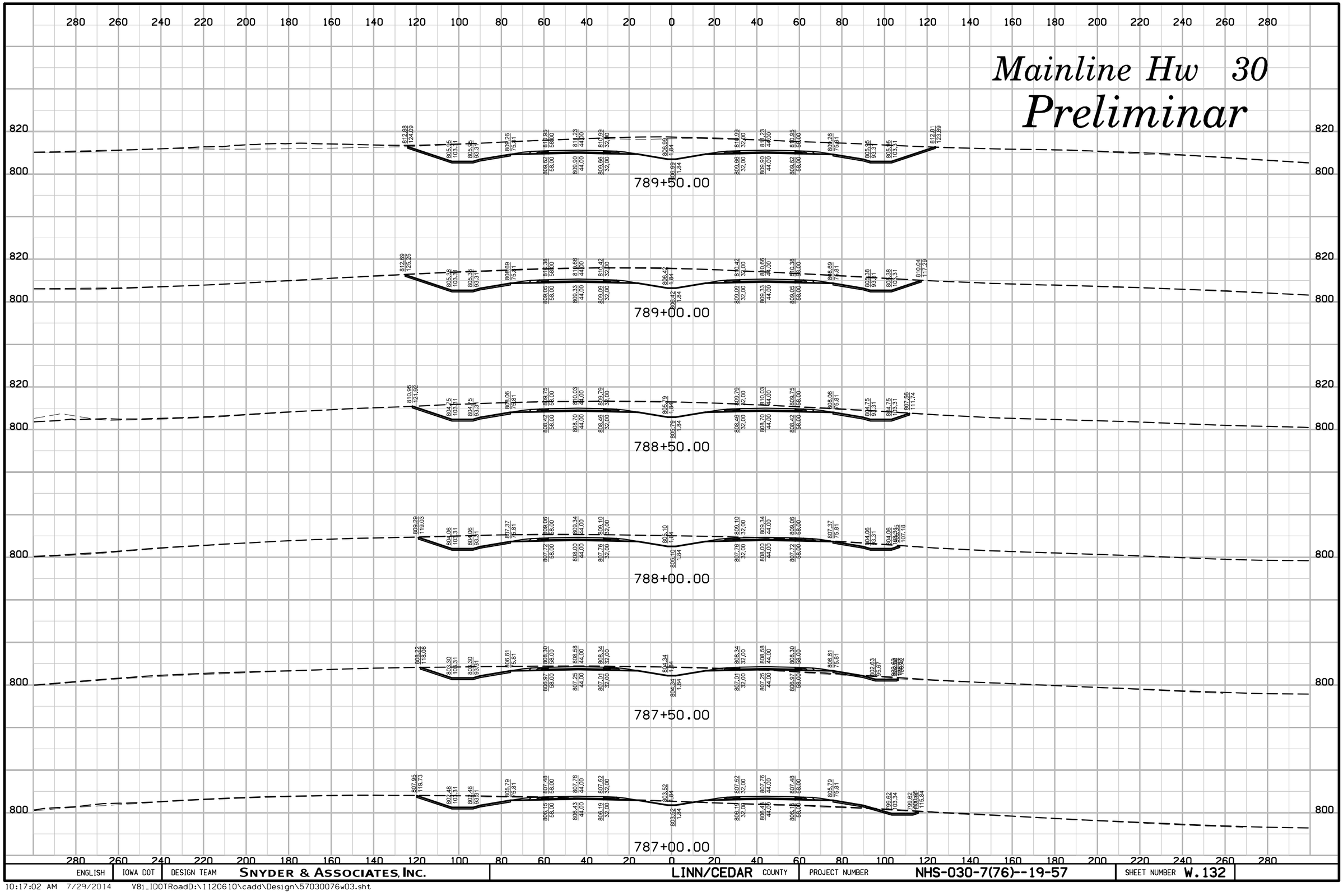


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.131

10:17:01 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

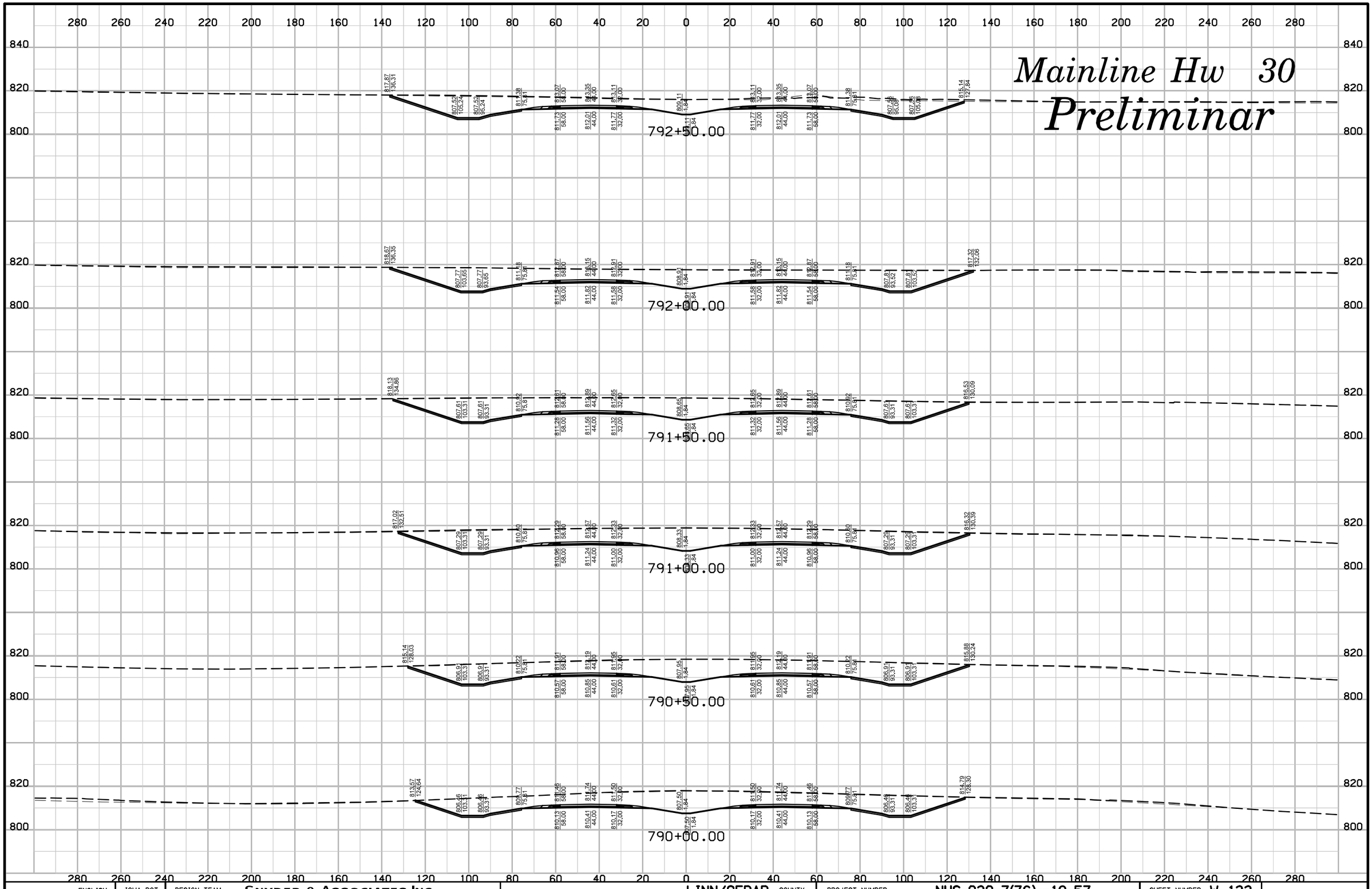


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER W.132

10:17:02 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

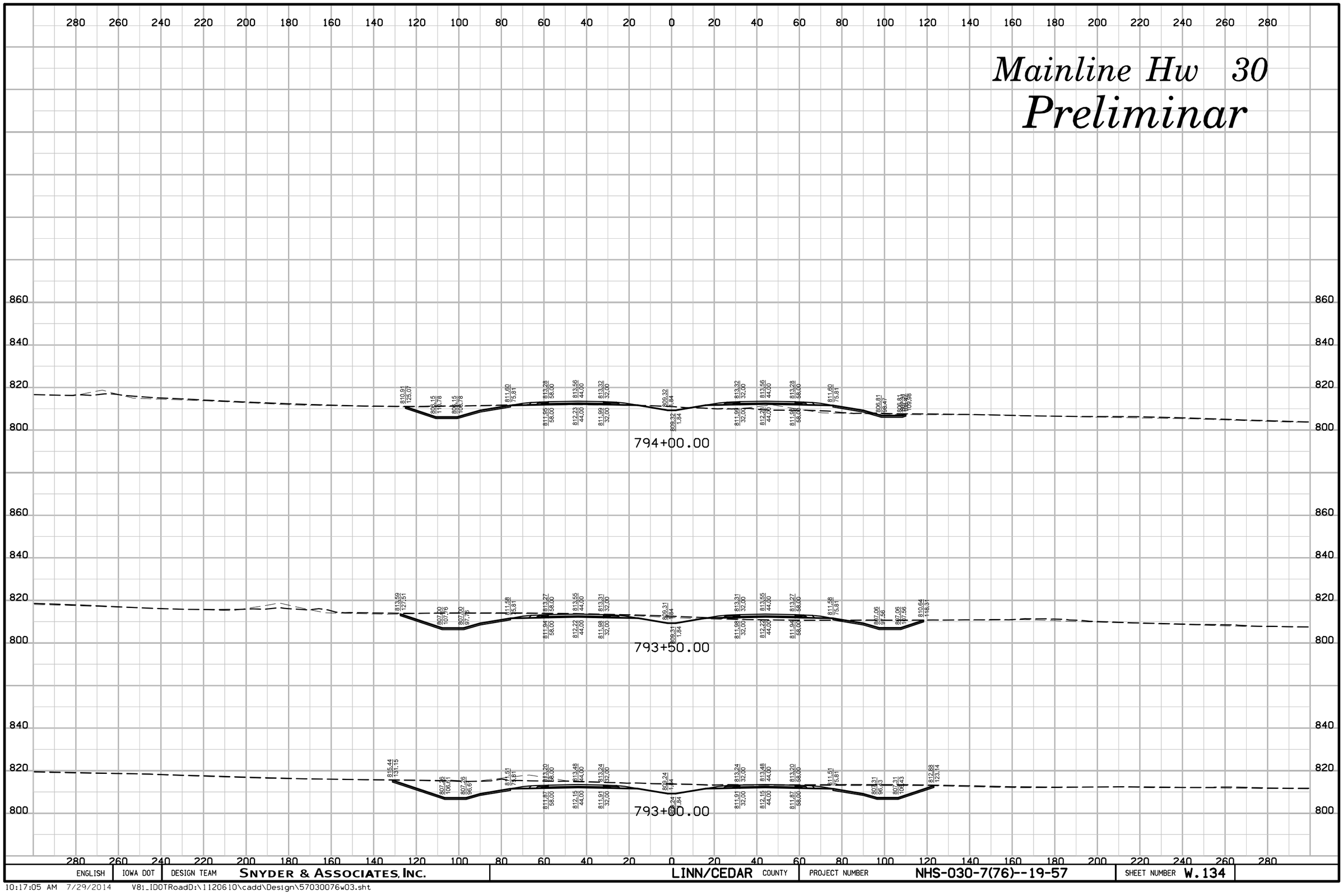


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.133

10:17:04 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

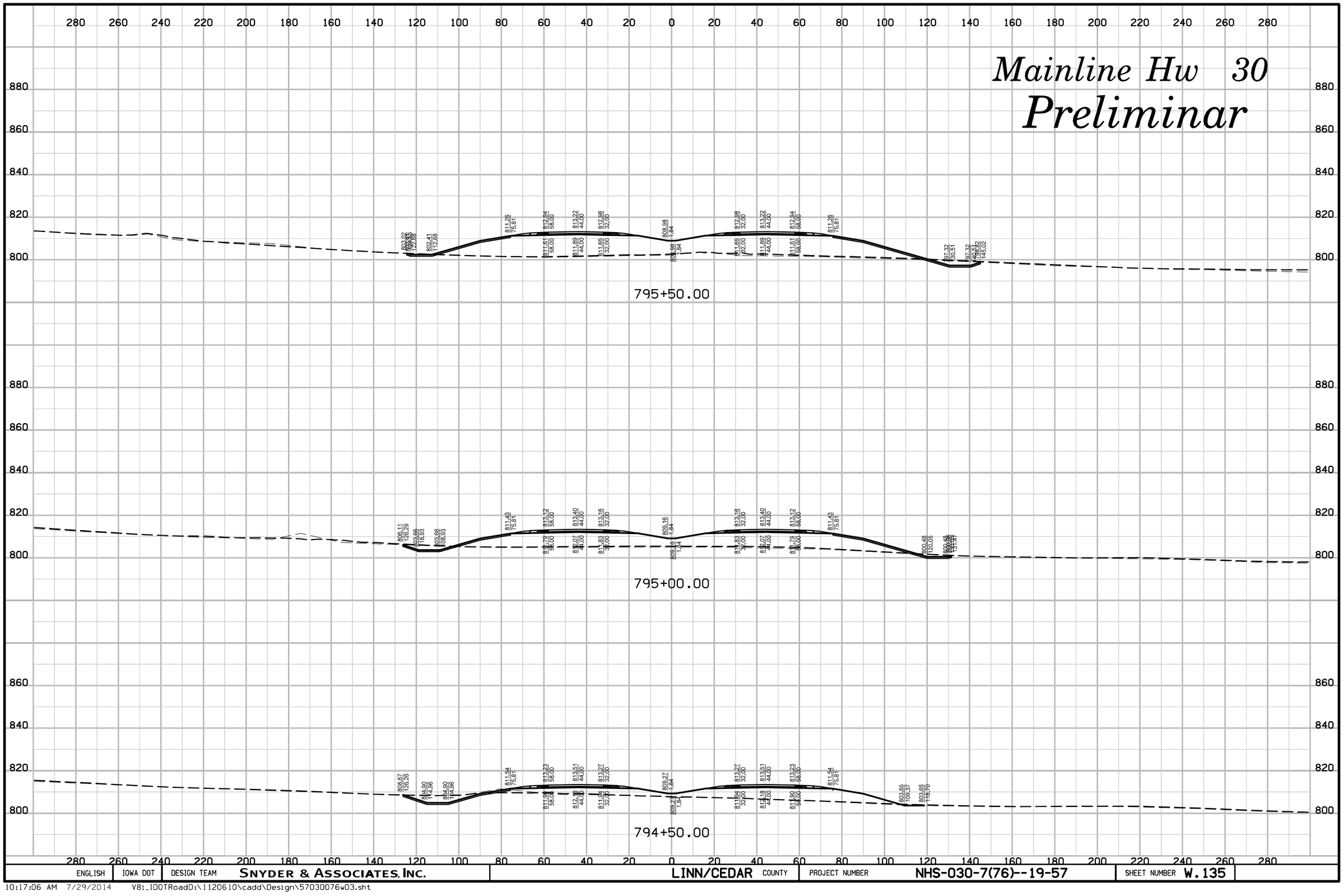


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.134

10:17:05 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.135

10:17:06 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

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

900 880 860 840 820 800 780

806.78 160.33 | 799.92 125.72 | 799.92 125.72 | 810.77 75.81 | 812.46 58.00 | 812.74 44.00 | 812.50 32.00 | 808.50 1.64 | 812.50 32.00 | 812.74 44.00 | 812.46 58.00 | 810.77 75.81

811.13 58.00 | 811.41 44.00 | 811.17 32.00 | 808.50 1.64 | 811.17 32.00 | 811.41 44.00 | 811.13 58.00

792.01 147.99 151.68

796+50.00

804.08 134.68 | 801.16 126.23 | 801.16 126.23 | 811.02 75.81 | 812.71 58.00 | 812.89 44.00 | 812.75 32.00 | 808.75 1.64 | 812.75 32.00 | 812.89 44.00 | 812.71 58.00 | 811.02 75.81

811.38 58.00 | 811.66 44.00 | 811.42 32.00 | 808.75 1.64 | 811.42 32.00 | 811.66 44.00 | 811.38 58.00

794.15 140.77 | 794.15 139.74 | 794.02 134.02

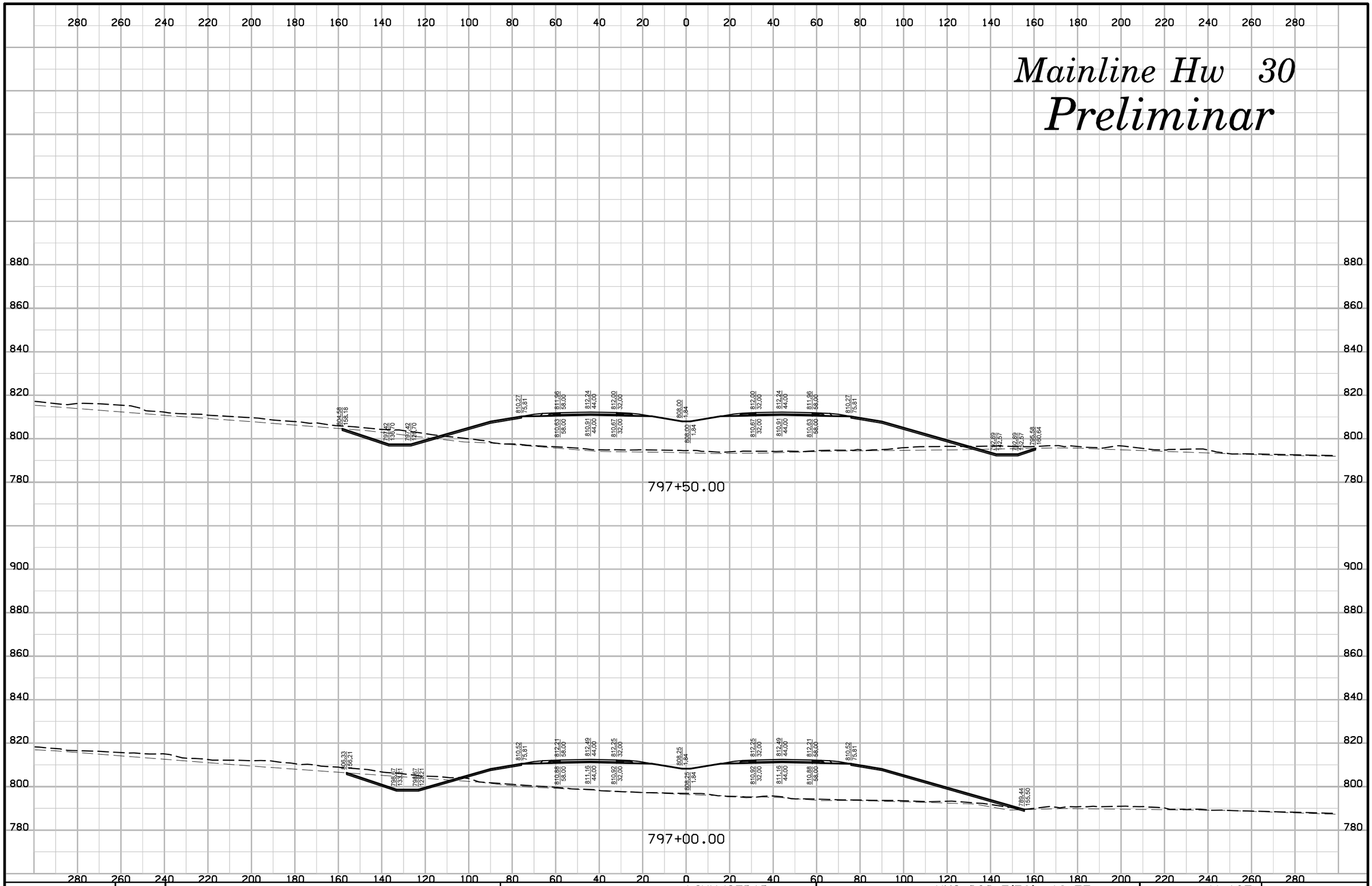
796+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.136

10:17:08 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

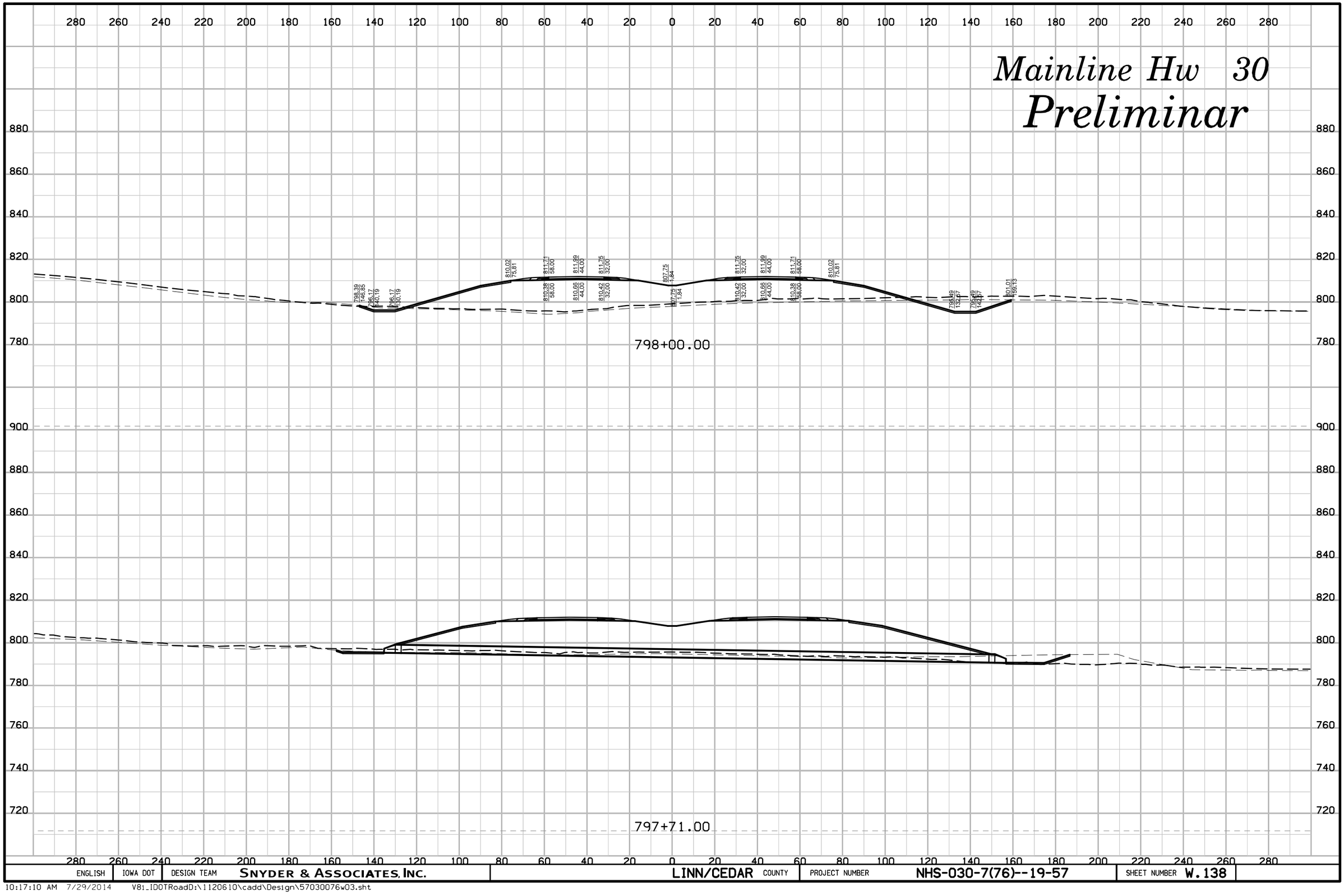
Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.137

Mainline Hw 30

Preliminar

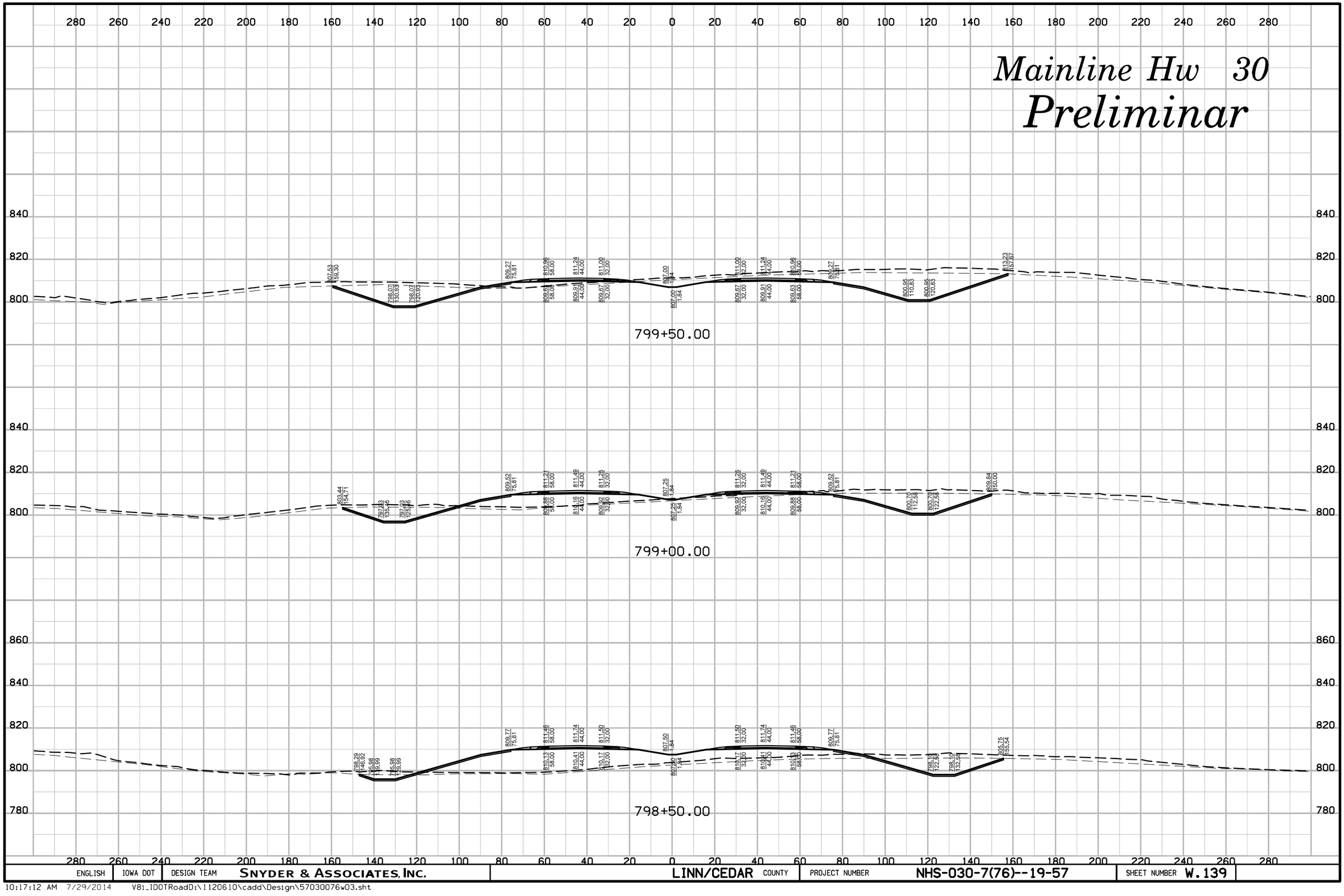


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.138

10:17:10 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

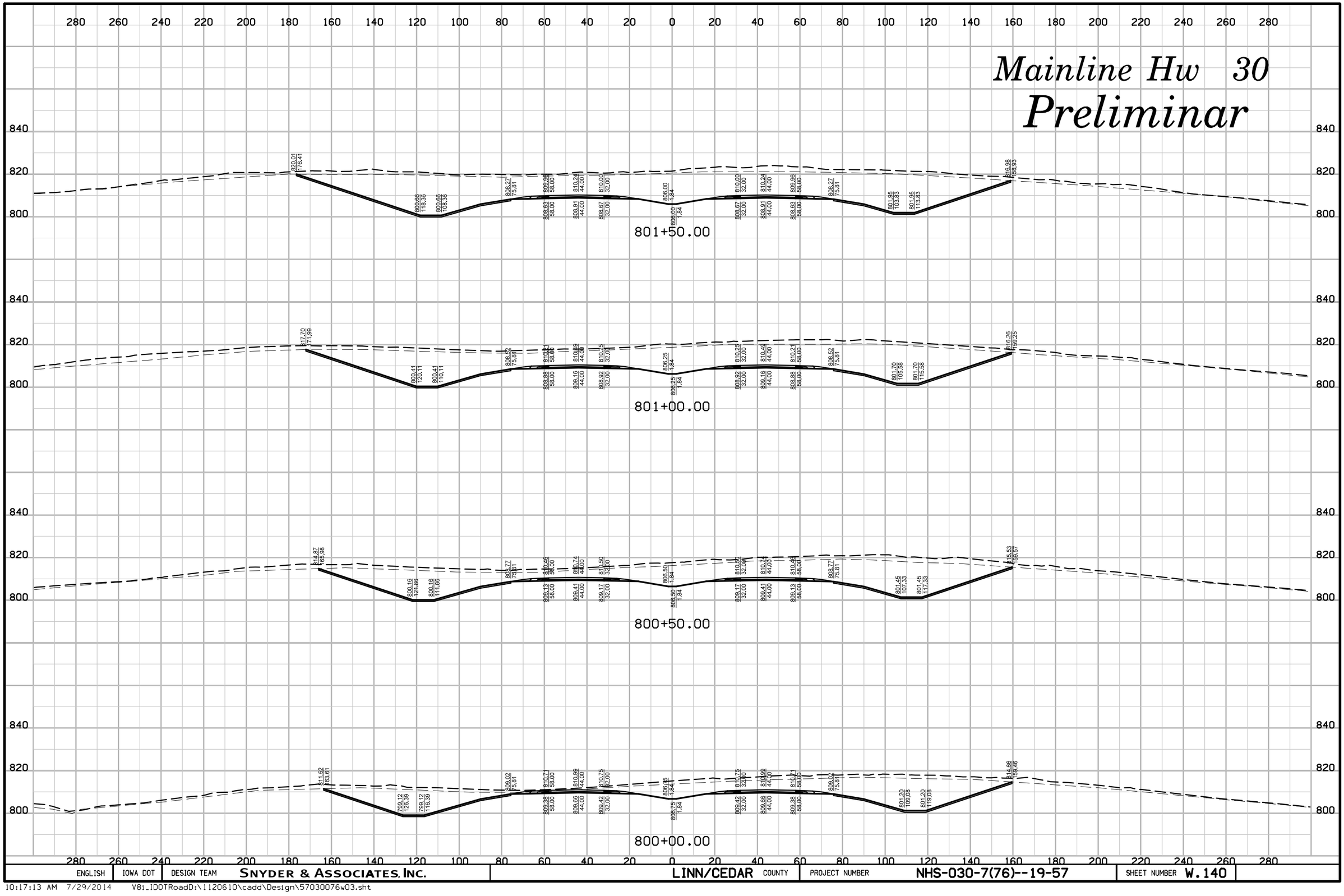


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.139

10:17:12 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

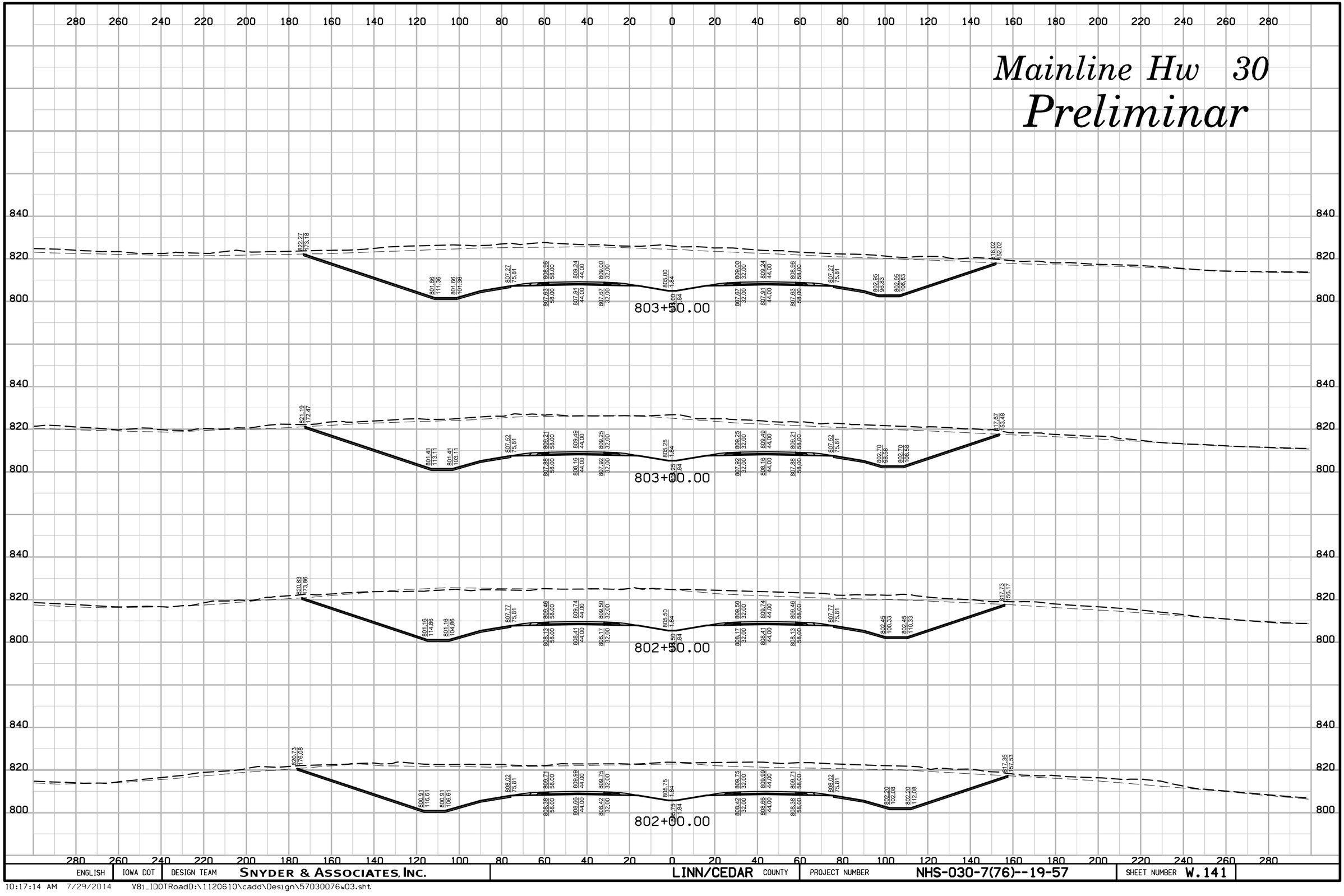


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.140

10:17:13 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

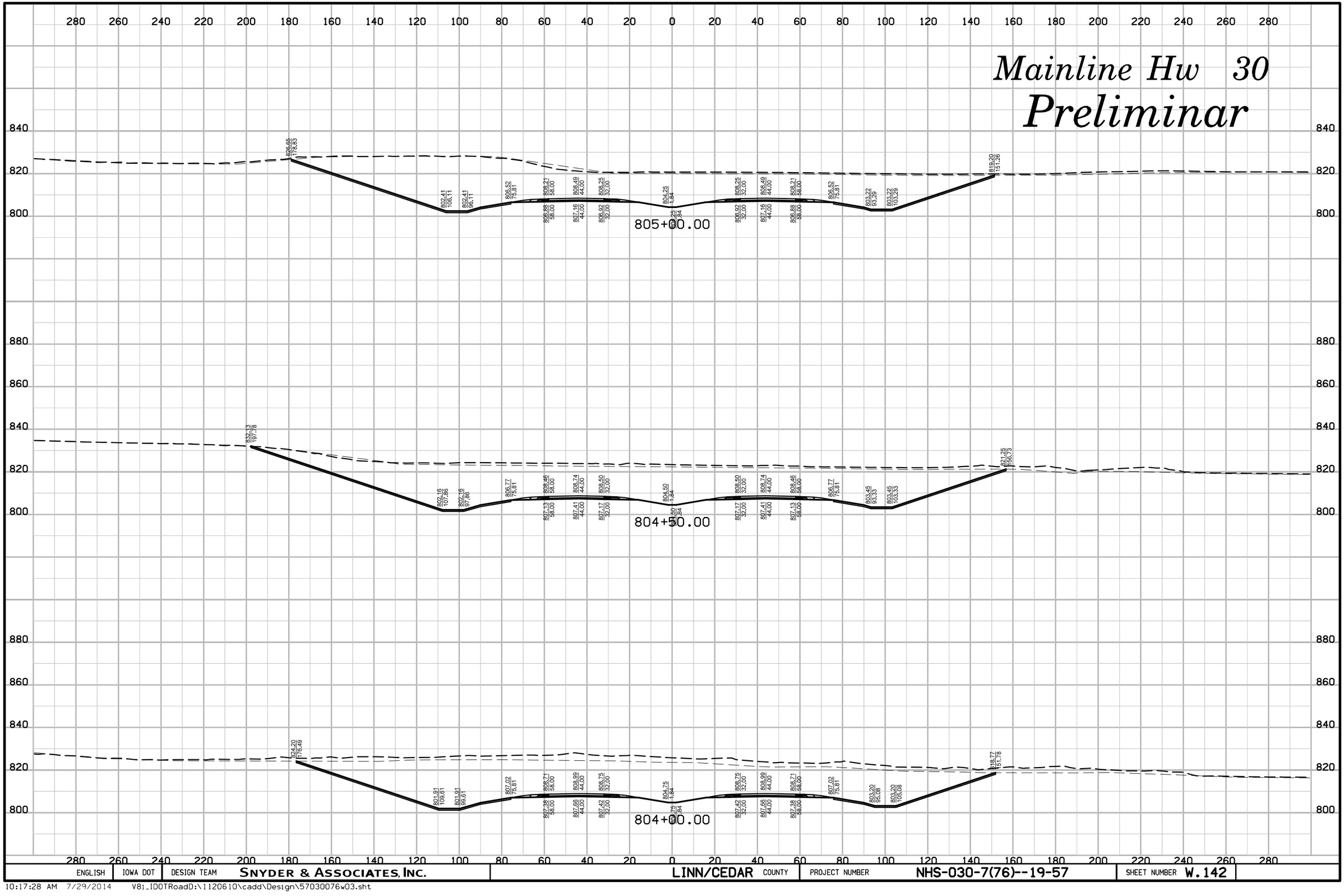


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.141

10:17:14 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

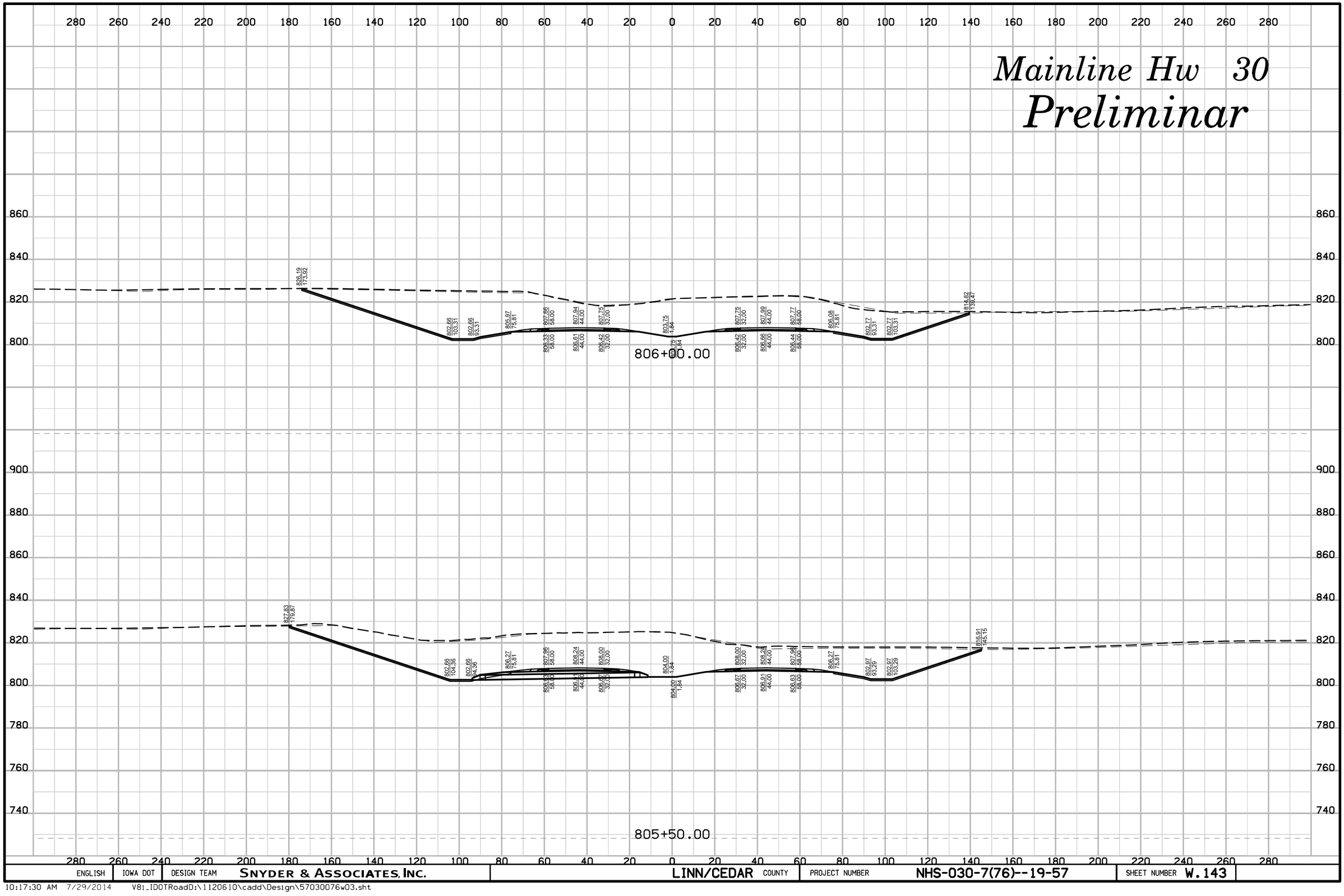


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.142

10:17:28 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

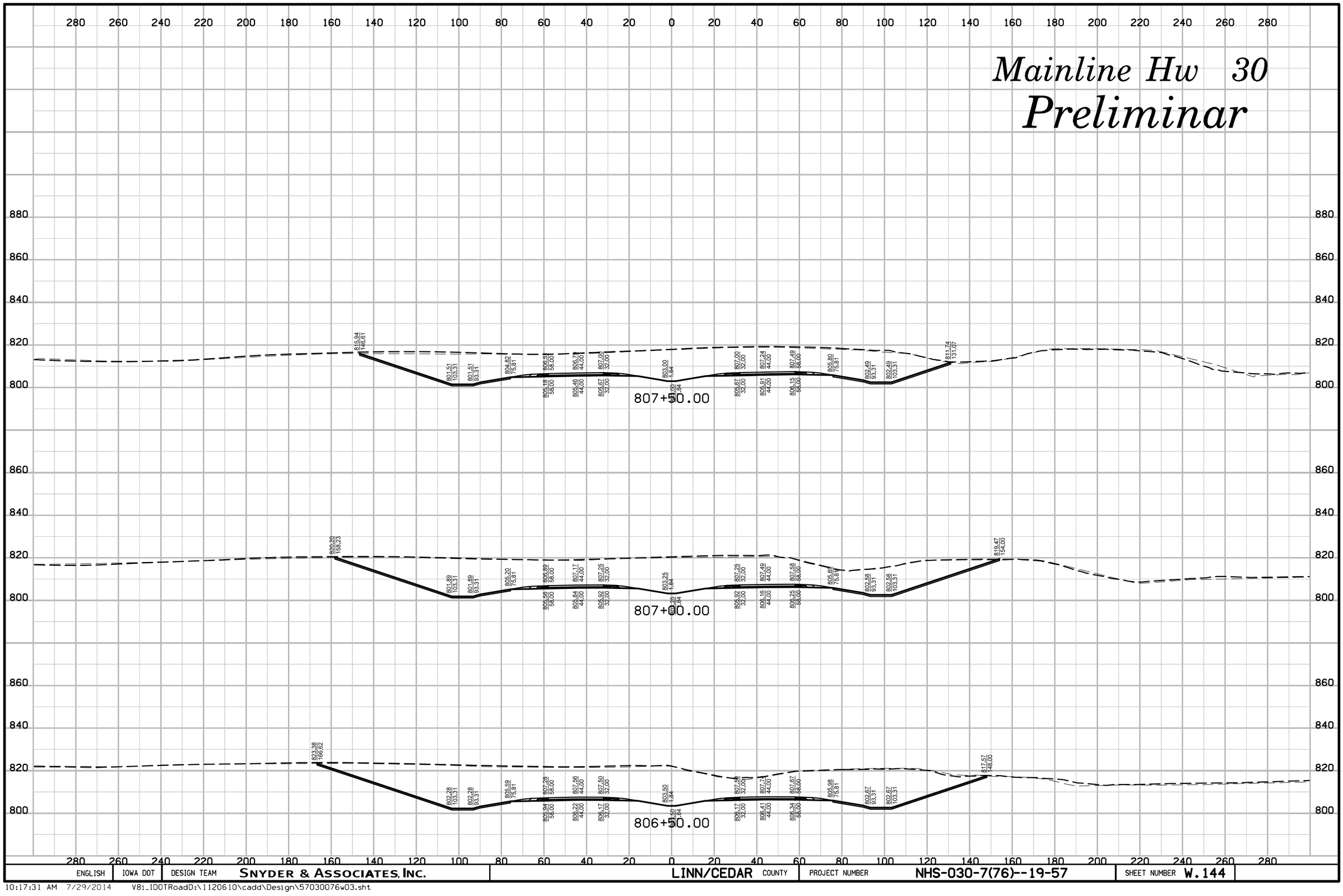


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.143

10:17:30 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

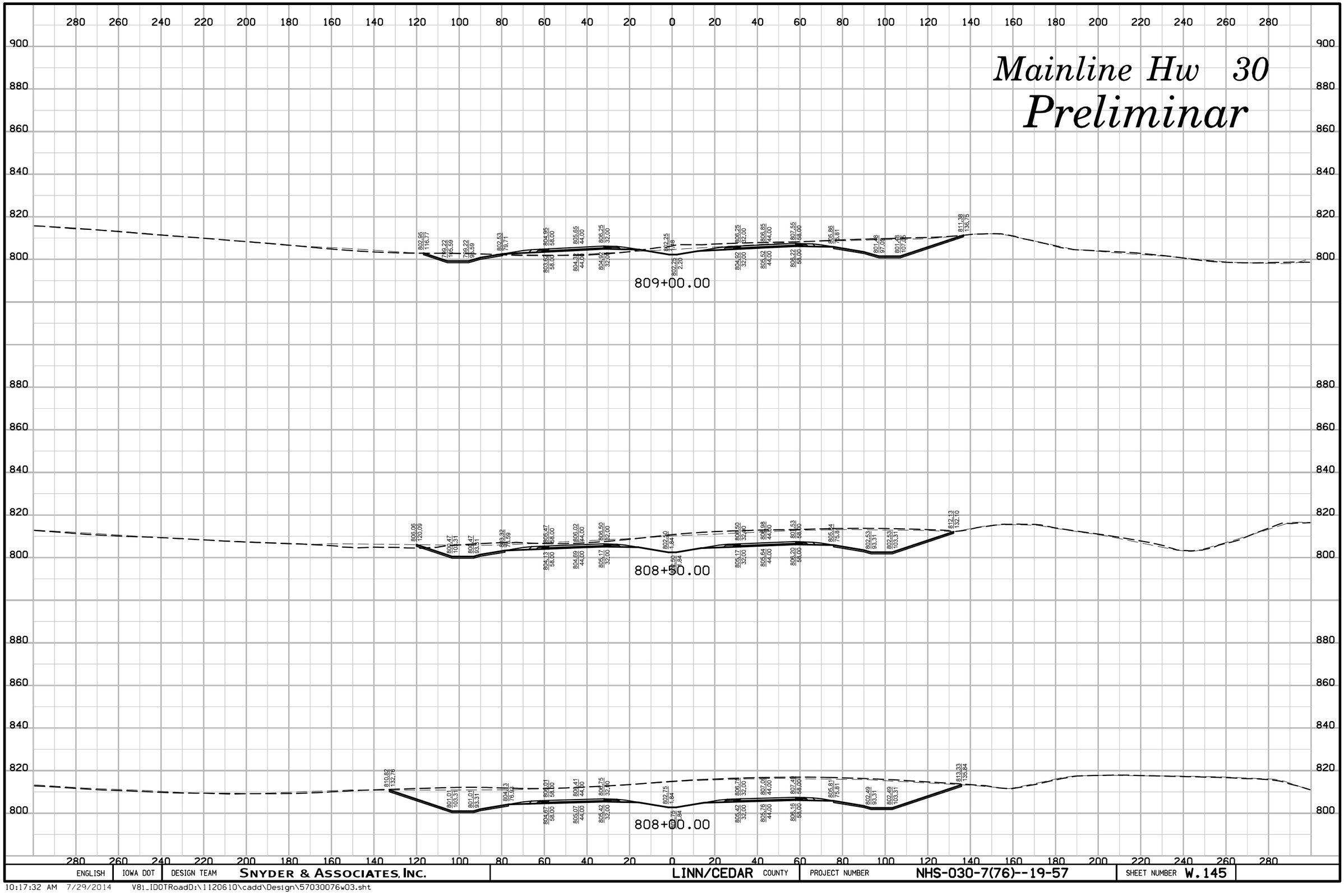


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.144

10:17:31 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

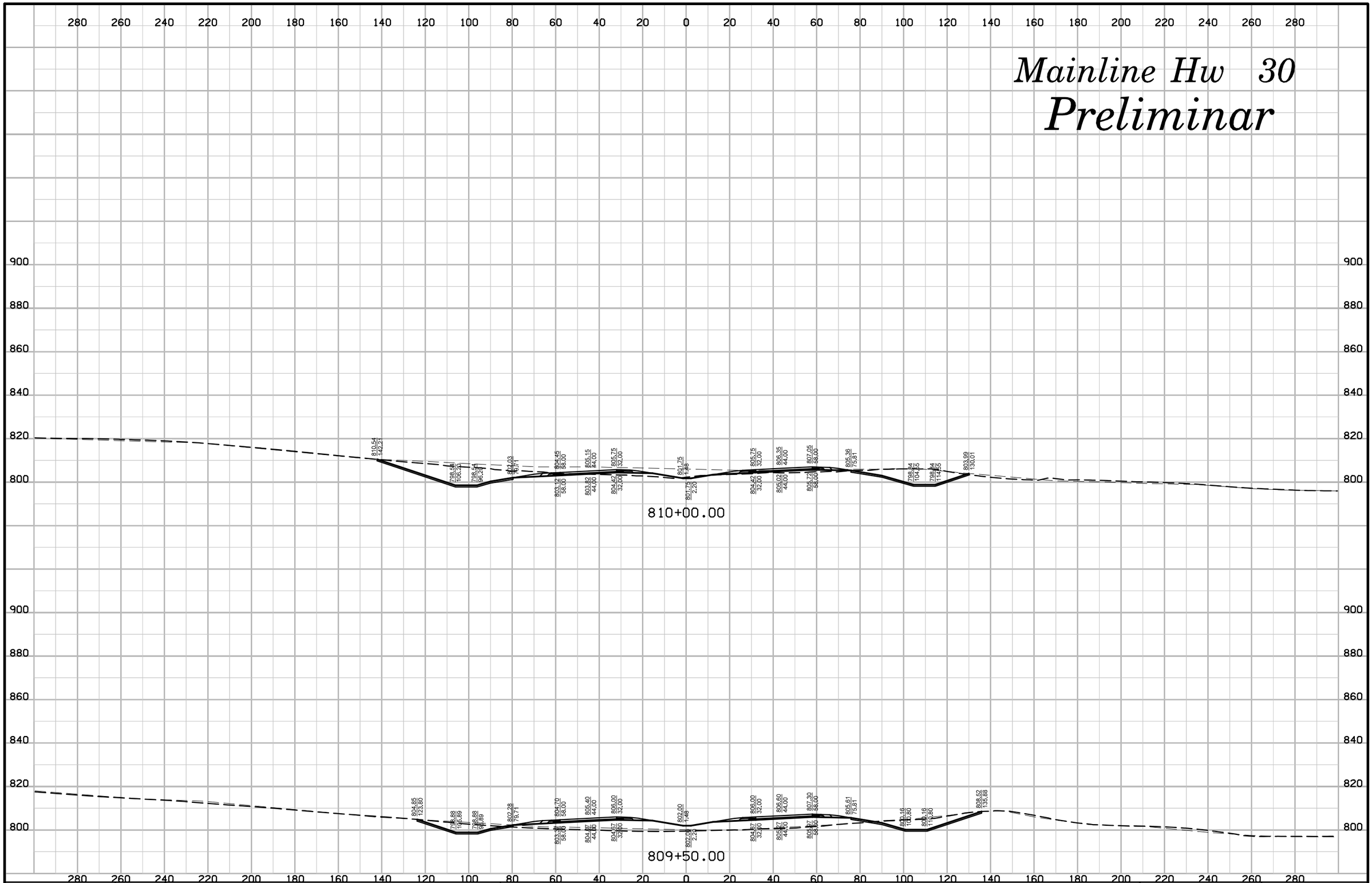


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.145

10:17:32 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

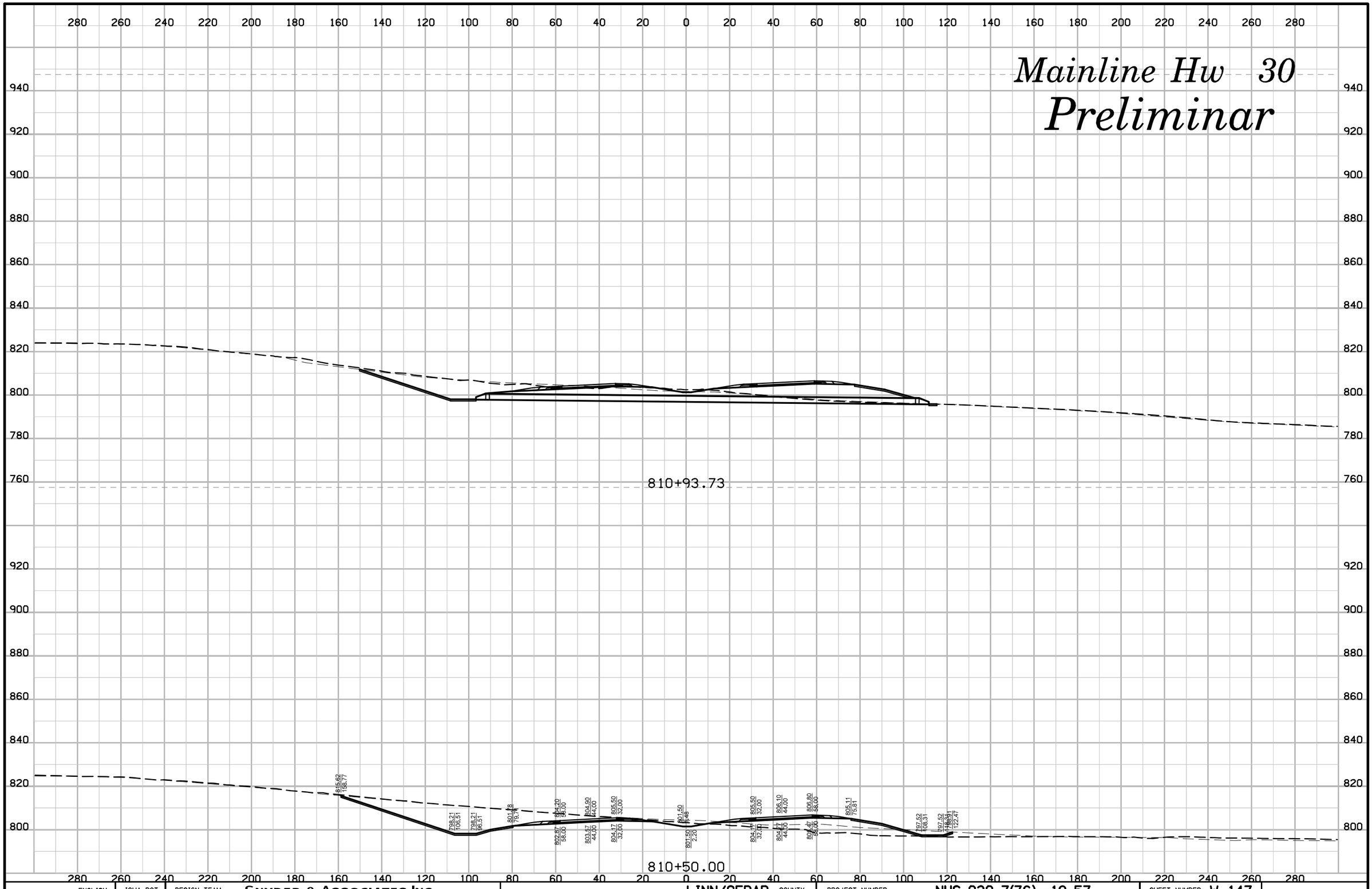


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.146

10:17:33 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

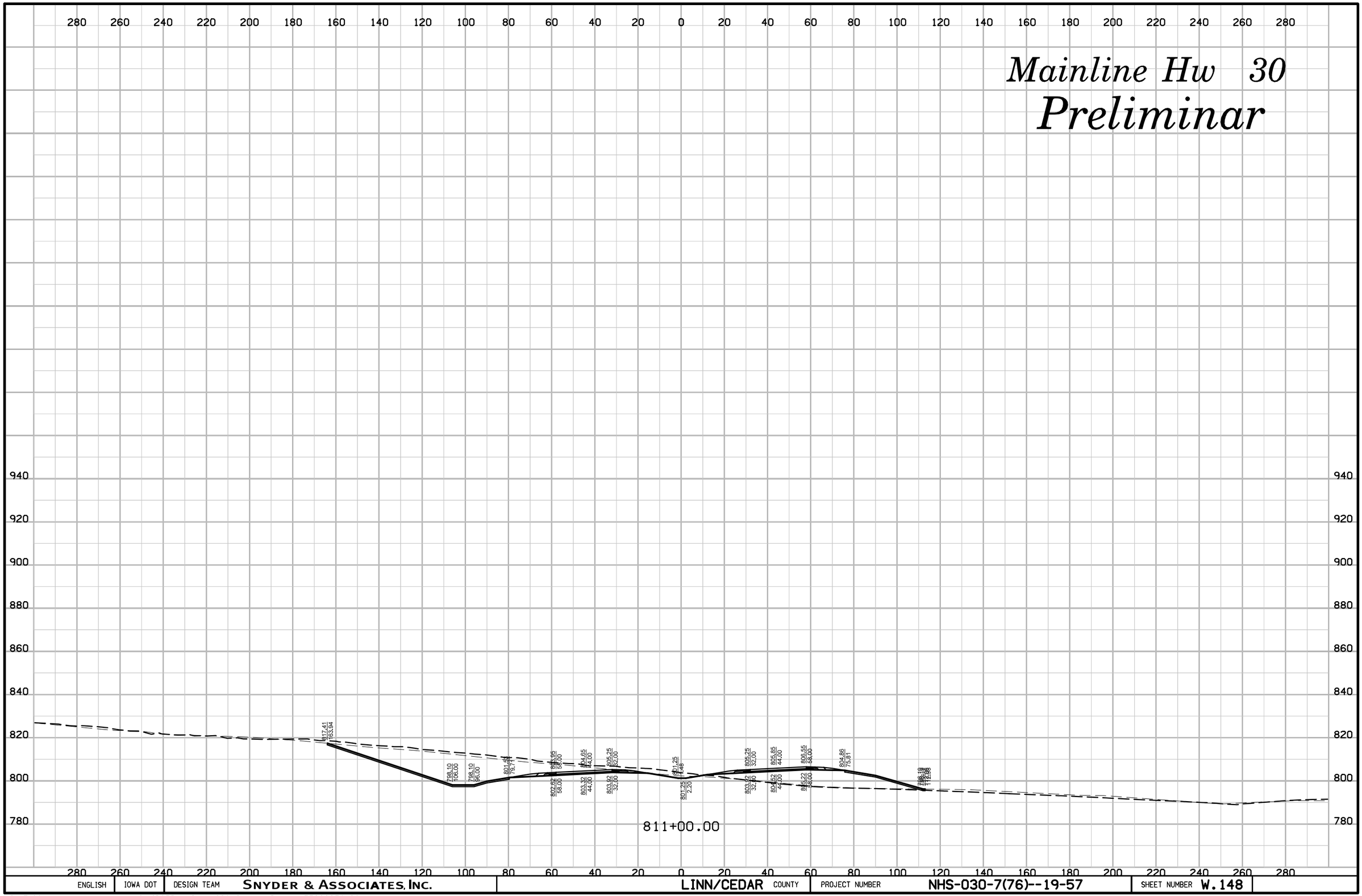


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.147

10:17:35 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.148

10:17:36 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

811+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.149

10:17:37 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

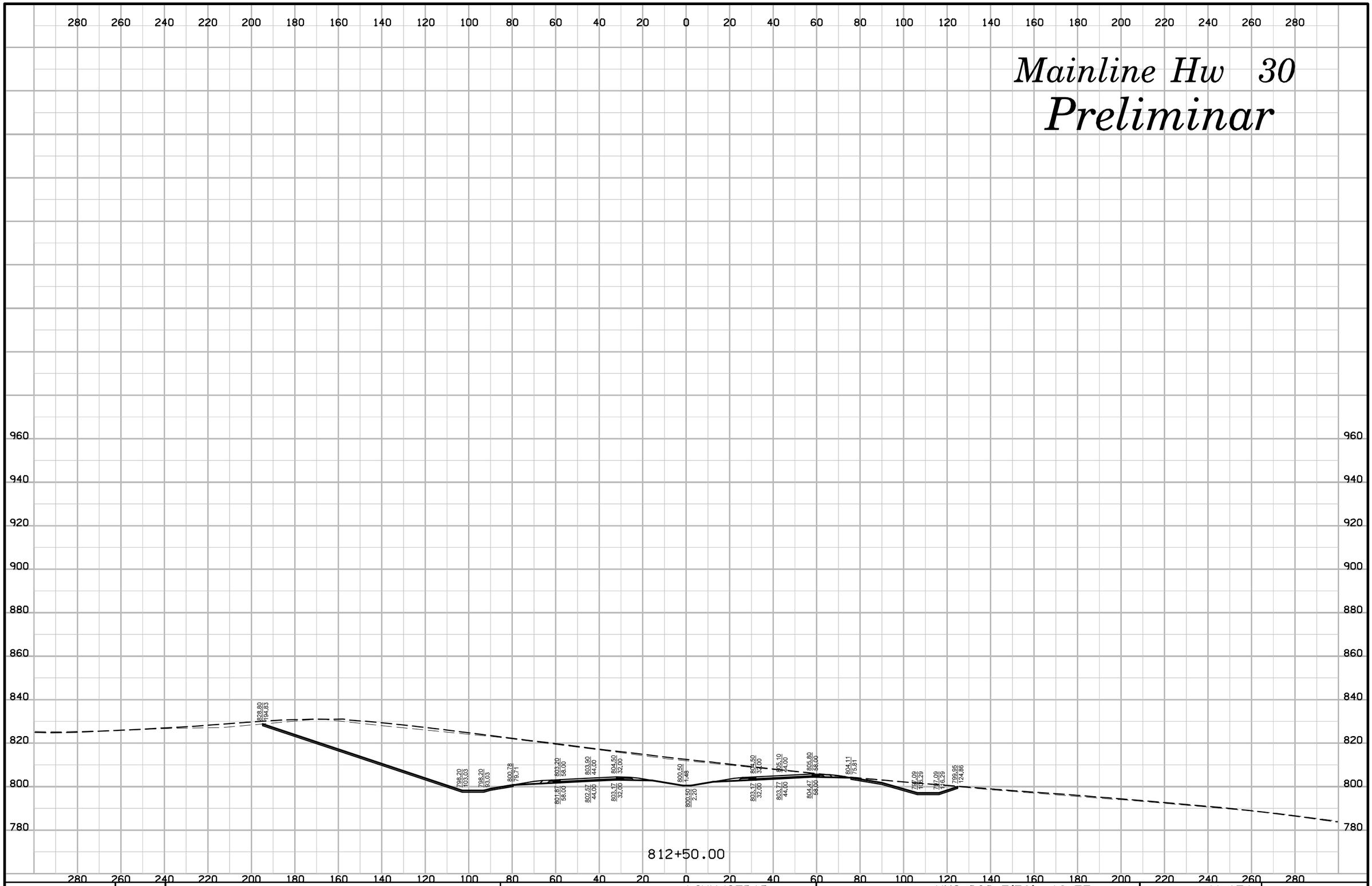
812+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.150

10:17:38 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

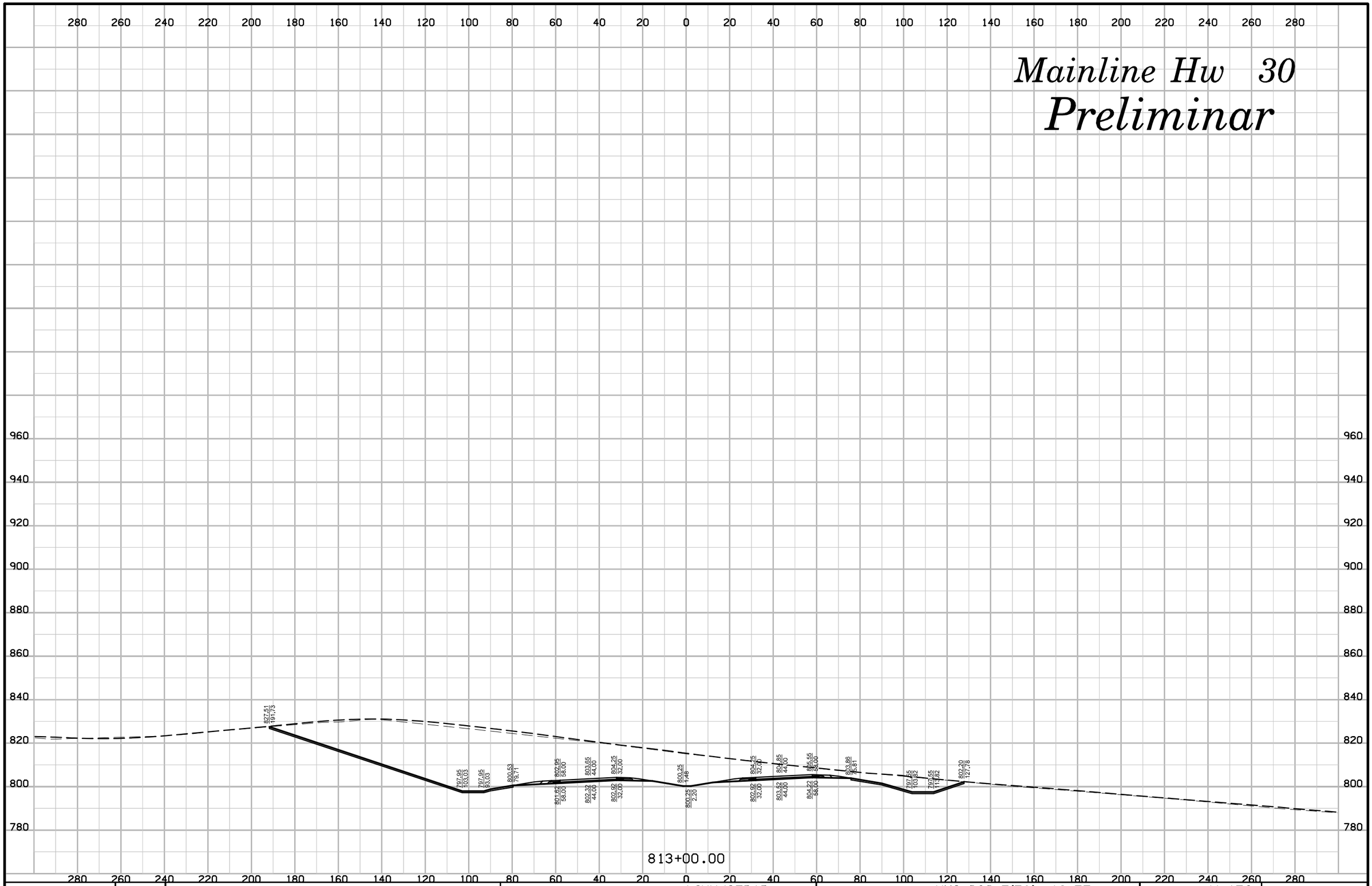


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.151

10:17:40 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

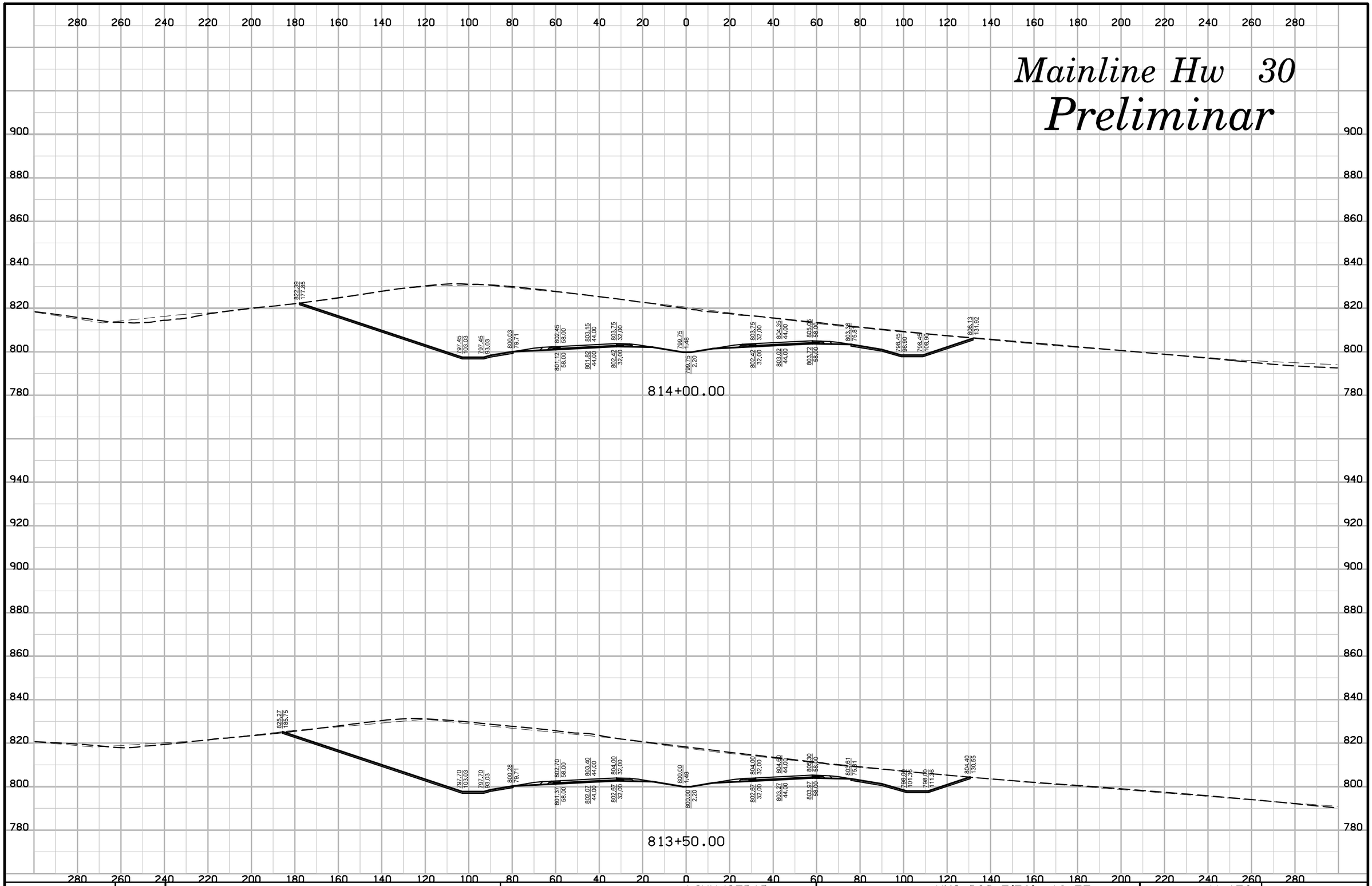


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.152

10:17:41 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.153

10:17:42 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

816+00.00

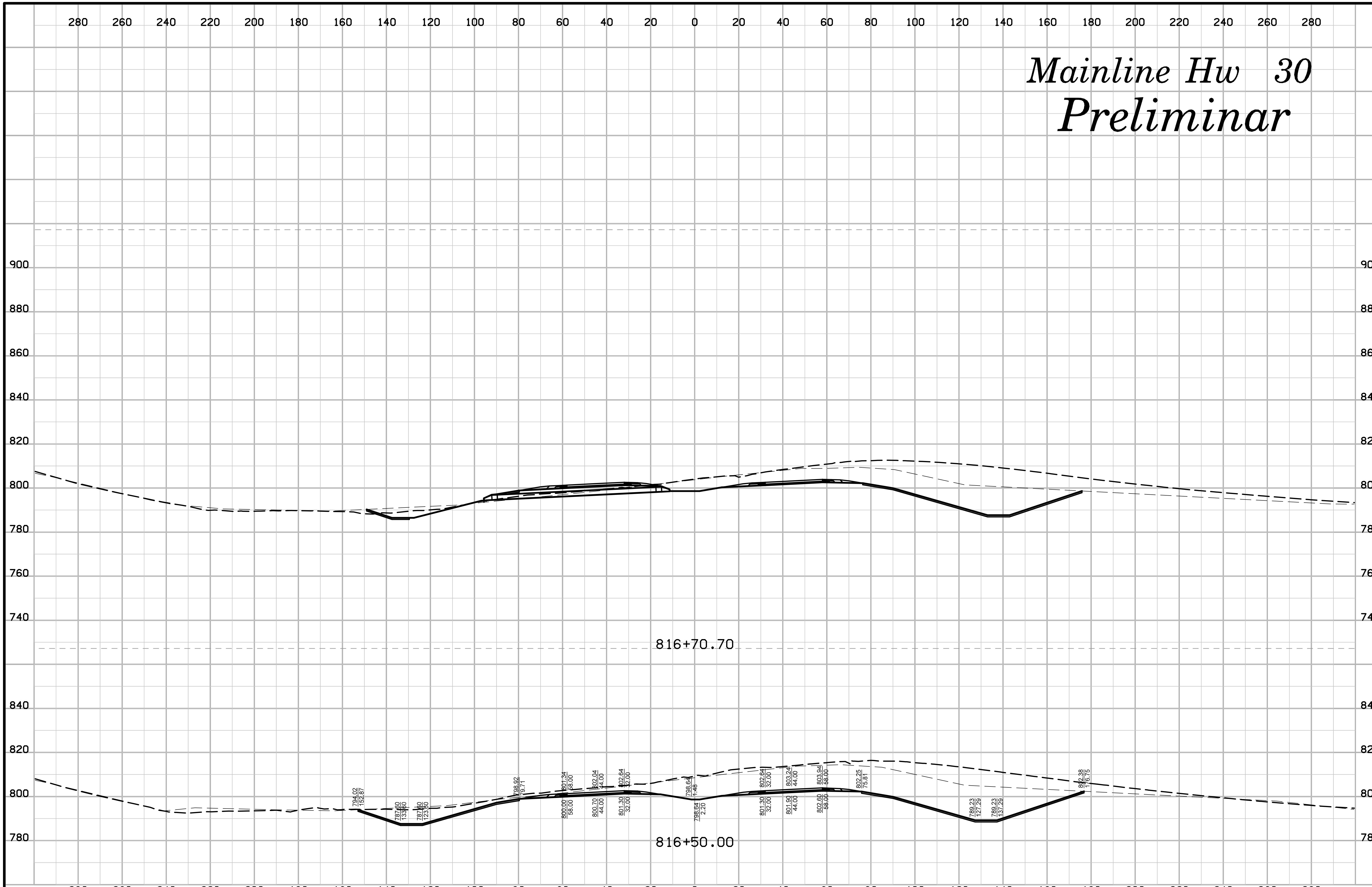
815+50.00

815+00.00

814+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.154

10:17:43 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

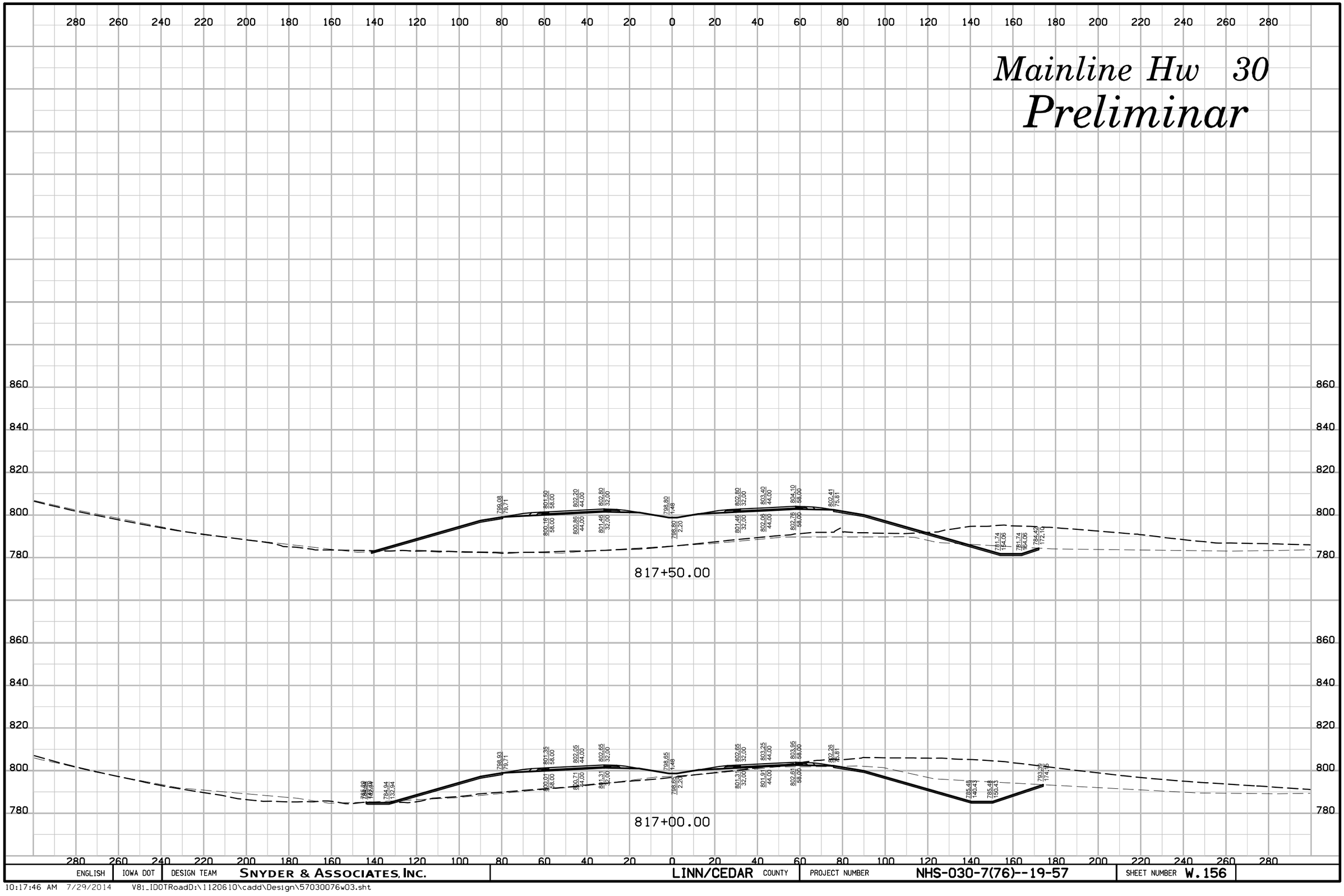


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.		LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.155

10:17:45 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.156

10:17:46 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

818+30.24

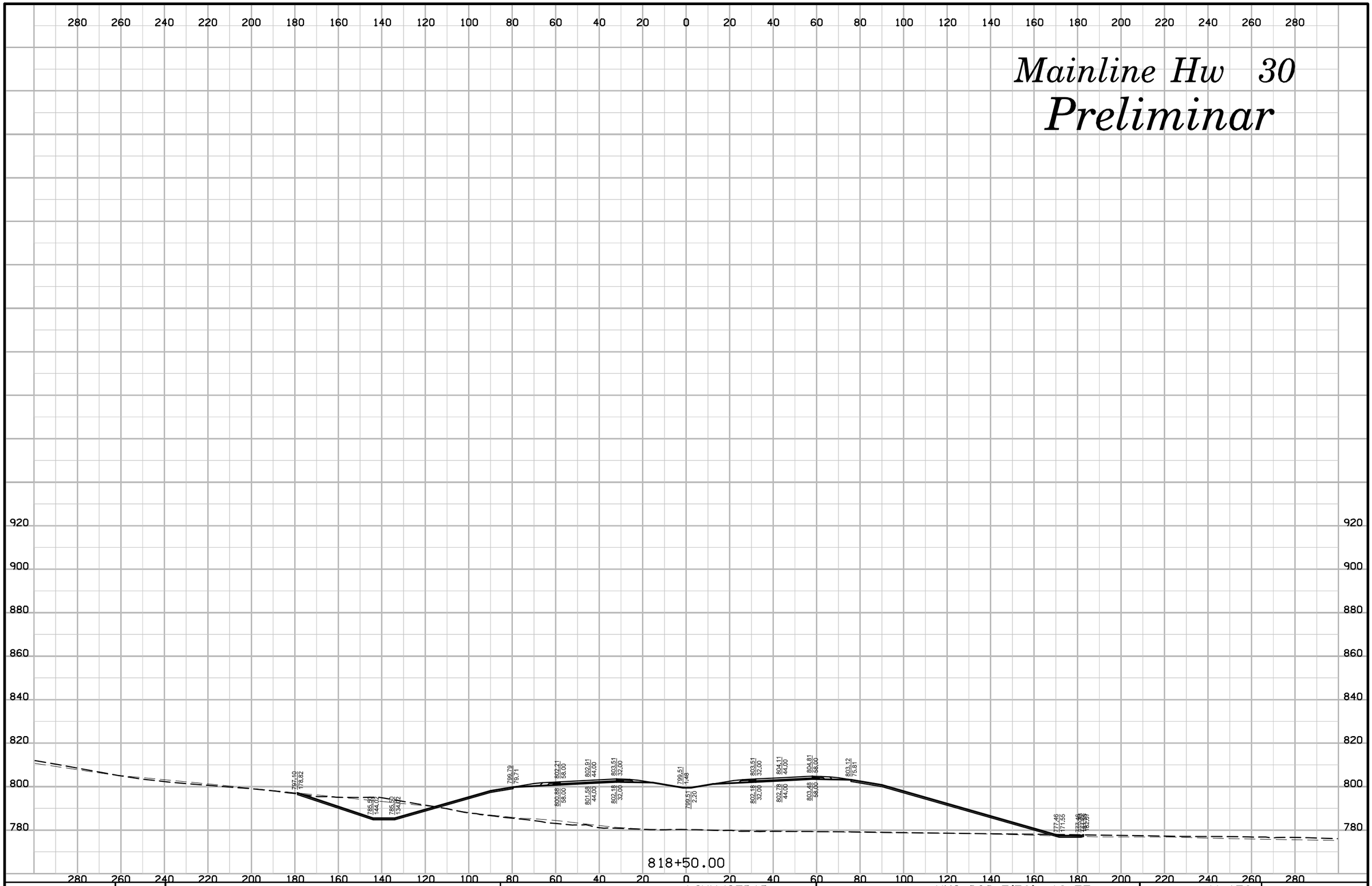
818+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.157

10:17:47 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

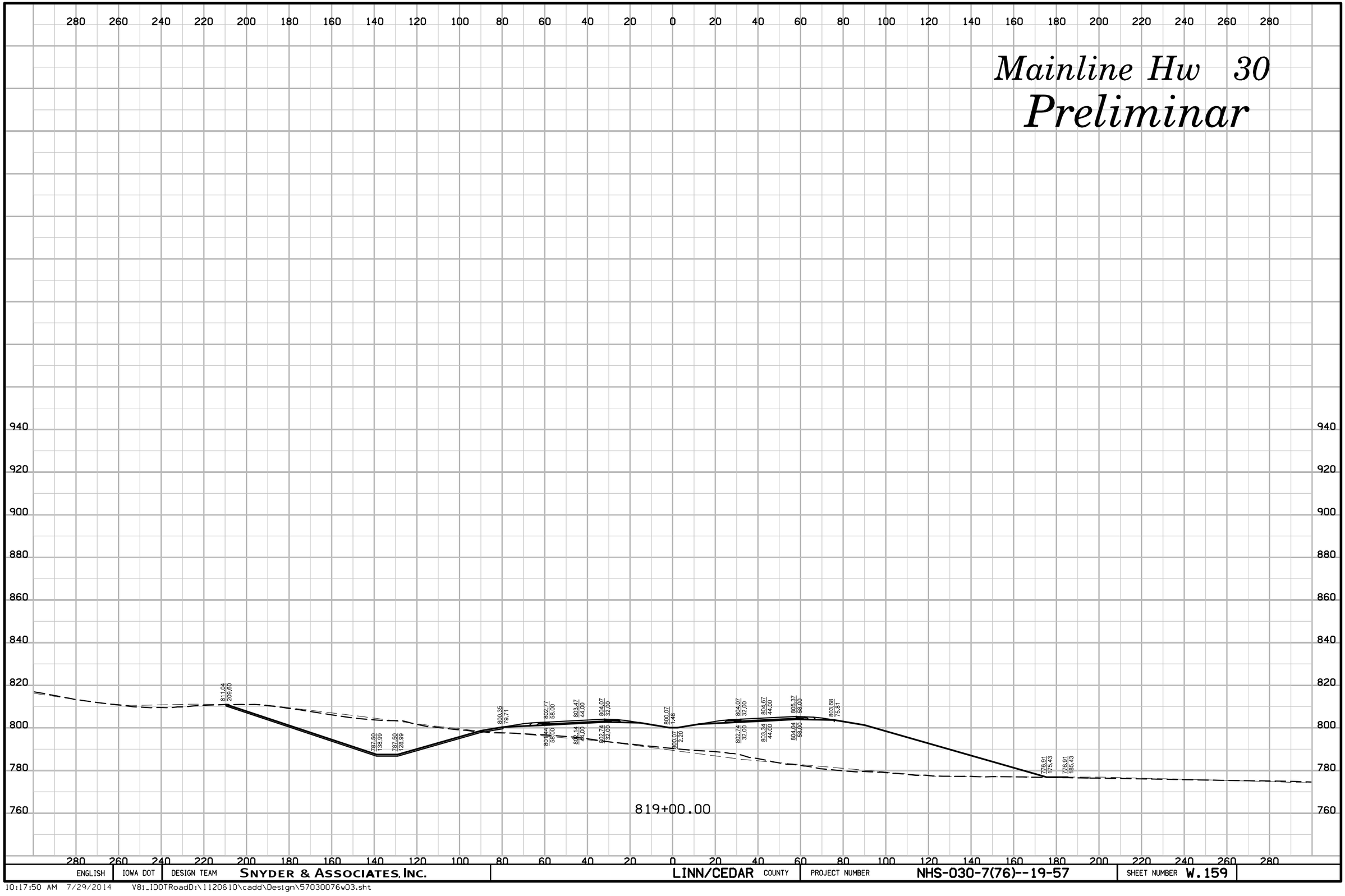


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.158

10:17:48 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

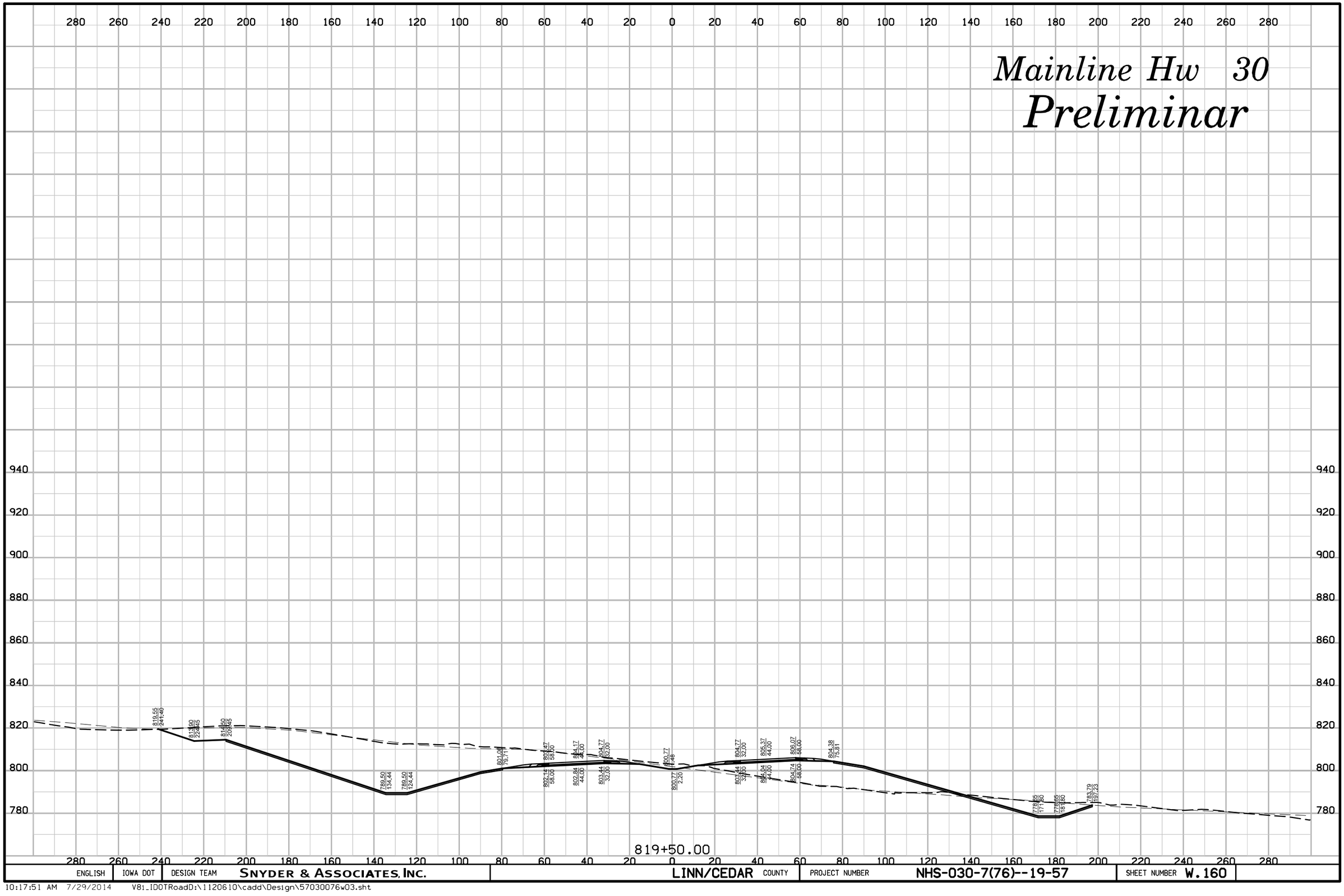


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.159

10:17:50 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

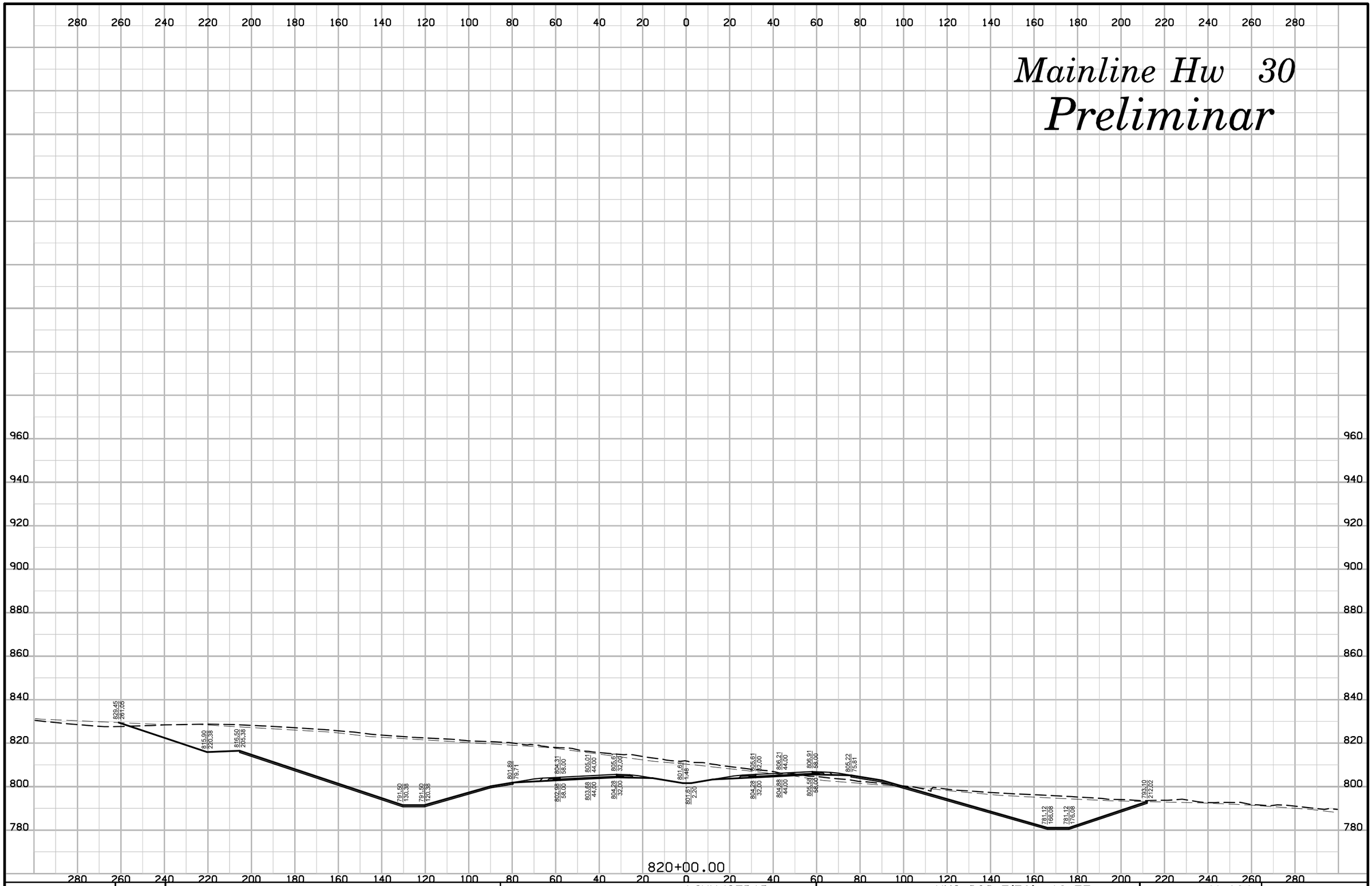


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.160

10:17:51 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

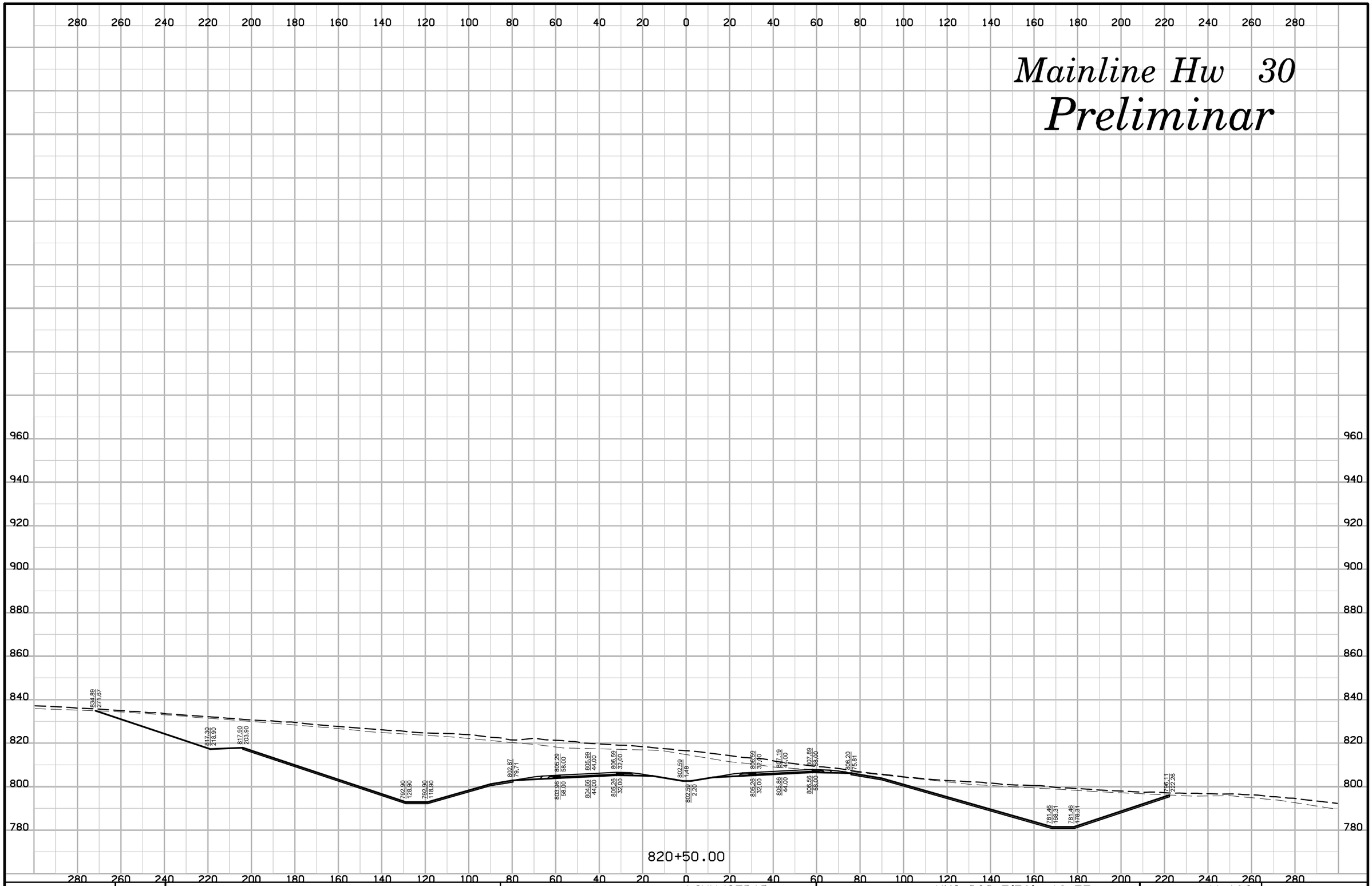


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.161

10:17:52 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

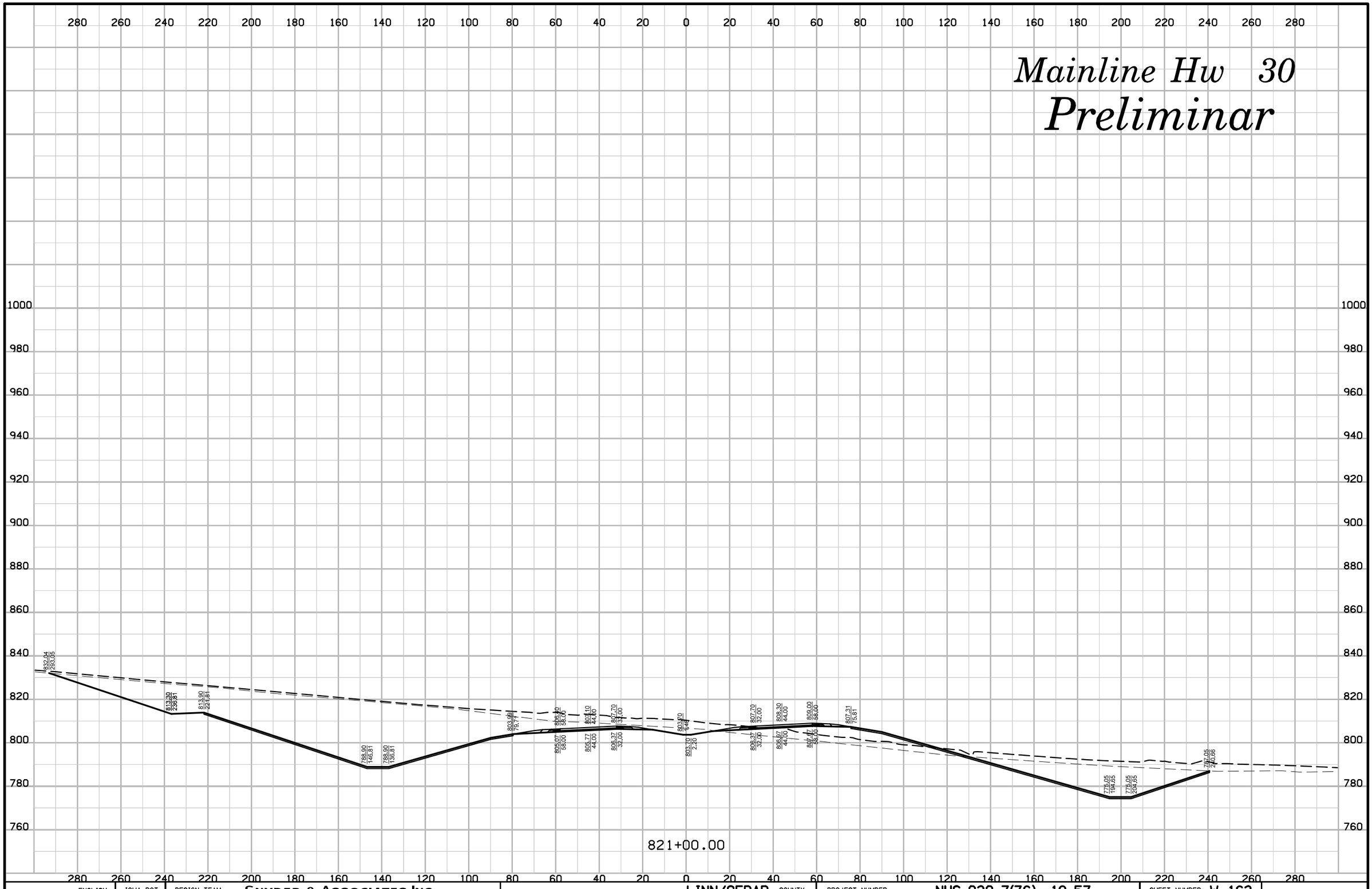


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.162

10:17:53 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

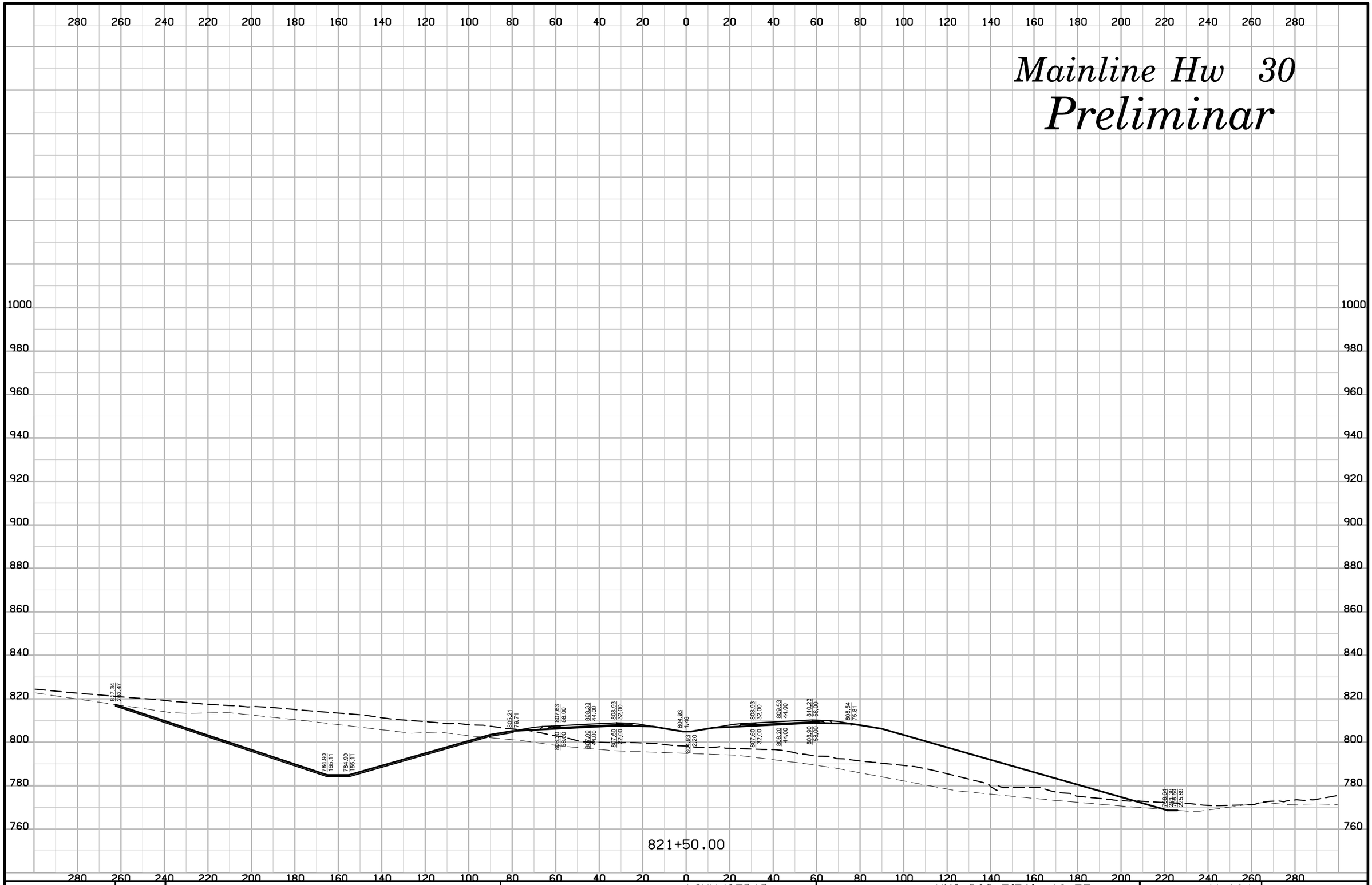


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.163

10:17:55 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

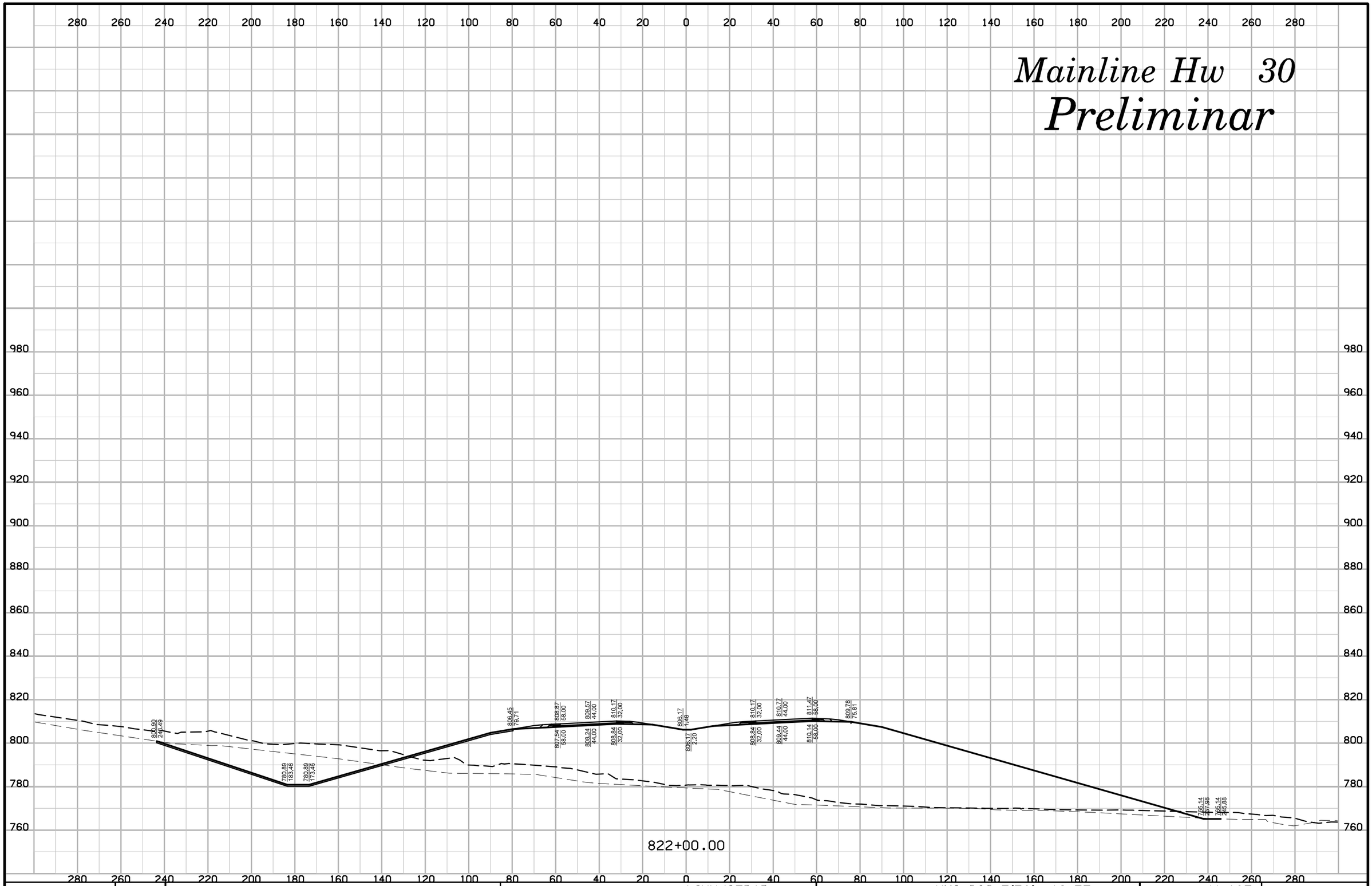


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.164

10:17:56 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

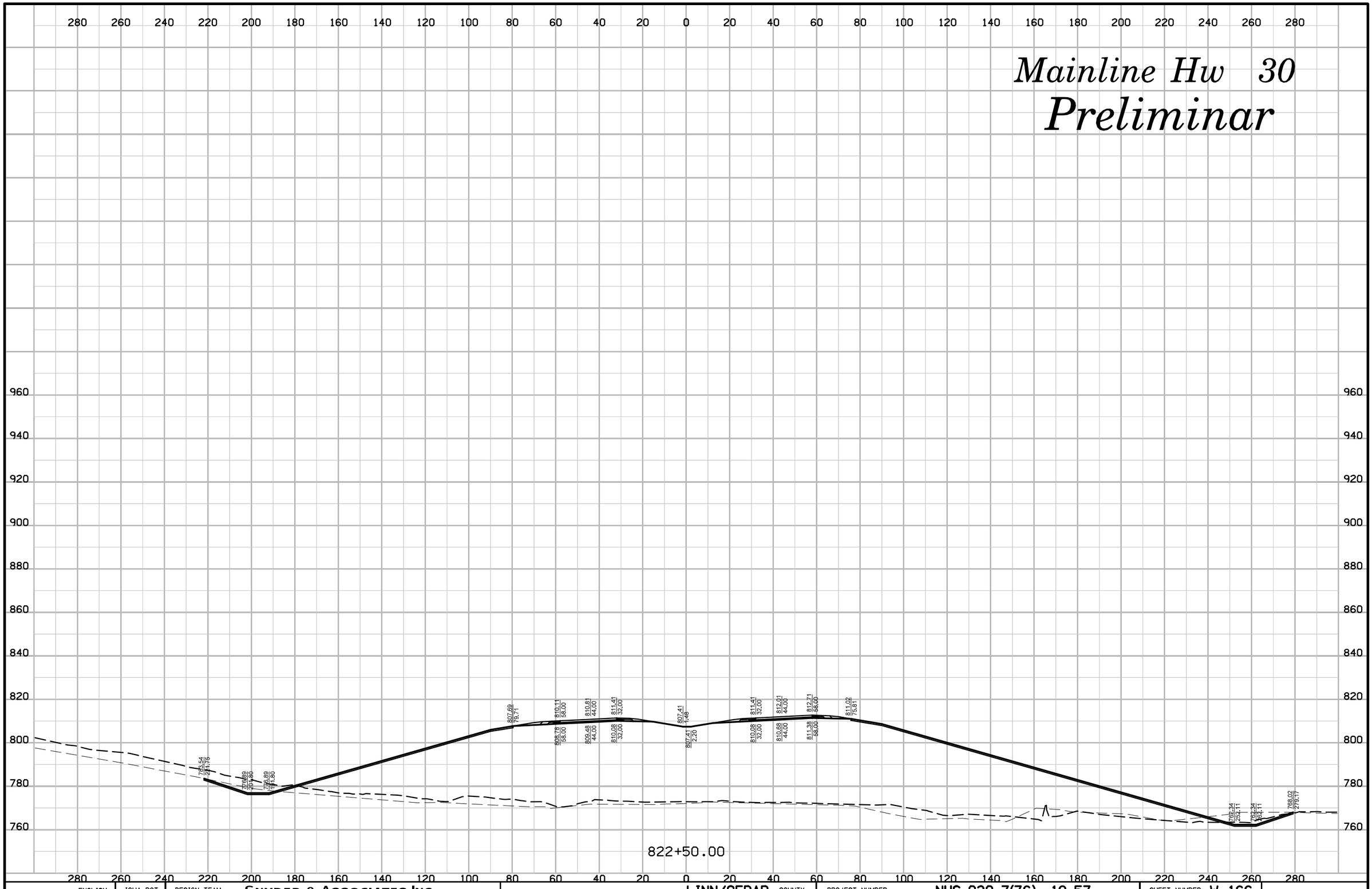


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.165

10:17:57 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.166

10:17:58 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

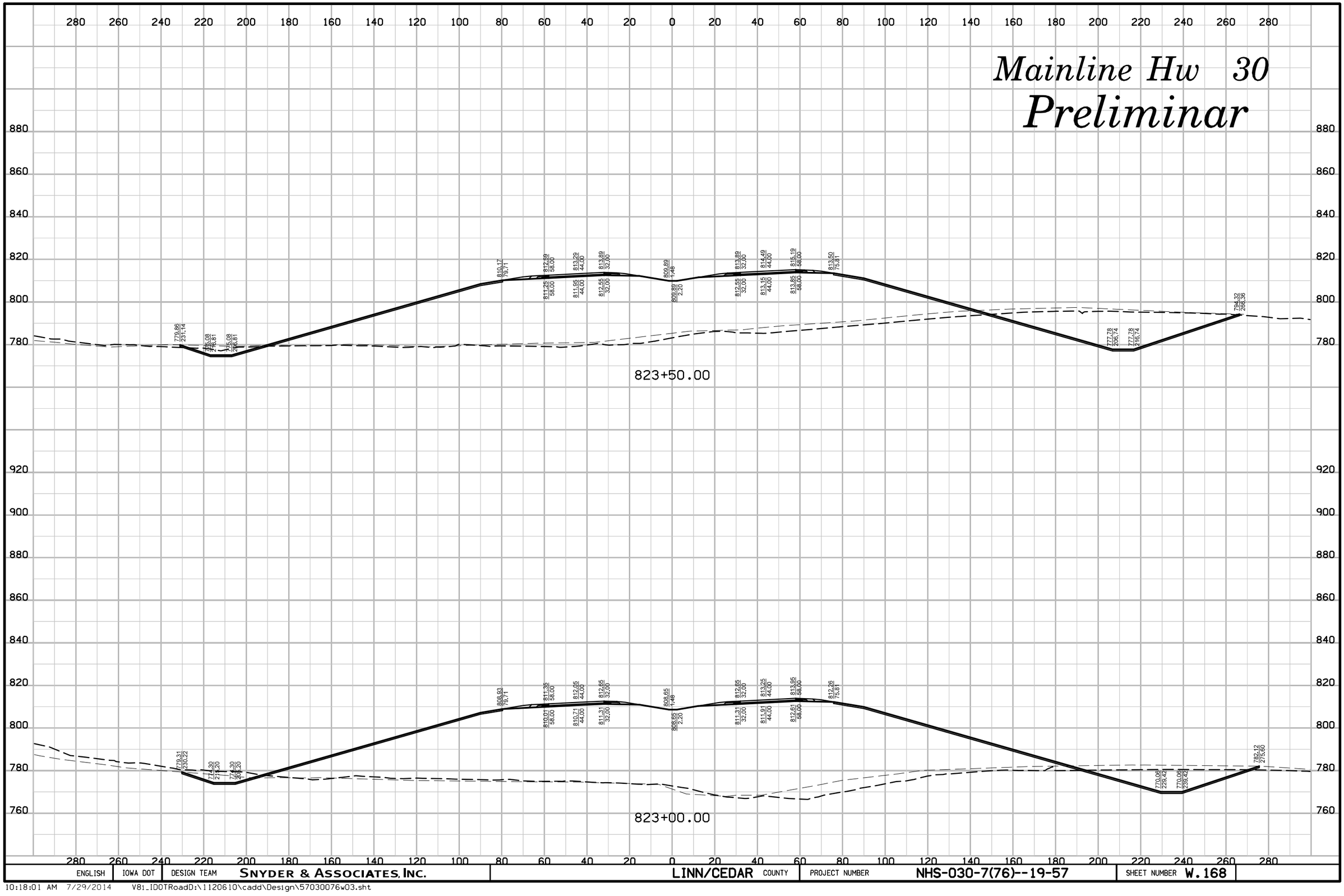
822+84.18

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.167

10:18:00 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.168

10:18:01 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

825+00.00

824+50.00

824+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.169

10:18:02 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

826+50.00

826+00.00

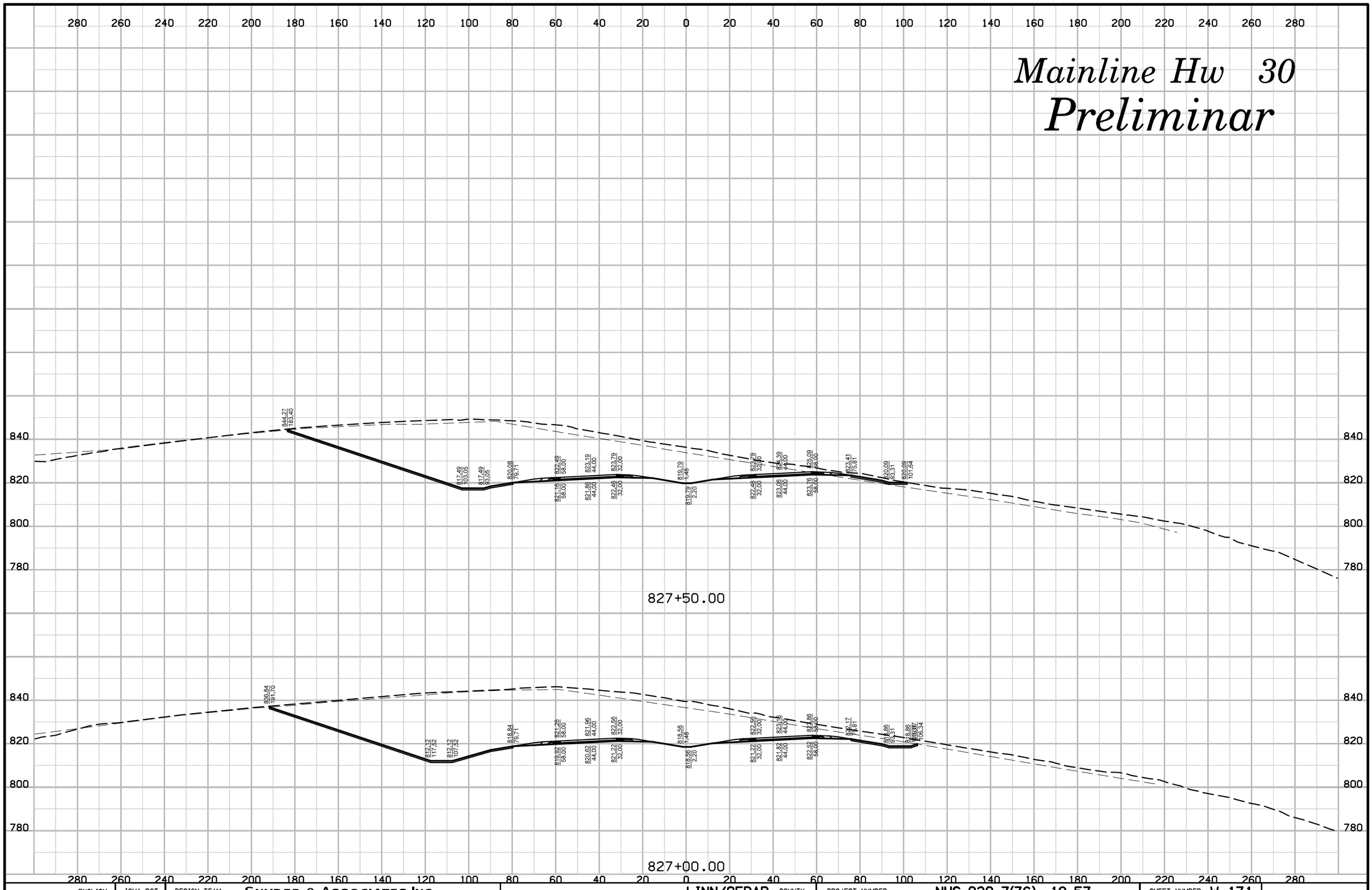
825+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.170

10:18:03 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

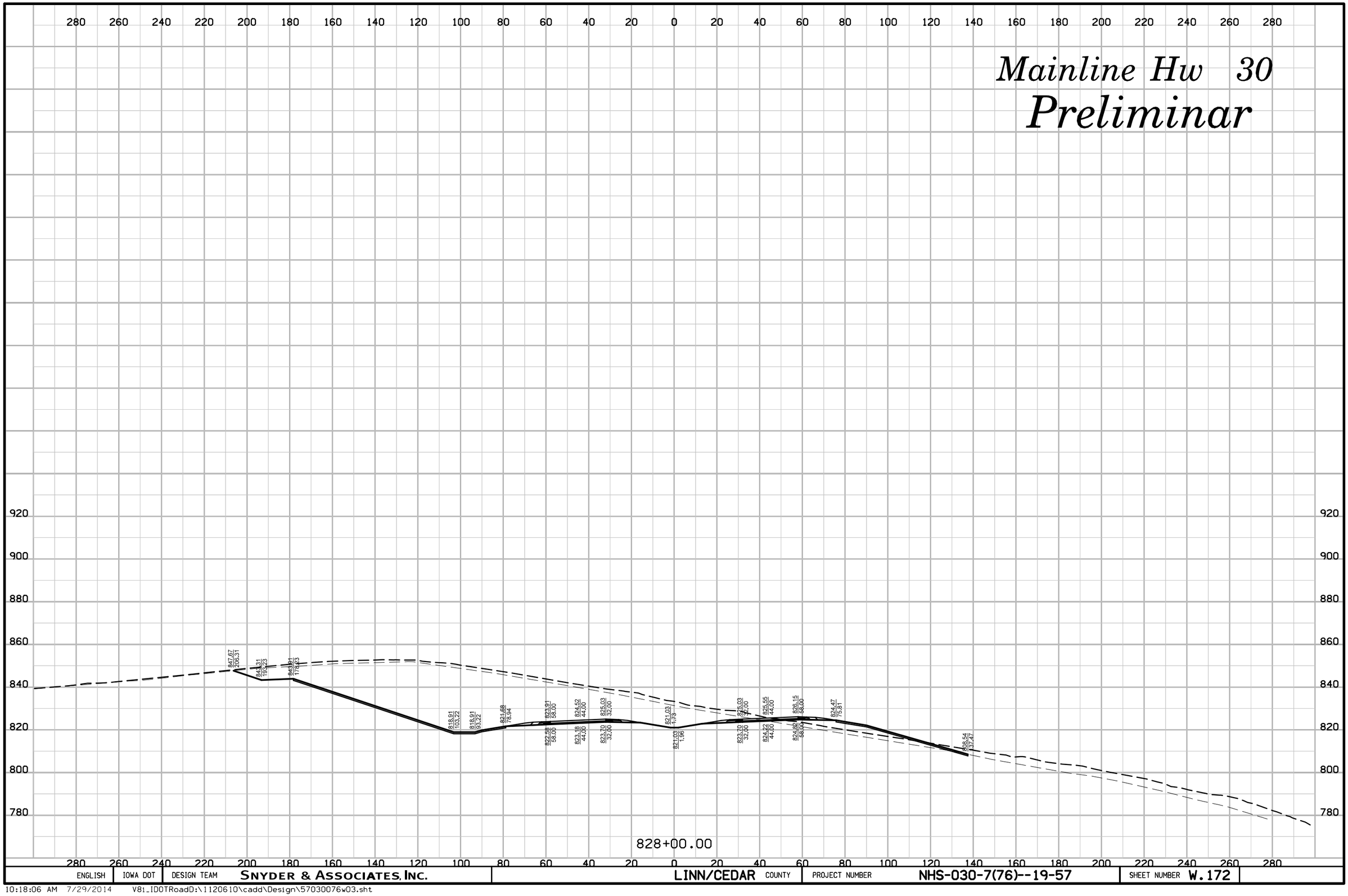


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.171

10:18:05 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.172

10:18:06 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

852.14
215.22
844.84
193.31
846.44
176.32
820.44
103.31
820.44
93.31
823.49
77.40
824.11
58.00
825.44
58.00
824.56
44.00
825.89
44.00
824.94
32.00
826.27
32.00
922.27
1.84
922.27
1.84
824.94
32.00
826.27
32.00
825.32
44.00
825.66
44.00
825.77
58.00
827.10
58.00
825.42
75.61
784.09
228.37

828+50.00

ENGLISH | IOWA DOT | DESIGN TEAM | SNYDER & ASSOCIATES, INC. | LINN/CEDAR COUNTY | PROJECT NUMBER NHS-030-7(76)--19-57 | SHEET NUMBER W.173

10:18:07 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

856.76
224.49

846.37
193.32

846.97
178.32

821.97
103.31

821.97
93.31

825.26
75.92

826.97
58.00

825.63
58.00

827.26
44.00

825.93
44.00

827.51
32.00

826.18
32.00

823.51
1.84

823.97
1.84

827.51
32.00

826.18
32.00

827.76
44.00

826.43
44.00

828.05
58.00

826.72
58.00

826.36
75.81

827.68
182.13

829+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.174

10:18:08 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

881.01
233.11
847.75
193.32
846.95
178.32
823.35
103.31
823.35
93.31
826.66
75.81
828.35
58.00
828.63
44.00
828.75
32.00
824.75
1.84
828.75
32.00
828.99
44.00
829.13
58.00
827.44
75.81
827.02
56.00
827.30
44.00
827.42
32.00
824.75
1.84
827.42
32.00
827.66
44.00
827.79
54.40
771.11
276.89

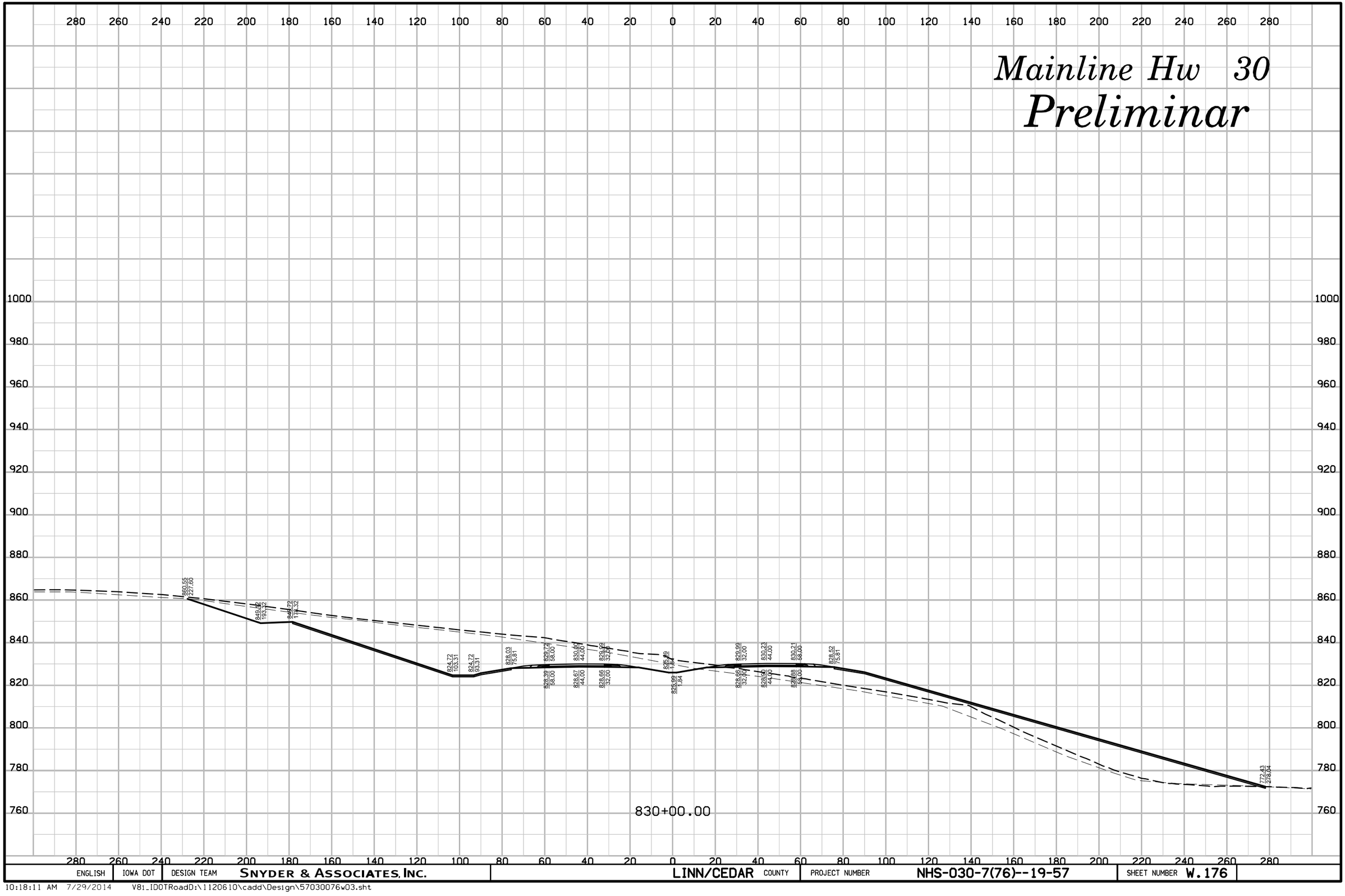
829+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.175

10:18:10 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.176

10:18:11 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

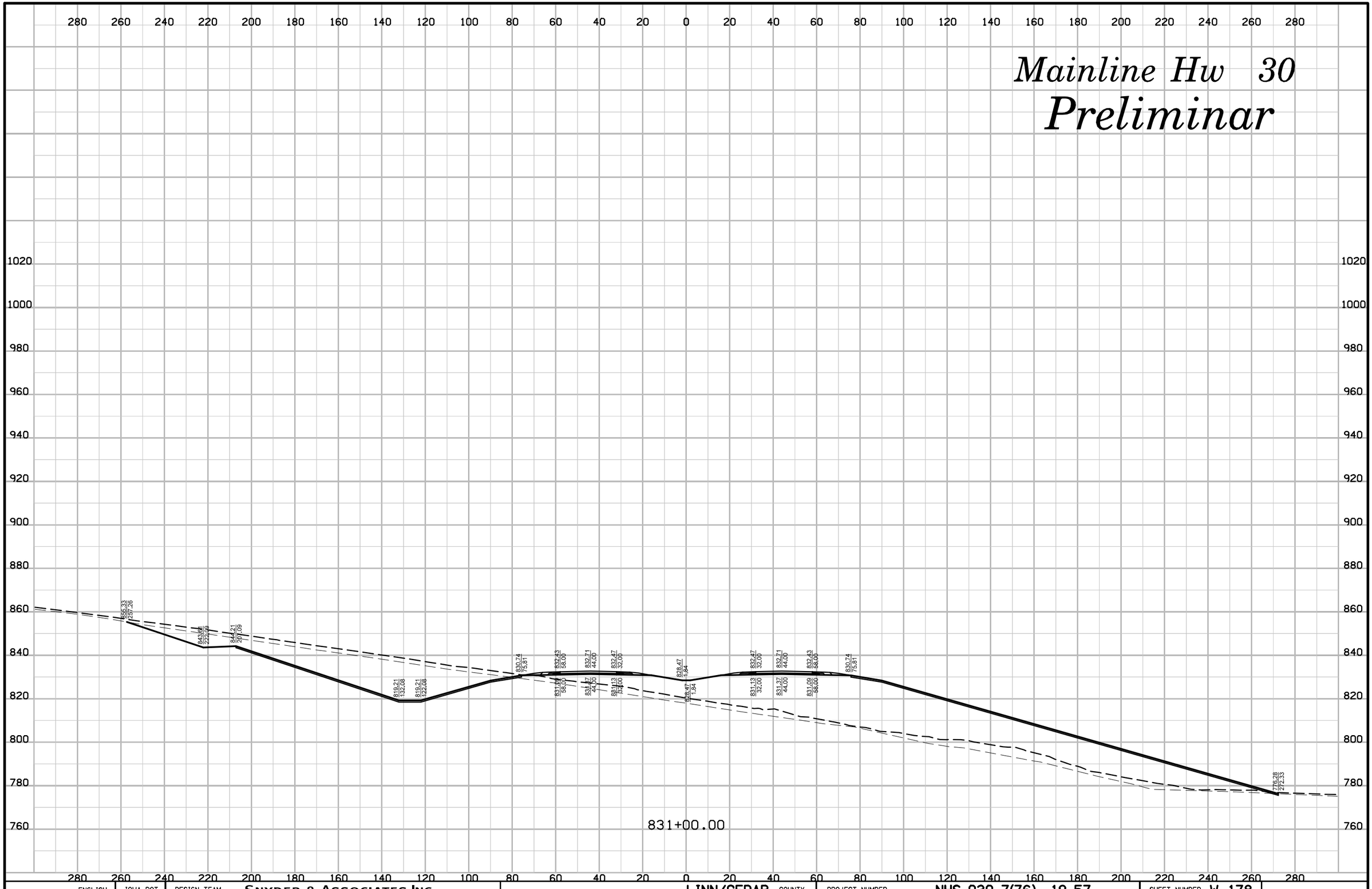
830+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.177

10:18:12 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

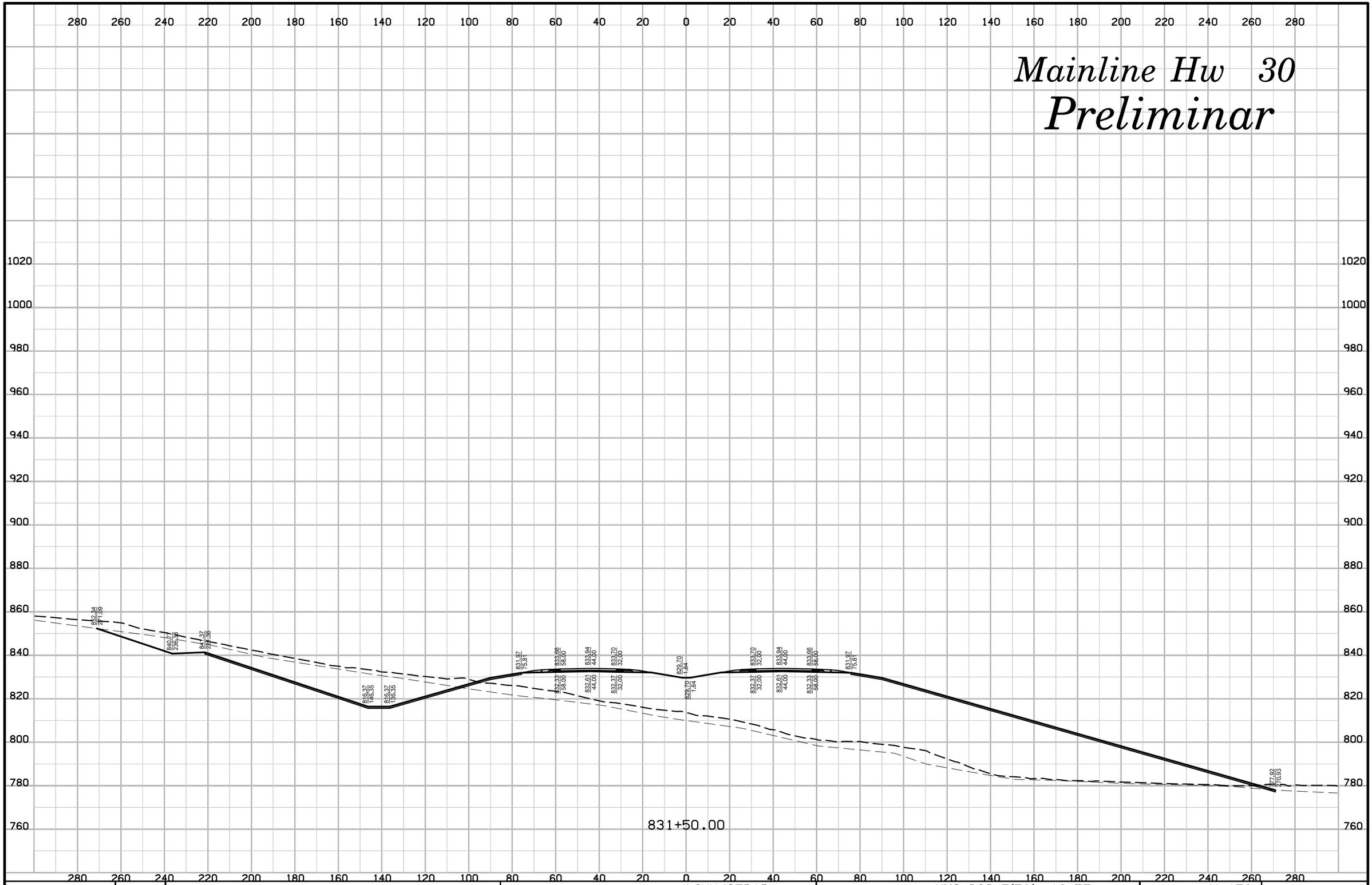


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.178

10:18:13 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

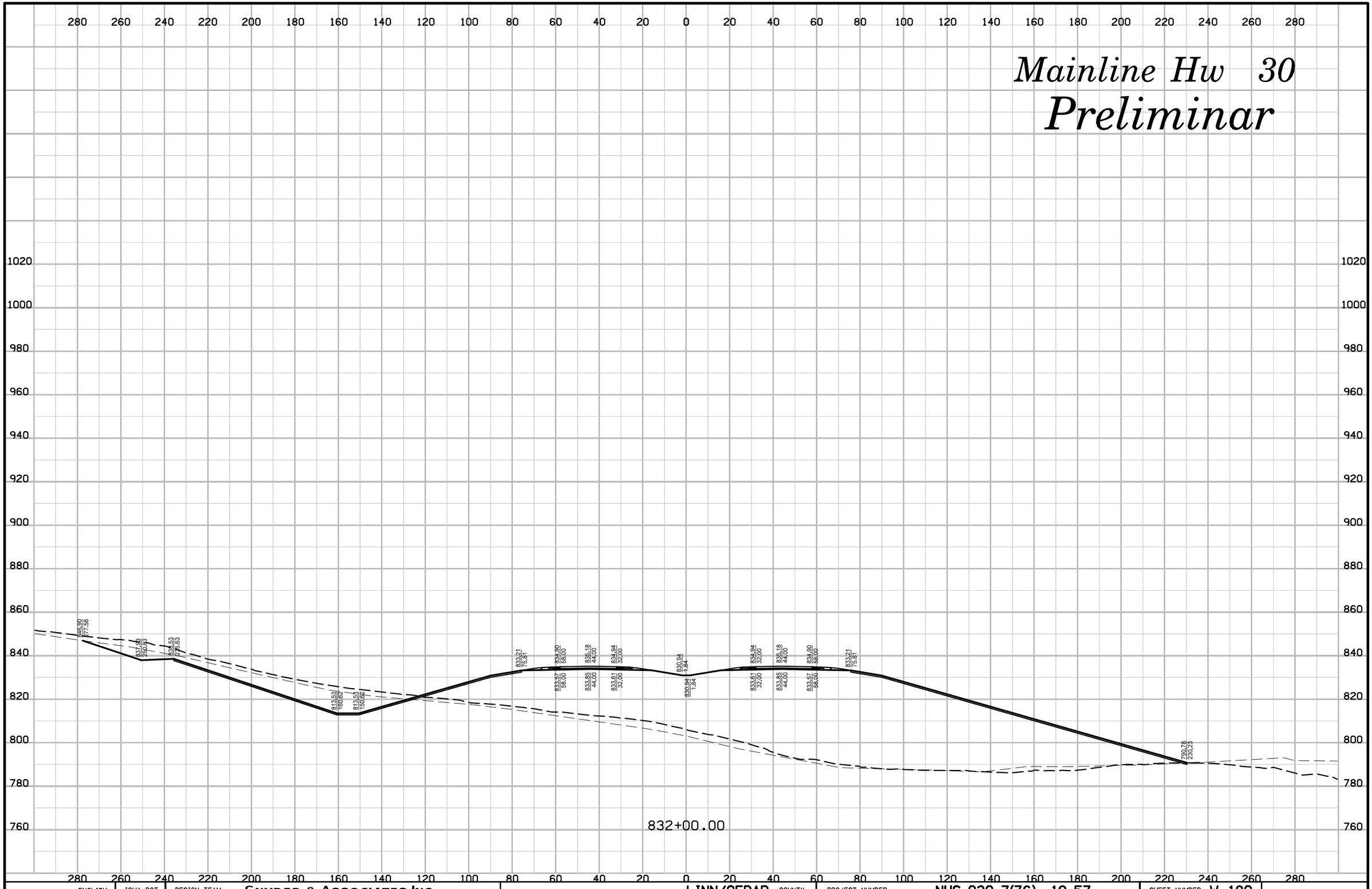


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.179

10:18:14 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.180

10:18:16 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

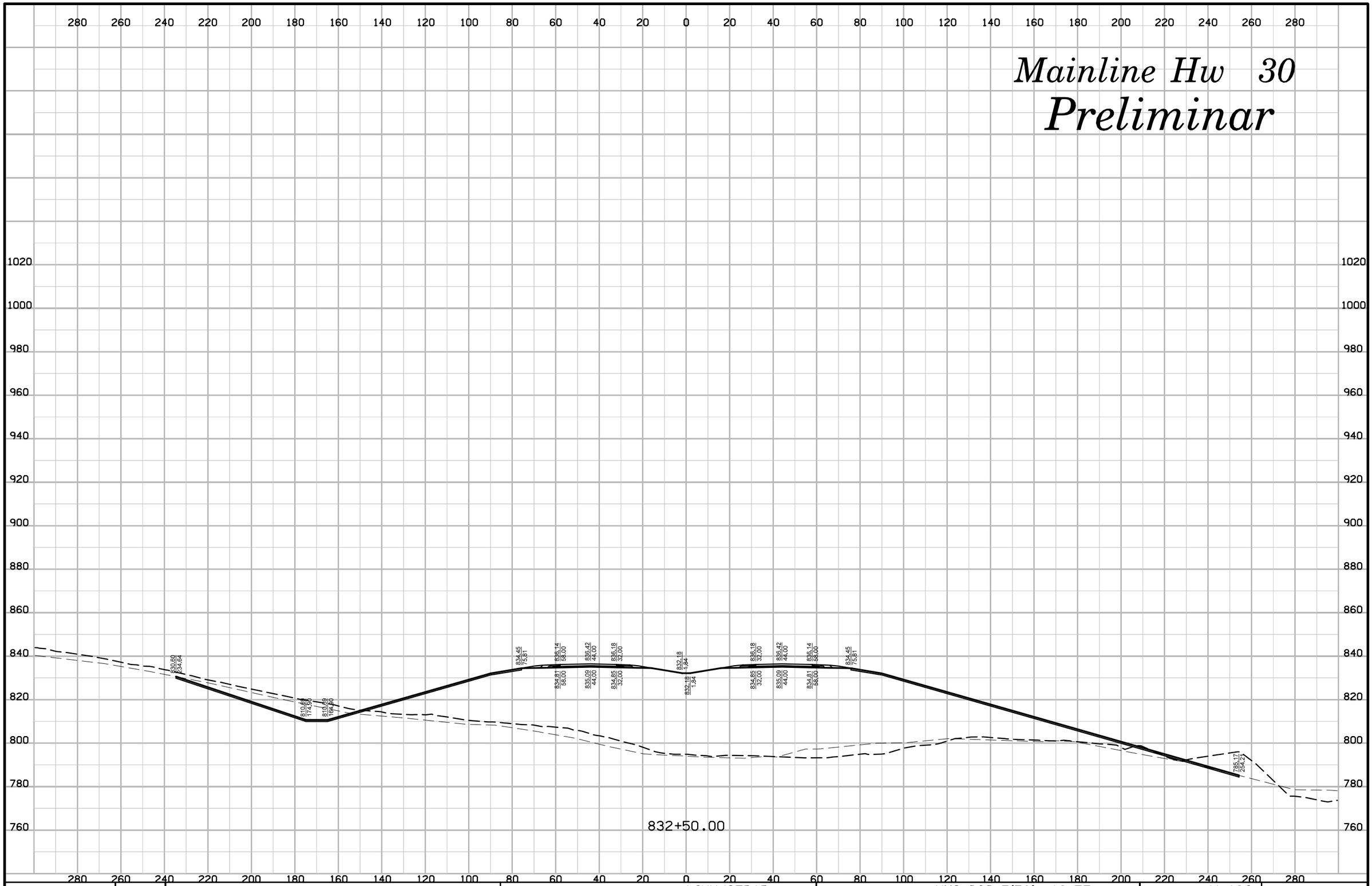
832+41.07

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.181

10:18:17 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

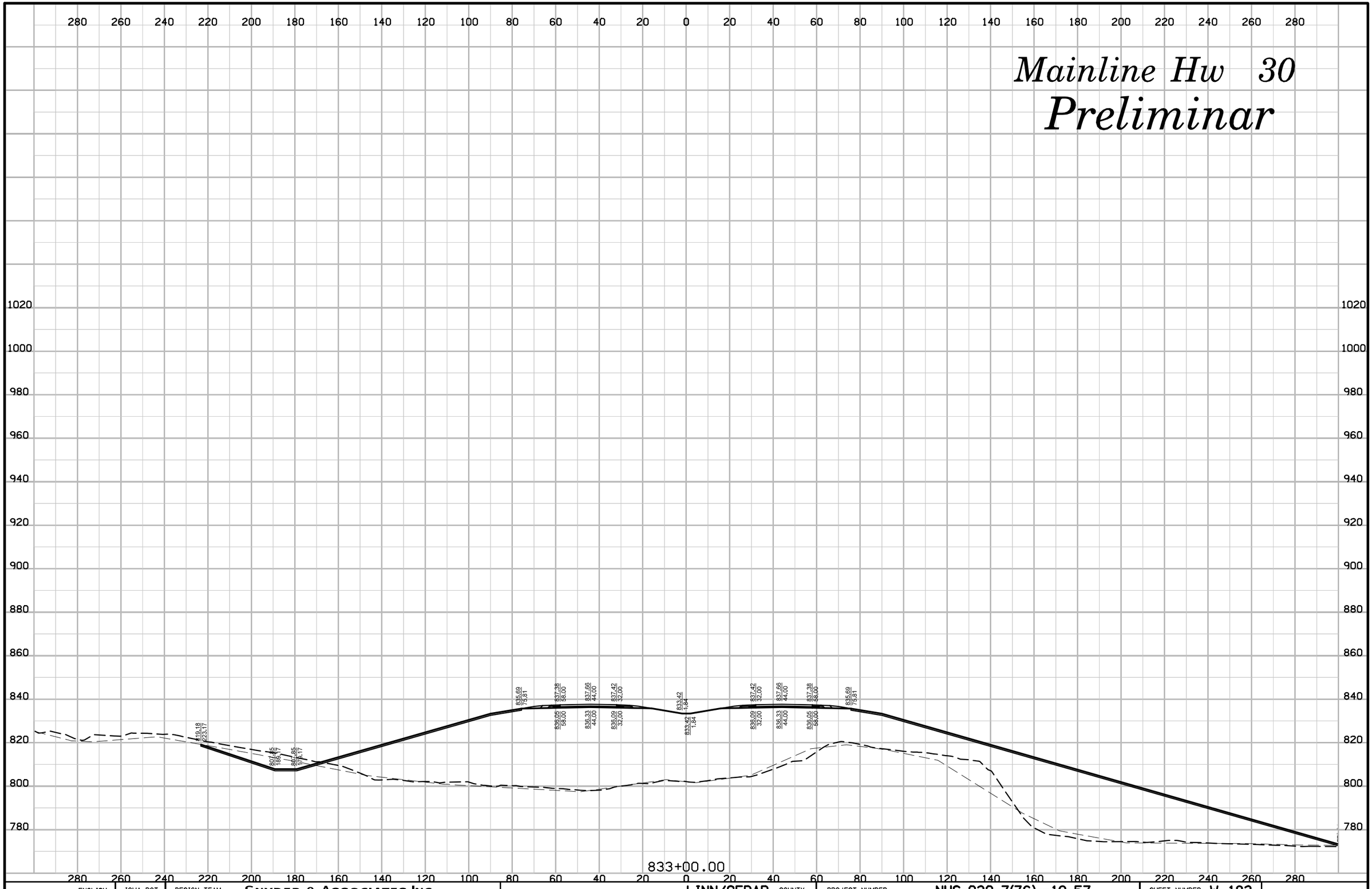


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.182

10:18:18 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

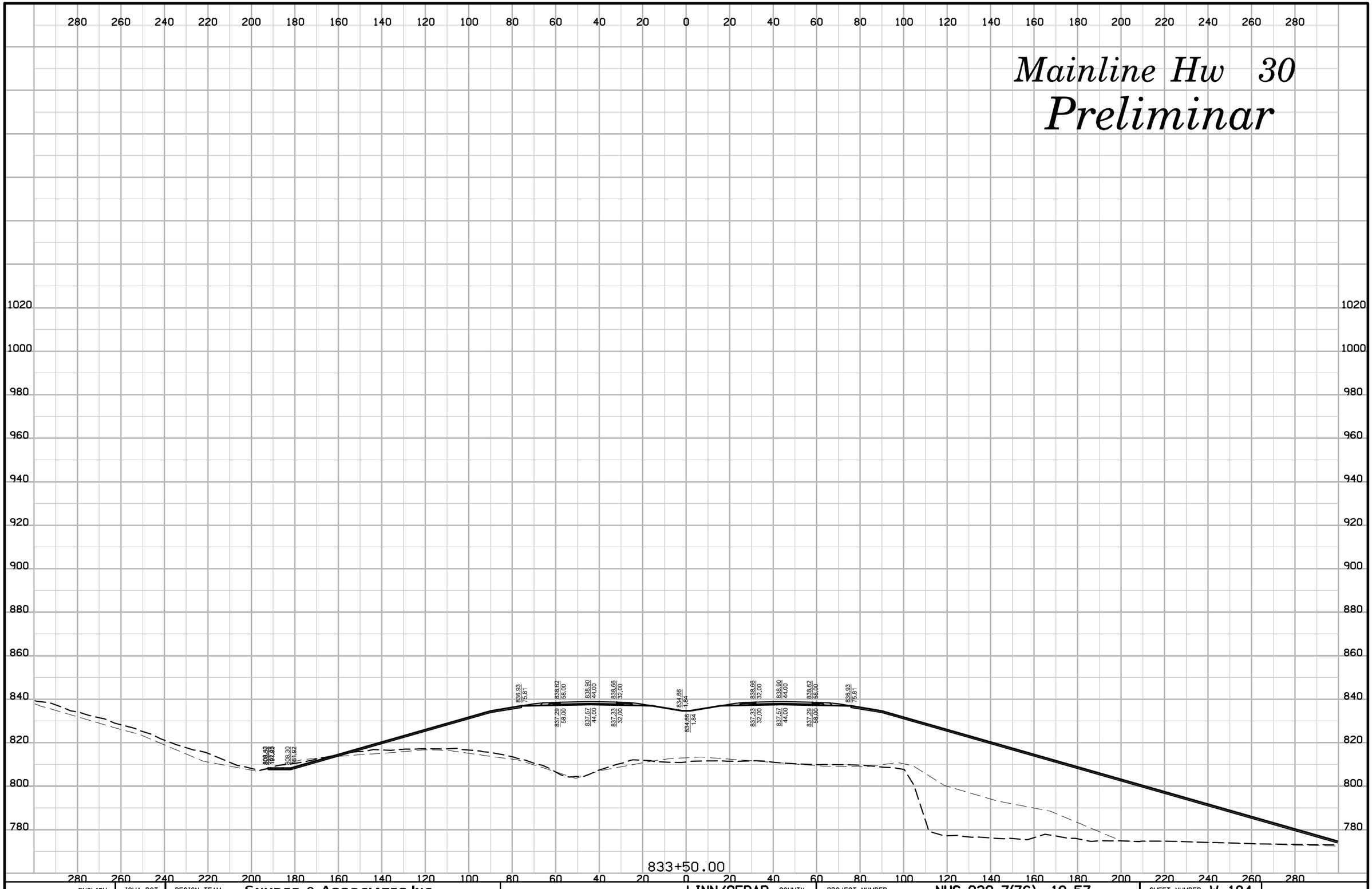
Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.183

Mainline Hw 30

Preliminar

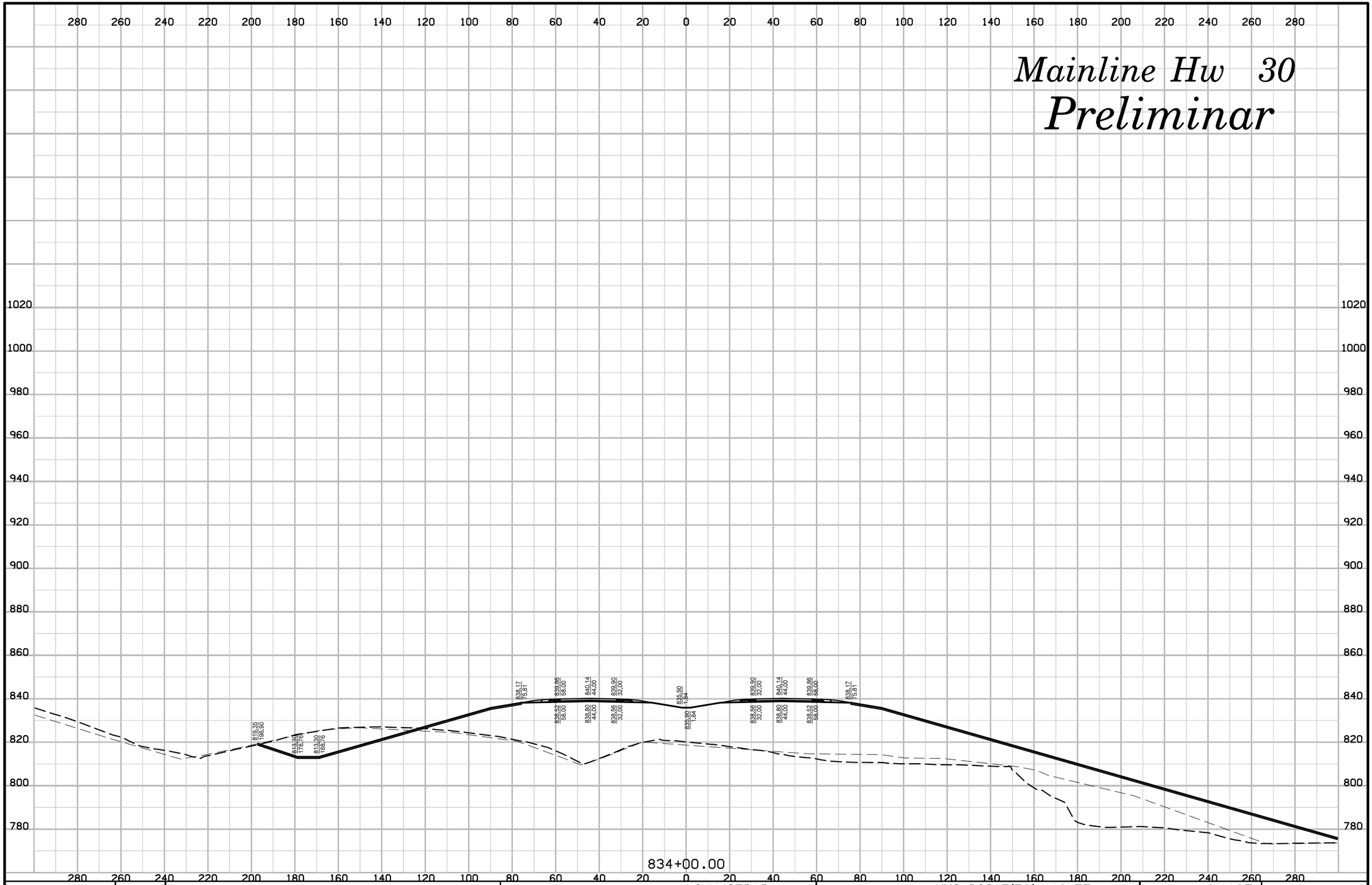


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.184

10:18:21 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.185

10:18:22 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

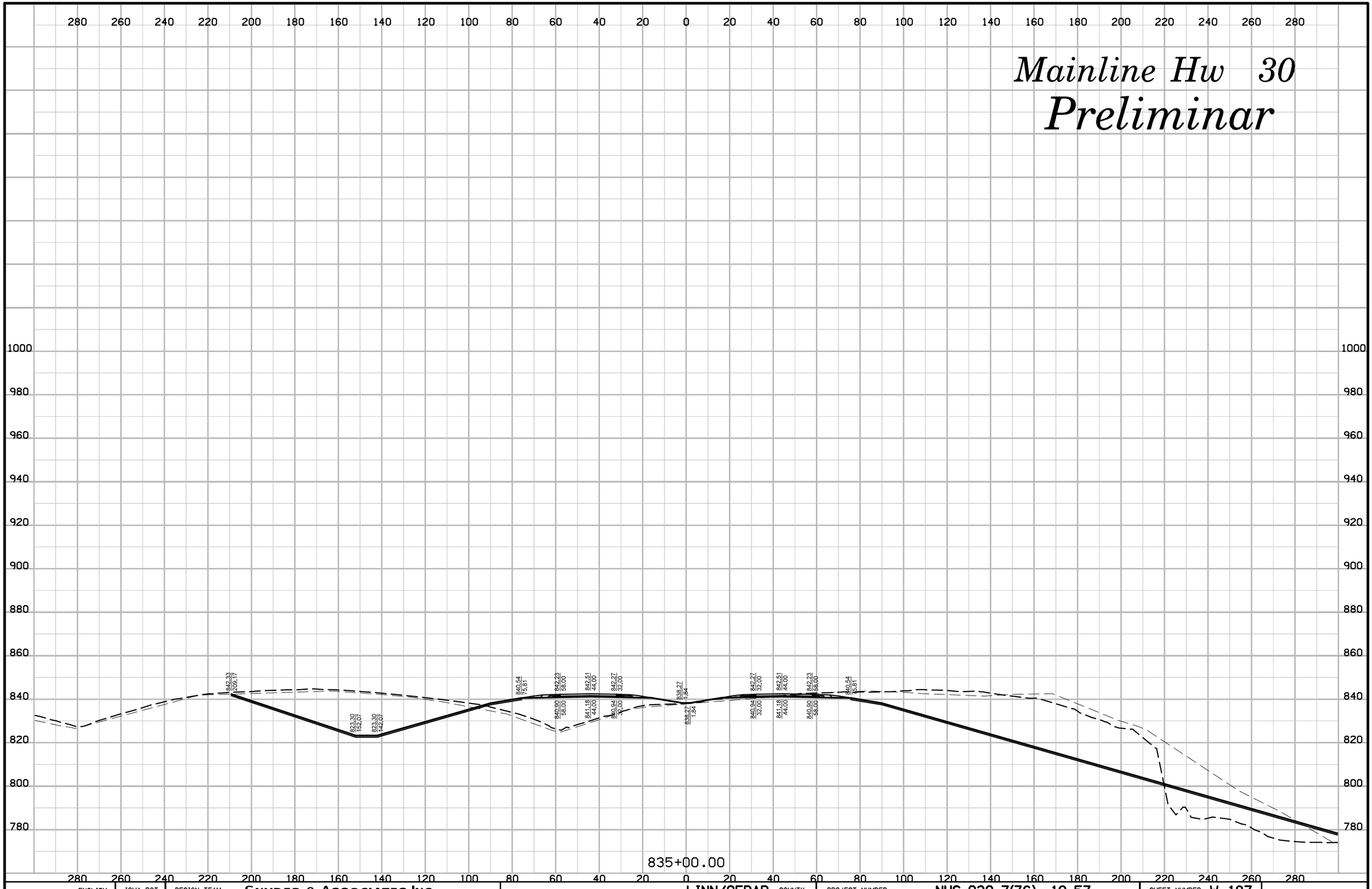
834+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER W.186

10:18:23 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

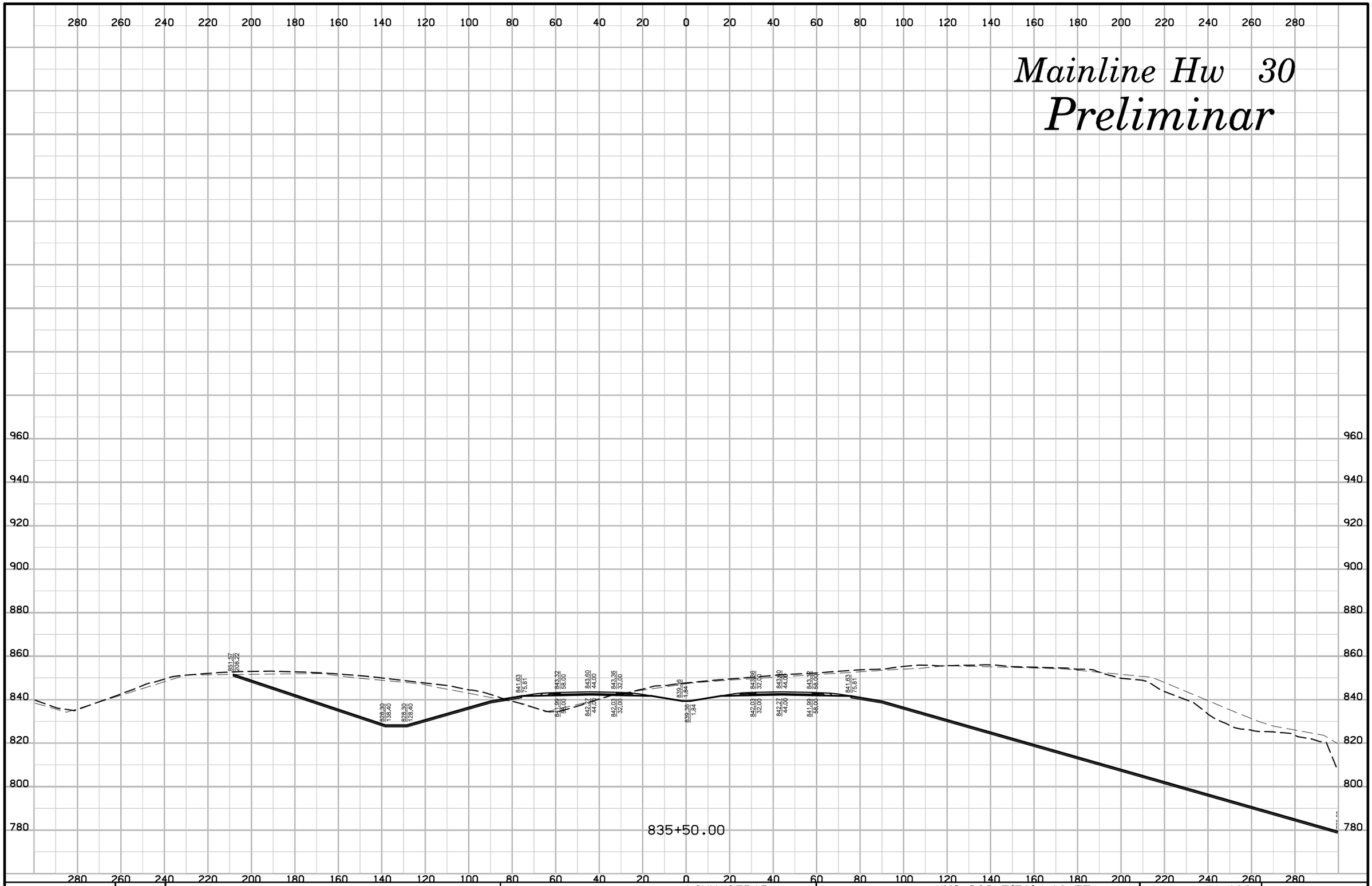


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.187

10:18:24 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

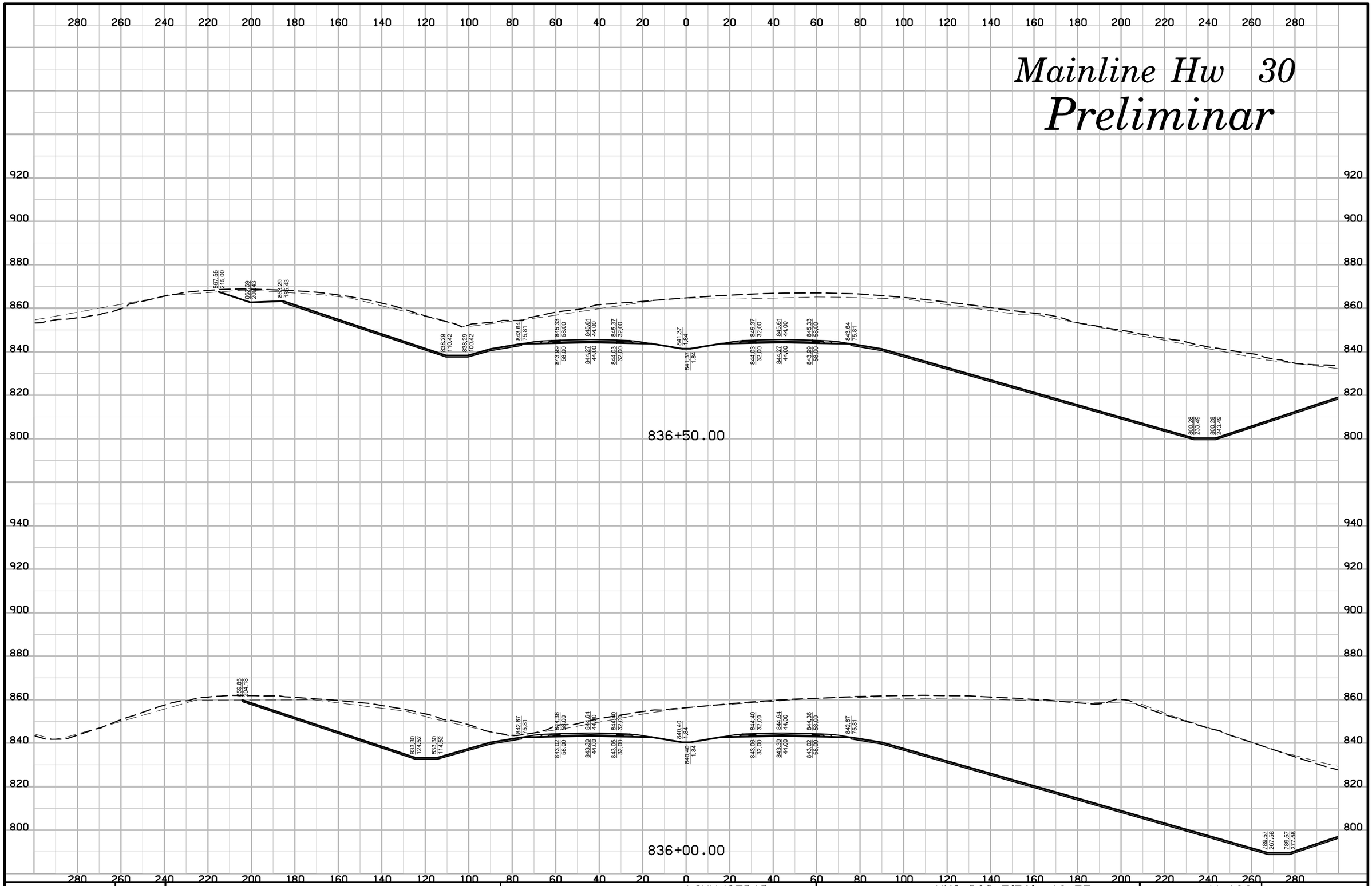


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.188

10:18:26 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.189

10:18:27 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

875.30
222.33
865.68
193.33
866.49
178.62
841.23
103.31
841.23
93.31
844.54
75.81
846.23
58.00
844.90
58.00
846.51
44.00
845.18
44.00
846.27
32.00
844.94
32.00
842.27
1.84
842.27
1.84
846.27
32.00
844.94
32.00
846.51
44.00
845.18
44.00
846.23
58.00
844.90
58.00
844.54
75.81
810.99
199.19
810.99
209.19
824.86
250.62

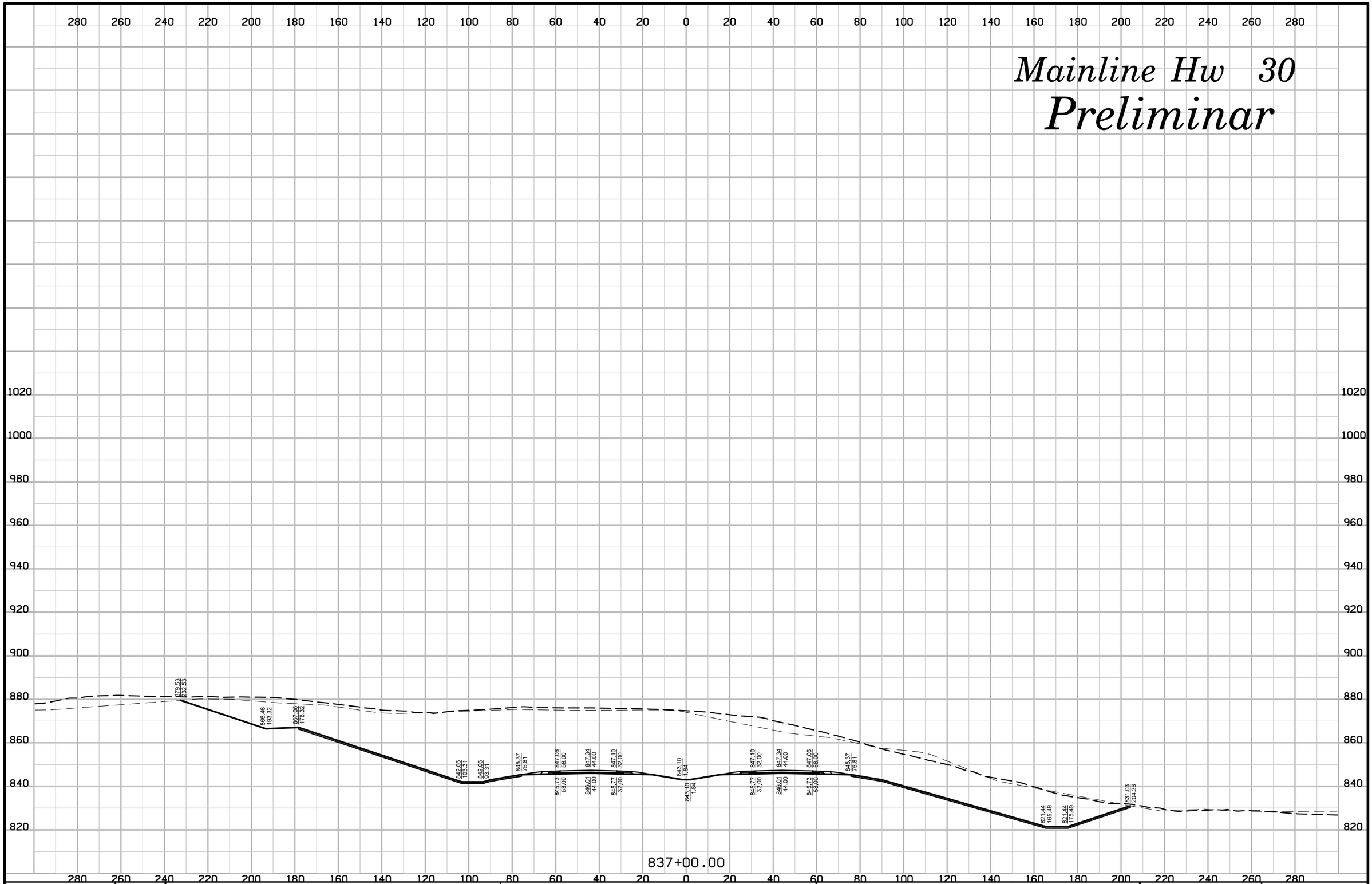
837+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.190

10:18:28 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

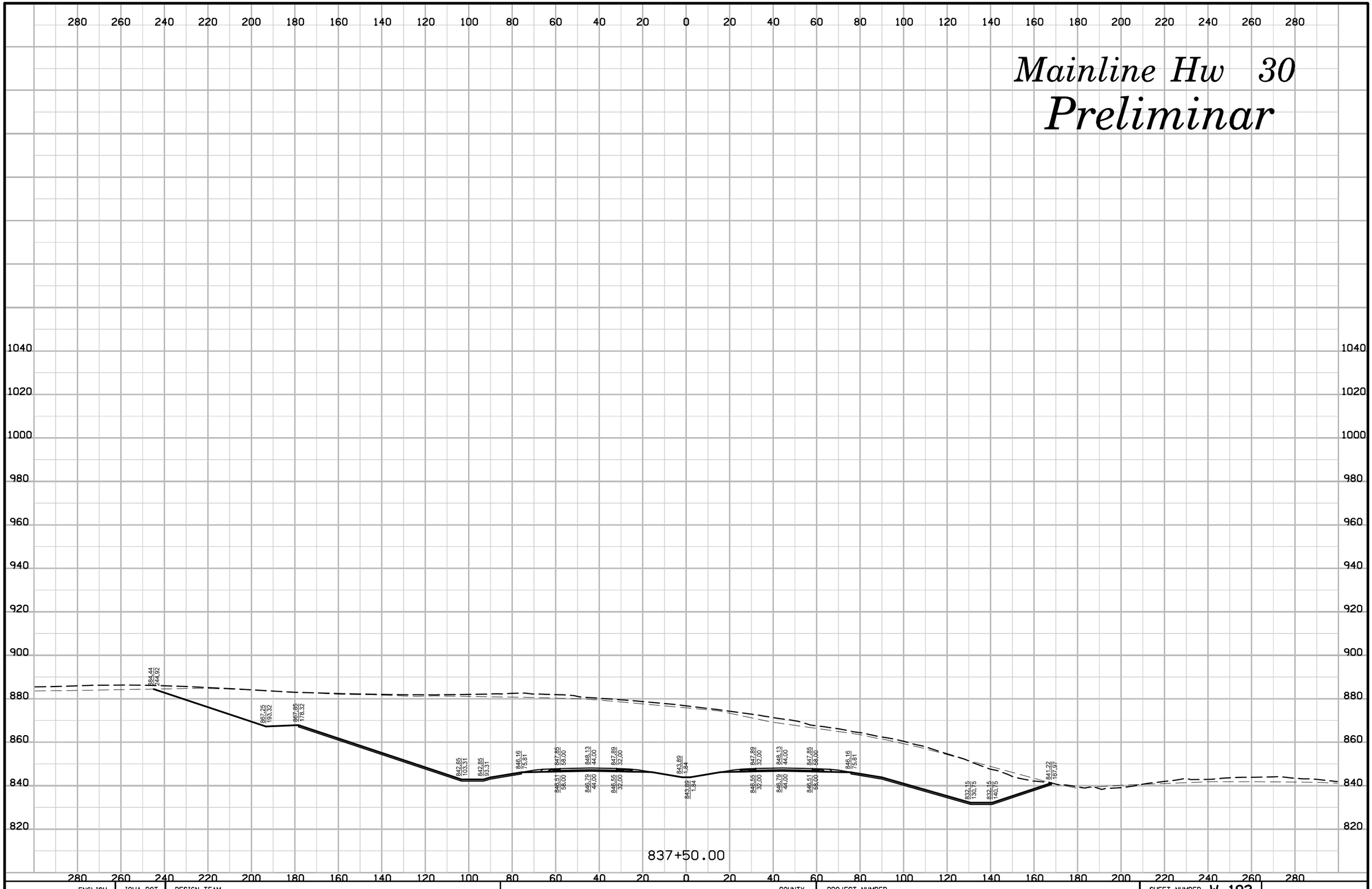


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.191

10:18:29 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

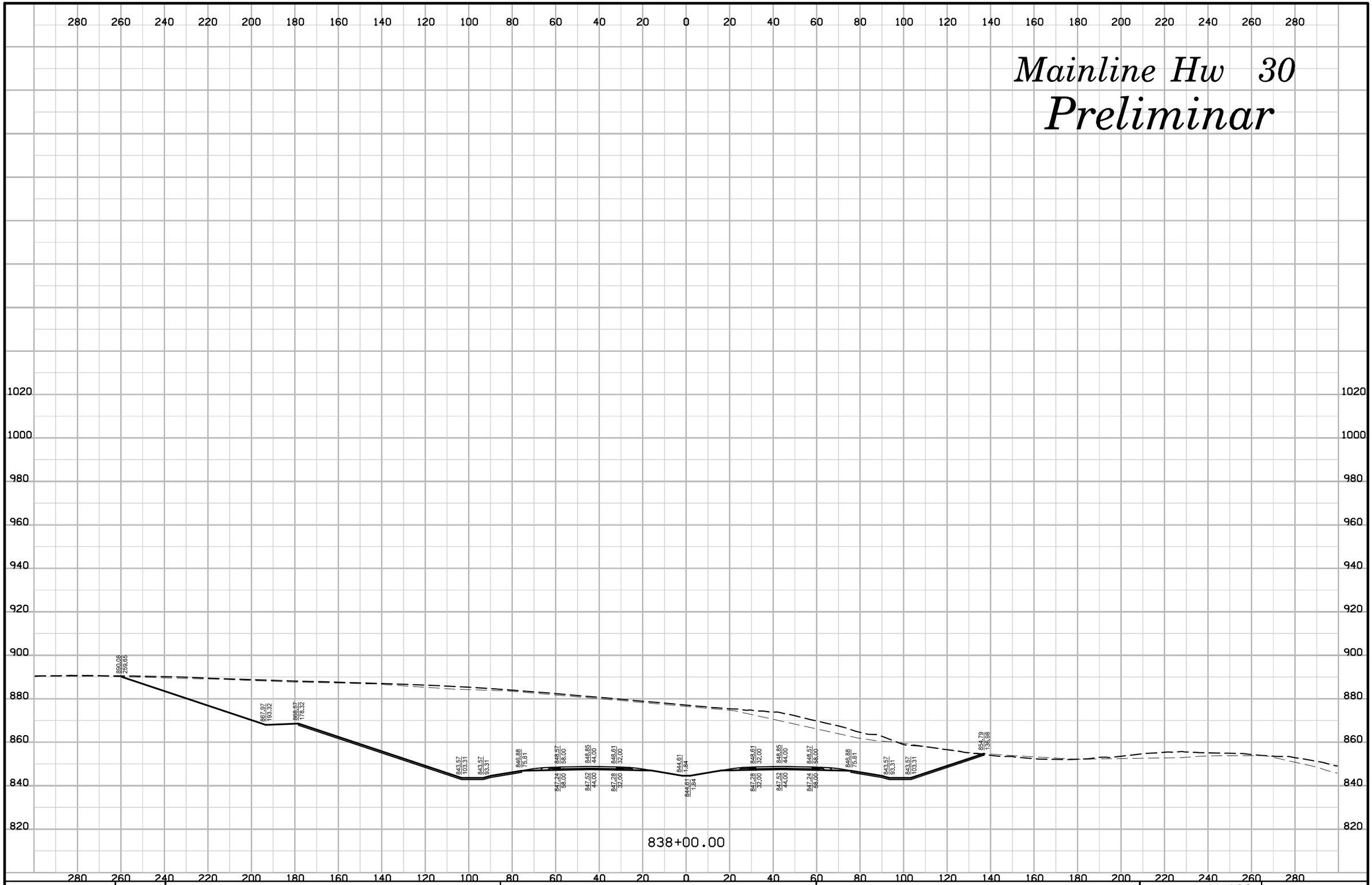
Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER W.192

Mainline Hw 30

Preliminar

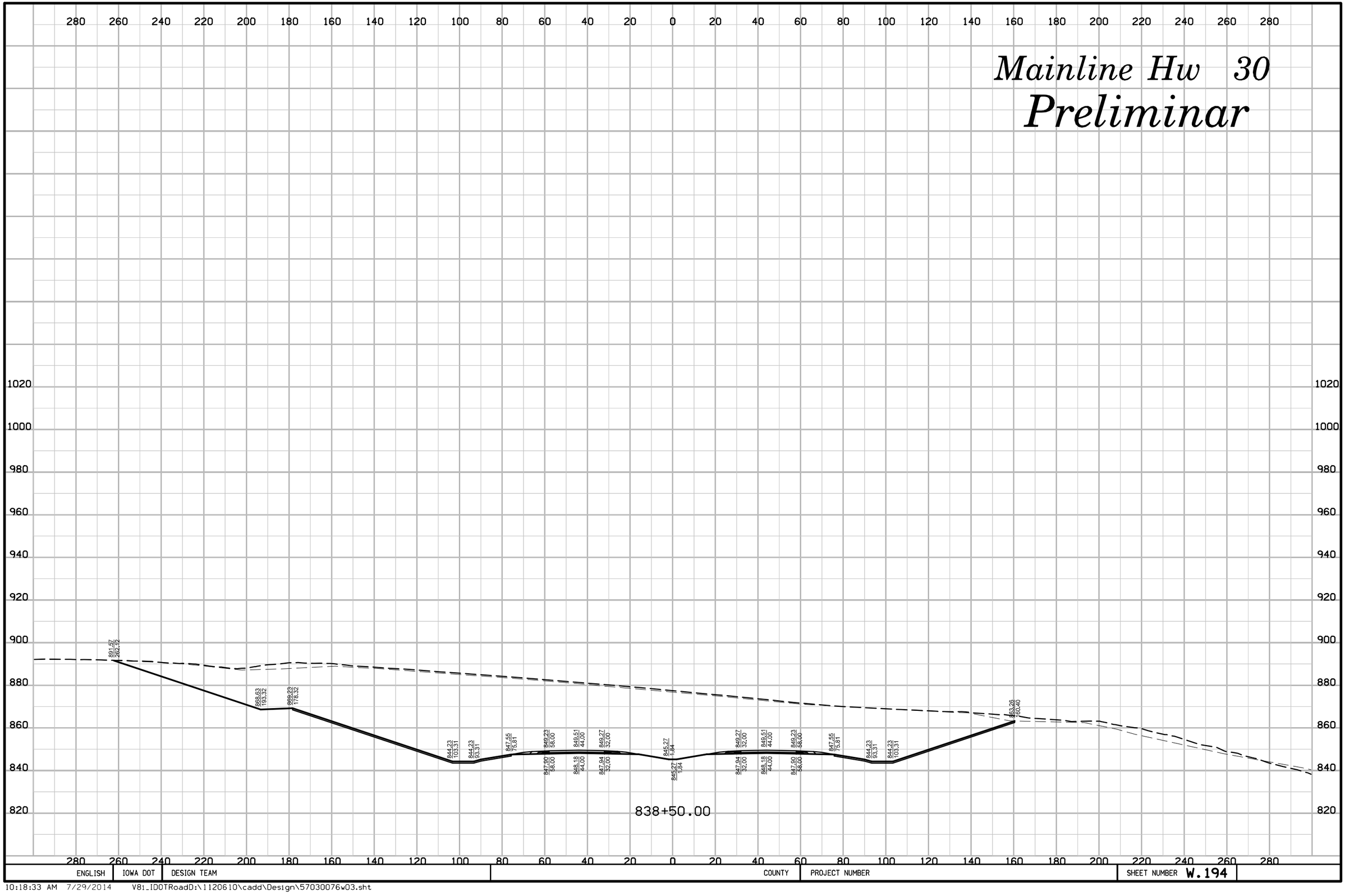


ENGLISH	IOWA DOT	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER W.193

10:18:32 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

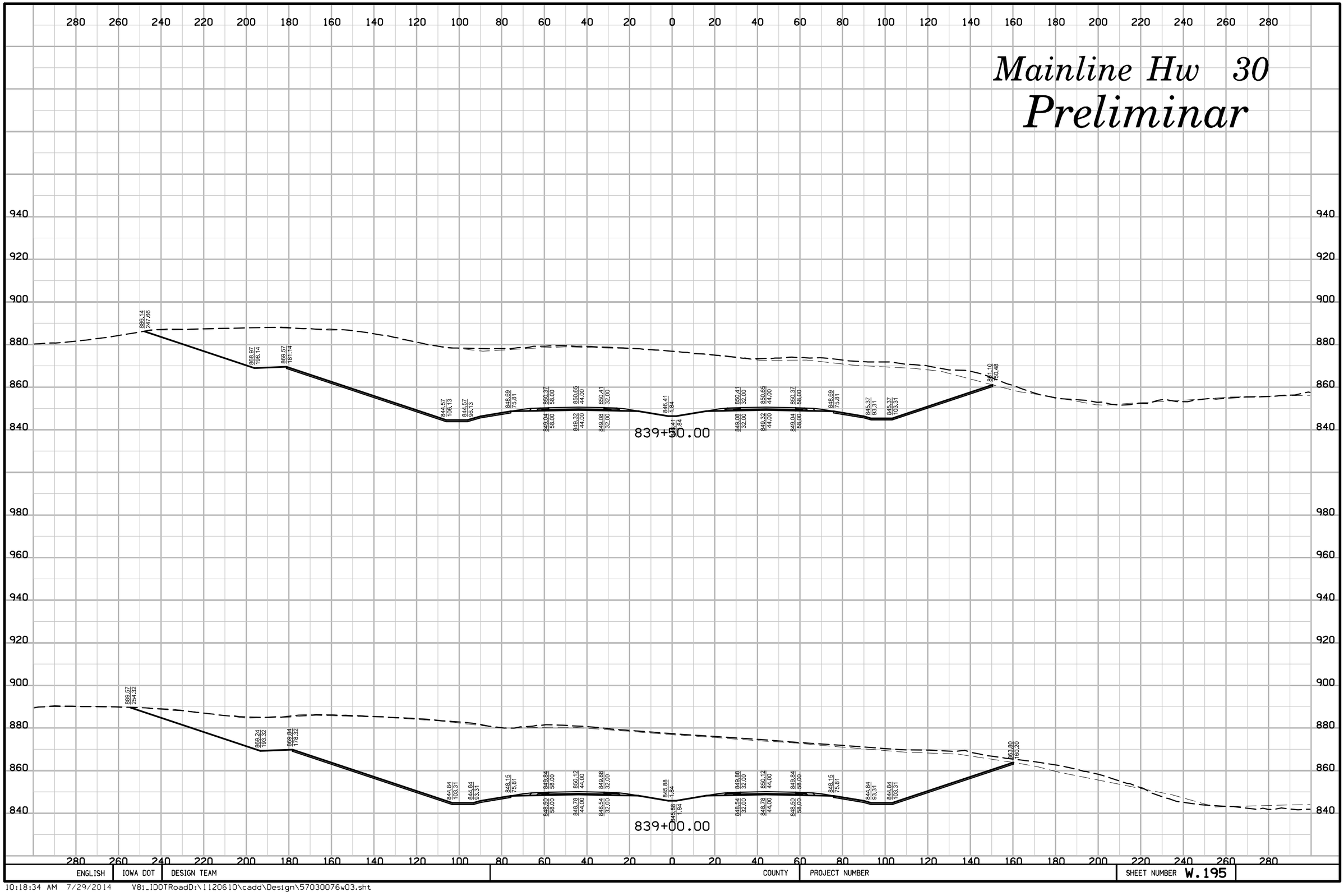
Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER W.194

Mainline Hw 30

Preliminar

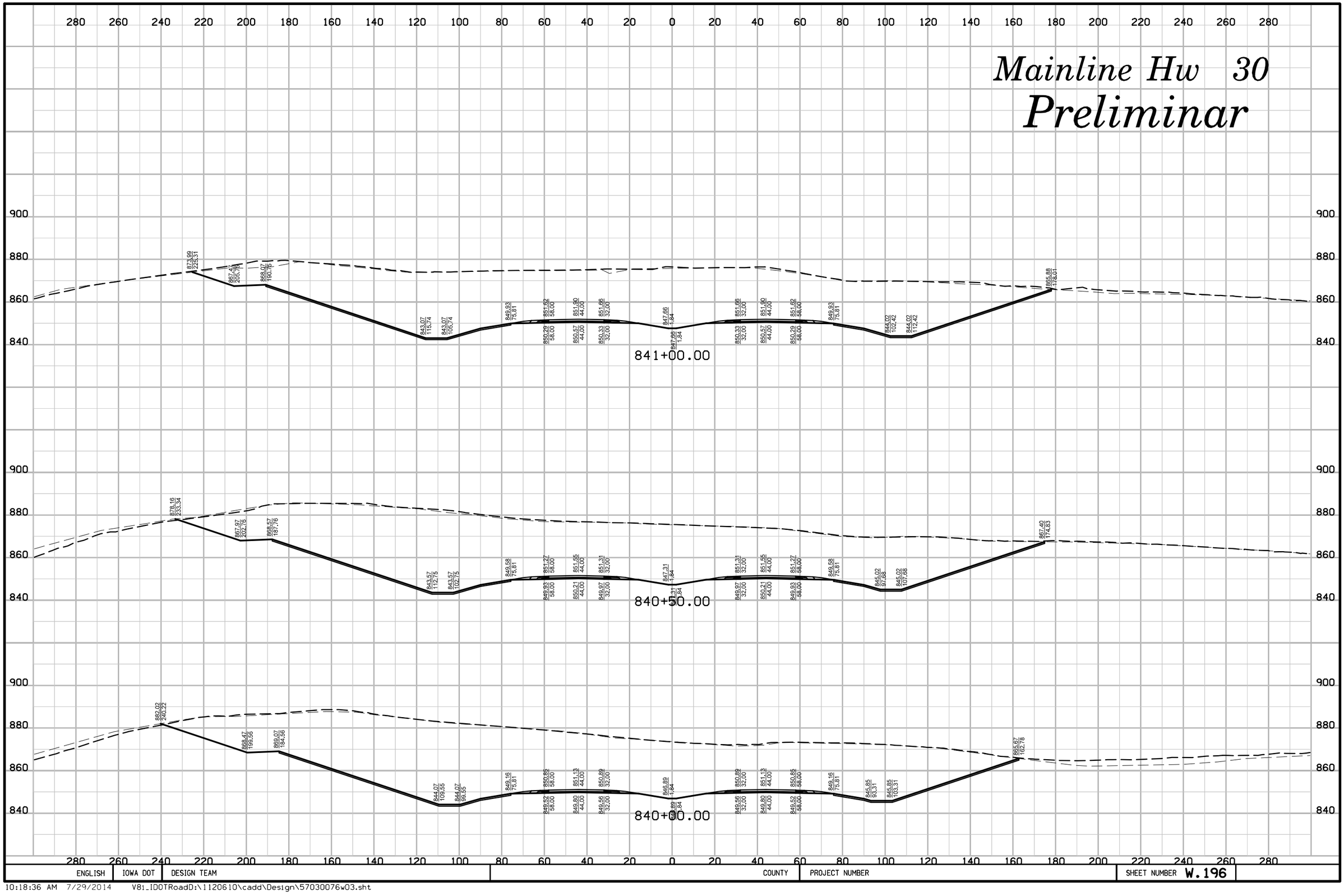


ENGLISH	IOWA DOT	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER W.195

10:18:34 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

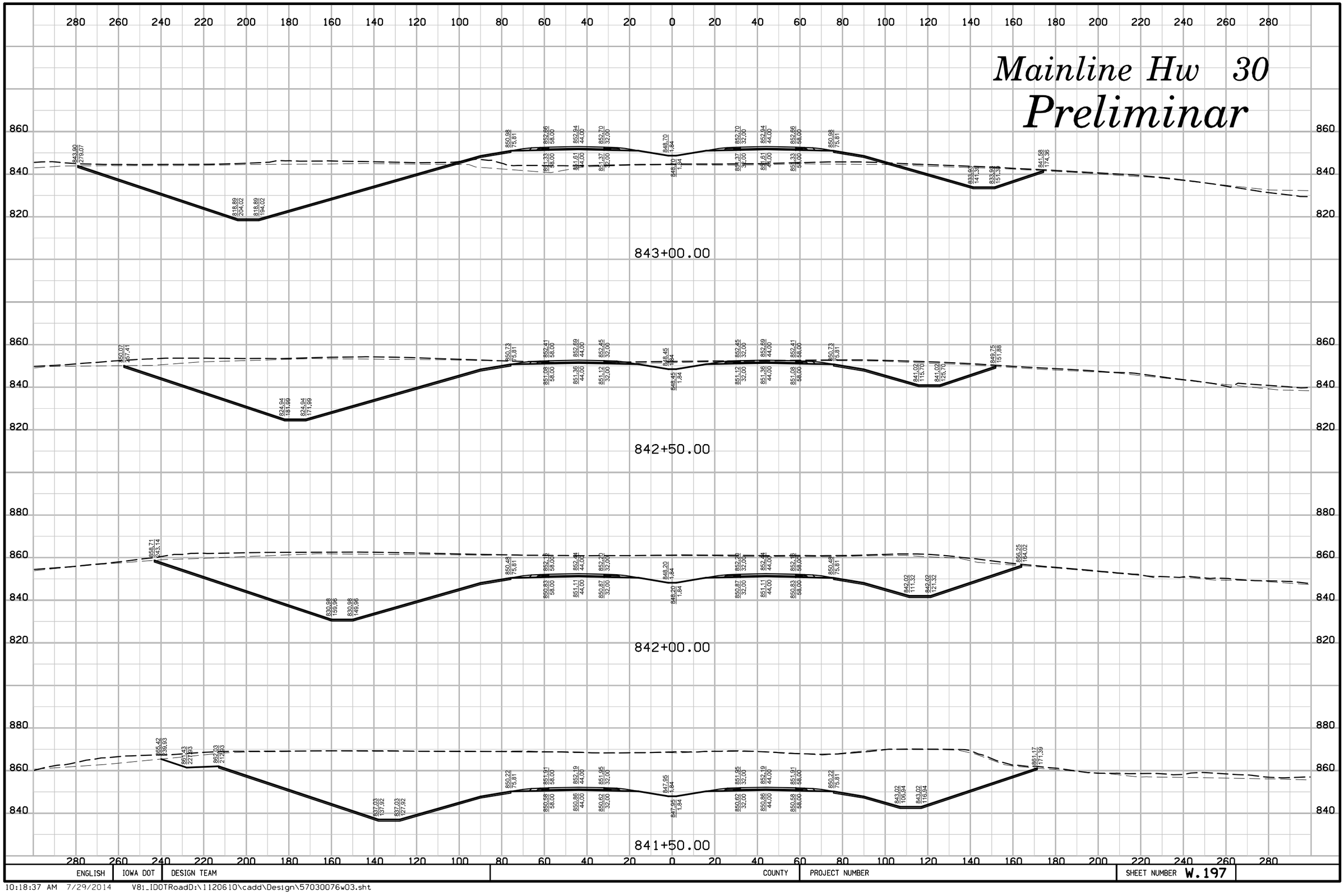
Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM		COUNTY	PROJECT NUMBER	SHEET NUMBER W.196	

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM		COUNTY	PROJECT NUMBER	SHEET NUMBER **W.197**	

10:18:37 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

845+00.00

844+50.00

844+00.00

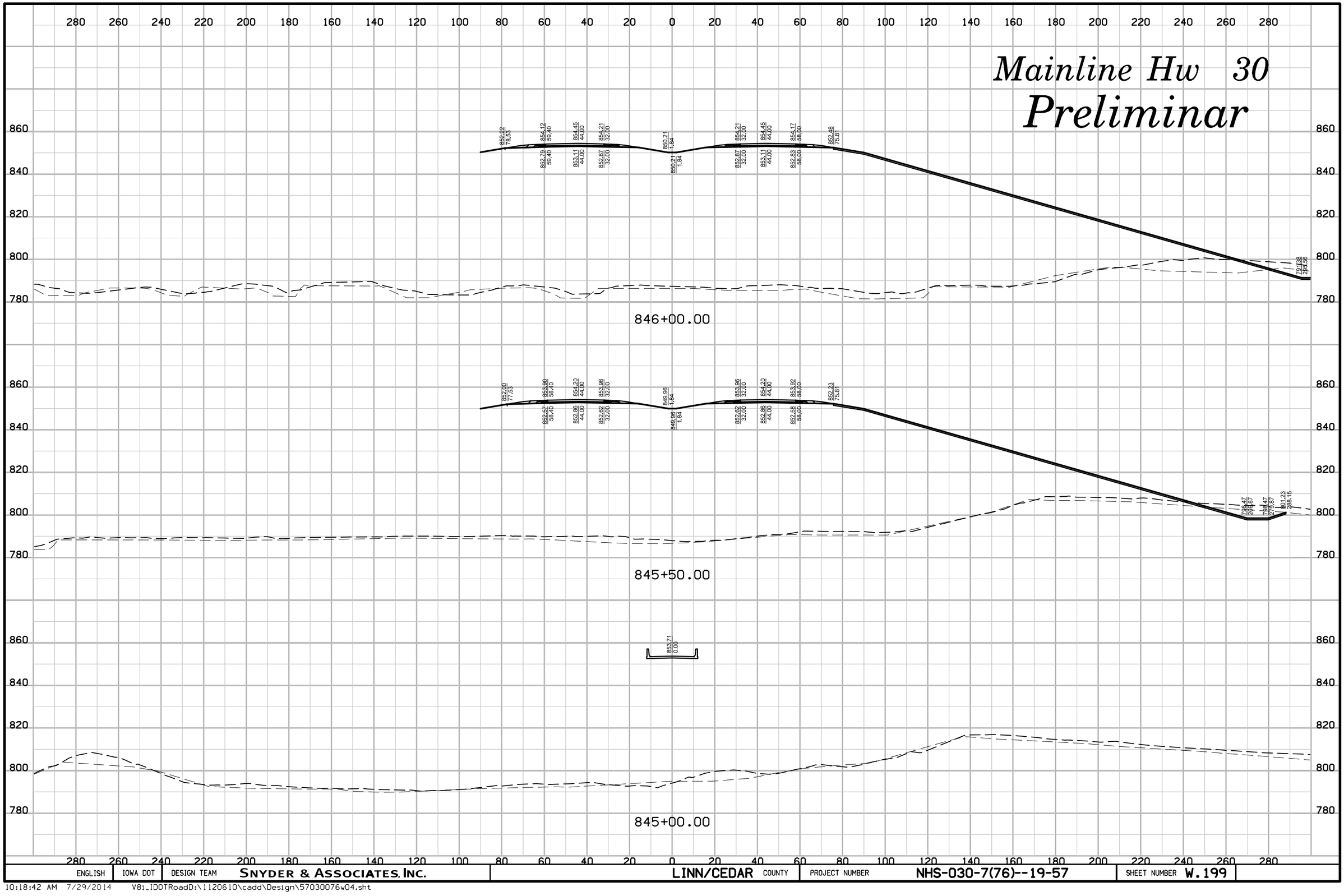
843+50.00

ENGLISH	IOWA DOT	DESIGN TEAM		COUNTY	PROJECT NUMBER	SHEET NUMBER W.198	

10:18:38 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w03.sht

Mainline Hw 30

Preliminar

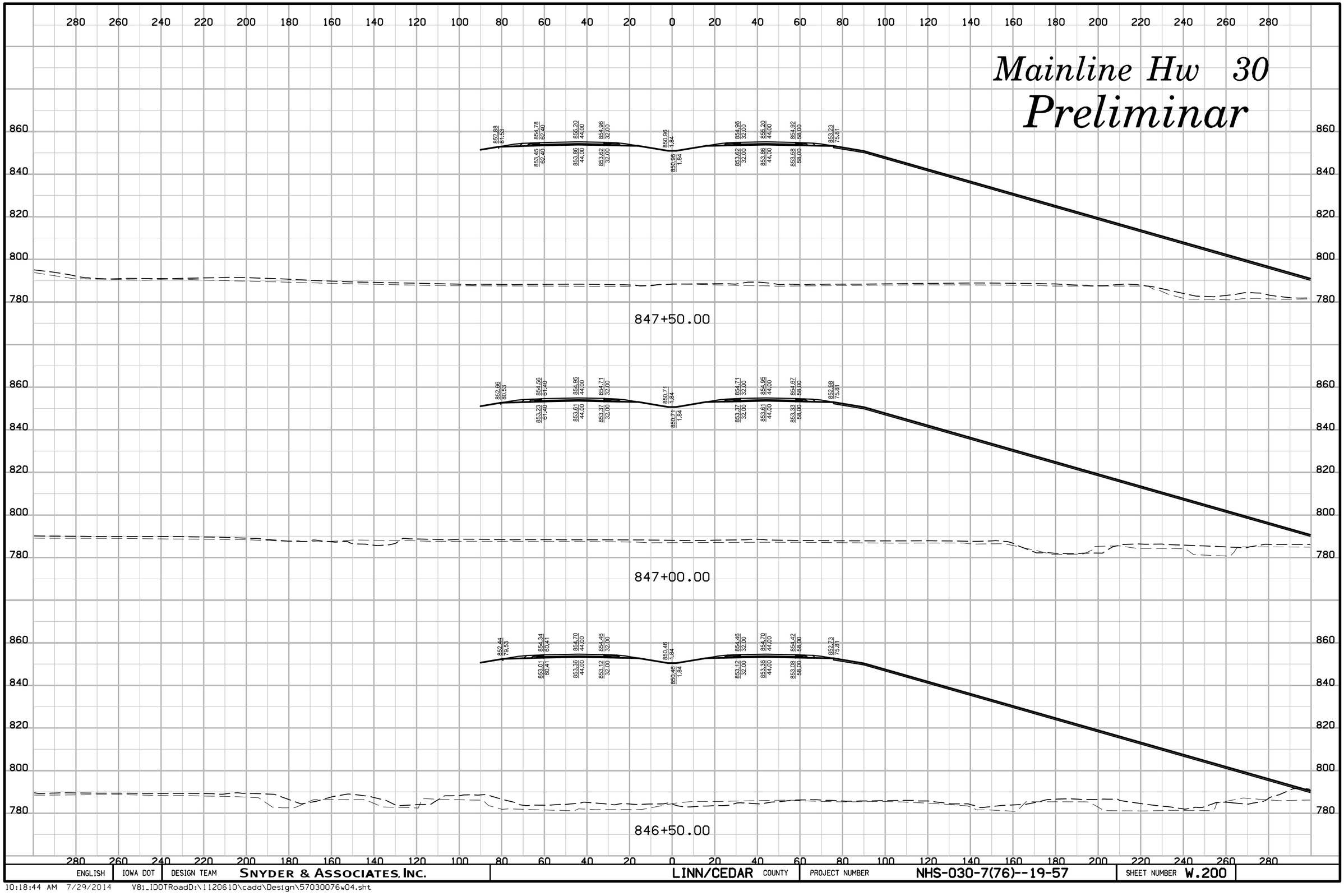


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.199

10:18:42 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.200

10:18:44 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

849+00.00

848+50.00

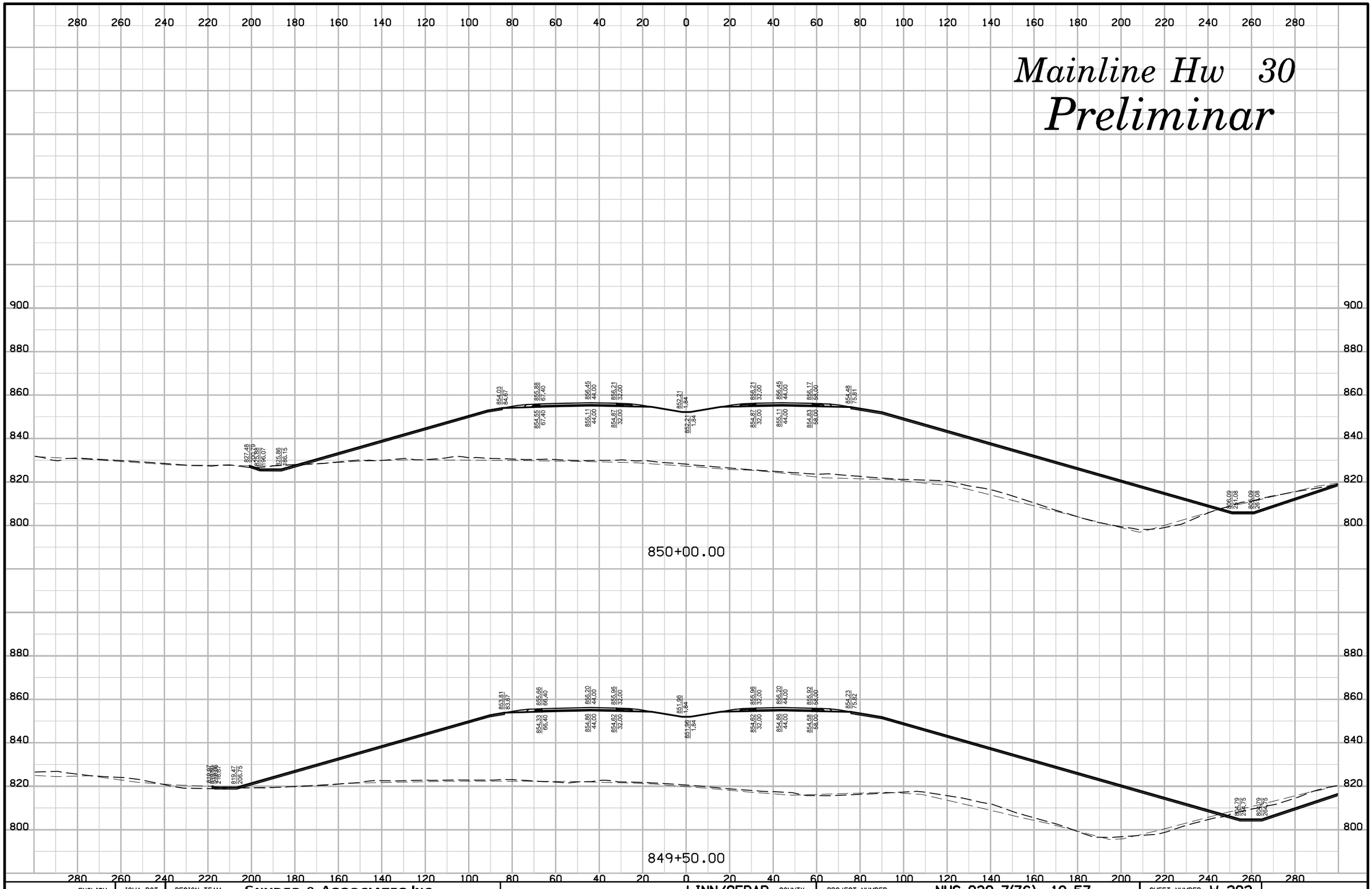
848+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.201

10:18:45 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

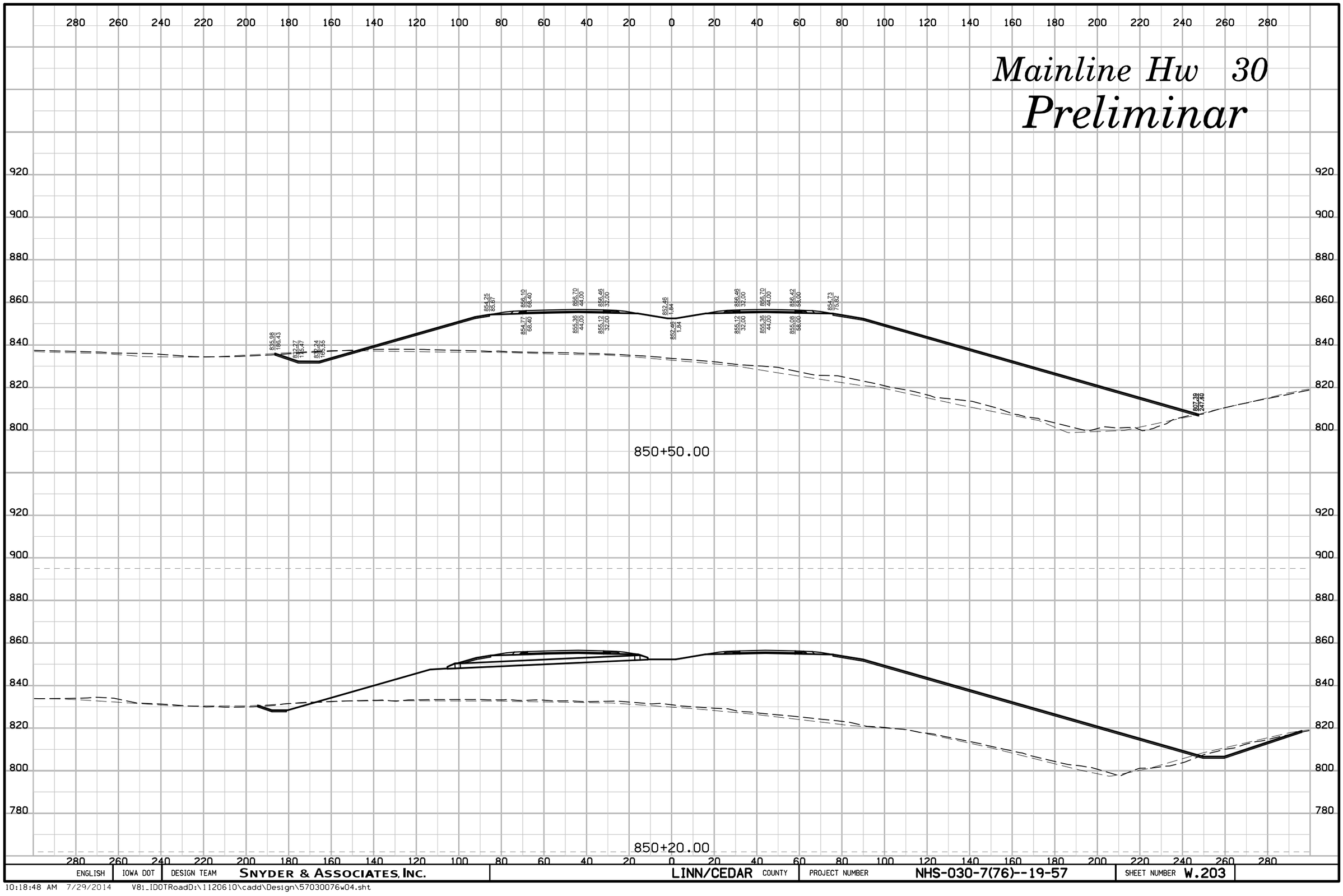


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.202

10:18:46 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

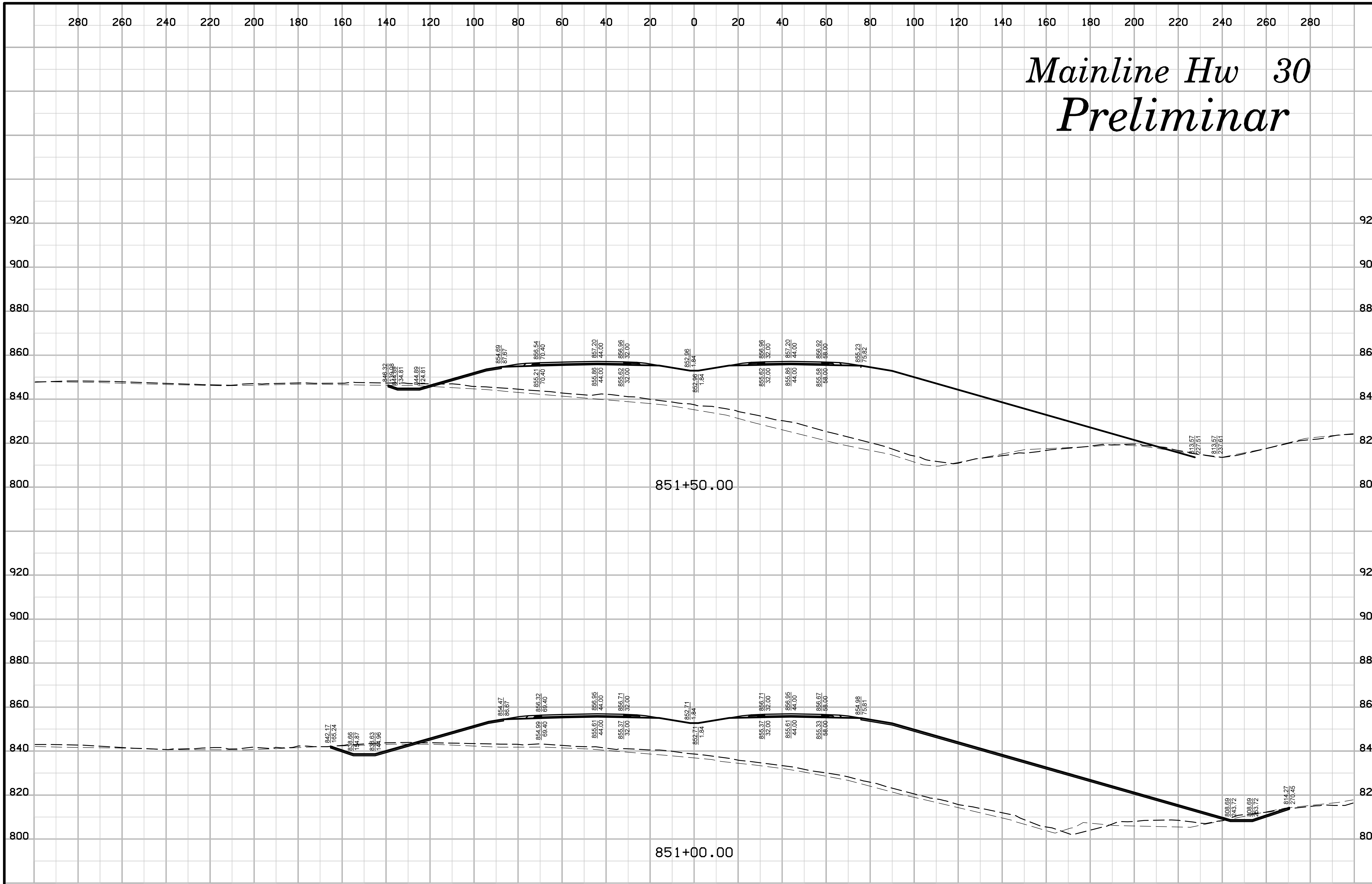
Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.203

10:18:48 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.		LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER W.204

10:18:49 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

852+50.00

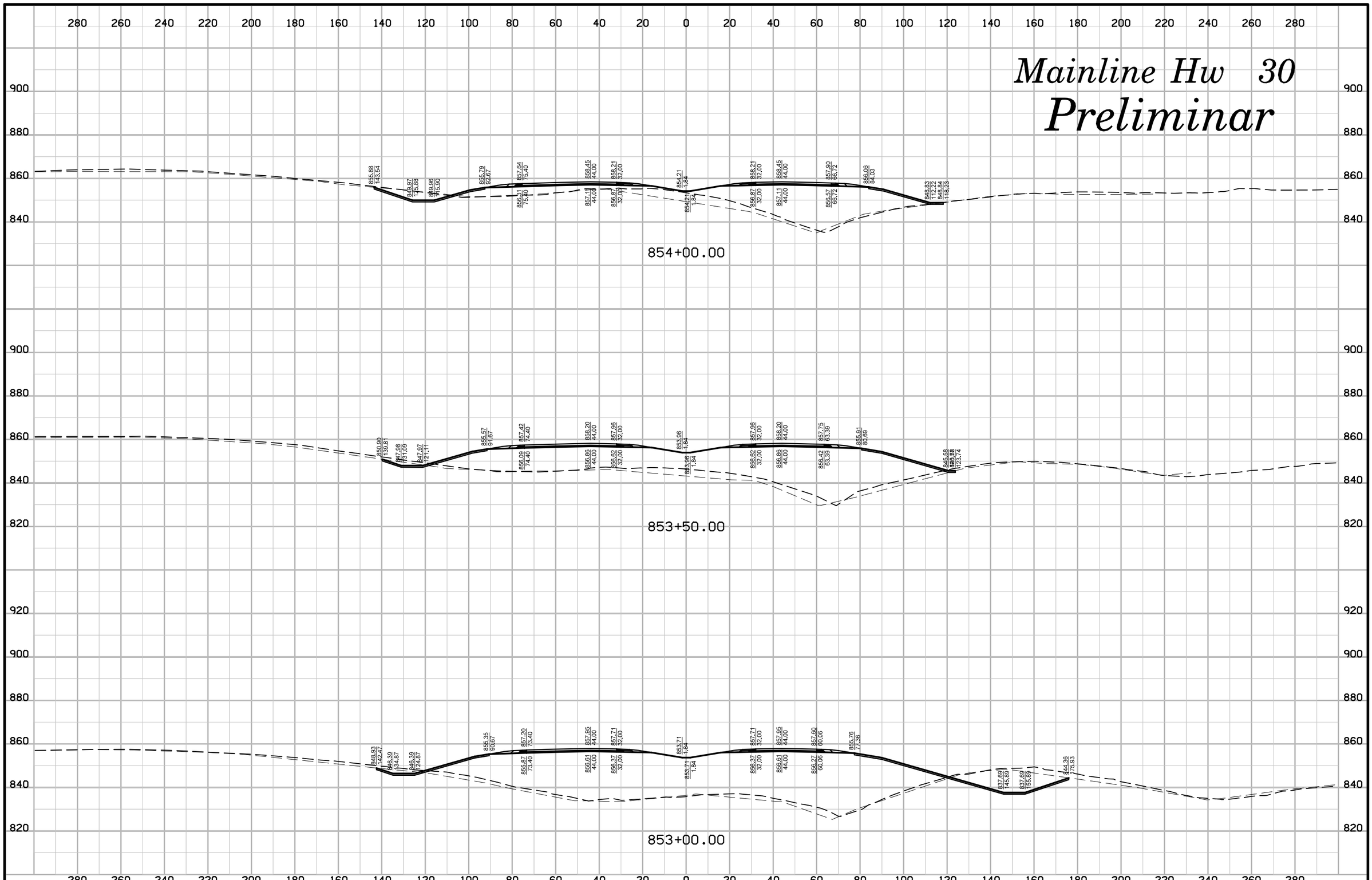
852+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.205

10:18:50 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.206

10:18:51 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

856+50.00

856+00.00

855+50.00

855+00.00

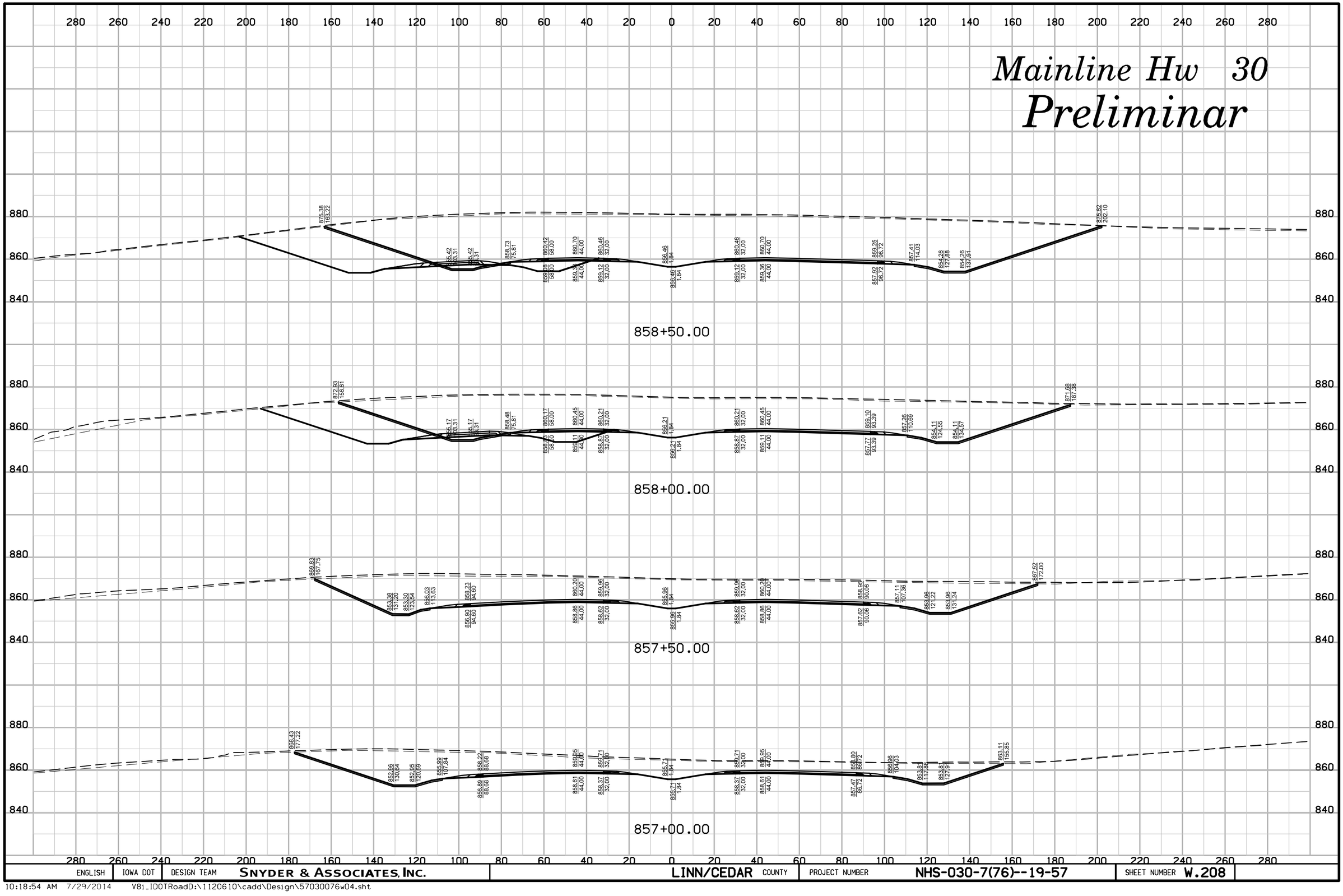
854+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.207

10:18:53 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

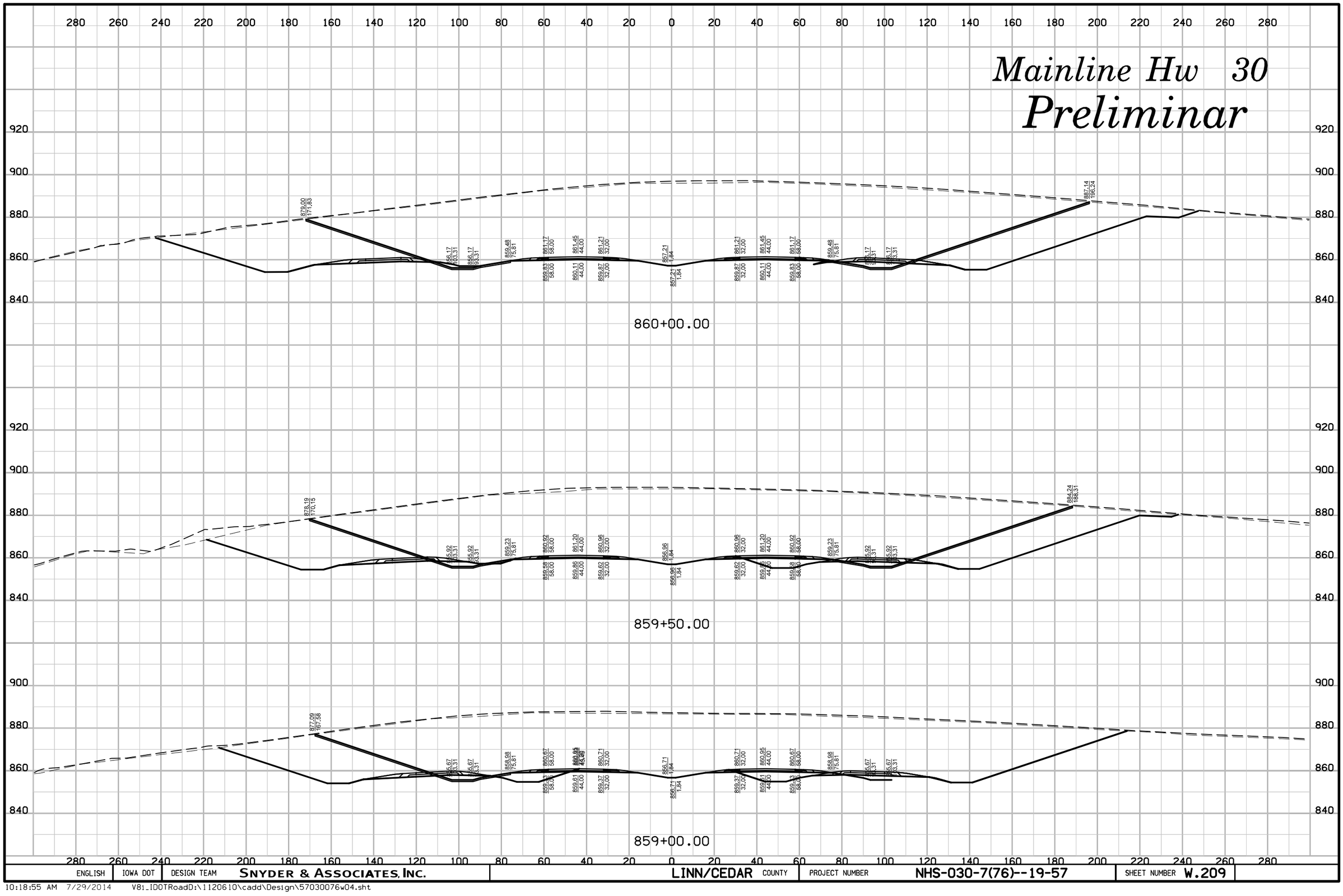


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.208

10:18:54 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

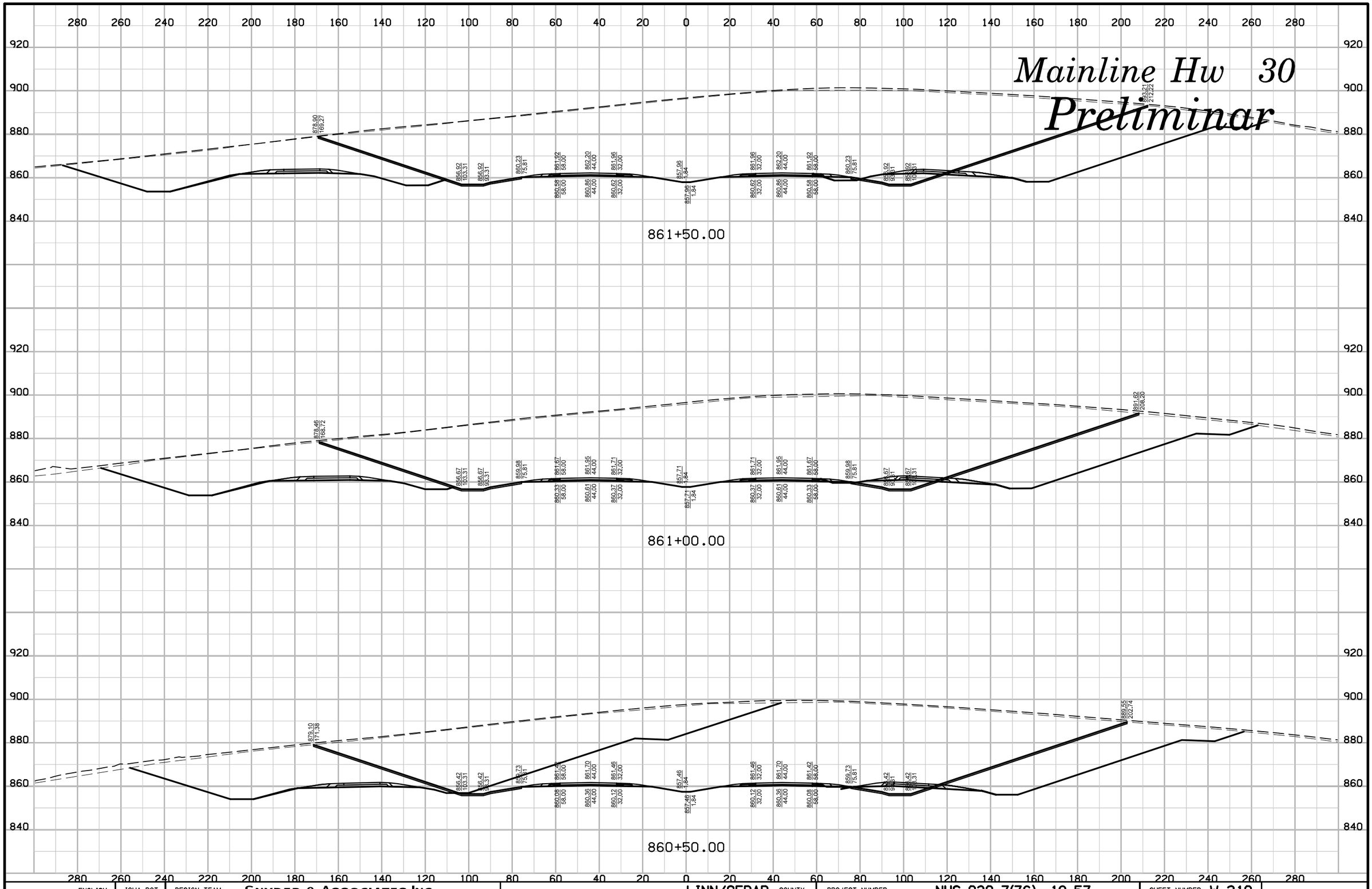
Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.209

10:18:55 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

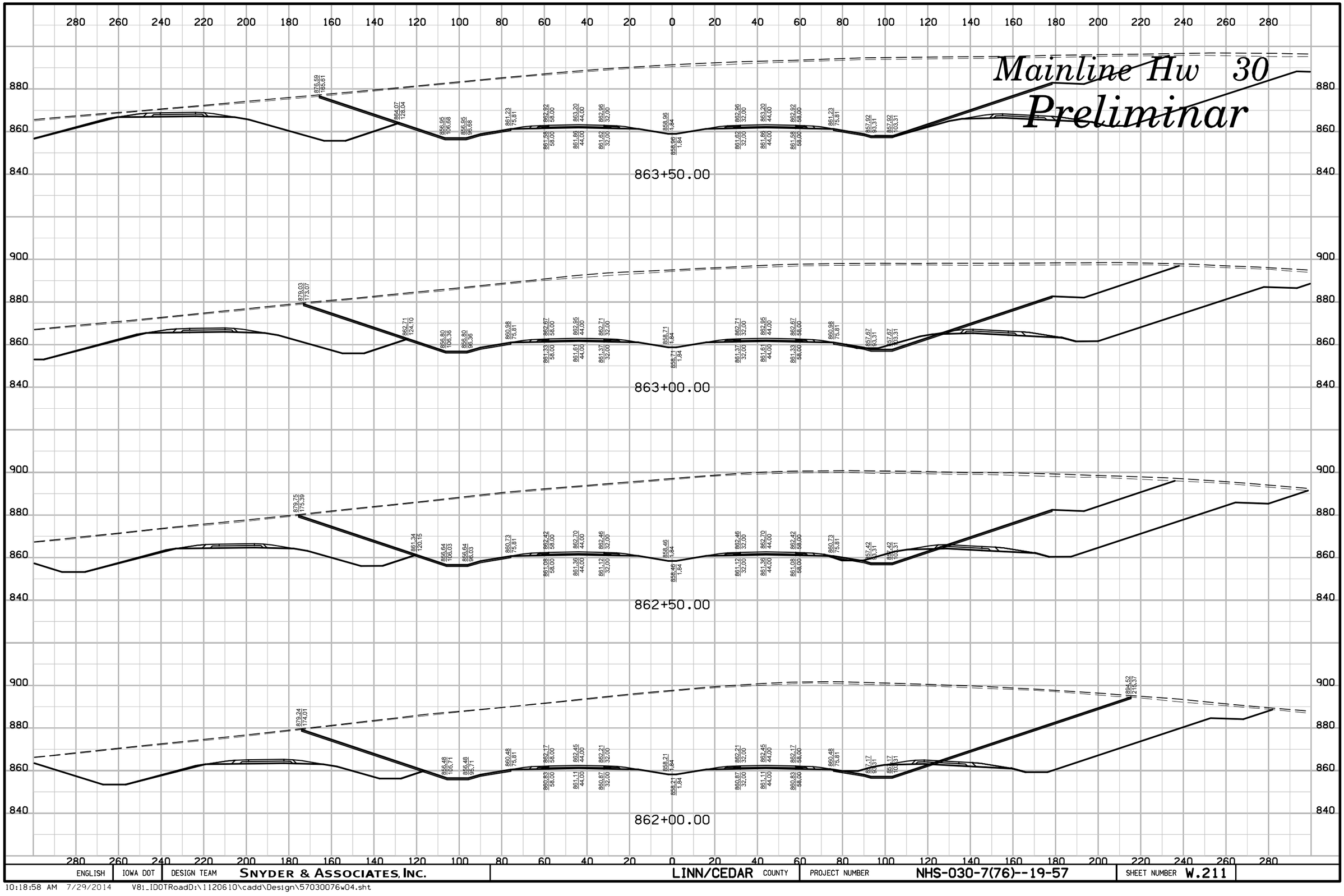


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.210

10:18:56 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.211

10:18:58 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

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
860
840
820

863+85.00

920
900
880
860
840
820
800

863+65.00

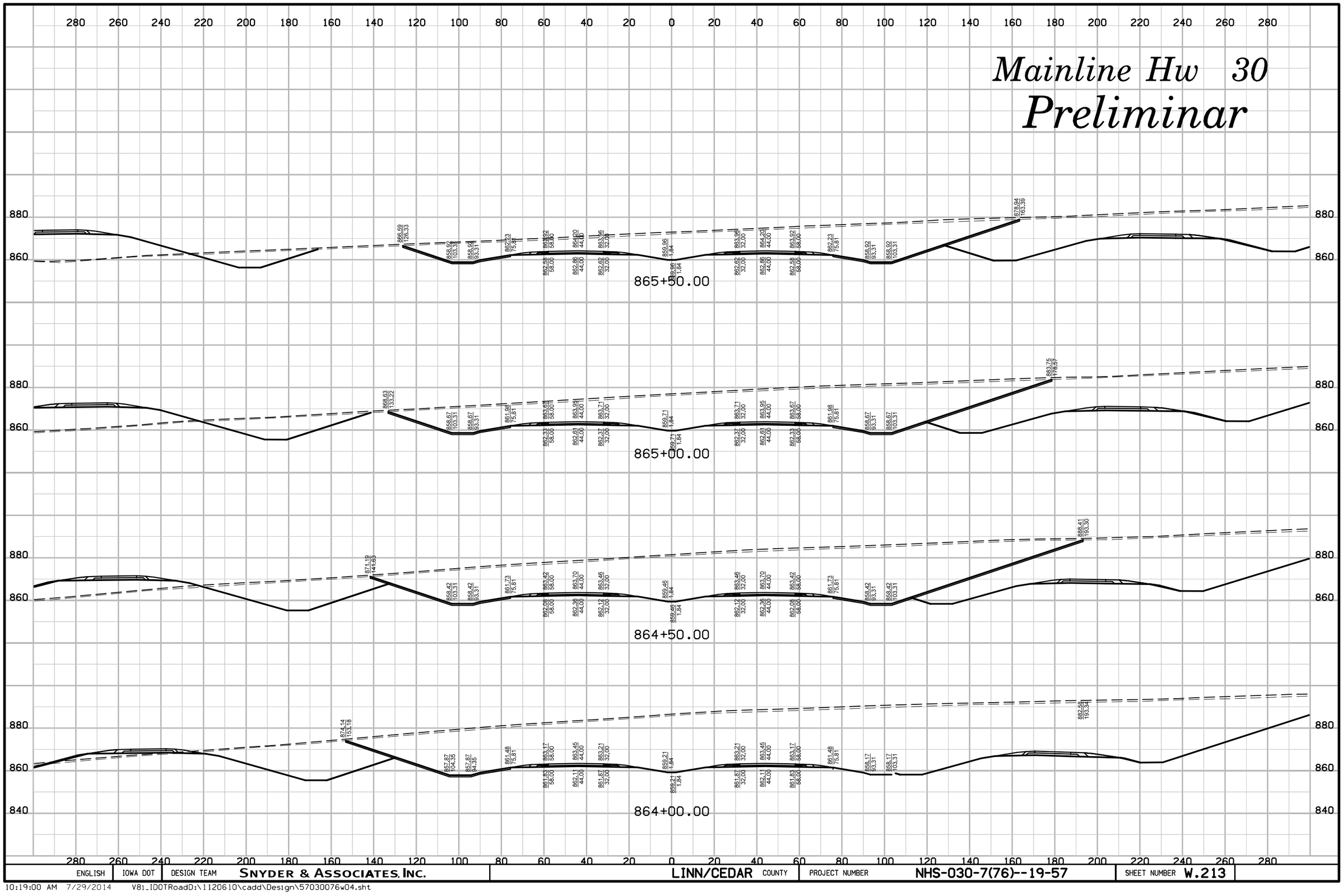
280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.212

10:18:59 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.213

10:19:00 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

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

880
860

863.75 113.33 | 860.42 103.31 | 860.42 93.31 | 863.73 75.81 | 865.42 58.00 | 865.70 44.00 | 865.46 32.00 | 861.46 1.84 | 865.46 32.00 | 865.70 44.00 | 865.42 58.00 | 863.73 75.81 | 860.42 93.31 | 860.42 103.31 | 866.04 120.19

864.08 58.00 | 864.36 44.00 | 864.12 32.00 | 861.46 1.84 | 864.12 32.00 | 864.36 44.00 | 864.08 58.00

868+50.00

863.78 114.15 | 860.17 103.31 | 860.17 93.31 | 863.48 75.81 | 865.17 58.00 | 865.45 44.00 | 865.21 32.00 | 861.21 1.84 | 865.21 32.00 | 865.45 44.00 | 865.17 58.00 | 863.48 75.81 | 860.17 93.31 | 860.17 103.31 | 866.74 123.04

863.83 58.00 | 864.11 44.00 | 863.87 32.00 | 861.21 1.84 | 863.87 32.00 | 864.11 44.00 | 863.83 58.00

868+00.00

863.12 112.94 | 859.92 103.31 | 859.92 93.31 | 863.23 75.81 | 864.92 58.00 | 865.20 44.00 | 864.96 32.00 | 860.98 1.84 | 864.96 32.00 | 865.20 44.00 | 864.92 58.00 | 863.23 74.81 | 859.92 93.31 | 859.92 103.31 | 867.82 127.04

863.58 58.00 | 863.86 44.00 | 863.62 32.00 | 860.98 1.84 | 863.62 32.00 | 863.86 44.00 | 863.58 58.00

867+50.00

863.04 113.43 | 859.67 103.31 | 859.67 93.31 | 862.98 75.81 | 864.67 58.00 | 864.95 44.00 | 864.71 32.00 | 861.71 1.84 | 864.71 32.00 | 864.95 44.00 | 864.67 58.00 | 862.98 75.81 | 859.67 93.31 | 859.67 103.31 | 869.22 132.00

863.33 58.00 | 863.61 44.00 | 863.37 32.00 | 860.71 1.84 | 863.37 32.00 | 863.61 44.00 | 863.33 58.00

867+00.00

864.00 117.06 | 859.42 103.31 | 859.42 93.31 | 862.73 75.81 | 864.42 58.00 | 864.70 44.00 | 864.46 32.00 | 860.46 1.84 | 864.46 32.00 | 864.70 44.00 | 864.42 58.00 | 862.73 75.81 | 859.42 93.31 | 859.42 103.31 | 871.19 138.54

863.08 58.00 | 863.36 44.00 | 863.12 32.00 | 860.46 1.84 | 863.12 32.00 | 863.36 44.00 | 863.08 58.00

866+50.00

865.21 121.46 | 859.17 103.31 | 859.17 93.31 | 862.48 75.81 | 864.17 58.00 | 864.45 44.00 | 864.21 32.00 | 860.21 1.84 | 864.21 32.00 | 864.45 44.00 | 864.17 58.00 | 862.48 75.81 | 859.17 93.31 | 859.17 103.31 | 874.42 148.08

862.83 58.00 | 863.11 44.00 | 862.87 32.00 | 860.21 1.84 | 862.87 32.00 | 863.11 44.00 | 862.83 58.00

866+00.00

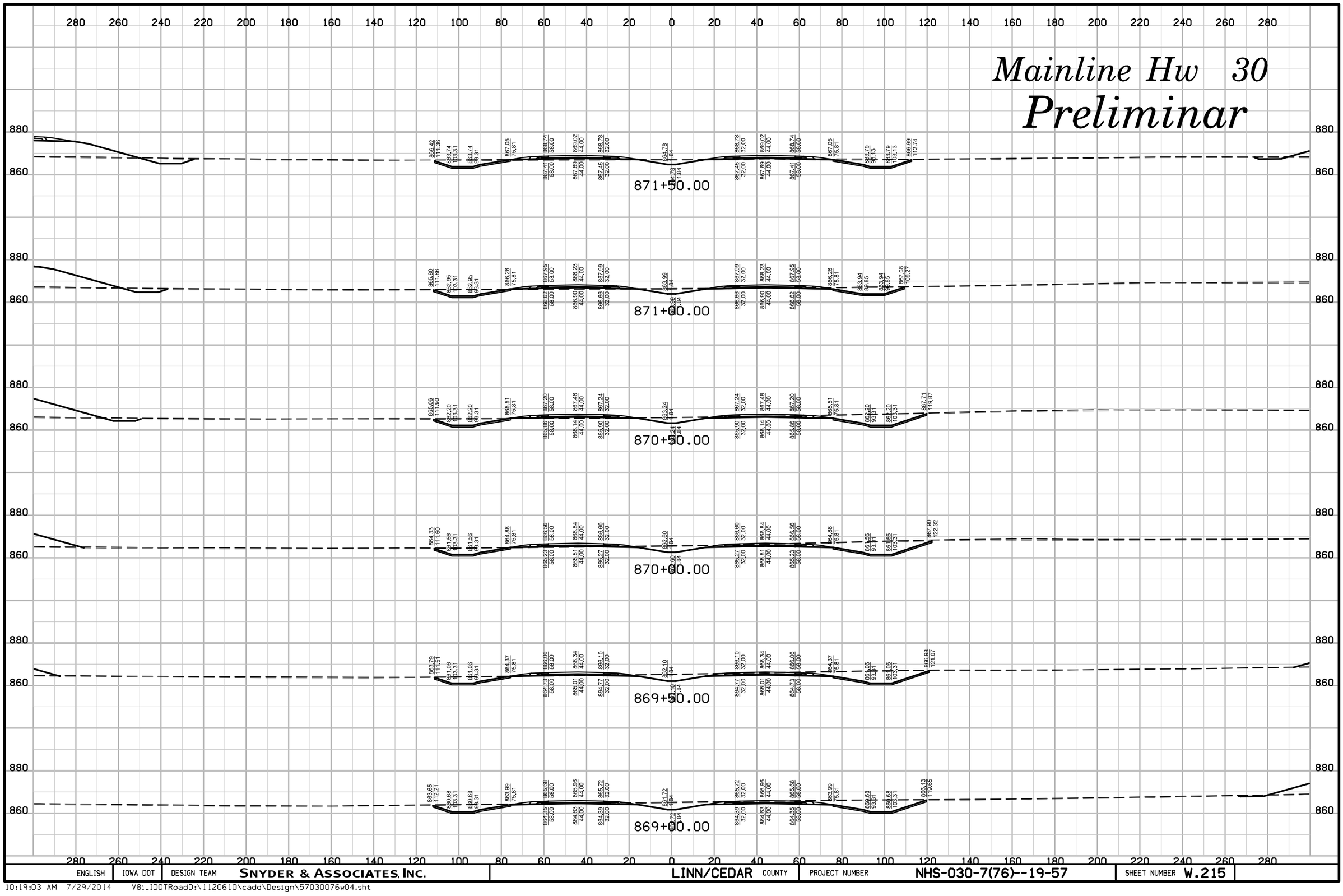
280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.214

10:19:02 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.215

10:19:03 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

874+00.00

873+50.00

873+00.00

872+50.00

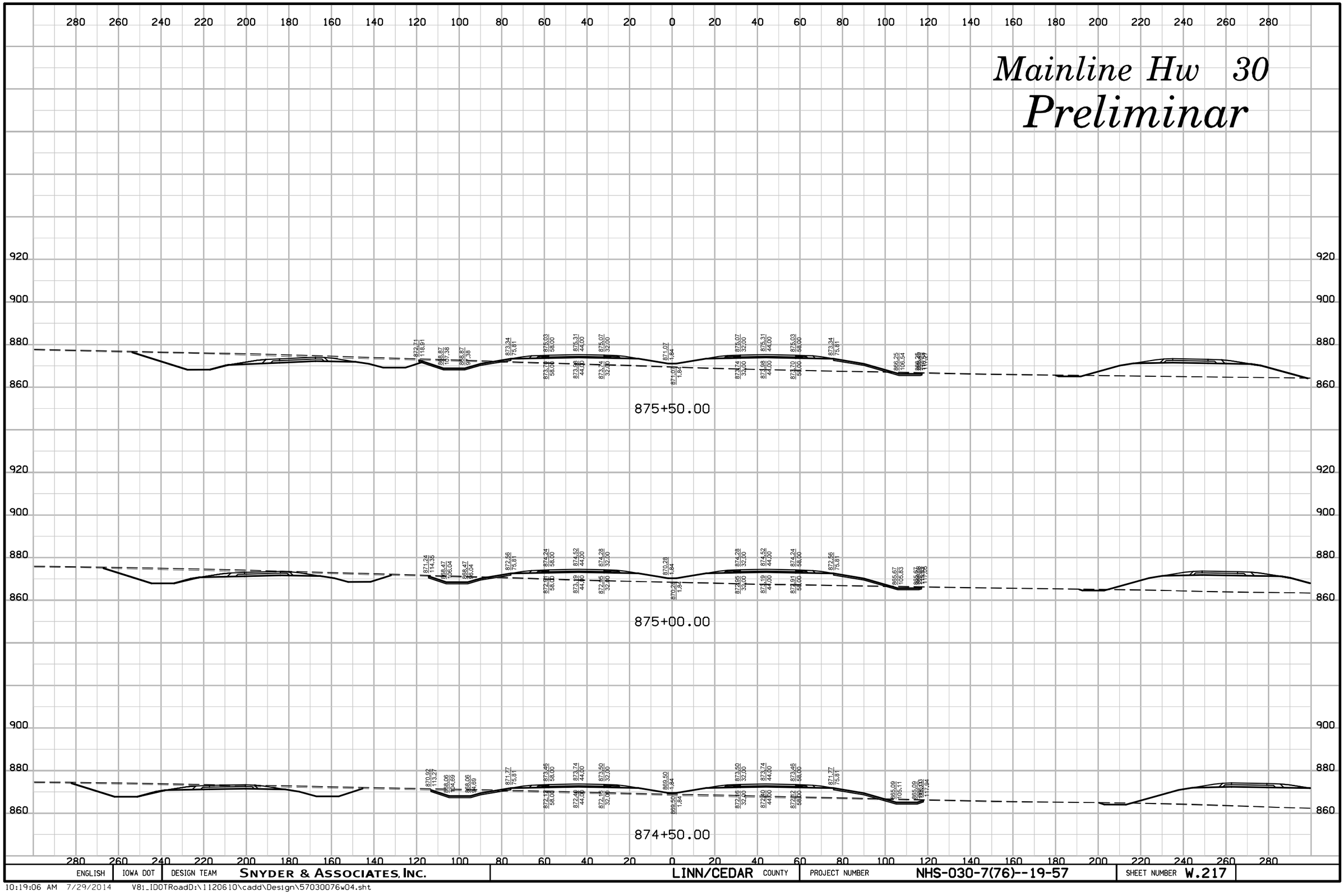
872+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.216

10:19:04 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

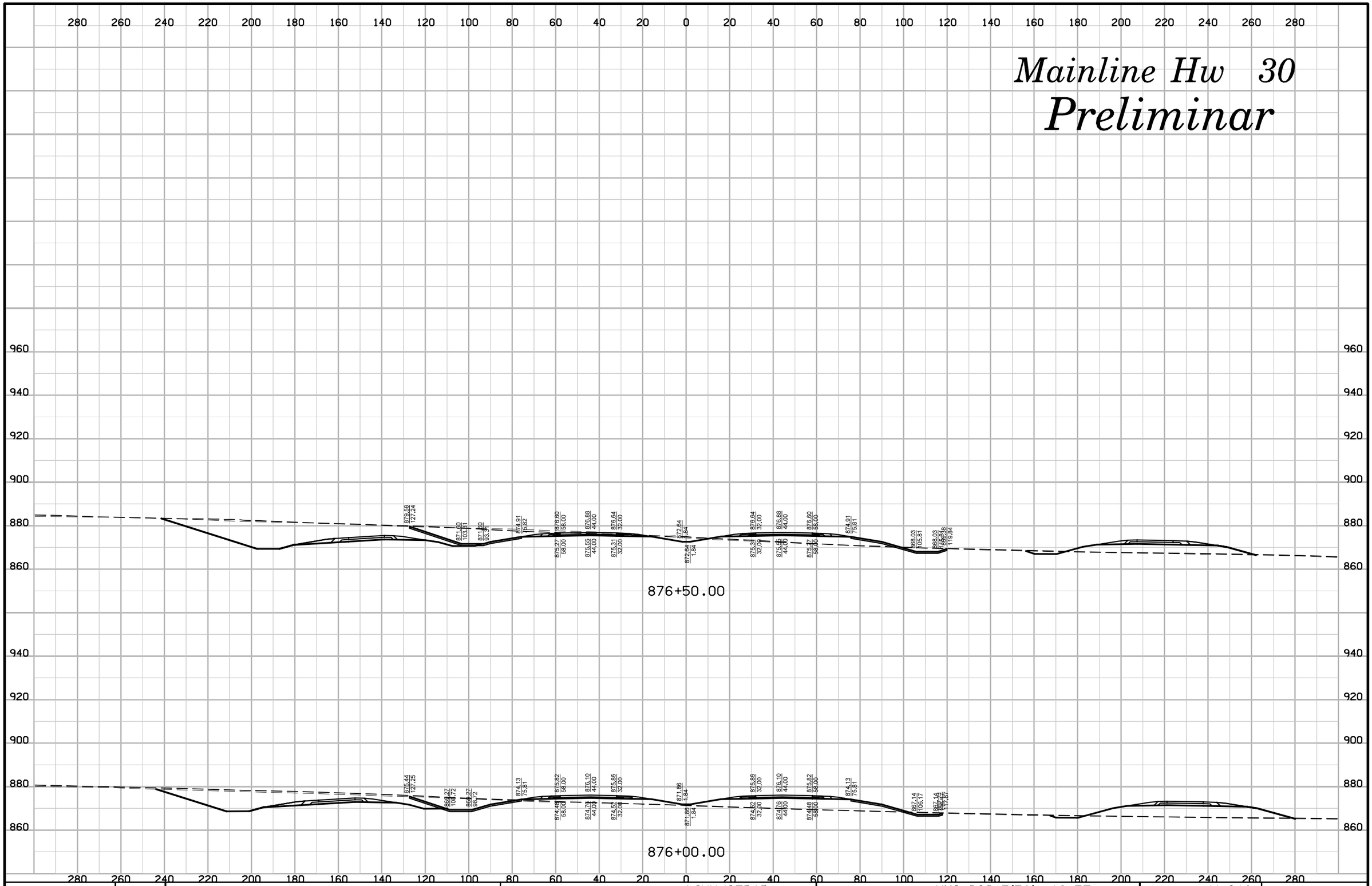


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.217

10:19:06 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.218

10:19:07 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

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

960 940 920 900 880 860

893.84 165.31
873.18 103.31
873.18 93.31
876.49 75.82
878.18 58.00
878.49 44.00
878.22 32.00
876.84 58.00
877.12 44.00
876.88 32.00
874.22 1.84
876.88 32.00
878.22 32.00
878.46 44.00
878.18 58.00
876.84 58.00
877.12 44.00
876.49 75.81
869.42 105.97
869.42 115.07
875.21 151.26

877+50.00

886.08 144.37
872.39 103.31
872.39 93.31
875.70 75.81
877.39 58.00
877.67 44.00
877.43 32.00
876.06 58.00
876.34 44.00
876.10 32.00
873.43 1.84
876.10 32.00
877.43 32.00
877.67 44.00
877.39 58.00
876.06 58.00
876.34 44.00
875.70 75.81
868.93 115.44
868.93 115.44
871.61 123.50

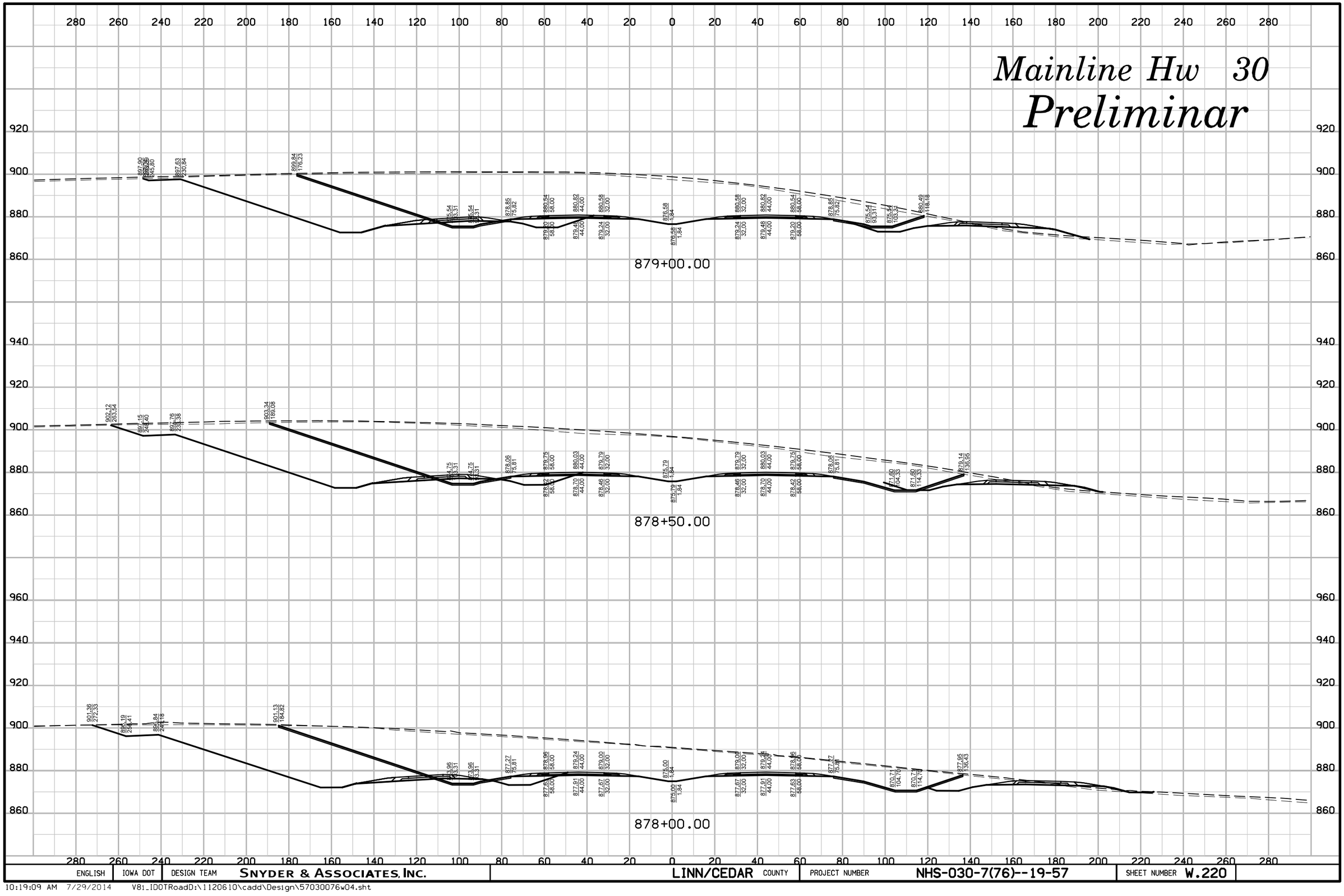
877+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.219

10:19:08 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

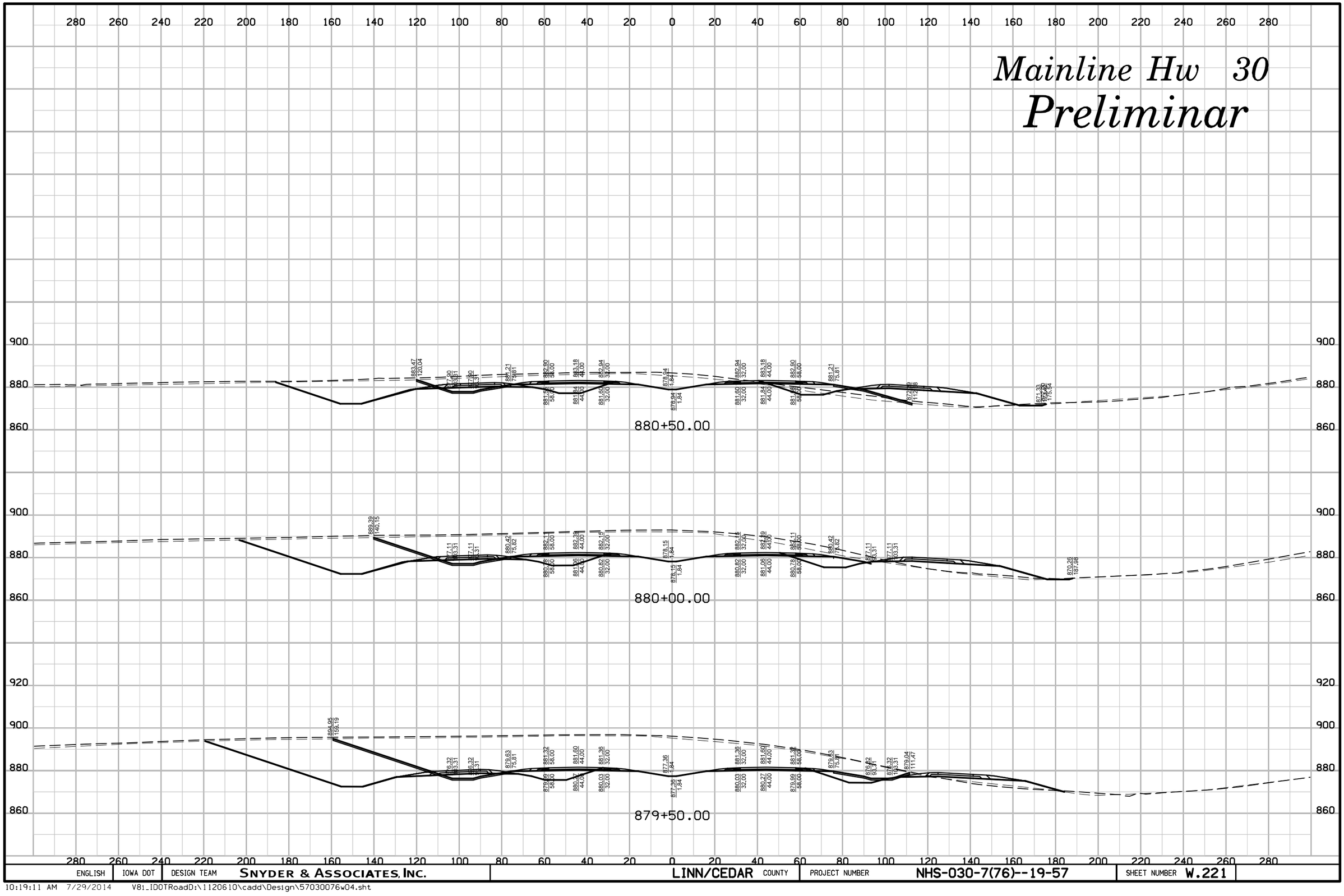


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.220

10:19:09 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.221

10:19:11 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

881+28.00

881+00.00

880+70.79

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.222

10:19:12 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

883+50.00

883+00.00

882+50.00

882+00.00

881+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.223

10:19:13 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

886+00.00

885+50.00

885+00.00

884+50.00

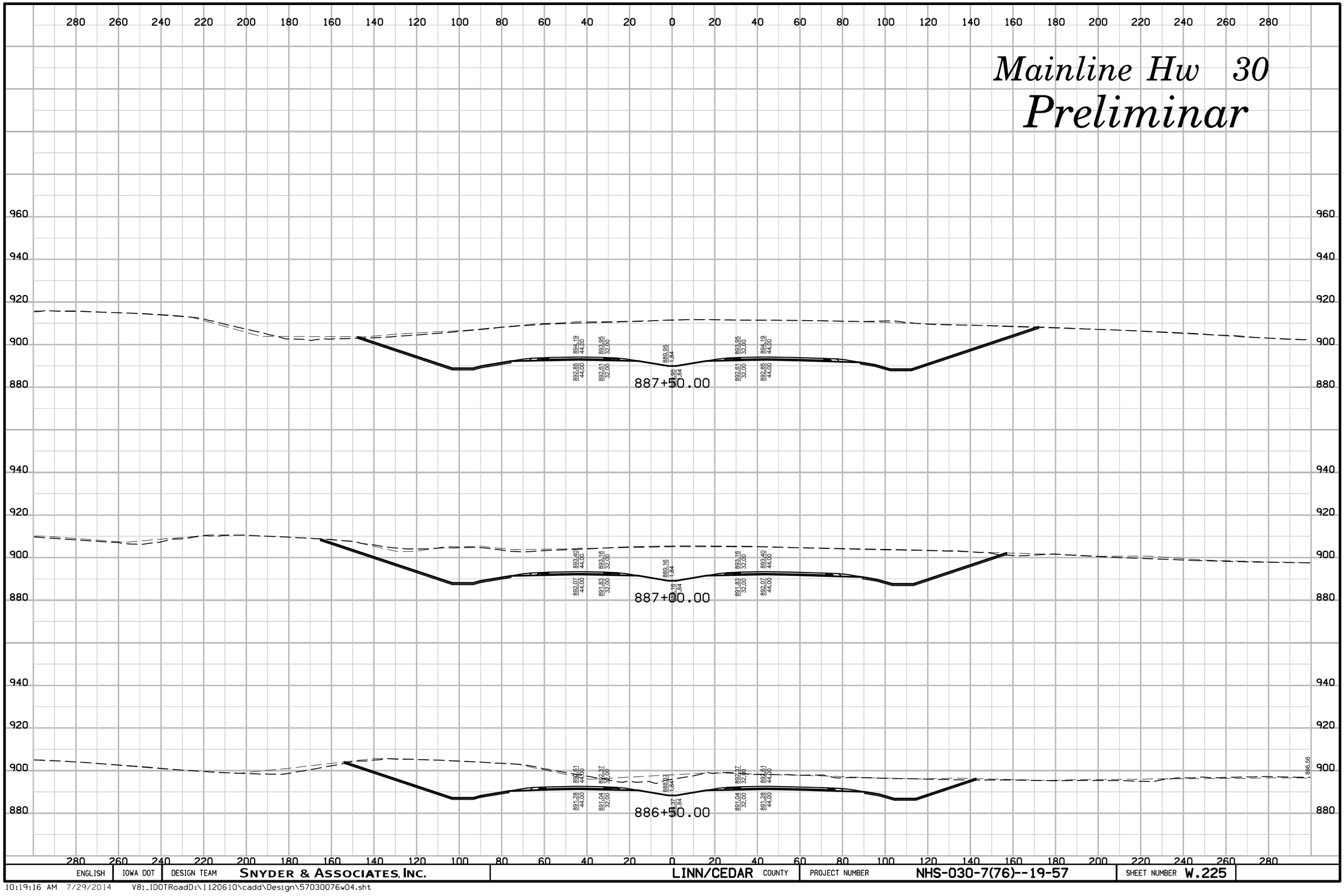
884+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.224

10:19:15 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

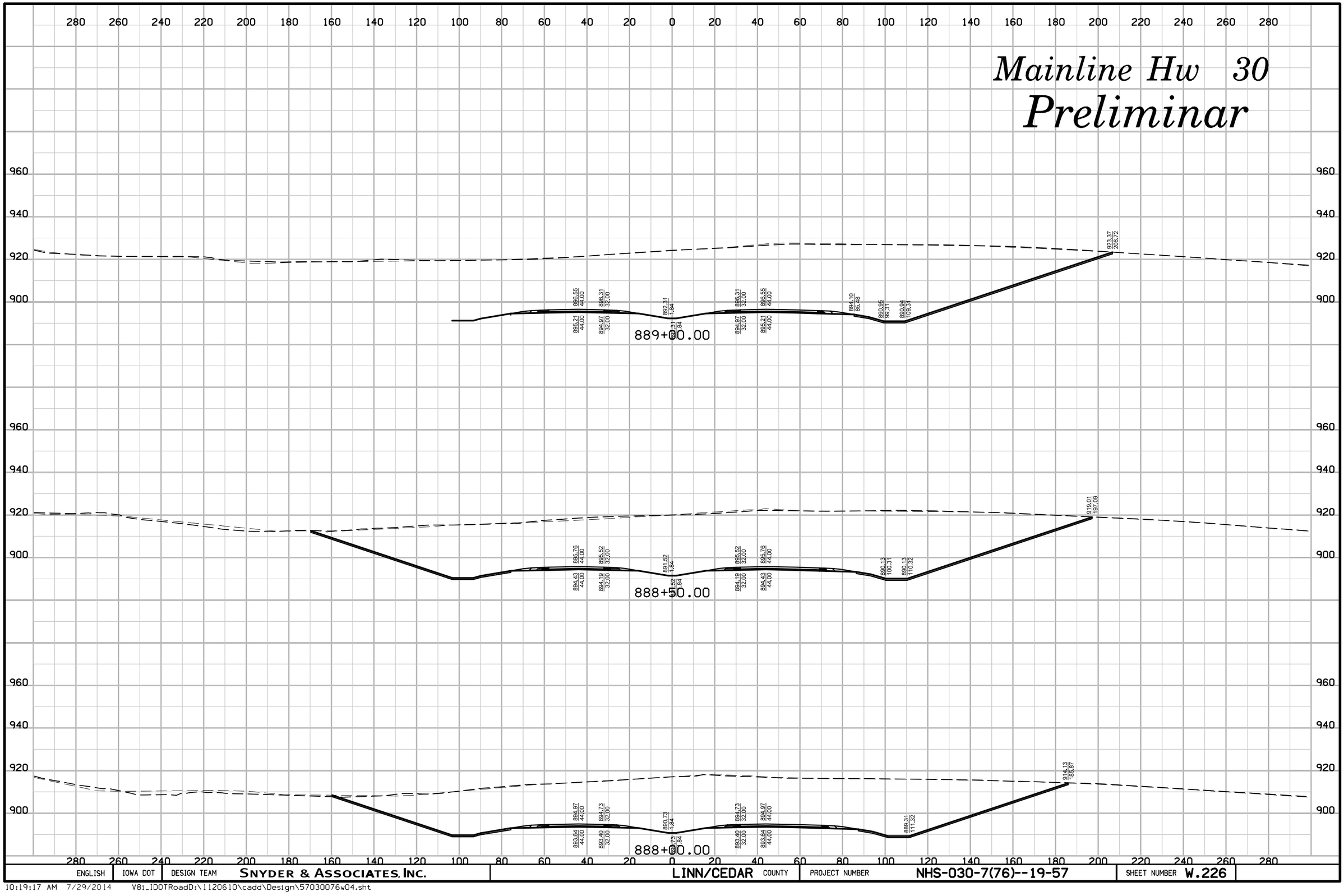


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.225

10:19:16 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

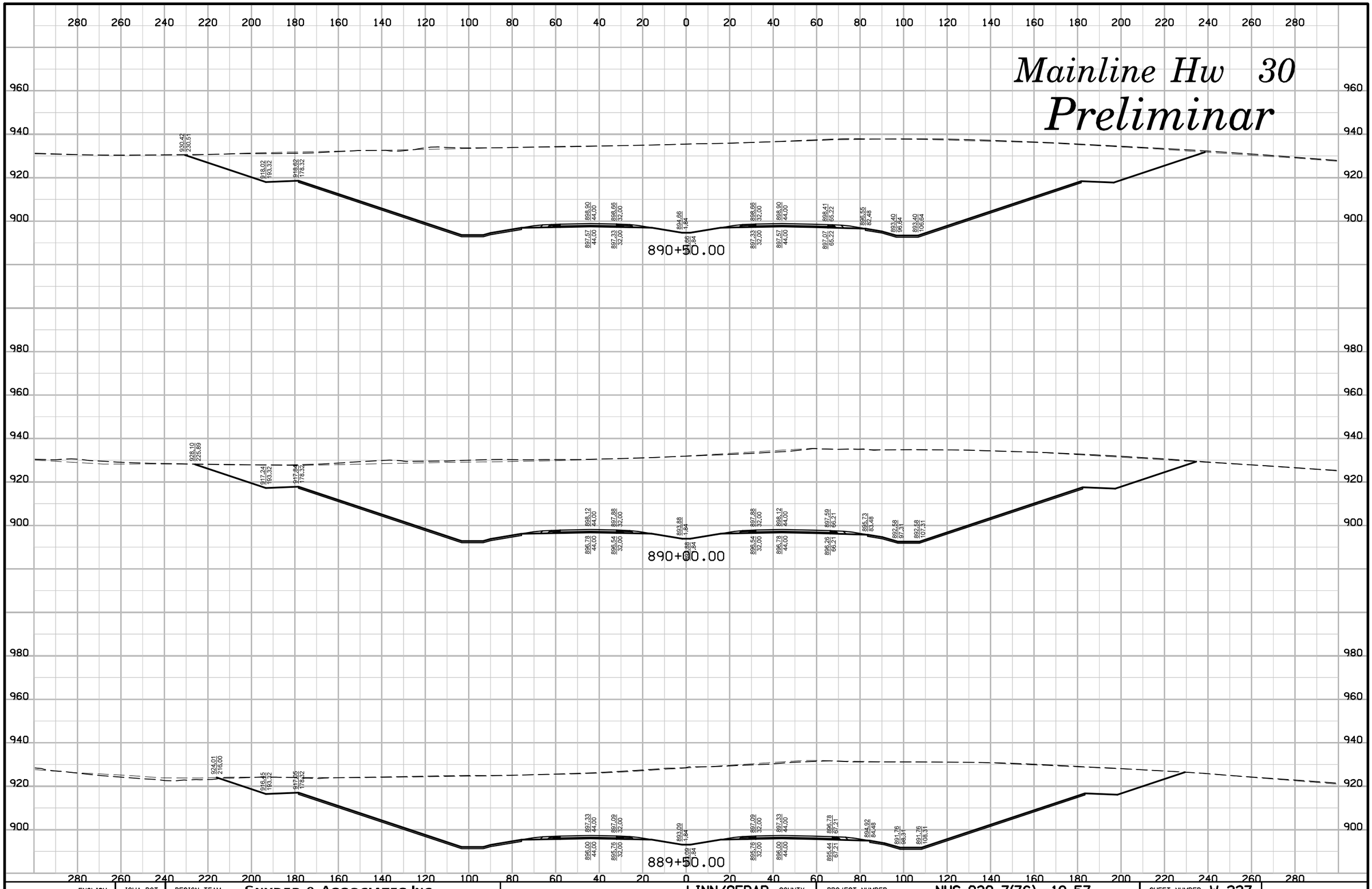


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.226

10:19:17 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

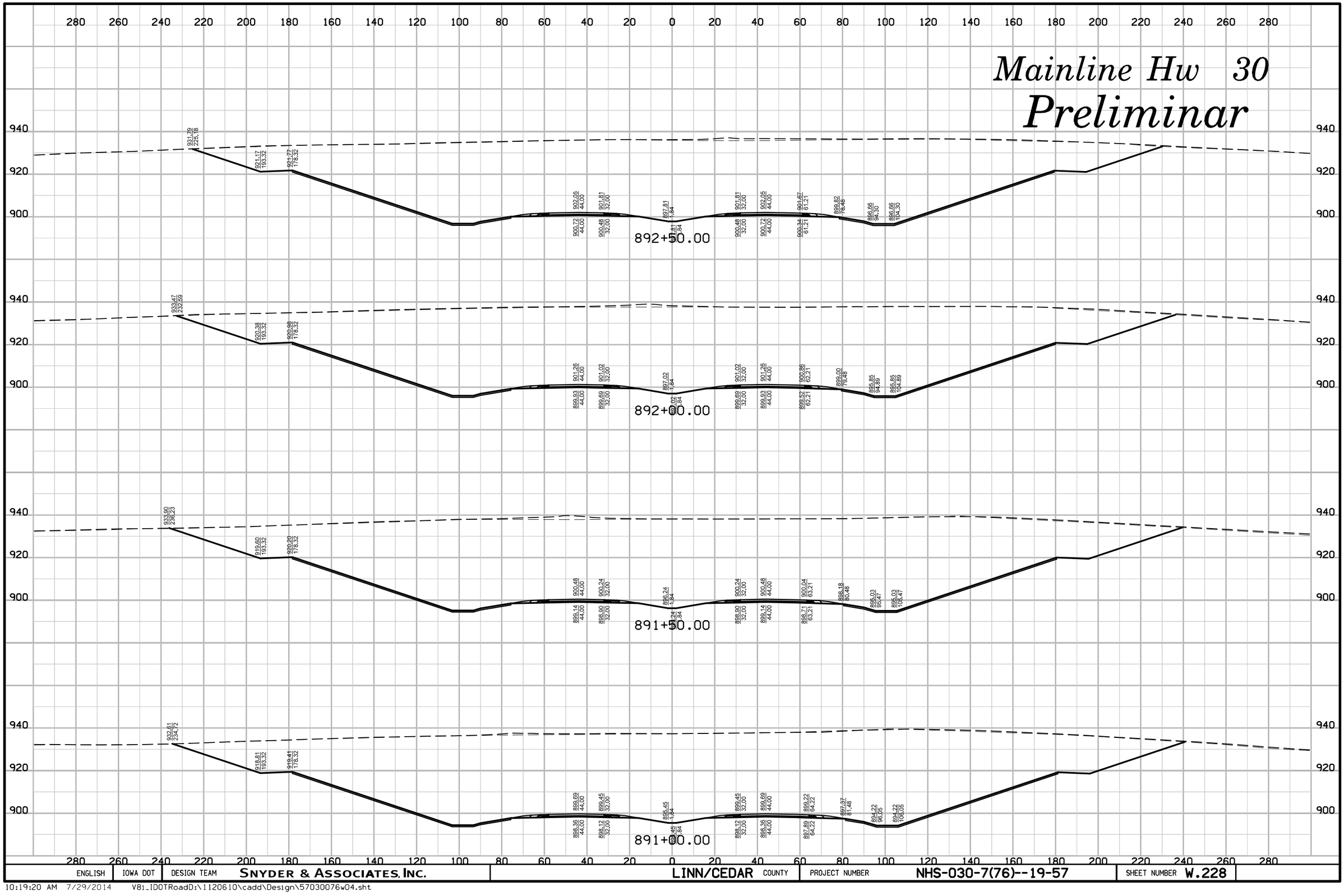
Preliminar



10:19:18 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

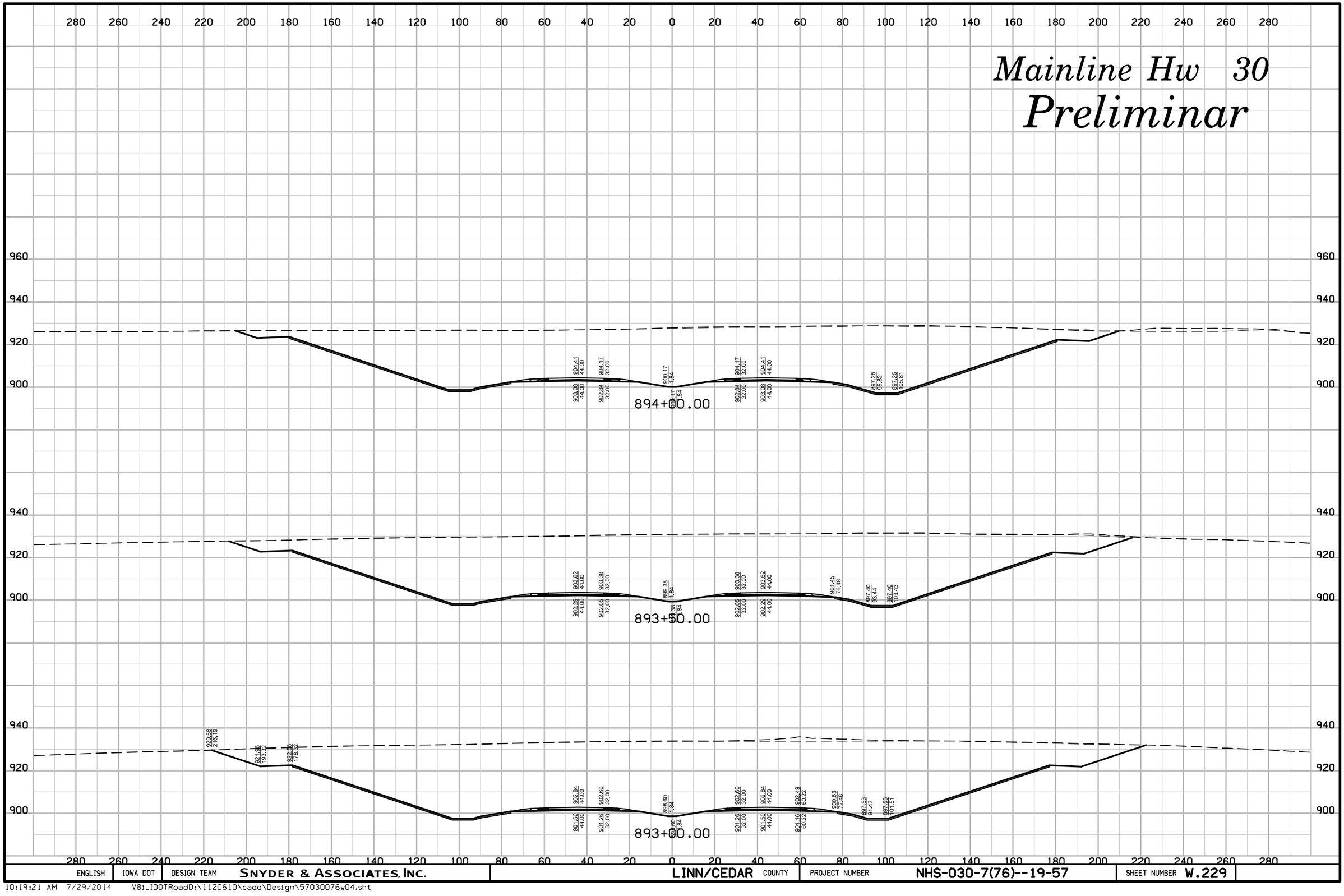


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.228

10:19:20 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

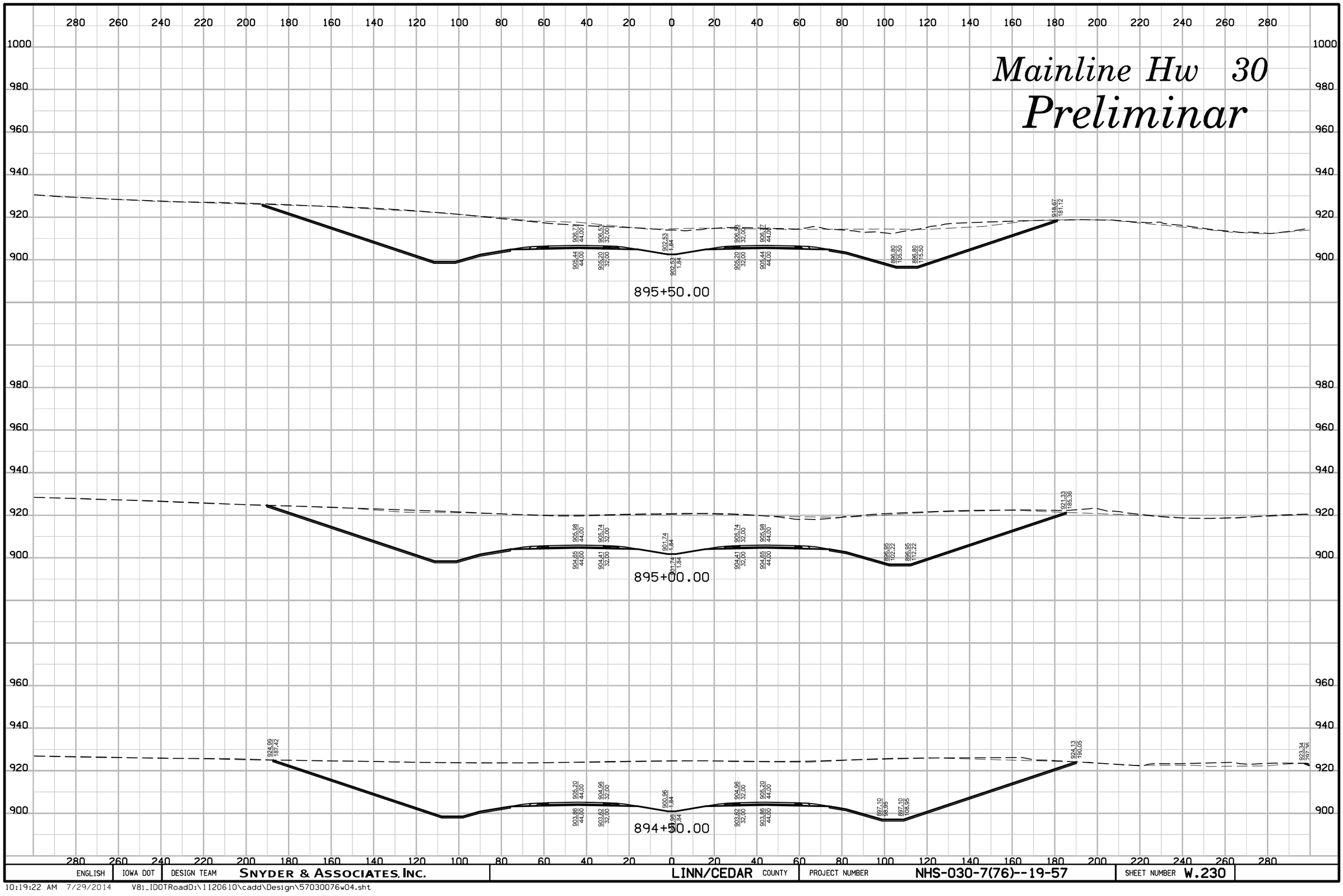


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.229

10:19:21 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

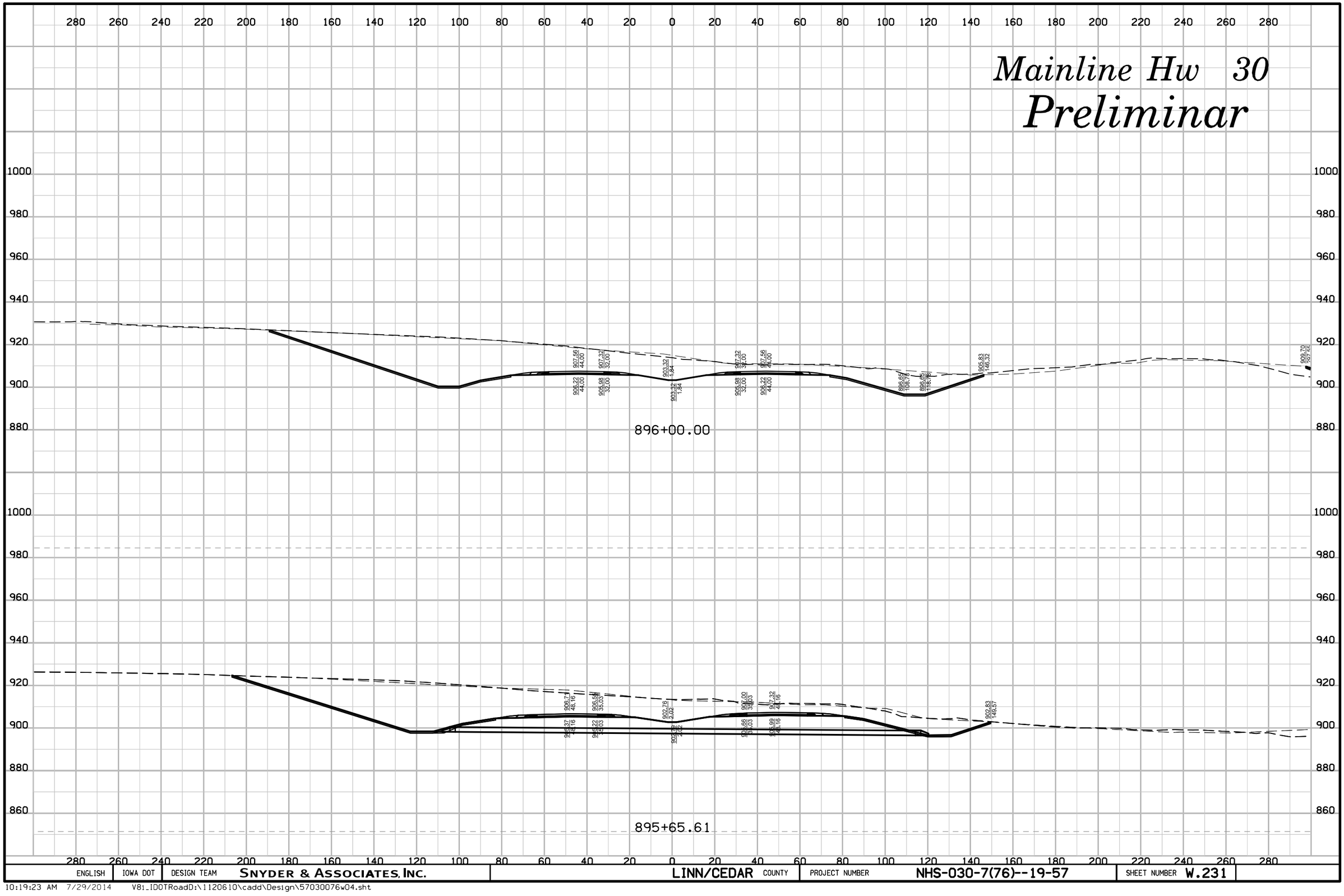


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.230

10:19:22 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

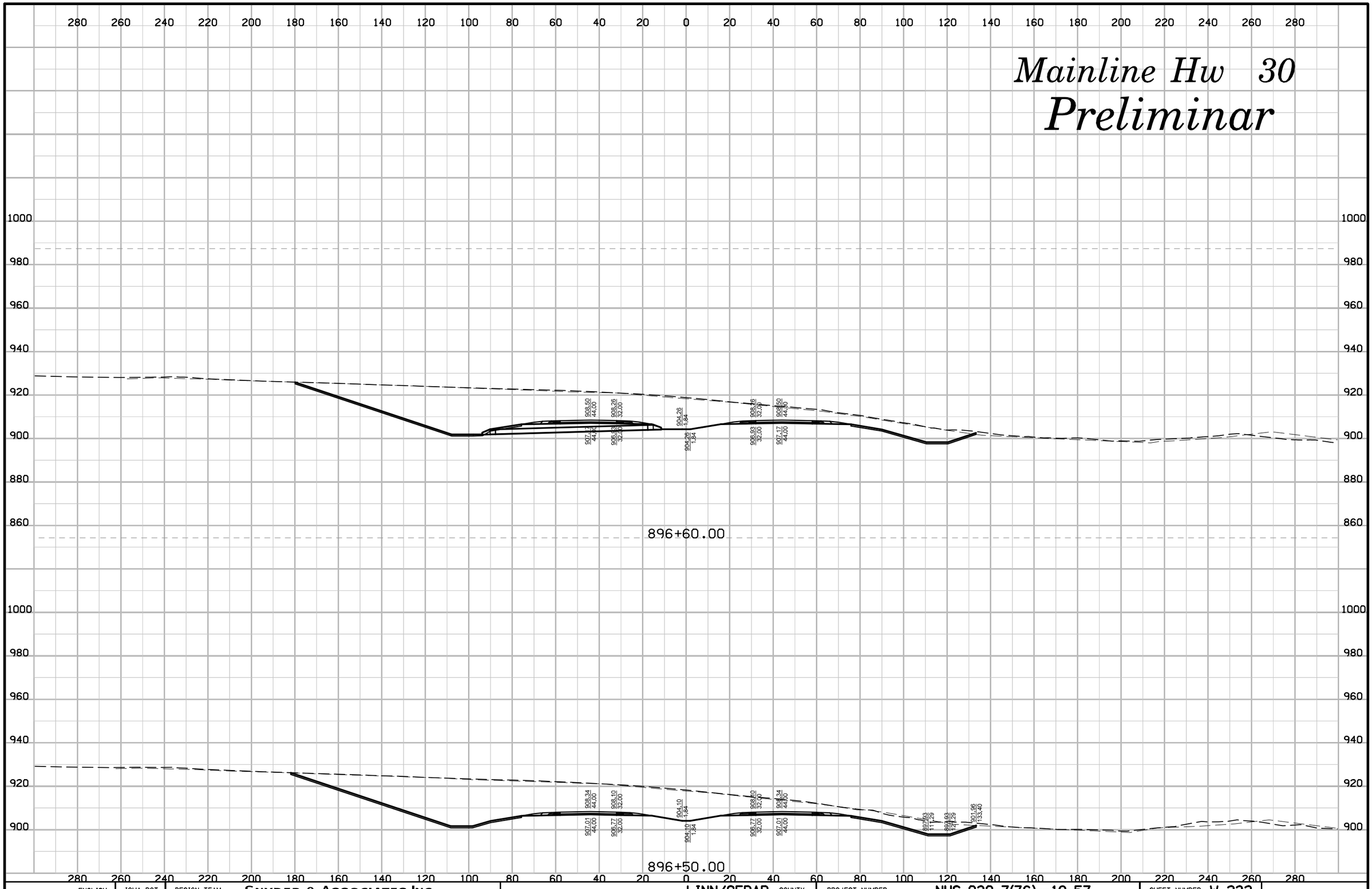


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.231

10:19:23 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

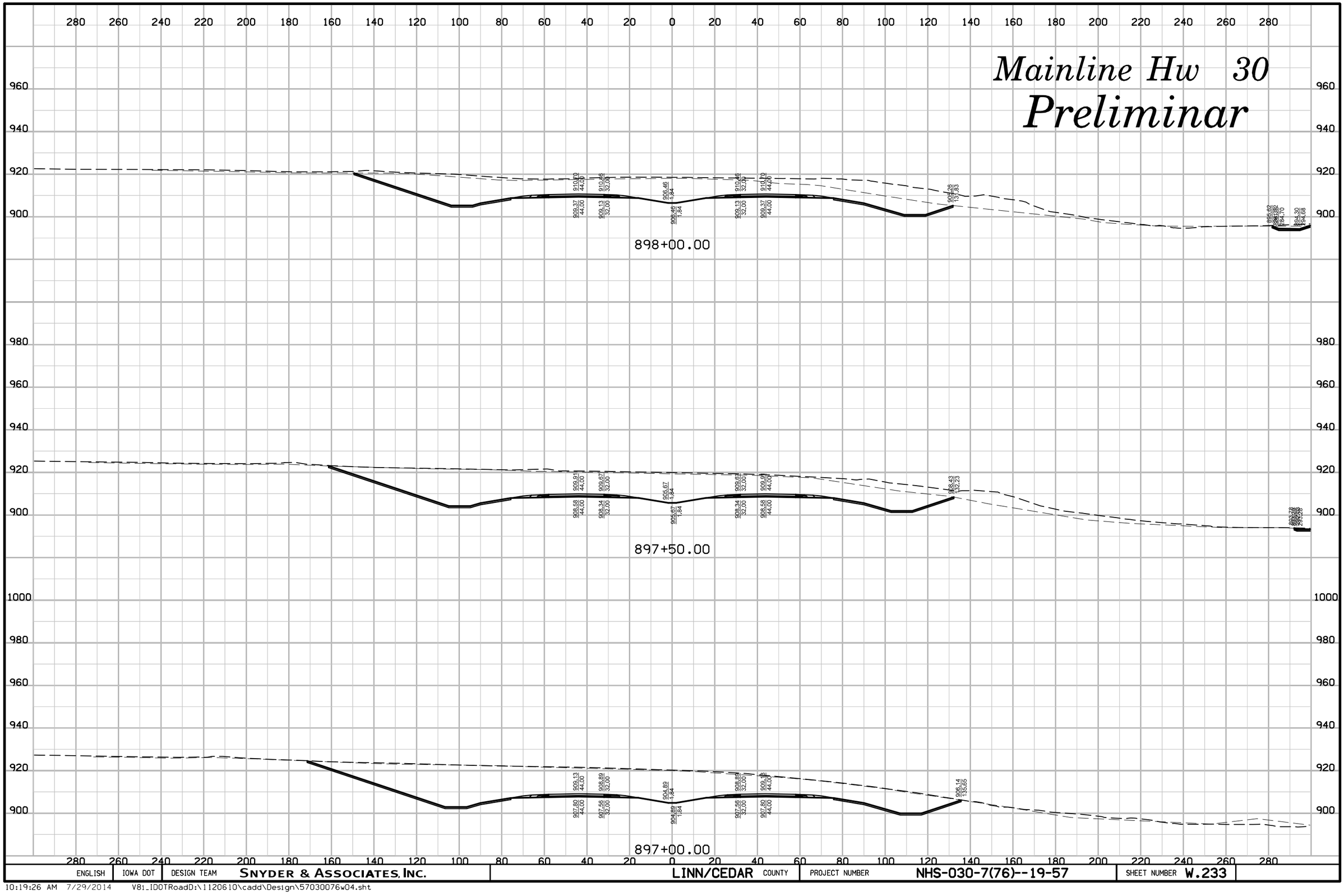


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.232

10:19:25 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.233

10:19:26 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

899+50.00

899+43.10

899+00.00

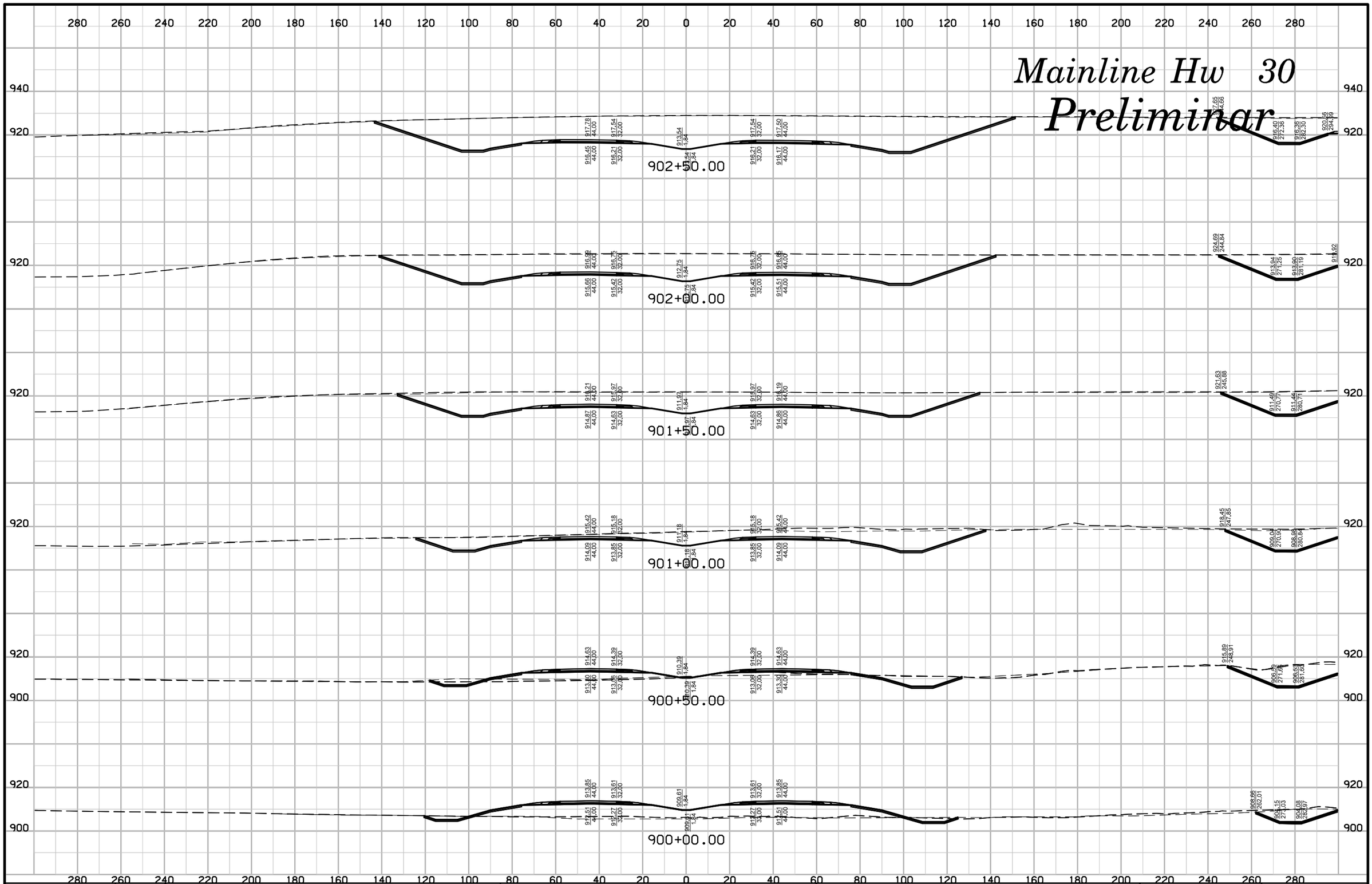
898+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.234

10:19:27 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

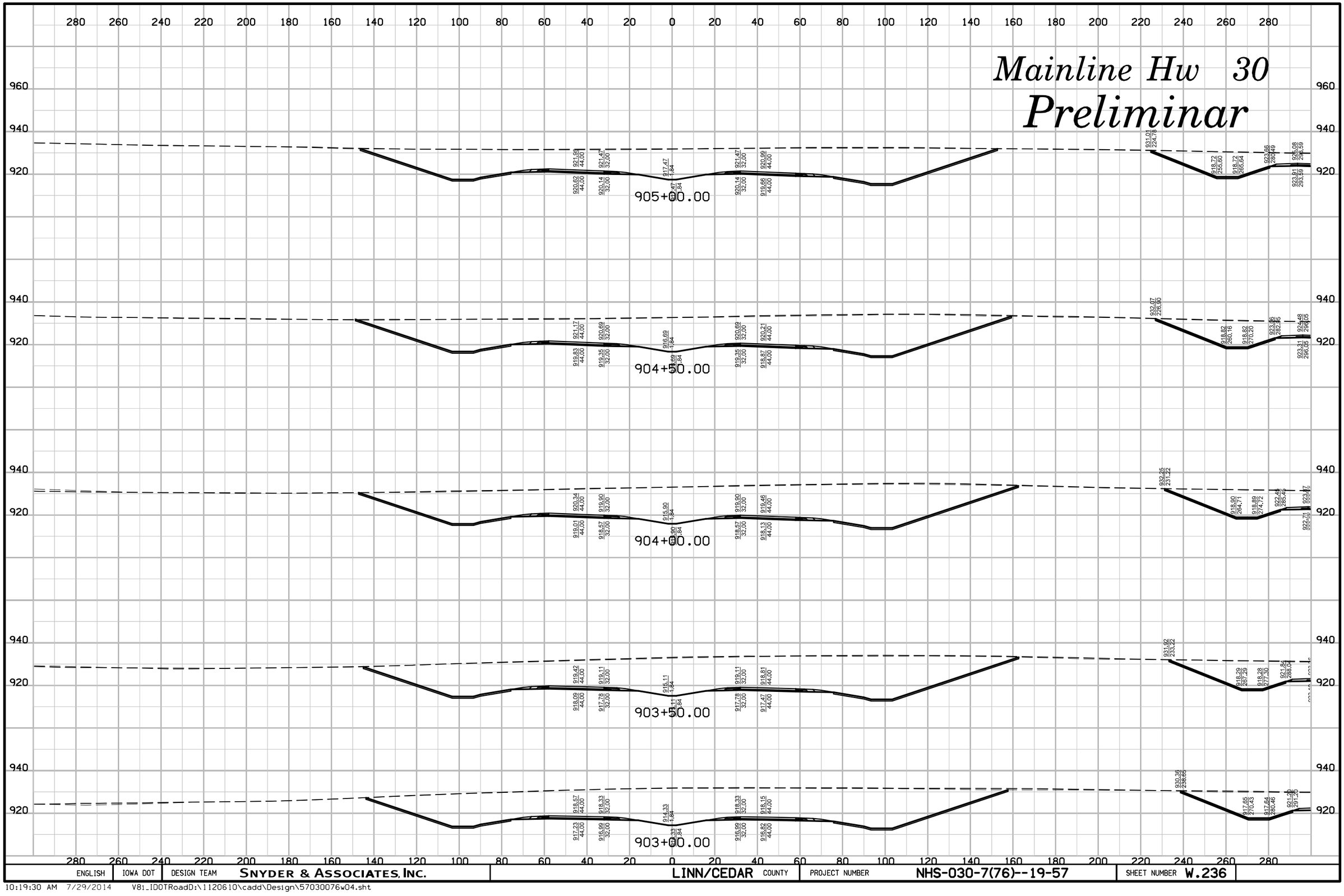


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.235

10:19:28 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

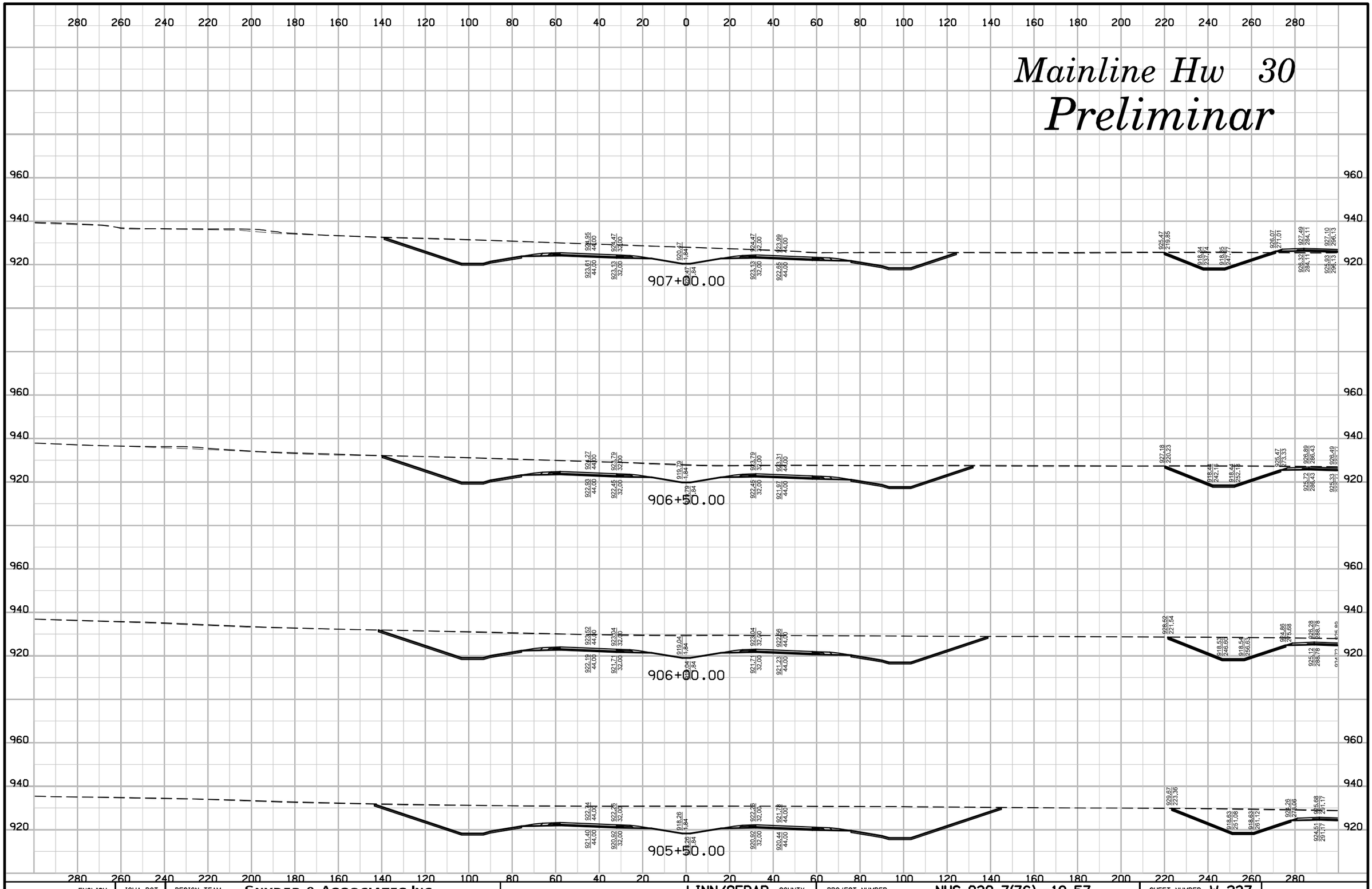


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.236

10:19:30 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.237

Mainline Hw 30

Preliminar

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

980 960 940 920

925.28 44.00 | 926.62 44.00 | 926.14 32.00 | 924.80 32.00 | 922.14 1.84 | 922.14 1.84 | 924.80 32.00 | 926.14 22.00 | 925.66 44.00 | 924.32 44.00

908+50.00

921.05 221.04 | 918.74 235.78 | 918.73 236.76 | 927.88 264.30 | 928.13 277.40 | 929.30 277.40 | 927.74 289.41 | 928.91 289.41

980 960 940 920

924.79 44.00 | 926.12 44.00 | 925.64 34.00 | 924.31 32.00 | 921.64 1.84 | 921.64 1.84 | 924.31 32.00 | 925.84 22.00 | 925.16 44.00 | 923.83 44.00

908+00.00

921.16 221.48 | 918.16 239.03 | 918.16 239.06 | 927.28 265.50 | 927.53 278.60 | 928.70 278.60 | 927.14 291.61 | 928.30 291.61

960 940 920

924.23 44.00 | 926.57 44.00 | 925.09 34.00 | 923.75 32.00 | 921.09 1.84 | 921.09 1.84 | 923.75 32.00 | 925.09 22.00 | 924.61 44.00 | 923.27 44.00

907+50.00

923.35 220.57 | 918.25 233.37 | 918.25 243.40 | 926.67 268.74 | 928.13 281.44 | 929.09 281.84 | 926.53 293.85 | 927.70 293.85

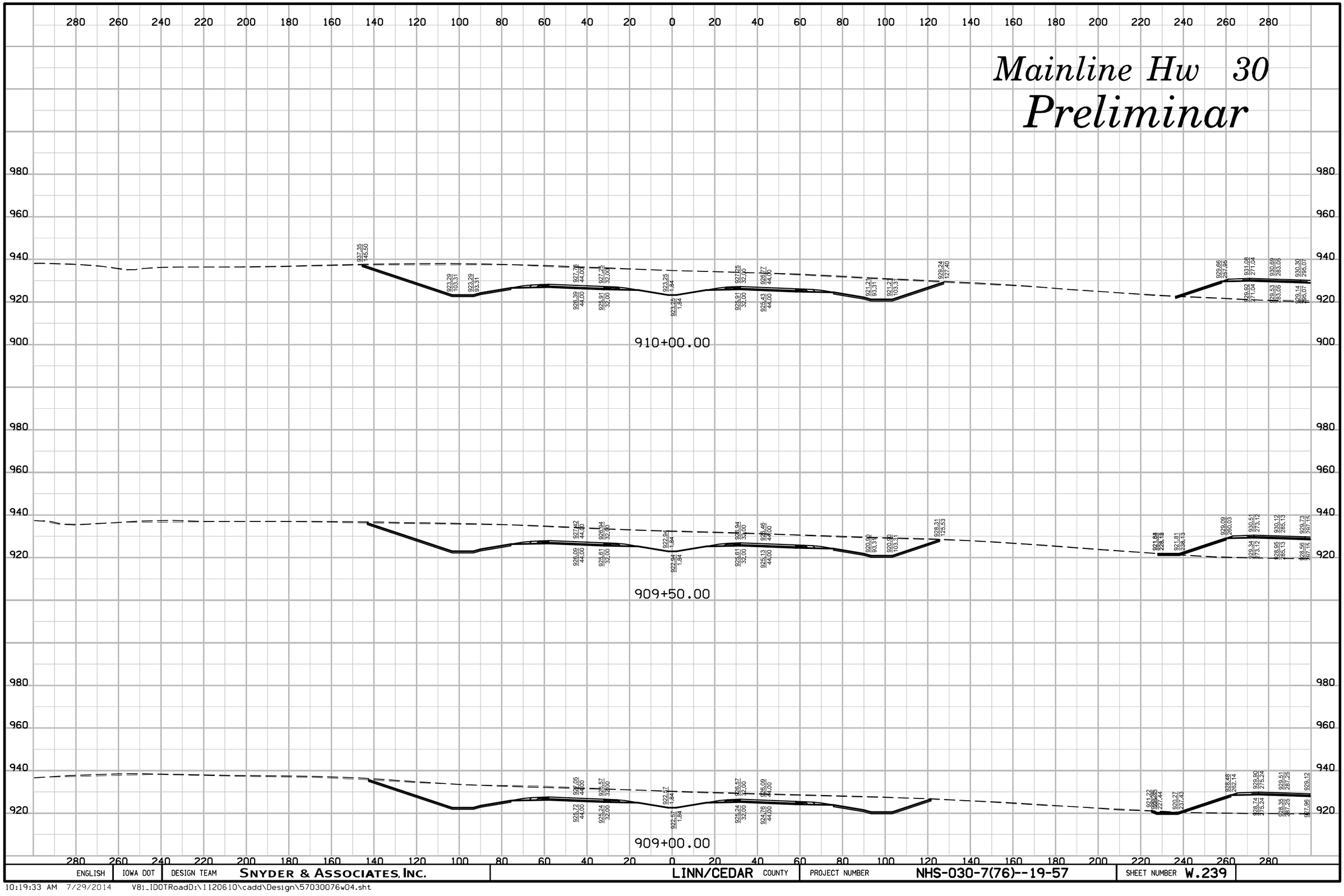
280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.238

10:19:32 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

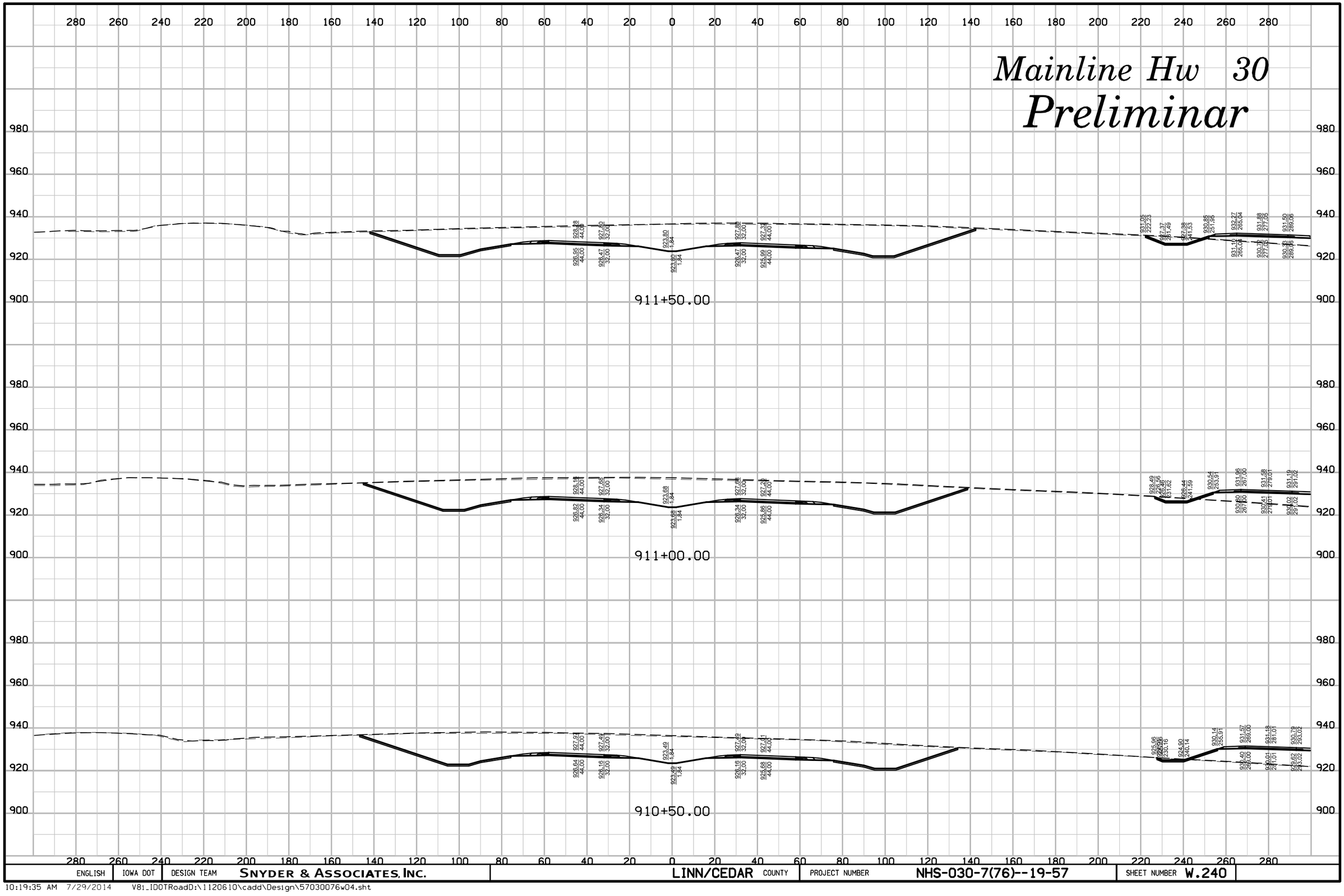


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.239

10:19:33 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.240

10:19:35 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

914+50.00

914+00.00

913+50.00

913+00.00

912+50.00

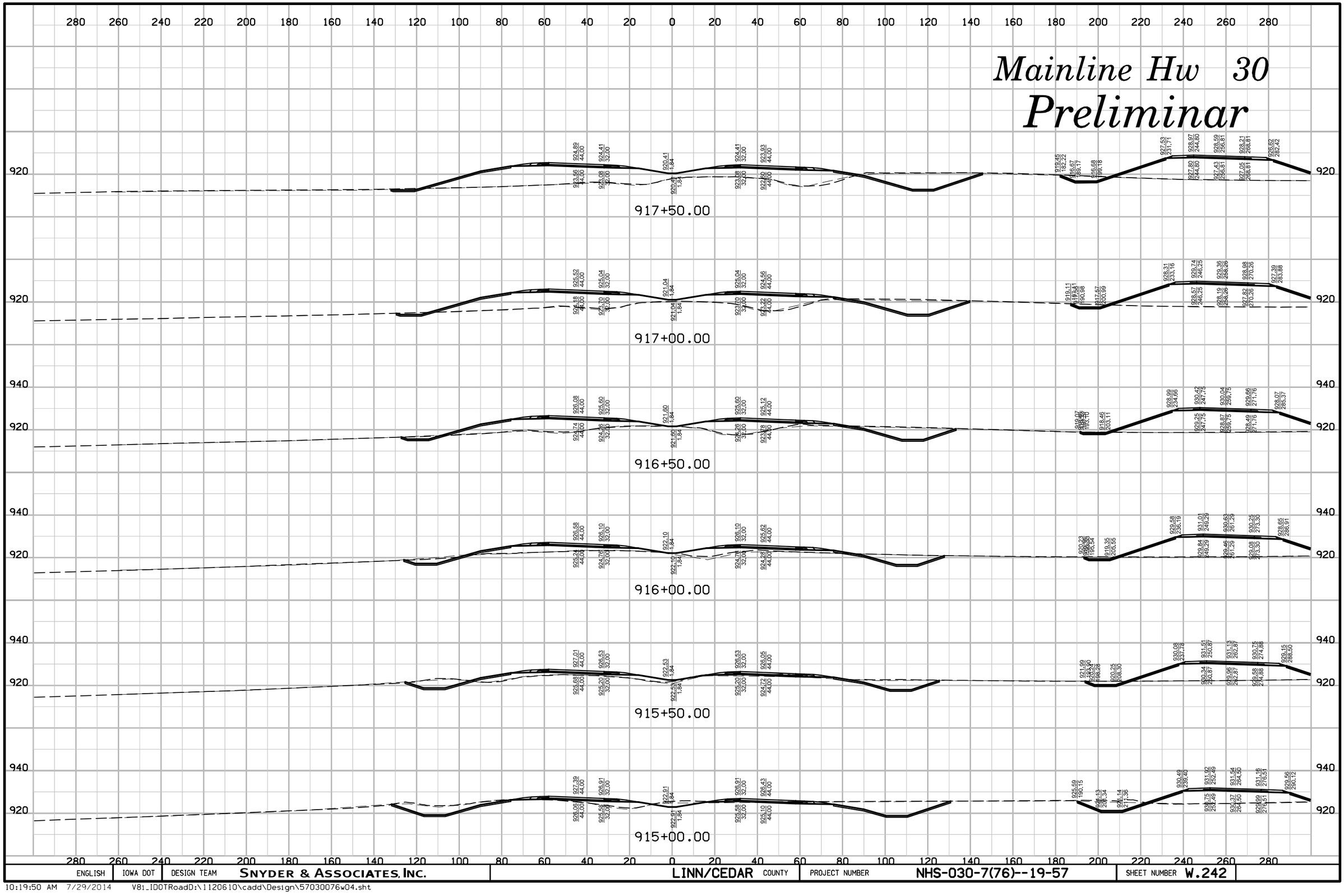
912+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.241

10:19:36 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

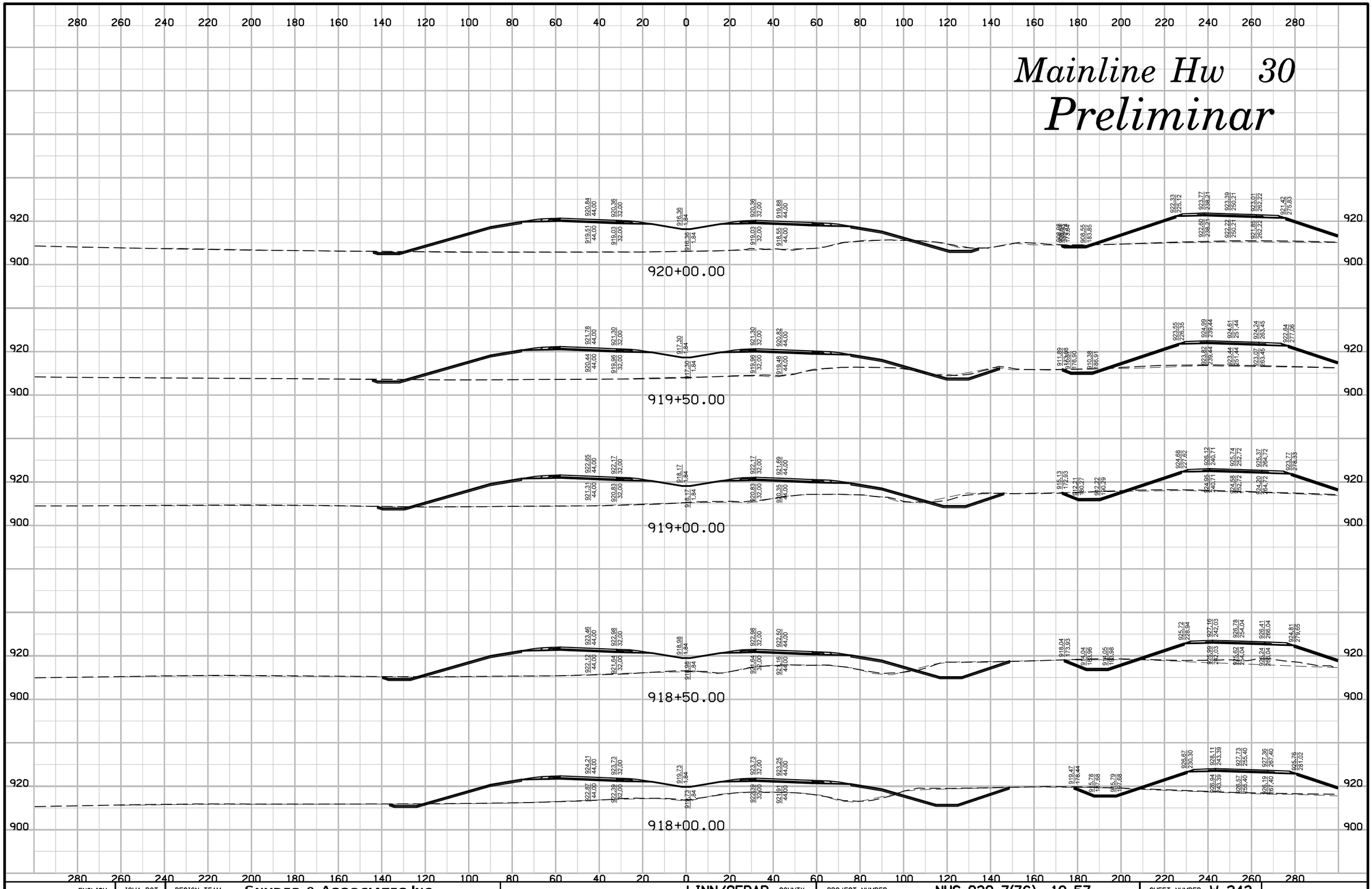


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.242

10:19:50 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

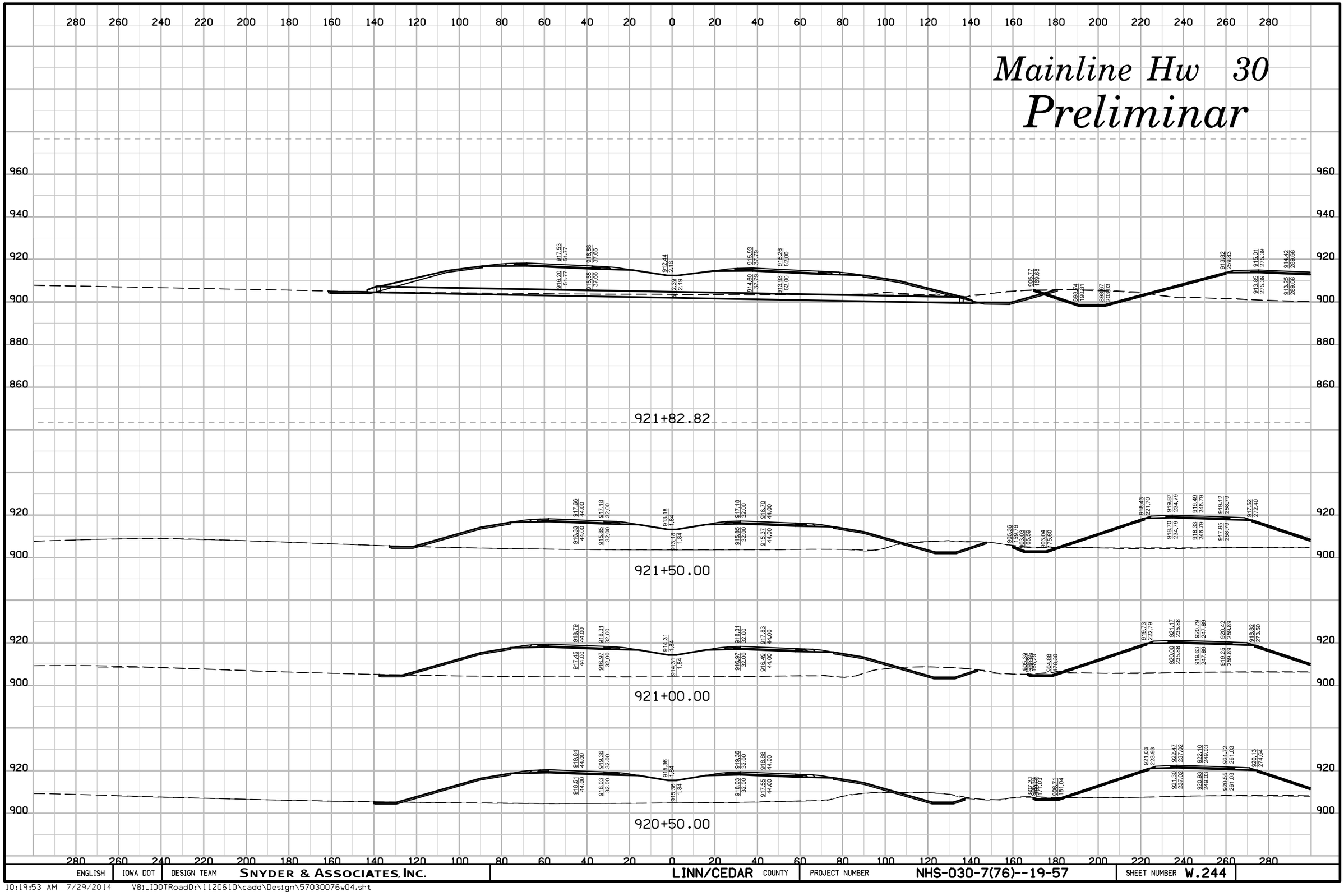
Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.243

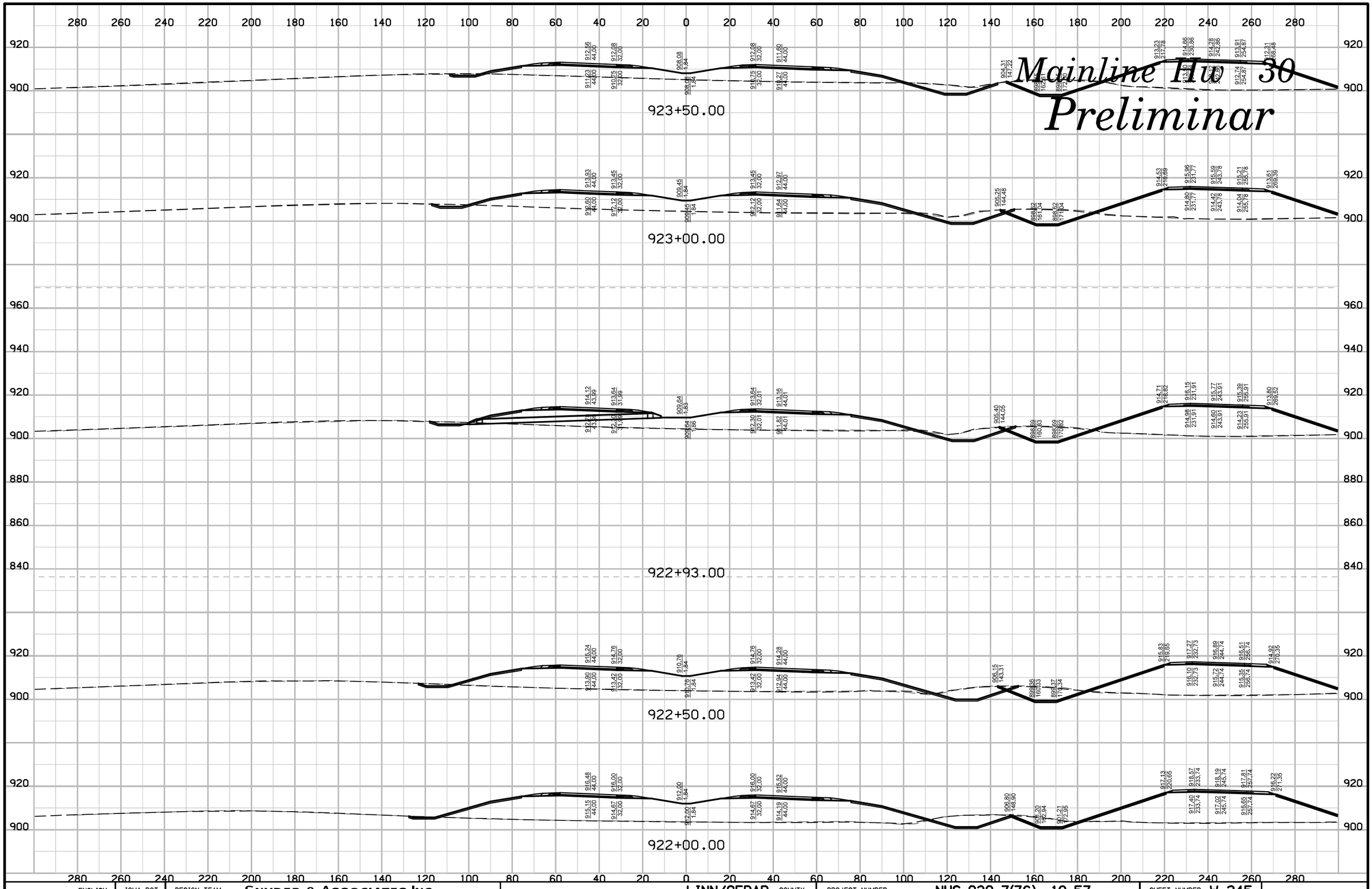
Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.244

10:19:53 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.245

10:19:54 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

926+50.00

926+00.00

925+50.00

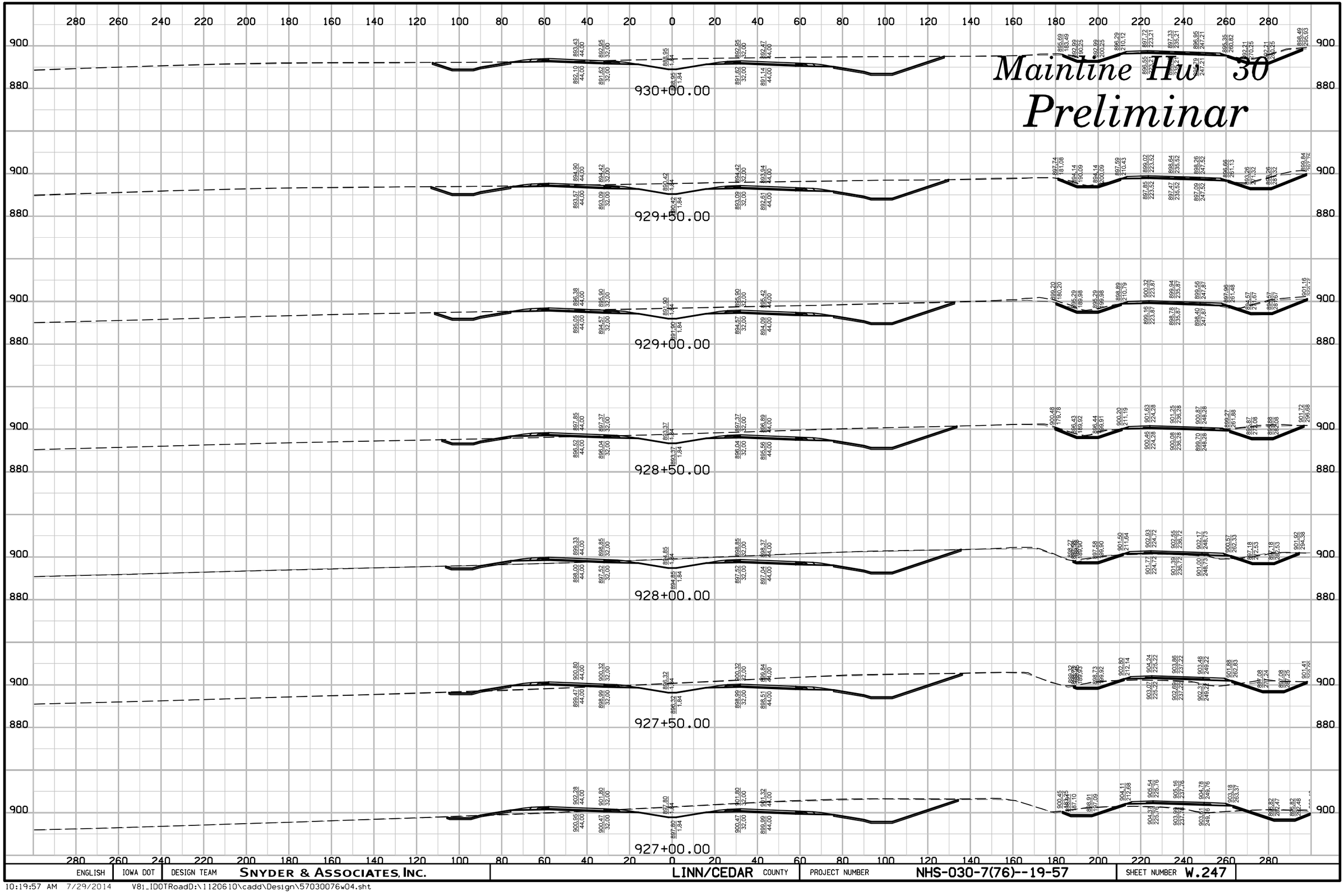
925+00.00

924+50.00

924+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.246

10:19:56 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

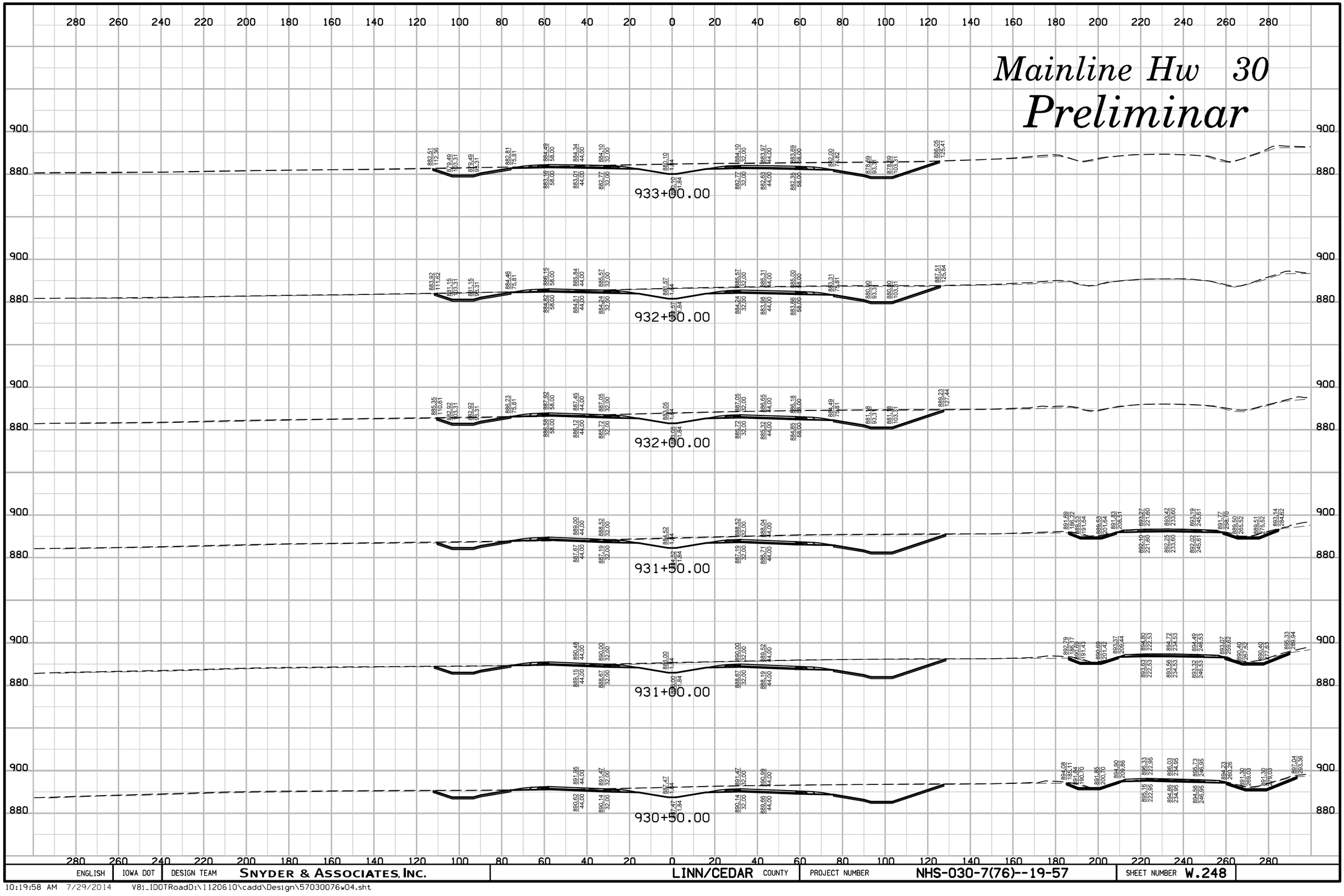


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.247

10:19:57 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.248

10:19:58 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

934+50.00

934+00.00

933+63.00

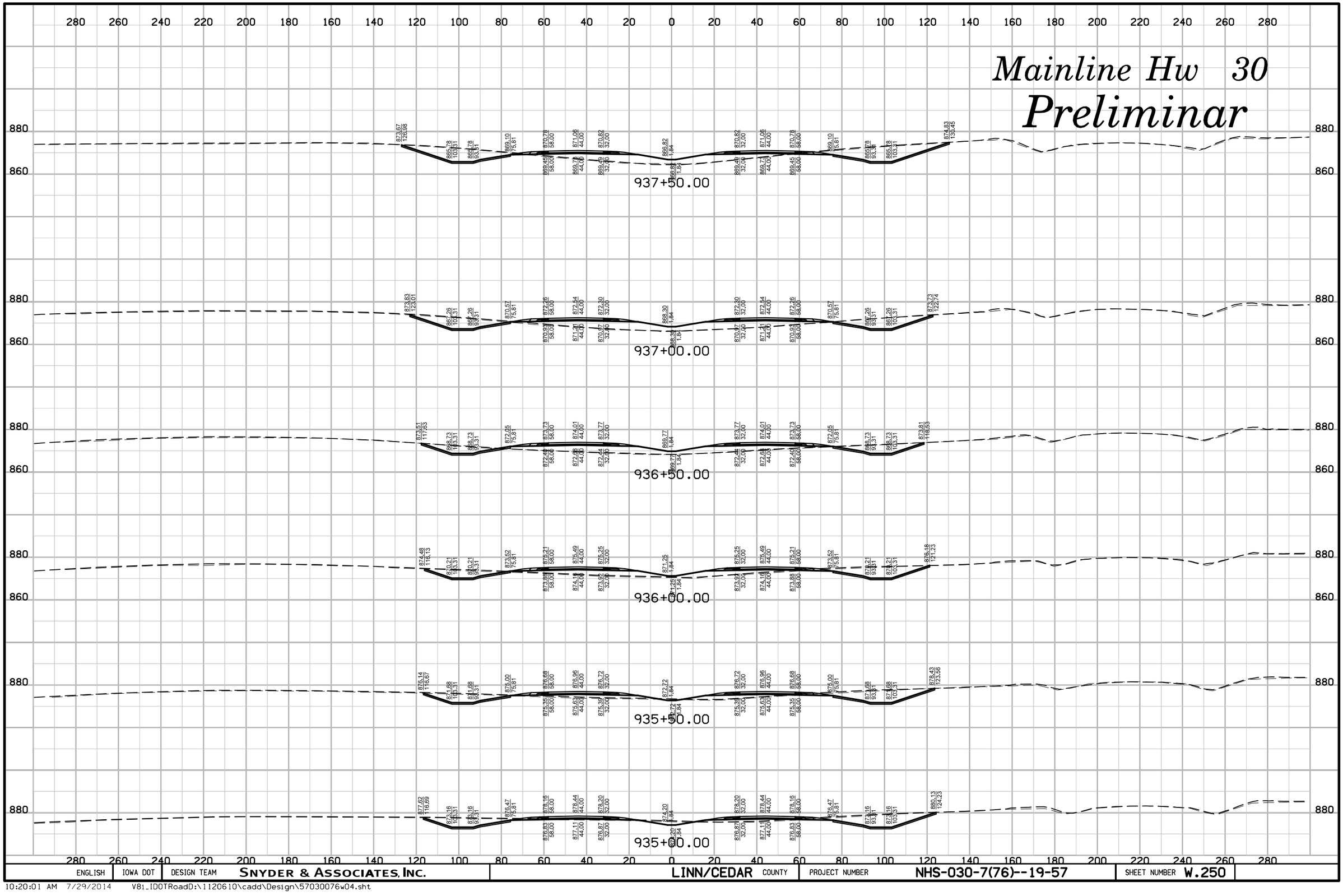
933+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	W.249

10:20:00 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

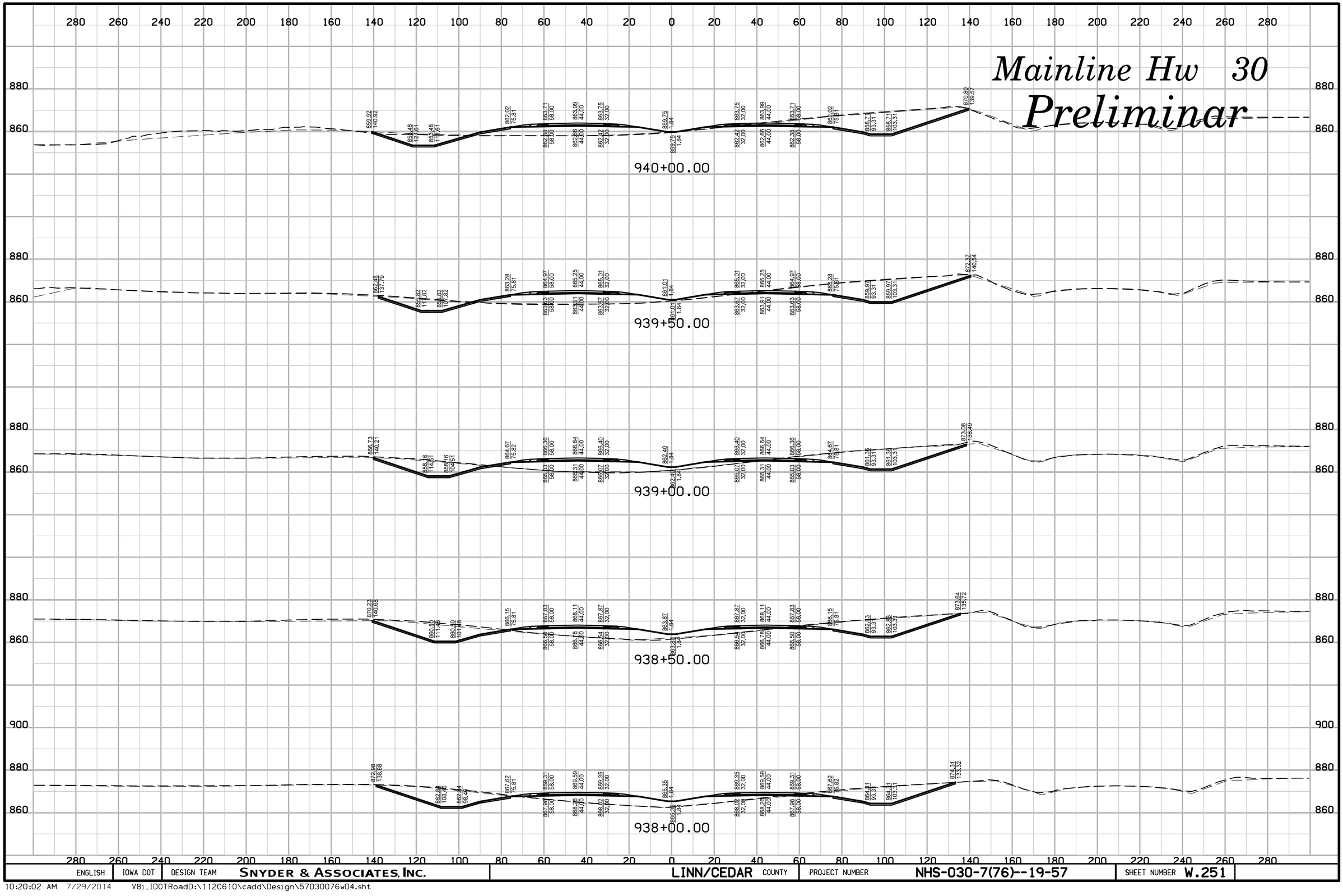


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.250

10:20:01 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

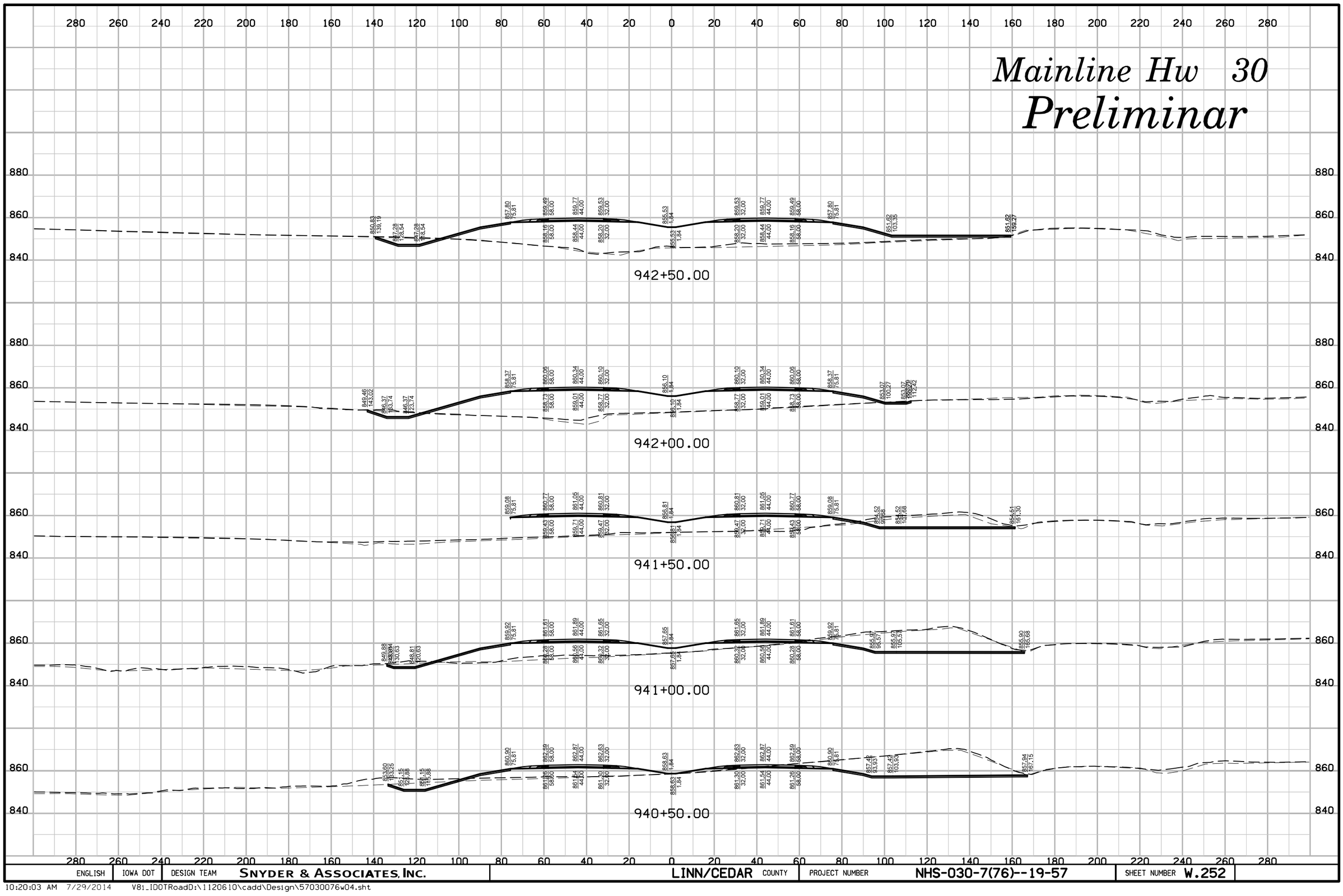


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.251

10:20:02 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

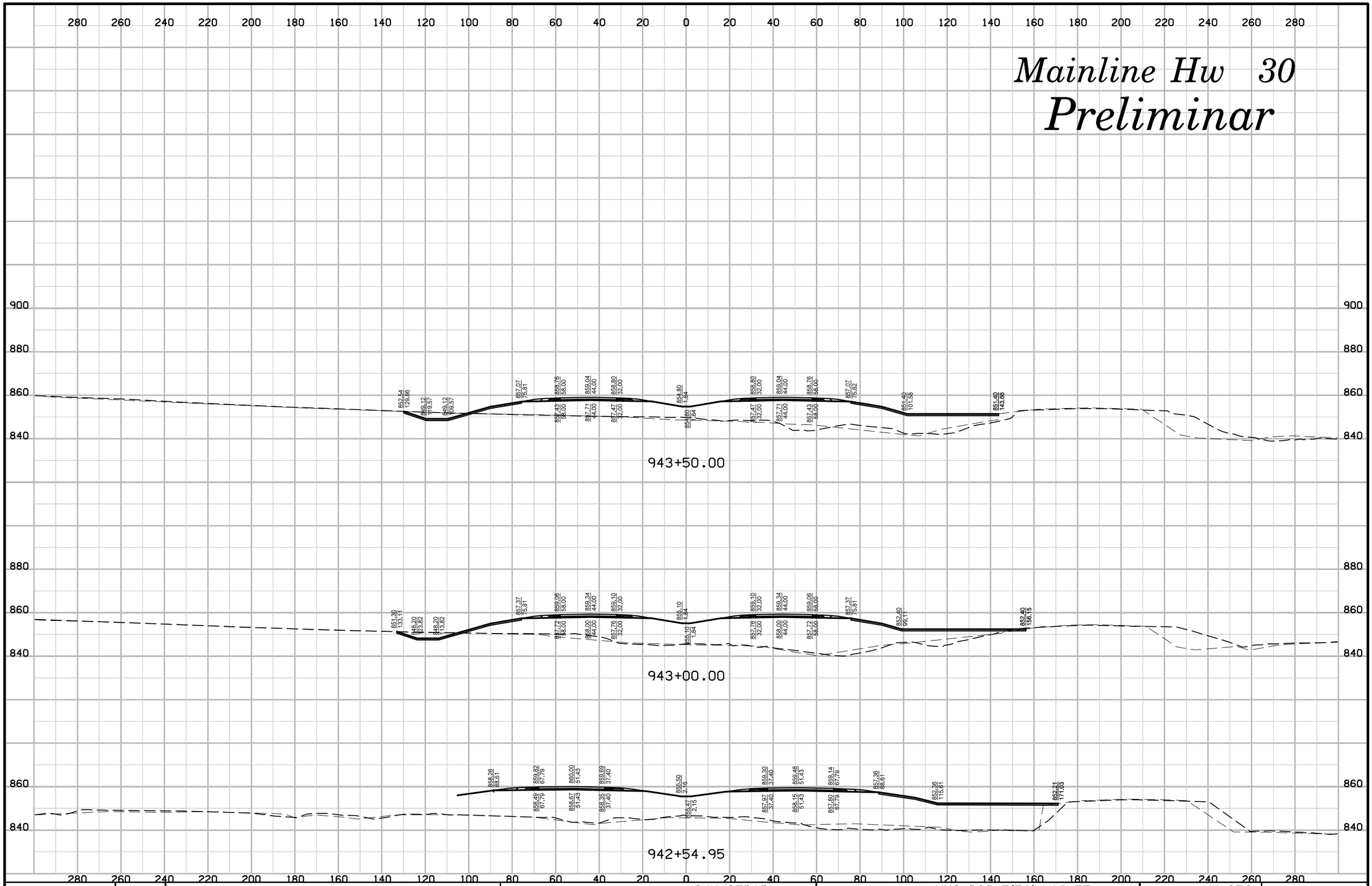


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.252

10:20:03 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

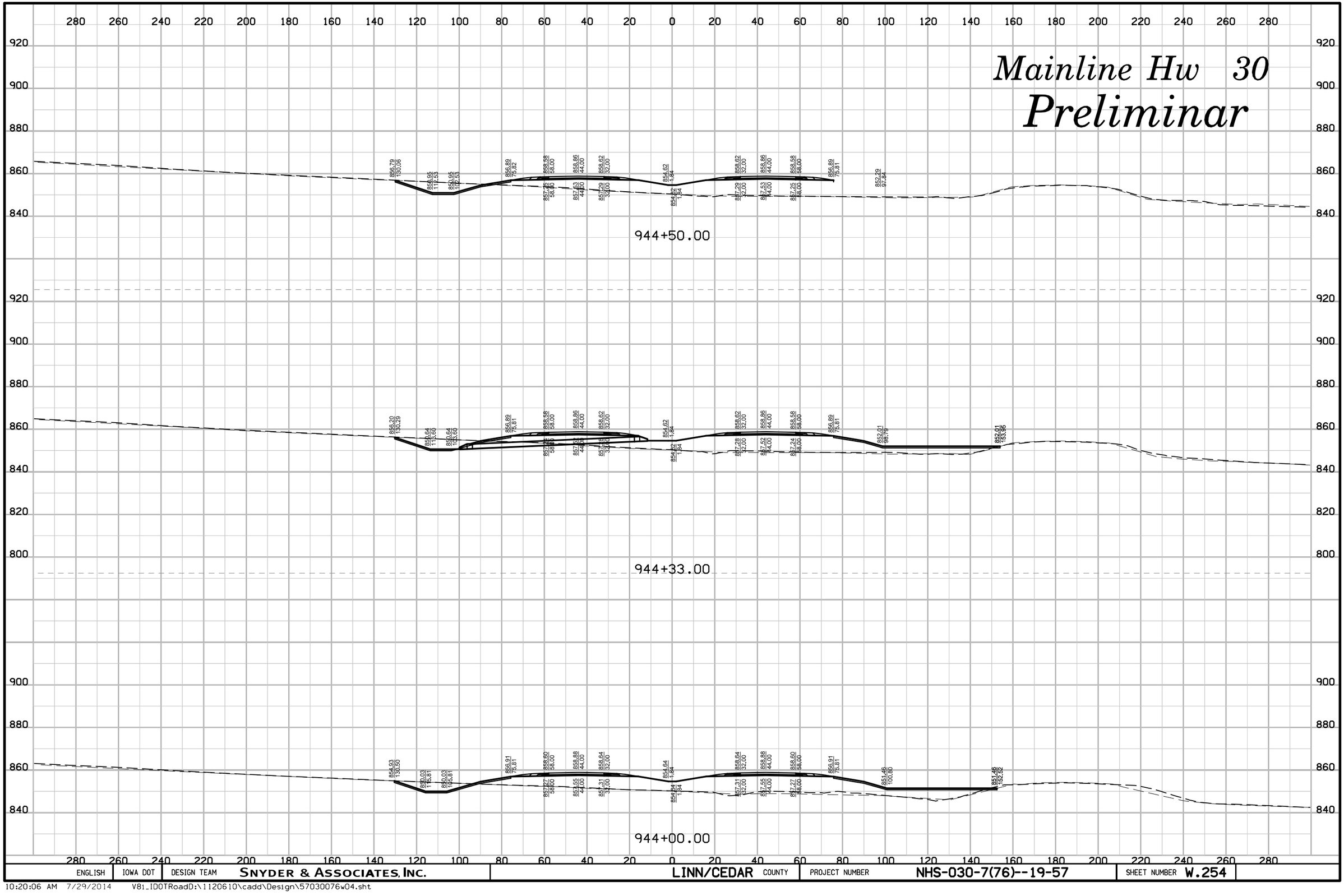


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.253

10:20:05 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.254

10:20:06 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

946+50.00

946+00.00

945+50.00

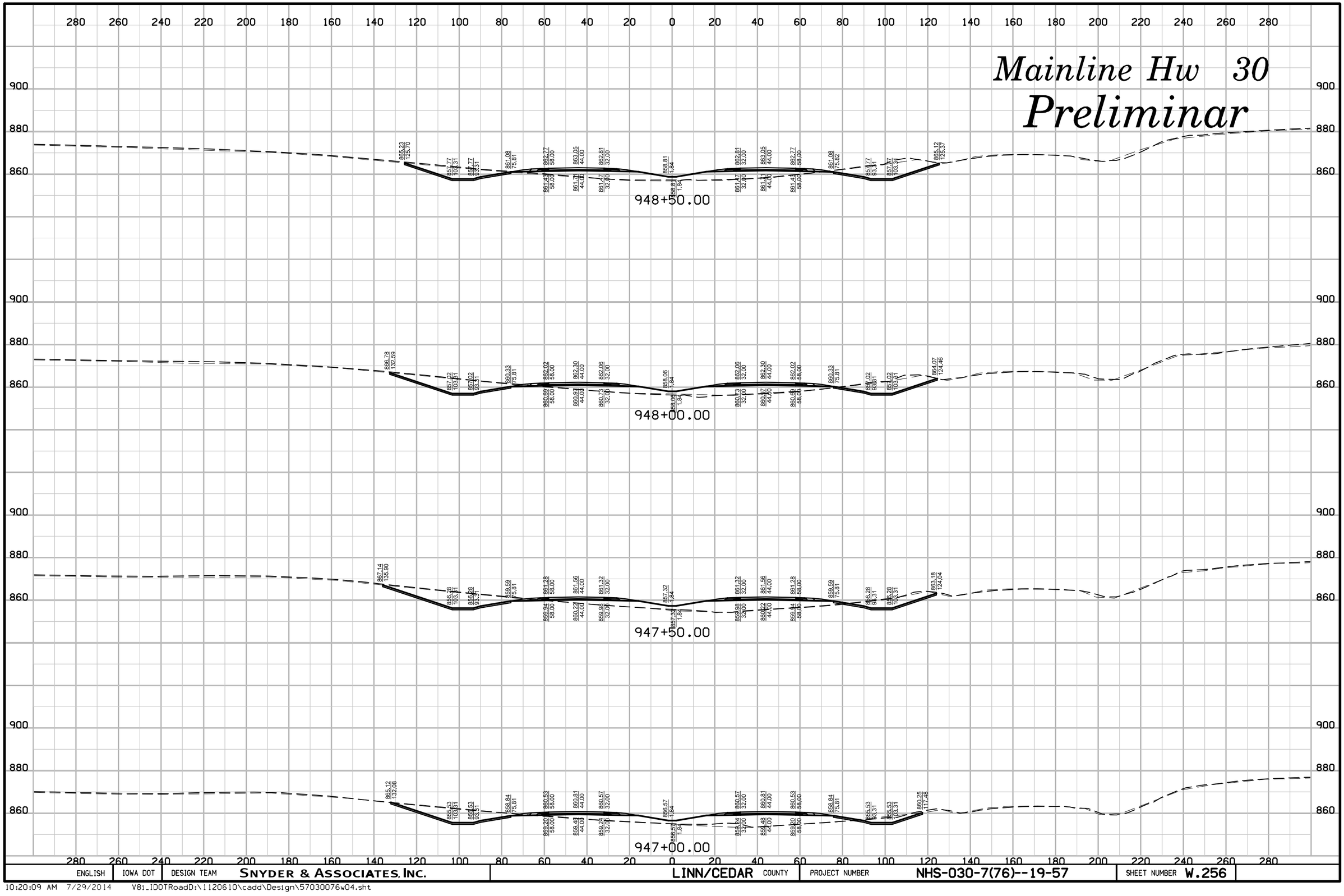
945+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.255

10:20:07 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

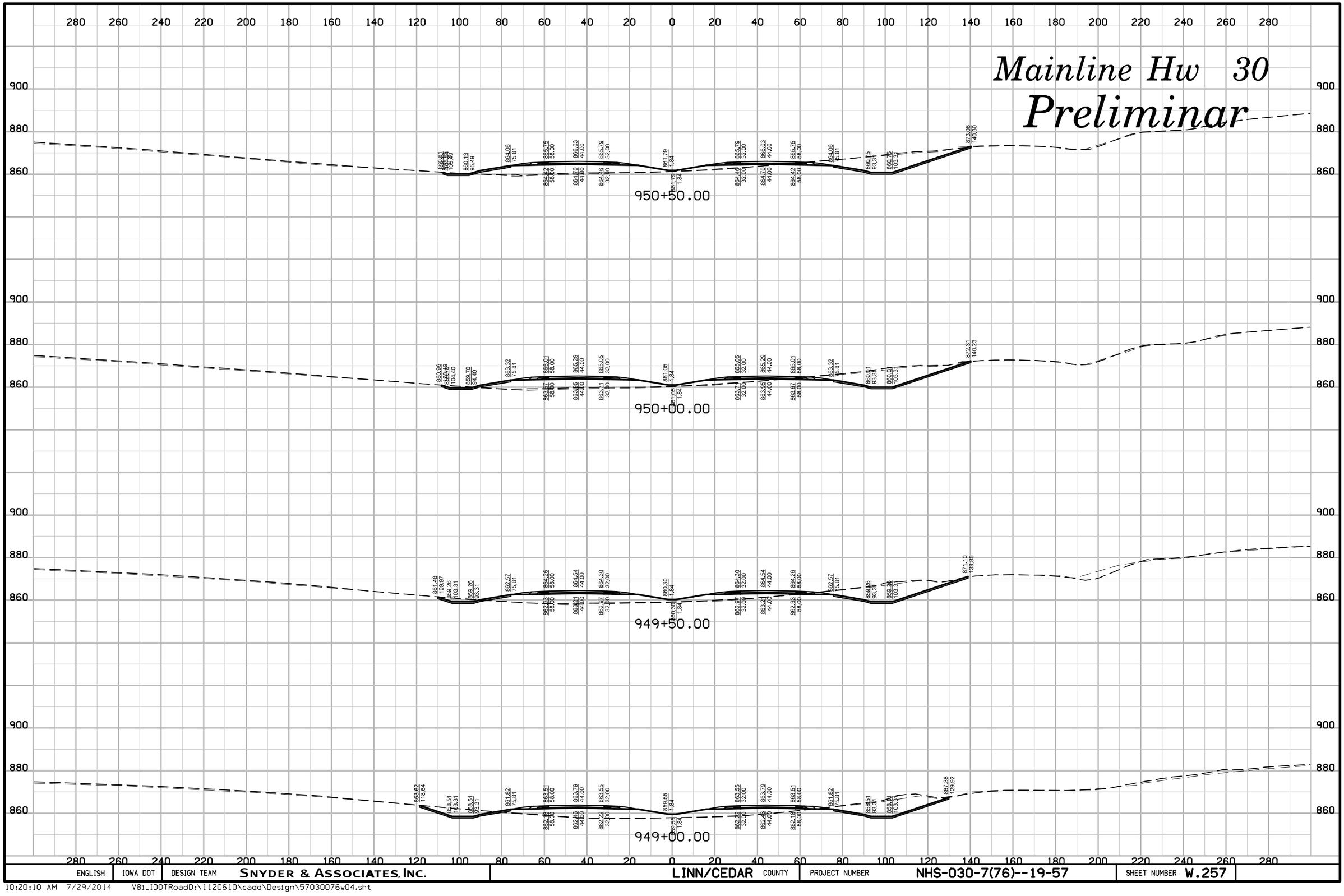


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.256

10:20:09 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

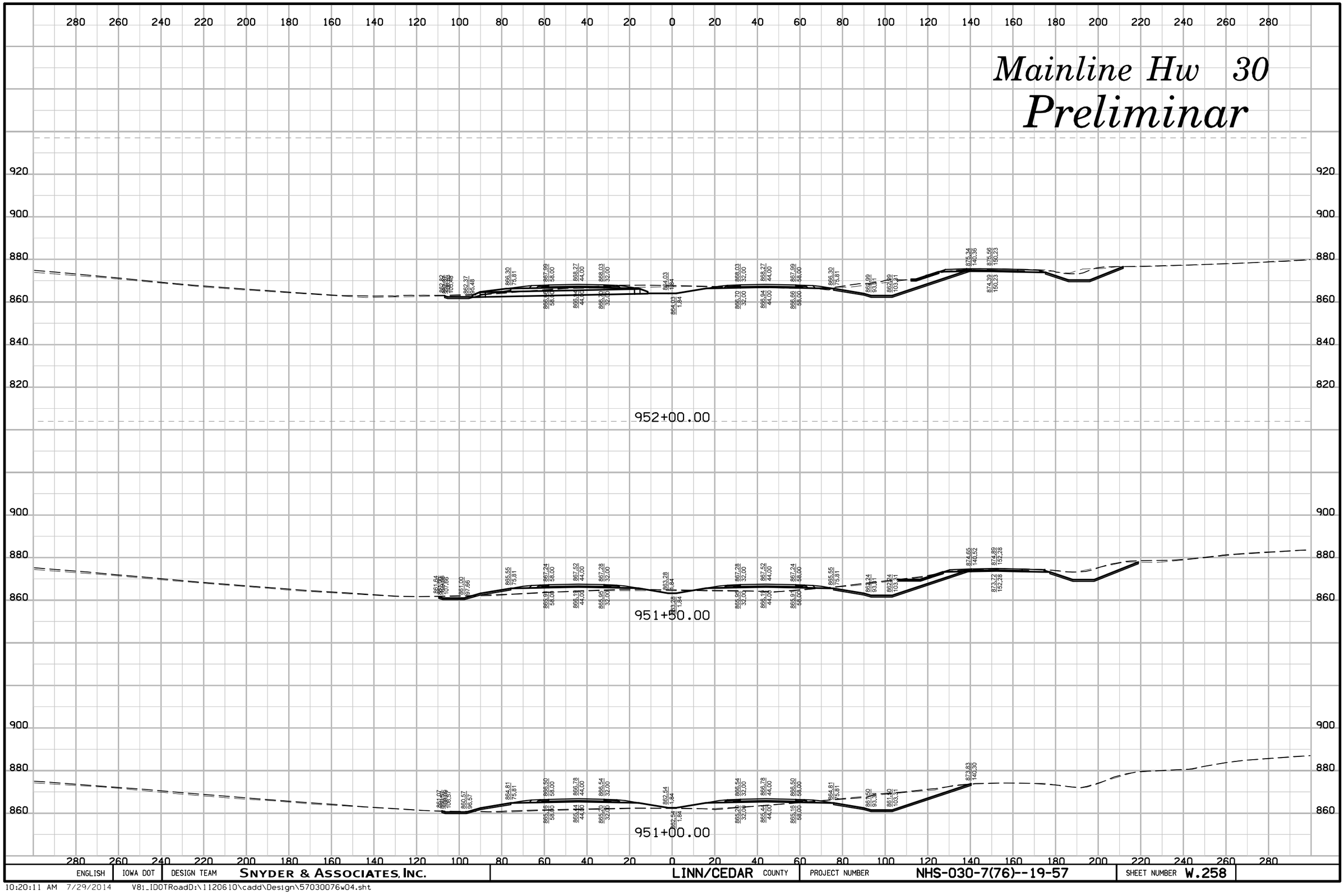


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.257

10:20:10 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.258

10:20:11 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

955+00.00

954+50.00

954+00.00

953+50.00

953+00.00

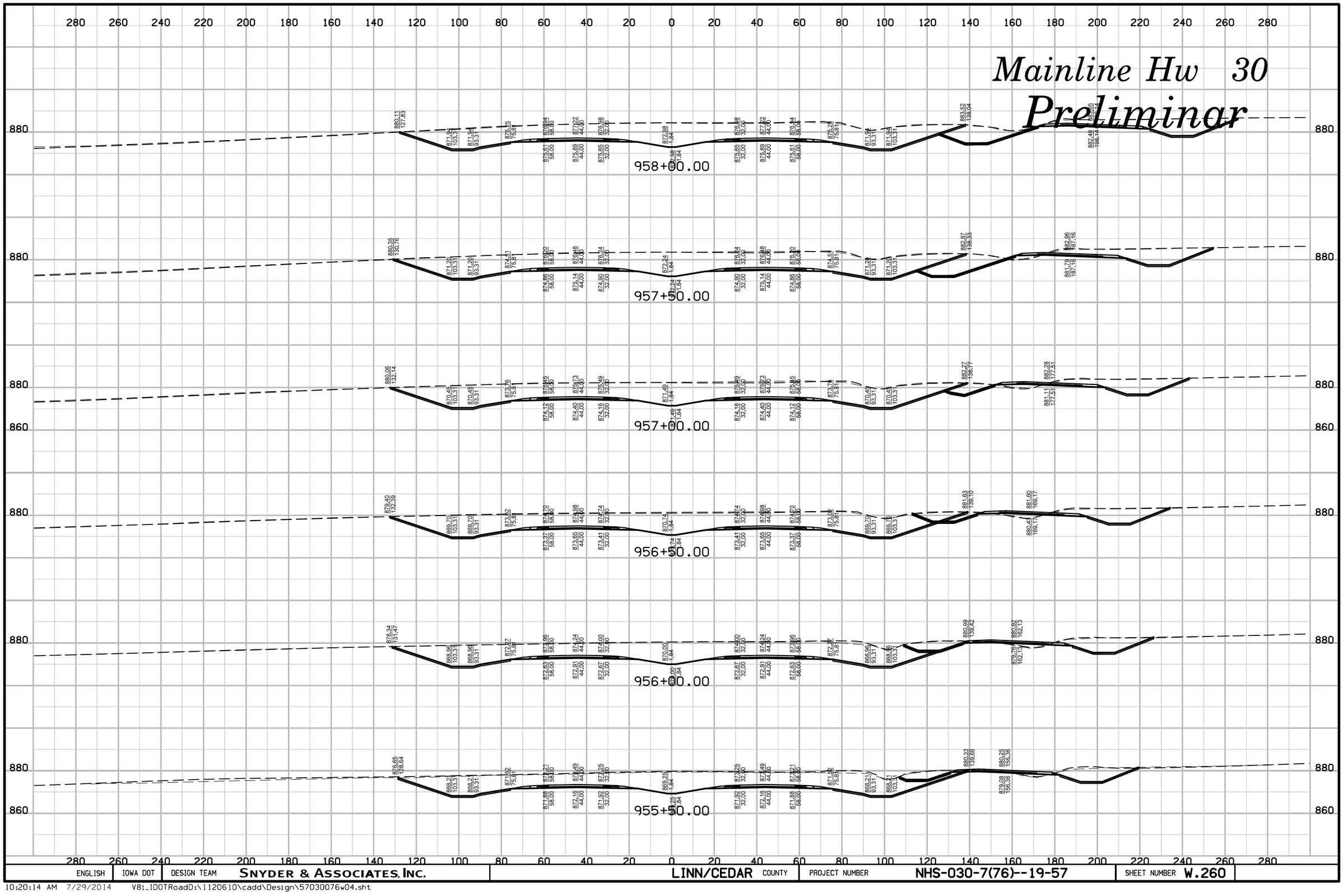
952+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.259

10:20:12 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

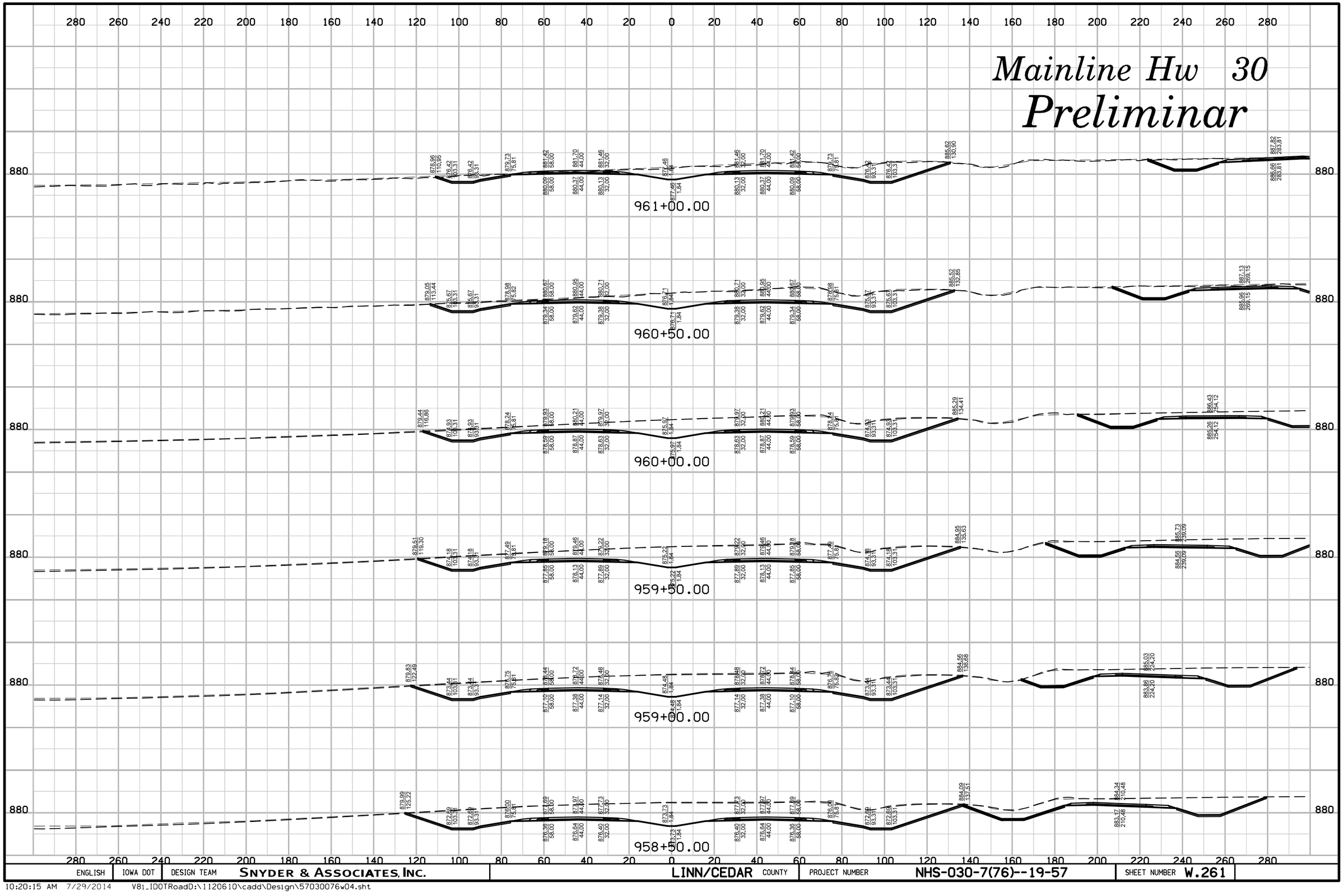


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.260

10:20:14 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

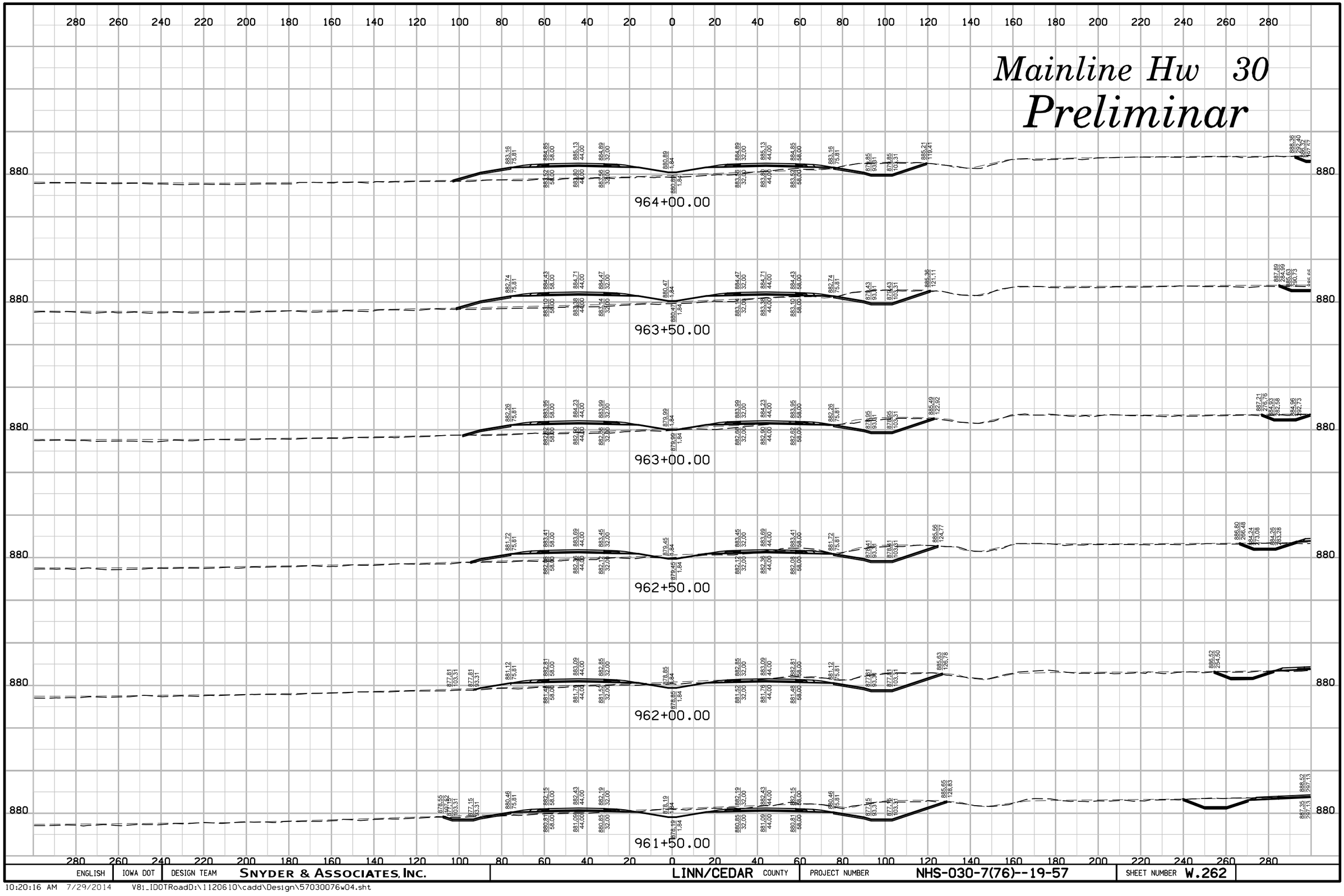


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.261

10:20:15 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

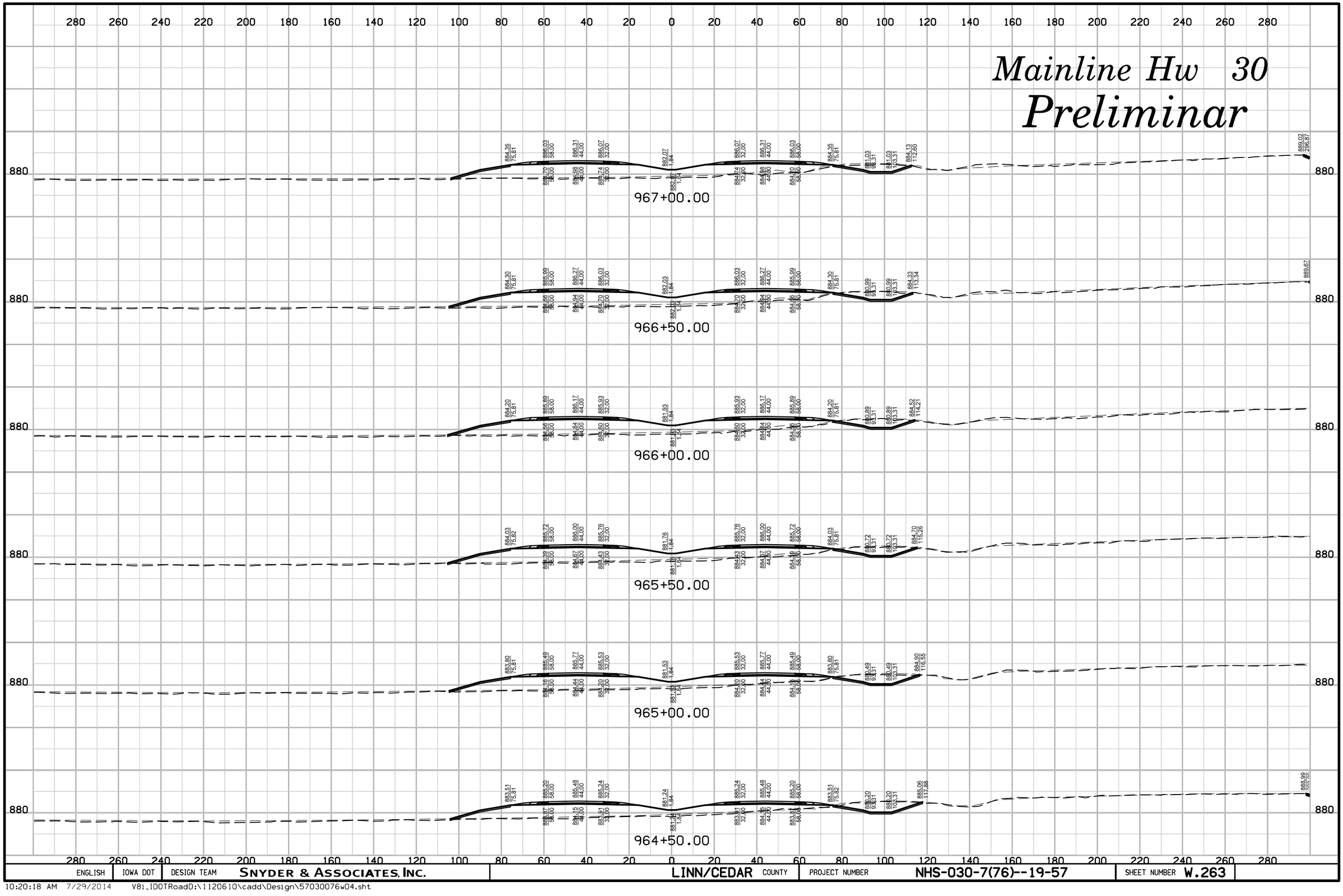
Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.262

Mainline Hw 30

Preliminar

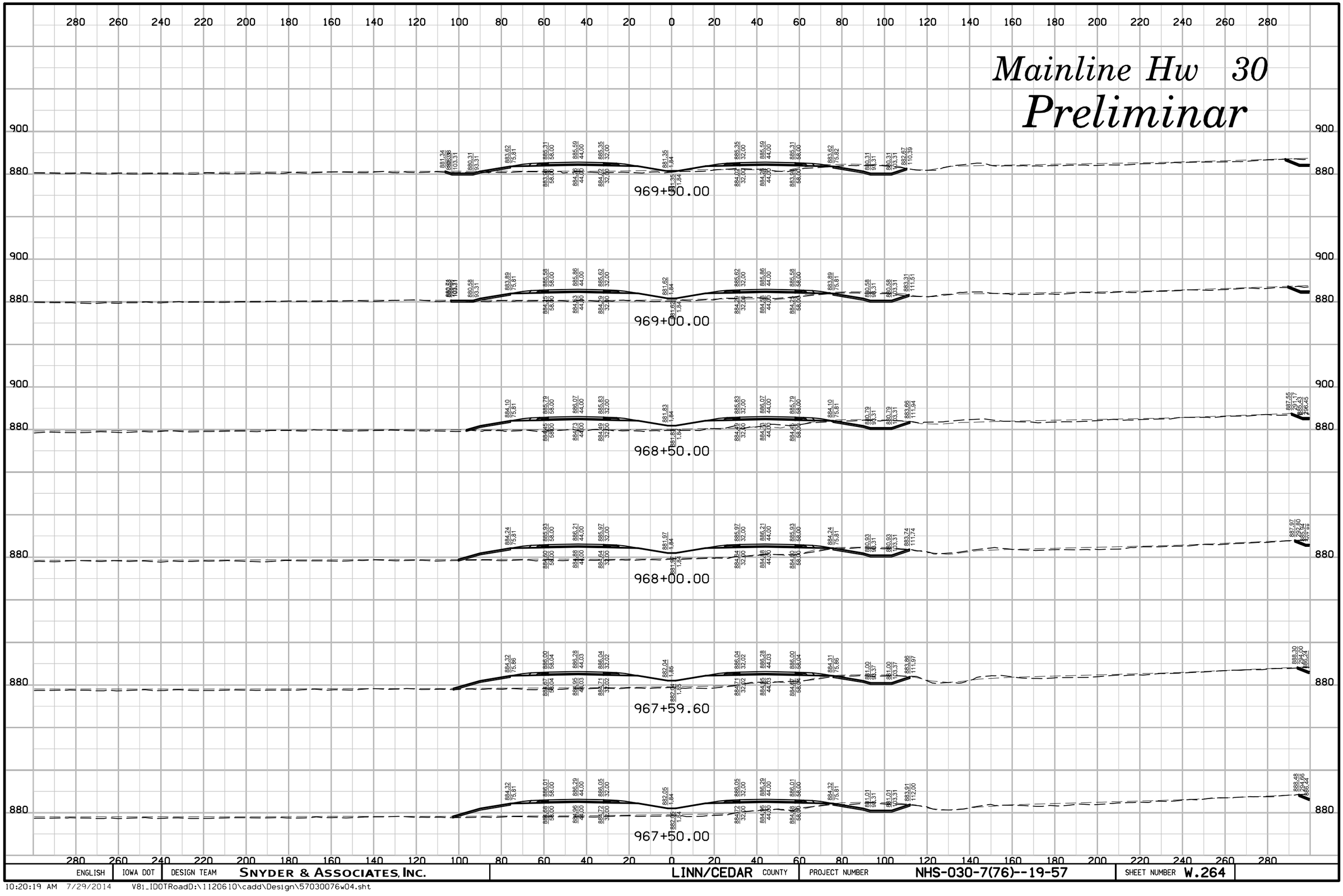


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.263

10:20:18 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.264

10:20:19 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

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

900
880

882.75 118.45 | 877.70 108.31 | 877.70 93.31 | 881.02 75.81 | 882.70 55.00 | 882.98 44.00 | 882.74 32.00 | 880.74 1.44 | 880.74 1.84 | 882.74 32.00 | 882.98 44.00 | 882.70 55.00 | 881.02 75.81 | 877.70 91.31 | 877.70 103.31 | 881.38 108.33

881.37 55.00 | 881.65 44.00 | 881.41 32.00 | 881.41 32.00 | 881.65 44.00 | 881.37 55.00

972+50.00

883.35 116.83 | 878.18 108.31 | 878.18 93.31 | 881.49 75.81 | 883.18 55.00 | 883.46 44.00 | 883.22 32.00 | 880.22 1.44 | 880.22 1.84 | 883.22 32.00 | 883.46 44.00 | 883.18 55.00 | 881.49 75.81 | 878.18 91.31 | 878.18 103.31 | 881.73 107.67

881.85 55.00 | 882.13 44.00 | 881.89 32.00 | 881.89 32.00 | 882.13 44.00 | 881.85 55.00

972+00.00

883.50 117.84 | 878.65 108.31 | 878.65 93.31 | 881.97 75.81 | 883.65 55.00 | 883.93 44.00 | 883.69 32.00 | 880.69 1.44 | 880.69 1.84 | 883.69 32.00 | 883.93 44.00 | 883.65 55.00 | 881.97 75.81 | 878.65 91.31 | 878.65 103.31 | 880.47 108.77

882.32 55.00 | 882.60 44.00 | 882.36 32.00 | 882.36 32.00 | 882.60 44.00 | 882.32 55.00

971+50.00

883.26 115.71 | 879.13 103.31 | 879.13 93.31 | 882.44 75.82 | 884.13 55.00 | 884.41 44.00 | 884.17 32.00 | 880.17 1.44 | 880.17 1.84 | 884.17 32.00 | 884.41 44.00 | 884.13 55.00 | 882.44 75.81 | 879.13 91.31 | 879.13 103.31 | 881.11 108.27

882.80 55.00 | 883.08 44.00 | 882.84 32.00 | 882.84 32.00 | 883.08 44.00 | 882.80 55.00

971+00.00

882.71 112.66 | 879.58 103.31 | 879.58 93.31 | 882.90 75.81 | 884.58 55.00 | 884.86 44.00 | 884.62 32.00 | 880.62 1.44 | 880.62 1.84 | 884.62 32.00 | 884.86 44.00 | 884.58 55.00 | 882.90 75.81 | 879.58 91.31 | 879.58 103.31 | 881.84 110.07

883.26 55.00 | 883.53 44.00 | 883.29 32.00 | 883.29 32.00 | 883.53 44.00 | 883.26 55.00

970+50.00

882.04 109.51 | 879.98 103.31 | 879.98 93.31 | 883.29 75.81 | 884.98 55.00 | 885.26 44.00 | 885.02 32.00 | 881.02 1.44 | 881.02 1.84 | 885.02 32.00 | 885.26 44.00 | 884.98 55.00 | 883.29 75.81 | 879.98 91.31 | 879.98 103.31 | 882.11 109.71

883.64 55.00 | 883.93 44.00 | 883.69 32.00 | 883.69 32.00 | 883.93 44.00 | 883.64 55.00

970+00.00

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.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.265

10:20:20 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

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

880

877.19 110.32 | 874.85 103.31 | 874.65 93.31 | 878.17 75.81 | 879.85 58.00 | 880.13 44.00 | 879.89 32.00 | 875.99 0.84 | 879.89 32.00 | 880.13 44.00 | 879.85 58.00 | 878.17 75.81 | 874.85 93.31 | 874.85 103.31 | 879.45 117.09

878.51 58.00 | 878.80 44.00 | 878.50 32.00 | 875.99 0.84 | 878.56 32.00 | 878.80 44.00 | 878.52 58.00

975+50.00

880

878.04 111.45 | 875.33 103.31 | 875.33 93.31 | 878.64 75.81 | 880.33 58.00 | 880.61 44.00 | 880.37 32.00 | 876.37 0.84 | 880.37 32.00 | 880.61 44.00 | 880.33 58.00 | 878.64 75.62 | 875.33 93.31 | 875.33 103.31 | 880.10 117.63

879.00 58.00 | 879.28 44.00 | 879.04 32.00 | 876.37 0.84 | 879.04 32.00 | 879.28 44.00 | 879.00 58.00

975+00.00

880

878.69 111.97 | 875.80 103.31 | 875.80 93.31 | 879.12 75.81 | 880.80 58.00 | 881.08 44.00 | 880.84 32.00 | 876.84 0.84 | 880.84 32.00 | 881.08 44.00 | 880.80 58.00 | 879.12 75.81 | 875.80 93.31 | 875.80 103.31 | 881.05 119.06

879.47 58.00 | 879.75 44.00 | 879.51 32.00 | 876.84 0.84 | 879.54 32.00 | 879.75 44.00 | 879.47 58.00

974+50.00

880

878.61 113.29 | 876.28 103.31 | 876.28 93.31 | 879.59 75.81 | 881.28 58.00 | 881.56 44.00 | 881.32 32.00 | 877.32 0.84 | 881.32 32.00 | 881.56 44.00 | 881.28 58.00 | 879.59 75.81 | 876.28 93.31 | 876.28 103.31 | 881.91 120.21

879.95 58.00 | 880.23 44.00 | 879.99 32.00 | 877.32 0.84 | 879.99 32.00 | 880.23 44.00 | 879.95 58.00

974+00.00

880

880.89 115.72 | 876.75 103.31 | 876.75 93.31 | 880.07 75.81 | 881.75 58.00 | 882.03 44.00 | 881.79 32.00 | 877.79 0.84 | 881.79 32.00 | 882.03 44.00 | 881.75 58.00 | 880.07 75.81 | 876.75 93.31 | 876.75 103.31 | 882.19 119.62

880.42 58.00 | 880.70 44.00 | 880.46 32.00 | 877.79 0.84 | 880.46 32.00 | 880.70 44.00 | 880.42 58.00

973+50.00

880

881.88 117.27 | 877.23 103.31 | 877.23 93.31 | 880.54 75.81 | 882.23 58.00 | 882.51 44.00 | 882.27 32.00 | 878.27 0.84 | 882.27 32.00 | 882.51 44.00 | 882.23 58.00 | 880.54 75.81 | 877.23 93.31 | 877.23 103.31 | 882.20 118.22

880.90 58.00 | 881.18 44.00 | 880.94 32.00 | 878.27 0.84 | 880.94 32.00 | 881.18 44.00 | 880.90 58.00

973+00.00

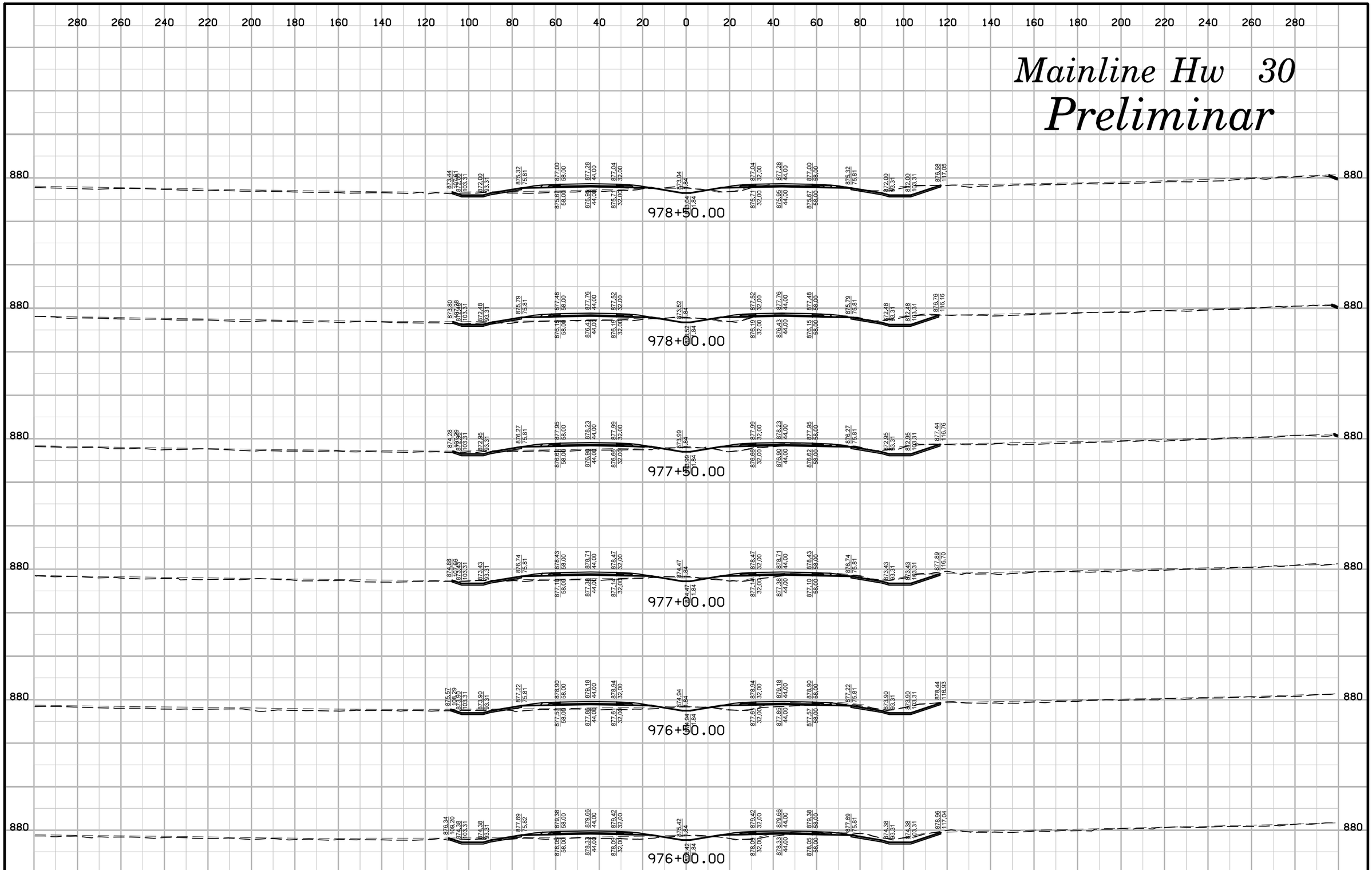
280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.266

10:20:22 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

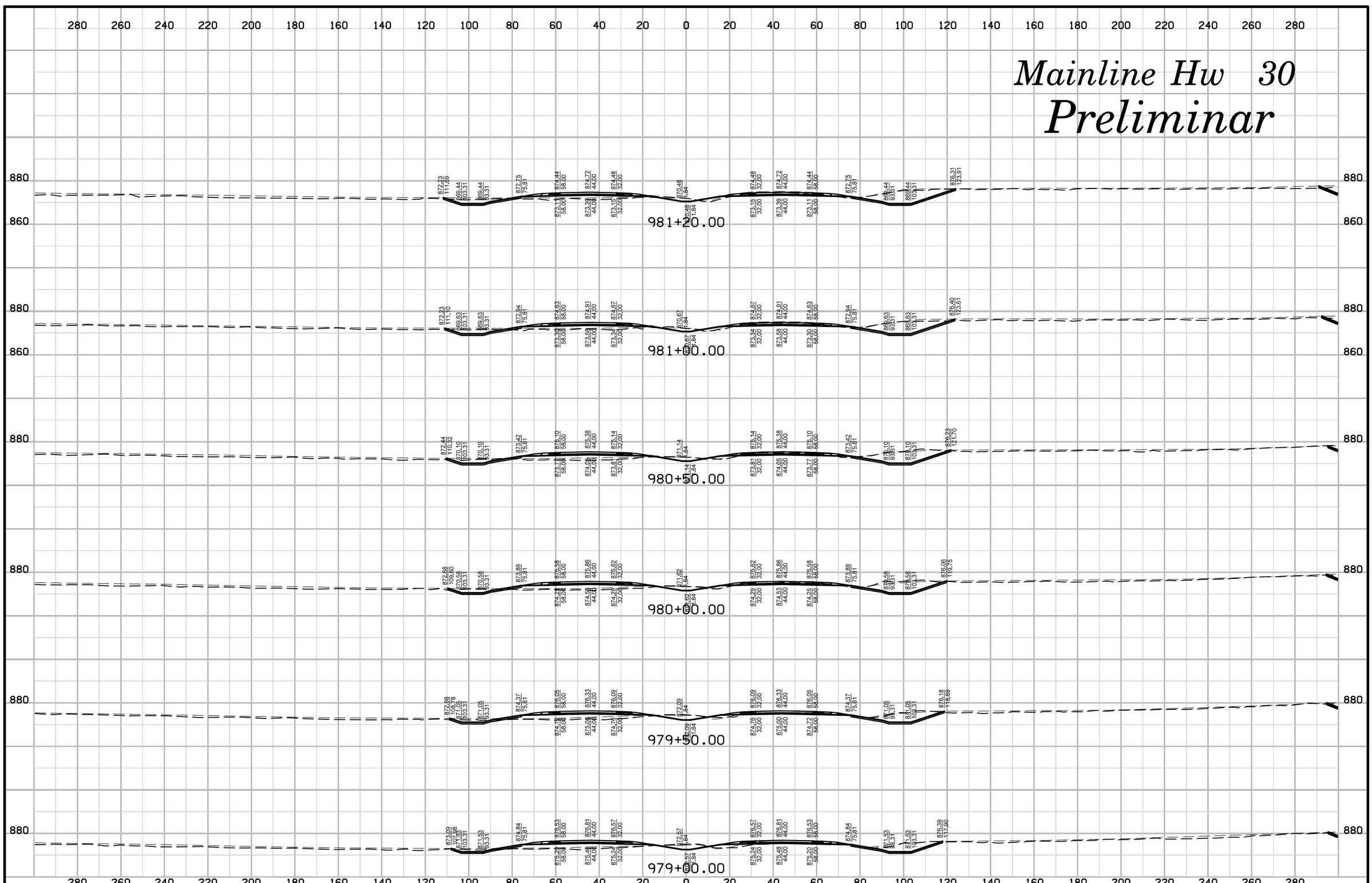


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.267

10:20:23 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

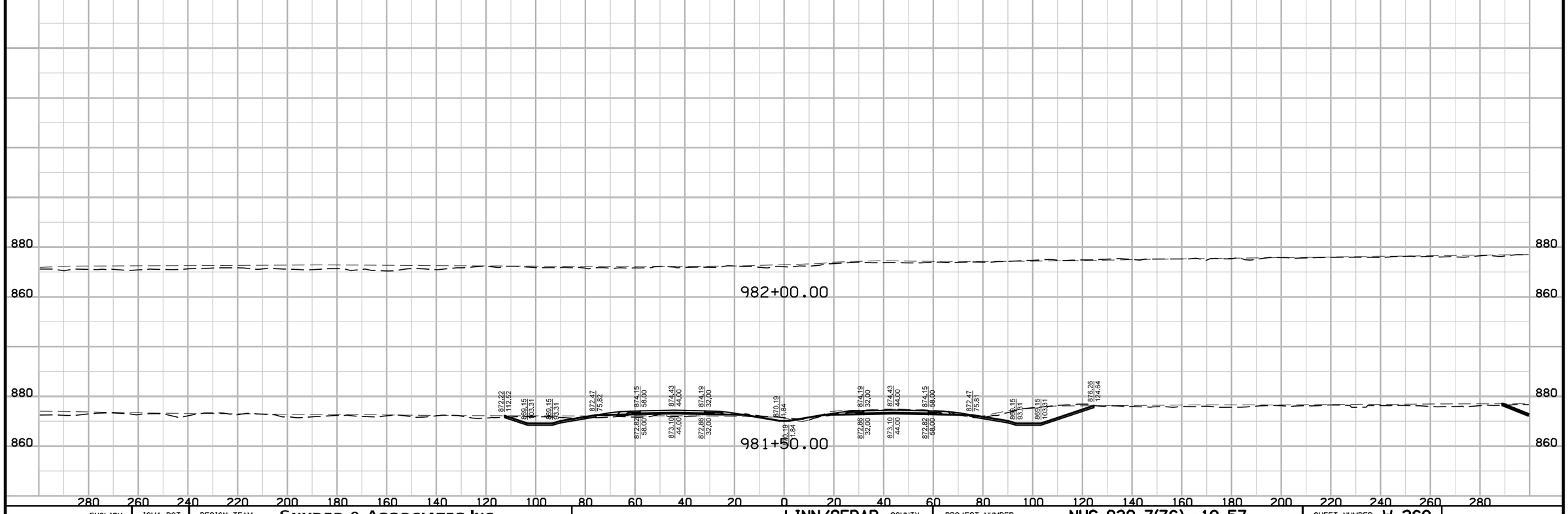


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.268

10:20:24 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Mainline Hw 30

Preliminar

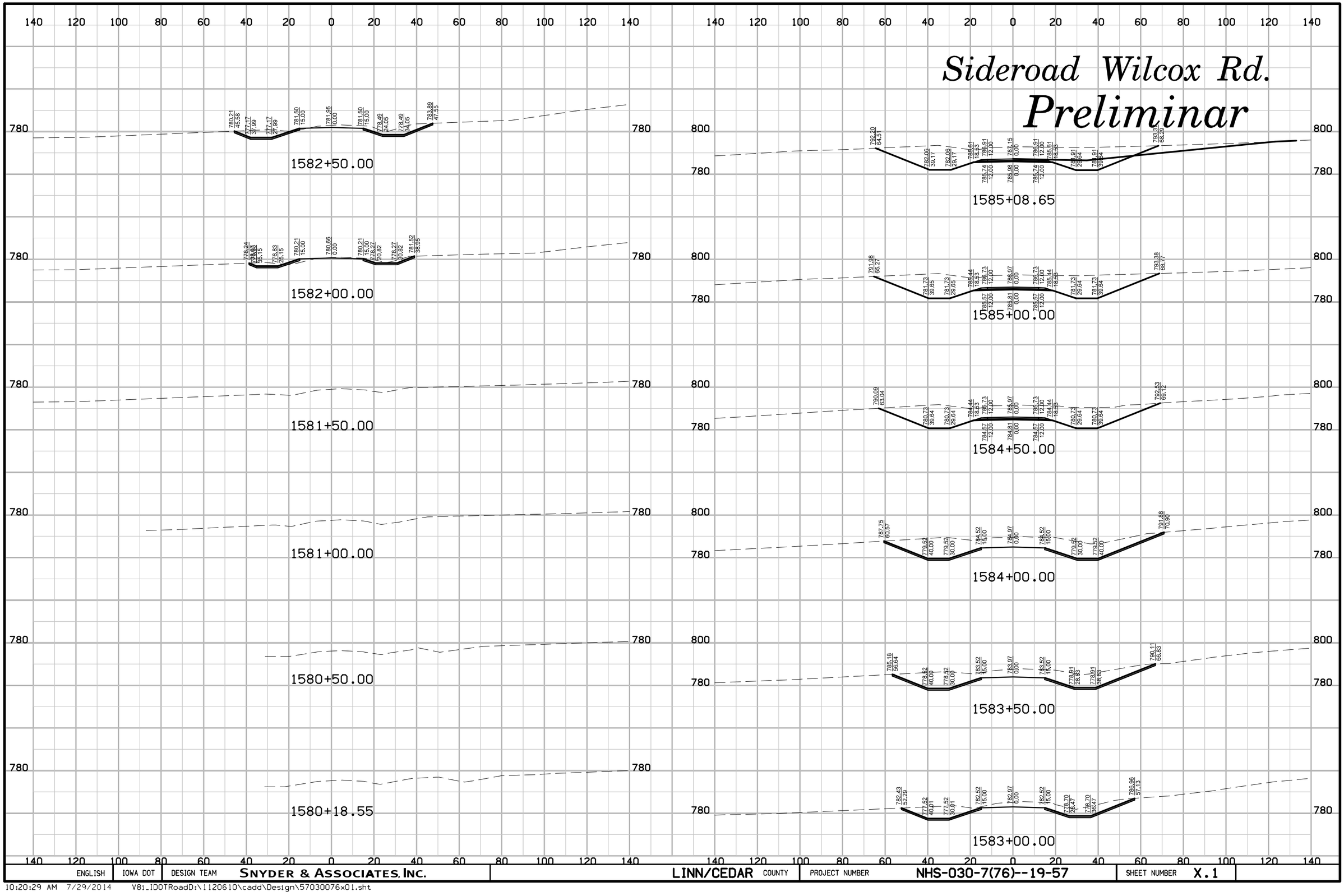


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER W.269

10:20:26 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076w04.sht

Sideroad Wilcox Rd.

Preliminar

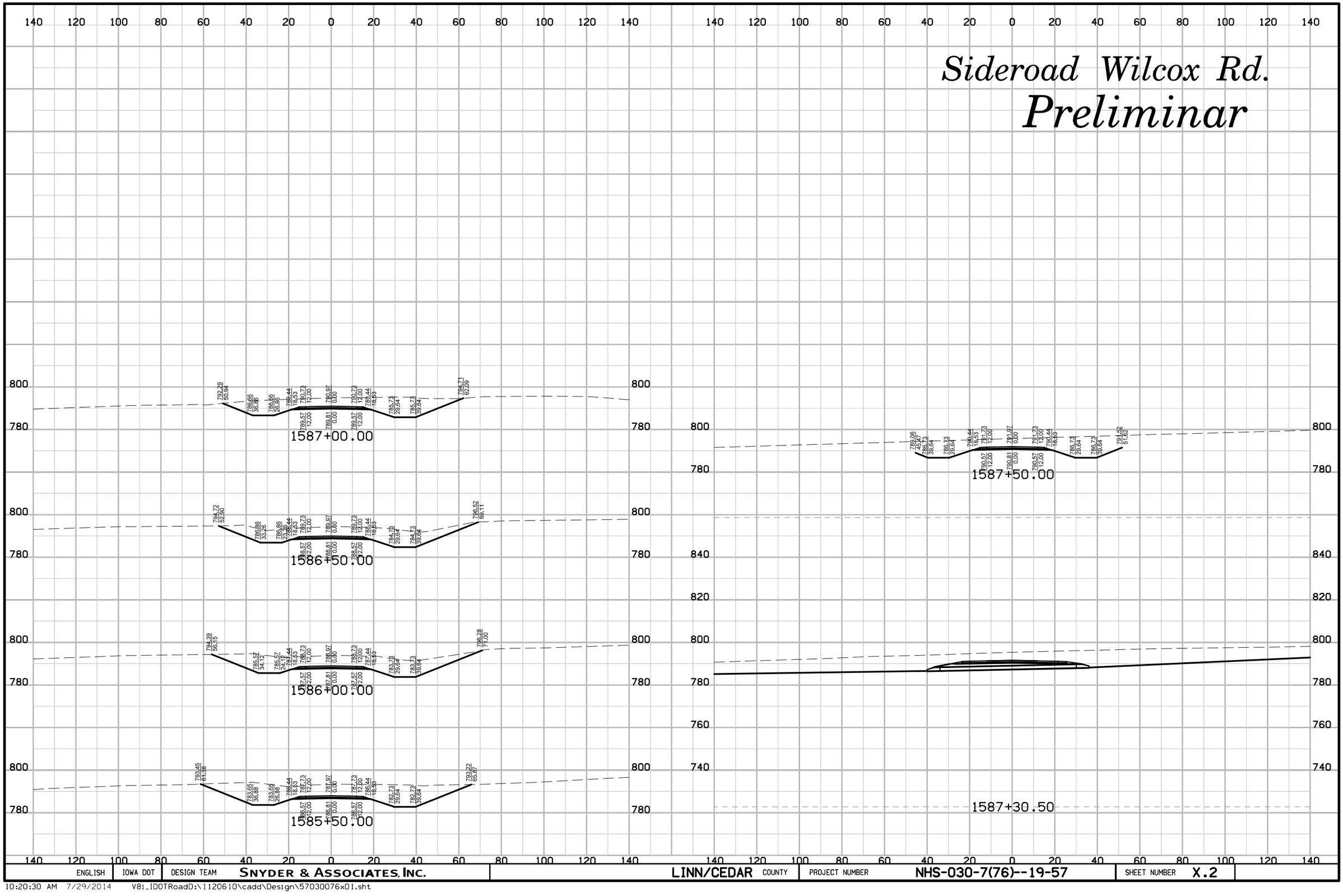


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.1

10:20:29 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x01.sht

Sideroad Wilcox Rd.

Preliminar

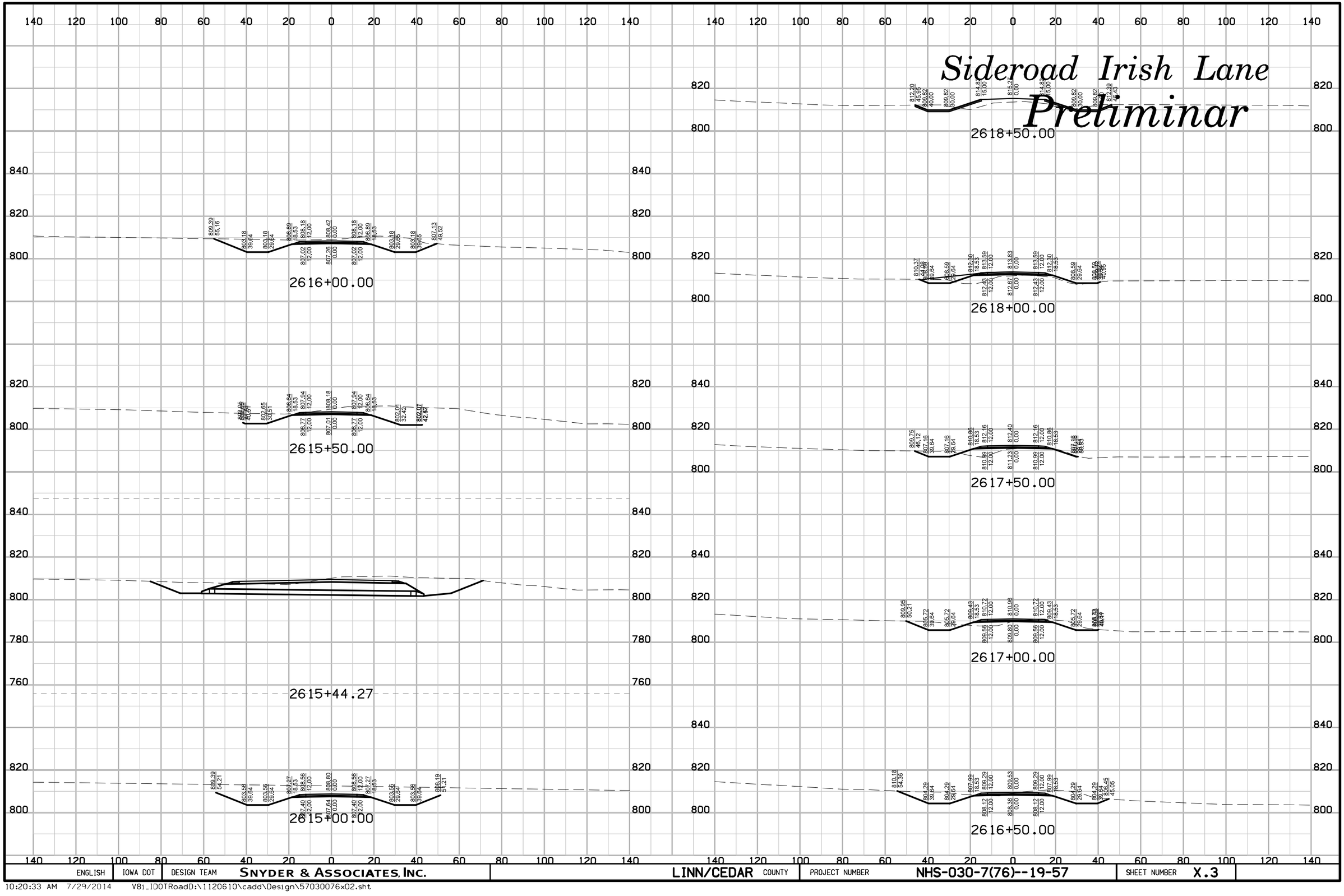


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.2

10:20:30 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x01.sht

Sideroad Irish Lane

Preliminar

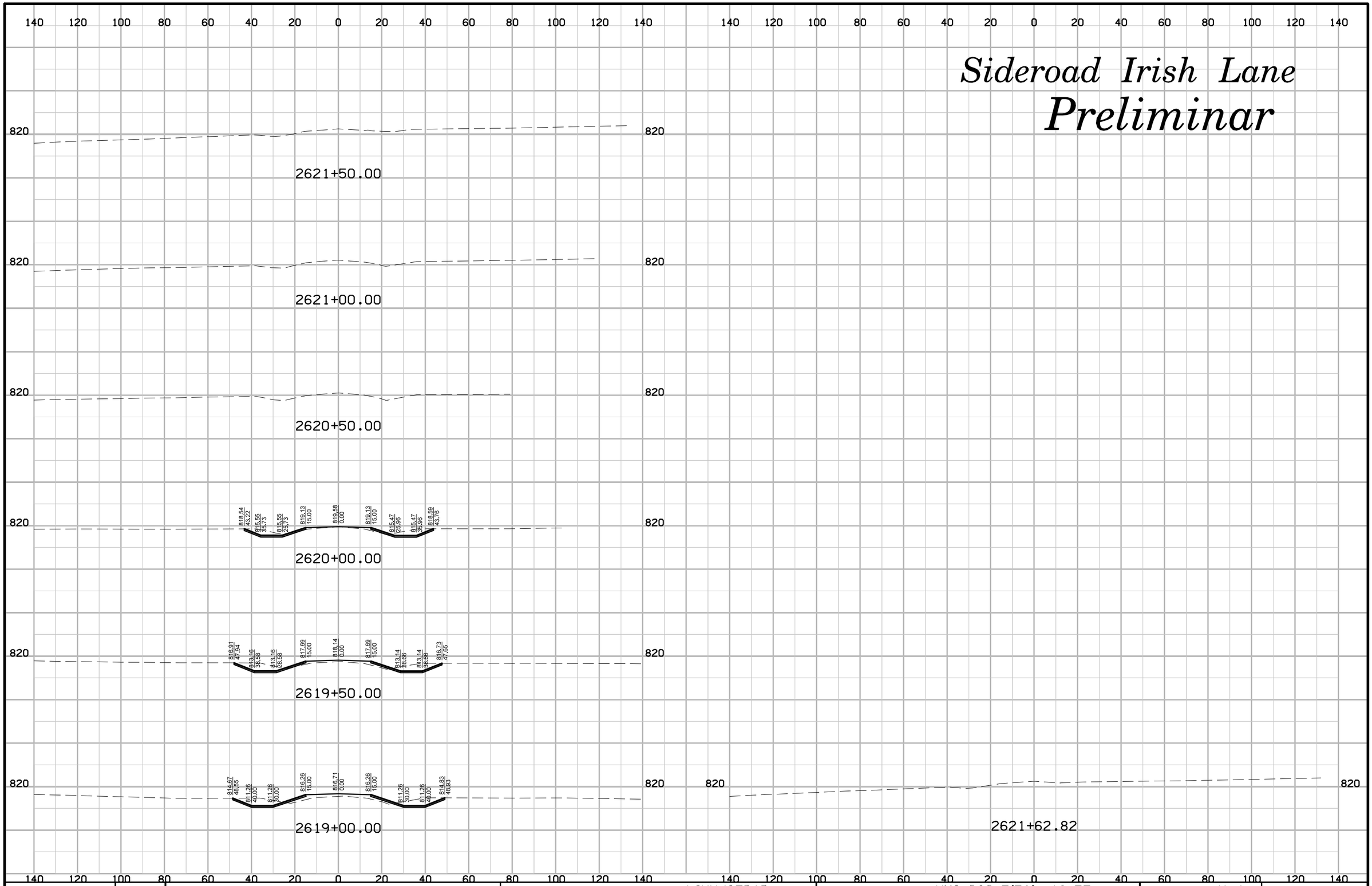


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.3

10:20:33 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x02.sht

Sideroad Irish Lane

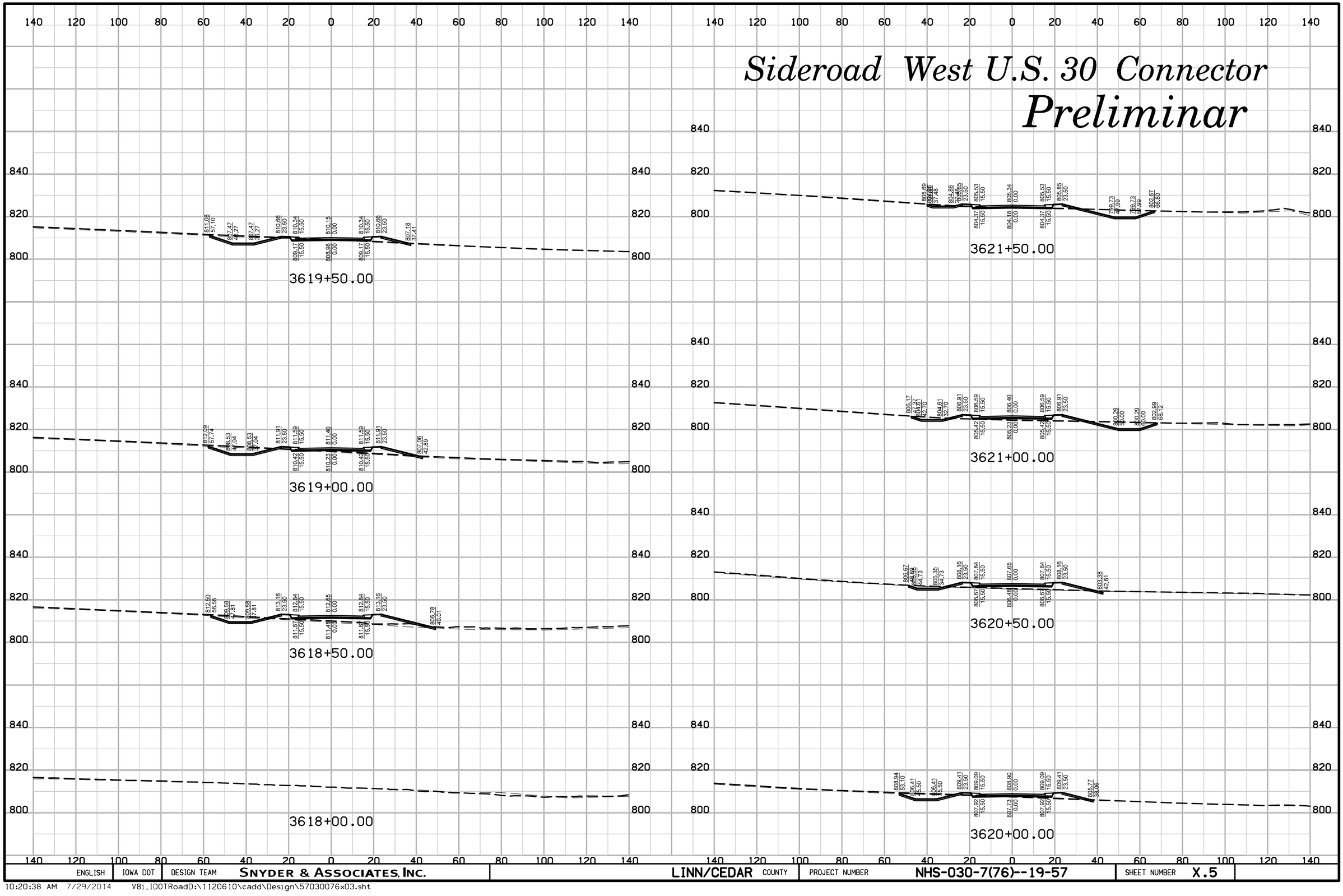
Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.4

Sideroad West U.S. 30 Connector

Preliminar

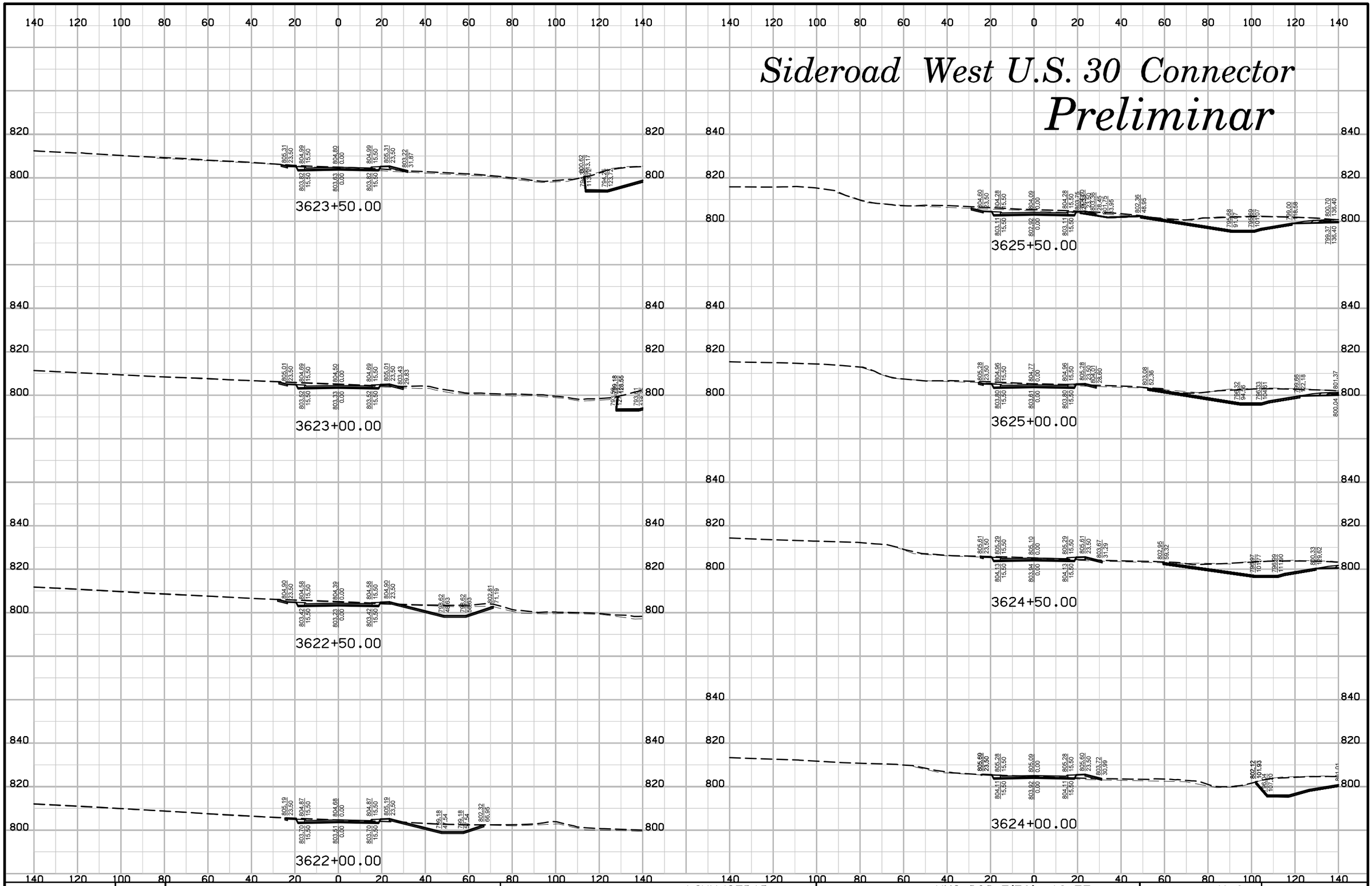


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.5

10:20:38 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x03.sht

Sideroad West U.S. 30 Connector

Preliminar

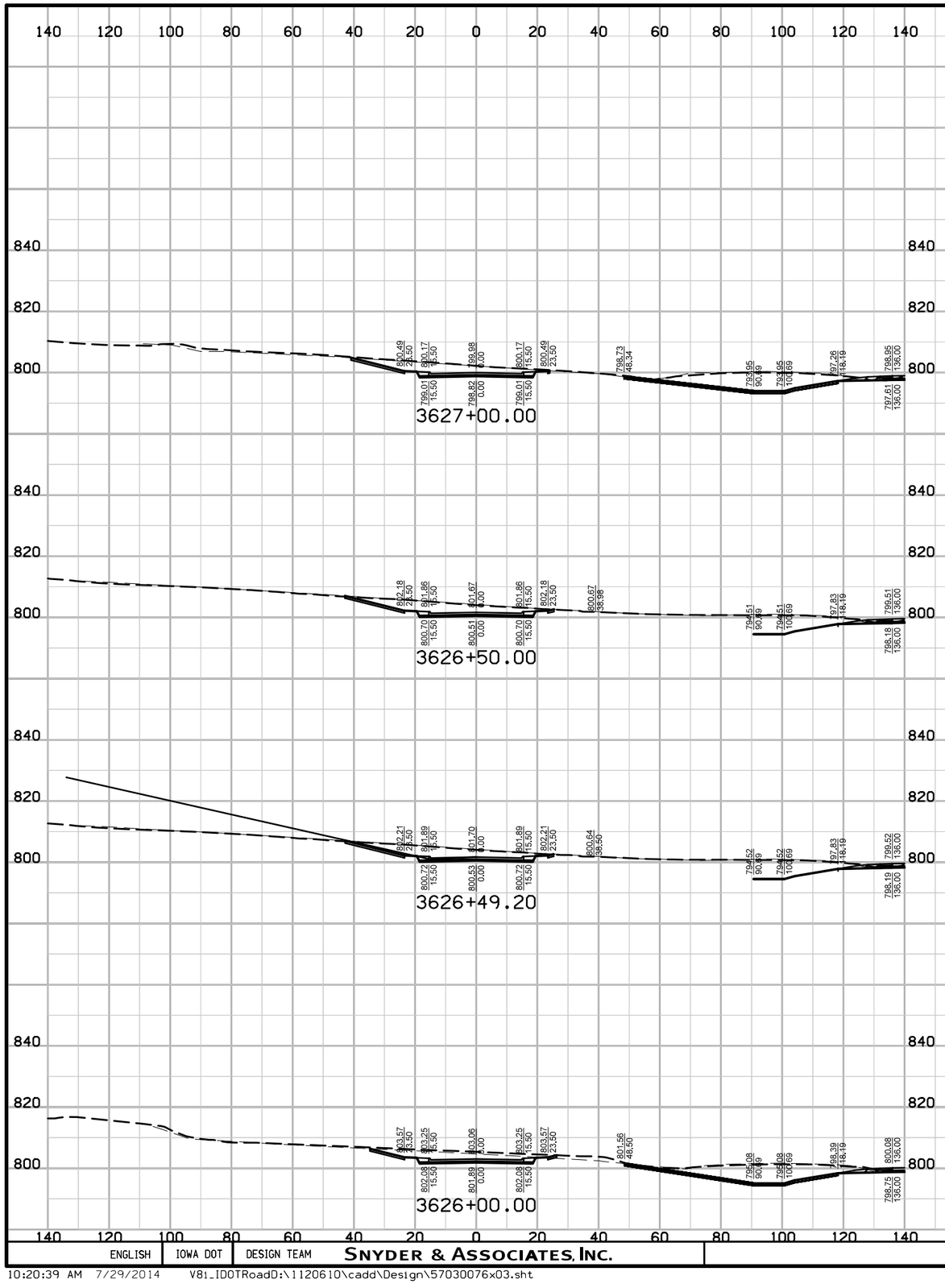


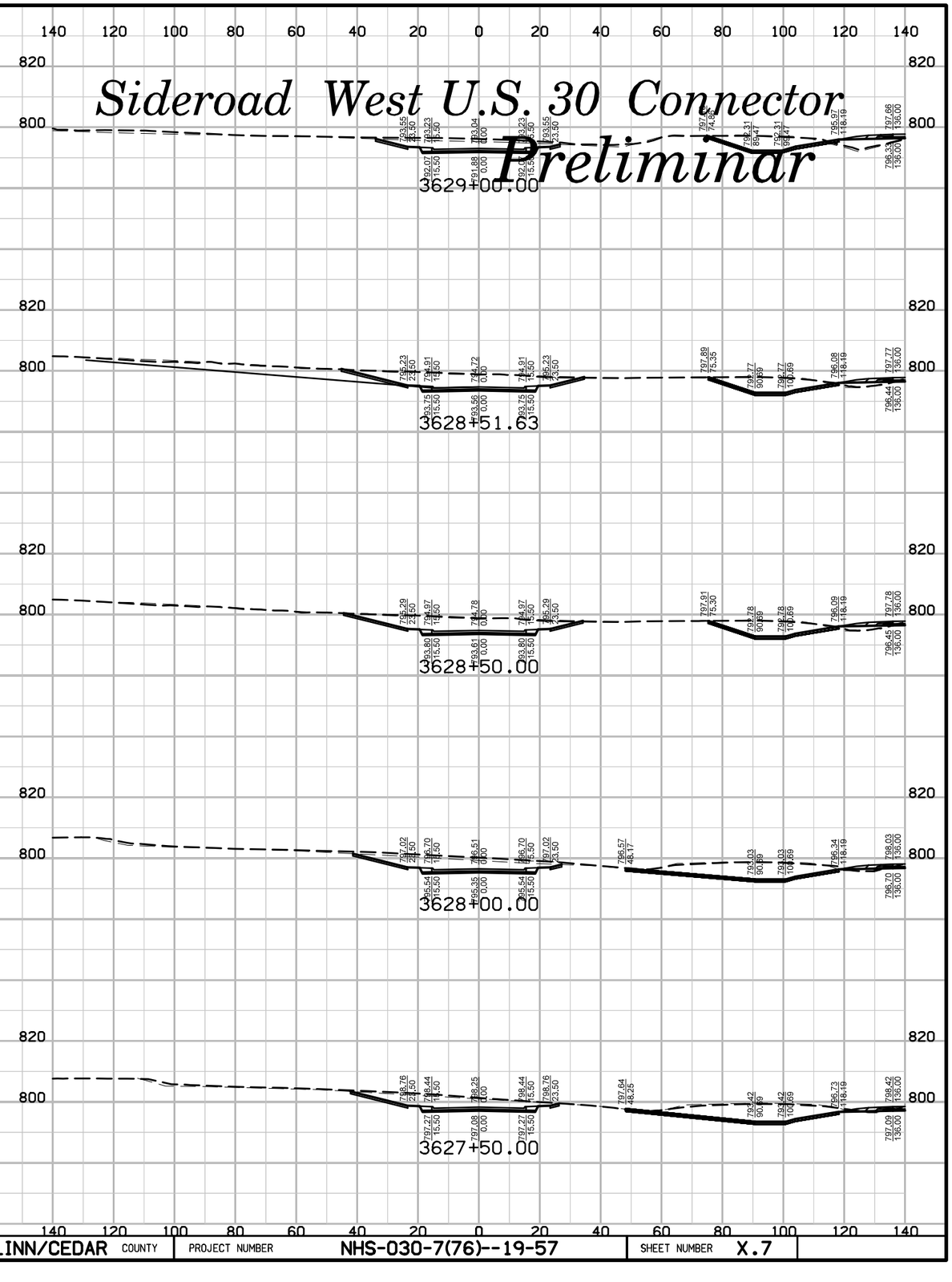
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.6

10:20:39 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x03.sht

Sideroad West U.S. 30 Connector

Preliminar



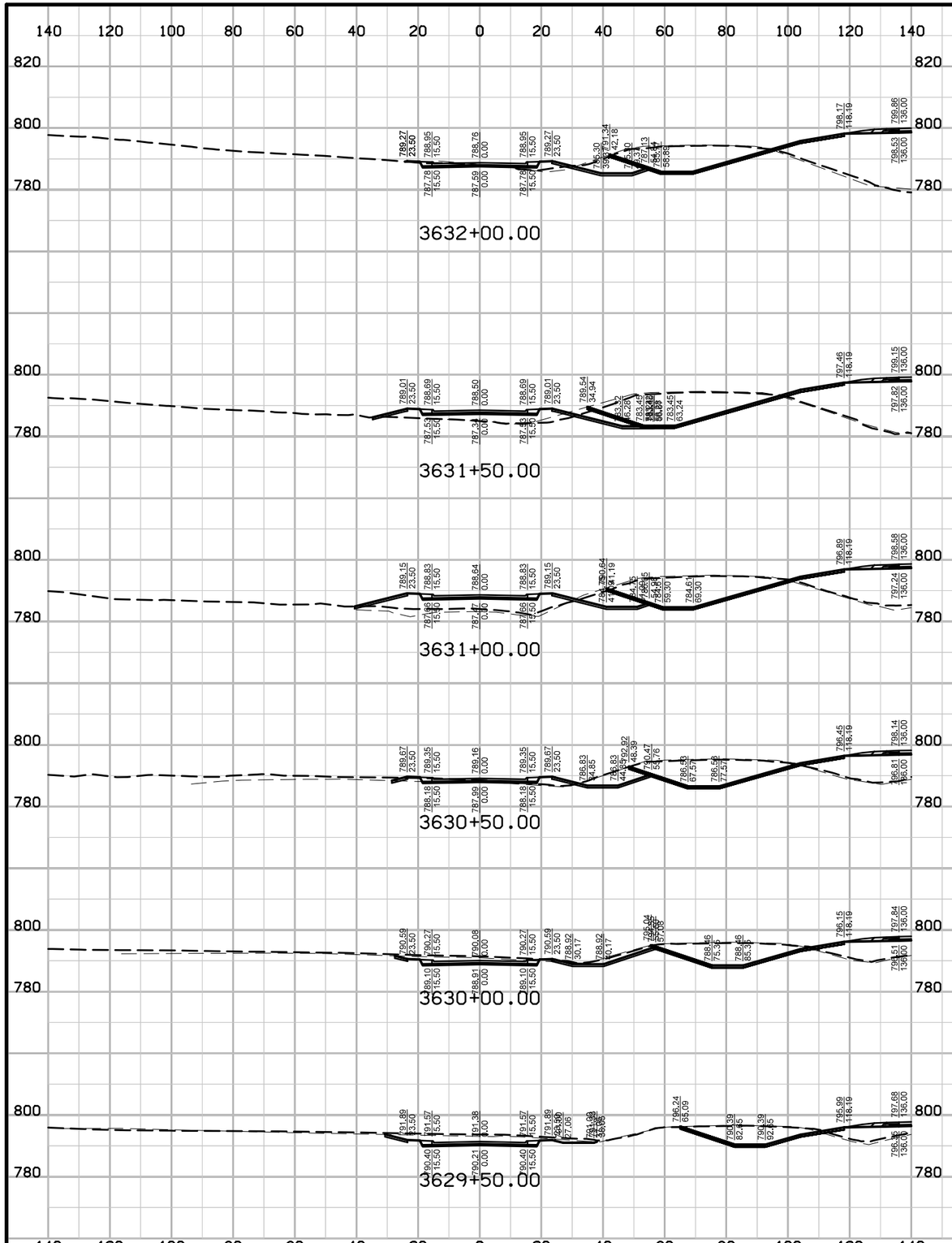


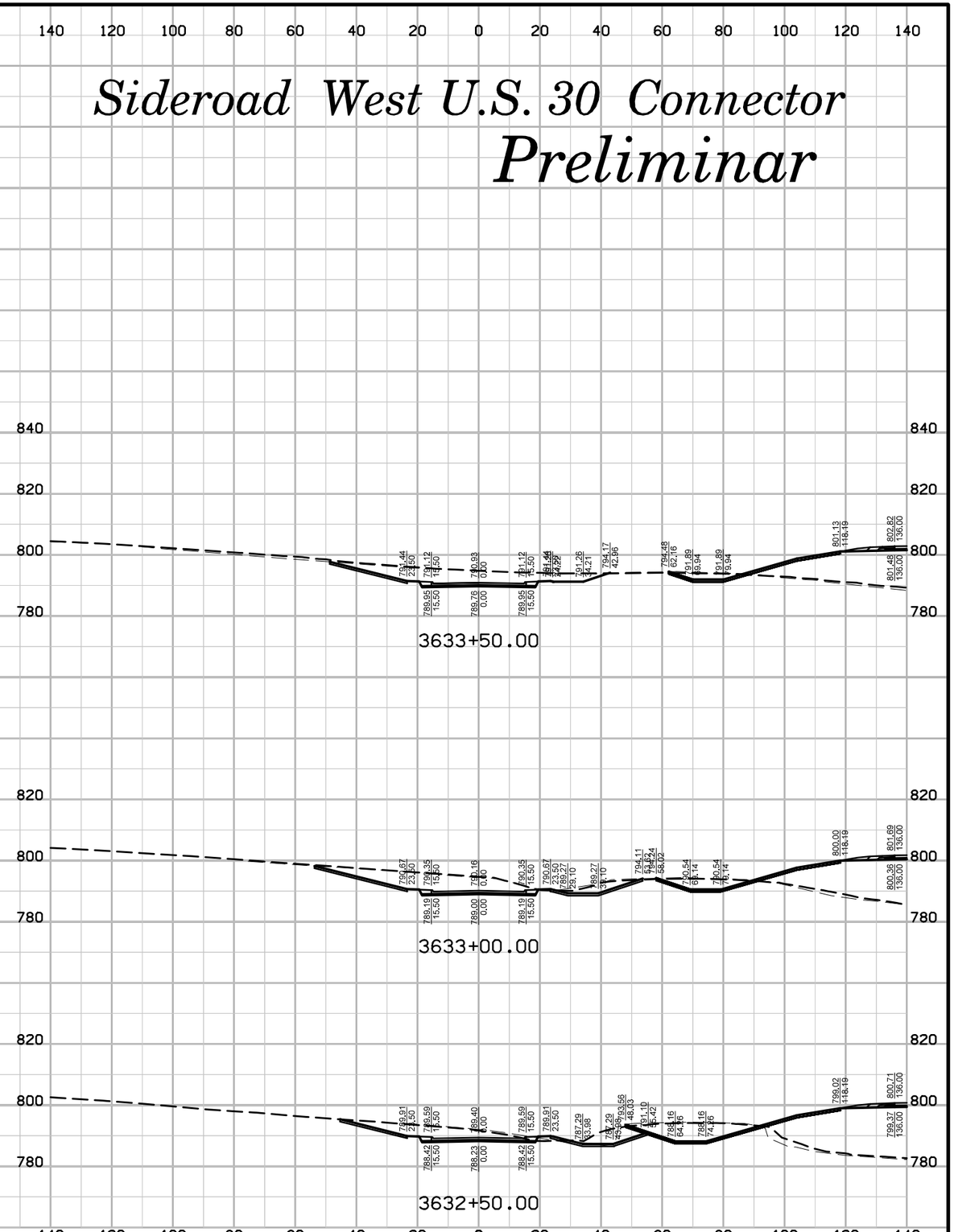
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.7

10:20:39 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x03.sht

Sideroad West U.S. 30 Connector

Preliminar

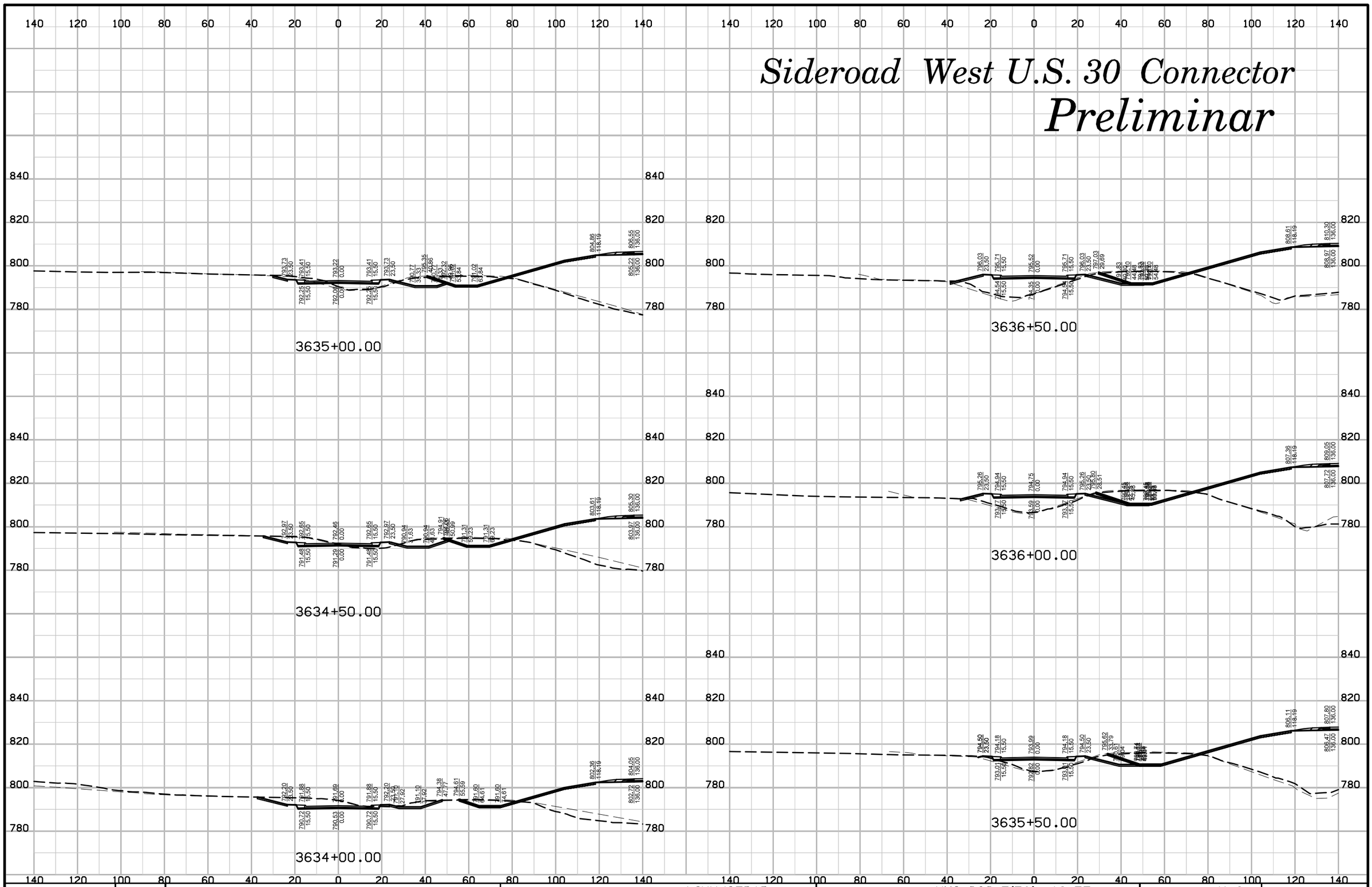




ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.8

Sideroad West U.S. 30 Connector

Preliminar

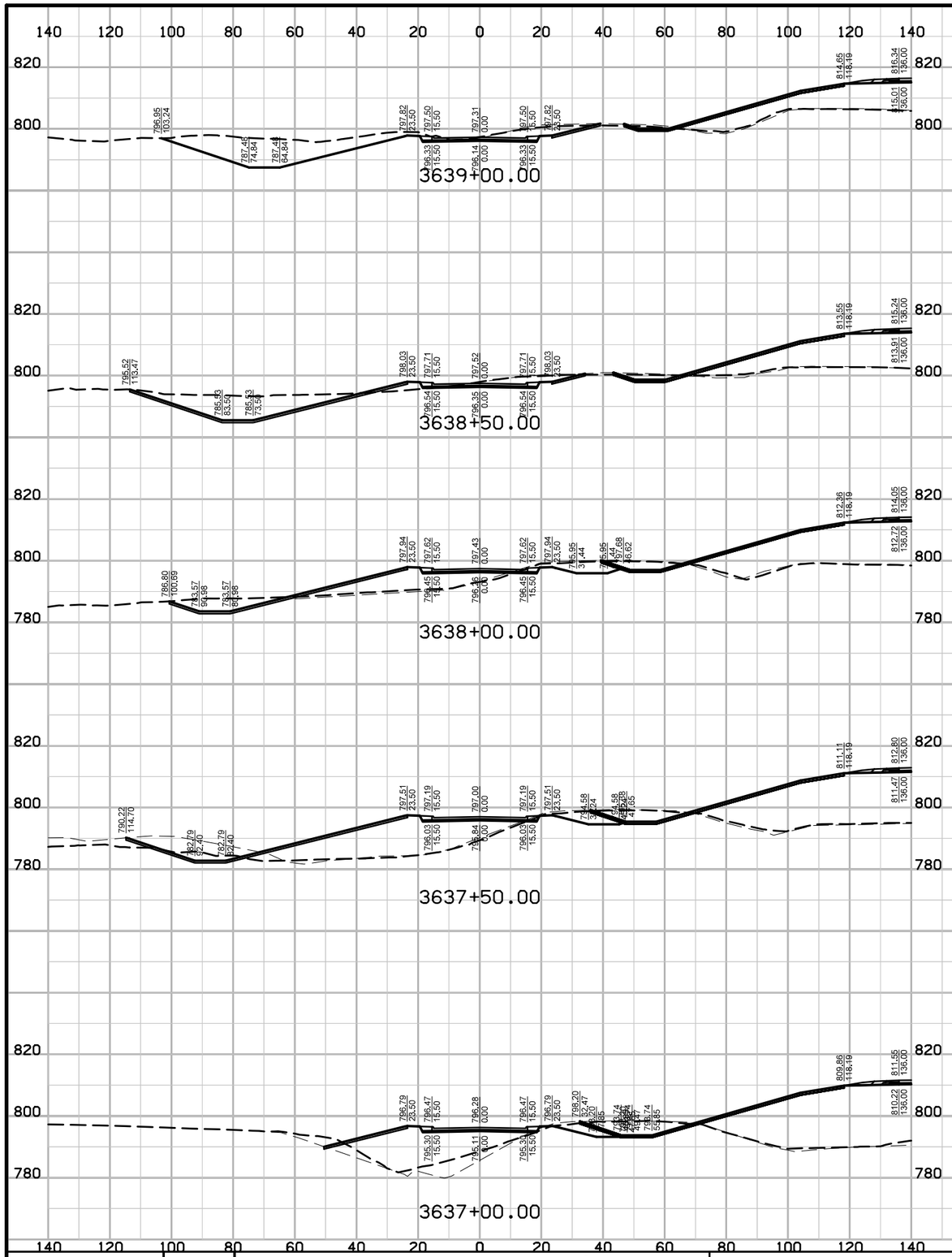


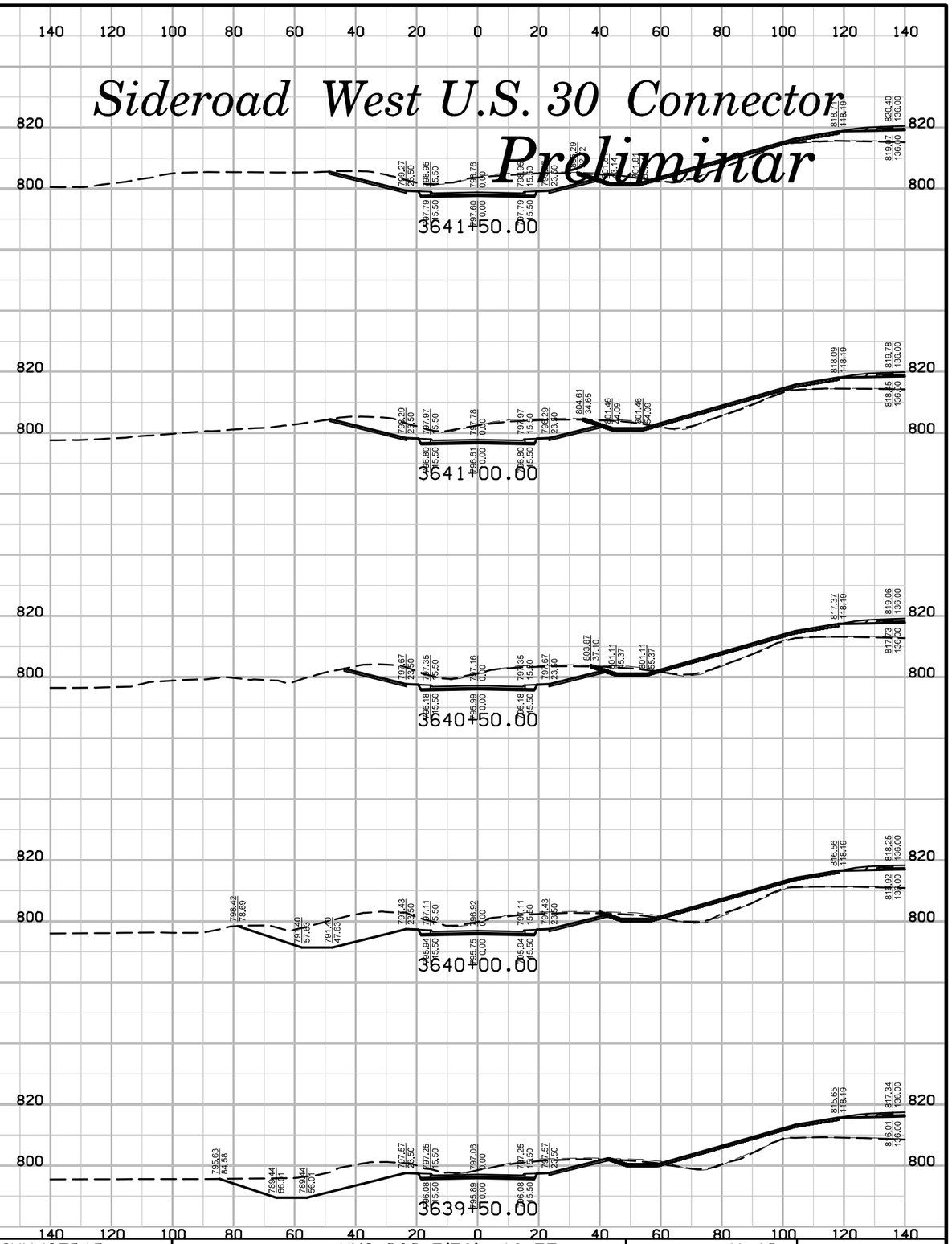
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.9

10:20:41 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x03.sht

Sideroad West U.S. 30 Connector

Preliminar



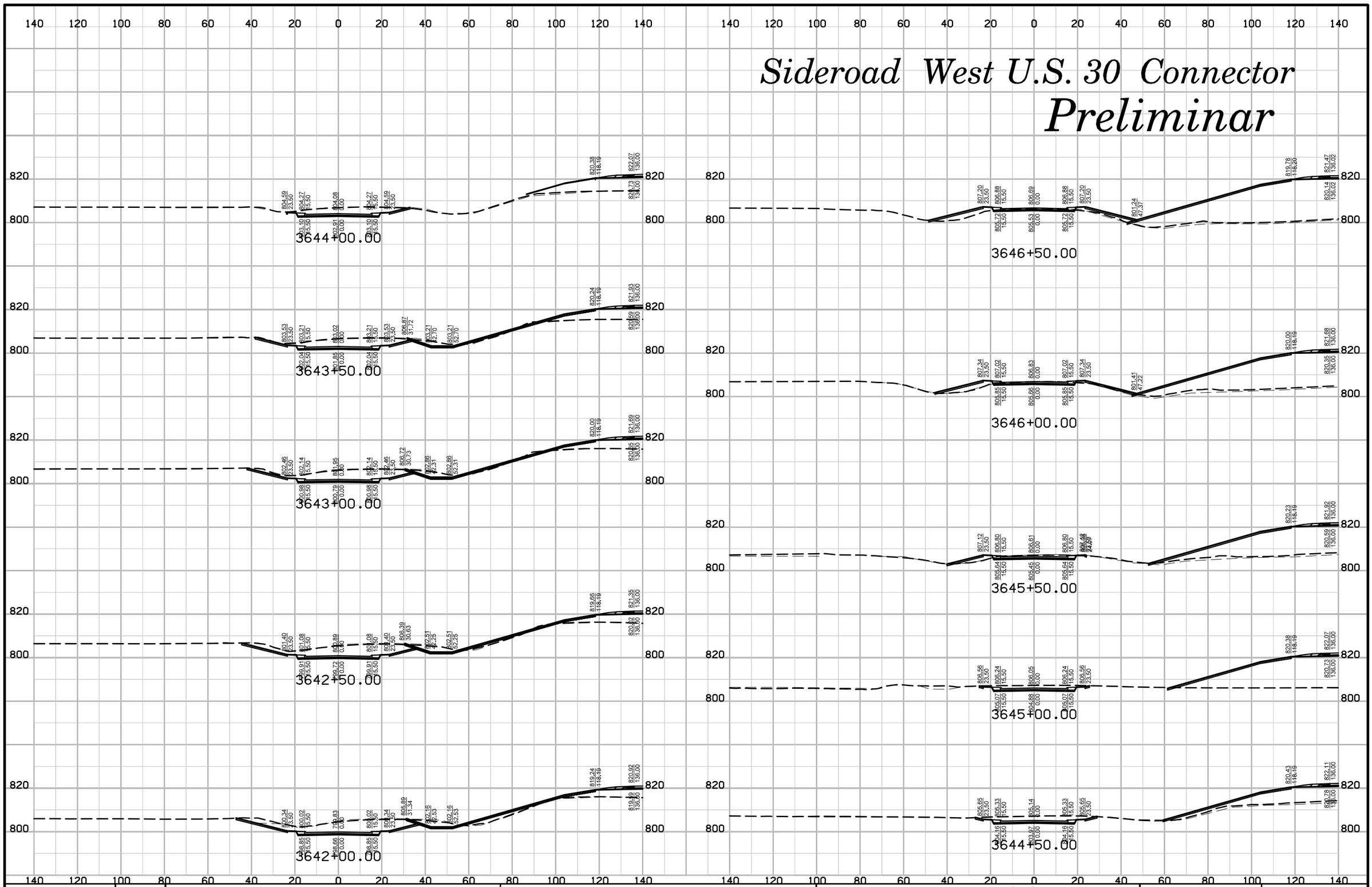


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.10

10:20:42 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x03.sht

Sideroad West U.S. 30 Connector

Preliminar

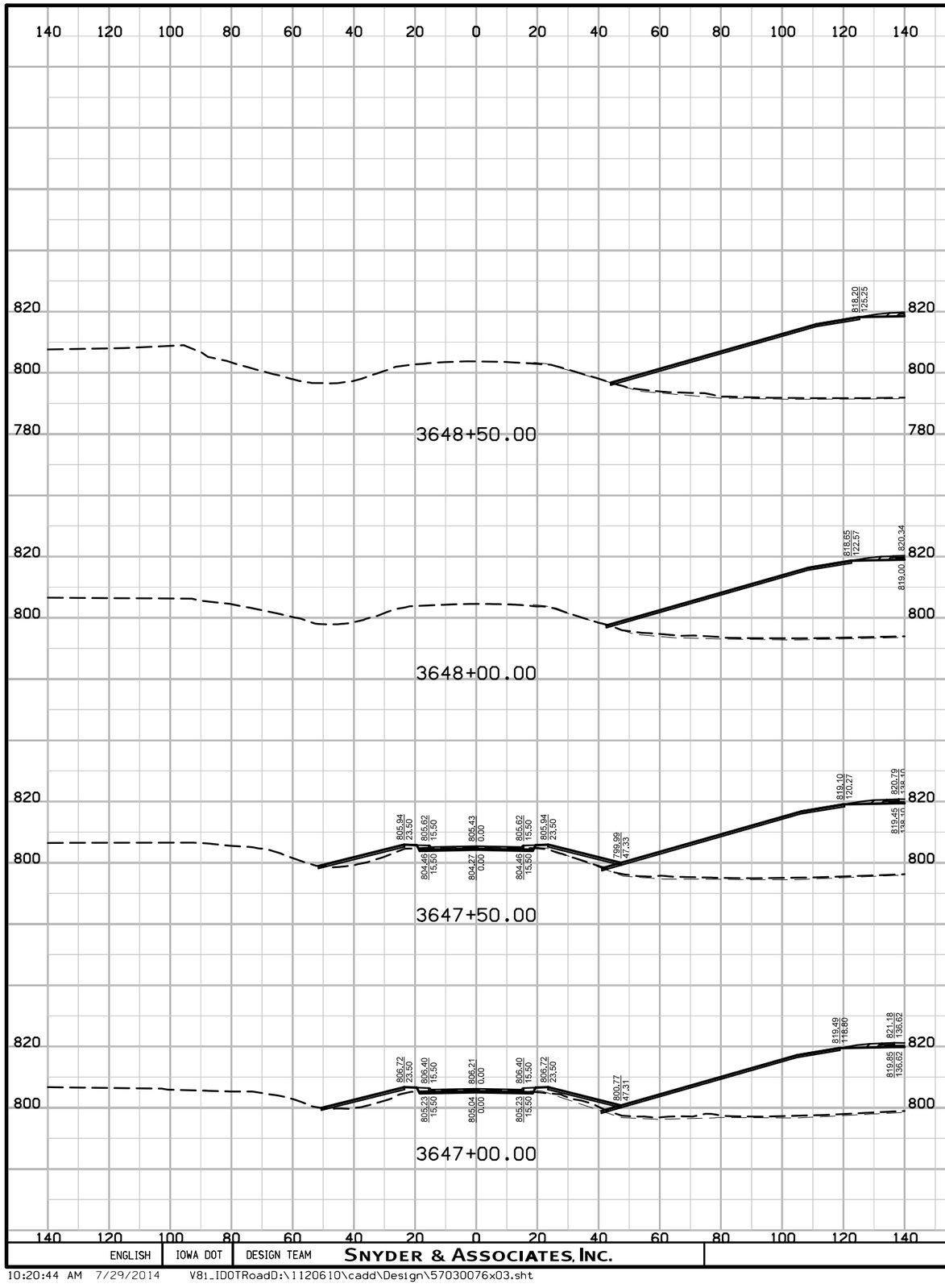


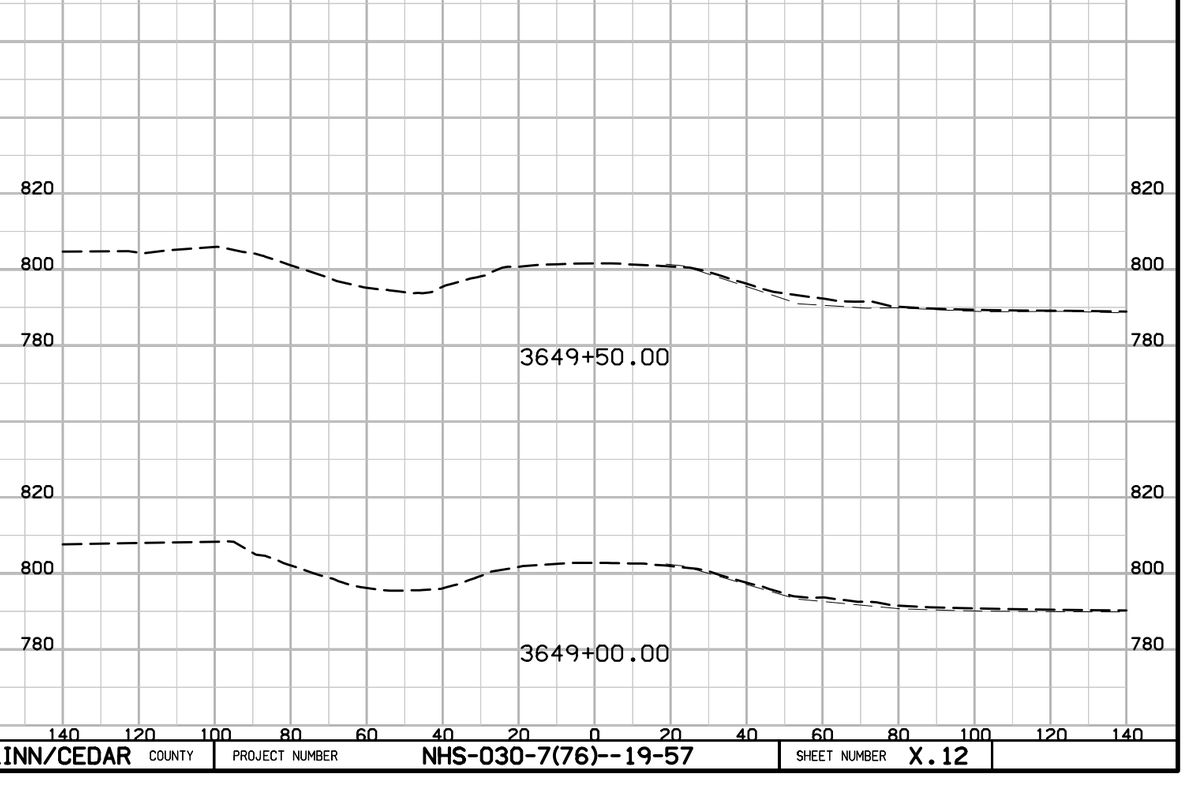
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.11

10:20:43 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x03.sht

Sideroad West U.S. 30 Connector

Preliminar



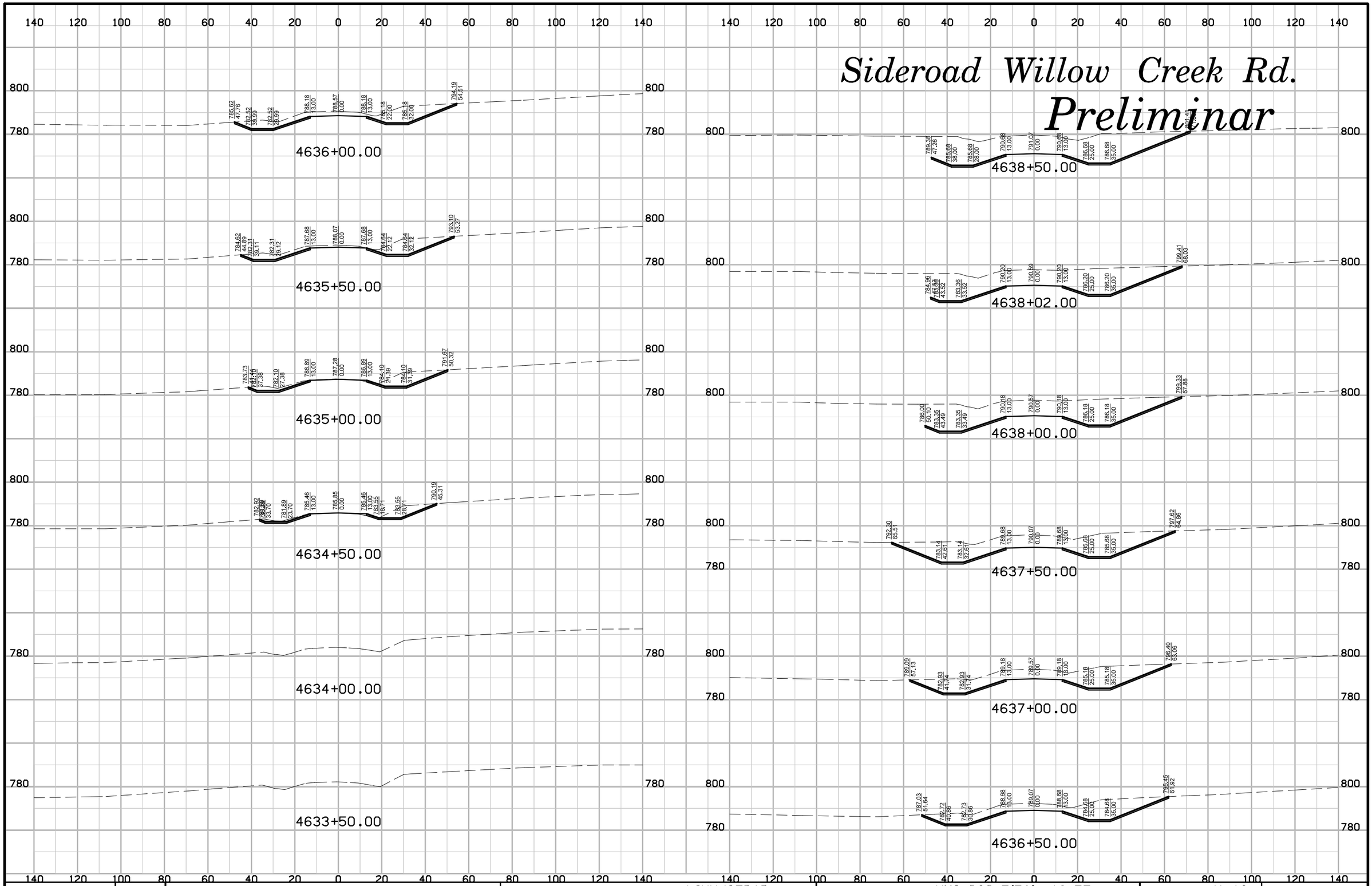


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.12

10:20:44 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x03.sht

Sideroad Willow Creek Rd.

Preliminar

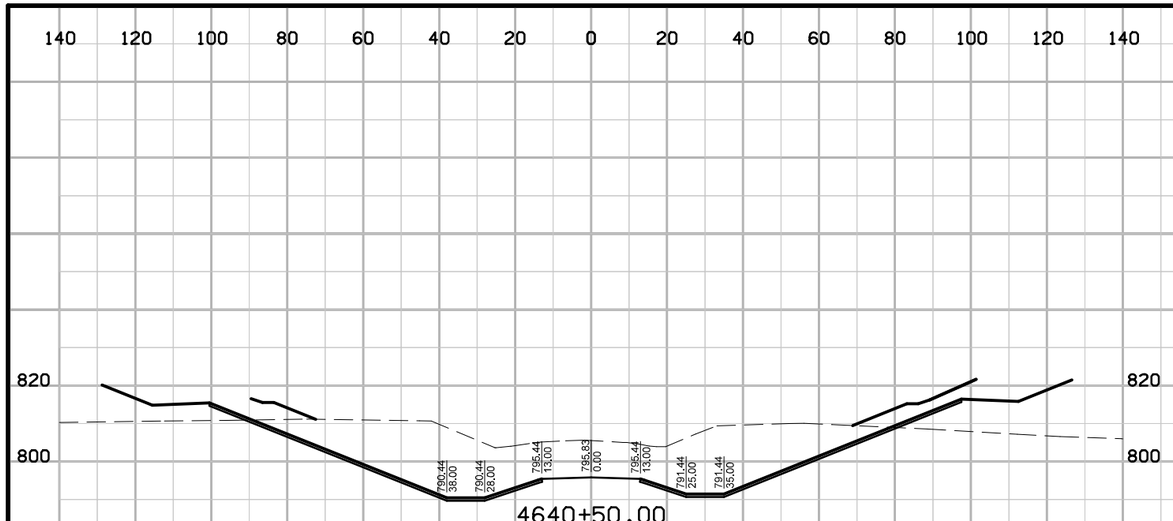


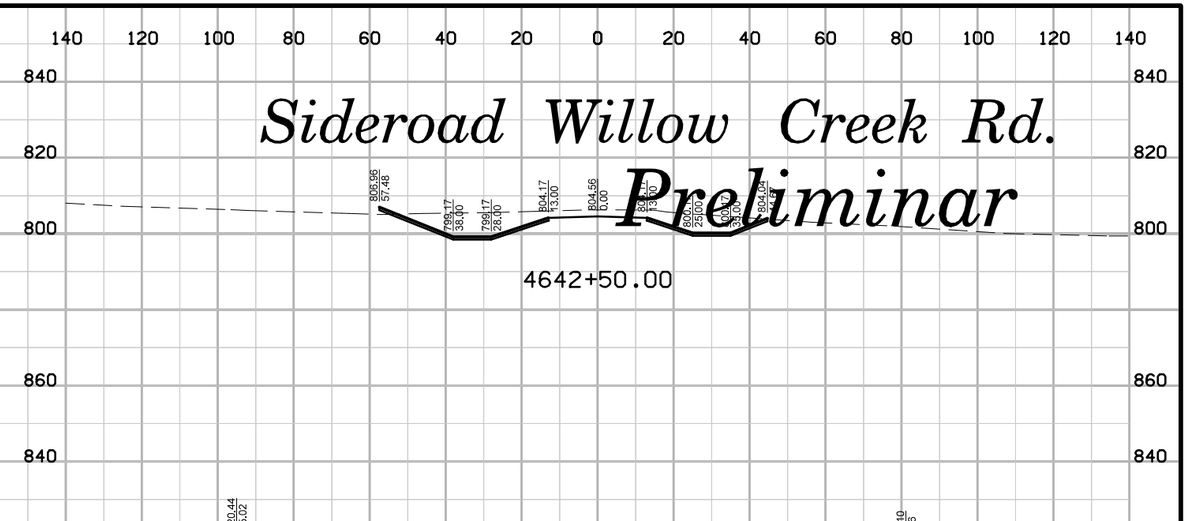
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.13

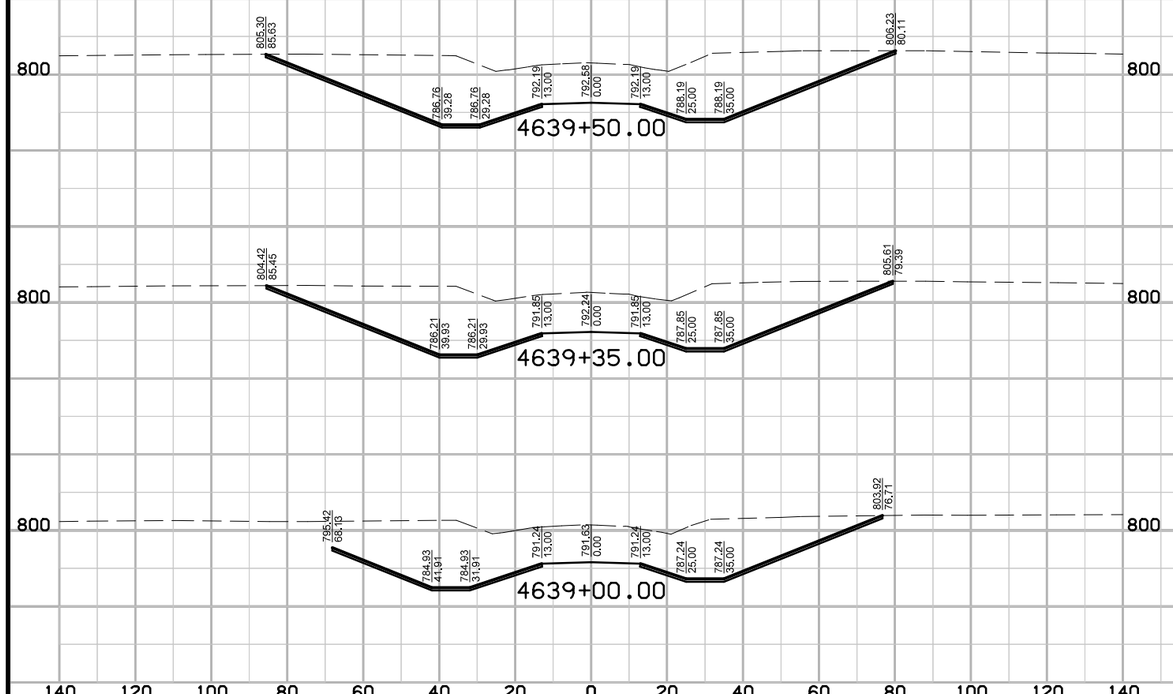
10:20:47 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x04.sht

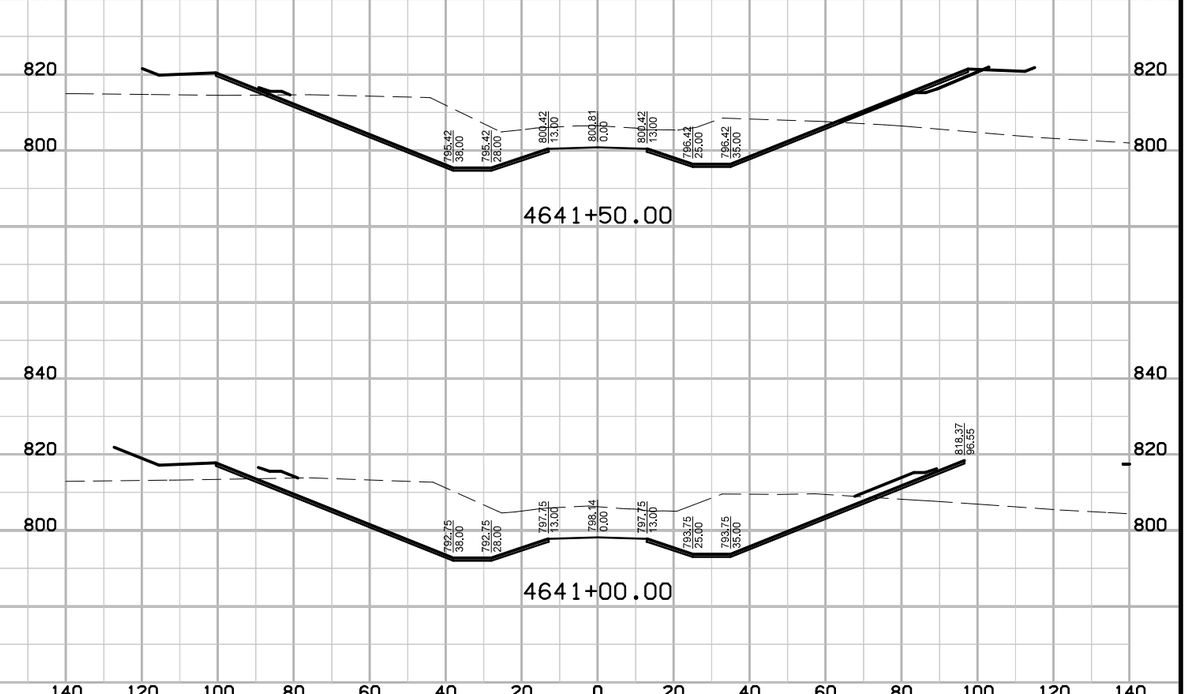
Sideroad Willow Creek Rd.

Preliminar







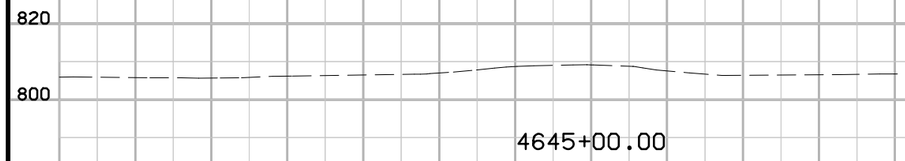


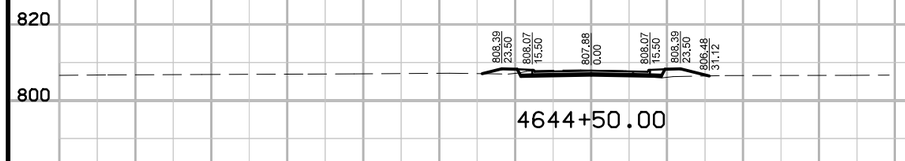
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.14

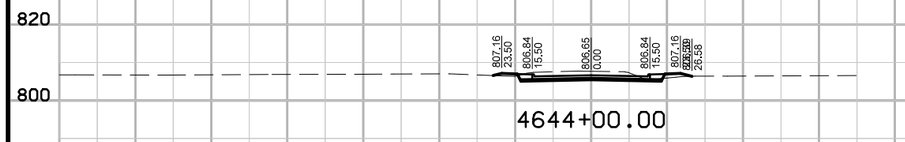
10:20:48 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x04.sht

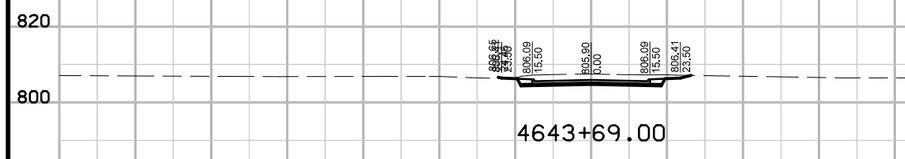
Sideroad Willow Creek Rd.

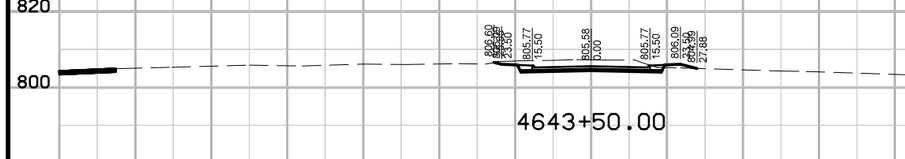
Preliminar

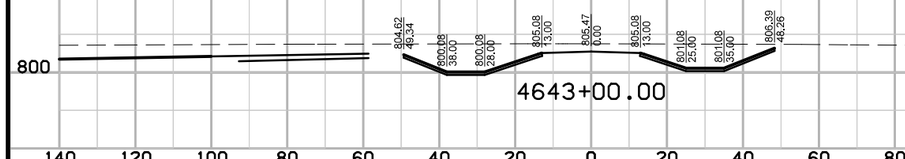


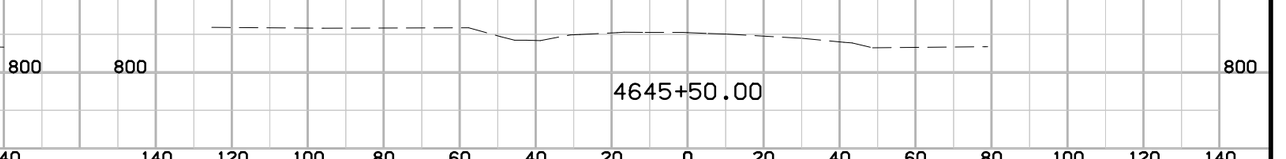










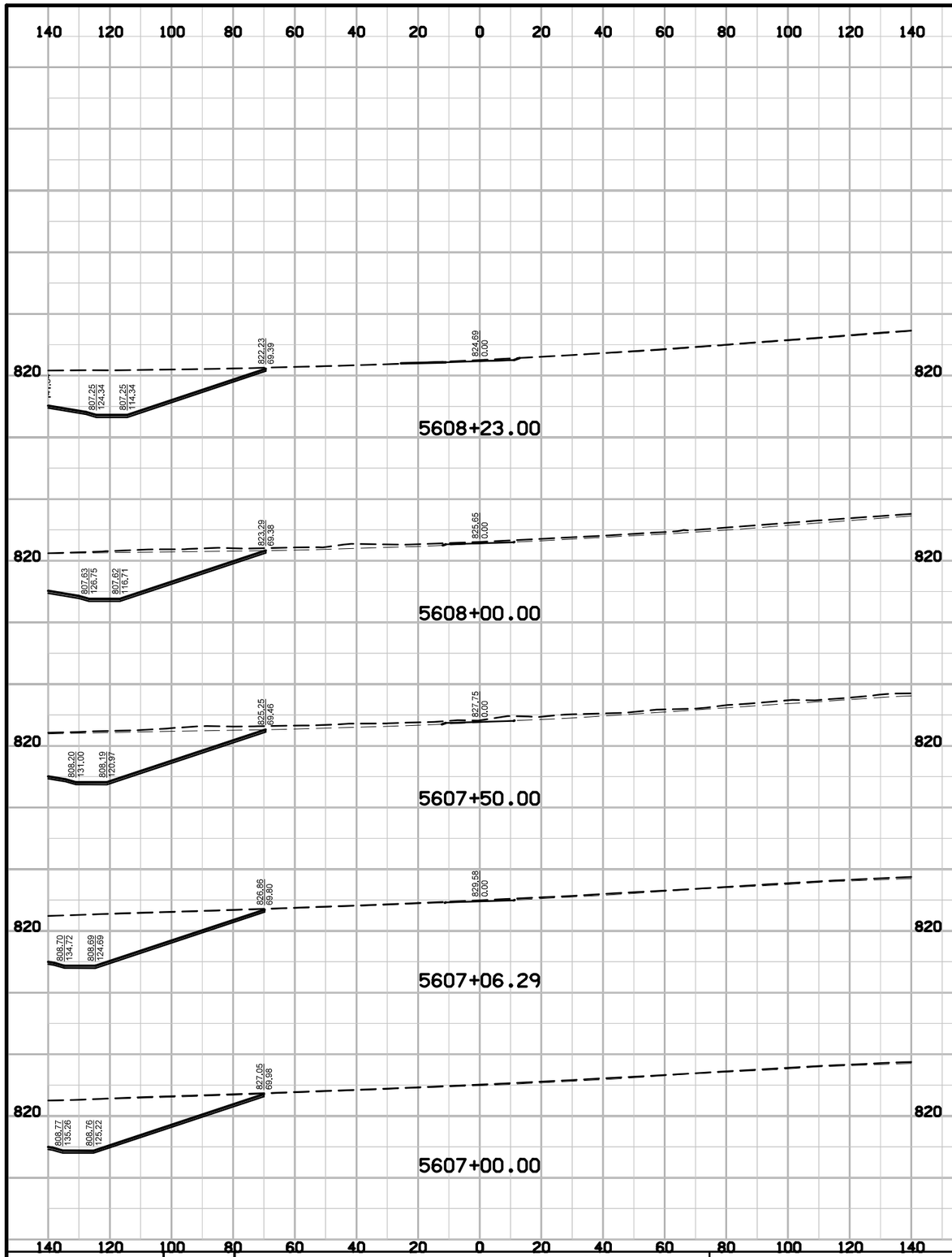


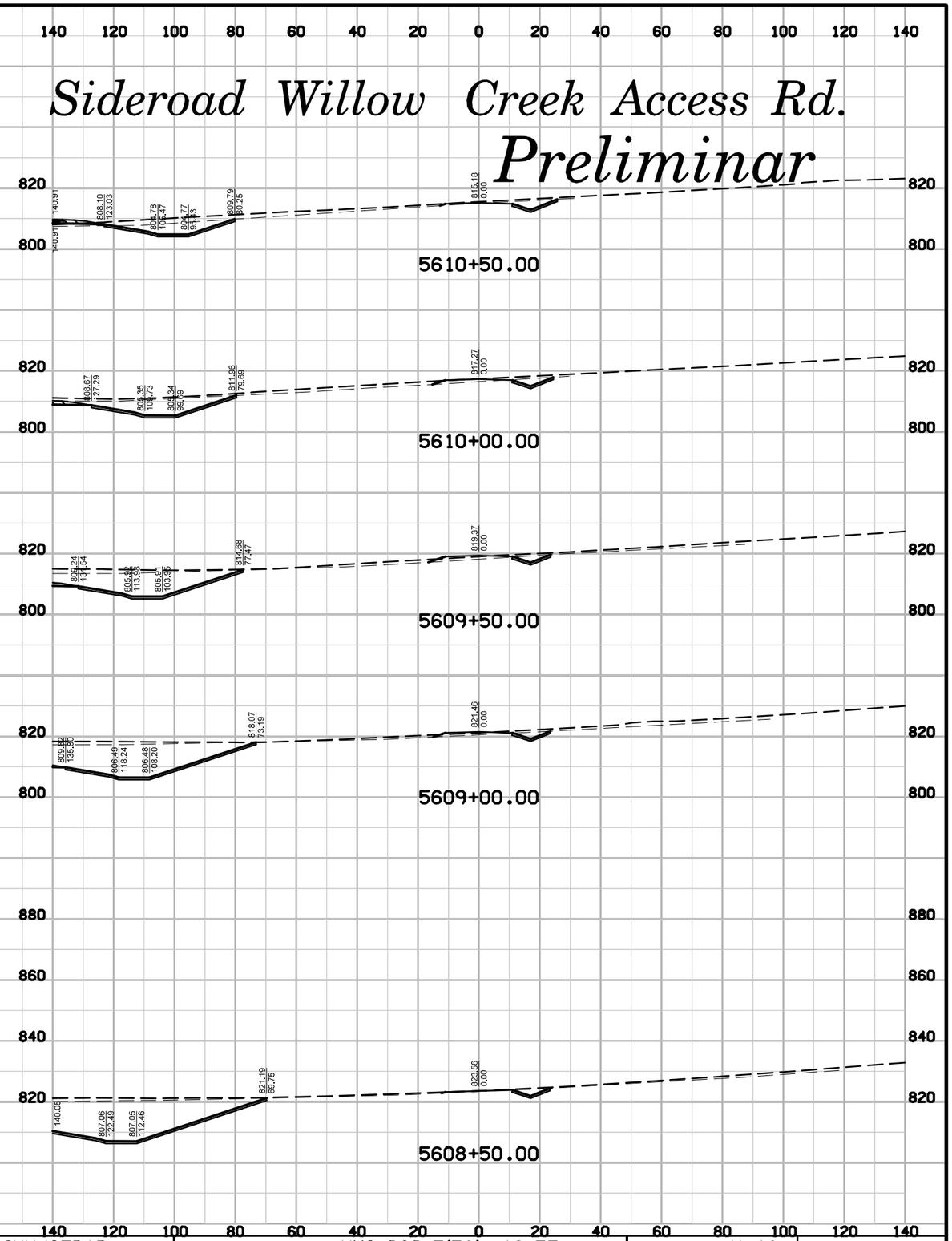
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.15

10:20:49 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x04.sht

Sideroad Willow Creek Access Rd.

Preliminar



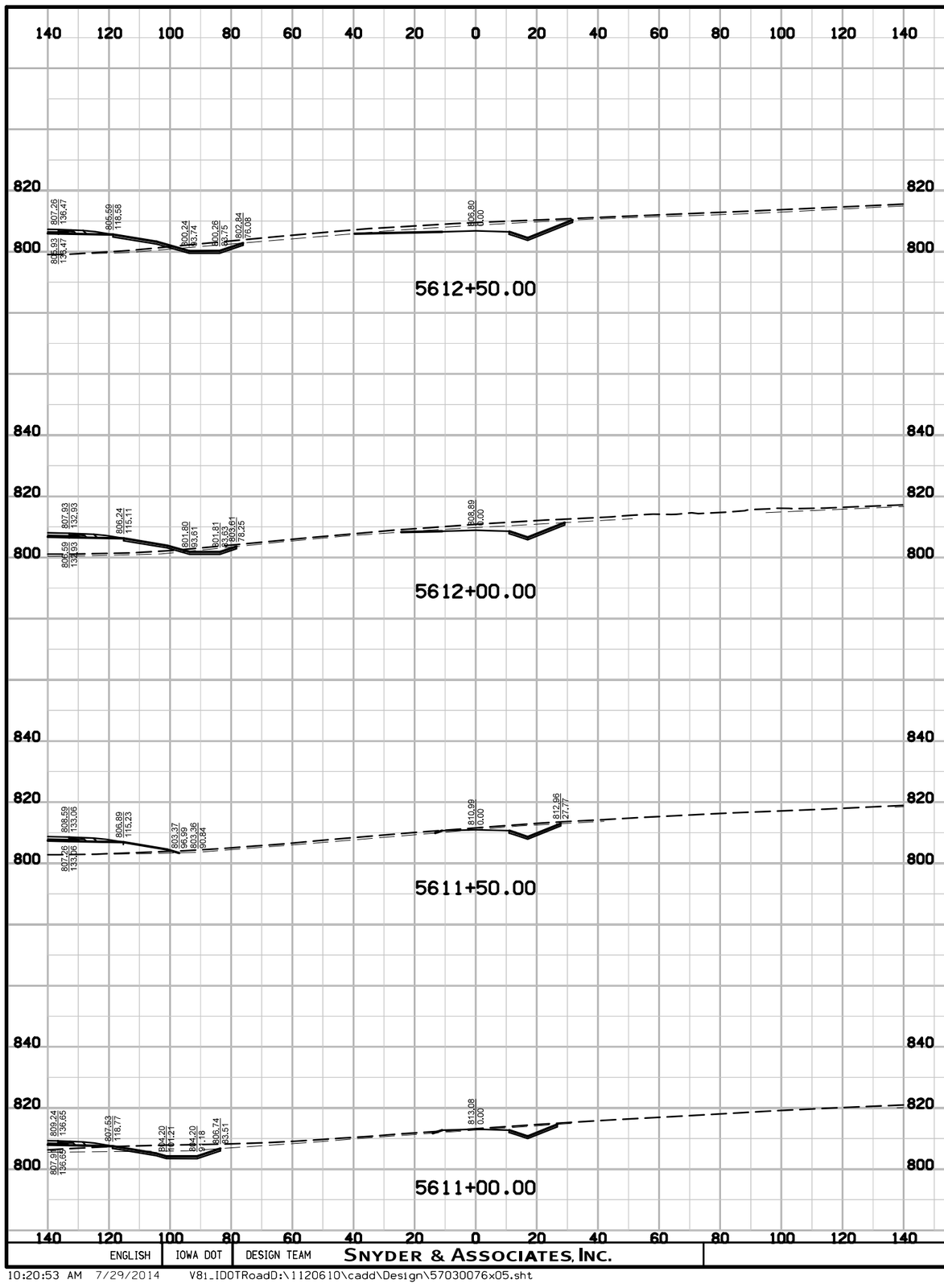


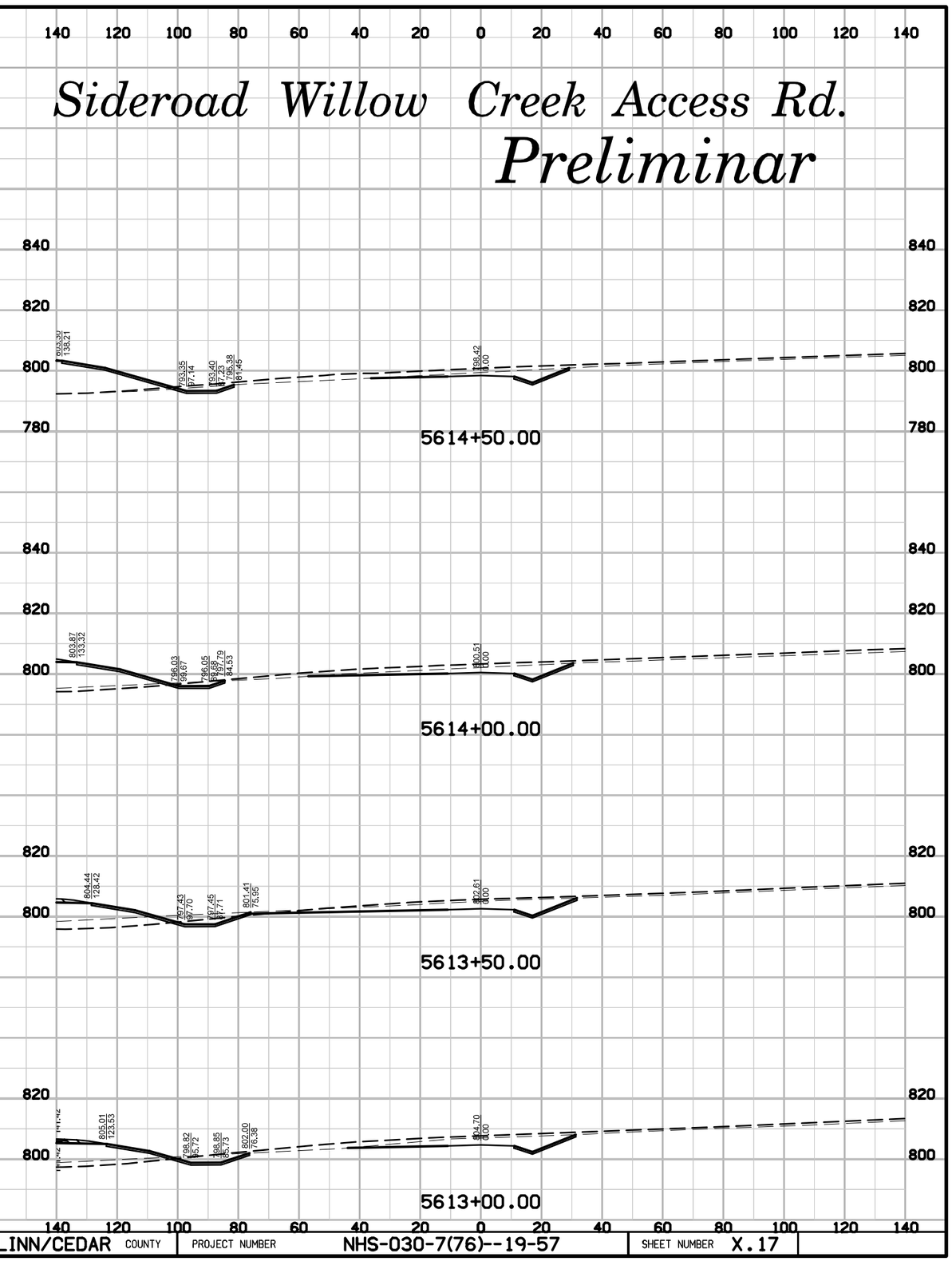
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.16

10:20:53 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x05.sht

Sideroad Willow Creek Access Rd.

Preliminar



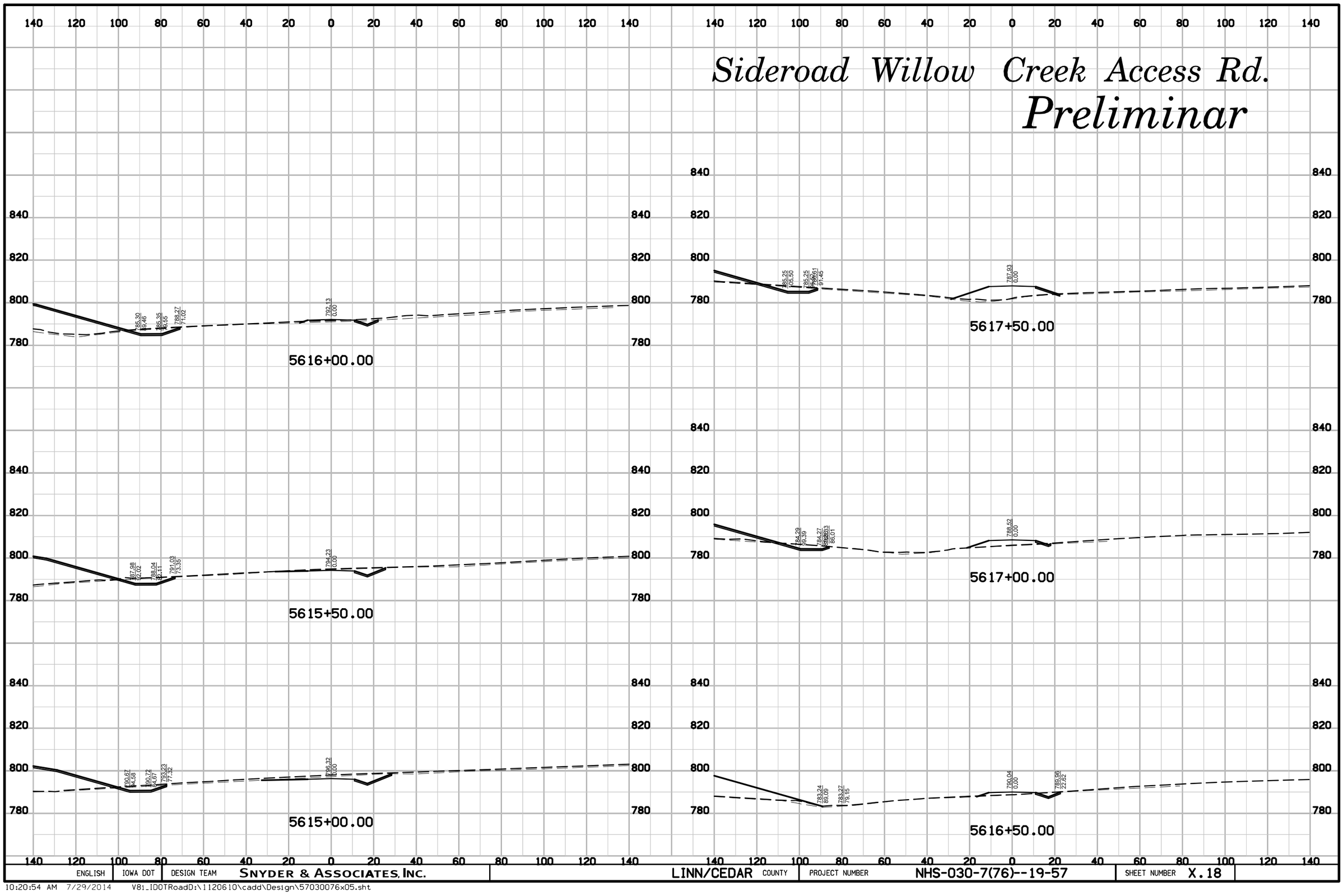


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.17

10:20:53 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x05.sht

Sideroad Willow Creek Access Rd.

Preliminar

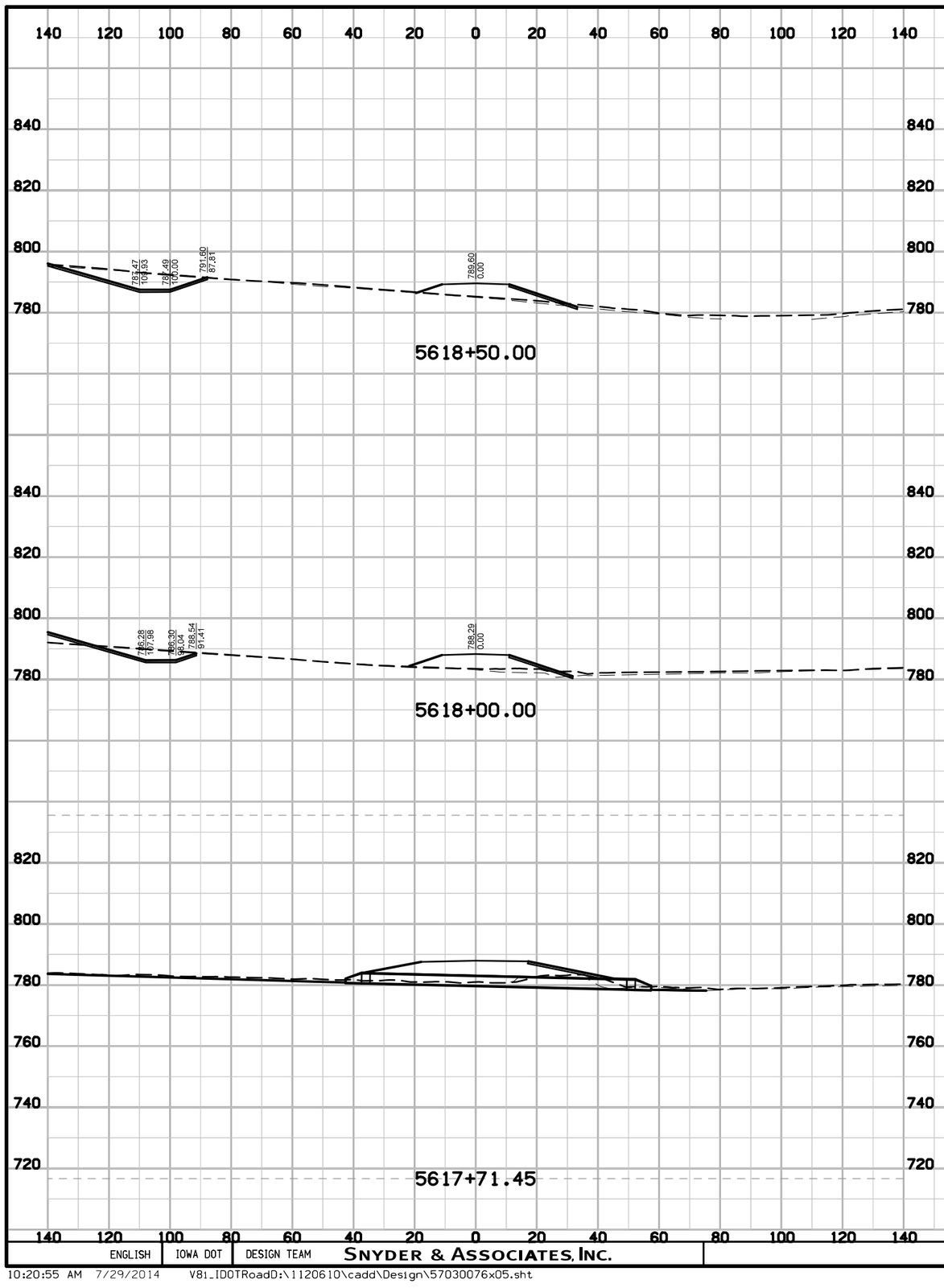


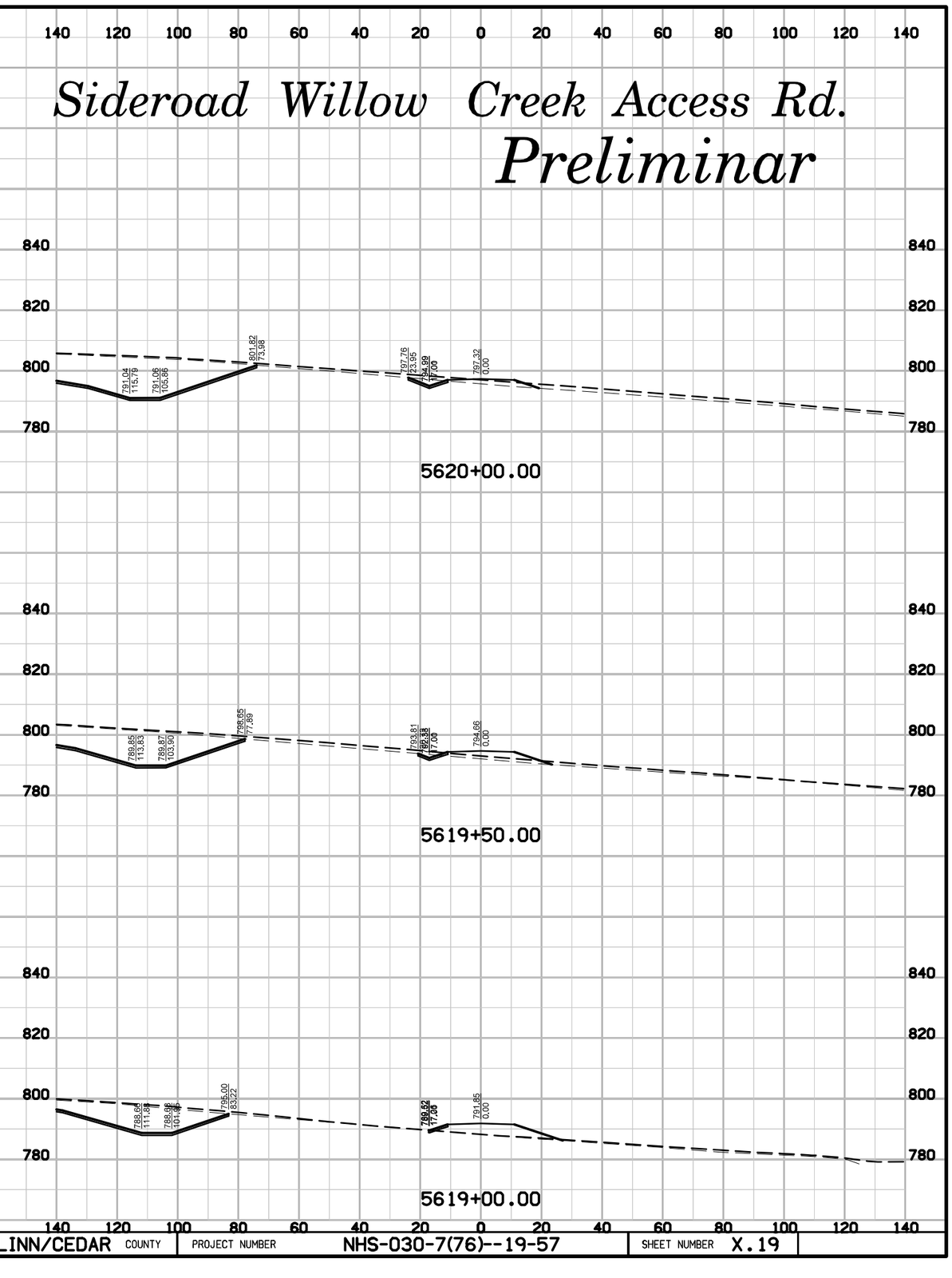
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.18

10:20:54 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x05.sht

Sideroad Willow Creek Access Rd.

Preliminar



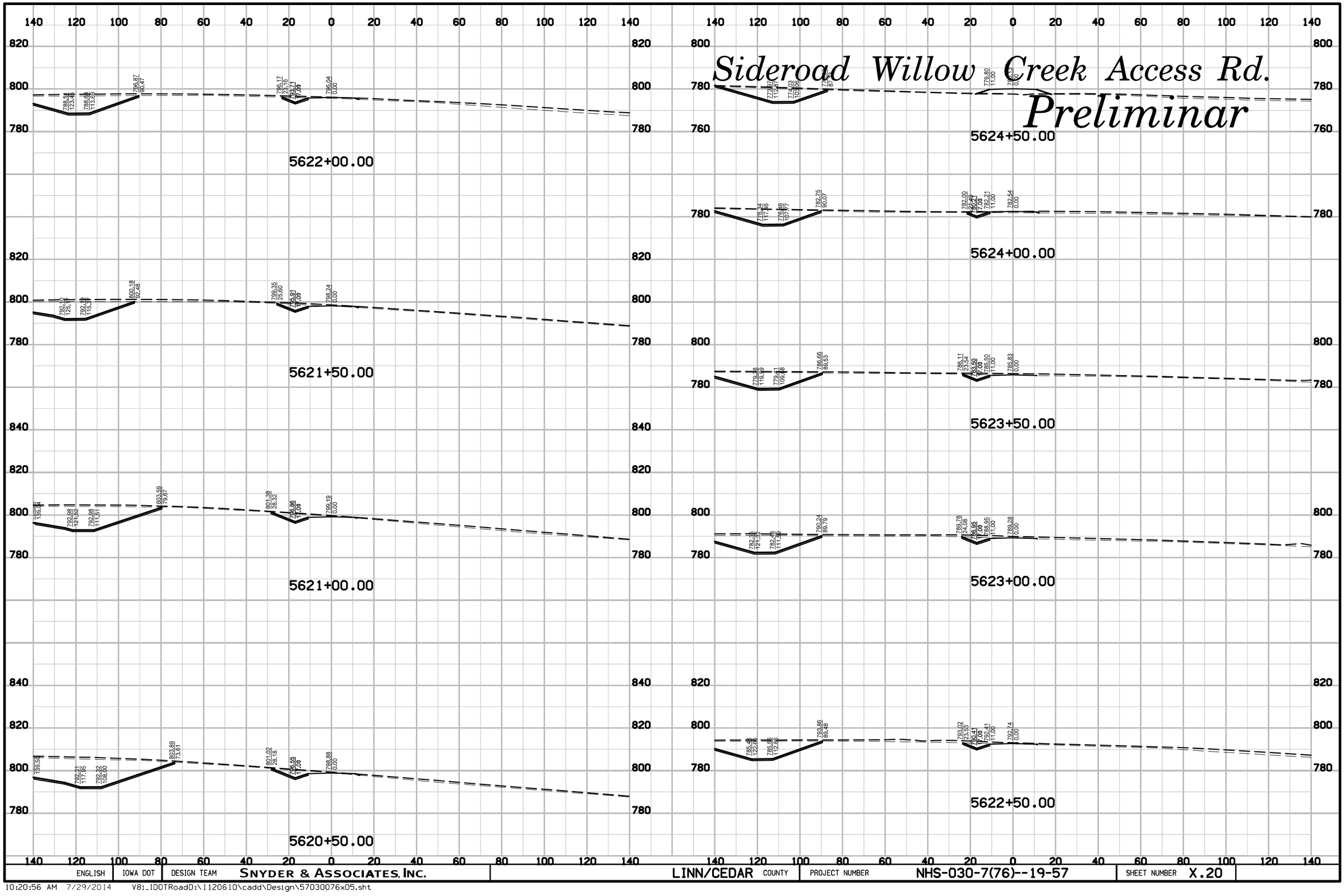


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.19

10:20:55 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x05.sht

Sideroad Willow Creek Access Rd.

Preliminar

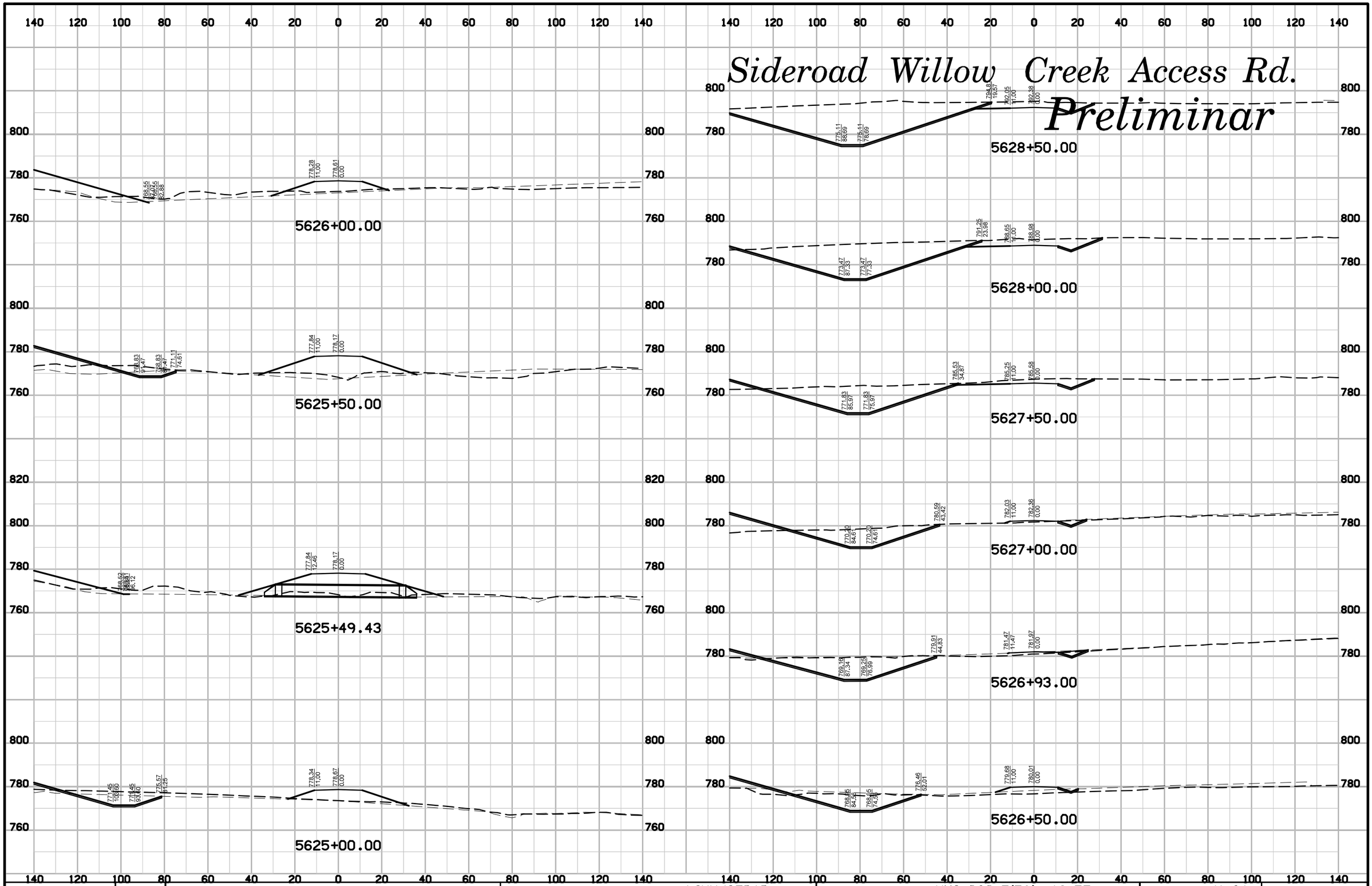


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.20

10:20:56 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x05.sht

Sideroad Willow Creek Access Rd.

Preliminar

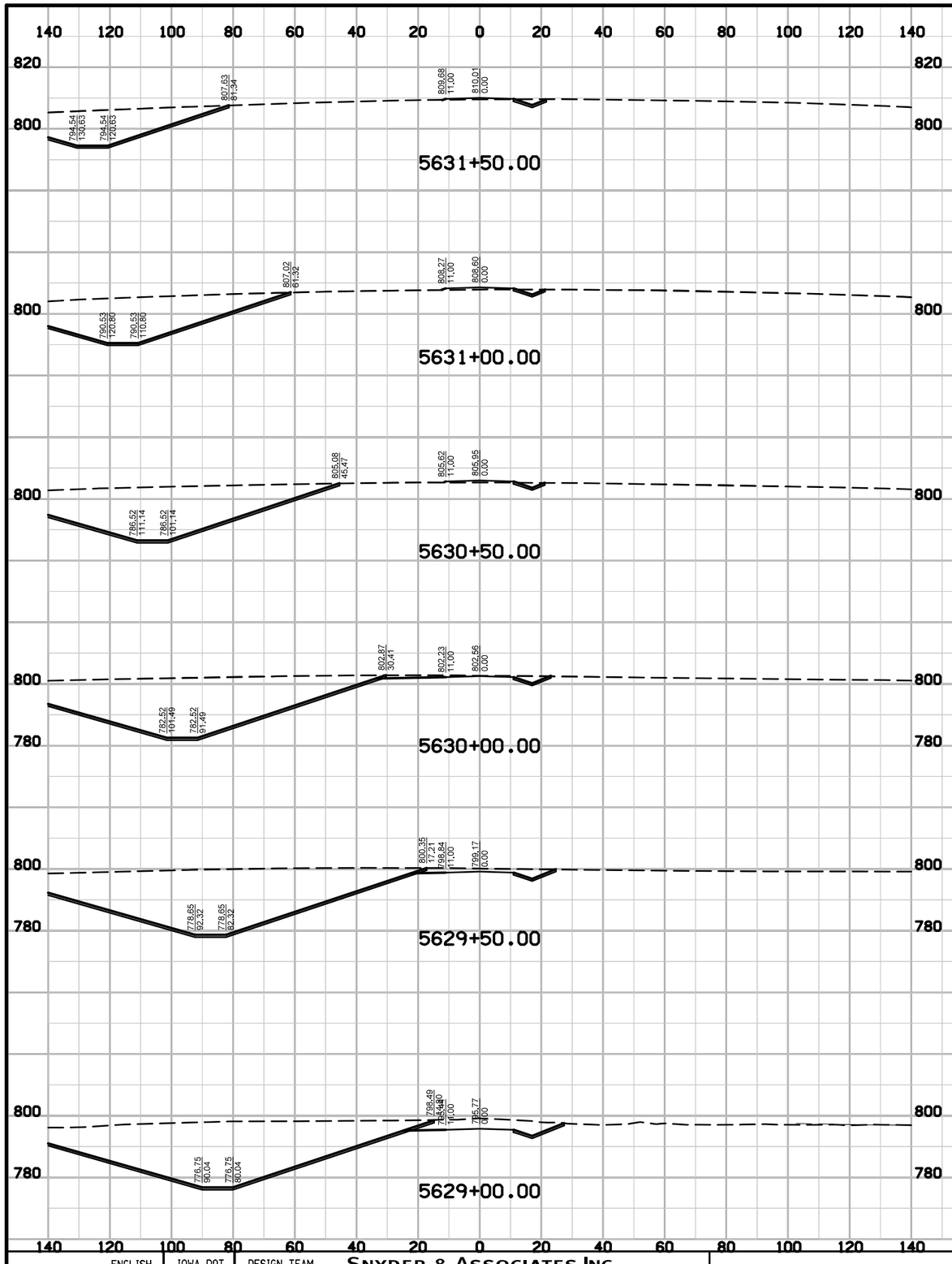


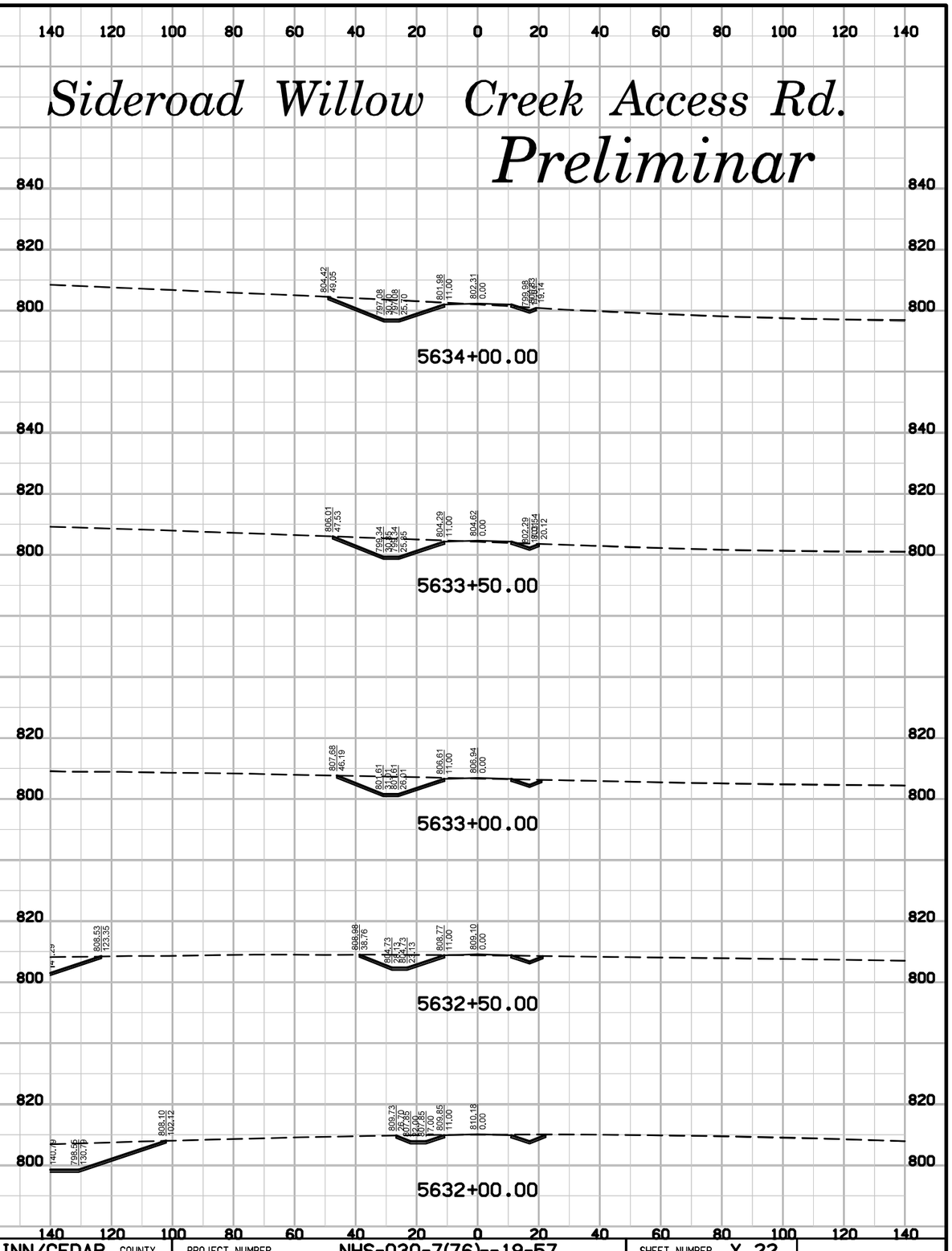
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.21

10:20:57 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x05.sht

Sideroad Willow Creek Access Rd.

Preliminar



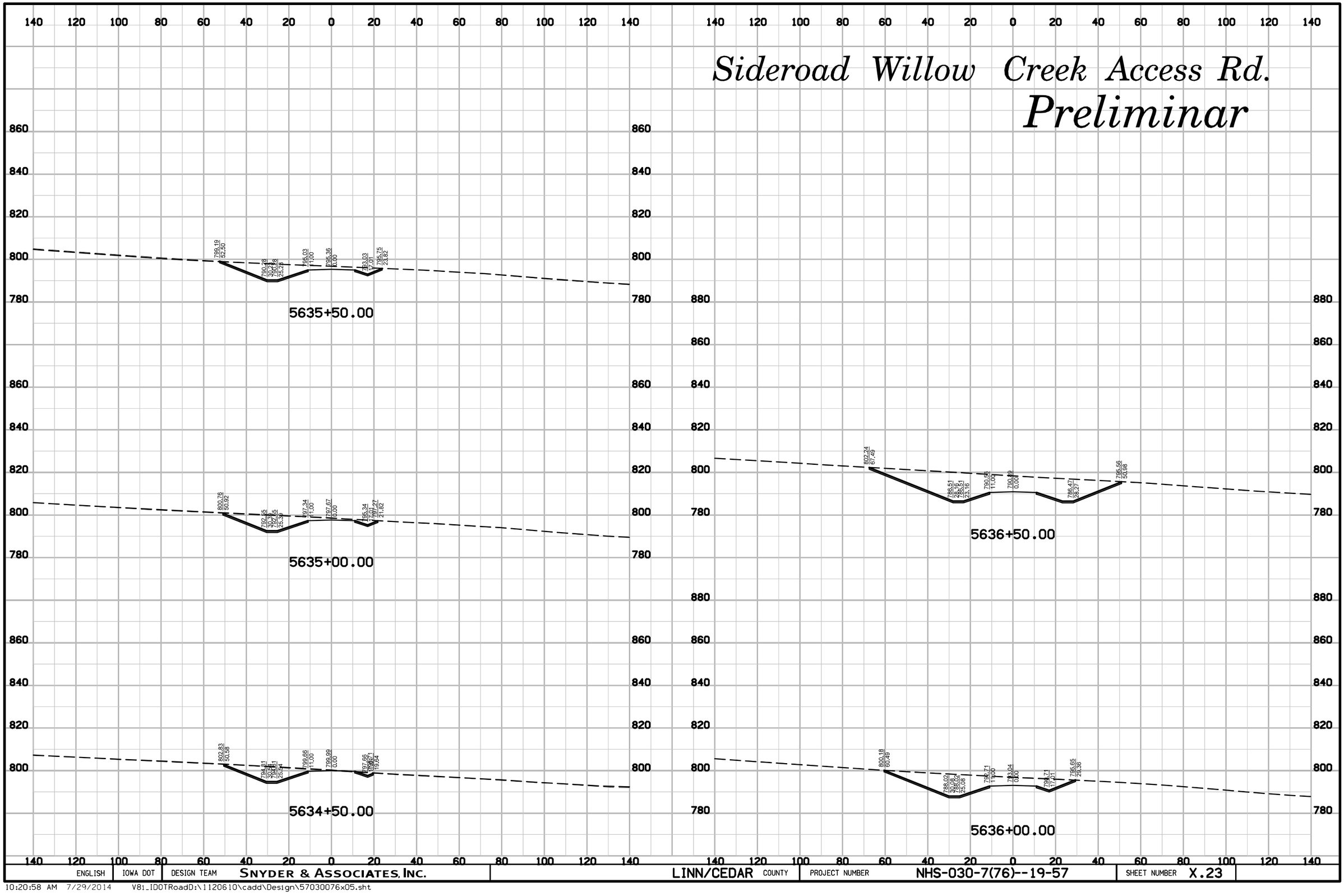


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.22

10:20:58 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x05.sht

Sideroad Willow Creek Access Rd.

Preliminar

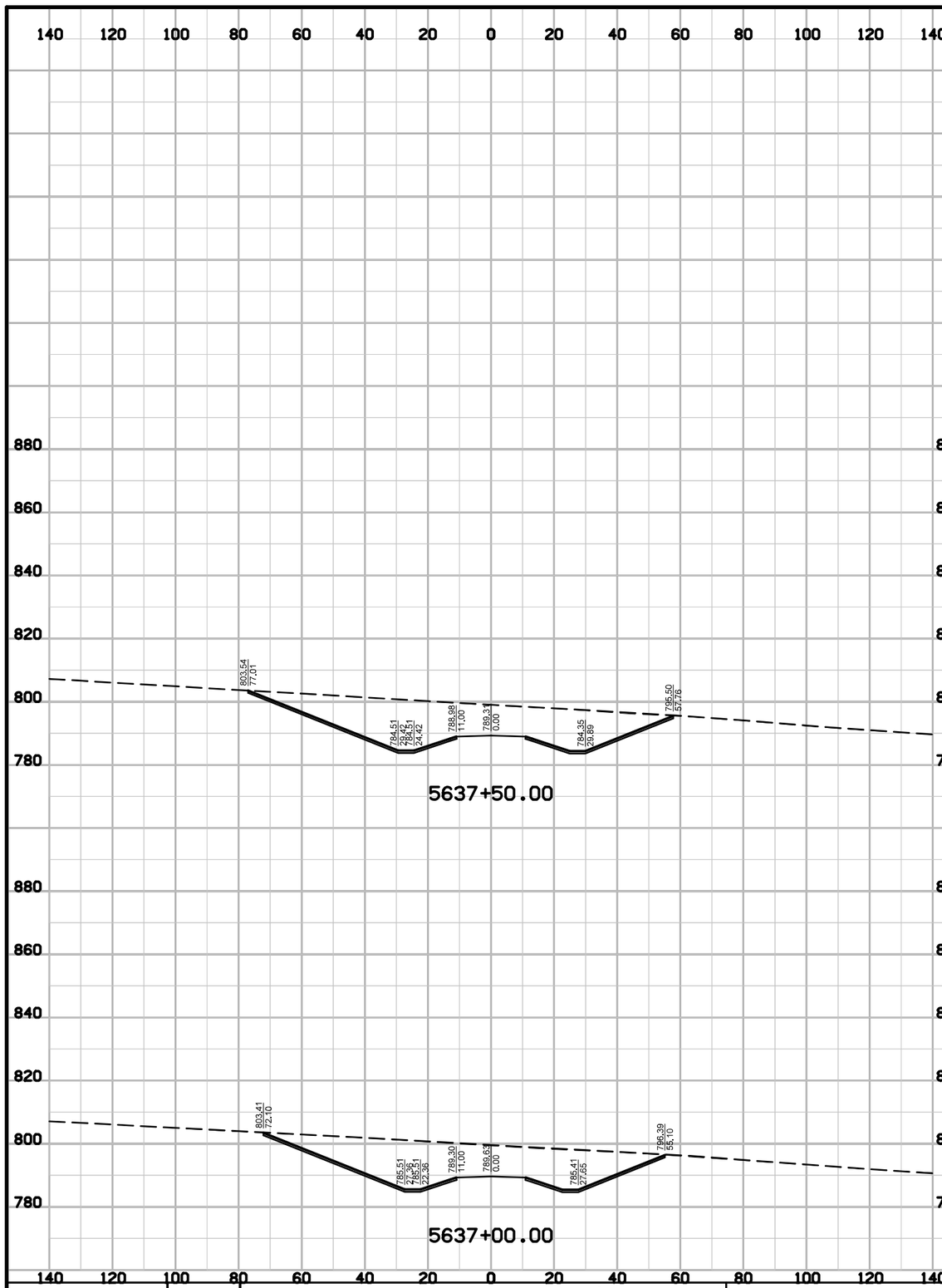


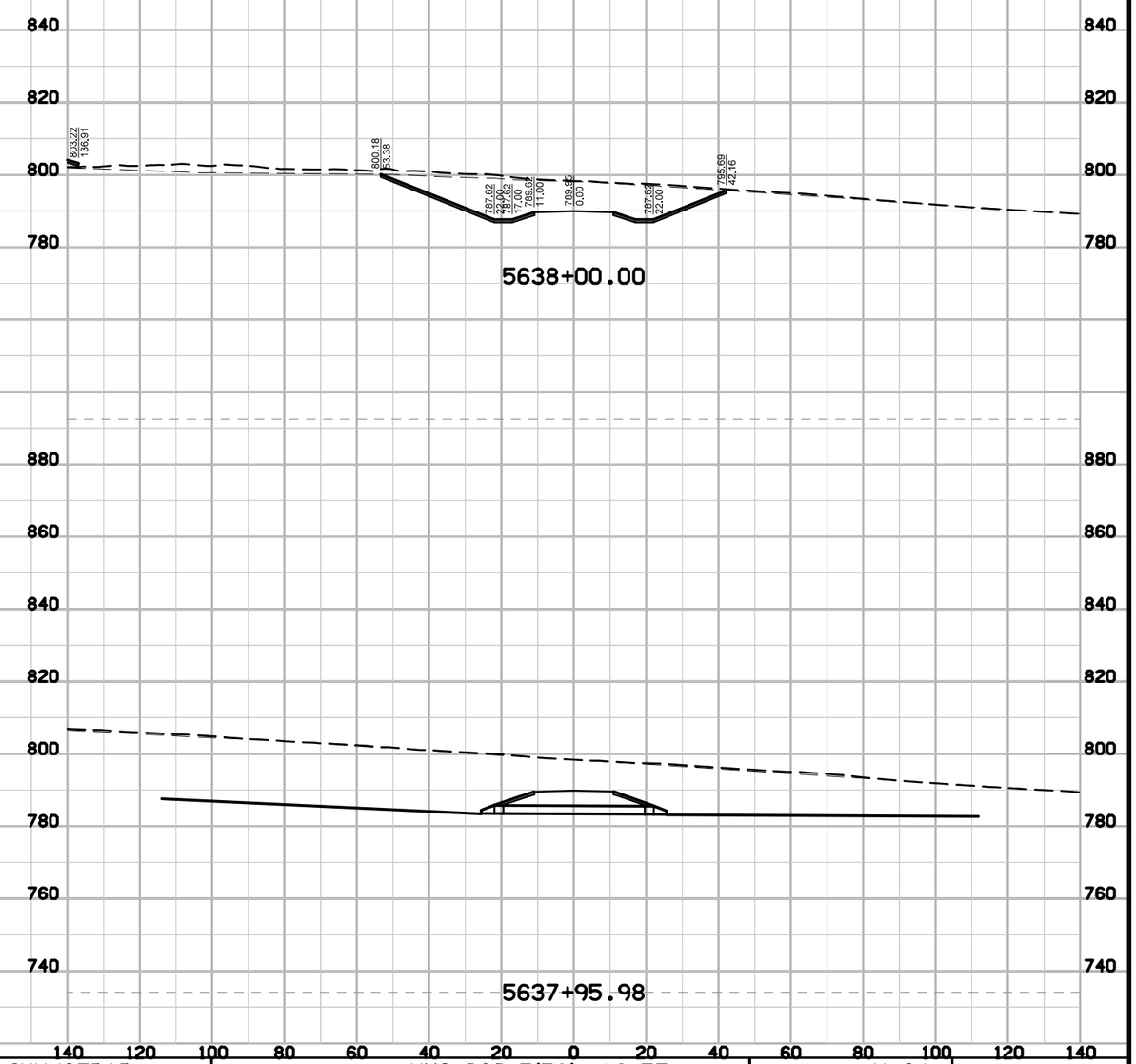
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.23

10:20:58 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x05.sht

Sideroad Willow Creek Access Rd.

Preliminar



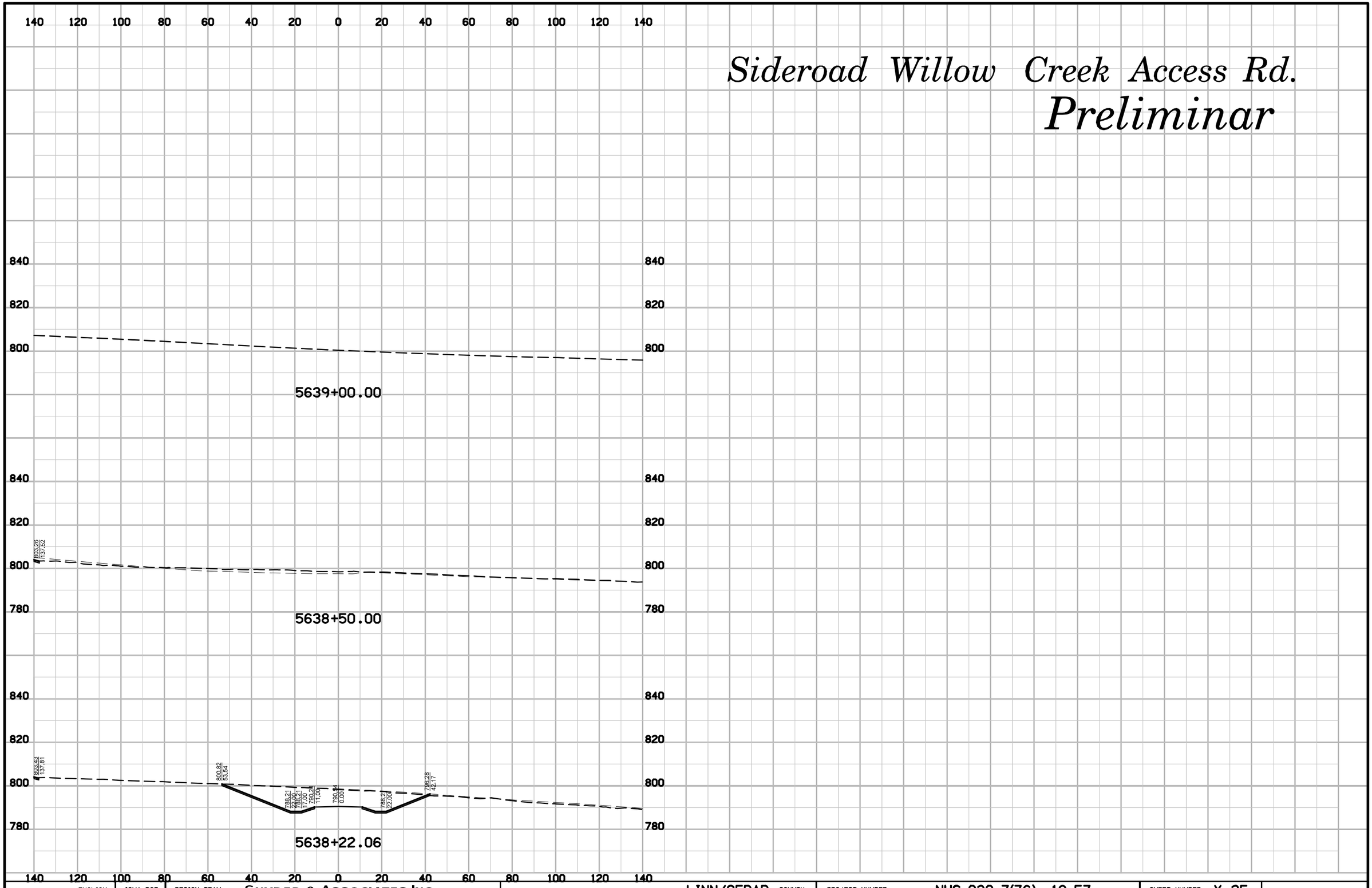


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.24

10:20:59 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x05.sht

Sideroad Willow Creek Access Rd.

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.25

10:21:00 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x05.sht

Sideroad IA. Hw . 1

Preliminar

6673+00.00

6672+50.00

6672+00.00

6671+50.00

6671+00.00

6670+50.00

6676+00.00

6675+50.00

6675+00.00

6674+50.00

6674+00.00

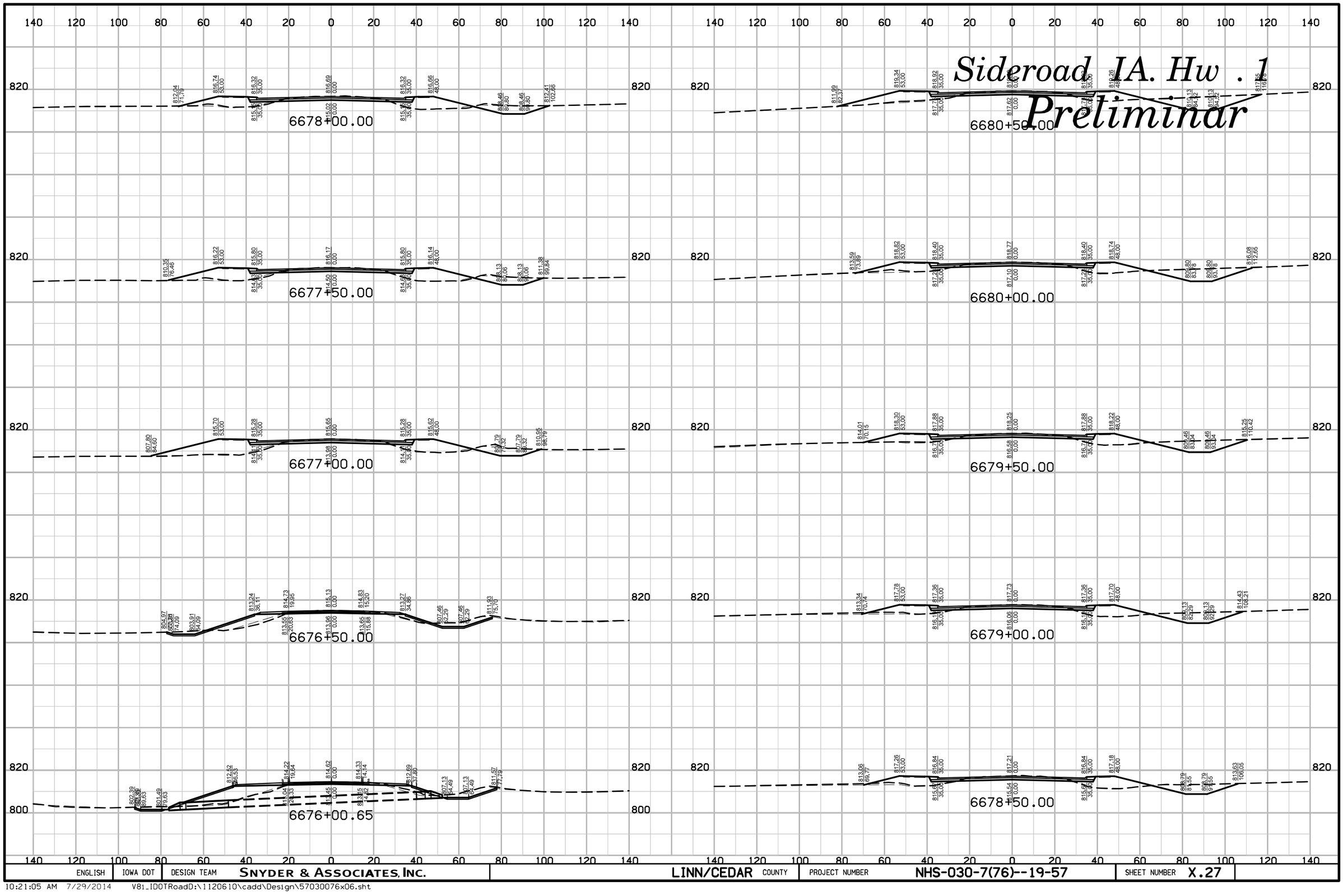
6673+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.26

10:21:04 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x06.sht

Sideroad IA. Hw . 1

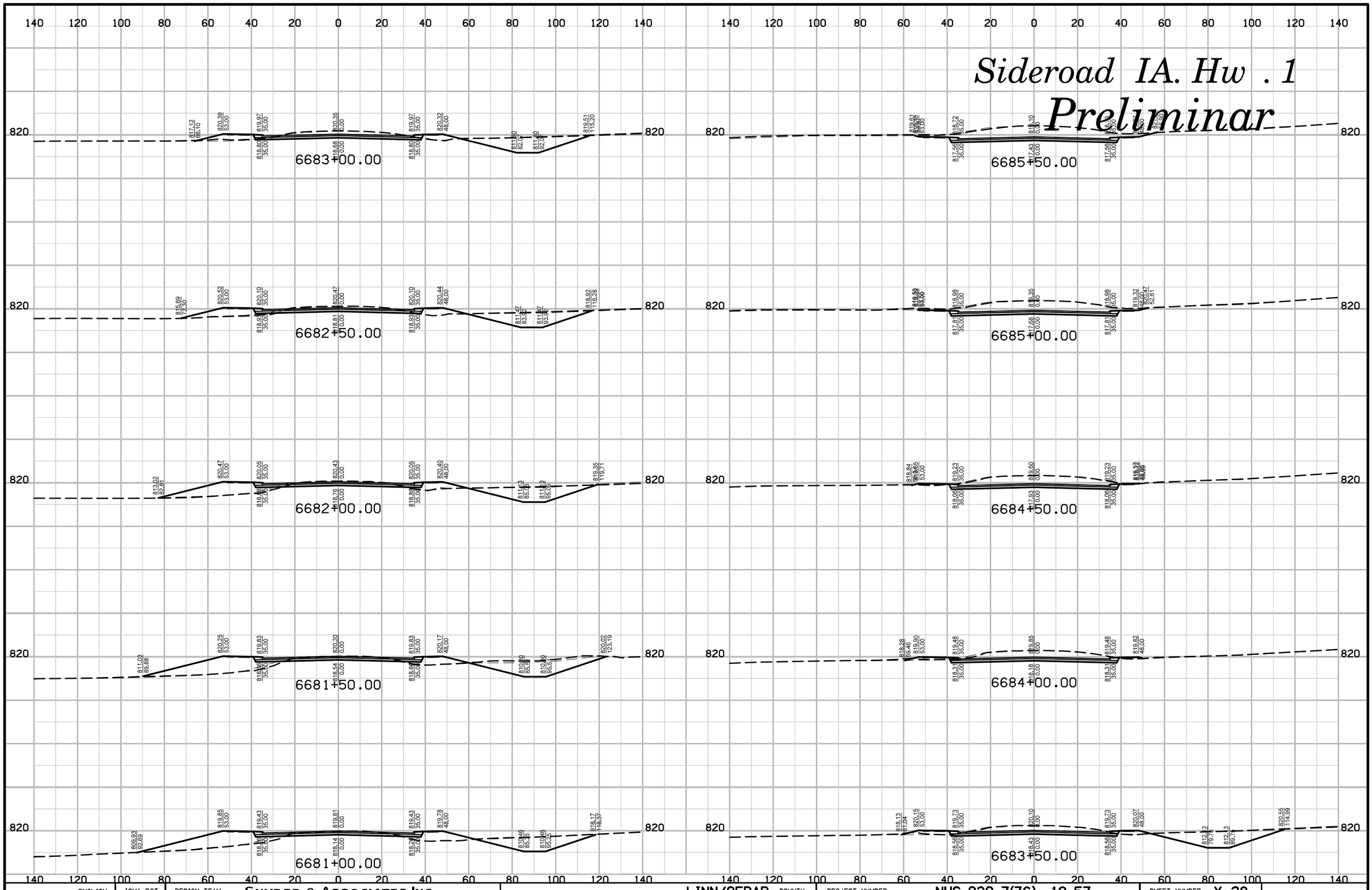
Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.27

Sideroad IA. Hw . 1

Preliminar

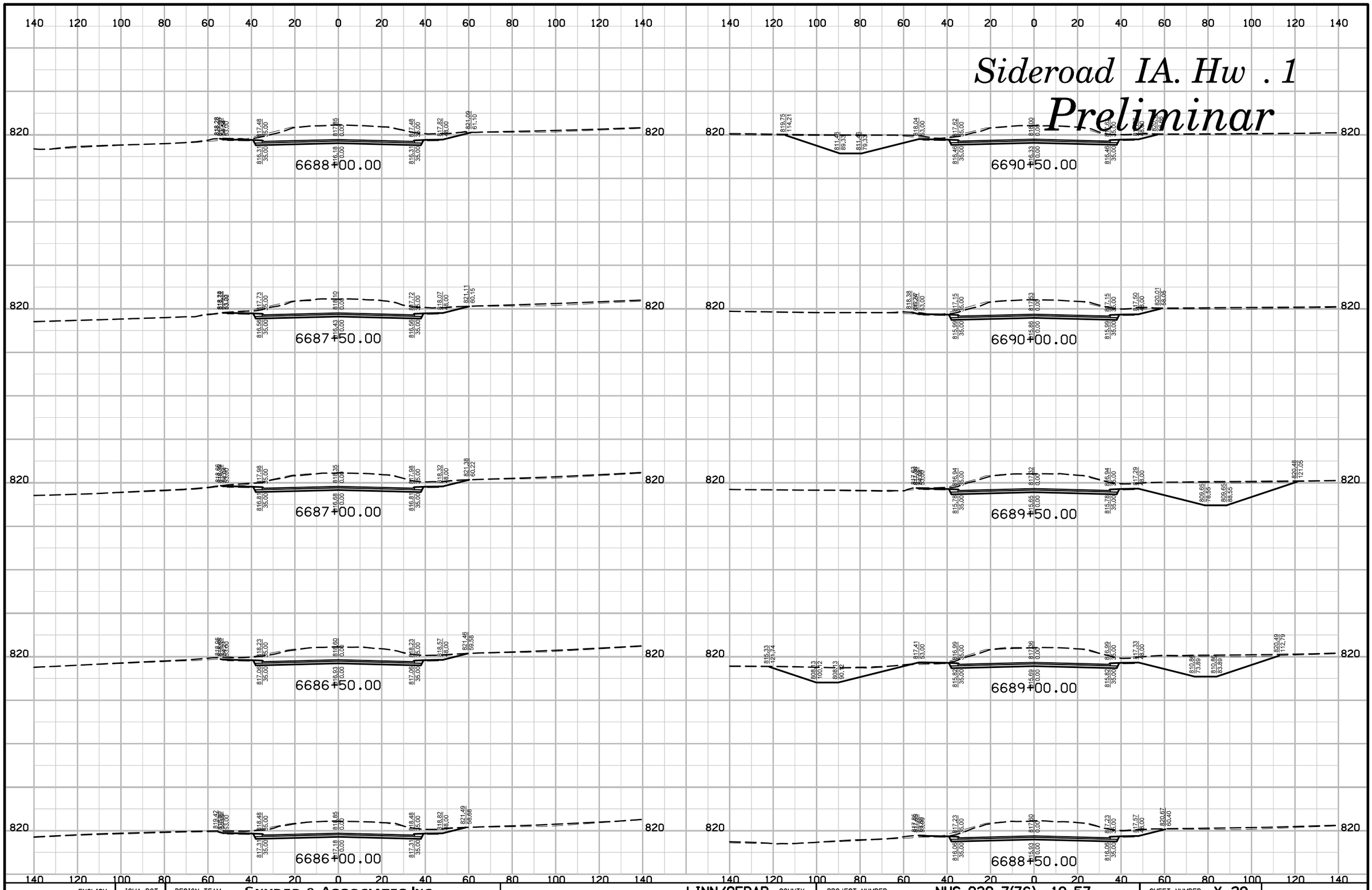


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.28

10:21:06 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x06.sht

Sideroad IA. Hw . 1

Preliminar

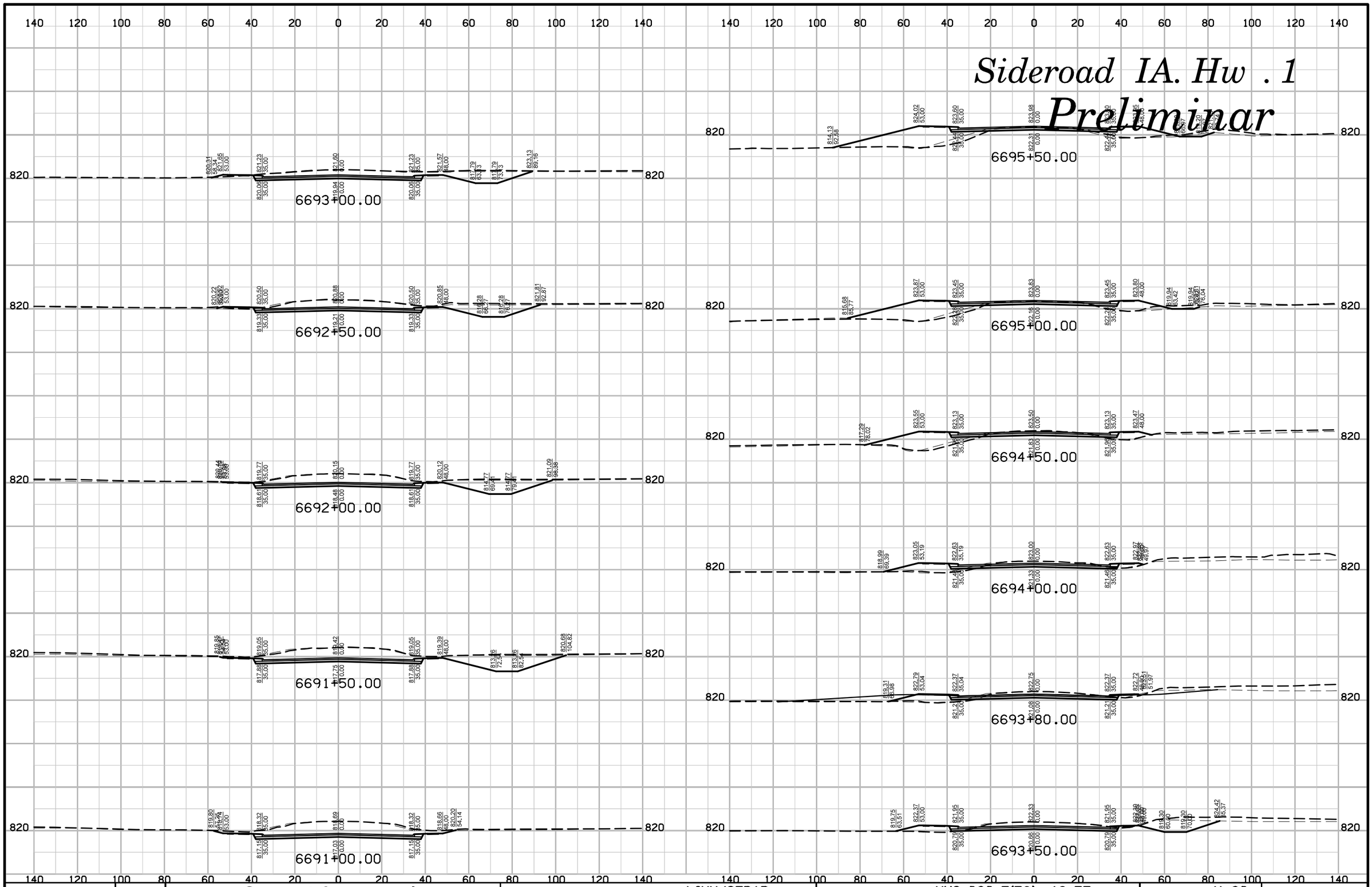


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.29

10:21:07 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x06.sht

Sideroad IA. Hw . 1

Preliminar

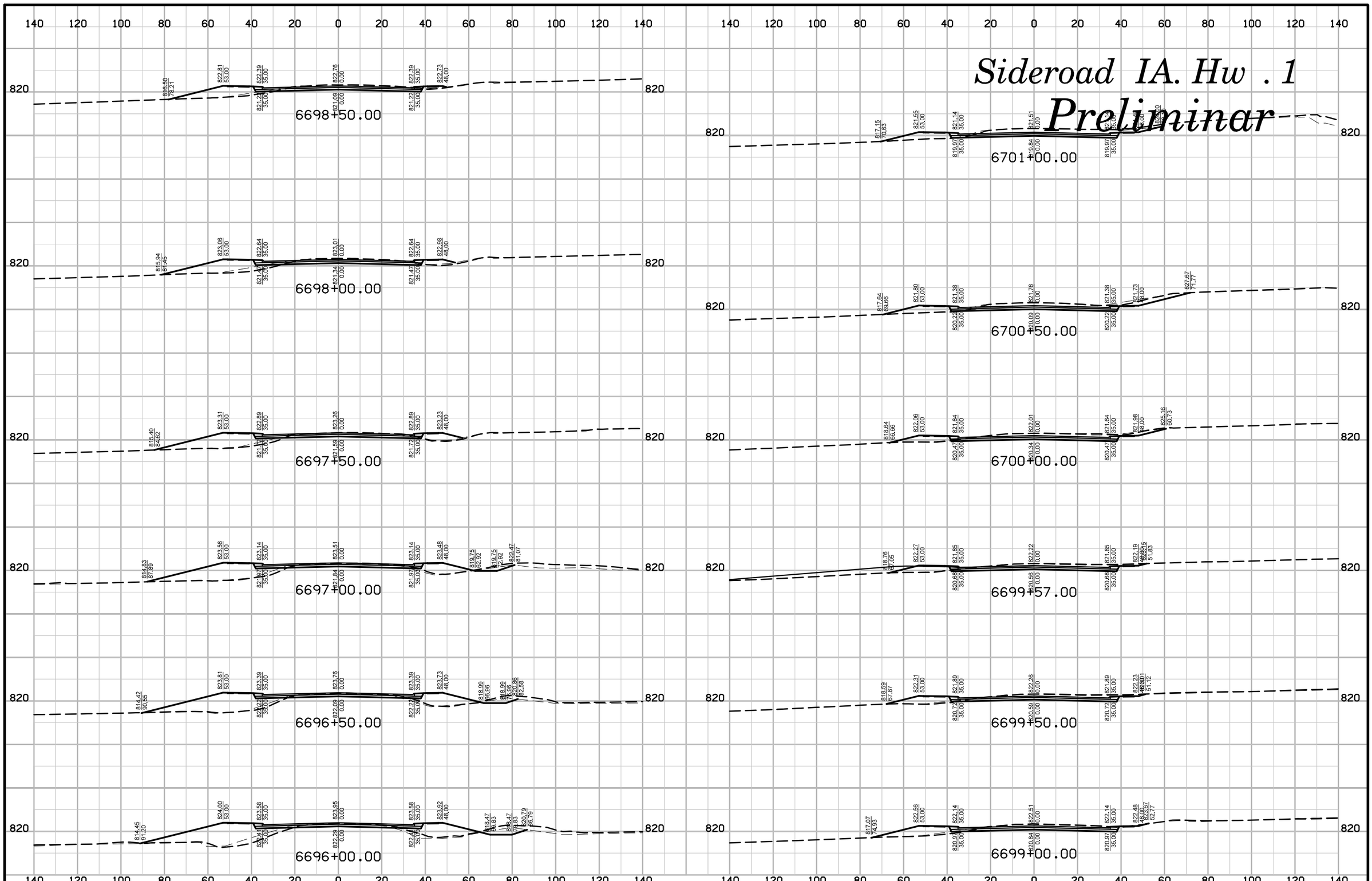


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.30

10:21:08 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x06.sht

Sideroad IA. Hw . 1

Preliminar

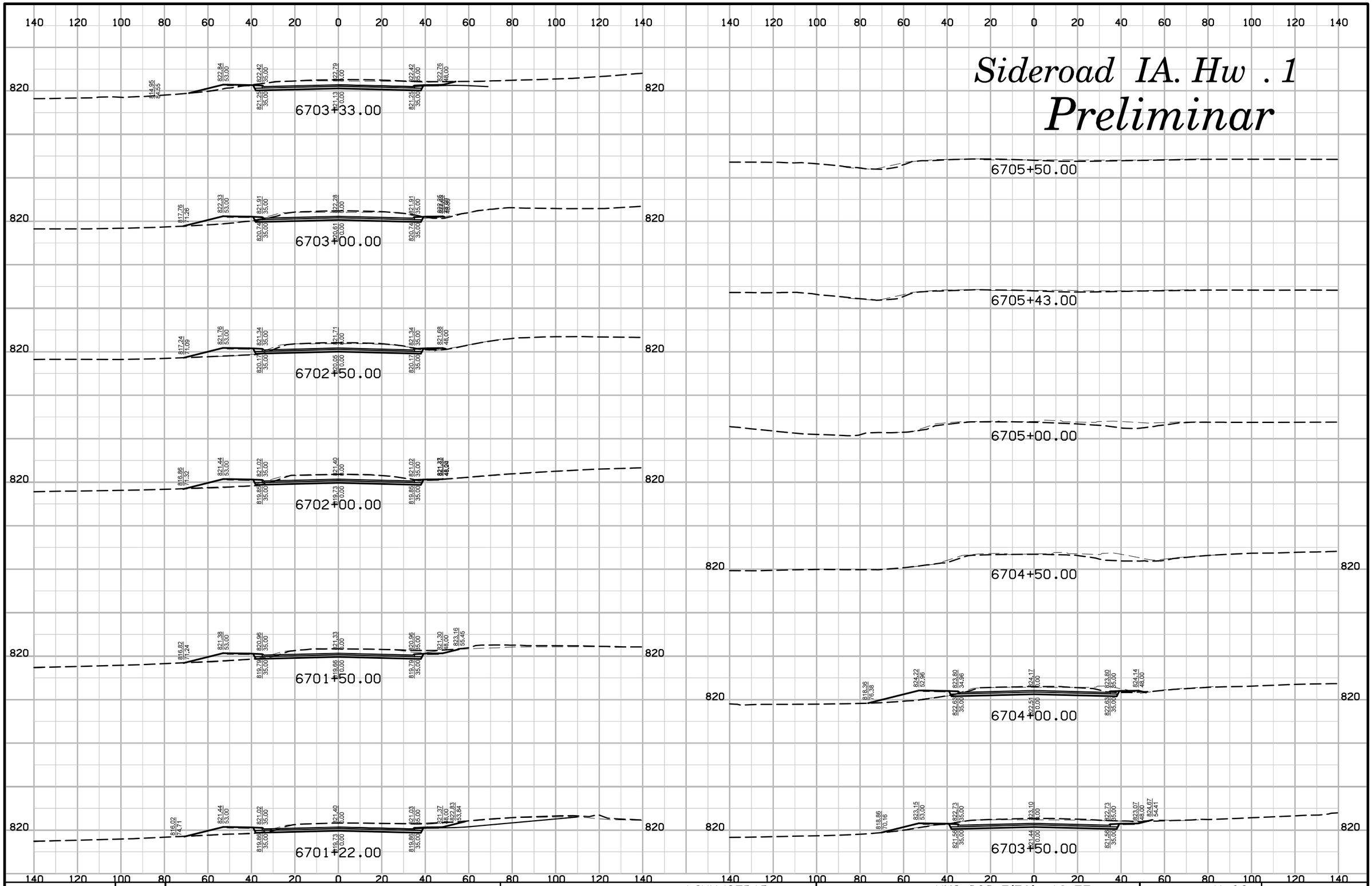


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.31

10:21:09 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x06.sht

Sideroad IA. Hw . 1

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.32

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

Sideroad IA. Hw . 1

Preliminar

6707+50.00

6707+00.00

6706+50.00

6706+05.85

6706+00.00

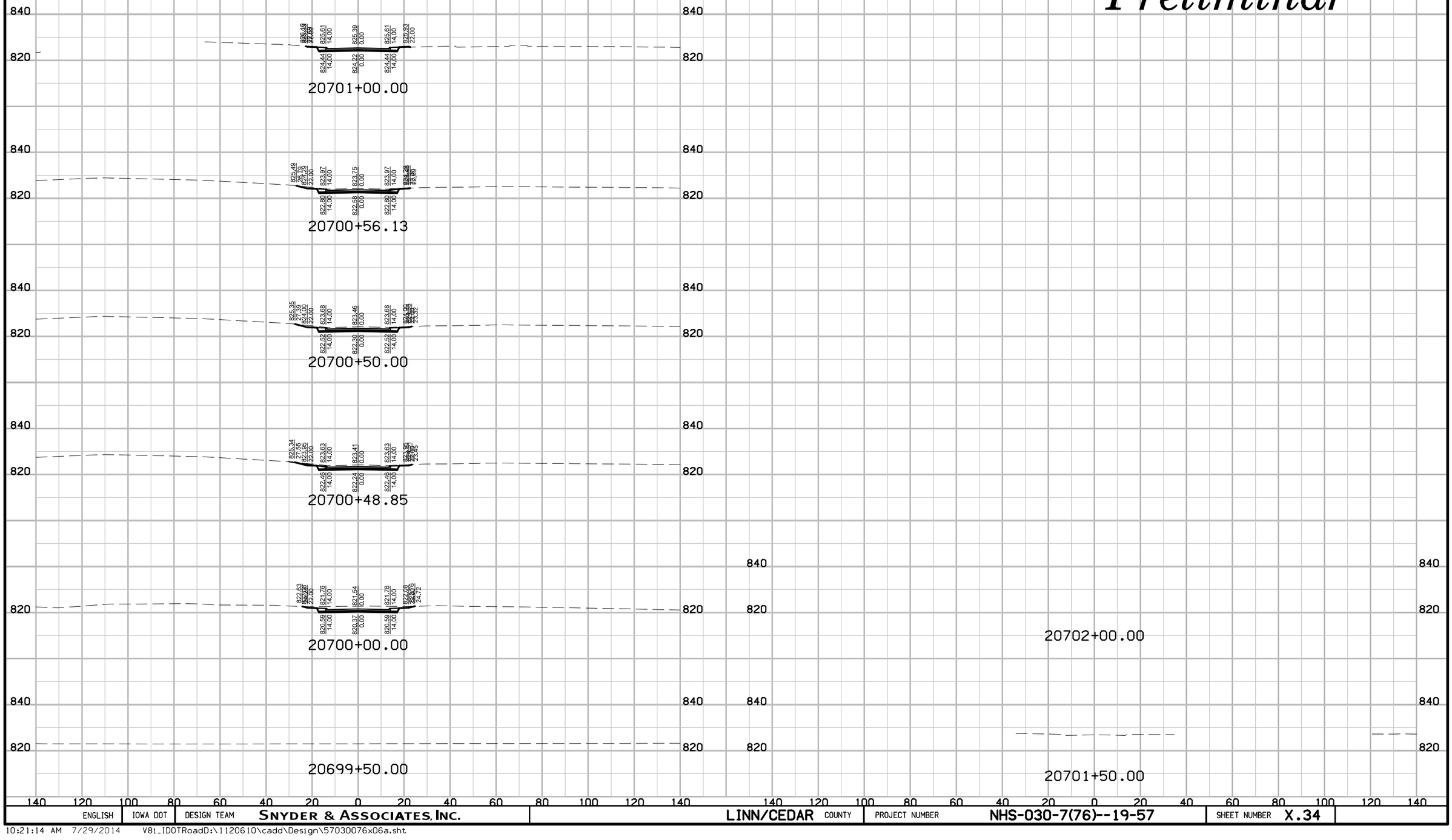
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.33

10:21:11 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x06.sht

Sideroad Virgil Ave.

Preliminar

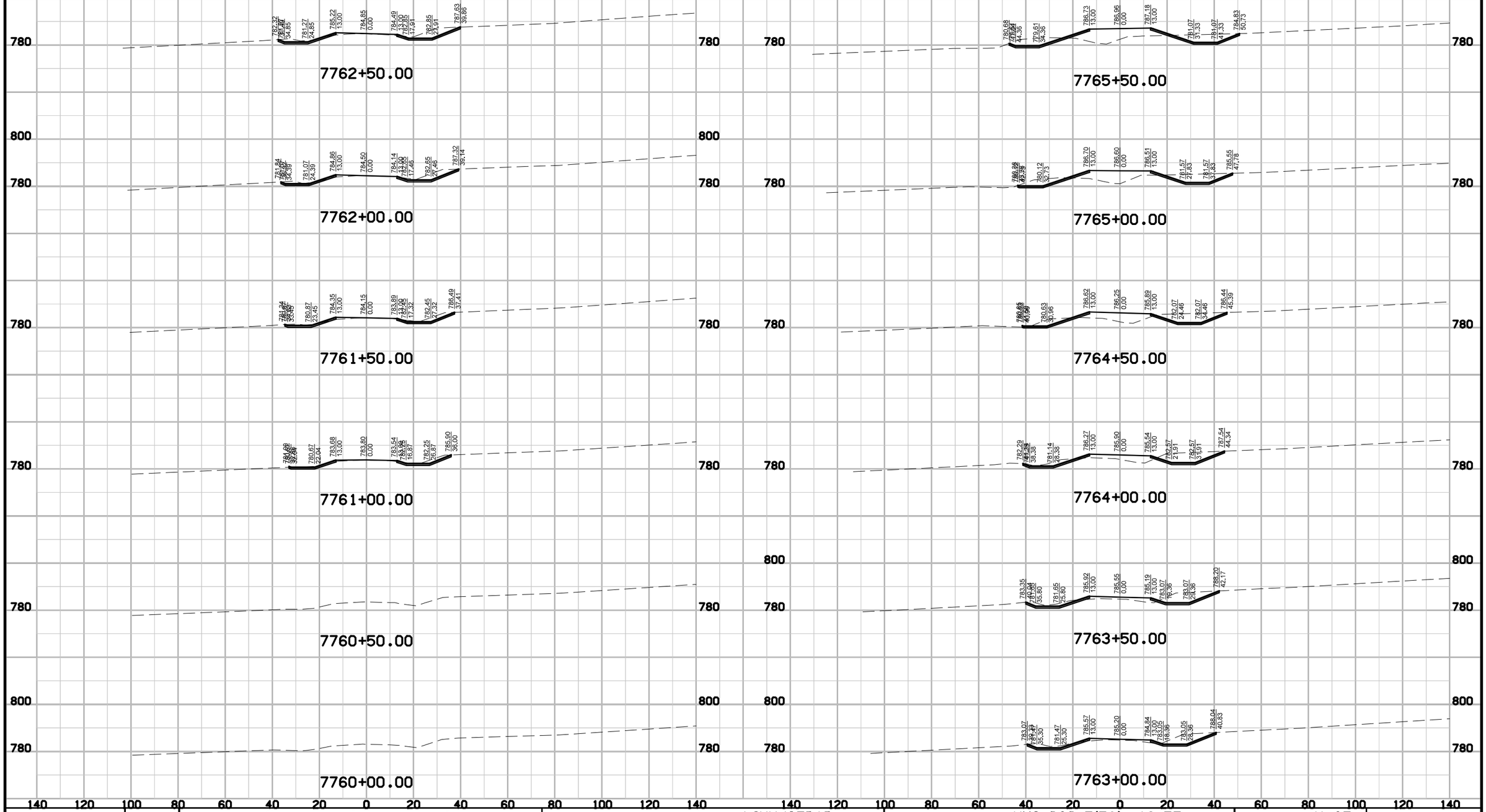


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.34

10:21:14 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x06a.sht

Sideroad Standing Rock Rd.

Preliminar

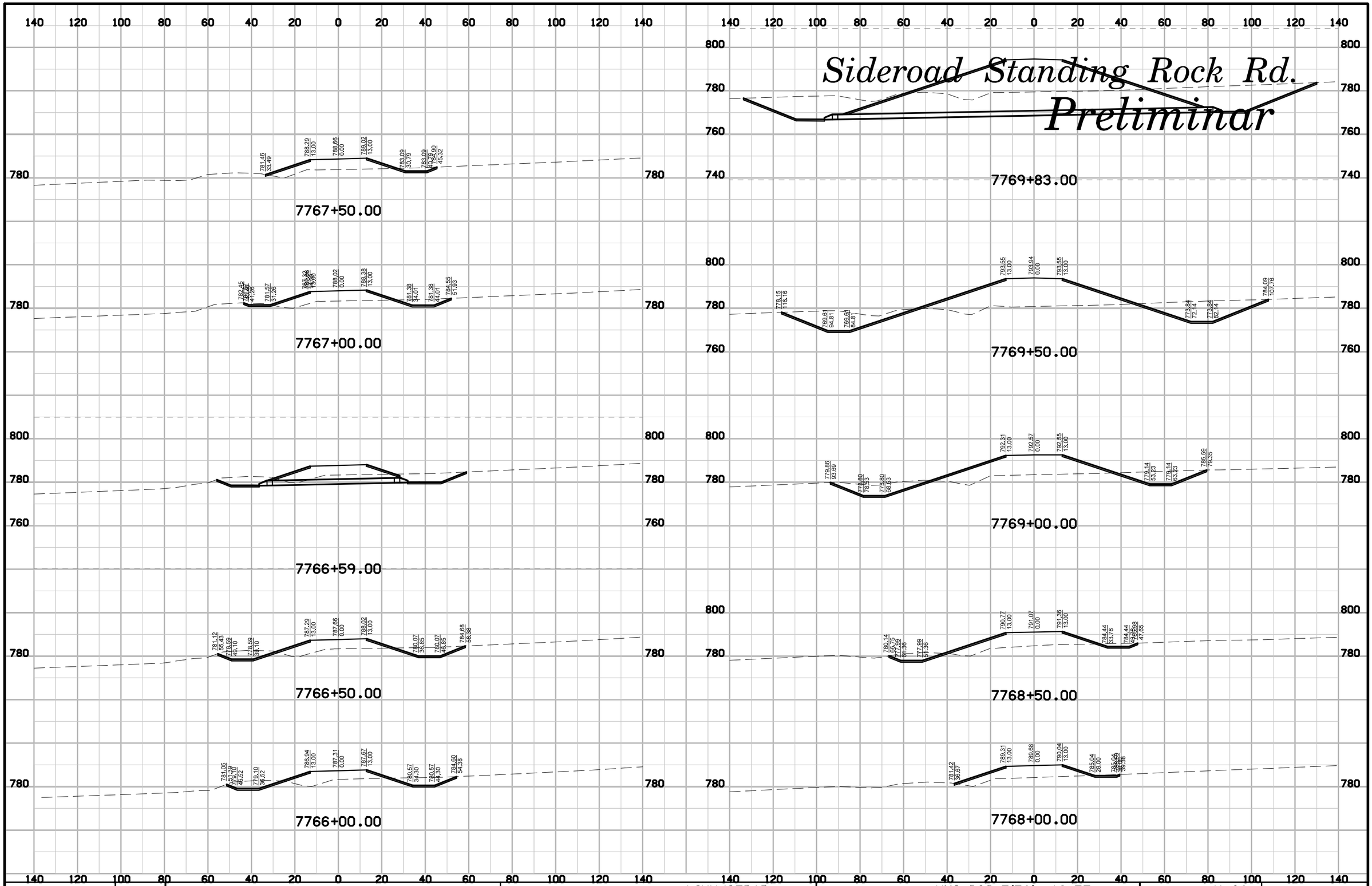


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.35

10:21:17 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x07.sht

Sideroad Standing Rock Rd.

Preliminar

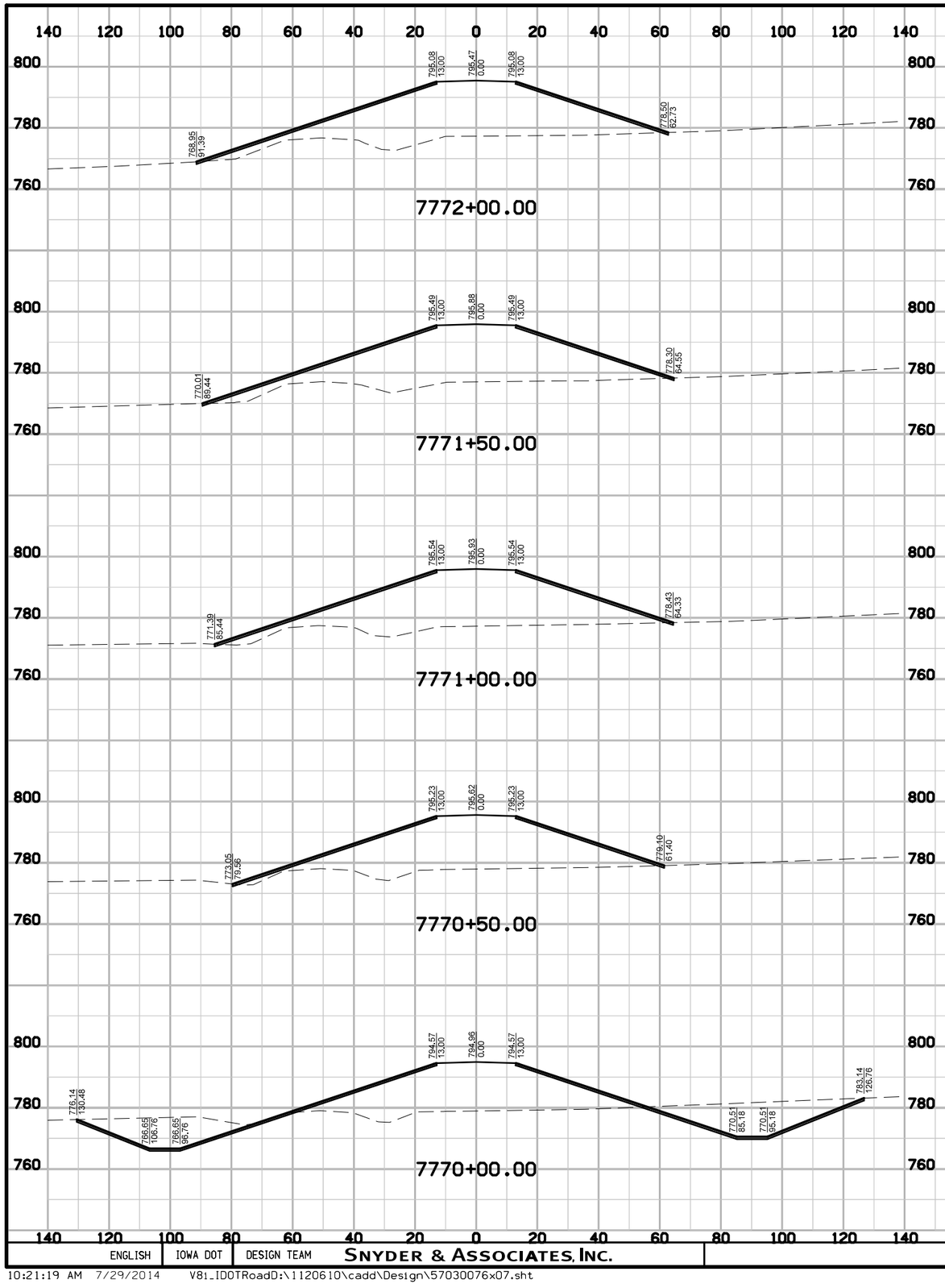


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.36

10:21:18 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x07.sht

Sideroad Standing Rock Rd.

Preliminar

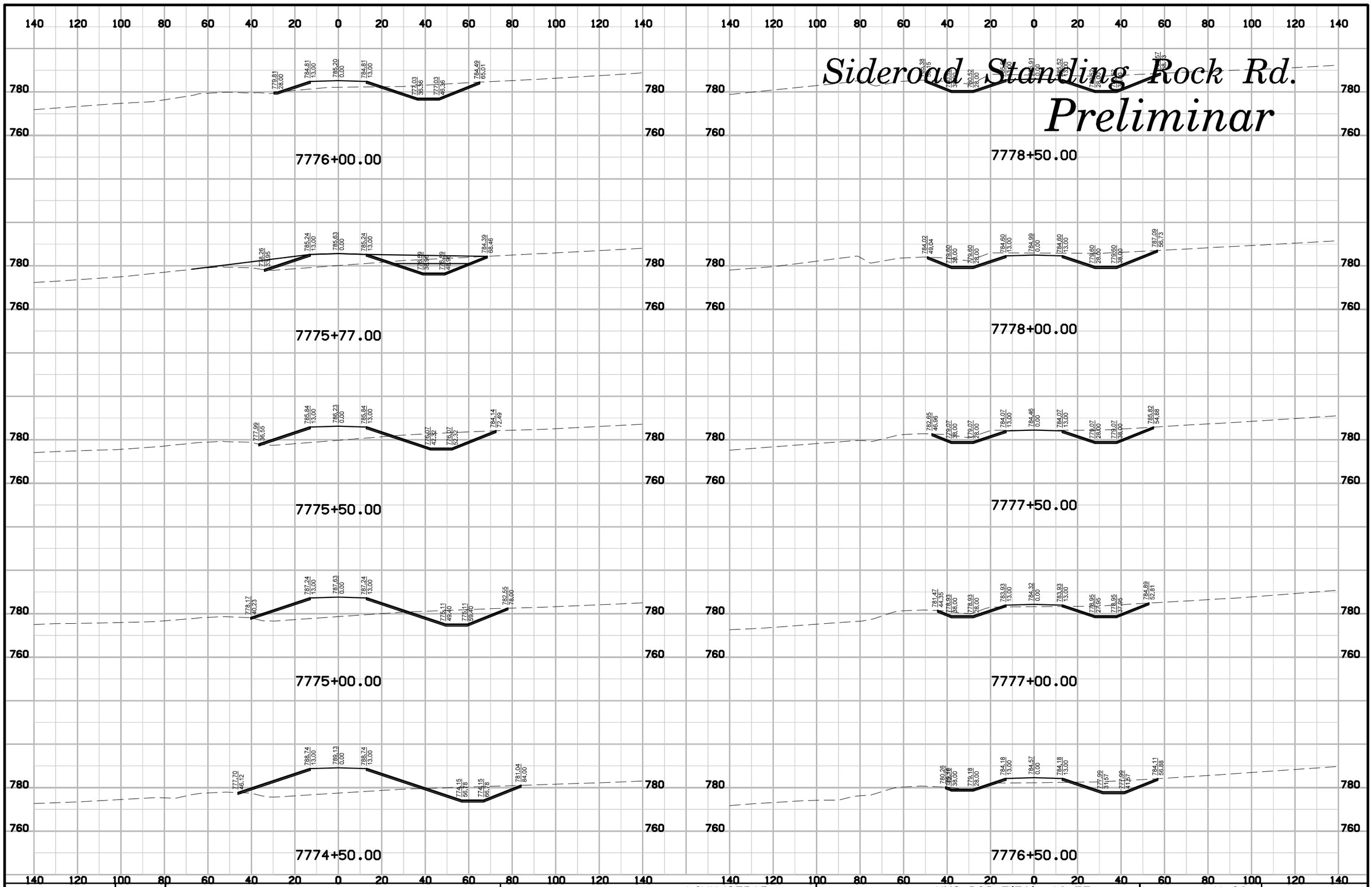


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.37

10:21:19 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x07.sht

Sideroad, Standing Rock Rd.

Preliminar

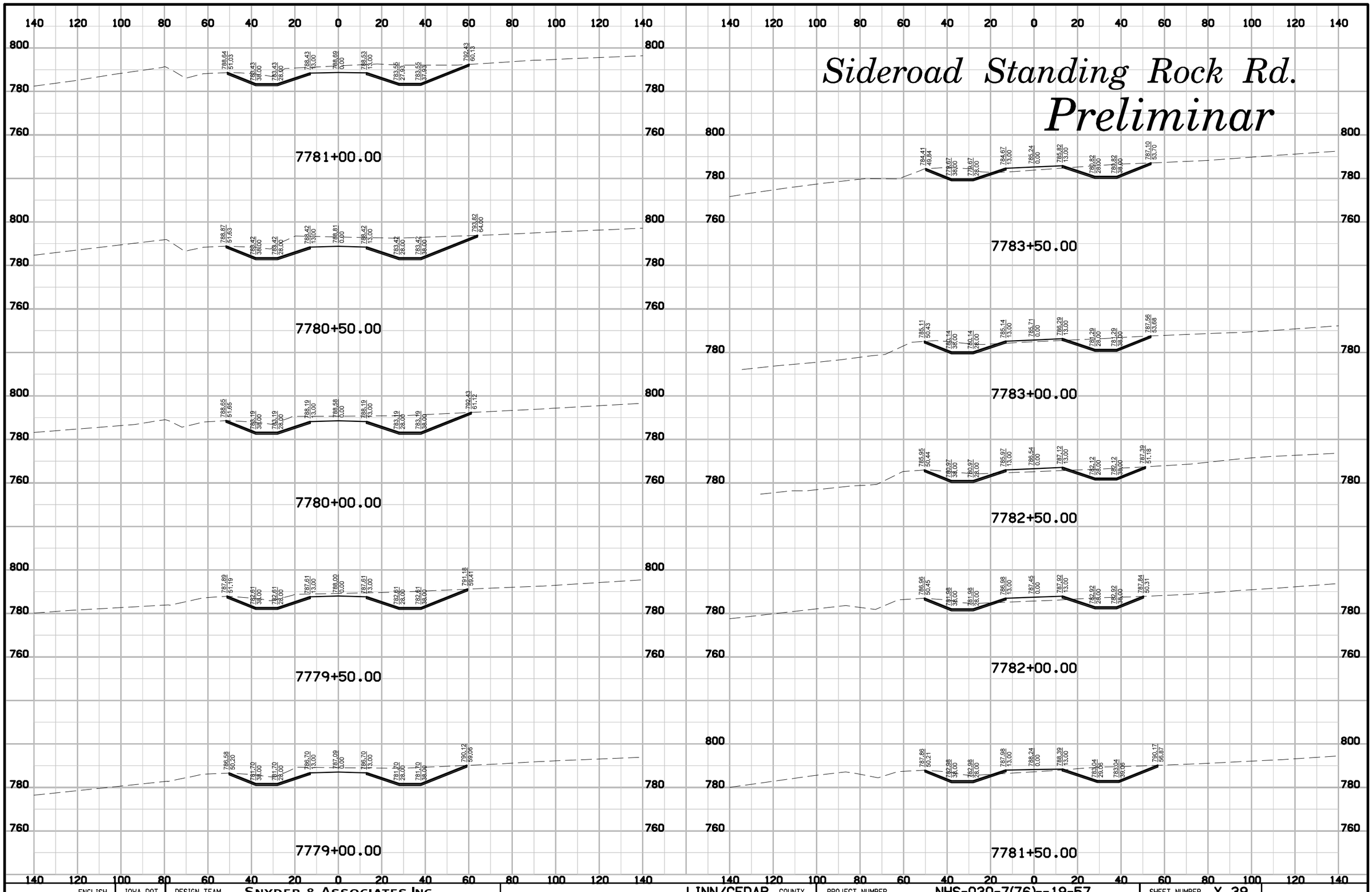


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.38

10:21:20 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x07.sht

Sideroad Standing Rock Rd.

Preliminar

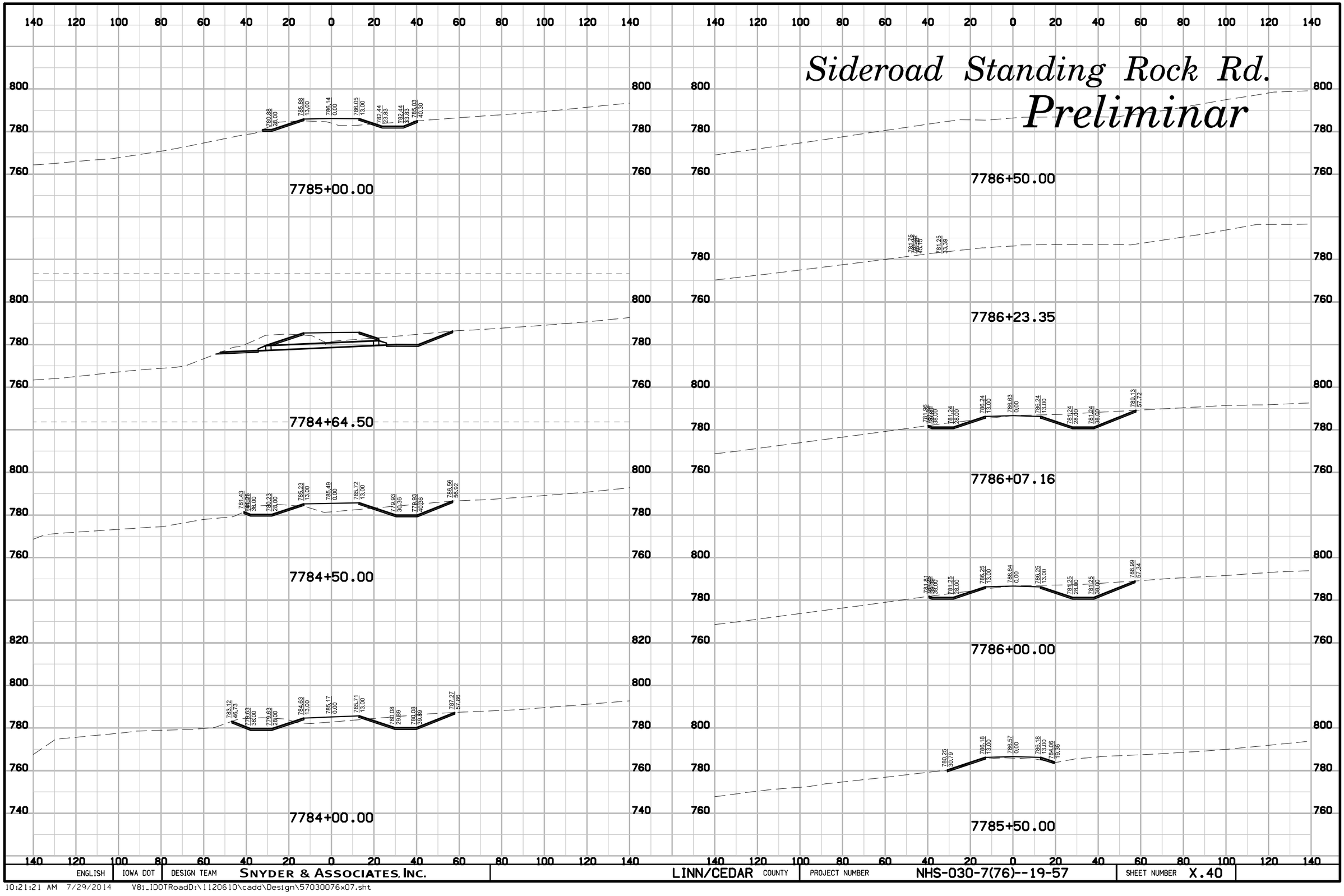


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.39

10:21:21 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x07.sht

Sideroad Standing Rock Rd.

Preliminar

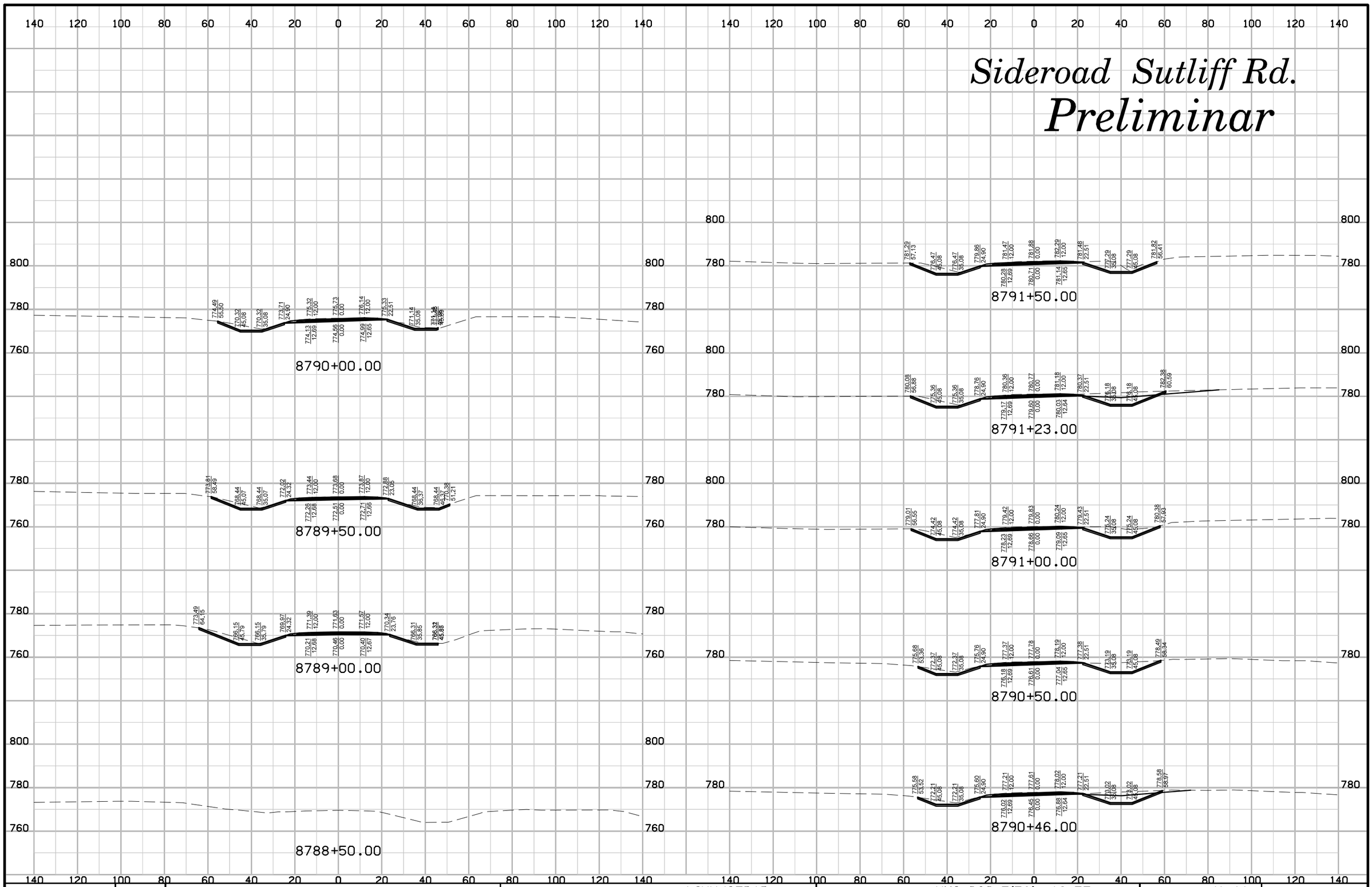


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.40

10:21:21 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x07.sht

Sideroad Sutliff Rd.

Preliminar

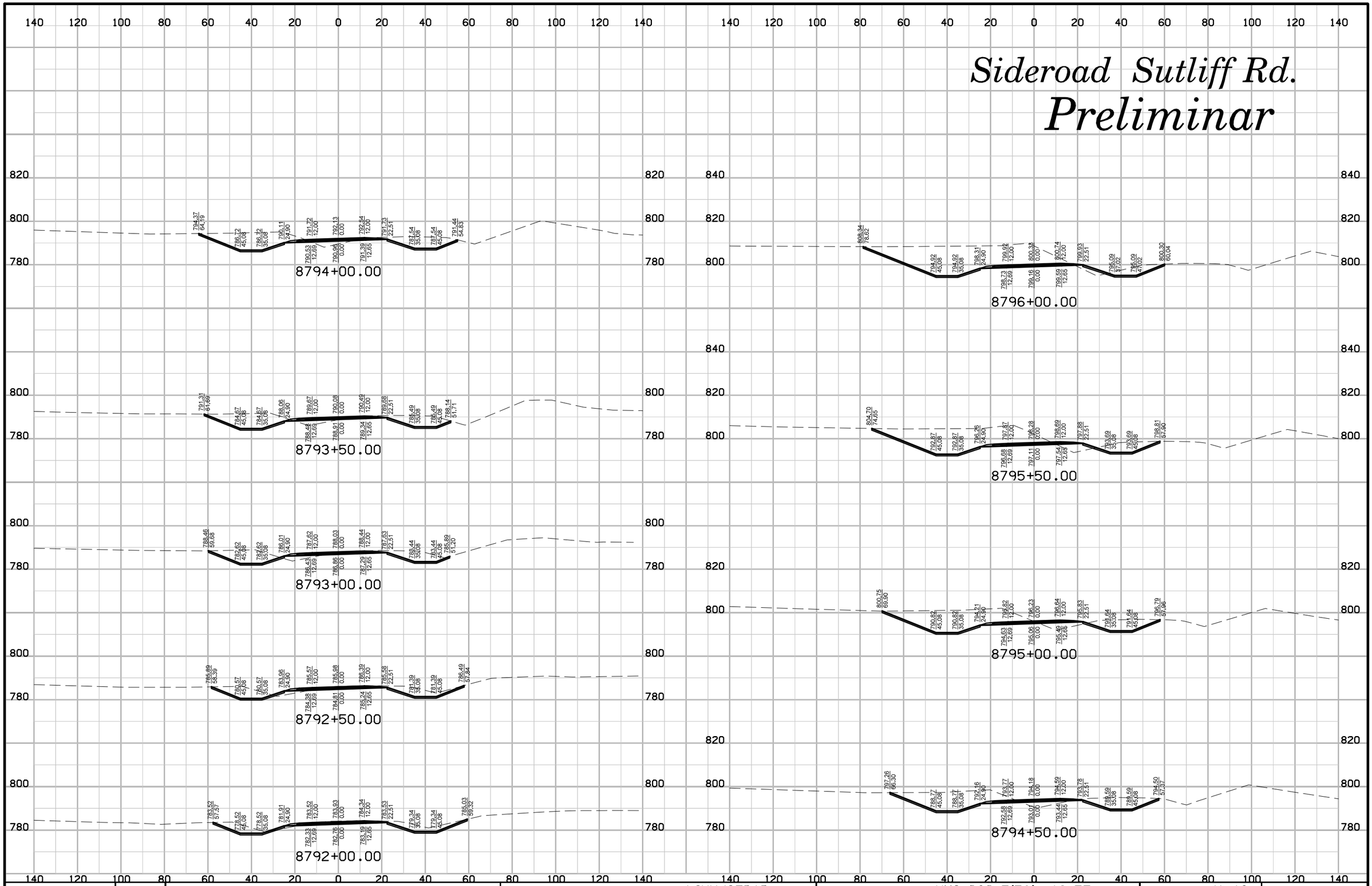


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.41

10:21:25 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x08.sht

Sideroad Sutliff Rd.

Preliminar

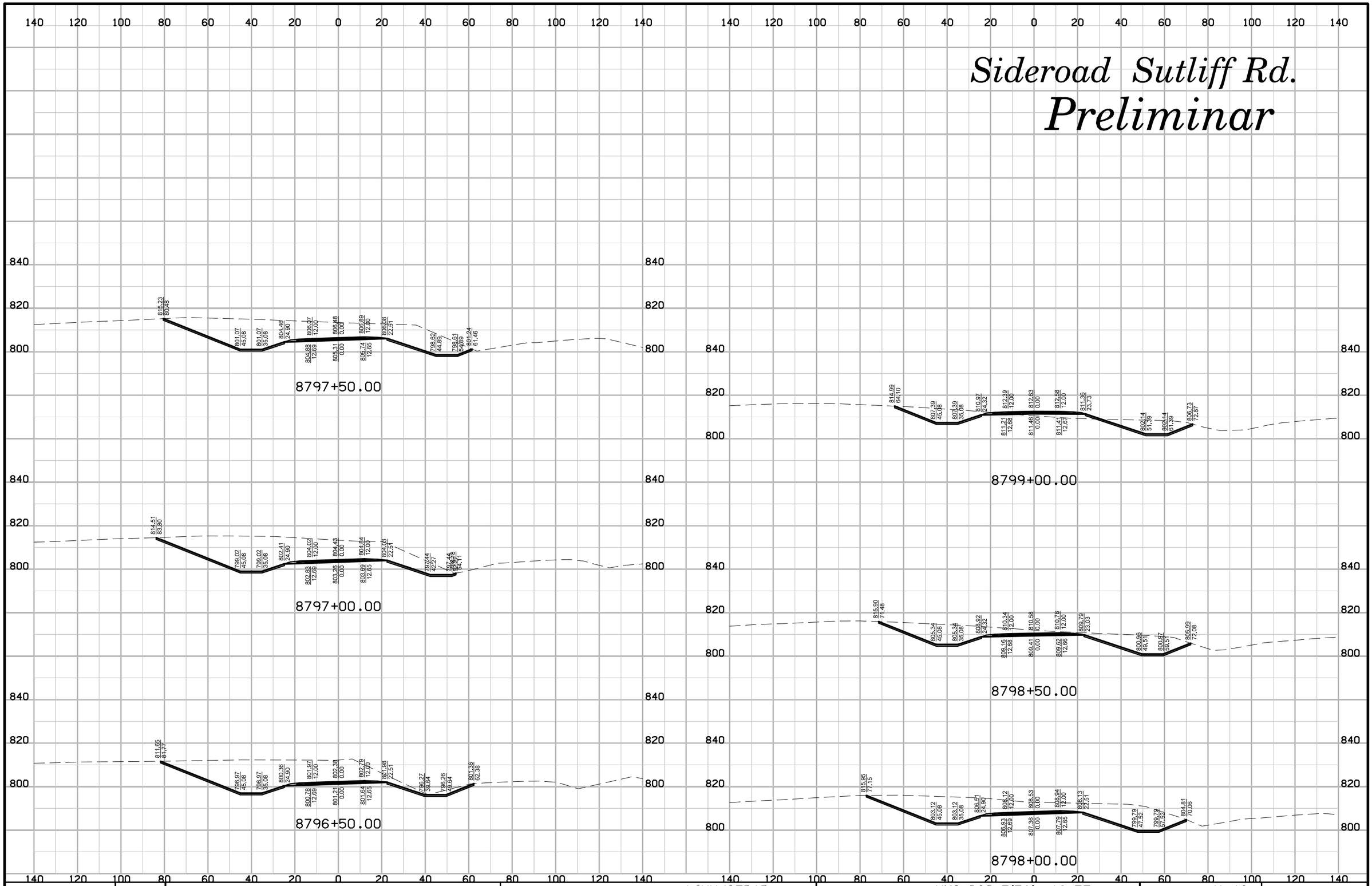


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.42

10:21:26 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x08.sht

Sideroad Sutliff Rd.

Preliminar

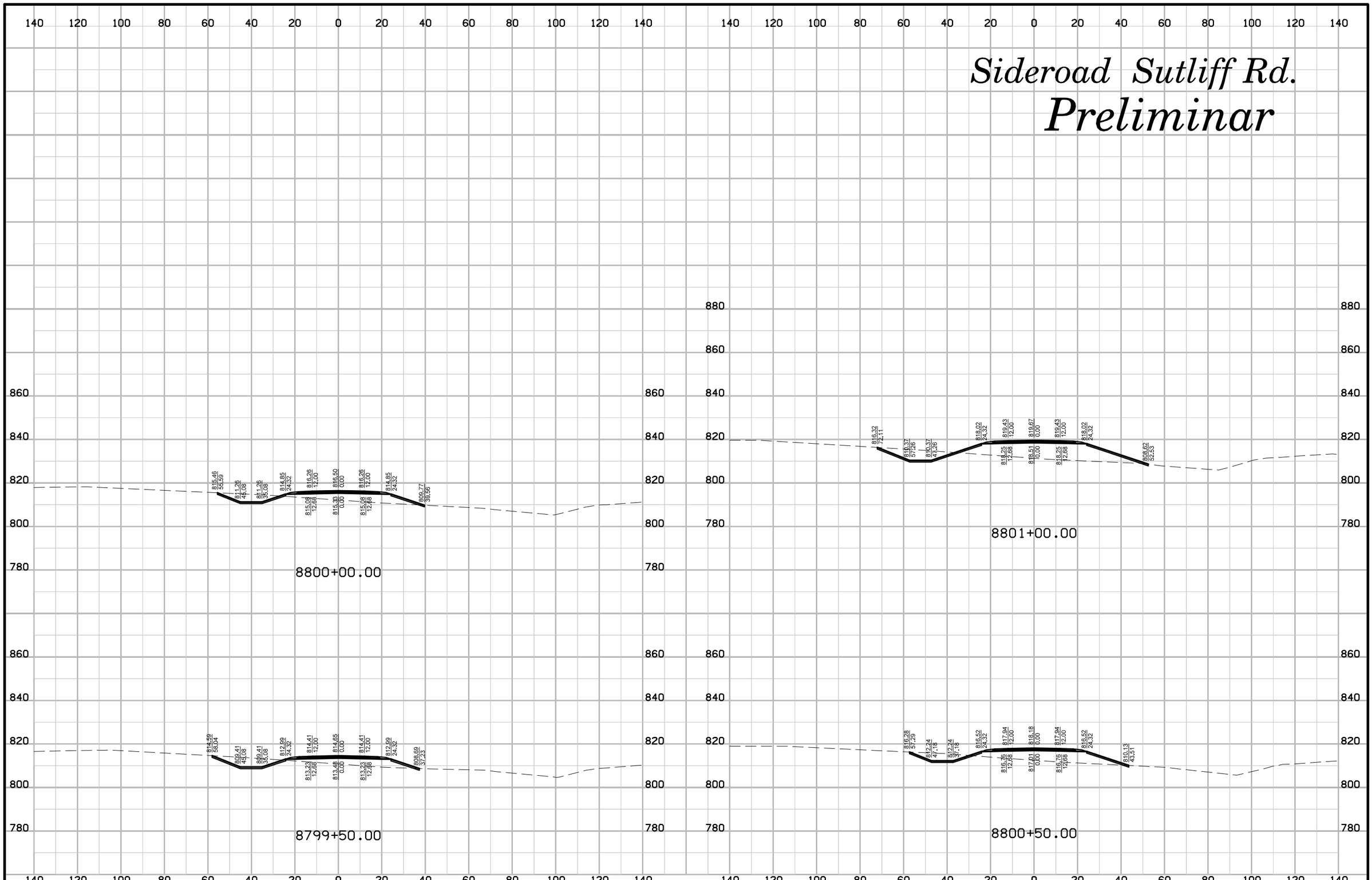


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.43

10:21:27 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x08.sht

Sideroad Sutliff Rd.

Preliminar

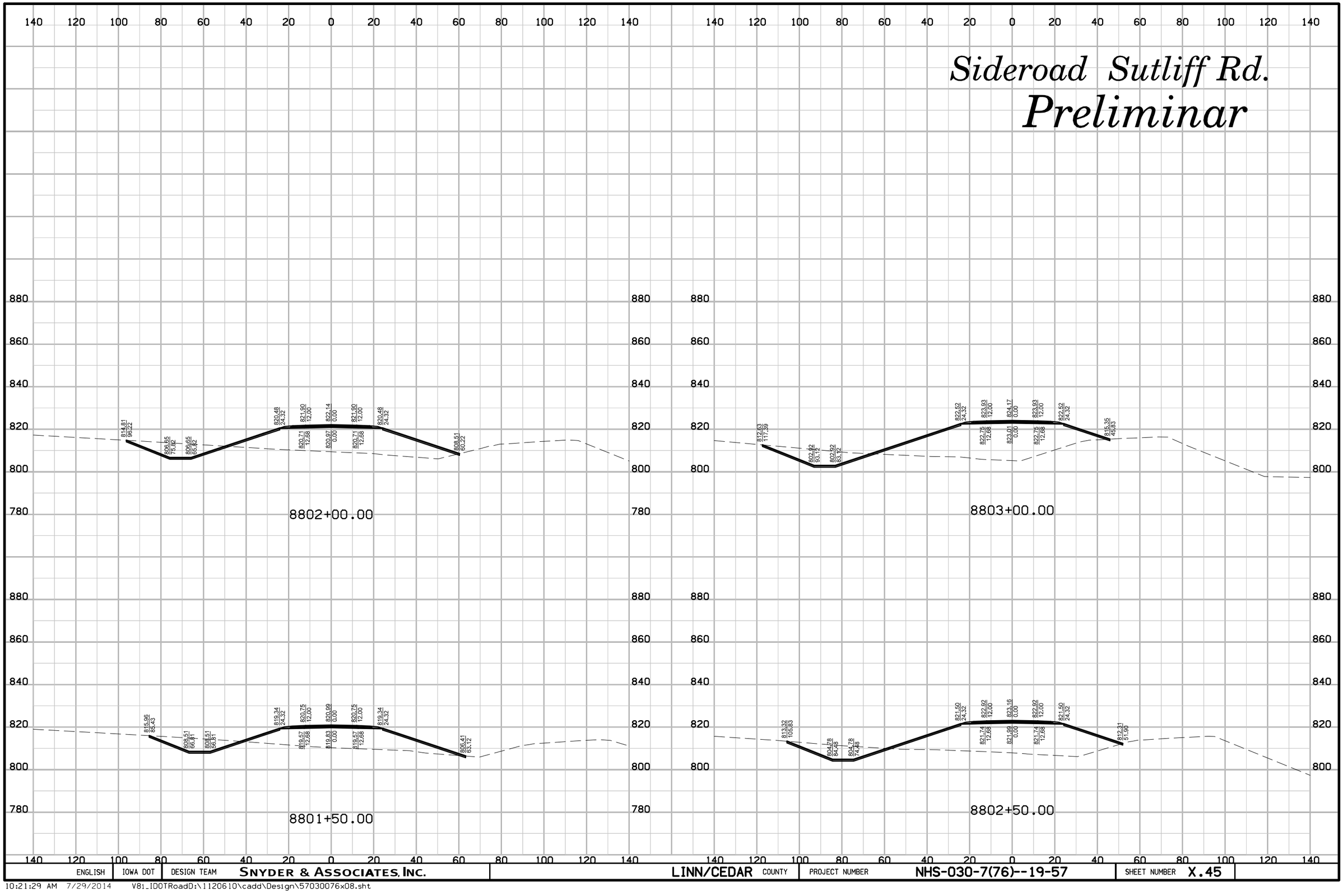


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.44

10:21:28 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x08.sht

Sideroad Sutliff Rd.

Preliminar

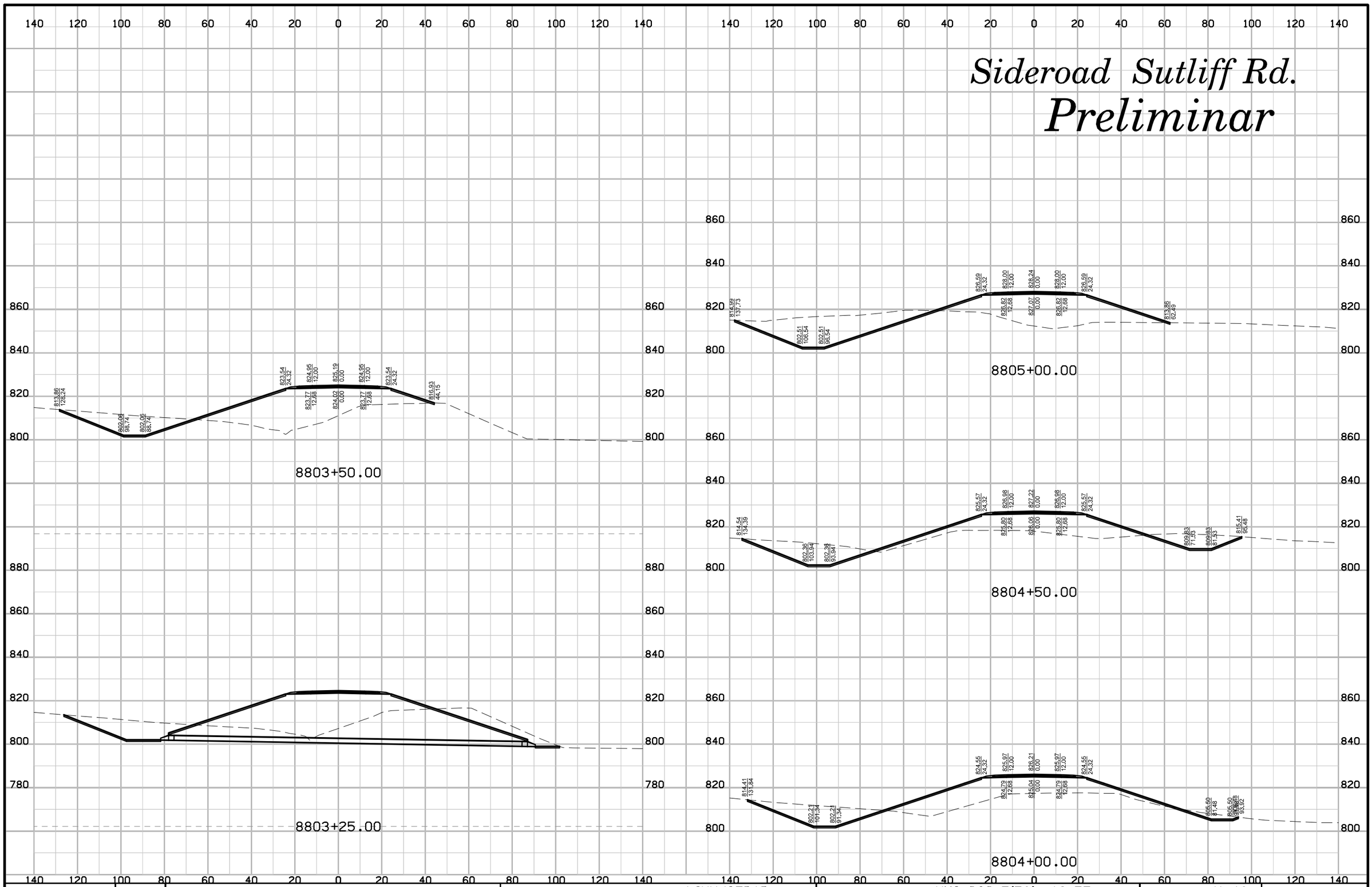


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.45

10:21:29 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x08.sht

Sideroad Sutliff Rd.

Preliminar

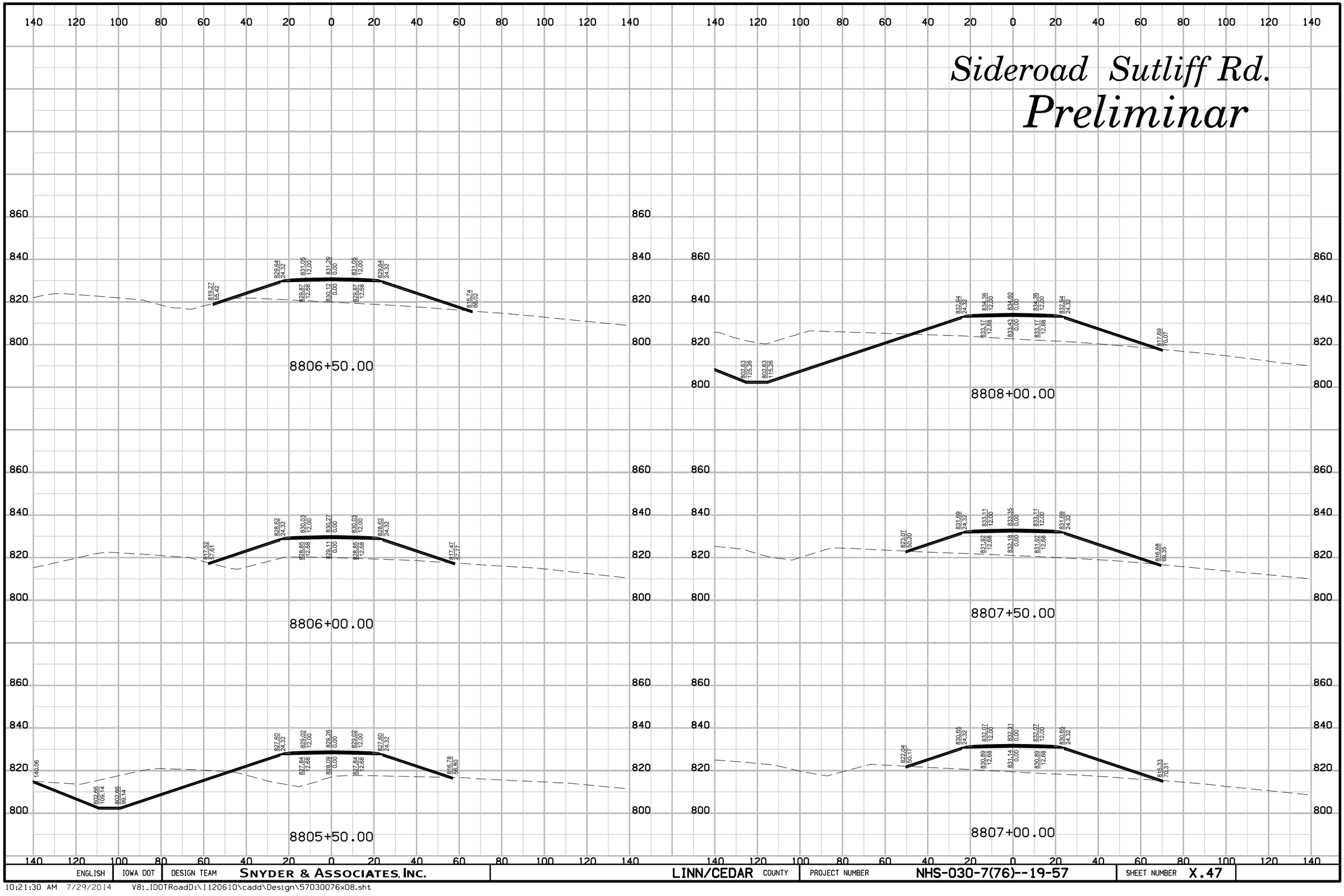


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.46

10:21:29 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x08.sht

Sideroad Sutliff Rd.

Preliminar

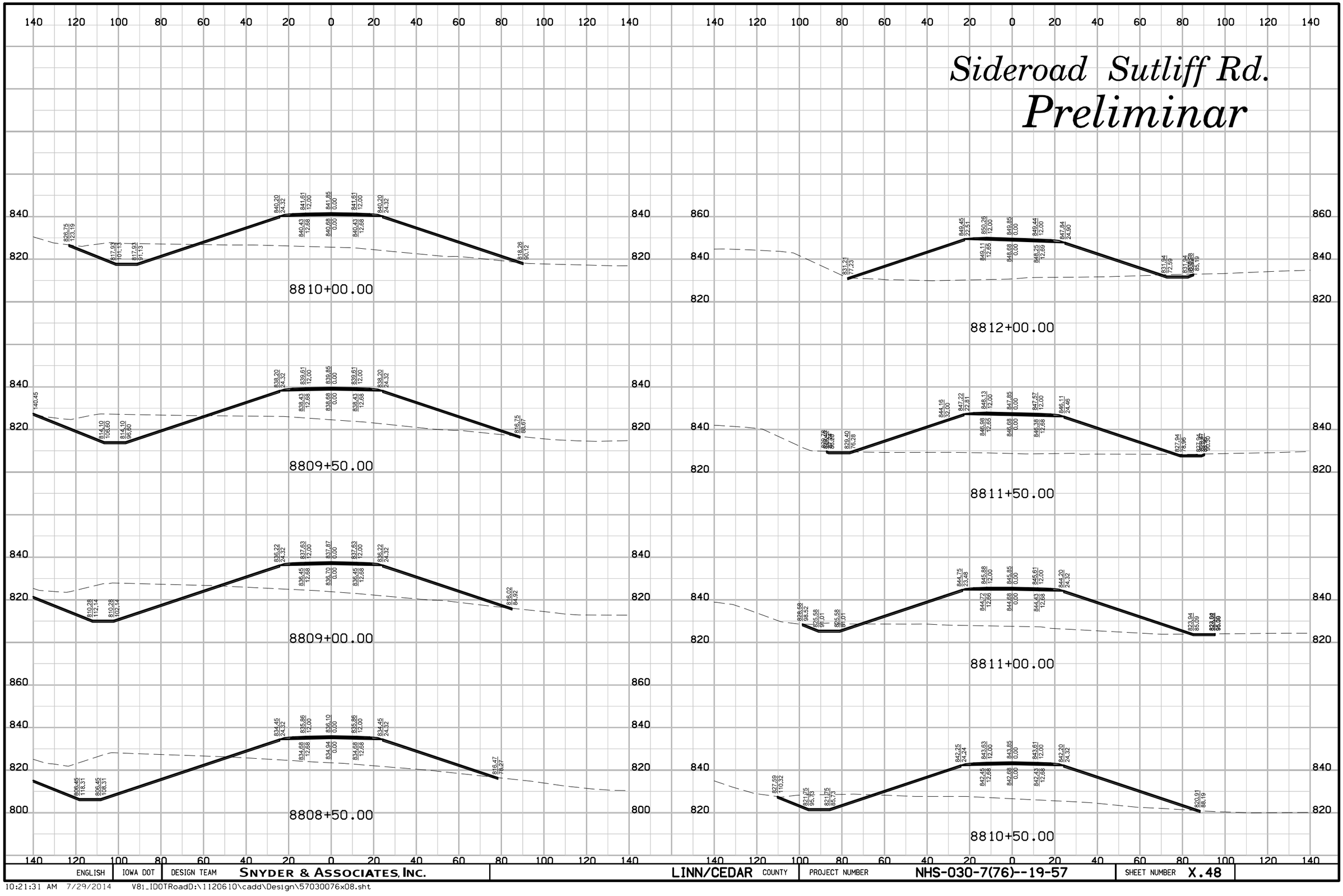


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.47

10:21:30 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x08.sht

Sideroad Sutliff Rd.

Preliminar

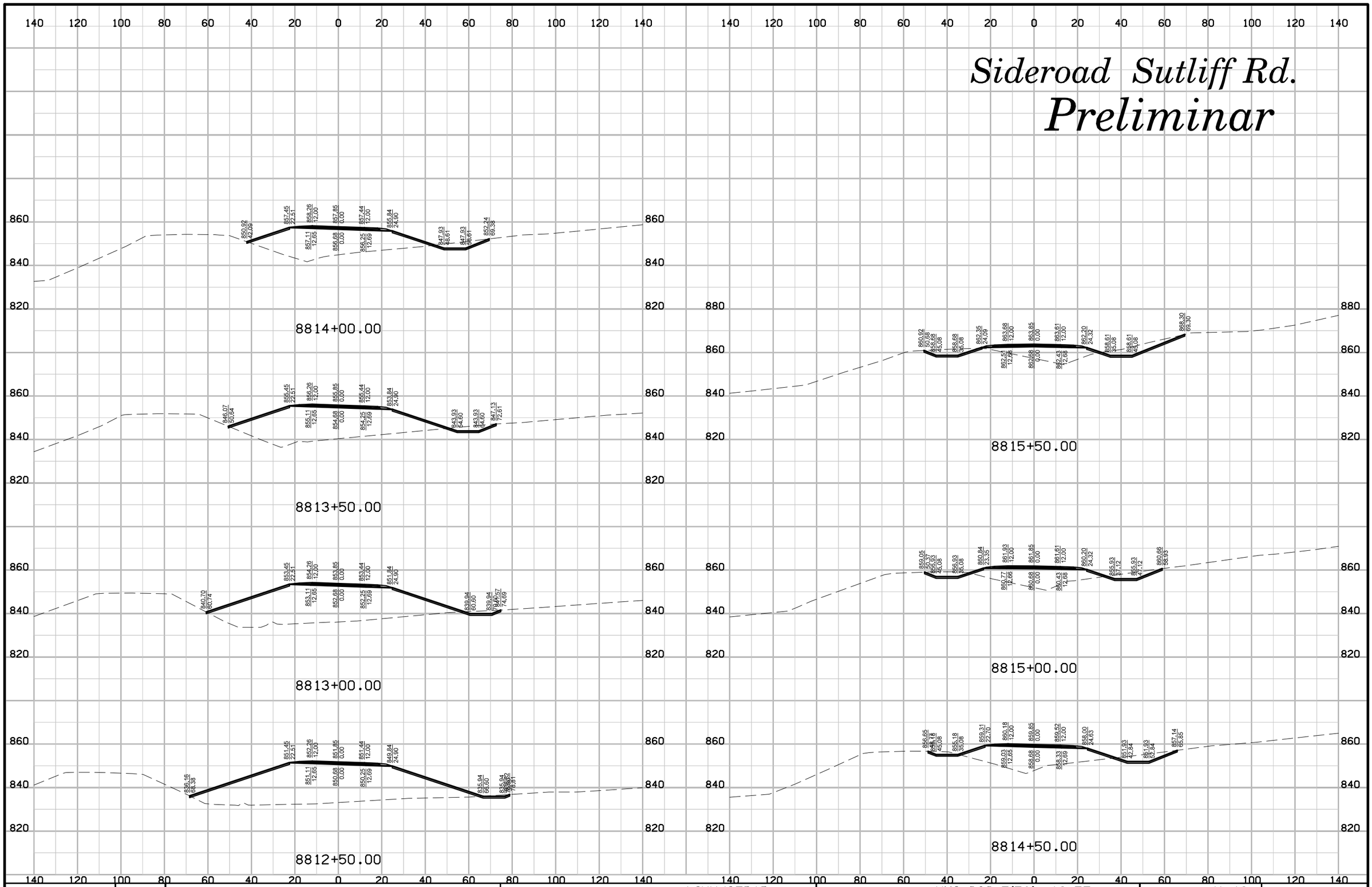


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.48

10:21:31 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x08.sht

Sideroad Sutliff Rd.

Preliminar

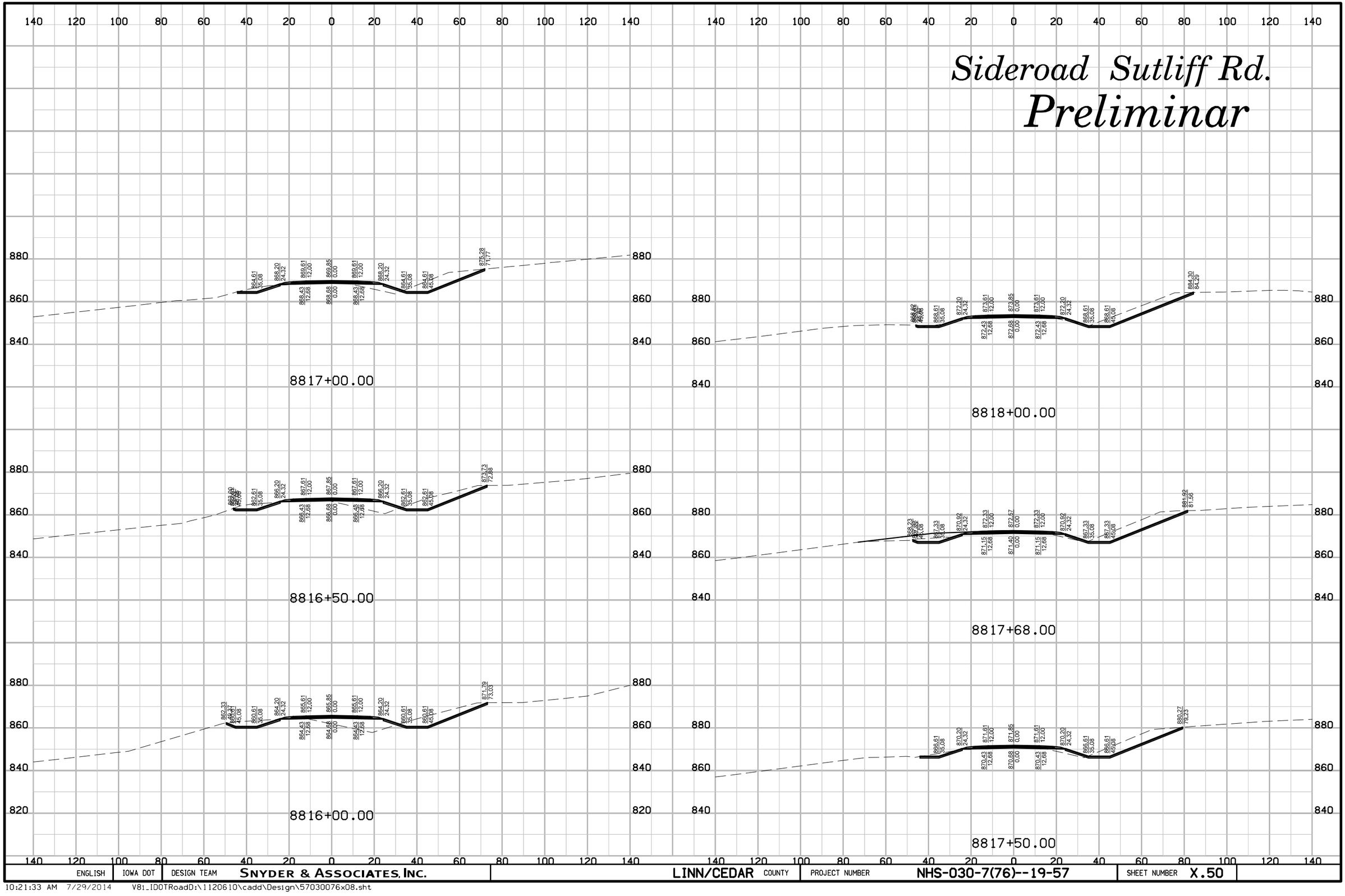


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.49

10:21:32 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x08.sht

Sideroad Sutliff Rd.

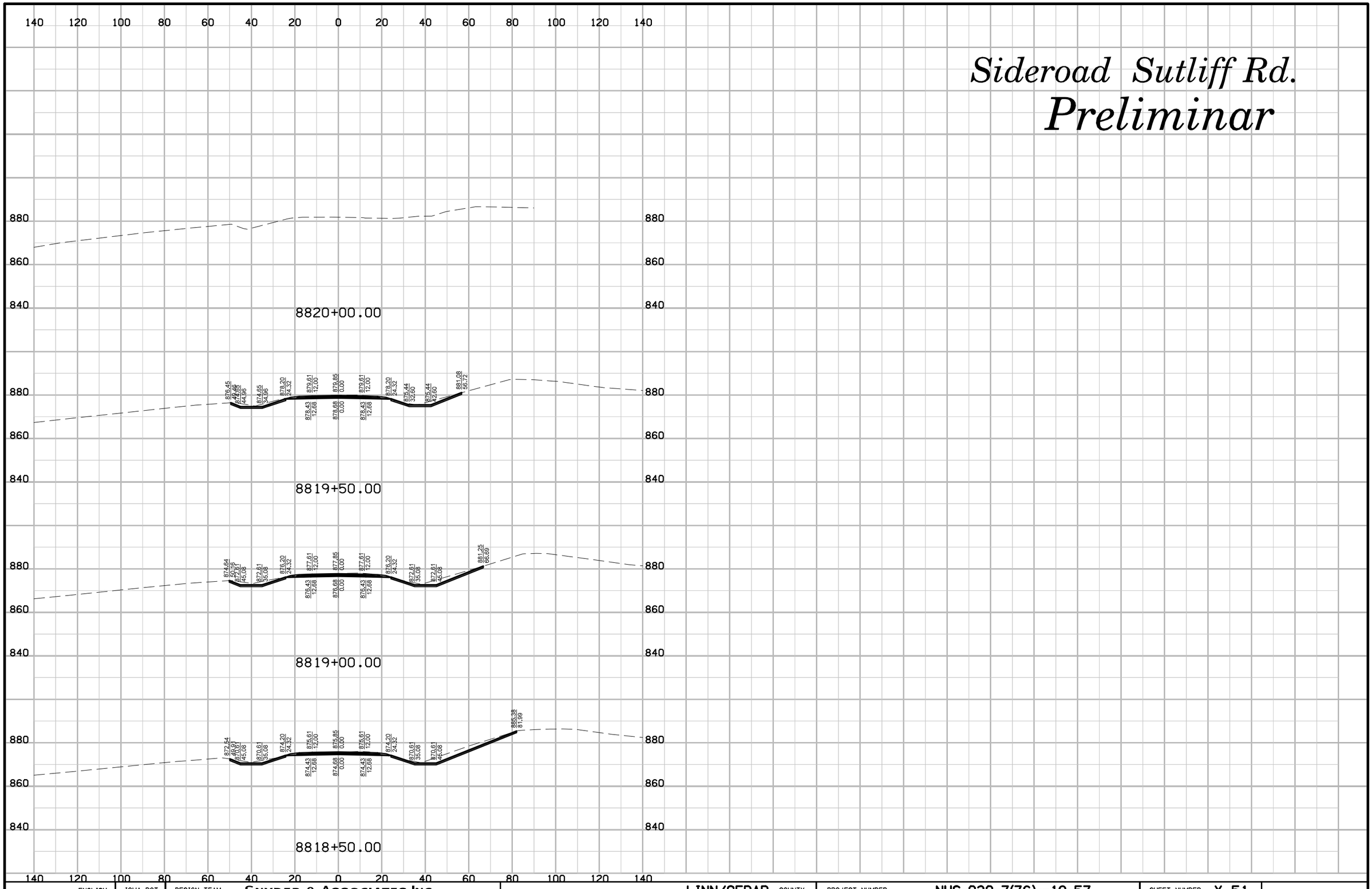
Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.50

Sideroad Sutliff Rd.

Preliminar

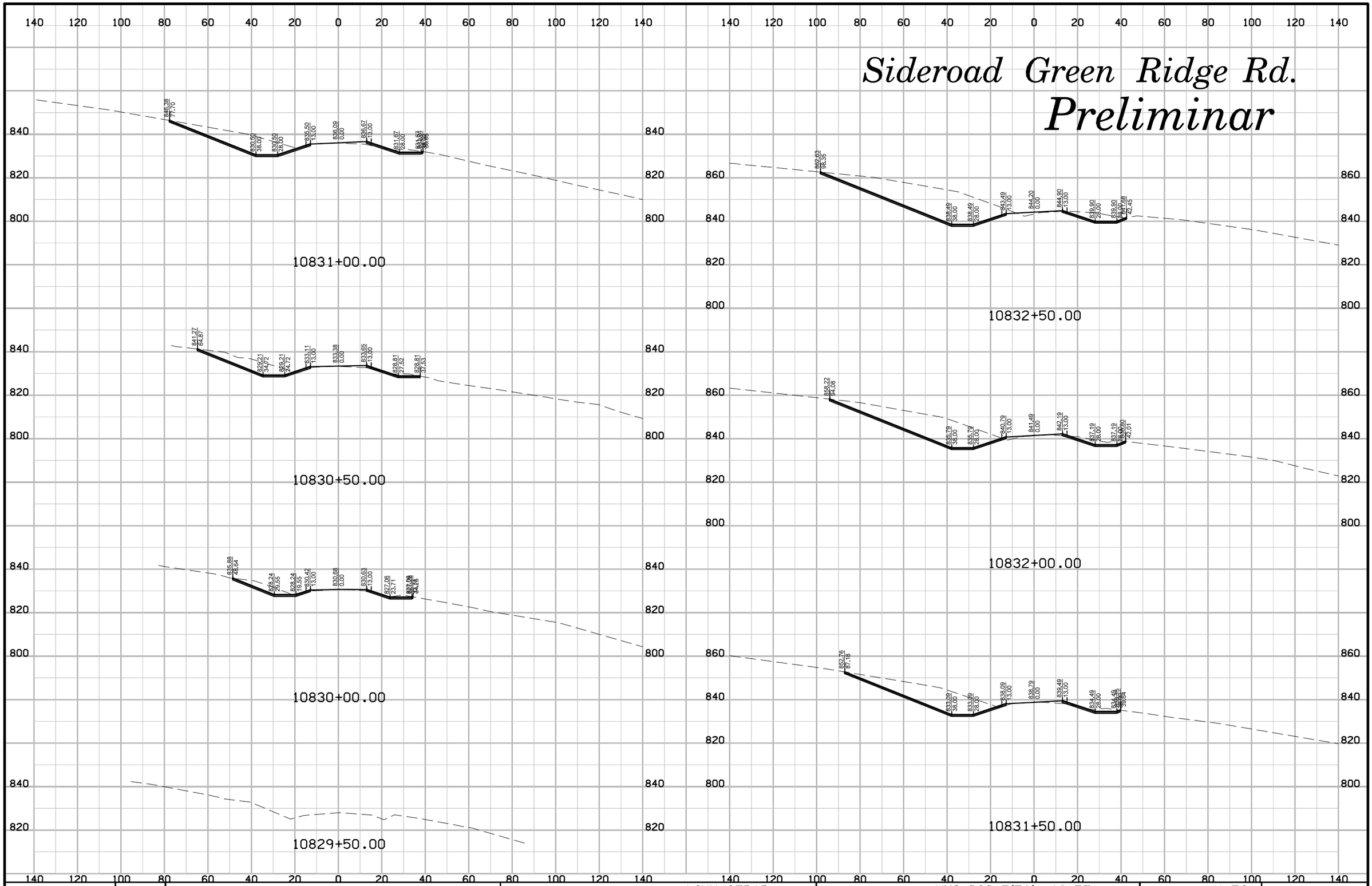


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.51

10:21:34 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x08.sht

Sideroad Green Ridge Rd.

Preliminar

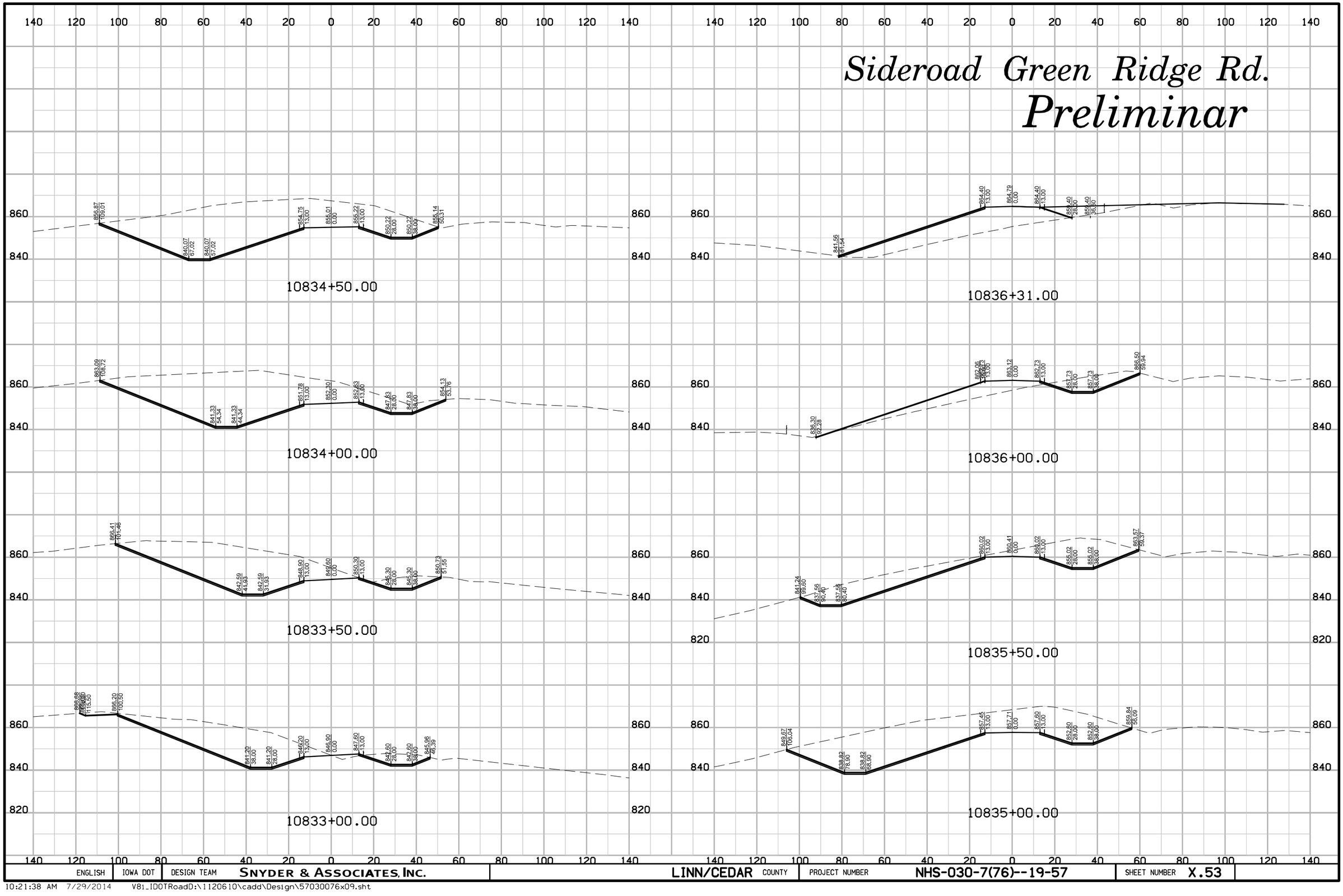


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.52

10:21:37 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x09.sht

Sideroad Green Ridge Rd.

Preliminar

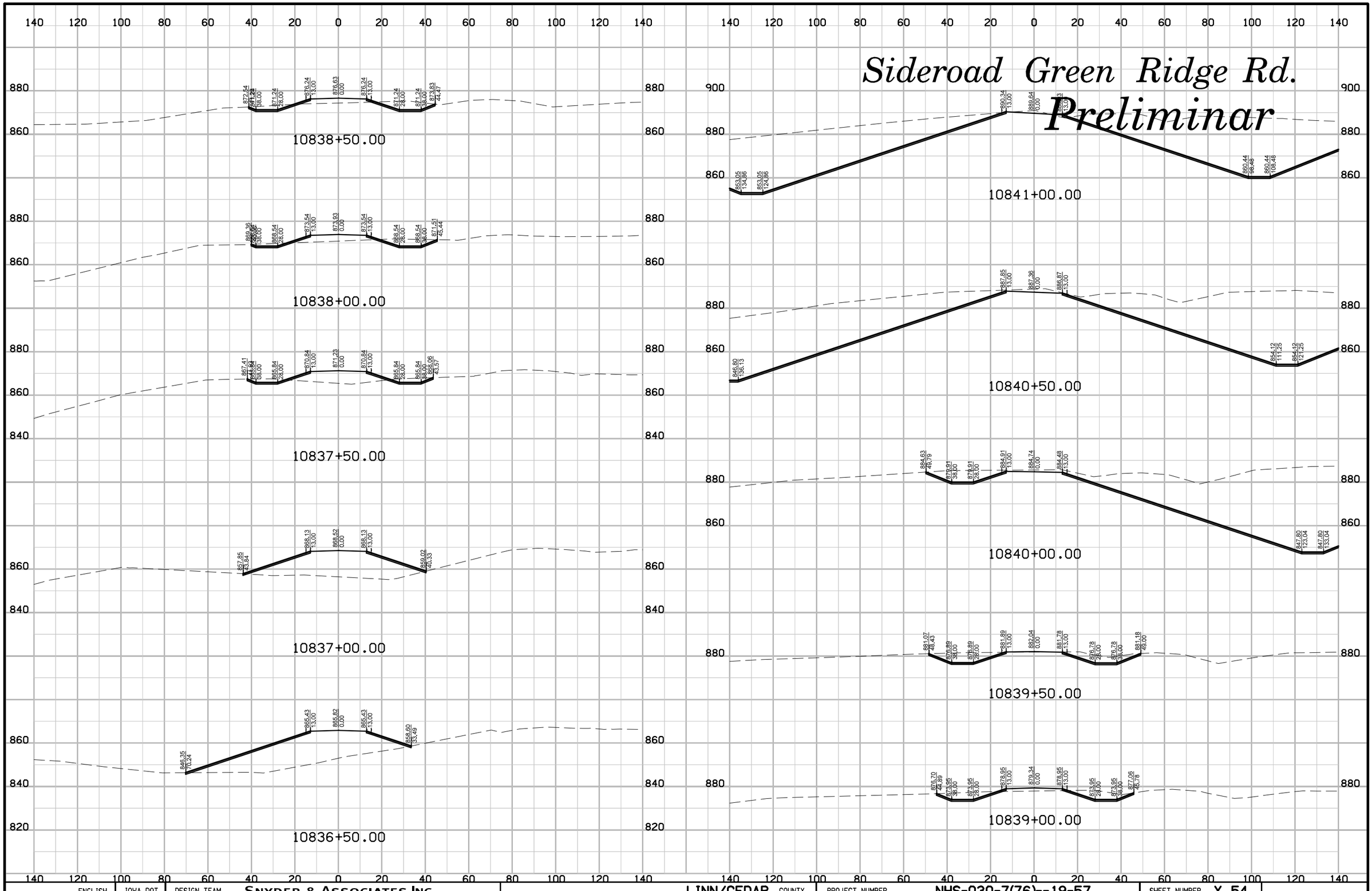


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.53

10:21:38 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x09.sht

Sideroad Green Ridge Rd.

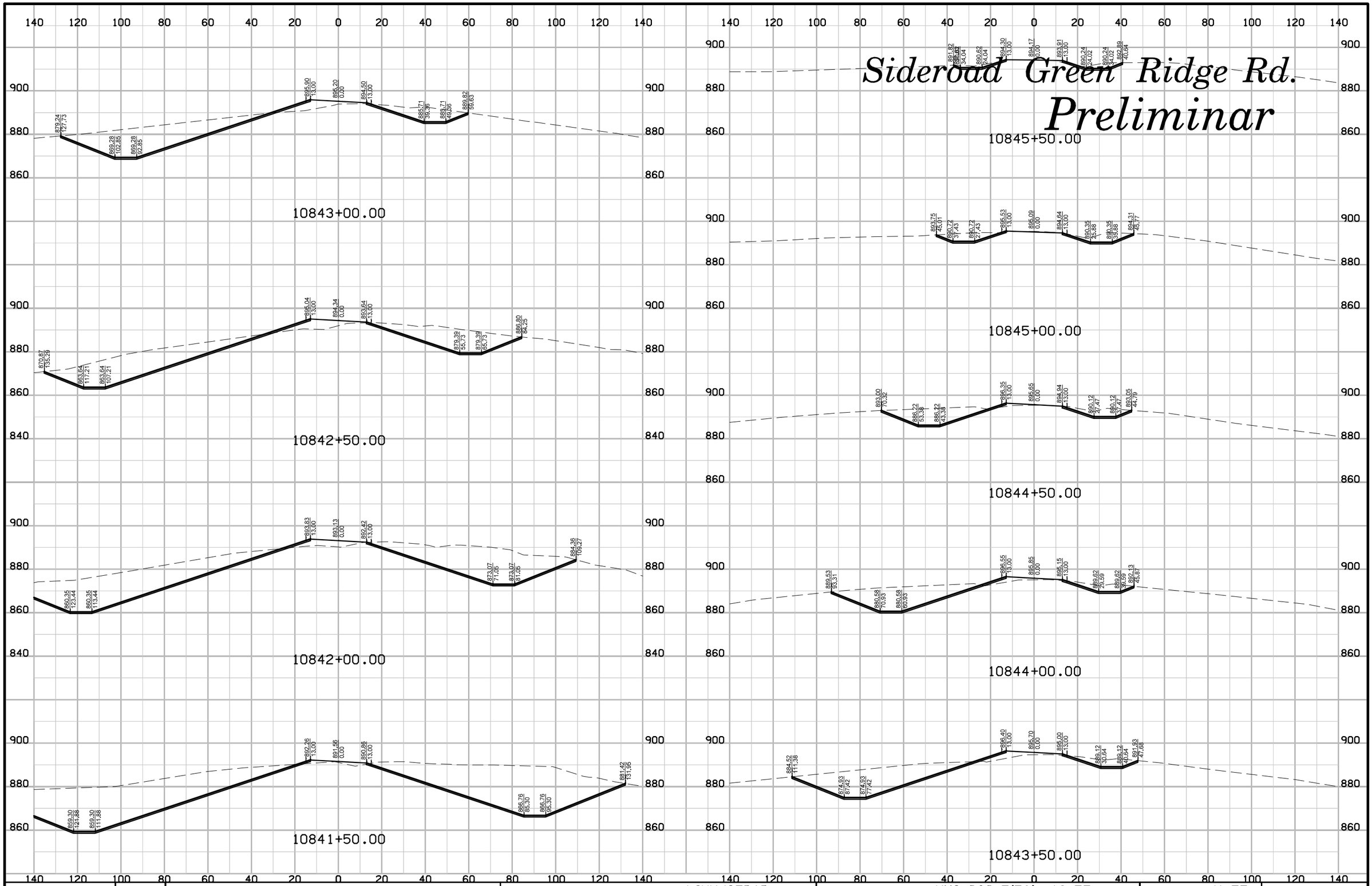
Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.54

Sideroad Green Ridge Rd.

Preliminar

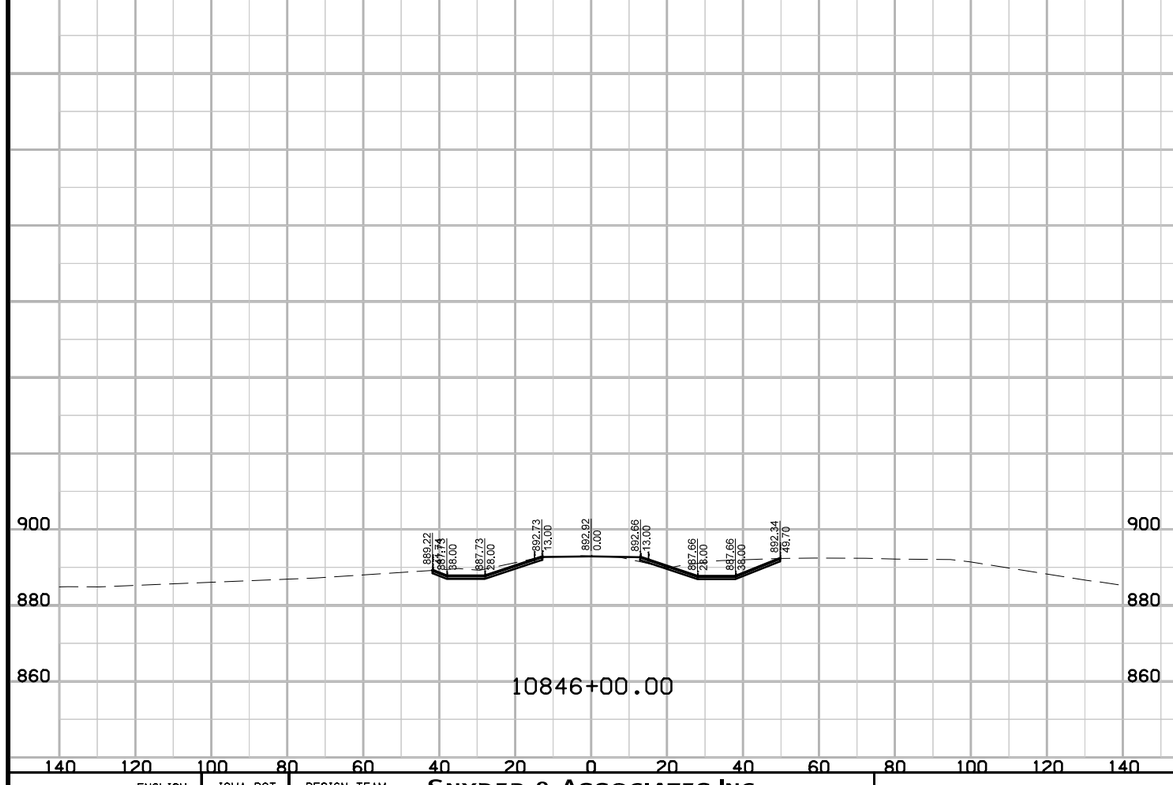


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.55

10:21:40 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x09.sht

Sideroad Green Ridge Rd.

Preliminar

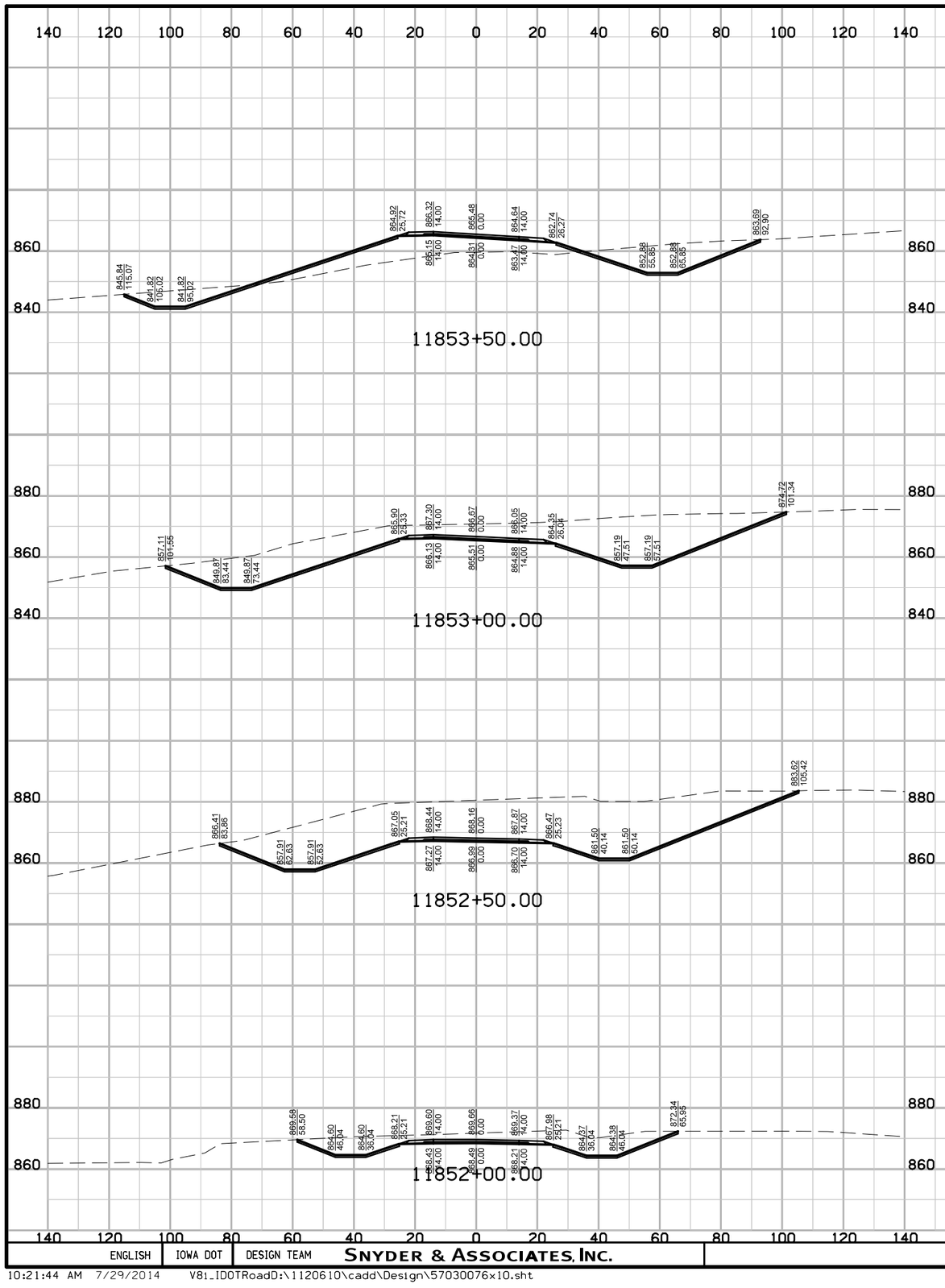


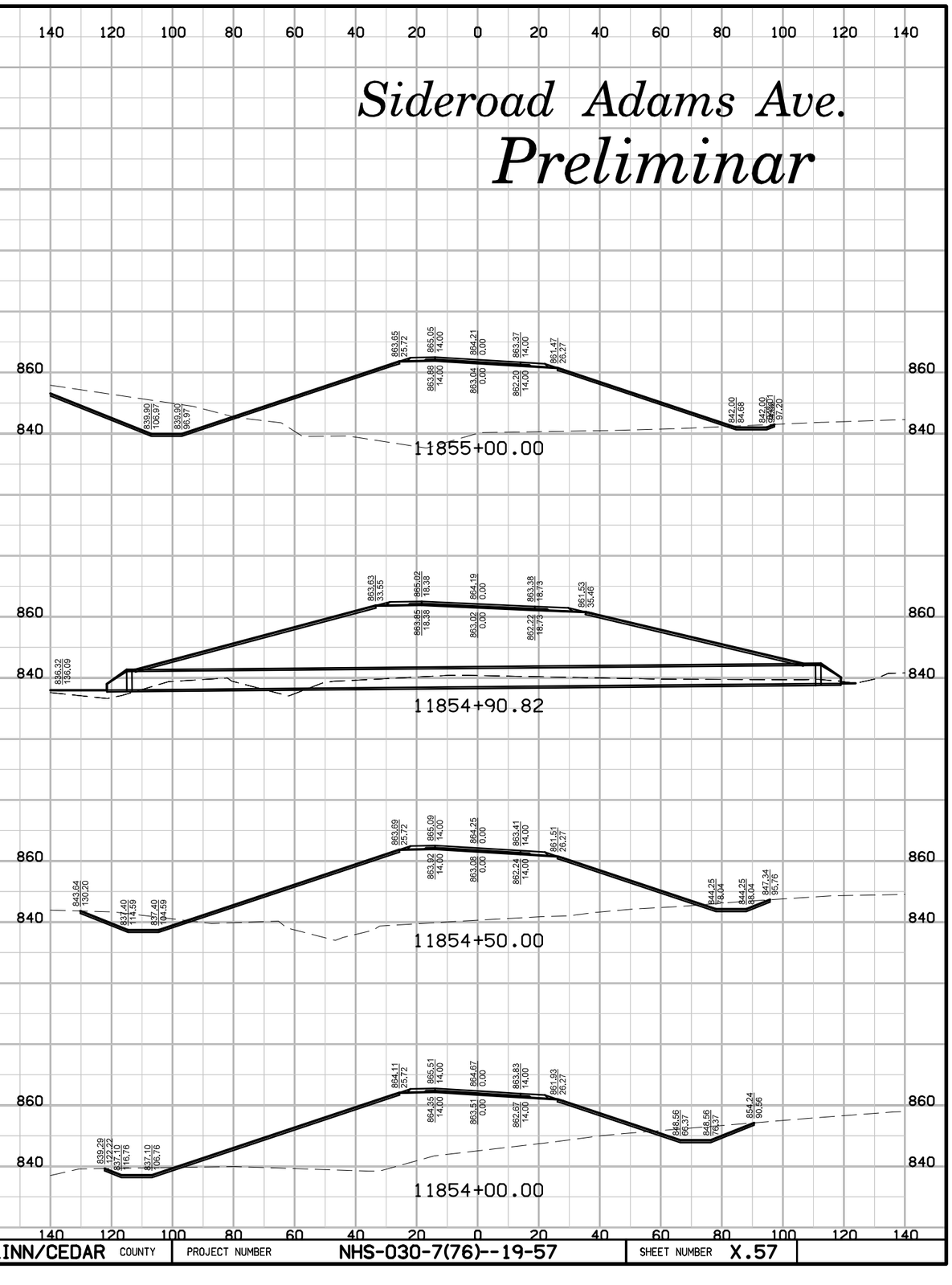
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.56

10:21:41 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x09.sht

Sideroad Adams Ave.

Preliminar



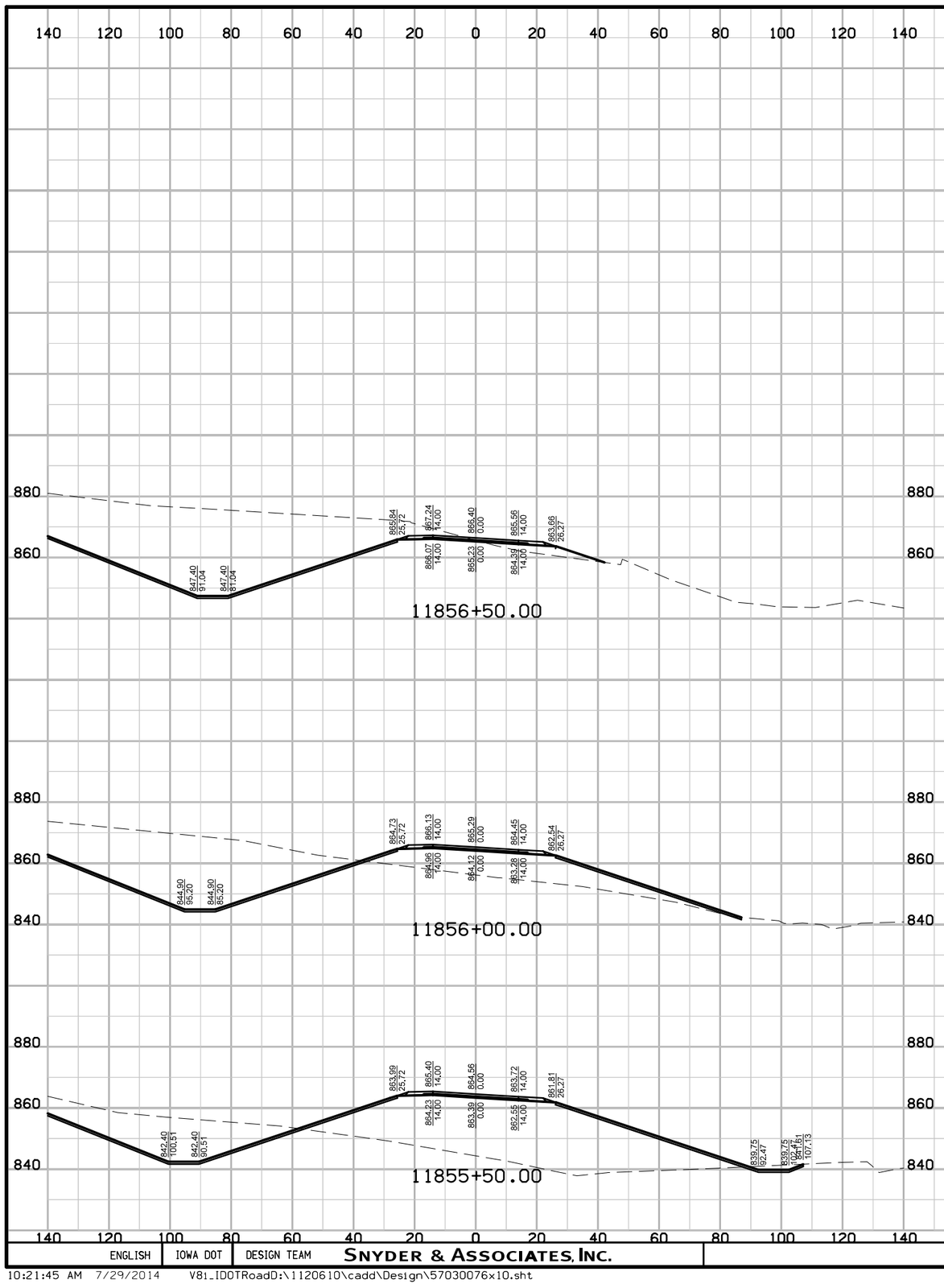


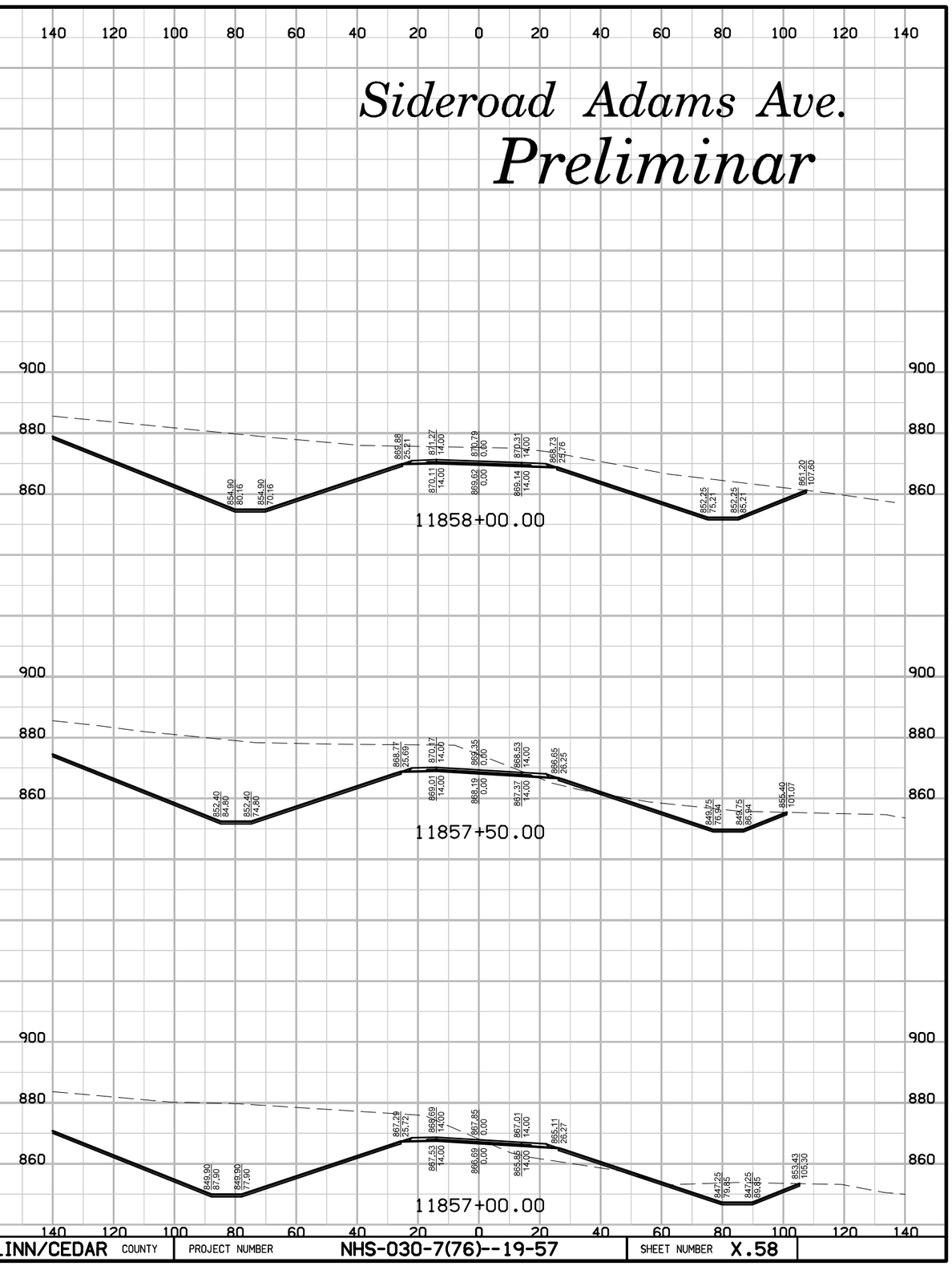
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.57

10:21:44 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x10.sht

Sideroad Adams Ave.

Preliminar



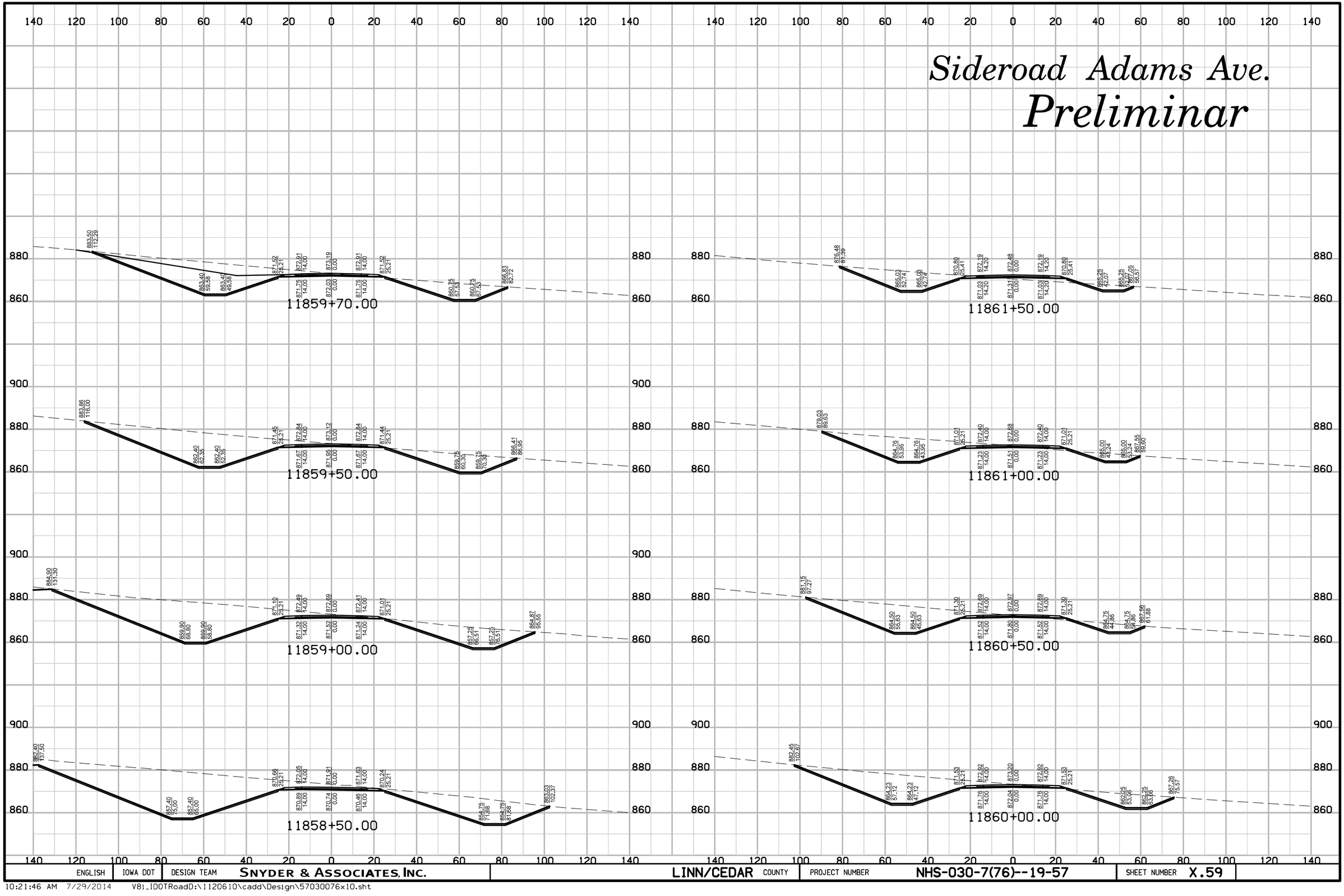


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.58

10:21:45 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x10.sht

Sideroad Adams Ave.

Preliminar

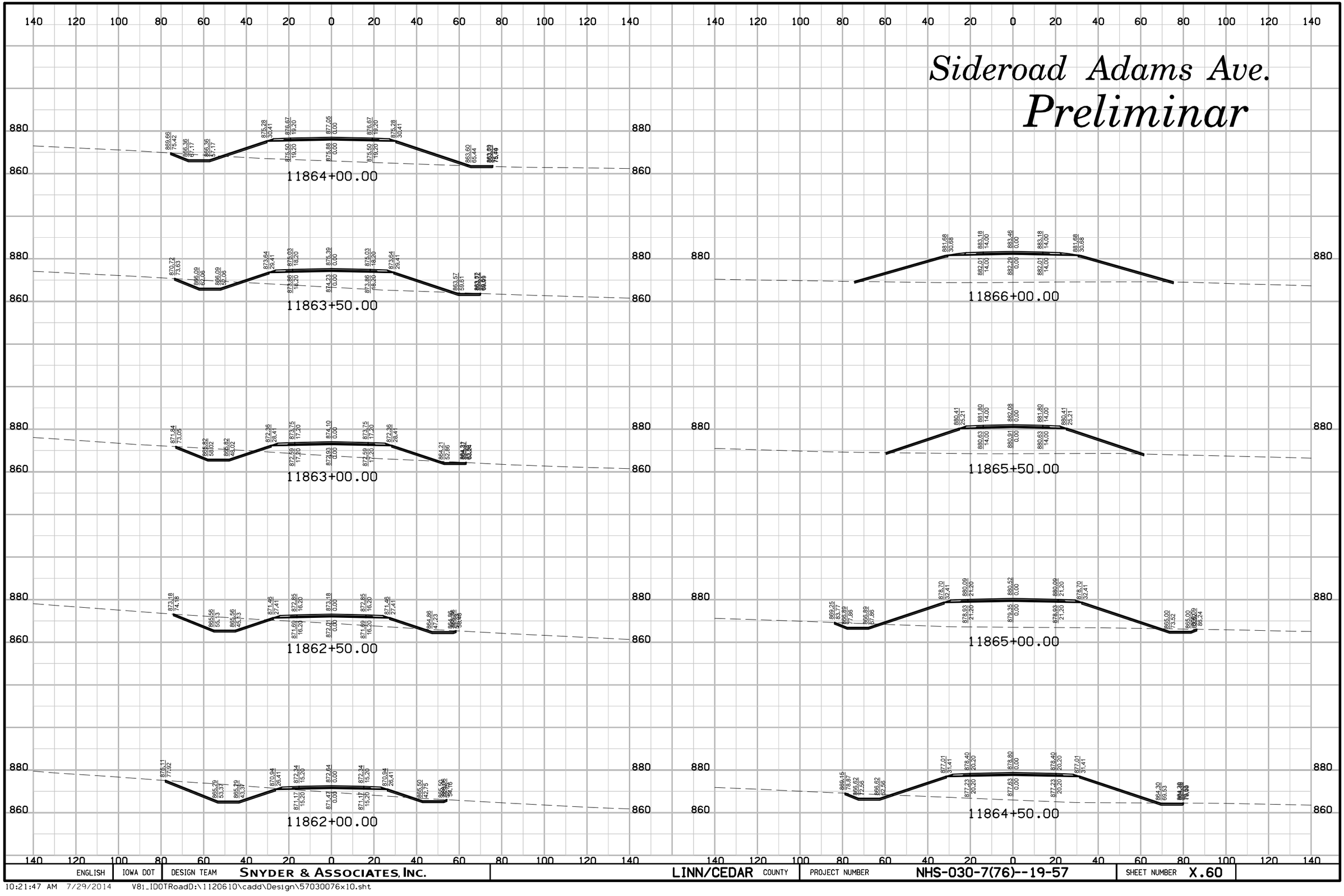


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.59

10:21:46 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x10.sht

Sideroad Adams Ave.

Preliminar

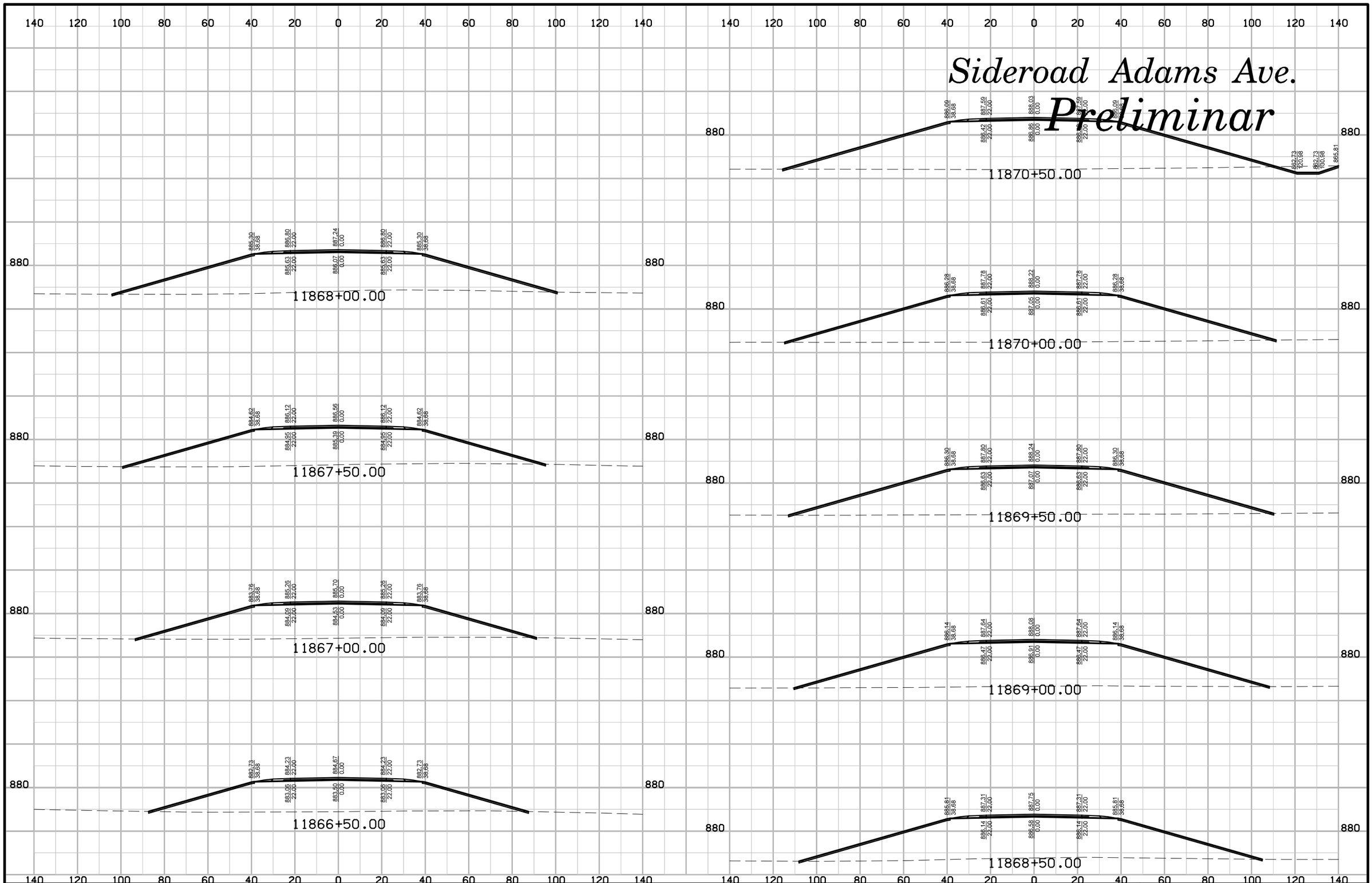


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.60

10:21:47 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x10.sht

Sideroad Adams Ave.

Preliminar

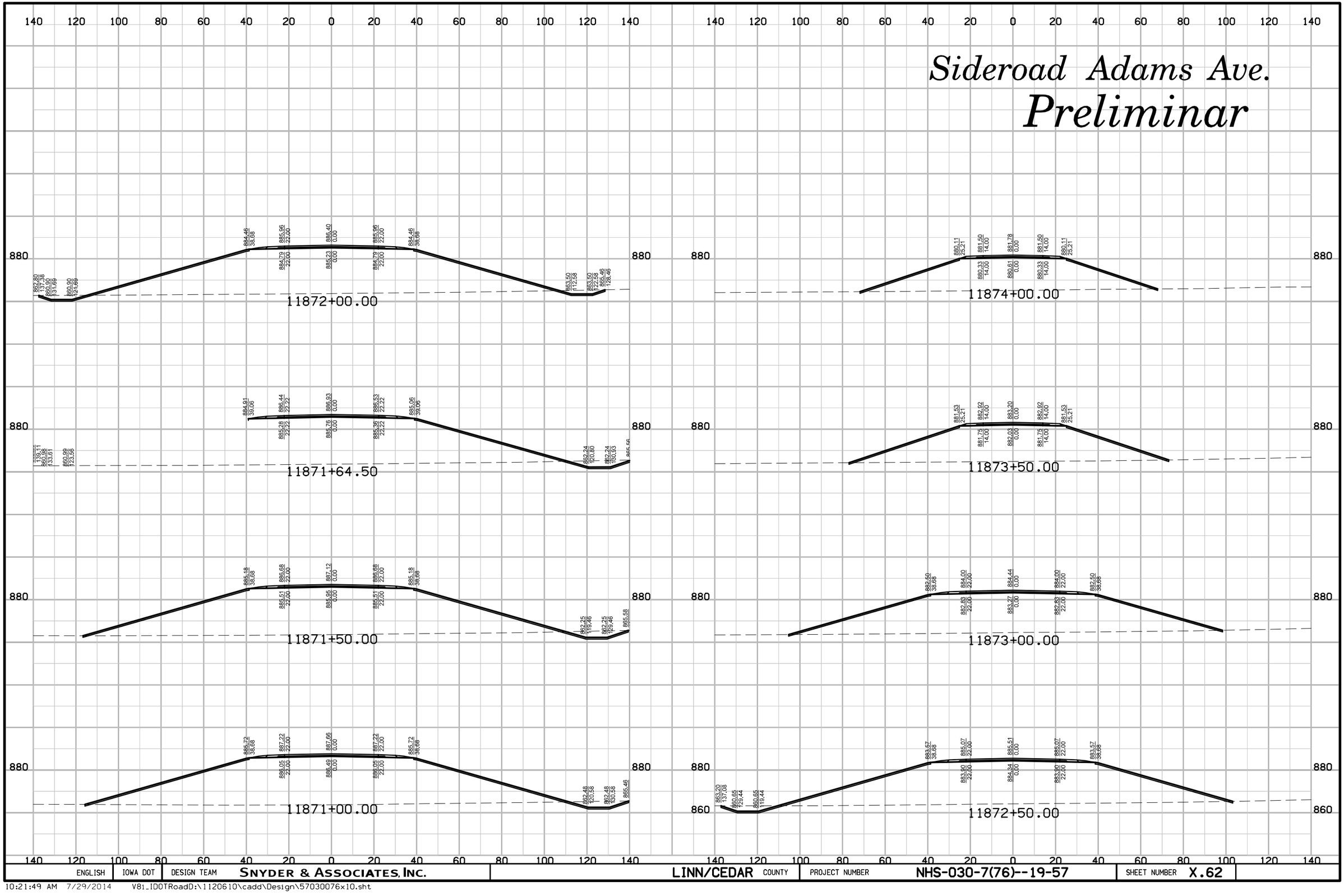


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.61

10:21:48 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x10.sht

Sideroad Adams Ave.

Preliminar

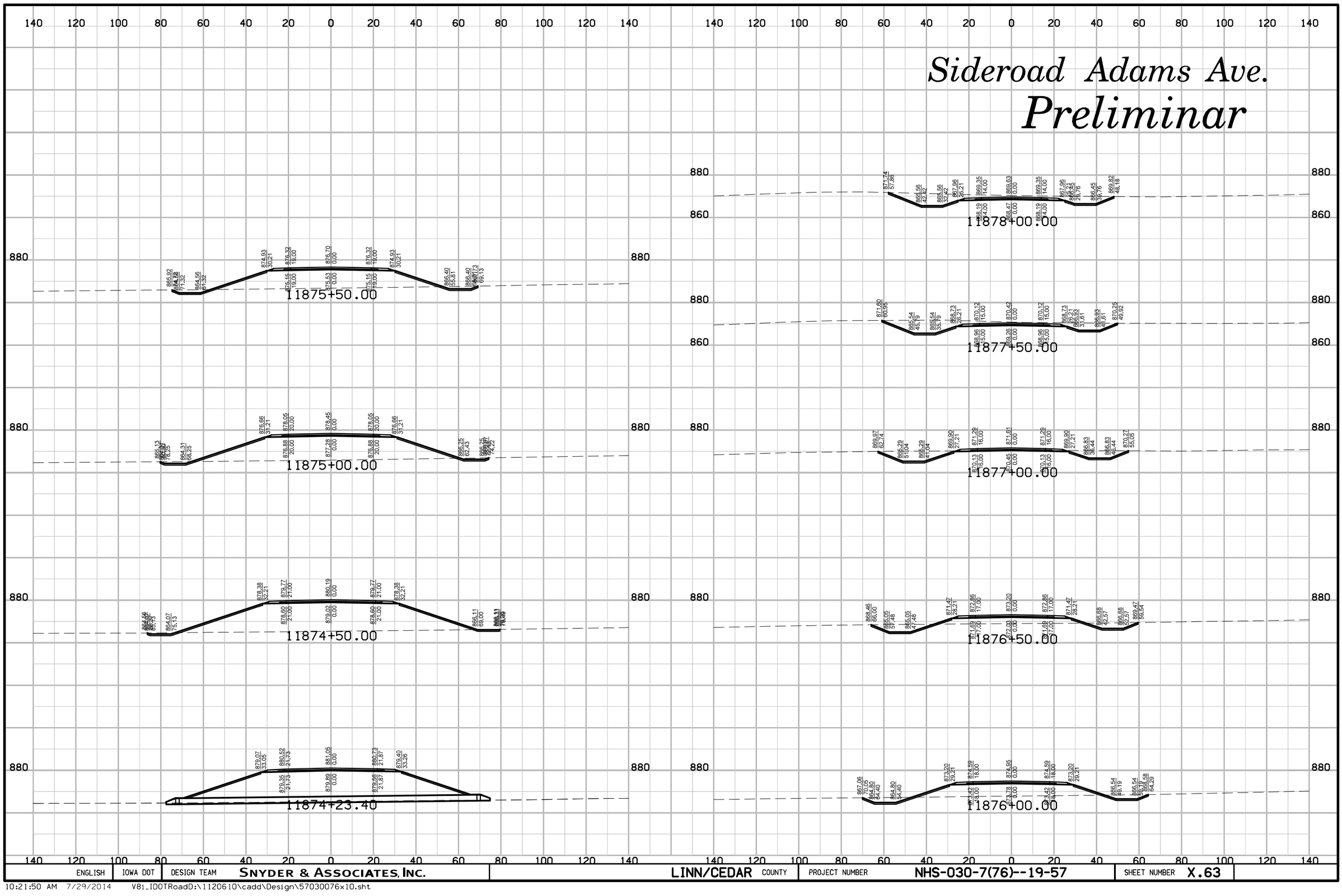


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.62

10:21:49 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x10.sht

Sideroad Adams Ave.

Preliminar

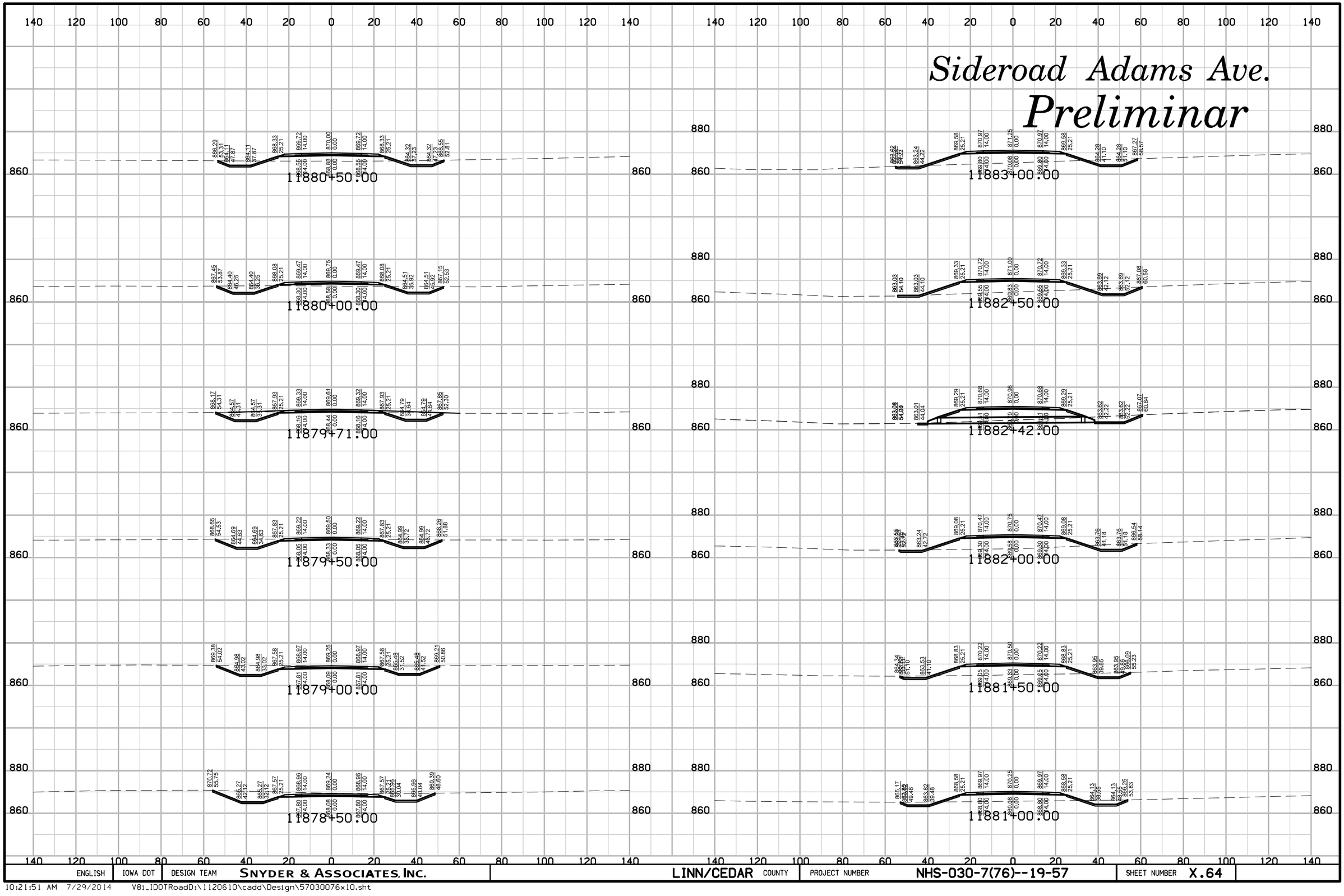


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.63

10:21:50 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x10.sht

Sideroad Adams Ave.

Preliminar

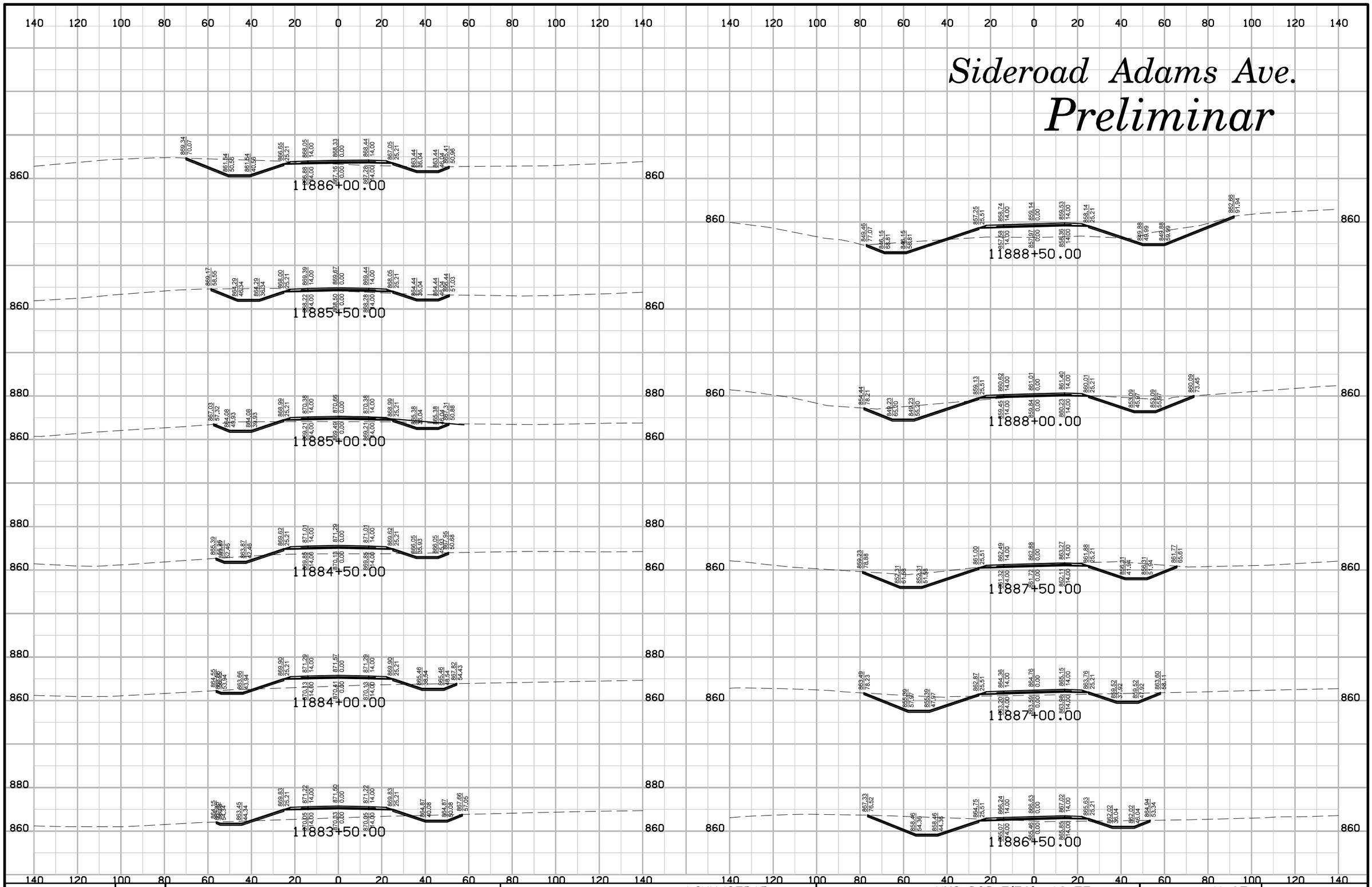


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.64

10:21:51 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x10.sht

Sideroad Adams Ave.

Preliminar

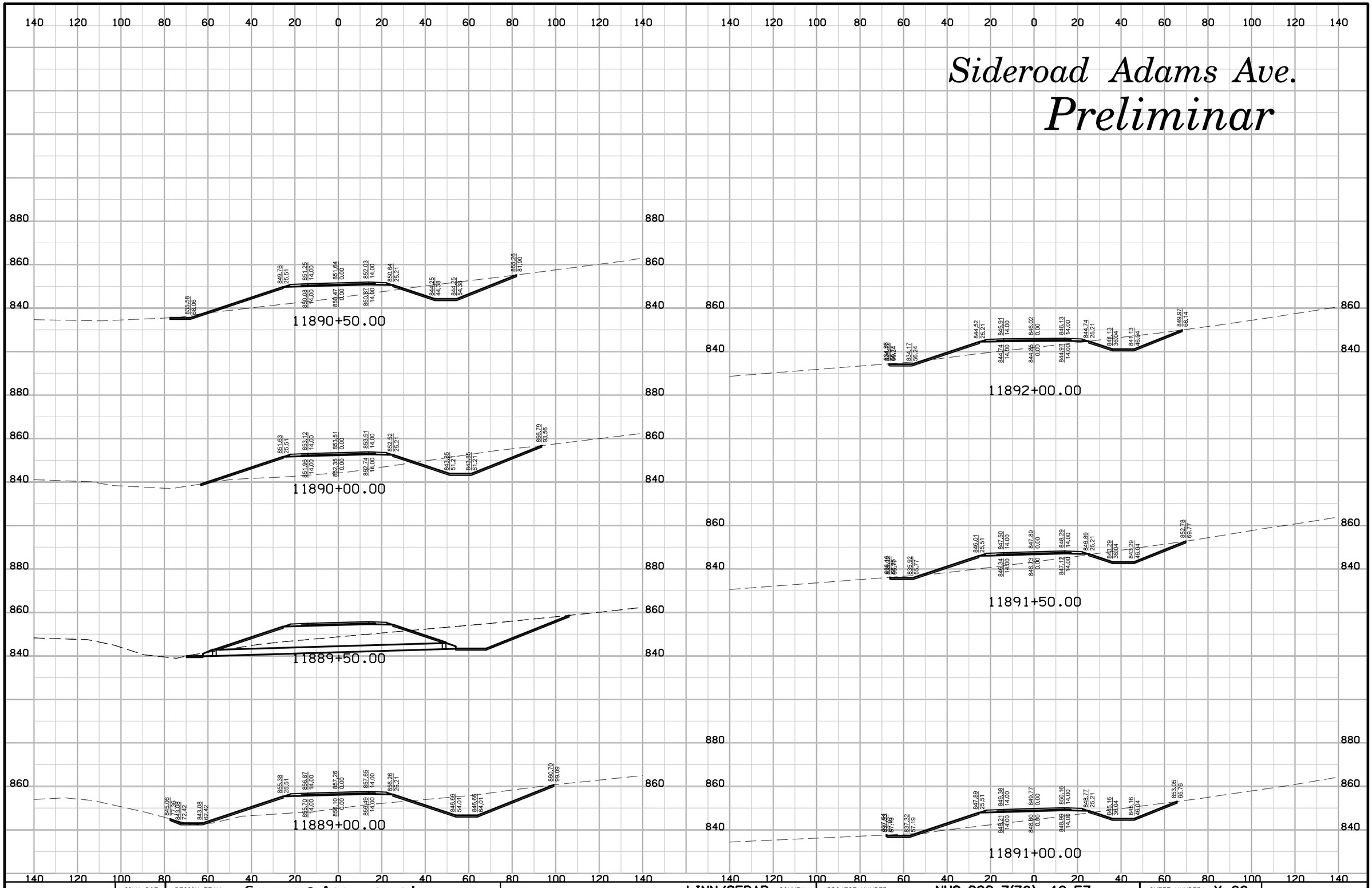


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.65

10:21:52 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x10.sht

Sideroad Adams Ave.

Preliminar

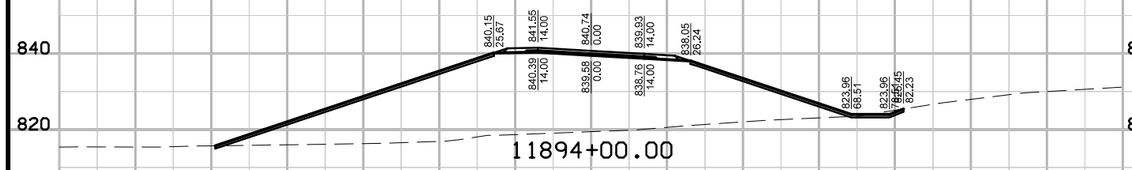


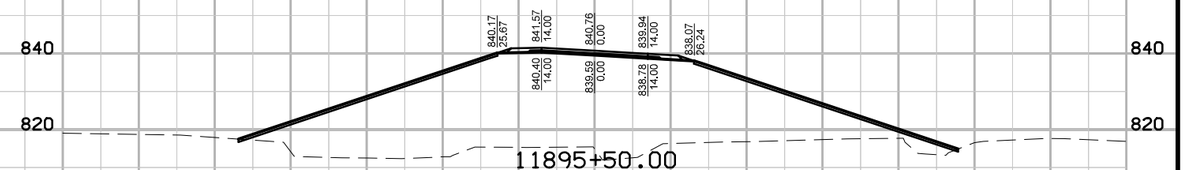
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.66

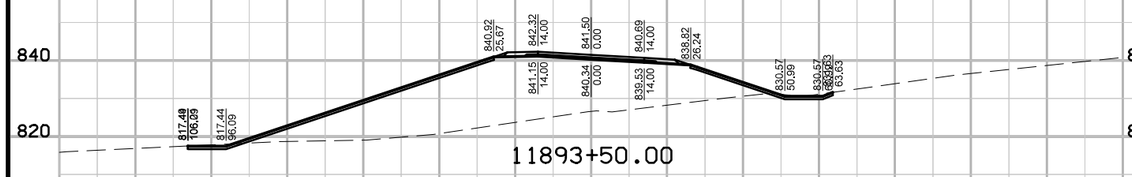
10:21:53 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x10.sht

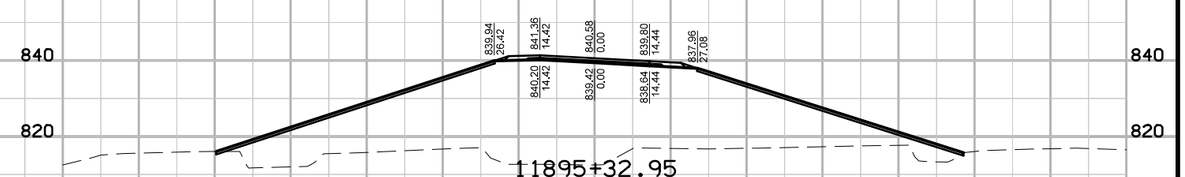
Sideroad Adams Ave.

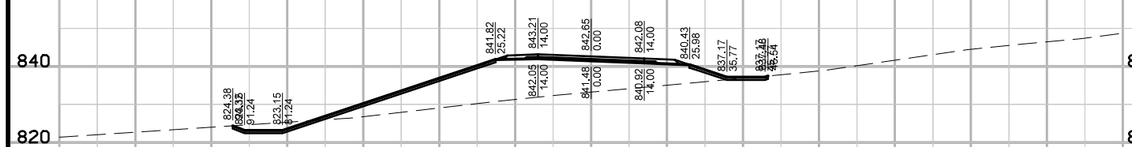
Preliminar

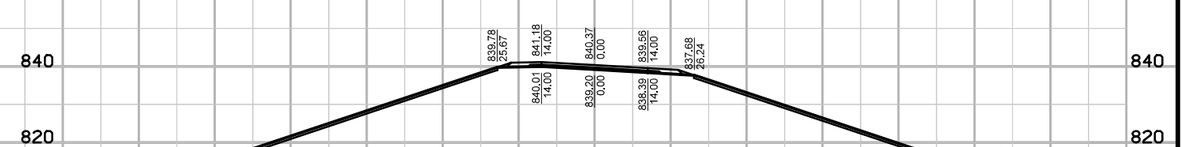


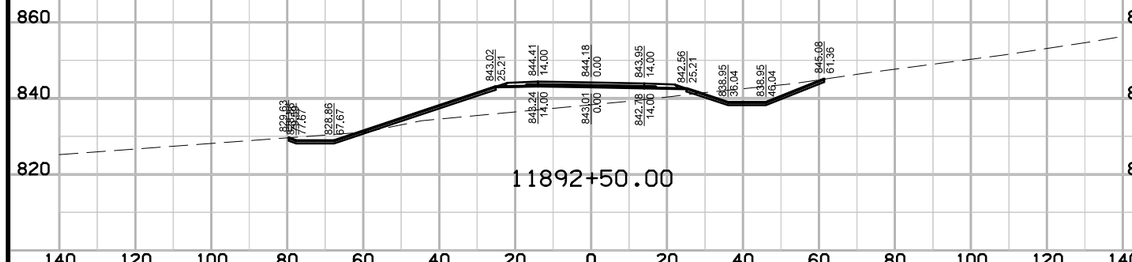


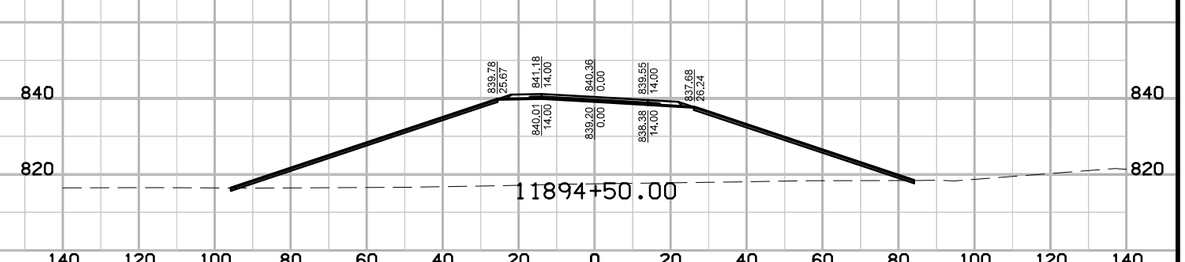










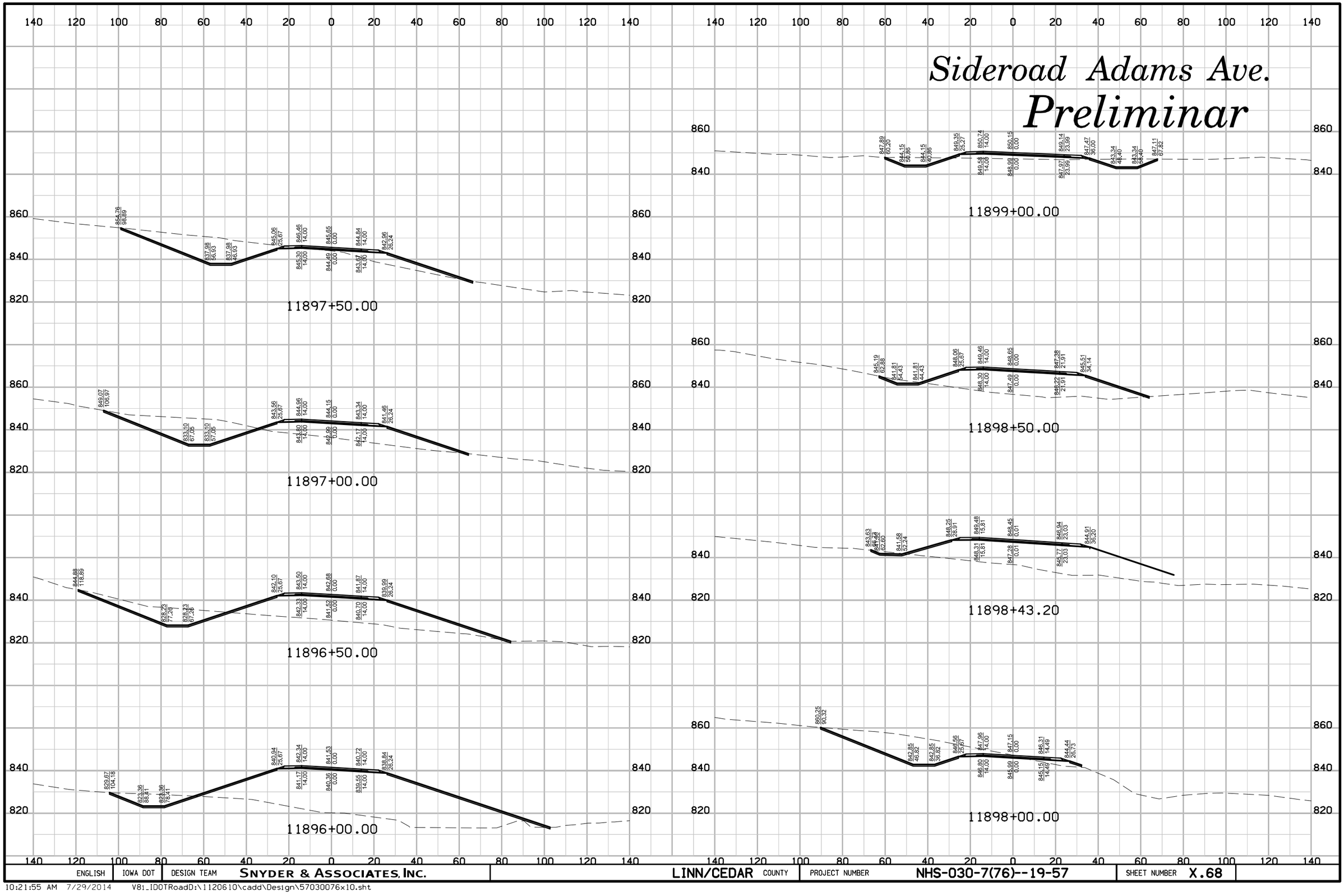


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.67

10:21:54 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x10.sht

Sideroad Adams Ave.

Preliminar

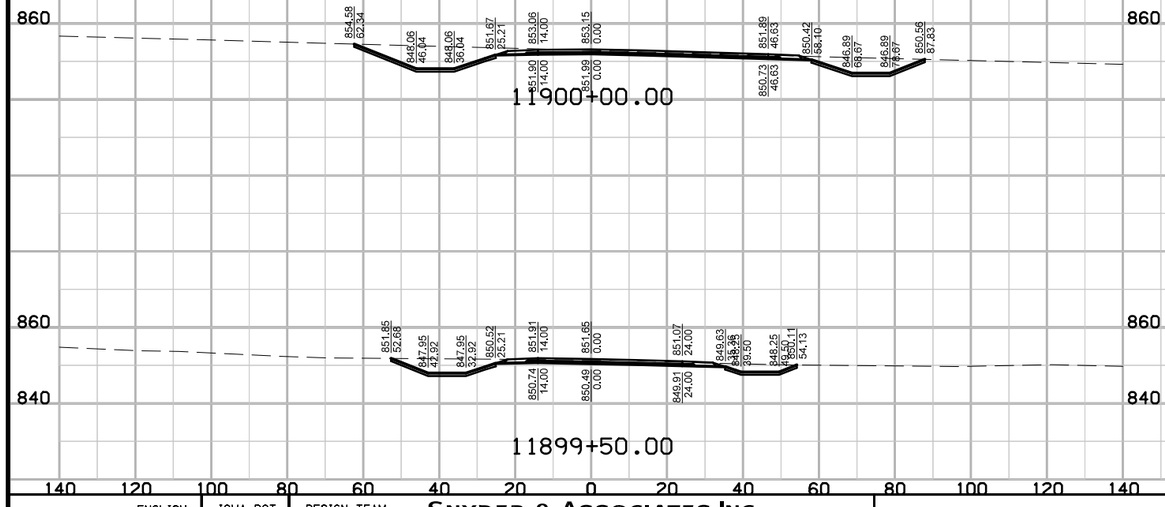


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.68

10:21:55 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x10.sht

Sideroad Adams Ave.

Preliminar

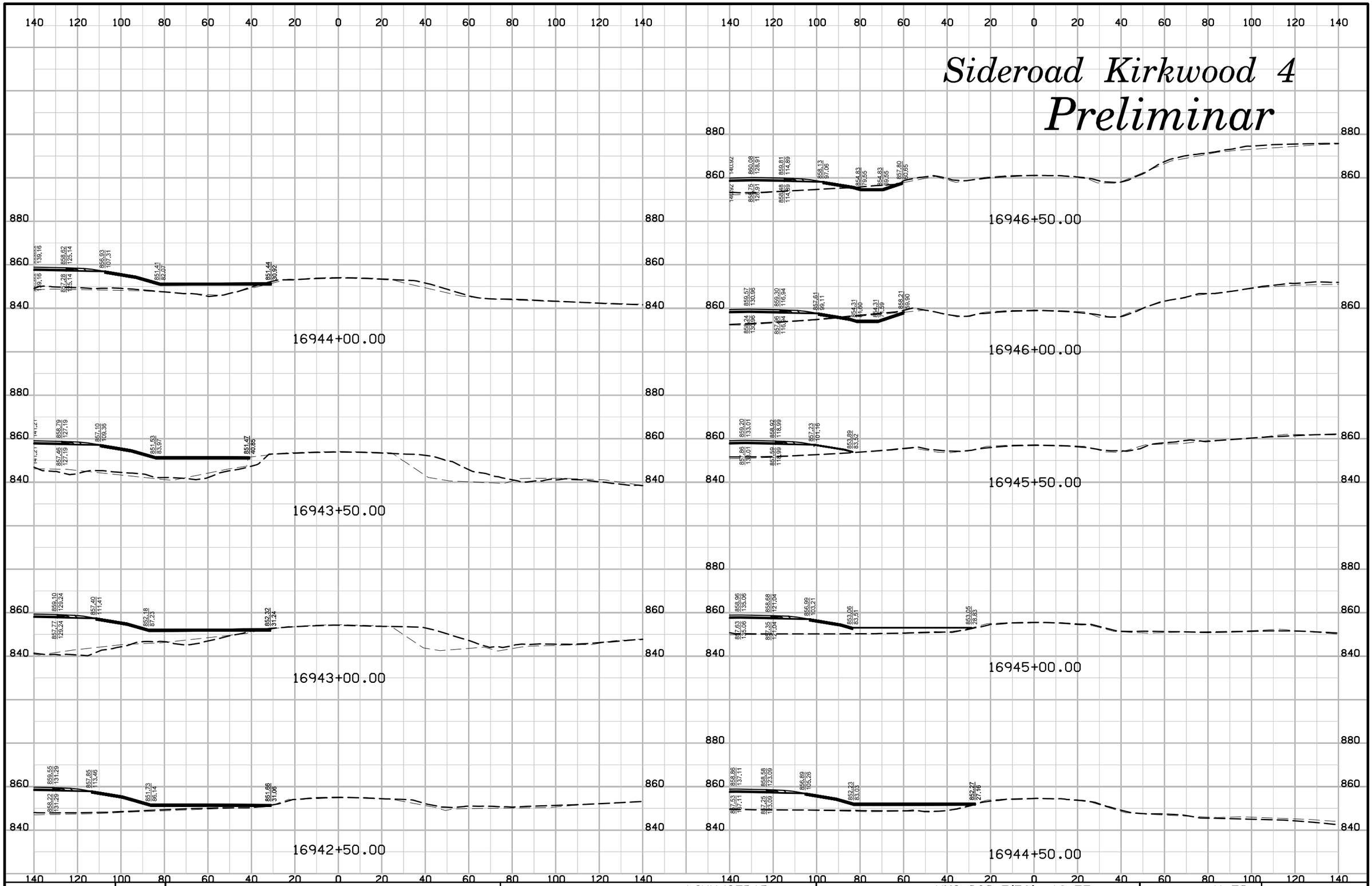


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.69

10:21:56 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x10.sht

Sideroad Kirkwood 4

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.70

10:22:00 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x15.sht

Sideroad Kirkwood 4

Preliminar

16949+00.00

16948+50.00

16948+00.00

16947+50.00

16947+00.00

16951+50.00

16951+00.00

16950+50.00

16950+00.00

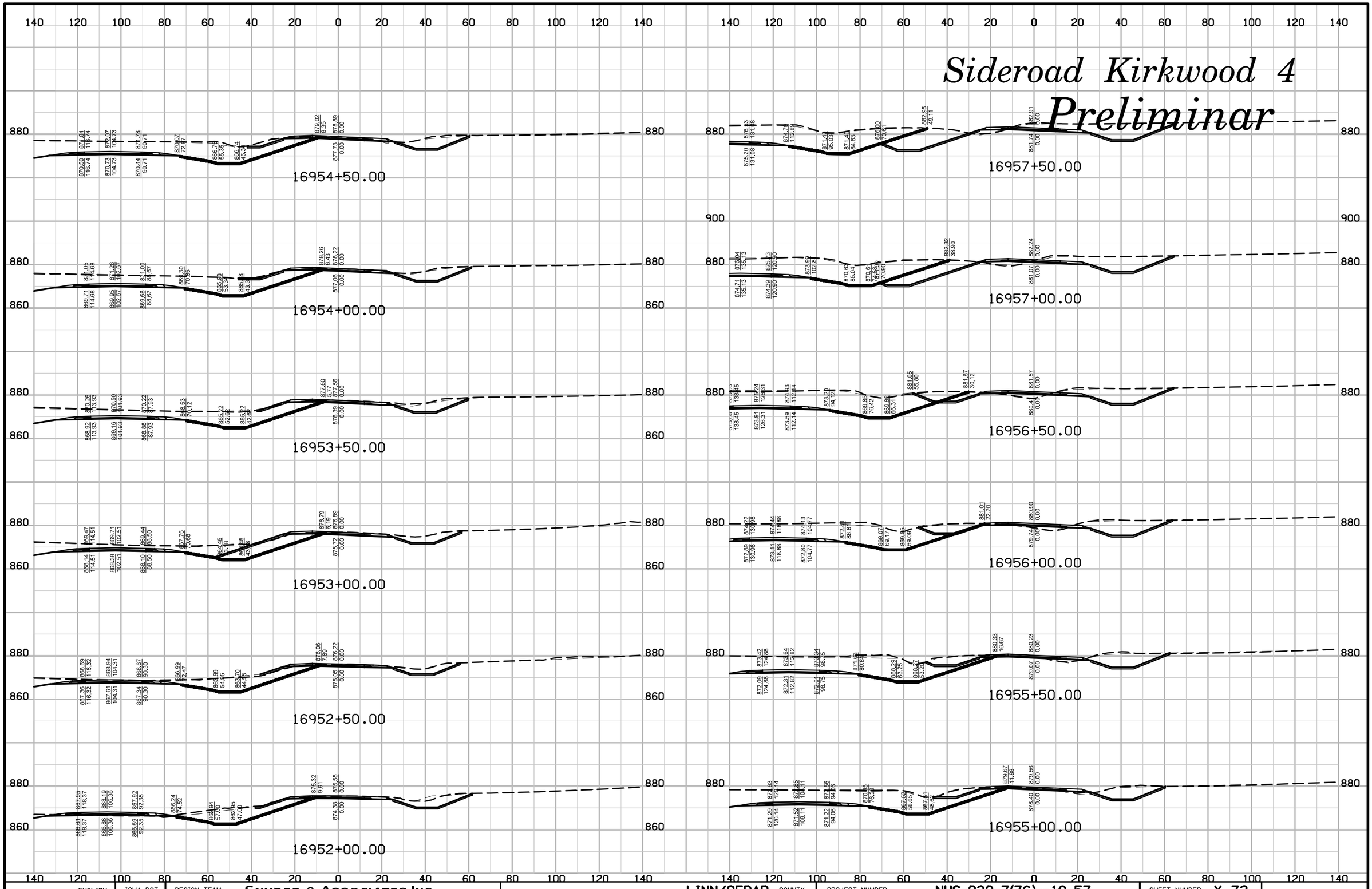
16949+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.71

10:22:01 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x15.sht

Sideroad Kirkwood 4

Preliminar

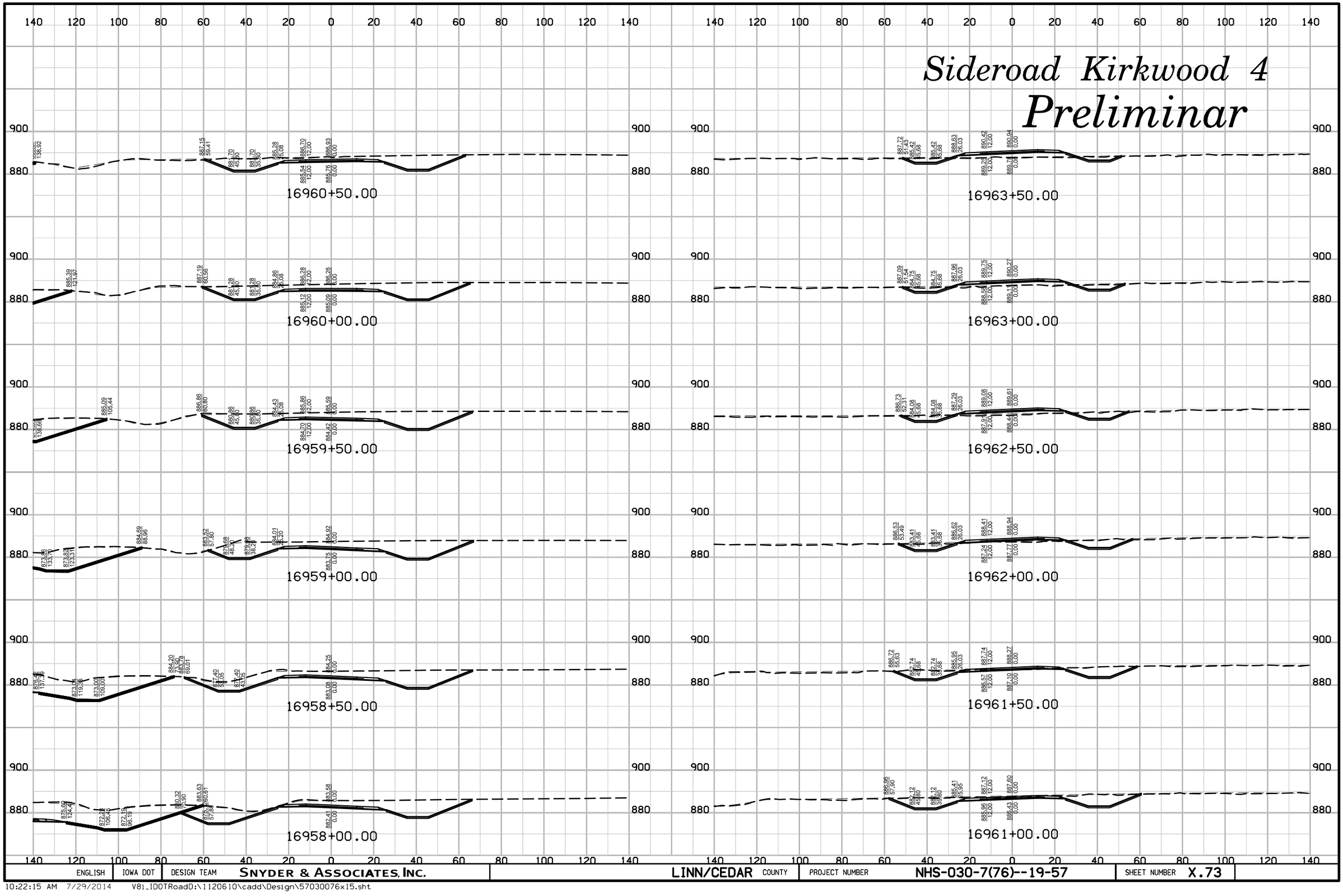


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.72

10:22:02 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x15.sht

Sideroad Kirkwood 4

Preliminar

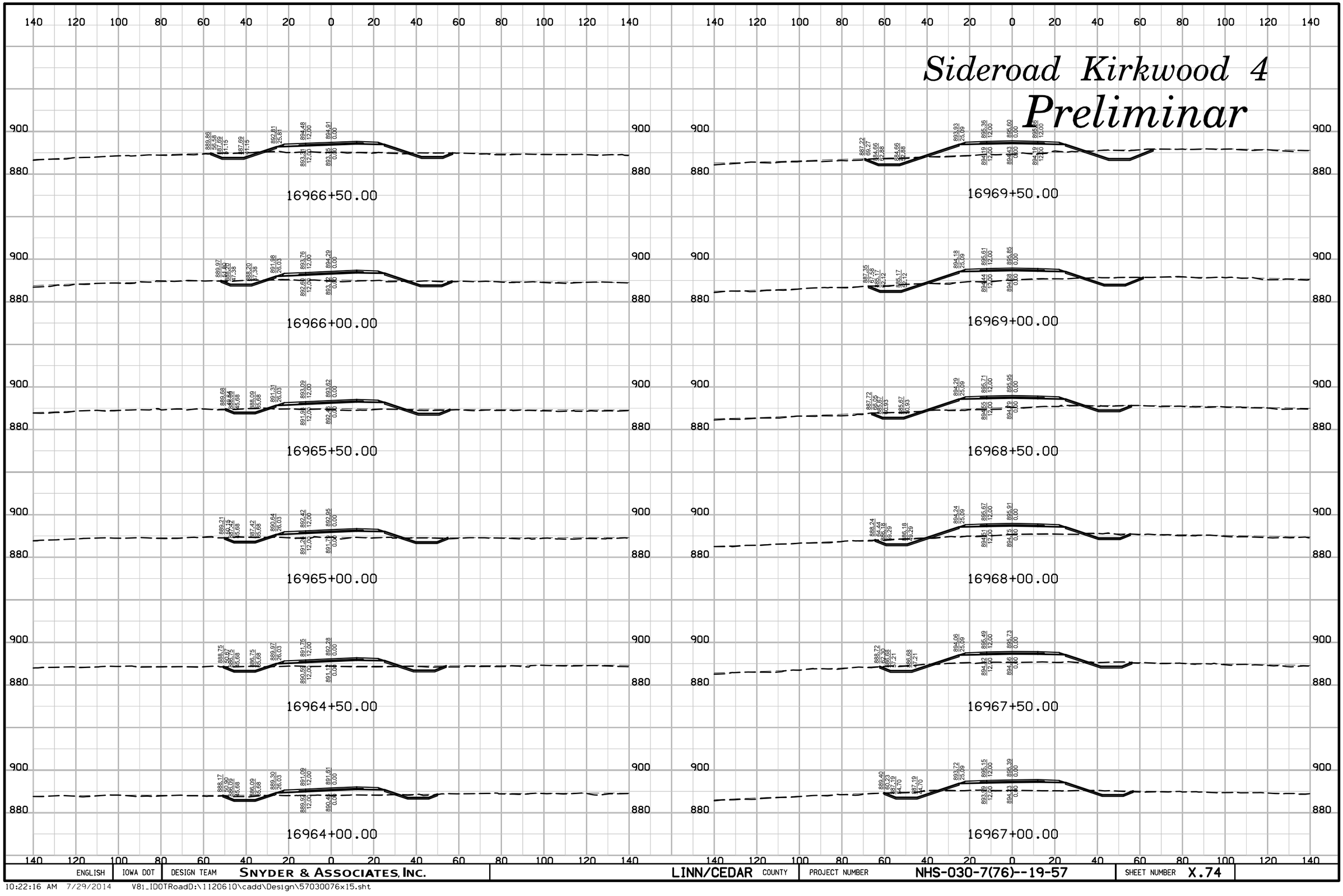


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER X.73

10:22:15 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x15.sht

Sideroad Kirkwood 4

Preliminar

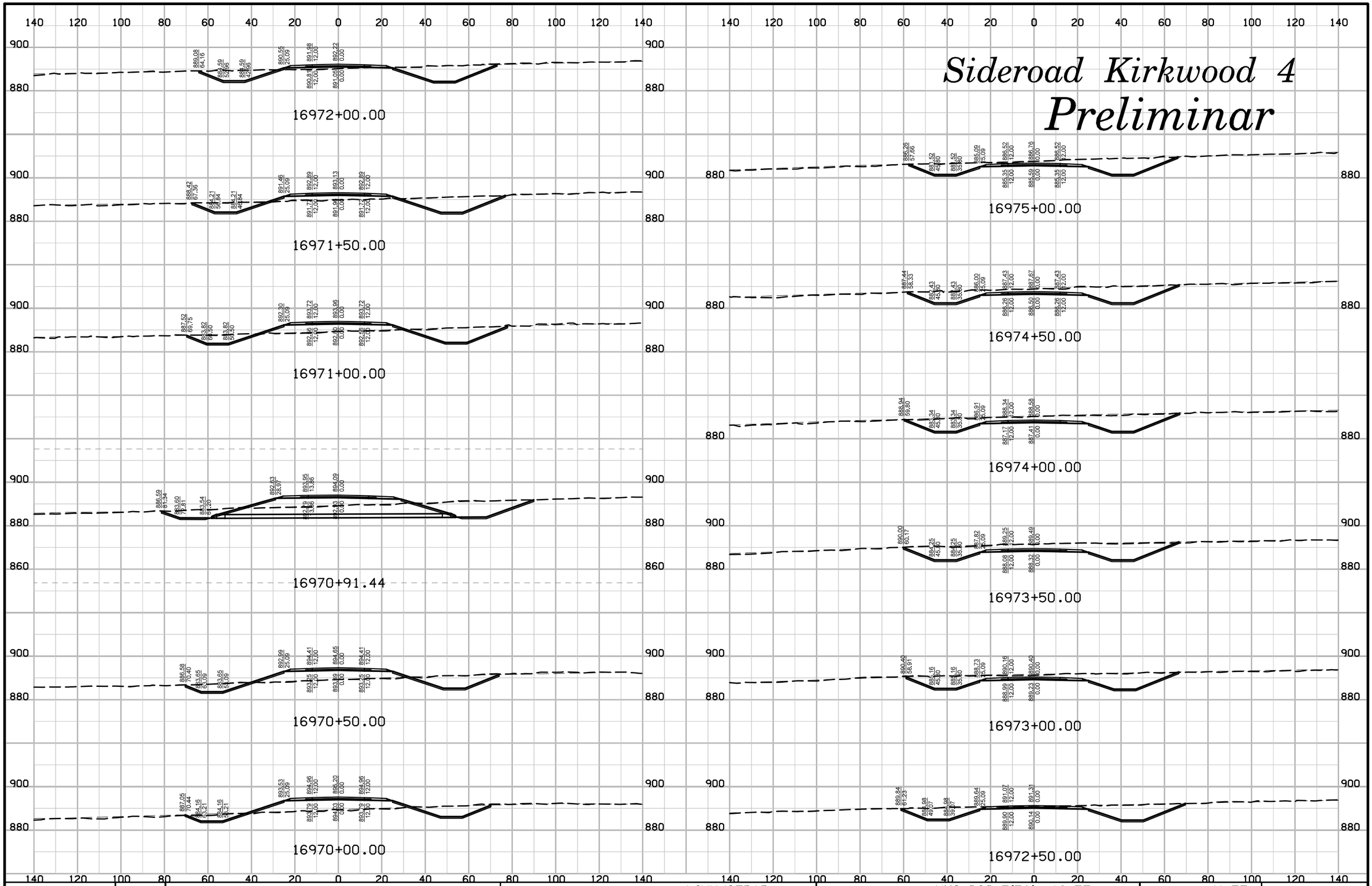


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.74

10:22:16 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x15.sht

Sideroad Kirkwood 4

Preliminar

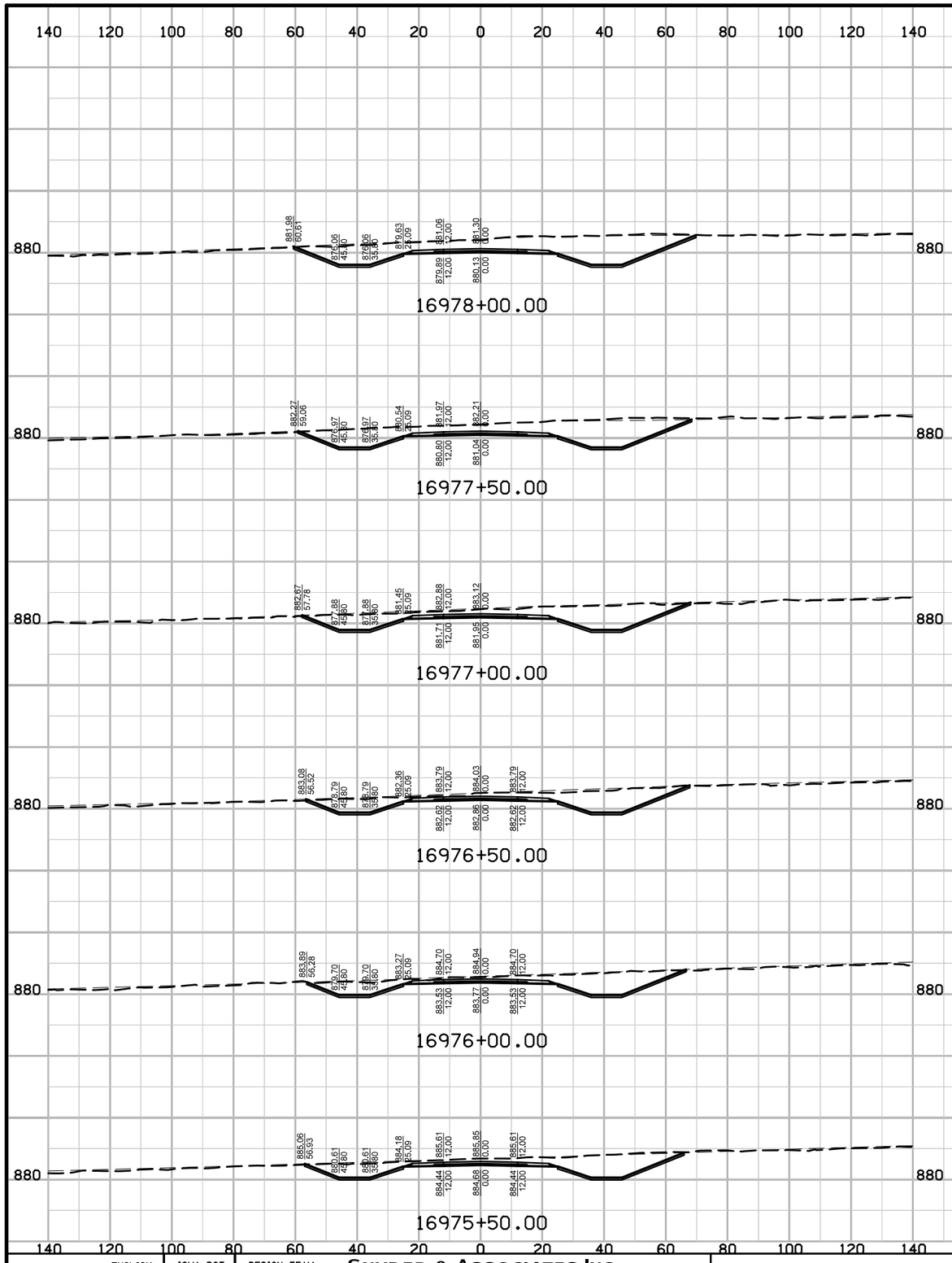


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.75

10:22:17 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x15.sht

Sideroad Kirkwood 4

Preliminar

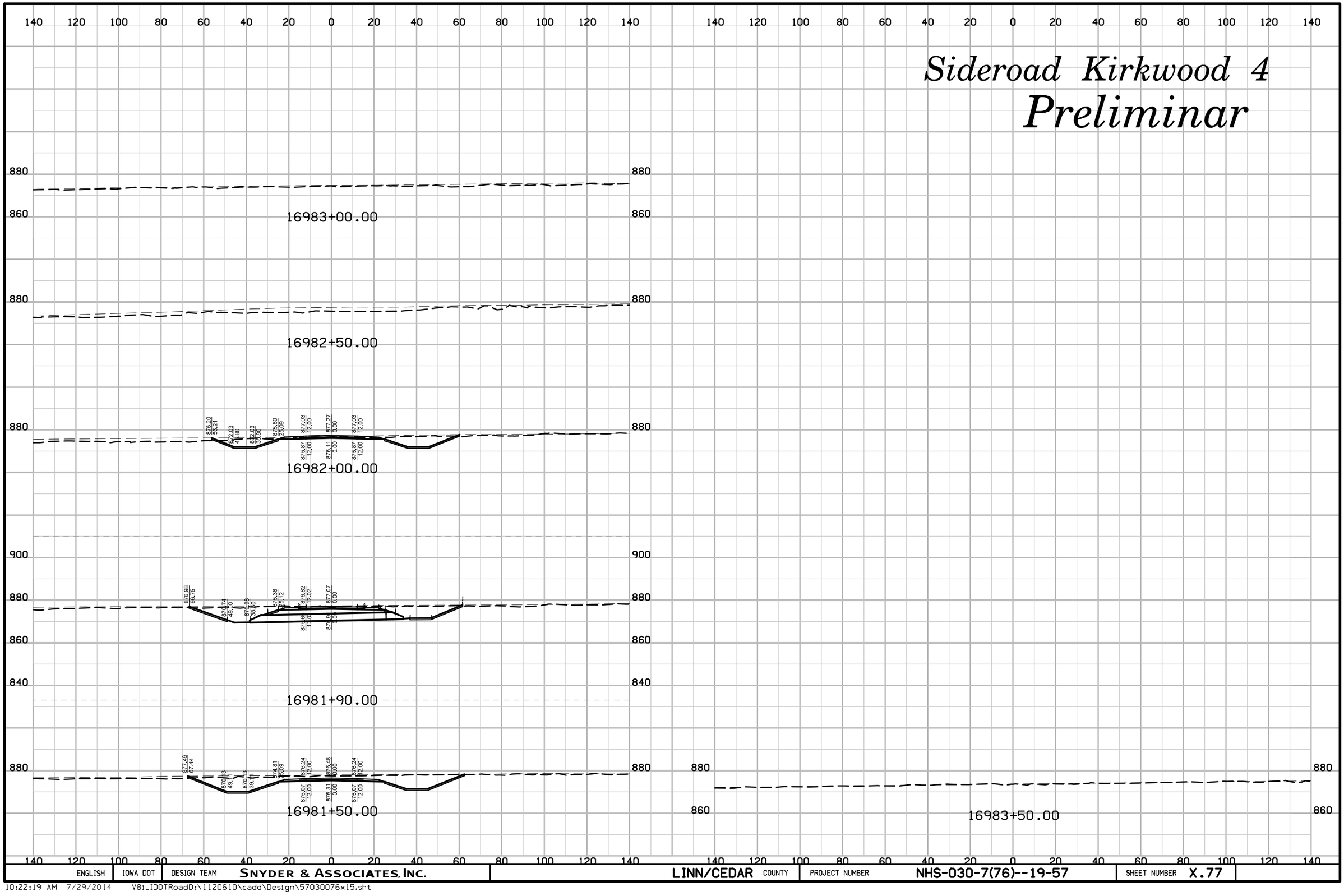


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.76

10:22:18 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x15.sht

Sideroad Kirkwood 4

Preliminar

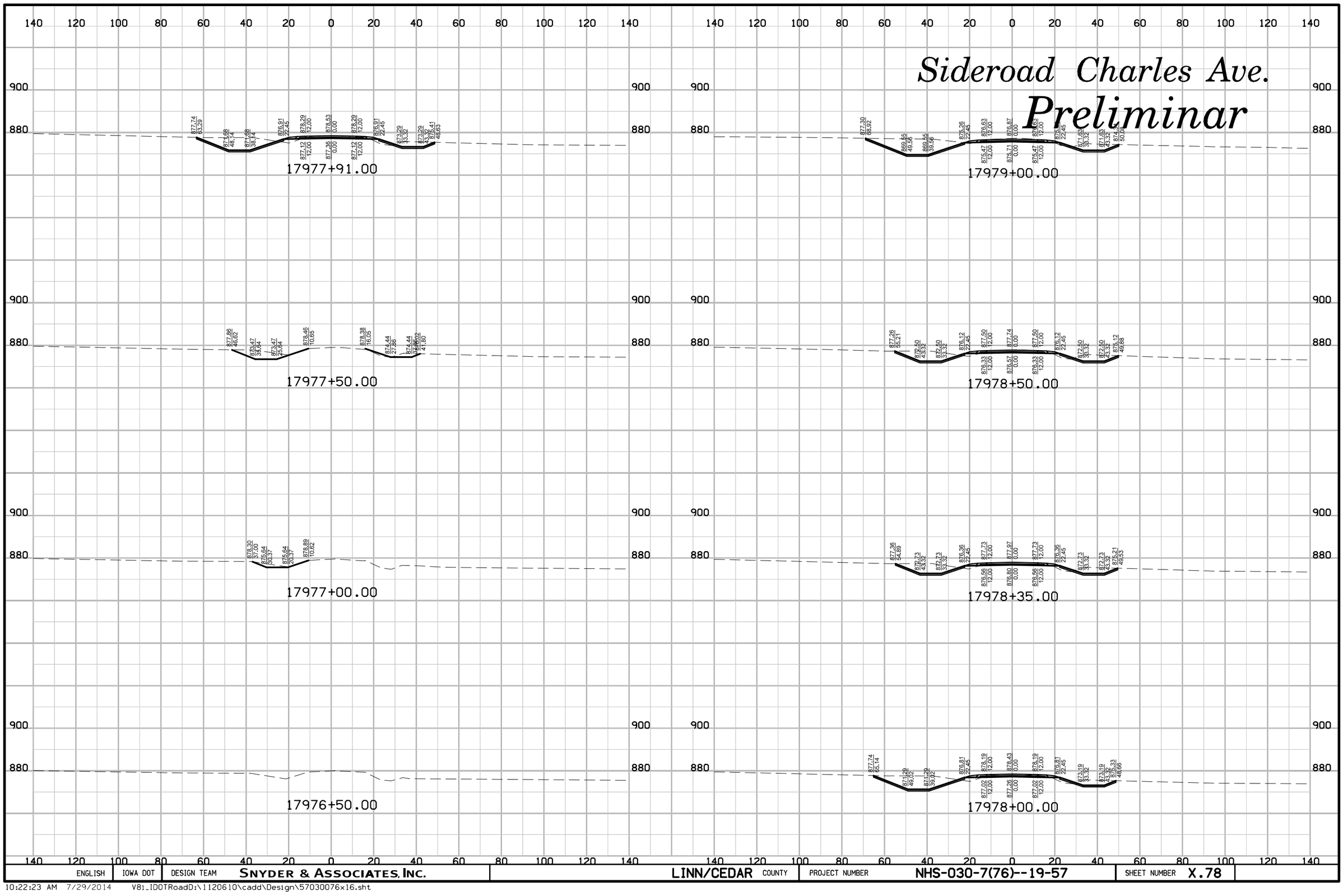


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.77

10:22:19 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x15.sht

Sideroad Charles Ave.

Preliminar

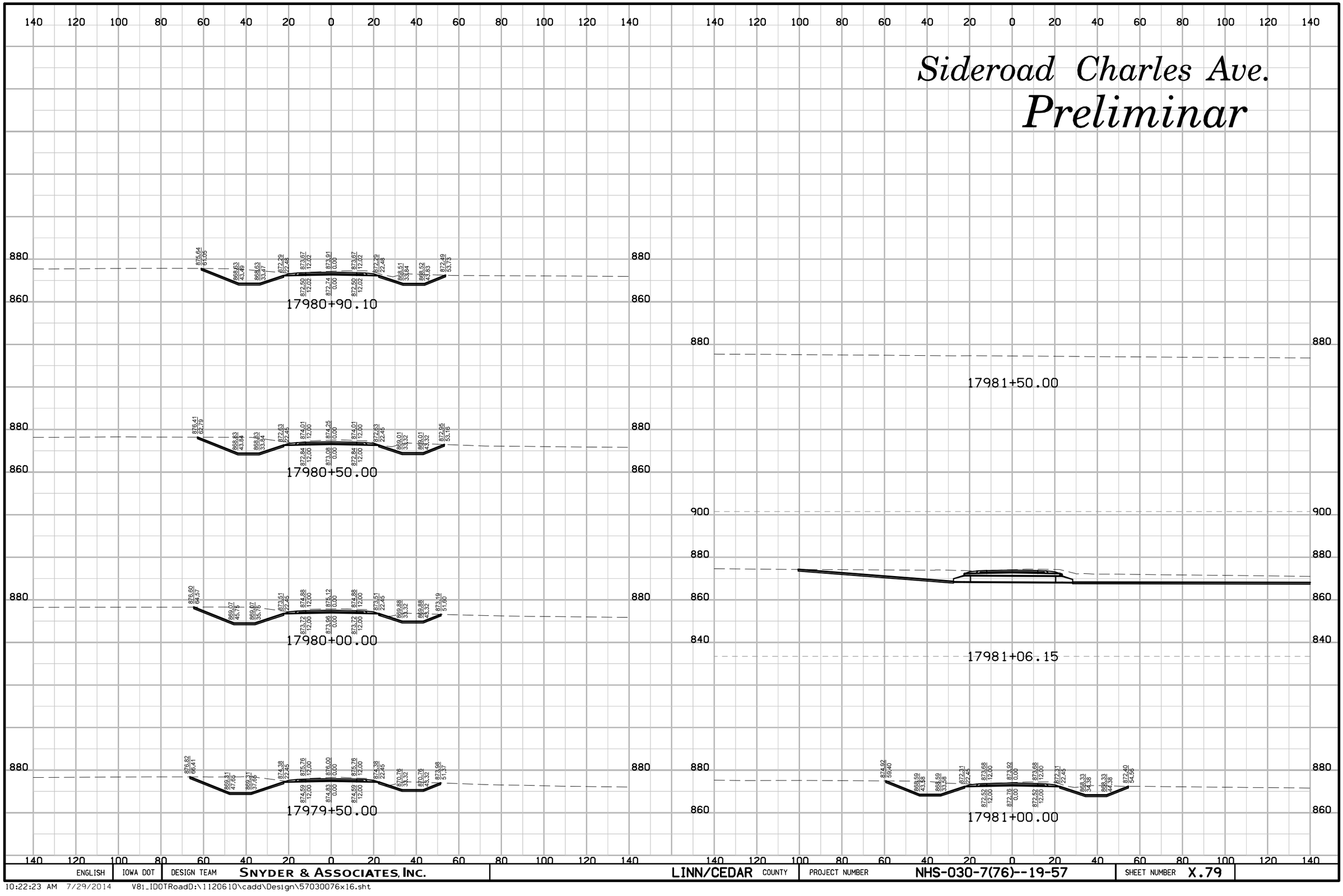


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.78

10:22:23 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x16.sht

Sideroad Charles Ave.

Preliminar

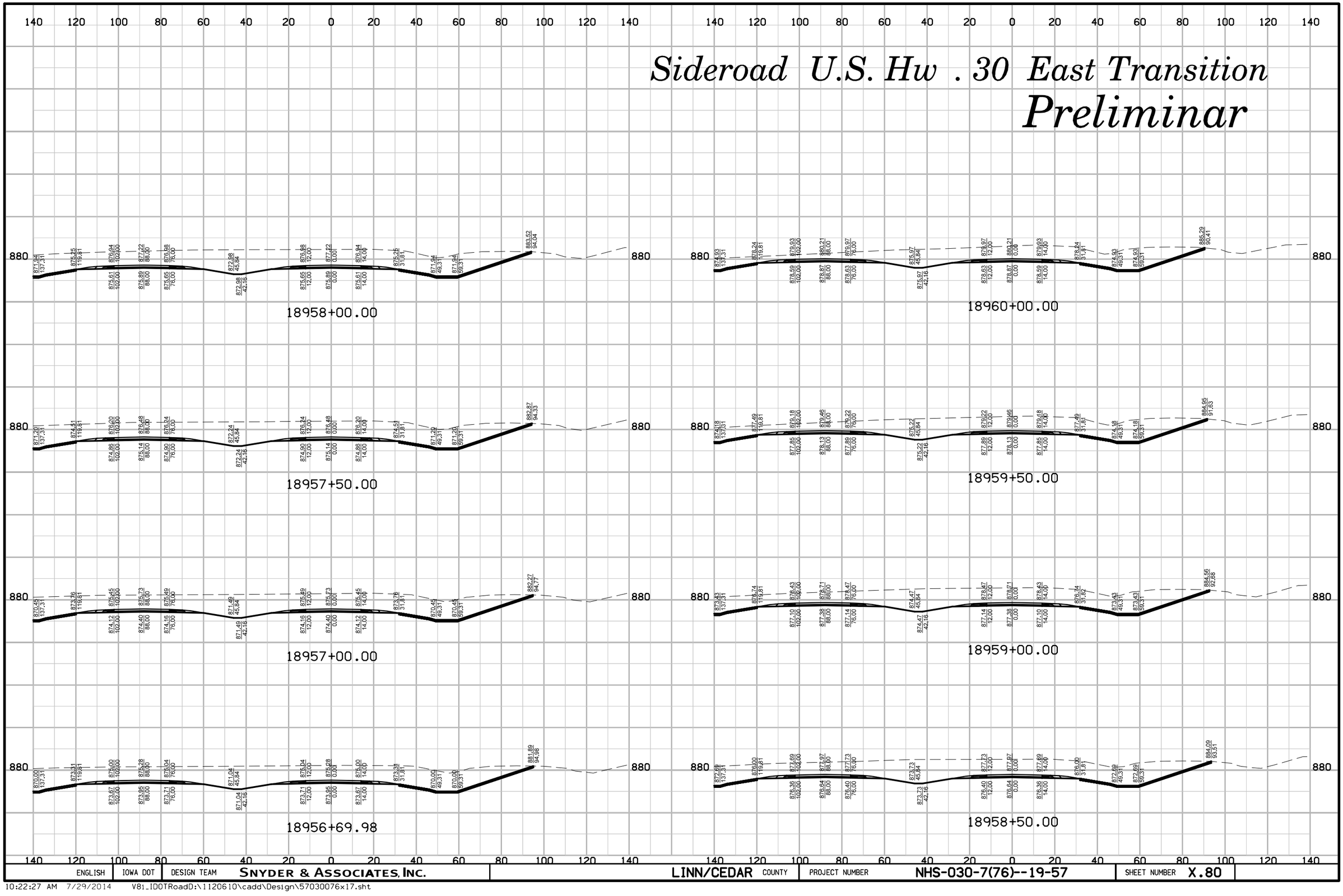


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.79

10:22:23 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x16.sht

Sideroad U.S. Hw . 30 East Transition

Preliminar

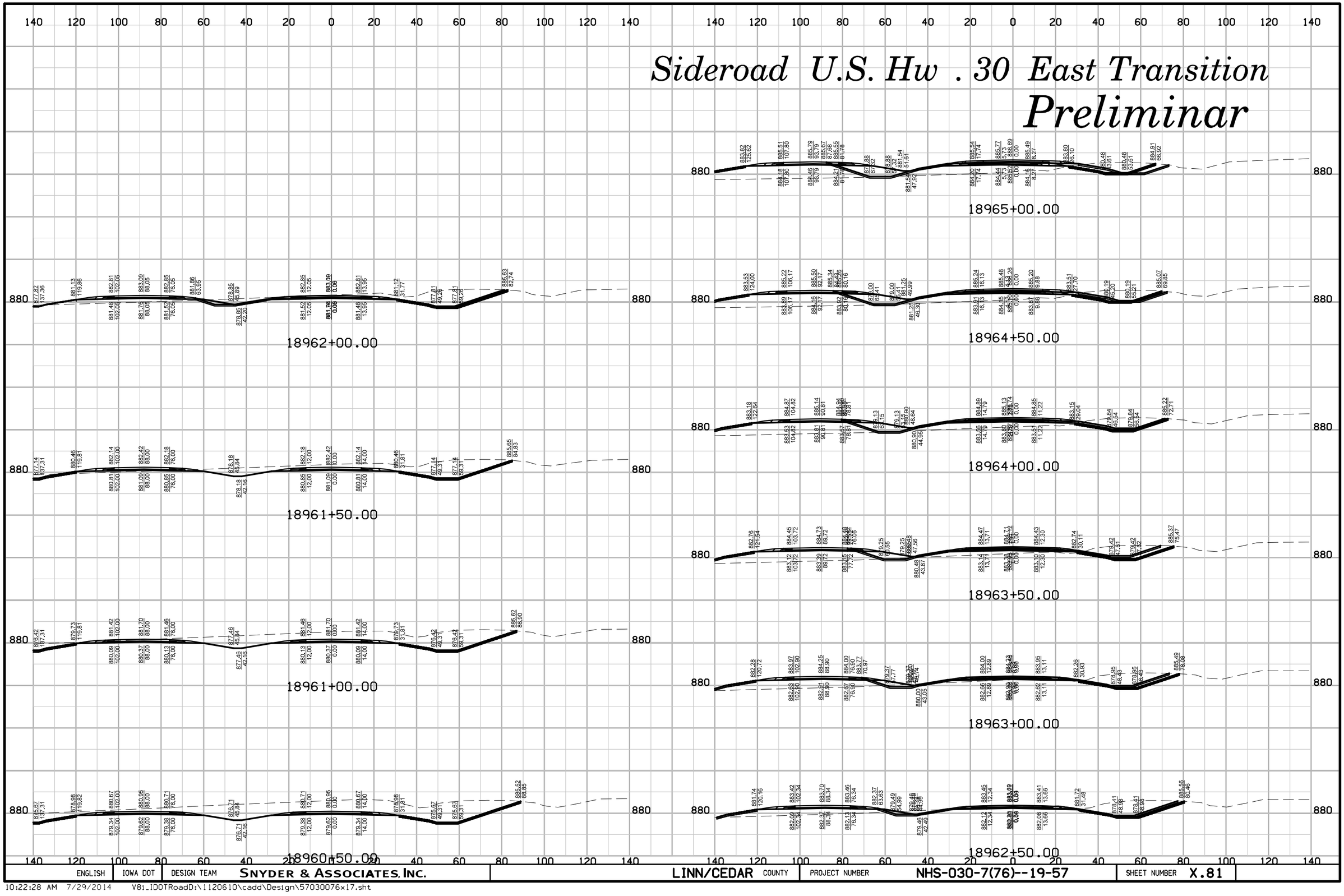


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER X.80

10:22:27 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x17.sht

Sideroad U.S. Hw . 30 East Transition

Preliminar

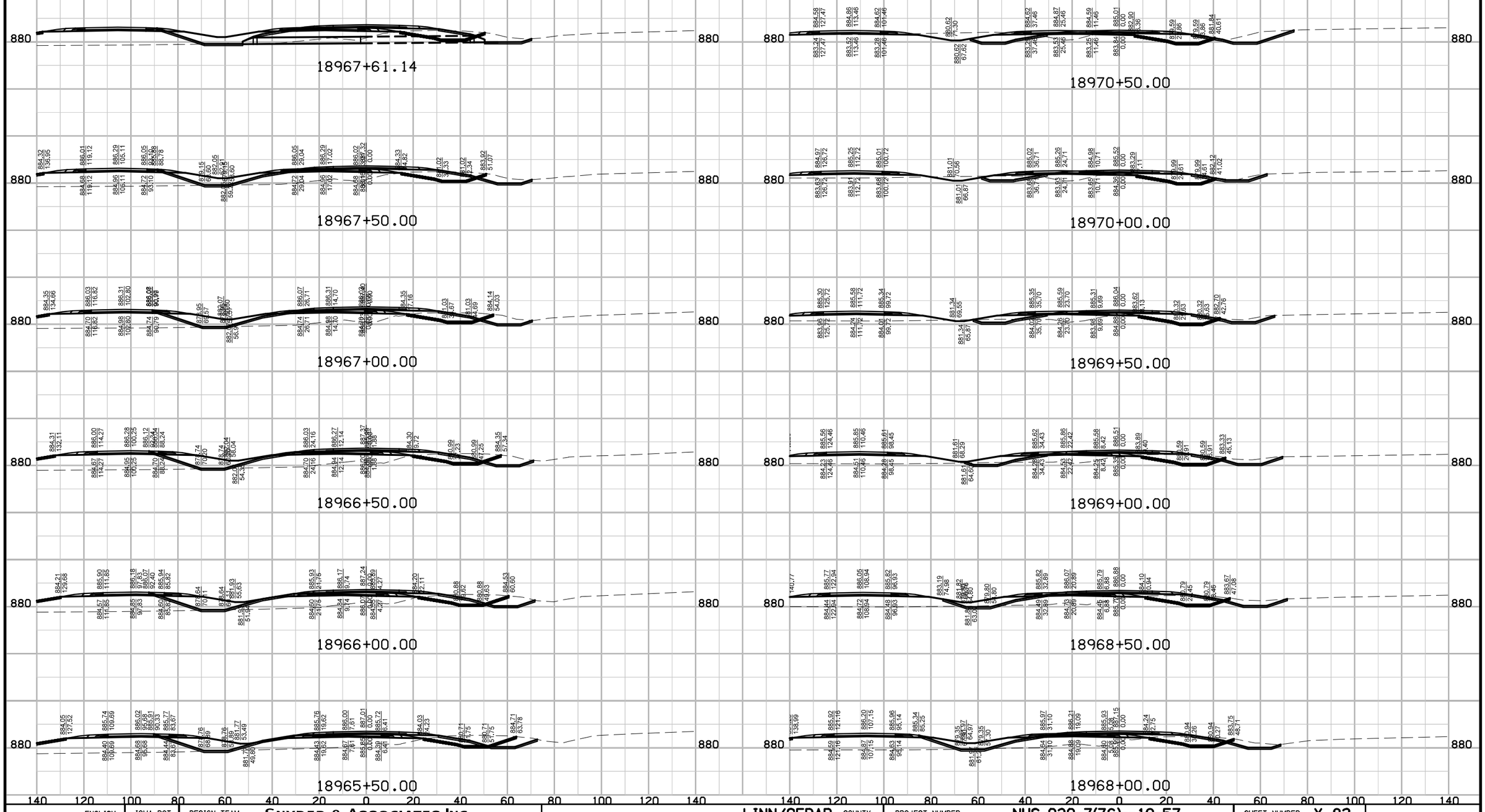


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.81

10:22:28 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x17.sht

Sideroad U.S. Hw . 30 East Transition

Preliminar

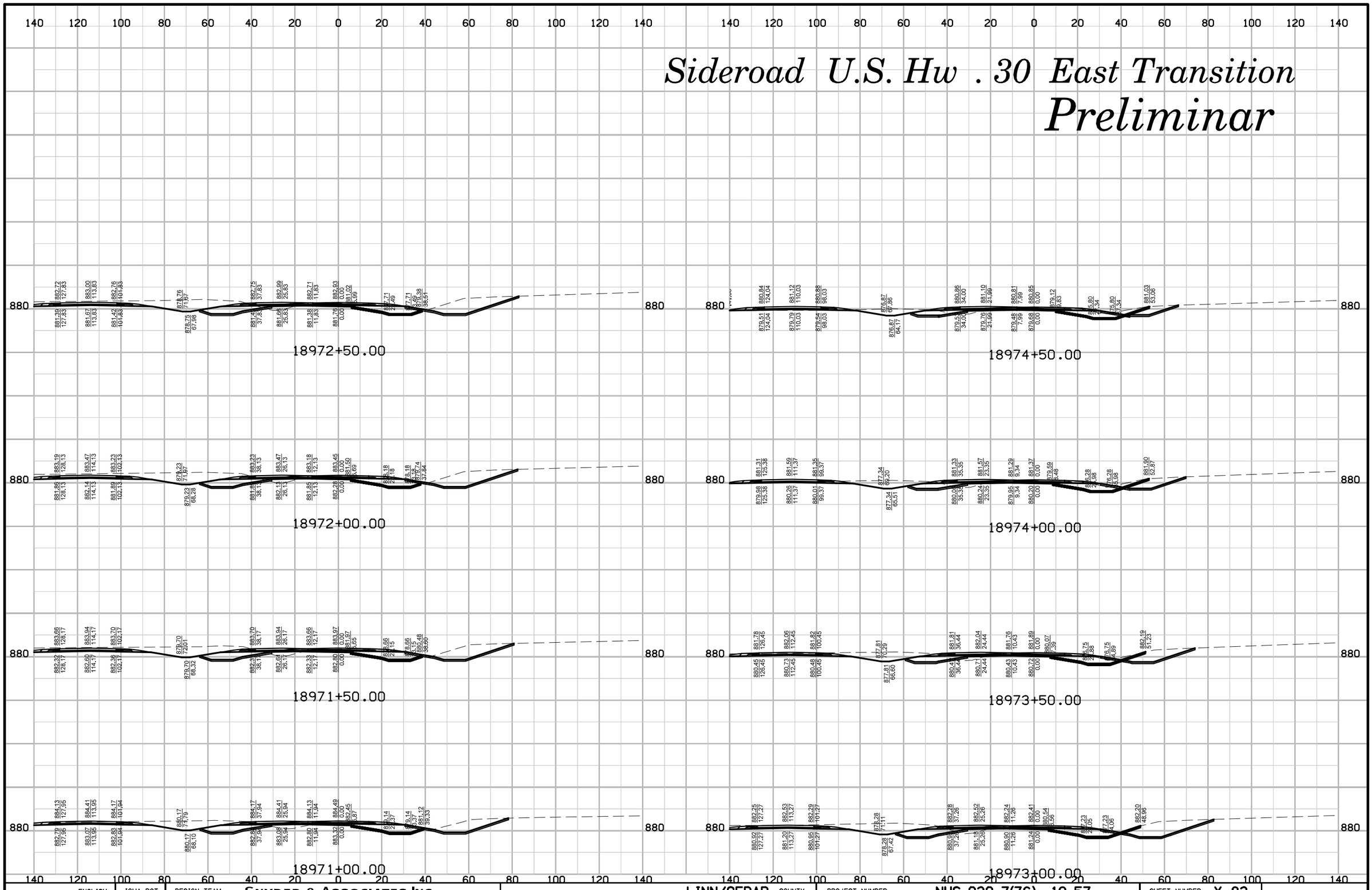


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.82

10:22:29 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x17.sht

Sideroad U.S. Hw . 30 East Transition

Preliminar

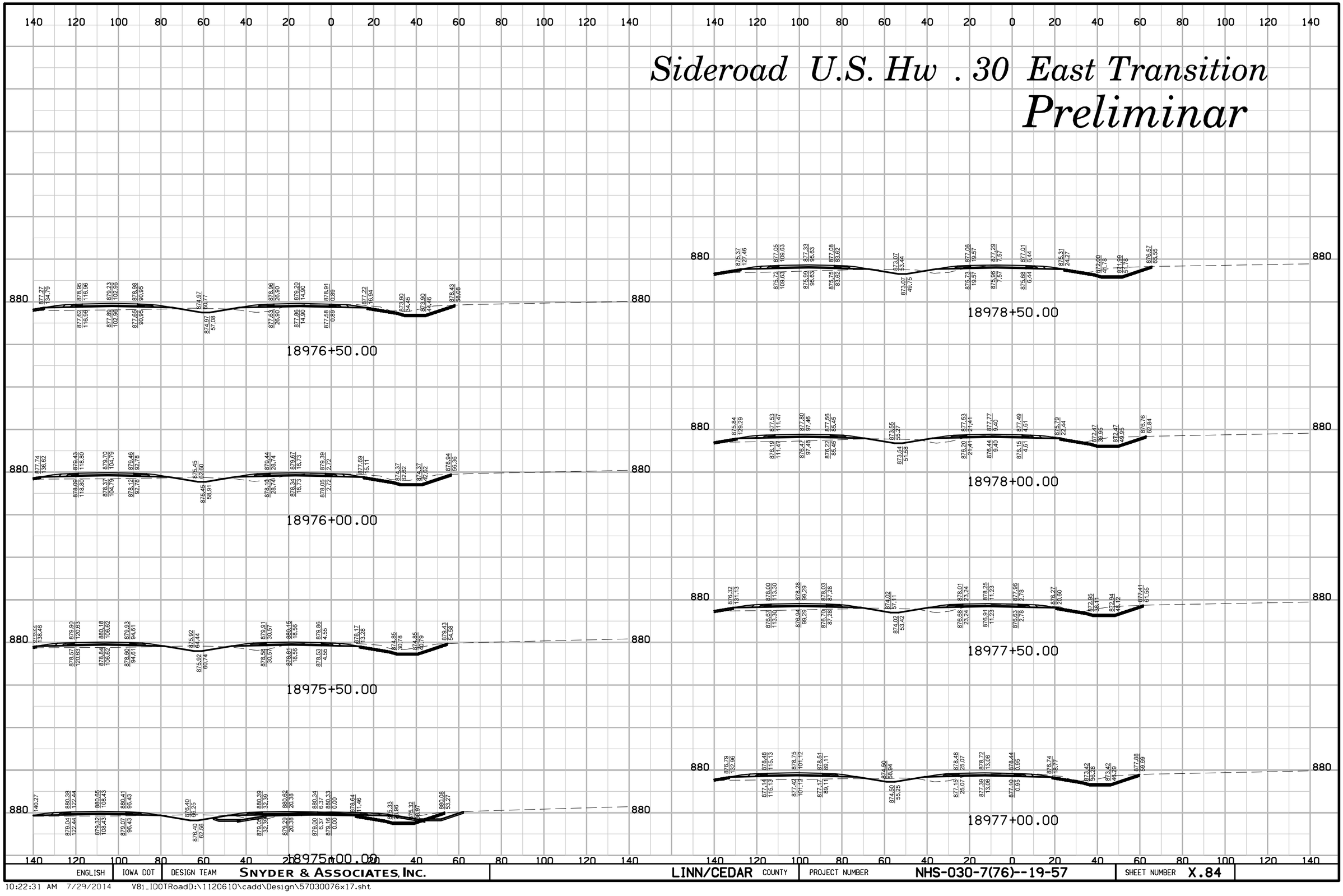


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.83

10:22:30 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x17.sht

Sideroad U.S. Hw . 30 East Transition

Preliminar

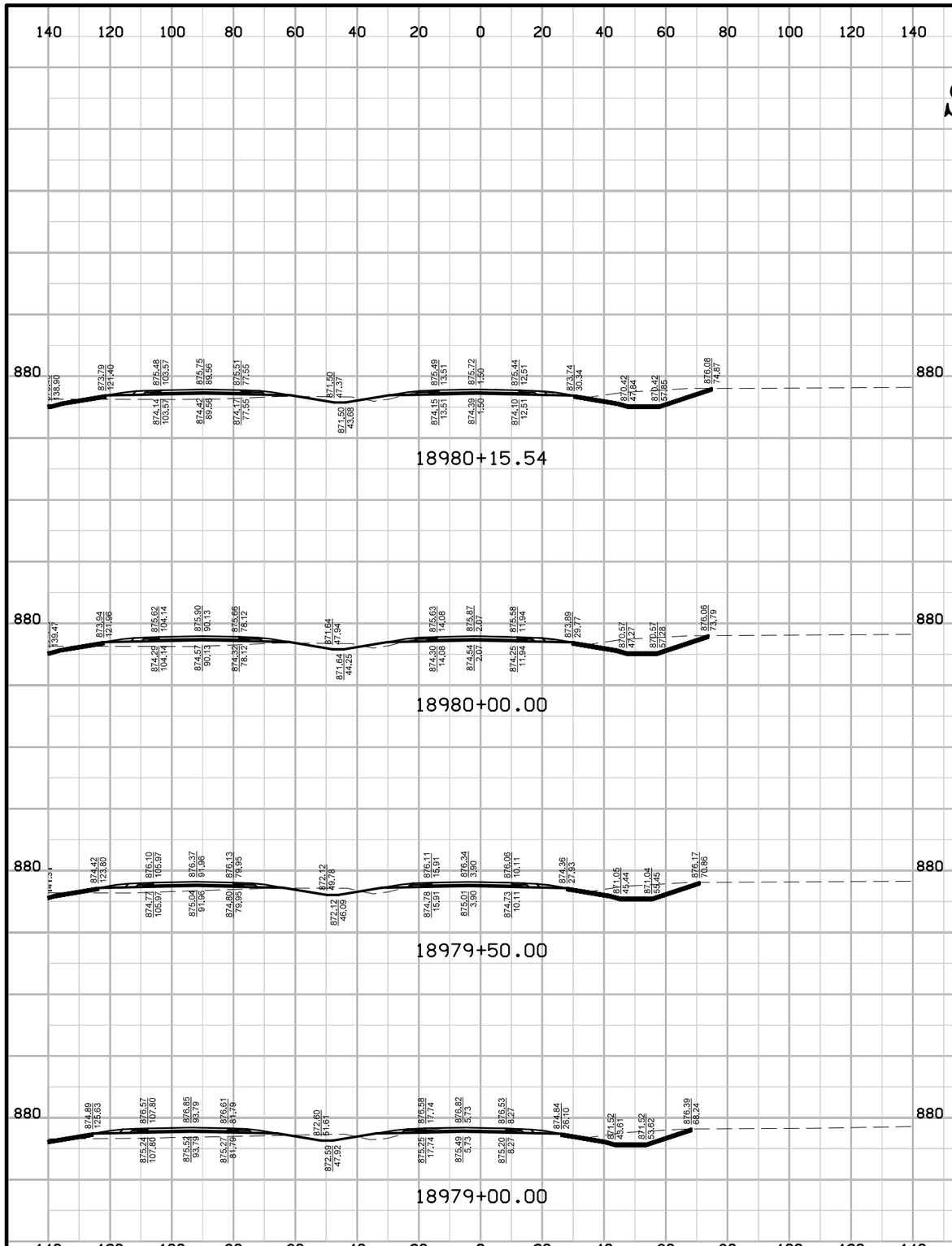


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.84

10:22:31 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x17.sht

Sideroad U.S. Hw . 30 East Transition

Preliminar

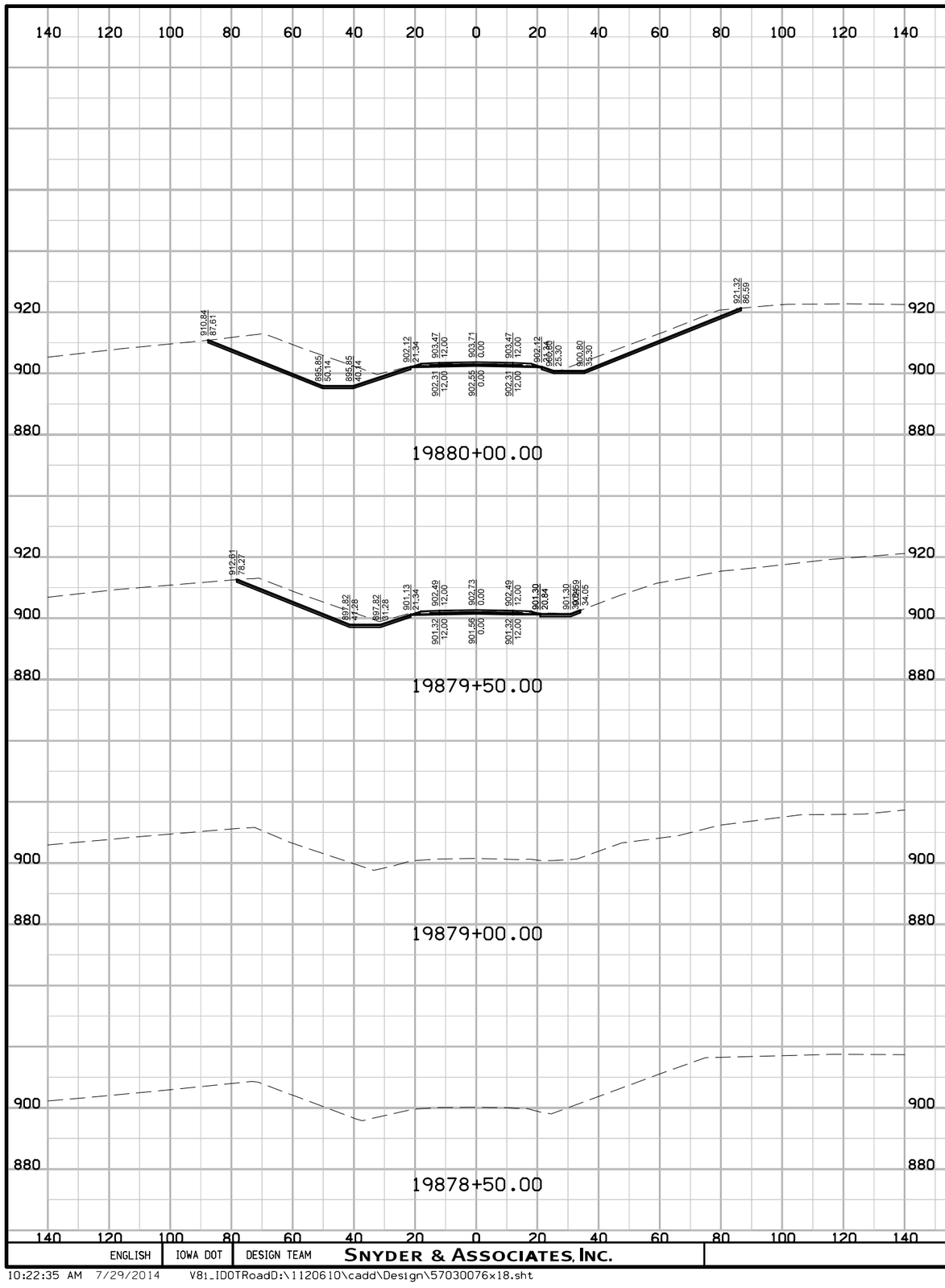


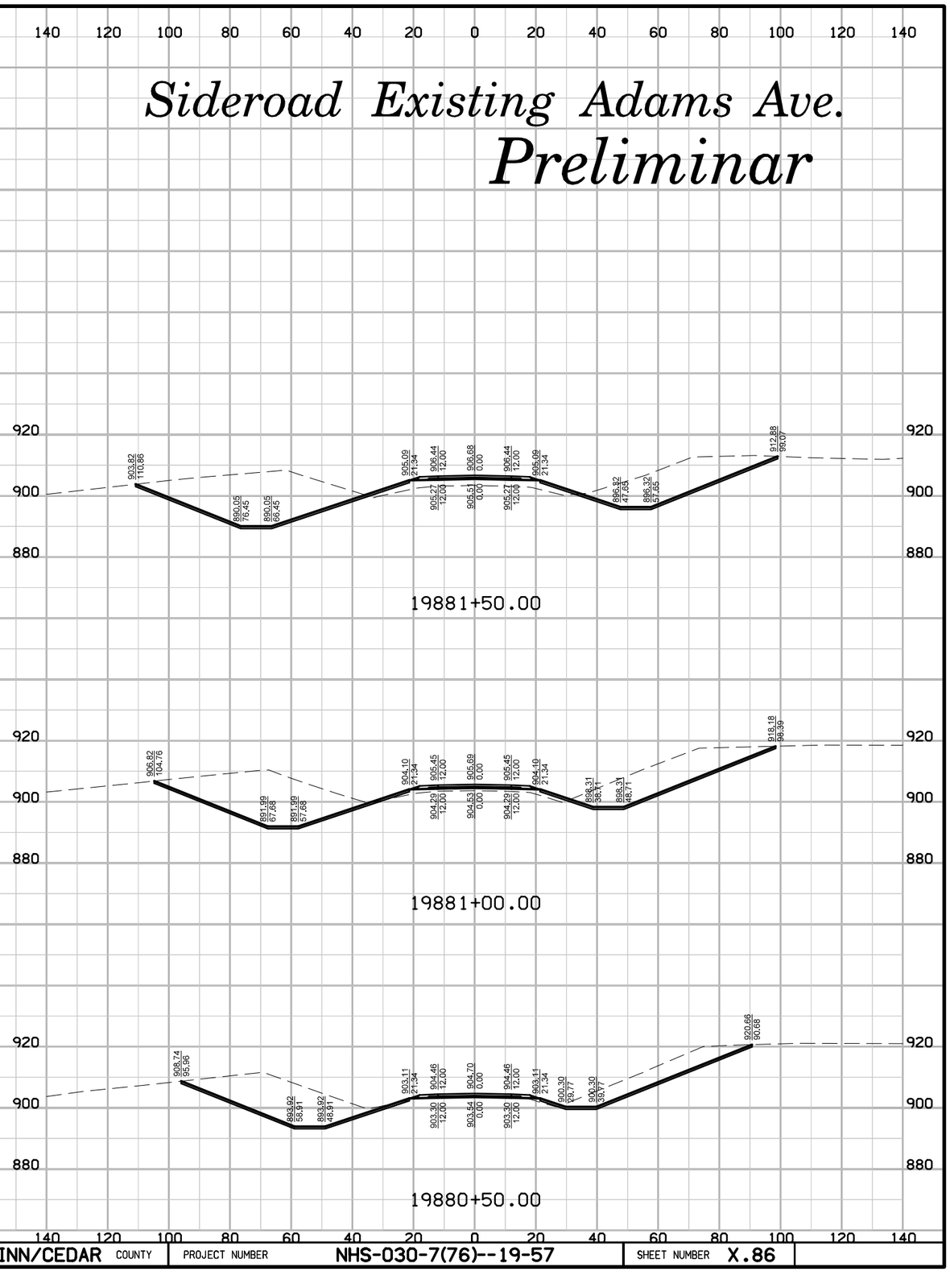
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.85

10:22:32 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x17.sht

Sideroad Existing Adams Ave.

Preliminar



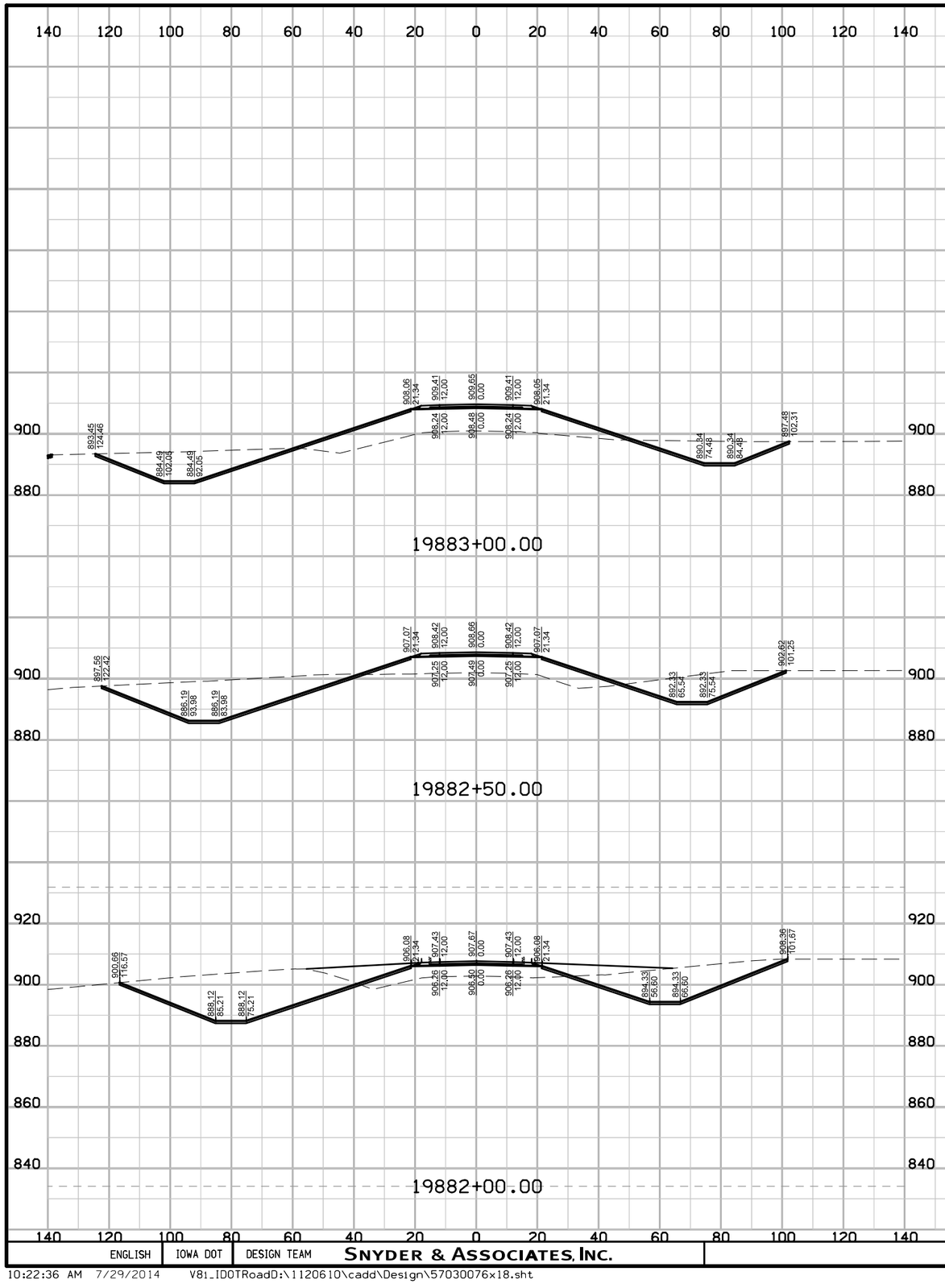


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.86

10:22:35 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x18.sht

Sideroad Existing Adams Ave.

Preliminar

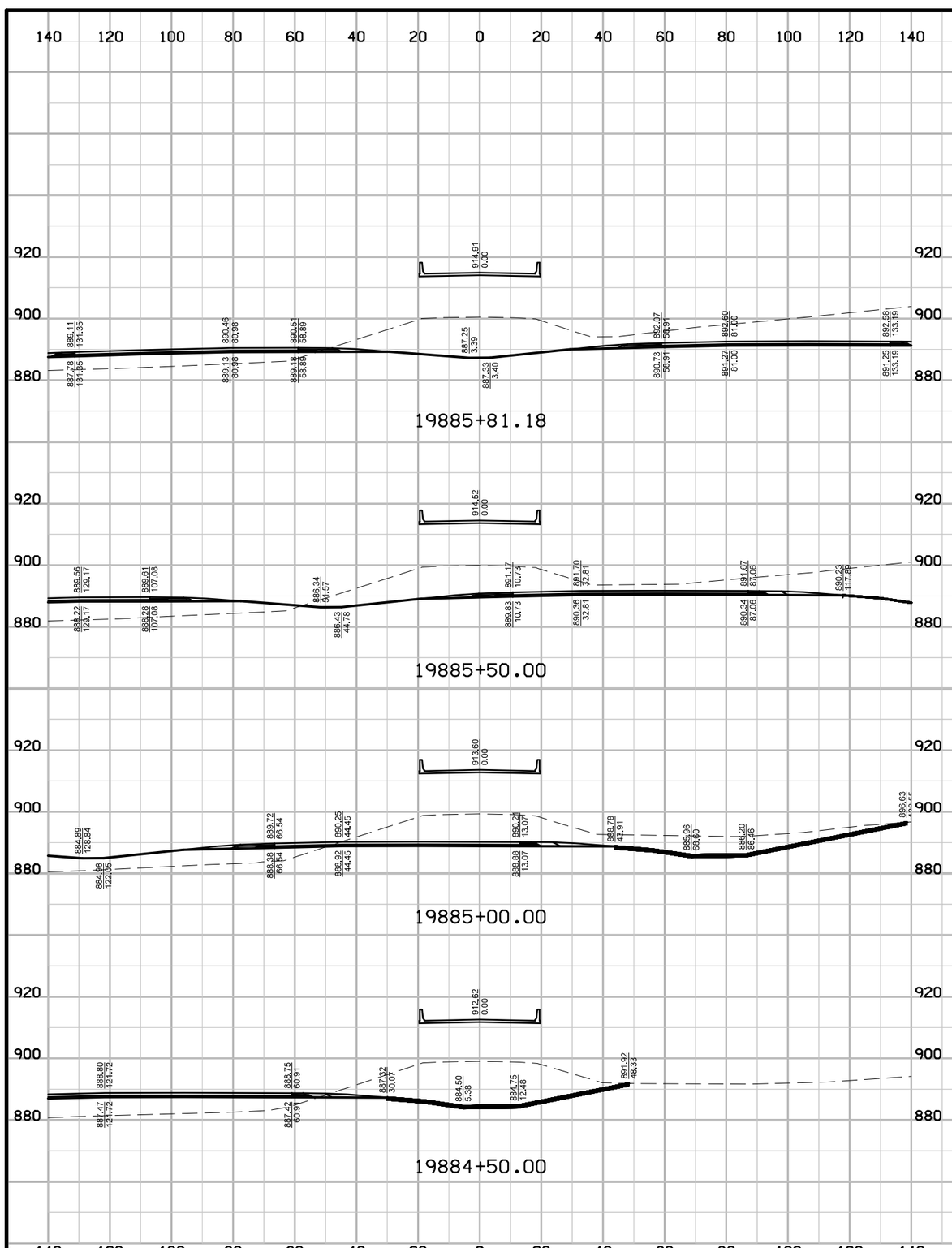


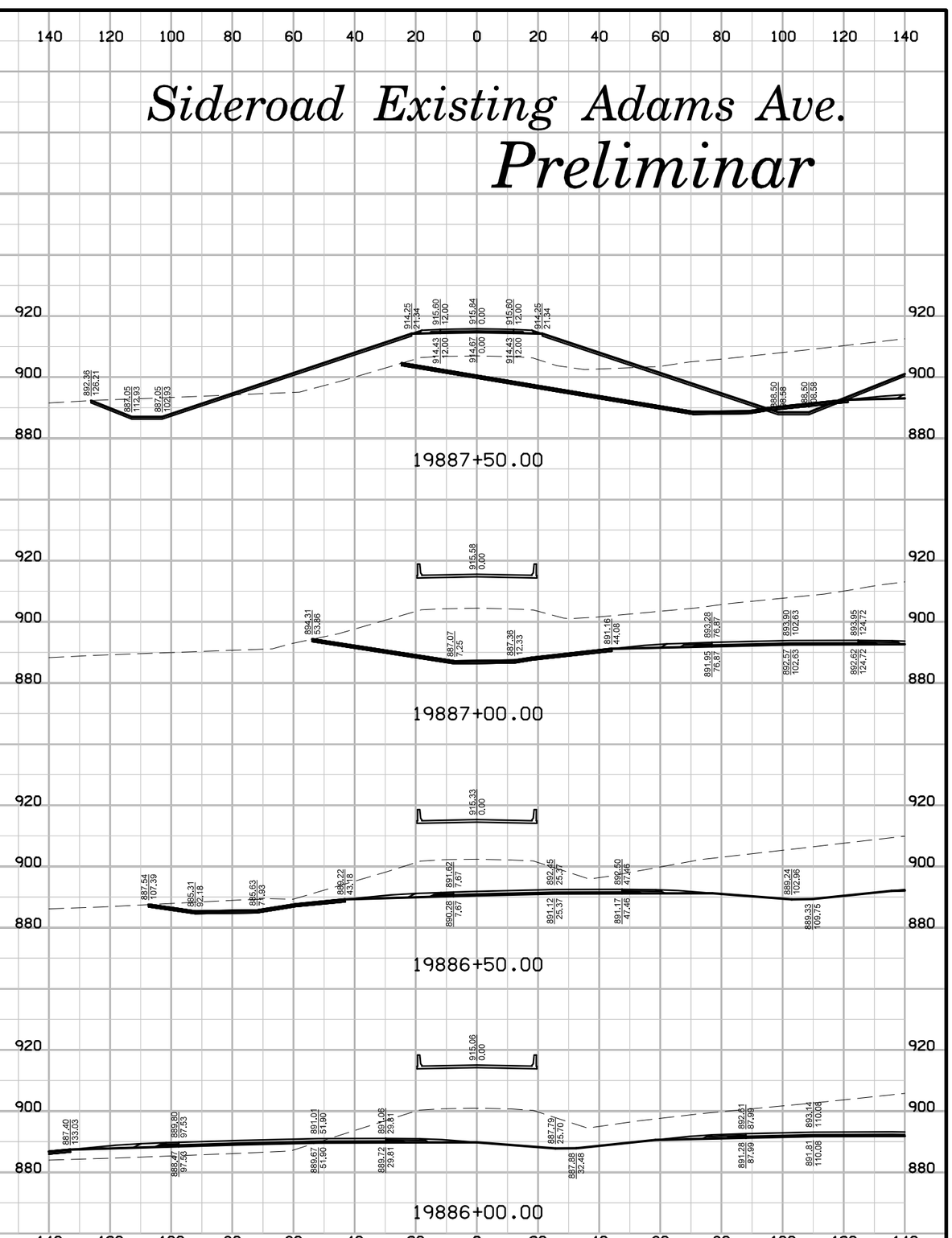
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.87

10:22:36 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x18.sht

Sideroad Existing Adams Ave.

Preliminar



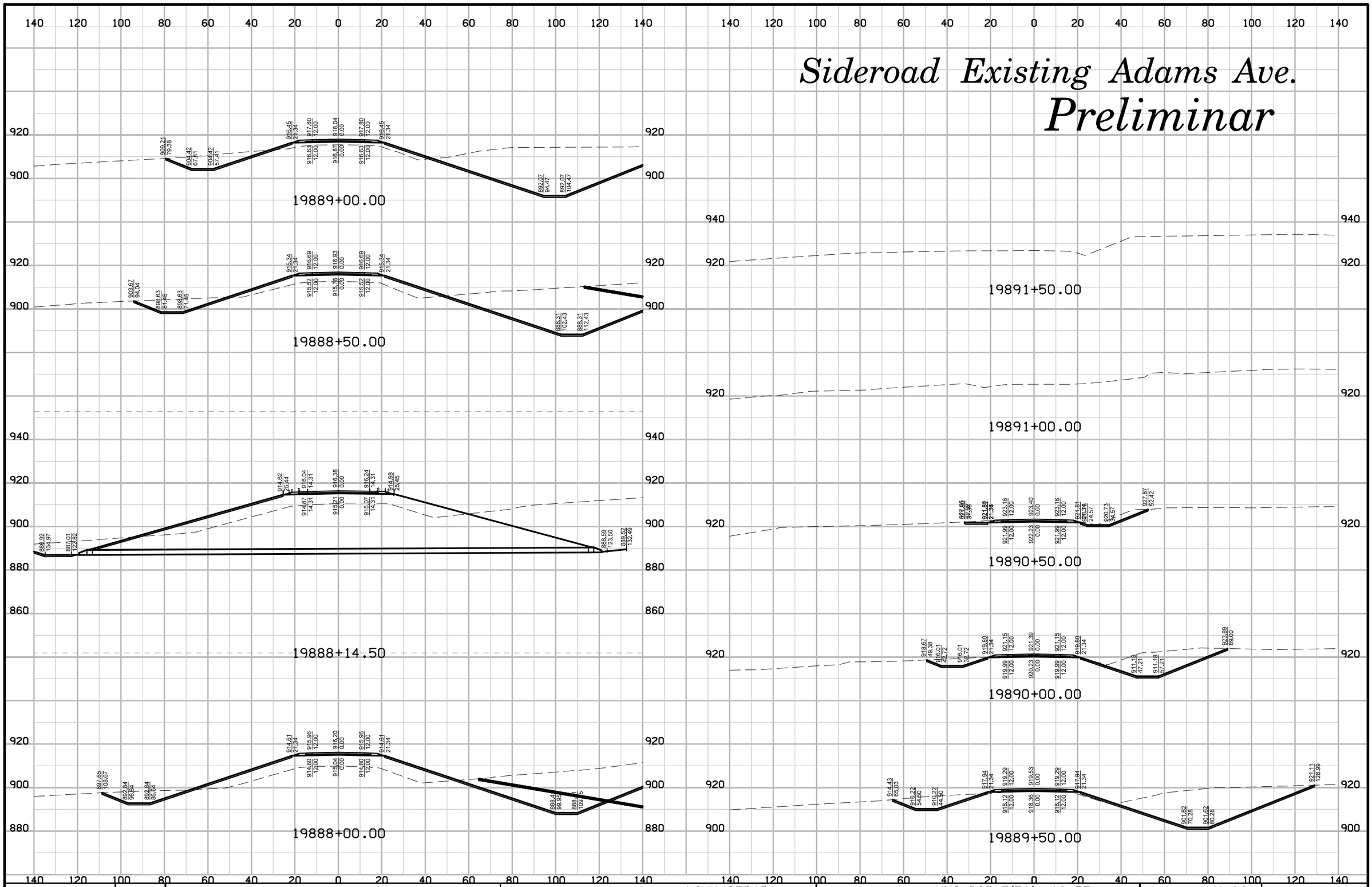


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.88

10:22:37 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x18.sht

Sideroad Existing Adams Ave.

Preliminar

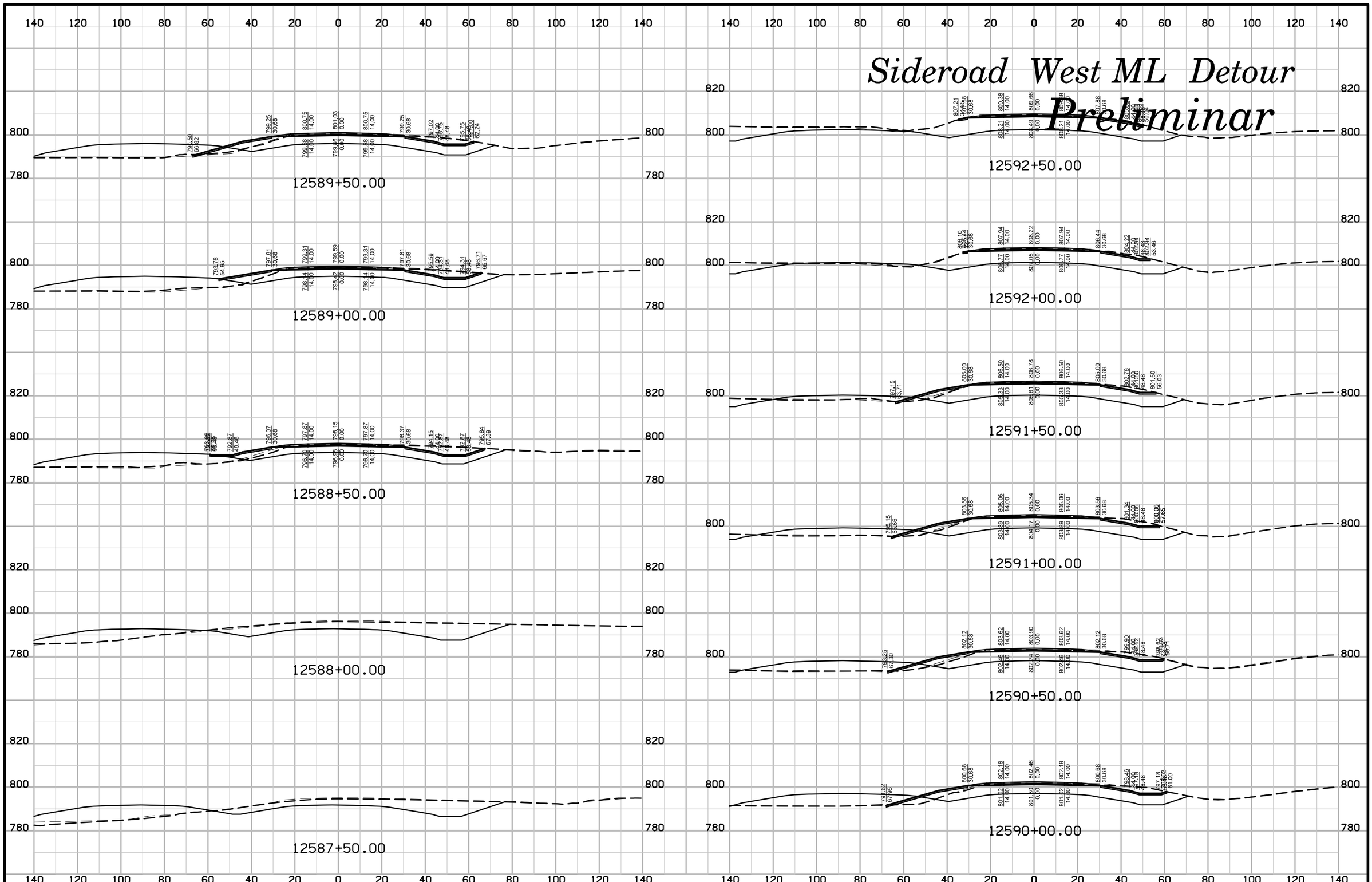


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.89

10:22:37 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x18.sht

Sideroad West ML Detour

Preliminar

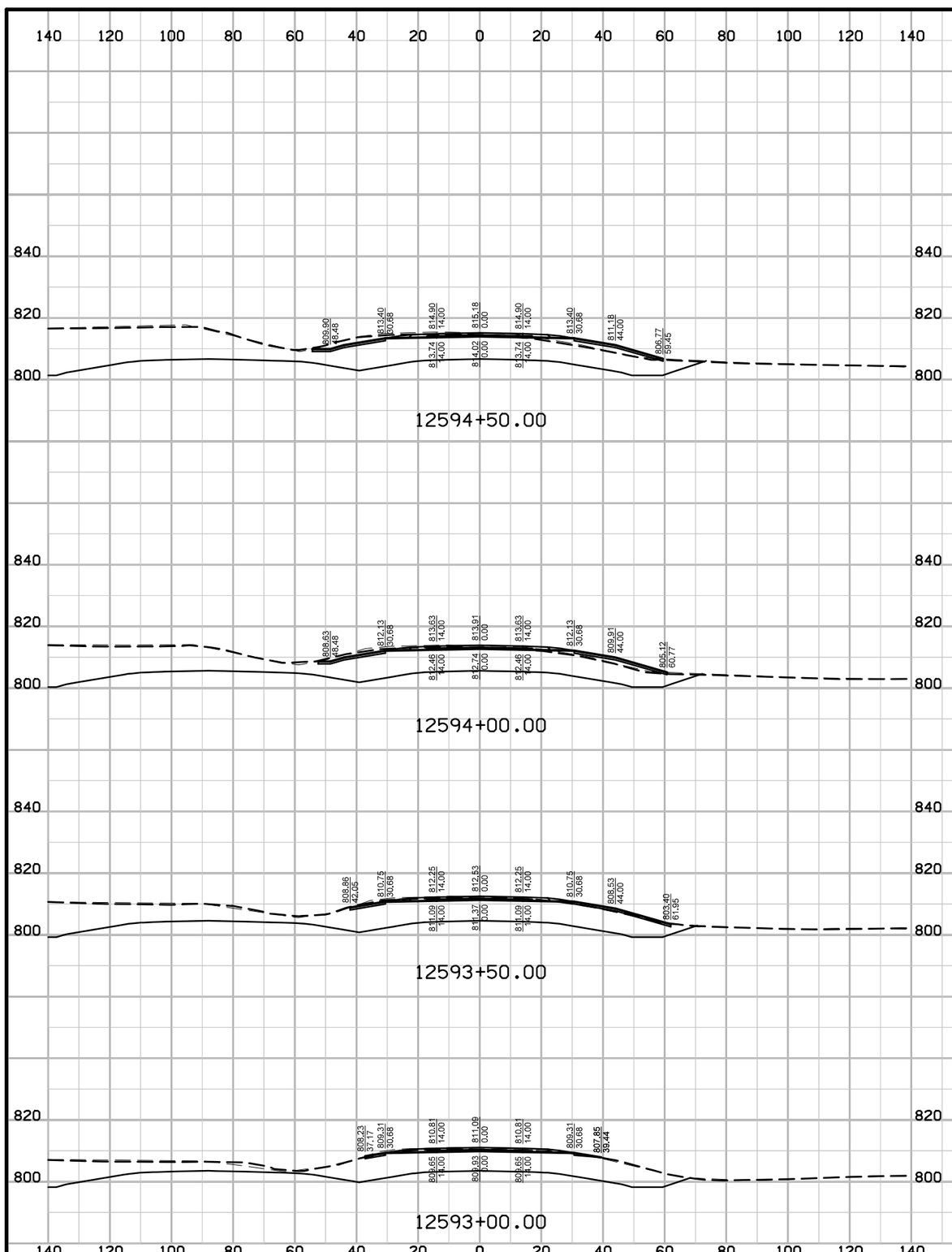


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.90

10:22:41 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x19.sht

Sideroad West ML Detour

Preliminar

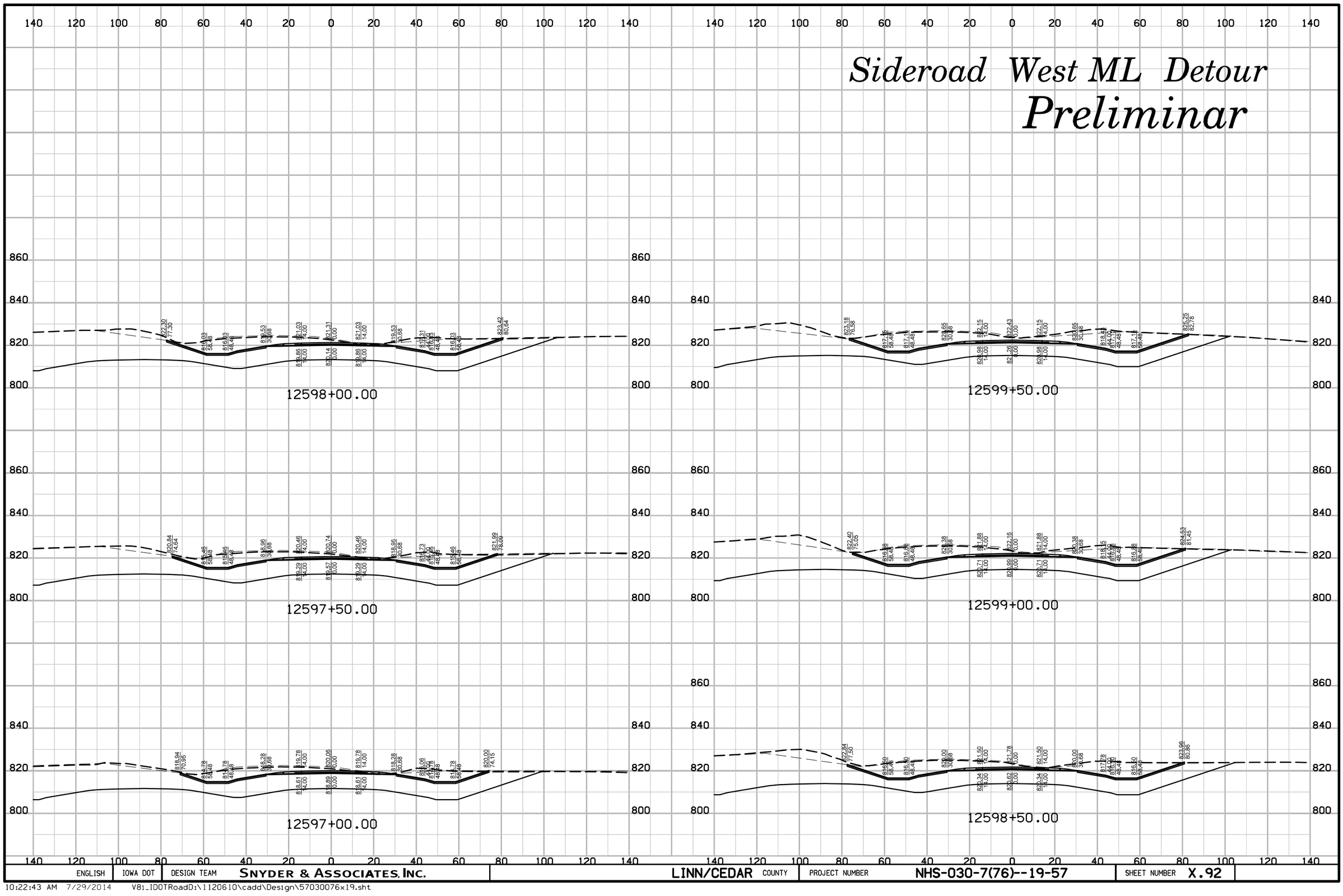


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.91

10:22:42 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x19.sht

Sideroad West ML Detour

Preliminar

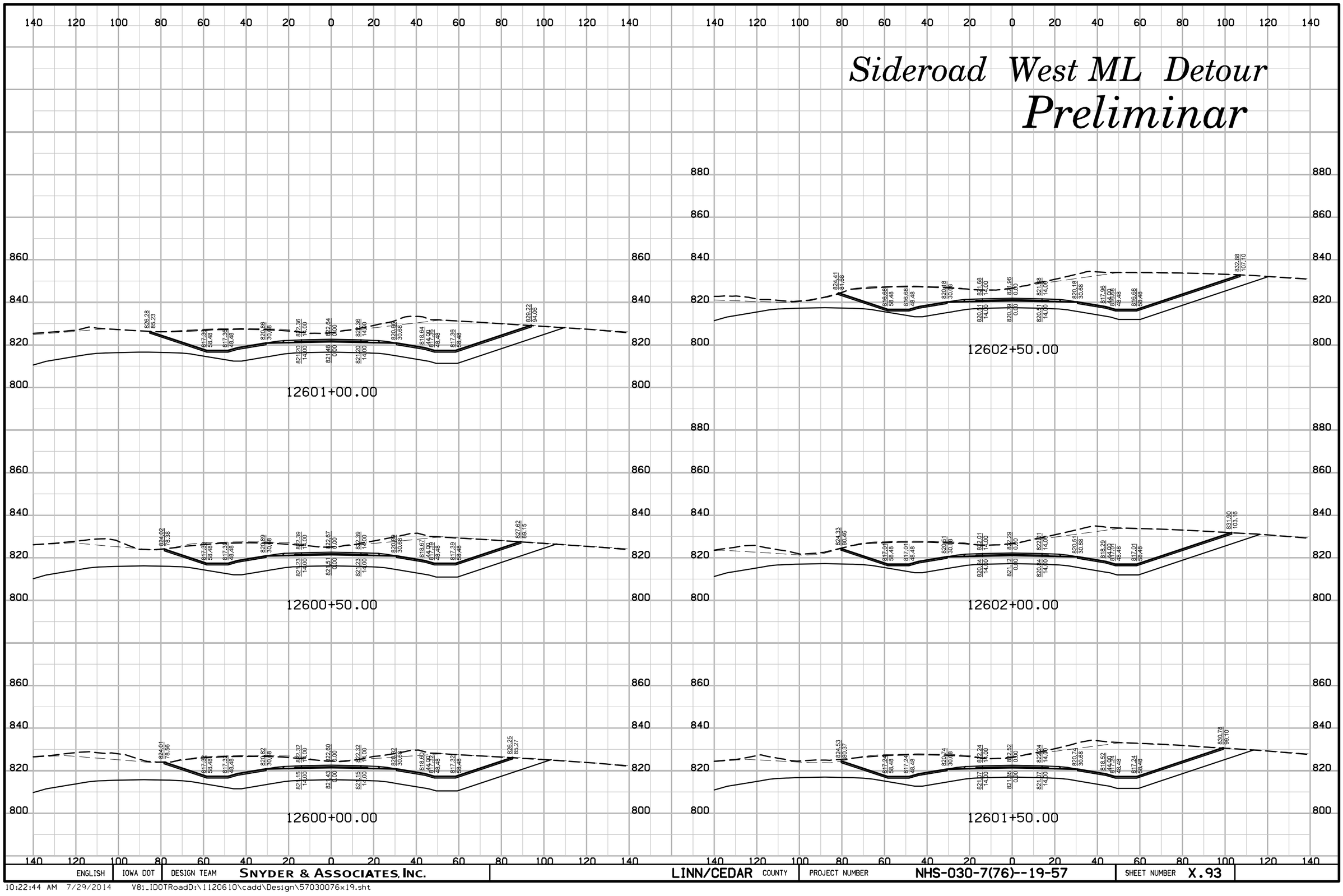


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.92

10:22:43 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x19.sht

Sideroad West ML Detour

Preliminar

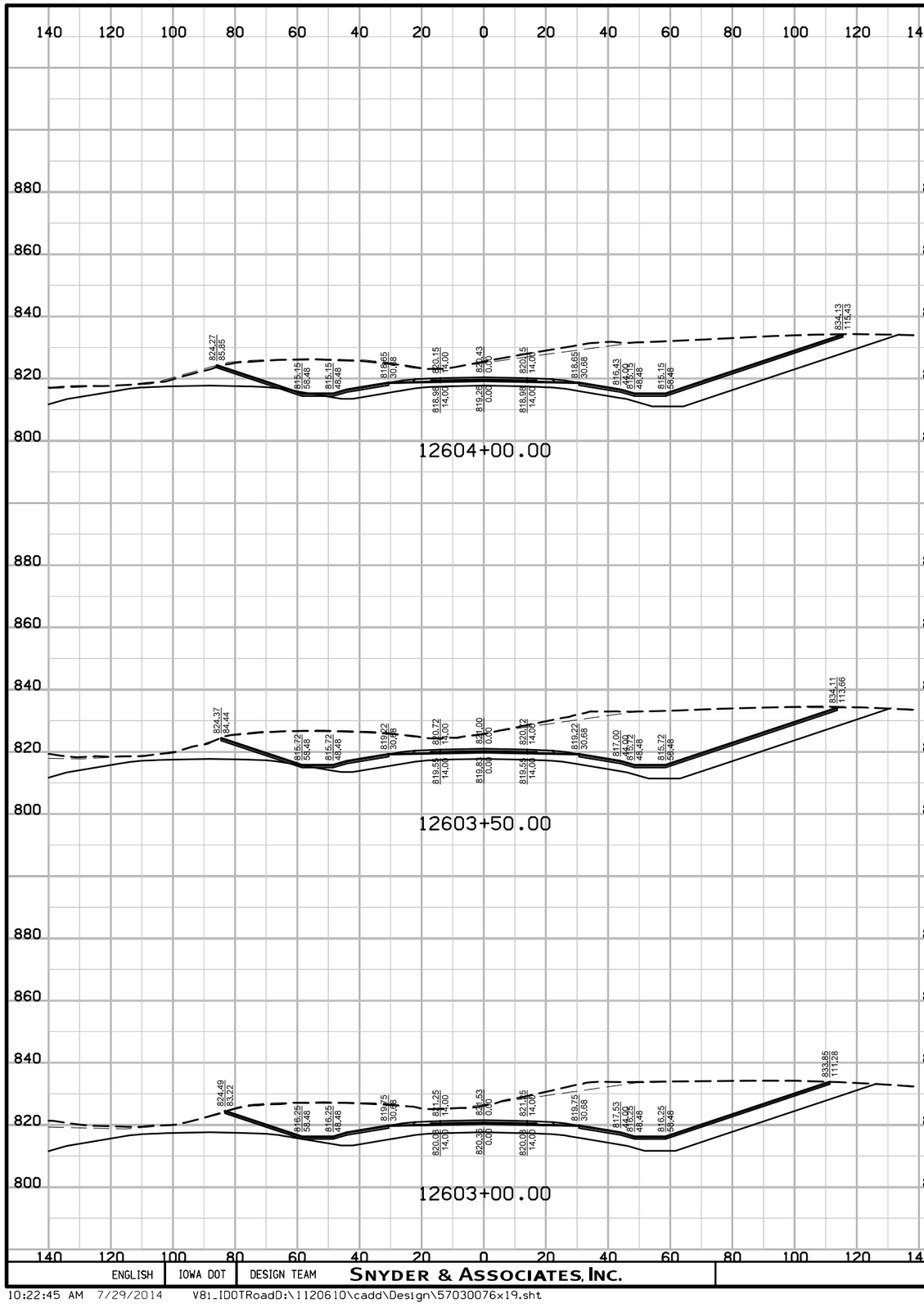


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.93

10:22:44 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x19.sht

Sideroad West ML Detour

Preliminar

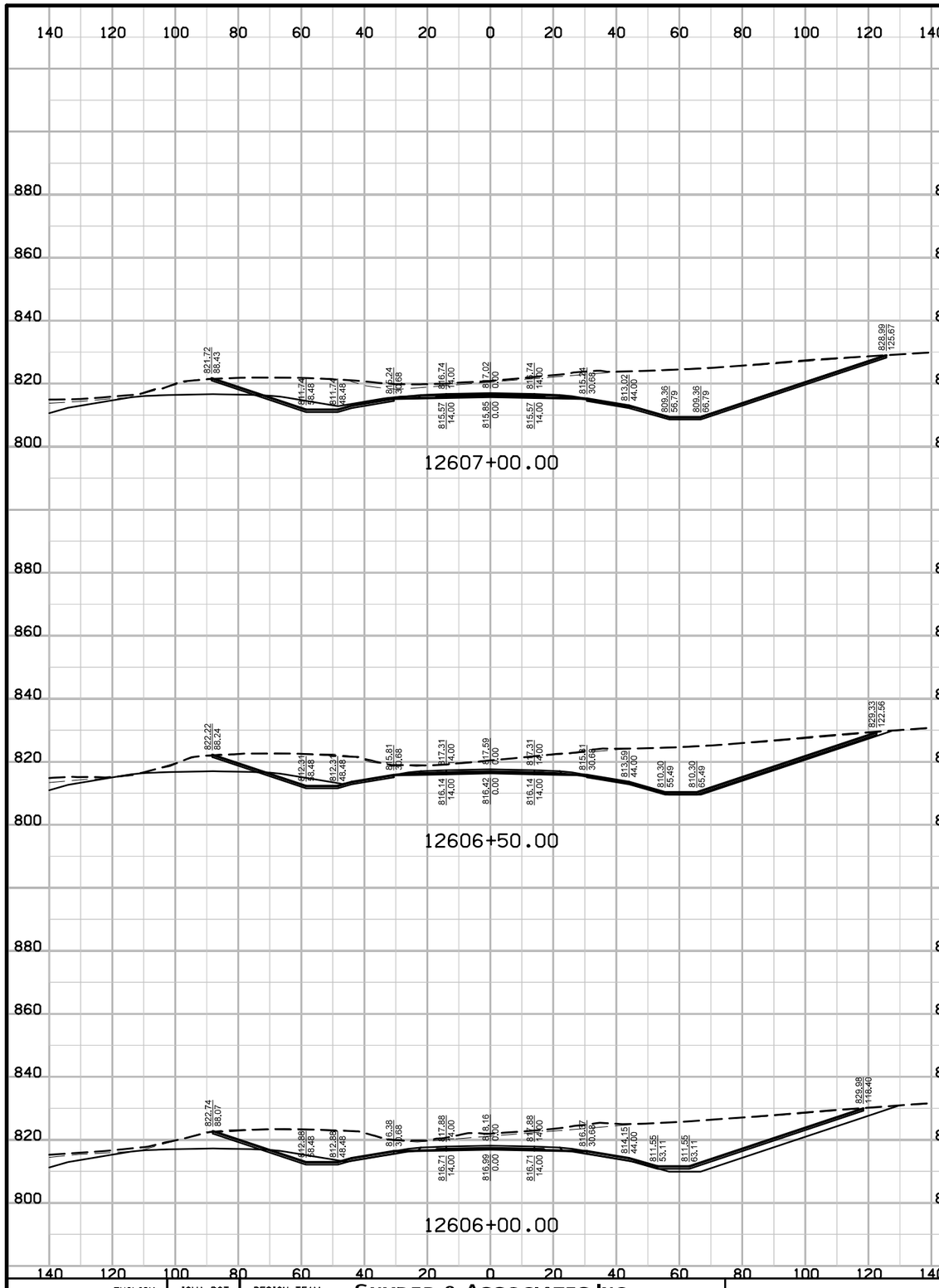


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.94

10:22:45 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x19.sht

Sideroad West ML Detour

Preliminar

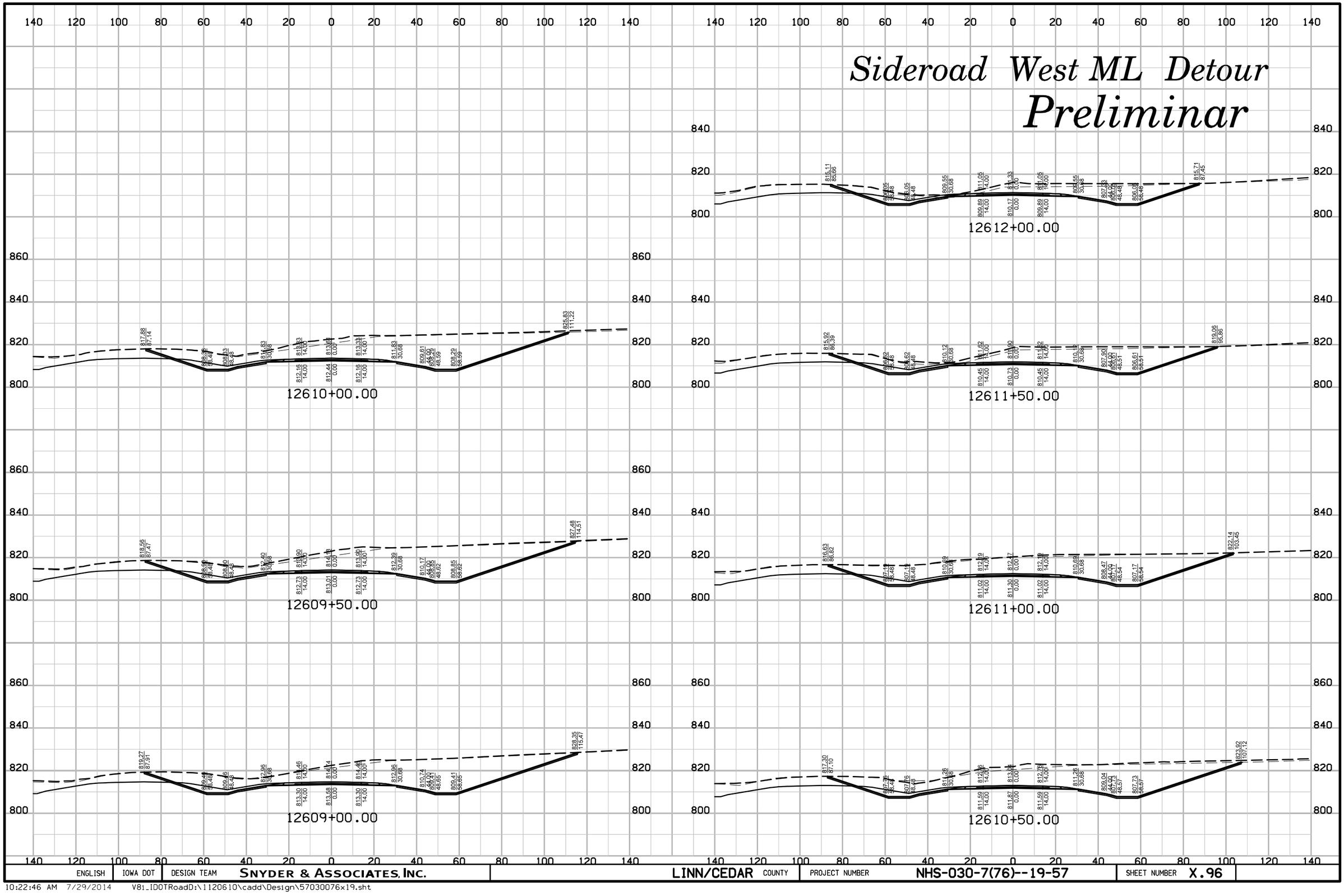


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.95

10:22:46 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x19.sht

Sideroad West ML Detour

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.96

10:22:46 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x19.sht

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

Sideroad West ML Detour

Preliminar

820 800

12613+00.00

820 800

12612+50.00

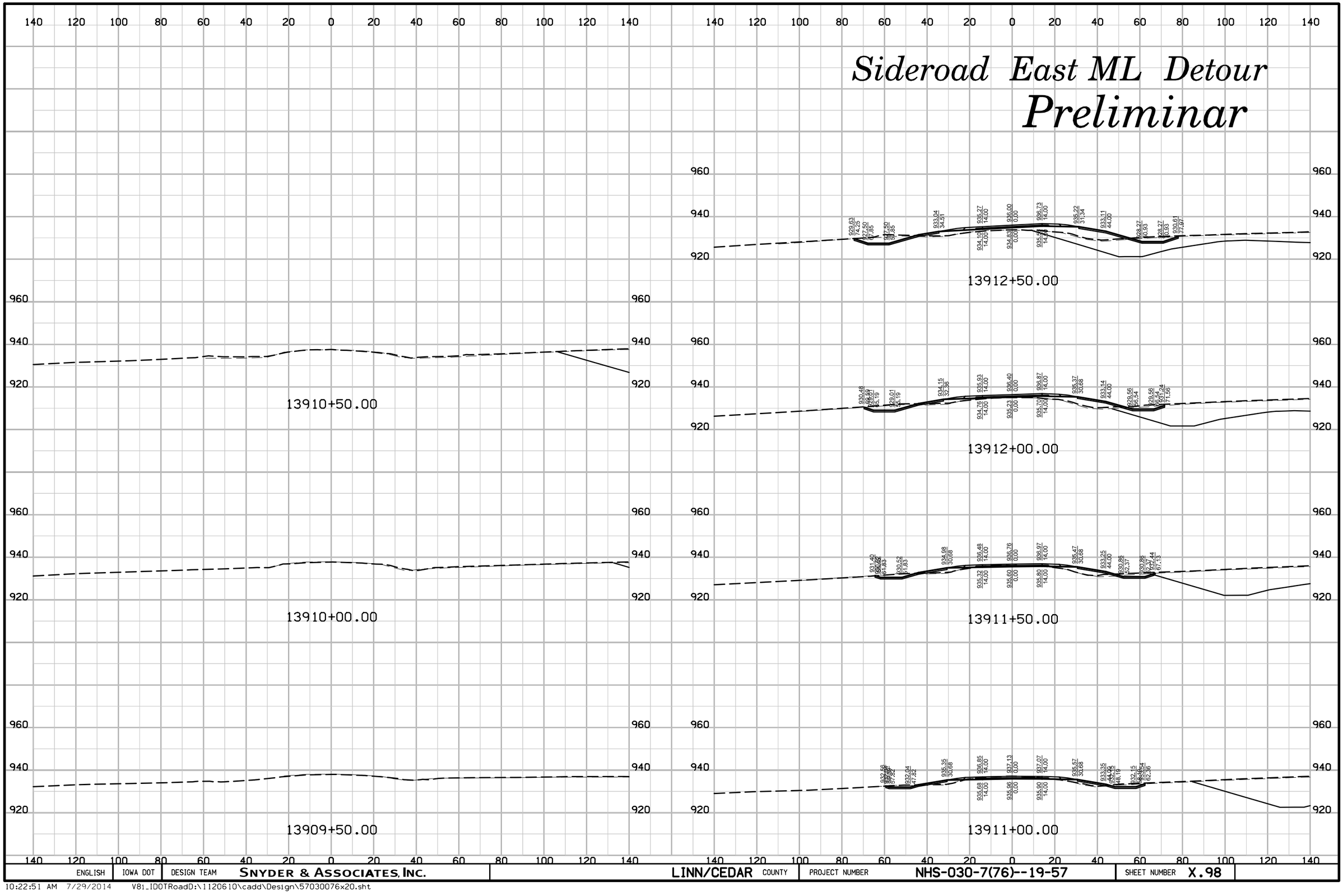
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.97

10:22:47 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x19.sht

Sideroad East ML Detour

Preliminar

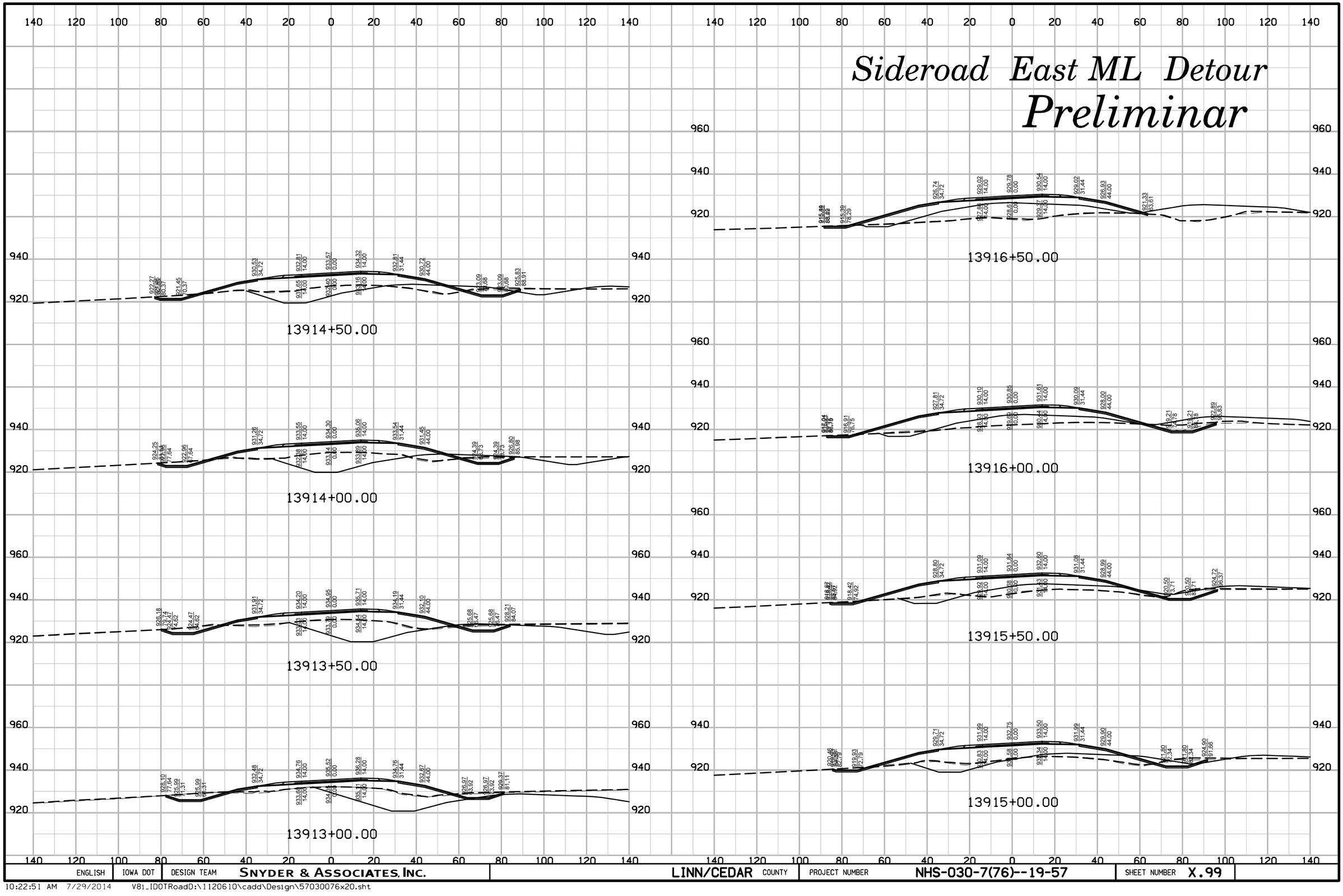


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.98

10:22:51 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x20.sht

Sideroad East ML Detour

Preliminar

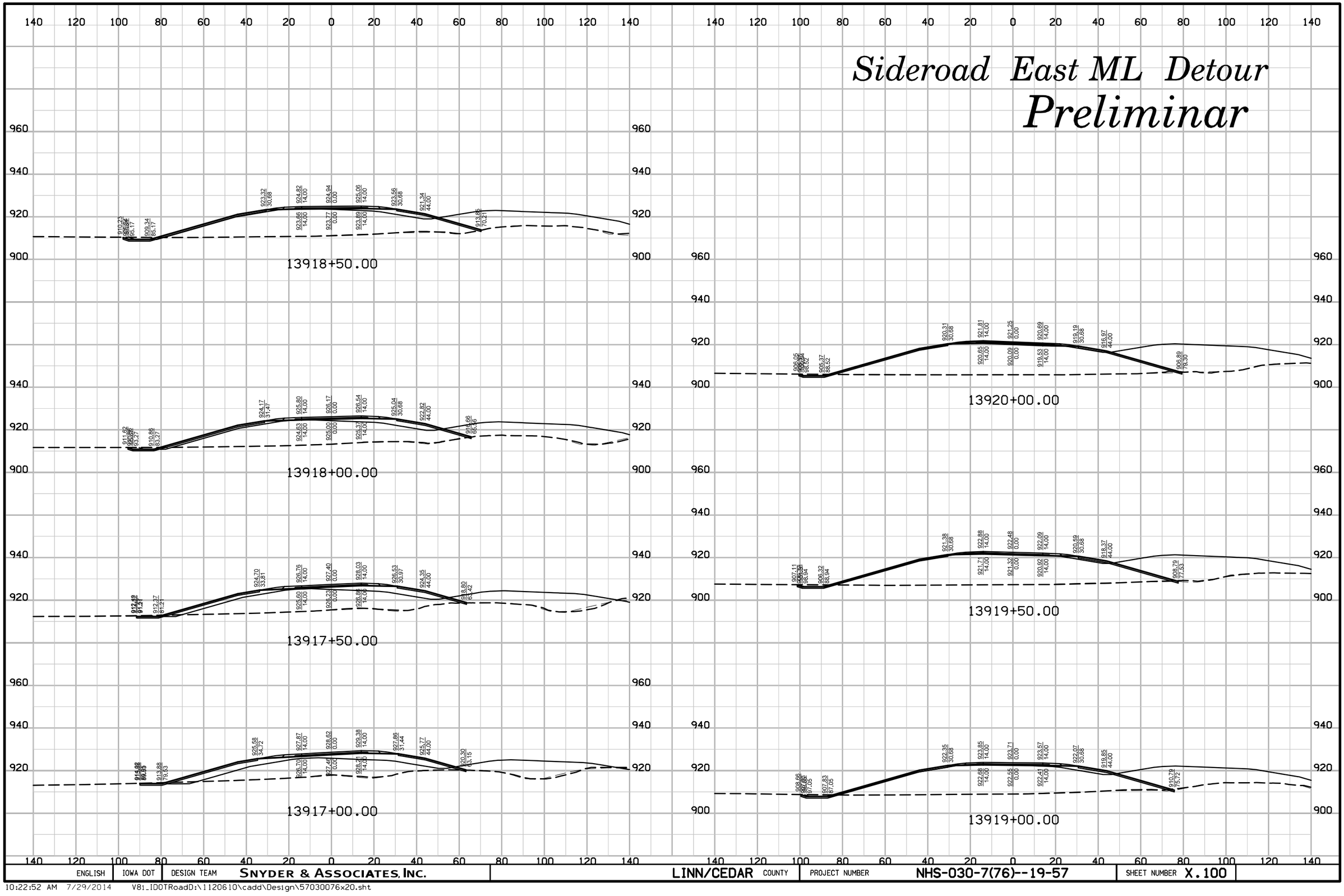


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.99

10:22:51 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x20.sht

Sideroad East ML Detour

Preliminar

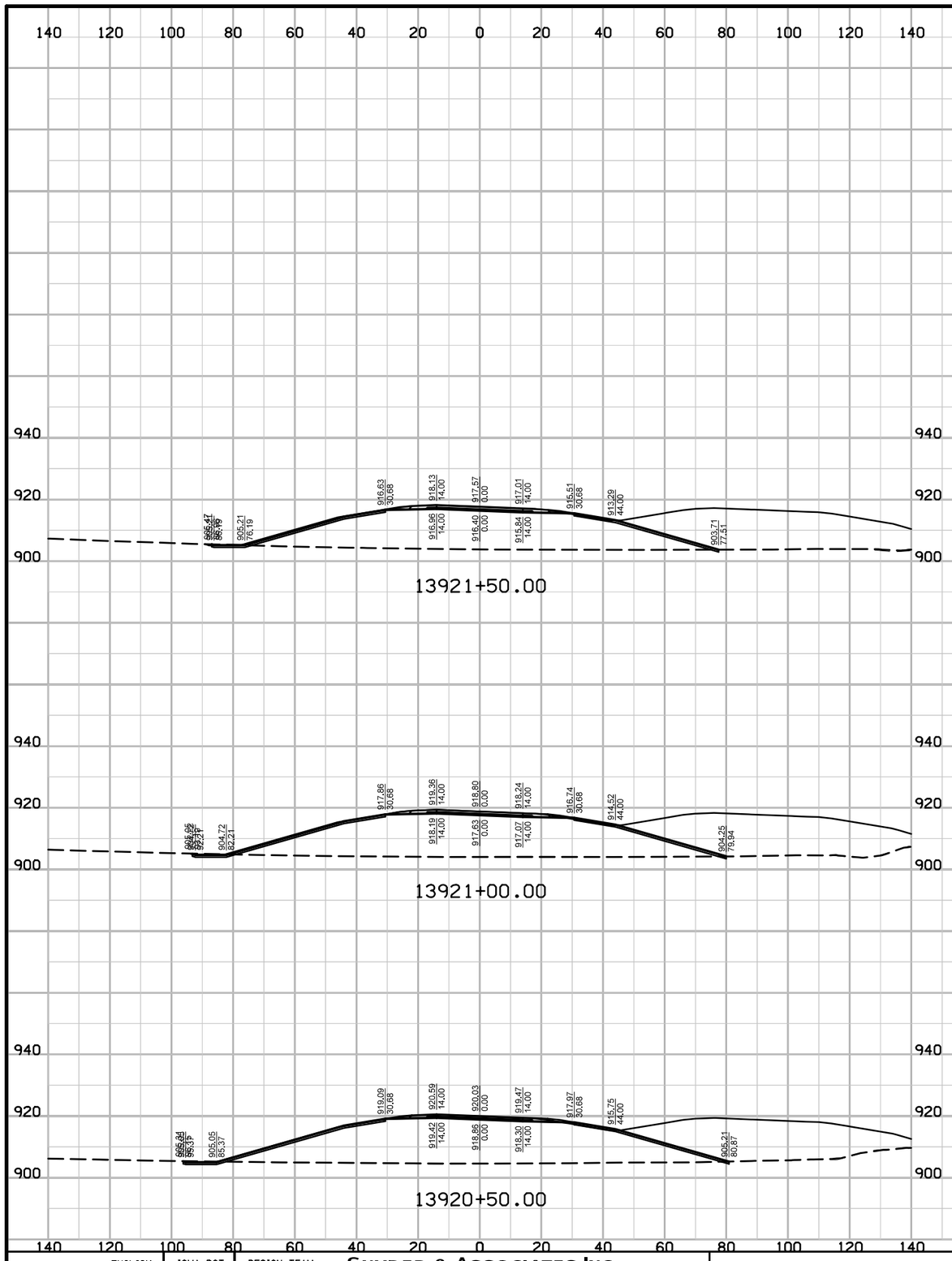


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.100

10:22:52 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x20.sht

Sideroad East ML Detour

Preliminar

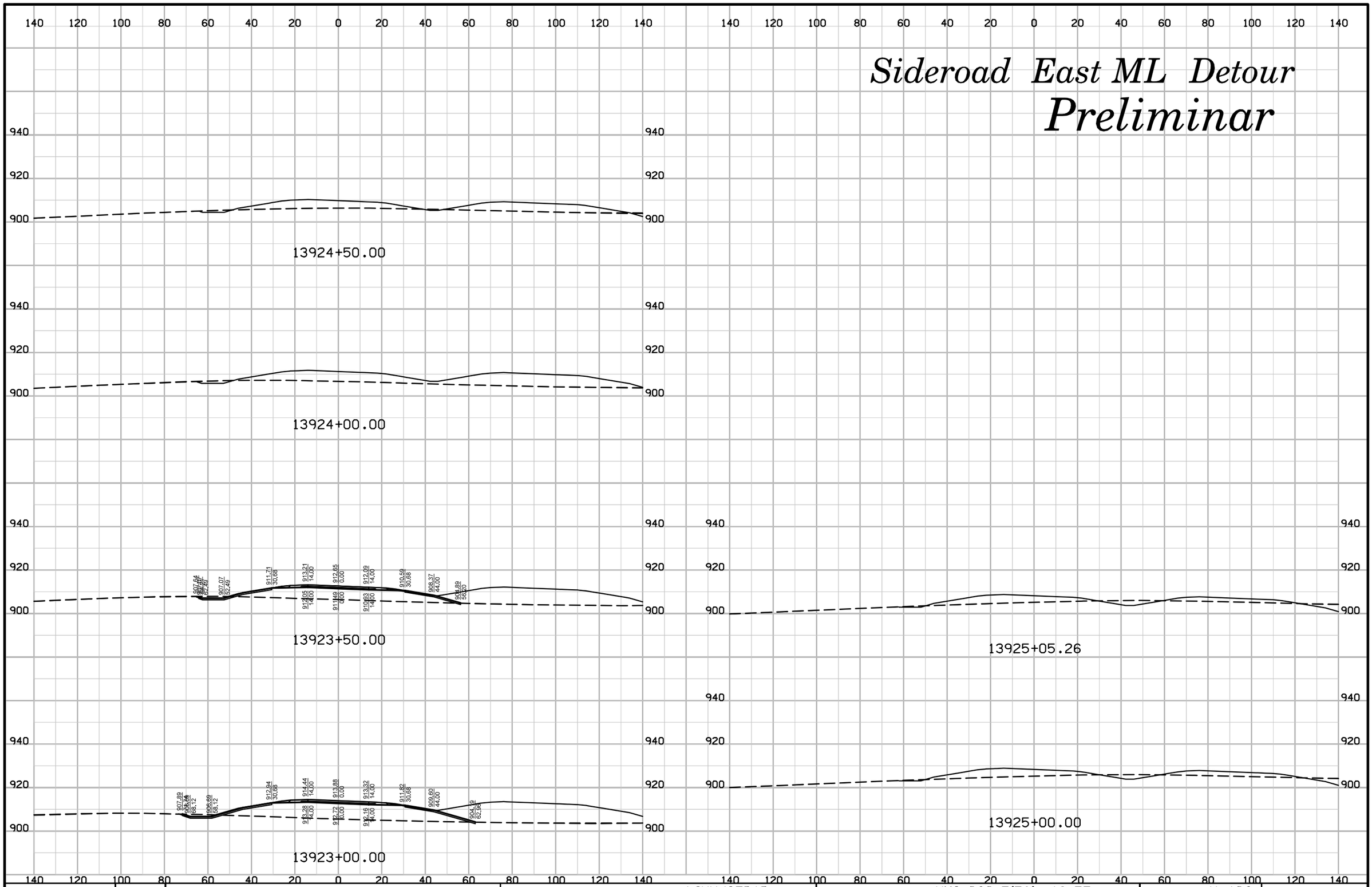


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.101

10:22:53 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x20.sht

Sideroad East ML Detour

Preliminar

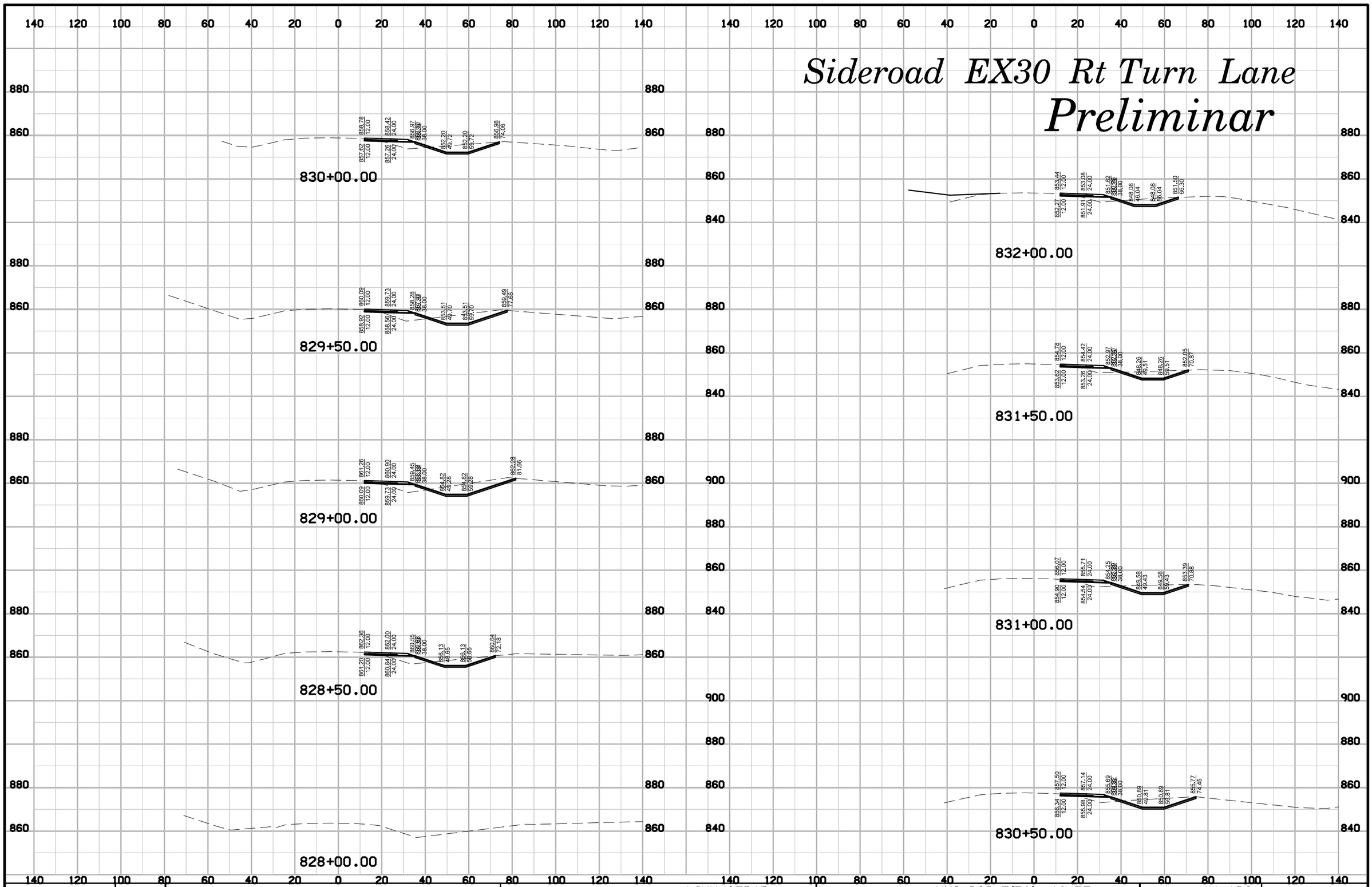


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.102

10:22:54 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x20.sht

Sideroad EX30 Rt Turn Lane

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.103

10:22:57 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x21.sht

Sideroad Kirkwood 3

Preliminar

15860+05.50

15862+50.00

15860+00.00

15862+00.00

15859+50.00

15861+50.00

15859+00.00

15861+00.00

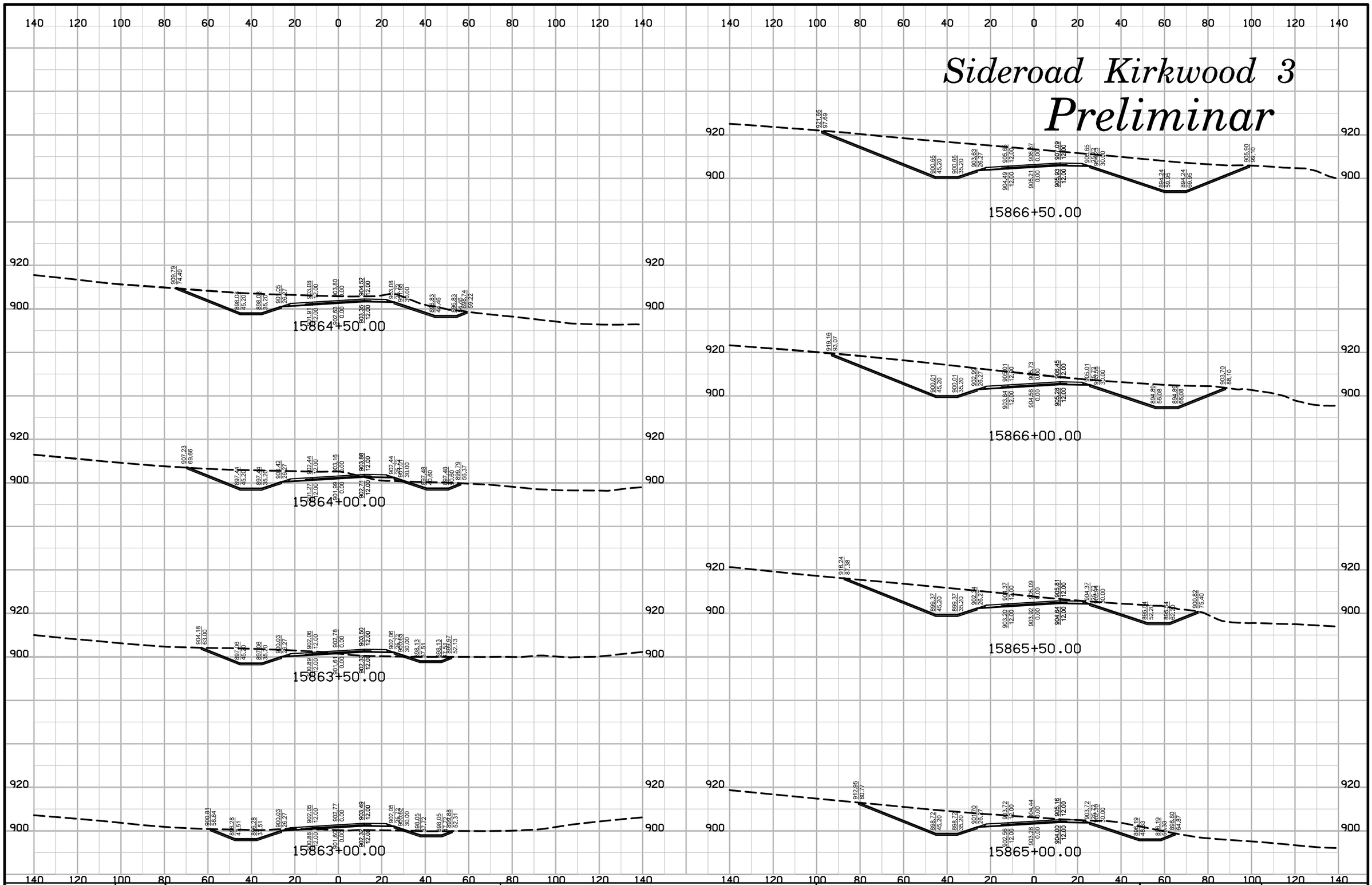
15860+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.104

10:23:01 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x22.sht

Sideroad Kirkwood 3

Preliminar

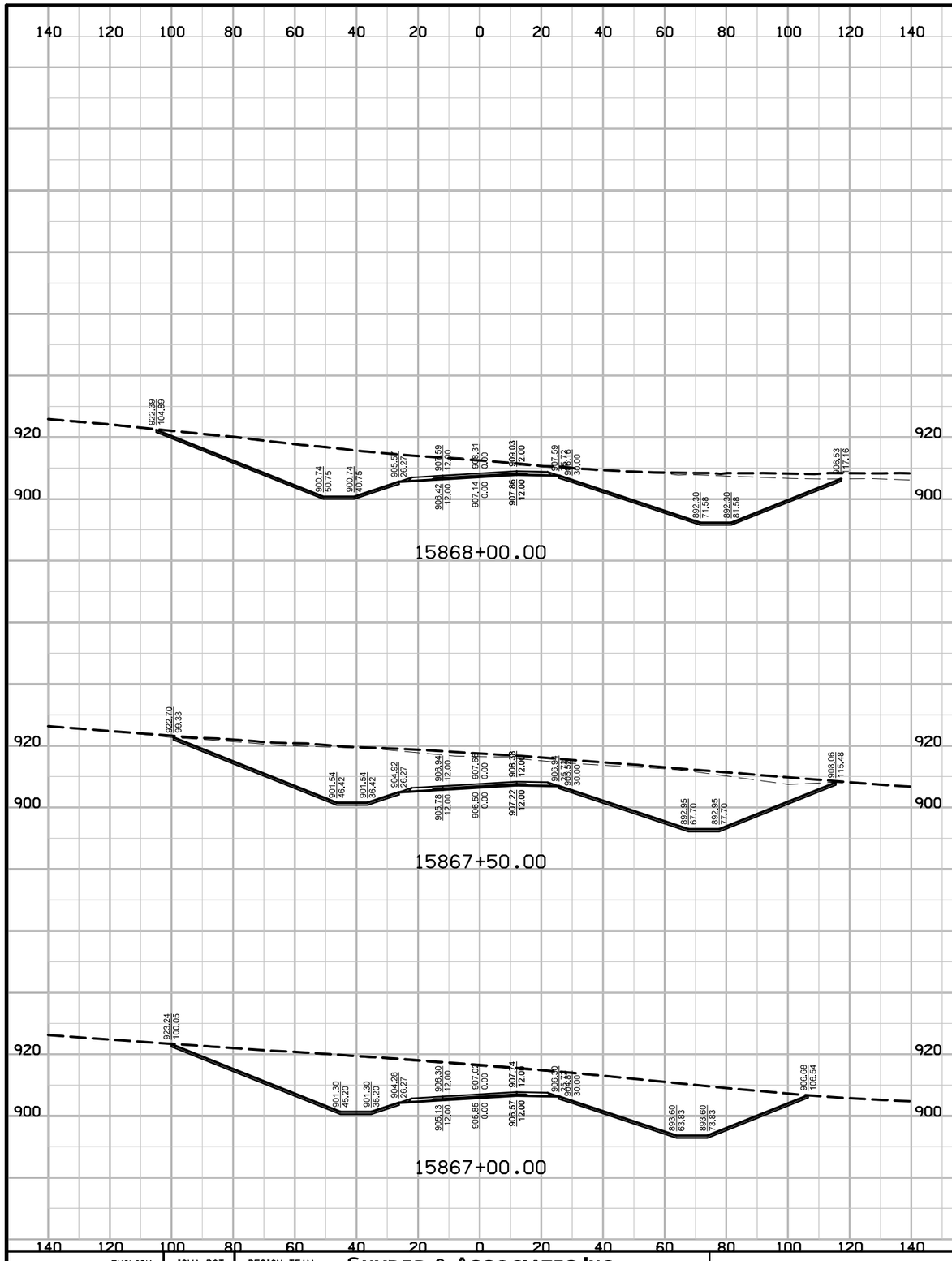


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.105

10:23:02 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x22.sht

Sideroad Kirkwood 3

Preliminar

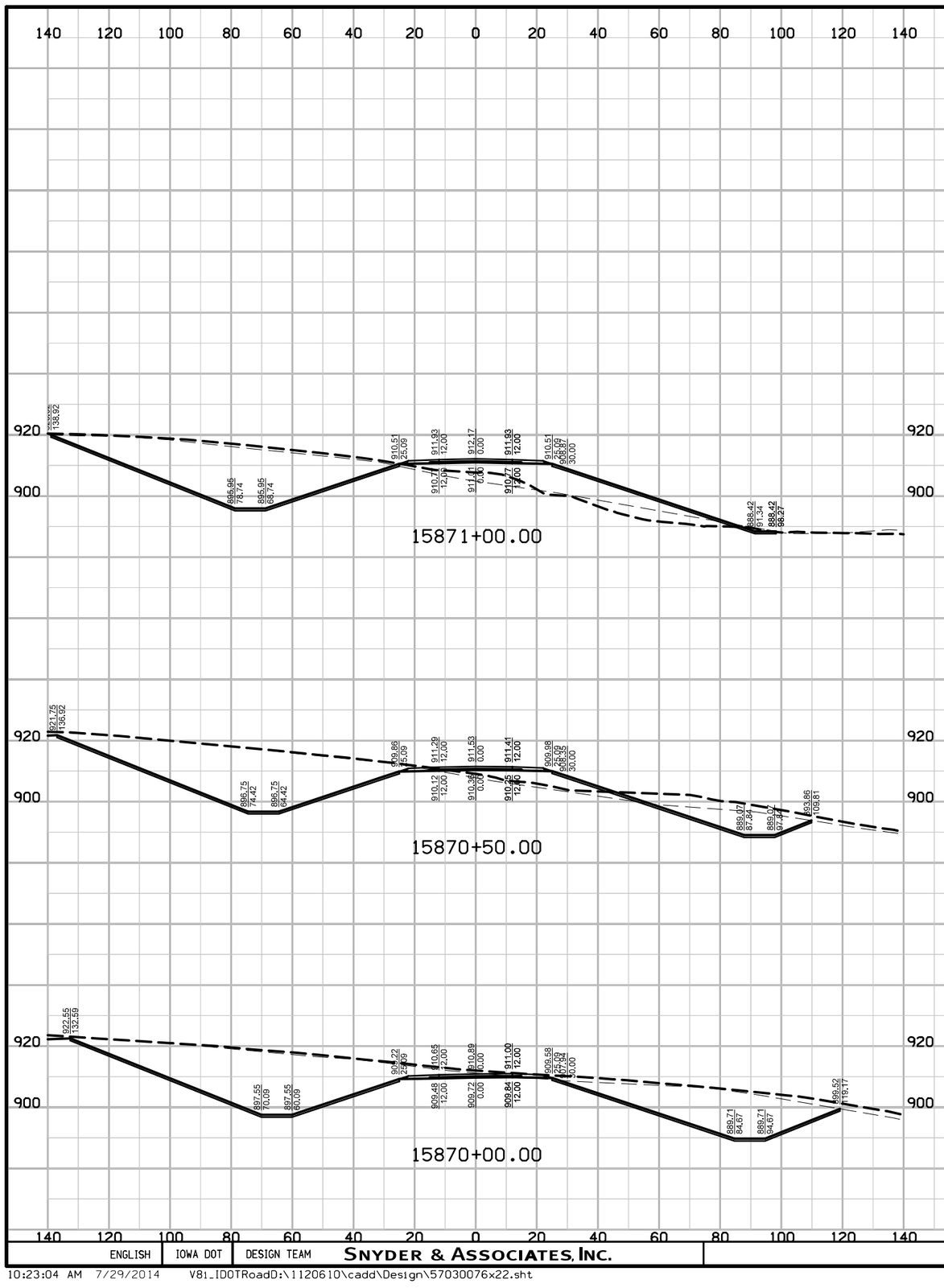


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.106

10:23:03 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x22.sht

Sideroad Kirkwood 3

Preliminar

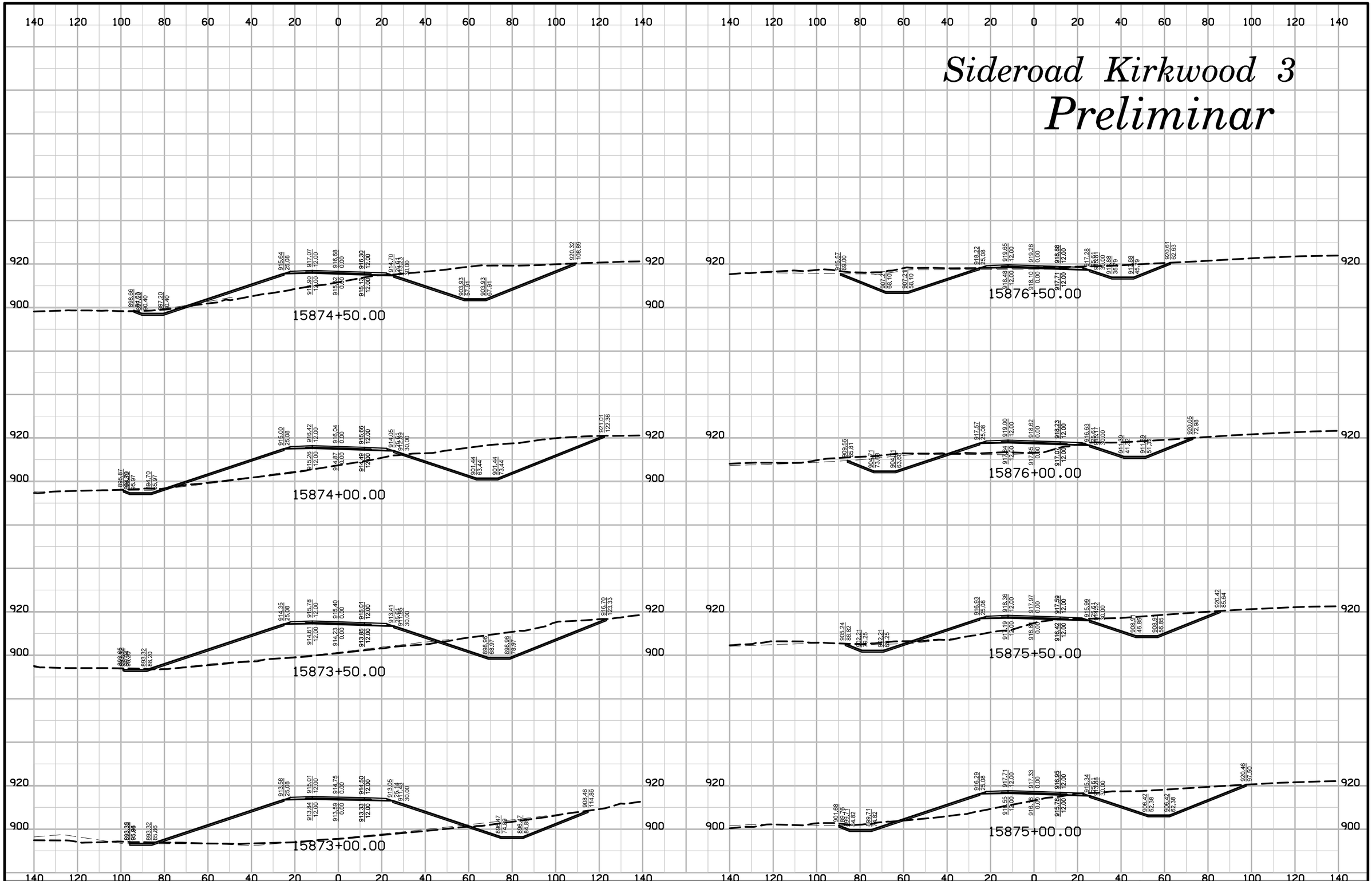


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.107

10:23:04 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x22.sht

Sideroad Kirkwood 3

Preliminar

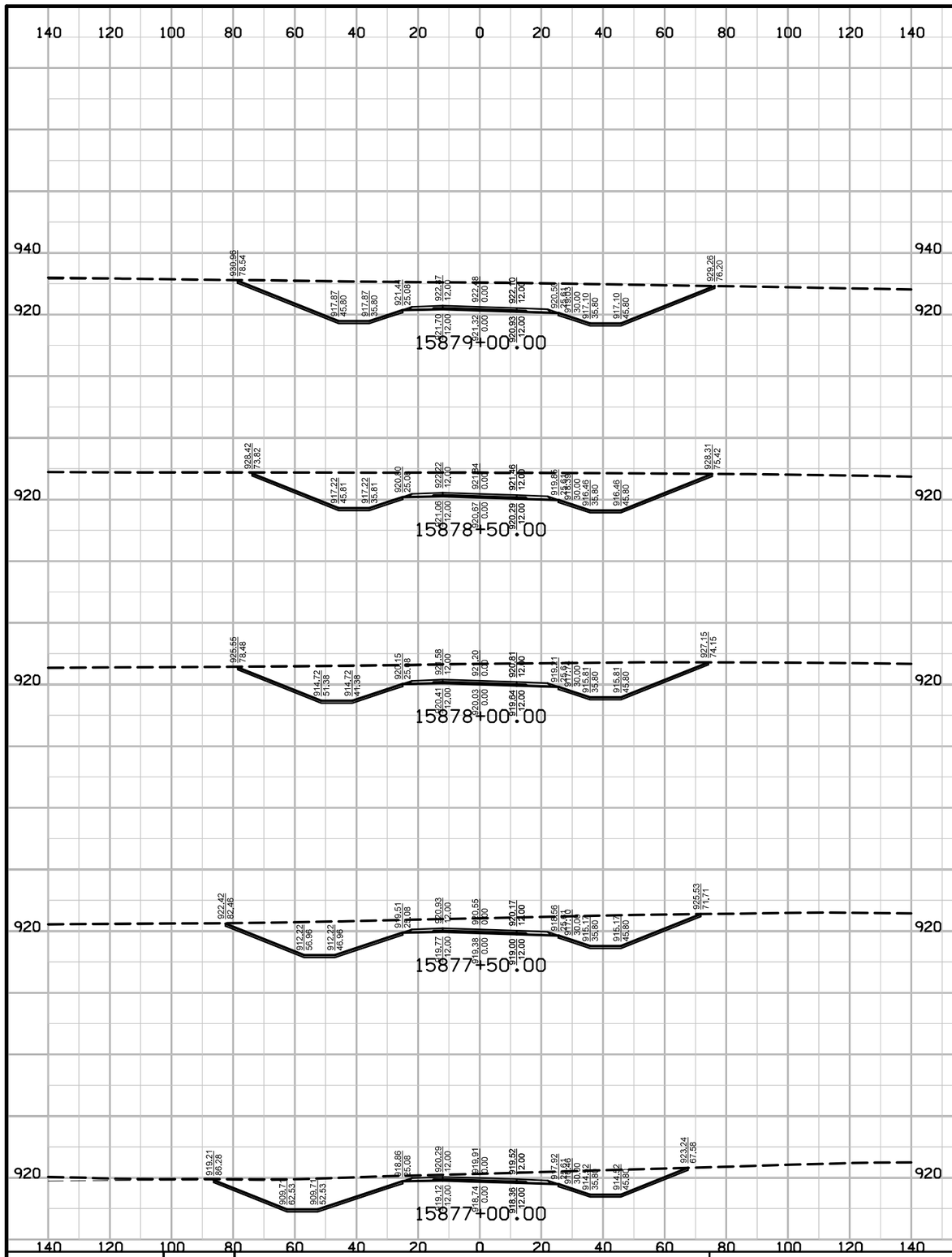


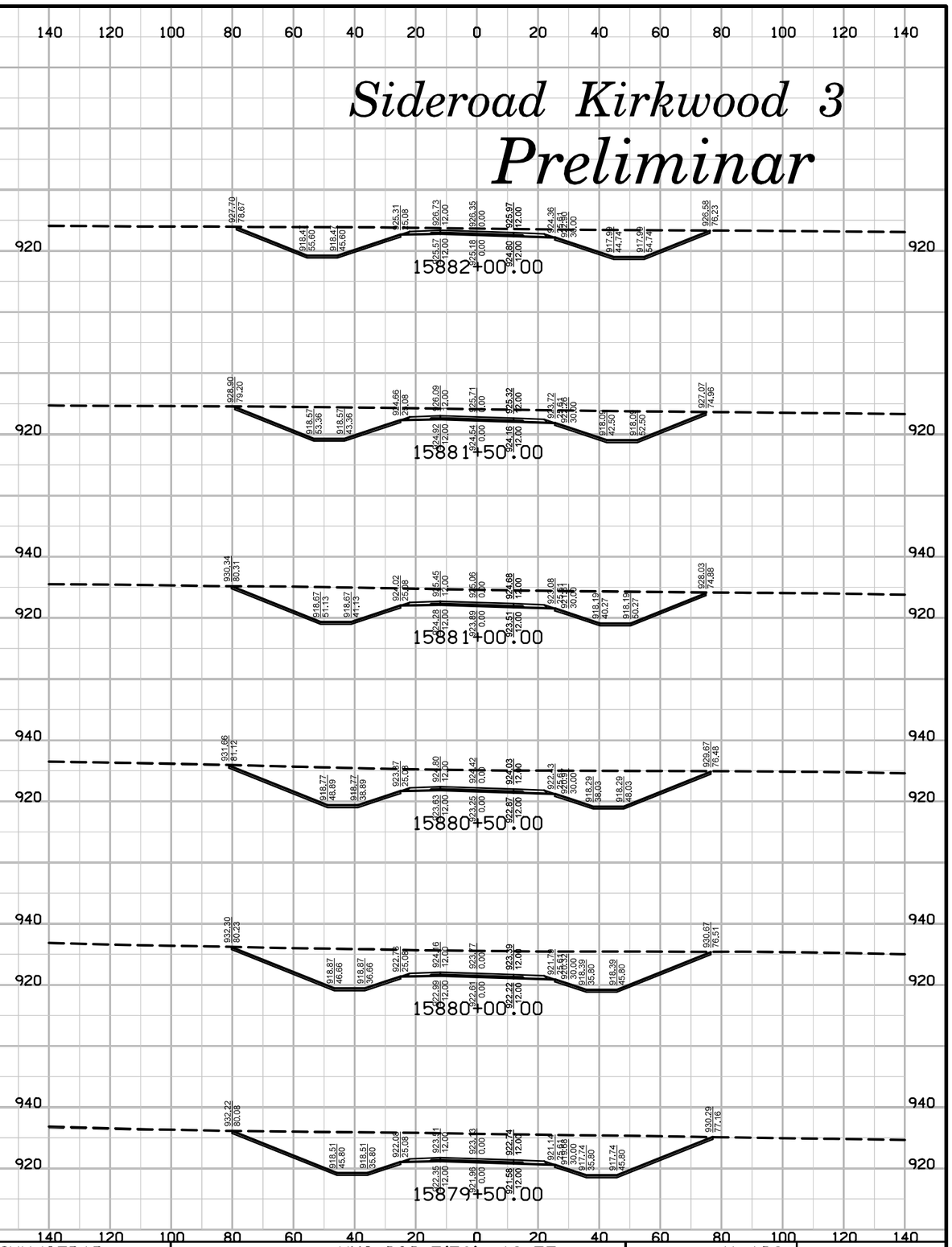
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR	COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	X.108

10:23:05 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x22.sht

Sideroad Kirkwood 3

Preliminar



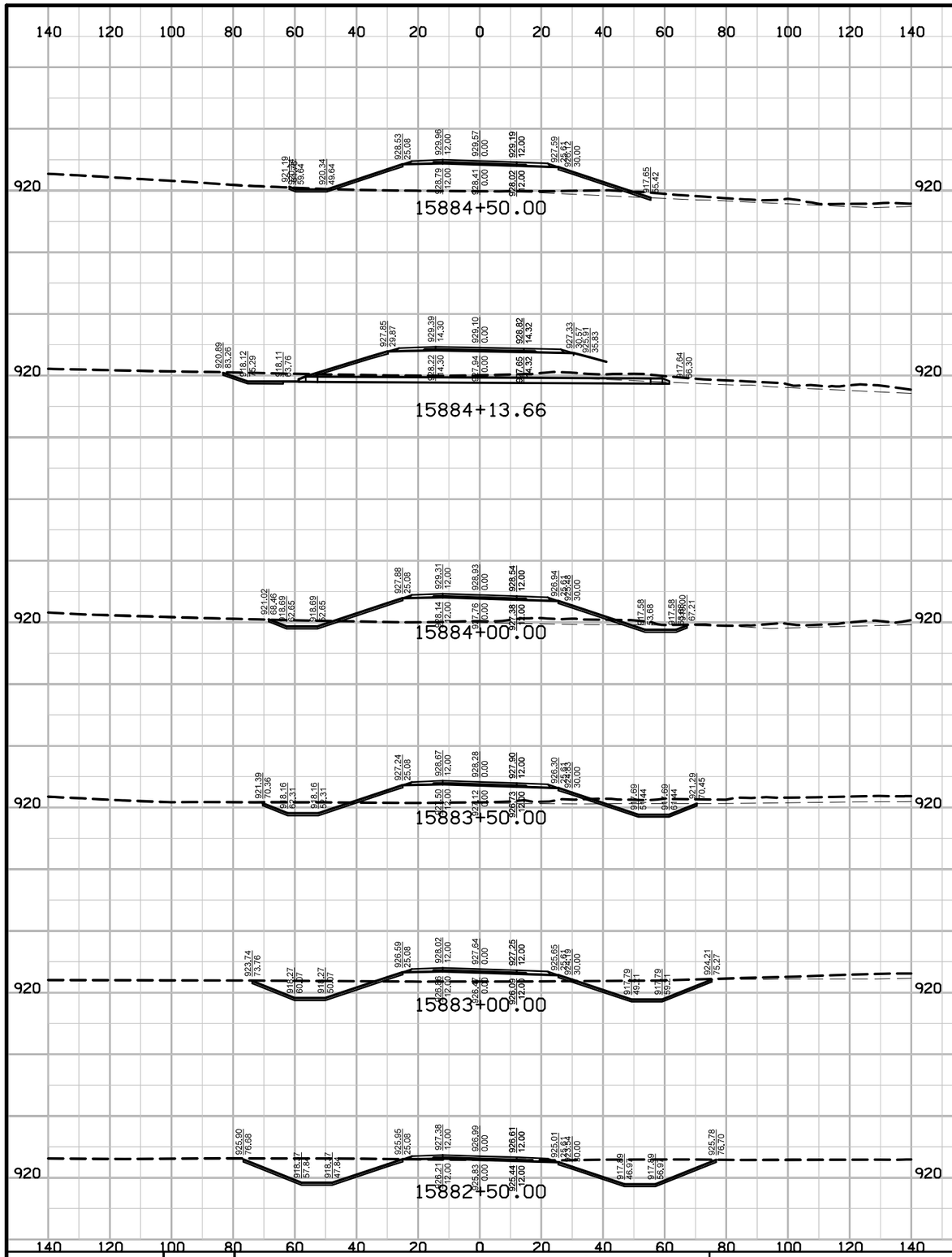


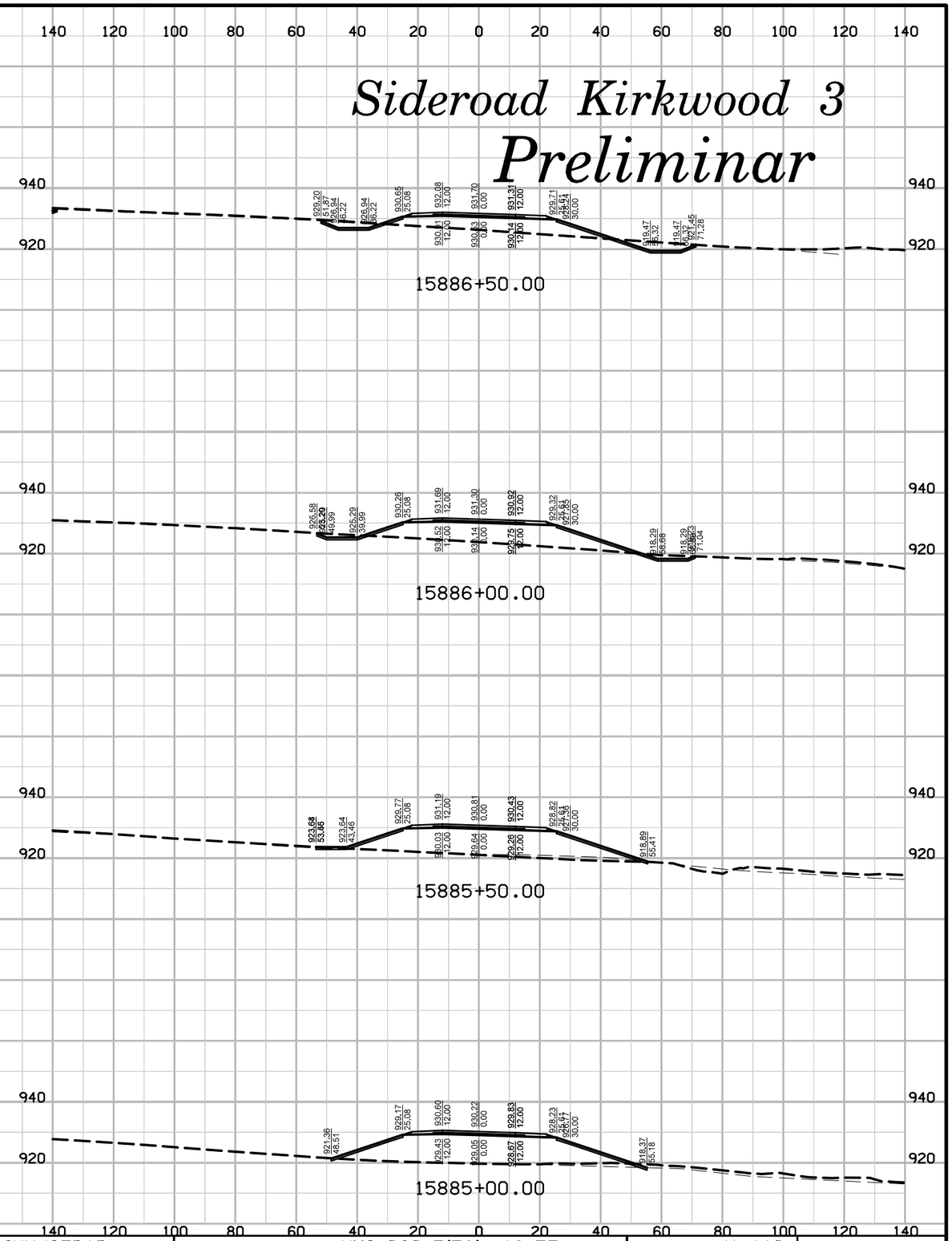
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.109

10:23:06 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x22.sht

Sideroad Kirkwood 3

Preliminar



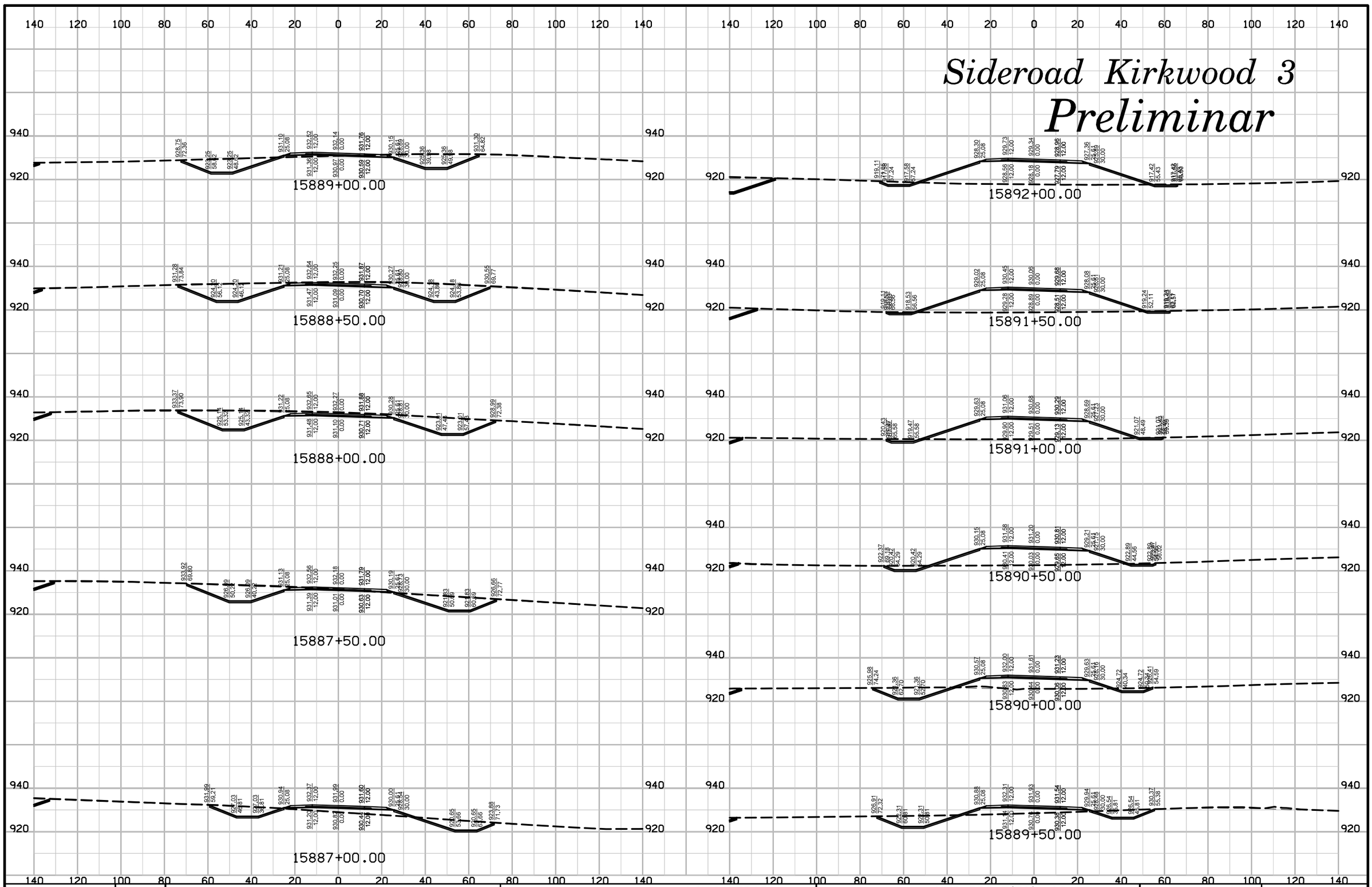


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.110

10:23:07 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x22.sht

Sideroad Kirkwood 3

Preliminar

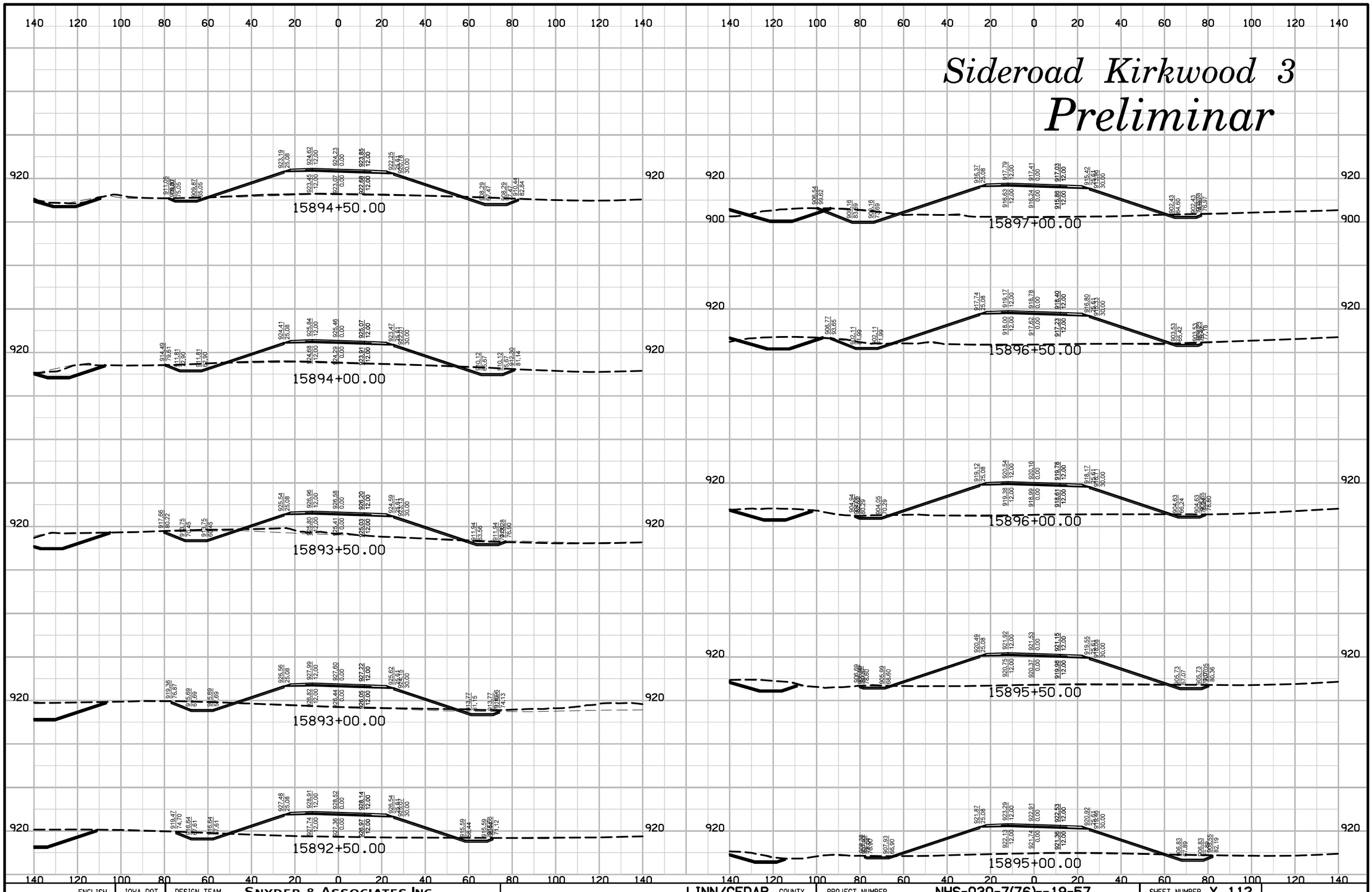


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.111

10:23:08 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x22.sht

Sideroad Kirkwood 3

Preliminar

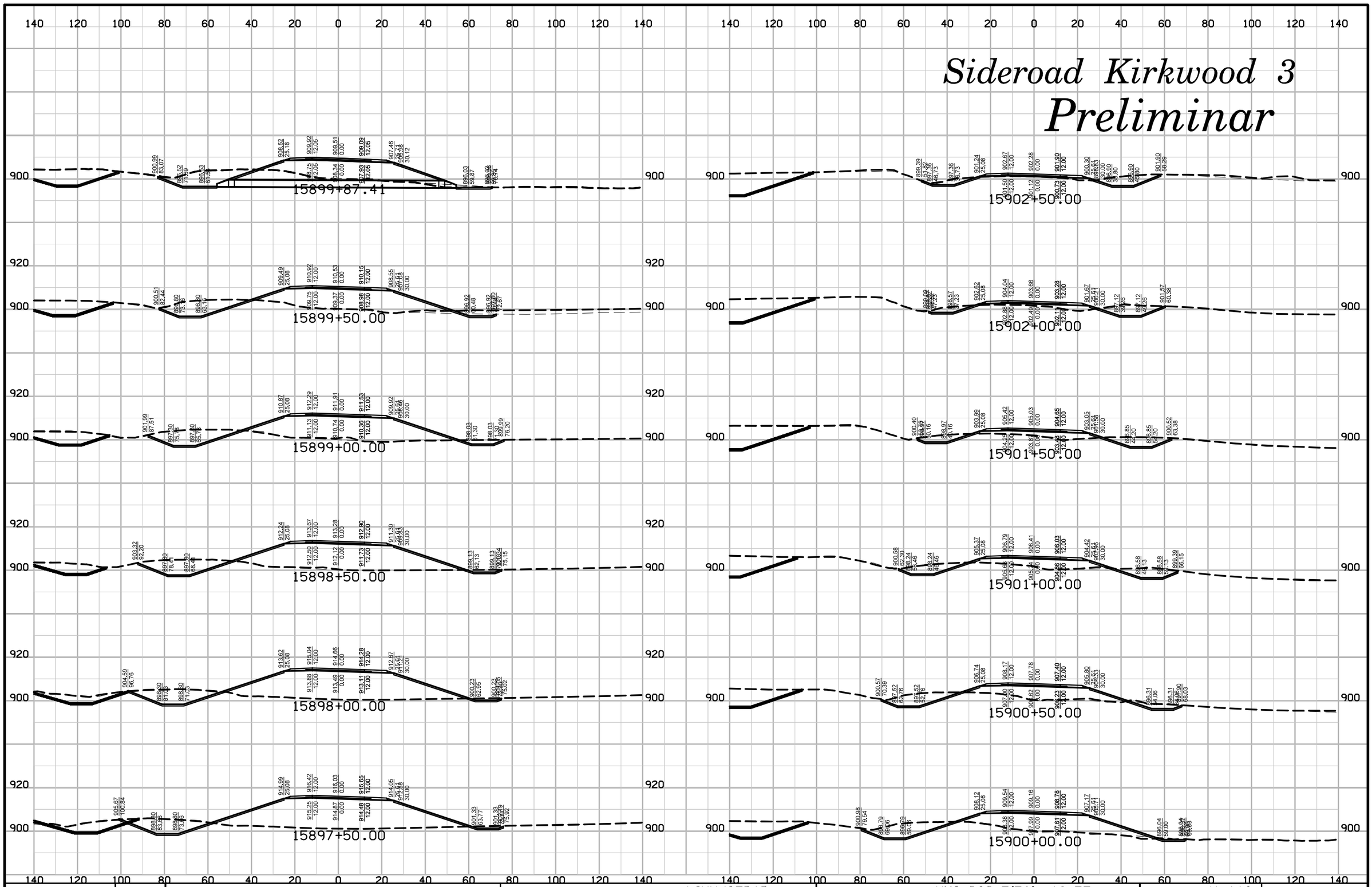


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.112

10:23:09 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x22.sht

Sideroad Kirkwood 3

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.113

10:23:10 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x22.sht

Sideroad Kirkwood 3

Preliminar

15905+00.00

15904+50.00

15904+00.00

15903+50.00

15903+00.00

15908+00.00

15907+50.00

15907+00.00

15906+50.00

15906+00.00

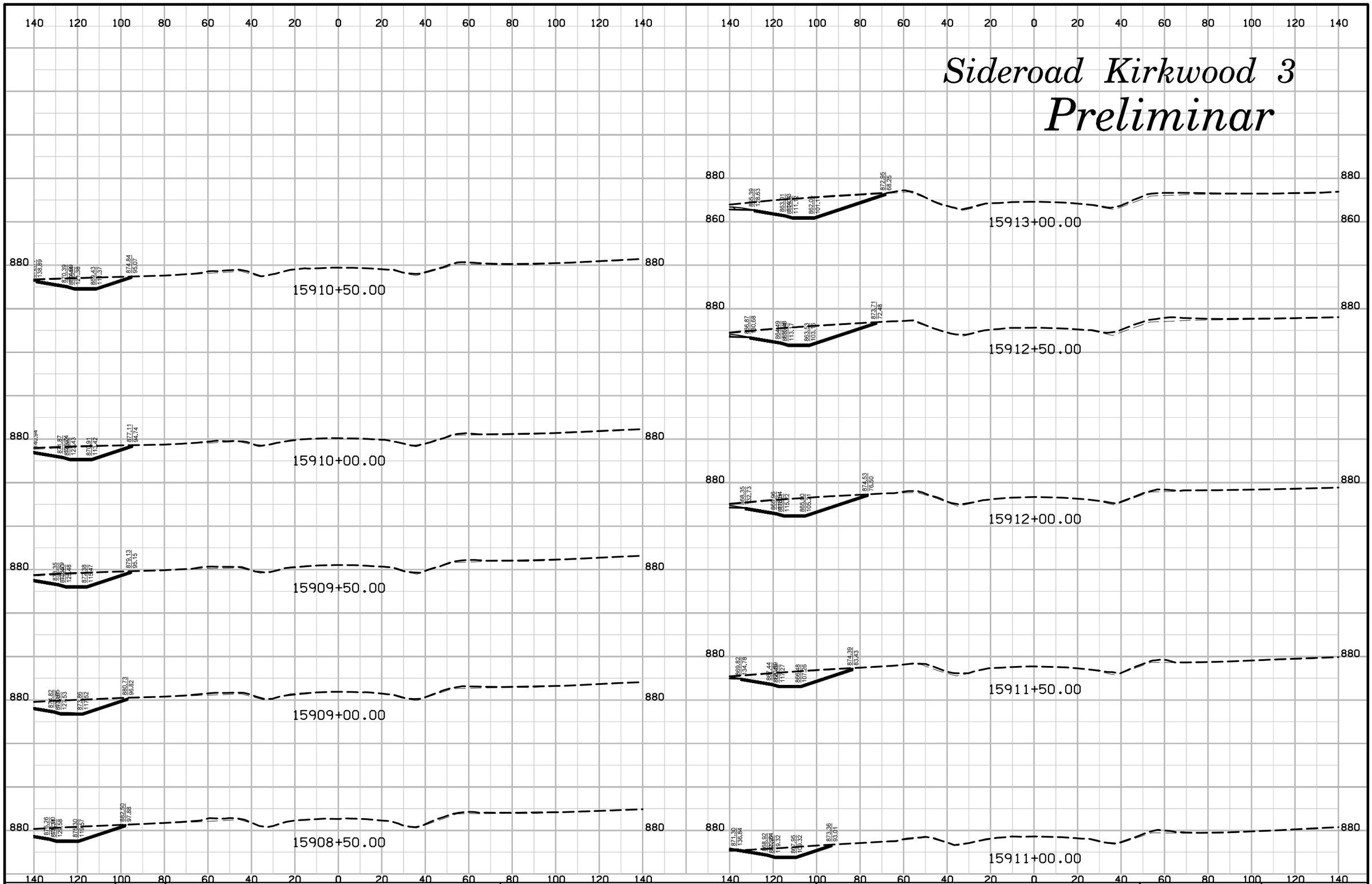
15905+50.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER X.114

10:23:11 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076x22.sht

Sideroad Kirkwood 3

Preliminar

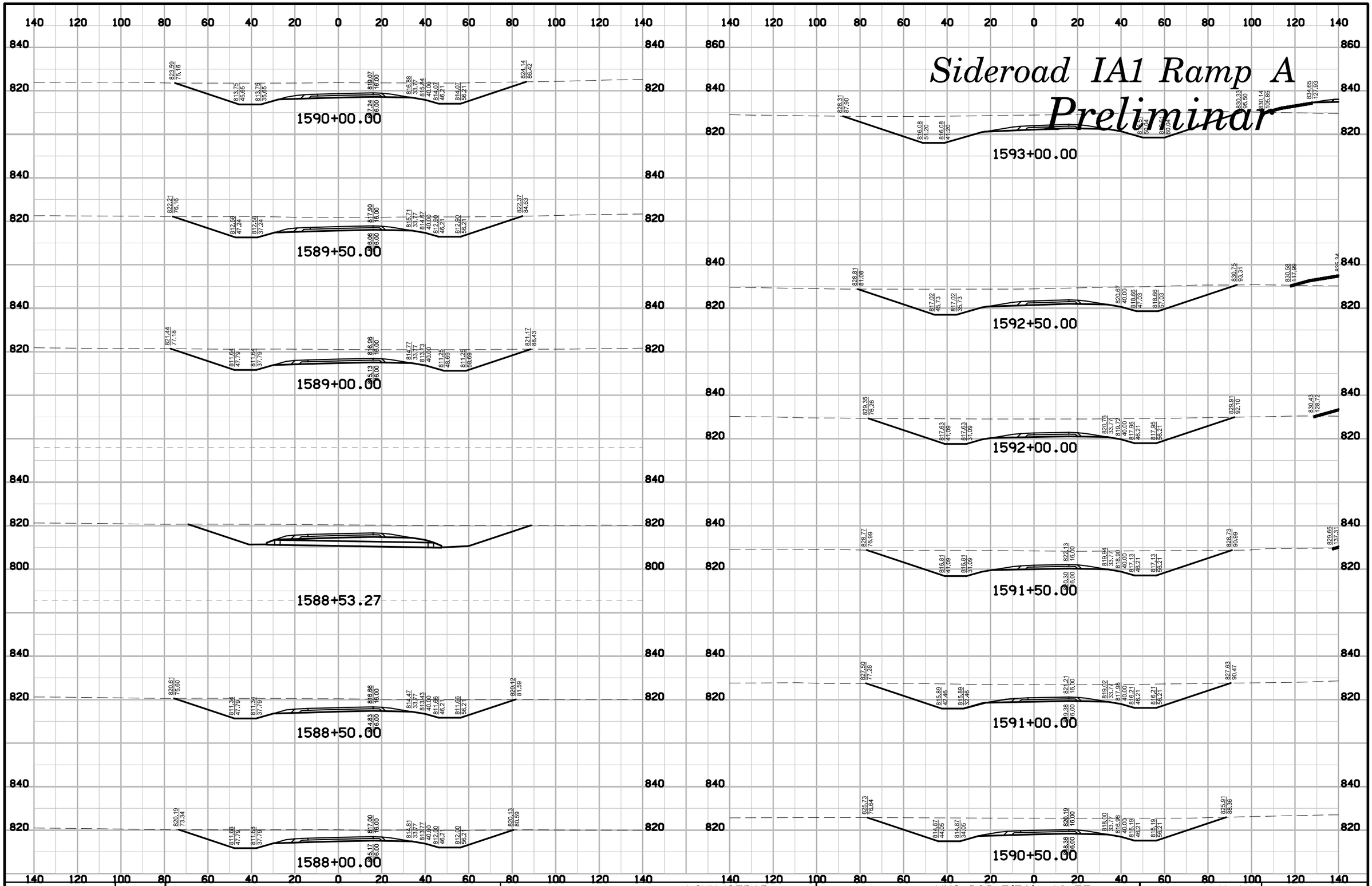


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER X.115

10:23:12 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076x22.sht

Sideroad IA1 Ramp A

Preliminar

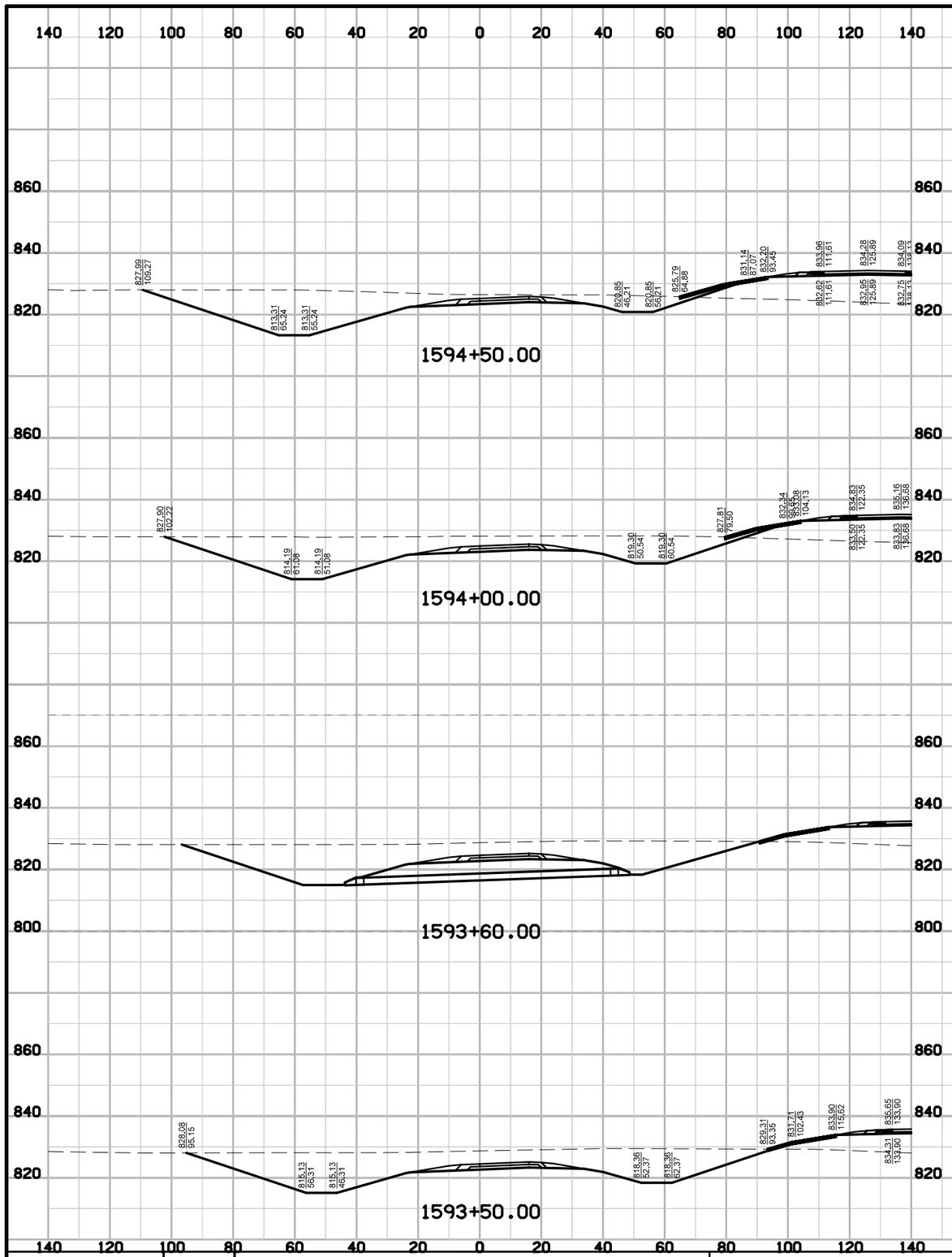


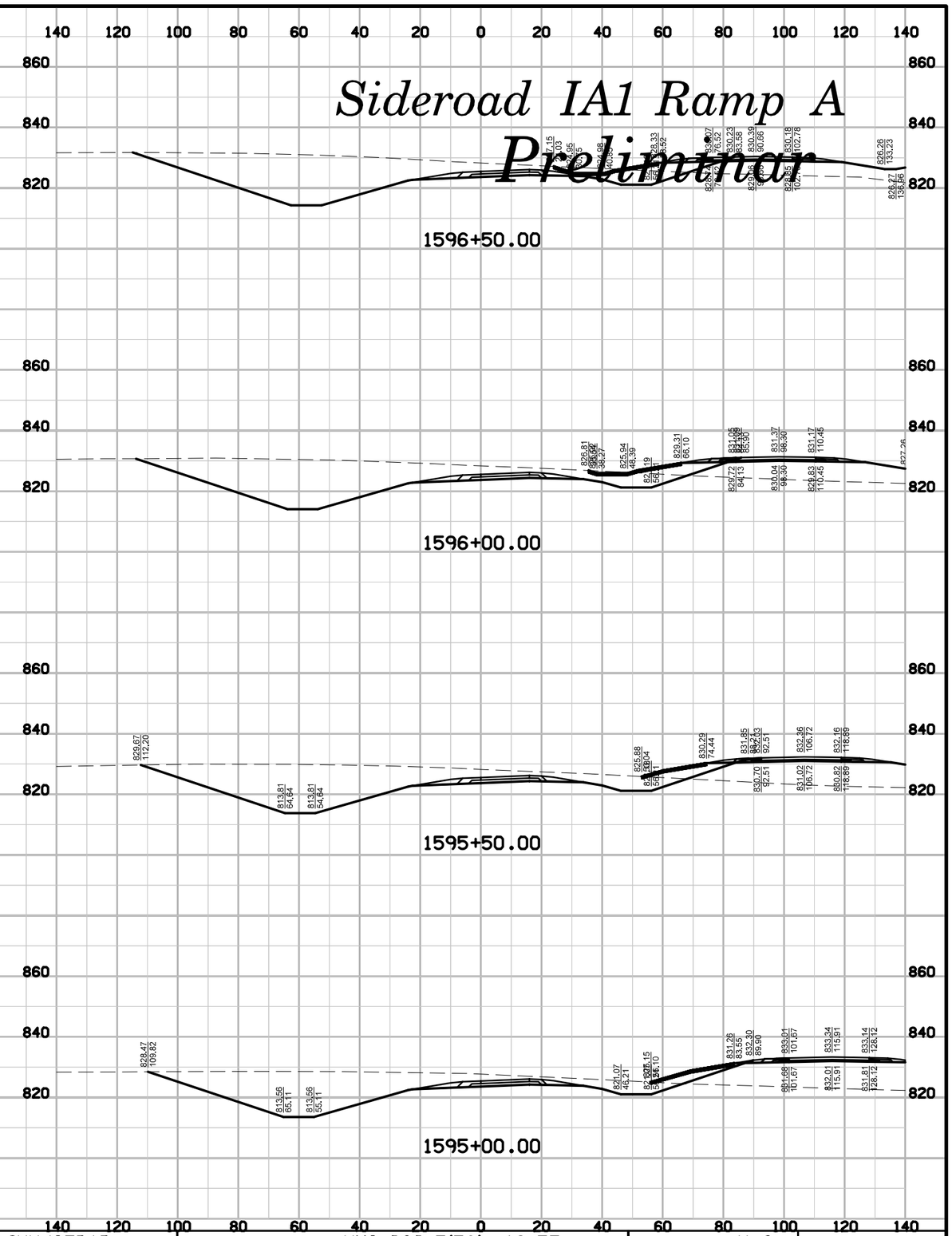
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	Y.1

10:23:15 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076y01.sht

Sideroad IA1 Ramp A

Preliminar

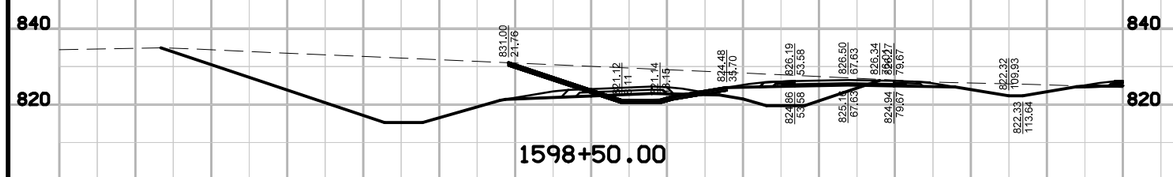


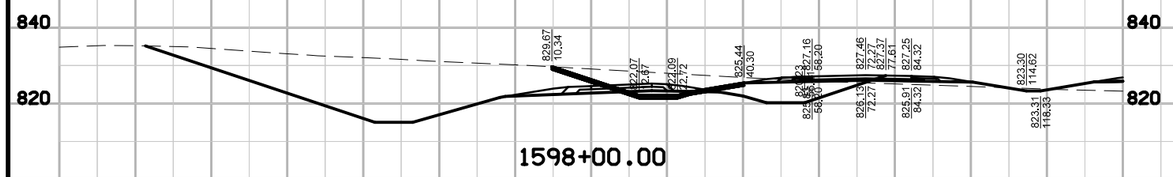


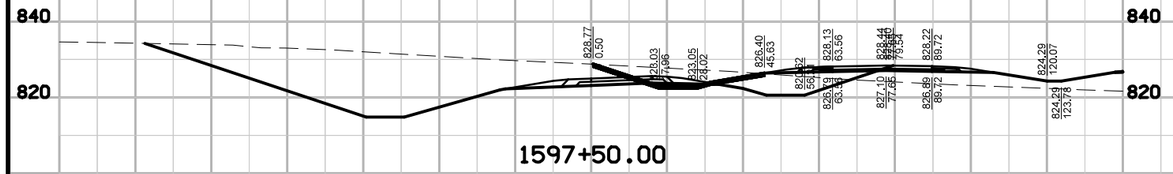
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	Y.2

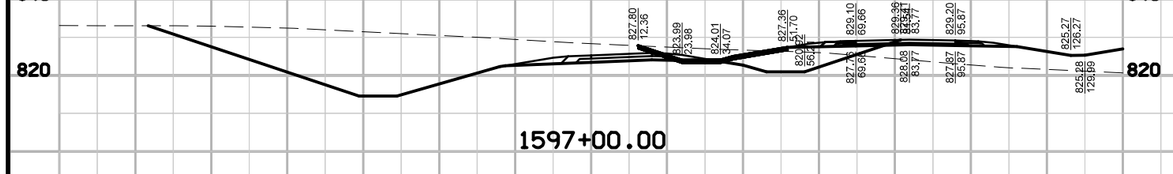
Sideroad IA1 Ramp A

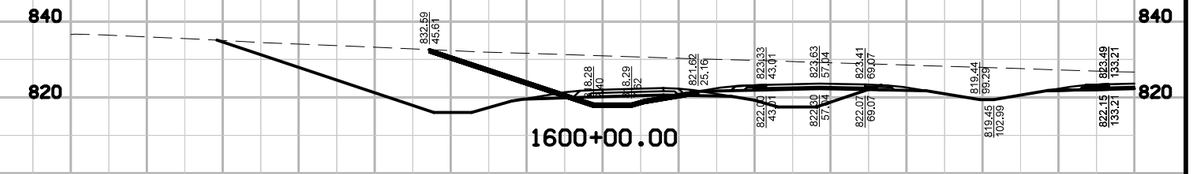
Preliminar

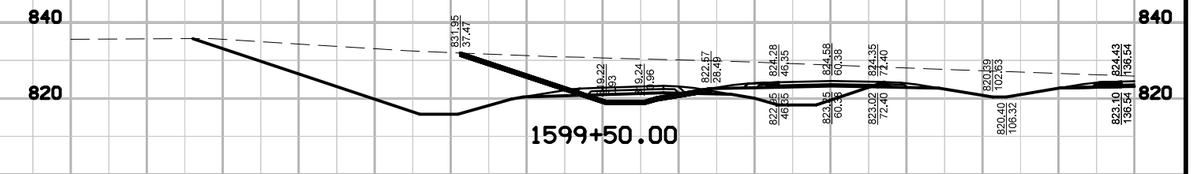


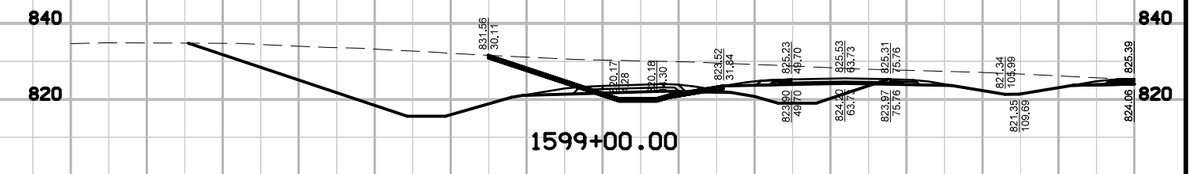










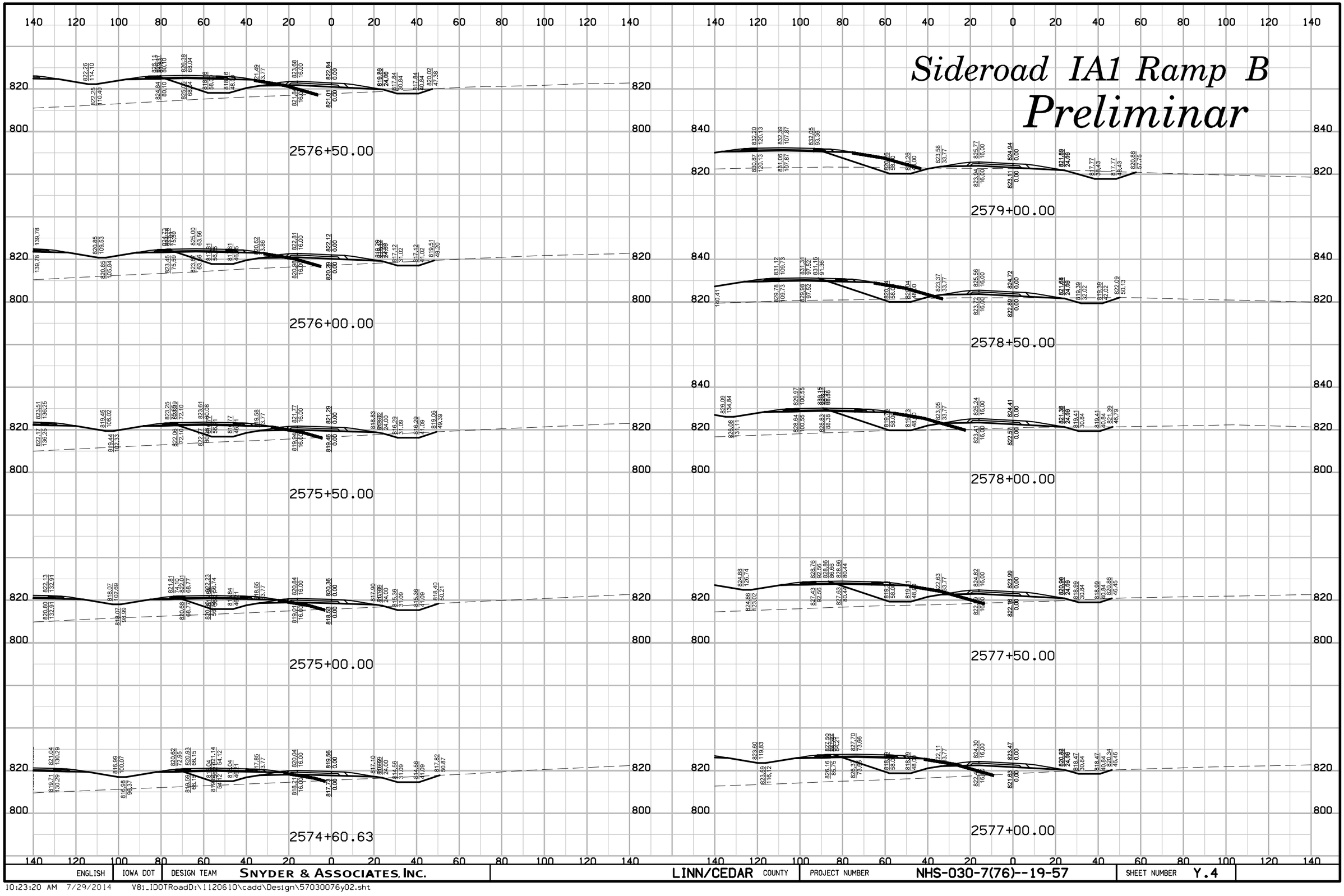


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	Y.3

10:23:17 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076y01.sht

Sideroad IA1 Ramp B

Preliminar

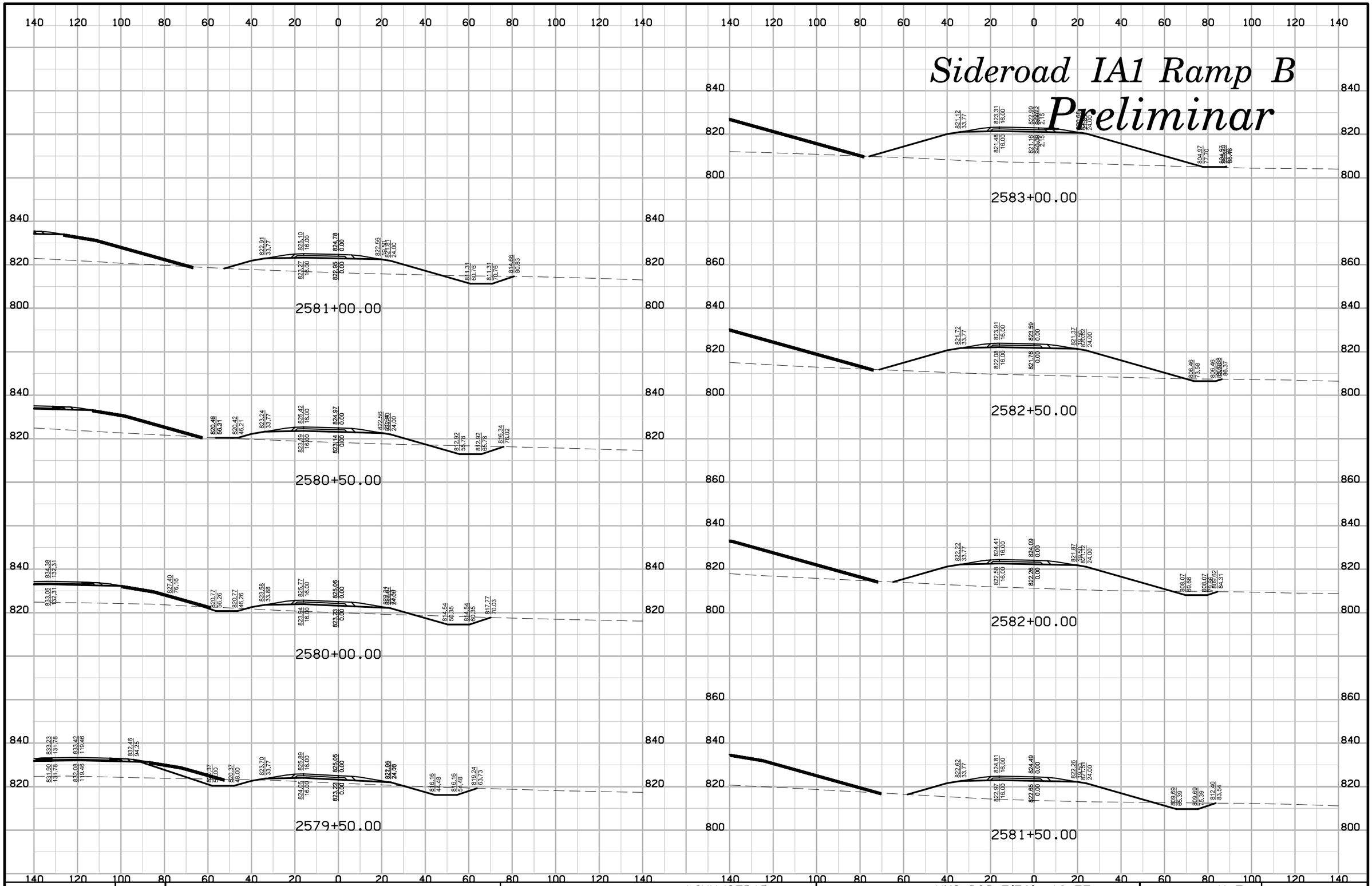


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	Y.4

10:23:20 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076y02.sht

Sideroad IA1 Ramp B

Preliminar

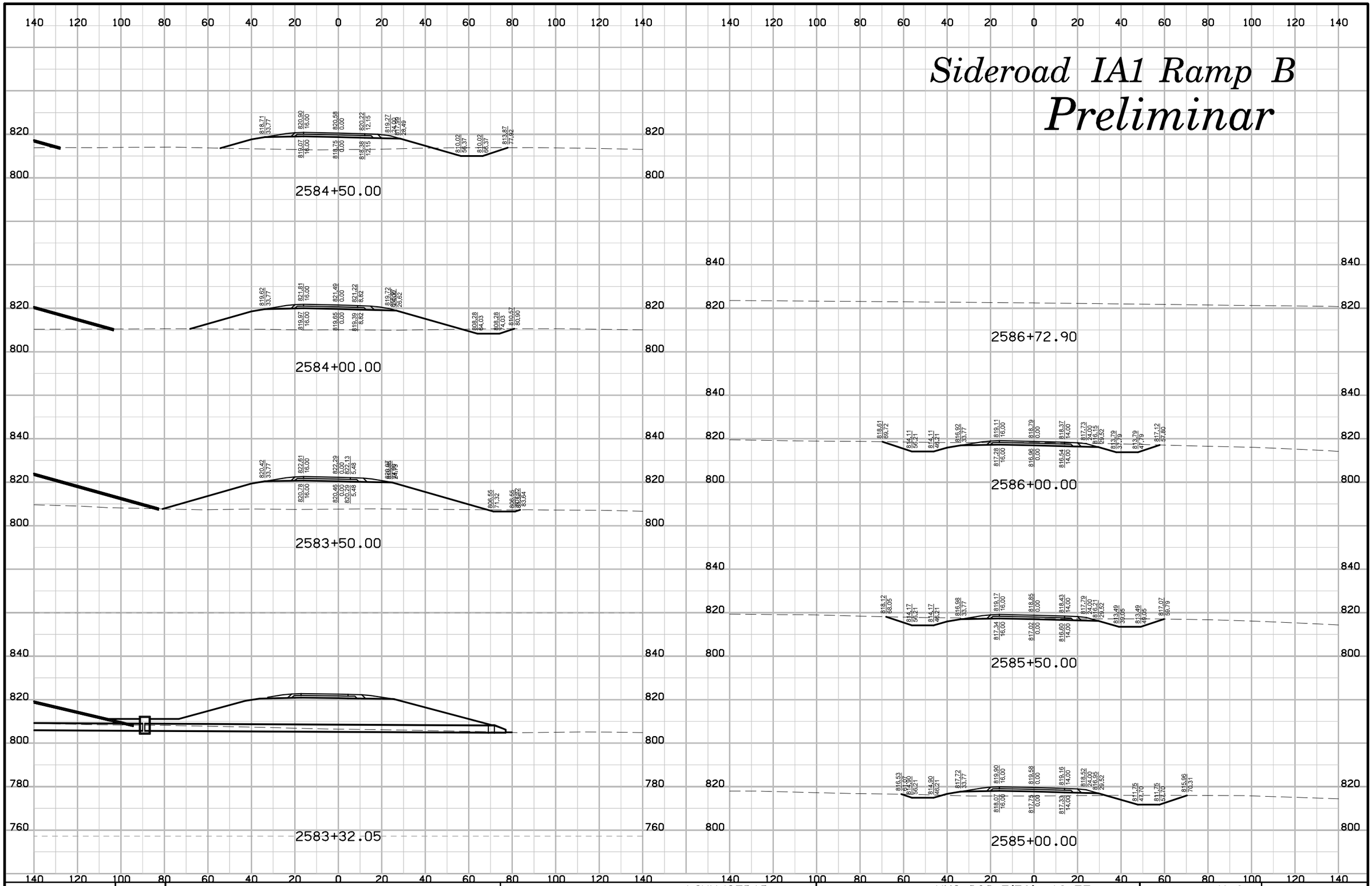


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	Y.5

10:23:21 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076y02.sht

Sideroad IA1 Ramp B

Preliminar

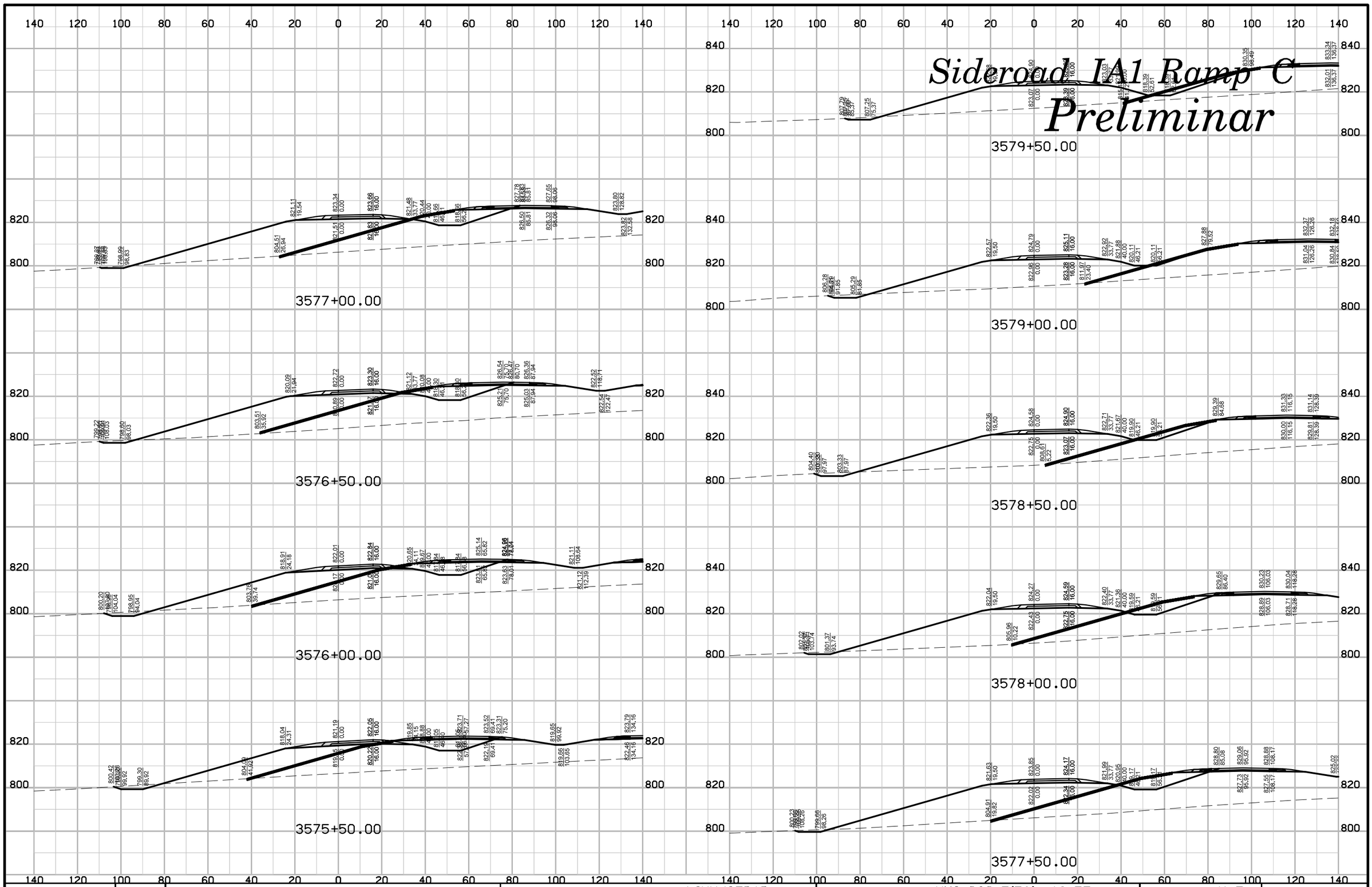


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	Y.6

10:23:22 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076y02.sht

Sideroad 1A1 Ramp C

Preliminar

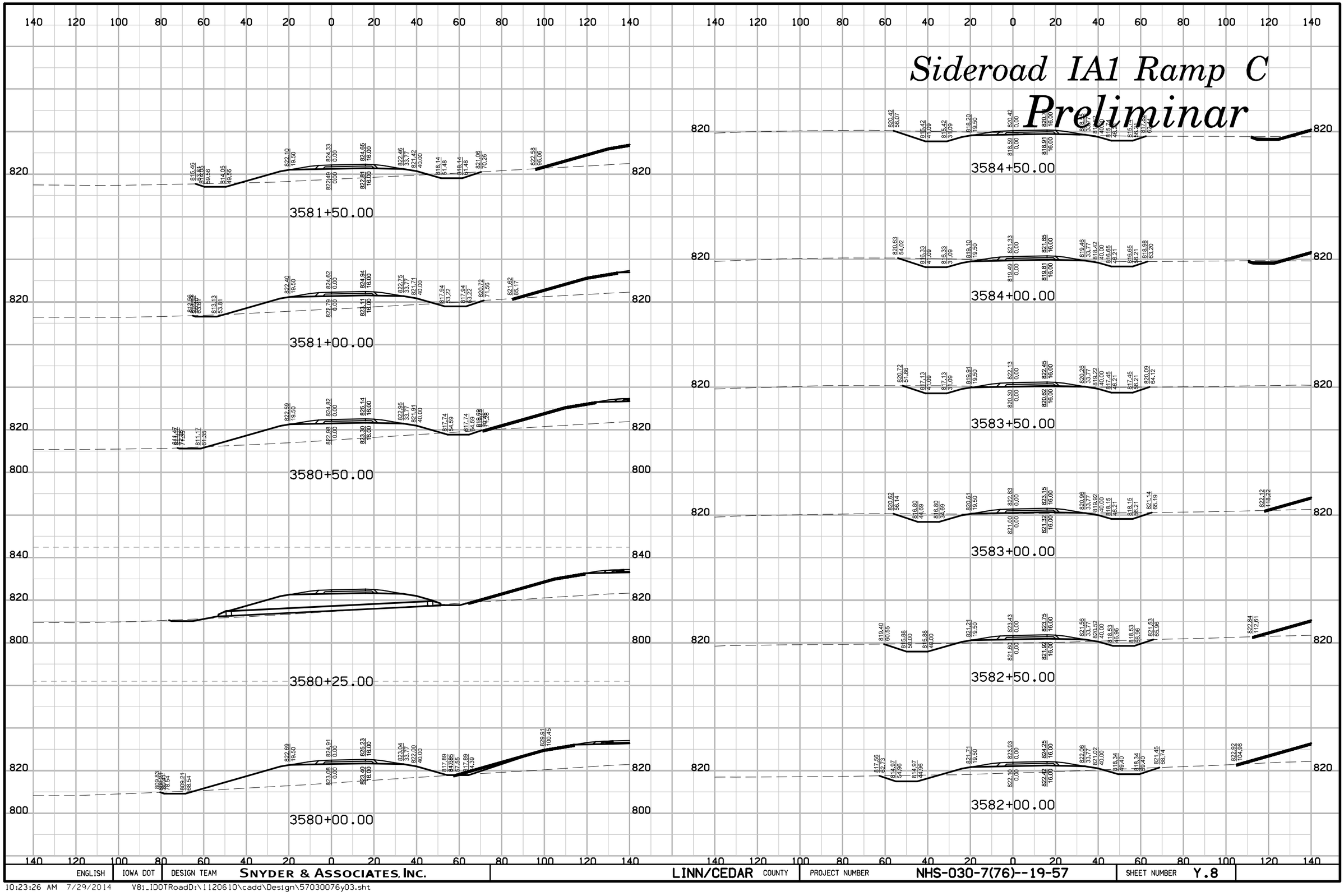


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER Y.7

10:23:26 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076y03.sht

Sideroad IA1 Ramp C

Preliminar

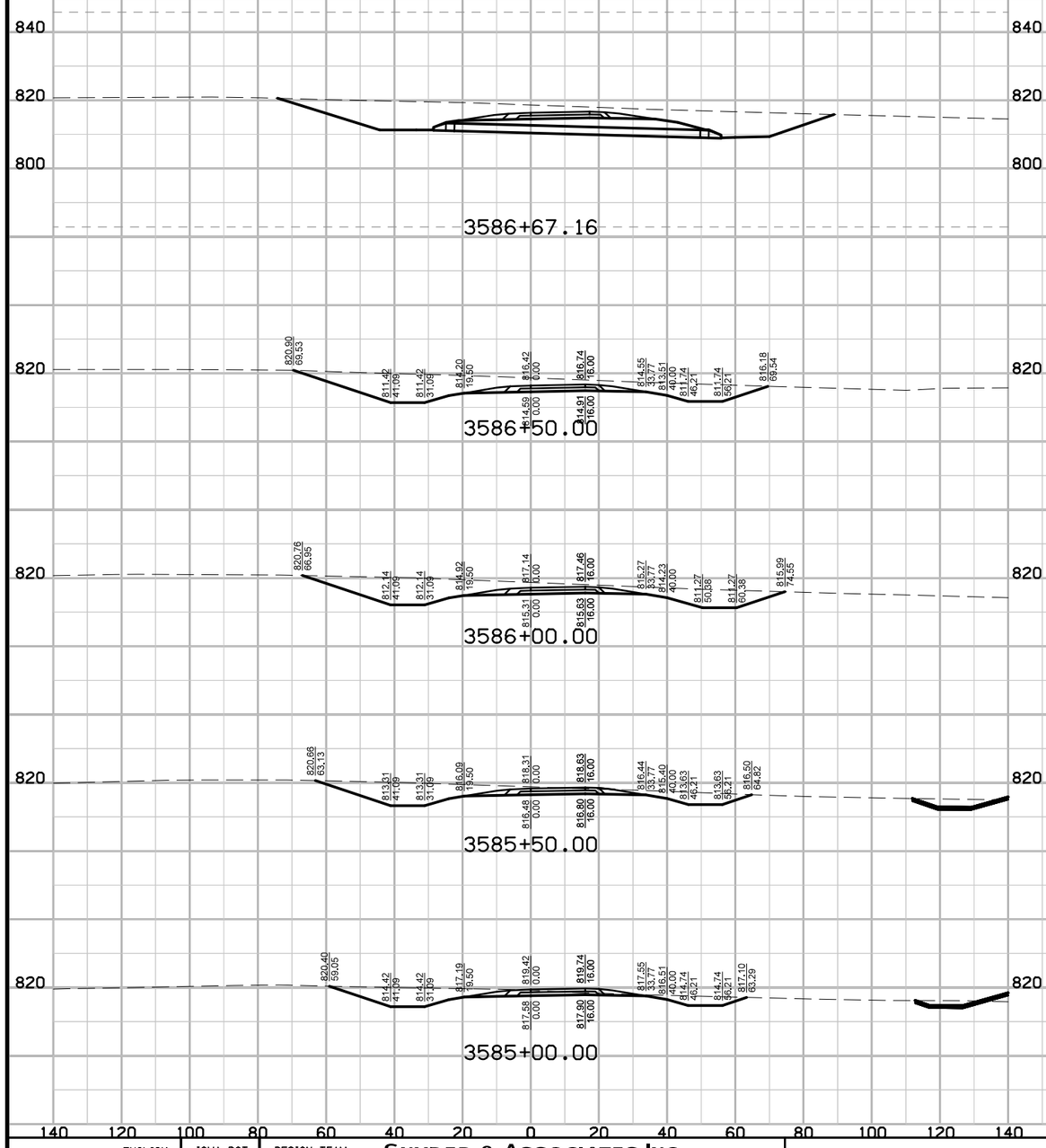


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	Y.8

10:23:26 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076y03.sht

Sideroad IA1 Ramp C

Preliminar

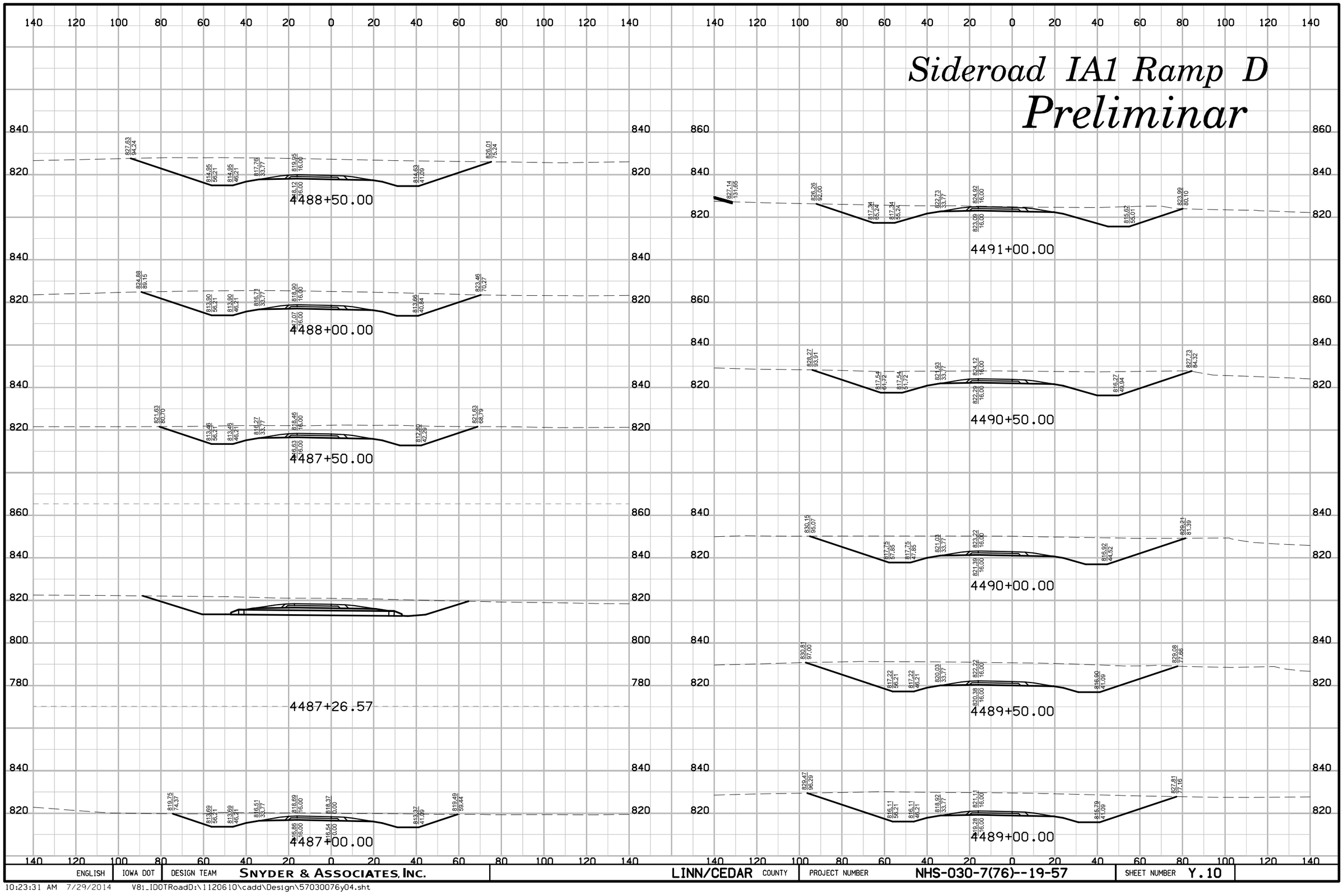


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	Y.9

10:23:27 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076y03.sht

Sideroad IA1 Ramp D

Preliminar

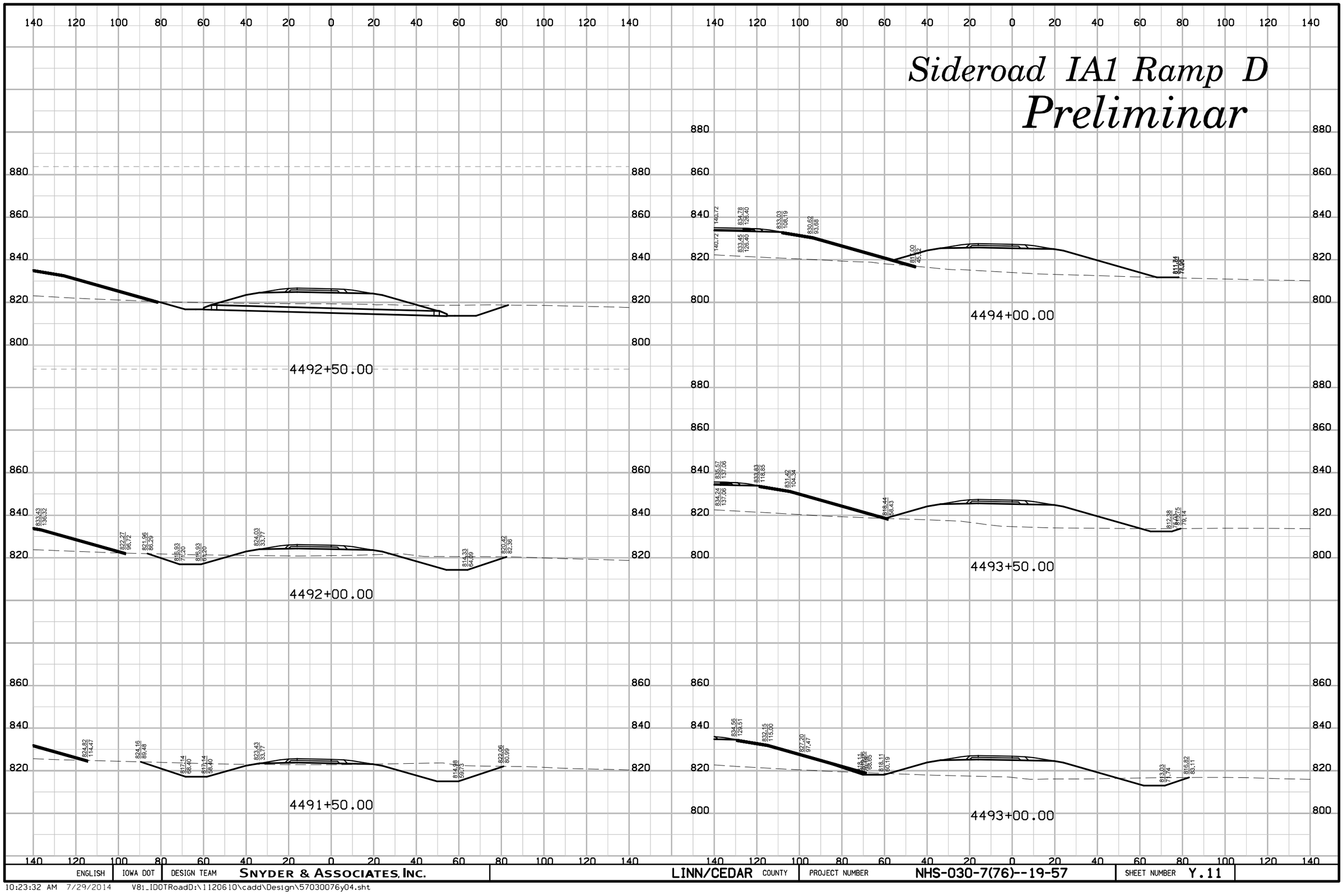


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	Y.10

10:23:31 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076y04.sht

Sideroad IA1 Ramp D

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	Y.11

Sideroad IA1 Ramp D

Preliminar

4495+50.00

4497+50.00

4495+00.00

4497+00.00

4494+50.00

4496+50.00

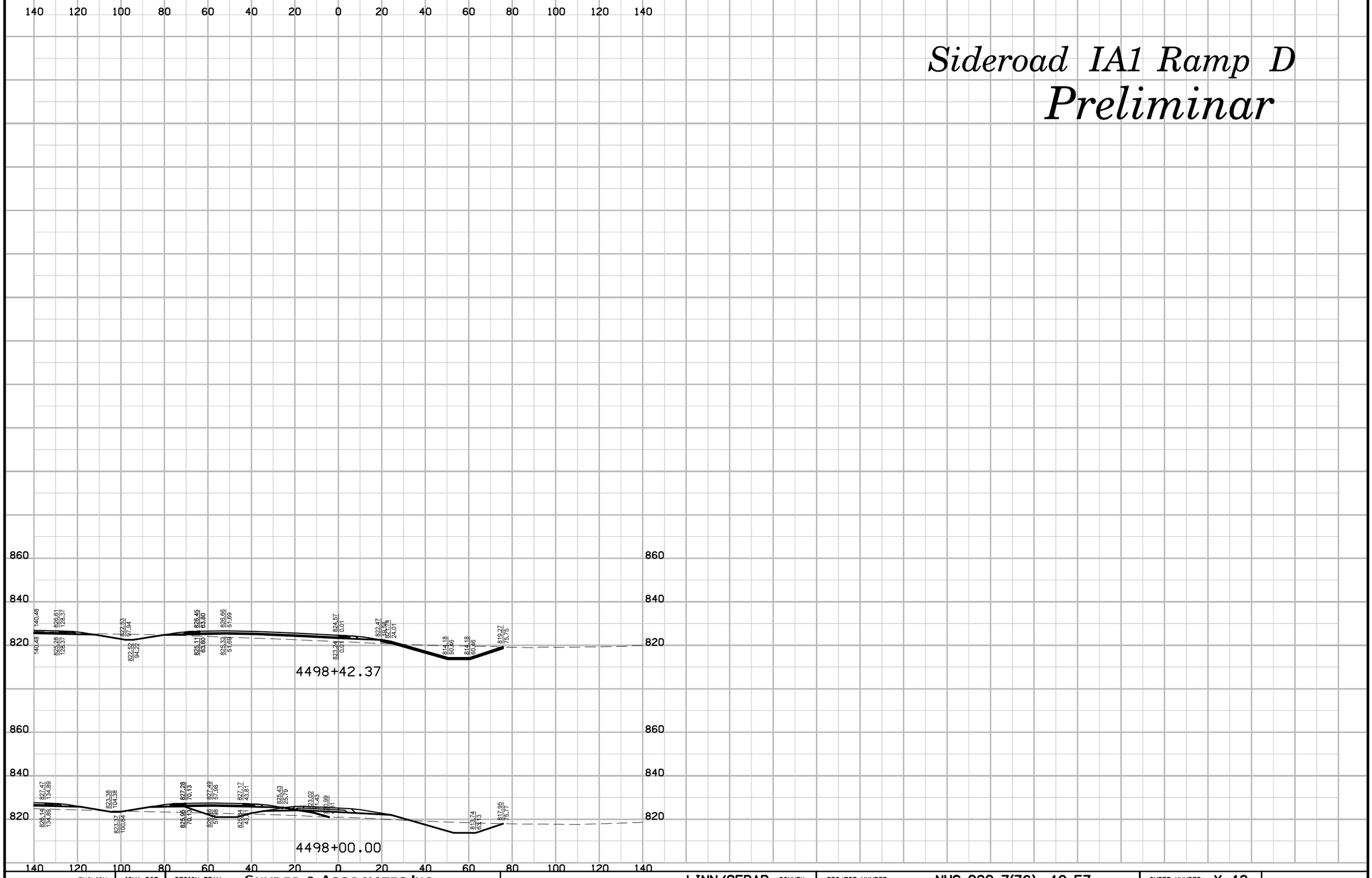
4496+00.00

ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	Y.12

10:23:32 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076y04.sht

Sideroad IA1 Ramp D

Preliminar

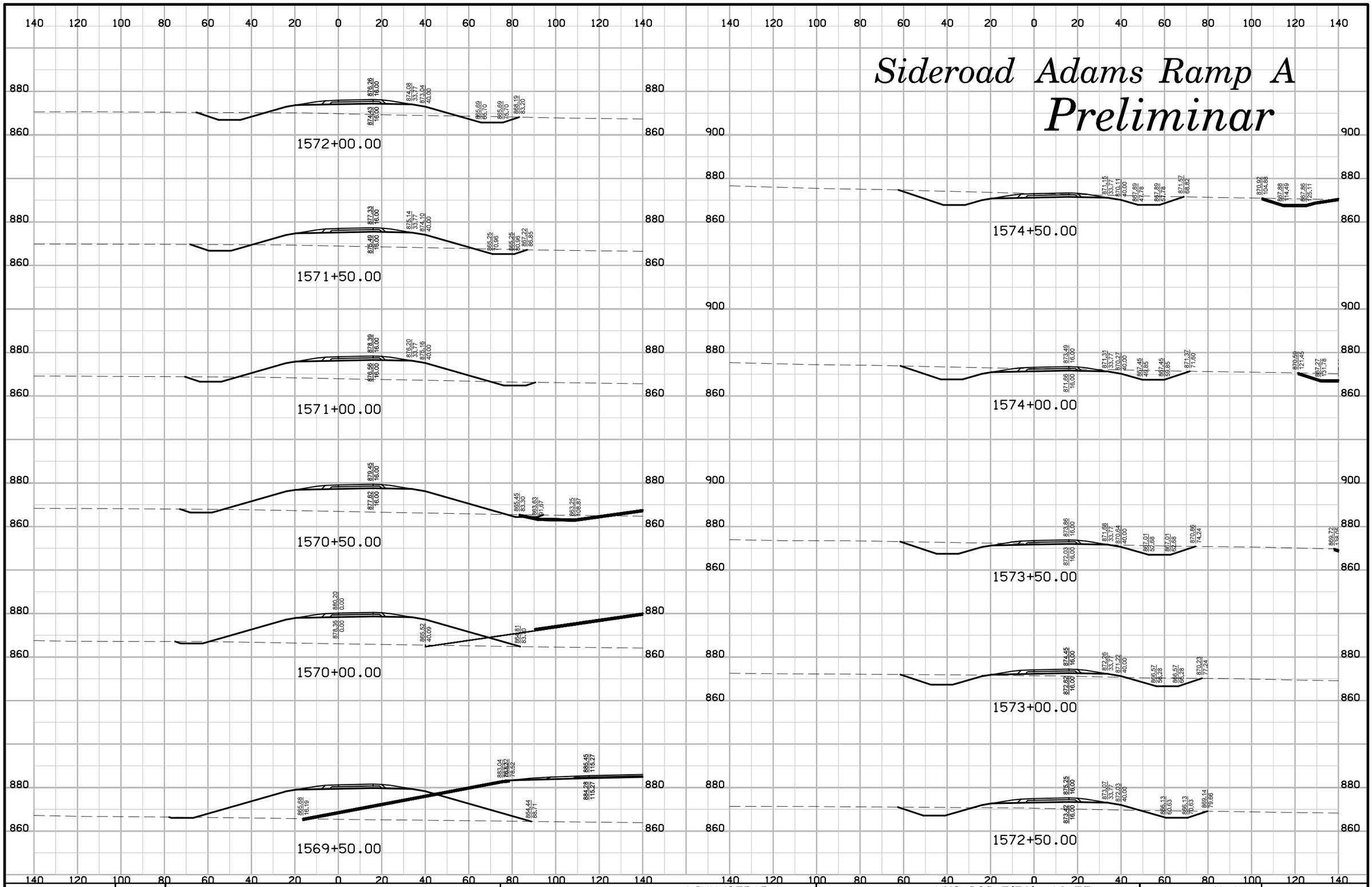


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER Y.13

10:23:33 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076y04.sht

Sideroad Adams Ramp A

Preliminar

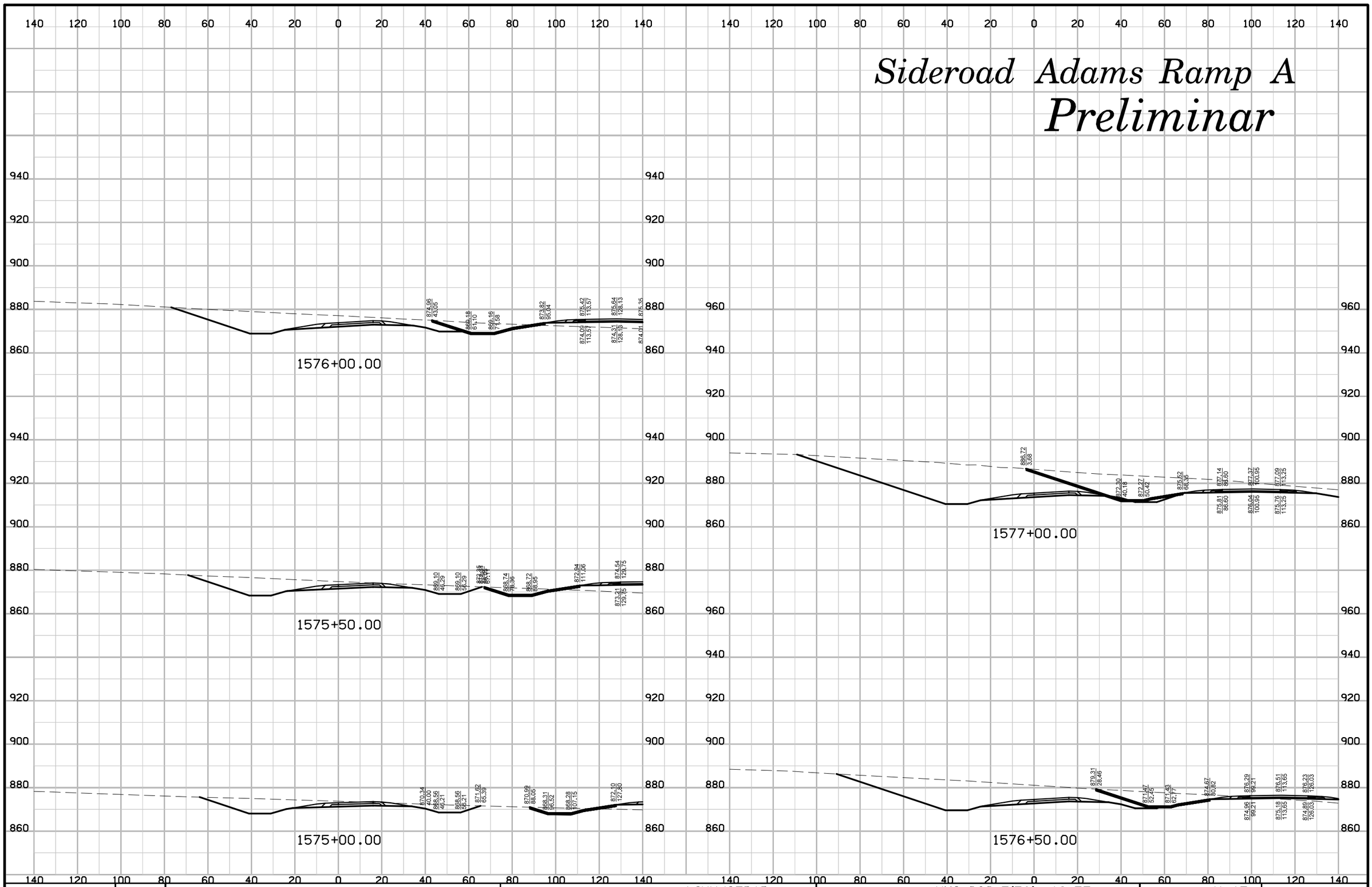


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER Y.14

10:23:37 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076y05.sht

Sideroad Adams Ramp A

Preliminar

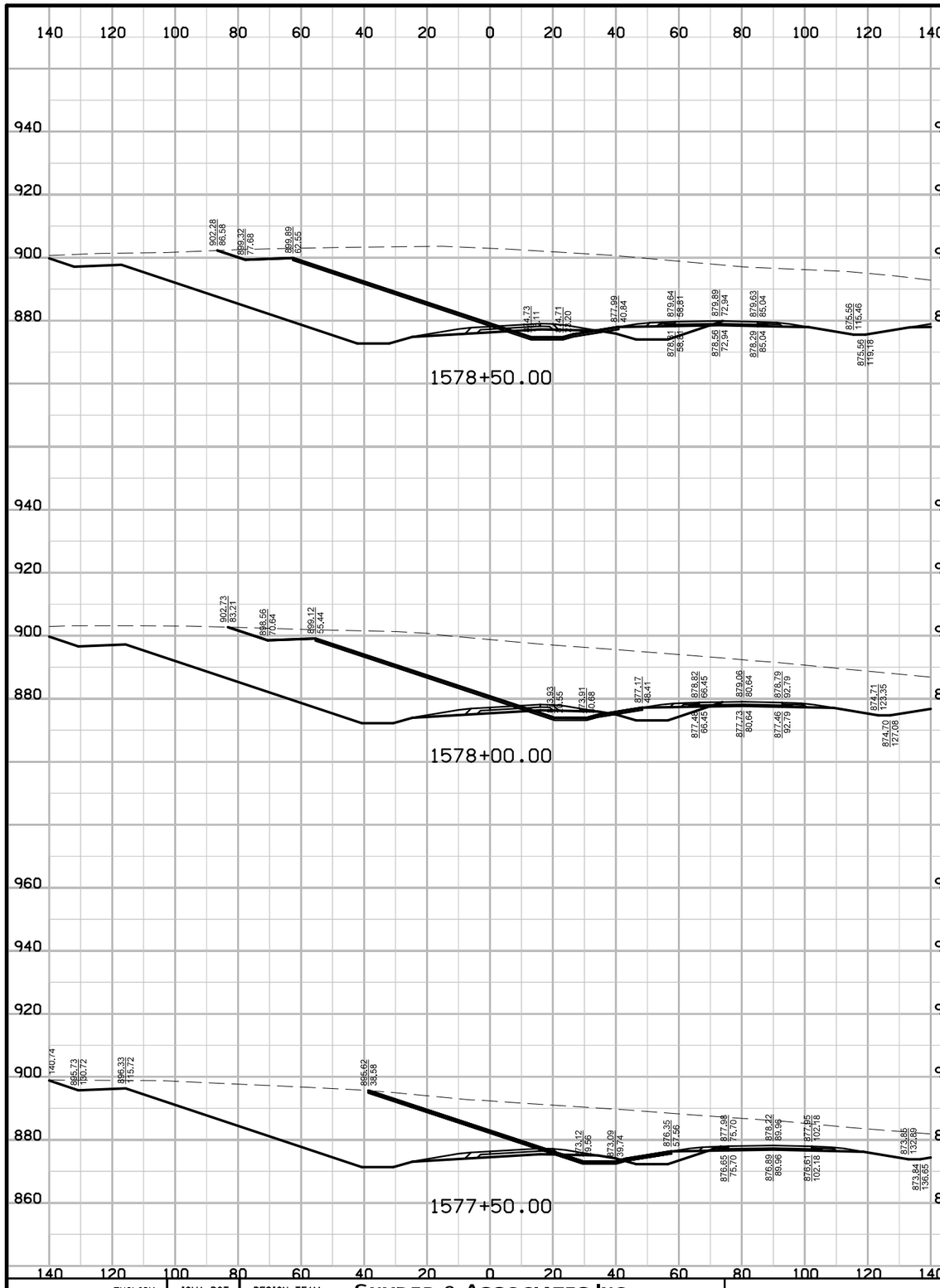


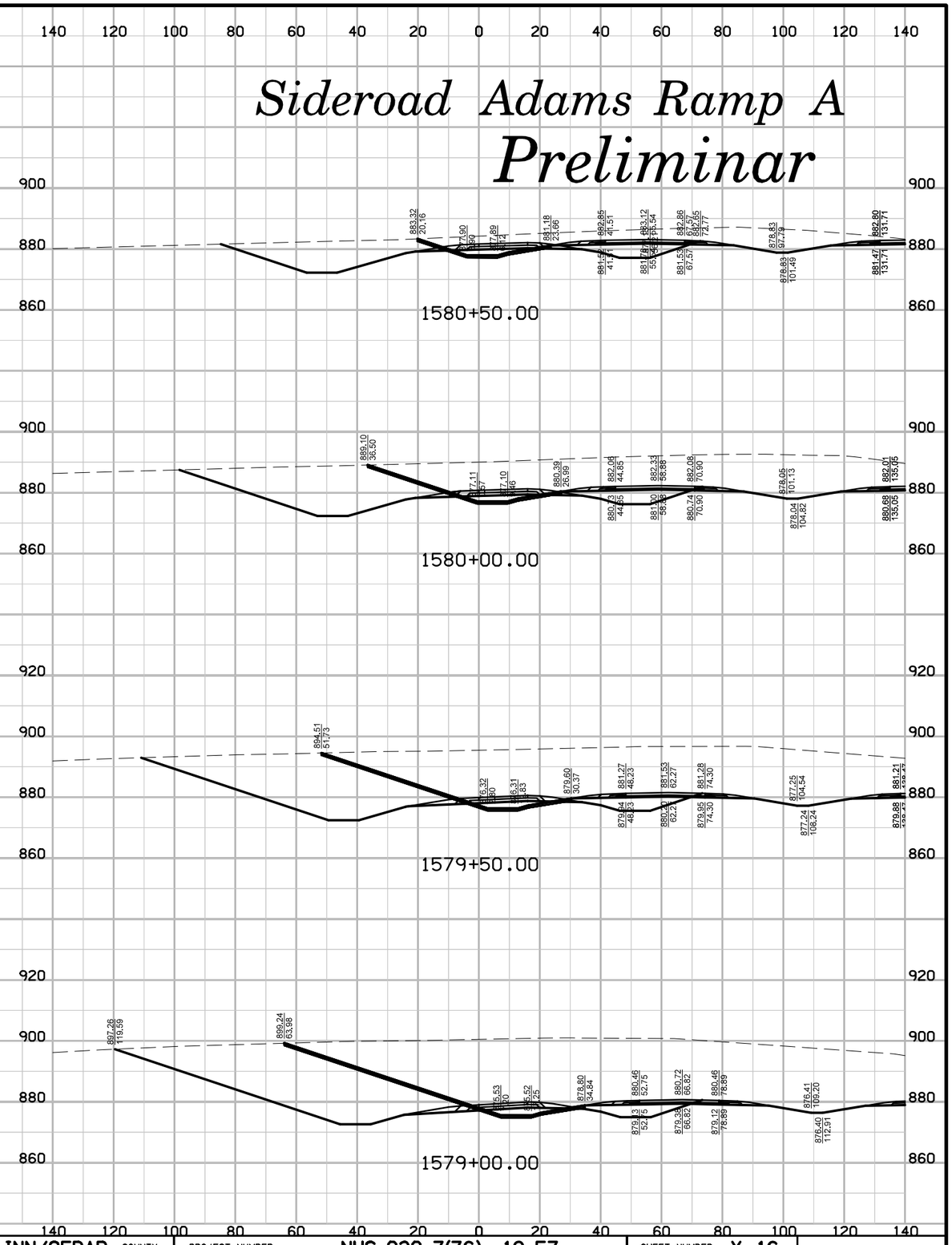
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	Y.15

10:23:37 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076y05.sht

Sideroad Adams Ramp A

Preliminar



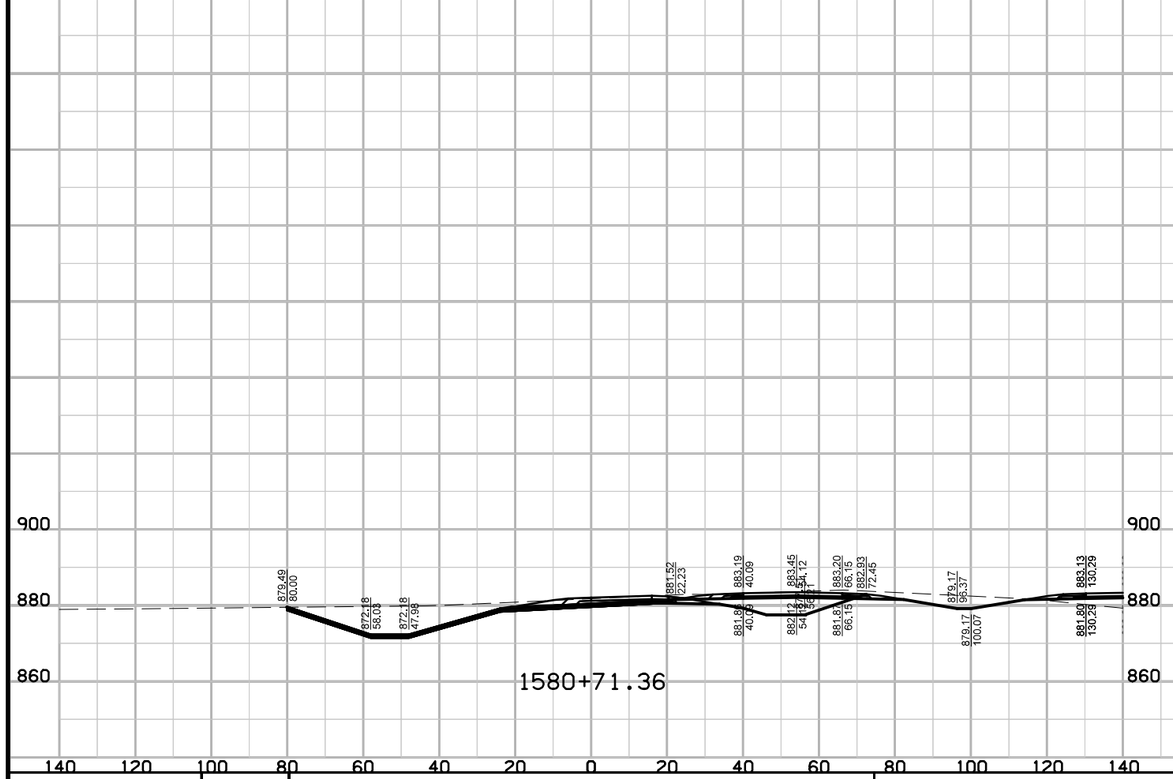


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	Y.16

10:23:38 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076y05.sht

Sideroad Adams Ramp A

Preliminar

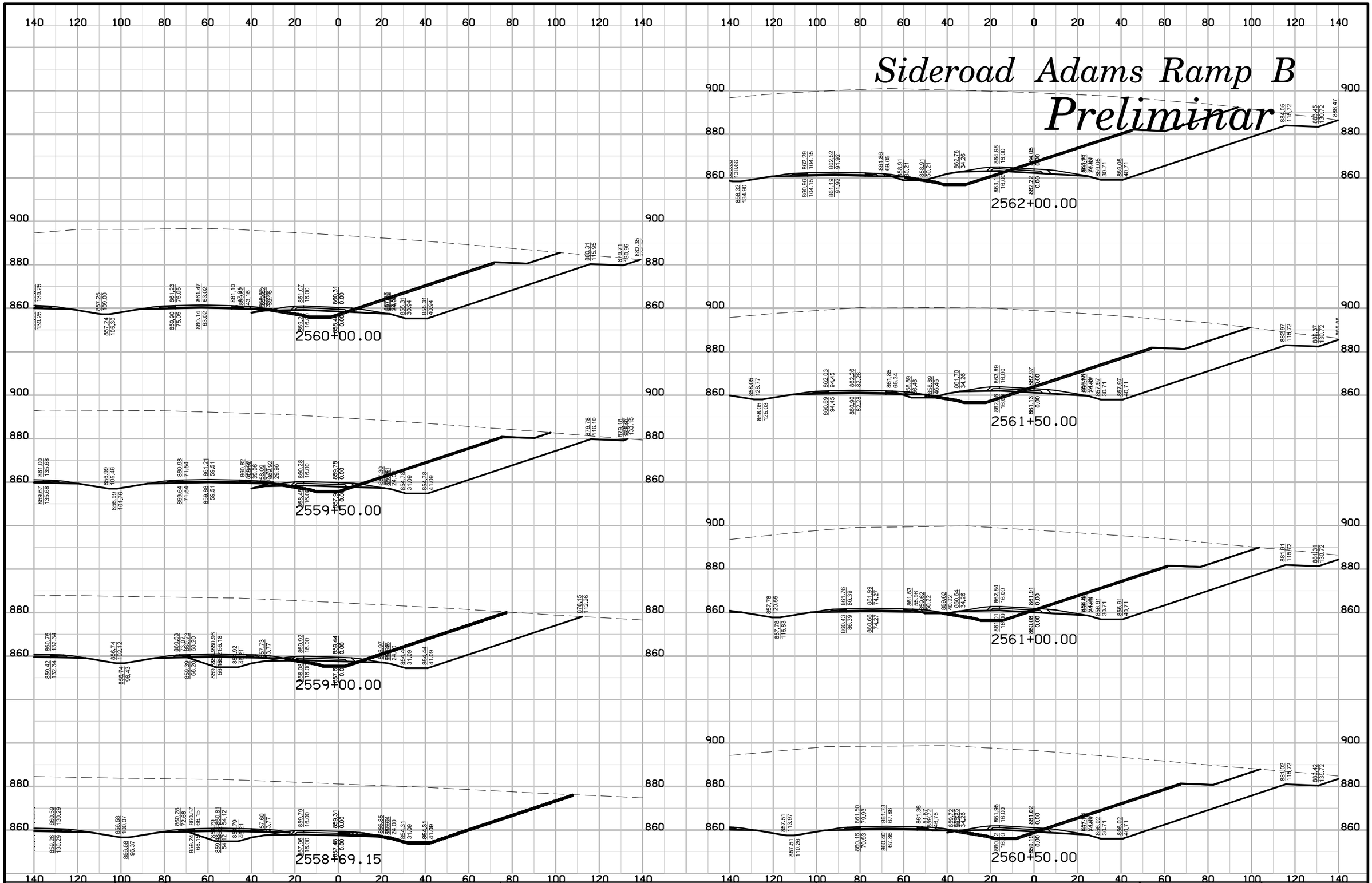


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER Y.17

10:23:39 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076y05.sht

Sideroad Adams Ramp B

Preliminar

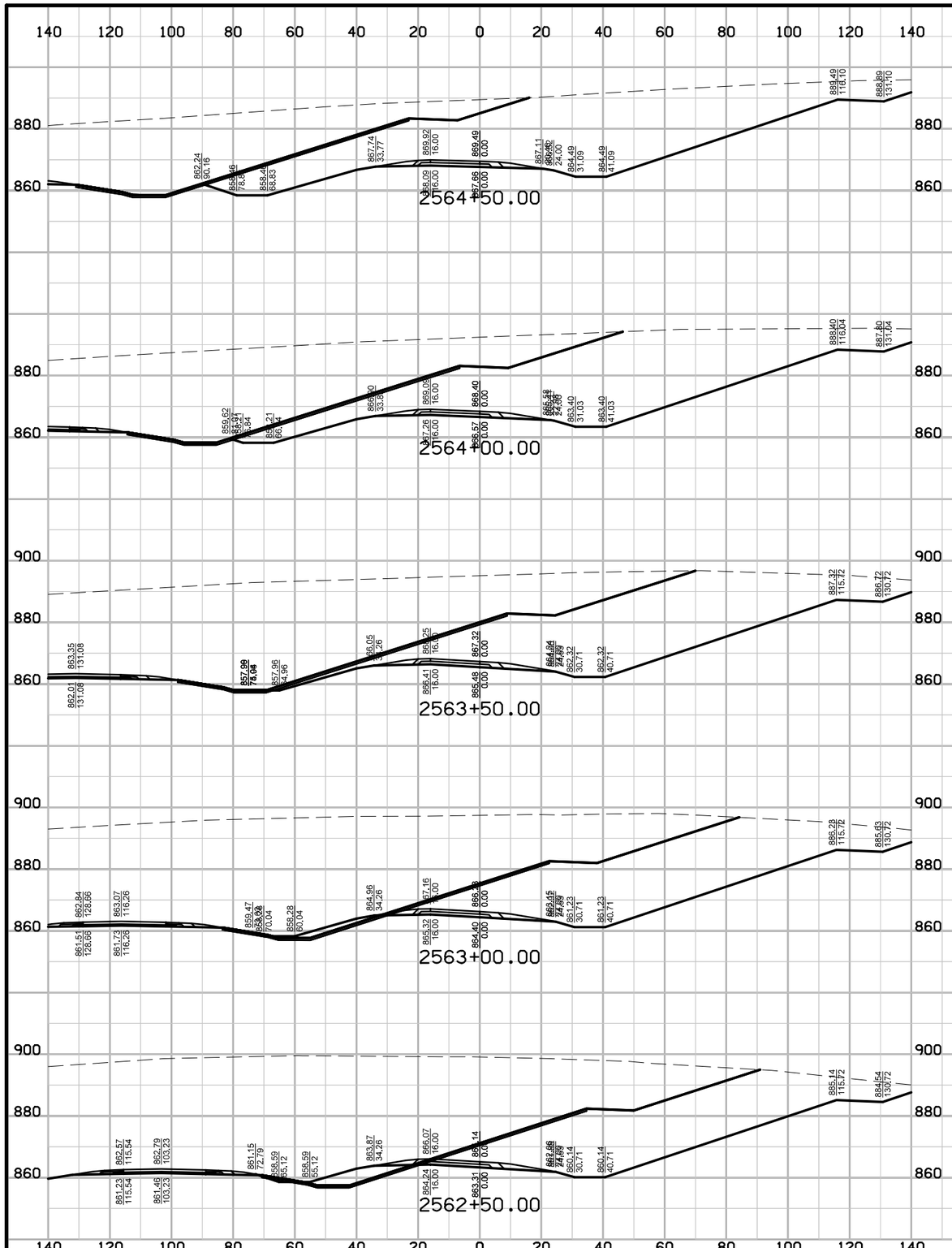


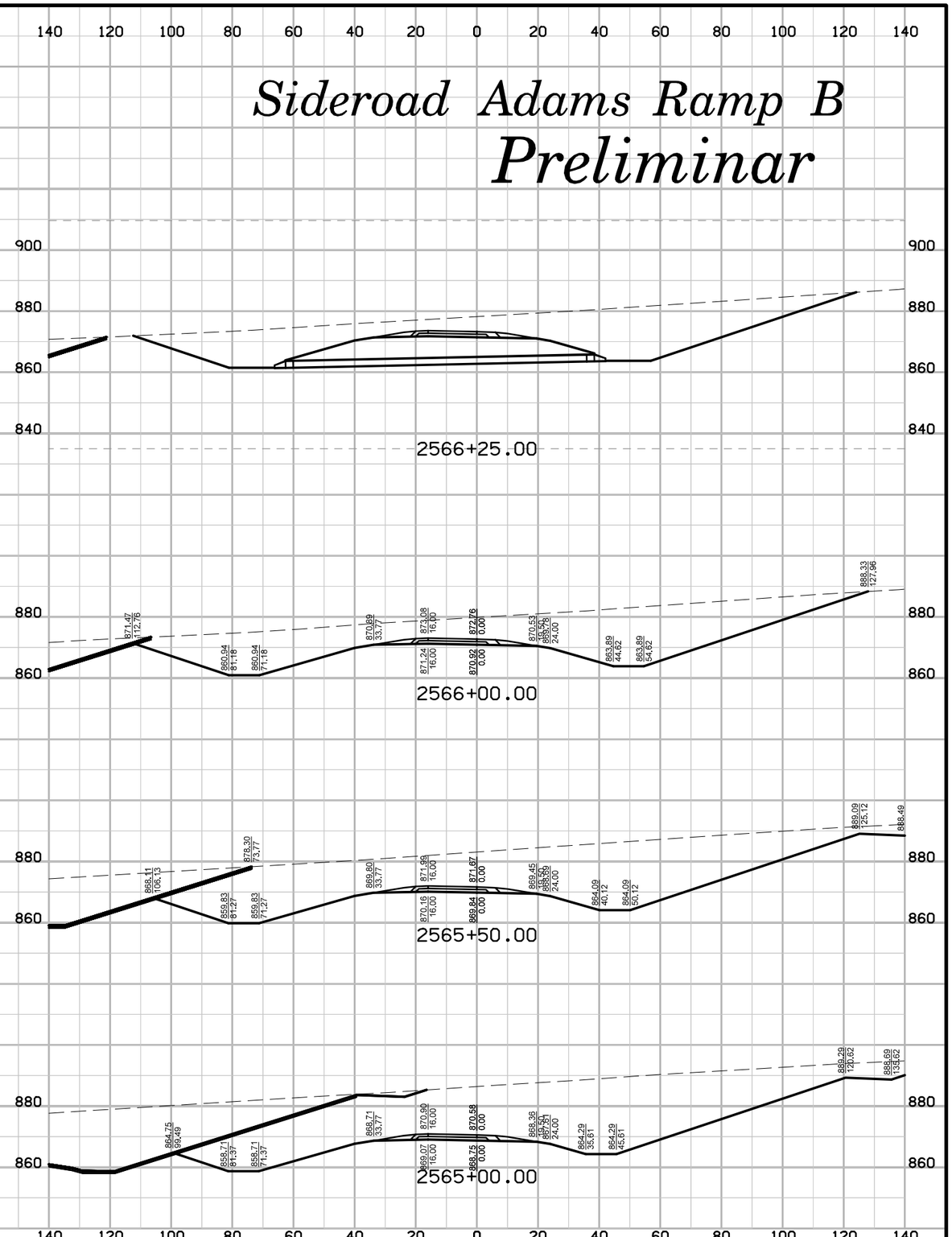
ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	Y.18

10:23:42 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076y06.sht

Sideroad Adams Ramp B

Preliminar



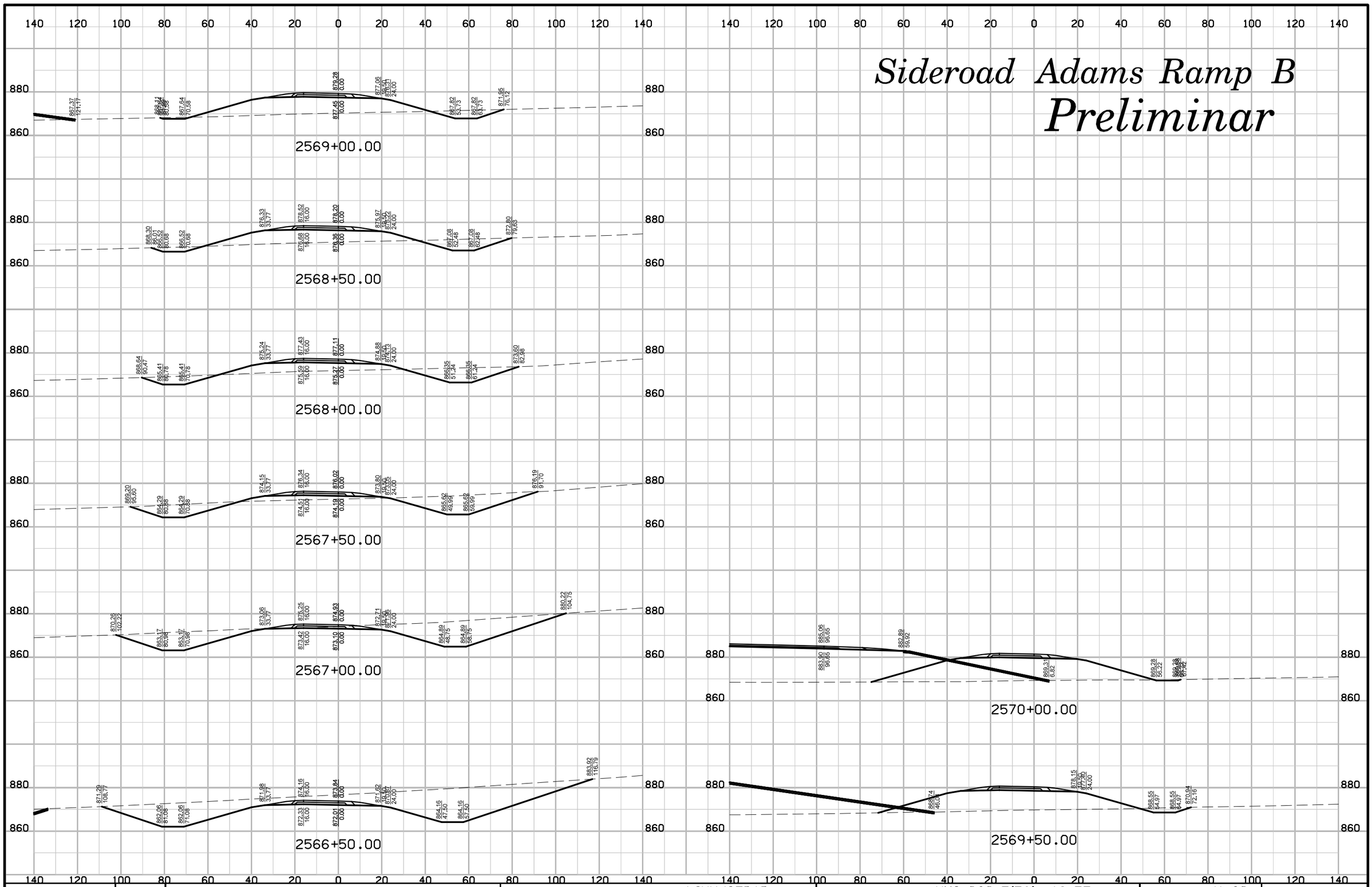


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER Y.19

10:23:43 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076y06.sht

Sideroad Adams Ramp B

Preliminar

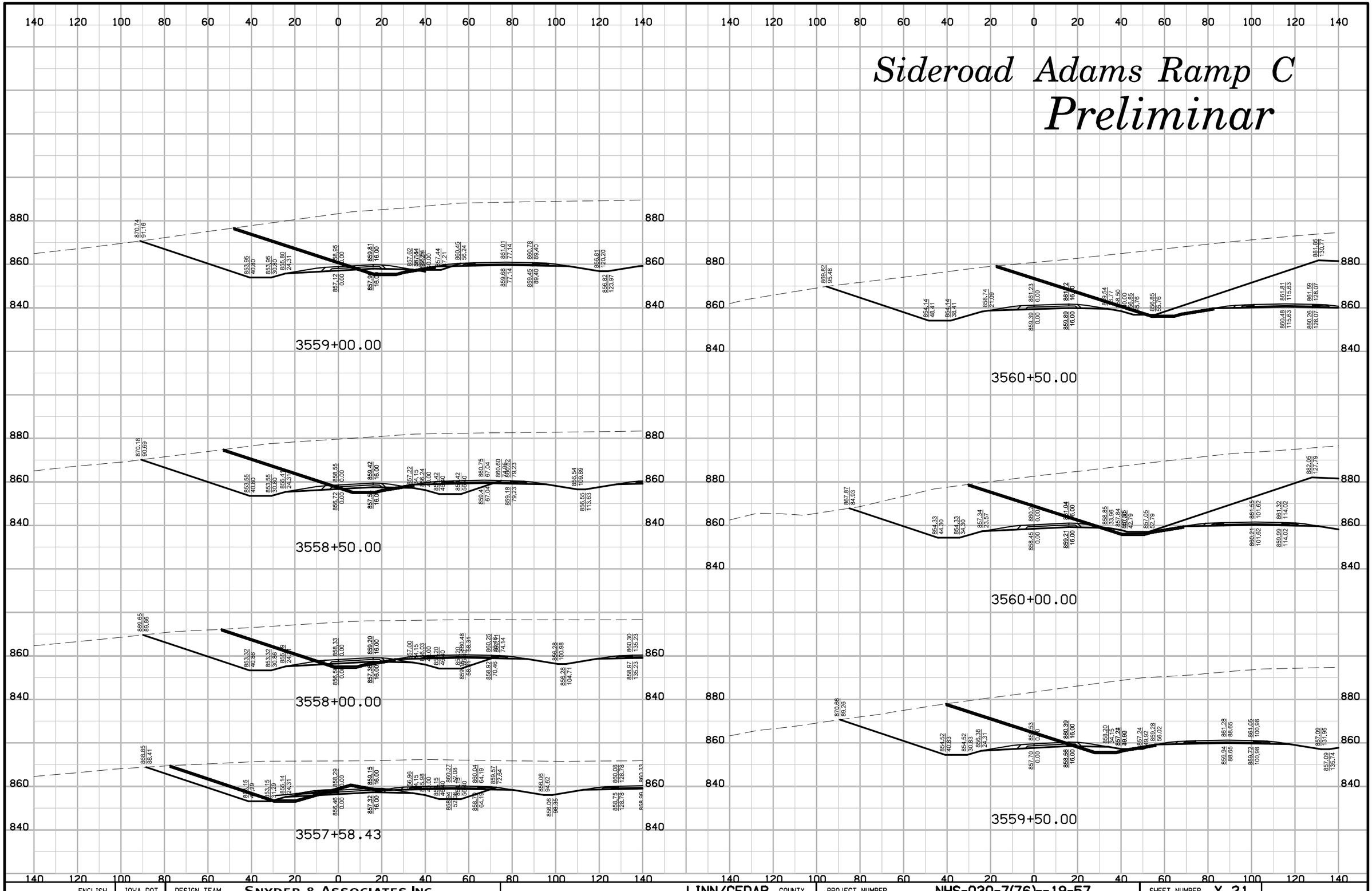


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER Y.20

10:23:44 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076y06.sht

Sideroad Adams Ramp C

Preliminar

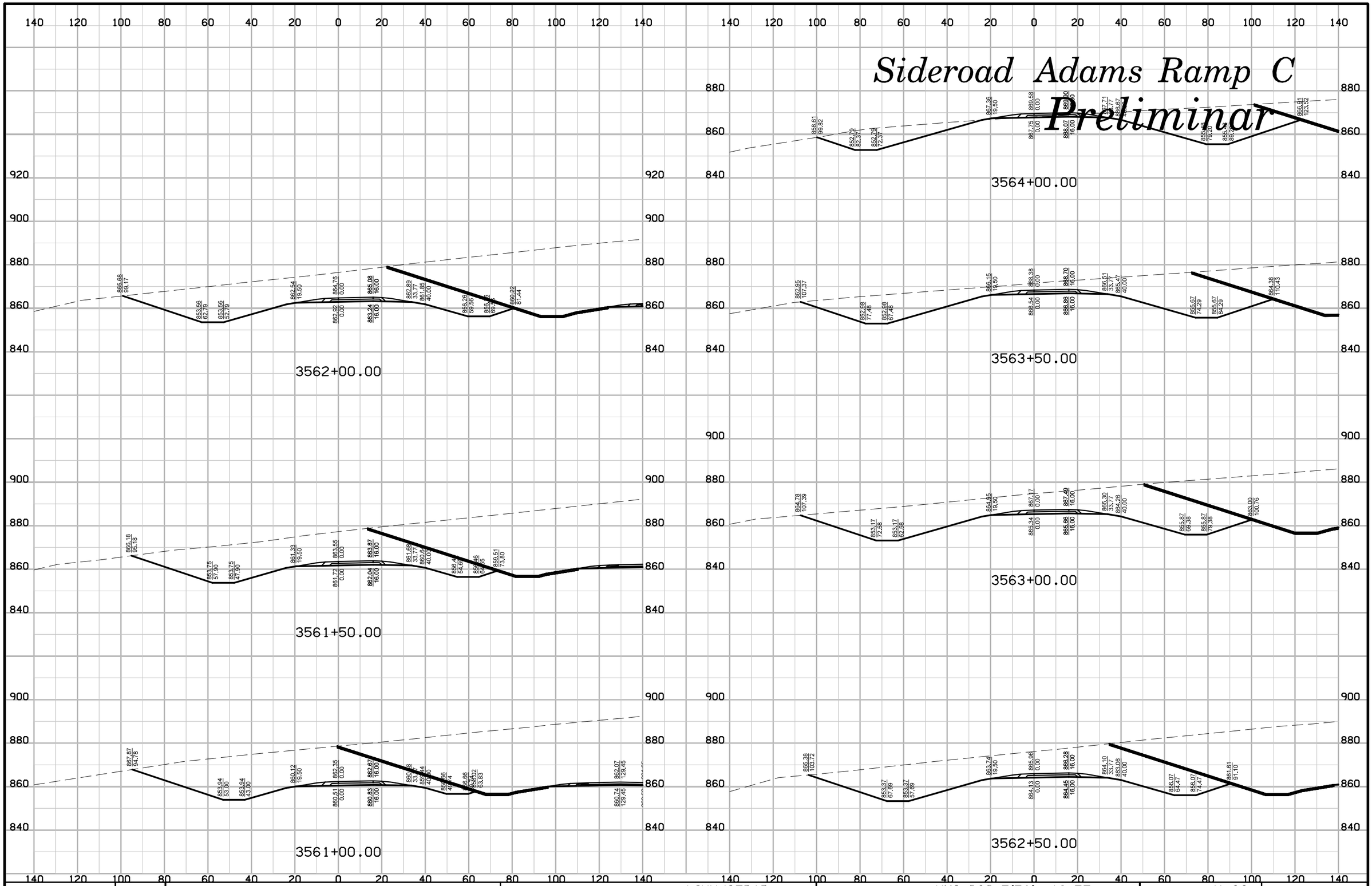


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER Y.21

10:23:48 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076y07.sht

Sideroad Adams Ramp C

Preliminar

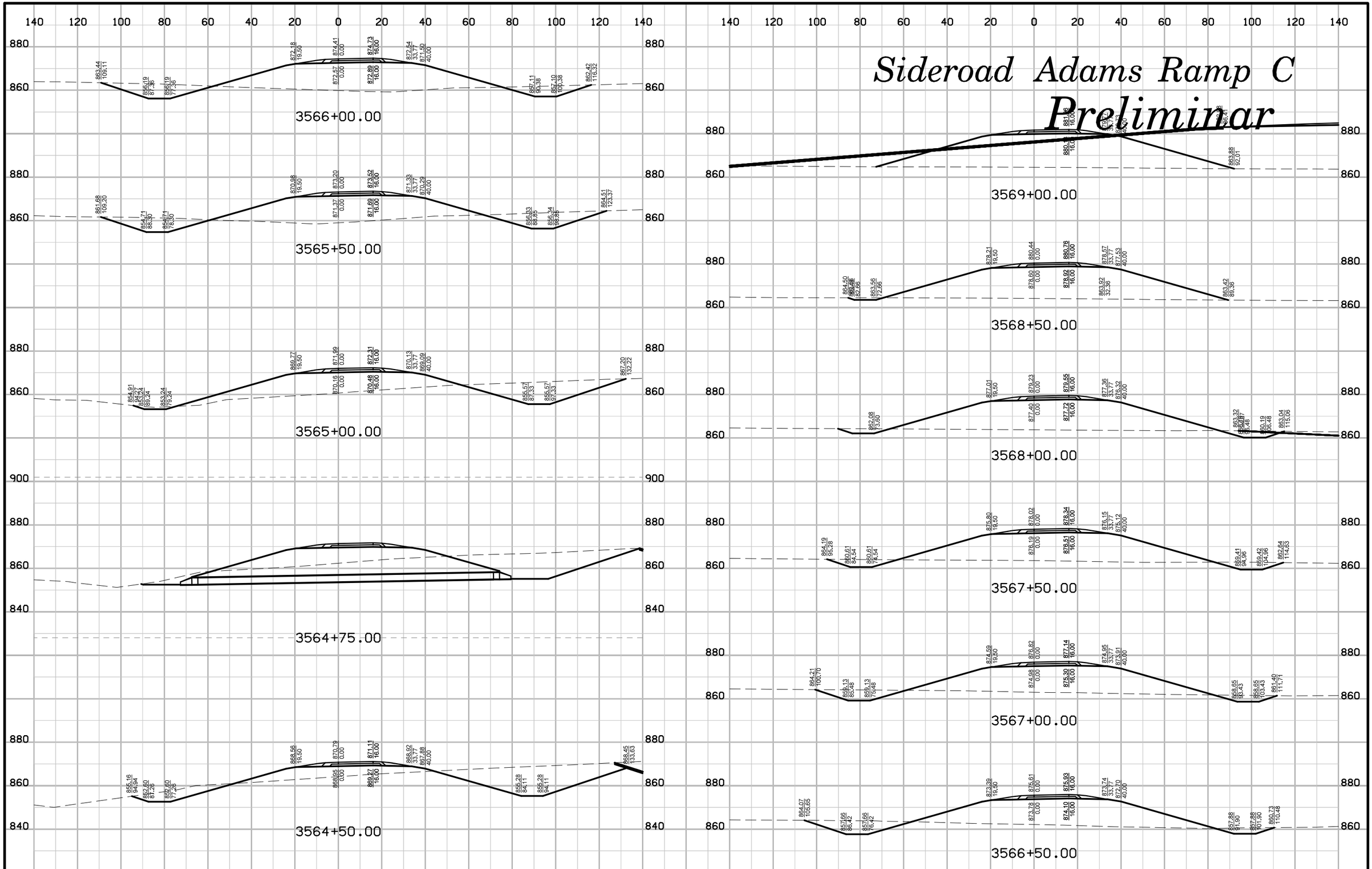


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	Y.22

10:23:48 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076y07.sht

Sideroad Adams Ramp C

Preliminar

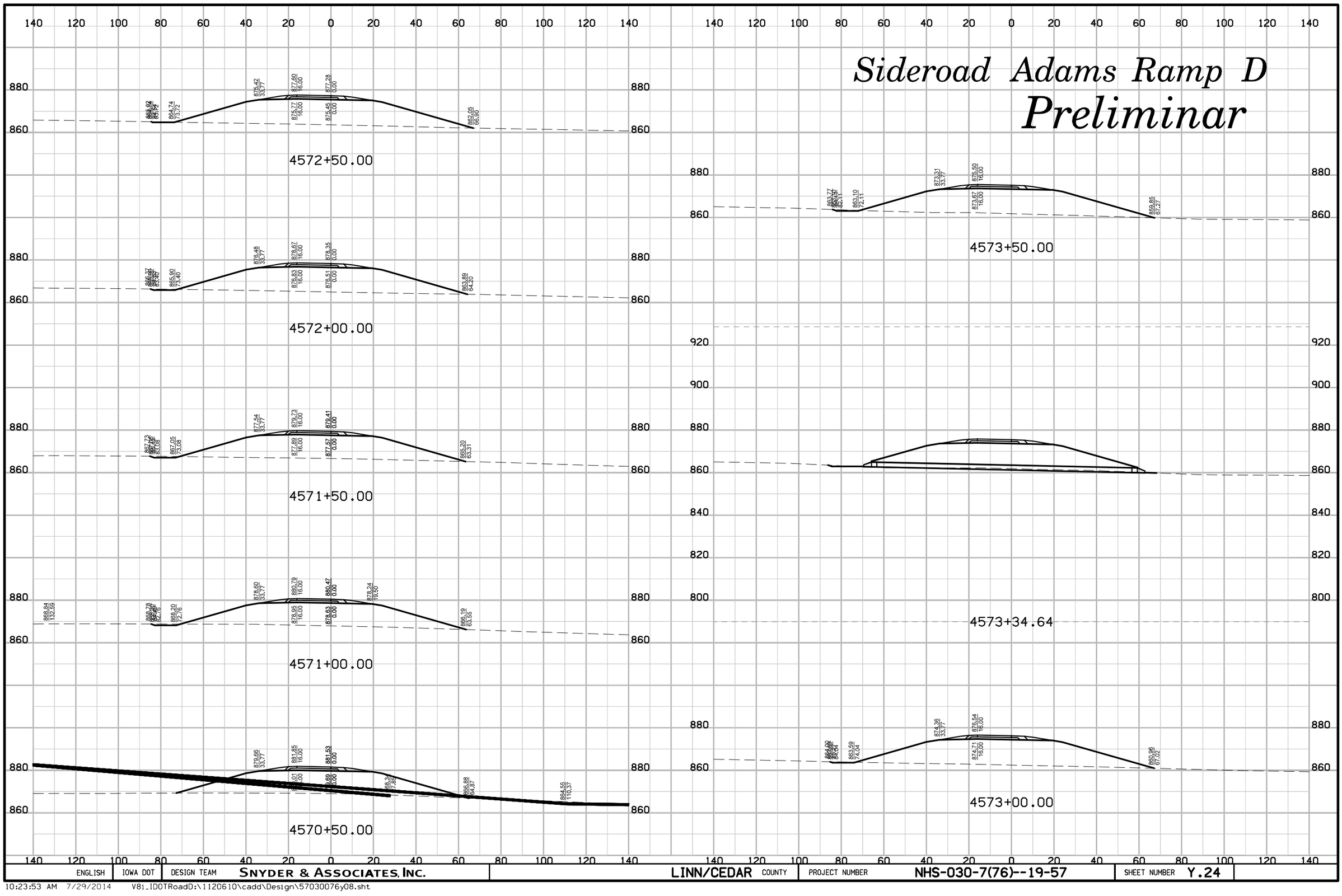


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER NHS-030-7(76)--19-57	SHEET NUMBER Y.23

10:23:49 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076y07.sht

Sideroad Adams Ramp D

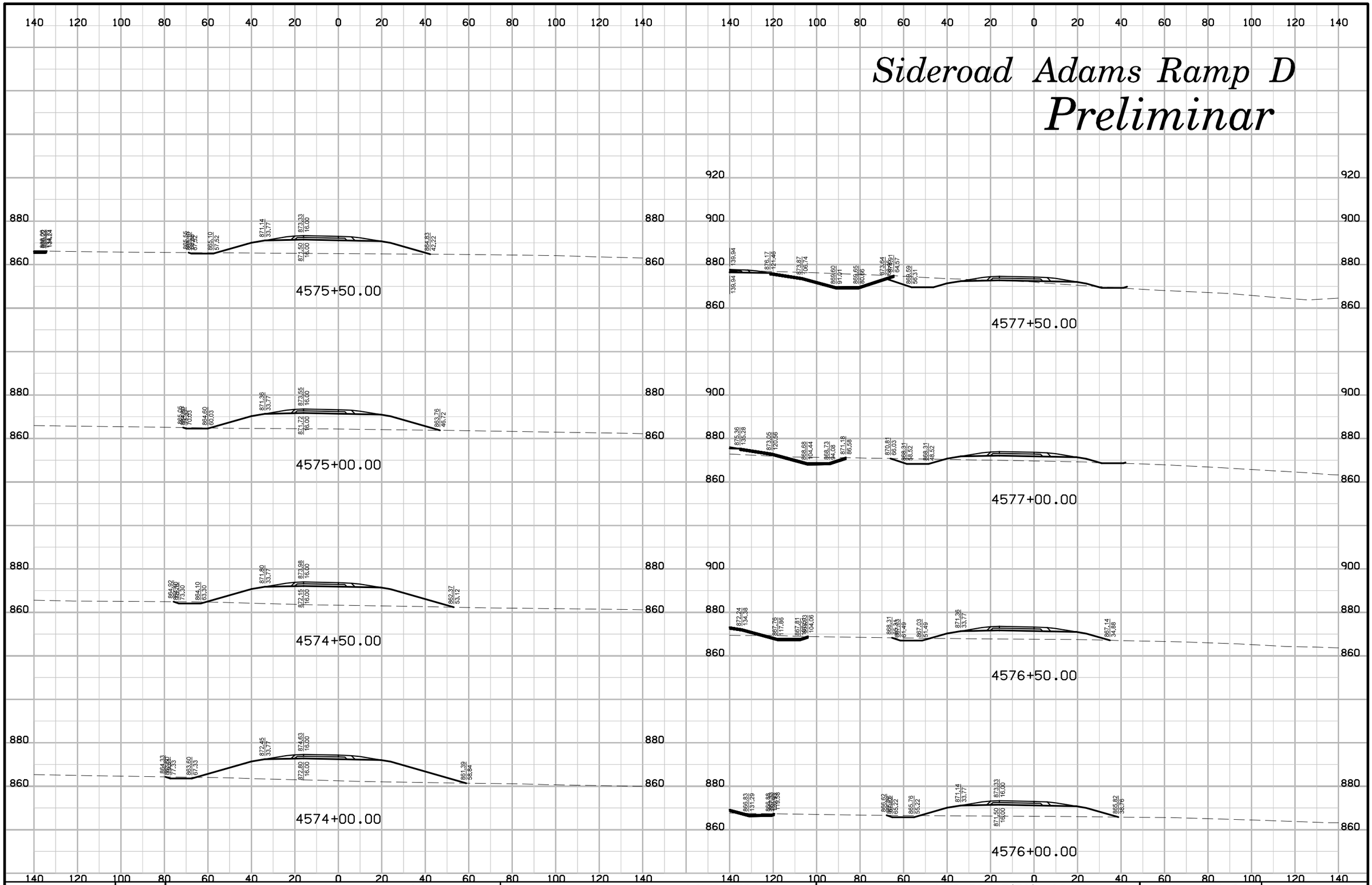
Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER Y.24

Sideroad Adams Ramp D

Preliminar

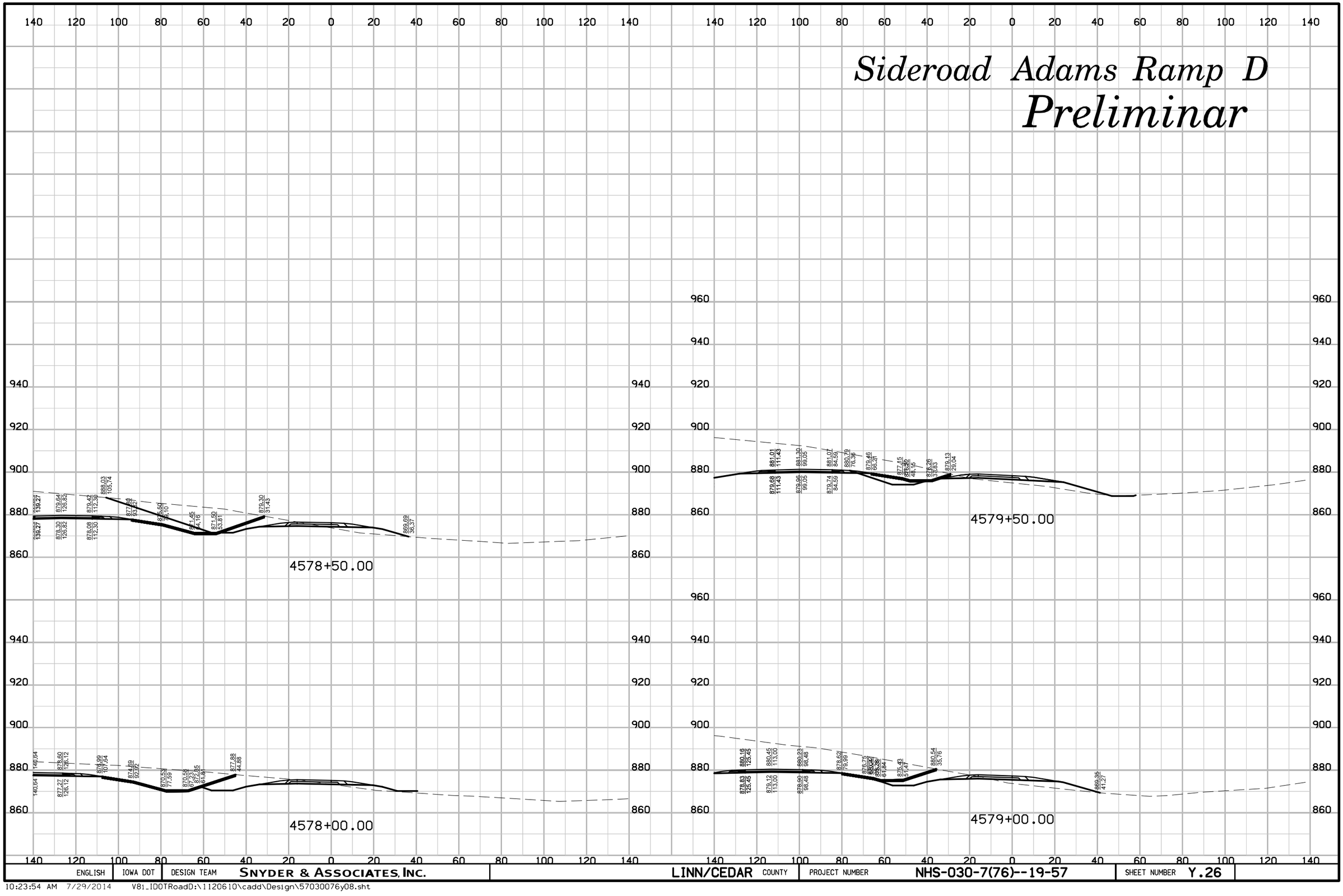


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER Y.25

10:23:54 AM 7/29/2014 V81_IDOTRoadD:\1120610\cadd\Design\57030076y08.sht

Sideroad Adams Ramp D

Preliminar

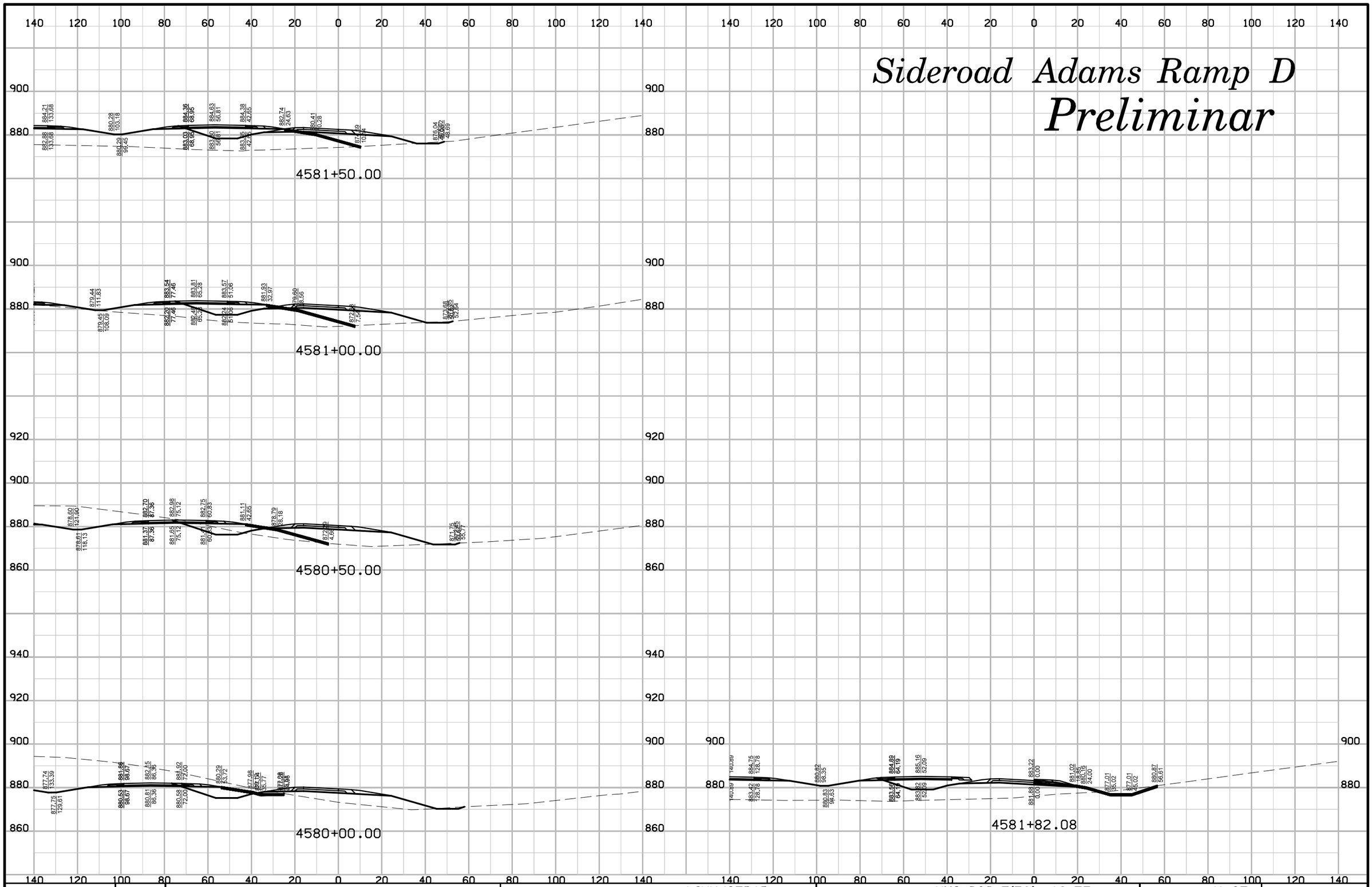


ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	Y.26

10:23:54 AM 7/29/2014 V8i_IDOTRoadD:\1120610\cadd\Design\57030076y08.sht

Sideroad Adams Ramp D

Preliminar



ENGLISH	IOWA DOT	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	LINN/CEDAR COUNTY	PROJECT NUMBER	NHS-030-7(76)--19-57	SHEET NUMBER	Y.27