IOWA DEPARTMENT OF TRANSPORTATION

TO OFFICE: District 6

DATE: April 27, 2017

ATTENTION: Jim Schnoebelen

REF. : Dubuque County
STP-052-2(119)--2C-31
PIN: 10-31-052-020-02

FROM: Kevin K. Patel

OFFICE: Design

SUBJECT: Field Exam (D2)

A field exam was held on Friday, March 31, 2017 to review the proposed project for the reconstruction of U.S. 52 from approximately 0.7 miles north of Boy Scout Road, north to the east junction of Pfeiler Road.

Those present for the field exam included the following: Ken Yanna, Roger Walton and Steve Lueck from District 6; Yan Jia, Dustin Skogerboe, Mike Thiel and Kevin Patel from the Office of Design; Rob Cornelis from the Office of Bridges and Structures, and Nikki Cuva from the Office of Right of Way.

U.S. 52 is functionally classified as an "area development" route and is a service level "B" roadway. The 2018 and 2038 ADT is estimated to be 2,200 vpd and 2,400 vpd with 12% truck traffic respectively.

The proposed project will extend from 0.7 miles north of Boy Scout Road, north to the east junction of Pfeiler Road, a distance of approximately 4.6 miles. The existing mainline pavement will be removed and reconstructed with 24' wide, 9.5" thick PCC pavement, over 12" of modified subbase. Paved shoulders 6' wide along with 4:1 foreslopes and longitudinal subdrains will be provided. There will be one location that will use 7' wide paved shoulders with a 6" sloped faced curb in order to minimize right of way impacts.

The existing horizontal and vertical alignment will generally be used as constructed; however, the new design will strive to improve the geometry where possible while minimizing impacts to the existing right of way. A 50 mph design speed was selected for the majority of the route; however, a 45 mph design speed will be used near the City of Rickardsville. Currently there are 4 horizontal curves within the project limits that do not meet the minimum 833' radius for a 50 mph design speed. All curves within the 45 mph design speed area do meet the minimum 643' radius required. After the project's completion all of the existing curves will be improved. However, it still may not be possible to meet the required minimum radius guidelines and therefore a design exception will be required. The design exception will also include the proposed 6' wide paved shoulders. The IDOT recommends 8' wide effective (2' paved and 6' granular) shoulders be used for NHS routes.

There are 8 paved side roads that will be impacted by the project. The typical sections for these roadways should be reviewed with the County Engineer.

There have been a total of 44 crashes over a 10-year period that have occurred within the project limits (animals related crashes were omitted). The crash locations were placed on the plan sheets to determine if these crashes could be attributed to the existing roadway geometry. A meeting with the Office of Traffic and Safety was held on April 6th to further evaluate these crashes.

The Office of Right of Way will provide a cost estimate for the cattle shelter at station 390 (south side) and the group of buildings at station 423 (south side) to determine if the new design should strive to minimize the impacts to these properties.

Five Points Road will be reconstructed approximately 100' south of the intersection with U.S. 52 as part of a Dubuque County project. This will include paving a swale on the west side of Five Points Road. It was recommended that survey information be obtained on the new paving to ensure that the U.S. 52 reconstruction ties in to the new pavement surface. There is an ice cream store on the south west corner of this intersection. The existing entrance into the ice cream store is over 150' long. In order to help define the entrance location a curb and gutter section was discussed; however, this will require the profile grade to be lowered. A ditch section was also discussed. This will be reviewed further.

The existing St. Joseph Drive intersection with U.S. 52 results in an acute skew angle which is undesirable. Therefore, it was recommended that St. Joseph's Drive be terminated prior to the intersection and a hammer head turn around be constructed. In addition to this the mainline horizontal curve near St. Joseph's Drive will be flattened and shifted to the south which will result in some residential properties having longer driveways. This design will be reviewed with the City of Rickardsville to get their input. The north ditch of St. Joseph's Drive does not appear to drain well and should be reviewed for installation of cross road culvert.

Guardrail is recommended adjacent to U.S. 52 due to the steep foreslopes from approximately Sta. 559 to 574. During the field exam both steel beam and high tension cable guardrail was discussed along with the advantages and disadvantages associated with both options. The District Maintenance Staff was consulted and they preferred the high tension cable guardrail. However, as the soil conditions in this area may have potential stability issues, soil borings will be taken to verify that the selection of guardrail and type of post will perform well.

The intersection of U.S 52 and Park Hollow Road/ James Road should be reviewed to determine if turn lanes should be added due to the 5.15% grade on the mainline roadway.

During construction, traffic will be maintained via an off-site detour. The suggested detour route is IA 136 south from Luxemburg approximately 10 miles to the intersection with U.S. 20, then east on U.S. 20 for approximately 26 miles to the intersection with U.S. 52. The out of distance travel is approximately 10 miles. The contractor will be required to maintain access to property owners during construction.

Right of way will be required.

The field exam plan sheets may be viewed as pdf files at:
PW:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\ Design Events\D2\D2_31052119_plan.pdf

This project is currently scheduled for a January 2020 letting. The concept cost for this project was $4,720,000. The current cost estimate is now estimated to be $7,606,000.

KKP:

M. J. Sankey	S. J. Gent	M. J. Kennerly
D. A. Widick	W.A. Sorenson	R. Cornelis
E. C. Wright	B. R. Smith	T. Nicholson
Y. Jia	K. D. Nicholson	R. Walton
K. Brink	J. E. Laaser-Webb	T. Crouch
V. A. Brewer	D. R. Tebben	M. D. Masteller
N. L. Cuva	M. A. Swenson	C. B. Brakke
D. E. Sprengeler	N. L. McDonald	D. A. Popp
B. Bradley	G. A. Novey	D. R. Claman
J. McCollough	S. P. Anderson	B. Hofer
D. Skogerboe	K. Yanna	D. McDonald
M. Thiel	H. Holak	E. D. Gansen
S. Flockhart	P. C. Keen	S. Lueck
J. R. Schoenrock	Local FHWA	W. N. Cameron
J. Garton	S. J. Megivern	M. K. Solberg

LETTING DATE 01/22/2020

DUBUQUE CO. - UNKNOWN PAVEMENT - GRADE AND REPLACE - STP-052-2(119)--2C-31

IOWA DOT

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

DUBUQUE COUNTY

UNKNOWN PAVEMENT - GRADE AND REPLACE

From Approx. 0.7 Mile N. Of Boy Scout Rd. N. To E. Jct. Pfeiler Rd.

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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

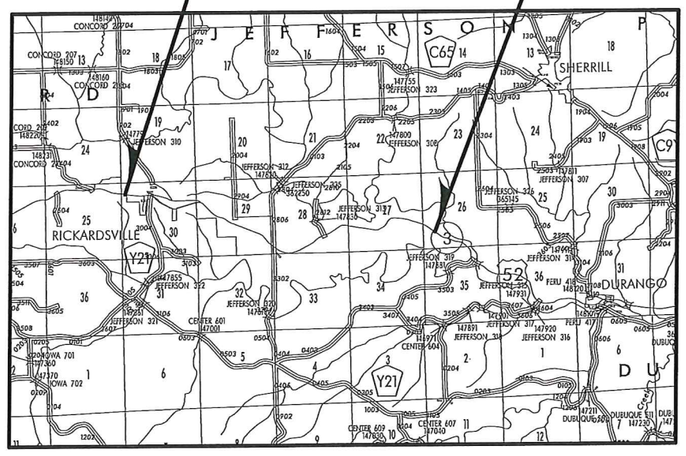
IOWA ONE CALL 1-800-292-8989 www.iowaonecall.com 811 Know what's below. Call before you dig.

REVISIONS

TOTAL
PROJECT IDENTIFICATION NUMBER
10-31-052-020-02
PROJECT NUMBER
STP-052-2(119)--2C-31
R.O.W. PROJECT NUMBER
STPN-052-2(122)--2J-31

Sta. 601+50
End Project

Sta. 357+00
Begin Project



DESIGN DATA RURAL			
2018	AADT	2167	V.P.D.
2038	AADT	2411	V.P.D.
20--	DHV	--	V.P.H.
TRUCKS		12	%
Total Design ESALs		--	

Field Exam

Ken Yanna
Roger Walton
Steve Lueck
} District 6

Yan Jia
Dustin Skogerboe
Mike Thiel
Kevin Patel
} Design

Rob Cornelis - Prelim Bridge

Nikki Cuva - ROW

APPROVED TO PROCEED ~KDW 4-12-17.

D3 PLAN – Date: 5/30/2017

D5 PLAN – Date: 9/30/2017

PRELIMINARY PLANS

Subject to change by final design.

D2 PLAN – Date: 3/31/217

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER A.1

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FE Questions/Comments

1) BOP – Where to start? (ROW/Property Lines, Drainage, Geometric Constraints). OK

2) Curve & Sta. 388+00 – Exam Pipe outlet to south with dike.

3) Curve & Sta. 408+00 – Look at flattening curve to north. Discuss property's operation with District. Curve has crashes related to geometry.

4) Curve & Sta. 426+00 – Look at flattening curve to south. Will impact buildings. Curve has crashes related to geometry.

5) Check functionality of entrance at Sta. 470+00 Rt. Can the entrance be removed?

6) Discuss entrances just east of cemetery at Sta. 495+00.

7) St. Joseph's Drive East intersection – Discuss options:
   - Option 1: Close connection & provide hammerhead – Reroute local traffic west to James Road.
   - Option 2: Keep east intersection open, but shift intersection to the west.

8) Discuss drainage options in north ditch along Rickardsville hill.

9) Discuss foreslope & impacts to ~~west~~ South of US 52 along Rickardsville hill.

10) Drainage around houses

Steel beam

Pros

- reduced deflection
- more rigid barrier
- hit to end anchor does not necessarily compromise system (unless connection cable is compromised)
- can be placed at breakover of 2:1, with a 12" blockout and half a post, face of rail is 20" in from breakover

Cons

- longer posts at this location (7.5' wood or 9' steel are considered equivalent if placed at 2:1 breakover) could create a situation where post-impact, there may be more compaction issues, especially for a stronger hit that may require compaction from the side of the 2:1
- longer posts also create issues if rock could be encountered
- district maintenance crews may not have equipment to repair nor have access to non-standard post lengths
- possible snow buildup on narrow roadway

Cable

Pros

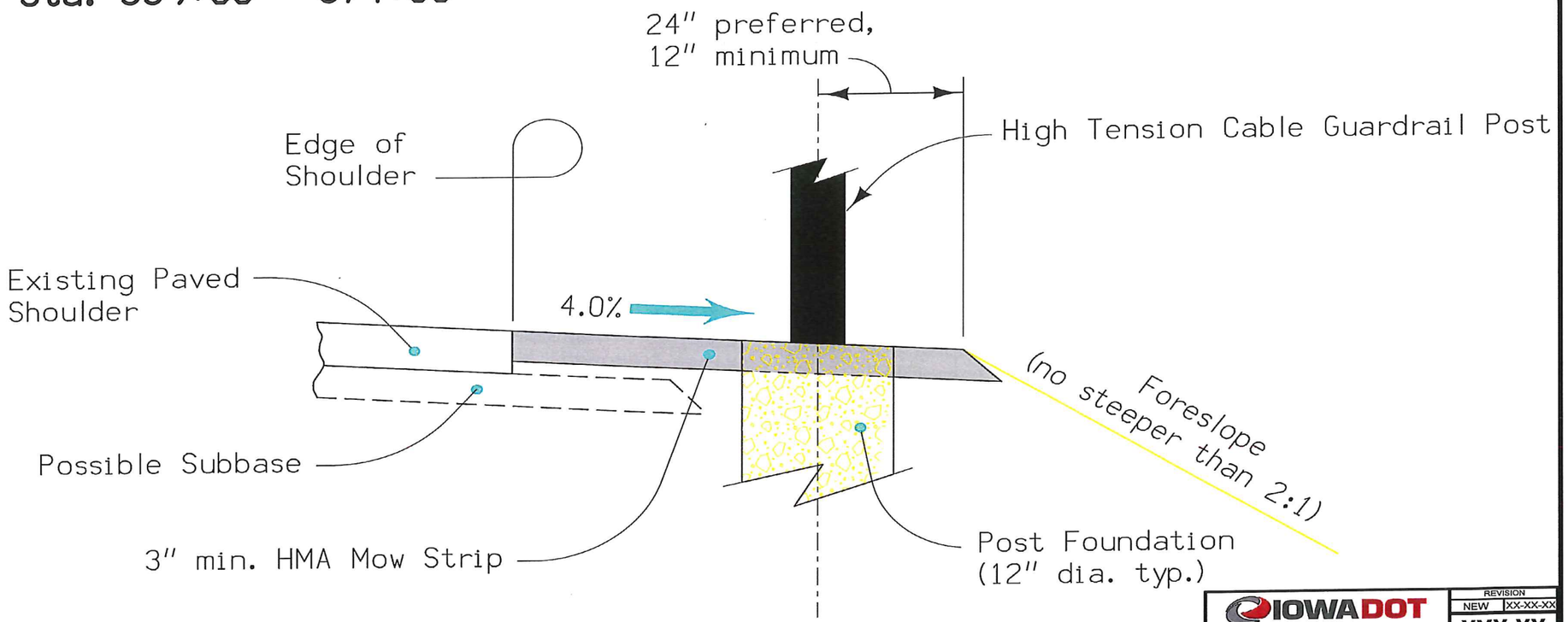
- capable of capturing larger vehicles (TL-4 vs. TL-3 for steel beam)
- maintenance may be able to contract out work (on-call contractor depends on district)
- cheaper for install lengths longer than 200'
- less likely that an impact requires any grading as posts are meant to give way
- can be fixed by maintenance crews
- no snow buildup

Cons

- larger deflection (depending on post spacing, which is determined by manufacturer)
- needs at least 1' (preferably 2') of shoulder behind post
- direct hit to end anchor compromises entire system (could design end anchor to have larger offset than regular run to minimize strike potential)

As per 4/5/17 note from Ken Y. District Maint would prefer high tension cable guardrail. Should review soil conditions

Sta. 559+00 - 574+00



IOWA DOT

ROAD DESIGN DETAIL

REVISION: NEW | XX-XX-XX

XXX-XX

SHEET 1 of 1

REVISIONS: New

HIGH TENSION CABLE GUARDRAIL OUTSIDE SHOULDER INSTALLATION

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER A.3

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Total Report

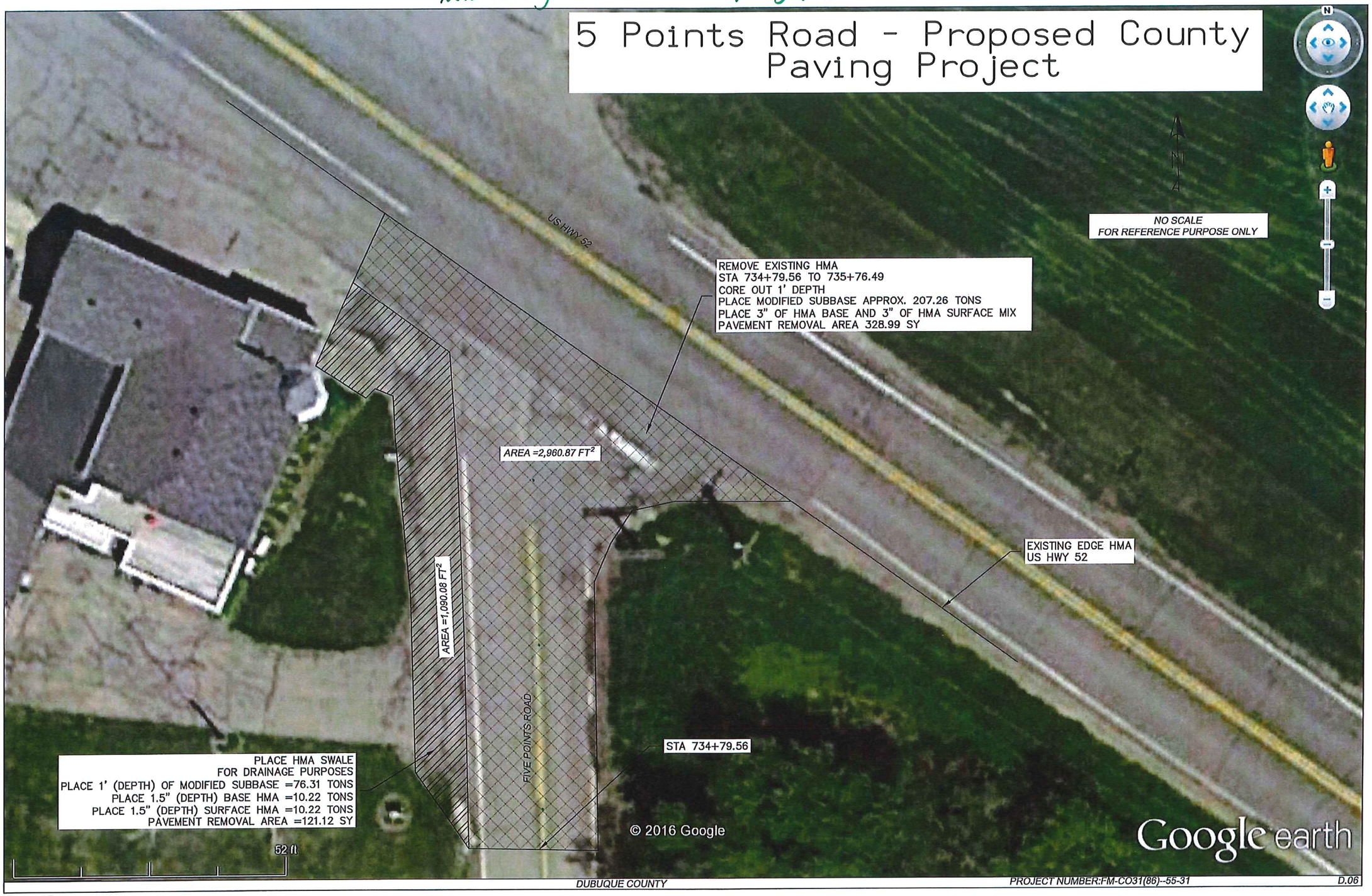
Segment 2

No.	CASE NUMBER	B / A 36/9	Location	Sta	Year	Mo	BAC	No. Veh	Severity	Vehicle Damage	Weather	Road Cond.	Initial Dir.	Vehicle Action	Cause	Ditch or Obstacle	Notes from Narrative
1	2006200564	Before	East Rickardsville Curve	535+89	2006	1	0	1	Minor	Severe	Cloudy	See Narrative	South	Straight	Fast for Conditions		
2	2006212031	Before	Gillespie Hill	337+67	2006	3	0	1	PDO	Disabling	Sleet	Slush	North	Straight	ROR - Rt		
3	2006219757	Before		428+80	2006	5	0	1	PDO	Functional	Rain	Wet	South	Straight	Lost Control		
4	2006219772	Before	St. Joseph St	541+90	2006	4	0	3	Unknown	Minor	Clear	Dry	South	Straight	Lost Control		
5	2006225944	Before	Gillespie Hill	336+33	2006	6	0	1	Minor	Unknown	Rain	Wet	Not Reportec	Straight	Swerving/Evasive		
6	2006248545	Before	Gillespie Hill	335+77	2006	10	0	1	PDO	Disabling	Mist	Wet	North	Straight	Lost Control		
7	2006258099	Before	Gillespie Hill	328+87	2006	12	0	1	Major	Severe	Cloudy	See Narrative	North	Straight	No fault		
8	2007206994	Before	5 Points Rd Intersection	479+84	2007	1	0	1	PDO	Severe	Cloudy	Dry	North	Straight	Crossed Centerline		
9	2007206997	Before	Gillespie Hill	321+06	2007	1	0	1	Minor	Disabling	Snow	Icy	South	Straight	Fast for Conditions		
10	2007376699	Before	Gillespie Hill	320+84	2007	6	0	1	Minor	Disabling	Clear	Dry	North	Straight	Fast for Conditions		
11	2007380147	Before	Boy Scout Rd	319+35	2007	6	0	1	Minor	Disabling	Cloudy	Dry	South	Straight	ROR - Rt		
13	2007395580	Before		560+30	2007	9	0	1	PDO	Disabling	Rain	Wet	South	Straight	Over-Steering		
14	2007398678	Before	Gillespie Hill	323+40	2007	10	0	1	PDO	Functional	Rain	Wet	South	Straight	Swerving/Evasive		
15	2008422696	Before		433+26	2008	1	0	1	Unknown	Severe	Sleet	Slush	South	Straight	Fast for Conditions		
16	2008423189	Before		386+13	2008	1	0	1	Unknown	Disabling	Cloudy	Snow	North	Straight	Fast for Conditions		
17	2008425411	Before		561+42	2008	2	0.149	1	Minor	Severe	Blowing snow	Icy	South	Straight	Swerving/Evasive		
18	2008426577	Before	Y-21/Park Hollow Rd	579+64	2008	2	0	2	PDO	Disabling	Cloudy	Wet	South	Turning Left	FTY		
19	2008428604	Before		576+23	2008	2	0	1	PDO	Functional	Clear	Wet	South	Straight	ROR - Rt		
20	2008442960	Before		389+00	2008	5	0	1	PDO	Disabling	Clear	Dry	South	Straight	Crossed Centerline		
21	2008447609	Before		466+00	2008	6	0	1	PDO	Severe	Clear	Dry	East	Straight	Swerving/Evasive		
22	2008458460	Before		574+45	2008	8	0	1	PDO	Disabling	Unknown	Dry	South	Straight	Over-Steering		
23	2009488908	Before		391+20	2009	1	0	1	PDO	Disabling	Snow	Snow	South	Straight	ROR - Lt		
24	2009494874	Before		575+55	2009	2	0	1	PDO	Minor	Cloudy	Snow	East	Straight	Fast for Conditions		
25	2009515909	Before	East Rickardsville Curve	545+05	2009	6	0	1	Major	Severe	Cloudy	Dry	North	Straight	ROR - Rt		
26	2009522933	Before	Gillespie Hill	323+49	2009	8	0	1	PDO	Minor	Clear	Dry	North	Straight	No fault		
27	2009533787	Before	East Rickardsville Curve	539+21	2009	10	0	1	PDO	Functional	Cloudy	Wet	South	Straight	ROR - Rt		
28	2010549610	Before		387+74	2010	1	0	1	Unknown	Minor	Snow	Snow	South	Straight	ROR - Rt		
29	2010578290	Before		436+31	2010	6	0.143	1	PDO	Severe	Cloudy	Dry	South	Straight	ROR - Rt		
30	2010587536	Before	Boy Scout Rd	319+34	2010	8	0	1	Unknown	Severe	Clear	Dry	West	Straight	ROR - Straight		
31	2010590853	Before	Gillespie Hill	328+85	2010	9	0	1	PDO	Functional	Cloudy	Dry	South	Straight	No fault		
32	2010592208	Before	Gillespie Hill	341+19	2010	9	0	1	PDO	Disabling	Cloudy	Wet	North	Straight	Lost Control		
33	2010597130	Before		405+05	2010	10	0.2	1	Major	Minor	Rain	Wet	West	Straight	Fast for Conditions		
34	2010604010	Before	St. Joseph St	541+78	2010	12	0	1	PDO	Functional	Snow	Snow	West	Straight	ROR - Straight		
35	2010610114	Before		496+08	2010	12	0	2	PDO	Disabling	Cloudy	Dry	North	Straight	FTY		
36	2010613605	Before		406+38	2010	12	0.13	1	Unknown	Severe	Cloudy	Dry	South	Straight	Fast for Conditions		
37	2012691387	After		434+77	2012	6	0	1	PDO	Disabling	Cloudy	Dry	North	Straight	ROR - Rt	Ditch/Fence	Rod broke on car causing driver to lose control and enter ditch and hit fence
38	2012718886	After		463+33	2012	12	0	4	PDO	Functional	Snow	Snow	West	Other	Swerving/Evasive	Parked Car	White-out conditions; a car got stuck in large snow drift on road; rear-ended by 3 other cars
39	2013738802	After	Gillespie Hill	338+22	2013	4	0.124	1	Minor	Severe	Clear	Dry	North	Straight	Crossed Centerline	Guardrail	Intoxicated driver couldn't recall what happened; appeared to hit guardrail
40	2013745316	After		387+59	2013	6	0	1	Minor	Severe	Clear	Dry	North	Straight	ROR - Rt	Ditch	NB around corner when lost control and entered ditch
41	2013754680	After	Y-21/James Rd	579+54	2013	8	0	2	Unknown	Disabling	Clear	Dry	East	Straight	FTY	Car	SB when a car pulled out in front of them; struck back end of driver's side of car
42	2013756911	After		408+87	2013	9	0	2	Unknown	Severe	Cloudy	Wet	South	Straight	Lost Control (Wet)	Tree	NB when lost control, fish tailed and struck SB vehicle; both went onto property hitting a tree
43	2013758024	After		428+13	2013	9	0	2	PDO	Disabling	Cloudy	Dry	North	Straight	Followed too close	Parked Car	Vehicle hit parked school bus; claimed they didn't see bus; bus had red lights on and stop arm
44	2013759380	After	Gillespie Hill	328+82	2013	9	0	1	PDO	Disabling	Rain	Wet	North	Straight	Fast for Conditions	Guardrail	Approx. 50 mph; just traveld through S-curve when lost control and struck guardrail on right side

No animal related crashes are shown
(these were removed from list)

Need survey information after paving project has been completed

5 Points Road - Proposed County Paving Project



DUBUQUE COUNTY | PROJECT NUMBER:FM-CO31(86)--55-31 | D.06

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER A.5

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Roadway	US 52/IA 3 Section 2 - Sta. 357+00 - 509+00		
PIN Number	10-31-052-020-02	**Submittal Date**	
Project Number	STP-052-2(119)--2C-31		**Approval Date**
District	District 6	**Assistant District Engineer**	
County	Dubuque (31)	**or**	
Route	US 52/IA 3	**Office Director**	
Location	From Approx. 0.7 Mile N. Of Boy Scout Rd. N. To E. Jct. Pfeiler Rd.		
Work Type	Unknown Pavement - Grade and Replace		
Segment Manager	Yan Jia		
Designer	Dustin Skogerboe		

Design Manual Section 1C-1
last update: 12-08-16

Rural Two-Lane Highways (Rural Arterials)

Design Element		Preferred	Acceptable	Project Values
Design speed (mph)		60	50	50
Maximum superelevation rate (Refer to Section 2A-2)		6%	8%	6%
Design lane width (ft)		12	12	12
Full depth paved width (ft)		14	12	12
Right turn lane (ft)		12	10	NA
Climbing Lane (ft)		12	12	NA
Left turn lane (ft)		12	10	NA
Pavement cross-slope (on tangent sections)	Through lanes	2%	1.5% minimum, 2% maximum	2%
	Auxiliary and turn lanes	3%	3% maximum	NA
	Crown break at centerline	4%	4% maximum	4%
Shoulder cross-slope (on tangent sections)		4%	Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders	4%
Curb type (Refer to Section 3C-2)	Design speed = 50 or 55 mph	6-inch sloped	6-inch standard	6-inch sloped
	Design speed ≥ 60 mph	4-inch sloped	6-inch sloped	NA
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance)	Adjacent to shoulder	10:1 for 4' then 6:1	3:1	4:1
	Beyond standard ditch depth and design clear zone	3.5:1	3:1	3:1
	Curbed roadways	2%	not steeper than 3:1	2%
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)		3:1	2.5:1	3:1
Transverse Slopes	w/ drainage structures	8:1	6:1	6:1
	w/o drainage structures	10:1	6:1	6:1
Ditches (Refer to Section 3G-1)	Outside ditch (depth x width) (ft)	5 x 10	--	NA
Bridge width—new*	Bridge length ≤ 200 ft	design lane widths + effective shoulder widths	design lane widths + effective shoulder widths	NA
	Bridge length > 200 ft	design lane widths + effective shoulder widths	design lane width + 4' right and left of the design lane widths	NA
Bridge width—existing*		design lane widths + no less than 2 ft left and right	design lane widths + 2 ft. offset left and right	NA
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)	Over primary	16.5	16	NA
	Over non-primary	16.5 at interchange locations, 15 at all other locations	14	NA
	Over railroad	23.3	23.3	NA
	Sign trusses and pedestrian bridges	17.5	17	NA
Structural Capacity		Contact Office of Bridges and Structures	Contact Office of Bridges and Structures	NA
Level of Service		B	B	B

*FHWA notification via email is required if acceptable critera is not met on the NHS system (No formal design exeption is required)

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Roadway Design Speed (mph) = 50

Design Manual Section 1C-1
last update: 12-08-16

Design Criteria for High Speed Roadways

Design Element			Preferred Criteria, Design Speed, mph						Acceptable Criteria, Design Speed, mph						Project Values
			50	55	60	65	70	75	50	55	60	65	70	75	
Stopping sight distance (ft) (Refer to Section 6D-1)			425	495	570	645	730	820	425	495	570	645	730	820	425
Minimum horizontal curve radius (ft) (Refer to Sections 2A-2 and 2A-3)	Method 5 superelevation and side friction distribution	e_{max} = 6%	833	1060	1330	1660	2040	2500	833	1060	1330	1660	2040	2500	475
		e_{max} = 8%	--	--	--	--	--	--	758	960	1200	1480	1810	2210	NA
Minimum vertical curve length (ft) (Refer to Section 2B-1)			150	165	180	195	210	225	150	165	180	195	210	225	200
Minimum rate of vertical curvature (K) (Refer to Section 2B-1)	crest vertical curves		84	114	151	193	247	312	84	114	151	193	247	312	85
	sag vertical curves	roadways without fixed-source lighting	96	115	136	157	181	206	96	115	136	157	181	206	96
		roadways with fixed-source lighting	96	115	136	157	181	206	54	66	78	91	106	121	NA
Minimum gradient (%)	(Refer to Section 2B-1)		0.5						0.3% with a curb, 0.0% without a curb						0.4
Maximum gradient (%)	(Refer to Section 2B-1)	Urban roadways	4		3				7	6	6	–	–	–	NA
		Rural roadways							5	5	4	4	4	4	5.13
		Interstates							5	5	4	4	4	4	NA
Clear zone			See "Preferred Clear Zone" table in Section 8A-2						See "Acceptable Clear Zone" table in Section 8A-2						20

Design year ADT = 2411

Design Manual Section 1C-1
last update: 12-08-16

Effective Shoulder Width and Type for Two-Lane Highways

Preferred (values shown in feet)		
	Rural Roadways	Urban Roadways
Turn lanes with shoulders	6	6
Turn lanes with curbs	6	See Section 3C-2
	Effective Shoulder Width	Paved Width
Climbing Lanes	6	4
Two-Lane Highways	Effective Shoulder Width	Paved Width
Routes where bicycles are to be accommodated	10	10
On roadways approaching urban areas (due to increased bike traffic)	10	10
On all curves with a superelevation rate of 7.0% or greater	10	10
On roadways with design year ADT > 5000	10	6
On all other NHS	10	4
On non-NHS routes with design year ADT > 3000	10	4
On non-NHS routes with design year ADT < 3000	8	2*

Acceptable (values shown in feet)			Project Values
	Rural Roadways	Urban Roadways	
Turn lanes with shoulders	6	0	NA
Turn lanes with curbs	6	0	NA
	Effective Shoulder Width	Paved Width	
Climbing Lanes	4	0	NA
Two-Lane Highways	Effective Shoulder Width	Paved Width	
Design year ADT > 2000 vpd	8	2*	6
Design year ADT between 400 - 2000 vpd	6	2*	
Design year ADT < 400 vpd	4	2*	

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

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

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

Notes:

(1) Clear Zone = 26' preferred, 20' acceptable

Roadway	US 52/IA 3 Section 2 - Sta. 509+00 - 601+50 (Rickardsville)		
PIN Number	10-31-052-020-02	**Submittal Date**	
Project Number	STP-052-2(119)--2C-31		**Approval Date**
District	District 6	**Assistant District Engineer**	
County	Dubuque (31)	**or**	
Route	US 52/IA 3	**Office Director**	
Location	From Approx. 0.7 Mile N. Of Boy Scout Rd. N. To E. Jct. Pfeiler Rd.		
Work Type	Unknown Pavement - Grade and Replace		
Segment Manager	Yan Jia		
Designer	Dustin Skogerboe		

Design Manual Section 1C-1
last update: 12-08-16

Rural Two-Lane Highways (Rural Arterials)

Design Element		Preferred	Acceptable	Project Values
Design speed (mph)		60	50	45
Maximum superelevation rate (Refer to Section 2A-2)		6%	8%	6%
Design lane width (ft)		12	12	12
Full depth paved width (ft)		14	12	12
Right turn lane (ft)		12	10	NA
Climbing Lane (ft)		12	12	NA
Left turn lane (ft)		12	10	NA
Pavement cross-slope (on tangent sections)	Through lanes	2%	1.5% minimum, 2% maximum	2%
	Auxiliary and turn lanes	3%	3% maximum	NA
	Crown break at centerline	4%	4% maximum	4%
Shoulder cross-slope (on tangent sections)		4%	Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders	4%
Curb type (Refer to Section 3C-2)	Design speed = 50 or 55 mph	6-inch sloped	6-inch standard	6-inch sloped
	Design speed ≥ 60 mph	4-inch sloped	6-inch sloped	NA
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance)	Adjacent to shoulder	10:1 for 4' then 6:1	3:1	4:1
	Beyond standard ditch depth and design clear zone	3.5:1	3:1	3:1
	Curbed roadways	2%	not steeper than 3:1	2%
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)		3:1	2.5:1	3:1
Transverse Slopes	w/ drainage structures	8:1	6:1	6:1
	w/o drainage structures	10:1	6:1	6:1
Ditches (Refer to Section 3G-1)	Outside ditch (depth x width) (ft)	5 x 10	--	NA
Bridge width—new*	Bridge length ≤ 200 ft	design lane widths + effective shoulder widths	design lane widths + effective shoulder widths	NA
	Bridge length > 200 ft	design lane widths + effective shoulder widths	design lane width + 4' right and left of the design lane widths	NA
Bridge width—existing*		design lane widths + no less than 2 ft left and right	design lane widths + 2 ft. offset left and right	NA
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)	Over primary	16.5	16	NA
	Over non-primary	16.5 at interchange locations, 15 at all other locations	14	NA
	Over railroad	23.3	23.3	NA
	Sign trusses and pedestrian bridges	17.5	17	NA
Structural Capacity		Contact Office of Bridges and Structures	Contact Office of Bridges and Structures	NA
Level of Service		B	B	B

*FHWA notification via email is required if acceptable critera is not met on the NHS system (No formal design exeption is required)

Roadway Design Speed (mph) = 45

Design Manual Section 1C-1
last update: 12-08-16

Design Criteria for High Speed Roadways

Design Element			Preferred Criteria, Design Speed, mph						Acceptable Criteria, Design Speed, mph						Project Values
			50	55	60	65	70	75	45	55	60	65	70	75	
Stopping sight distance (ft) (Refer to Section 6D-1)			425	495	570	645	730	820	360	495	570	645	730	820	- - -
Minimum horizontal curve radius (ft) (Refer to Sections 2A-2 and 2A-3)	Method 5 superelevation and side friction distribution	e_{max} = 6%	833	1060	1330	1660	2040	2500	643	1060	1330	1660	2040	2500	700
		e_{max} = 8%	--	--	--	--	--	--	—	960	1200	1480	1810	2210	NA
Minimum vertical curve length (ft) (Refer to Section 2B-1)			150	165	180	195	210	225	135	165	180	195	210	225	300
Minimum rate of vertical curvature (K) (Refer to Section 2B-1)	crest vertical curves		84	114	151	193	247	312	61	114	151	193	247	312	89
	sag vertical curves	roadways without fixed source lighting	96	115	136	157	181	206	79	115	136	157	181	206	104
		roadways with fixed-source lighting	96	115	136	157	181	206	—	66	78	91	106	121	NA
Minimum gradient (%)	(Refer to Section 2B-1)		0.5						0.3% with a curb, 0.0% without a curb						0.5
Maximum gradient (%) (Refer to Section 2B-1)		Urban roadways	4		3				7	6	6	—	—	—	NA
		Rural roadways							6 6	5	4	4	4	4	5.75
		Interstates							5	5	4	4	4	4	NA
Clear zone			See "Preferred Clear Zone" table in Section 8A-2						See "Acceptable Clear Zone" table in Section 8A-2						20

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER A.10

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Design year ADT = 2411

Design Manual Section 1C-1
last update: 12-08-16

Effective Shoulder Width and Type for Two-Lane Highways

Preferred (values shown in feet)	Rural Roadways	Urban Roadways
Turn lanes with shoulders	6	6
Turn lanes with curbs	6	See Section 3C-2
	Effective Shoulder Width	Paved Width
Climbing Lanes	6	4
Two-Lane Highways	Effective Shoulder Width	Paved Width
Routes where bicycles are to be accommodated	10	10
On roadways approaching urban areas (due to increased bike traffic)	10	10
On all curves with a superelevation rate of 7.0% or greater	10	10
On roadways with design year ADT > 5000	10	6
On all other NHS	10	4
On non-NHS routes with design year ADT > 3000	10	4
On non-NHS routes with design year ADT < 3000	8	2*

Acceptable (values shown in feet)	Rural Roadways	Urban Roadways	Project Values
Turn lanes with shoulders	6	0	NA
Turn lanes with curbs	6	0	NA
	Effective Shoulder Width	Paved Width	
Climbing Lanes	4	0	NA
Two-Lane Highways	Effective Shoulder Width	Paved Width	
Design year ADT > 2000 vpd	8	2*	6
Design year ADT between 400 - 2000 vpd	6	2*	
Design year ADT < 400 vpd	4	2*	

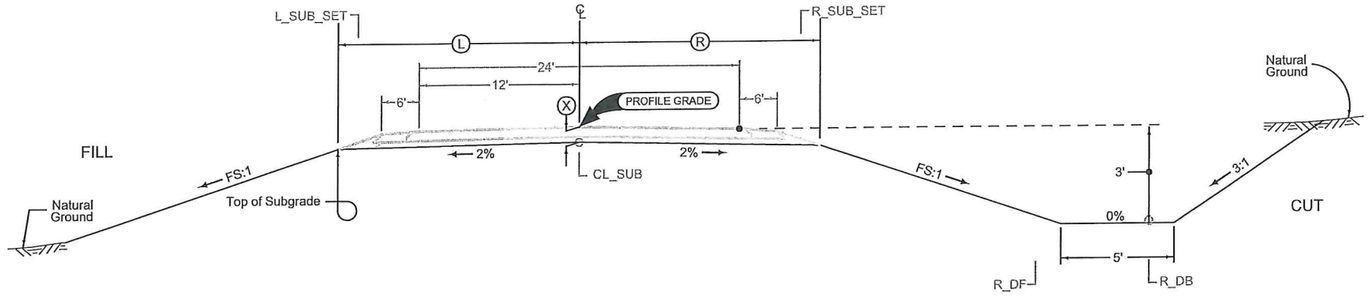
*Requires safety edge-Refer to Section 3C-6

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

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

Notes:

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	FS
US 52	352+25.00	601+50.0	25.5	25.5	21.5	4:1



G_2_Grade
MODIFIED

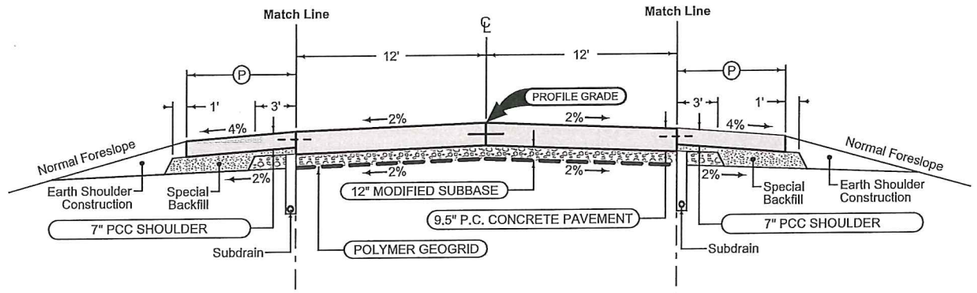
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

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

2 LANE GRADING

Paved Shoulder Alternates

		2_G_ Modified
STATION TO STATION		(P) Feet
357+00.0	580+09.3	6
591+00.0	601+50.0	6



Paved Shoulder Alternates

		2_G_ Modified
STATION TO STATION		(P) Feet
357+00.0	601+50.0	6

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

	2P_ MODIFIED
STATION TO STATION	
357+00.0	601+50.0

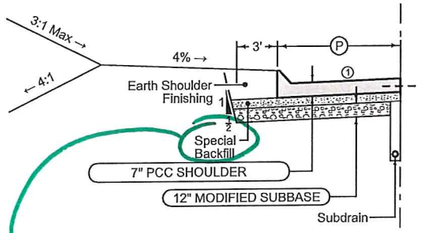
Curbed Shoulder

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

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

			2_Curb_ 04-19-11
STATION TO STATION		(P) Feet	Curb Type See PV-102
580+09.3	591+00.0	7	6" Sloped

(1) 4% Cross Slope



Review special backfill. Should modified be used instead?

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER B.1

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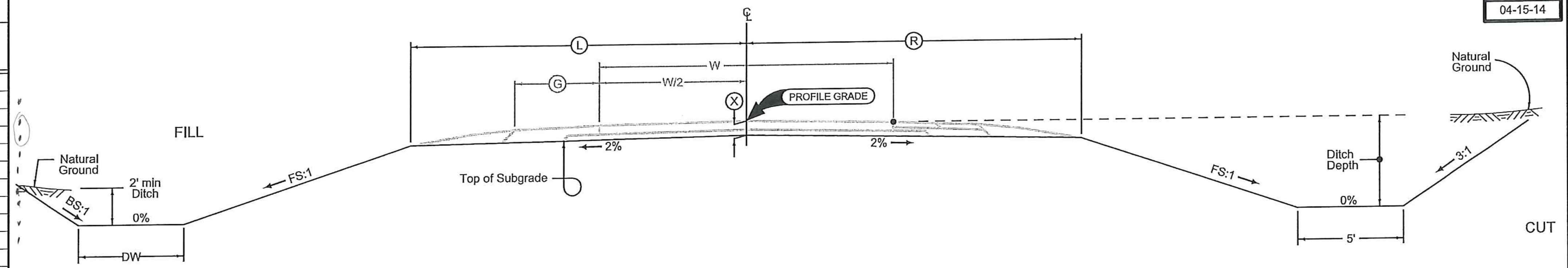
G_2_Grade
04-15-14

LOCATION			DIMENSIONS					
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	FS	BS	DW
Carmen Oaks Drive	22XX+XX.XX	22XX+XX.XX	–	–	21.5	X	3	X
Fetkether Lane	21XX+XX.XX	21XX+XX.XX	**	**	21.5	X	3	X
5 Points Road South	20XX+XX.XX	20XX+XX.XX	XX	XX	21.5	X	3	X
5 Points Road North	19XX+XX.XX	19XX+XX.XX	XX	XX	21.5	X	3	X
Klein Lane	18XX+XX.XX	18XX+XX.XX	–	–	21.5	X	3	X
St. Joseph's Drive	17XX+XX.XX	17XX+XX.XX	–	–	21.5	X	3	X
Wilgenbusch Drive	16XX+XX.XX	16XX+XX.XX	–	–	21.5	X	3	X
Park Hollow Road	15XX+XX.XX	15XX+XX.XX	–	–	21.5	X	3	
James Road	14XX+XX.XX	14XX+XX.XX	–	–	21.5	X	3	
Hilltop Court	13XX+XX.XX	13XX+XX.XX	–	–	21.5	X	3	
** See Cross Sections								



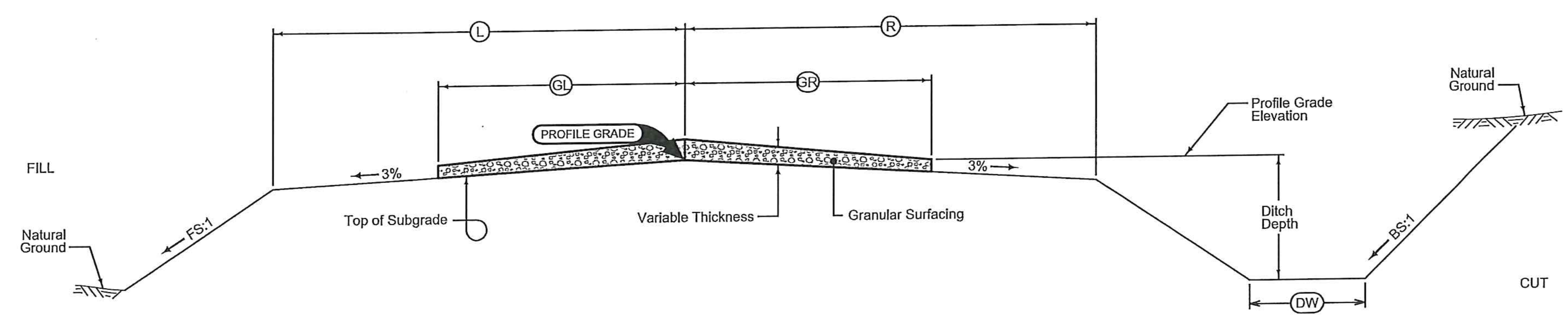
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

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

2 LANE GRADING

2_GradeGran
Modified

LOCATION			DIMENSIONS							Quantities	
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(GL) Feet	(GR) Feet	FS	BS	(DW) Feet	Length Mile	Granular Surfacing Tons
XXX	XXXX+XX.XX	XXXX+XX.XX	XX	XX	XX	XX	**	**	X **	–	–
** See Cross Sections											



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

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

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

GRADING AND GRANULAR SURFACING

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

See Tab 112-9 for shoulder quantities.

PAVED COUNTY ROADS

Granular Shoulder

			2_G_SR_ 10-19-10
STATION TO STATION			(G) Feet
Carmen Oaks Drive	22XX+XX.XX	22XX+XX.XX	X
Fetkether Lane	21XX+XX.XX	21XX+XX.XX	X
5 Points Road South	20XX+XX.XX	20XX+XX.XX	X
5 Points Road North	19XX+XX.XX	19XX+XX.XX	X
Klein Lane	18XX+XX.XX	18XX+XX.XX	X
St. Joseph's Drive	17XX+XX.XX	17XX+XX.XX	X
Wilgenbusch Drive	16XX+XX.XX	16XX+XX.XX	X
Park Hollow Road	15XX+XX.XX	15XX+XX.XX	X
James Road	14XX+XX.XX	14XX+XX.XX	X
Hilltop Court	13XX+XX.XX	13XX+XX.XX	X

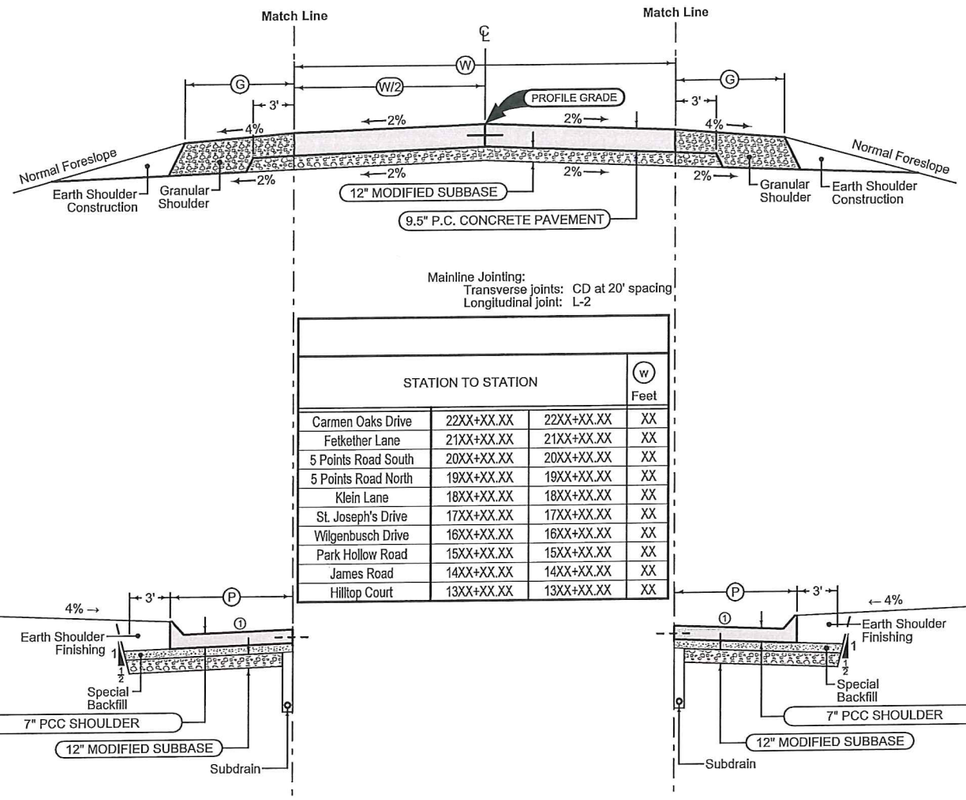
Curbed Shoulder

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

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

			2_Curb_ MODIFIED	
STATION TO STATION			(P) Feet	Curb Type See PV-102
Park Hollow Road	16XX+XX.XX	16XX+XX.XX	X	6" Sloped

(1) 4% Cross Slope



STATION TO STATION			(W) Feet
Carmen Oaks Drive	22XX+XX.XX	22XX+XX.XX	XX
Fetkether Lane	21XX+XX.XX	21XX+XX.XX	XX
5 Points Road South	20XX+XX.XX	20XX+XX.XX	XX
5 Points Road North	19XX+XX.XX	19XX+XX.XX	XX
Klein Lane	18XX+XX.XX	18XX+XX.XX	XX
St. Joseph's Drive	17XX+XX.XX	17XX+XX.XX	XX
Wilgenbusch Drive	16XX+XX.XX	16XX+XX.XX	XX
Park Hollow Road	15XX+XX.XX	15XX+XX.XX	XX
James Road	14XX+XX.XX	14XX+XX.XX	XX
Hilltop Court	13XX+XX.XX	13XX+XX.XX	XX

Granular Shoulder

			2_G_SR_ 10-19-10
STATION TO STATION			(G) Feet
Carmen Oaks Drive	22XX+XX.XX	22XX+XX.XX	X
Fetkether Lane	21XX+XX.XX	21XX+XX.XX	X
5 Points Road South	20XX+XX.XX	20XX+XX.XX	X
5 Points Road North	19XX+XX.XX	19XX+XX.XX	X
Klein Lane	18XX+XX.XX	18XX+XX.XX	X
St. Joseph's Drive	17XX+XX.XX	17XX+XX.XX	X
Wilgenbusch Drive	16XX+XX.XX	16XX+XX.XX	X
Park Hollow Road	15XX+XX.XX	15XX+XX.XX	X
James Road	14XX+XX.XX	14XX+XX.XX	X
Hilltop Court	13XX+XX.XX	13XX+XX.XX	X

Curbed Shoulder

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

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

			2_Curb_ MODIFIED	
STATION TO STATION			(P) Feet	Curb Type See PV-102
XXX	XXXX+XX.XX	XXXX+XX.XX	X	6" Sloped

(1) 4% Cross Slope

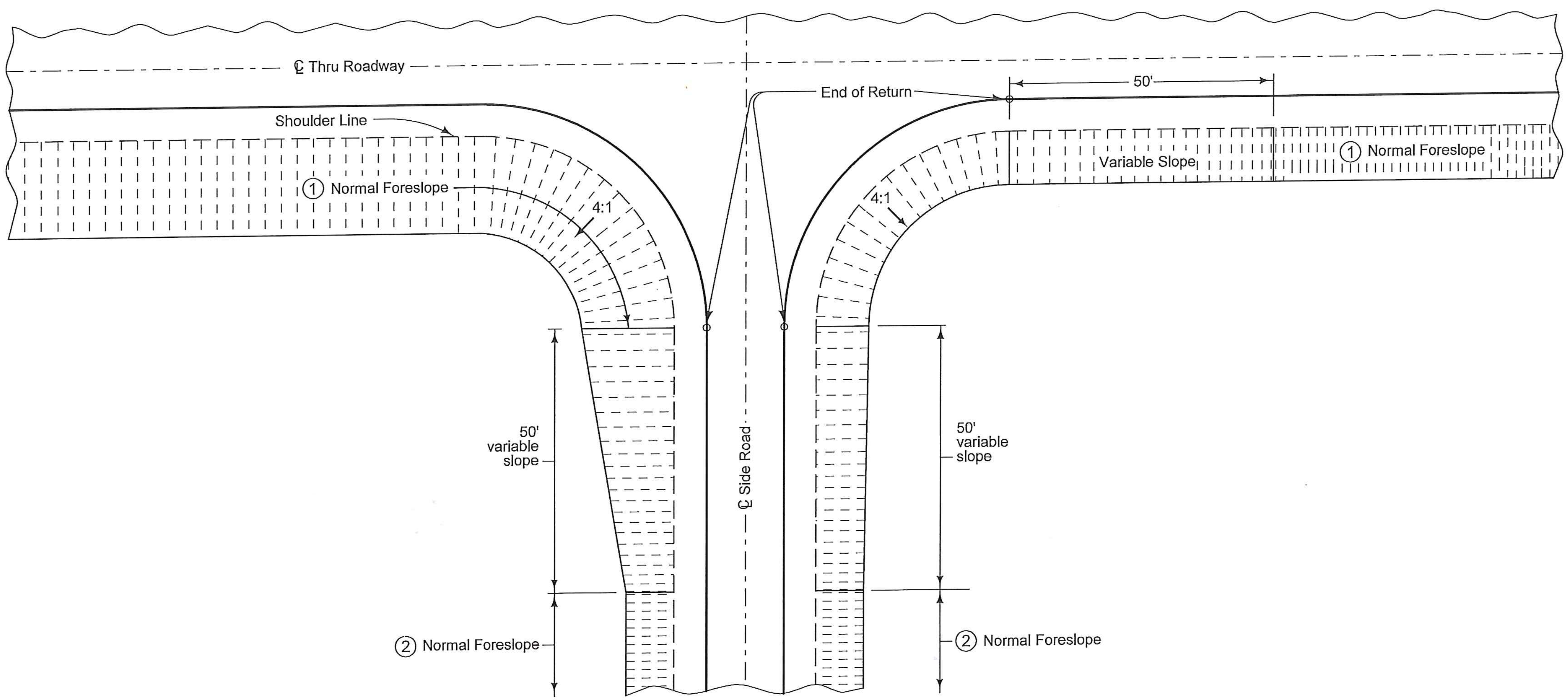
Review with Dubuque Co. Engineer

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

PAVED COUNTY ROADS

① 4:1 foreslope.

② Refer to X sheets for foreslopes at each side road.



NORMAL FORESLOPES

SIDE ROAD GRADING

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER B.4

ACCESS POINTS AND SAFETY RAMPS

Refer to Cross-Sections

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

Location		Type	Length of Opening (1)			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	
358+81.00	Lt	C				24.0	15.0											
365+55.00	Rt	C				24.0		15.0										
373+79.00	Lt	C				30.0		15.0										
379+25.00	Rt	C				30.0		15.0										
382+31.00	Lt	C				24.0		15.0										
383+07.00	Rt	C				24.0	10.0											
383+23.00	Lt	C				30.0		15.0										
385+99.00	Rt	B				24.0		10.0										
390+88.00	Lt	C				30.0		15.0										
390+88.00	Rt	B				30.0		25.0										
393+86.55	Rt	B				34.0	25.0											
398+90.00	Lt	C				30.0		15.0										
404+82.00	Lt	B				24.0	15.0											
404+97.00	Rt	B				30.0		15.0										
406+14.00	Lt	B				24.0	15.0											
409+61.00	Rt	C				30.0	15.0											
412+16.00	Lt	C				24.0		15.0										
413+72.00	Rt	C				42.0		15.0										
416+49.00	Lt	C				30.0		15.0										
419+24.00	Rt	C				30.0		15.0										
422+12.00	Lt	C				24.0		15.0										
423+17.00	Lt	C				30.0												
423+79.00	Lt	C				30.0												
423+79.00	Rt	C				24.0		15.0										
425+33.00	Lt	C				30.0		15.0										
426+48.00	Rt	C				30.0		15.0										
427+28.00	Lt	C				30.0		15.0										
436+30.00	Rt	C				24.0		15.0										
446+57.00	Lt	C				30.0		15.0										
446+57.00	Rt	C				30.0		15.0										
453+57.00	Rt	C				24.0	15.0											
459+23.00	Lt	C				24.0		15.0										
469+01.00	Lt	C				24.0		15.0										
469+01.00	Rt	C				30.0		15.0										
470+54.00	Lt	C				24.0		10.0										
472+99.00	Rt	C				24.0		10.0										
474+15.00	Lt	C				30.0		15.0										
474+55.00	Rt	C				24.0		10.0										
476+38.00	Rt	C				30.0		10.0										
19481+49.00	Lt	C				24.0		10.0										
481+77.00	Lt	B				45.0												
482+04.00	Rt	C				28.0	10.0											
488+01.00	Lt	C				40.0		15.0										
488+01.00	Rt	C				30.0		15.0										
488+72.00	Rt	C				24.0		15.0										
491+90.00	Lt	C			15'	24.0		15.0										
492+76.00	Lt	C				14.0		15.0										
493+82.00	Lt	C				24.0		15.0										
502+37.00	Lt	C				24.0		15.0										
502+37.00	Rt	C				30.0		15.0										
509+18.00	Lt	C				24.0	10.0											
510+23.00	Lt	C				24.0	10.0											
511+20.00	Lt	C				24.0	10.0											
512+41.00	Lt	C				24.0		15.0										
514+06.00	Lt	B				34.0		15.0										
517+70.00	Lt	B				18.0	10.0											
518+29.00	Rt	C				24.0		15.0										
523+50.00	Rt	C				45.0		15.0										
525+97.00	Rt	C				24.0		15.0										
528+54.00	Lt	C				26.0	15.0											
529+76.00	Lt	C				30.0		15.0										
534+91.00	Rt	C				30.0		15.0										
535+56.00	Rt	C				24.0	10.0											
537+20.00	Rt	C				24.0	10.0											
538+11.00	Rt	C				24.0	10.0											
539+14.00	Rt	C				24.0	10.0											
539+80.00	Rt	C				24.0	10.0											
541+25.00	Rt	C				24.0	10.0											
541+49.00	Lt	C				30.0		15.0										
541+76.00	Rt	C				24.0	10.0											
542+58.00	Rt	C				24.0	10.0											
544+58.00	Lt	C				30.0		15.0										

ACCESS POINTS AND SAFETY RAMPS

Refer to Cross-Sections

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

Location		Type	Length of Opening (1)			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	
17548+47.67	Lt	C				24.0		25.0										Hammerhead Turnaround
558+16.00	Lt	C				24.0		15.0										
565+06.00	Rt	C				24.0		15.0										
15578+89.84	Lt	C				24.0	10.0											
581+43.00	Lt	C				24.0	10.0											
584+96.00	Rt	B				45.0		15.0										
586+98.00	Lt	B				30.0	10.0											
587+58.00	Rt	C				24.0		15.0										
587+72.00	Lt	B				24.0	10.0											
588+31.00	Lt	B				24.0	10.0											
589+11.00	Lt	B				24.0	10.0											
589+53.00	Rt	C				24.0		15.0										
590+26.00	Lt	C				16.0	10.0											
590+55.00	Lt	B				24.0	25.0											
591+02.50	Rt	C				24.0	10.0											
592+18.00	Lt	C				24.0	10.0											
593+33.00	Lt	C				24.0	10.0											
594+39.00	Lt	C				24.0	10.0											
595+39.00	Lt	C				24.0	10.0											
597+39.00	Lt	C				24.0	10.0											
598+97.00	Lt	C				28.0		15.0										
600+52.00	Lt	C				24.0		15.0										
601+16.00	Rt	C				24.0		15.0										

SURVEY SYMBOLS

- LP L.P. Tank
- TDC Tree Deciduous
- TEV Evergeen Tree
- Flg FLG Flag Poles
- SHR Shrub
- IN Storm Sewer Intake
- LUM Luminaire
- DIK Centerline of Dike or Dam
- EG Edge of Gravel Road
- BIN Grain Bin
- TER Terrace
- TV Satelite TV Dish
- WM Wind Mill
- HDG Hedge Row
- TP TPD Telephone Pedestal
- PPA Power Pole Co. 1
- PR Electic Riser Pole
- Tile TIL Tile Line
- OUT Tile Outlet
- EB EB Electrical Box
- MM MM Mile Marker Post
- BB BB Billboard
- FHD Fire Hydrants
- WV WV Water Valve
- GDL Guard Rail Steel
- MH Utility Access (Manhole)
- RET Retaining Walls
- INB Storm Sewer Beehive Intake
- SIGN SI Sign
- FWD Wood Fence
- FW Wire Fence
- FCL Chain Link and Security Fence
- ENT Centerline BL of Entrance
- D Centerline Draw or Stream (Down)
- DU Centerline Draw or Stream (Up)
- BNK Stream Bank
- EW Edge of Water
- RIP Rip-Rap

Steve Flockhart
to review
utility listing

UTILITY LEGEND

Alliant Energy
Electric Distribution
Mark Wills
Real Estate and Right of Way Representative II
200 1st St. SE
Cedar Rapids, Ia 52401
319-786-8196
markwills@alliantenergy.com

Century Link (formerly Qwest)
Local Fiber Optic
Steve Parker
Manager of Engineering & Construction
2103 E. University Ave
1st Floor
Des Moines, IA 50317
515-265-0968
Steven.Parker4@CenturyLink.com

City of Rickardsville
None
Vicky Cleary
20494 St. Joseph's Drive
Rickardville, IA 52039
563-552-1302
vickycleary@aol.com

Maquoketa Valley Electric Cooperative
Electric
Jeremy Richert
Distribution Engineer
109 N Huber Street
Box 370
Anamosa, IA 52205-0370
319-462-3541
jlauzon@mvec.com

Maquoketa Valley Electric Cooperative
Electric
Jeremy Richert
Distribution Engineer
109 N Huber Street
Anamosa, IA 52205-0370
319-462-3541
jrichert@mvec.com

Mediacom
Cable TV
Bob Fraser
Regional Construction Manager
207 West Pearl Street
Decorah, IA 52101
563-387-6119
bfrazer@mediacomcc.com

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)

JEFFERSON TWP.
T-90N R-1E
Sec. 26

JEFFERSON TWP.
T-90N R-1E
Sec. 27

APPROX. SEC. LINE

Curve Data
Δ = 18° 24' 00.00" (LT)
T = 185.61
L = 368.03
R = 1,146.00
E = 14.93

Curve Data
Δ = 18° 24' 00.00" (LT)
T = 186.26
L = 369.31
R = 1,150.00
E = 14.99

Carmen Oaks Drive

POT Sta 350+33.63

18" X 36' CMP

18" X 30' CMP

+81 Prop. "C" Ent. Type W = 24'

35 M.P.H.

PC Sta 363+33.83

PT Sta 367+03.15

+79 Prop. "C" Ent. Type W = 30'

52 3

Curve Data
Δ = 32° 49' 45.83" (RT)
T = 140.65
L = 273.57
R = 477.45
E = 20.29

SPEED LIMIT 50

18" X 36' CMP

Sta. 357+00.00
Begin Project

PI Sta 365+20.09

+55 Prop. "C" Ent. Type W = 24'

Sta. 51+99.73
2' X 2' X 34.8' RCB
W/ 30" X 6.6' RCP Inlet

0 100 FEET

355 360 365 370

35 MPH
Advisory Controls

50 MPH
Regulatory Controls

Sta. 357+00.00
Begin Project

870.44

VPI +47.236
Elv 875.65
Len 600.00 ft
K = 545

+1.500%

+0.400%

+0.400%

+3.200%

VPI +50.000
Elv 878.06
Len 550.00 ft
K = 196

VPI +50.000
Elv 900.46
Len 700.00 ft
K = 87

+3.200%

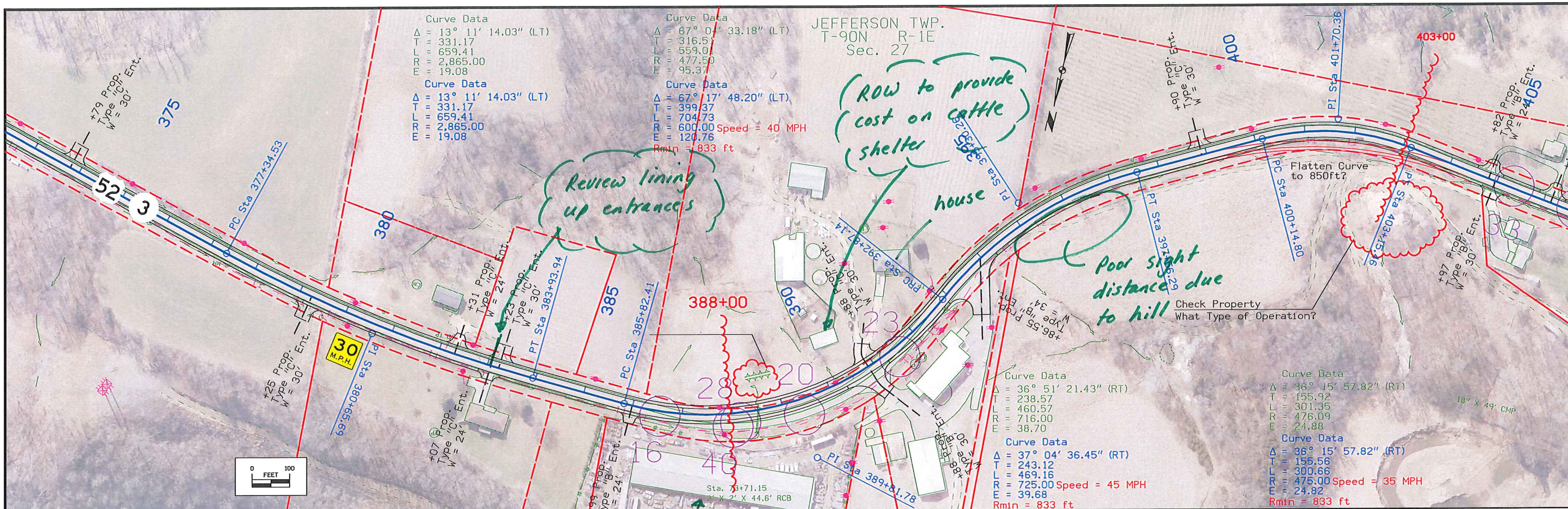
910 900 890 880 870 860 850 840

870.44 870.82 871.19 871.56 871.92 872.26 872.60 872.92 873.23 873.53 873.82 874.09 874.36 874.61 874.85 875.08 875.30 875.51 875.70 875.89 876.06 876.22 876.37 876.51 876.64 876.76 876.86 876.96 877.08 877.23 877.40 877.62 877.86 878.13 878.44 878.78 879.15 879.55 879.99 880.45 880.95 881.48 882.04 882.63 883.26 883.92 884.60 885.33 886.08 886.86 887.66 888.46 889.26 890.03 890.72 891.34 891.89 892.36 892.77 893.10 893.36 893.55 893.67 893.71 893.69

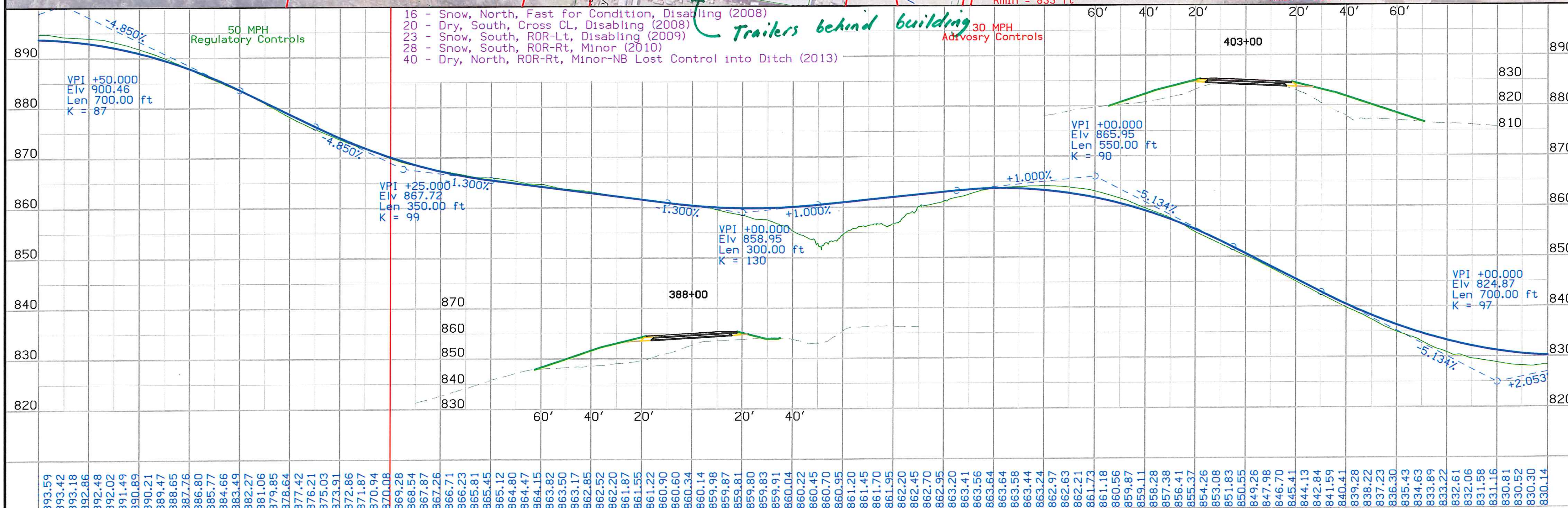
355 360 365 370

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER D.2

8:27:13 AM 3/30/2017 mthiel2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_D02.dgn



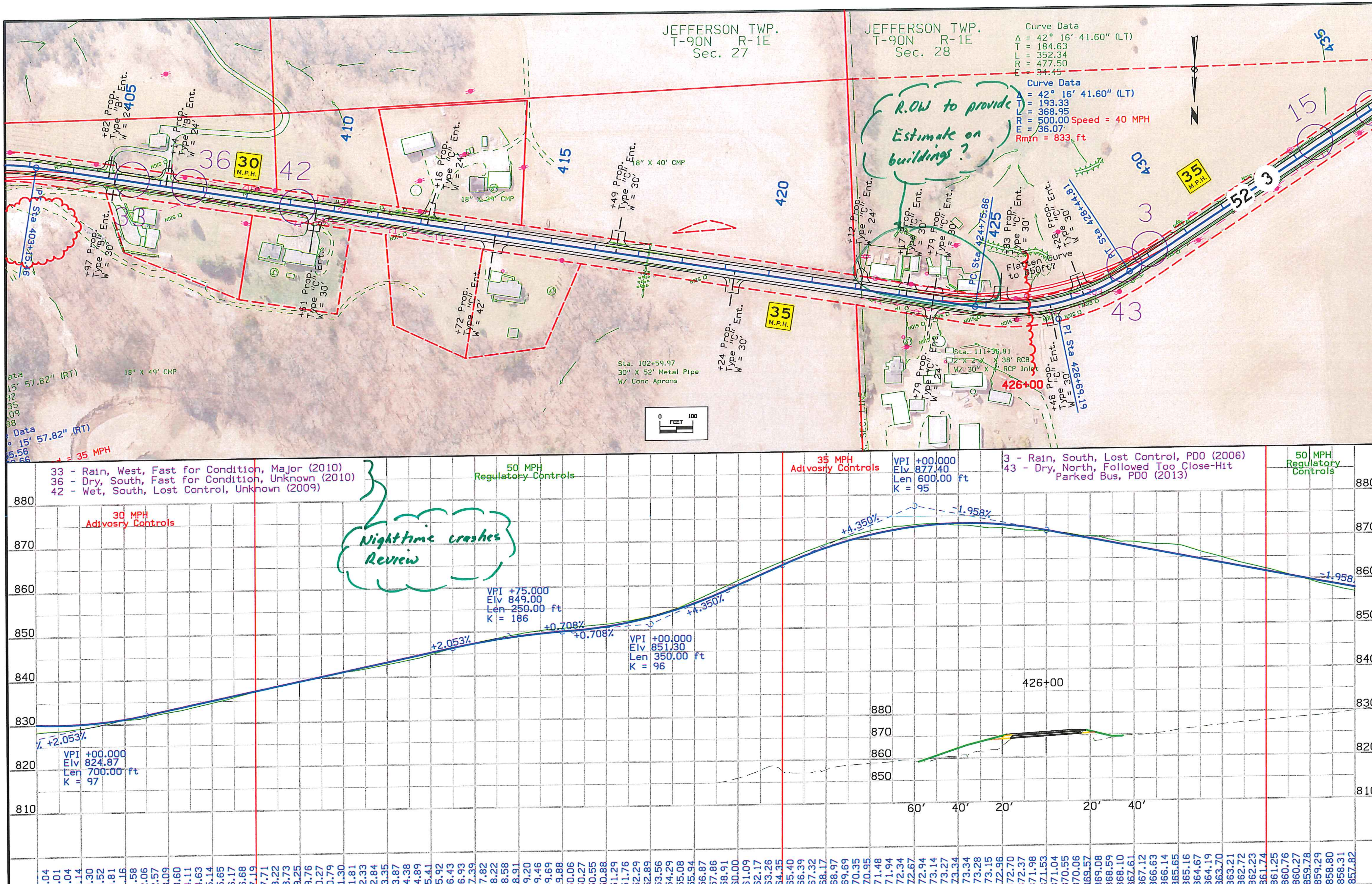
Curve Data
Δ = 13° 11' 14.03" (LT)
T = 331.17
L = 659.41
R = 2,865.00
E = 19.08
Curve Data
Δ = 13° 11' 14.03" (LT)
T = 331.17
L = 659.41
R = 2,865.00
E = 19.08
Curve Data
Δ = 67° 04' 33.18" (LT)
T = 316.51
L = 559.01
R = 477.50
E = 95.37
Curve Data
Δ = 67° 17' 48.20" (LT)
T = 399.37
L = 704.73
R = 600.00 Speed = 40 MPH
E = 120.76
Rmin = 833 ft
JEFFERSON TWP.
T-90N R-1E
Sec. 27
ROW to provide cost on cattle shelter
Review lining up entrances
house
Poor sight distance due to hill
Check Property
What Type of Operation?
Flatten Curve to 850ft?
388+00
403+00
PC Sta 377+34.53
PT Sta 383+93.94
PC Sta 385+82.41
PT Sta 397+36.29
PC Sta 400+14.80
PI Sta 401+70.36
PI Sta 389+81.78
PI Sta 380+59.69
Curve Data
Δ = 36° 51' 21.43" (RT)
T = 238.57
L = 460.57
R = 716.00
E = 38.70
Curve Data
Δ = 37° 04' 36.45" (RT)
T = 243.12
L = 469.16
R = 725.00 Speed = 45 MPH
E = 39.68
Rmin = 833 ft
Curve Data
Δ = 36° 15' 57.82" (RT)
T = 155.92
L = 301.35
R = 476.09
E = 24.88
Curve Data
Δ = 36° 15' 57.82" (RT)
T = 155.56
L = 300.66
R = 475.00 Speed = 35 MPH
E = 24.82
Rmin = 833 ft
30 M.P.H.
Trailers behind building



16 - Snow, North, Fast for Condition, Disabling (2008)
20 - Dry, South, Cross CL, Disabling (2008)
23 - Snow, South, ROR-Lt, Disabling (2009)
28 - Snow, South, ROR-Rt, Minor (2010)
40 - Dry, North, ROR-Rt, Minor-NB Lost Control into Ditch (2013)
50 MPH
Regulatory Controls
30 MPH
Advisory Controls
VPI +50.000
Elv 900.46
Len 700.00 ft
K = 87
VPI +25.000
Elv 867.72
Len 350.00 ft
K = 99
VPI +00.000
Elv 858.95
Len 300.00 ft
K = 130
VPI +00.000
Elv 865.95
Len 550.00 ft
K = 90
VPI +00.000
Elv 824.87
Len 700.00 ft
K = 97
-4.850%
-1.300%
+1.000%
-5.134%
+2.053
388+00
403+00

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER D.3

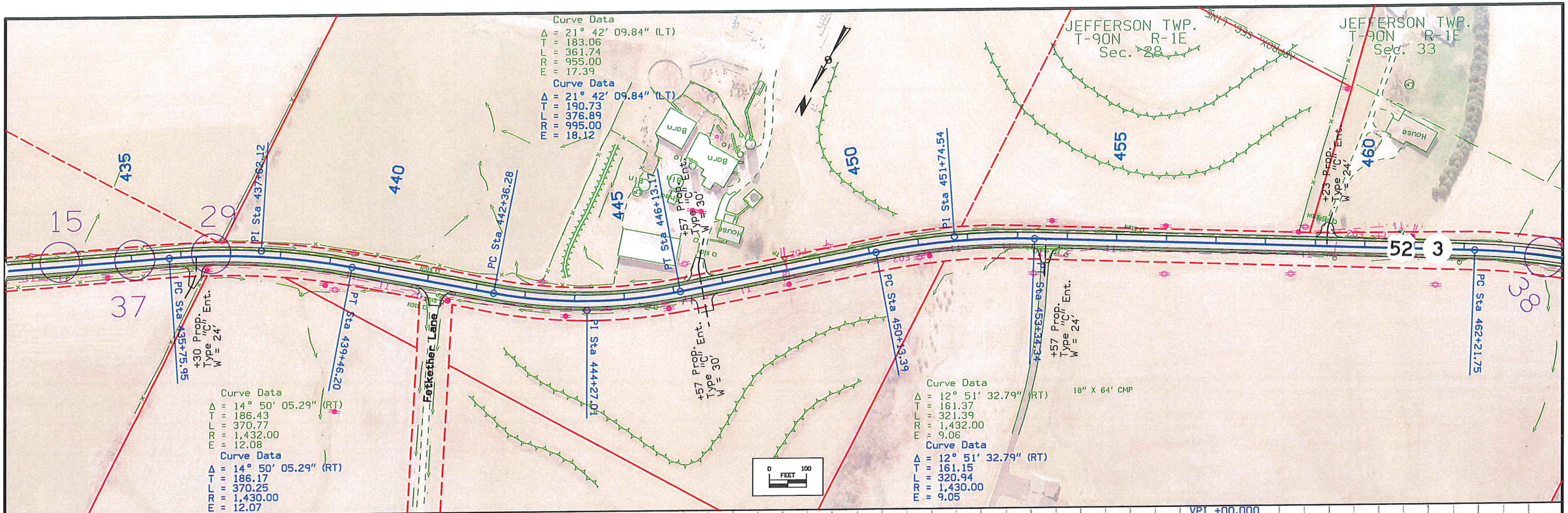
8:27:24 AM 3/30/2017 mthiel2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_D02.dgn



JEFFERSON TWP.
T-90N R-1E
Sec. 27
JEFFERSON TWP.
T-90N R-1E
Sec. 28
Curve Data
Δ = 42° 16' 41.60" (LT)
T = 184.63
L = 352.34
R = 477.50
E = 34.45
Curve Data
Δ = 42° 16' 41.60" (LT)
T = 193.33
L = 368.95
R = 500.00
E = 36.07
Speed = 40 MPH
Rmin = 833 ft
R.O.W to provide
Estimate on buildings ?
Flatten Curve to 350ft?
+82 Prop. Type "B" Ent. W = 24'
+14 Prop. Type "B" Ent. W = 24'
+16 Prop. Type "C" Ent. W = 24'
+49 Prop. Type "C" Ent. W = 30'
+97 Prop. Type "B" Ent. W = 30'
+61 Prop. Type "C" Ent. W = 30'
+72 Prop. Type "C" Ent. W = 42'
+24 Prop. Type "C" Ent. W = 30'
+12 Prop. Type "C" Ent. W = 24'
+17 Prop. Type "C" Ent. W = 30'
+79 Prop. Type "C" Ent. W = 30'
+33 Prop. Type "C" Ent. W = 30'
+28 Prop. Type "C" Ent. W = 30'
+79 Prop. Type "C" Ent. W = 24'
+48 Prop. Type "C" Ent. W = 30'
18" X 40' CMP
18" X 24' CMP
18" X 49' CMP
Sta. 102+59.97
30" X 52' Metal Pipe
W/ Conc Aprons
Sta. 111+36.81
2 X 2 X 38' RCB
W/ 30" X RCP Inlet
PC Sta 424+75.86
PT Sta 428+44.81
PI Sta 426+69.19
PT Sta 409+15.96
426+00
30 M.P.H.
35 M.P.H.
35 M.P.H.
52 3
405
410
415
420
425
430
435
FEET 0 100
33 - Rain, West, Fast for Condition, Major (2010)
36 - Dry, South, Fast for Condition, Unknown (2010)
42 - Wet, South, Lost Control, Unknown (2009)
3 - Rain, South, Lost Control, PDO (2006)
43 - Dry, North, Followed Too Close-Hit Parked Bus, PDO (2013)
30 MPH Advisory Controls
50 MPH Regulatory Controls
35 MPH Advisory Controls
50 MPH Regulatory Controls
Nighttime crashes Review
VPI +00.000
Elv 824.87
Len 700.00 ft
K = 97
VPI +75.000
Elv 849.00
Len 250.00 ft
K = 186
VPI +00.000
Elv 851.30
Len 350.00 ft
K = 96
VPI +00.000
Elv 877.40
Len 600.00 ft
K = 95
+2.053%
+0.708%
+4.350%
-1.958%
880
870
860
850
840
830
820
810
60' 40' 20' 20' 40'

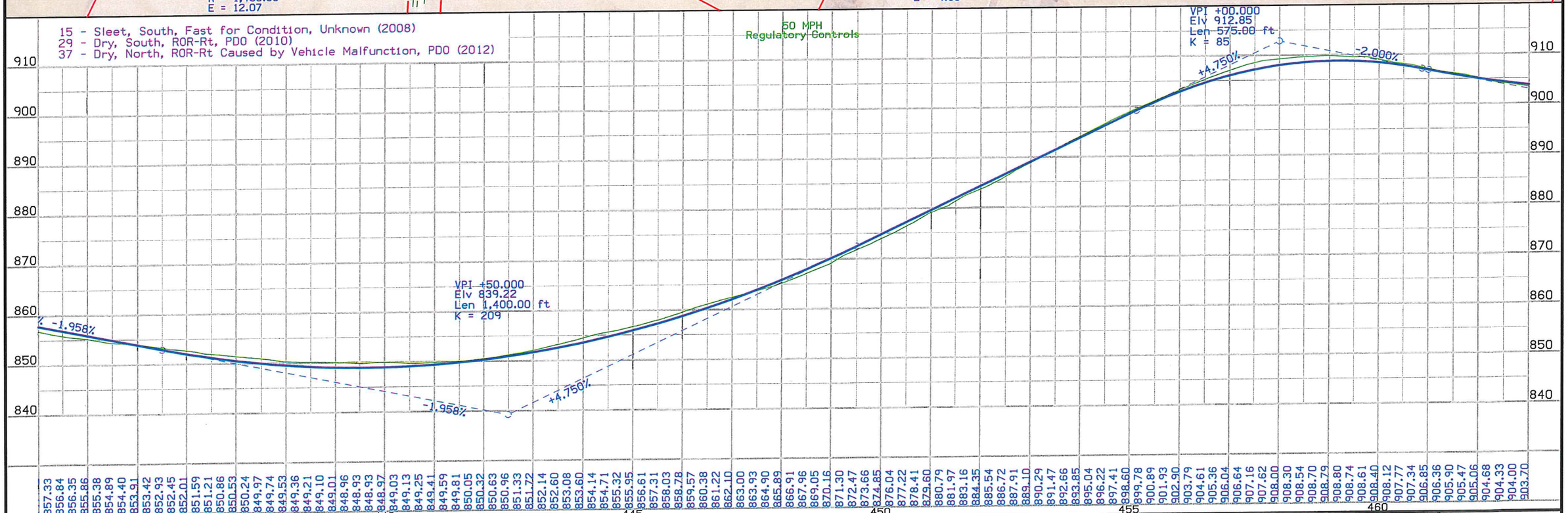
FILE NO.	ENGLISH	DESIGN TEAM Jia \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER D.4

8:27:42 AM 3/30/2017 mthiel2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_D02.dgn



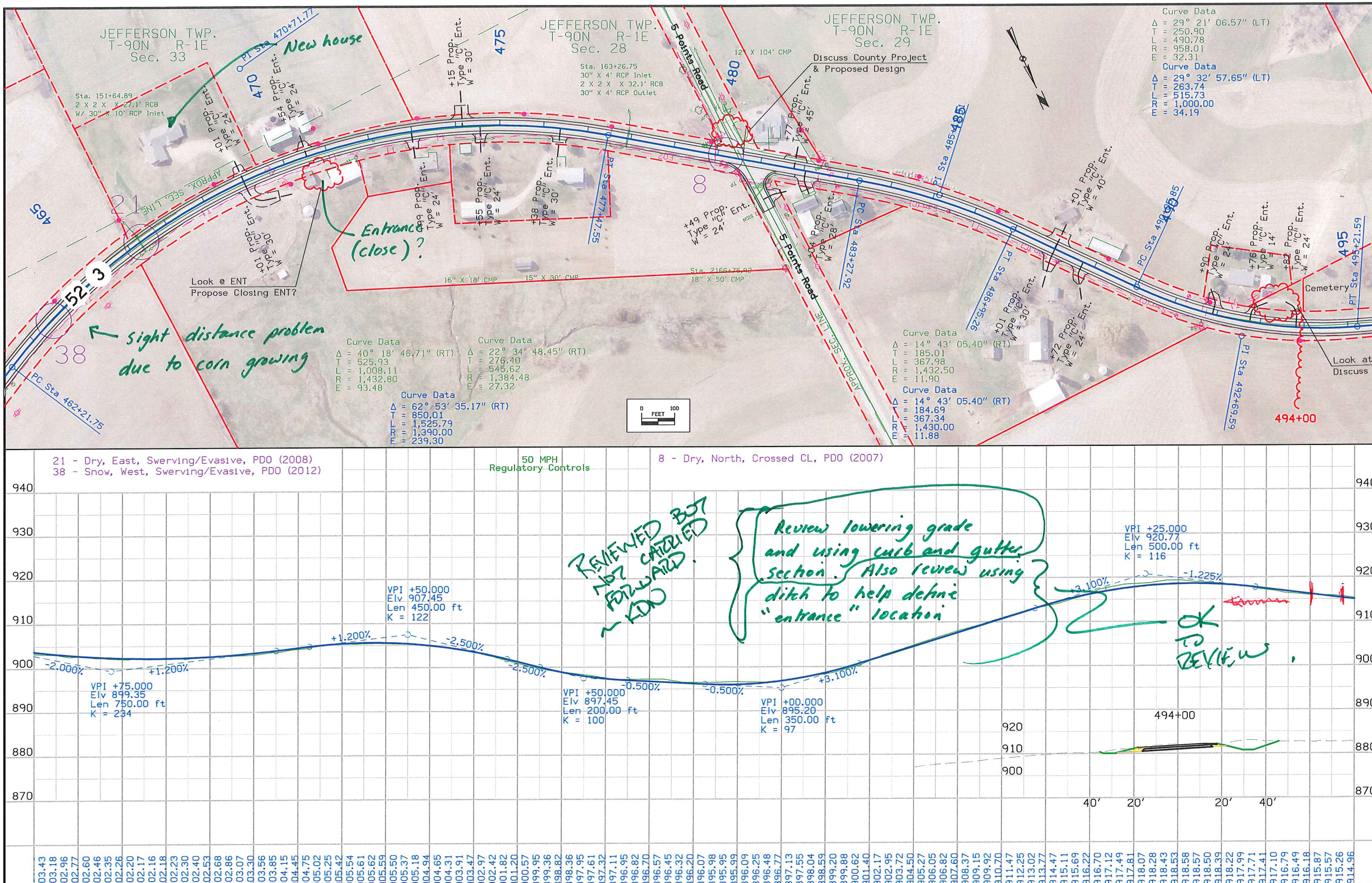
15 - Sleet, South, Fast for Condition, Unknown (2008)
29 - Dry, South, ROR-Rt, PDO (2010)
37 - Dry, North, ROR-Rt Caused by Vehicle Malfunction, PDO (2012)

50 MPH
Regulatory Controls



FILE NO.	ENGLISH	DESIGN TEAM	J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER	STP-052-2(119)--2C-31	SHEET NUMBER	D.5

8:27:53 AM 3/30/2017 mthiel2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_D02.dgn



JEFFERSON TWP.
T-90N R-1E
Sec. 33
JEFFERSON TWP.
T-90N R-1E
Sec. 28
JEFFERSON TWP.
T-90N R-1E
Sec. 29
New house
PI Sta 470+71.77
Sta. 151+64.89
2 X 2 X 27.1' RCB
W/ 30" X 10' RCP Inlet
Sta. 163+26.75
30" X 4' RCP Inlet
2 X 2 X 32.1' RCB
30" X 4' RCP Outlet
12" X 104' CMP
Discuss County Project
& Proposed Design
5 Points Road
Entrance (close)?
Look @ ENT
Propose Closing ENT?
15" X 18' CMP
15" X 30' CMP
Sta. 2166+75.92
18" X 50' CMP
sight distance problem due to corn growing
PC Sta 462+21.75
PI Sta 477+47.55
PI Sta 483+27.92
PT Sta 485+51
PI Sta 486+95.26
PC Sta 490+09.85
PI Sta 492+69.59
PT Sta 495+21.59
Cemetery
Look at E
Discuss De
494+00
Curve Data
Δ = 40° 18' 46.71" (RT)
T = 525.93
L = 1,008.11
R = 1,432.80
E = 93.48
Curve Data
Δ = 22° 34' 48.45" (RT)
T = 276.40
L = 545.62
R = 1,384.48
E = 27.32
Curve Data
Δ = 62° 53' 35.17" (RT)
T = 850.01
L = 1,525.79
R = 1,390.00
E = 239.30
Curve Data
Δ = 14° 43' 05.40" (RT)
T = 185.01
L = 367.98
R = 1,432.50
E = 11.90
Curve Data
Δ = 14° 43' 05.40" (RT)
T = 184.69
L = 367.34
R = 1,430.00
E = 11.88
Curve Data
Δ = 29° 21' 06.57" (LT)
T = 250.90
L = 490.78
R = 958.01
E = 32.31
Curve Data
Δ = 29° 32' 57.65" (LT)
T = 263.74
L = 515.73
R = 1,000.00
E = 34.19
21 - Dry, East, Swerving/Evasive, PDO (2008)
38 - Snow, West, Swerving/Evasive, PDO (2012)
50 MPH
Regulatory Controls
8 - Dry, North, Crossed CL, PDO (2007)
REVIEWED BUT NOT CARRIED FORWARD. ~KDN
Review lowering grade and using curb and gutter section. Also review using ditch to help define "entrance" location
OK to REVIEW.
VPI +75.000
Elv 899.35
Len 750.00 ft
K = 234
VPI +50.000
Elv 907.45
Len 450.00 ft
K = 122
VPI +50.000
Elv 897.45
Len 200.00 ft
K = 100
VPI +00.000
Elv 895.20
Len 350.00 ft
K = 97
VPI +25.000
Elv 920.77
Len 500.00 ft
K = 116
-2.000%
+1.200%
-2.500%
-0.500%
+3.100%
-1.225%
494+00
465
470
475
480
485
490
495

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER D.6

8:28:06 AM 3/30/2017 mthiel2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_D02.dgn

JEFFERSON TWP.
T-90N R-1E
Sec. 29

Sta. 199+78.74
24 ft X 2 ft X 29 ft RCB
w/ 24 in x 5 ft extension
D.A. = ?? Ac - R

Sta 204+97.91
24ft X 2 ft X 33 ft RCB
w/ 25 in x 5 ft extension
D.A. = ?? Ac - R

Curve Data
Δ = 25° 01' 04.95" (LT)
T = 211.88
L = 417.00
R = 955.00
E = 23.22

Curve Data
Δ = 25° 01' 04.95" (LT)
T = 220.75
L = 434.46
R = 995.00
E = 24.19

+78 Prop. "C" Ent. W = 14'
+82 Prop. "C" Ent. W = 24'
495
PT Sta 495+21.59
Cemetery
500
+37 Prop. "C" Ent. W = 24'
505
15 in x 87 ft C.M.P.
SPEED LIMIT 50
+37 Prop. "C" Ent. W = 30'
Sta. 192+55.85
30" X 6' RCP Inlet
2 X 2 X X 33' RCB
30" X 6' RCP Outlet
SPEED LIMIT 45
510
+10 Prop. "C" Ent. W = 24'
+28 Prop. "C" Ent. W = 24'
+20 Prop. "C" Ent. W = 24'
+41 Prop. "C" Ent. W = 24'
18 in x 20 ft C.M.P.
+06 Prop. "B" Ent. W = 24'
515
15 in x 87 ft C.M.P.
24 in x 41 ft PLASTIC PIPE
Klein Lane
PC Sta 515+69.17
PT Sta 517+17.52
+30 Prop. "C" Ent. W = 18'
+29 Prop. "C" Ent. W = 24'
PT Sta 518+63.71
PC Sta 519+54.75
520
PT Sta 521+75.50
PT Sta 523+89.22
+50 Prop. "C" Ent. W = 45'

Look at ENTs
Discuss Design 35
possible
Review ✓ closure
of entrance

Curve Data
Δ = 16° 45' 47.35" (RT)
T = 140.71
L = 279.41
R = 955.00
E = 10.31

Curve Data
Δ = 16° 57' 38.44" (RT)
T = 148.35
L = 294.54
R = 995.00
E = 11.00

0 100 FEET

35 - Dry, North, FTY, PDO (2010)

50 MPH
Regulatory Controls

45 MPH
Regulatory Controls

950
940
930
920
910
900
890
880

VPI +00.000
Elv 917.71
Len 375.00 ft
K = 171

-1.225%
+1.797%
+1.797%
-0.400%
-0.400%
+0.748%
+0.748%

VPI +25.000
Elv 910.97
Len 300.00 ft
K = 99

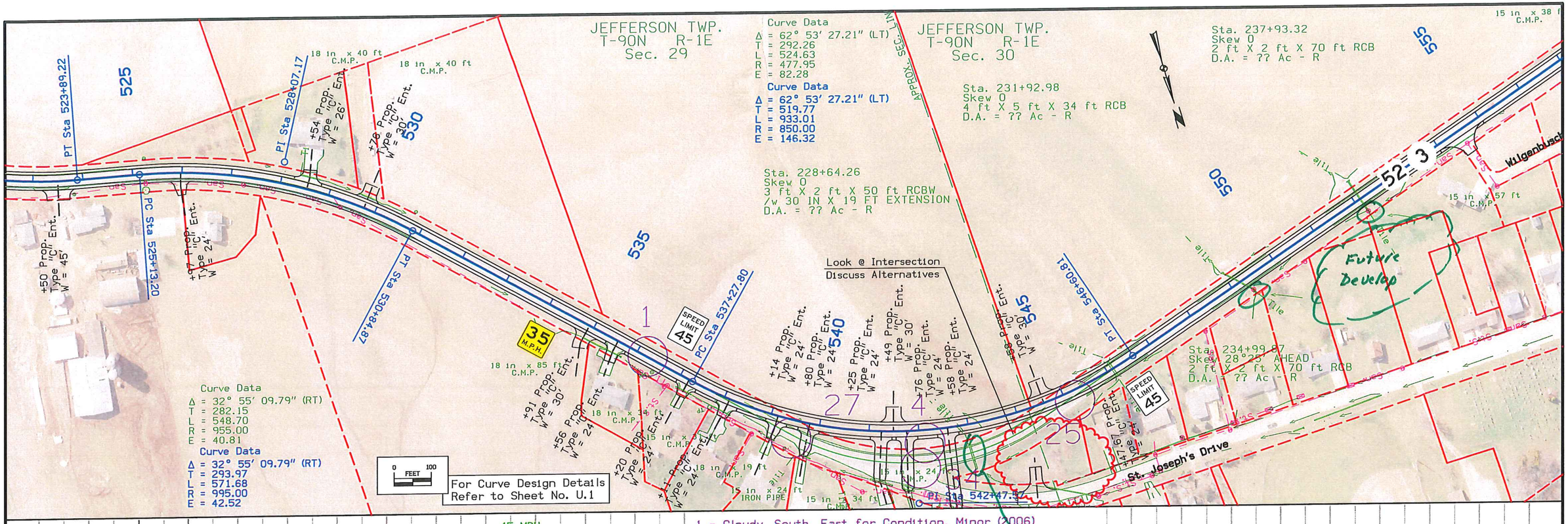
VPI +00.000
Elv 913.31
Len 1,800.00 ft
K = 1568

914.65 914.34 914.04 913.73 913.42 913.12 912.81 912.54 912.33 912.18 912.09 912.07 912.11 912.21 912.38 912.60 912.90 913.25 913.67 914.12 914.56 914.98 915.35 915.69 915.99 916.26 916.49 916.68 916.84 916.96 917.04 917.09 917.10 917.07 917.01 916.91 916.81 916.72 916.63 916.54 916.46 916.38 916.31 916.24 916.17 916.11 916.05 916.00 915.95 915.90 915.86 915.82 915.79 915.76 915.73 915.71 915.69 915.68 915.67 915.66 915.66 915.66 915.66 915.67 915.69 915.71 915.73 915.75 915.78 915.82 915.85 915.90 915.94 915.99 916.04 916.10 916.16 916.23 916.30 916.37 916.45 916.53 916.62 916.70 916.80 916.90 917.00 917.10 917.21 917.32 917.44 917.56 917.69 917.82 917.95 918.09 918.23 918.37 918.52 918.68 918.83 919.00 919.16 919.33 919.50 919.68 919.86 920.05 920.23 920.42 920.61 920.79 920.98 921.17 921.36 921.54 921.73 921.92 922.10 922.29

495 500 505 510 515 520

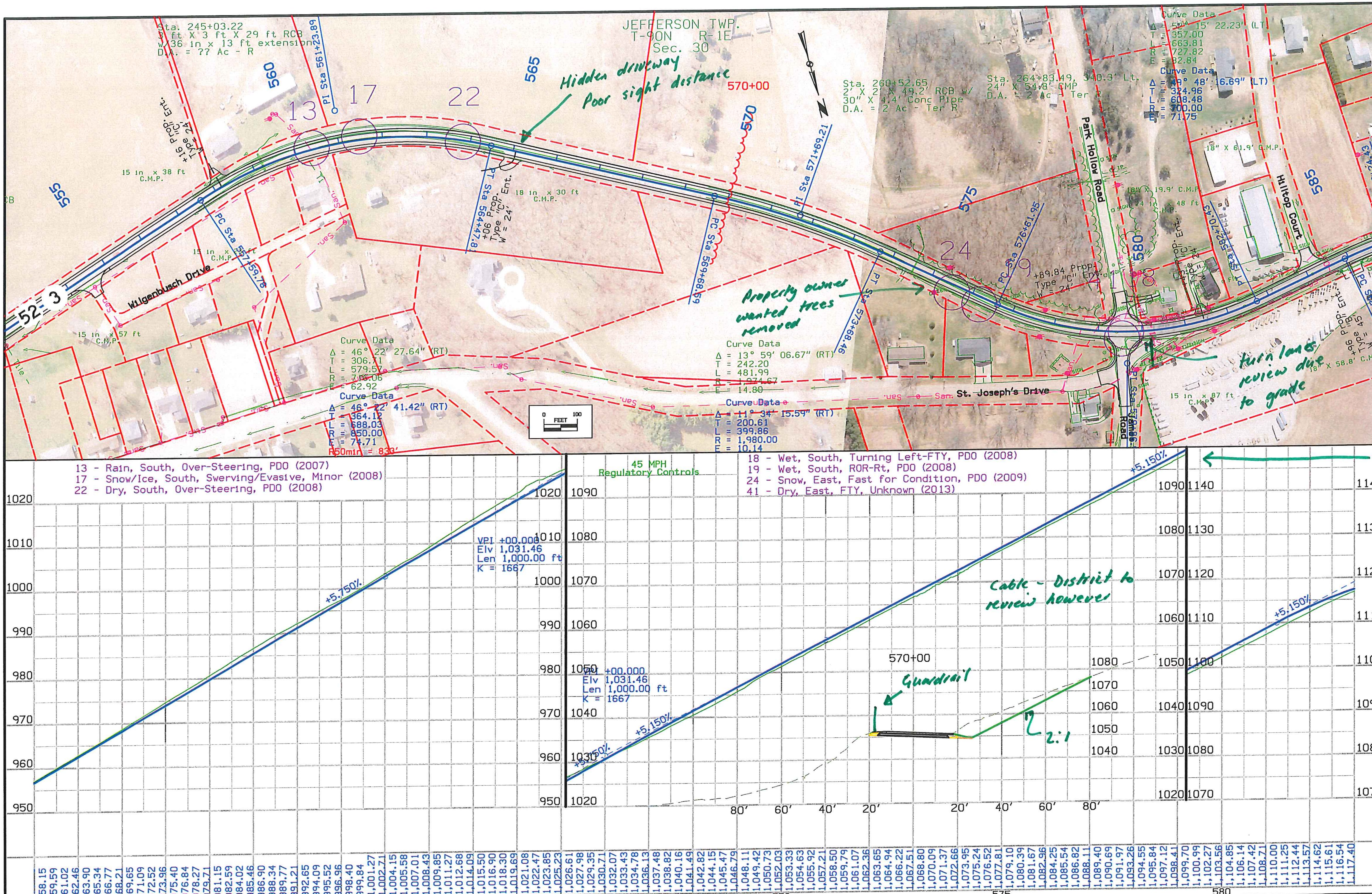
FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER D.7

8:28:24 AM 3/30/2017 mthiel2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_D02.dgn



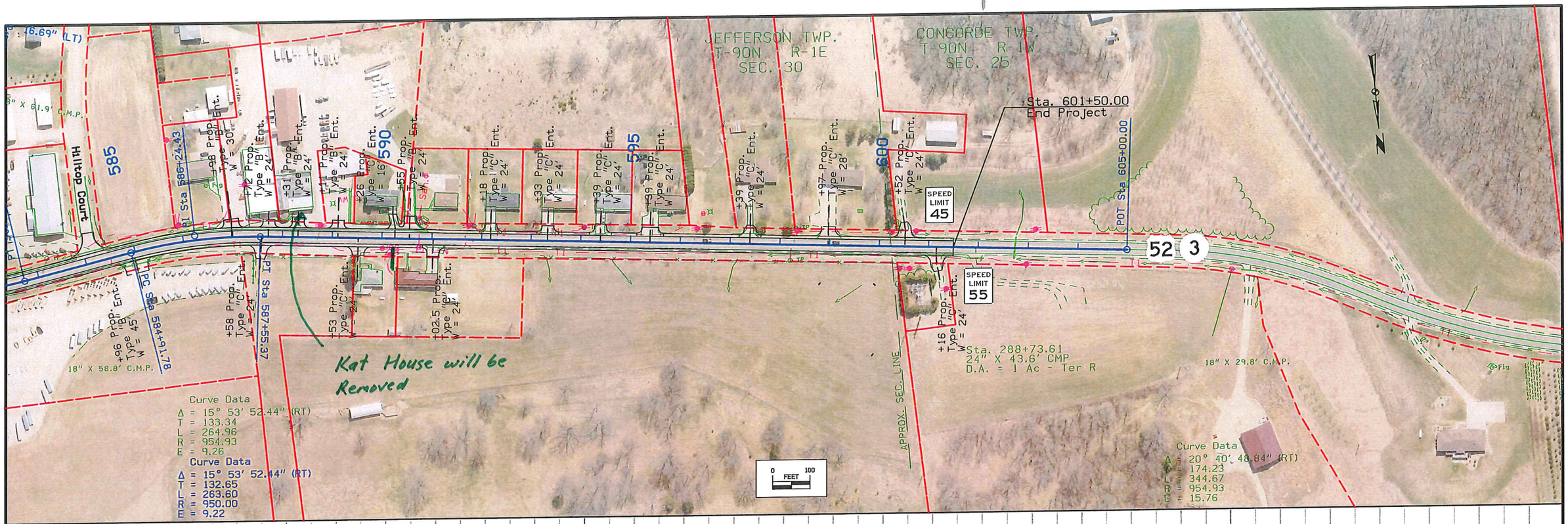
FILE NO.	ENGLISH	DESIGN TEAM	J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER	STP-052-2(119)--2C-31	SHEET NUMBER	D.8

8:28:38 AM 3/30/2017 mthiel2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_D02.dgn


JEFFERSON TWP.
T-90N R-1E
Sec. 30
Sta. 245+03.22
3 ft X 3 ft X 29 ft RCB
w/36 in x 13 ft extension
D.A. = ?? Ac - R
Hidden driveway
Poor sight distance
570+00
Sta. 260+52.65
2' X 2' X 49.2' RCB w/
30" X 4.4' Conc Pipe
D.A. = 2 Ac - Ter R
Sta. 264+83.49, 340.3' Lt.
24" X 54.8' CMP
D.A. = 2 Ac - Ter R
Curve Data
Δ = 50° 15' 22.23" (LT)
T = 357.00
L = 663.81
R = 727.82
E = 82.84
Curve Data
Δ = 49° 48' 16.69" (LT)
T = 324.96
L = 608.48
R = 700.00
E = 71.75
Park Hollow Road
Wilgenbusch Drive
St. Joseph's Drive
Property owner wanted trees removed
turn lanes review due to grade
Curve Data
Δ = 46° 22' 27.64" (RT)
T = 306.71
L = 579.57
E = 62.92
Curve Data
Δ = 46° 22' 41.42" (RT)
T = 364.12
L = 688.03
R = 850.00
E = 74.71
Curve Data
Δ = 13° 59' 06.67" (RT)
T = 242.20
L = 481.99
R = 1,974.67
E = 14.80
Curve Data
Δ = 11° 34' 15.59" (RT)
T = 200.61
L = 399.86
R = 1,980.00
E = 10.14
13 - Rain, South, Over-Steering, PDO (2007)
17 - Snow/Ice, South, Swerving/Evasive, Minor (2008)
22 - Dry, South, Over-Steering, PDO (2008)
45 MPH
Regulatory Controls
18 - Wet, South, Turning Left-FTY, PDO (2008)
19 - Wet, South, ROR-Rt, PDO (2008)
24 - Snow, East, Fast for Condition, PDO (2009)
41 - Dry, East, FTY, Unknown (2013)
VPI +00.000
Elv 1,031.46
Len 1,000.00 ft
K = 1667
+5.750%
+5.150%
Cable - District to review however
Guardrail
2:1
570+00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER D.9

8:28:51 AM 3/30/2017 mthiel2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_D02.dgn



FILE NO.	ENGLISH	DESIGN TEAM	DUBUQUE COUNTY	PROJECT NUMBER	SHEET NUMBER
		J1a \ Skogerboe		STP-052-2(119)--2C-31	D.10

8:29:09 AM 3/30/2017 mthiel2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_D02.dgn

Survey Information

General Information

Measurement units for this survey are US survey feet. This survey used IDOT Project control found in previous surveys.

Vertical Control

Vertical datum for this survey is NAVD 88 relative to National Geodetic Survey marks located throughout the project.

NGS 1st. Order Class I mark designated A178 has a published
Elev. Of 1121.97
Survey Elev. = 1121.97

NGS 1st. Order Class I mark designated F178 has a published
Elev. Of 1101.50
Survey Elev. = 1101.50

NGS 1st. Order Class I mark designated H178 has a published
Elev. Of 1133.84
Survey Elev. = 1133.84

Horizontal Control

A National Geodetic Survey marker was used to transfer NAD 83 (2011) Iowa State Plane North Zone (US Survey Feet) coordinates to Project Control. Redundant RTK observations were used to verify the published values. The project coordinates are scaled around NGS Pt. A178 at 3687343.14 N, 5619919.96 E, 1121.97 EL. Additional control points were placed throughout the project using a GNSS Base-Rover setup relative to Pt. A178. A minimum of three observations with appropriate time spans between were averaged. The horizontal standard deviation of these observations was less than 0.03 ft. at 95% confidence level (2 sigma).

Alignment Information

The horizontal alignment for this survey is a retrace of the FN-3-9(21)—21-31 1966 As-built Plan. Stationing was backed up and carried forward from PI Sta 50+38.1 without equation to EOP at Sta 255+49.877. A number of Reference Ties to Conc. Monuments were found in the IDOT Reference recovery notes, these points as well as others were located and used to create an assortment of PC, PT and PI points along the corridor.
Of the Ref Ties that were found, a number of these ties have been damaged, damage included extreme leaning and or the tops were broken off.
Every attempt was made to duplicate and match the AB plan curve deltas, tangents and radius lengths as closely as possible. When no other option was available, we had to rely upon roadway splits to generate the tangents. The final alignment differs from AB Plan stationing in a range of zero and six feet along this 4-½ mile alignment. This alignment has nineteen curves.

The highway appears to be a little different than the AB Plan and the AB Plan equations found between Sta 32+41.08 to Sta 35+80.

Station Equations are as follows:

CP Sta 32+41.080 This Survey =
CP Sta 32+36.3 FN-3-9(21)—21-31 1966 As-built Plan

PI Sta 50+38.1 this survey =
PI Sta 50+38.1 FN-3-9(21)—21-31 1966 As-built Plan.

PC Sta 255+49.877 Back =
PC Sta 255+59.5 FN-3-9(21)—21-31 1966 As-built Plan. Ahead

VERTICAL CONTROL

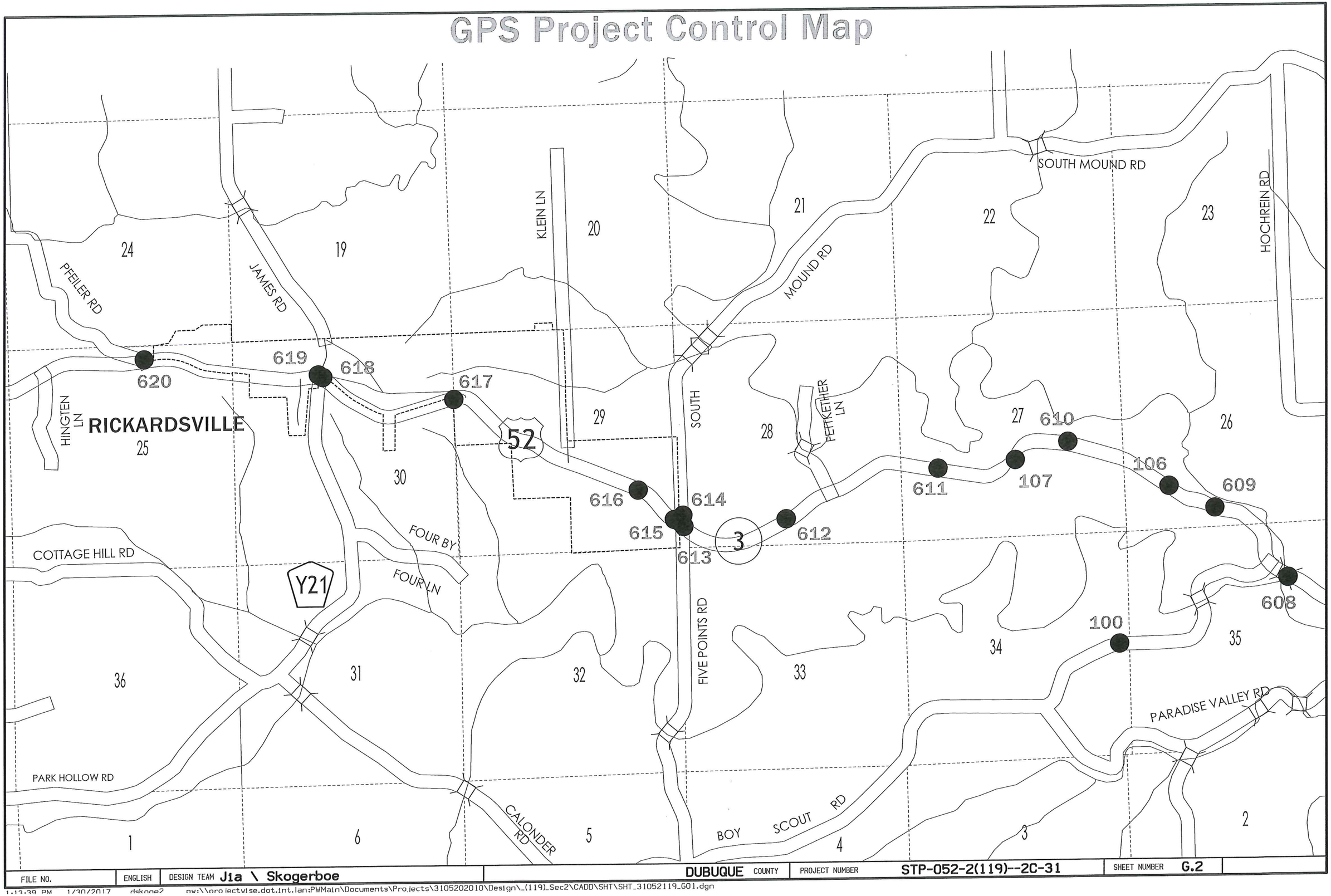
BENCHMARKS

				ELEVATION
No. 610 Sta.	64+76.806	32.114 Rt.	Y:3685182.029 X:5641832.351 Fd NGS Monument Stamped T177 EL=869.267	869.267
No. 611 Sta.	99+05.491	33.089 Rt.	Y:3684579.903 X:5638755.711 Fd NGS Monument Stamped U177 EL=847.761	847.761
No. 612 Sta.	138+72.295	52.738 Rt.	Y:3683420.011 X:5635160.658 Fd NGS Monument Data sheet removed from NGS database Monu has been moved Stamped V177 Observed ZC891.420 Published 893.09	891.420
No. 613 Sta.	165+58.752	29.197 Rt.	Y:3683259.875 X:5632741.460 Fd Conc Monument with unnamed USGS Disk	899.065
No. 614 Sta.	167+36.614	230.834 Rt.	Y:3683527.385 X:5632714.431 Fd Conc Monu Exposed by 1 Foot Stamped TT31T Published NGVD29 Datum Elevation 884.715 Obstructions No GPS	884.776
No. 615 Sta.	168+44.434	35.825 Rt.	Y:3683431.748 X:5632513.167 Fd NGS Monument Stamped 31 118 EL=907.003	907.003
No. 616 Sta.	179+79.523	30.721 Lt.	Y:3684135.842 X:5631651.490 Fd NGS Monument Stamped W177 Published EL=909.660 (unstable do not use) observed was 909.647	909.660
No. 617 Sta.	230+21.985	29.309 Lt.	Y:3686325.824 X:5627261.498 Fd NGS Monument Stamped X177 EL=905.894	905.894
No. 619 Sta.	265+97.31	84.079 Rt.	Y:3686941.205 X:5624047.811 Fd Conc Monument Stamped 31 422 EL=1109.387	1109.387
No. 620 Sta.	307+75.26	44.167 Rt.	Y:3687343.140 X:5619919.960 Fd NGS Monument Stamped A178 EL=1121.973	1121.973

MISCELLANEOUS LOCATIONS

				ELEVATION
No. 600 Sta.	--------	----------	Y:3677455.242 X:5672479.783 Fd NGS Monument Stamped H177 Observed with total station Published EL=660.412 Obstructions No GPS	660.412
No. 601 Sta.	--------	----------	Y:3680192.691 X:5668399.994 Fd NGS Monument Stamped K 177 EL=652.328 Obstructions No GPS	652.328
No. 602 Sta.	--------	----------	Y:3679453.606 X:5665582.614 Fd NGS Monument Set in the top of ledge at rock outcrop Stamped L177 EL=654.133 Obstructions No GPS	654.133
No. 603 Sta.	--------	----------	Y:3678916.369 X:5662020.845 Fd Brass Disk in Face Cliff Stamped M177 EL=669.129 CP404 near this point Obstructions No GPS	669.129
No. 604 Sta.	--------	----------	Y:3679073.204 X:5657613.734 Fd NGS Monu Set in Top of Ledge at Foot of Cliff Stamped N177 EL=667.167 Obstructions No GPS	667.167
No. 605 Sta.	--------	----------	Y:3678827.997 X:5655379.224 Fd NGS Monument Stamped Q72 EL=643.775	643.775
No. 606 Sta.	--------	----------	Y:3679483.801 X:5655842.955 Fd NGS Monument Stamped P177 EL=646.787 Obstructions No GPS	646.787
No. 607 Sta.	--------	----------	Y:3679427.579 X:5651233.742 Fd NGS Monu Set Vertically in Rock Outcropping Stamped Q 177 EL=655.163 Obstructions No GPS	655.163
No. 608 Sta.	--------	----------	Y:3681918.874 X:5647049.006 Fd NGS Monument SE Corner Brg on Top Conc Barrier Rail Stamped R 177 Reset	669.813
No. 609 Sta.	--------	----------	Y:3683584.840 X:5645322.220 Fd NGS Monu Set Vertically in Rock Wall Stamped S177 EL=792.587 Obstructions No GPS	792.587
No. 618 Sta.	--------	----------	Y:3686878.307 X:5624153.013 Fd top of CM Severly Damaged Disk (Y177) missing central pin is bent easterly Published EL=1101.277	1100.799

GPS Project Control Map



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER G.2

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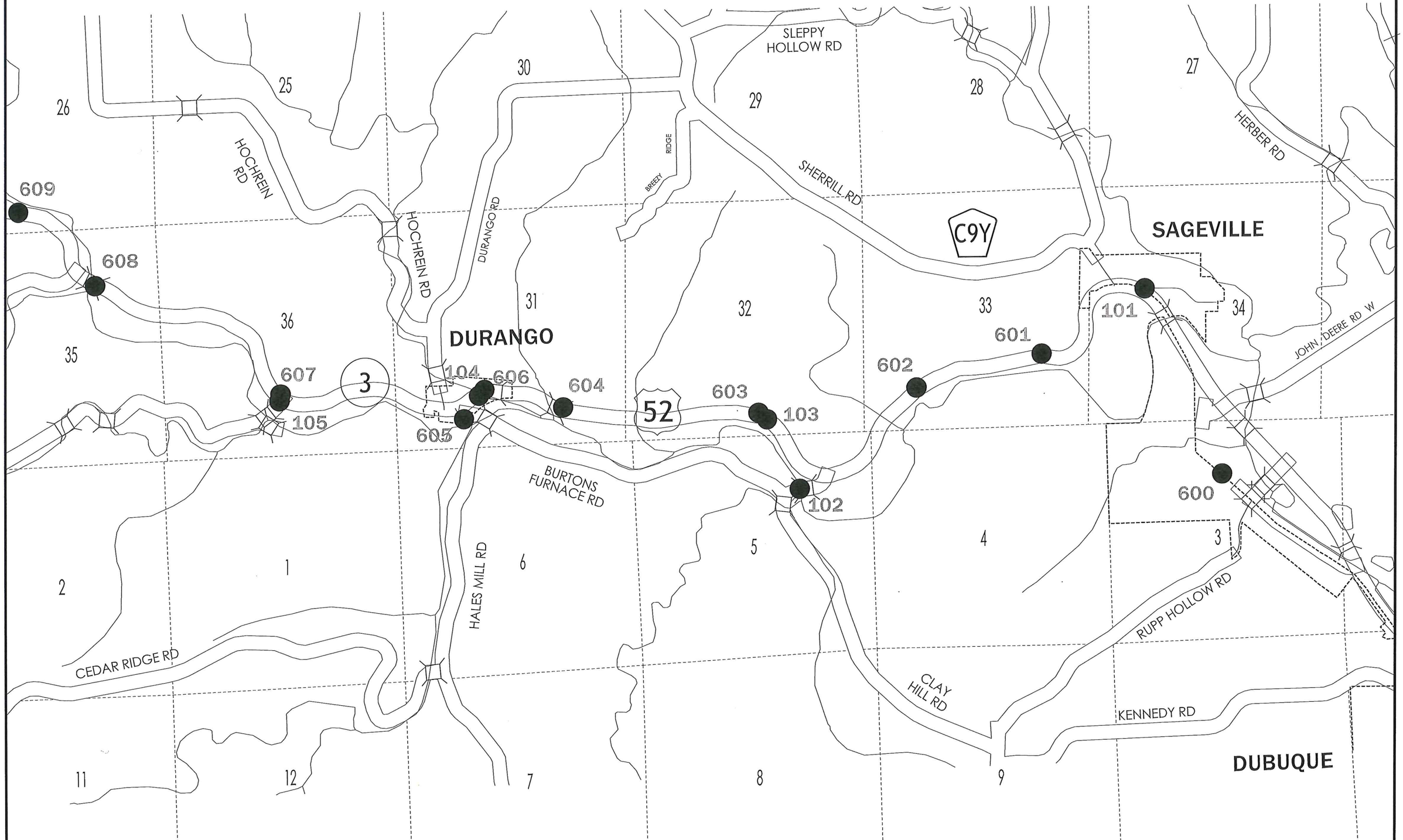
GPS Project Control Map



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Map Legend

Proposed Detour

Sections 1 & 2

Sections 3 & 4

Luxemburg

Holy Cross

Rickardsville

Durango

Sageville

New Vienna

Dubuque

Dyersville

Farley

Epworth

Peosta

52

136

20

U.S. 52 Detour

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER HSIPX-052-2(120)--3L-31	SHEET NUMBER J.2

7:13:36 AM 12/29/2016 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(120)_Sec3\31052120_j02.sht

JEFFERSON TWP.
T-90N R-1E
Sec. 29

JEFFERSON TWP.
T-90N R-1E
Sec. 30

Curve Data
Δ = 62° 53' 27.21" (LT)
T = 292.26
L = 524.63
R = 477.95
E = 82.28

Curve Data
Δ = 62° 53' 27.21" (LT)
T = 519.77
L = 933.01
R = 850.00
E = 146.32

Sta. 228+64.26
Skew 0
3 ft X 2 ft X 50 ft RCBW
/w 30 IN X 19 FT EXTENSION
D.A. = ?? Ac - R

Sta. 231+92.98
Skew 0
4 ft X 5 ft X 34 ft RCB
D.A. = ?? Ac - R

Drainage

Look @ Intersection
Discuss Alternatives

Move hammer?

Sta. 234+
Skew 28°
2 ft X 2
D.A. = ??

535
540
545
550

35 M.P.H.

SPEED LIMIT 45

PC Sta 537+27.80

PI Sta 542+47.57

PI Sta 546+60.81

+91 Prop. "C" Ent. Type "C", W = 30'
+56 Prop. "C" Ent. Type "C", W = 24'
+20 Prop. "C" Ent. Type "C", W = 24'
+11 Prop. "C" Ent. Type "C", W = 24'
+14 Prop. "C" Ent. Type "C", W = 24'
+80 Prop. "C" Ent. Type "C", W = 24'
+49 Prop. "C" Ent. Type "C", W = 30'
+25 Prop. "C" Ent. Type "C", W = 24'
+76 Prop. "C" Ent. Type "C", W = 24'
+58 Prop. "C" Ent. Type "C", W = 24'
+58 Prop. "C" Ent. Type "C", W = 30'
+47.67 Prop. "C" Ent. Type "C", W = 24'

1
27
4
34
25

St. Joseph's Drive

1 - Cloudy, South, Fast for Condition, Minor (2006)
4 - Dry, South, Lost Control, Unknown (2006)
25 - Dry, North, ROR-Rt, Major (2009)
27 - Wet, South, ROR-Rt, PDO (2009)
34 - Snow, West, ROR-Rt, PDO (2010)

0 FEET 50

E St. Joseph's Drive Intersection

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER U.1

1:28:39 PM 3/29/2017 mthiel2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_U01.dgn

ML052
Preliminary

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

880 870 860

875.58 -44.67 | 872.04 -34.04 | 872.04 -29.04 | 874.80 -18.00 | 875.04 12.00 | 875.28 0.00 | 875.04 12.00 | 874.80 18.00 | 872.28 28.08

361+00.00

876.81 -51.13 | 871.12 -34.04 | 871.12 -29.04 | 873.88 -18.00 | 874.12 12.00 | 874.36 -0.00 | 874.12 12.00 | 873.88 18.00 | 872.83 39.17

360+00.00

872.67 -42.14 | 869.97 -34.04 | 869.97 -29.04 | 872.73 -18.00 | 872.97 12.00 | 873.21 -0.00 | 872.97 12.00 | 872.73 18.00 | 869.97 29.04 | 869.97 34.04 | 873.52 44.70

359+00.00

865.95 -38.87 | 866.90 -36.00 | 871.40 -18.00 | 871.64 12.00 | 871.88 0.00 | 871.64 12.00 | 871.40 18.00 | 868.64 29.04 | 868.64 34.04 | 873.6 49.12

358+00.00

862.50 -44.89 | 865.46 -36.00 | 869.96 -18.00 | 870.20 12.00 | 870.44 -0.00 | 870.20 12.00 | 869.96 18.00 | 867.20 29.04 | 867.20 34.04 | 871.10 45.72

357+00.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.1

7:12:55 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052

Preliminary

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

880
870

871.24 -43.19
873.61 -36.08
878.11 -18.08
878.46 12.08
879.16 -0.08
879.85 11.92
879.72 17.92
876.51 30.77

366+00.00

873.76 -30.22
876.82 -18.00
877.16 -12.00
877.86 -0.00
878.56 12.00
878.42 18.00
874.94 31.95

365+00.00

872.40 -35.62
876.04 -18.08
876.39 -12.08
877.08 -0.08
877.78 11.92
877.65 17.92
874.50 30.49

364+00.00

871.02 -37.66
871.58 -36.00
876.08 -18.00
876.32 -12.00
876.64 0.00
876.95 12.00
876.72 18.00
873.24 31.86

363+00.00

873.07 -34.59
875.58 -18.00
875.82 -12.00
876.06 0.00
875.88 12.00
875.64 18.00
871.93 32.82

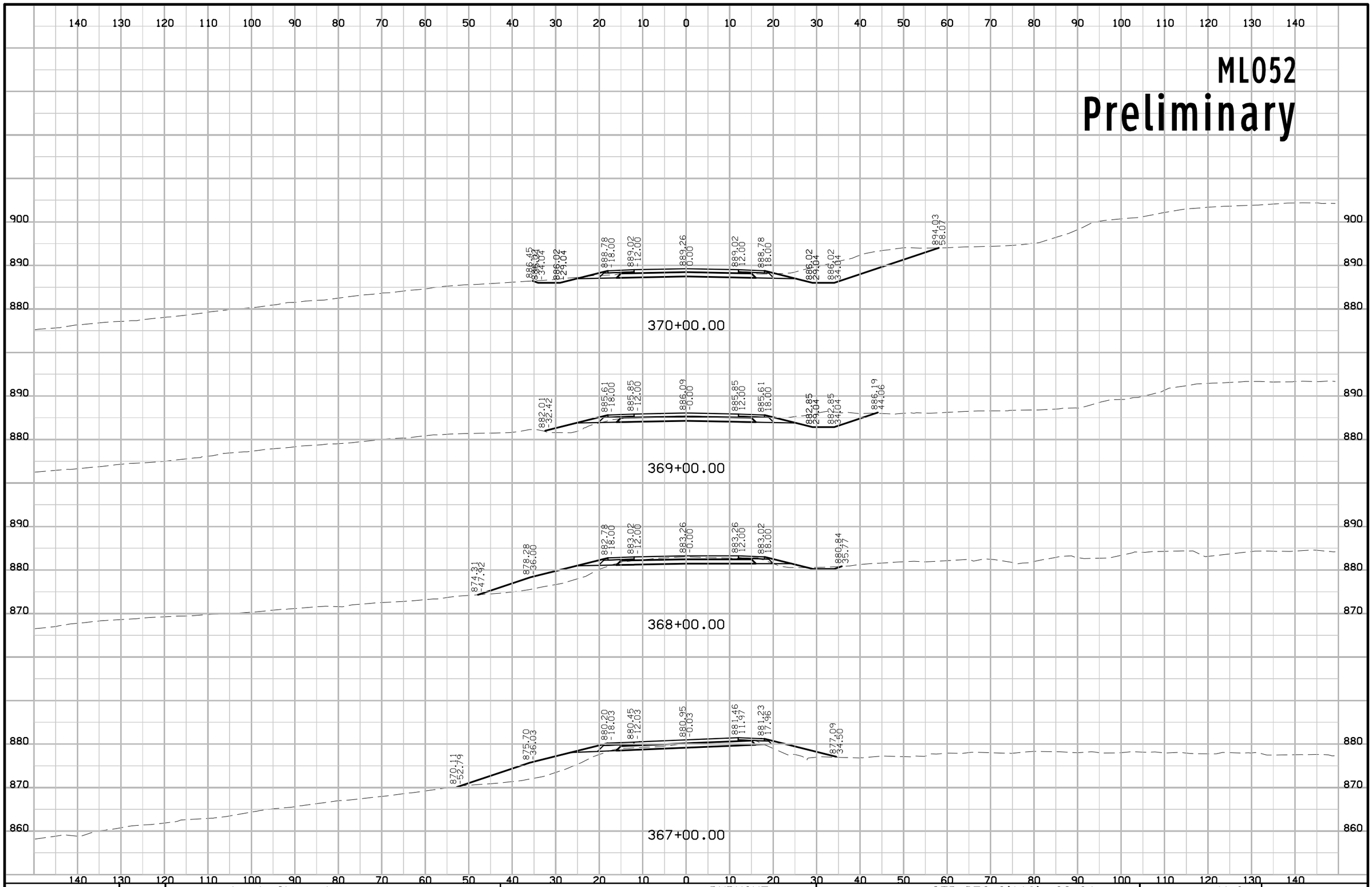
362+00.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.2

7:12:58 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

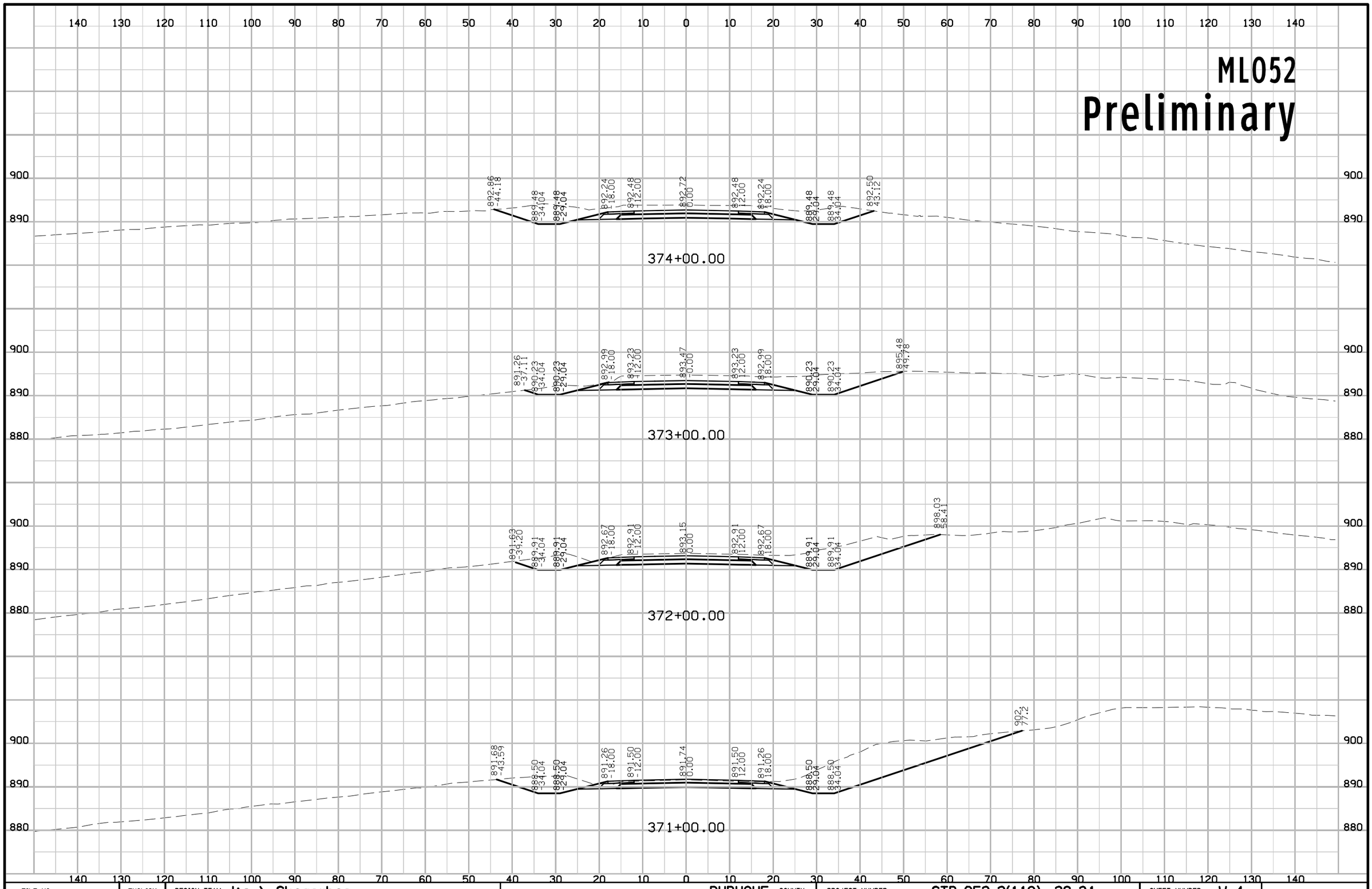
ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.3

7:13:00 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.4

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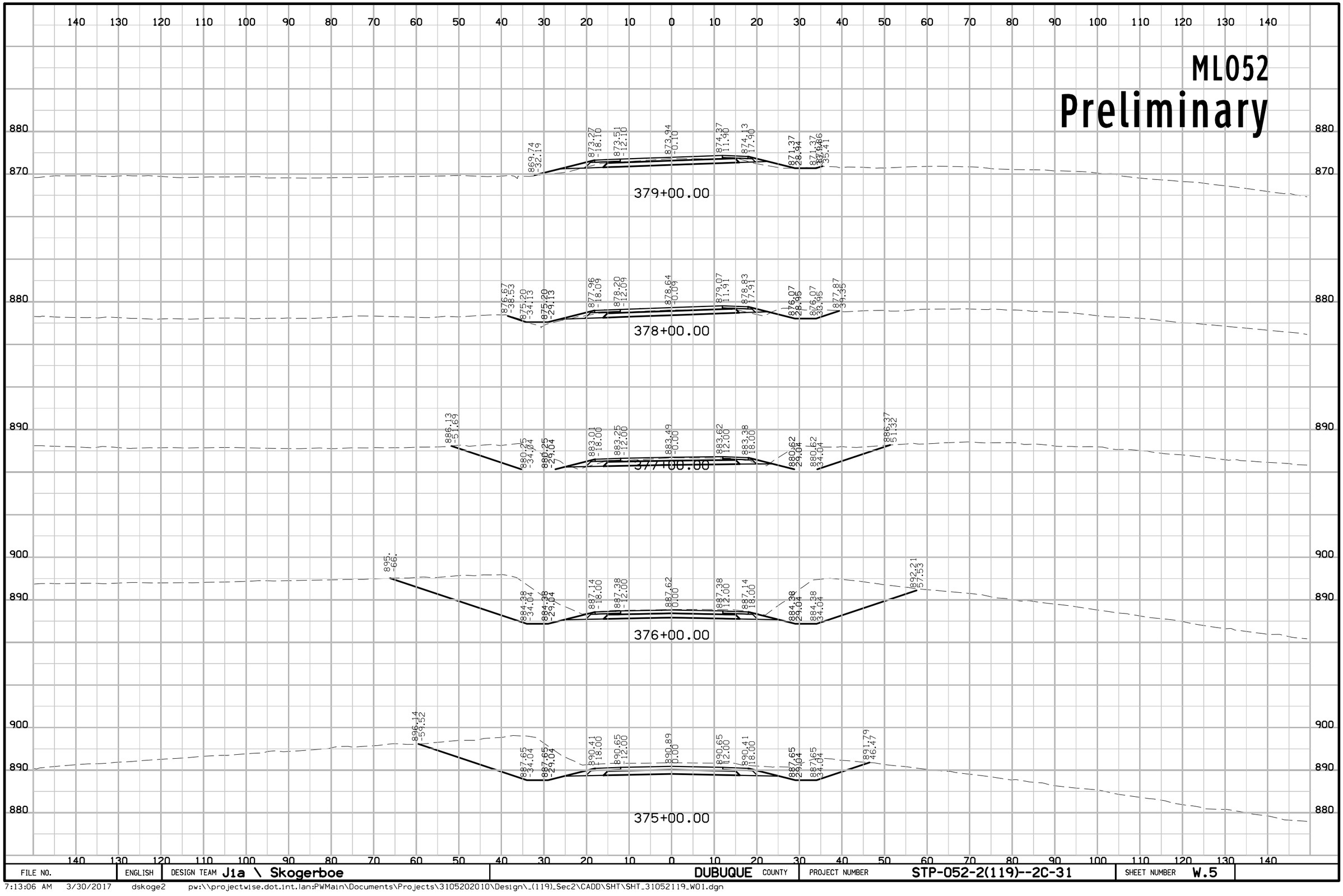
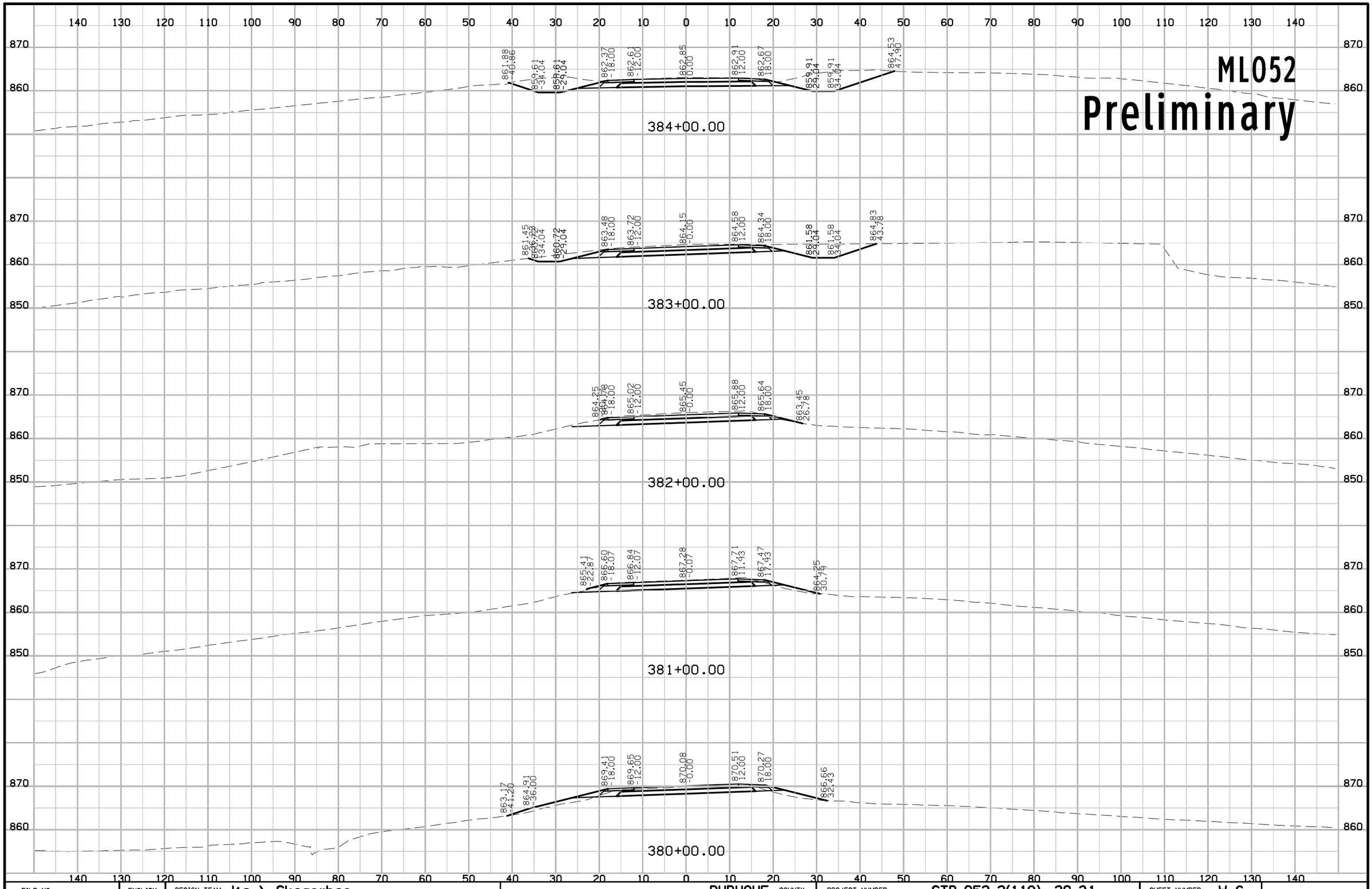
ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.5

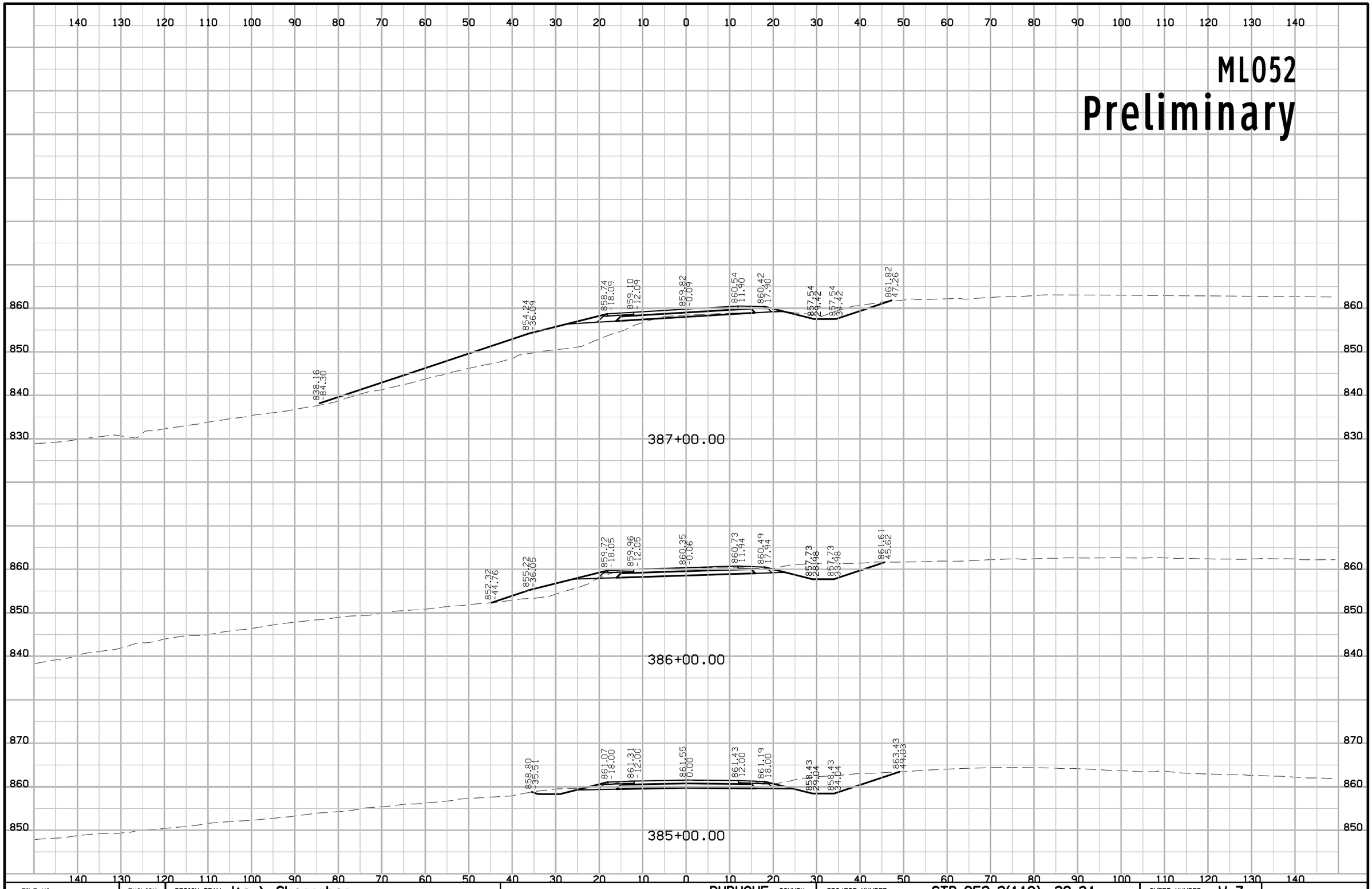
7:13:06 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.6

7:13:08 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.7

7:13:11 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052

Preliminary

392+00.00

391+00.00

390+00.00

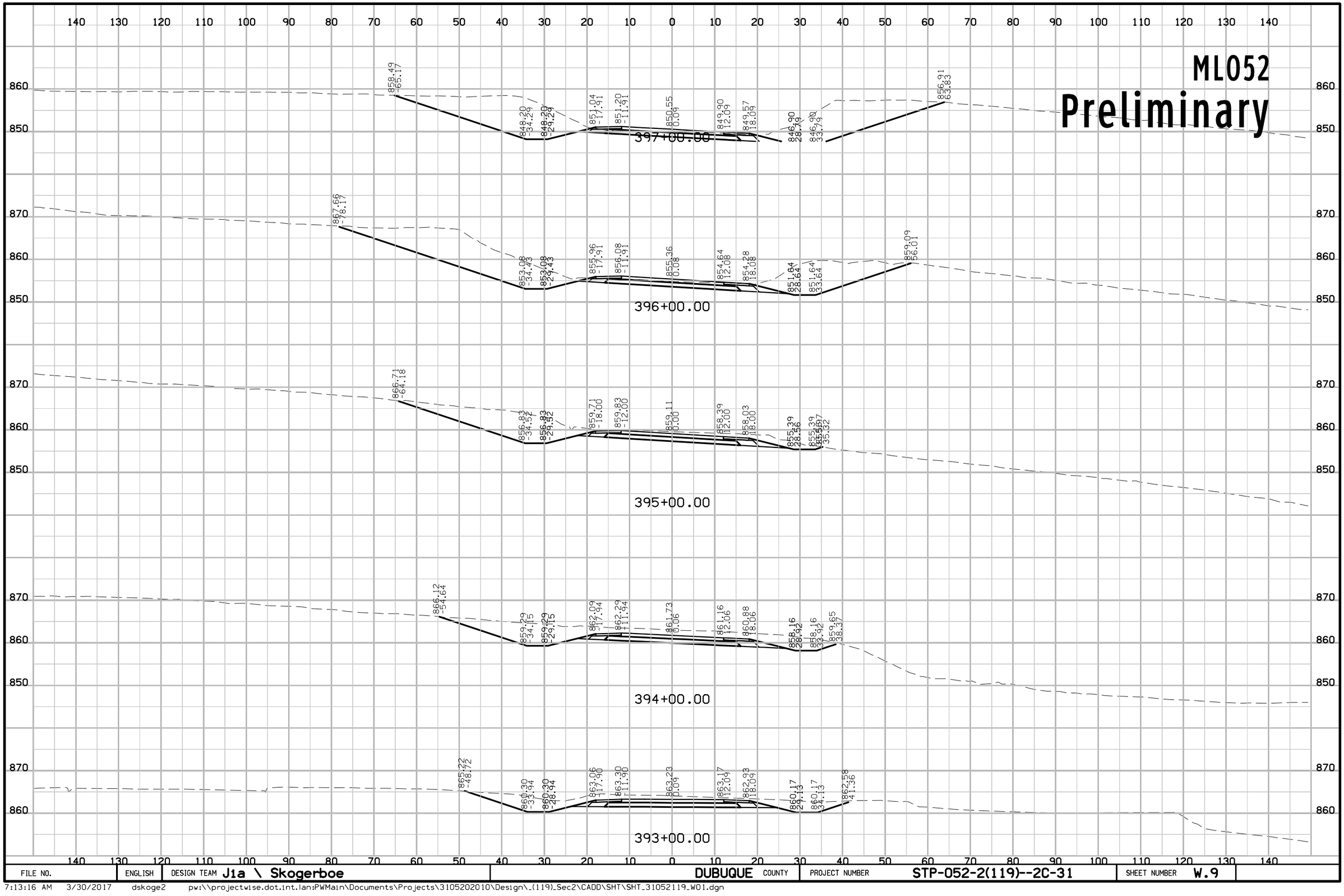
389+00.00

388+00.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.8	

7:13:13 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

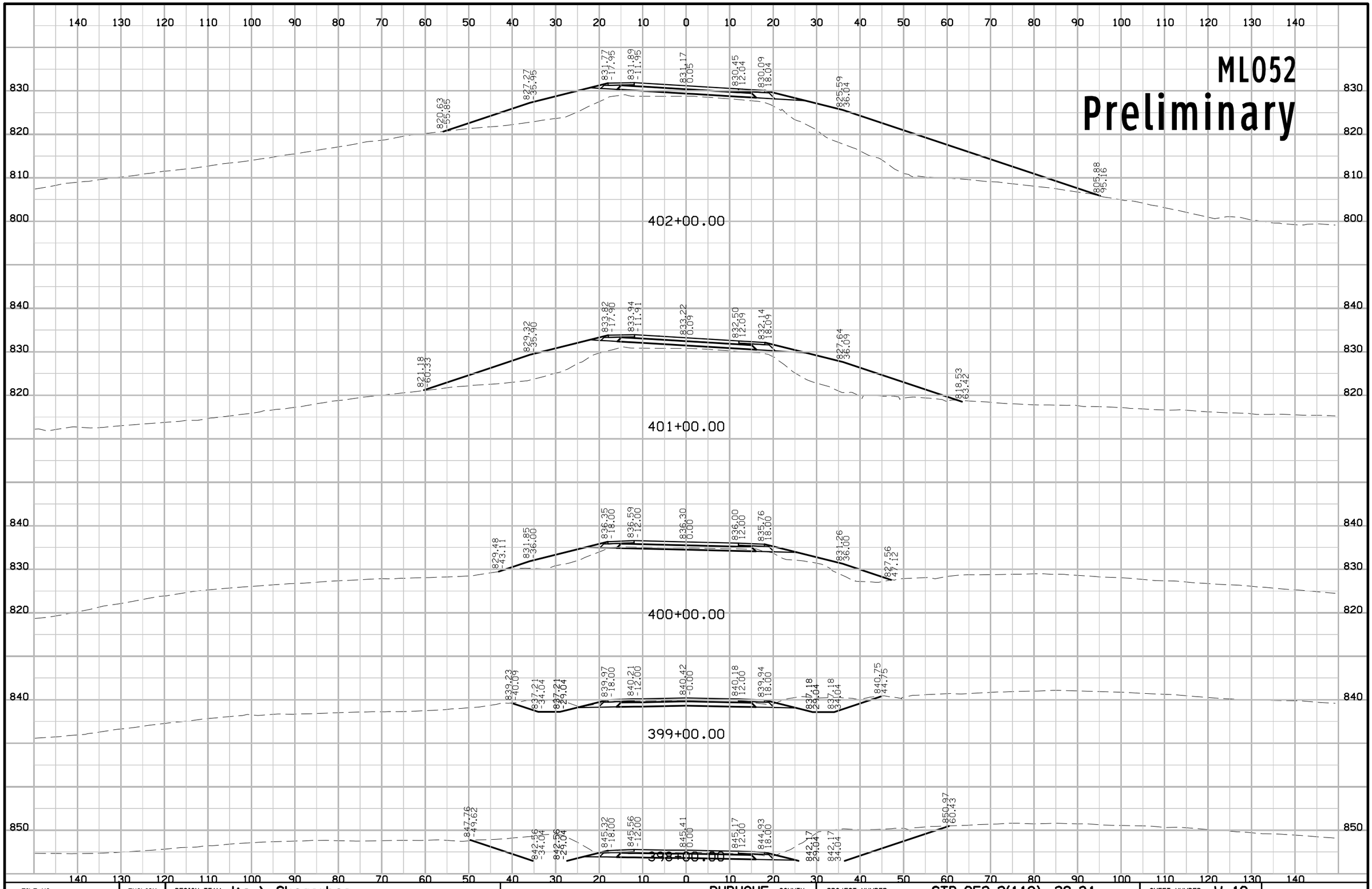
ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.9

7:13:16 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.10

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ML052

Preliminary

406+00.00

405+00.00

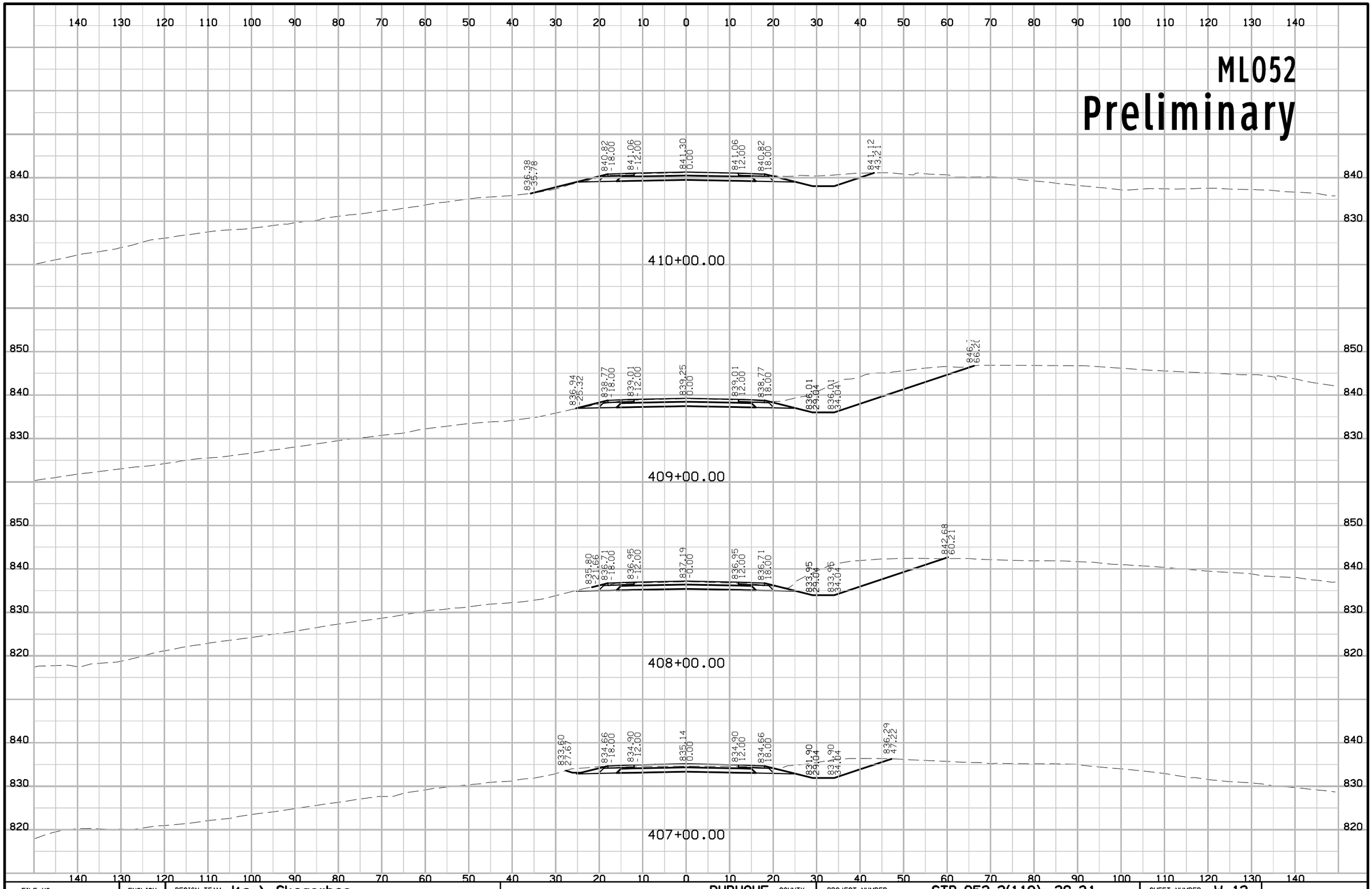
404+00.00

403+00.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.11

7:13:21 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052
Preliminary

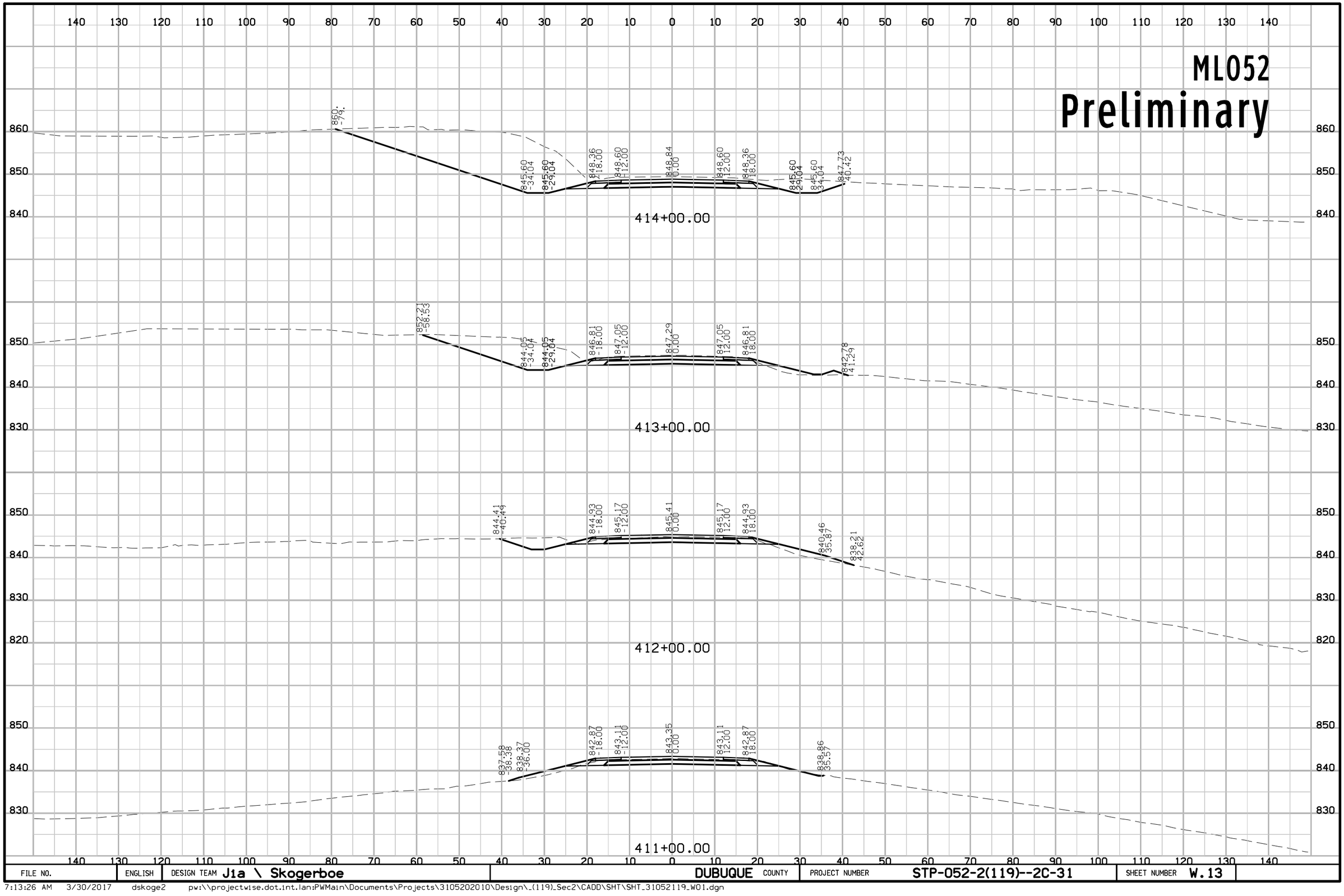


FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.12

7:13:24 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.13

7:13:26 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052
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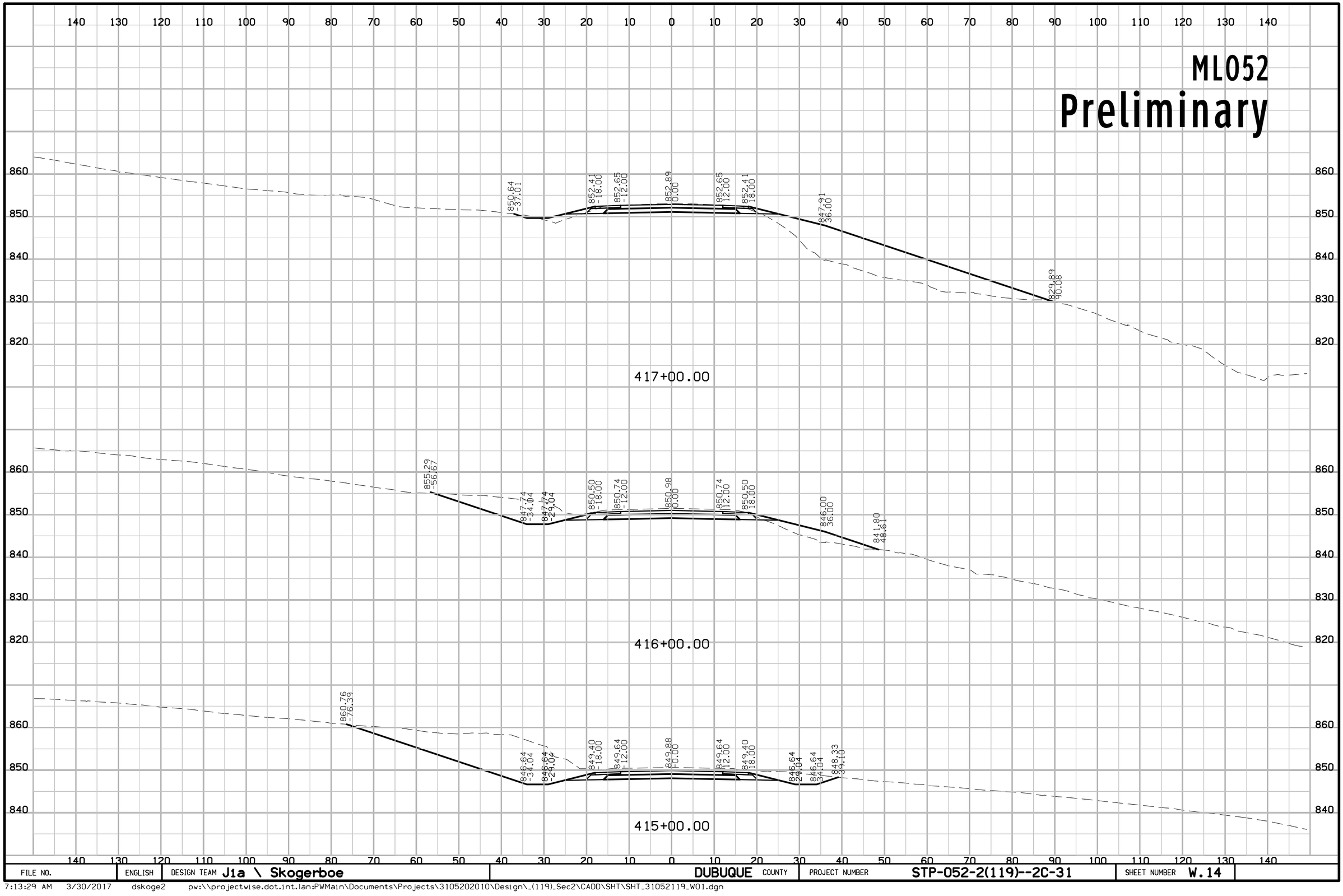
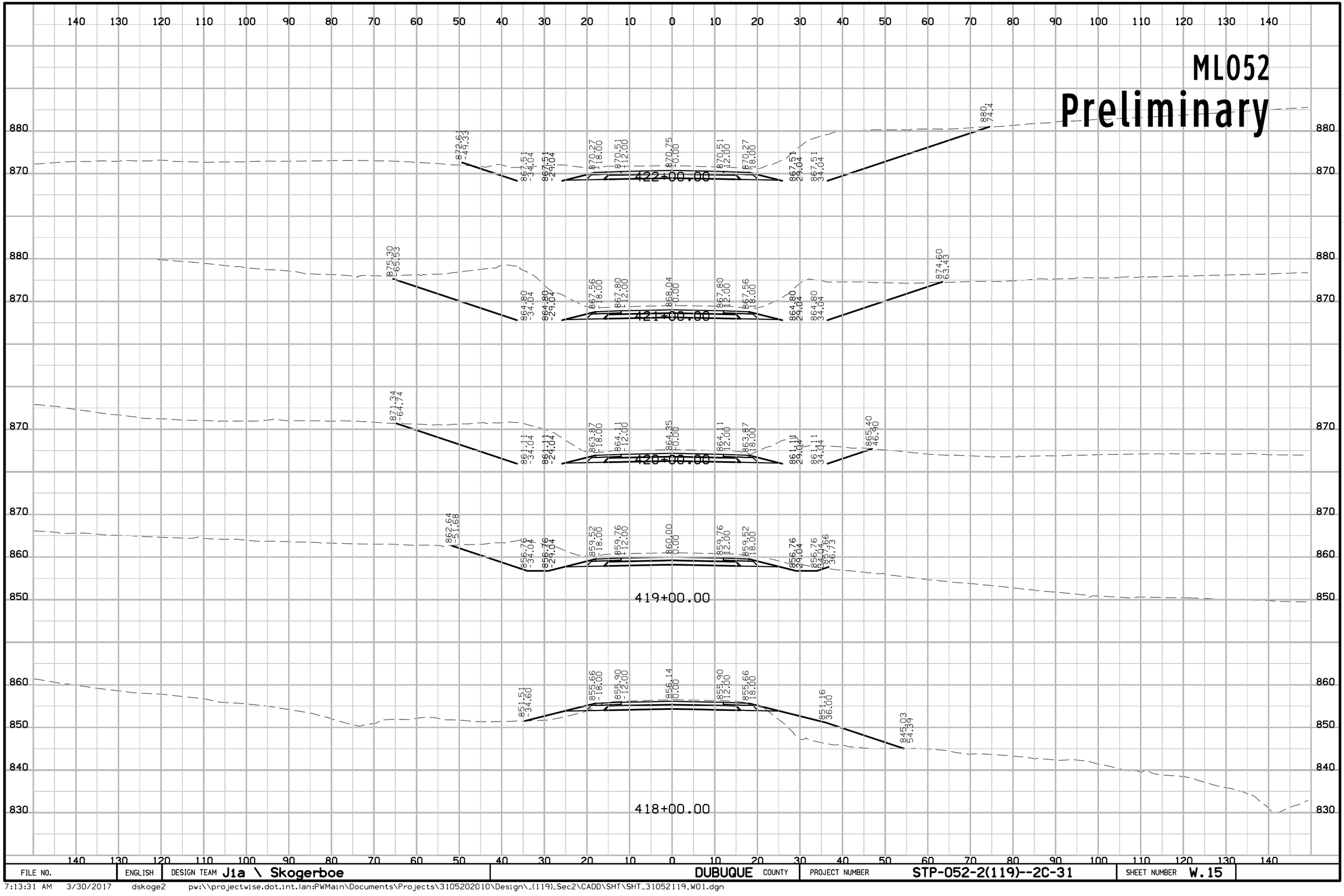


FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.14

7:13:29 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052

Preliminary

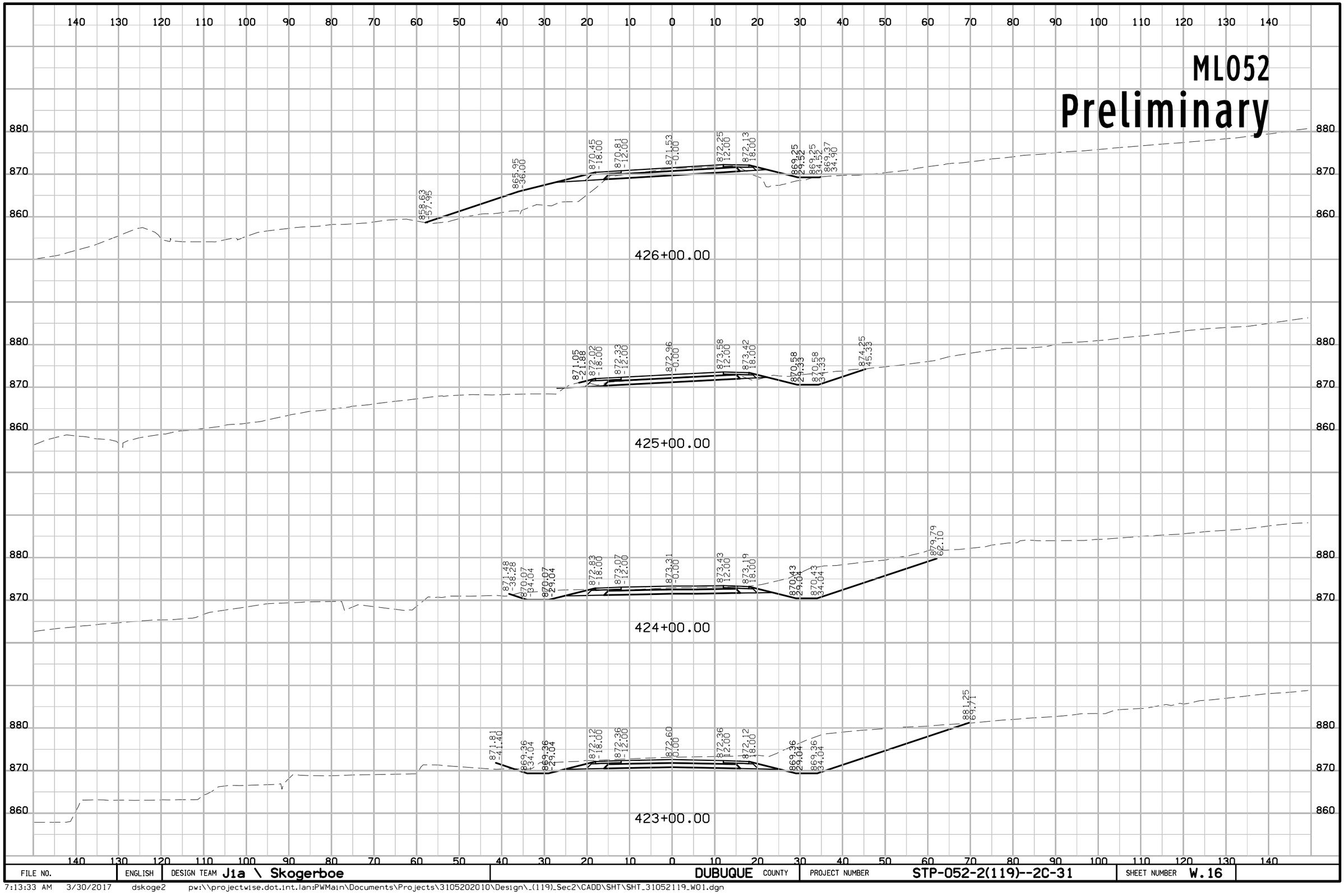


FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.15

7:13:31 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052

Preliminary

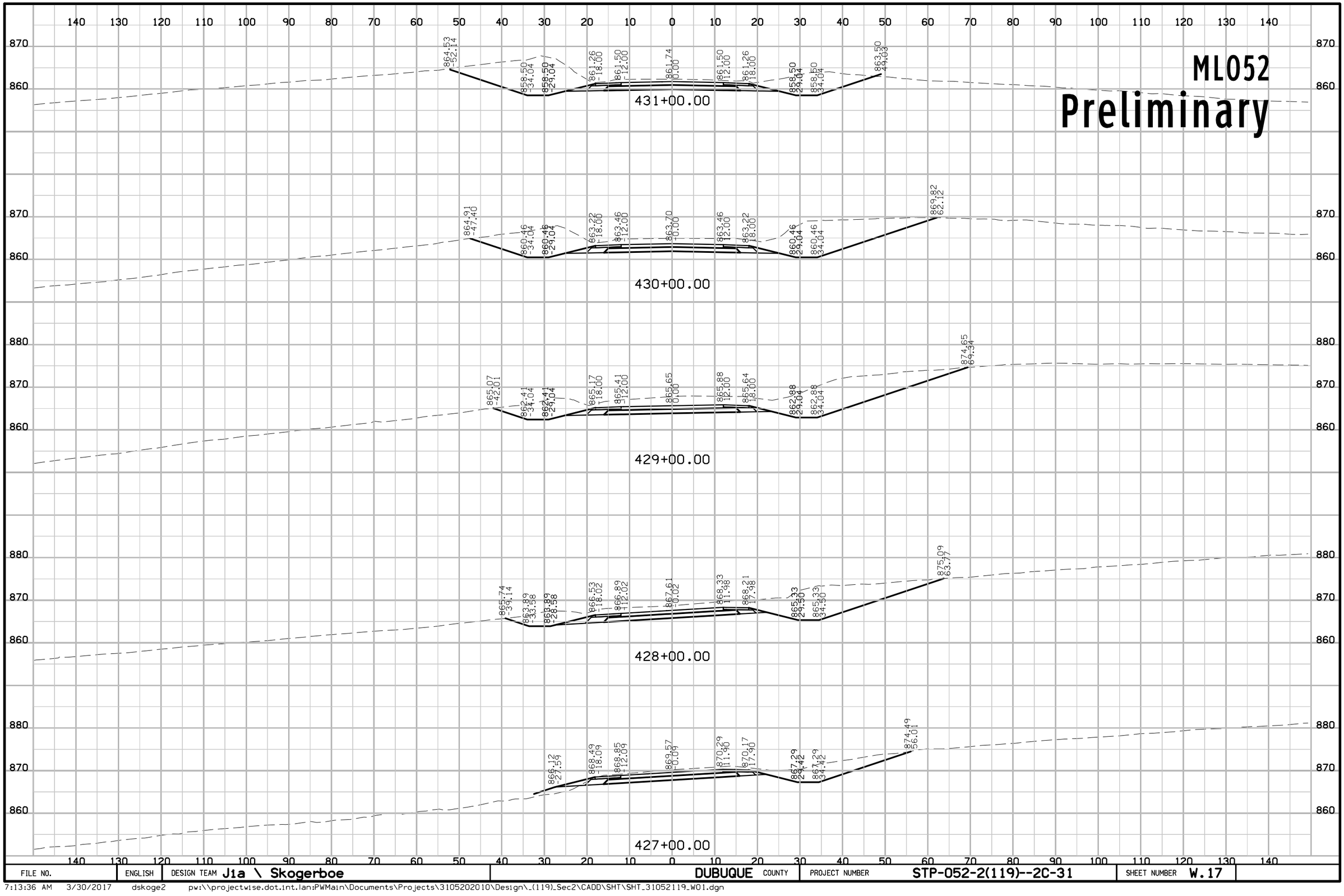


FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.16

7:13:33 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.17

7:13:36 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052

Preliminary

436+00.00

848.09 -34.00 | 852.38 -17.92 | 852.57 -11.92 | 852.01 0.08 | 851.46 12.08 | 851.17 18.08 | 848.46 28.94 | 848.46 34.94 | 851.39 42.73

435+00.00

849.43 -35.19 | 853.72 -18.00 | 853.96 -12.00 | 853.91 0.00 | 853.67 12.00 | 853.43 18.00 | 850.67 29.04 | 850.67 34.04 | 854.86 46.63

434+00.00

855.38 -18.00 | 855.62 -12.00 | 855.86 -0.00 | 855.62 12.00 | 855.38 18.00 | 852.62 29.04 | 852.62 34.04 | 855.80 43.58

433+00.00

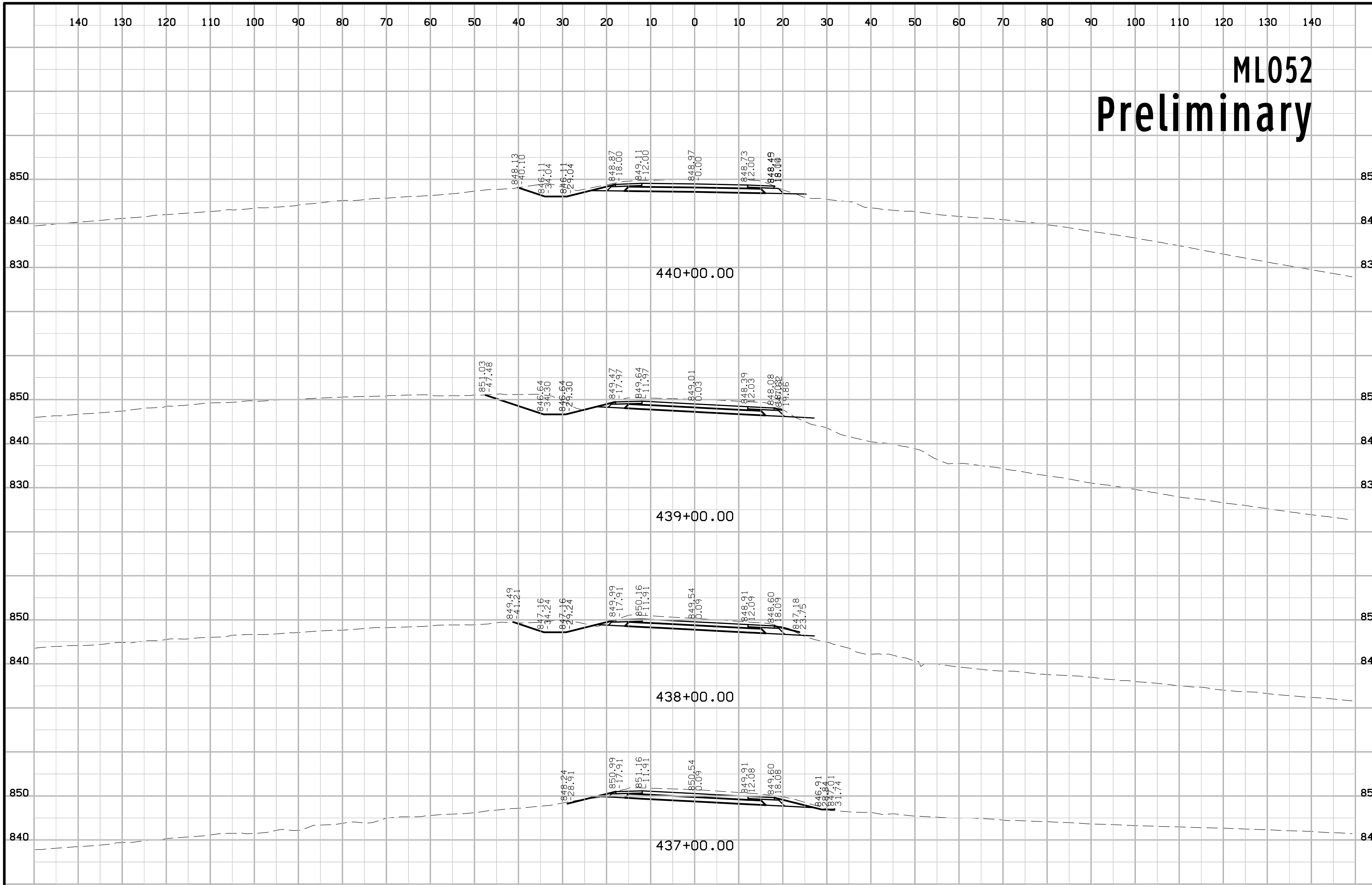
857.34 -18.00 | 857.58 -12.00 | 857.82 -0.00 | 857.58 12.00 | 857.34 18.00 | 854.58 29.04 | 854.58 34.04 | 856.98 41.23

432+00.00

860.66 -46.39 | 856.54 -34.04 | 856.54 -29.04 | 859.30 -18.00 | 859.54 -12.00 | 859.78 0.00 | 859.54 12.00 | 859.30 18.00 | 856.54 29.04 | 856.54 34.04 | 859.33 42.42

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.18

7:13:39 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\31052020\0\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn



FILE NO. | ENGLISH | DESIGN TEAM J1a \ Skogerboe | DUBUQUE COUNTY | PROJECT NUMBER STP-052-2(119)--2C-31 | SHEET NUMBER W.19

7:13:41 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052
Preliminary

445+00.00

444+00.00

443+00.00

442+00.00

441+00.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER	STP-052-2(119)--2C-31	SHEET NUMBER	W.20

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ML052
Preliminary

450+00.00

449+00.00

448+00.00

447+00.00

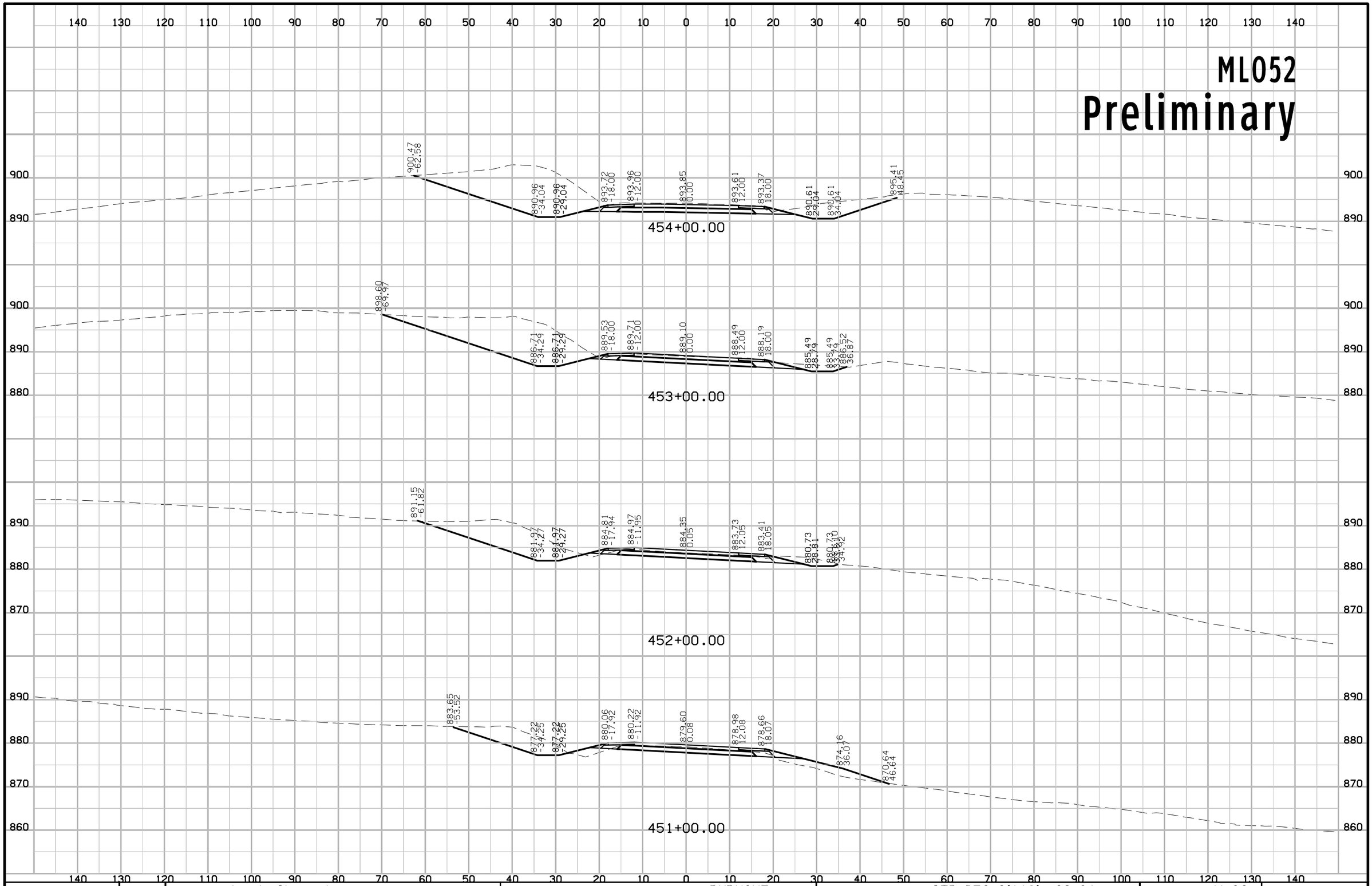
446+00.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.21

7:13:46 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052

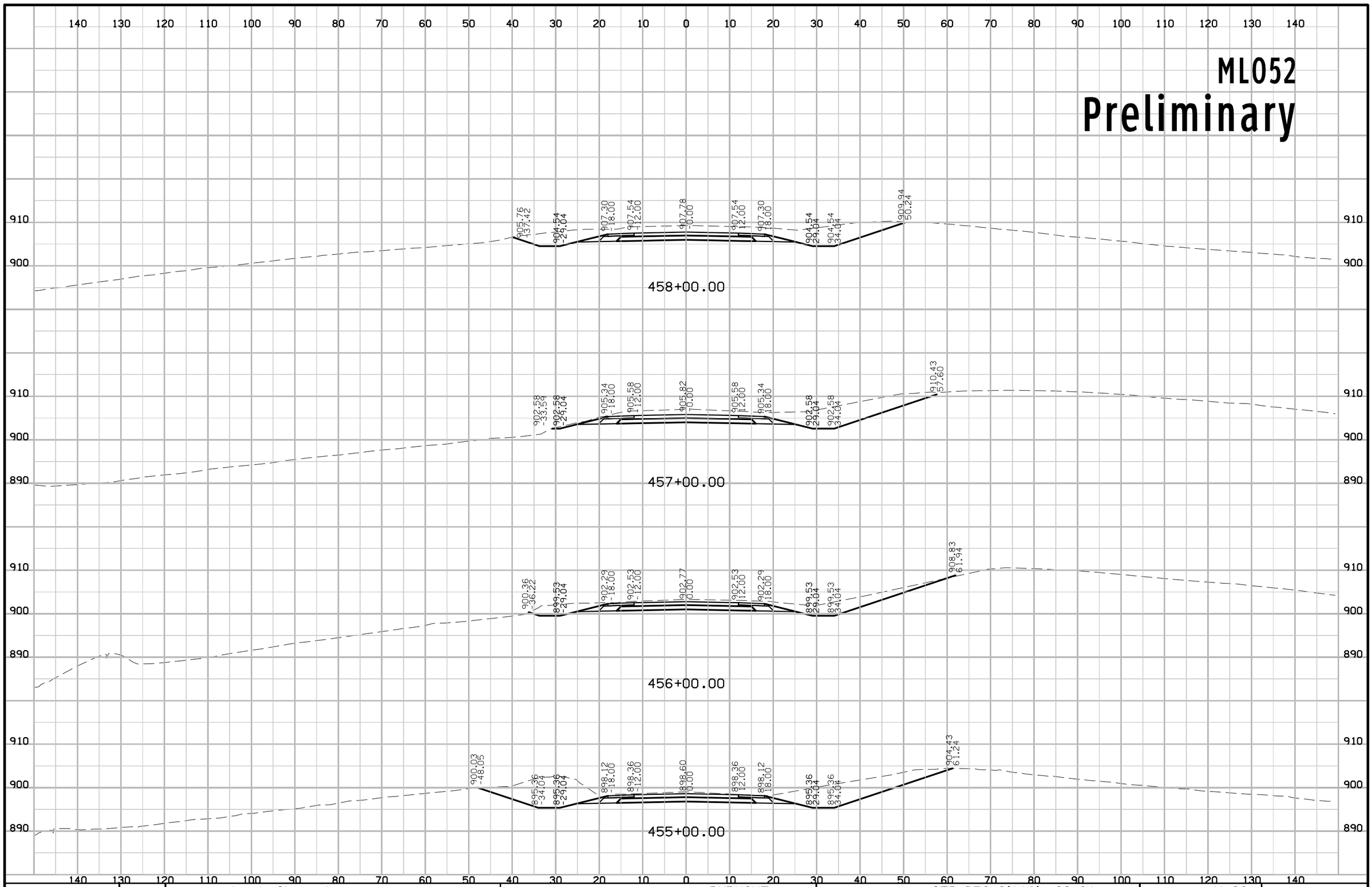
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.22

7:13:49 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052
Preliminary



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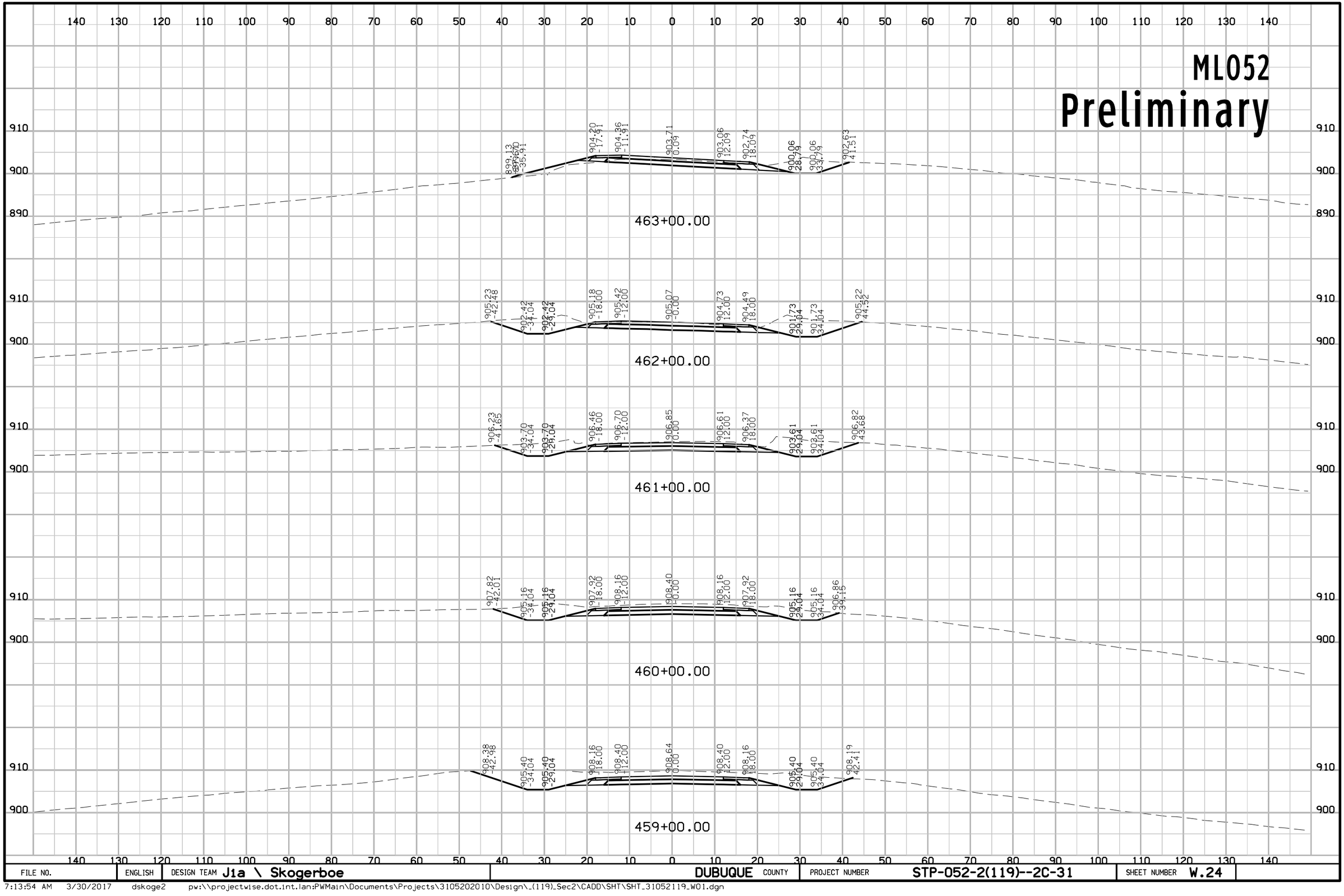
ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.24

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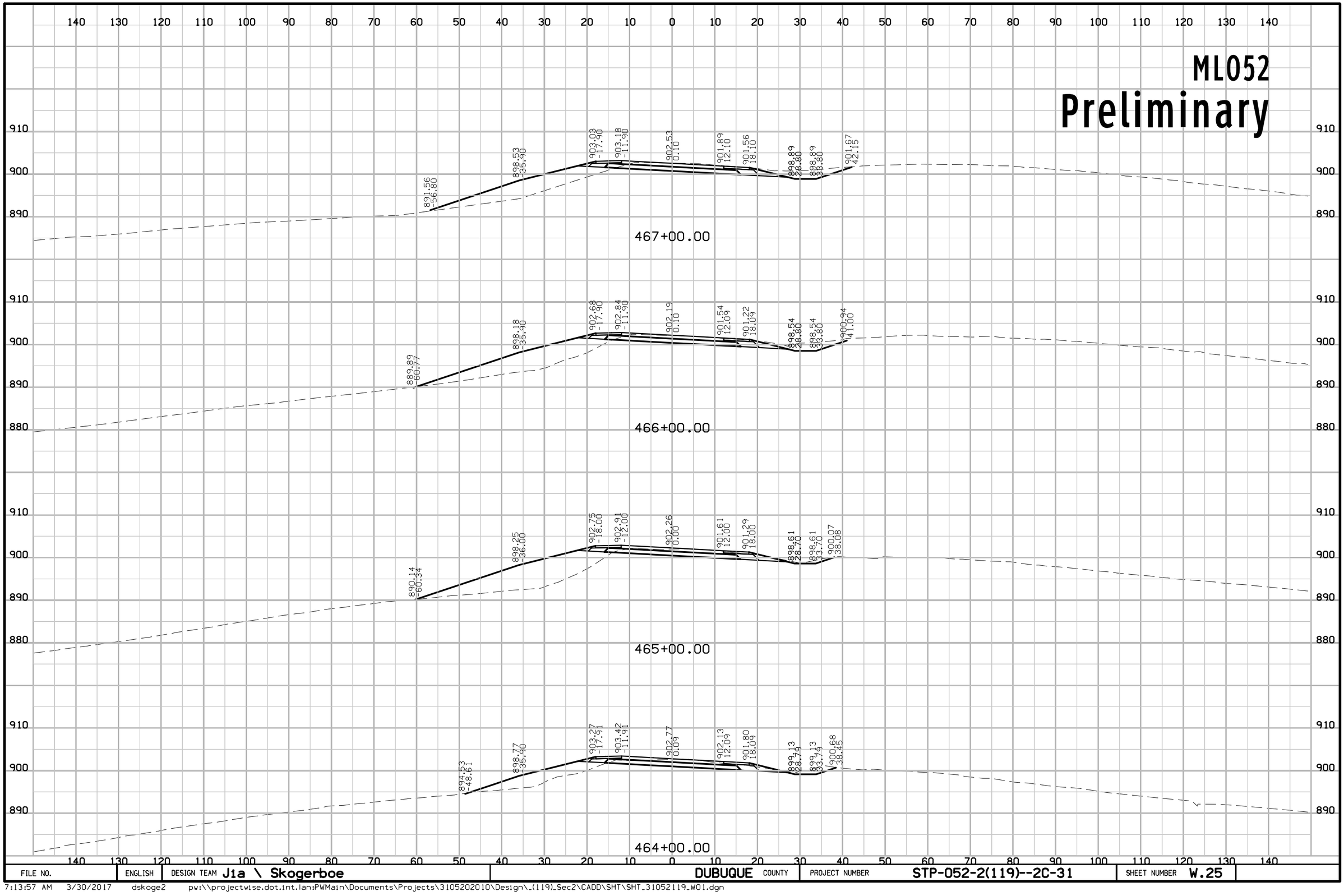
ML052

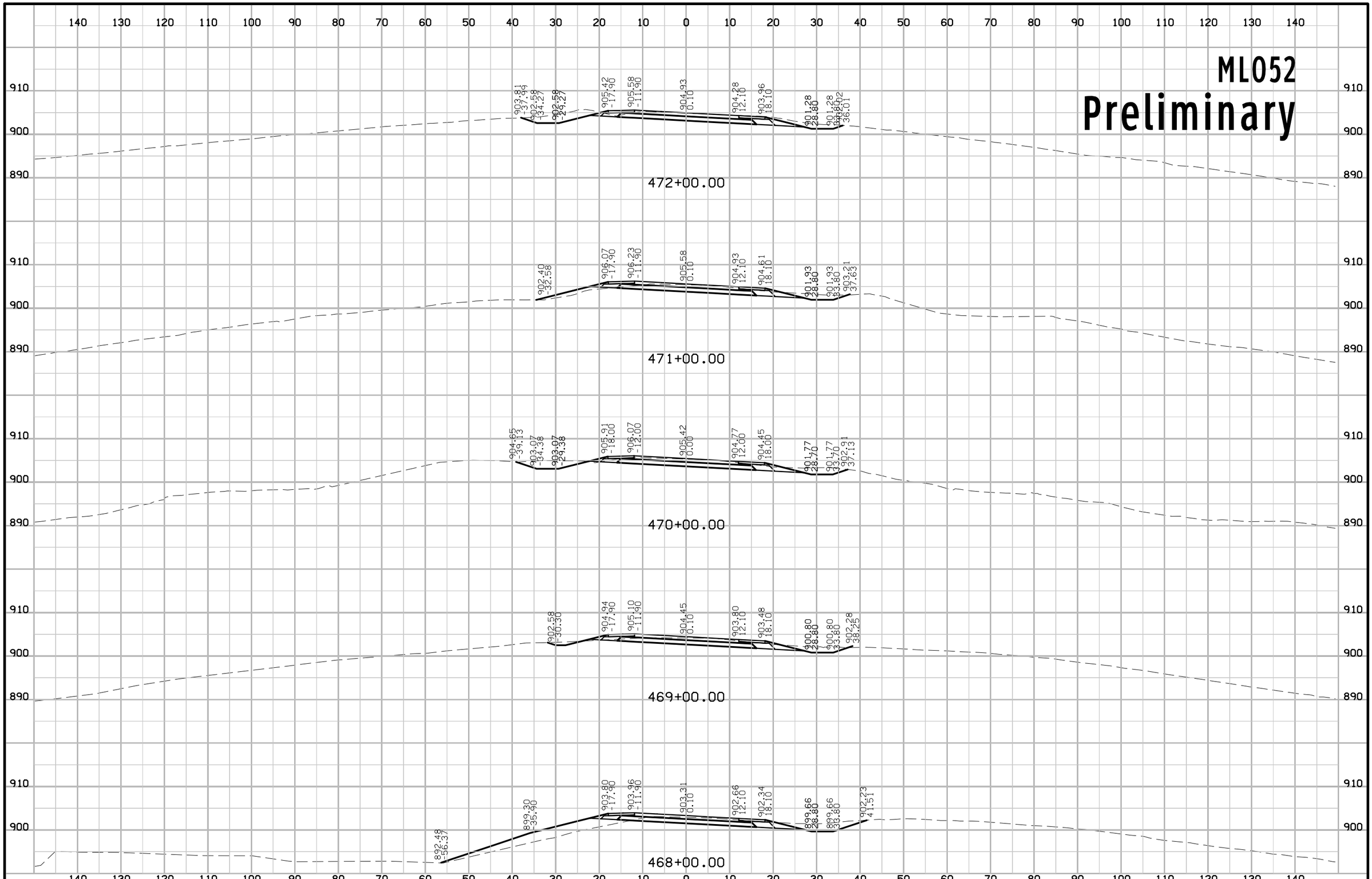
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.25

7:13:57 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM **J1a \ Skogerboe**	DUBUQUE COUNTY	PROJECT NUMBER **STP-052-2(119)--2C-31**	SHEET NUMBER **W.26**

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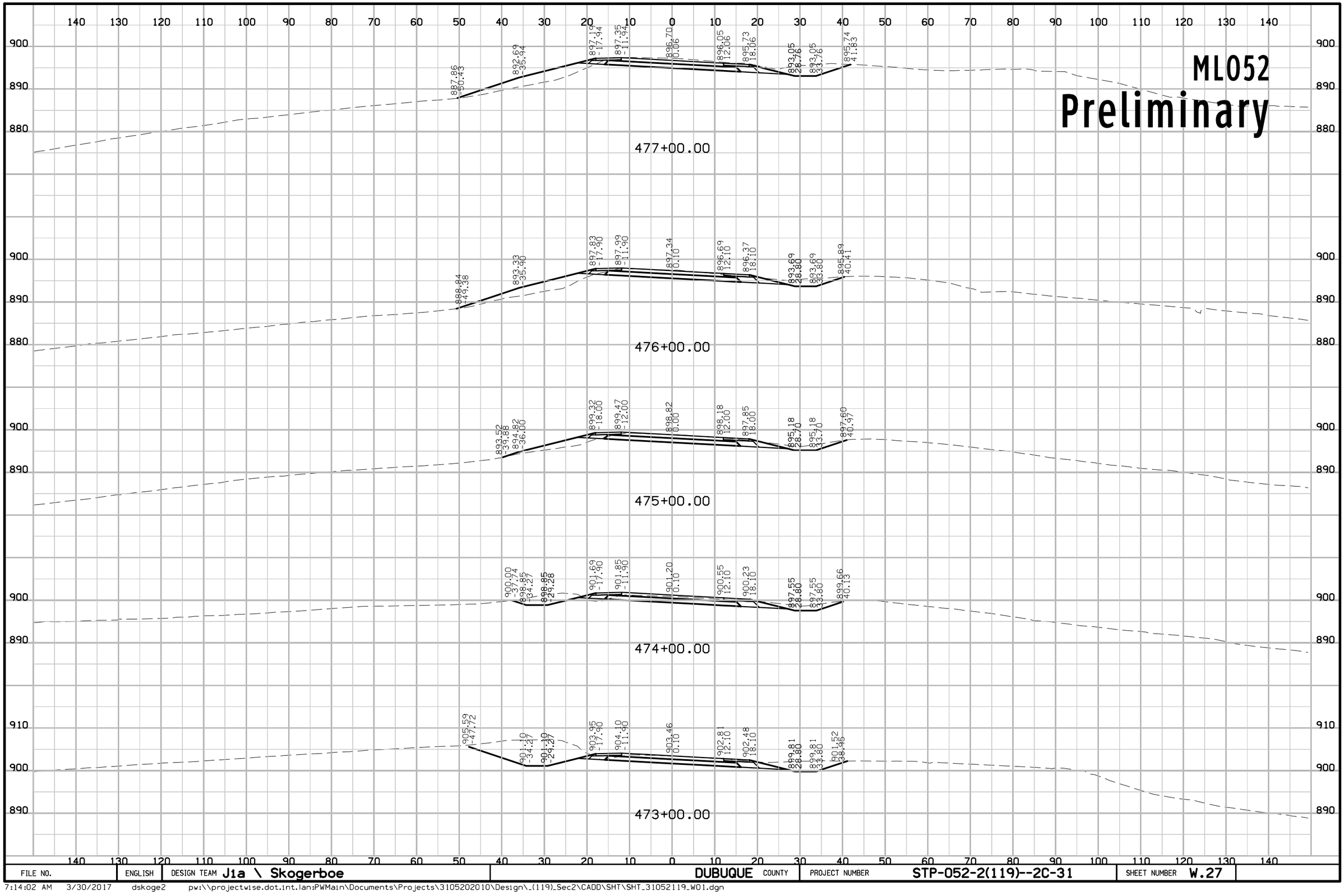
ML052

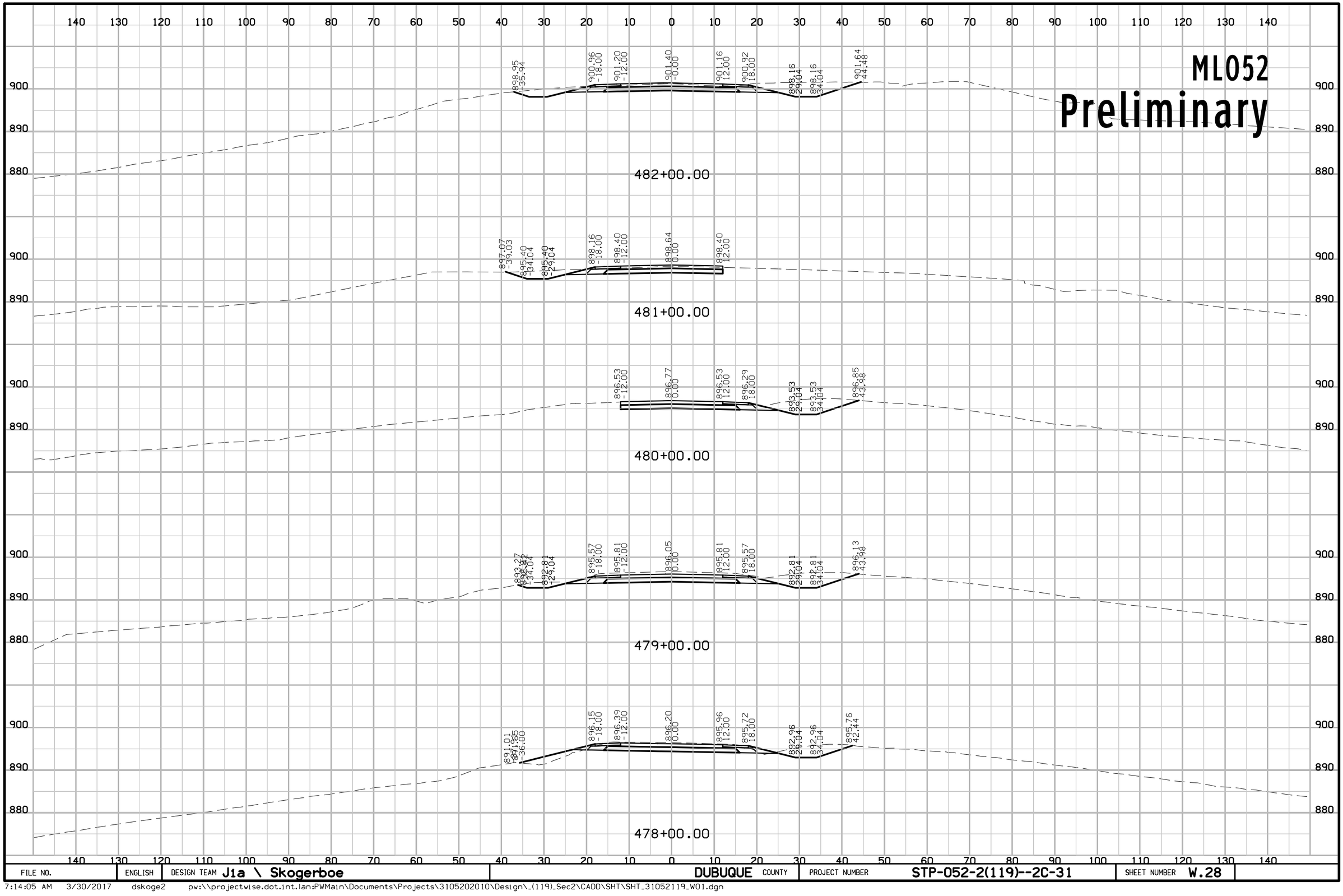
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.27

7:14:02 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.28

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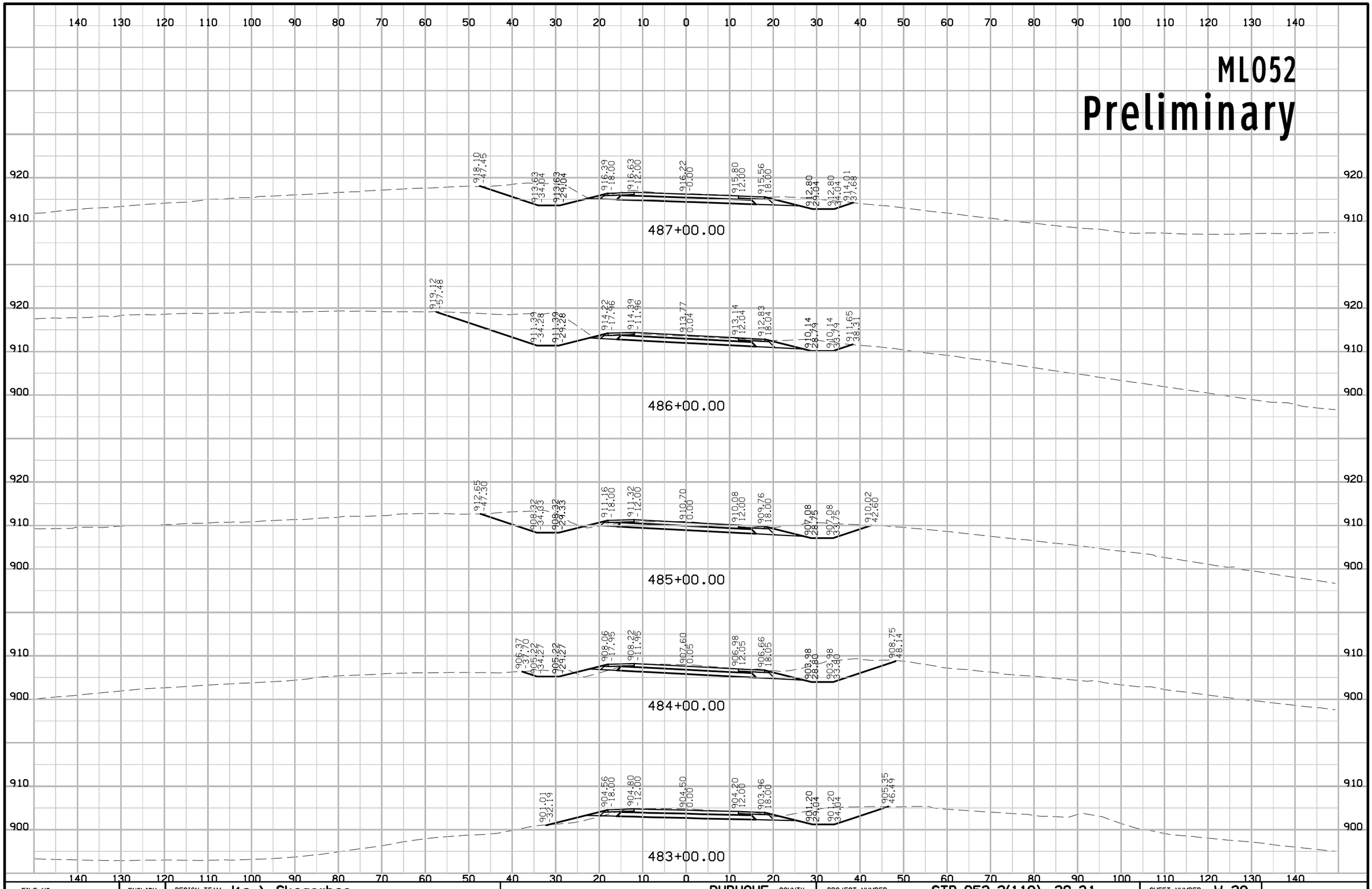
ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.29

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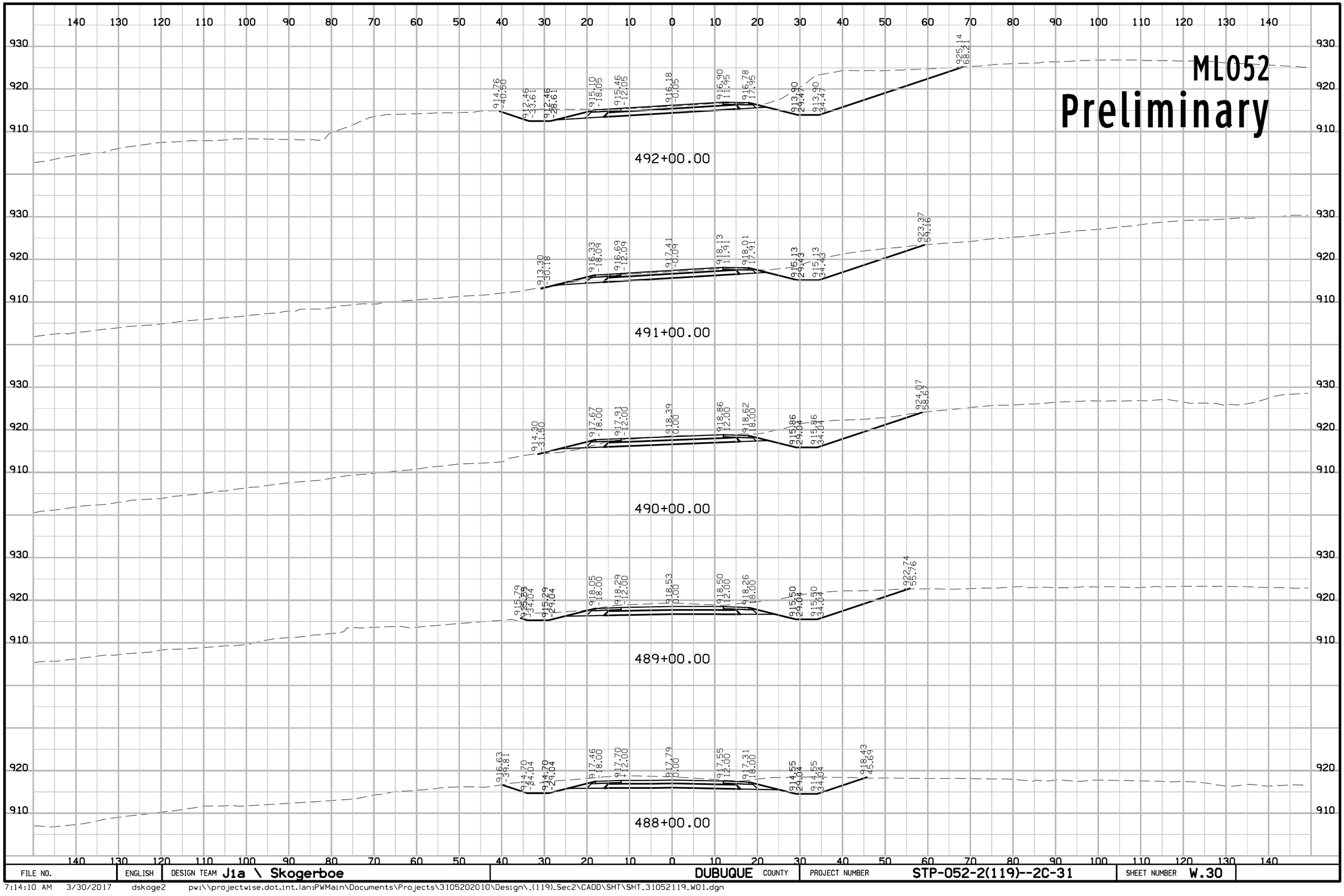
ML052
Preliminary



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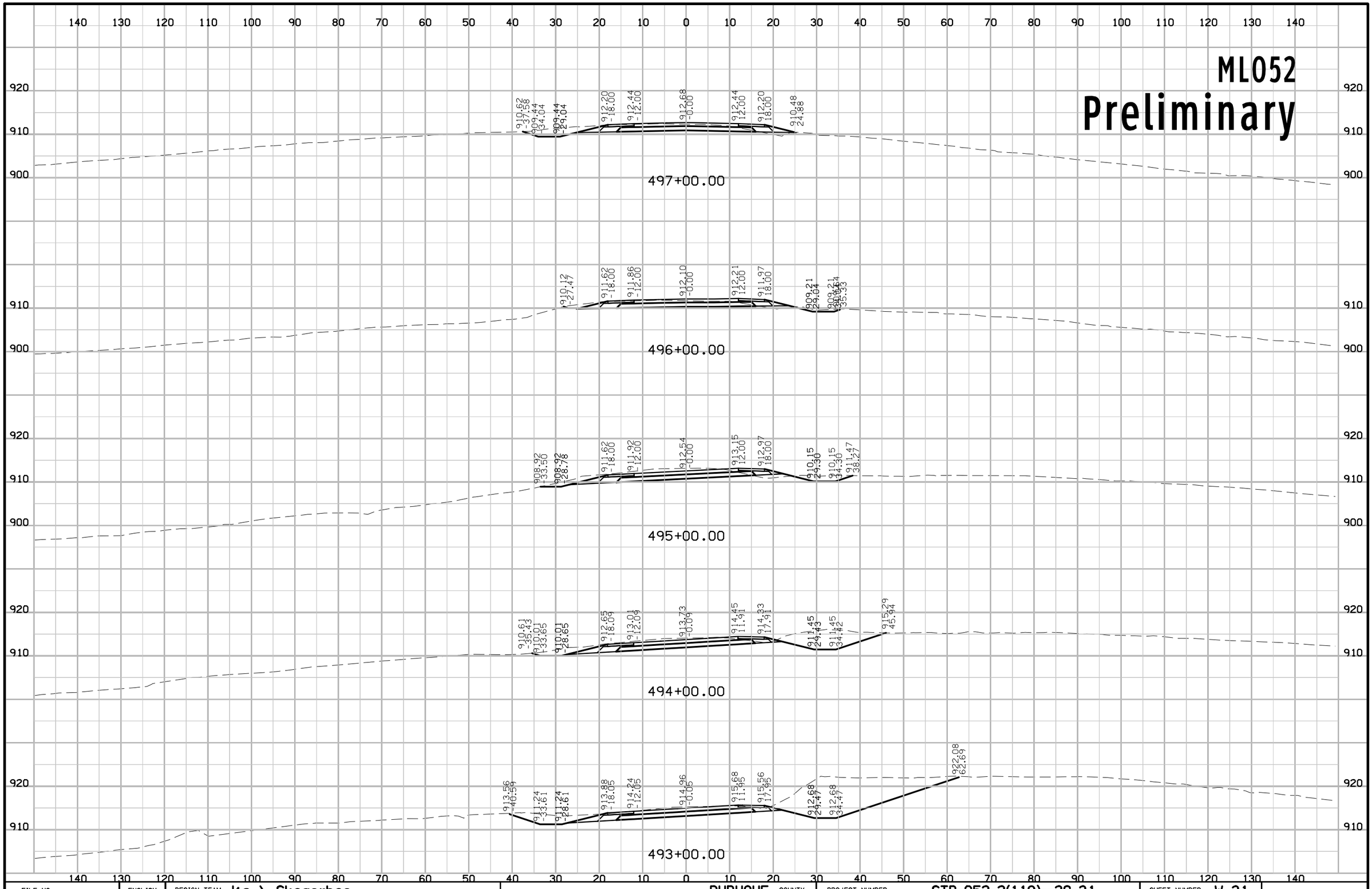
ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.31

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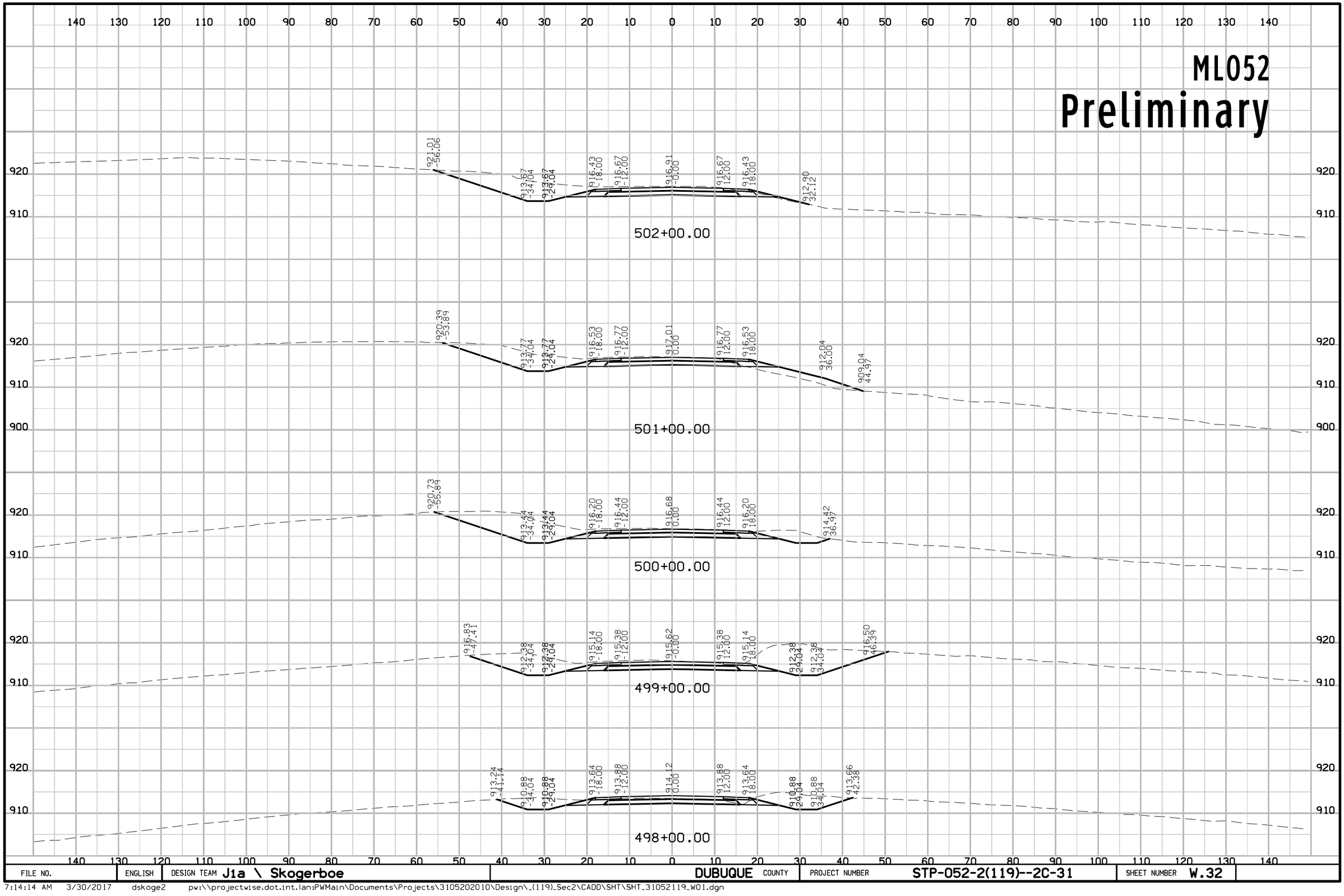
ML052

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.32

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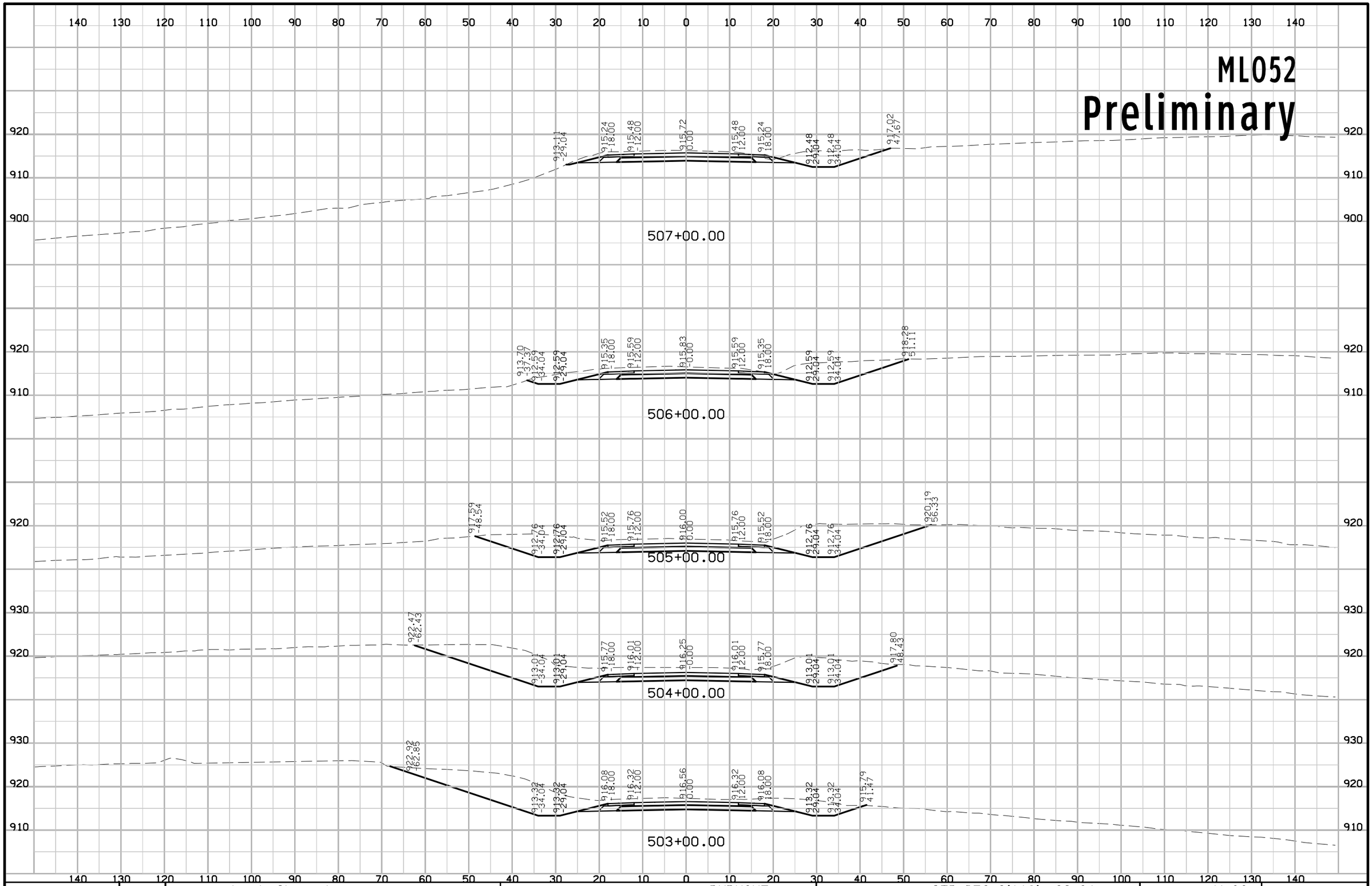
ML052

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.33

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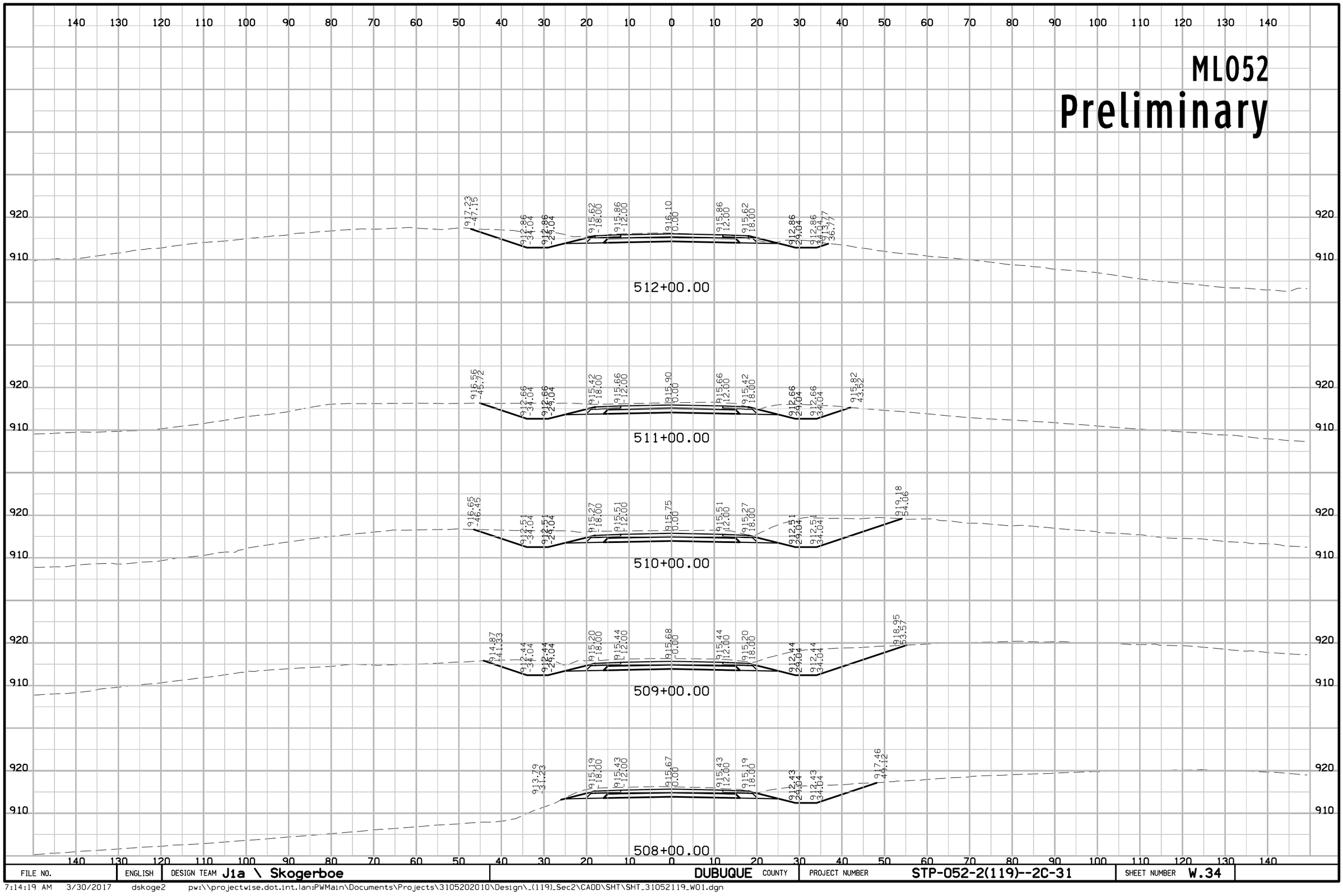
ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.34

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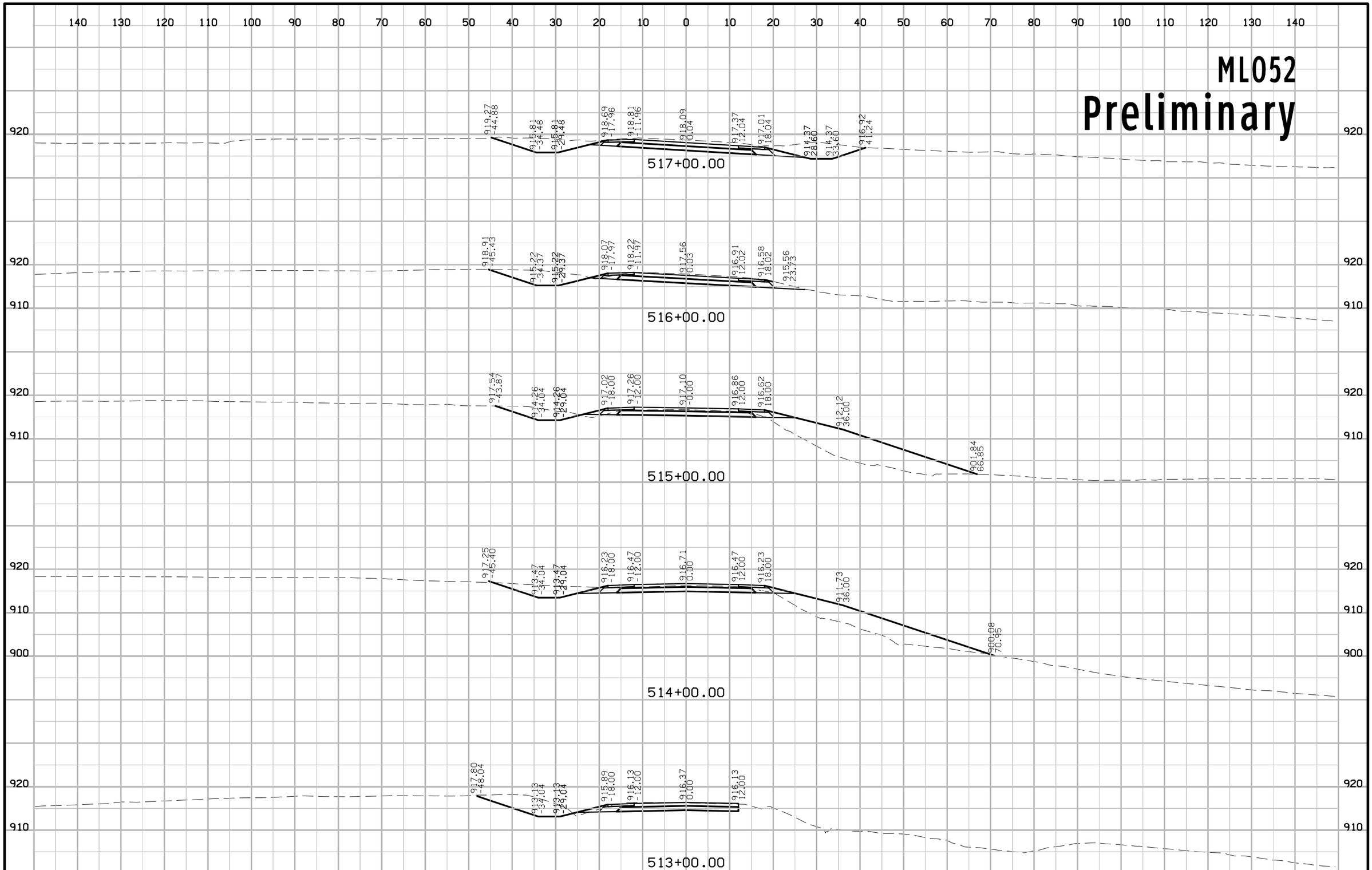
ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.35

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ML052
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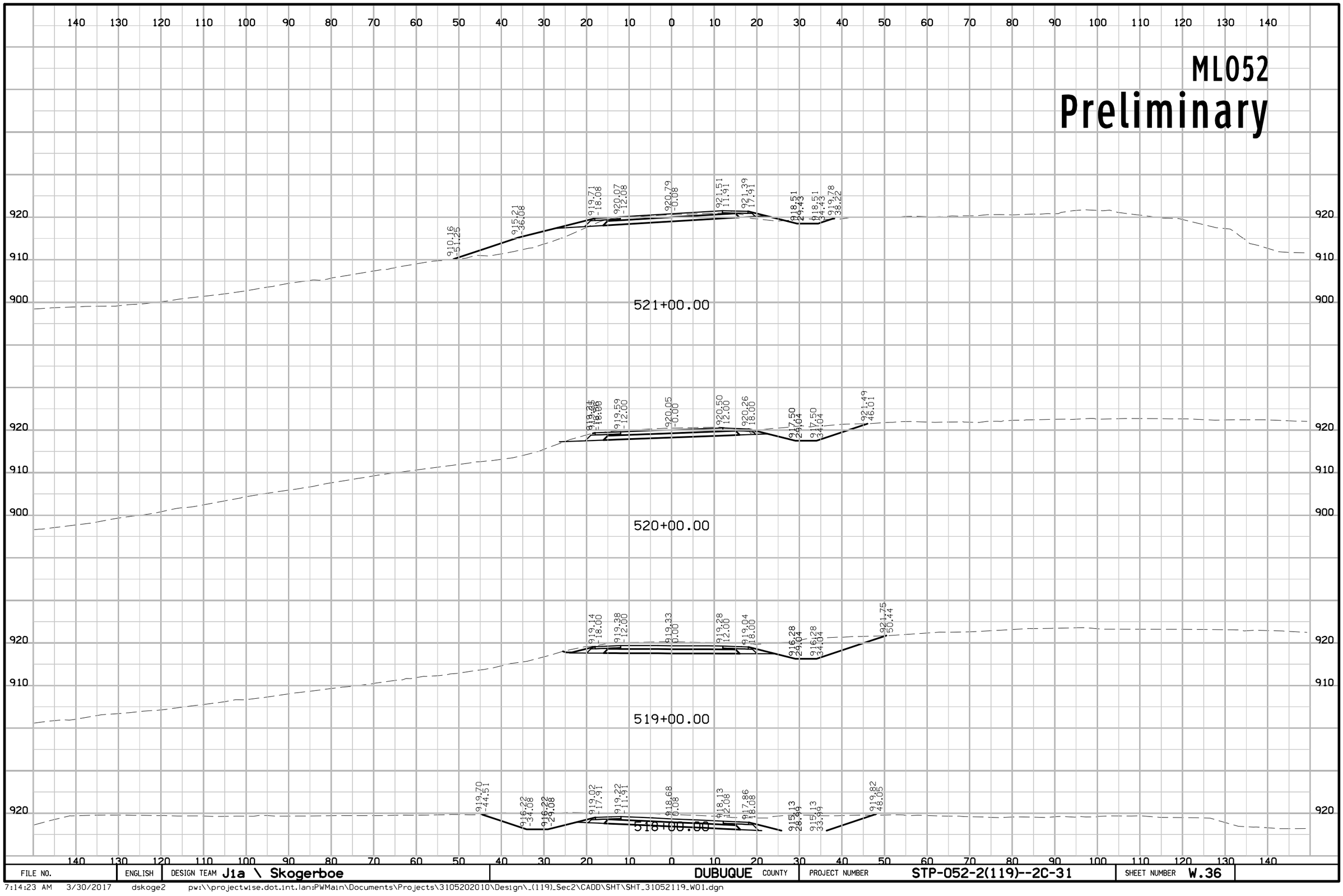

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.36

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ML052
Preliminary

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FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.37	

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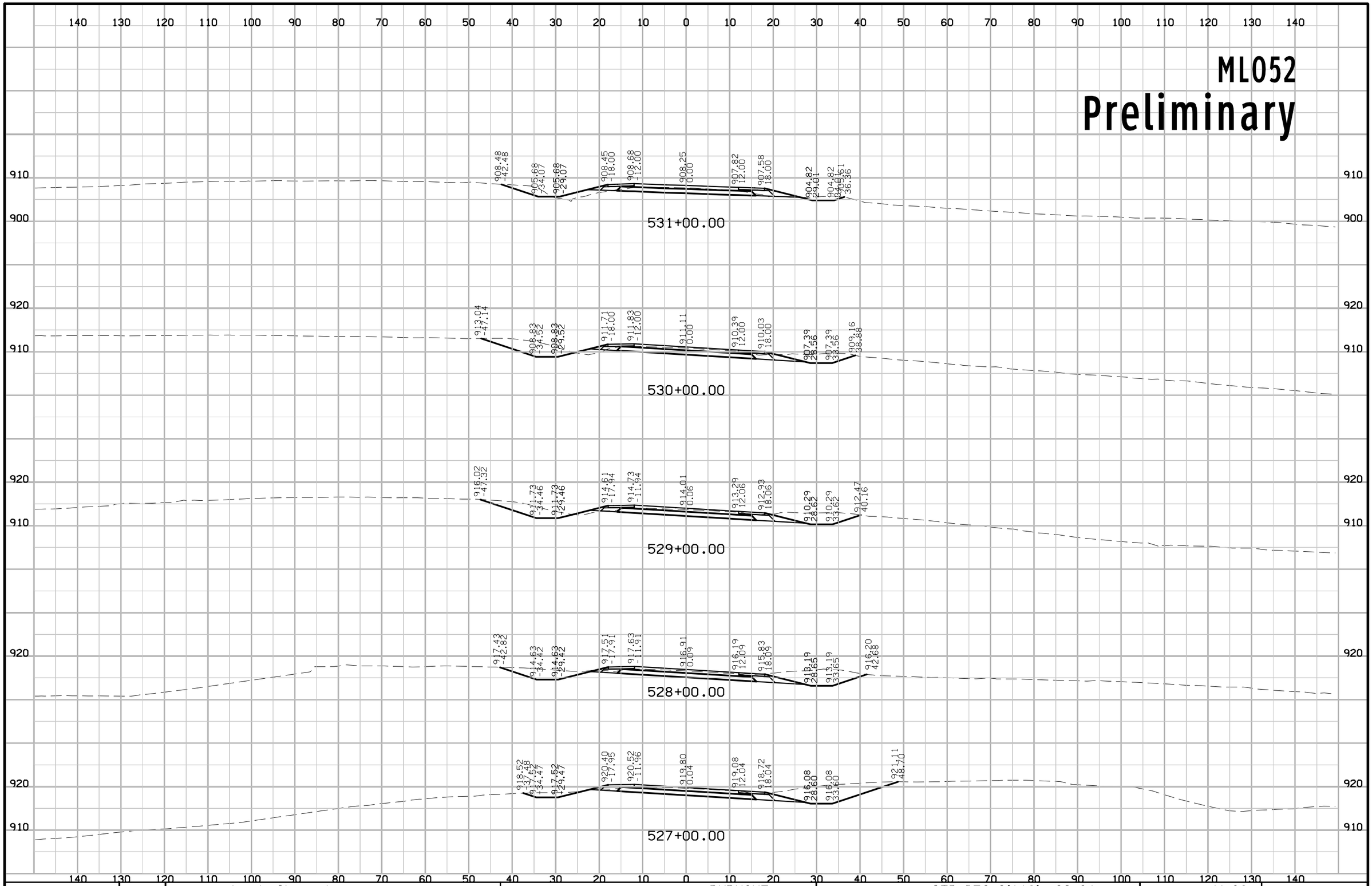
ML052

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.38

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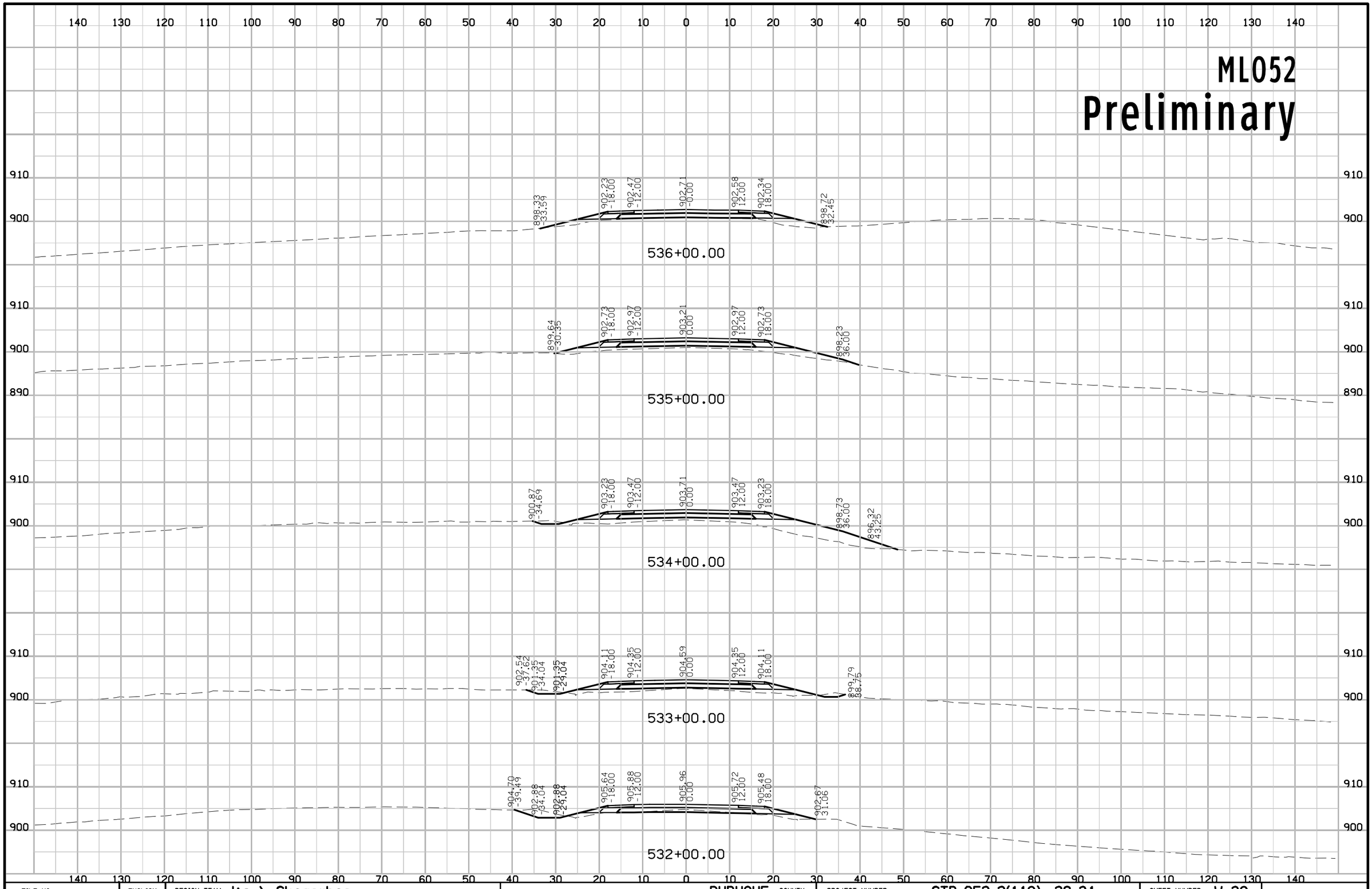
ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.39

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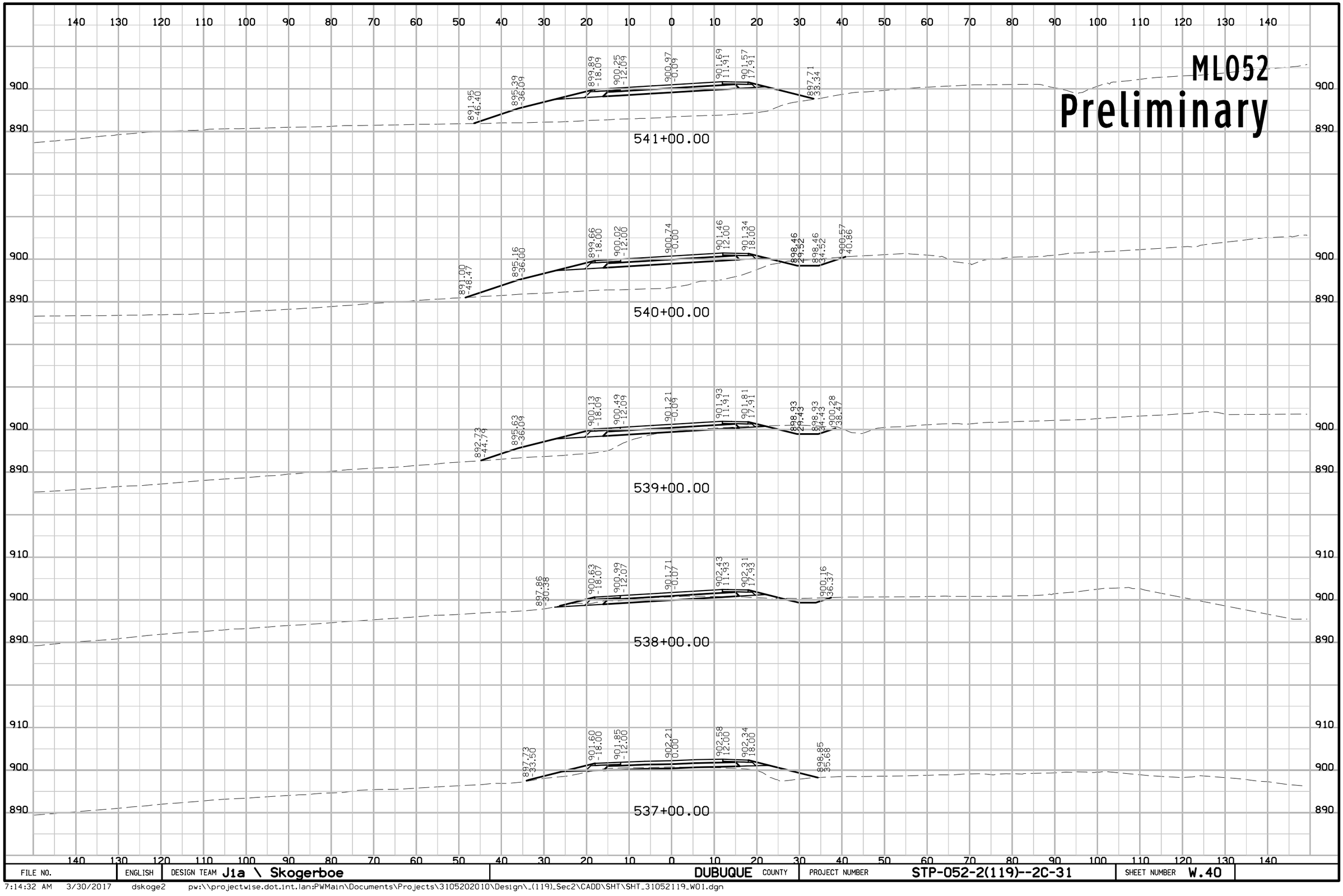
ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.40

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ML052

Preliminary

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543+00.00

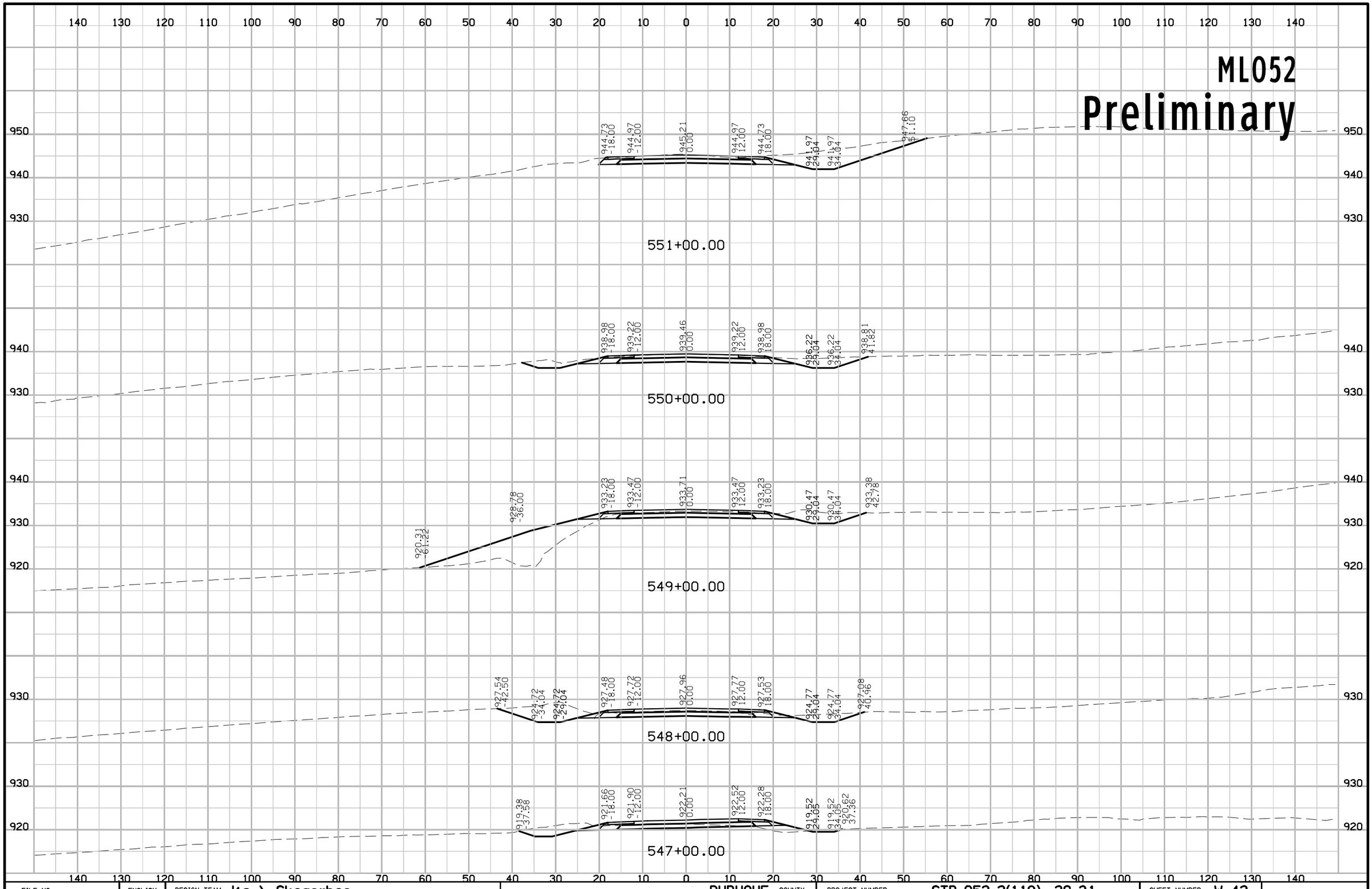
542+00.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.41

7:14:34 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.42

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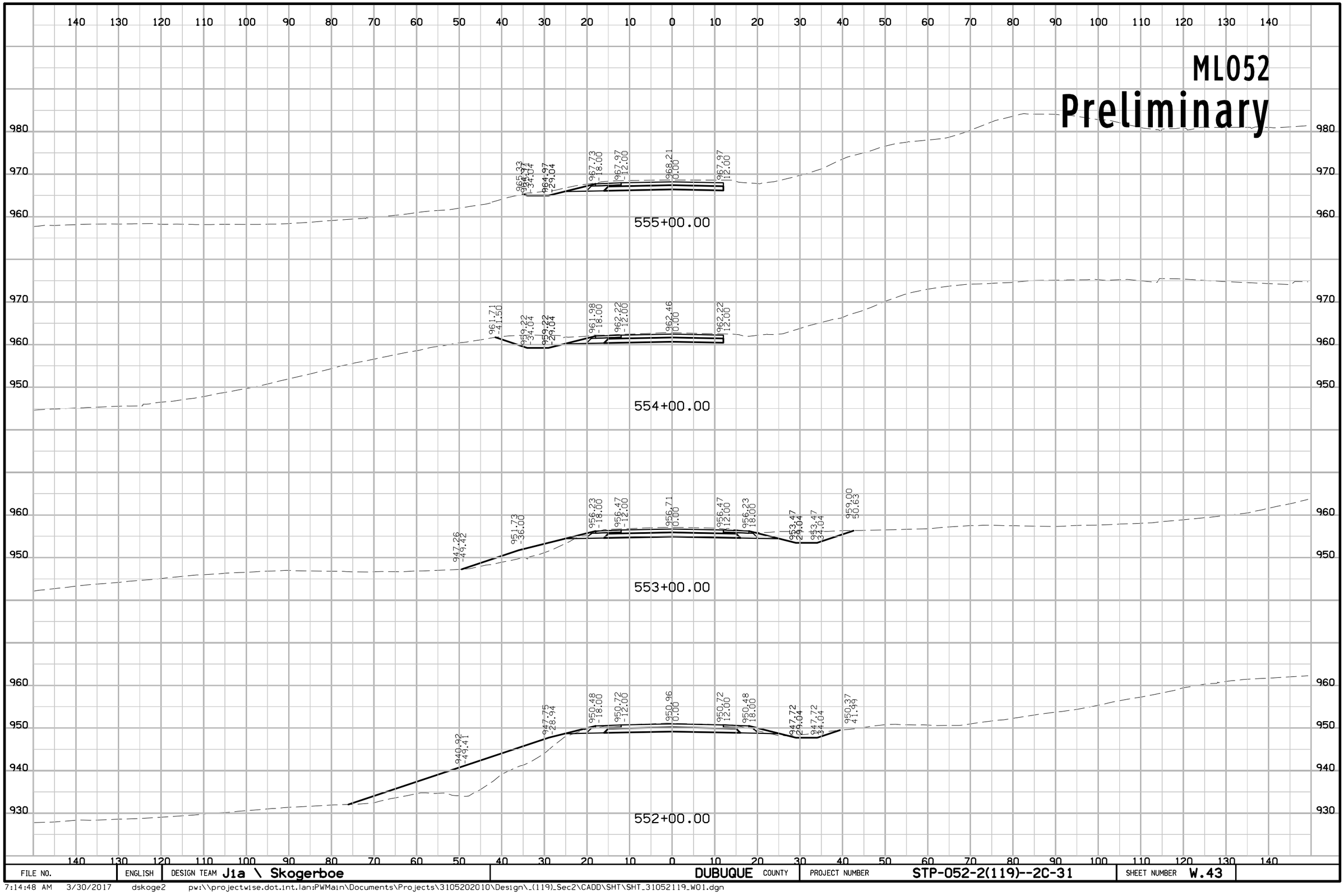
ML052

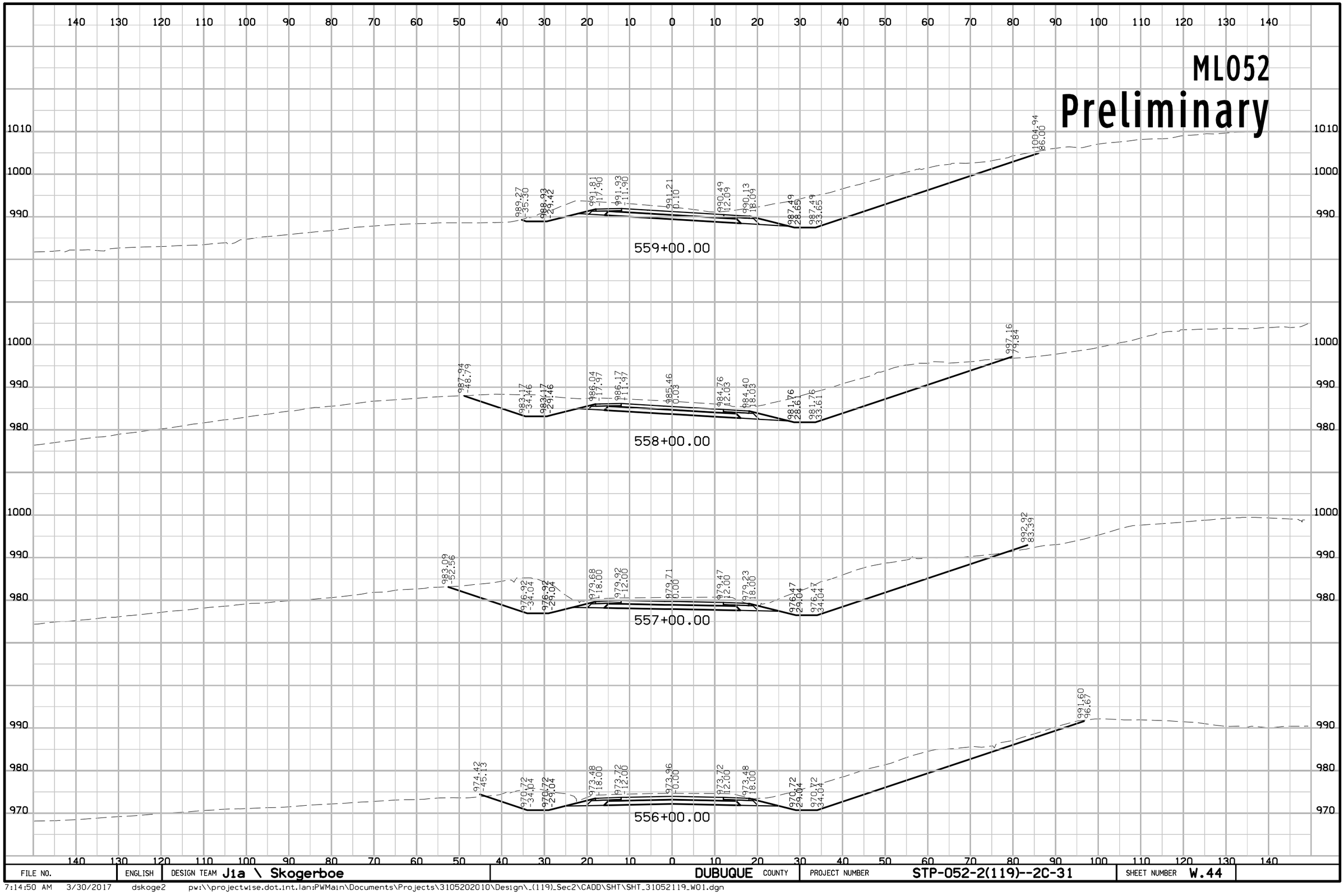
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.43

7:14:48 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052
Preliminary

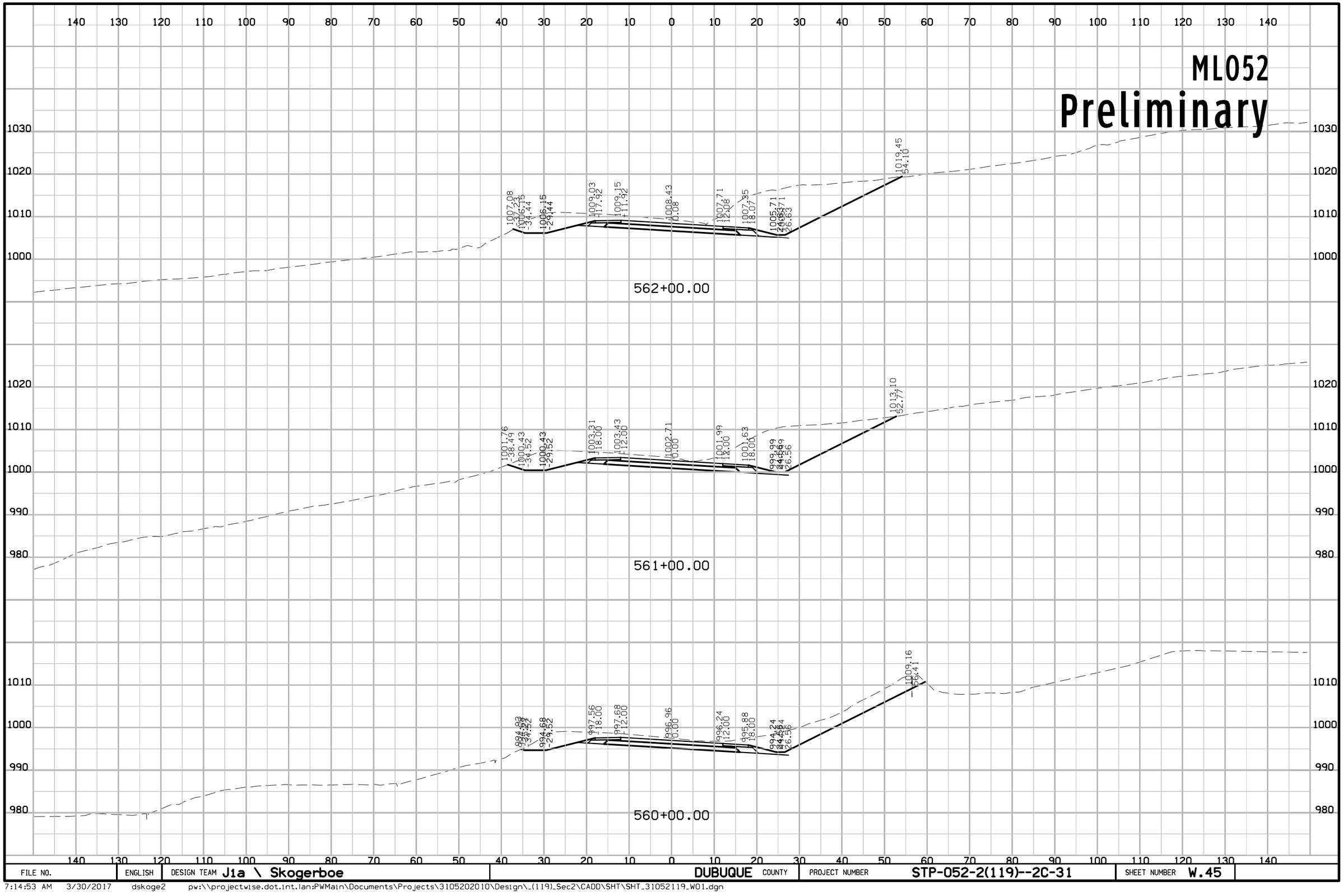


FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.44

7:14:50 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052

Preliminary

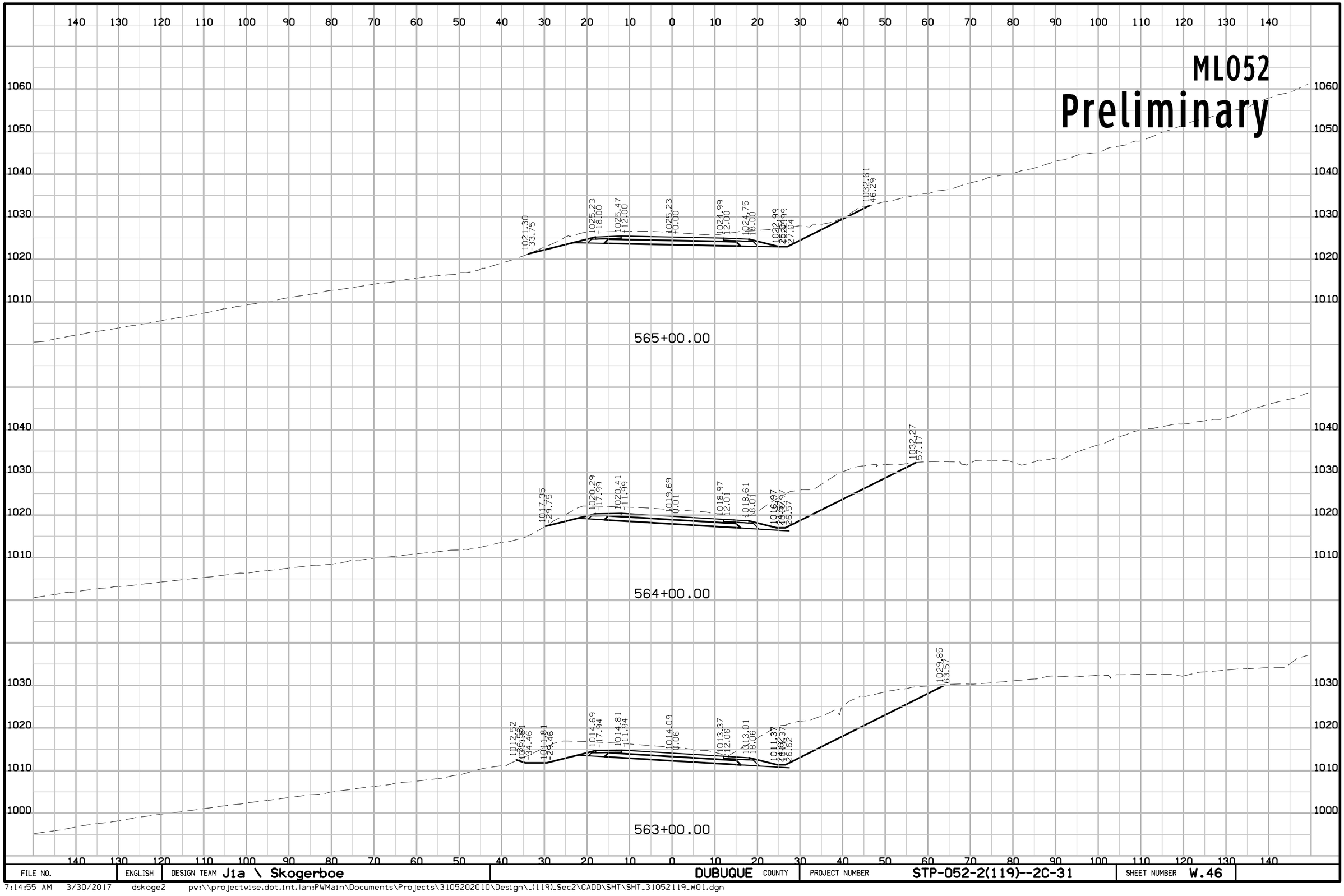


FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.45

7:14:53 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052

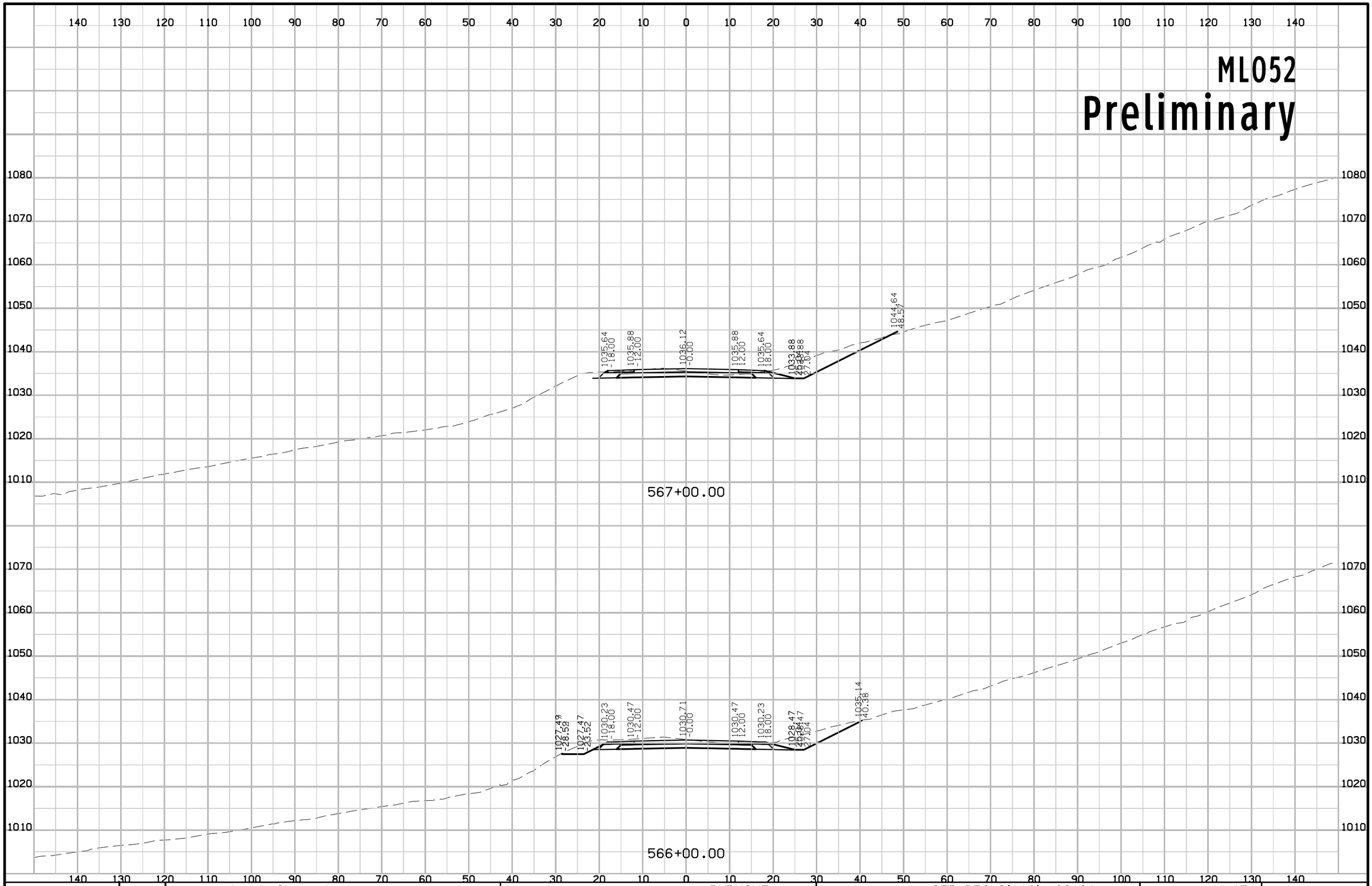
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.46

7:14:55 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052
Preliminary

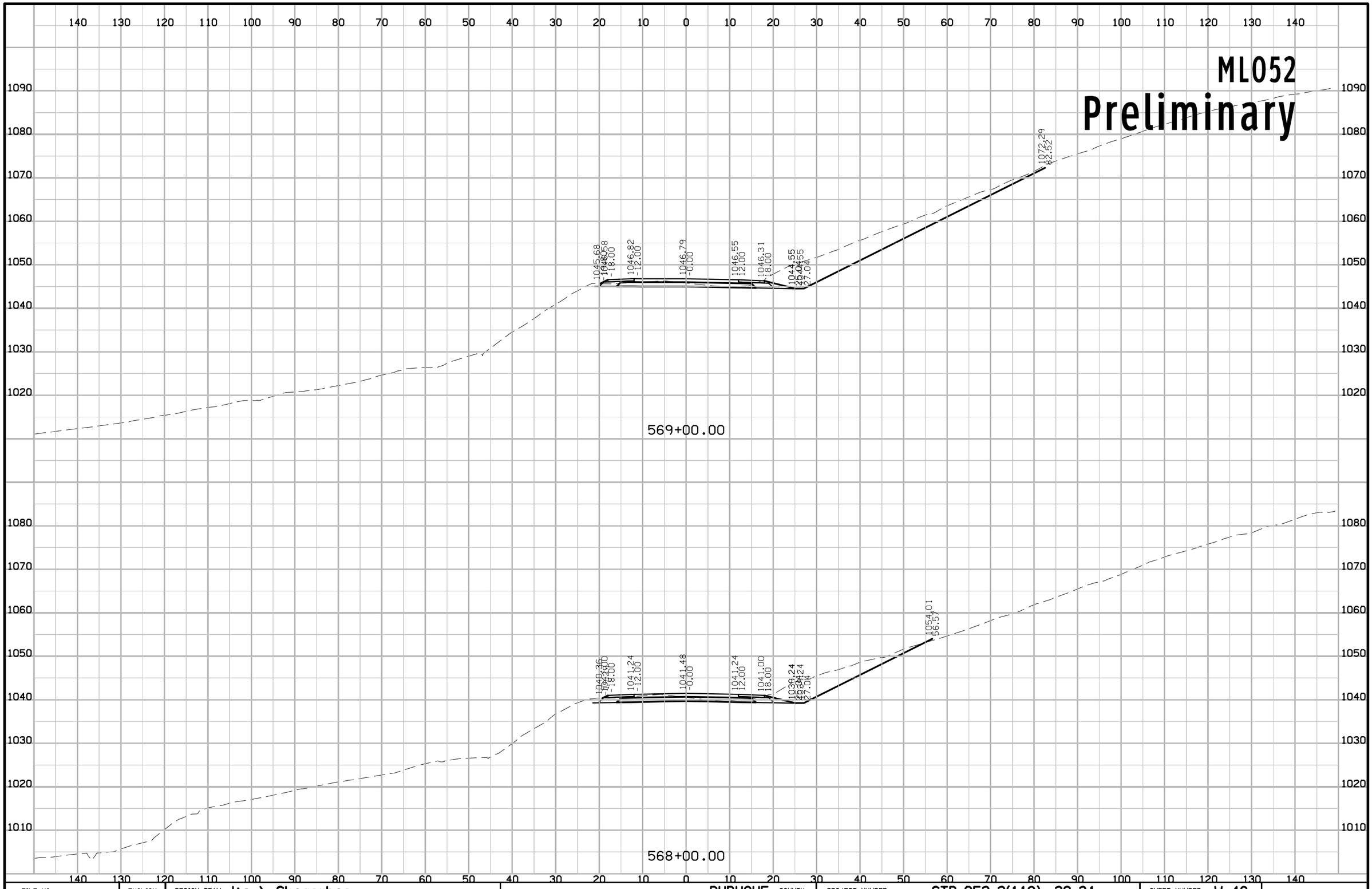


FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.47

7:14:58 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052

Preliminary

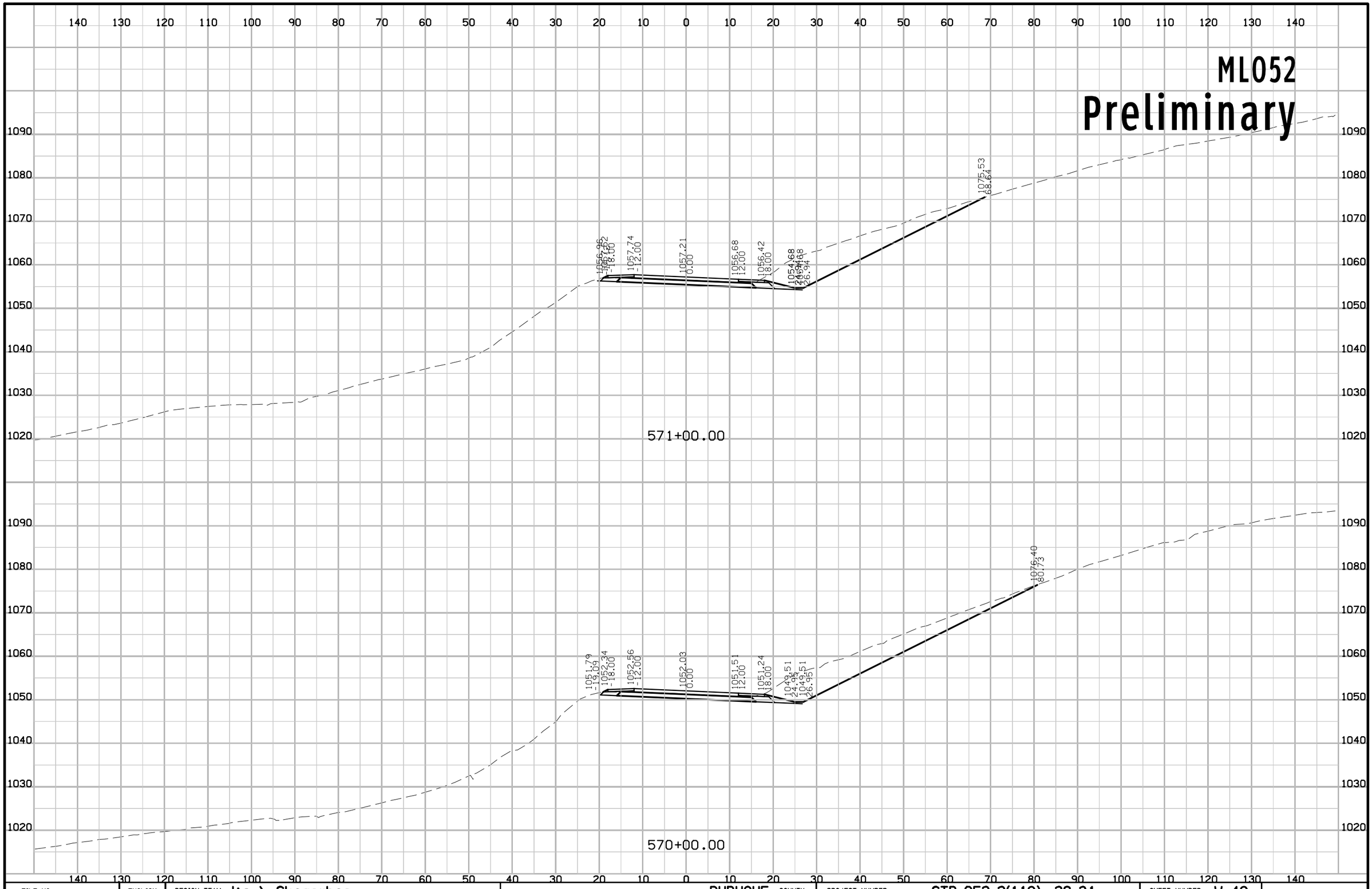


FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.48

7:15:01 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052

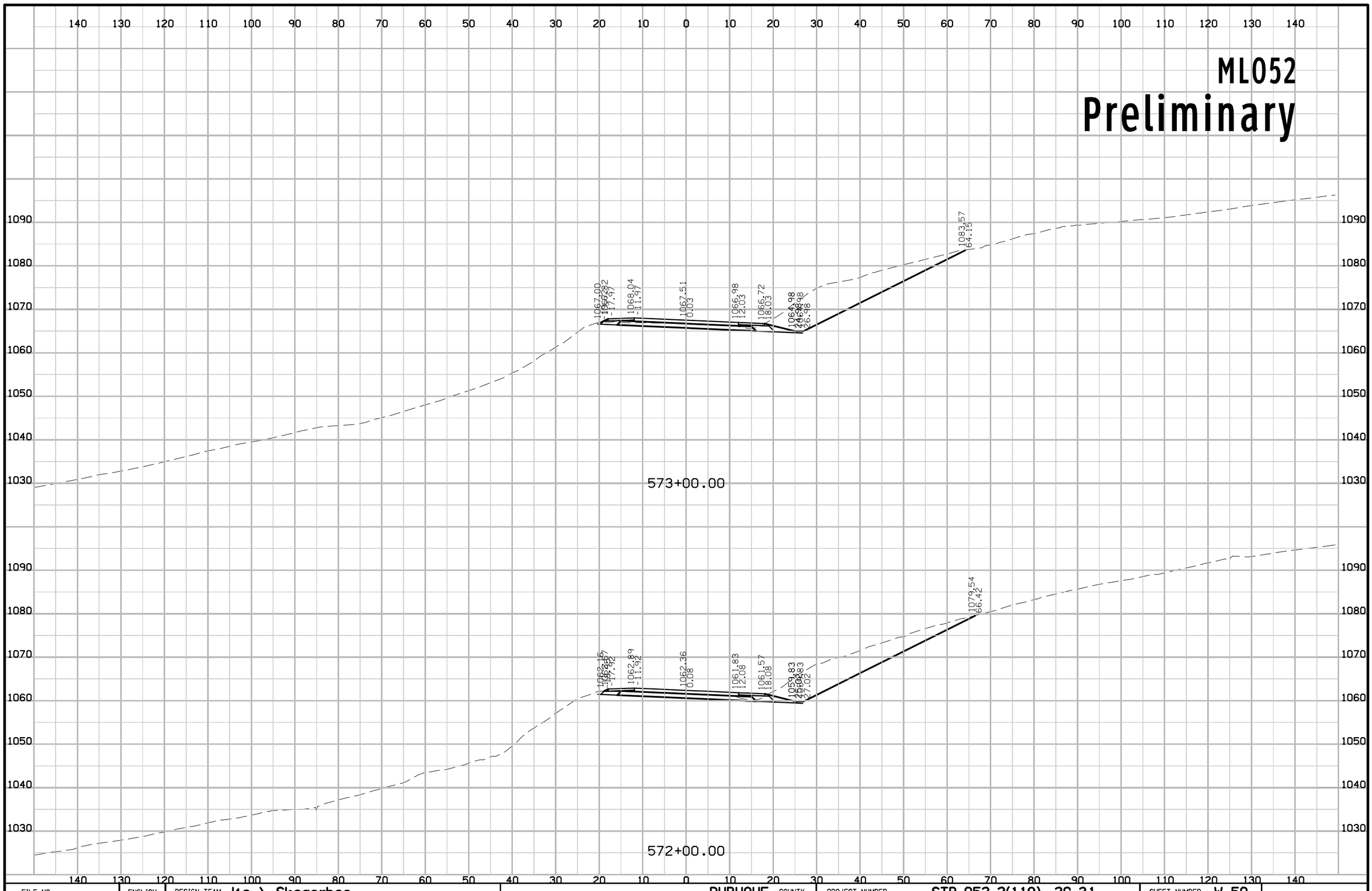
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.49

7:15:03 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

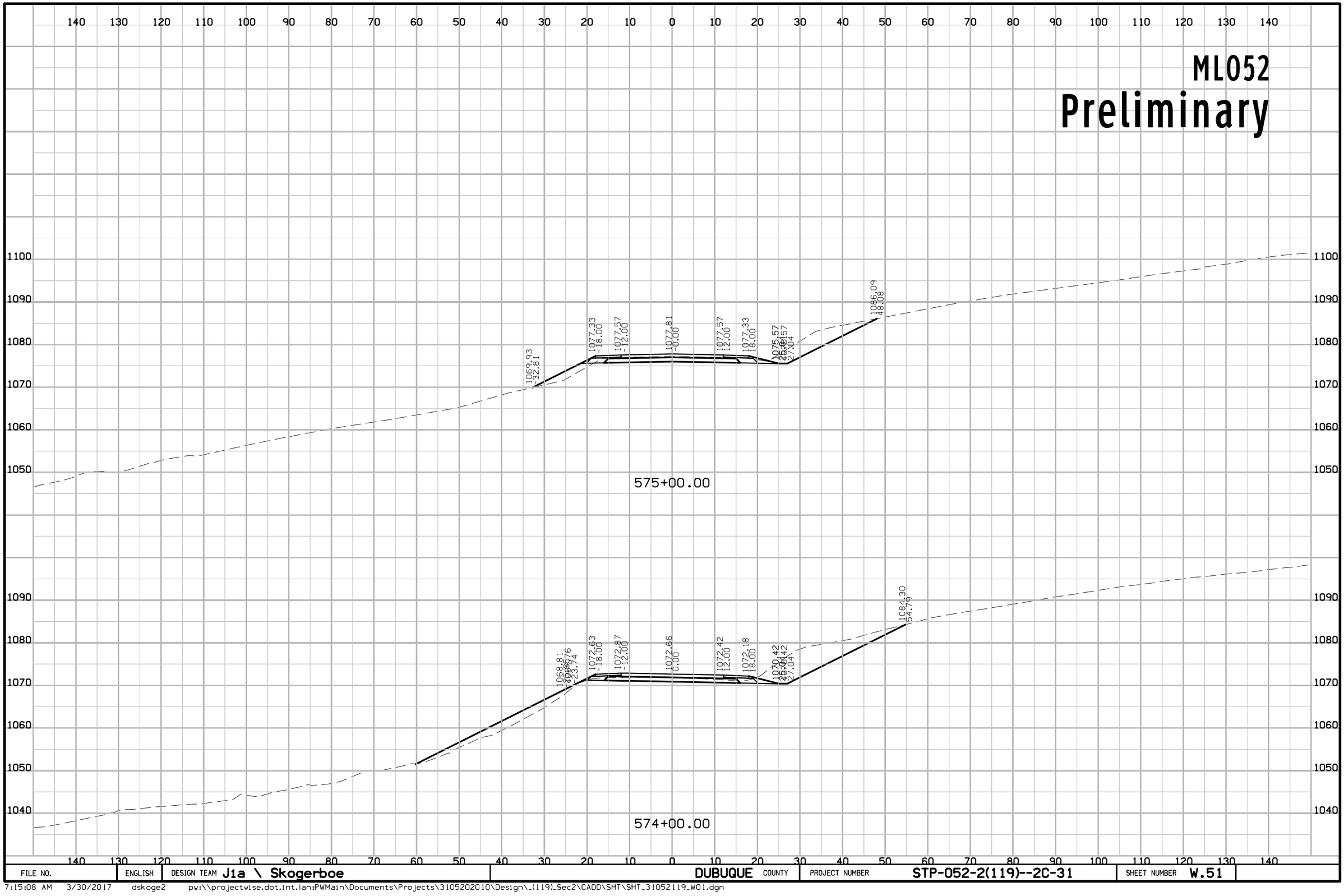
ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.50

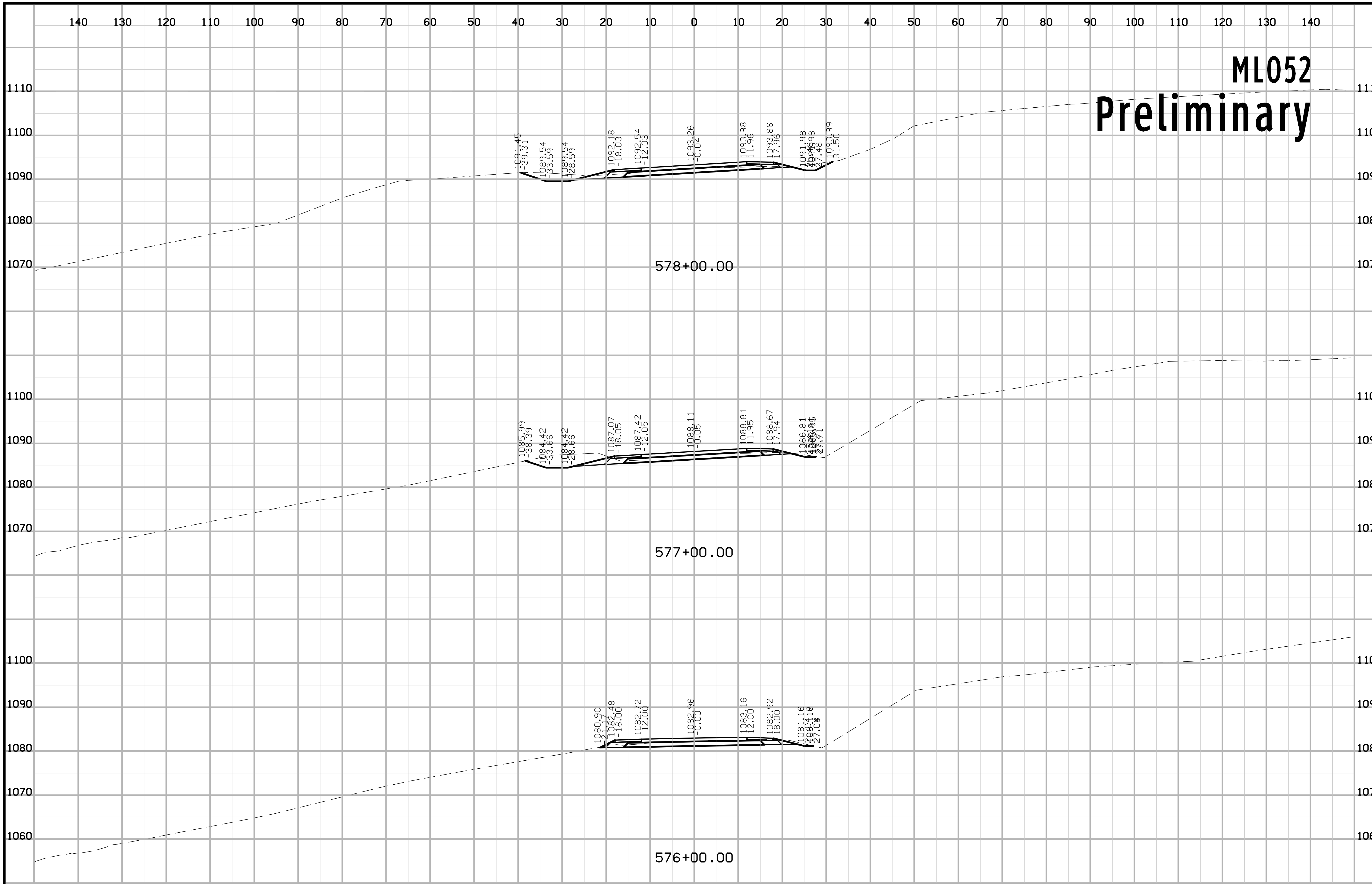
7:15:06 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.51

7:15:08 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn



ML052
Preliminary
140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140
1110
1100
1090
1080
1070
1060
1091.45 -39.31
1089.54 -33.59
1089.54 -28.59
1092.18 -18.03
1092.54 -12.03
1093.26 -0.04
1093.98 11.96
1093.86 17.96
1091.98
1093.99 31.50
578+00.00
1085.99 -38.39
1084.42 -33.66
1084.42 -28.66
1087.07 -18.05
1087.42 -12.05
1088.11 -0.05
1088.81 11.95
1088.67 17.94
1086.81
577+00.00
1080.90 -21.17
1082.48 -18.00
1082.72 -12.00
1082.96 -0.00
1083.16 12.00
1082.92 18.00
1081.16
576+00.00

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.52

7:15:11 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052

Preliminary

584+00.00

583+00.00

582+00.00

581+00.00

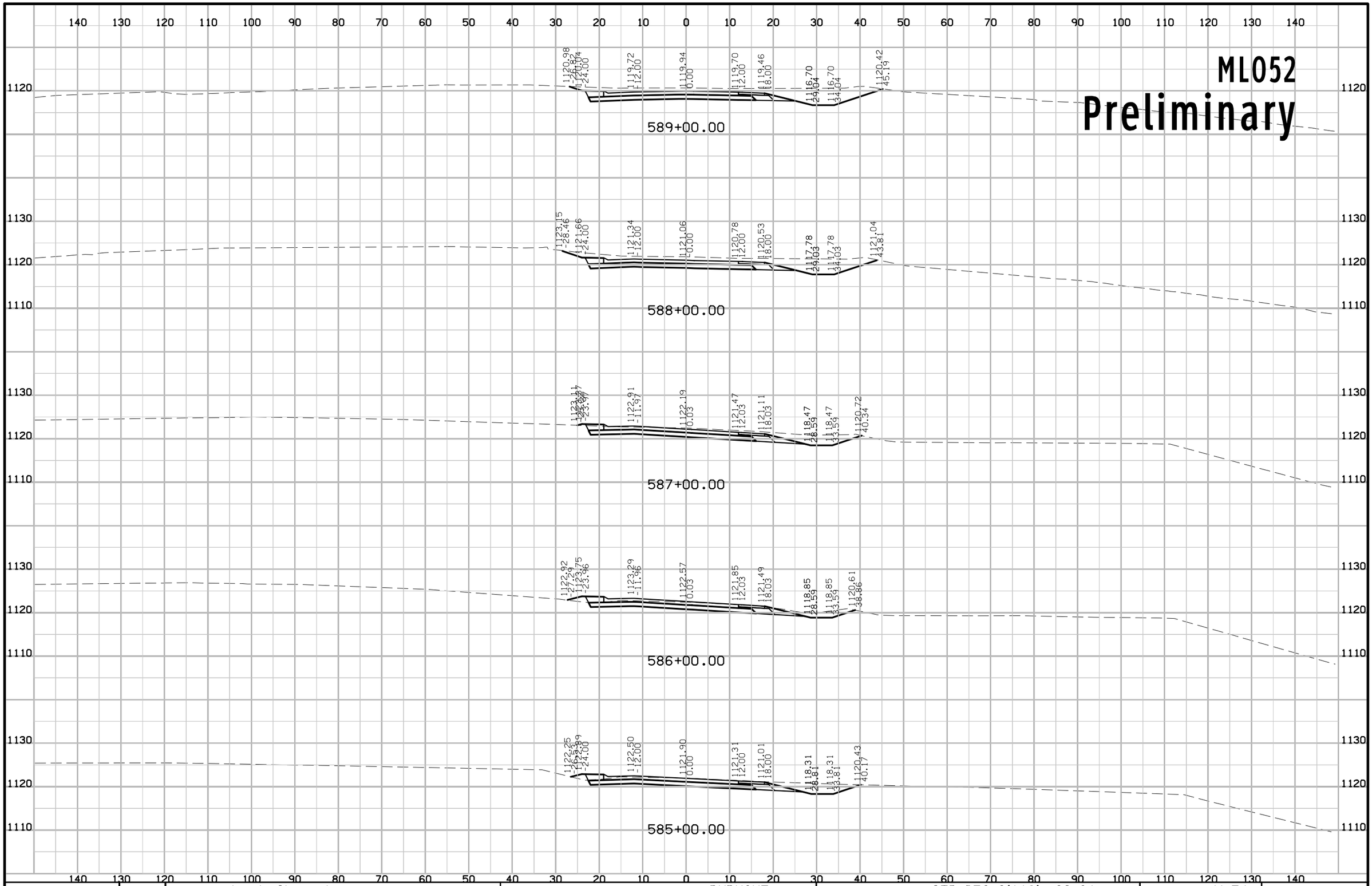
580+00.00

579+00.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.53

7:15:13 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

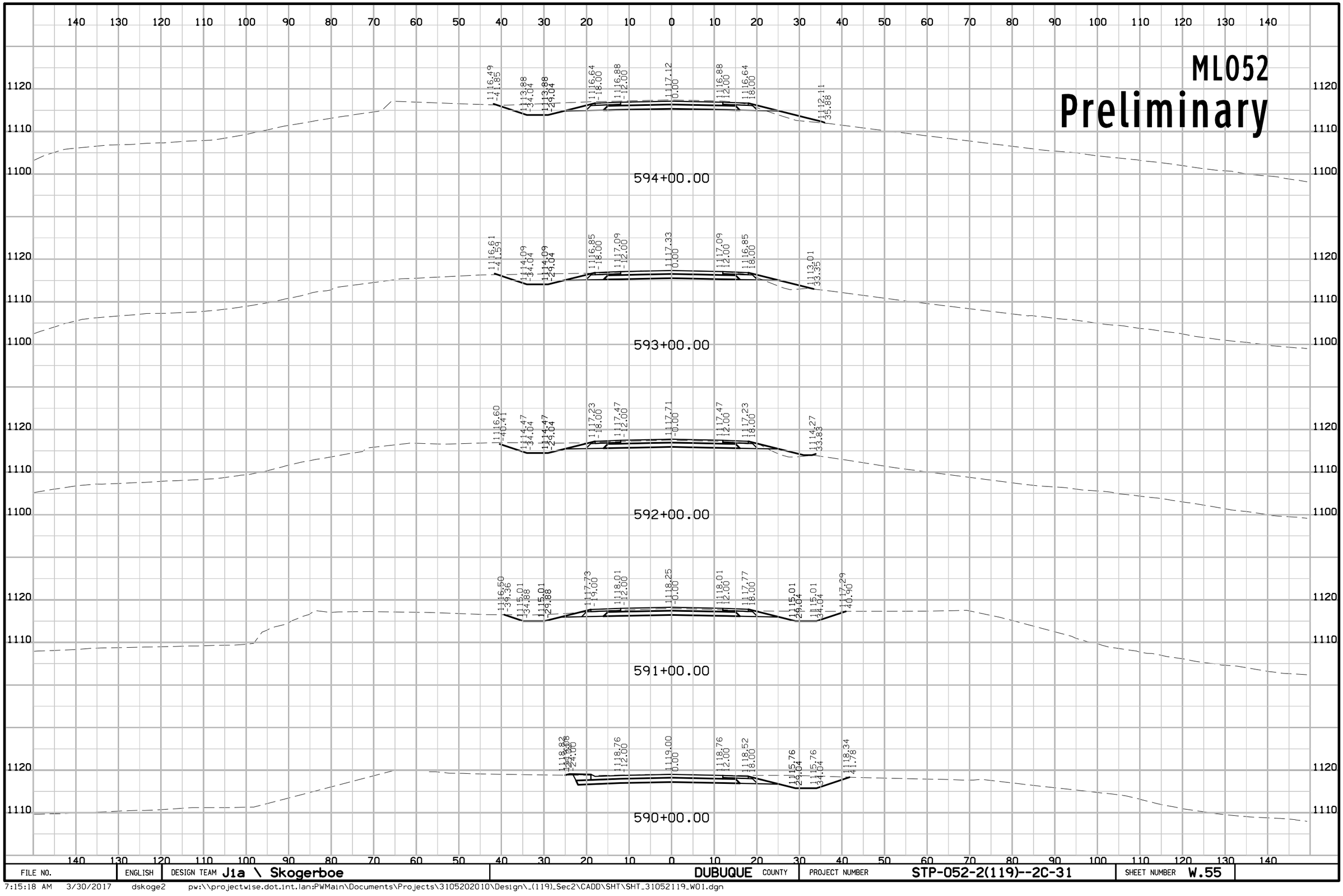
ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.54

7:15:16 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

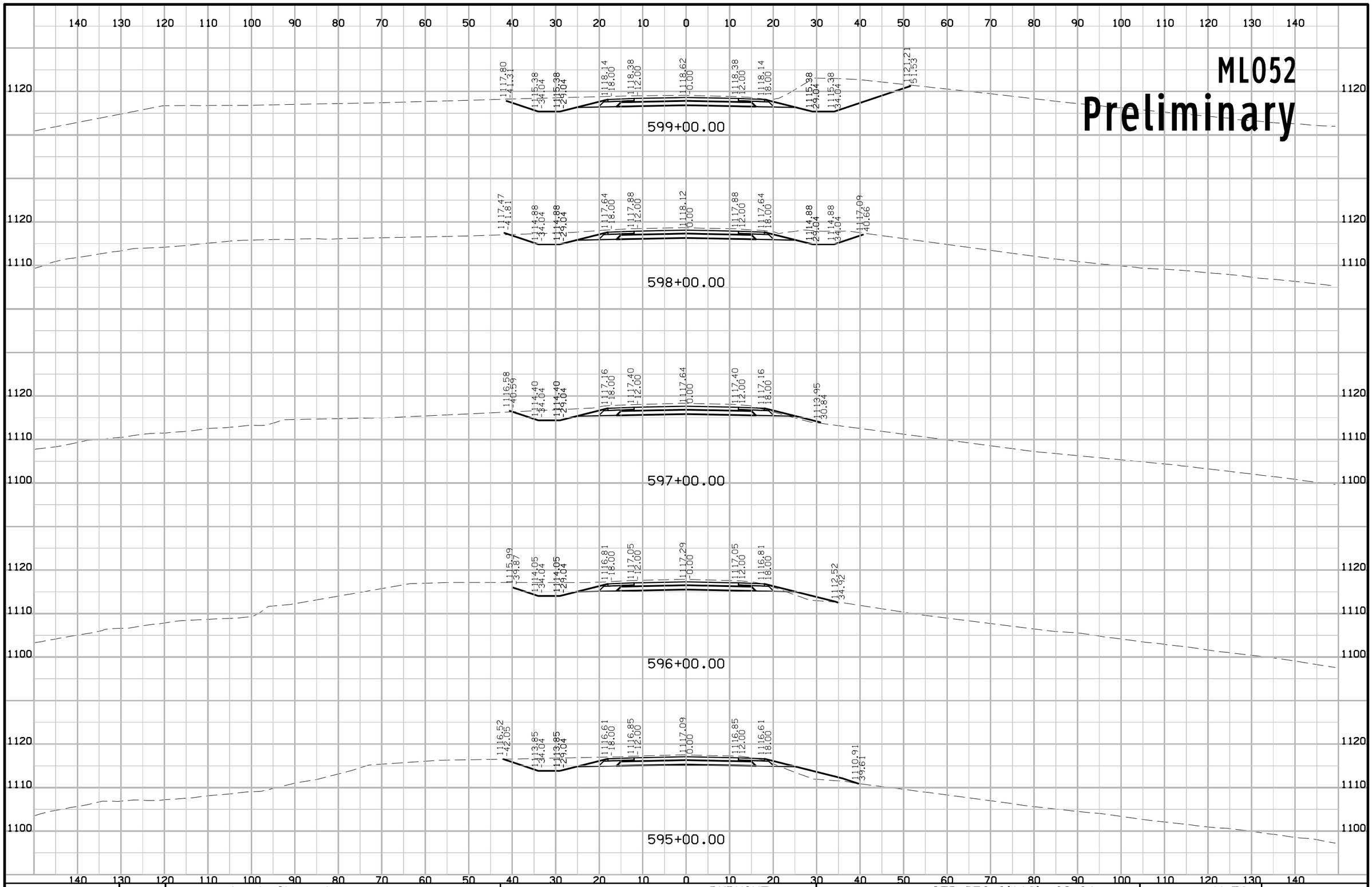
ML052
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.55

7:15:18 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\31052020010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052
Preliminary

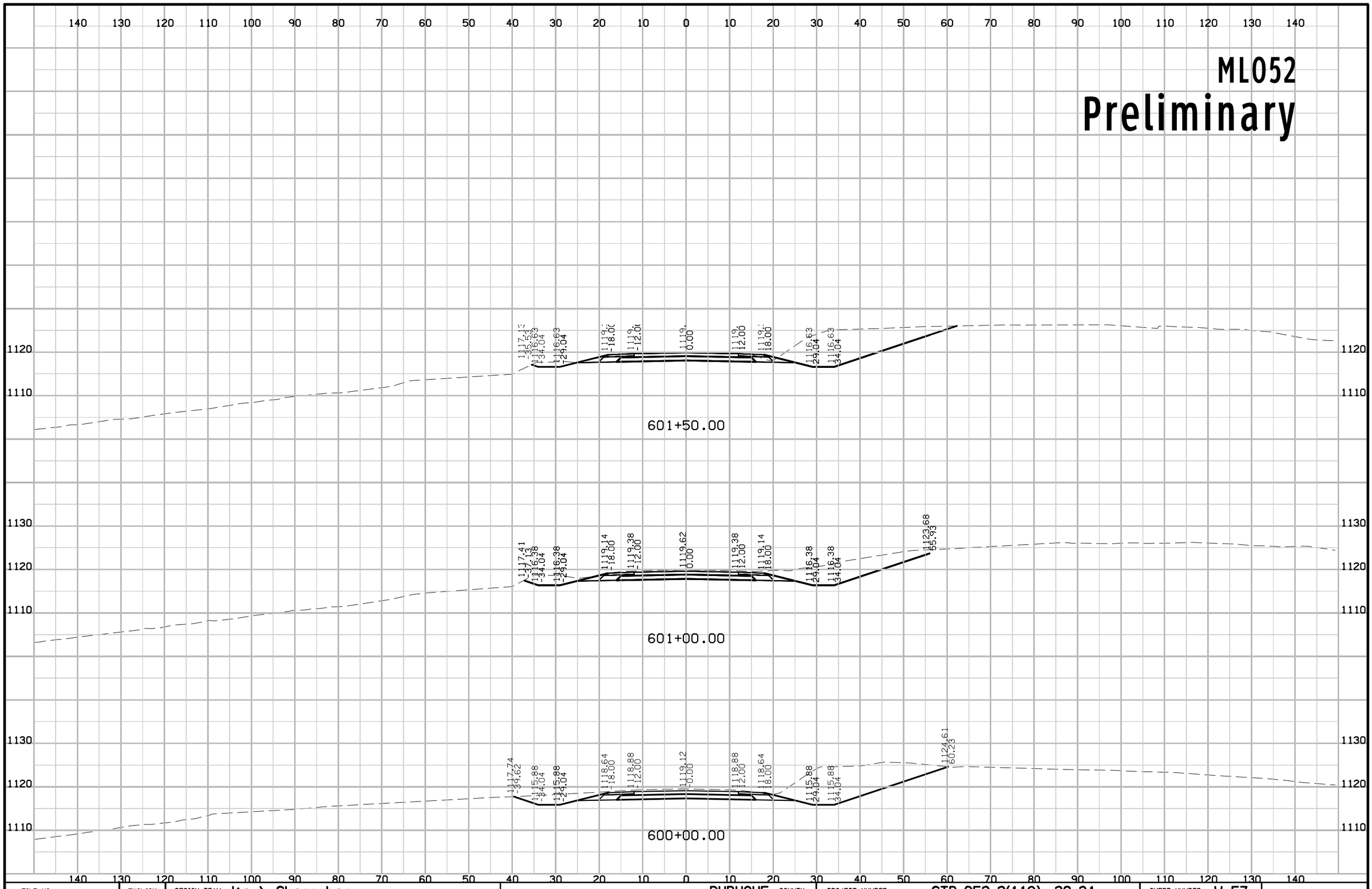


FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.56

7:15:21 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn

ML052

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Skogerboe	DUBUQUE COUNTY	PROJECT NUMBER STP-052-2(119)--2C-31	SHEET NUMBER W.57

7:15:24 AM 3/30/2017 dskoge2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(119)_Sec2\CADD\SHT\SHT_31052119_W01.dgn