IOWA DEPARTMENT OF TRANSPORTATION

TO OFFICE: District 3 **Date:** May 30, 2019

ATTENTION: Tony Lazarowicz, P.E. **PROJECT:** I-29/IA 141 Interchange
IMX-029-6(294)127--02-97

FROM: Bob Miller, P.E. PIN: 18-97-029-010

OFFICE: TranSystems Corp.

SUBJECT: Revised Project Concept Statement

This project includes reconstruction of the interchange at Interstate 29 and IA 141 near the City of Sloan. The interchange will provide 16'6" clearance over the existing I-29 pavement and modify the geometry to better conform to current design standards. Right-of-way acquisition will be required in the area of the ramp gores.

The concept includes reconstruction of the existing bridge (Maintenance No. 9700.0S141) with a construct a 222 feet x 40 feet pretensioned prestressed concrete beam bridge immediately north of the existing bridge.

A draft project concept report was submitted by TranSystems on May 14, 2019. Comments received during the review period have been considered and incorporated into the final concept report. The final concept report was submitted on May 28, 2019. The revised concept report was submitted on May 30, 2019.

The project cost estimate is $12,128,200. This project is currently programmed for construction in FY 2023.

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REVISED PROJECT CONCEPT STATEMENT

Bridge over Interstate 29 on
Iowa 141

Woodbury County
IMX-029-6(294)127--02-97
PIN: 18-97-029-010
Maint. No. 9700.0S141
FHWA No. 53230
File No. 31724

Prepared by TranSystems Corp.
May 30, 2019

I. STUDY AREA

A. Project Description

This project involves the replacement of the Iowa 141 bridge (Maint No. 9700.0S141) over I-29 in Woodbury County.

The preferred alternative is to construct a 222 feet x 40 feet pretensioned prestressed concrete beam bridge immediately north of the existing bridge. The bridge and IA 141 will be raised approximately 2 feet to provide the desirable clearance for interstate traffic. The new profile requires reconstruction of Iowa 141 for approximately 0.7 miles and reconstruction of the interchange ramps. This alternative requires right of way acquisition in the area of the ramp gores.

Additional alternatives were considered but were not pursued in this concept due to the inability to maintain traffic during construction. This alternative was a diamond interchange on existing horizontal alignment with an approximate two feet increased vertical clearance.

B. Need for Project

The 30 feet by 207 feet pretensioned prestressed concrete beam bridge was built in 1959 and overlaid with low-slump concrete in 1972. The top of deck was injected with epoxy in 1984 with additional injections since then. The bridge rails were retrofitted in 2008. The bridge is classified as structurally deficient due to the condition of the deck. Several AC and PC patches with large areas of delamination are located throughout the

top of the deck. The bottom of deck has large areas that are damp with cracking. The cracks have rust staining, stalactites, and heavy leaching.
Several prestressed beams have damage from impact and water infiltration. The beam ends have on-going deterioration. Due to the age of the structure, the poor condition of the deck, on-going prestressed beam deterioration, and low overhead bridge clearance (14 ft. 6 in.) a replacement structure should be designed.

The interchange geometry includes ramp terminal intersections at angles significantly sharper than current design guides of 60 degree minimum and 75 degree preferred. Existing ramp alignments include curve radii of 764 feet at eight percent superelevation. The ramps are shorter with acceleration/deceleration tapers of 630 feet and 500 feet respectively. Current design standards include minimums lengths of acceleration and deceleration of 1,000 feet. The ramp intersections with IA 141 are separated by over 1,000 feet and have unique channelized approaches at the intersections.

C. Present Facility

The existing structure is a 30 ft. x 207 ft. pretensioned prestressed concrete beam bridge constructed in 1959.

I-29 in the project area is a divided 4-lane facility, with two 12 foot wide traffic lanes in each direction, 10 feet outside and 6 feet inside paved shoulders and 4:1 foreslopes, constructed in 1959. The median in the project area is 74 feet centerline to centerline.

IA 141 in the project area is 24 feet wide asphalt surface over ten inches of concrete pavement with ten feet wide granular shoulders and 3:1 foreslopes. This section of IA 141 was constructed in 1958. The roadway surface continues to be paved both east and west of the interchange.

D. Traffic Estimates

The 2016 average daily traffic (ADT) estimate for I-29 is 15,400 vehicles with 27% trucks. The 2023 and 2043 ADT estimates on IA 141 (east of the interchange) are 4,100 vehicles per day with 13% trucks and 4,300 vehicles per day with 13% trucks. IA 141 terminates approximately ¼ mile west of I-29. IA 141 becomes 330th Street west side of the interchange and terminates approximately three miles west. The 2023 and 2043 ADT estimates on IA 141/330th Street (west of the interchange) are 1,270 vehicles per day with 3% trucks and 1,350 vehicles per day with 3% trucks.

E. Sufficiency Ratings

I-29 is classified as an "interstate" route and is a maintenance service level "A" road with a sufficiency rating of 10 in both the northbound and southbound lanes. The federal bridge sufficiency rating is 65.

F. Access Control

Access rights have previously been acquired for I-29. A review of the as-built interchange plans show that the current distance from the ramp baseline to the end of the Access Control line is greater than 700 feet west of the interchange. East of the interchange access control is greater than 600 feet on the south side of IA 141 and less than 100 feet north of IA 141.

These access control distances will increase with the proposed ramp geometrics to approximately 1,200 feet west of the interchange and a minimum of 500 feet east of the interchange.

Based on the Iowa Primary Highway Access Management Policy (2012), the land use west of the interchange is rural and the land use east of the interchange is considered a "built-up area". The minimum access control distance for rural areas is 600 feet and for built-up areas the desirable distance is 300 feet. Base on this criteria, access control guidelines will be met with the proposed geometry.

It should be noted there are three field entrances within the access control, west of the interchange. Two on the south side and one on the north side of IA 141.

G. Crash History

During the five-year study period from January 1, 2014 through December 31, 2018, there were eight crashes including, one personal injury crash (alcohol related), two possible injury crashes, and five crashes that caused personal property damage only. Two of the eight crashes were caused by failure to yield and two more were cross-over type crashes on IA 141. Three of the eight crashes occurred at the southbound ramp terminals caused by traffic entering or exiting the southbound ramps.

II. PROJECT CONCEPT

A. Feasible Alternative - Replace bridge and interchange ramps, realign IA 141

Replace the existing 30 feet x 207 feet prestressed concrete beam bridge on IA 141 with a two-span, 222 feet x 40 feet pretensioned, prestressed concrete beam bridge on a new

vertical and horizontal alignment. The typical cross section adjacent to the bridge will consist of a 24 foot wide paved roadway and eight foot effective shoulders (six foot paved and two foot granular). The foreslopes will be 6:1/3.5:1 between the ramp terminals and will transition to 3:1 beyond the ramp terminals in order to tie into the existing foreslopes.

The vertical alignment for this bridge will be raised approximately of 2 feet to meet minimum vertical clearance requirement of 16 feet six inches. The horizontal alignment will be shifted approximately 43 feet to the north to allow east-west traffic to be maintained through the interchange. IA 141 will be reconstructed for approximately 0.7 miles due to the new horizontal and vertical alignments. New bridge approaches will be constructed and the existing guardrail will be replaced with new guardrail. The shoulders will be paved twenty feet beyond the ends of the guardrail. Class 10 will be necessary to build the new ramps; the offset IA 141 alignment; and to construct the new guardrail blisters. Place macadam revetment for slope protection under the bridge. Bridge end drains will be constructed on all four quadrants of the bridge.

Interstate 29 will be used as constructed; however, high tension cable or guardrail will be installed in the median due to the location of the new bridge pier.

All interchange ramps will be reconstructed to modify the geometry to better conform to current design standards. Modification of the geometry also allows the existing ramps to be used in maintaining traffic during construction. The interchange configuration will be a standard diamond with 16 feet wide ramps and four feet inside and six feet outside paved shoulders.

The existing entrances on the west side of the interchange will need to be relocated to the west in order to be beyond the existing access control. These entrances are all field entrances which include two south of IA 141 and one north of IA 141.

It appears that the new ramps will require additional right-of-way in the gore areas.

Traffic will be maintained by staged construction, using the existing bridge and ramps while the new bridge and ramps are constructed. There will be a limited closure when the tie-in pavement is constructed. The contractor will provide access at all times for the businesses and other entrances on the east and west sides of the interchange.

The existing lighting will be removed and replaced at the ramp terminals. All signing for the interchange, mainline guide signs, logo signs and signing on IA 141 through the interchange will be replaced.

Erosion control, rural seeding, and fertilizing will be utilized on all disturbed areas.

Item	Estimated Cost
Bridge Costs	
New Bridge	$1,019,800
Bridge Removal	52,200
Mobilization - 10%	107,200
M & C - 20%	214,400
Bridge Total	**$1,393,600**
Roadway Costs	
Bridge Approaches	82,200
Removal of Pavement	420,000
PCC Pavement, 10”	2,000,000
Modified Subbase	262,100
Paved Shoulder (ramps)	380,000
Paved Shoulder (IA 141)	165,000
Class 10, Roadway and Borrow	2,800,000
Culverts/Culvert Extensions	155,400
Longitudinal subdrain and outlets	104,200
Steel Guardrail for 2-lane bridge (includes removal)	22,000
High Tension Cable Guardrail for median pier	7,700
Interchange lighting	50,000
Signing and Pavement Marking	90,000
Traffic Control - 5%	363,300
Mobilization - 5%	363,300
Subtotal	**$7,265,200**
Staging – 15%	1,089,800
M & C - 30%	2,179,600
Roadway Total	**$10,534,600**
Right of Way	**$200,000**
Project Total	**$12,128,200**

B. Detour Analysis

Traffic on I-29 will be maintained during construction except for short duration closures to accommodate bridge demolition and setting new beams. It is anticipated that these short duration closures of I-29 will occur at night and use ramps as detours. Shoulder and/or lane closures will be necessary for bridge and ramp construction.

Traffic on the ramps north of IA 141 will be maintained except for short term periods to allow for ramp construction staging. During the closure, traffic would utilize the I-29 interchange at Salix and K-45 (Old Highway 75). Further coordination with Woodbury County will be needed during design.

The ramps south of IA 141 (northbound exit, southbound entrance) will be closed during construction. During the closure, traffic would utilize the I-29 and E-24/K-42 interchange west of Whiting. Today, the K-45 and K-42 Monona County roads are in very poor condition, however there are planned County improvements that will be constructed prior to the I-29/IA 141 interchange project construction. These detour routes will need to be further investigated as the interchange design progresses through Field Exam and final design.

Traffic on IA 141 will be maintained via staged construction with traffic utilizing the existing bridge and pavement while the new bridge and pavement are constructed. Temporary connections will be constructed to allow IA 141 traffic access to the interchange.

C. Recommendations

It is recommended that the present structure and interchange be replaced as described.

D. Construction Sequence

It is anticipated that all work on this project will be awarded to one prime contractor.

E. Special Considerations

Right of Way will be required for this project.

Asbestos was found in the tar sealant in the joints of the concrete slope protection pads. The removal of the tar sealant on the concrete slope protection pads will be included as part of the project. Coordination with the Office of Location and Environment will be needed.

An environmental scan of the project area was completed in January 2019. The scan utilized information from publically available databases including GIS mapping data and agency websites. The accuracy of the environmental scan is limited to an in-house review and depends entirely upon information source quality.

The environmental scan indicated a potential for wetland impacts in the project area, particularly the southwest quadrant. A wetland delineation is recommended.

There is a Zone A floodplain in the southeast quadrant of the interchange. No Regulatory Floodway is present. If the floodplain is impacted, then coordination with the Iowa Department of Natural Resources (IDNR) and the Woodbury County Planning and Zoning Department will be needed.

A Section 404 Permit will be required.

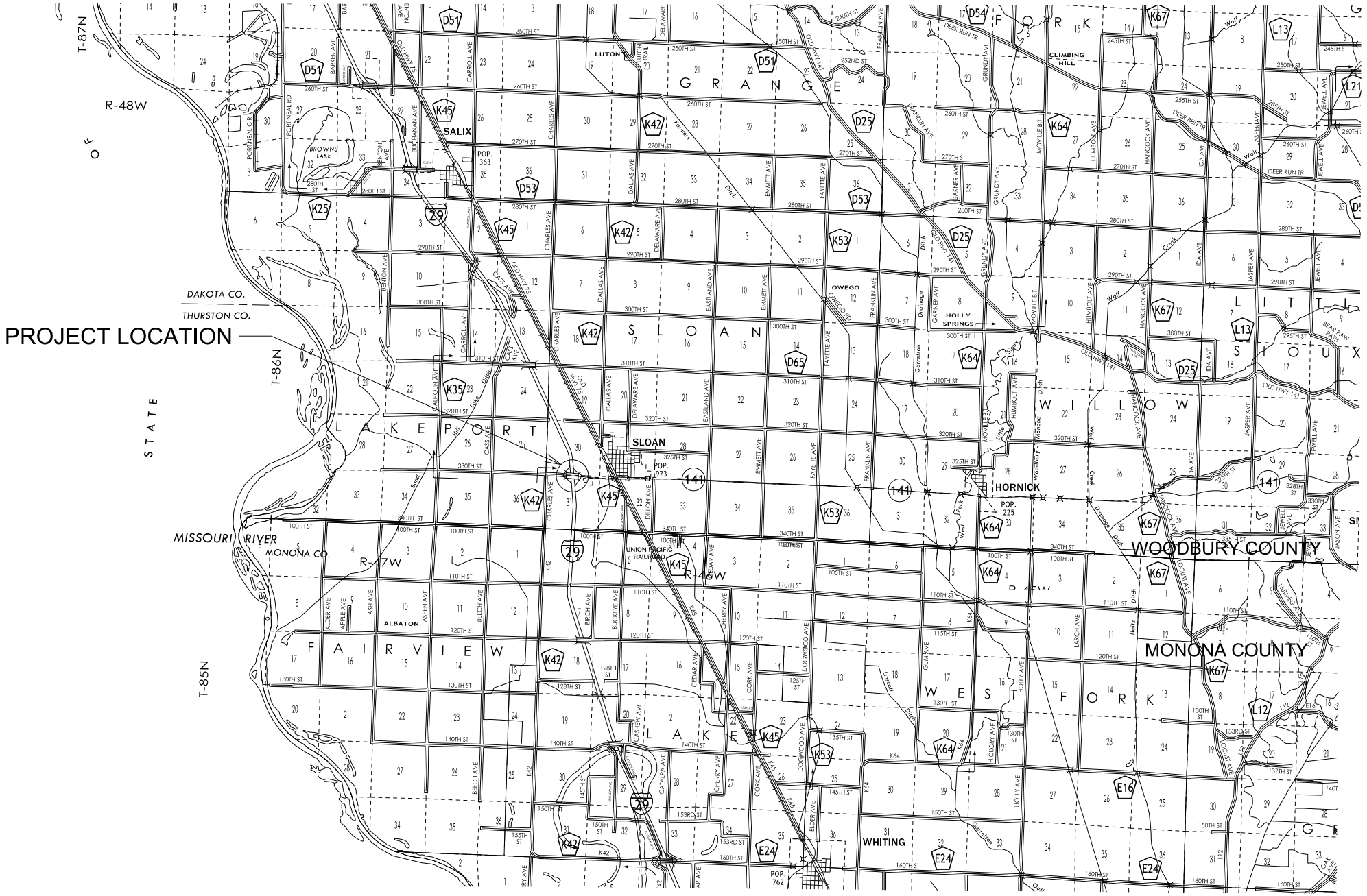
No Historic or Cultural Resources are expected to be found in the project limits, however to comply with Iowa guidance a Section 106 clearance will be required.

The complete environmental scan is attached.

There are no sidewalks adjacent to I-29 or IA 141; therefore, no ADA work is planned in conjunction with this project.

F. Program Status

Site data has been developed by the Office of Design. This project is listed in the current Iowa Transportation Improvement Program for replacement in FY2023.



INTERCHANGE AT I-29/IOWA 141 NEAR SLOAN, IOWA
PROJ. NO. IMX-029-6(294)127--02-97
CONCEPT STATEMENT
PROJECT LOCATION MAP

Curve Data
Δ = 2° 30′ 15.85″ (LT)
T = 199.57
L = 399.07
R = 9,130.00
E = 2.18
SUPER = N/C

Curve Data
Δ = 4° 55′ 53.83″ (RT)
T = 393.17
L = 785.85
R = 9,130.00
E = 8.46
SUPER = N/C

Curve Data
Δ = 3° 35′ 11.55″ (RT)
T = 285.85
L = 571.51
R = 9,130.00
E = 4.47
SUPER = N/C

Curve Data
Δ = 3° 35′ 11.55″ (LT)
T = 285.85
L = 571.51
R = 9,130.00
E = 4.47
SUPER = N/C

0 100
FEET

VPI +12.056
Elv 1,103.97
Len 1,000.00 ft
K = 166
SSD = 470′

EXISTING GROUND

EXISTING IA-141 PROFILE

1,075.34

1,072.81

-0.250%

+3.000%

+3.000%

-3.000%

-3.000%

+0.000%

VPI +87.772
Elv 1,073.24
Len 500.00 ft
K = 154

VPI +50.669
Elv 1,072.81
Len 500.00 ft
K = 167

FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER

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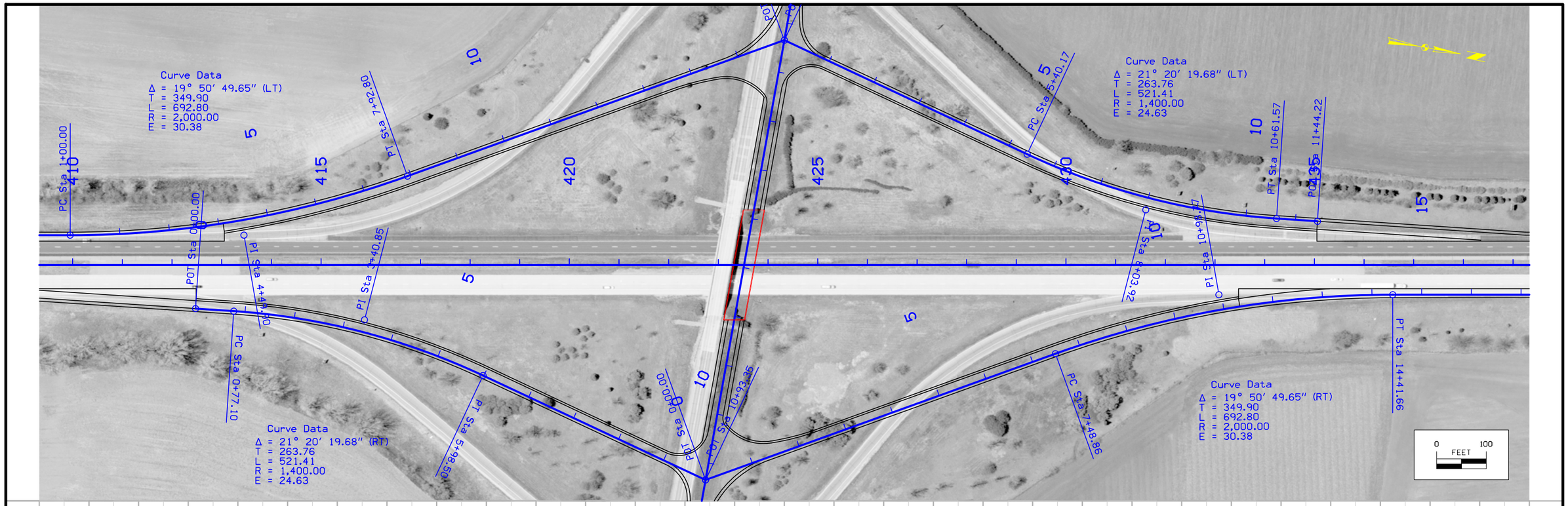

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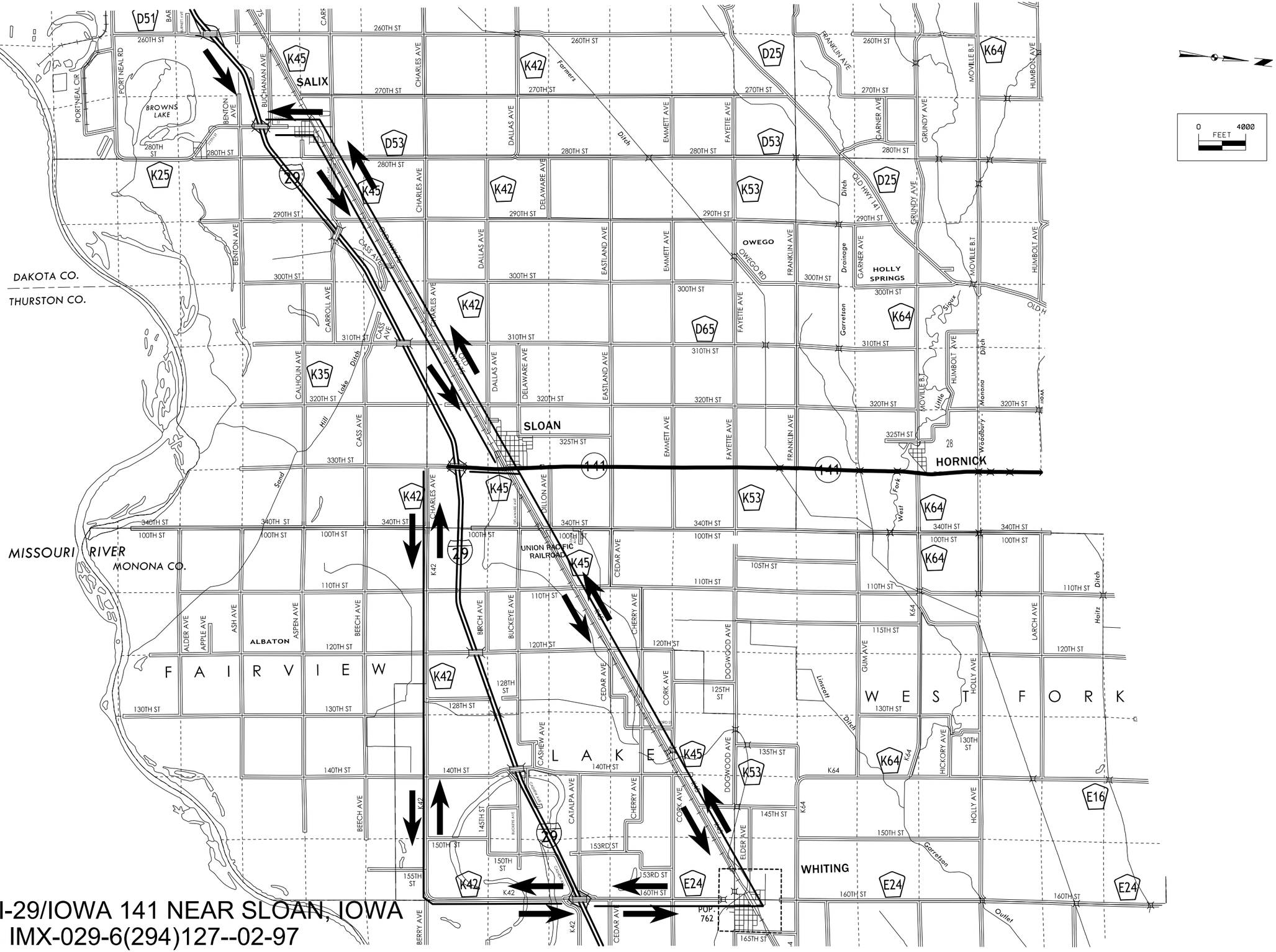


INTERCHANGE AT I-29/IOWA 141 NEAR SLOAN, IOWA
PROJ. NO. IMX-029-6(294)127--02-97
CONCEPT STATEMENT
POTENTIAL DETOUR ROUTES

LETTING DATE 11-01-2022

PCC PAVEMENT - GRADE AND NEW
IMX-029-6(294)127--02-97
WOODBURY Co.

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	**Title Sheets**
A.1	Title Sheet
A.2	Field Exam Questions
A.3 - 10	Concept Report
B Sheets	**Typical Cross Sections and Details**
B.1 - 7	Typical Cross Sections and Details
D Sheets	**I-29 Plan and Profile Sheets**
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 3	I-29 Plan and Profile Sheets
E Sheets	**IA 141 Plan and Profile Sheets**
* E.1 - 2	IA 141 Plan and Profile Sheets
F Sheets	**Detour Pavement Sheets**
* F.1 - 2	Detour Plan and Profile Sheets
G Sheets	**Survey Sheets**
G.1 - 3	Reference Ties and Bench Marks
G.4 - 5	Horizontal Control Tab. & Super for all Alignments
J Sheets	**Traffic Control and Staging Sheets**
* J.1	Traffic Control Plan & Staging Notes
* J.2	Traffic Control & Staging Legend & Symbol Info. Sheet
* J.3 - 11	Staging and Traffic Control Sheets
K Sheets	**Interchange Sheets**
* K.1 - 2	Interchange Layout Sheets
* K.3	IA 141 Ramp A Plan and Profile Sheet
* K.4	IA 141 Ramp B Plan and Profile Sheet
* K.5	IA 141 Ramp C Plan and Profile Sheet
* K.6	IA 141 Ramp D Plan and Profile Sheet
W Sheets	**Mainline Cross Sections**
W.1	Cross Sections Legend & Symbol Information Sheet
W.2 - 43	I-29 Cross Sections
X Sheets	**Side Road Cross Sections**
X.1 - 31	IA 141 Cross Sections
X.32 - 50	IA 141 Detour Cross Sections
Y Sheets	**Ramp Cross Sections**
Y.1 - 10	Ramp A Cross Sections
Y.11 - 21	Ramp B Cross Sections
Y.22 - 31	Ramp C Cross Sections
Y.32 - 41	Ramp D Cross Sections
	* Color Plan Sheets

IOWA DOT

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

WOODBURY COUNTY

PCC PAVEMENT - GRADE AND NEW

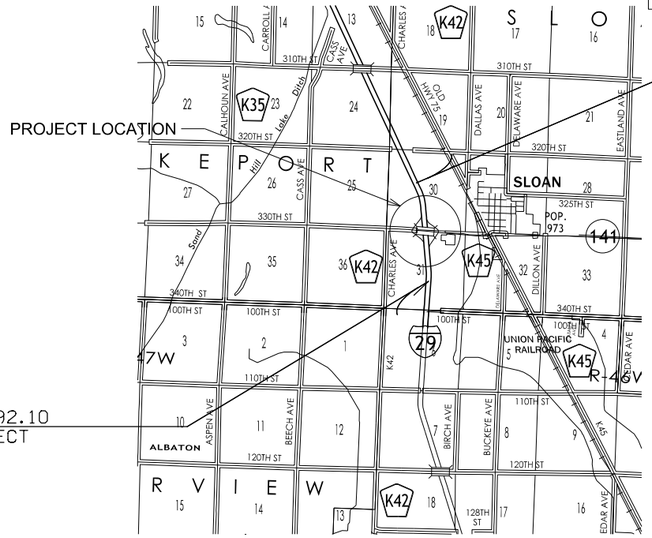
IA 141 over I-29
(Sloan Interchange)

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
811
www.iowaonecall.com



IA 141 DESIGN DATA RURAL		
2023 AADT	4,100	V.P.D.
2043 AADT	4,300	V.P.D.
20-- DHV	--	V.P.H.
TRUCKS	13	%
Total Design ESALs	--	

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

PRELIMINARY PLANS

Subject to change by final design.

D2 PLAN – Date: 3/06/2020

REVISIONS

TOTAL --
PROJECT IDENTIFICATION NUMBER
18-97-029-010
PROJECT NUMBER
IMX-029-6(294)127--02-97
R.O.W. PROJECT NUMBER

FIELD EXAM QUESTIONS

Drain tiles on farm fields? None found in survey.

Barrier protection for runaround where separation is 6' from new EOS to runaround EOP.

Constructability of ramp terminals at IA 141 in Stage 4. Would temporary barrier be required for the E.B. lane of IA 141?

Runarounds for IA 141 are a modified version of the detour connection standard PV-428. The 1000' reverse curves are being fit into a much narrower horizontal transition to fit within the overhead power poles on the east end of the project.

Runaround for east end of 141 is very close to overhead power poles. They could be protected with barrier and impact attenuators.

Truck stop/hotel will need access during construction of runaround. Should we include a new temporary entrance to the hotel parking lot in order to maintain access to the truck stop/hotel during the construction of the runaround? Or could the runaround with entrance be staged to maintain access. An option would be to utilize the existing entrance to the east. Would require pavement placement through existing gravel parking lot. This is private property.

Drainage analysis recommends increasing Ramp A pipe to 2 48" pipes and I-29 pipes to 6 30" pipes. If Ramp A pipes remain 30" headwater would rise but would not be a problem due to height of Ramp A grade. This would put the two pipes under I-29 at 30" (practical approach). Ramp B can remain 30" pipe.

Cross slope on I-29 access/decal lanes will match adjacent existing cross slope on I-29.

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Replace the existing 30 feet x 207 feet prestressed concrete beam bridge on IA 141 with a two-span, 222 feet x 40 feet pretensioned, prestressed concrete beam bridge on a new

vertical and horizontal alignment. The typical cross section adjacent to the bridge will consist of a 24 foot wide paved roadway and eight foot effective shoulders (six foot paved and two foot granular). The foreslopes will be 6:1/3.5:1 between the ramp terminals and will transition to 3:1 beyond the ramp terminals in order to tie into the existing foreslopes.

The vertical alignment for this bridge will be raised approximately of 2 feet to meet minimum vertical clearance requirement of 16 feet six inches. The horizontal alignment will be shifted approximately 43 feet to the north to allow east-west traffic to be maintained through the interchange. IA 141 will be reconstructed for approximately 0.7 miles due to the new horizontal and vertical alignments. New bridge approaches will be constructed and the existing guardrail will be replaced with new guardrail. The shoulders will be paved twenty feet beyond the ends of the guardrail. Class 10 will be necessary to build the new ramps; the offset IA 141 alignment; and to construct the new guardrail blisters. Place macadam revetment for slope protection under the bridge. Bridge end drains will be constructed on all four quadrants of the bridge.

Interstate 29 will be used as constructed; however, high tension cable or guardrail will be installed in the median due to the location of the new bridge pier.

All interchange ramps will be reconstructed to modify the geometry to better conform to current design standards. Modification of the geometry also allows the existing ramps to be used in maintaining traffic during construction. The interchange configuration will be a standard diamond with 16 feet wide ramps and four feet inside and six feet outside paved shoulders.

The existing entrances on the west side of the interchange will need to be relocated to the west in order to be beyond the existing access control. These entrances are all field entrances which include two south of IA 141 and one north of IA 141.

It appears that the new ramps will require additional right-of-way in the gore areas.

Traffic will be maintained by staged construction, using the existing bridge and ramps while the new bridge and ramps are constructed. There will be a limited closure when the tie-in pavement is constructed. The contractor will provide access at all times for the businesses and other entrances on the east and west sides of the interchange.

The existing lighting will be removed and replaced at the ramp terminals. All signing for the interchange, mainline guide signs, logo signs and signing on IA 141 through the interchange will be replaced.

Erosion control, rural seeding, and fertilizing will be utilized on all disturbed areas.

Item	Estimated Cost
Bridge Costs	
New Bridge	$1,019,800
Bridge Removal	52,200
Mobilization - 10%	107,200
M & C - 20%	214,400
Bridge Total	**$1,393,600**
Roadway Costs	
Bridge Approaches	82,200
Removal of Pavement	420,000
PCC Pavement, 10”	2,000,000
Modified Subbase	262,100
Paved Shoulder (ramps)	380,000
Paved Shoulder (IA 141)	165,000
Class 10, Roadway and Borrow	2,800,000
Culverts/Culvert Extensions	155,400
Longitudinal subdrain and outlets	104,200
Steel Guardrail for 2-lane bridge (includes removal)	22,000
High Tension Cable Guardrail for median pier	7,700
Interchange lighting	50,000
Signing and Pavement Marking	90,000
Traffic Control - 5%	363,300
Mobilization - 5%	363,300
Subtotal	**$7,265,200**
Staging – 15%	1,089,800
M & C - 30%	2,179,600
Roadway Total	**$10,534,600**
Right of Way	**$200,000**
Project Total	**$12,128,200**

B. Detour Analysis

Traffic on I-29 will be maintained during construction except for short duration closures to accommodate bridge demolition and setting new beams. It is anticipated that these short duration closures of I-29 will occur at night and use ramps as detours. Shoulder and/or lane closures will be necessary for bridge and ramp construction.

Traffic on the ramps north of IA 141 will be maintained except for short term periods to allow for ramp construction staging. During the closure, traffic would utilize the I-29 interchange at Salix and K-45 (Old Highway 75). Further coordination with Woodbury County will be needed during design.

The ramps south of IA 141 (northbound exit, southbound entrance) will be closed during construction. During the closure, traffic would utilize the I-29 and E-24/K-42 interchange west of Whiting. Today, the K-45 and K-42 Monona County roads are in very poor condition, however there are planned County improvements that will be constructed prior to the I-29/IA 141 interchange project construction. These detour routes will need to be further investigated as the interchange design progresses through Field Exam and final design.

Traffic on IA 141 will be maintained via staged construction with traffic utilizing the existing bridge and pavement while the new bridge and pavement are constructed. Temporary connections will be constructed to allow IA 141 traffic access to the interchange.

C. Recommendations

It is recommended that the present structure and interchange be replaced as described.

D. Construction Sequence

It is anticipated that all work on this project will be awarded to one prime contractor.

E. Special Considerations

Right of Way will be required for this project.

Asbestos was found in the tar sealant in the joints of the concrete slope protection pads. The removal of the tar sealant on the concrete slope protection pads will be included as part of the project. Coordination with the Office of Location and Environment will be needed.

An environmental scan of the project area was completed in January 2019. The scan utilized information from publically available databases including GIS mapping data and agency websites. The accuracy of the environmental scan is limited to an in-house review and depends entirely upon information source quality.

The environmental scan indicated a potential for wetland impacts in the project area, particularly the southwest quadrant. A wetland delineation is recommended.

There is a Zone A floodplain in the southeast quadrant of the interchange. No Regulatory Floodway is present. If the floodplain is impacted, then coordination with the Iowa Department of Natural Resources (IDNR) and the Woodbury County Planning and Zoning Department will be needed.

A Section 404 Permit will be required.

No Historic or Cultural Resources are expected to be found in the project limits, however to comply with Iowa guidance a Section 106 clearance will be required.

The complete environmental scan is attached.

There are no sidewalks adjacent to I-29 or IA 141; therefore, no ADA work is planned in conjunction with this project.

F. Program Status

Site data has been developed by the Office of Design. This project is listed in the current Iowa Transportation Improvement Program for replacement in FY2023.

INTERCHANGE AT I-29/IOWA 141 NEAR SLOAN, IOWA
PROJ. NO. IMX-029-6(294)127--02-97
CONCEPT STATEMENT
PROJECT LOCATION MAP

4/22/2019 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\PROJECT LOCATION 97029294.dgn

FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	A.7

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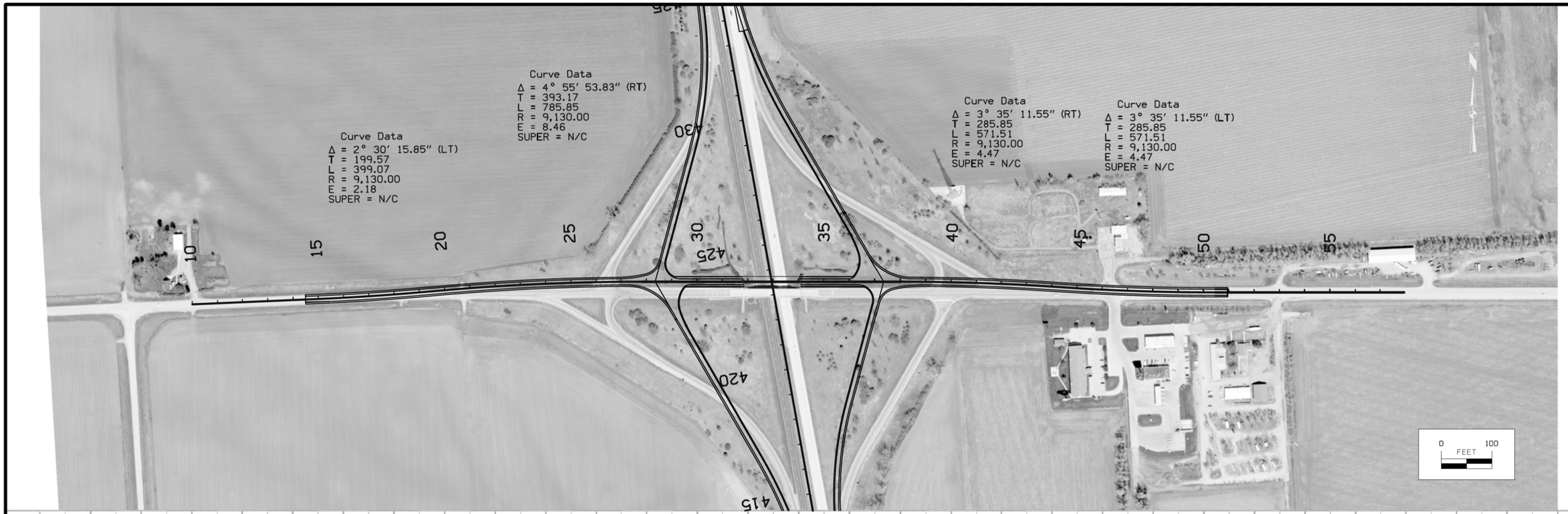

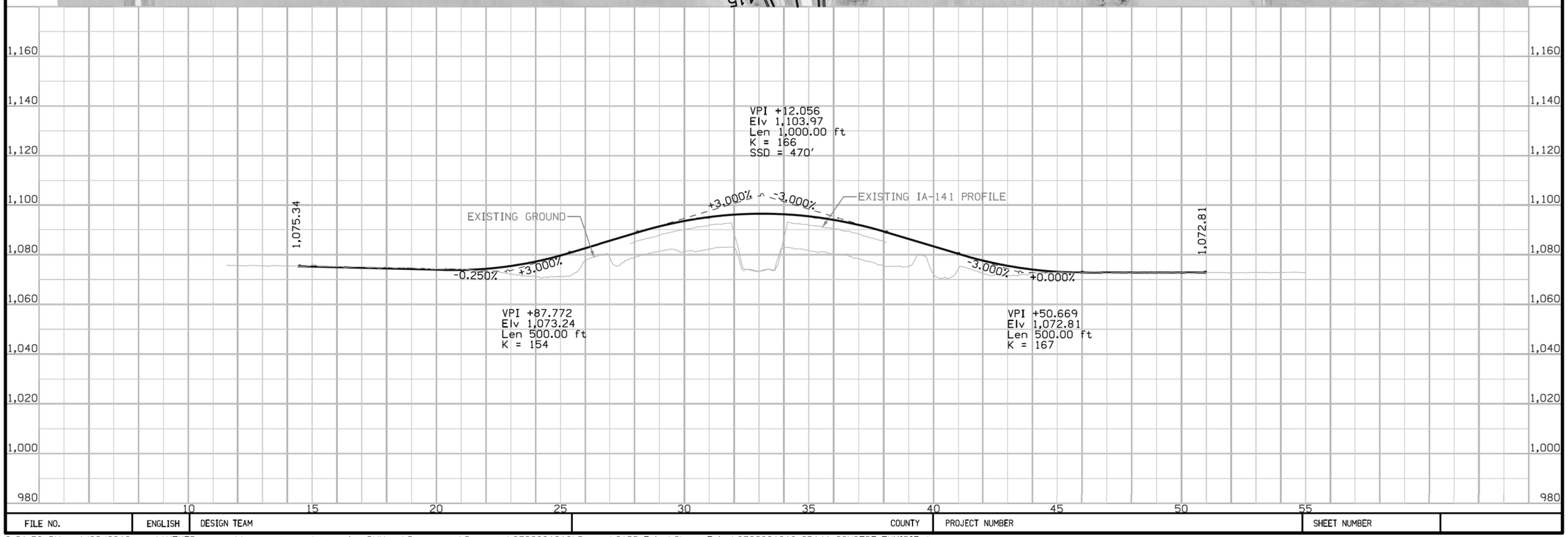

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FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	A.8	

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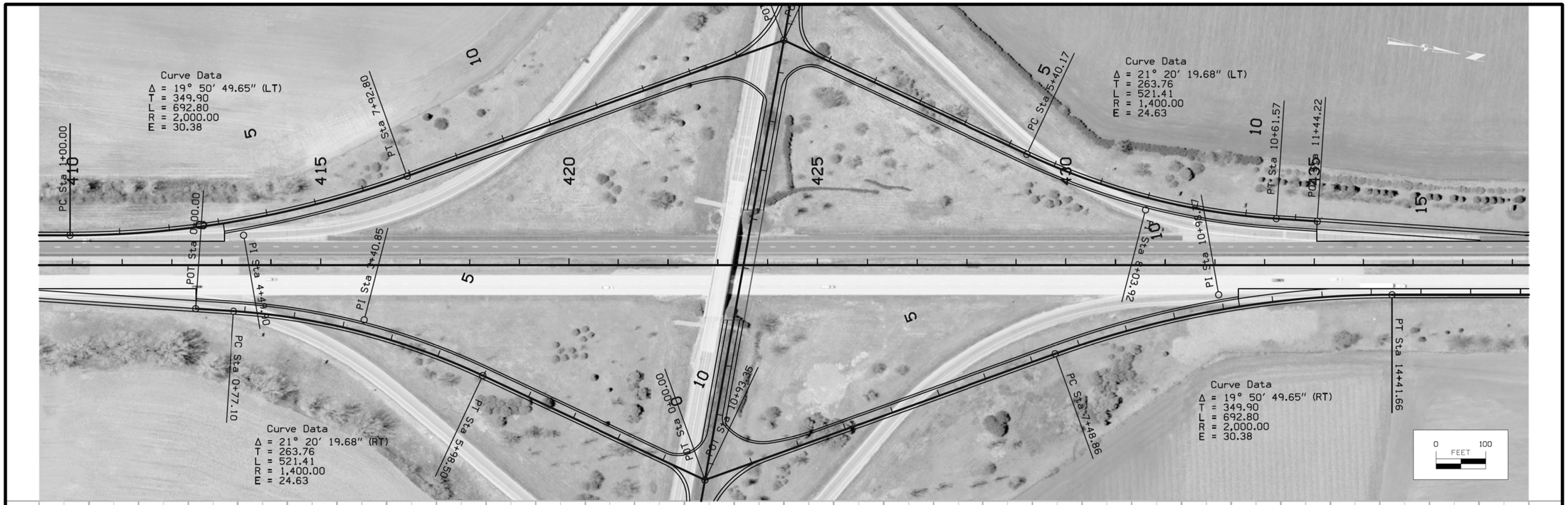

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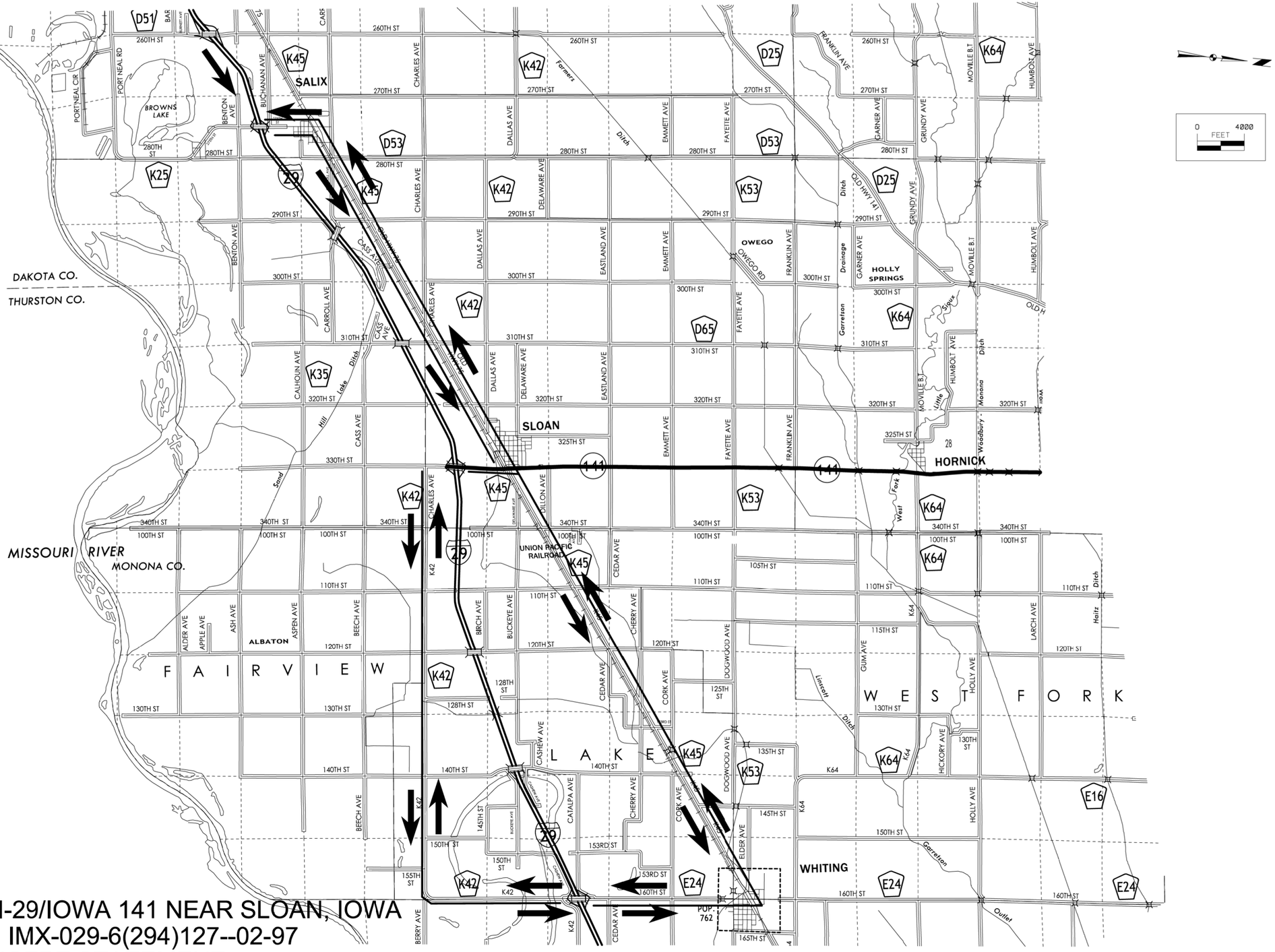

INTERCHANGE AT I-29/IOWA 141 NEAR SLOAN, IOWA
PROJ. NO. IMX-029-6(294)127--02-97
CONCEPT STATEMENT
POTENTIAL DETOUR ROUTES

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER A.10

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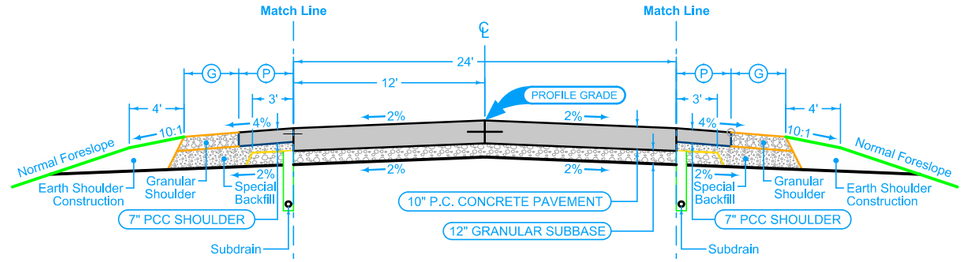
Combination Shoulder

Shoulder Jointing:
Longitudinal joint: B

STATION TO STATION		(P) Feet	(G) Feet
		6	2

2_C_
10-15-13



Mainline Jointing:
Transverse joints: CD at 17' spacing
Longitudinal joint: L-2

STATION TO STATION	

2P_
04-21-20

Combination Shoulder

Shoulder Jointing:
Longitudinal joint: B

STATION TO STATION		(P) Feet	(G) Feet
		6	2

2_C_
10-15-13

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

FILE NO. | ENGLISH | DESIGN TEAM IOWA DOT \ TranSystems | WOODBURY COUNTY | PROJECT NUMBER IMX-029-6(294)127--02-97 | SHEET NUMBER B.1

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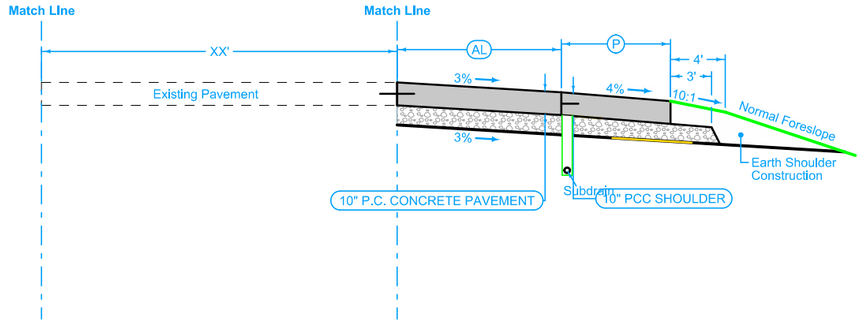
4E_
10-19-10



Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

			4_AuxLane_PCC_ 10-18-16	4_AL_Shldr_FullPCC_ MODIFIED
Direction of Travel	BEGIN STATION	END STATION	(AL) Feet	(P) Feet
SB	1094+52.96	1090+82.33	0-12	6-10
SB	1091+52.63	1081+33.08	12	6
SB	1081+33.08	1077+14.04	12-16	6

Auxiliary Lane
Full Depth Shoulder

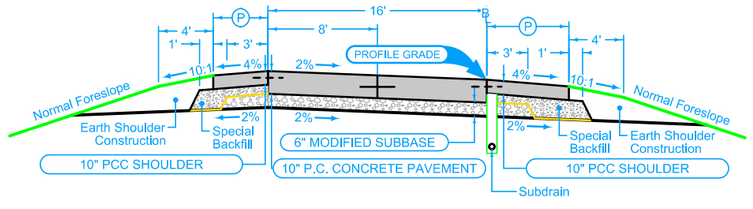
Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 17' spacing

I 29 SB EXIT DECELERATION LANE

Paved Shoulder

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 15' spacing

		1R_P_ALT_ 10-16-18
BEGIN STATION	END STATION	(P) Feet
111+44.77	100+94.00	4
100+94.00	100+12.42	4



Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 15' spacing.
Longitudinal joints: L-2

	1RP_ 10-17-17
BEGIN STATION	END STATION

Paved Shoulder

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 15' spacing

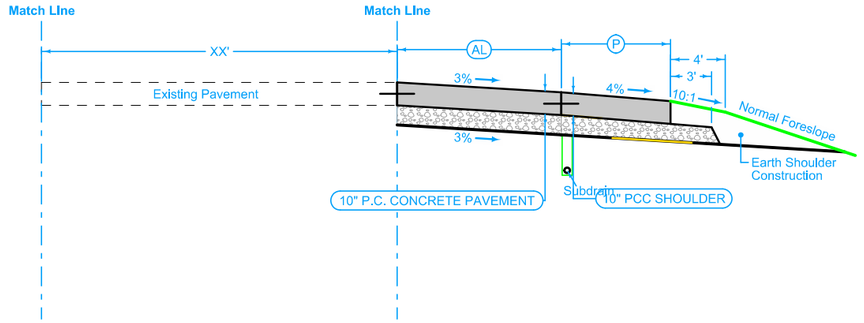
		1R_P_ALT_ 10-16-18
BEGIN STATION	END STATION	(P) Feet
111+44.77	100+94.00	6
100+94.00	100+12.42	6

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

See Tab 112-9 for shoulder quantities.

I 29
RAMP A

4E_
10-19-10



Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

				4_AuxLane_PCC_ 10-18-16
Direction of Travel	BEGIN STATION	END STATION	(AL) Feet	(P) Feet
SB	1055+04.51	1051+96.83	12-16	6
SB	1051+96.83	1041+96.83	12	6
SB	1041+96.83	1035+92.10	0-12	10

Auxiliary Lane
Full Depth Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 17' spacing

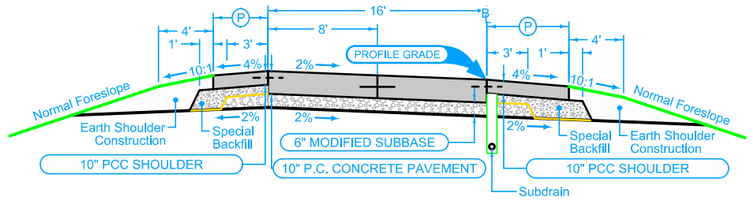
4_AL_Shldr_FullPCC_ MODIFIED

I 29 SB ENTRANCE ACCELERATION LANE

Paved Shoulder

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 15' spacing

		1R_P_ALT_ 10-16-18
BEGIN STATION	END STATION	(P) Feet
214+91.73	212+59.95	4
212+61.25	203+08.92	4



Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 15' spacing.
Longitudinal joints: L-2

	1RP_ 10-17-17
BEGIN STATION	END STATION

Paved Shoulder

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 15' spacing

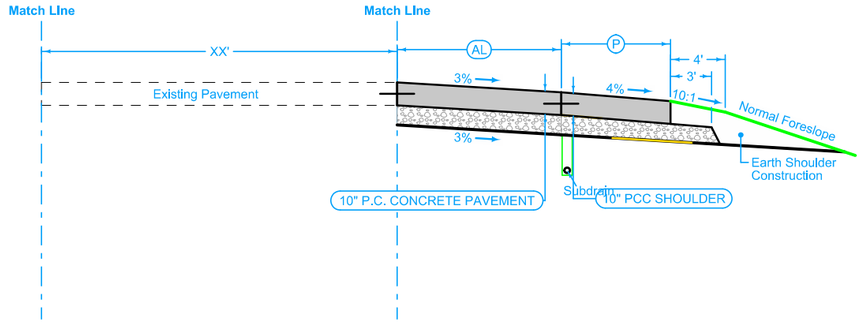
		1R_P_ALT_ 10-16-18
BEGIN STATION	END STATION	(P) Feet
214+91.73	212+61.25	6
212+61.25	203+08.92	6

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

See Tab 112-9 for shoulder quantities.

I 29
RAMP B

4E_
10-19-10



Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

				4_AuxLane_PCC_ 10-18-16
Direction of Travel	BEGIN STATION	END STATION	(AL) Feet	(P) Feet
NB	1037+37.33	1040+37.33	0-12	6-10
NB	1040+37.33	1050+36.21	12	6
NB	1050+36.21	1054+56.21	16	6

Auxiliary Lane
Full Depth Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 17' spacing

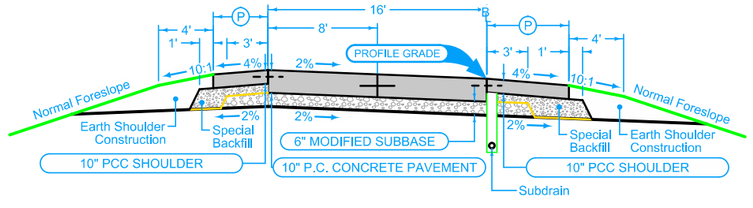
4_AL_Shldr_FullPCC_ MODIFIED

I 29 NB EXIT DECELERATION LANE

Paved Shoulder

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 15' spacing

		1R_P_ALT_ 10-16-18
BEGIN STATION	END STATION	(P) Feet
300+00.00	309+98.81	4
309+98.81	310+79.85	4



Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 15' spacing.
Longitudinal joints: L-2

	1RP_ 10-17-17
BEGIN STATION	END STATION

Paved Shoulder

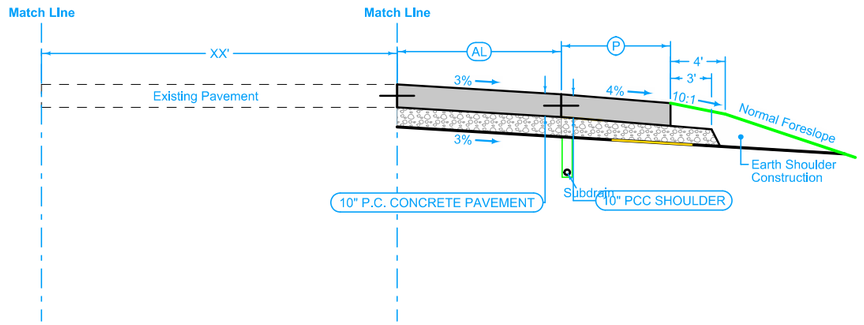
PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 15' spacing

		1R_P_ALT_ 10-16-18
BEGIN STATION	END STATION	(P) Feet
300+00.00	309+98.81	6
309+98.81	310+79.85	6

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

I 29
RAMP C

4E_
10-19-10



Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

				4_AuxLane_PCC_ 10-18-16
Direction of Travel	BEGIN STATION	END STATION	(AL) Feet	(P) Feet
NB	1075+52.10	1078+59.81	12-16	6
NB	1078+59.81	1088+46.13	12	6
NB	1088+46.13	1094+46.13	0-12	6-10

Auxiliary Lane
Full Depth Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 17' spacing

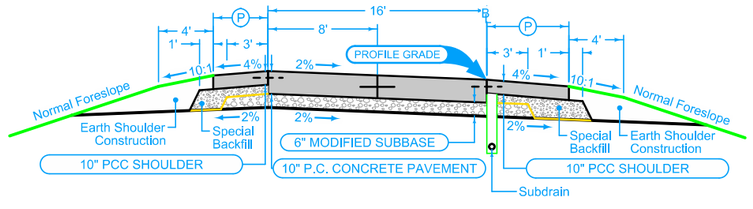
	4_AL_Shldr_FullPCC_ MODIFIED

I 29 NB ENTRANCE ACCELERATION LANE

Paved Shoulder

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 15' spacing

		1R_P_ALT_ 10-16-18
BEGIN STATION	END STATION	(P) Feet
400+13.86	401+29.30	4
402+46.30	411+27.27	4



Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 15' spacing.
Longitudinal joints: L-2

		1RP_ 10-17-17
BEGIN STATION	END STATION	

Paved Shoulder

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 15' spacing

		1R_P_ALT_ 10-16-18
BEGIN STATION	END STATION	(P) Feet
400+13.86	401+29.30	6
401+29.30	411+27.27	6

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

See Tab 112-9 for shoulder quantities.

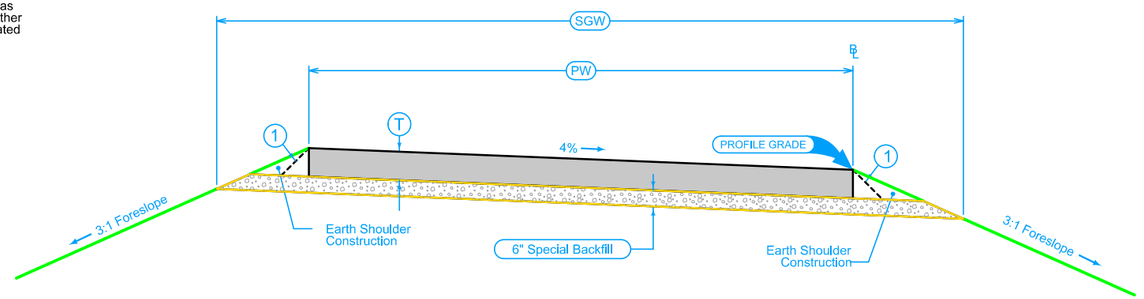
I 29
RAMP D

LOCATION			DIMENSIONS						6" Special Backfill	Earth Shoulder Construction
ROAD IDENTIFICATION	STATION TO STATION		HMA			PCC				
			(PW) Feet	(T) Inches	(SGW) Feet	(PW) Feet	(T) Inches	(SGW) Feet	Tons/Station	Station

Quantity calculations based on vertical pavement edges.

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

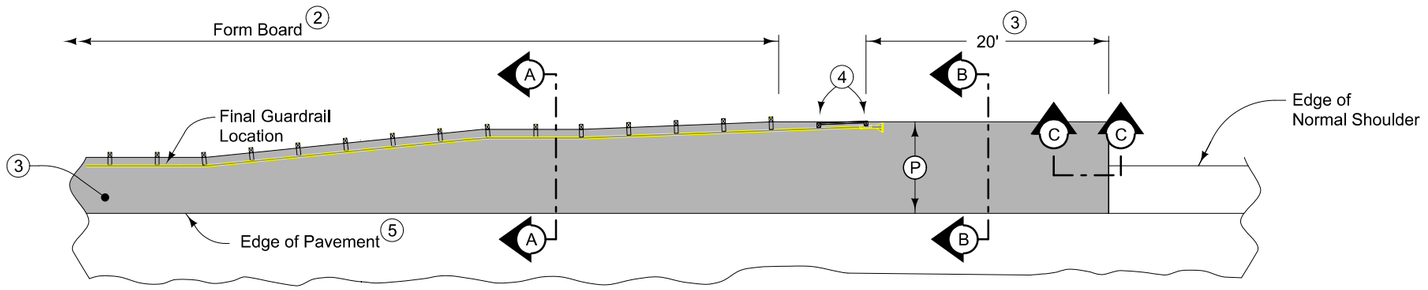
(1) Possible HMA 1:1 slope



DETOUR PAVING

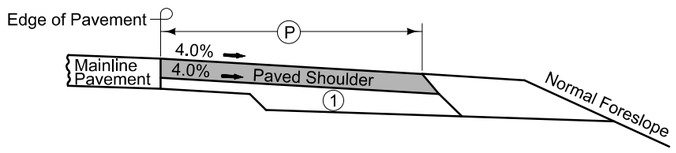
D_Detour
10-21-14

DESIGNER INFO



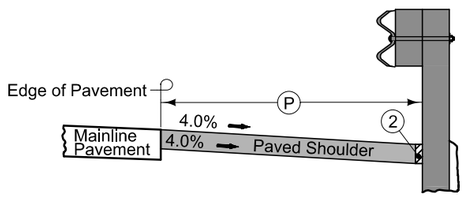
PLAN VIEW

Section A-A

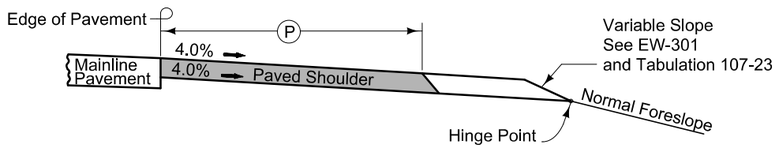


Section B-B

NEW CONSTRUCTION



Section A-A



Section B-B

EXISTING SHOULDER

DESIGNER INFO

7156
04-18-17

9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

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

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

Refer to Tabulation 112-9 for shoulder quantities.

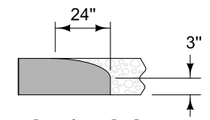
(1) For subgrade treatment, refer to other details in the plan.

(2) PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown. Refer to note 4 for final 2 posts.

(3) Continue paved shoulder to existing paved shoulder or 20 feet beyond the center of the first post.

(4) Shoulder may be notched for final 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.

(5) 'KT-1 joint for PCC shoulder.
'B' joint for HMA shoulder.



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

PAVED SHOULDER AT GUARDRAIL

SURVEY SYMBOLS

- D Centerline Draw or Stream (Down)
- LUM Luminaire
- RIP Rip-Rap
- OUT Tile Outlet
- GDL Guard Rail Steel
- SL Speed Limit Sign
- MH Utility Access (Manhole)
- IN Storm Sewer Intake
- TDC Tree Deciduous
- TEV Evergeen Tree
- FCL Chain Link and Security Fence
- CEL Cell Phone Tower
- UB Utility Box
- TPD Telephone Pedestal
- PR Electic Riser Pole
- HDG Hedge Row
- TFR Tree Fruit
- TLNL Tree Line Left
- TLNR Tree Line Right
- SI Sign
- FW Wire Fence
- MM Mile Marker Post
- WHD Water Hydrant
- EB Electrical Box
- BB Billboard
- FHD Fire Hydrants
- MIS Miscellaneous
- SEP Septic Tank
- GPR Guard Post (4 or More Posts)
- GV Gas Valve

UTILITY LEGEND

MIDAMERICAN ENERGY ELECTRIC
Contact Name: Gerald Messersmith
Contact Phone: (712)233-4833
Contact Email: gsmessersmith@midamerican.com

E1
MIDAMERICAN ENERGY ELECTRIC
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G
MIDAMERICAN ENERGY GAS
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Contact Phone: (712)454-4524
Contact Email: JSCountryman@midamerican.com

G2
MEGELLAN PIPELINE
Contact Name: Dyan Gillean
Contact Phone: (918)574-7098
Contact Email: wilcall2@magellanlp.com

E2
IOWA DOT
Contact Name: Ron Gliser
Contact Phone: (712)4283300
Contact Email: ron.gliser@dot.iowa.gov

FO
LONG LINES
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Contact Phone: (712)271-5550
Contact Email: mpatton@longlines.biz

W
CITY OF SLOAN WATER
Contact Name: Anthony Bride
Contact Phone: (712)4283754
Contact Email: jonescityofsloan@longlines.com

SAN.
CITY OF SLOAN SEWER
Contact Name: Anthony Bride
Contact Phone: (712)4283754
Contact Email: jonescityofsloan@longlines.com

FO2
SOUTH DAKOTA NETWORK LLC
Contact Name: Nicholas Rasmussen
Contact Phone: (605)9781077
Contact Email:
nicholas.rasmussen@sdncommunications.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)

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER D.1

5:37:33 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_LGD.dgn

Curve Data
Δ = 8° 47′ 45.00″ (LT)
T = 440.87
L = 880.01
R = 5,732.34
E = 16.93

EXTEND
Sta. 1039+00.62, 11.93 Lt.
24″x 67.3 RCP
D.A.=Median Only A-F
Install 14′ - 24″ RCP plus Apron
F.L. = Ot. 1067.49
Lt. 1067.12

Sta. 1035+92.10
Begin Construction

PI Sta 1037+05.47

PI Sta 1041+44.61

18″ x 31.7
Conc. Pipe

NORMAN STEVENSON TRUST

EXTEND
Sta. 1047+00.08
30″x 162.8 RCP
D.A.=12 A-F
Install 24.4′ - 30″ RCP plus Apron
F.L. = Lt. 1066.74
Ot. 1066.71
Install 26.5′ - 30″ RCP plus Apron
F.L. = Ot. 1066.48
Rt. 1066.44

Sta. 1064+29.25
Skew 10°13′
30″x 144.4 RCP
D.A.=140 A-F

Sta. 1064+34.94
Skew 10°13′
30″x 143.8 RCP
D.A.=140 A-F

Remove and Replace Shoulder

Remove and Replace Shoulder

EXTEND
Sta. 1057+00.09, 12.37 Rt.
24″x 61.9 RCP
D.A.=Median Only A-F
Install 93.4′ - 24″ RCP plus Apron
F.L. = Ot. 1069.20
Lt. 1067.86

MICHAEL PATTERON

0 FEET 100

Interstate 29

141

+87 Lt.
1067.69

+37 Rt.
1067.00

-0.13% Lt. Ditch Grade
-0.03% Rt. Ditch Grade

+00 Lt.
1066.90

+0.03% Lt. Ditch Grade

+57 Lt.
1067.11

+56 Rt.
1066.44

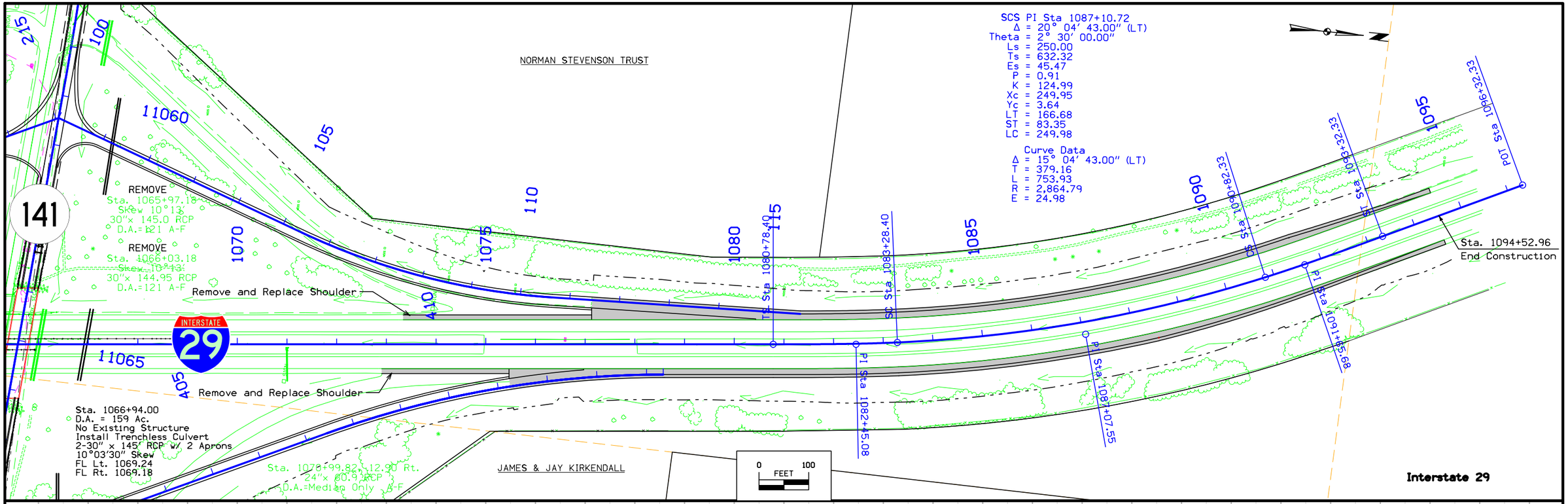
1,080
1,070
1,060
1,050
1,040

Lt Med Rt (Use as Constructed) — Ditch Grade — Ramp B
Lt Med Rt (U.A.C) — Ditch Grade — Ramp C

1040 1045 1050 1055 1060 1065

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER D.2

9:37:20 AM 2/27/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_D02.dgn



FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER D.3

9:37:21 AM 2/27/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_D02.dgn

FILE NO. | ENGLISH | DESIGN TEAM **IOWA DOT \ TranSystems** | **WOODBURY** COUNTY | PROJECT NUMBER **IMX-029-6(294)127--02-97** | SHEET NUMBER **E.1**

5:59:59 PM 2/27/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_E02.dgn

Curve Data
Δ = 3° 32′ 41.58″ (RT)
T = 282.53
L = 564.87
R = 9,130.00
E = 4.37
e = N.C.

RICHARD PAUL HECK

Remove
24″ x 103.85
Conc. Pipe

JAMES AND JAY KIRKENDALL

+38.61 Prop.
Type "C" Ent.
24″ Uncl. Pipe

PI Sta 11073+17.07
PC Sta 11077+45.99
PT Sta 11083+10.86
PI Sta 11080+28.51
PT Sta 11075+99.41
POT Sta 11095+95.94

11075
11080
11085
11090
11095

APPROX. SEC. LINE

141

Sta. 11083+60.86
End Side Road Construction (IA 141)

Curve Data
Δ = 3° 32′ 41.58″ (LT)
T = 282.53
L = 564.87
R = 9,130.00
E = 4.37
e = N.C.

+66.36 Prop.
Type "A" Ent.
18″ Uncl. Pipe

Remove
24″ x 86.9
Conc. Pipe

RICHARD PATTERSON

MPGC INC

WINNAVEGAS CASINO

COLE KG
SLOAN IA LLC

MPGC INC

MICHAEL PATTERSON

0 FEET 100

Iowa 141

2.000%
1,080
1,070
1,060
11078+38.61
Prop. Type "C"
Ent. Lt.

-2.000%
1,080
1,070
1,060
11078+66.36
Prop. Type "A"
Ent. Rt.

1,090
1,080
1,070
1,060

Sta. 11083+60.86
End Side Road Profile (Co.Rd.K-42)
Elev. = 1073.04

-3.000%
-0.002%
-0.015% Lt. Ditch Grade
+76 Lt.
1068.29
+15 Rt.
1067.91
VPI +38.000
Elv 1,073.06
Len 500.00 ft
K = 167

Lt Ditch Grade (Use as Constructed)
Rt Ditch Grade (Use as Constructed)

1,078.82 1,077.58 1,076.49 1,075.55 1,074.76 1,074.12 1,073.63 1,073.29 1,073.10 1,073.06 1,073.06 1,073.05 1,073.05 1,073.05 1,073.05 1,073.05 1,073.05 1,073.05 1,073.04

11075 11080 11085 11090

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER E.2

5:48:15 PM 2/27/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_E02.dgn

Curve Data
Δ = 11° 09′ 42.95″ (RT)
T = 97.72
L = 194.81
R = 1,000.00
E = 4.76

Curve Data
Δ = 11° 09′ 42.95″ (LT)
T = 97.72
L = 194.81
R = 1,000.00
E = 4.76

Curve Data
Δ = 2° 20′ 33.64″ (LT)
T = 187.74
L = 375.43
R = 9,182.00
E = 1.92

Curve Data
Δ = 2° 39′ 19.04″ (RT)
T = 210.39
L = 420.71
R = 9,078.00
E = 2.44

NORMAN STEVENSON TRUST

SECTION LINE

POT Sta 11042+28.56
PI Sta 11043+76.28
PT Sta 11046+68.18
PC Sta 11047+18.18
PT Sta 11050+93.61
PI Sta 11054+23.15

11045
11050
11055

(DET1)

PC Sta 11042+78.56
PRC Sta 11044+73.37
PI Sta 11045+71.09
PI Sta 11049+05.93
PC Sta 11052+12.76
PT Sta 11056+33.46

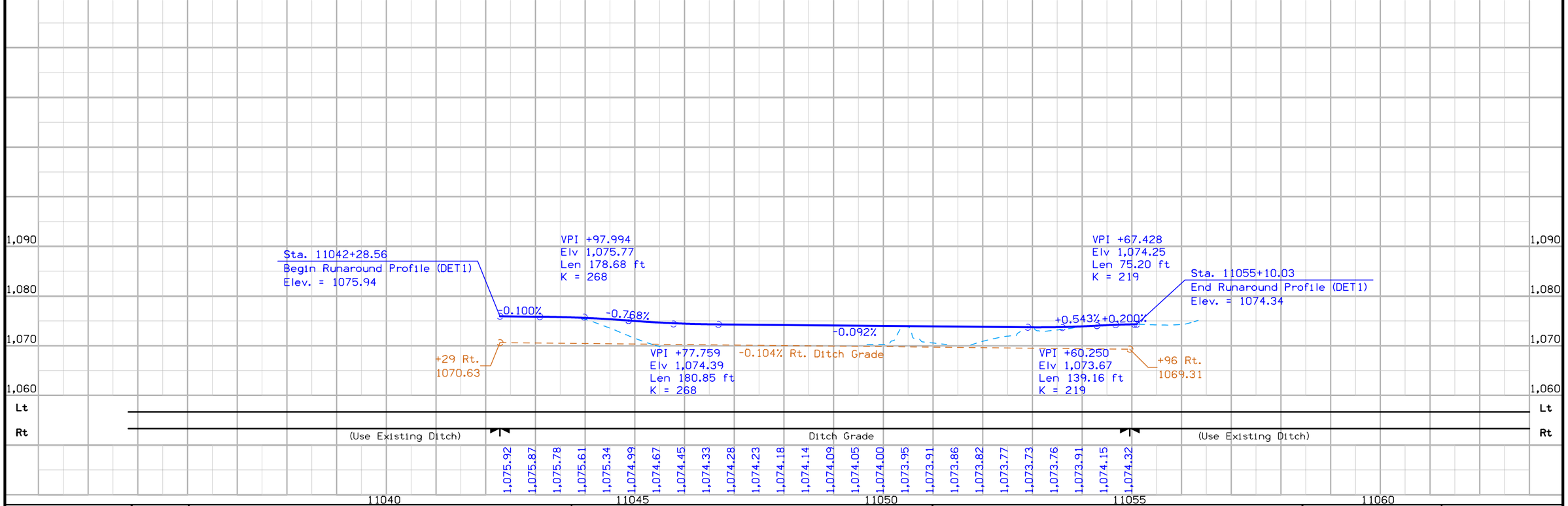
Sta. 11042+30.89
Begin Runaround Construction

Sta. 11055+05.03
End Runaround Construction

STEVEN OLSON

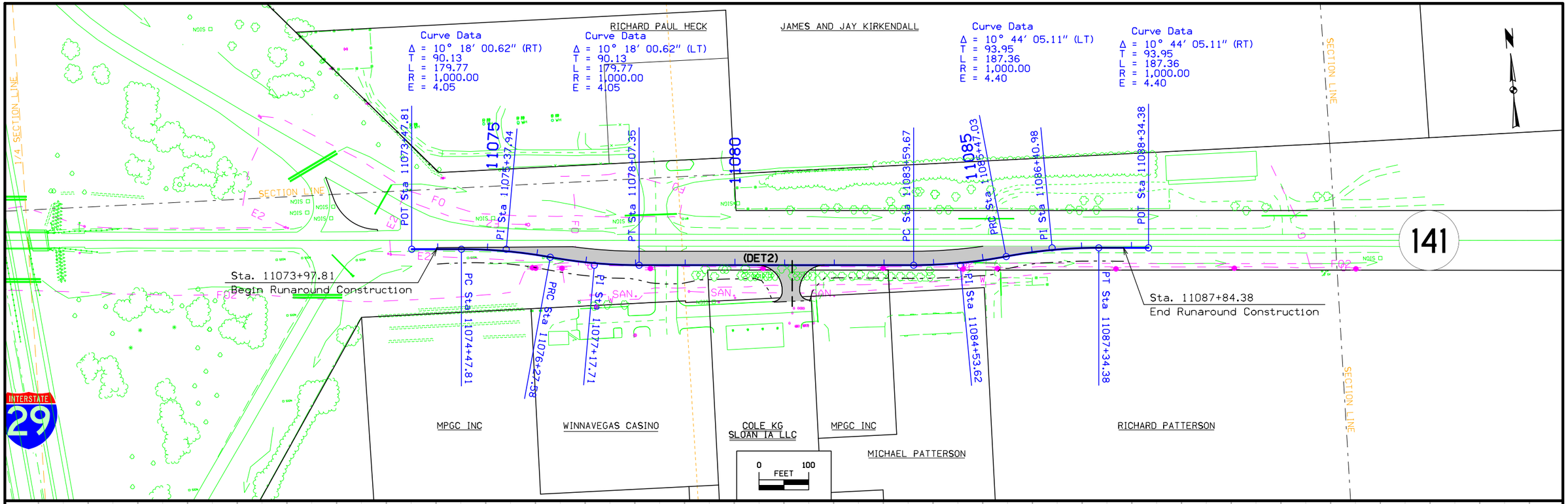
NORMAN STEVENSON TRUST

0 FEET 100



FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER F.1

5:39:36 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_F01.dgn



FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER F.2

5:39:38 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_F01.dgn

Woodbury County
IMX-029-6(294)- -2R-97
Location: IA 141 Interchange
Type of Work: PCC Pavement - Grade and Replace
Project Directory: 9702901011
PIN 18-97-029-010
Sap-0755.1

Party Personnel

Clayton Henningsen- Survey Party Chief
Jason Arn- Survey Party Chief
Paul Harry- Asst. Party Chief

Date(s) of Survey

Begin Date	7/30/2019
End Date	9/16/2019

General Information

Measurement units for this survey are US survey feet. This survey is for proposed removal and reconstruction of IA 141 interchange. This is a partial terrain and underground structure field survey with aerial image and lidar acquired terrain added in the Photogrammetry section of the Design Office.

Vertical Control

Vertical datum for this survey is NAVD88 (Computed using Geoid12b). GRS80 Ellipsoidal Height was computed at project Pts. 97K42001, 97141002, 97029003, R 181, J 129, SLOAN, and 8097 by doing concurrent 6 hour static observations. The project control is relative to nearby Iowa RTN Base Stations.

This survey observed 1 County GPS control with published NAVD88 heights to compare to local ground control:

Woodbury County GPS Network mark designated 8097 has a published Elev. of 1071.19
Survey Elev. = 1071.115

This survey observed 3 NGS GPS control with published NAVD88 heights to compare to local ground control:

NGS mark designated R 181 (PID NM1908) has a published Elev. of 1074.17

Horizontal Control

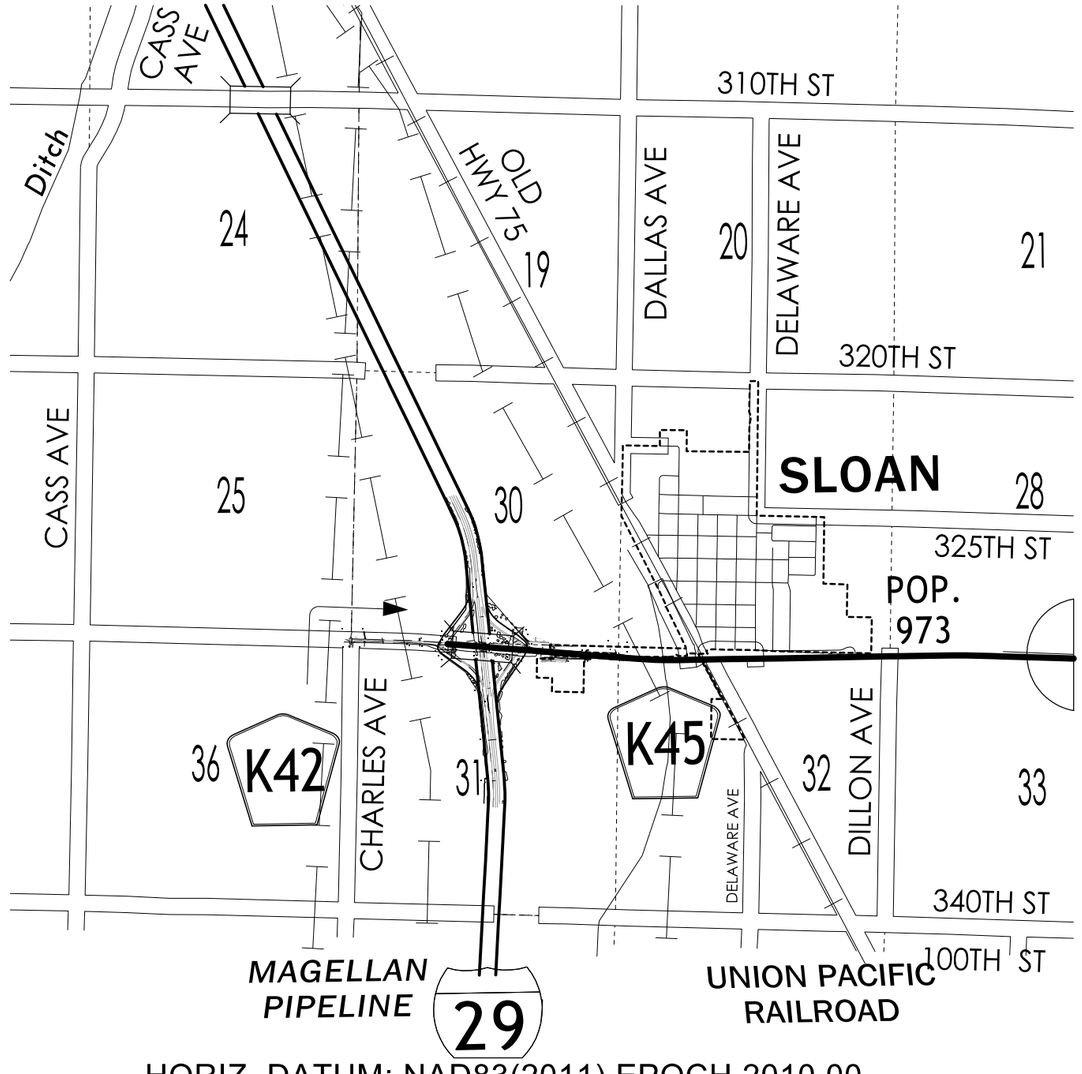
The project coordinate system for this survey is Iowa RCS Zone 4 (U.S. Survey Feet). This survey control is relative to IaRTN reference stations. IaRTN Reference Station coordinates are relative to the National Reference Station network datum: NAD83 (2011) for Epoch 2010.00. Coordinates were determined by conducting concurrent 6 hour static observations on Project Pts. 97K42001, 97141002, 97029003, R 181, J 129, SLOAN, and 8097.

Alignment Information

Horizontal alignment was provided by District 3.

CONTROL POINT VICINITY MAP

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



HORIZ. DATUM: NAD83(2011) EPOCH 2010.00
VERT. DATUM: NAVD88
Ia. Regional Coordinate System Zone 4

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

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER G.2

5:40:05 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_G01.dgn

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

Ia. Regional Coordinate System Zone 4

Point Name	North Coordinate	East Coordinate	Elevation	Feature Code- Monument Description
97K42001	8492205.092	14115877.022	1073.360	CP SET FENO MONUMENT
97029003	8495138.154	14118004.006	1071.640	CP SET FENO MONUMENT
8097	8487110.070	14115748.567	1071.120	CP WOODBURY COUNTY GPS
SLOAN	8486874.050	14125663.566	1068.810	CP NGS DISK PID NM0113
R 181	8497489.513	14119794.189	1074.030	CP NGS DISK PID NM1908
J 129	8502653.223	14117039.413	1074.290	CP NGS DISK PID NM0125
97141002	8491813.134	14122417.643	1071.310	CP SET FENO MONUMENT

ALIGNMENT COORDINATES

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
	I-29 (Existing)																		
SURMLA29_1								1032+64.60	8488951.76	14118738.48	1037+05.47	8489392.03	14118761.50	1041+44.61	8489830.64	14118716.93			
SURMLA294		1065+14.00	8492187.89	14118477.36															
SURMLA29_6					1080+78.40	8493744.27	14118319.18				1082+45.08	8493910.10	14118302.33				1083+28.40	8493992.58	14118290.29
SURMLA29_7								1083+28.40	8493992.58	14118290.29	1087+07.55	8494367.76	14118235.54	1090+82.33	8494715.78	14118085.07			
SURMLA29_8					1090+82.33	8494715.78	14118085.07				1091+65.68	8494792.28	14118051.99				1093+32.33	8494942.25	14117979.23
SURMLA2910		1096+32.33	8495212.16	14117848.28															
	IA 141																		
SR1411		11039+61.88	8492323.95	14115929.40															
SR141_3								11047+15.72	8492300.60	14116682.89	11049+02.40	8492294.82	14116869.47	11050+89.03	8492296.67	14117056.14			
SR141_6								11052+08.17	8492297.85	14117175.28	11056+04.66	8492301.78	14117571.75	11060+00.65	8492271.32	14117967.07			
SR141_9								11070+34.54	8492191.90	14118997.90	11073+17.07	8492170.20	14119279.60	11075+99.41	8492131.12	14119559.41			
SR141_12								11077+45.99	8492110.85	14119704.57	11080+28.51	8492071.77	14119984.38	11083+10.86	8492050.07	14120266.07			
SR14114		11095+95.94	8491951.36	14121547.35															
	Ramp A																		
RPA1411		100+00.00	8492267.87	14118011.88															
RPA141_3								105+41.06	8492778.19	14118191.65	108+05.55	8493027.66	14118279.53	110+63.88	8493291.99	14118270.34			
RPA1415		115+64.57	8493792.38	14118252.94															
	Ramp B																		
RPB141_1								200+00.00	8490871.30	14118549.85	203+48.90	8491218.42	14118514.57	206+90.85	8491533.08	14118363.85			
RPB1413		215+05.59	8492267.87	14118011.88															
	Ramp C																		
RPC1411		295+80.14	8490723.84	14118687.46															
RPC141_3								300+86.15	8491229.54	14118669.90	303+50.61	8491493.85	14118660.72	306+08.91	8491743.29	14118748.59			
RPC1415		310+91.81	8492198.75	14118909.03															
	Ramp D																		
RPD1411		400+00.00	8492198.75	14118909.03															
RPD141_3								407+42.54	8492868.43	14118588.26	410+91.45	8493183.10	14118437.53	414+33.40	8493530.21	14118402.25			
RPD1415		414+36.18	8493532.98	14118401.97															
	West Runaround																		
DET11		11042+28.56	8492301.53	14116195.52															
DET1_3								11042+78.56	8492299.98	14116245.49	11043+76.28	8492296.95	14116343.16	11044+73.37	8492275.07	14116438.40			
DET1_4								11044+73.37	8492275.07	14116438.40	11045+71.09	8492253.20	14116533.63	11046+68.18	8492250.17	14116631.30			
DET1_7								11047+18.18	8492248.62	14116681.27	11049+05.93	8492242.81	14116868.93	11050+93.61	8492244.67	14117056.66			
DET1_10								11052+12.76	8492245.85	14117175.79	11054+23.15	8492247.93	14117386.18	11056+33.46	8492240.27	14117596.43			
	East Runaround																		
DET21		11073+47.81	8492106.11	14119307.34															
DET2_3								11074+47.81	8492098.43	14119407.04	11075+37.94	8492091.51	14119496.91	11076+27.58	8492068.63	14119584.08			
DET2_4								11076+27.58	8492068.63	14119584.08	11077+17.71	8492045.75	14119671.26	11078+07.35	8492038.82	14119761.12			
DET2_7								11083+59.67	8491996.40	14120311.81	11084+53.62	8491989.18	14120405.48	11085+47.03	8491999.54	14120498.86			
DET2_8								11085+47.03	8491999.54	14120498.86	11086+40.98	8492009.90	14120592.24	11087+34.38	8492002.68	14120685.92			
DET210		11088+34.38	8491995.00	14120785.62															

SPIRAL OR CIRCULAR CURVE DATA

Name	Location	ΔSCS	Horizontal Alignment Data												Remarks
			Spiral Data							Curve Data					
			0S	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	ΔC	T	L	R	E	
	I-29 (Existing)															
SURMLA29_1											8^ 47' 45.00" LT	440.87'	880.01'	5,732.34'	16.93'	
SURMLA29_6		20^04'43"	2^30'00" LT	250.00	632.32	45.47	249.95	3.64	166.68	83.35						
SURMLA29_7											15^ 04' 43.00" LT	379.16'	753.93'	2,864.79'	24.98'	
SURMLA29_8		20^04'43"	2^30'00" LT	250.00	632.32	45.47	249.95	3.64	166.68	83.35						
	IA 141															
SR141_3											2^ 20' 33.64" LT	186.68'	373.30'	9,130.00'	1.91'	
SR141_6											4^ 58' 23.79" RT	396.49'	792.48'	9,130.00'	8.61'	
SR141_9											3^ 32' 41.58" RT	282.53'	564.87'	9,130.00'	4.37'	
SR141_12											3^ 32' 41.58" LT	282.53'	564.87'	9,130.00'	4.37'	
	Ramp A															
RPA141_3											21^ 23' 48.00" LT	264.49'	522.82'	1,400.00'	24.76'	
	Ramp B															
RPB141_1											19^ 47' 29.30" LT	348.90'	690.85'	2,000.00'	30.21'	
	Ramp C															
RPC141_3											21^ 23' 40.08" RT	264.46'	522.77'	1,400.00'	24.76'	
	Ramp D															
RPD141_3											19^ 47' 29.30" RT	348.90'	690.85'	2,000.00'	30.21'	
	West Runaround															
DET1_3											11^ 09' 42.95" RT	97.72'	194.81'	1,000.00'	4.76'	
DET1_4											11^ 09' 42.95" LT	97.72'	194.81'	1,000.00'	4.76'	
DET1_7											2^ 20' 33.64" LT	187.74'	375.43'	9,182.00'	1.92'	
DET1_10											2^ 39' 19.04" RT	210.39'	420.71'	9,078.00'	2.44'	
	East Runaround															
DET2_3											10^ 18' 00.62" RT	90.13'	179.77'	1,000.00'	4.05'	
DET2_4											10^ 18' 00.62" LT	90.13'	179.77'	1,000.00'	4.05'	
DET2_7											10^ 44' 05.11" LT	93.95'	187.36'	1,000.00'	4.40'	
DET2_8											10^ 44' 05.11" RT	93.95'	187.36'	1,000.00'	4.40'	

SUPERELEVATION DATA

See PV-300 Series

Road Identification	Circular Curve or Spiral Curve Name	Radius	Superelevation Data			Standard Road Plan	Section A-A	Section B-B	Section C-C	Section D-D	Section E-E	Section F-F	Case A	Case B	Case C	Case S	Case T	Case U	Remarks
			e	L	x														
		FT	%	FT	FT														
IA 141 Ramp A	RPA141-3	1400	6.0	186	62	PV-303	104+72.86		105+41.06	105+96.86						105+34.86	105+34.86		
							111+32.08		110+63.88	110+08.08						110+70.08	110+70.08		
IA 141 Ramp B	RPB141-1	2000	5.4	168	62	PV-303	199+44.40		200+00.00	200+50.40						200+06.84	200+06.84		
							207+46.45		206+90.85	206+40.45						206+84.01	206+84.01		
IA 141 Ramp C	RPC141-1	1400	6.0	186	62	PV-303	300+17.95		300+86.15	301+41.95						300+79.95	300+79.95		
							306+77.11		306+08.91	305+53.11						306+15.11	306+15.11		
IA 141 Ramp D	RPD141-1	2000	5.4	168	62	PV-303	406+86.94		407+42.54	407+92.94						407+49.38	407+49.38		
							414+89.00		414+33.40	413+83.00						414+26.56	414+26.56		

108-23A
08-01-08

TRAFFIC CONTROL PLAN

1. All Traffic Control items shall be installed prior to contractor starting roadway work operations. Staging Traffic Control items shall be installed prior to beginning each stage's work. Items to be installed per the roadway plans, Standard Road Plan sheets, or as directed by the field engineer. Additional items may be necessary to accommodate field conditions. Contractor is responsible for field locate of utilities prior to installing TC items.
2. Lane Closure System, LCS, notifications shall be submitted and approved prior to related roadway work operations. "
3. Traffic Control shall be in accordance with Standard Road Plans. For additional information, refer to Part 6 of the Manual on the Uniform Traffic Control Devices and the current Standard and Supplemental Specifications.
4. Use Portable Dynamic Message Signs (PDMS) in conjunction with traffic control and detour signage per Standard Road Plan sheets; contractor shall provide PDMSs.
5. Traffic will be maintained on I-29 and IA 141 at all times.
6. Shoulder and/or lane closures (per Standard Road Plan TC-402, TC-418, and TC-420) will be necessary for all Stages of construction.
7. Ramps shall remain open and maintained except for short duration closures during Stages 3 and 4 (per Standard Road Plan TC-417) to complete ramp construction.
8. During ramp closures, I-29 traffic shall be detoured for duration of stages(see Sheets J.9 and J.10).
9. Demolition of existing structure and setting girders for new structure may require closure of I-29 for a short duration utilizing entrance/exit ramps. Install Traffic Control items per Standard Road Plan TC-454, using PDMSs to notify use of ramps, and the use of other items as directed by the field engineer to direct traffic accordingly.

111-01
04-17-12

COORDINATED OPERATIONS

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

Project	Type of Work

108-26A
08-01-08

STAGING NOTES

Stage 1

Traffic:
- Maintain northbound/southbound traffic in existing lanes of I-29.
- Maintain eastbound/westbound traffic in existing lanes of IA 141.
- Refer to IowaDOT standard sheets TC-1 and TC-402 to install lane temporary pavement

Construction:
- Construct temporary pavement at ramp gores and Ramp D and IA 141 interchange terminal.
- Install drainage culvert(s) under runaround limits and at Ramp C temporary pavement section.
- Construct temporary pavement runarounds along IA 141 at either end of the project limits.
- Maintain access at hotel/truck stop parking lot driveway by constructing temporary pavement in halves/temporary alternate driveway.
- Install temporary barrier rail along I-29 median shoulders to protect work zone for substructure construction.

Stage 2

Traffic:
- Maintain I-29 ramp traffic utilizing temporary ramp gores and existing ramp pavement.
- Maintain eastbound/westbound IA 141 traffic along existing pavement and temporary runarounds.
- Coordinate I-29 northbound/southbound overnight shutdown for girder setting operations(use ramps to maintain traffic per Standard Roadway Plan TC-454).

Construction:
- Construct new alignment sections of Ramps A, B, C, and D that do not interfere with traffic along I-29 and IA 141.
- Construct IA 141 substructure and superstructure; set girders during allowed timeframe.
- Construction IA 141 from project limits except in areas of existing ramp terminals; do not impede traffic entering and exiting I-29.
- Install proposed culverts as necessary for drainage under proposed ramp sections; maintain drainage throughout stage.

Stage 3

Traffic:
- Maintain northbound/southbound traffic in existing lanes of I-29.
- Detour northbound I-29 entrance ramp(Ramp D) traffic and southbound I-29 exit ramp(Ramp A) traffic via the Salix and K-45 interchange(see 'Detour Plan' on Sheet J.9).
- Maintain northbound I-29 exit ramp(Ramp C) traffic and southbound I-29 entrance ramp(Ramp B) traffic utilizing temporary gore ramp and existing ramp pavement.
- Maintain eastbound/westbound IA 141 traffic along existing pavement and temporary runarounds.

Construction:
- Construct remaining sections of Ramp A and D during ramp closures; complete ramp/I-29 shoulder construction at gores.
- Construct remaining ramp terminal sections along IA 141.

Stage 4

Traffic:
- Maintain northbound/southbound traffic in existing lanes of I-29.
- Detour northbound I-29 exit ramp(Ramp C) traffic and southbound I-29 entrance ramp(Ramp B) traffic via the Whiting and K-42 interchange(see 'Detour Plan' on Sheet J.10).
- Maintain northbound I-29 entrance ramp(Ramp D) traffic and southbound I-29 exit ramp(Ramp A) traffic utilizing newly constructed pavement from Stage 2 and 3.
- Maintain eastbound/westbound IA 141 traffic along new pavement completed in Stages 2 and 3.

Construction:
- Construct remaining sections of Ramp B and C during ramp closures; complete ramp/I-29 shoulder construction at gores.
- Construct remaining ramp terminal sections along IA 141.
- Remove remaining portions of IA 141 and Ramps A, B, C, and D.
- Remove runarounds at IA 141 project limits and reconstruct driveways, ditches, etc.

Other Staging Considerations

Traffic/Construction:
- Contractor will need to drop the existing structure at some point during construction operations(maybe during Stage 3 and Stage 4 dropping the structure in halves when off ramps are closed and portion of traffic is detour anyways?).

108-25
10-21-14

511 TRAVEL RESTRICTIONS

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks

CROSS SECTION VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

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

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

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

PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Magenta	(5)	Pavement Marking Call Outs
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Yellow	(4)	Pavement Markings, Yellow
Off White	(254)	Pavement Markings, White
Violet	(15)	Temporary barrier rail, Unpinned
Flush Orange	(228)	Temporary barrier rail, Pinned

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

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

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

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

TRAFFIC CONTROL AND STAGING LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES J)

Ramp B

Ramp A

1050 1055 1060 1065 1070 1075 1080

INTERSTATE 29

Lane closure per standard roadway plan TC-418

Temporary pavement construction per standard roadway plan TC-1 and TC-402

Temporary pavement construction per standard roadway plan TC-1 and TC-402

EXTEND
Sta. 1057+00.09, 12.37 Rt.
24"x 61.9 RCP
D.A.=Median Only A-F
Install 93.4' - 24" RCP plus Apron
F.L. = Ot. 1069.20
Lt. 1067.86

Sta. 1070+99.82, 12.90 Rt.
24"x 60.9 RCP
D.A.=Median Only A-F

Ramp C

Ramp D

Temporary pavement construction per standard roadway plan TC-1 and TC-402

141

0 FEET 100

I-29 Stage 1
Temporary Pavement Construction

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER J.3

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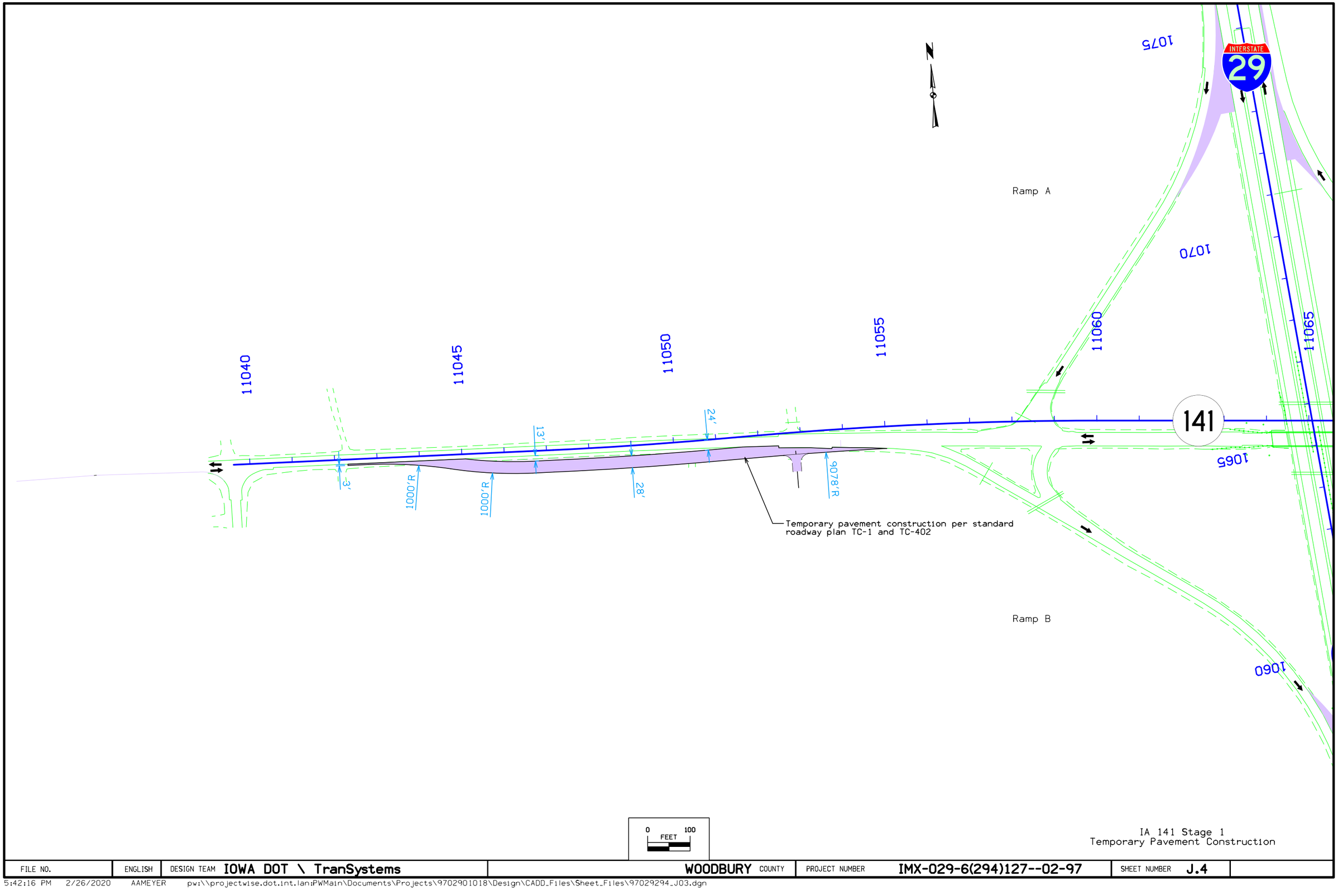

IA 141 Stage 1
Temporary Pavement Construction

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER J.4

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Ramp D

11065

11070

11075

11080

11085

11090

11095

94'R

1000'R

1000'R

35'

28'

10'

1000'R

1000'R

3'

141

Temporary pavement construction per standard roadway plan TC-1 and TC-402

Ramp C

INTERSTATE 29

0 FEET 100

IA 141 Stage 1
Temporary Pavement Construction

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER J.5

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Ramp B

Ramp A

Lane closure at ramps in construction with per standard road plan TC-418 and TC-420

1050 1055 1060 1065 1070 1075 1080

INTERSTATE 29

Outside lane closure for lane construction per standard road plan TC-418

EXTEND
Sta. 1057+00.09, 12.37 Rt.
24"x 61.9 RCP
D.A.=Median Only A-F
Install 93.4' - 24" RCP plus Apron
F.L. = Ot. 1069.20
Lt. 1067.86

Temporary detour using ramps per standard roadway plan TC-454 for setting girders on new structure

Sta. 1070+99.82, 12.90 Rt.
24"x 60.9 RCP
D.A.=Median Only A-F

Ramp C

Ramp D

141

0 100
FEET

I-29 Stage 2
Ramp Partial Construction

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER J.6

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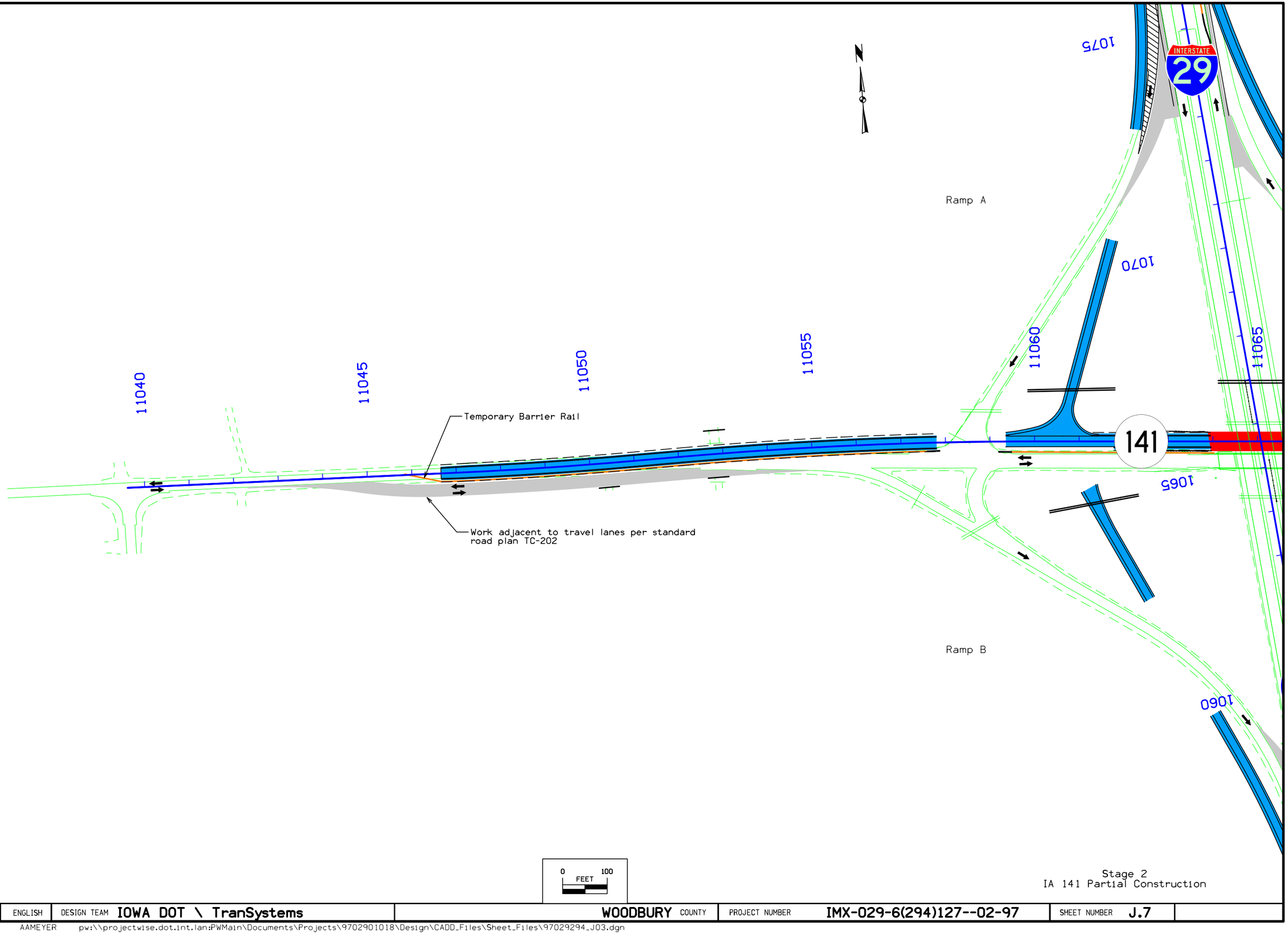

Stage 2
IA 141 Partial Construction

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER J.7

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Ramp D

11065

11070

11075

11080

11085

11090

11095

Temporary Barrier Rail

141

Work adjacent to travel lanes per standard road plan TC-202

Ramp C

INTERSTATE 29

0 100 FEET

Stage 2
IA 141 Partial Construction

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER J.8

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Ramp B

Ramp A

Finish remaining IA 141 construction

Finish remaining Ramp construction

1050 1055 1060 1065 1070 1075 1080

ROAD CLOSED

R11-2
48" x 30"

Ramp closure per stanard road plan TC-417

I-29 shoulder construction

INTERSTATE 29

I-29 shoulder construction and outside lane closed per stanard road plan TC-418

EXTEND
Sta. 1057+00.09, 12.37 Rt.
24"x 61.9 RCP
D.A.=Median Only A-F
Install 93.4' - 24" RCP plus Apron
F.L. = Ot. 1069.20
Lt. 1067.86

Ramp C

ROAD CLOSED

R11-2
48" x 30"

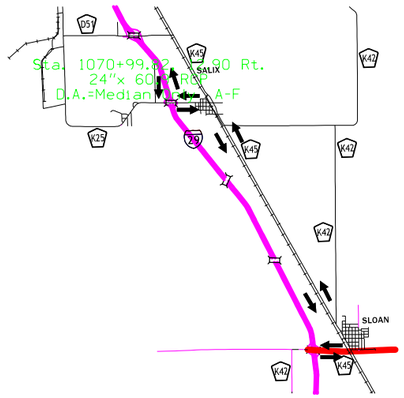
Ramp D

Finish remaining Ramp construction

141

Finish remaining IA 141 construction
per stanard road plan TC-202

0 100
FEET



Detour Plan

I-29 Stage 3
Complete IA 141, Ramp A and Ramp D Construction

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER J.9

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Finish remaining IA 141 construction per standard road plan TC-202

Ramp B

ROAD CLOSED
R11-2
48" x 30"

Ramp A

Finish remaining Ramp construction

I-29 shoulder construction and outside lane closure per standard road plan TC-418

1050 1055 1060 1065 1070 1075 1080

INTERSTATE 29

Ramp closure per stanard road plan TC-417

ROAD CLOSED
R11-2
48" x 30"

I-29 shoulder construction

Finish remaining Ramp construction

EXTEND
Sta. 1057+00.09, 12.37 Rt.
24"x 61.9 RCP
D.A.=Median Only A-F
Install 93.4' - 24" RCP plus Apron
F.L. = Ot. 1069.20
Lt. 1067.86

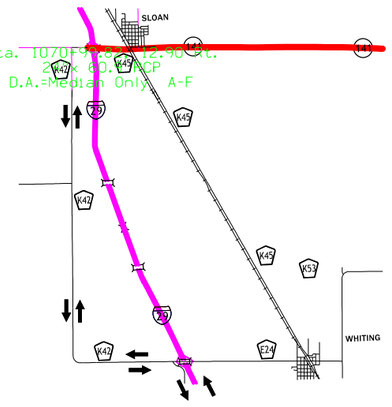
Ramp C

Ramp D

Finish remaining IA 141 construction

141

0 FEET 100



Detour Plan

I-29 Stage 4
Ramp B and Ramp C Terminal Construction

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER J.10

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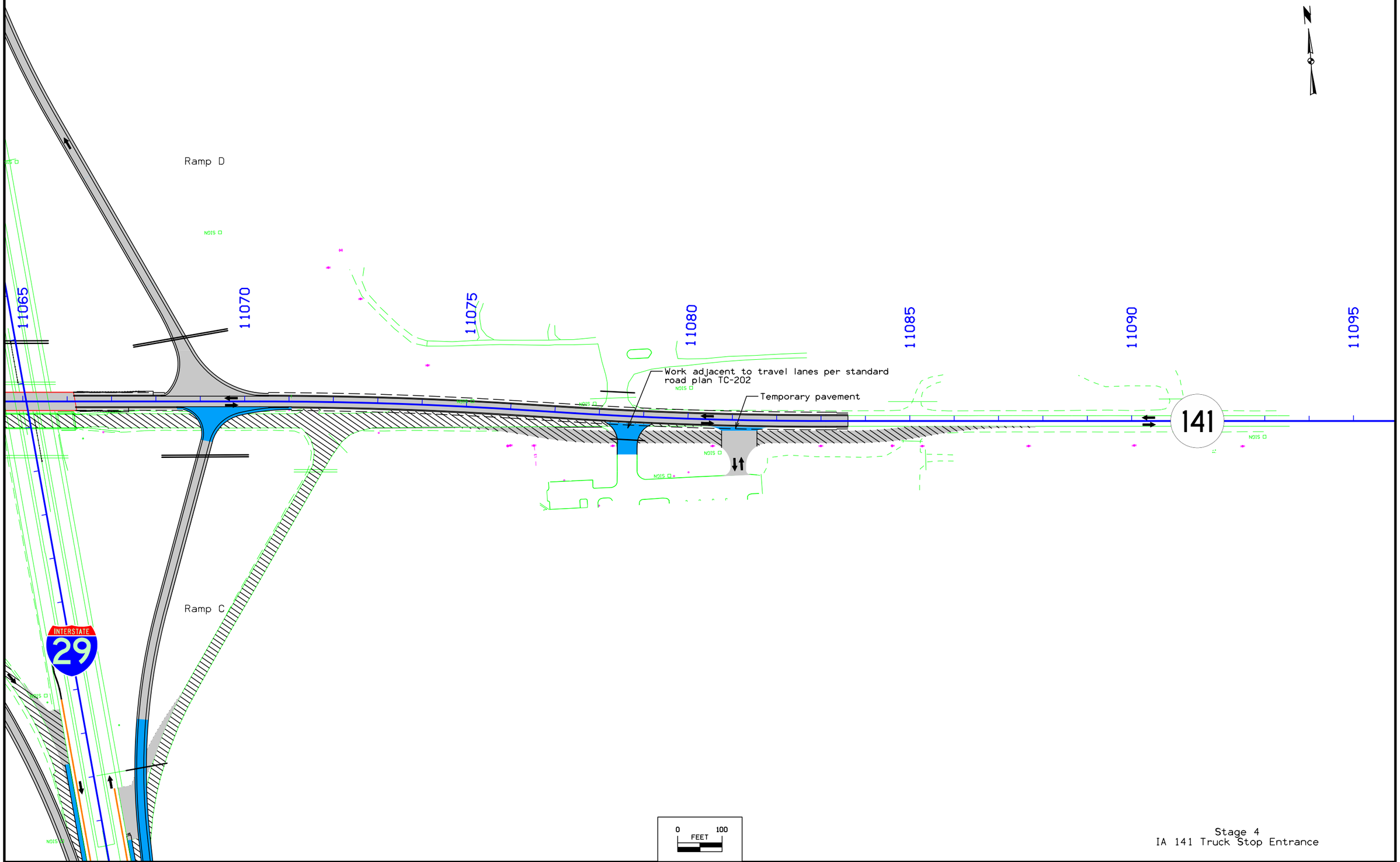

Stage 4
IA 141 Truck Stop Entrance

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER J.11

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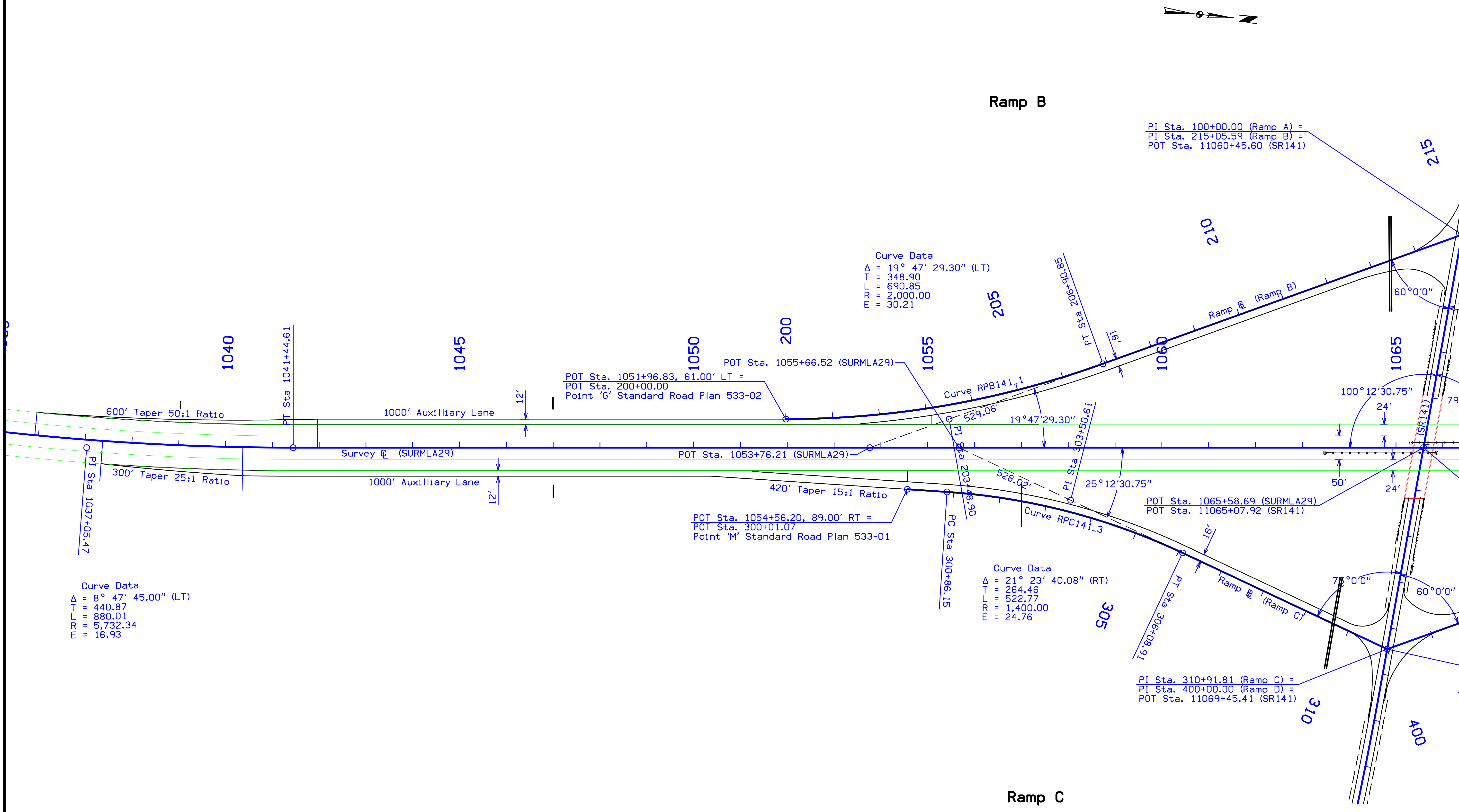

Ramp B
PI Sta. 100+00.00 (Ramp A) =
PI Sta. 215+05.59 (Ramp B) =
POT Sta. 11060+45.60 (SR141)
Curve Data
Δ = 19° 47' 29.30" (LT)
T = 348.90
L = 690.85
R = 2,000.00
E = 30.21
PT Sta 206+90.85
Ramp ℄ (Ramp B)
60°0'0"
600' Taper 50:1 Ratio
PT Sta 1041+44.61
1000' Auxiliary Lane
POT Sta. 1051+96.83, 61.00' LT =
POT Sta. 200+00.00
Point 'G' Standard Road Plan 533-02
POT Sta. 1055+66.52 (SURMLA29)
Curve RPB141_1
529.06'
19°47'29.30"
100°12'30.75"
24'
Survey ℄ (SURMLA29)
POT Sta. 1053+76.21 (SURMLA29)
PI Sta 1037+05.47
300' Taper 25:1 Ratio
1000' Auxiliary Lane
420' Taper 15:1 Ratio
PI Sta 203+48.90
528.02'
PI Sta 303+50.61
25°12'30.75"
50'
POT Sta. 1065+58.69 (SURMLA29)
POT Sta. 11065+07.92 (SR141)
POT Sta. 1054+56.20, 89.00' RT =
POT Sta. 300+01.07
Point 'M' Standard Road Plan 533-01
PC Sta 300+86.15
Curve RPC141_3
PT Sta 306+08.91
Ramp ℄ (Ramp C)
Curve Data
Δ = 8° 47' 45.00" (LT)
T = 440.87
L = 880.01
R = 5,732.34
E = 16.93
Curve Data
Δ = 21° 23' 40.08" (RT)
T = 264.46
L = 522.77
R = 1,400.00
E = 24.76
60°0'0"
PI Sta. 310+91.81 (Ramp C) =
PI Sta. 400+00.00 (Ramp D) =
POT Sta. 11069+45.41 (SR141)
Ramp C
0 FEET 100

Geometric Plan
Proposed Interchange of
Interstate 29 with IA 141
Woodbury County

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER K.1

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Ramp A

PI Sta. 100+00.00 (Ramp A) =
PI Sta. 215+05.59 (Ramp B) =
POT Sta. 11060+45.60 (SR141)

Curve Data
Δ = 21° 23′ 48.00″ (LT)
T = 264.49
L = 522.82
R = 1,400.00
E = 24.76

POT Sta. 1077+12.97, 89.00′ LT =
POT Sta. 111+43.66
Point 'M' Standard Road Plan 533-01

POT Sta. 1065+58.69 (SURMLA29)
POT Sta. 11065+07.92 (SR141)

POT Sta. 1076+07.19 (SURMLA29)
POT Sta. 1076+77.64 (SURMLA29)

POT Sta. 1078+57.03, 61.00′ RT =
POT Sta. 414+33.40
Point 'G' Standard Road Plan 533-02

Curve Data
Δ = 15° 04′ 43.00″ (LT)
T = 379.16
L = 753.93
R = 2,864.79
E = 24.98

SCS PI Sta 1087+10.72
Δ = 20° 04′ 43.00″ (LT)
Theta = 2° 30′ 00.00″
Ls = 250.00
Ts = 632.32
Es = 45.47
P = 0.91
K = 124.99
Xc = 249.95
Yc = 3.64
LT = 166.68
ST = 83.35
LC = 249.98

Ramp D

PI Sta. 310+91.81 (Ramp C) =
PI Sta. 400+00.00 (Ramp D) =
POT Sta. 11069+45.41 (SR141)

Curve Data
Δ = 19° 47′ 29.30″ (RT)
T = 348.90
L = 690.85
R = 2,000.00
E = 30.21

Geometric Plan
Proposed Interchange of
Interstate 29 with IA 141
Woodbury County

FILE NO.	ENGLISH	DESIGN IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER K.2

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NORMAN STEVENSON TRUST

PI Sta. 215+05.59 (Ramp B)=
POT Sta. 11060+45.60 (IA 141)

Sta. 213+45.57
D.A. = 104 Ac.
No Existing Structure
Install Culvert
2-30" x 202' RCP w/ 2 Aprons
19°22'29" Skew
FL 1069.50 Lt.
FL 1069.47 Rt.

PI Sta. 100+00.00 (Ramp A)=
POT Sta. 11060+45.60 (IA 141)

Curve Data
Δ = 21° 23' 48.00" (LT)
T = 264.49
L = 522.82
R = 1,400.00
E = 24.76
e = 6.0'
L = 186'
X = 62'

Sta. 101+17.44
D.A. = 154 Ac.
No Existing Structure
Install Culvert
2-30" x 195' RCP w/ 2 Aprons
16°11'52" Skew
FL 1069.50 Lt.
FL 1068.94 Rt.

NORMAN STEVENSON TRUST

REMOVE
Sta. 1067+43.00, 650.97 Lt.
Skew 33°
30"x 91.2 RCP
D.A.=116 A-F

REMOVE
Sta. 1067+48.96, 650.50 Lt.
Skew 33°
30"x 91.7 RCP
D.A.=116 A-F

POT Sta. 111+44.73 (Ramp A)=
POT Sta. 1077+14.04, 88.95' LT (I-29)

PC Sta 105+41.06
PT Sta 110+63.88
PI Sta 410+45.45
PC Sta 408+03.55
PT Sta 41+
Ramp A
Ramp D
141
INTERSTATE 29
0 FEET 100
Ramp A

Sta. 100+00.00
Begin Ramp A Profile
Elev. = 1089.73

VPI +00.000
Elv 1,084.89
Len 200.00 ft
K = 230

Sta. 111+44.73
End Ramp A Profile
Elev. = 1073.33
Point 'M' Standard Road Plan 533-01

-1.210%
-2.078%
-2.078%
+0.300%
+0.04% Lt. Ditch Grade

+95 Rt.
1069.50

VPI +80.000
Elv 1,072.84
Len 325.00 ft
K = 137

+65 Rt.
1070.15

Ditch Grade
I-29
(Use Existing Ditch)

100	105	110	115
1,089.73	1,082.81	1,075.58	1,073.64
1,089.13	1,081.77	1,074.75	1,073.36
1,088.52	1,080.73	1,074.10	1,073.26
1,087.91	1,079.69		
1,087.31	1,078.66		
1,086.70	1,077.62		
1,086.10	1,076.58		
1,085.44			
1,084.67			
1,083.80			

FILE NO.	ENGLISH	DESIGN IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER K.3

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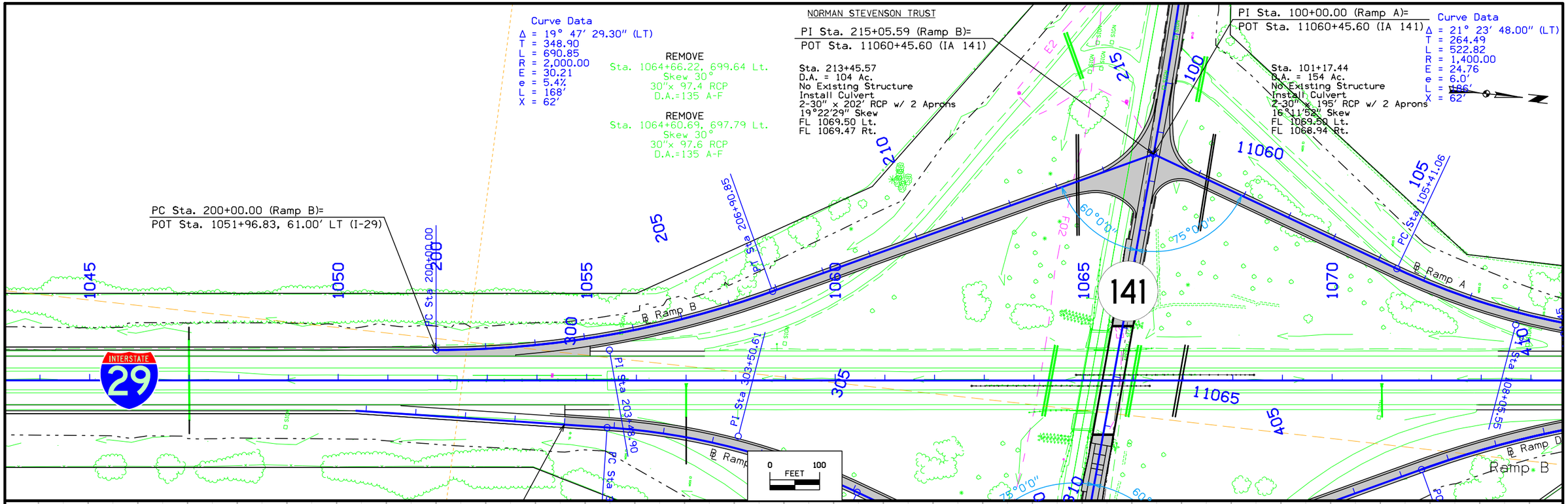

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER K.4

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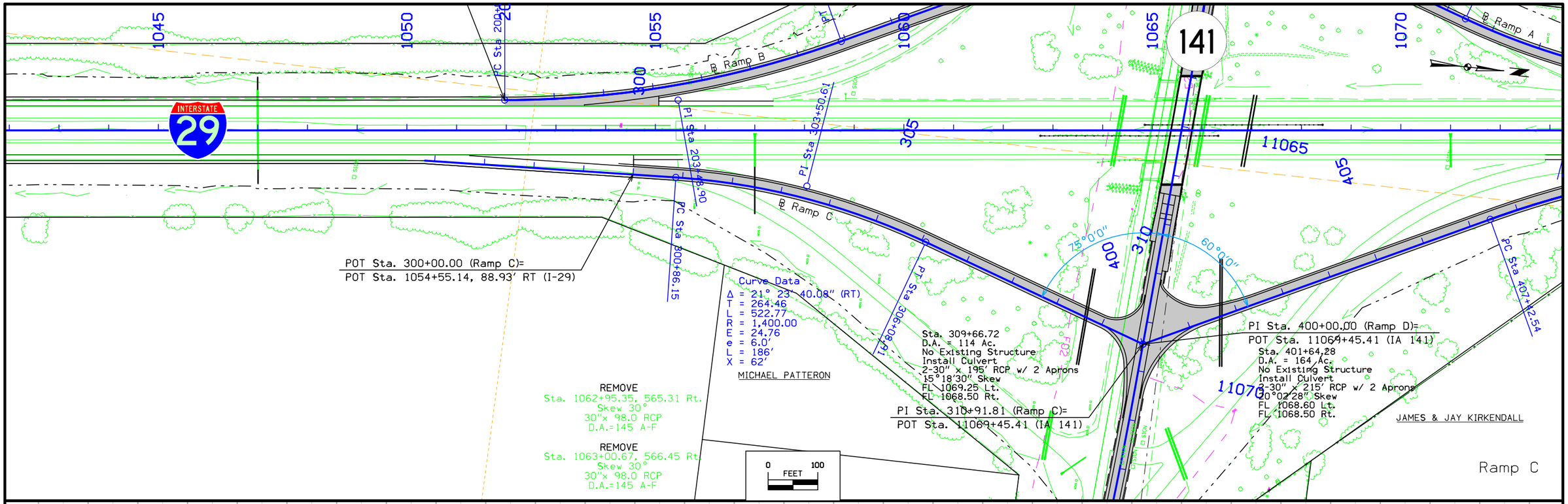

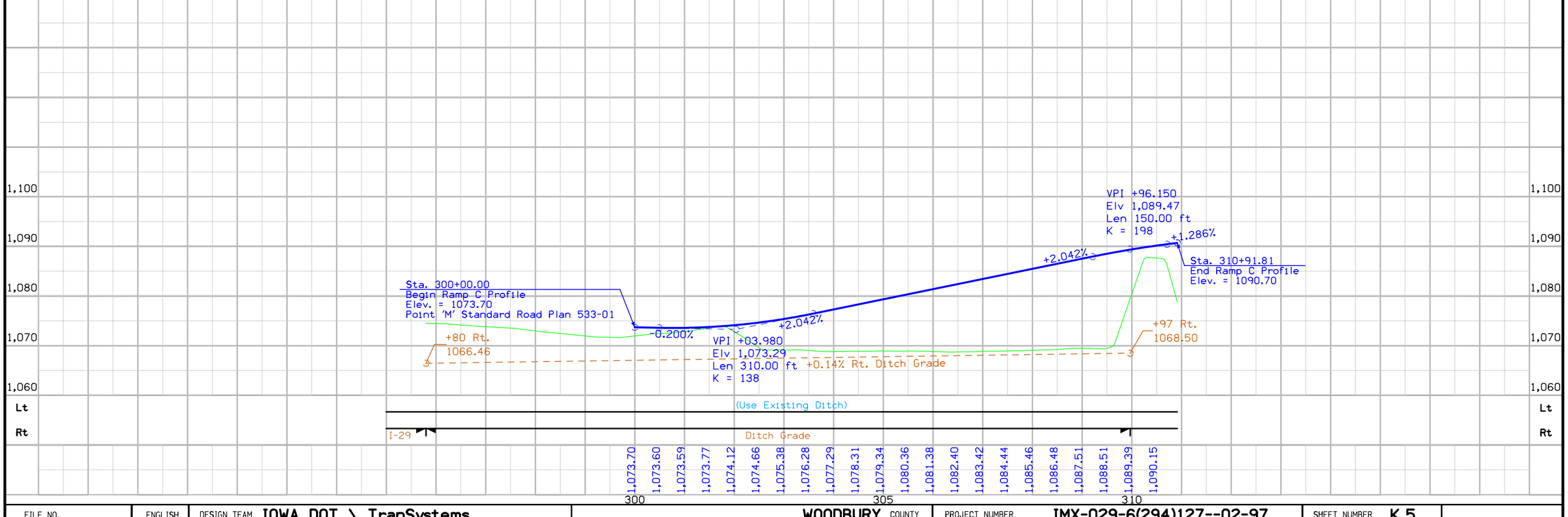

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER K.5

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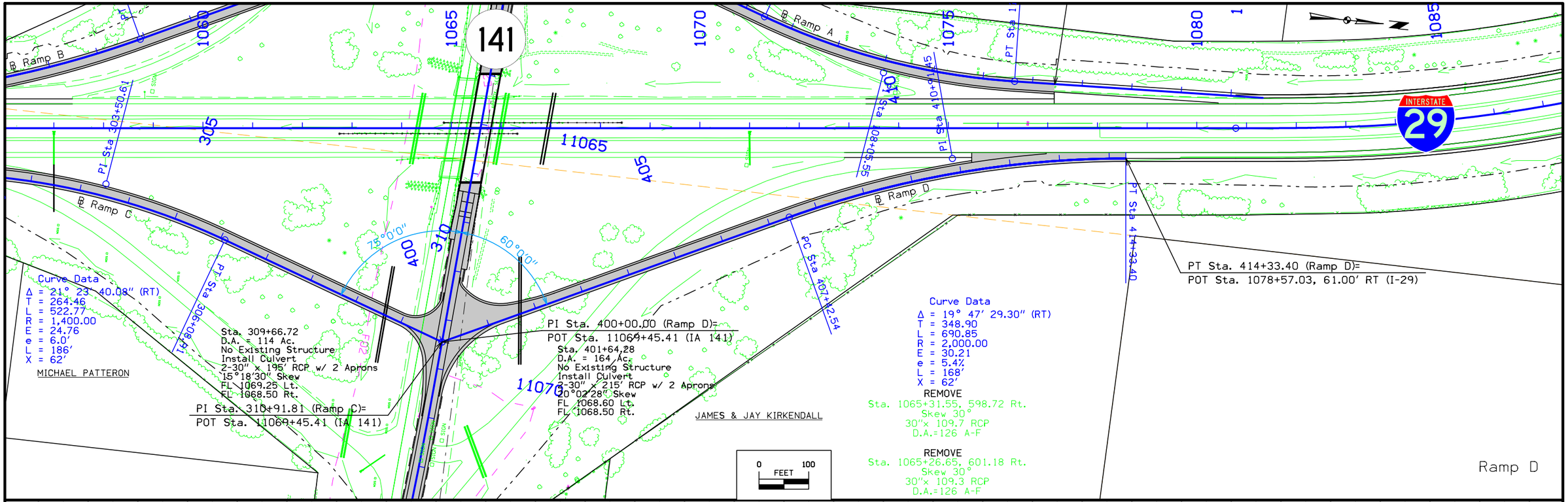

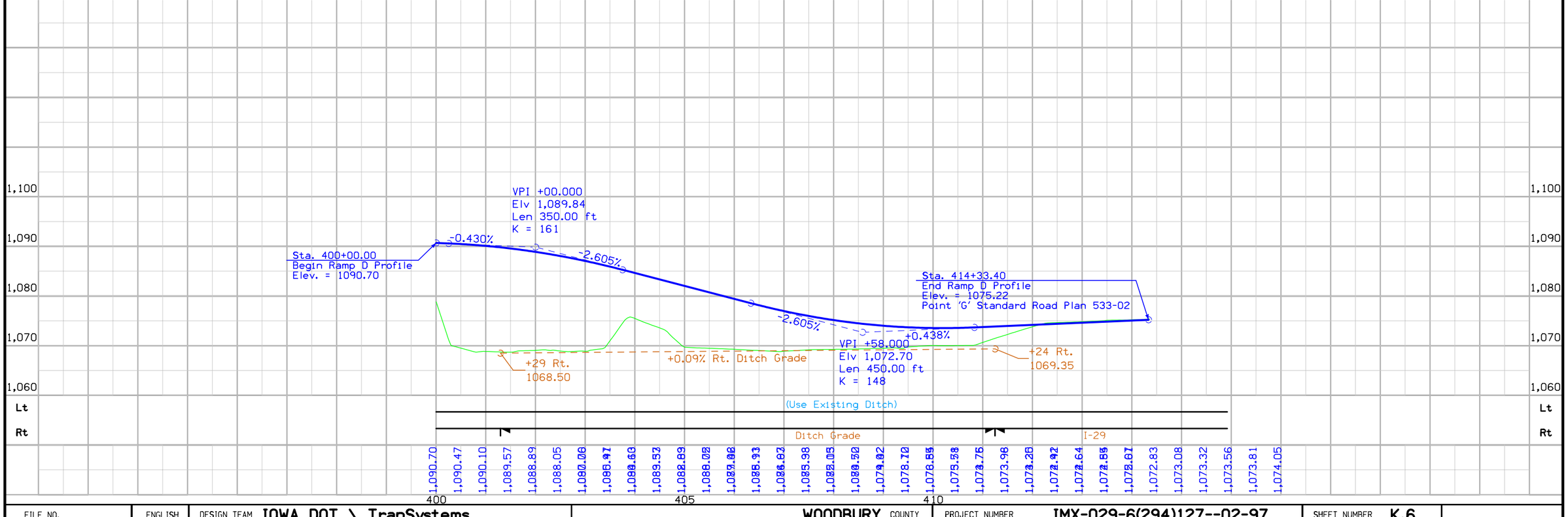

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER K.6

5:46:27 PM 2/27/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_K02.dgn

LINE STYLE LEGEND OF CROSS SECTION SHEETS (ROAD)

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

LINE STYLE LEGEND OF CROSS SECTION SHEETS (SOILS)

- Topsoil (Class 10)
- Slope Dressing Only
- Class 10 Materials
- Select Loams And Clay-Loams
- Select Sand
- Unsuitable Type A Disposal
- Unsuitable Type B Disposal
- Unsuitable Type C Disposal
- Shale
- Waste
- Broken and Weathered Rock
- Solid Rock
- Boulders

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

Note: Vertical or near vertical lines connecting soil layers at edges of cross sections are only for the purpose of calculating template quantities and do not depict soil stratification.

SYMBOL LEGEND OF CROSS SECTION SHEETS

Existing ROW — Existing Right-of-Way Limit

Proposed ROW — Proposed Right-of-Way Limit

Temporary ROW — Temporary Right-of-Way Limit

CROSS SECTION LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES W, X, Y, & Z)

FILE NO.	ENGLISH	DESIGN TEAM **IOWA DOT \ TranSystems**	**WOODBURY** COUNTY	PROJECT NUMBER **IMX-029-6(294)127--02-97**	SHEET NUMBER **W.1**

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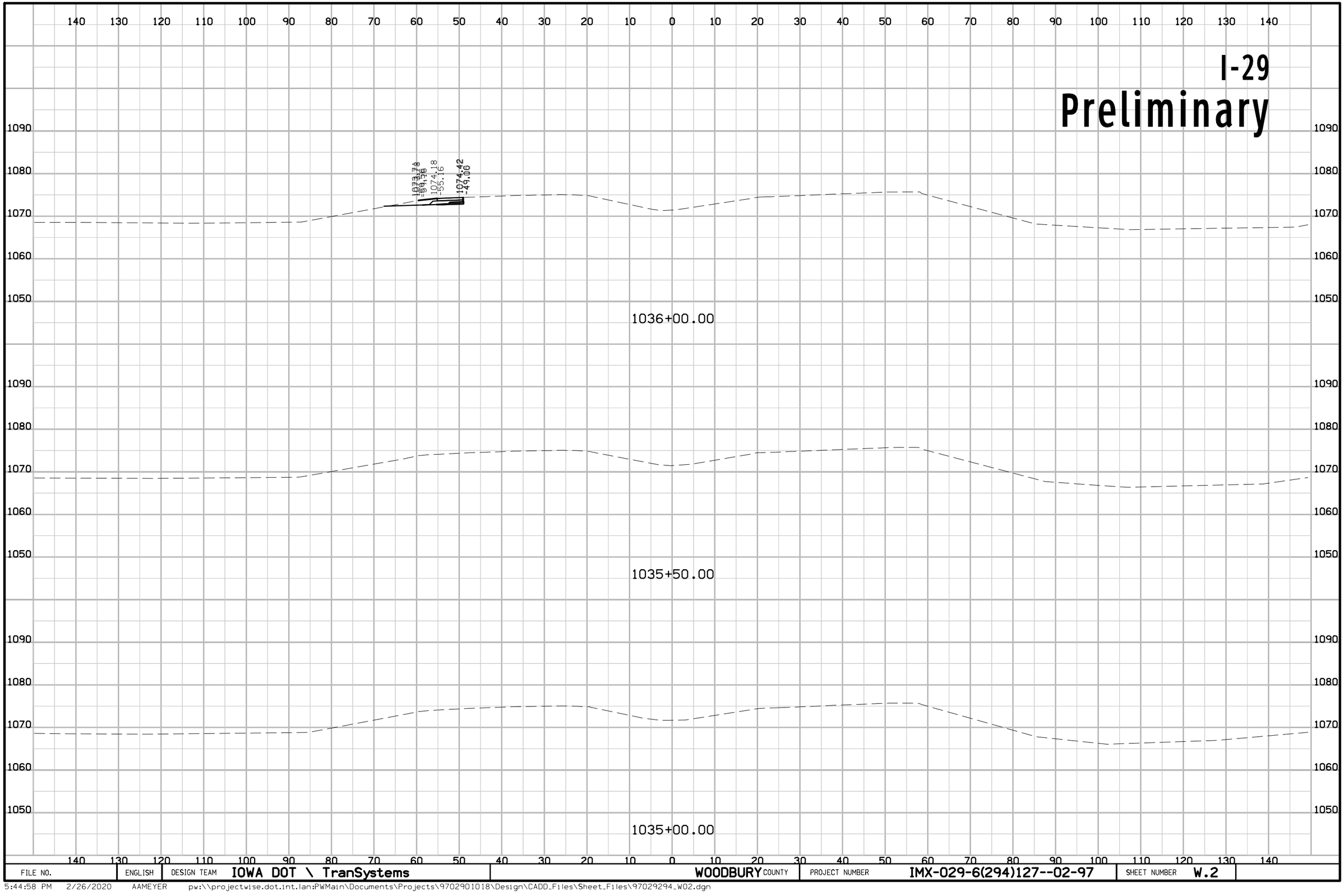
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.2

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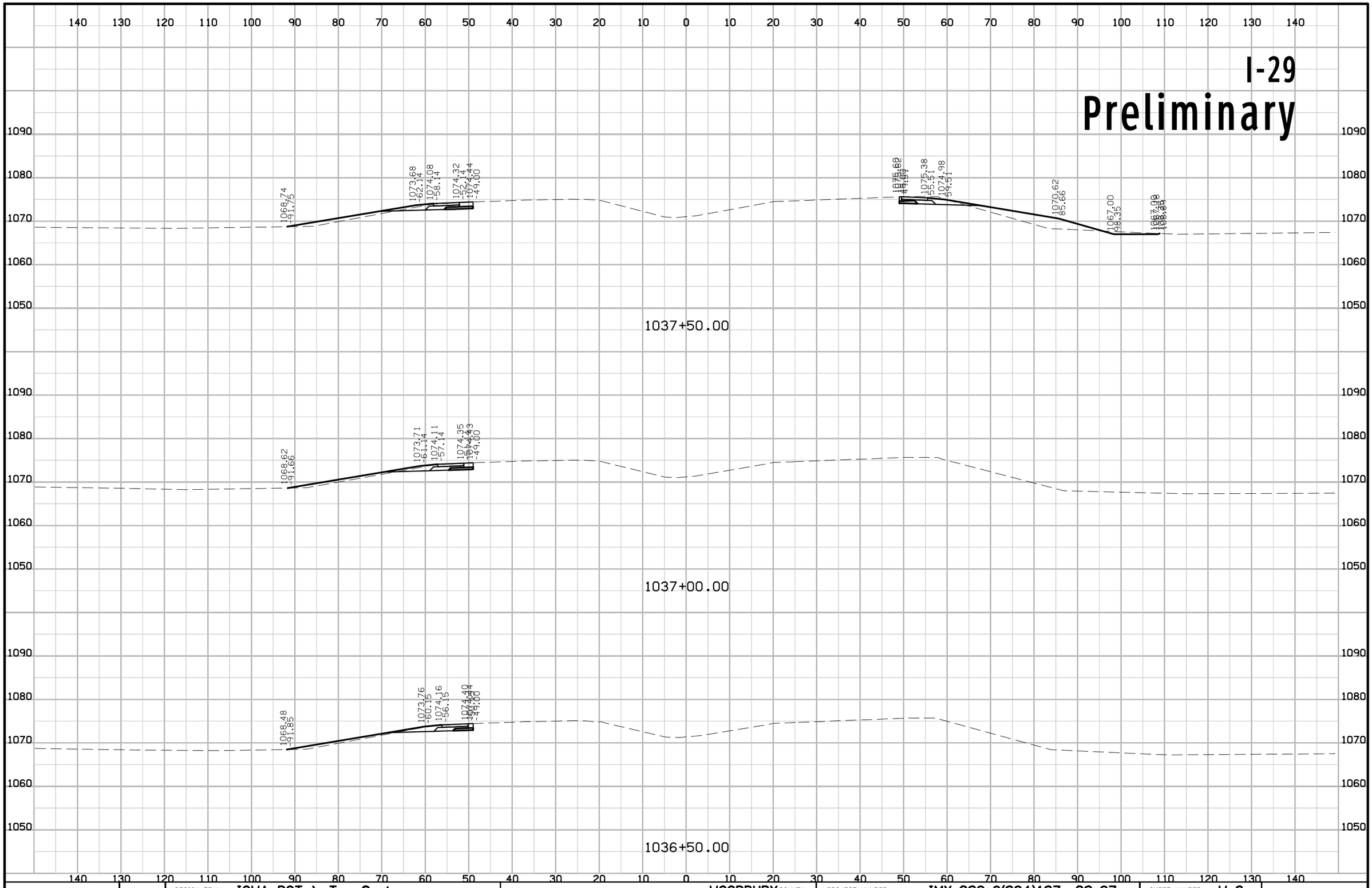
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER W.3

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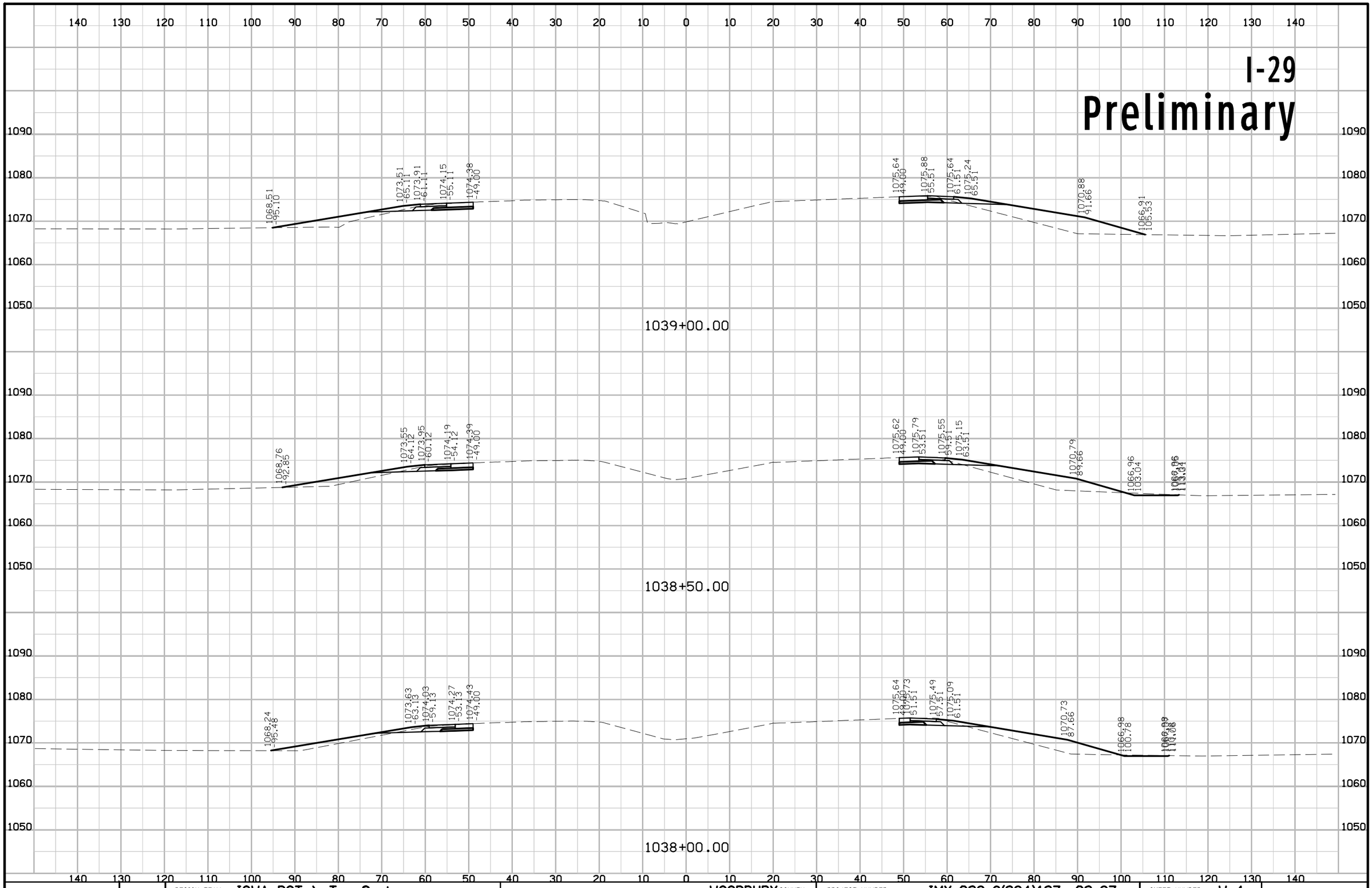
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER W.4

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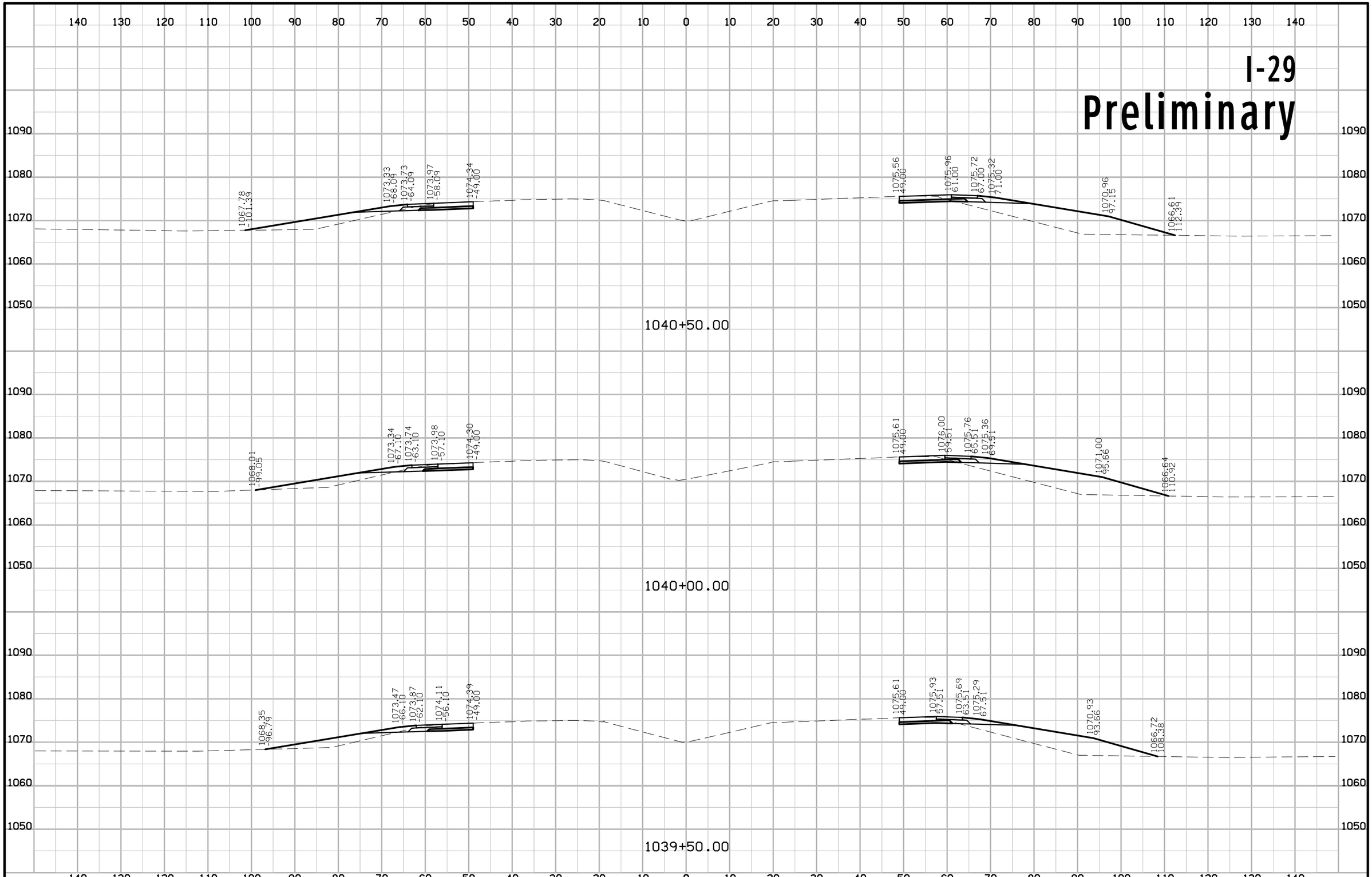
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.5

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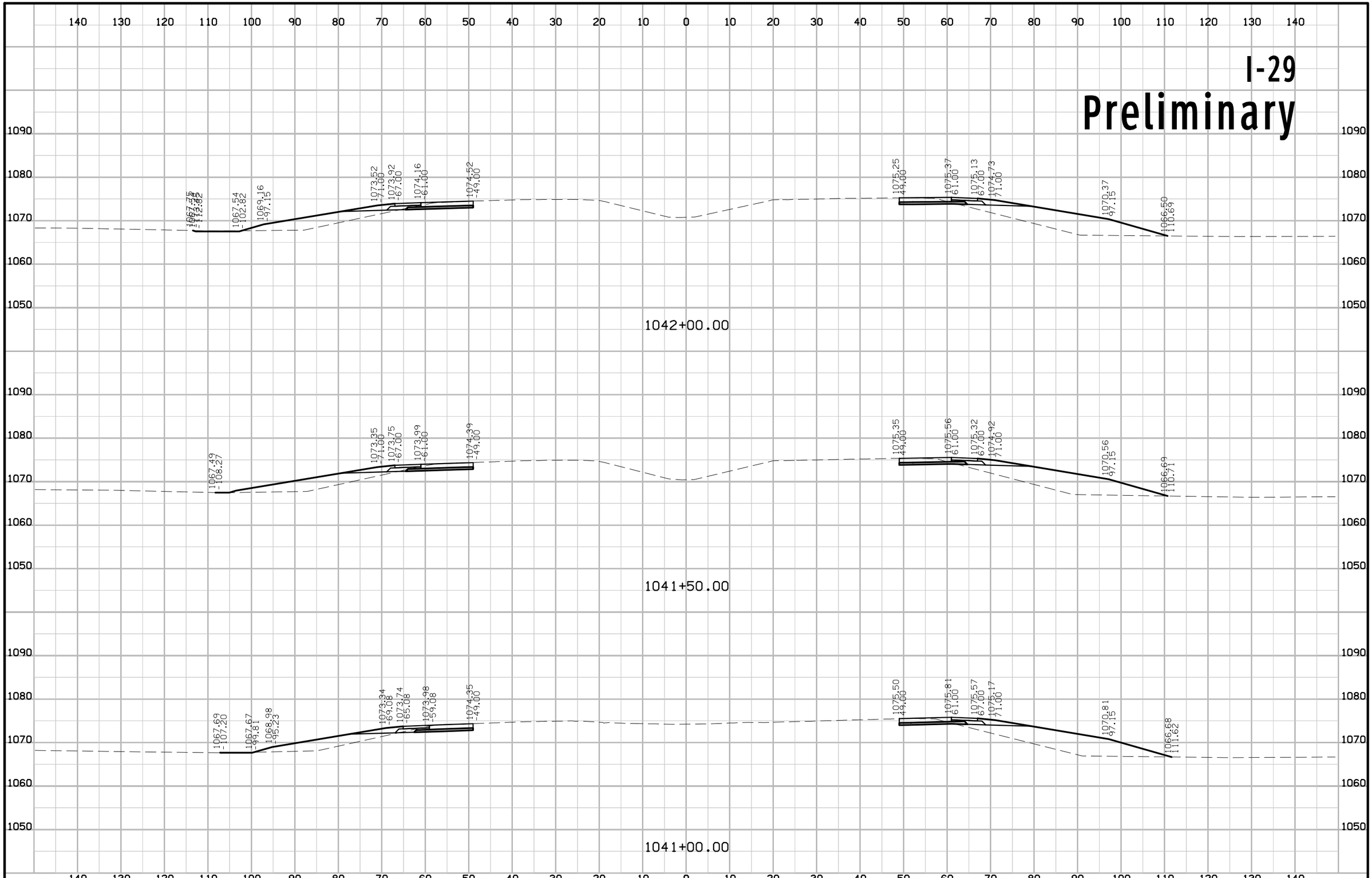
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.6

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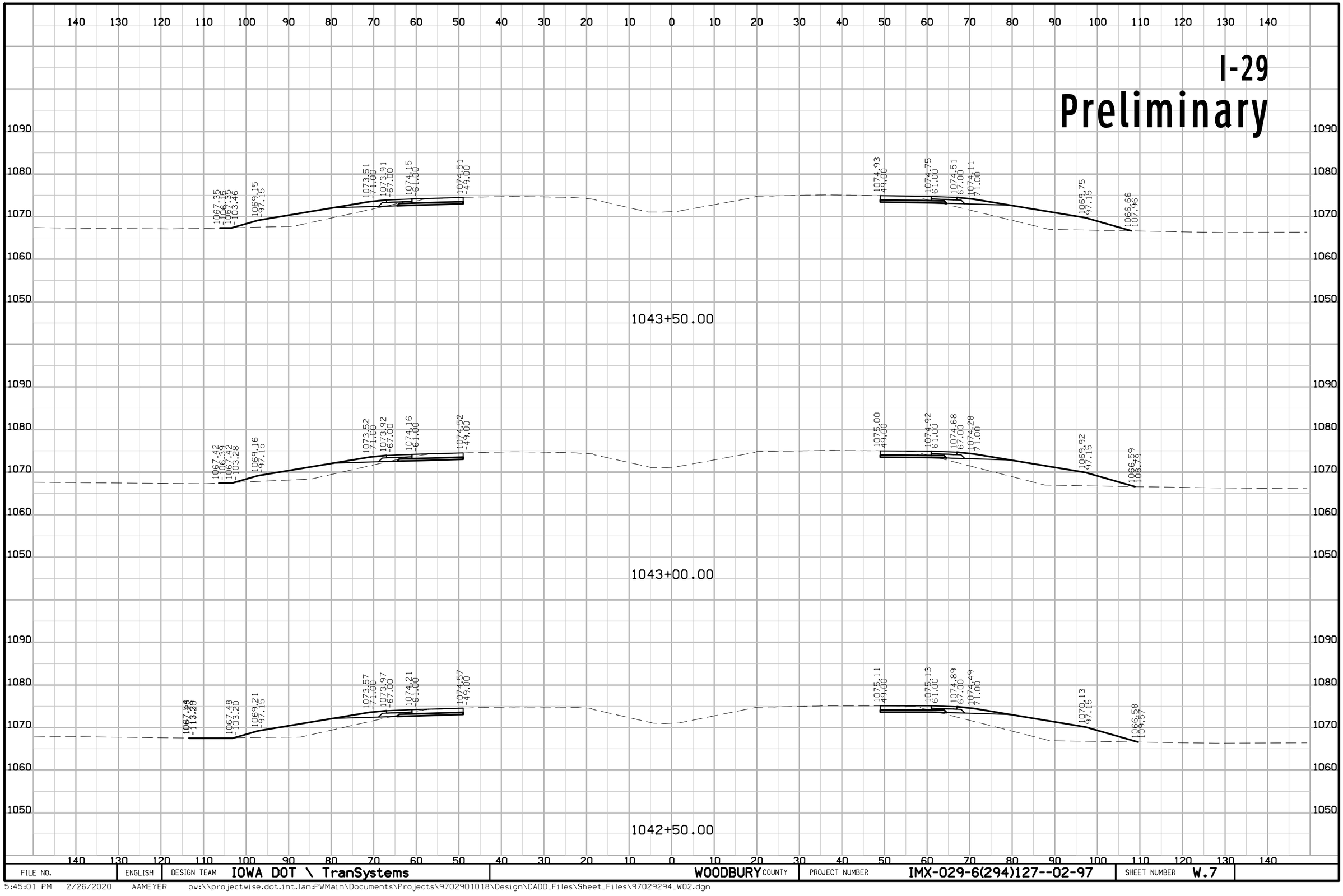
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.7

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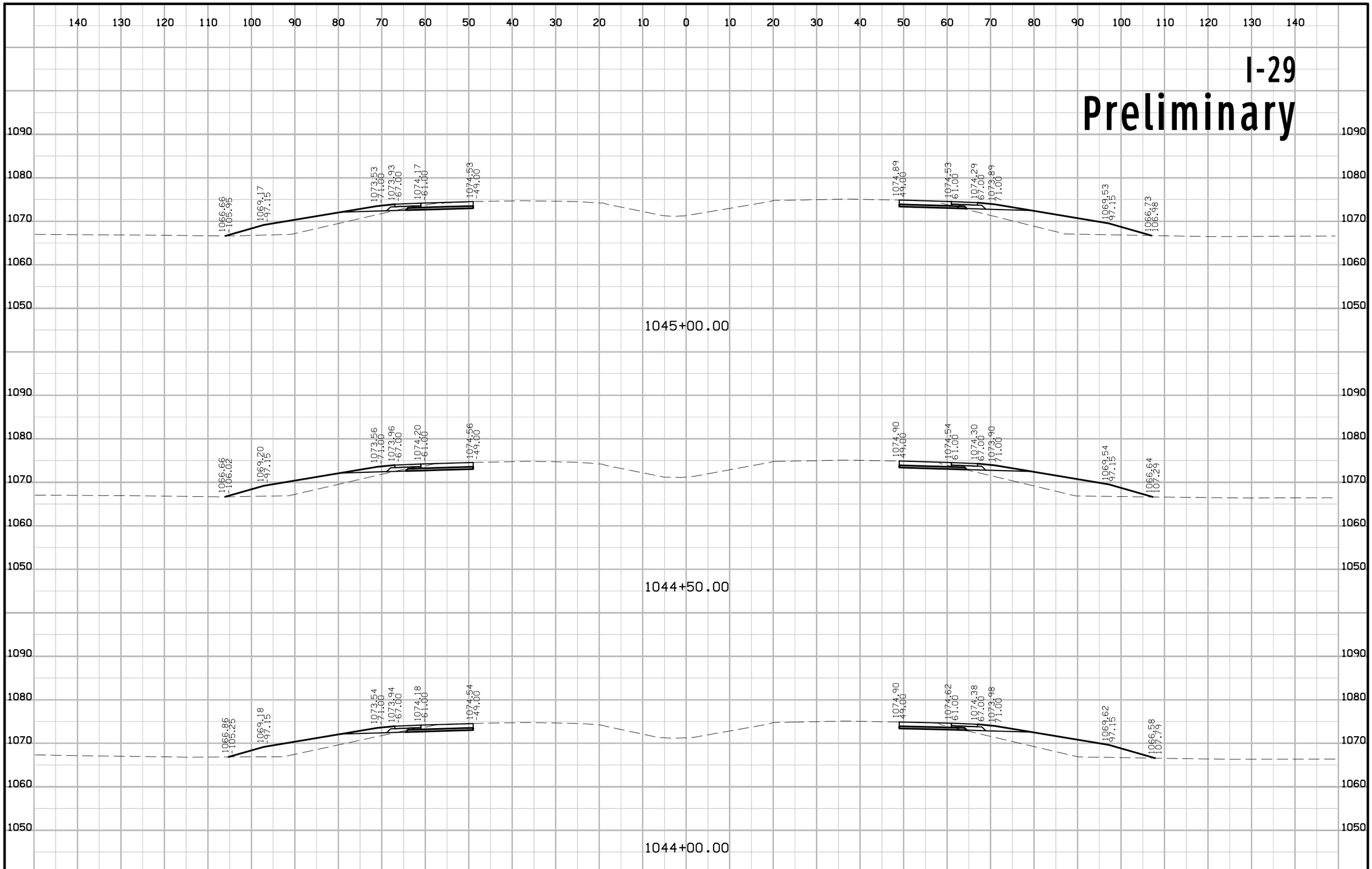
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.8

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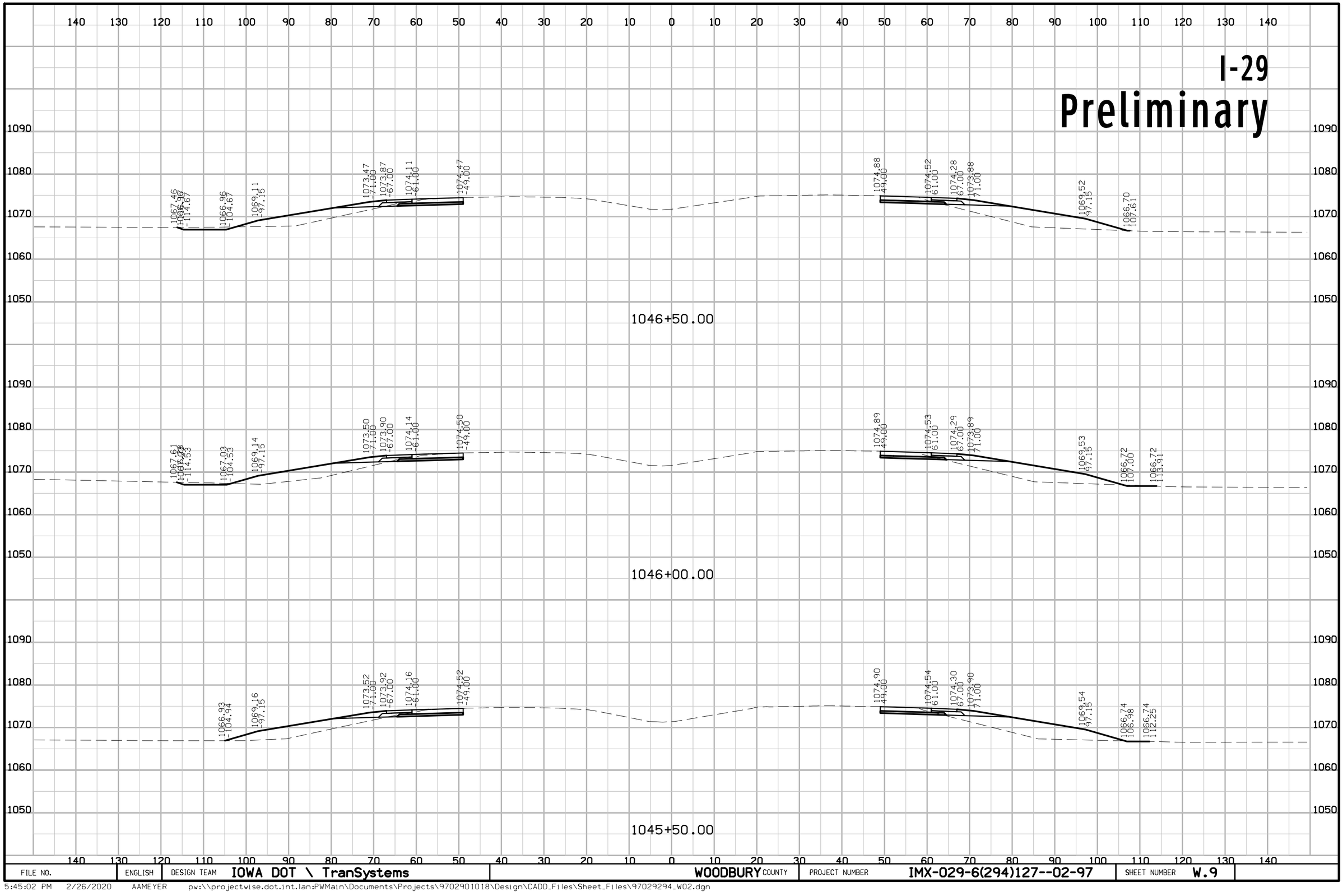
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.9

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I-29

Preliminary

1047+50.00

1047+00.00

FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.10

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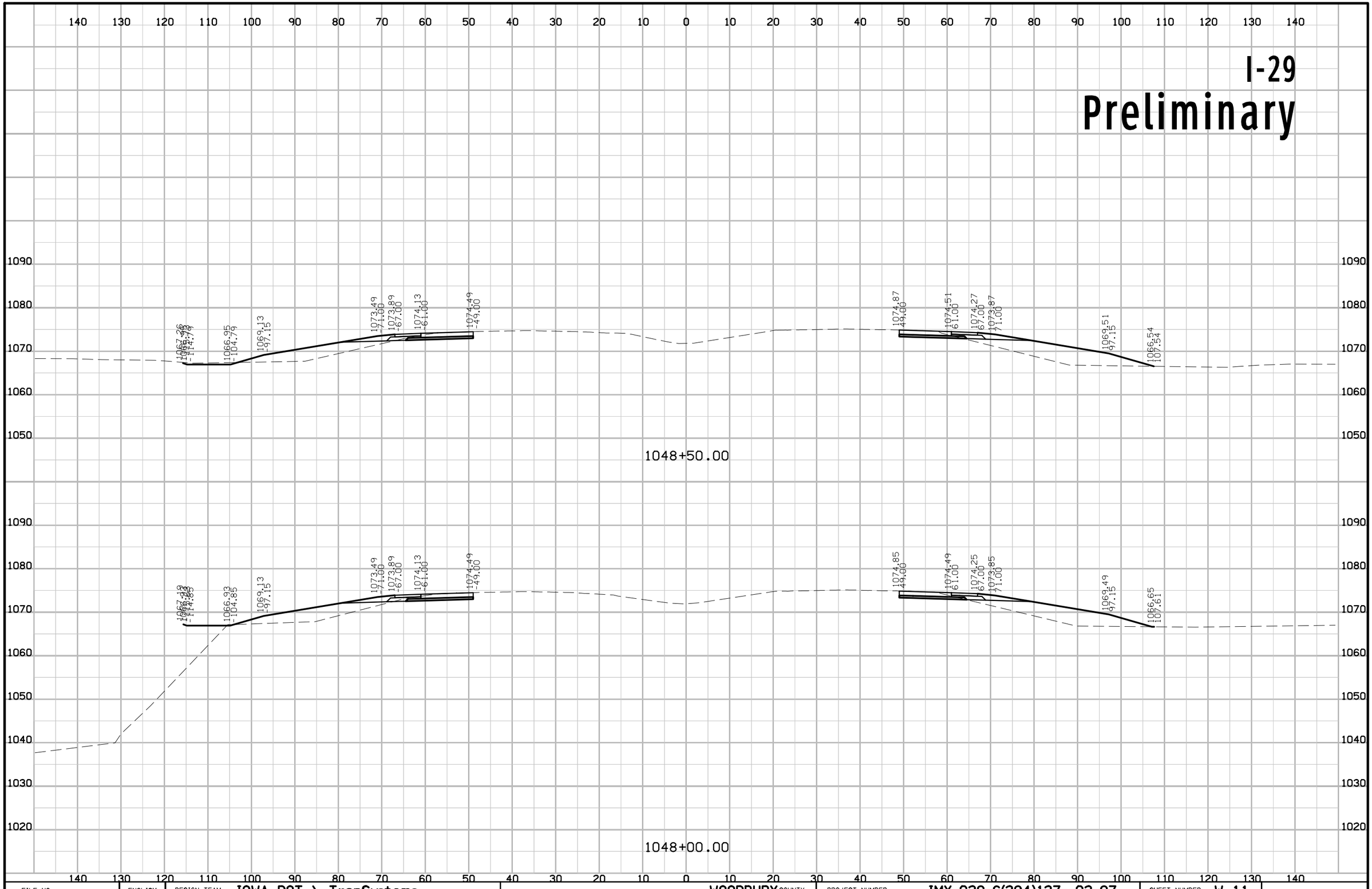
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER W.11

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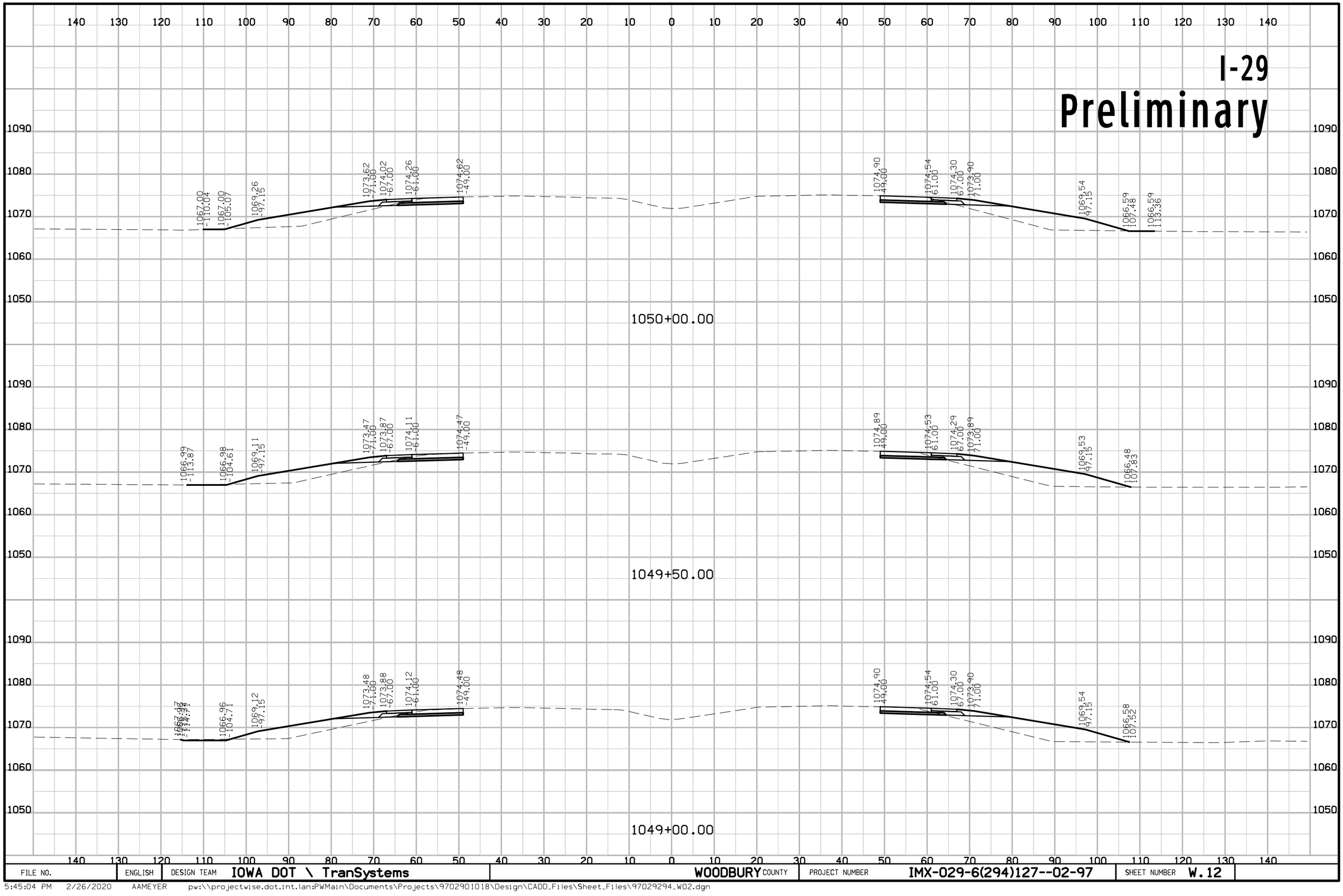
I-29

Preliminary



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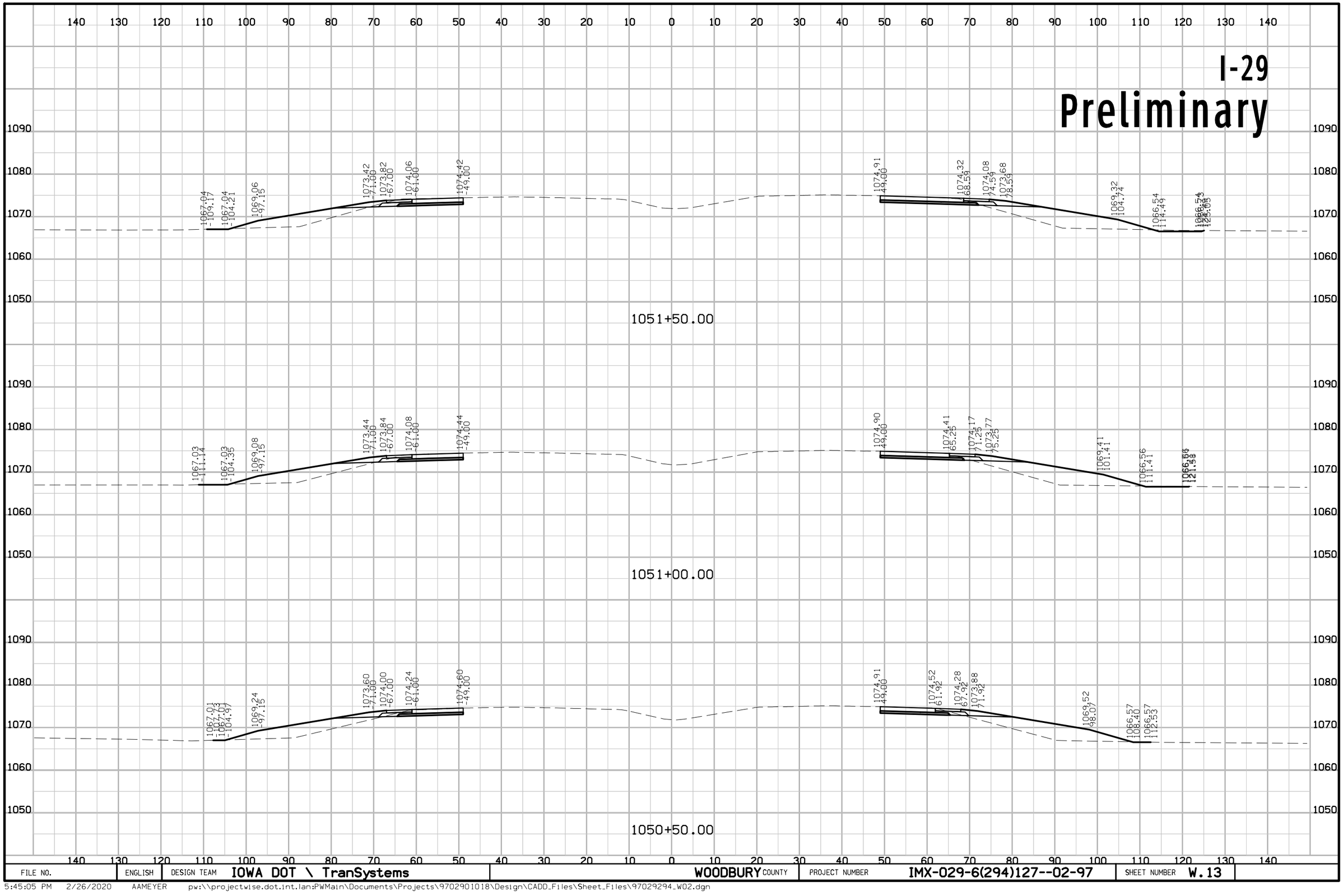
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.13

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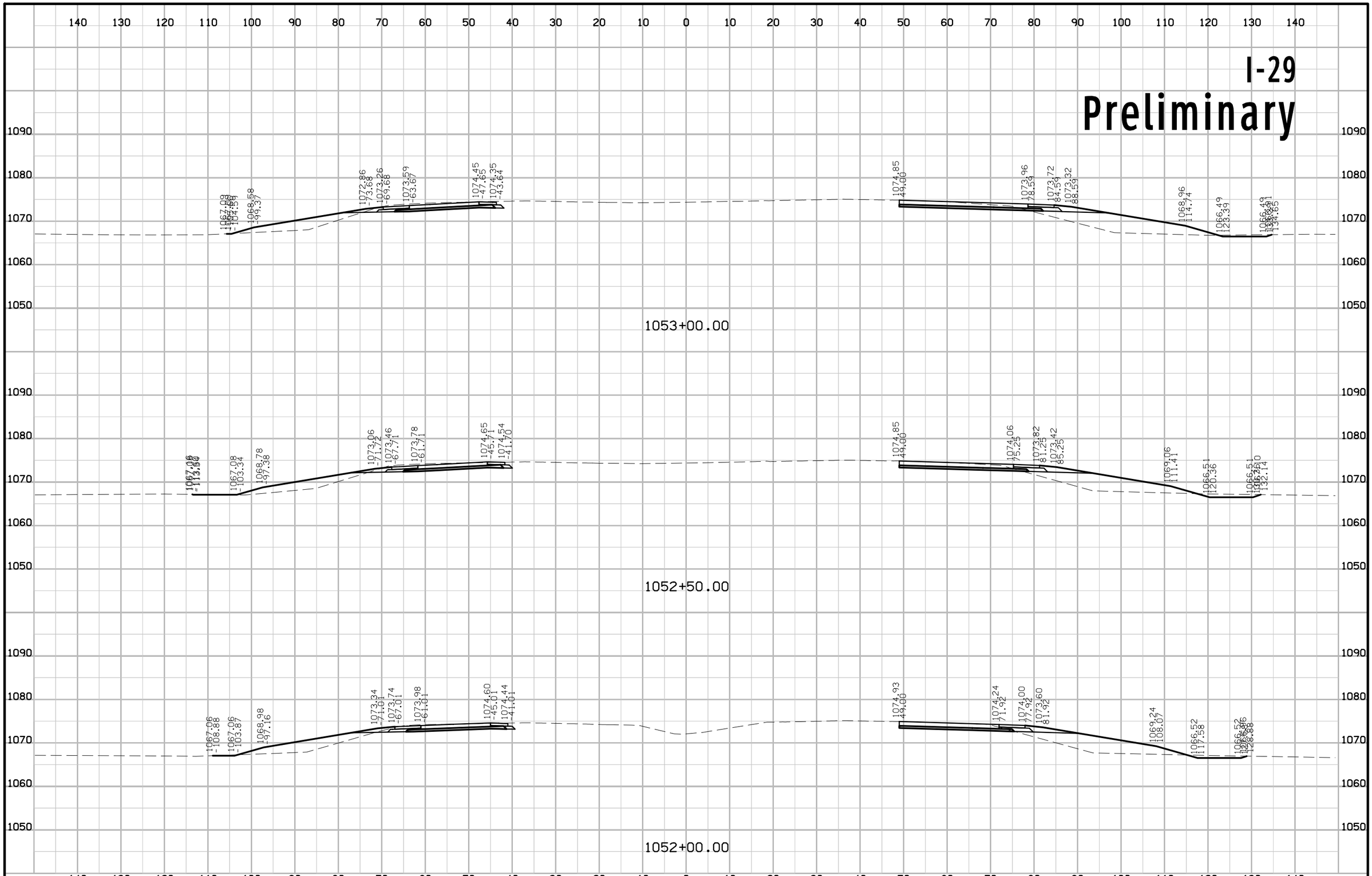
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.14

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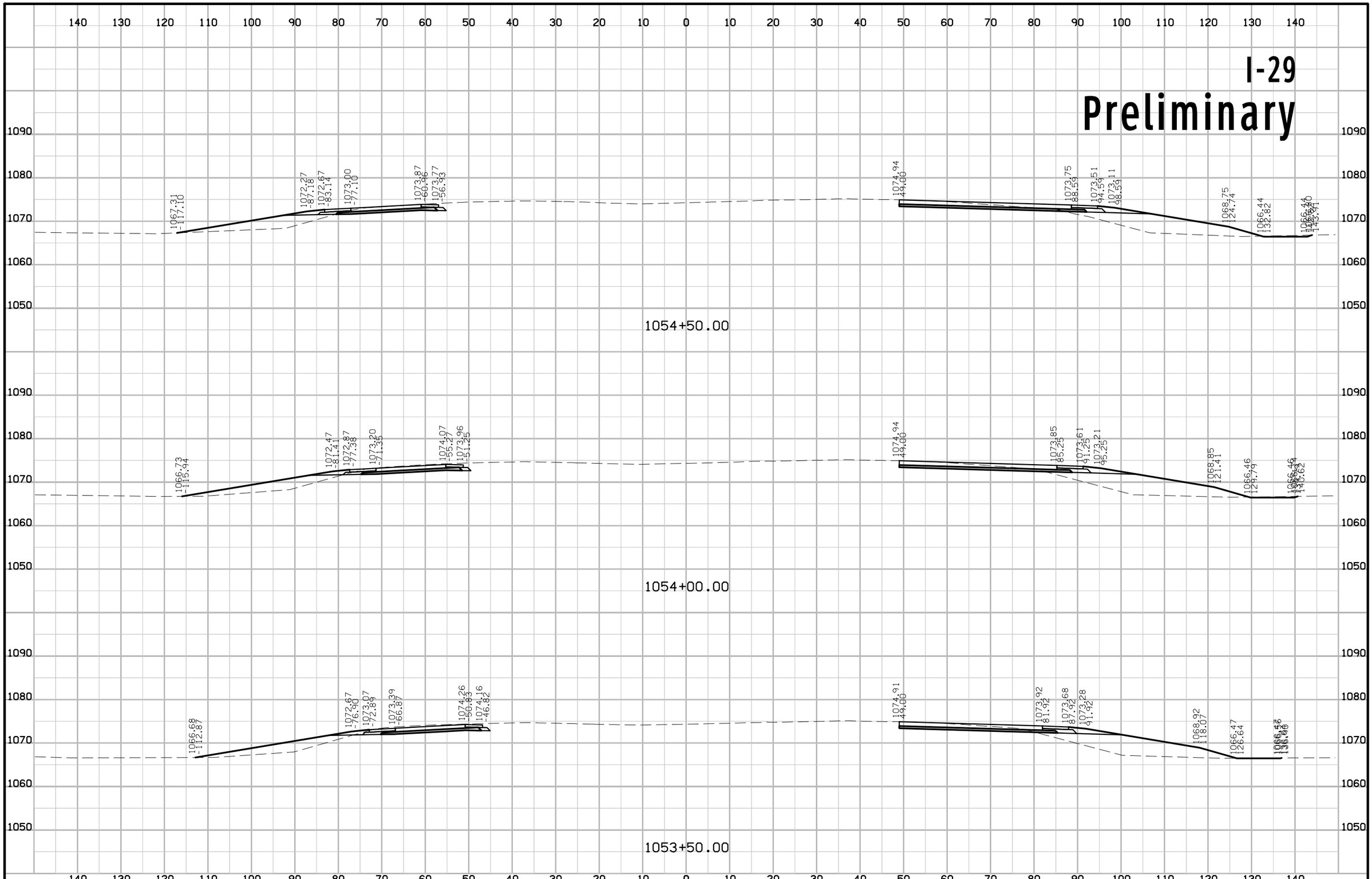
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.15

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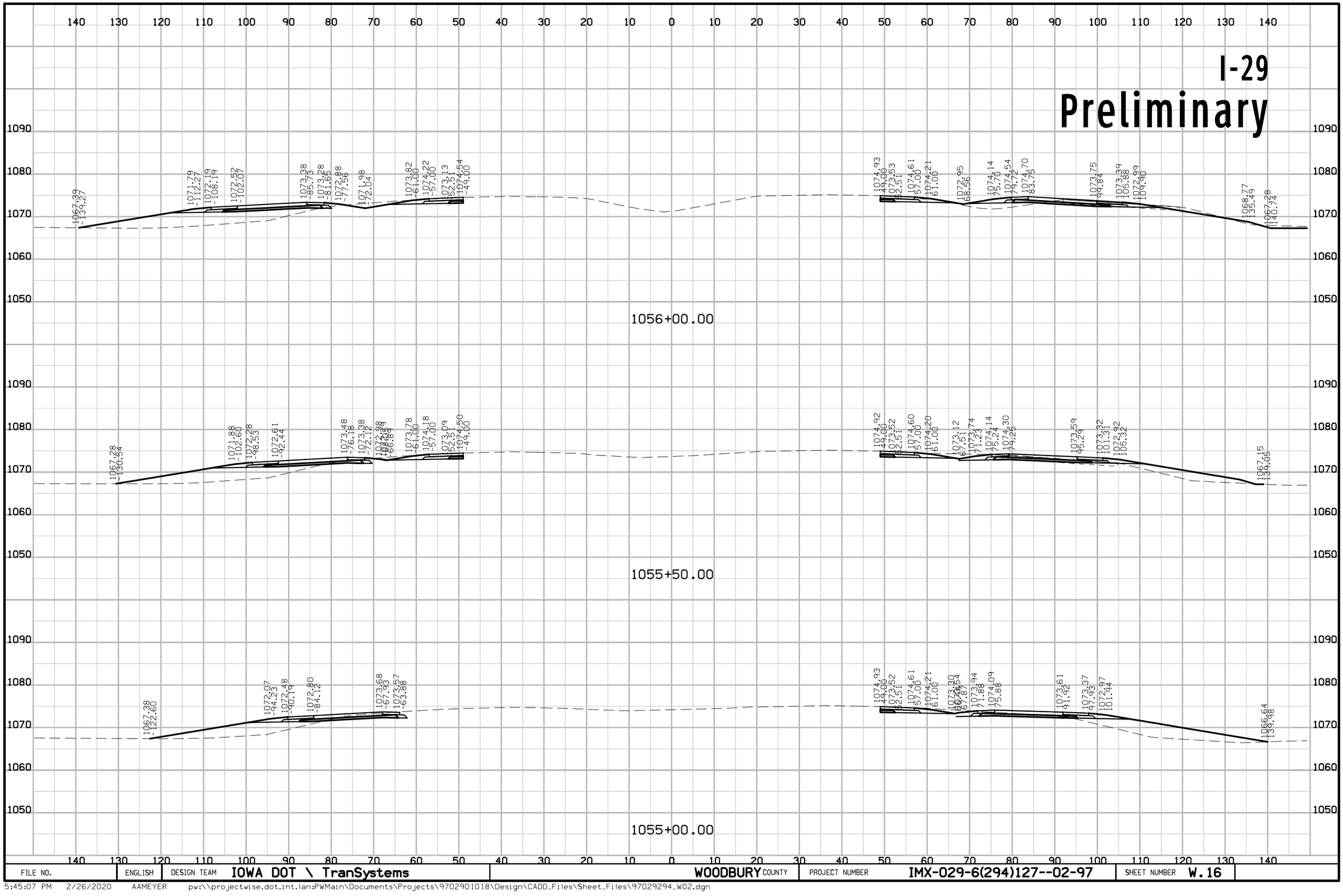
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.16

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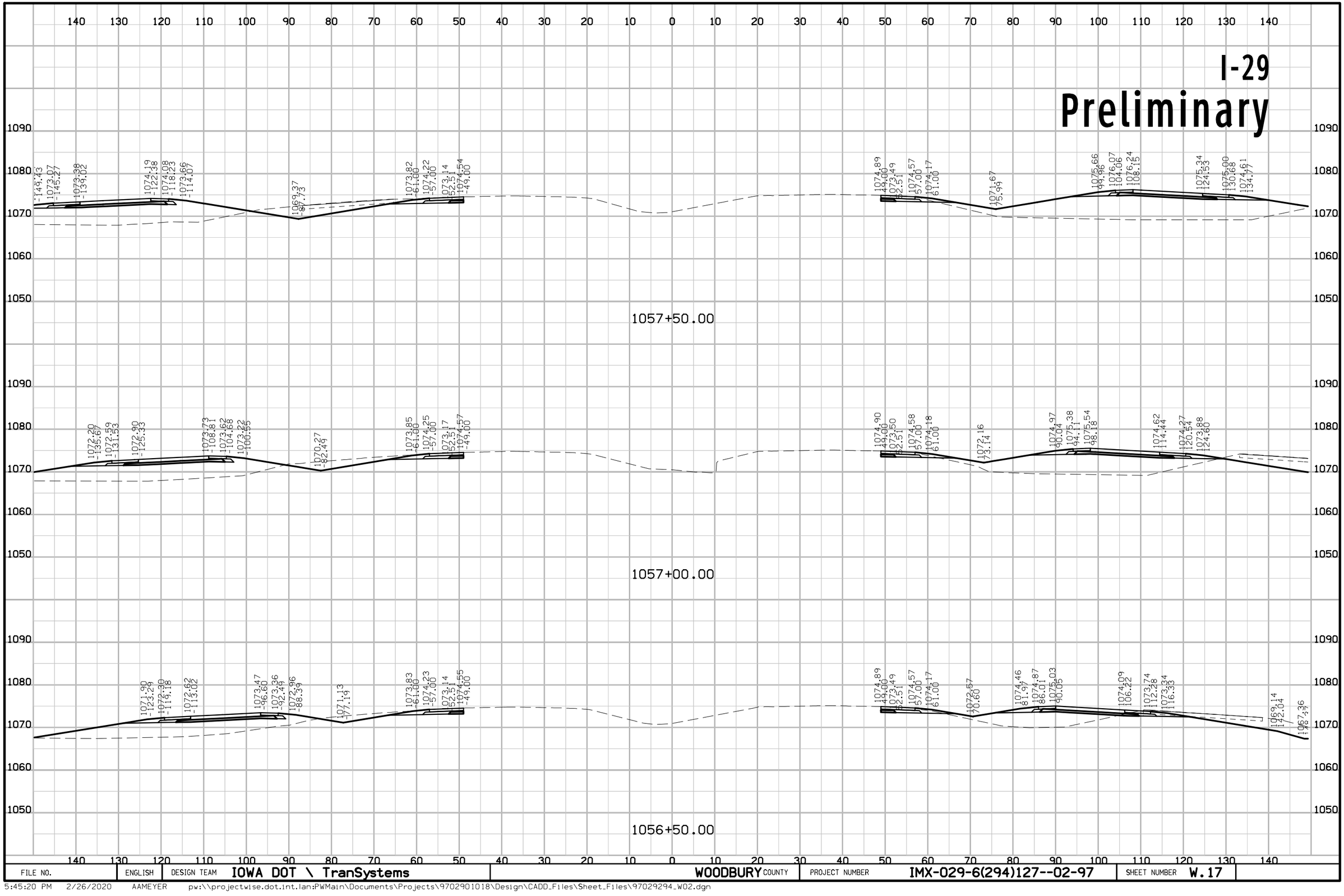
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.17

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I-29

Preliminary

1059+00.00

1058+50.00

1058+00.00

FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER W.18

5:45:20 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_W02.dgn

I-29

Preliminary

1060+50.00

1060+00.00

1059+50.00

1072.06
142.04

1073.88
136.08

1069.41
110.08

1075.05
130.57

1069.15
124.48

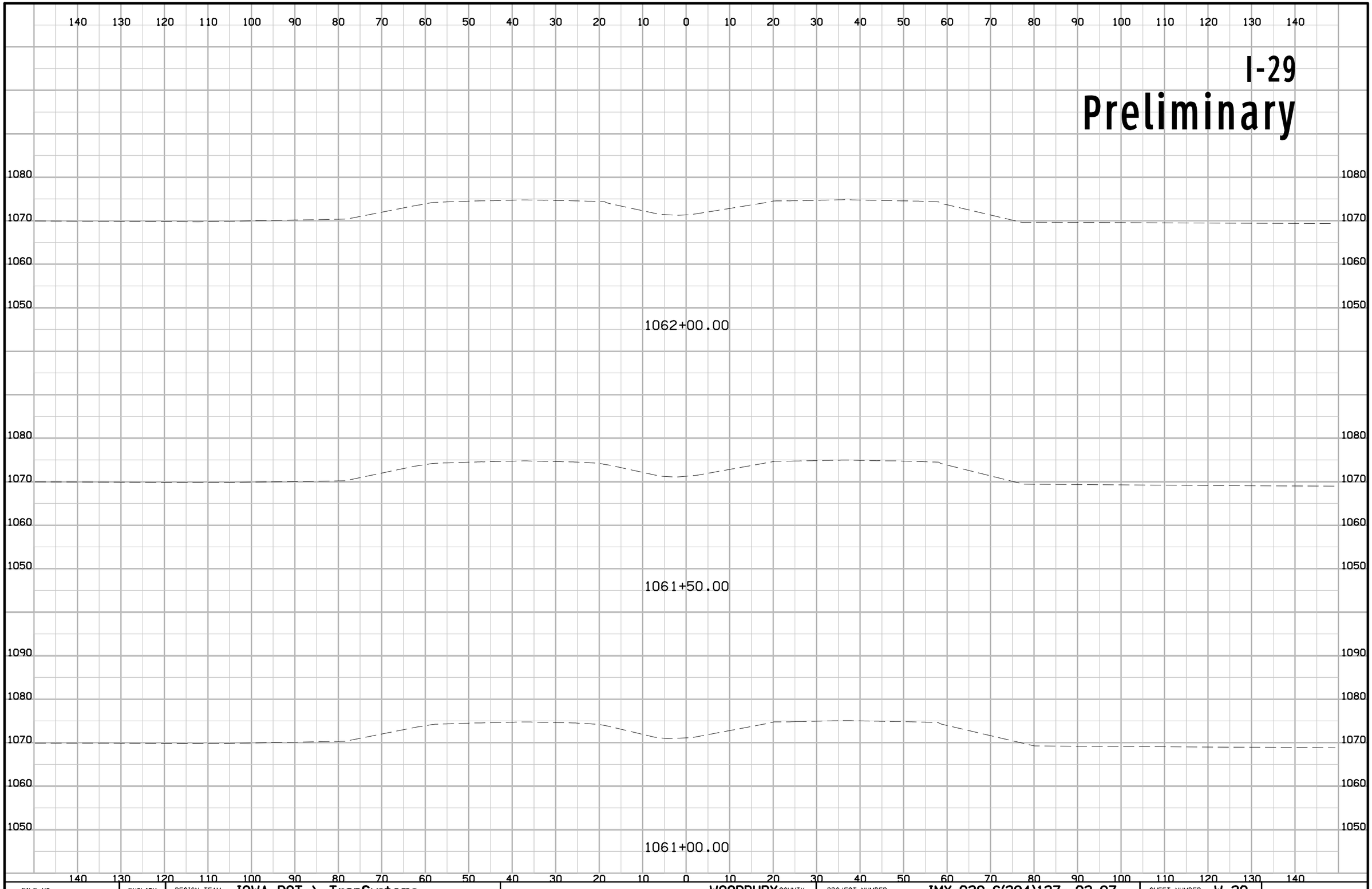
1068.82
141.14

FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.19

5:45:21 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_W02.dgn

I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER W.20

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I-29

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

1080
1070
1060
1050

1063+50.00

1063+00.00

1062+50.00

FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.21

5:45:21 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_W02.dgn

I-29

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

1100
1090
1080
1070
1060
1050

1069.46
141.89

1064+50.00

1080
1070
1060
1050

1070.01
132.09
1069.71
137.58

1064+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	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.22

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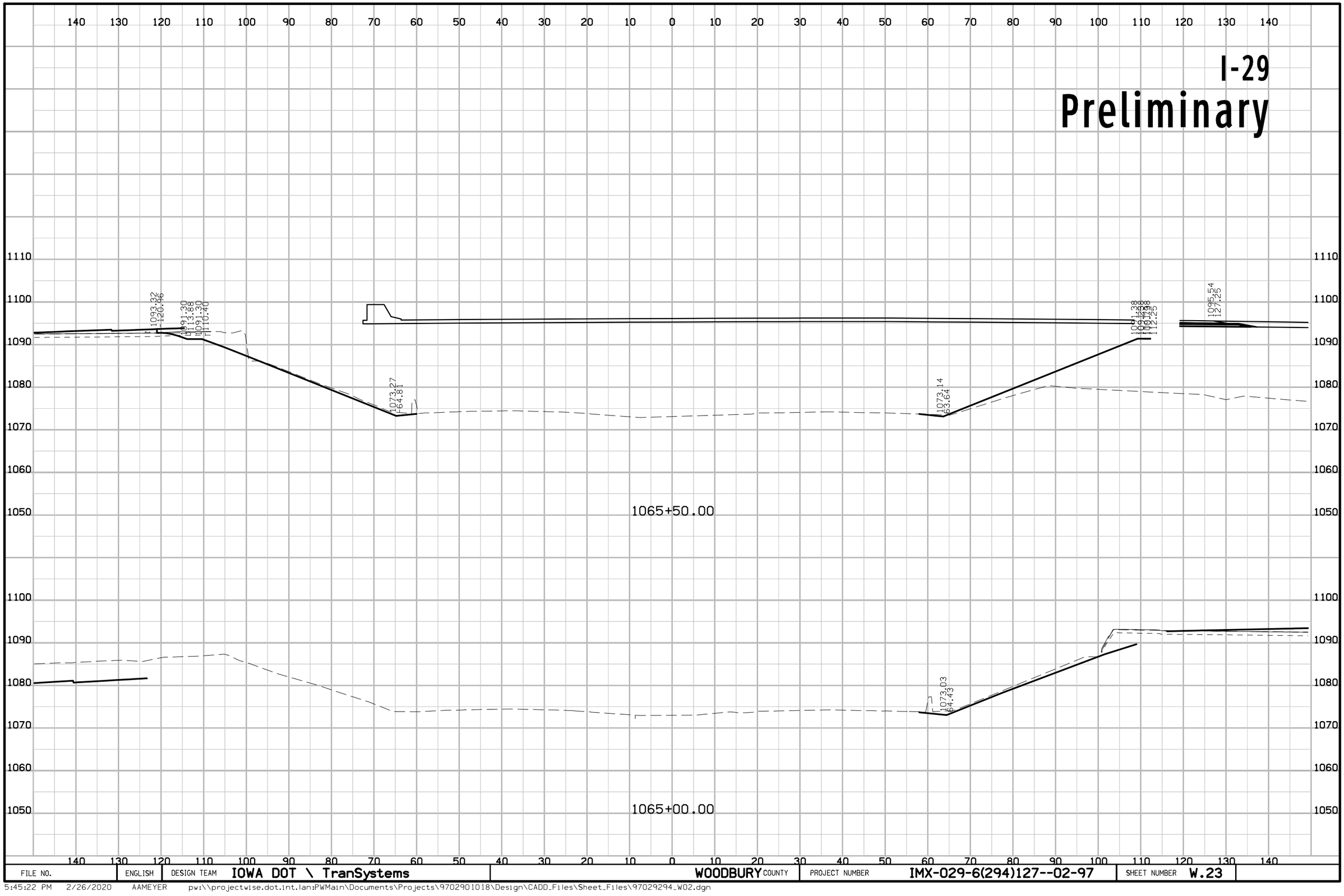
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.23

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I-29

Preliminary

1066+50.00

1066+00.00

1071.88
-79.19

1095.25
-119.70

1073.34
-64.33

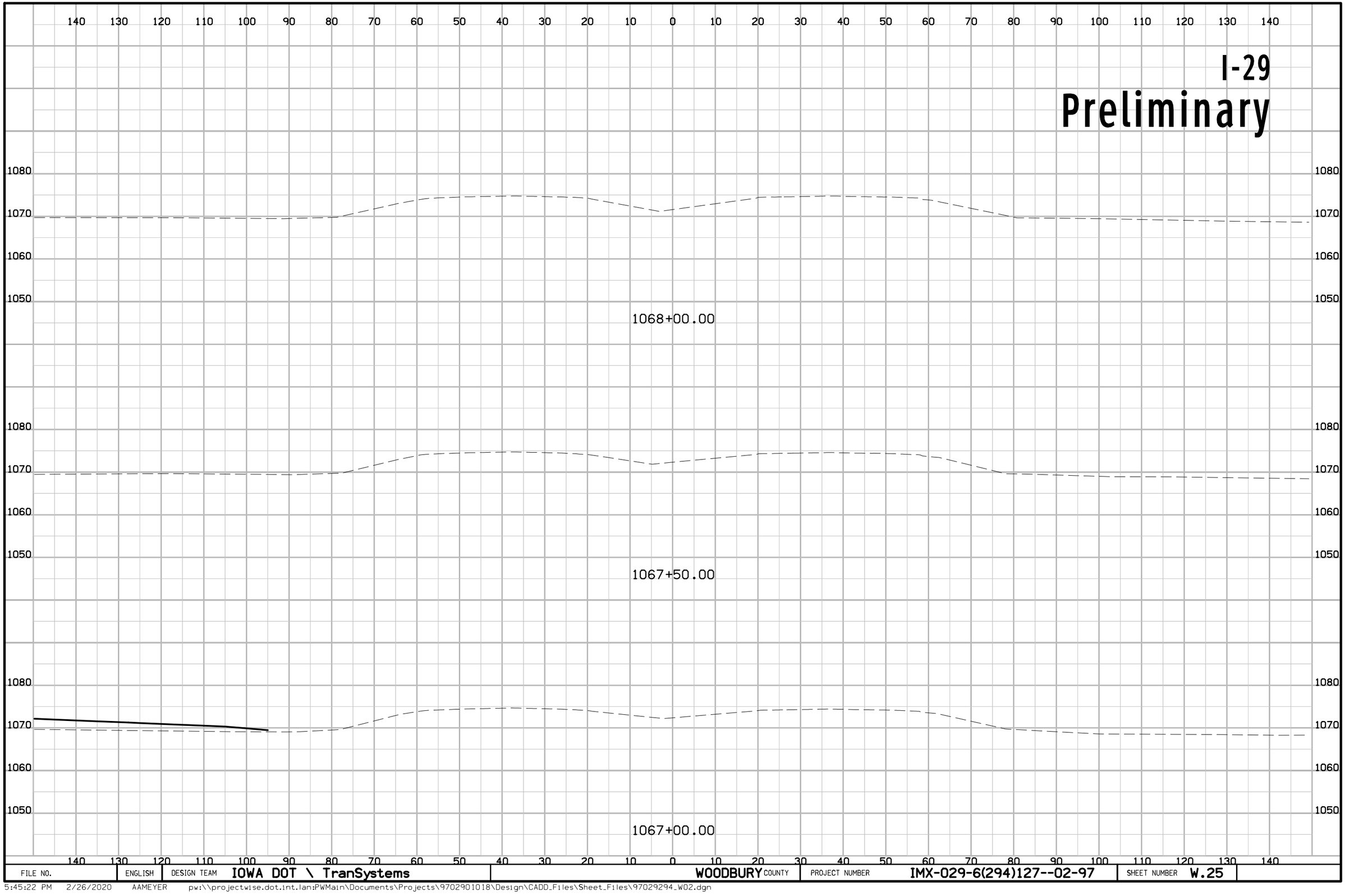
1071.86
73.62

FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.24

5:45:22 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_W02.dgn

I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.25

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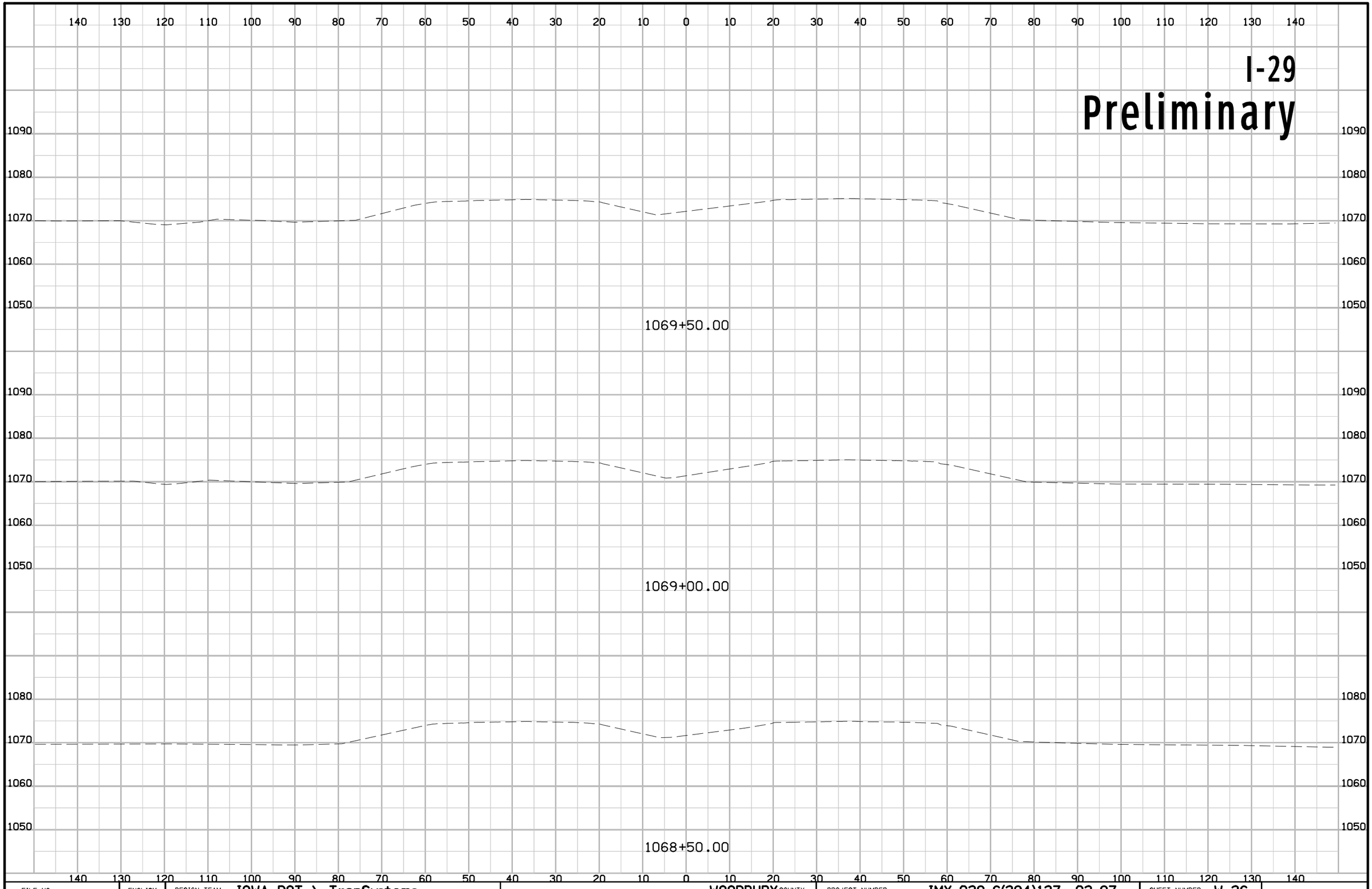
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER W.26

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I-29

Preliminary

1071+00.00

1070+50.00

1070+00.00

FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER W.27

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I-29

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

1090 1080 1070 1060 1050

1069.97
-102.92

1074.85
-120.56

1074.16
80.37

1070.55
91.81

1070.59
102.28

1075.14
130.18

1075.55
134.37

1075.73
138.57

1072+50.00

1075.92
-138.98

1070.08
-117.65

1073.48
100.70

1071.22
107.52

1071.26
118.47

1075.80
148.62

1072+00.00

1070.19
-134.57

1072.98
121.82

1071.86
125.43

1071.91
136.06

1071+50.00

FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER W.28

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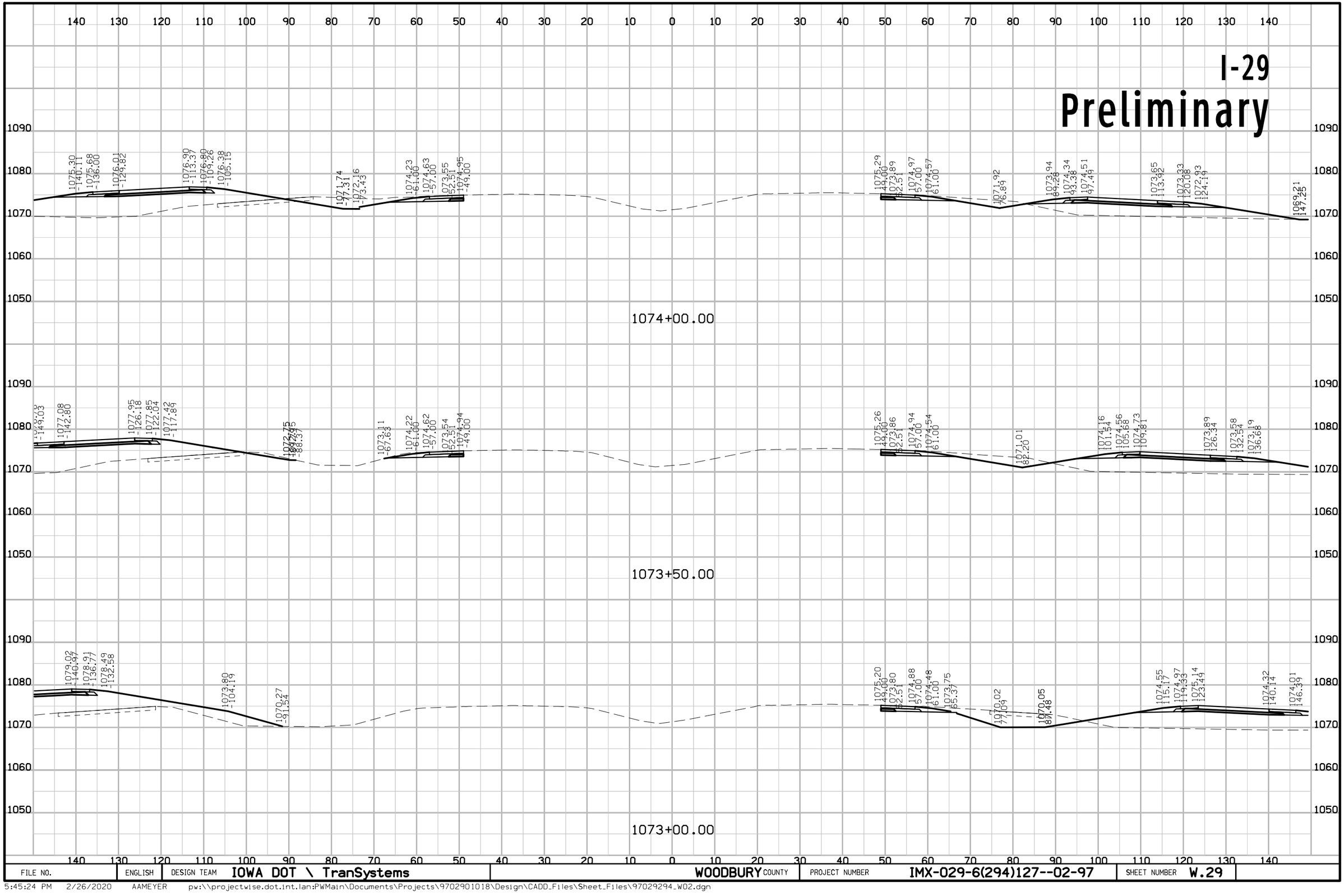
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.29

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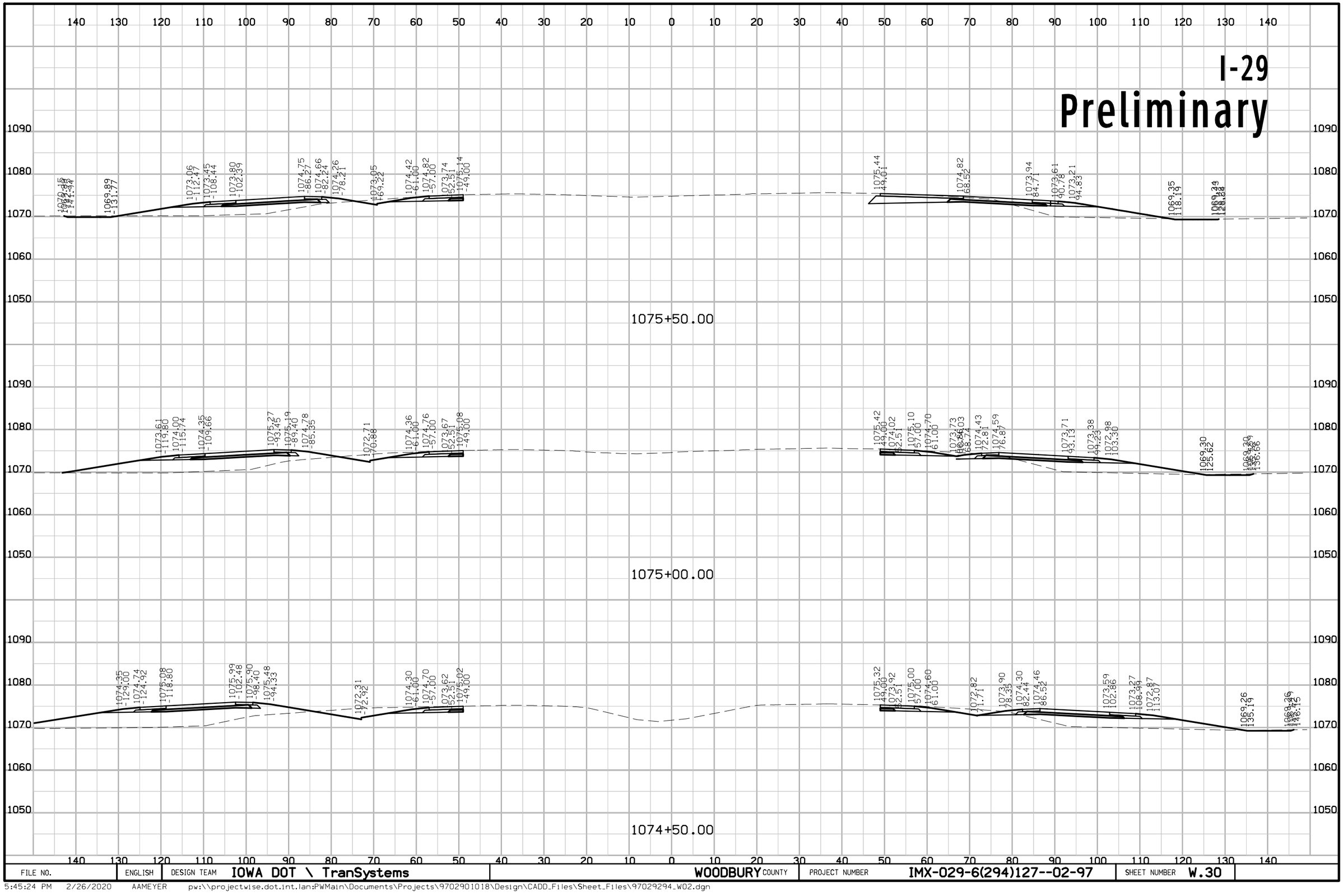
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER W.30

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I-29

Preliminary

1077+00.00

1076+50.00

1076+00.00

FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER W.31

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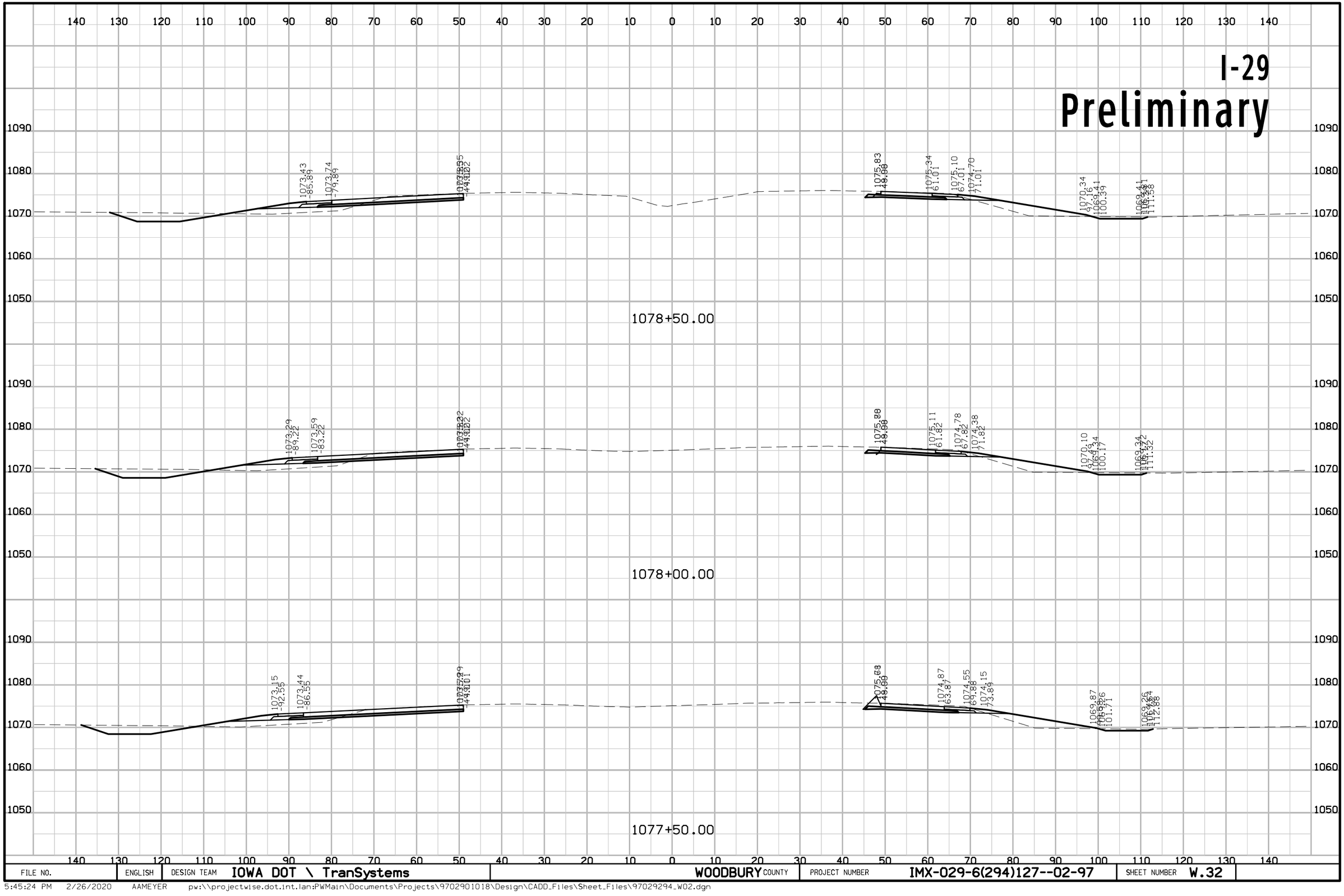
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER W.32

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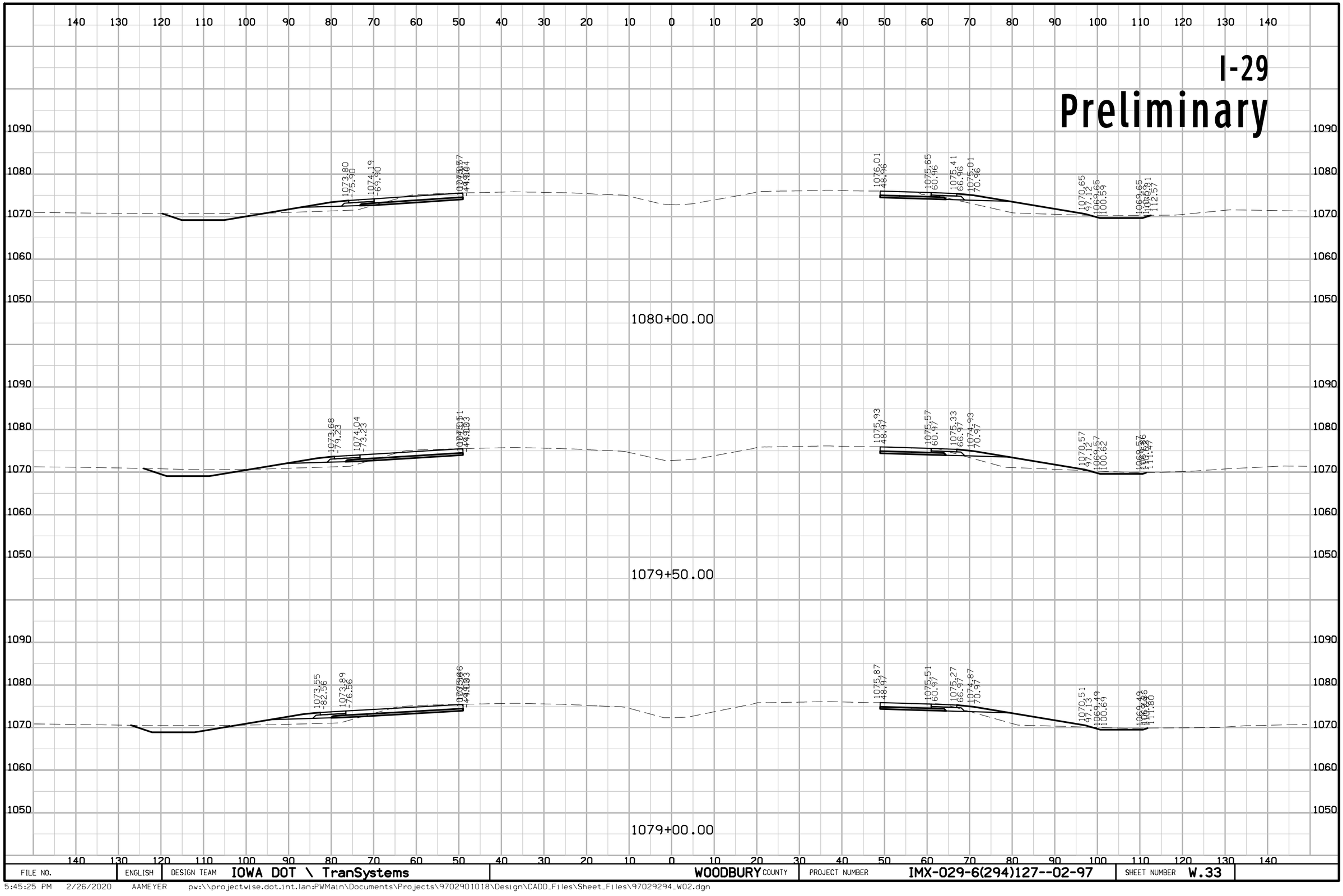
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.33

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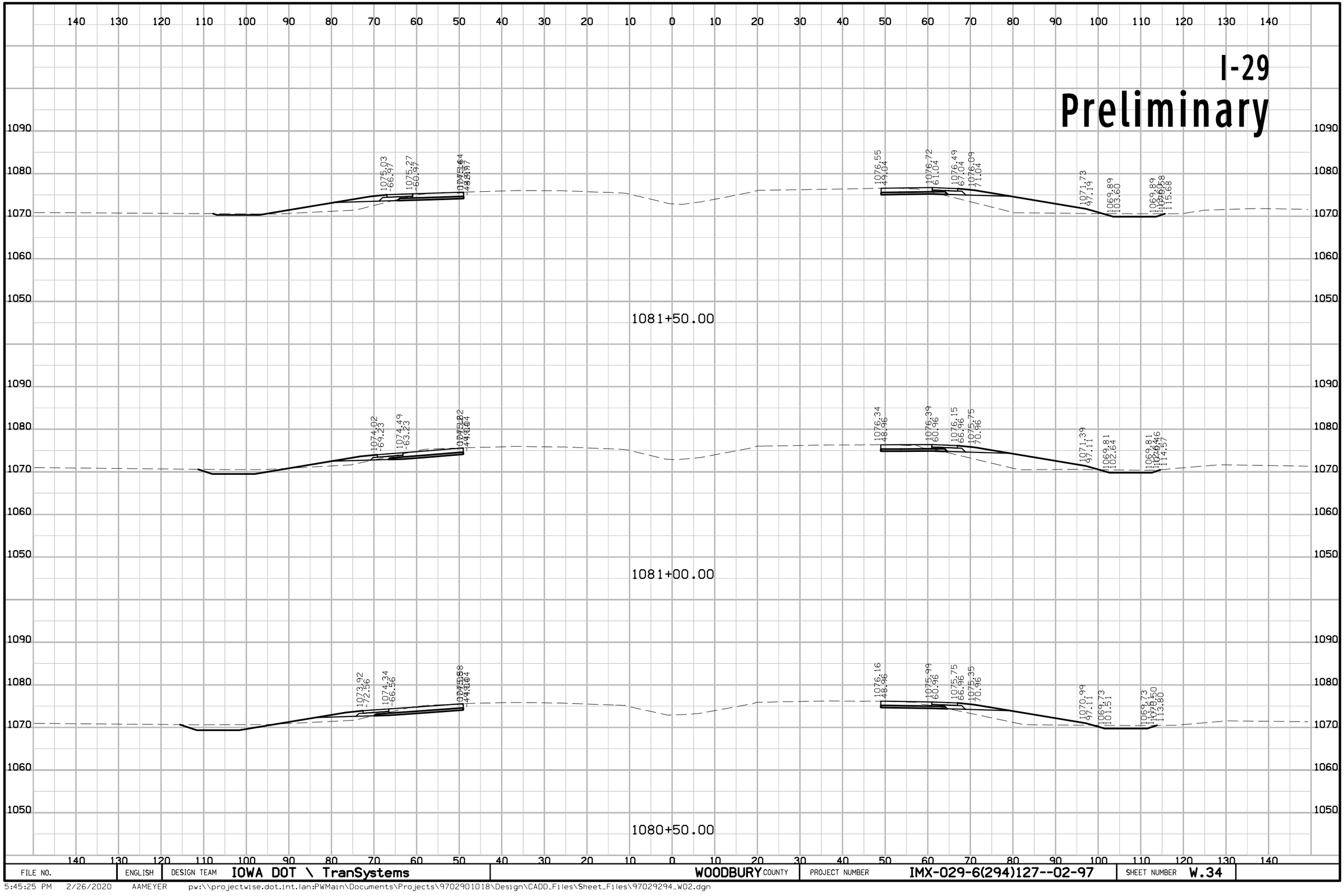
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER W.34

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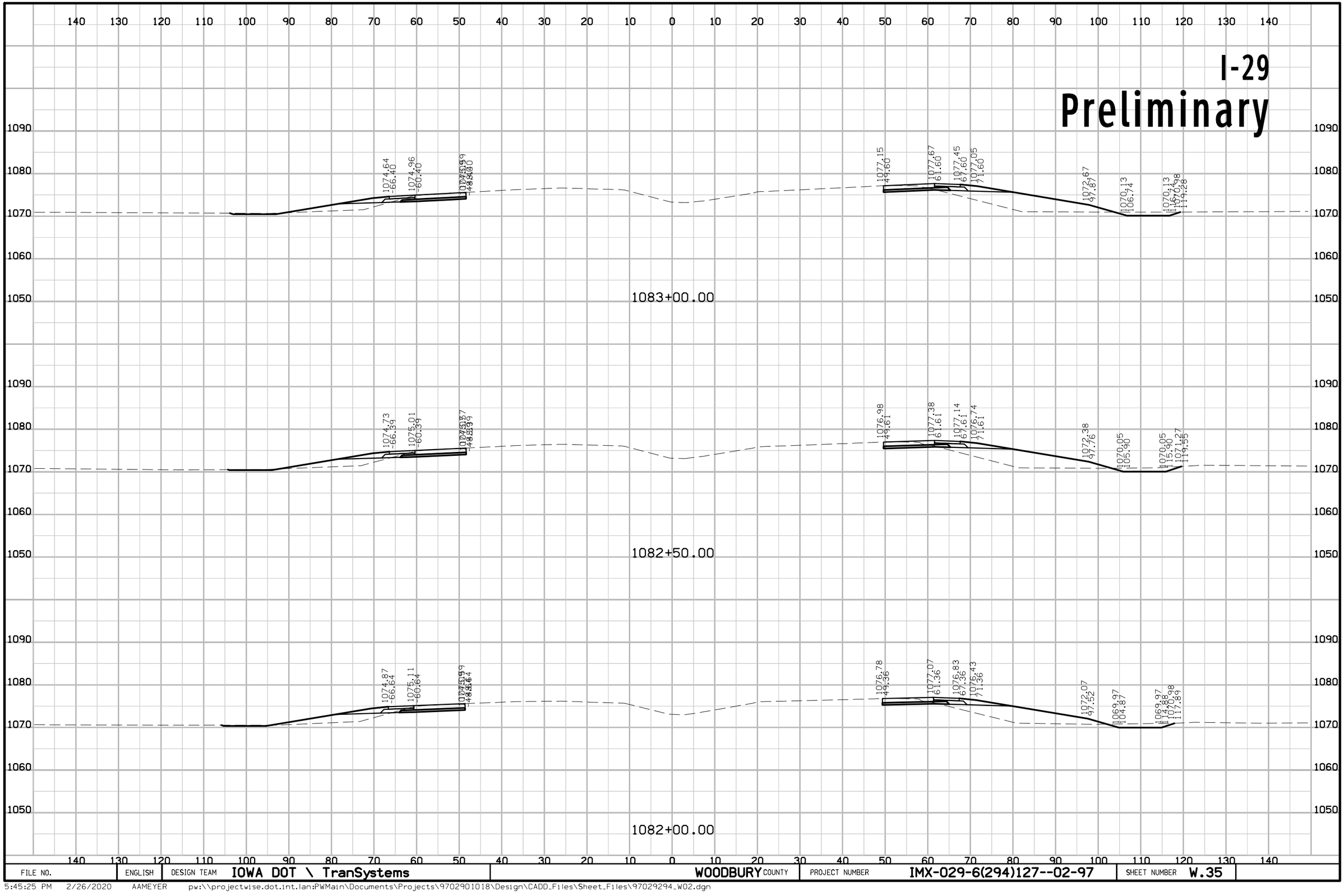
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER W.35

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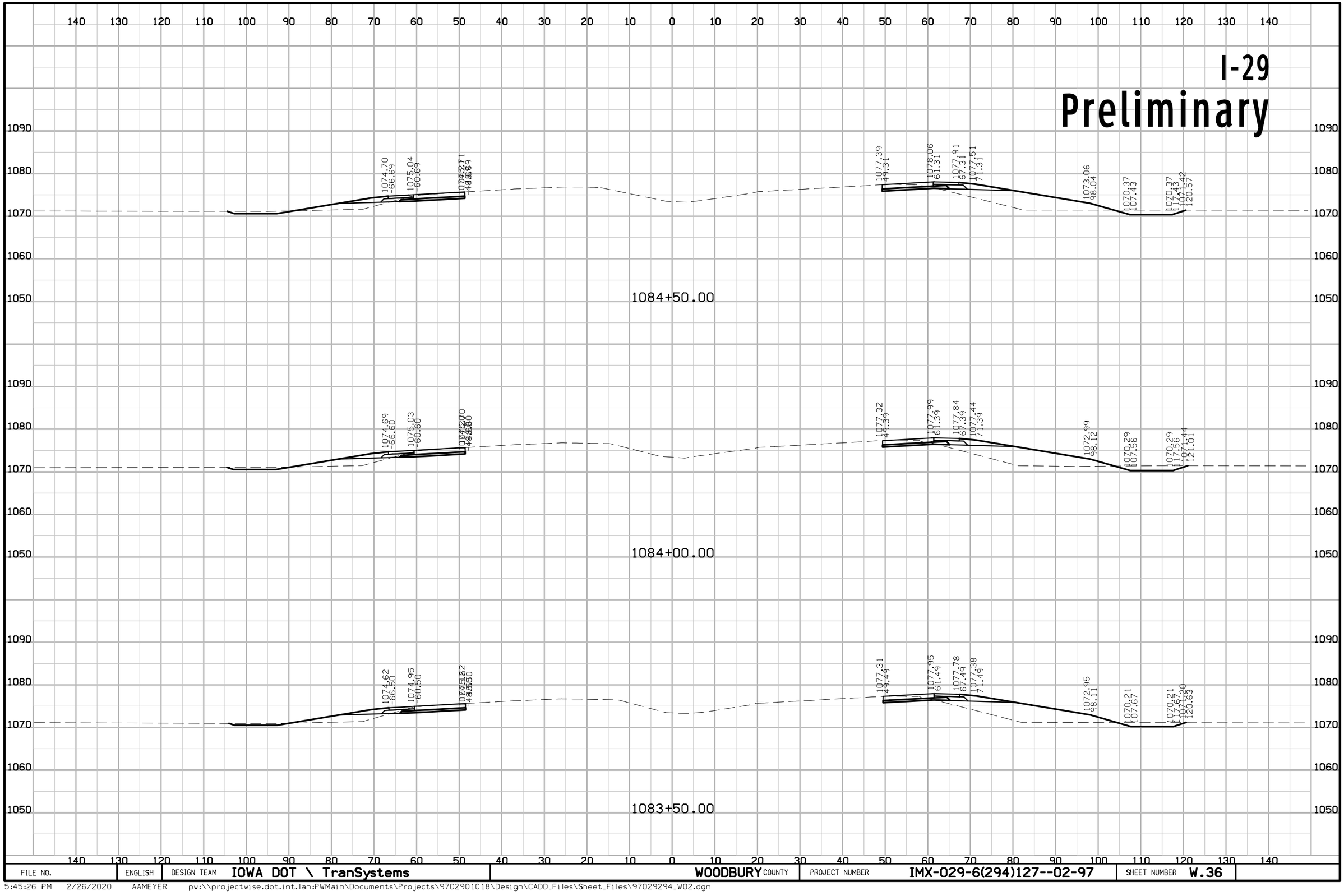
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER W.36

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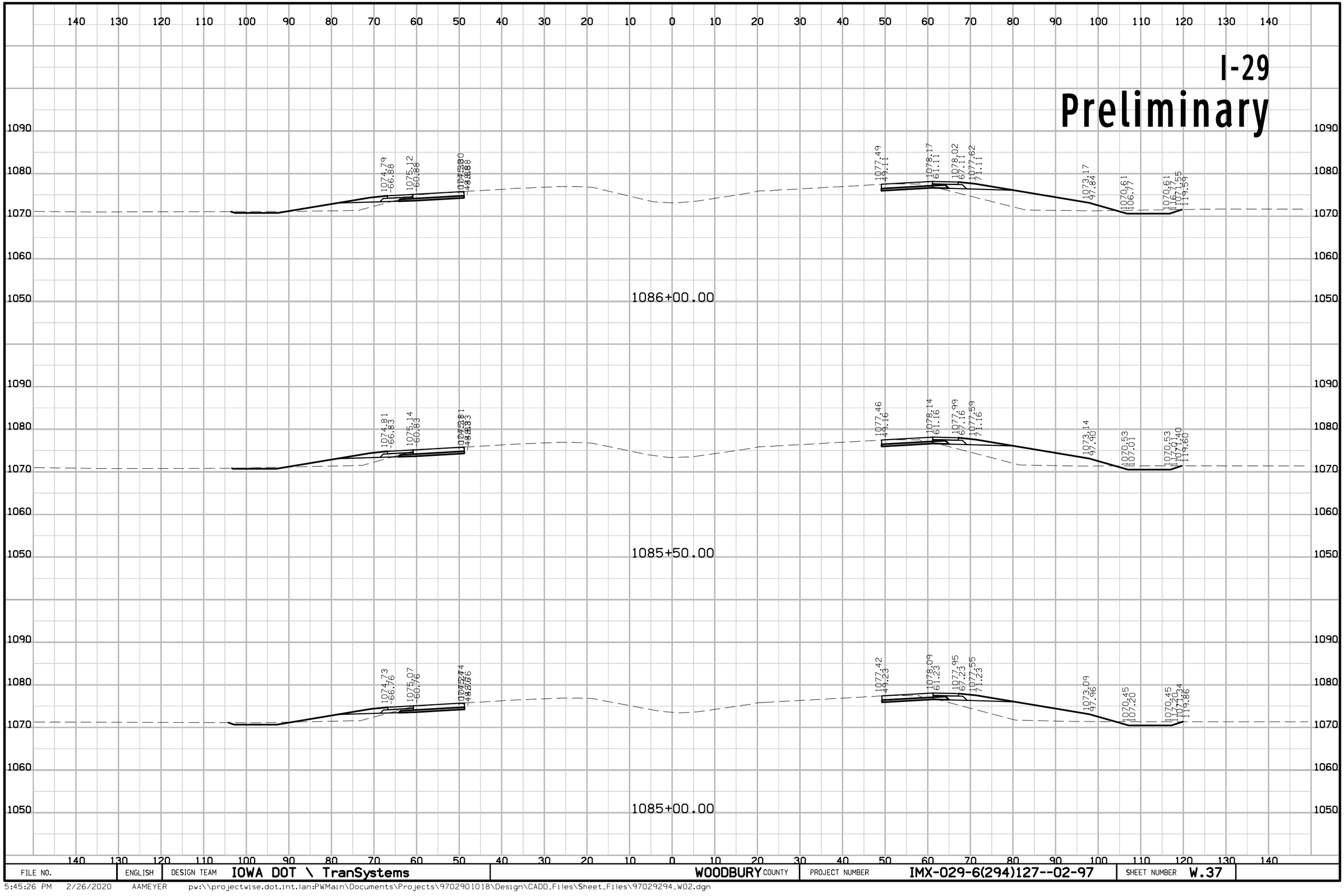
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER W.37

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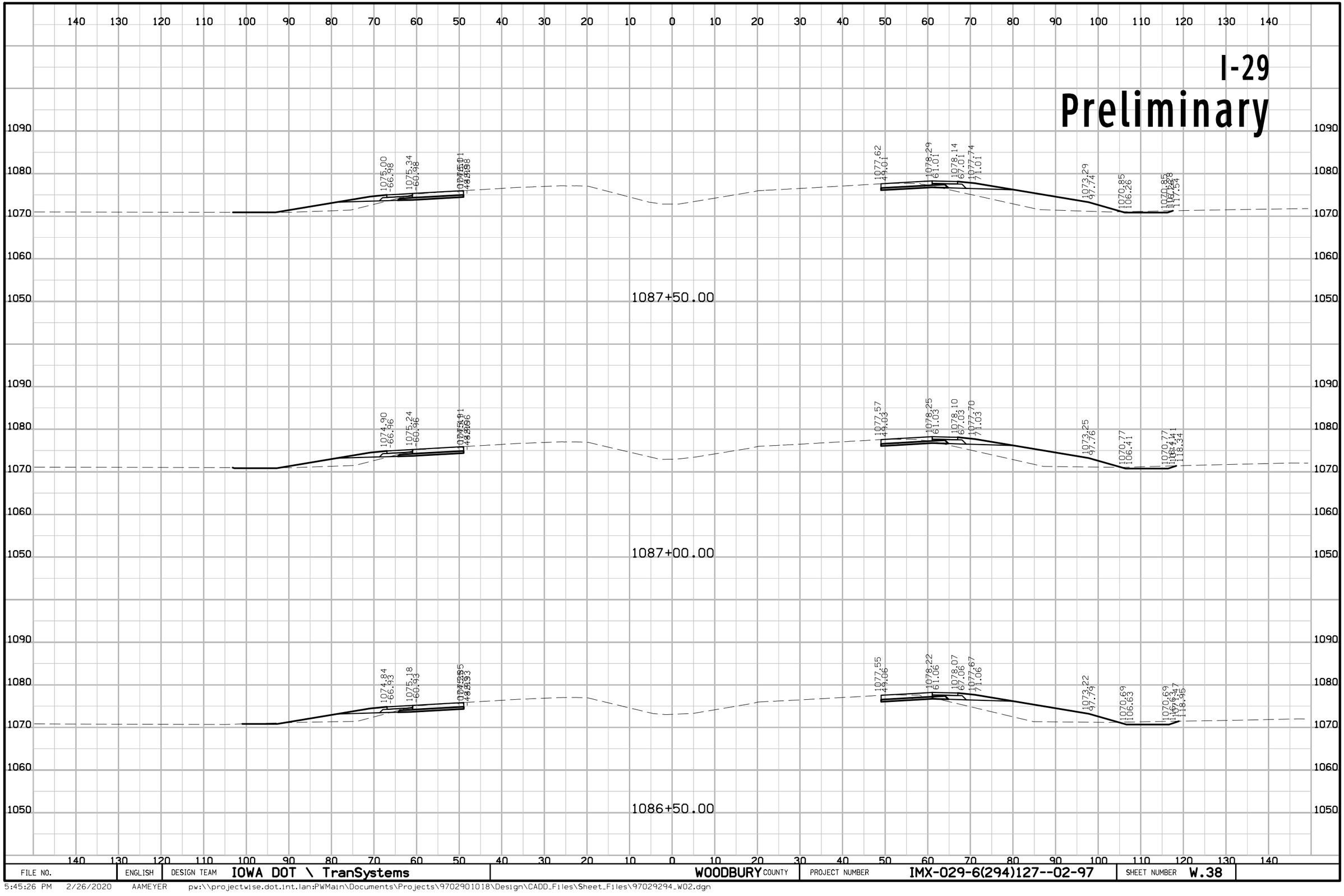
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER W.38

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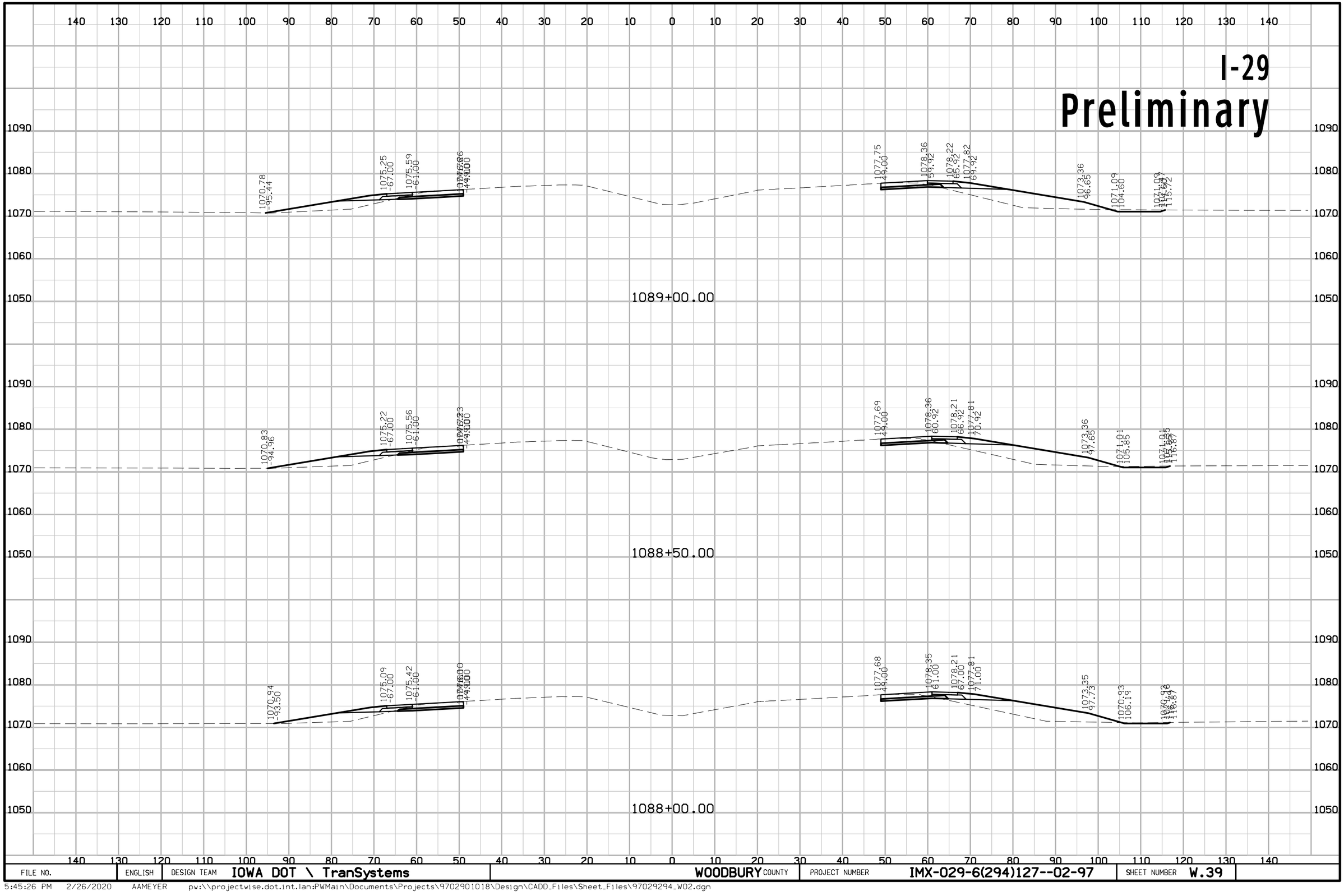
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER W.39

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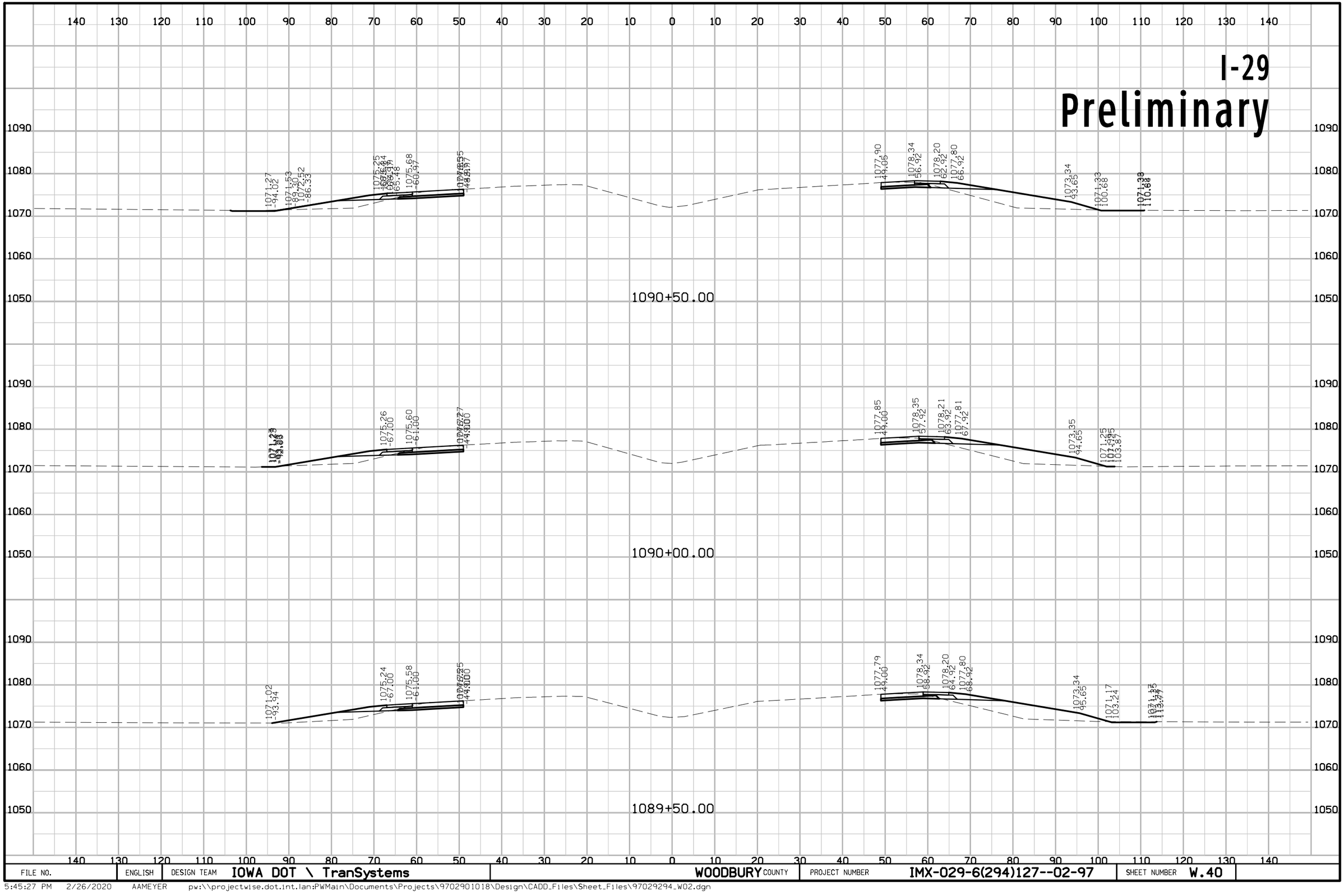
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.40

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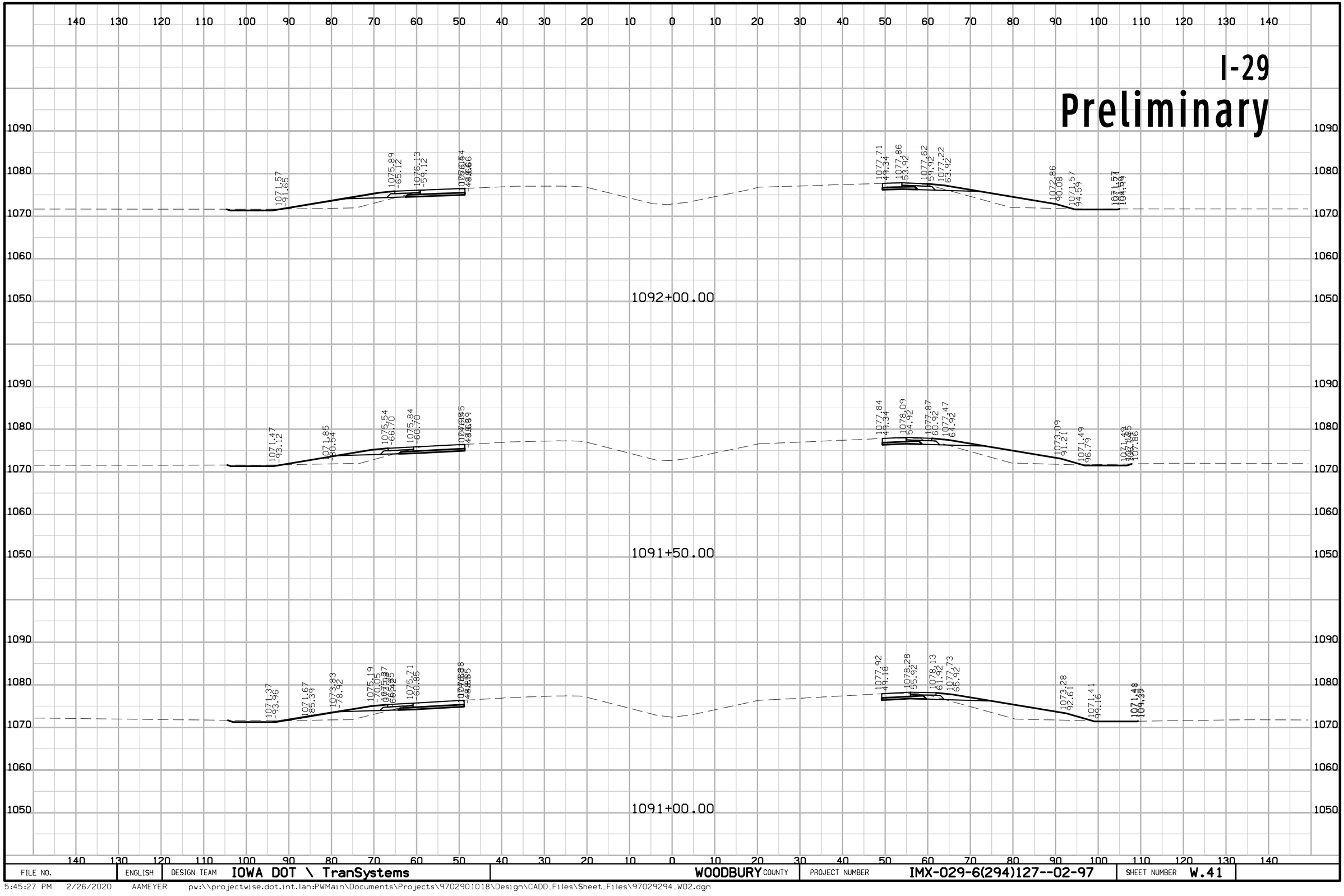
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	W.41

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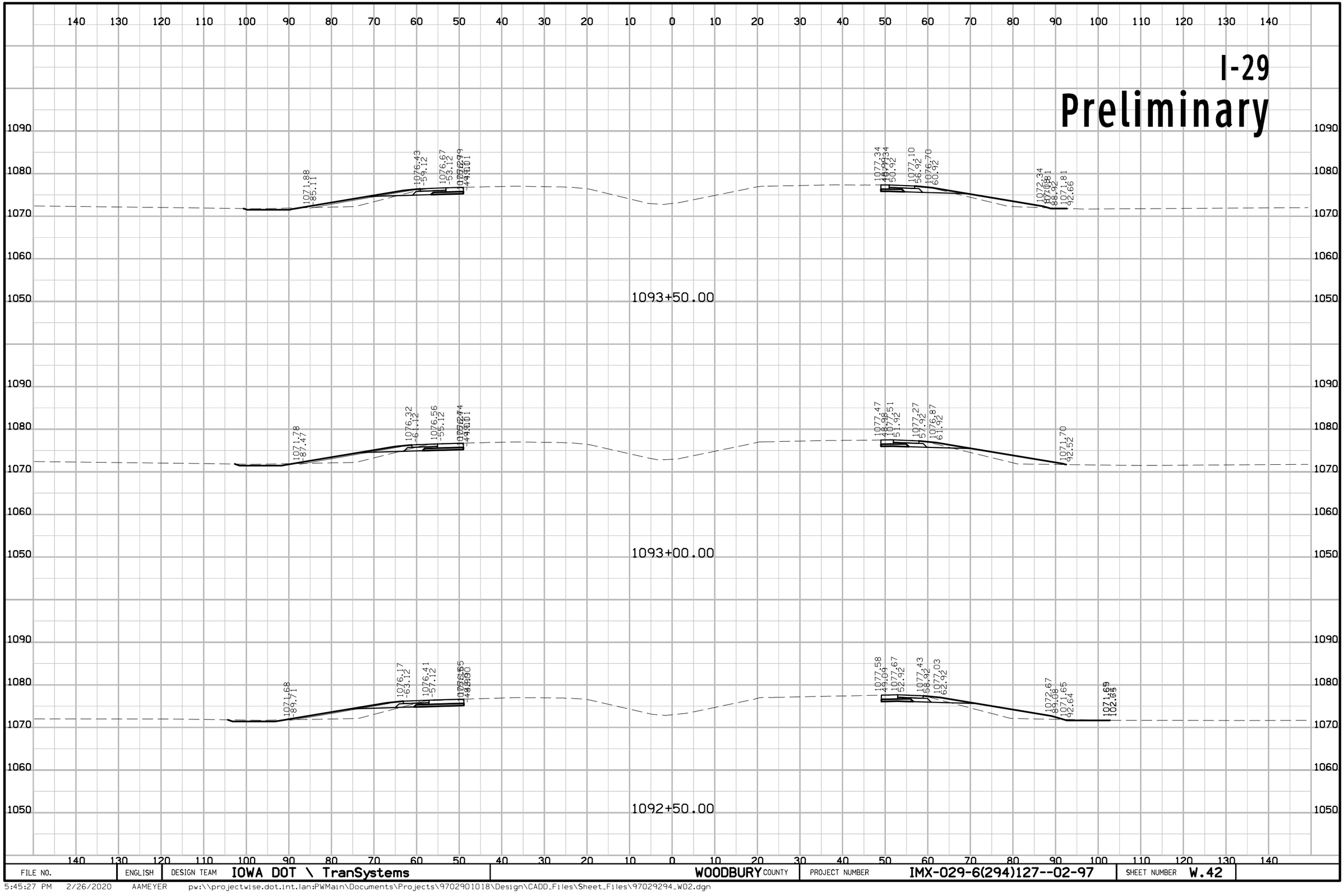
I-29

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER W.42

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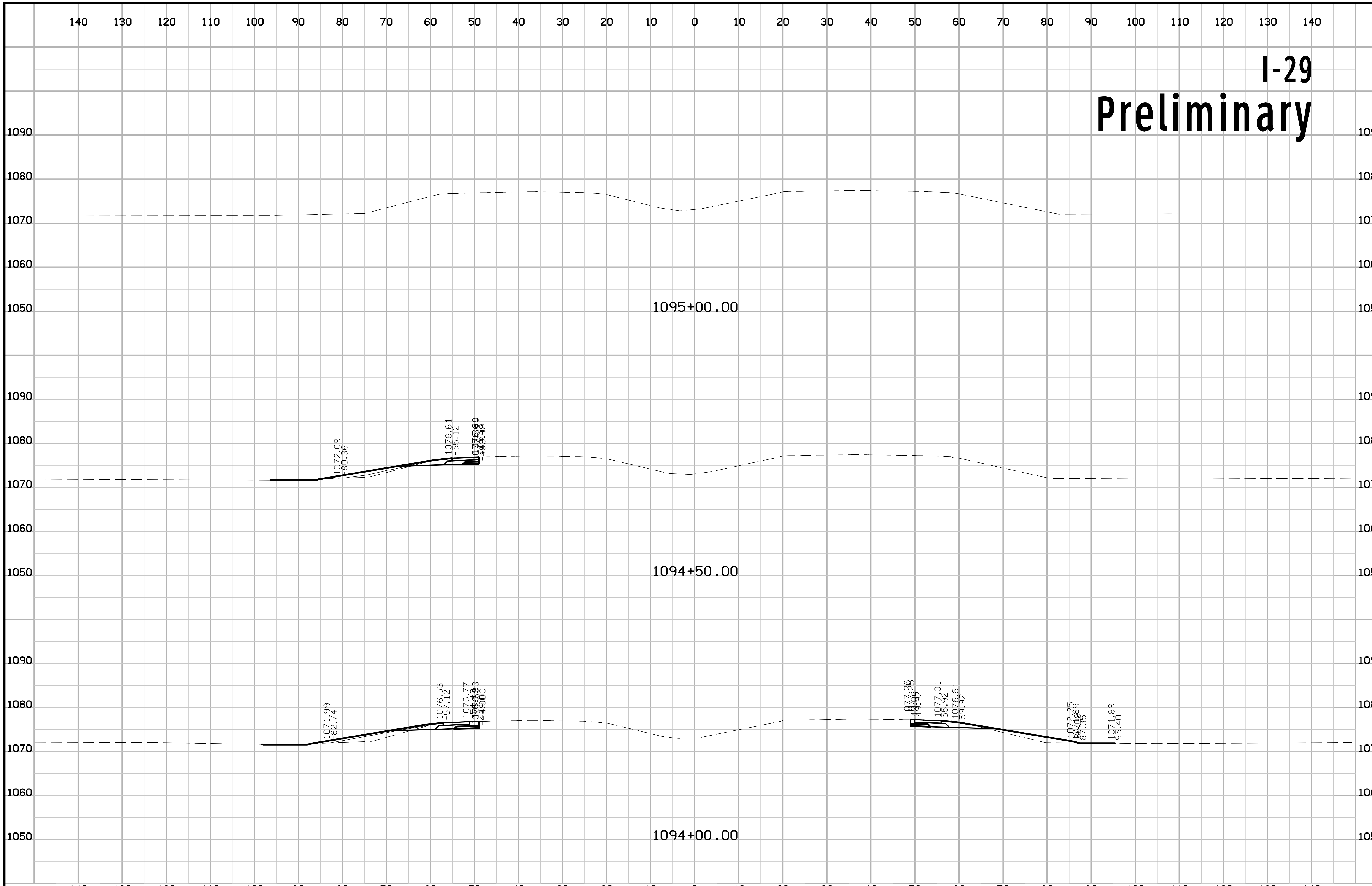
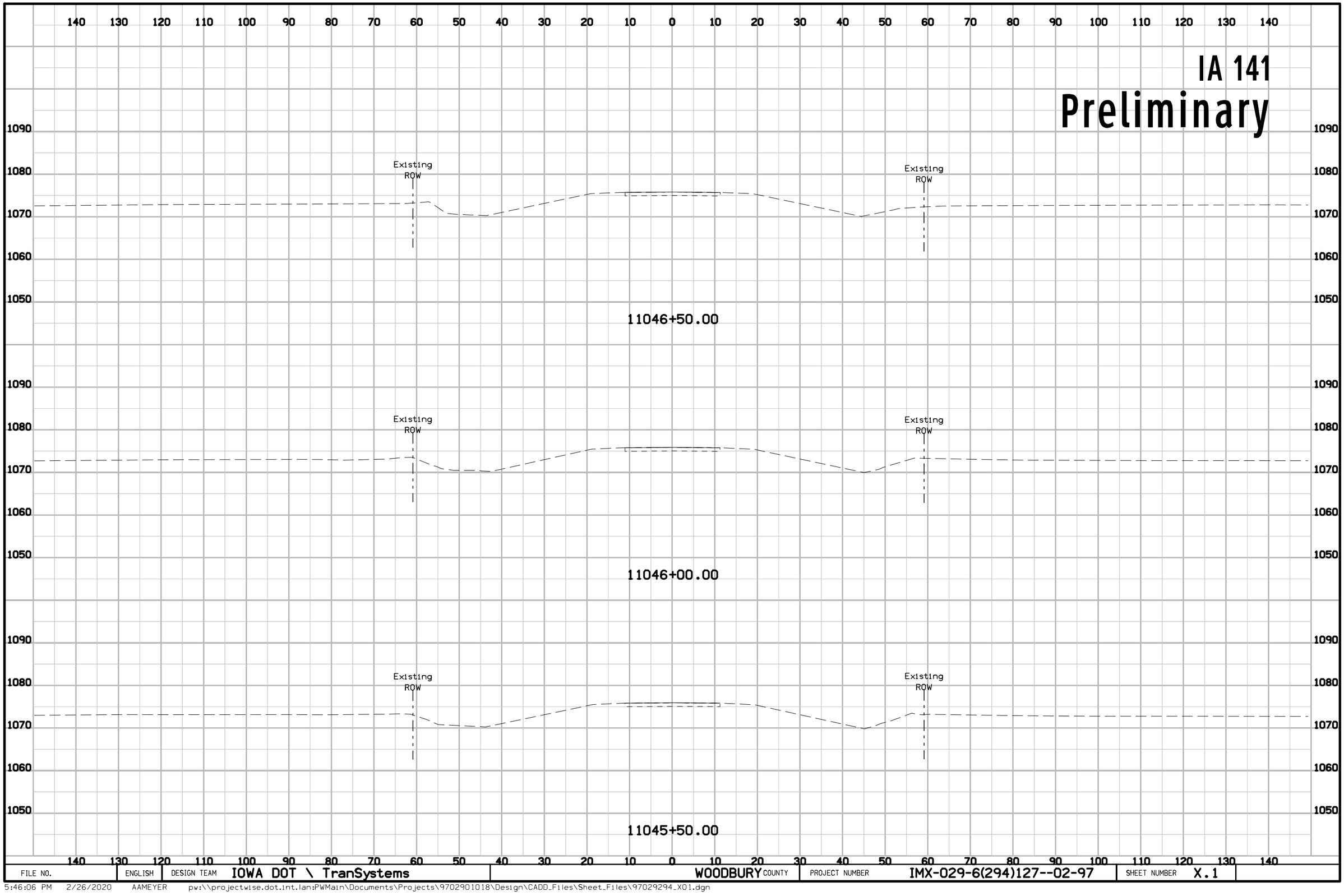


FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER W.43

IA 141

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.1

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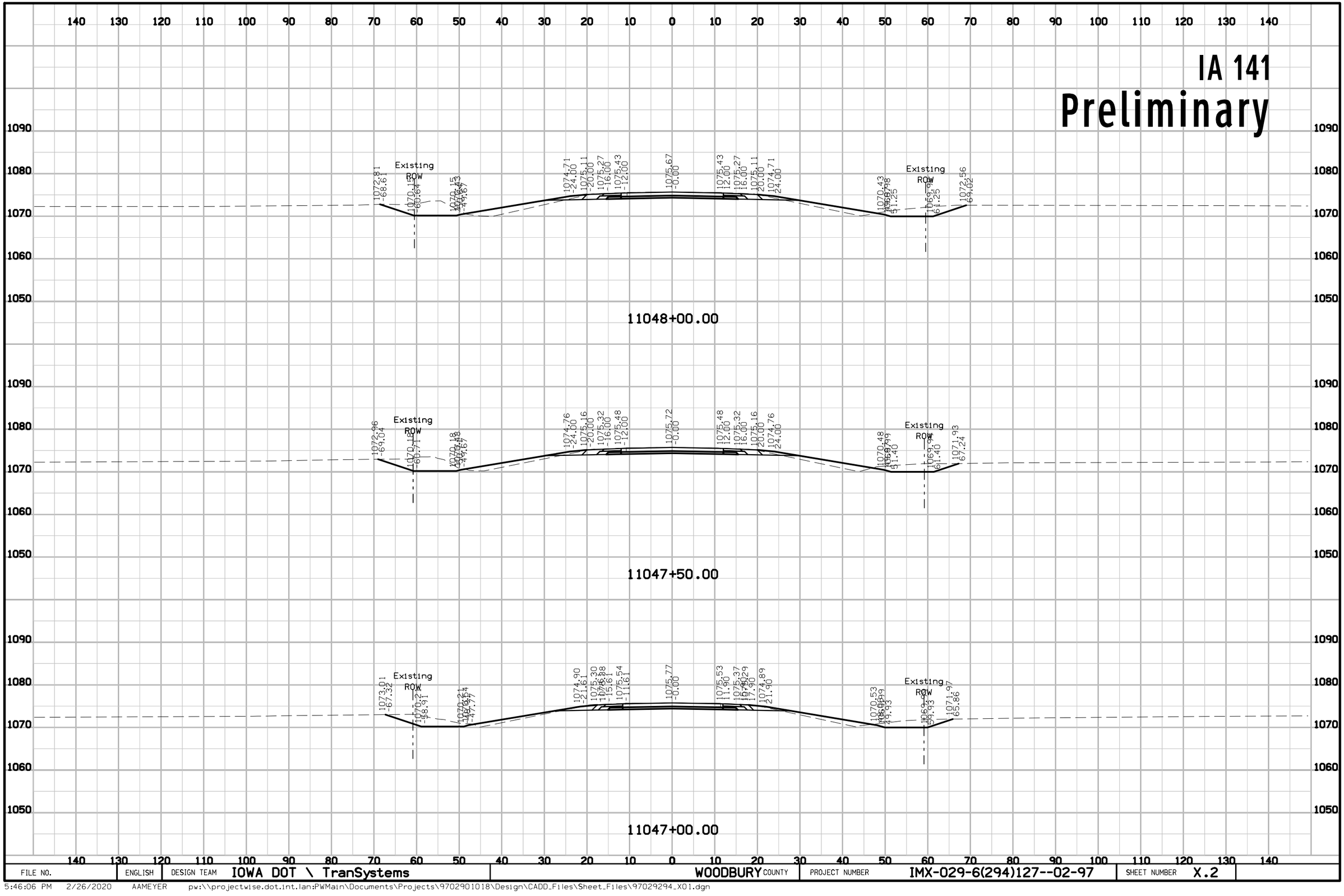
IA 141
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.2

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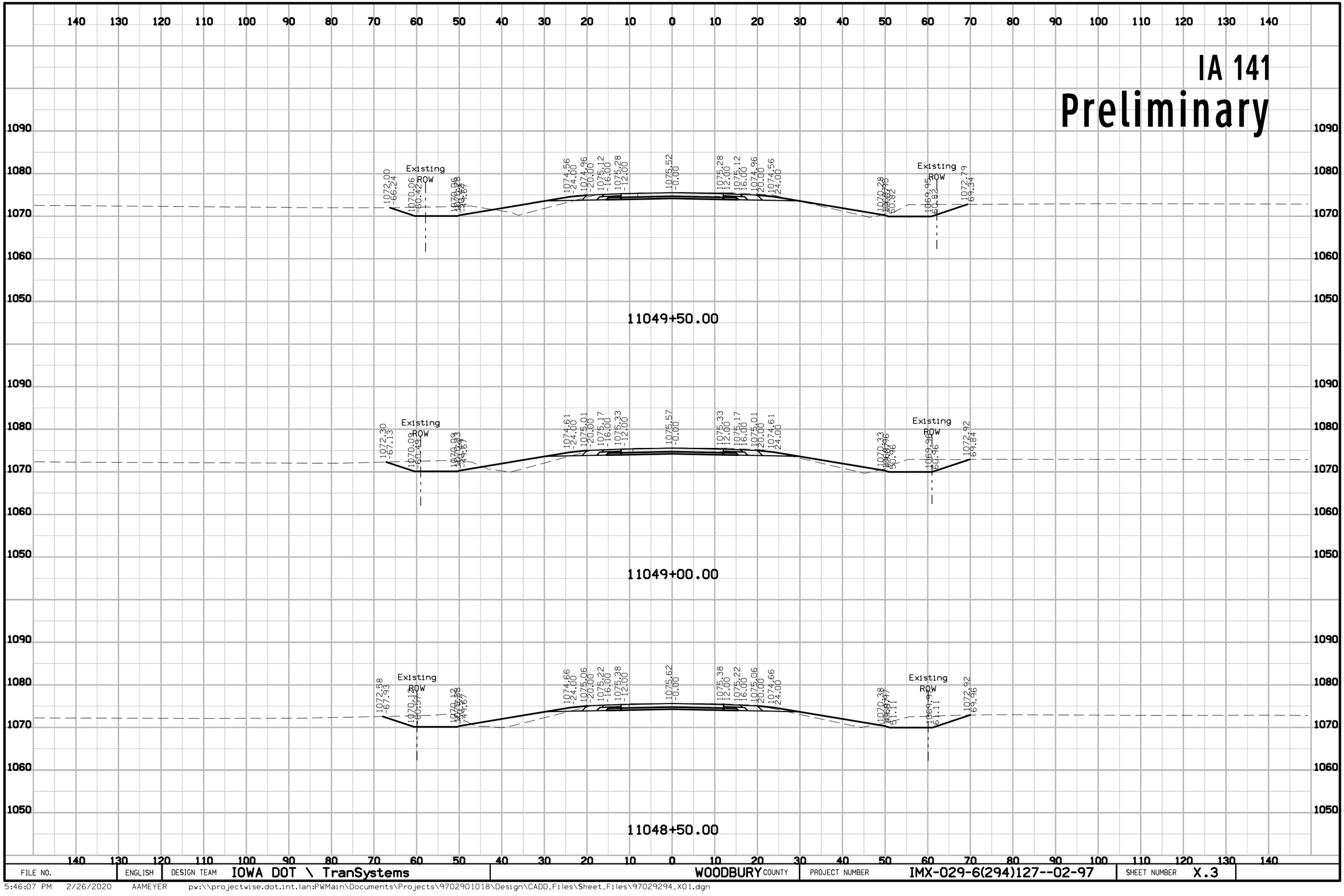
IA 141

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.3

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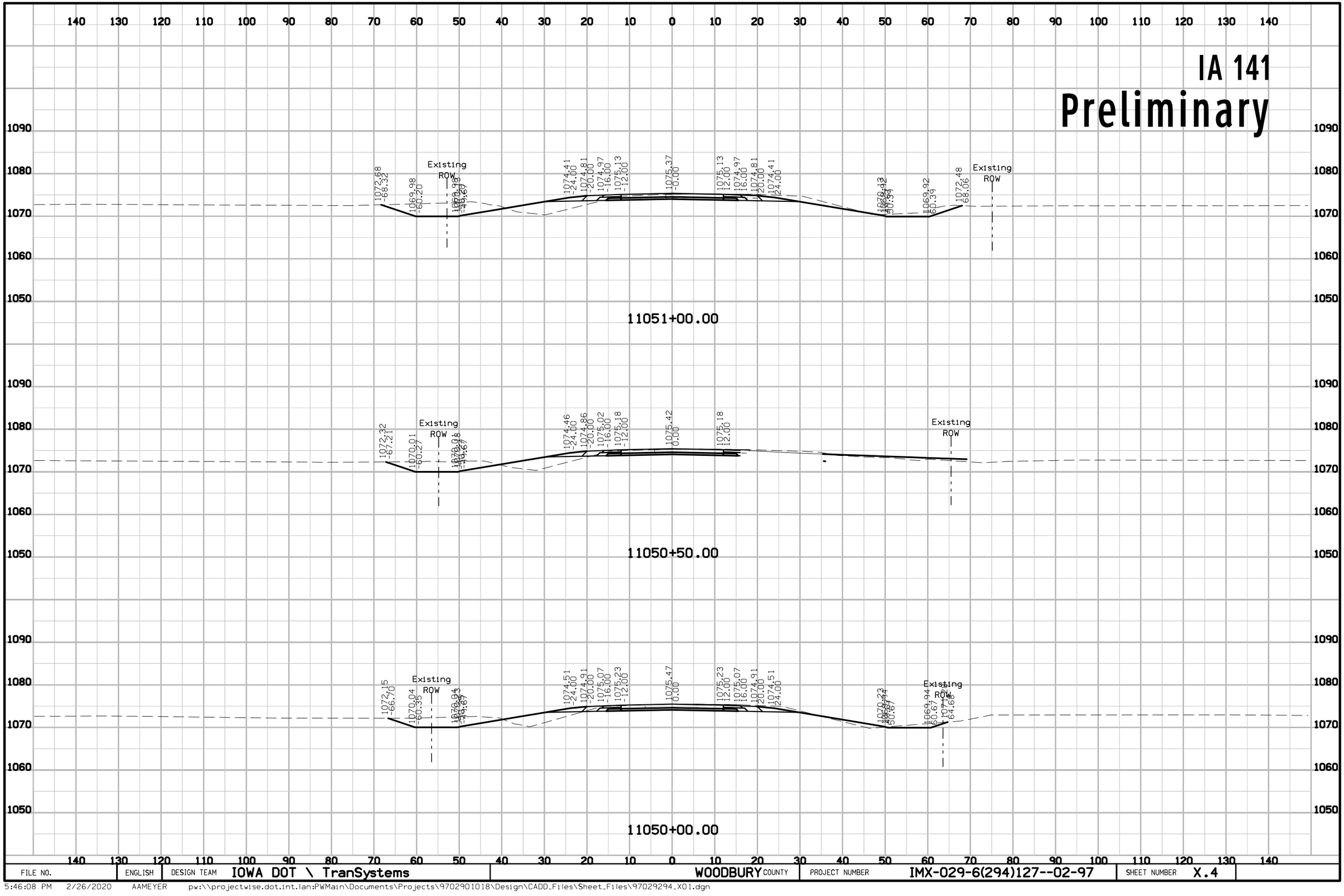
IA 141

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER X.4

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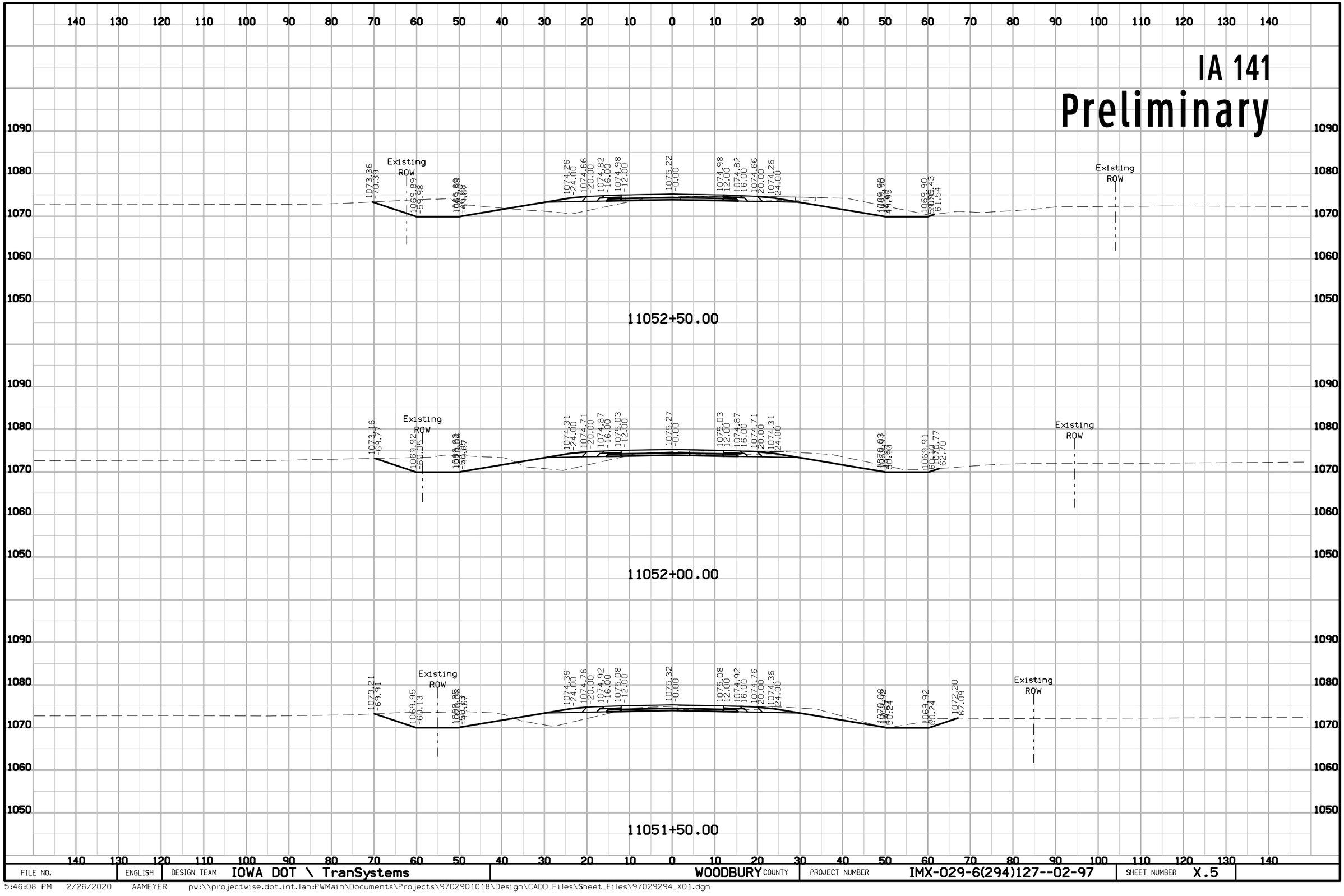
IA 141
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.5

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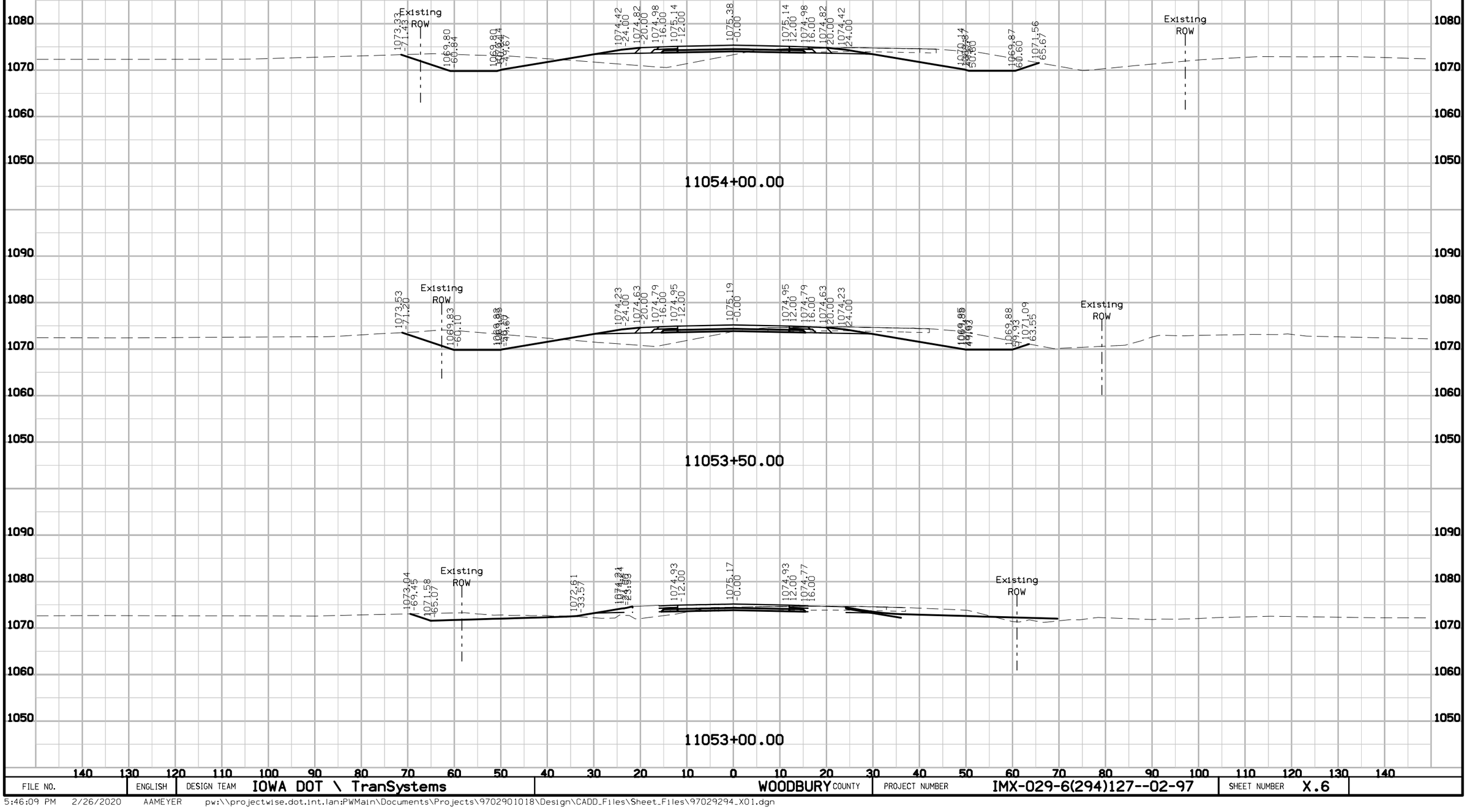
IA 141

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.6

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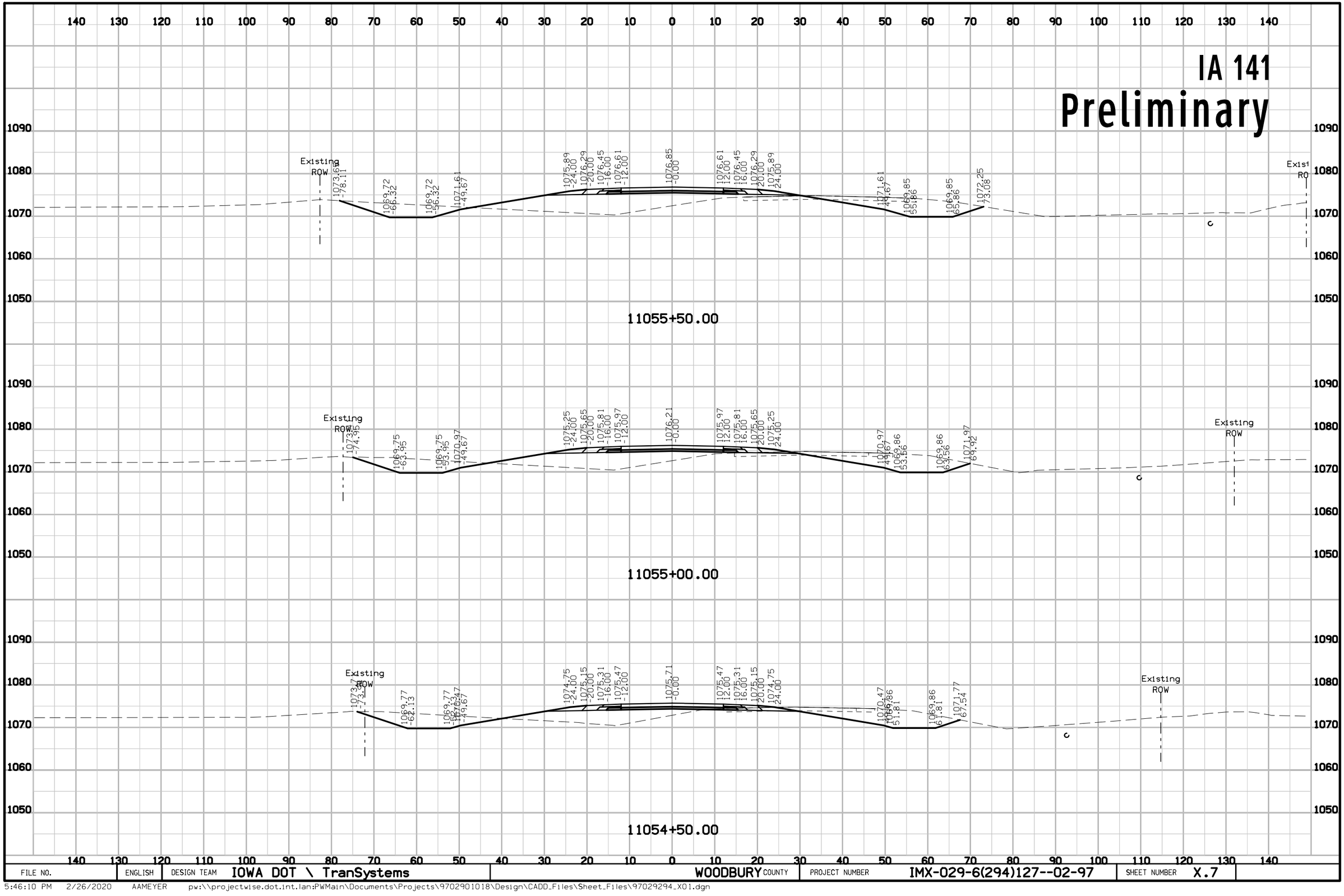
IA 141

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.7

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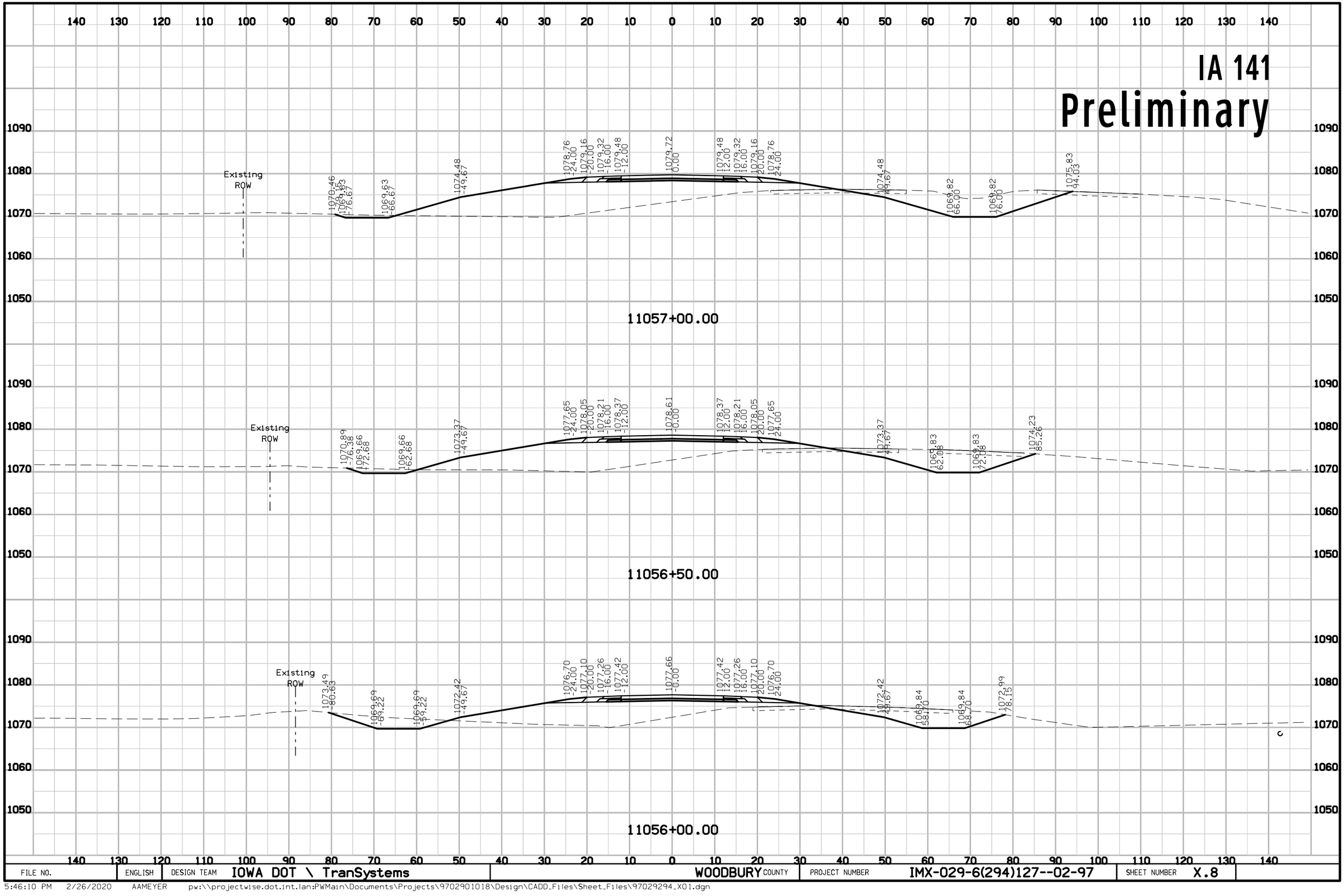
IA 141
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.8

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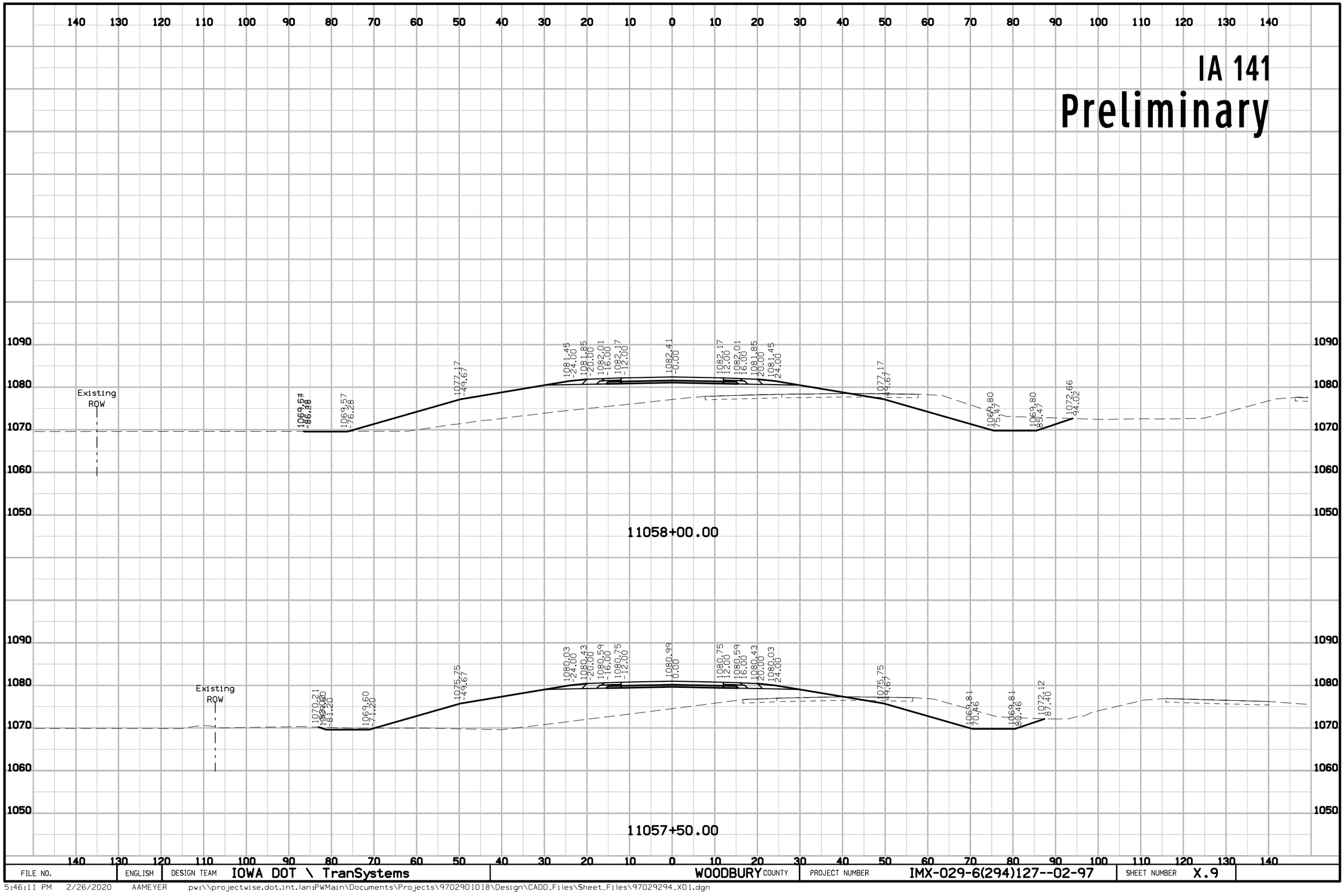
IA 141
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.9

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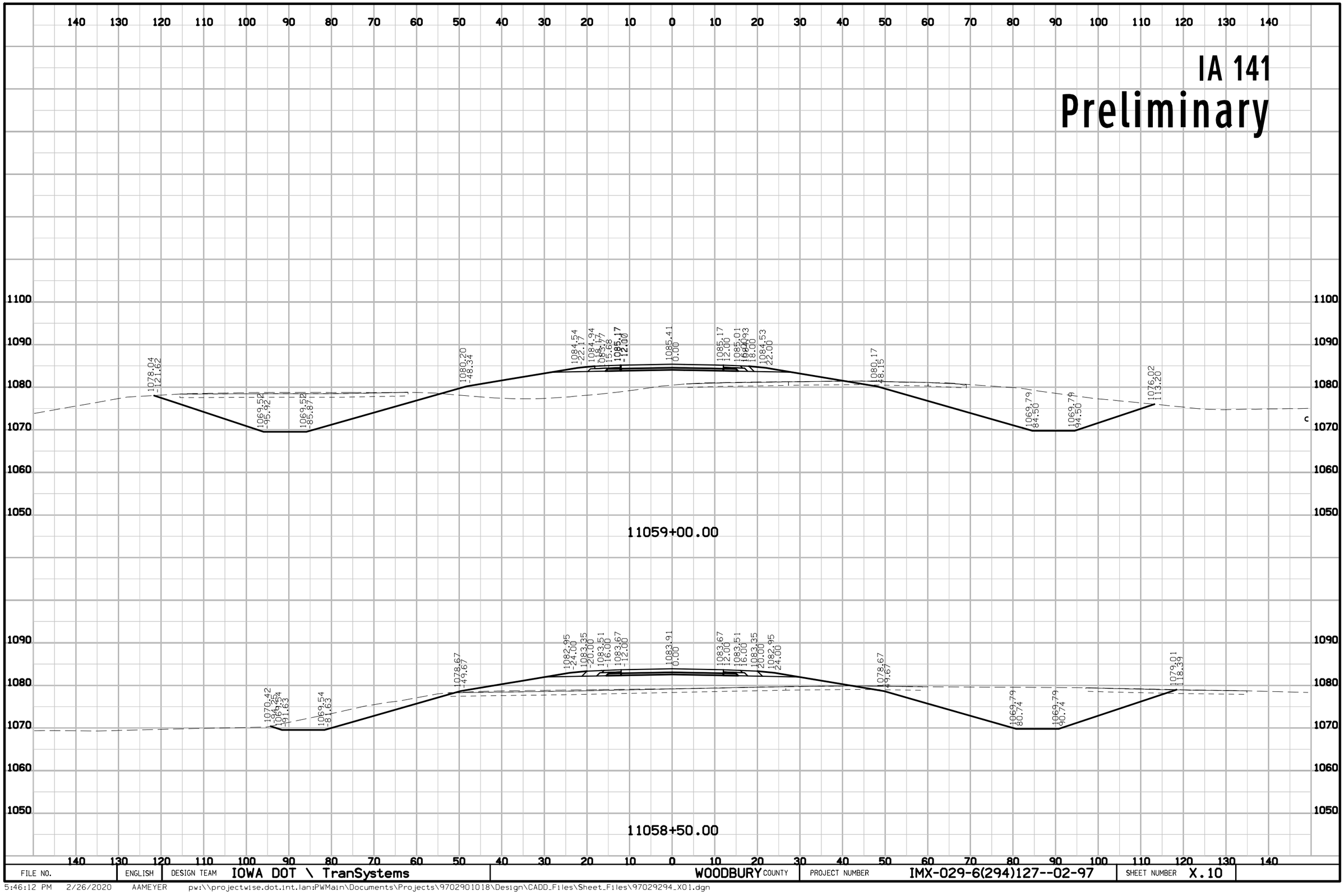
IA 141

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.10

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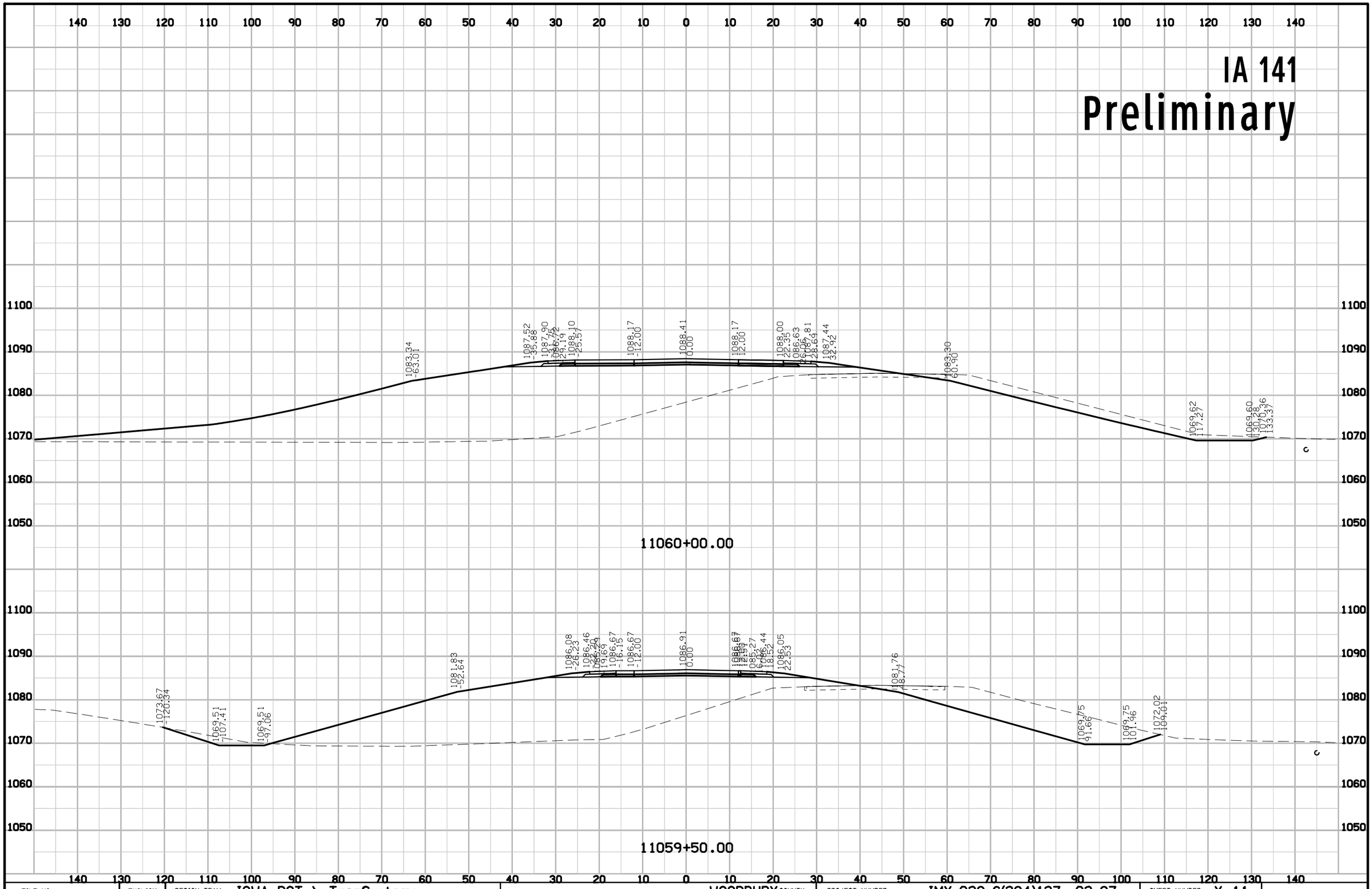
IA 141
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.11

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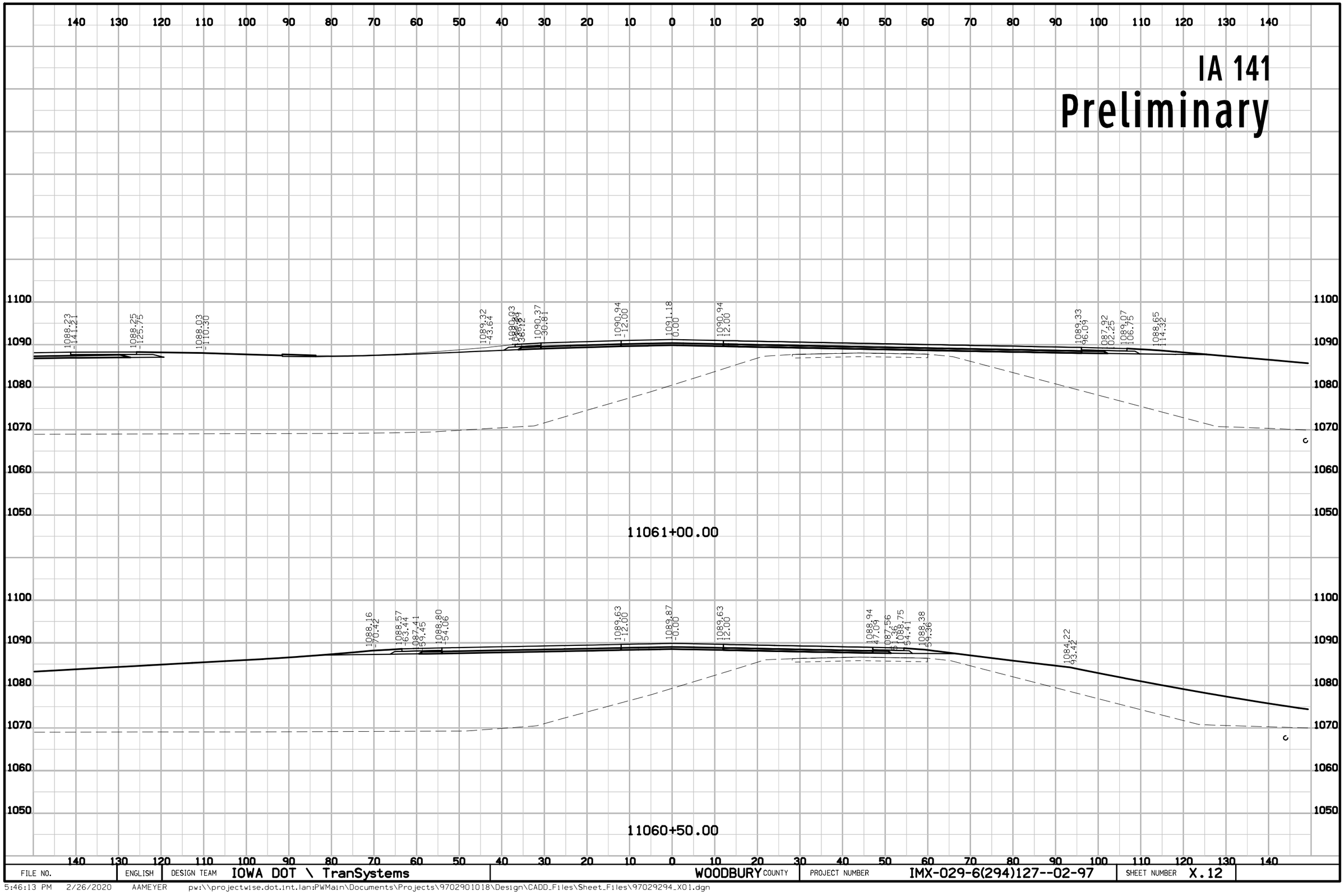
IA 141
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.12

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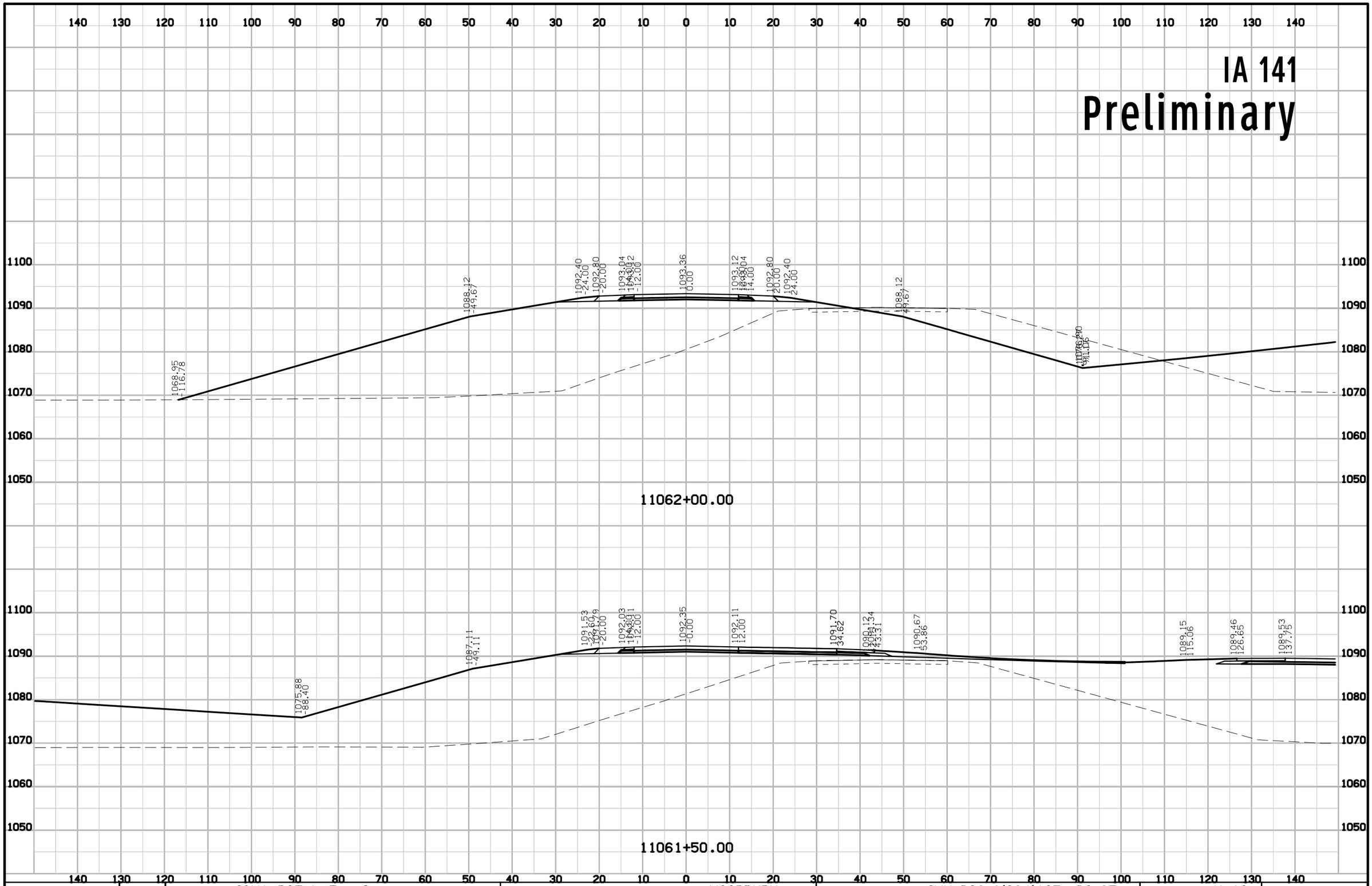
IA 141
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.13

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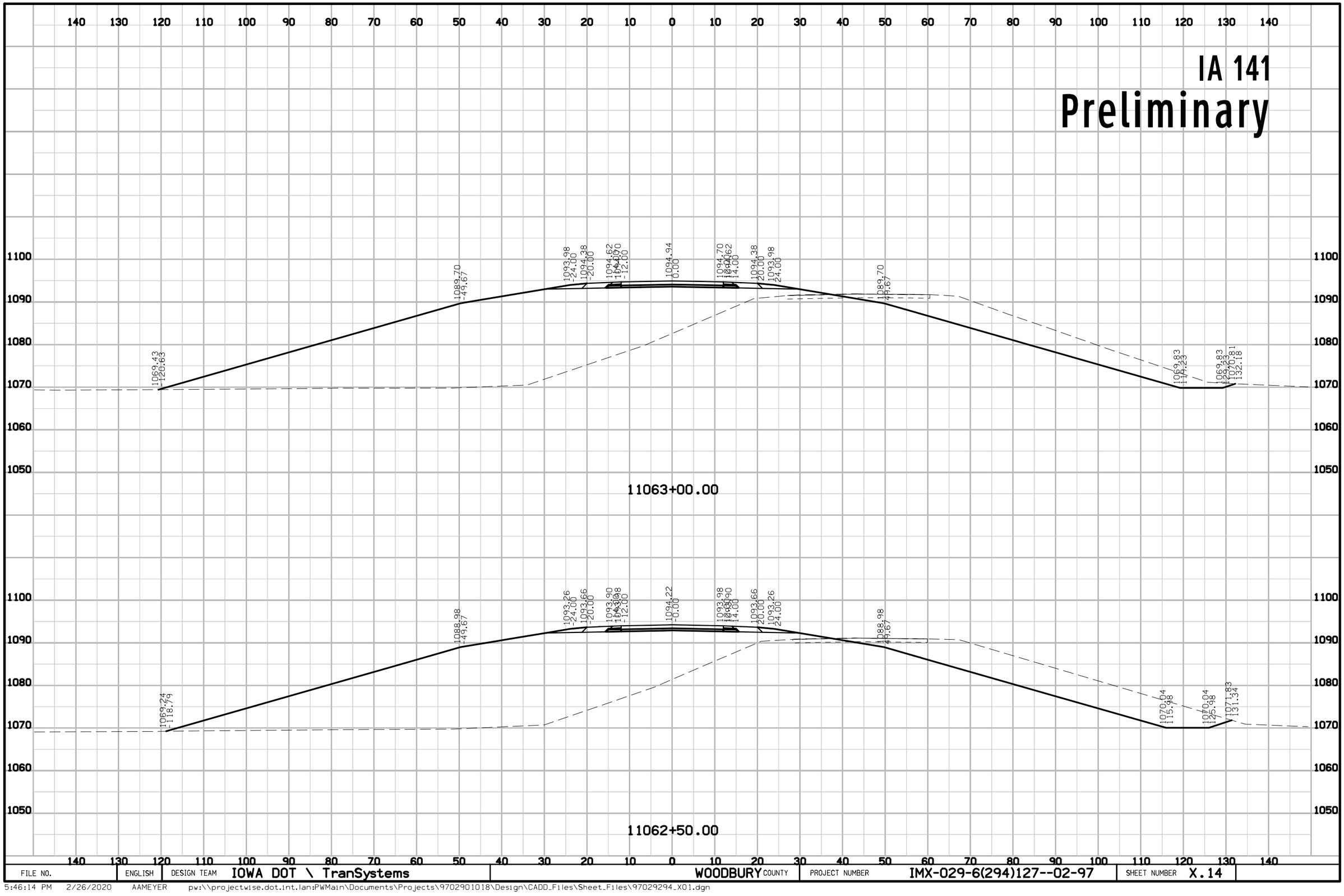
IA 141
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.14

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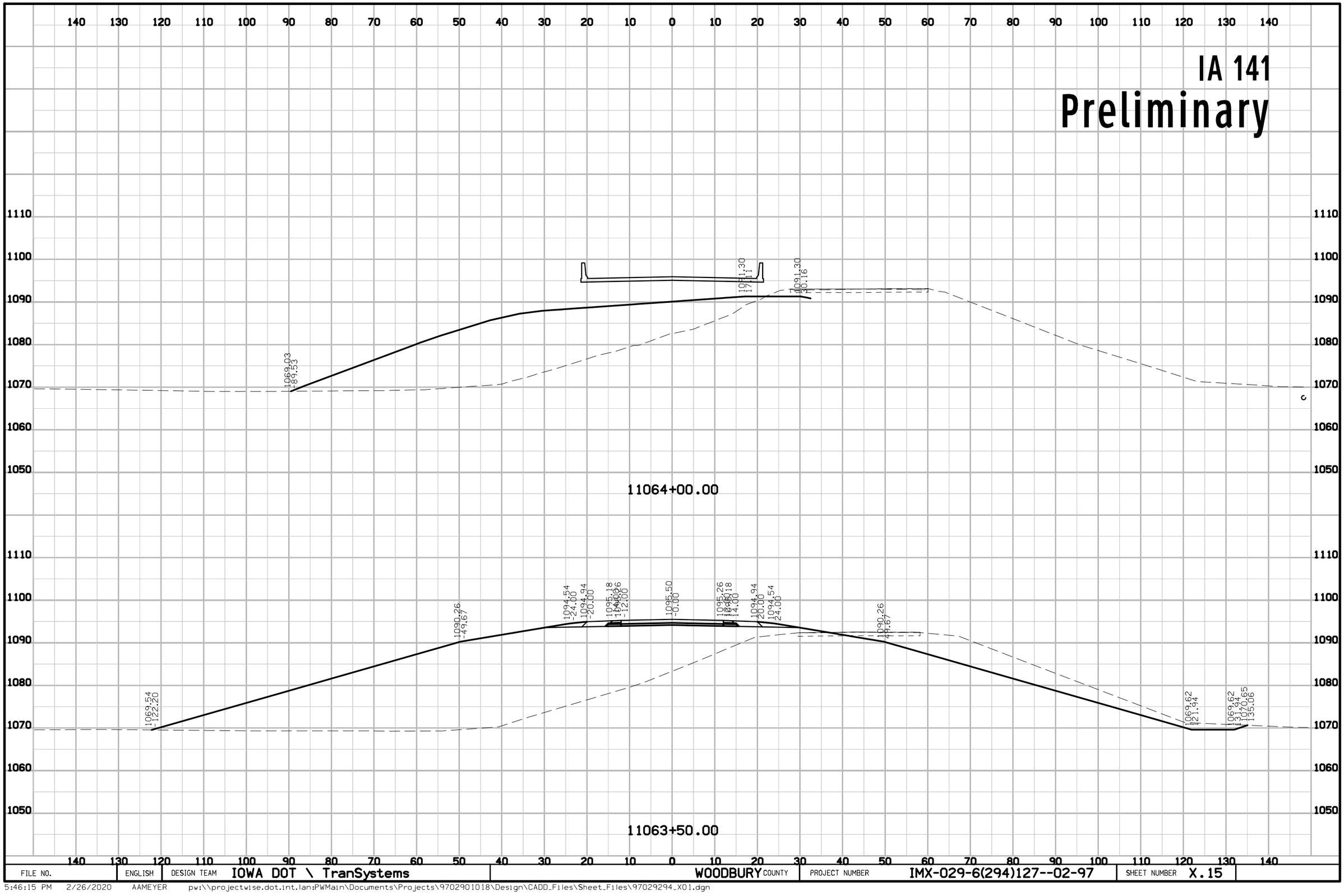
IA 141

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.15

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IA 141

Preliminary

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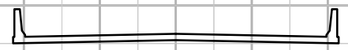
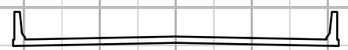
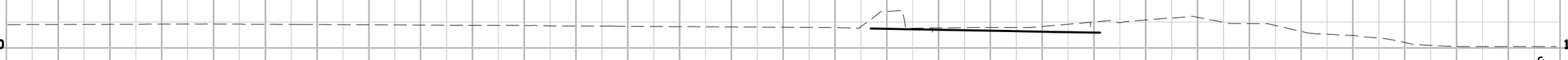


11065+00.00





11064+50.00

FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.16

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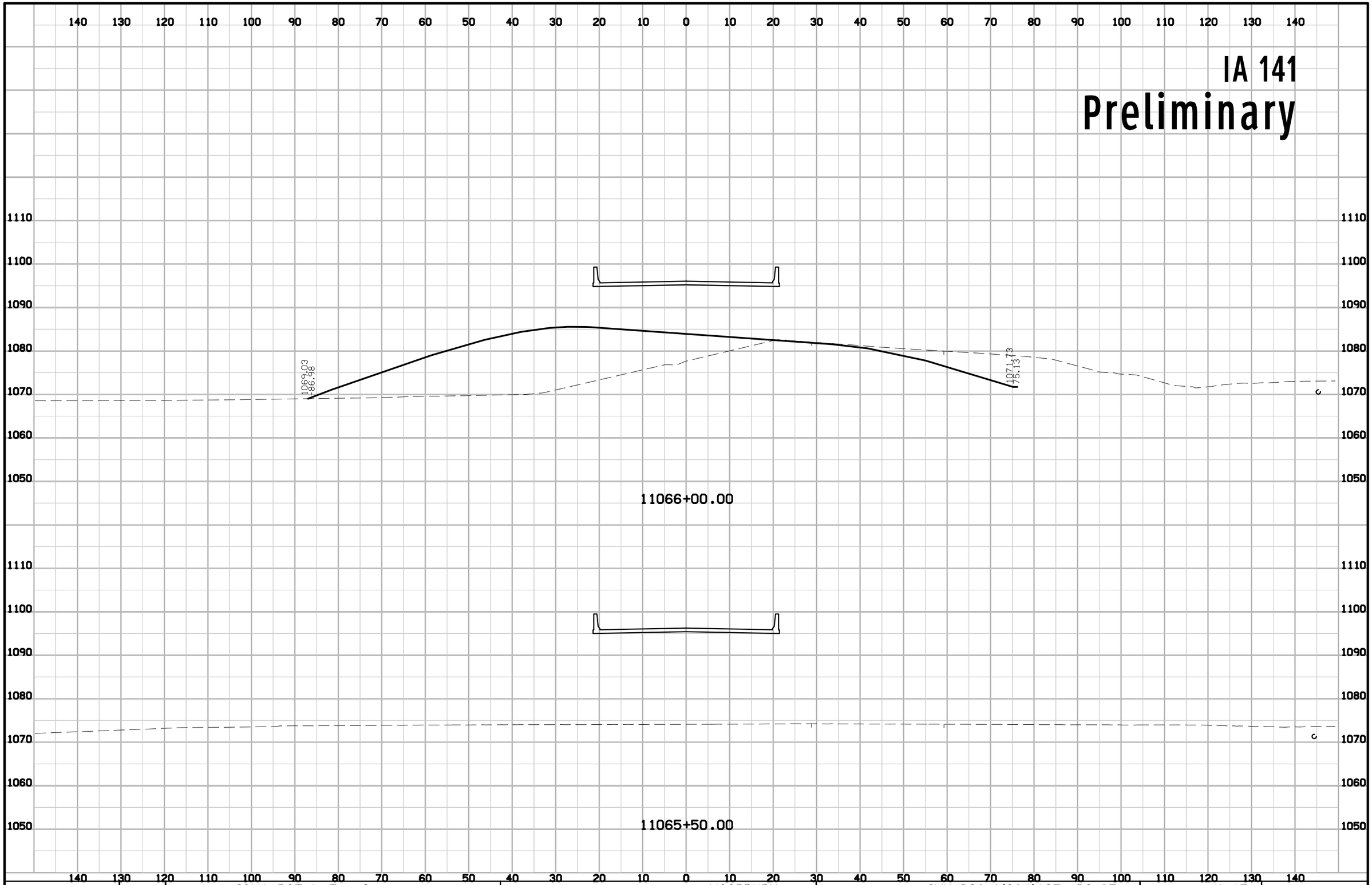
IA 141

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.17

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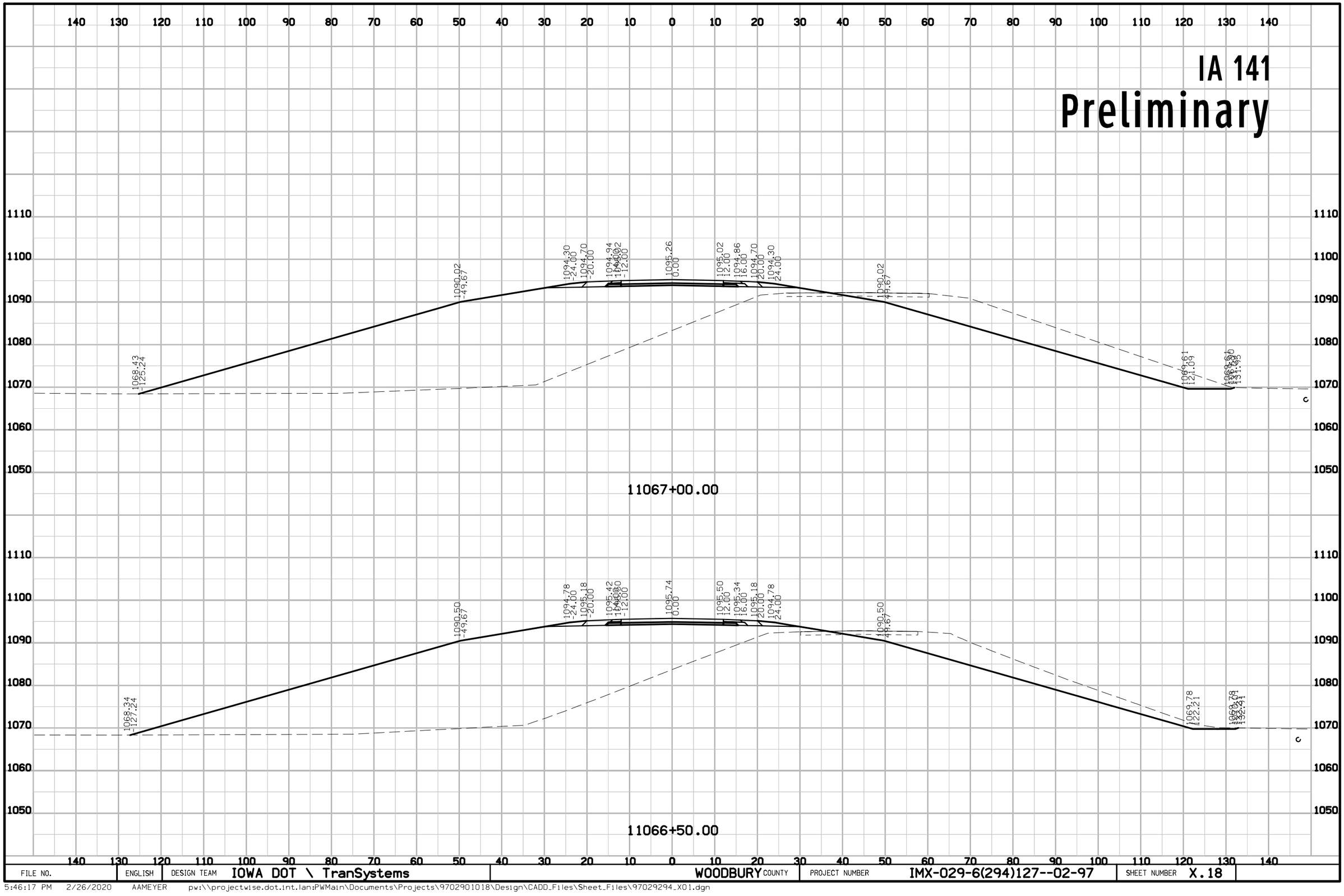
IA 141
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.18

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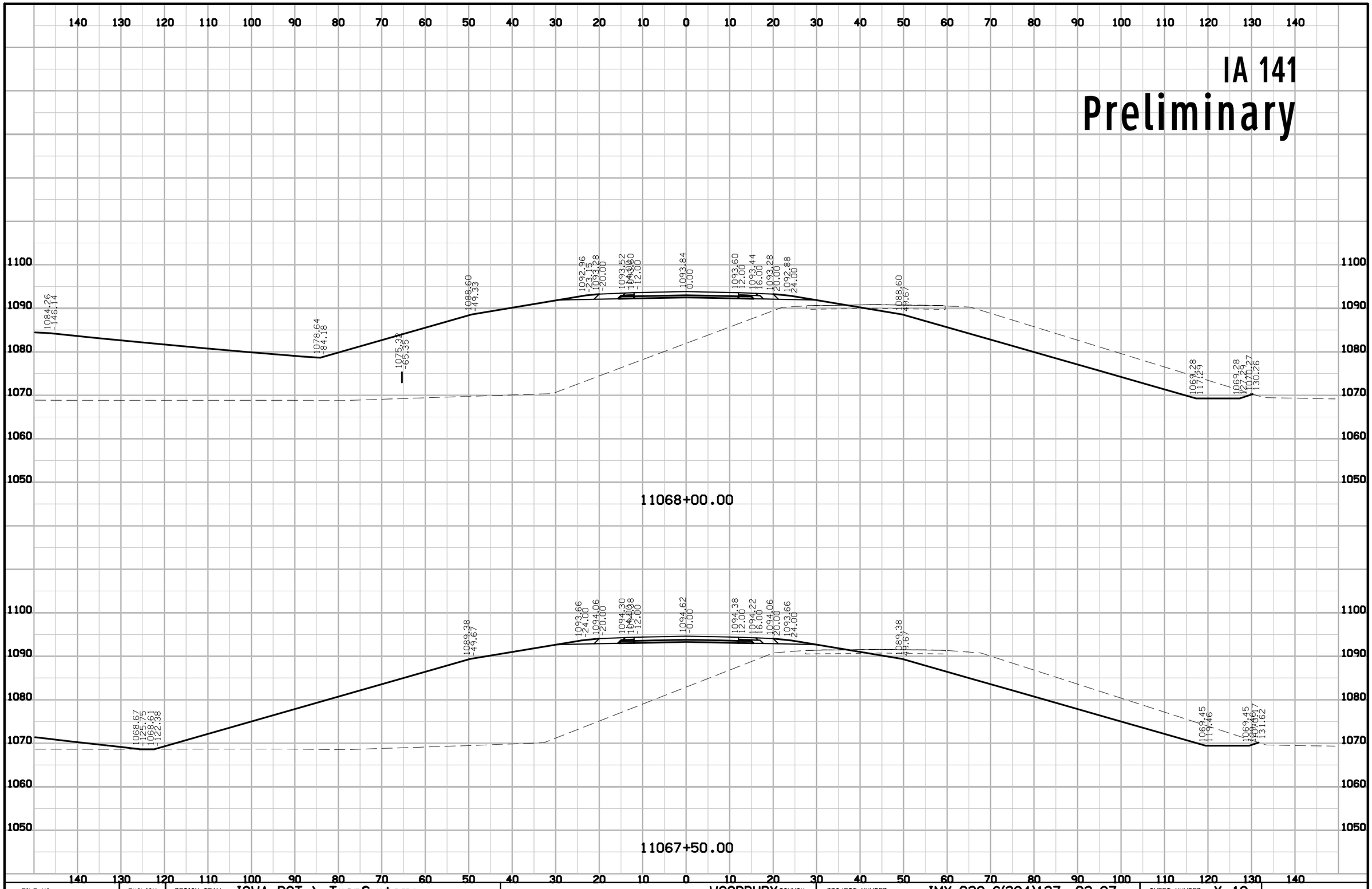
IA 141
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.19

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IA 141

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

1100 1090 1080 1070 1060 1050

1089.34 -100.67
1089.77 -93.97
1088.63 -89.91
1090.05 -84.33
1091.58 -12.00
1091.82 -0.00
1091.58 12.00
1090.79 43.13
1089.15 52.81
1089.40 92.20
1089.30 107.65

11069+00.00

1090.17 -111.97
1089.47 -77.02
1091.47 -57.40
1092.66 -12.00
1092.90 0.00
1092.66 12.00
1091.81 23.99
1079.25 86.41

11068+50.00

FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.20

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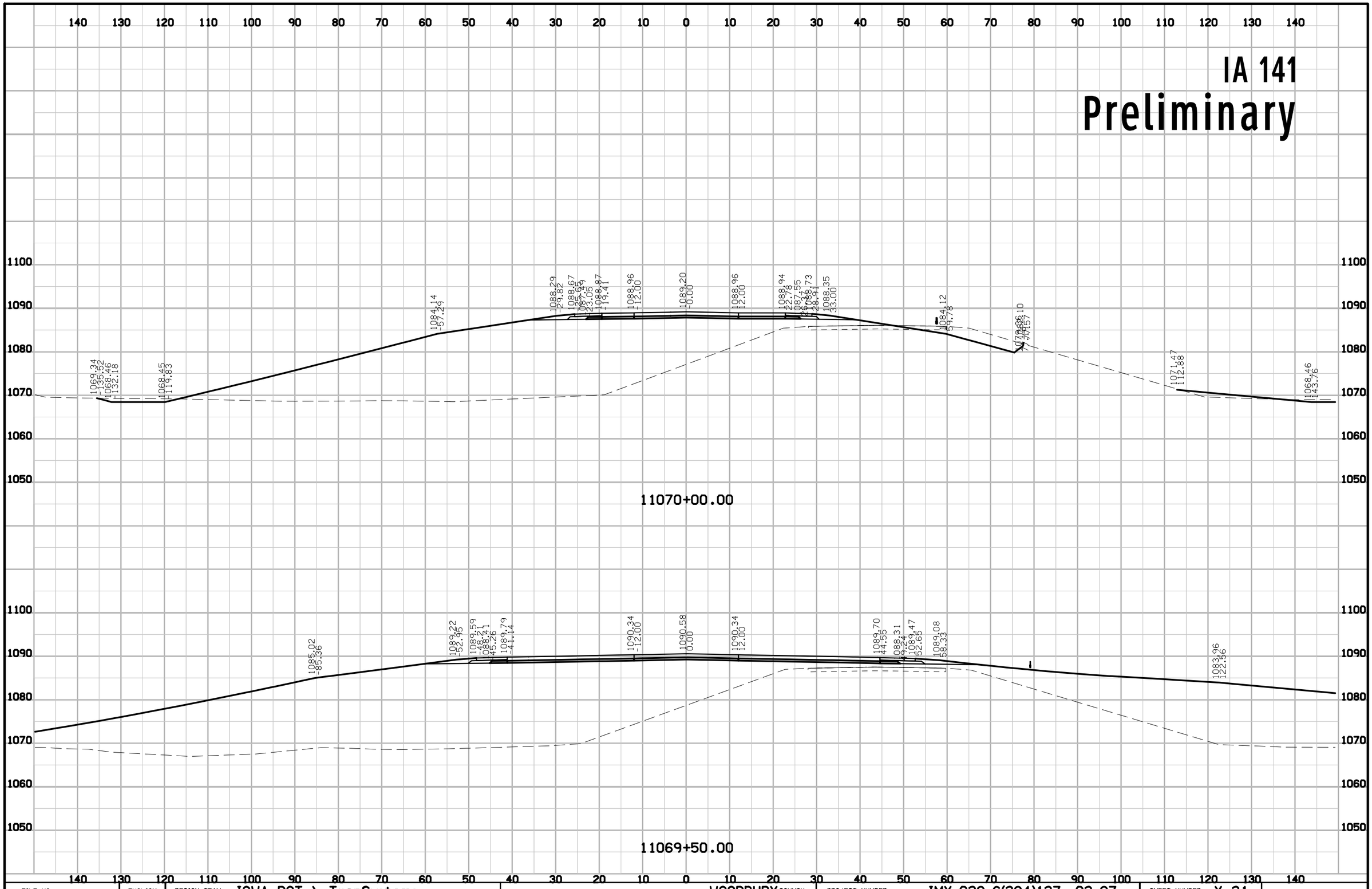
IA 141
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.21

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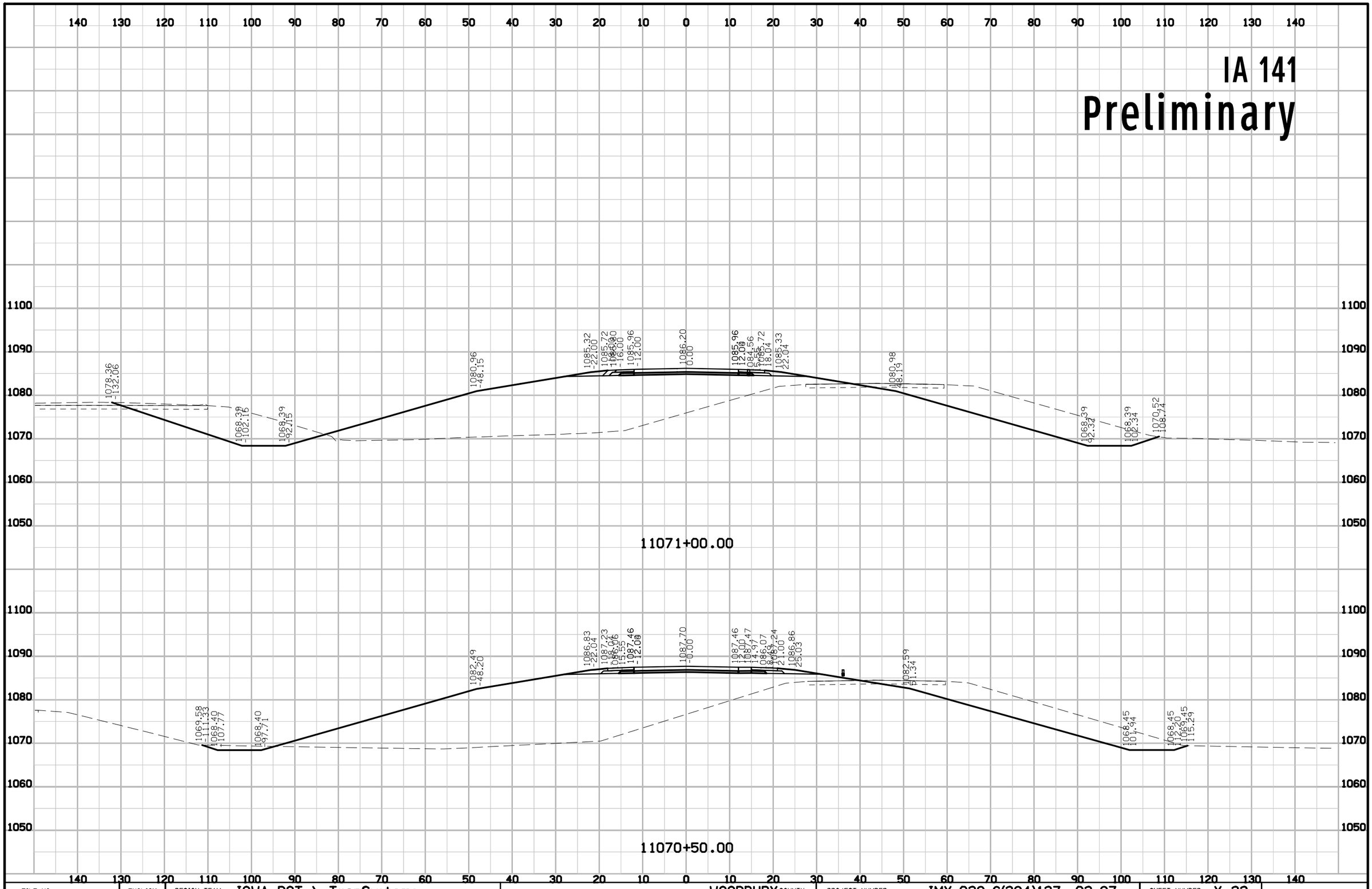
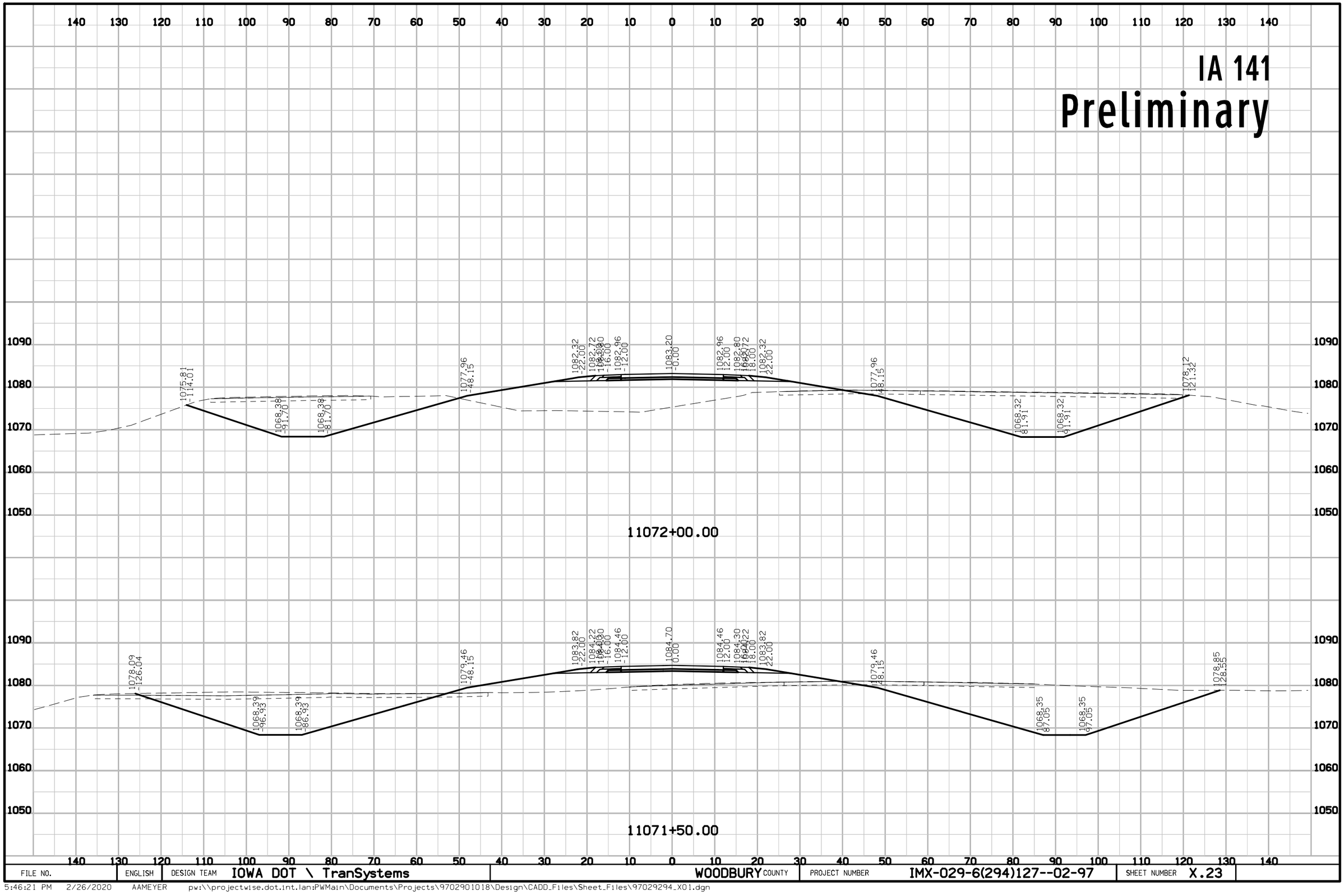
IA 141
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.22

5:46:20 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_X01.dgn

IA 141
Preliminary

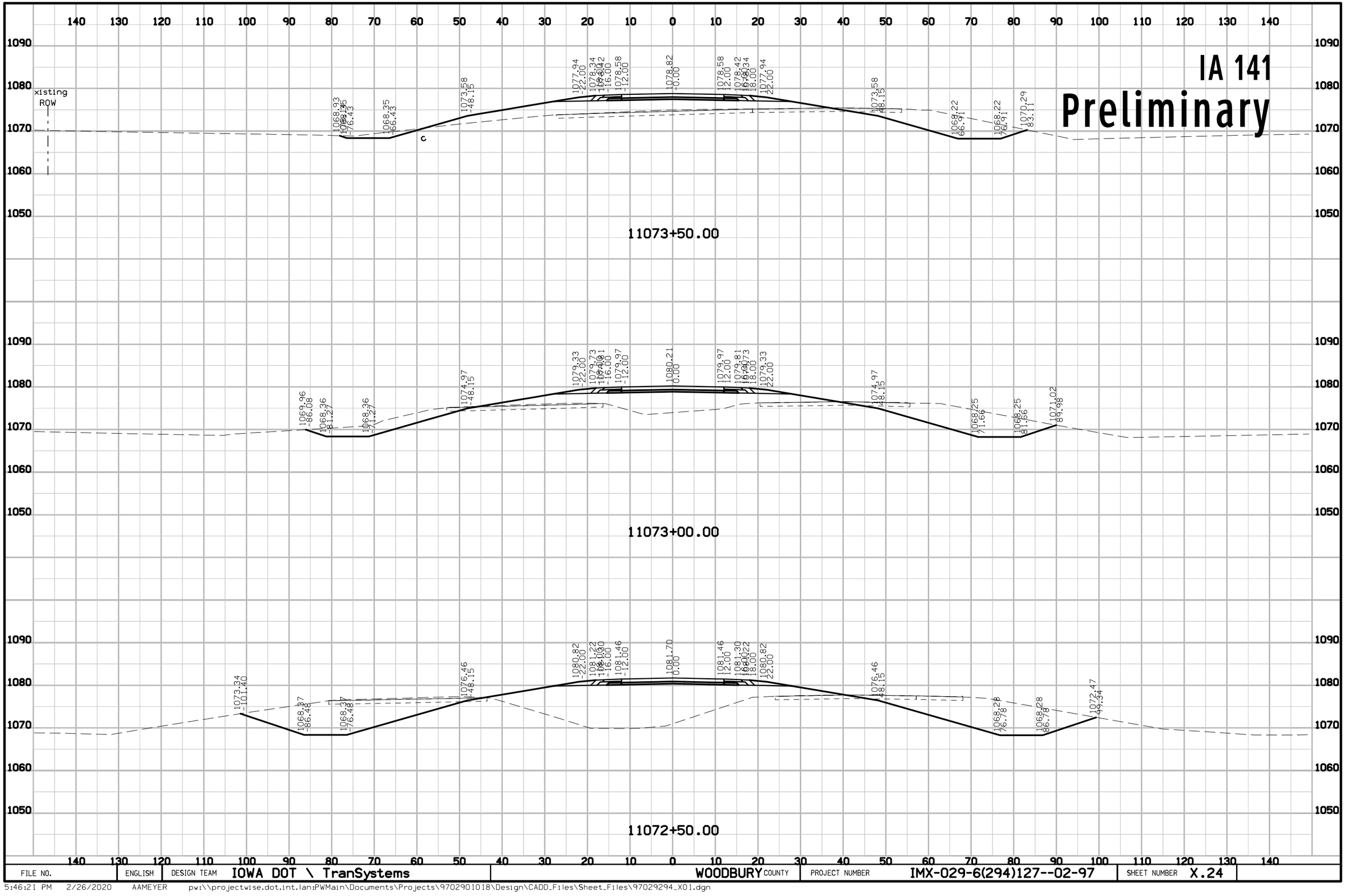


FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.23

5:46:21 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_X01.dgn

IA 141

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.24

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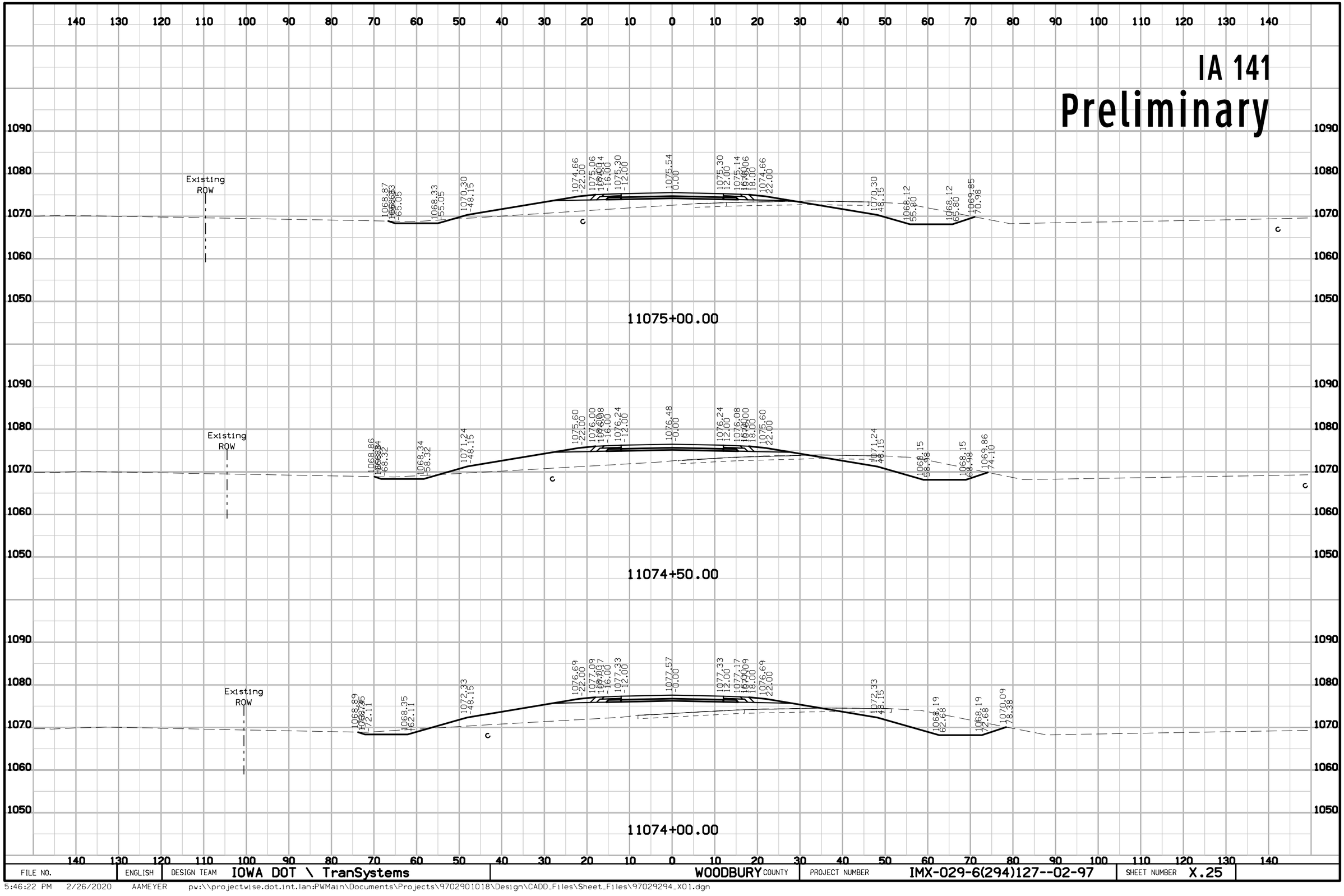
IA 141
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER X.25

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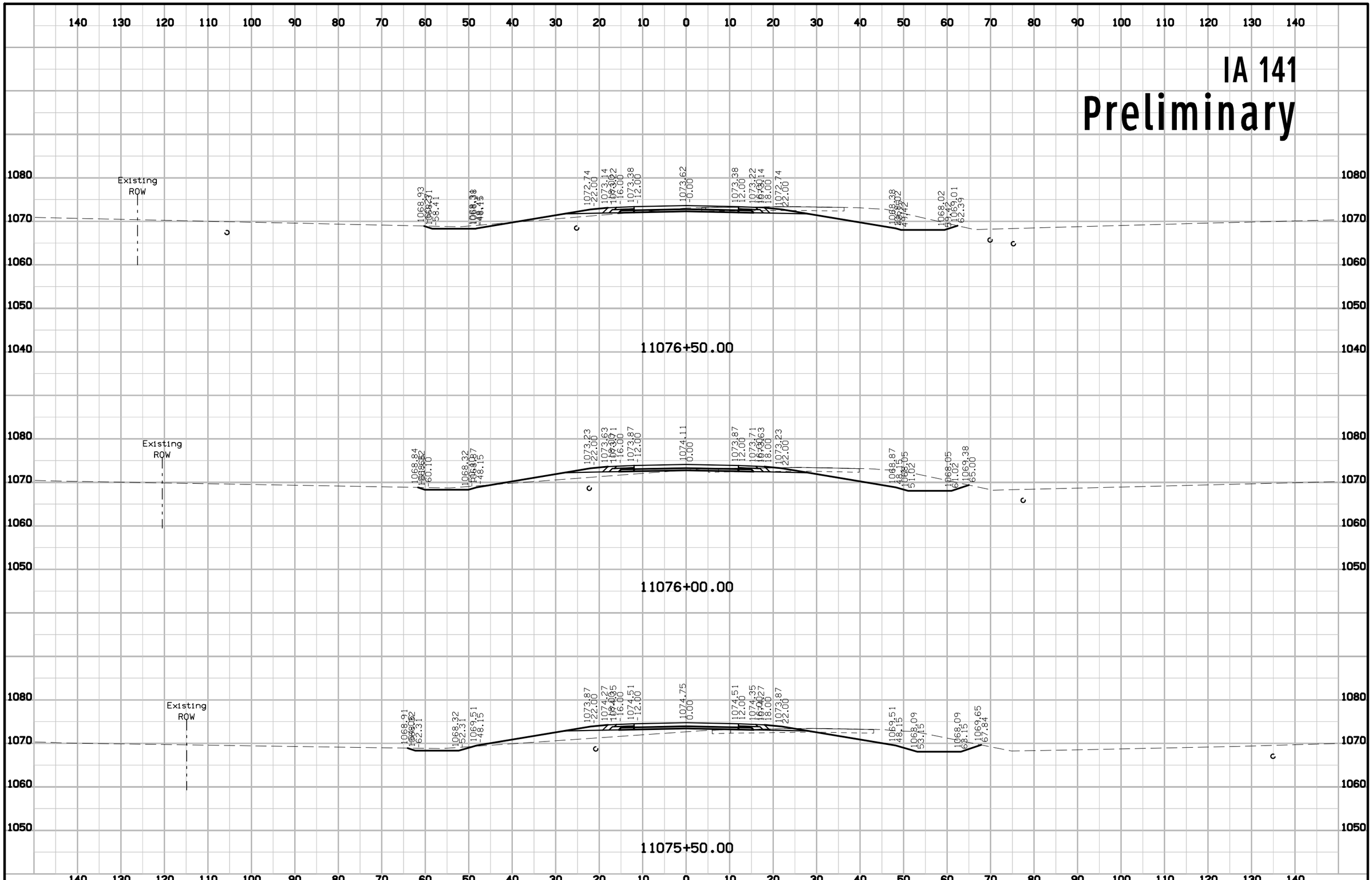
IA 141
Preliminary

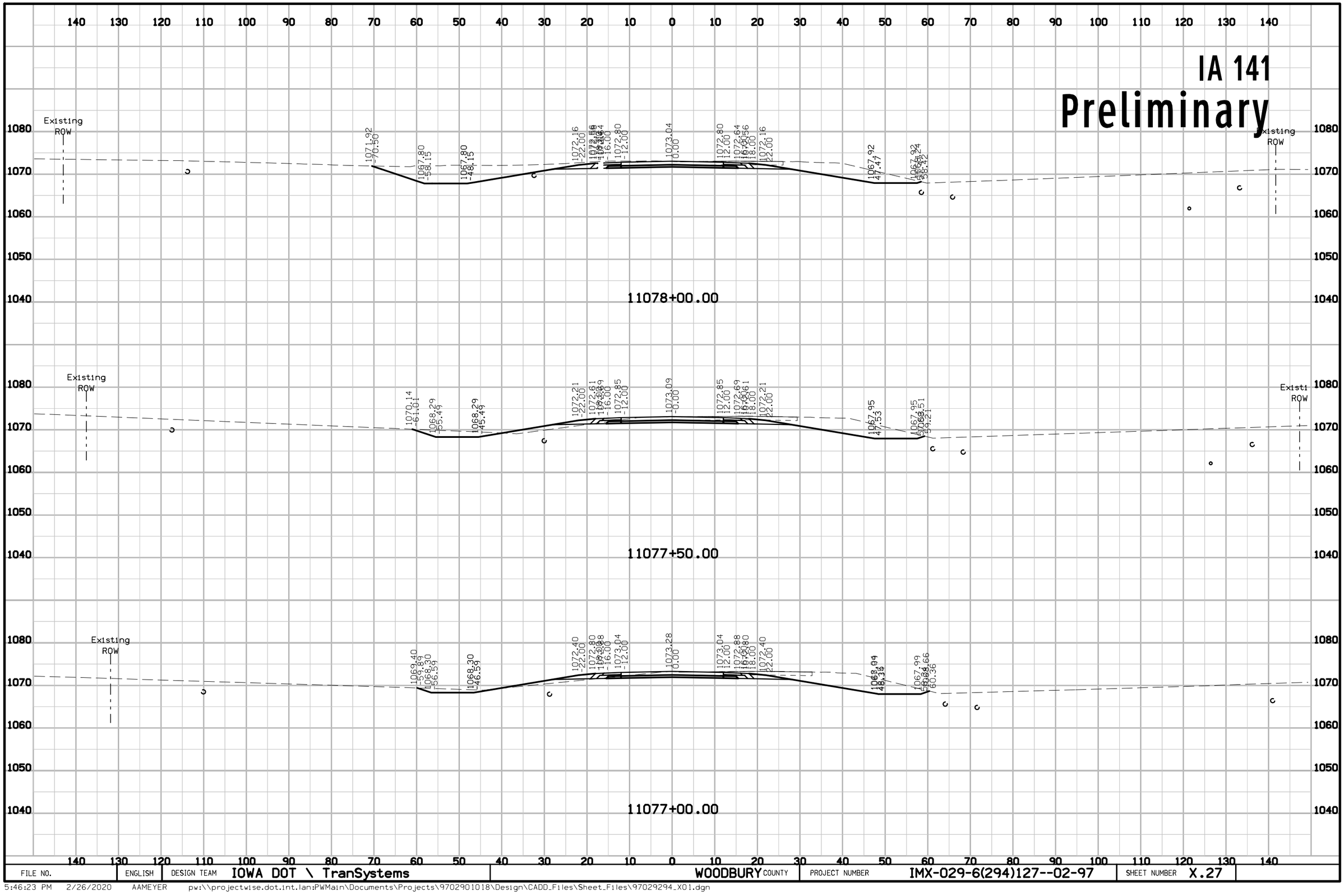


FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER X.26

5:46:23 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_X01.dgn

IA 141

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.27

5:46:23 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_X01.dgn

IA 141

Preliminary

11079+50.00

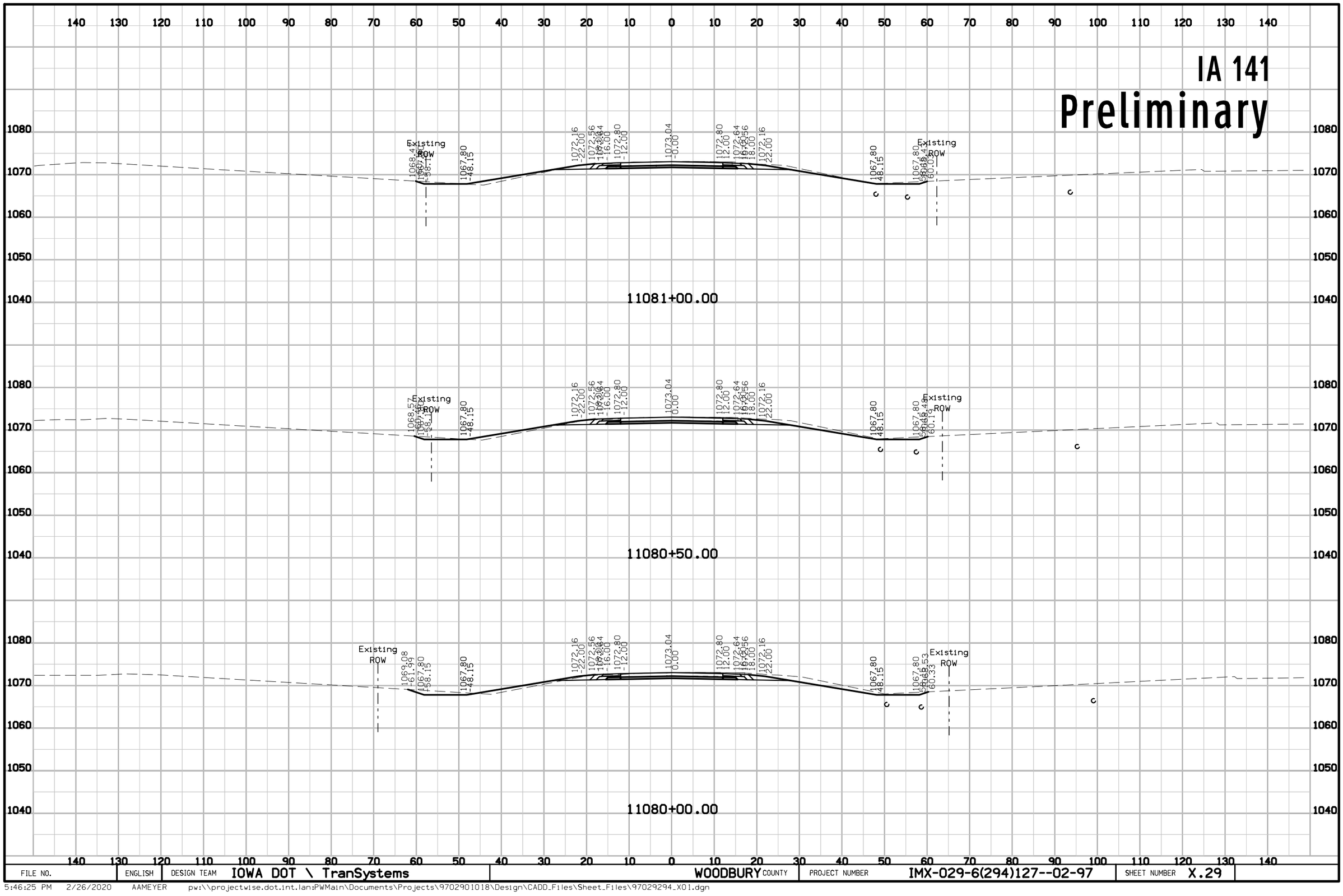
11079+00.00

11078+50.00

FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER X.28

5:46:24 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_X01.dgn

IA 141
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.29

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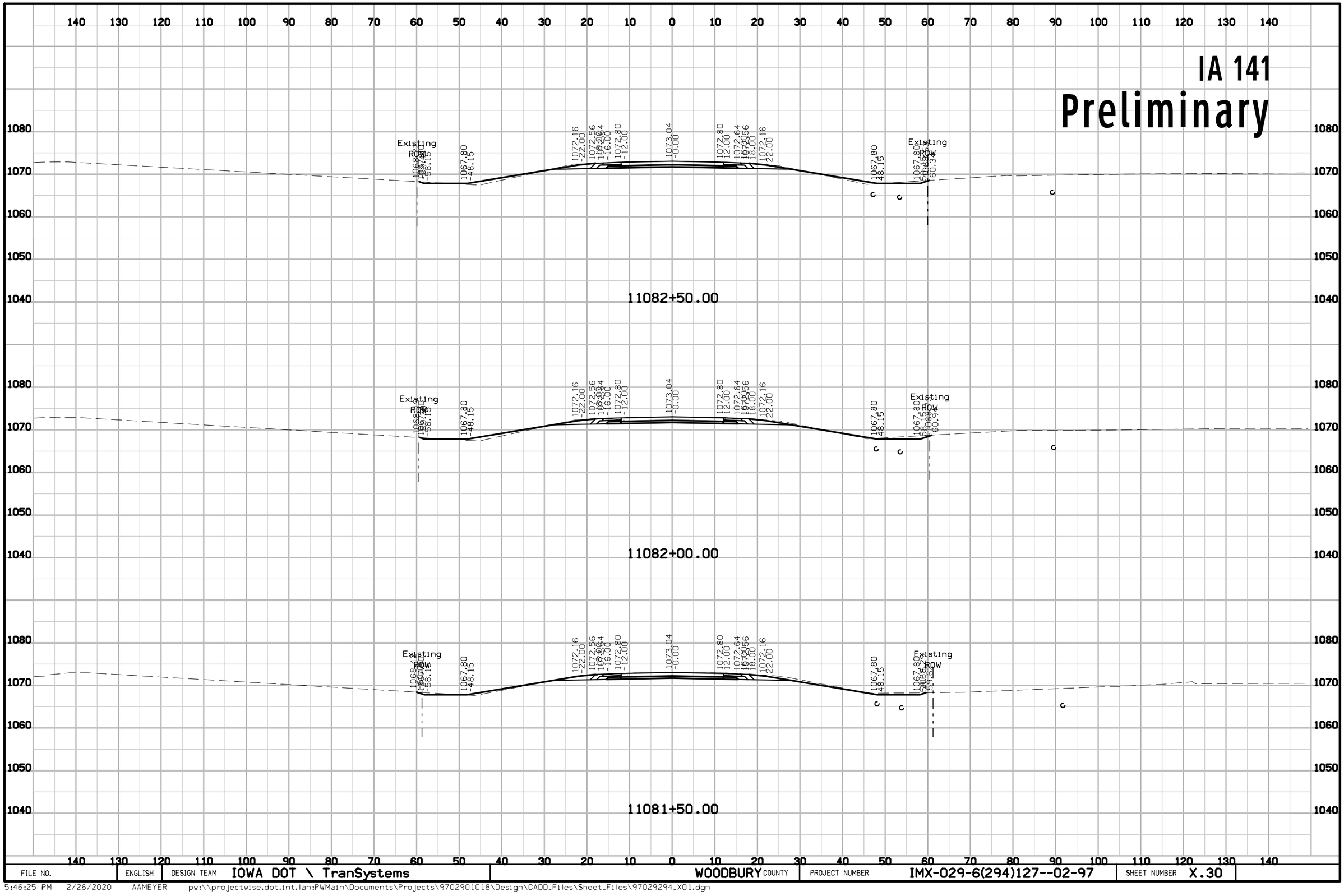
IA 141
Preliminary



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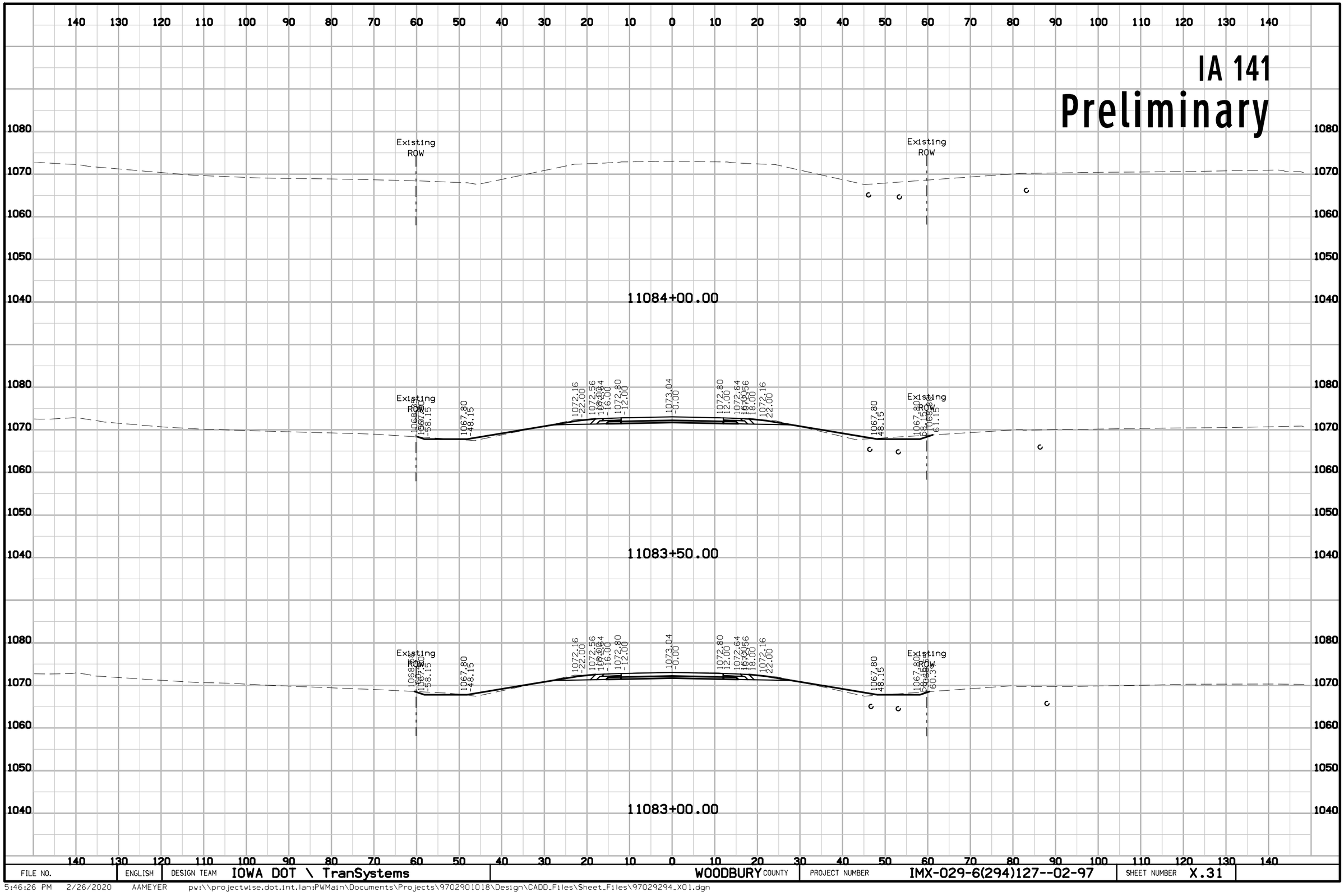
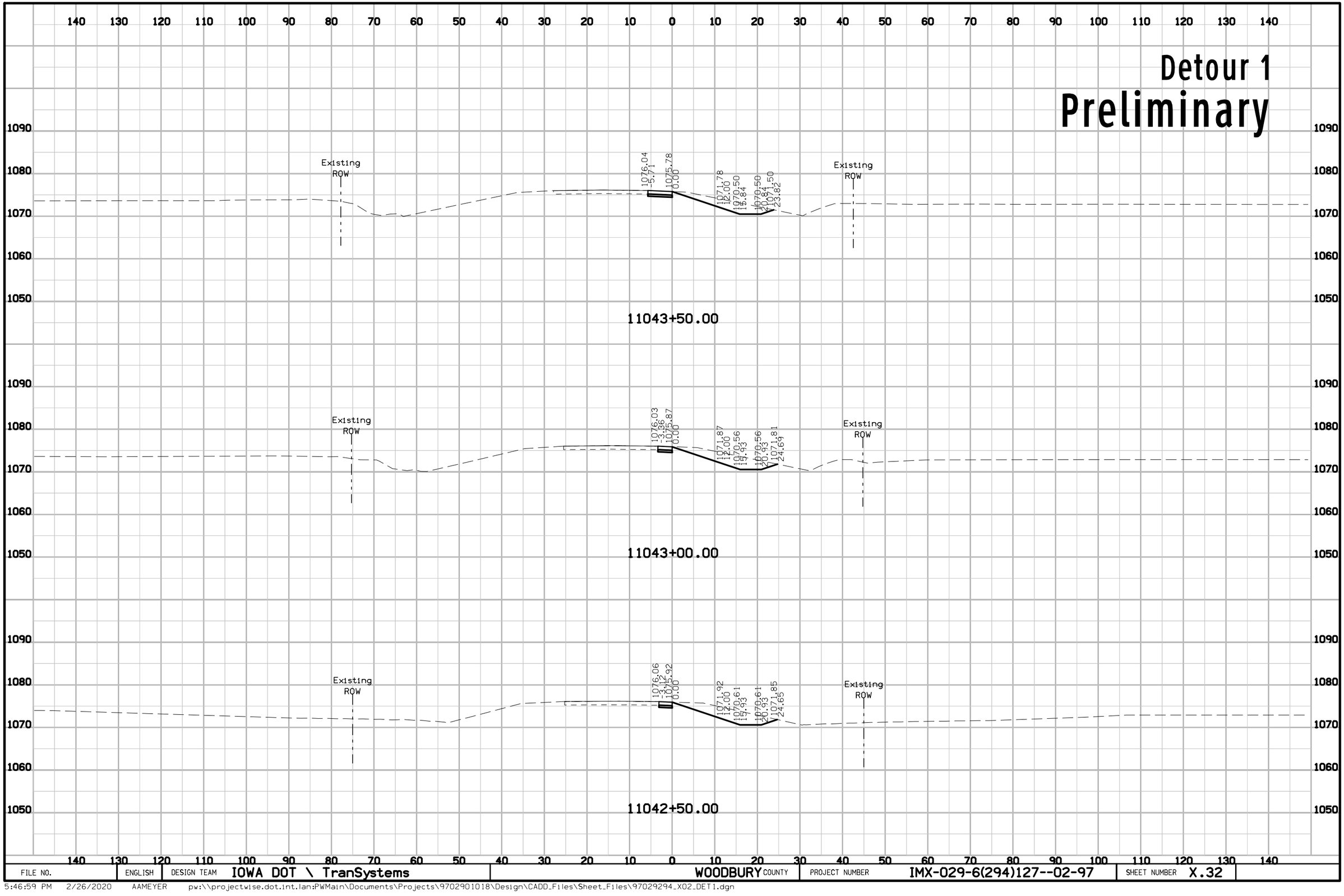
IA 141
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER X.31

5:46:26 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_X01.dgn

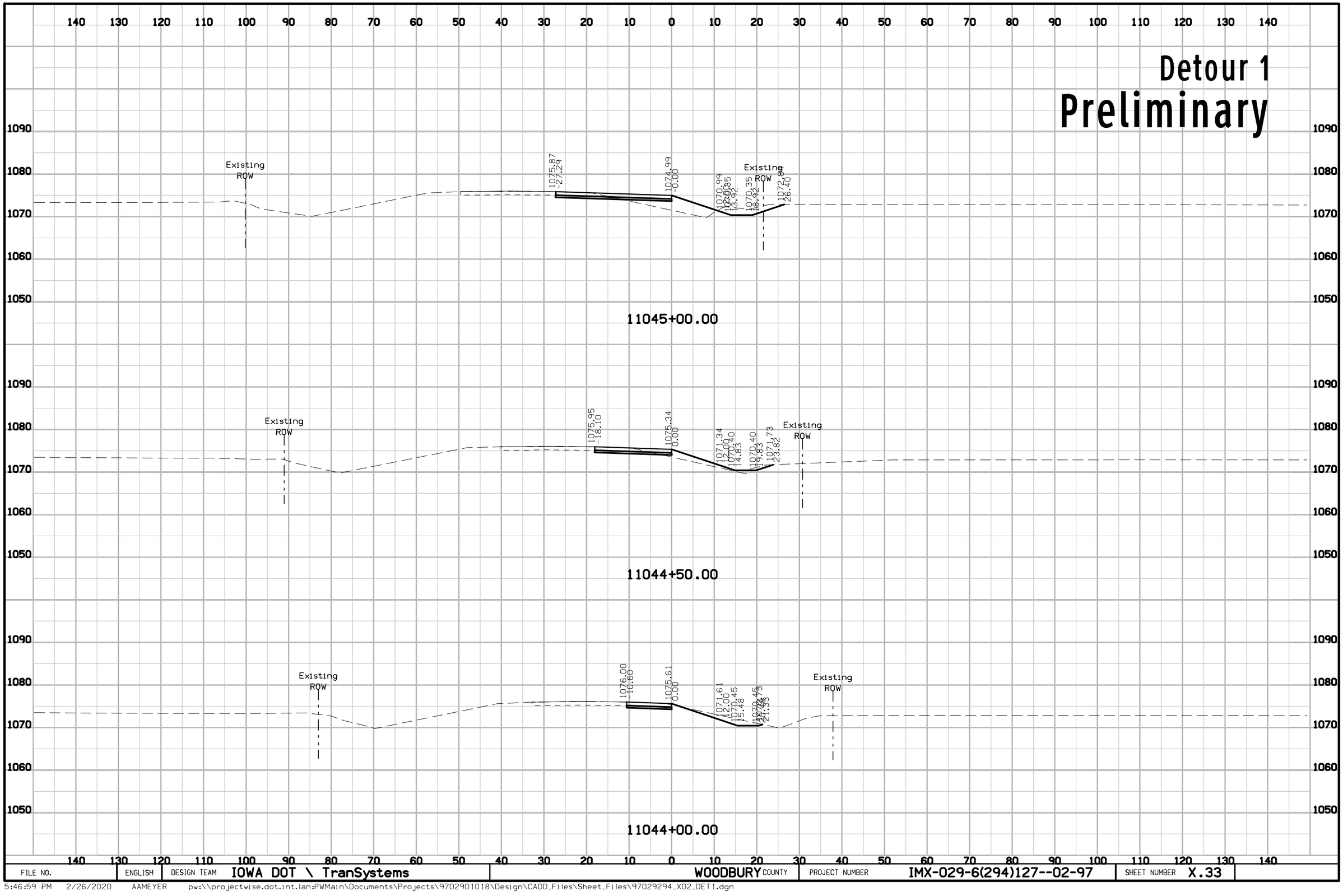
Detour 1
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.32

5:46:59 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_X02_DET1.dgn

Detour 1
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.33

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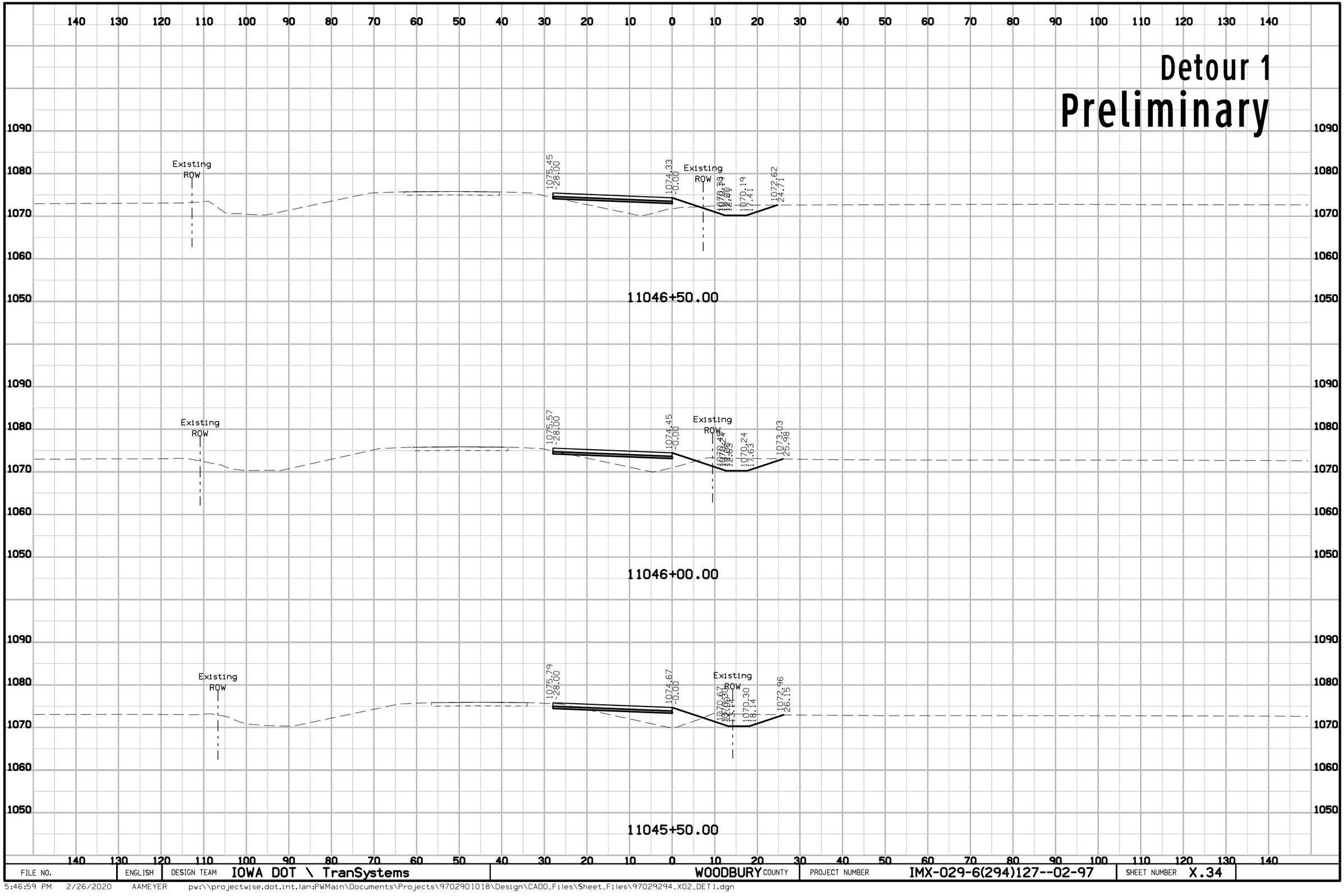
Detour 1
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER X.34

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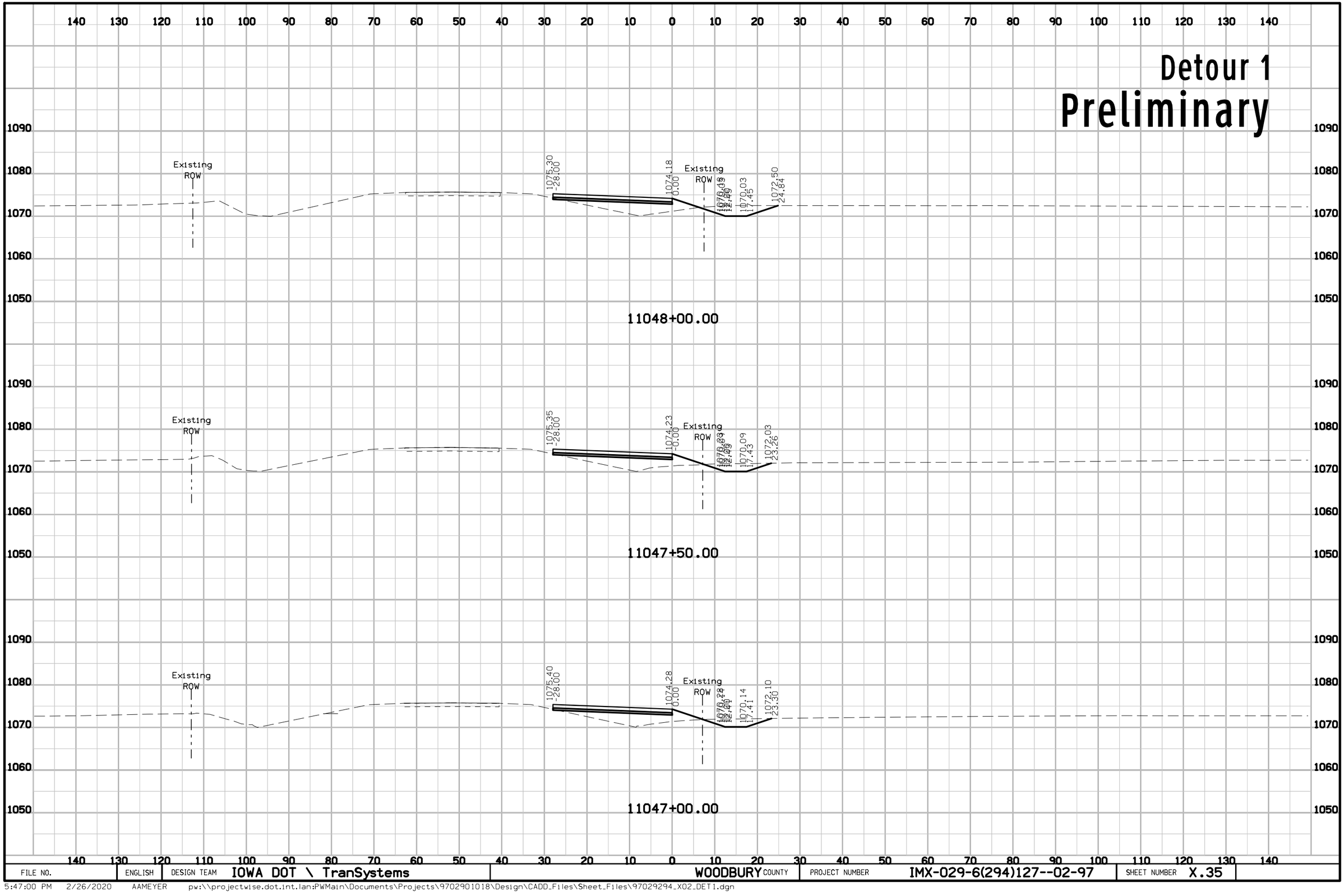
Detour 1
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.35

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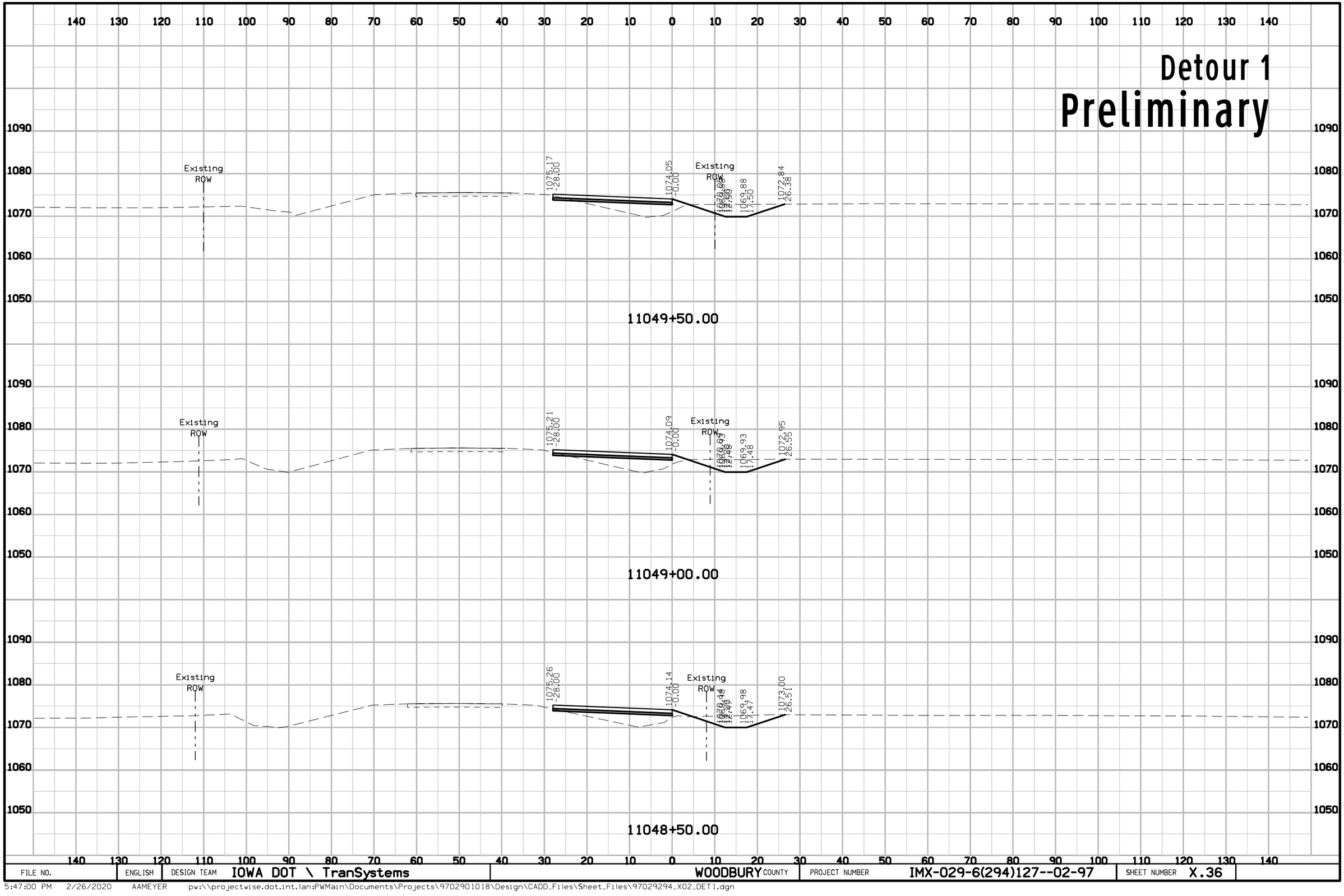
Detour 1
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.36

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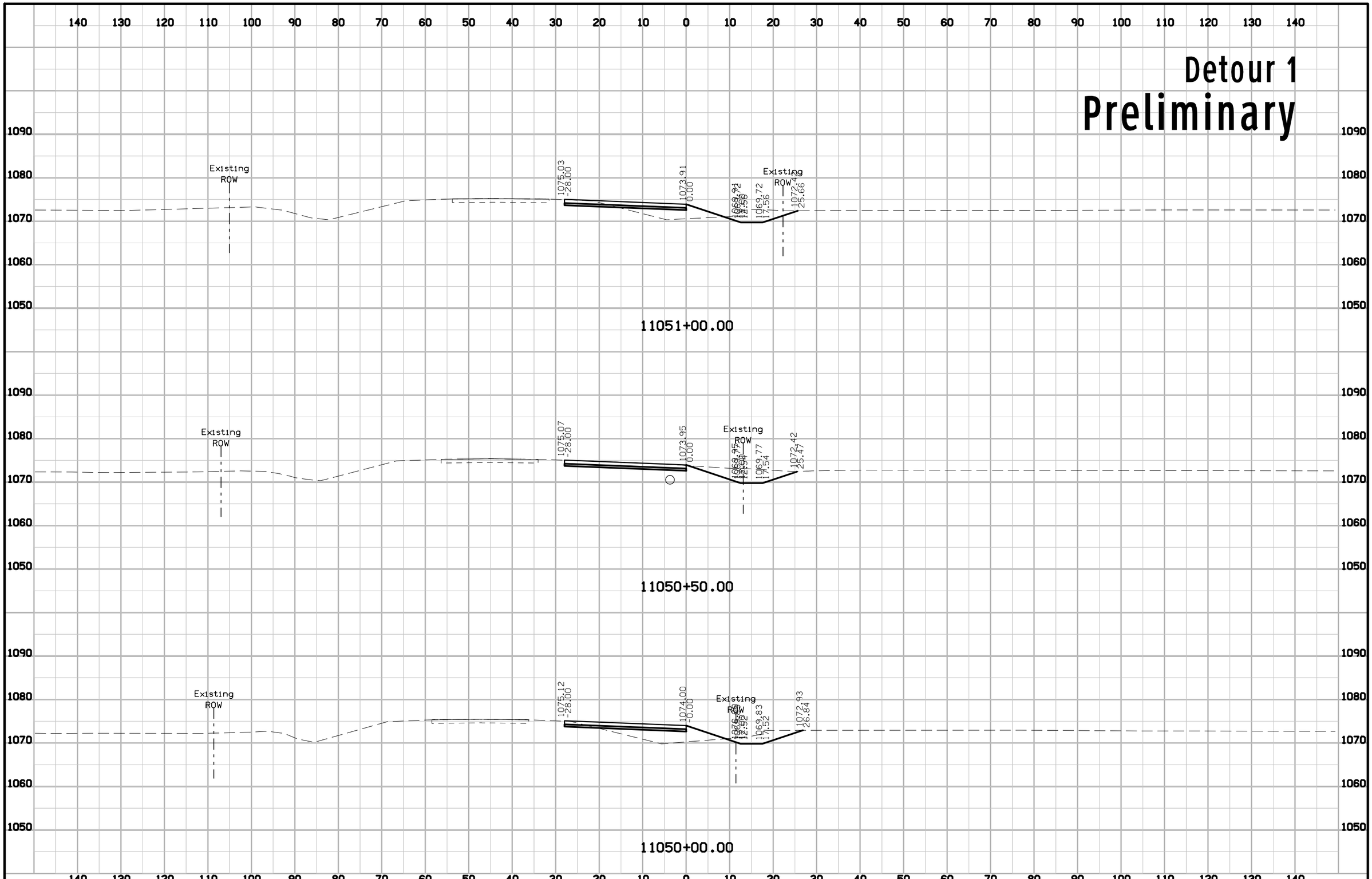
Detour 1
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER X.37

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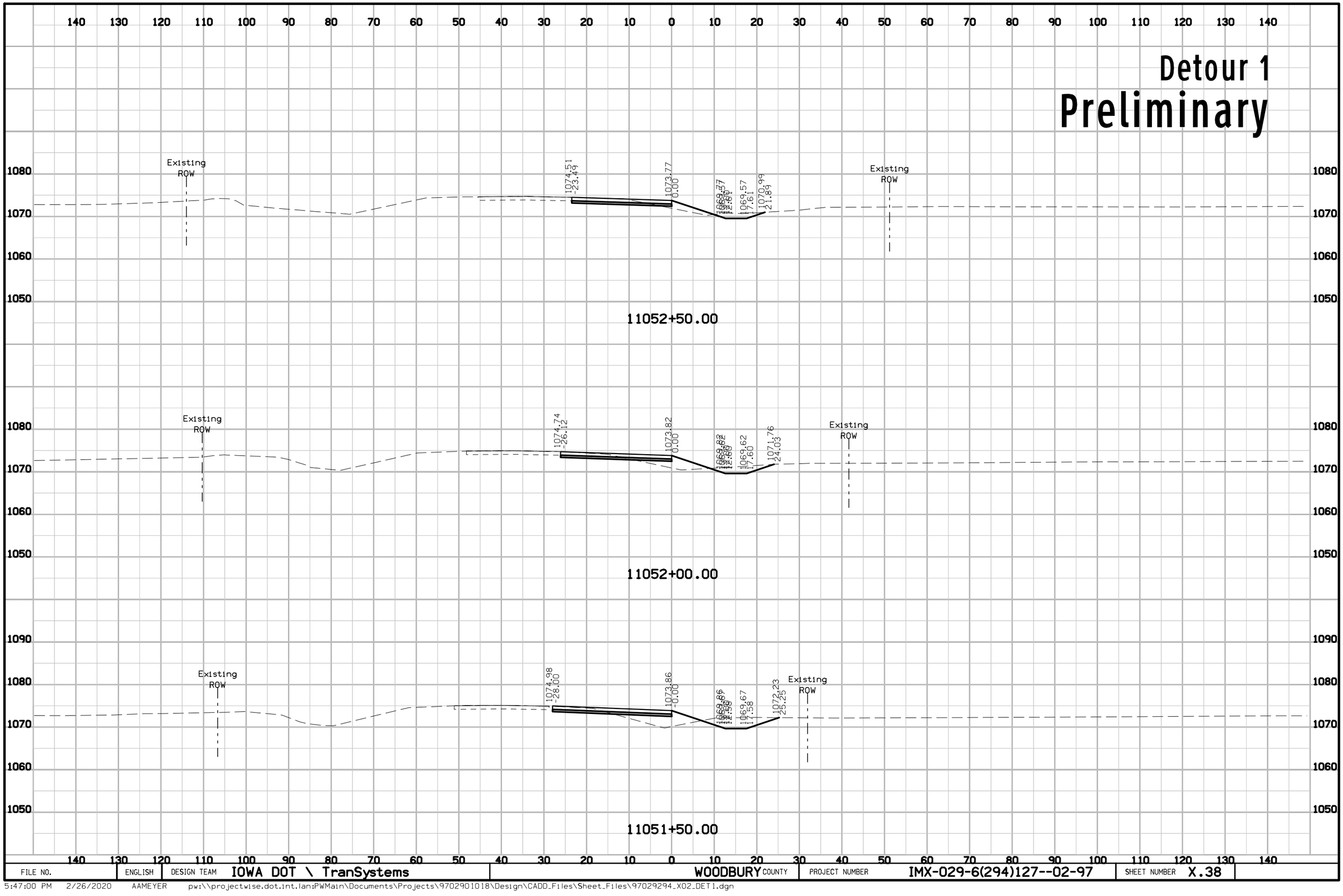
Detour 1
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER X.38

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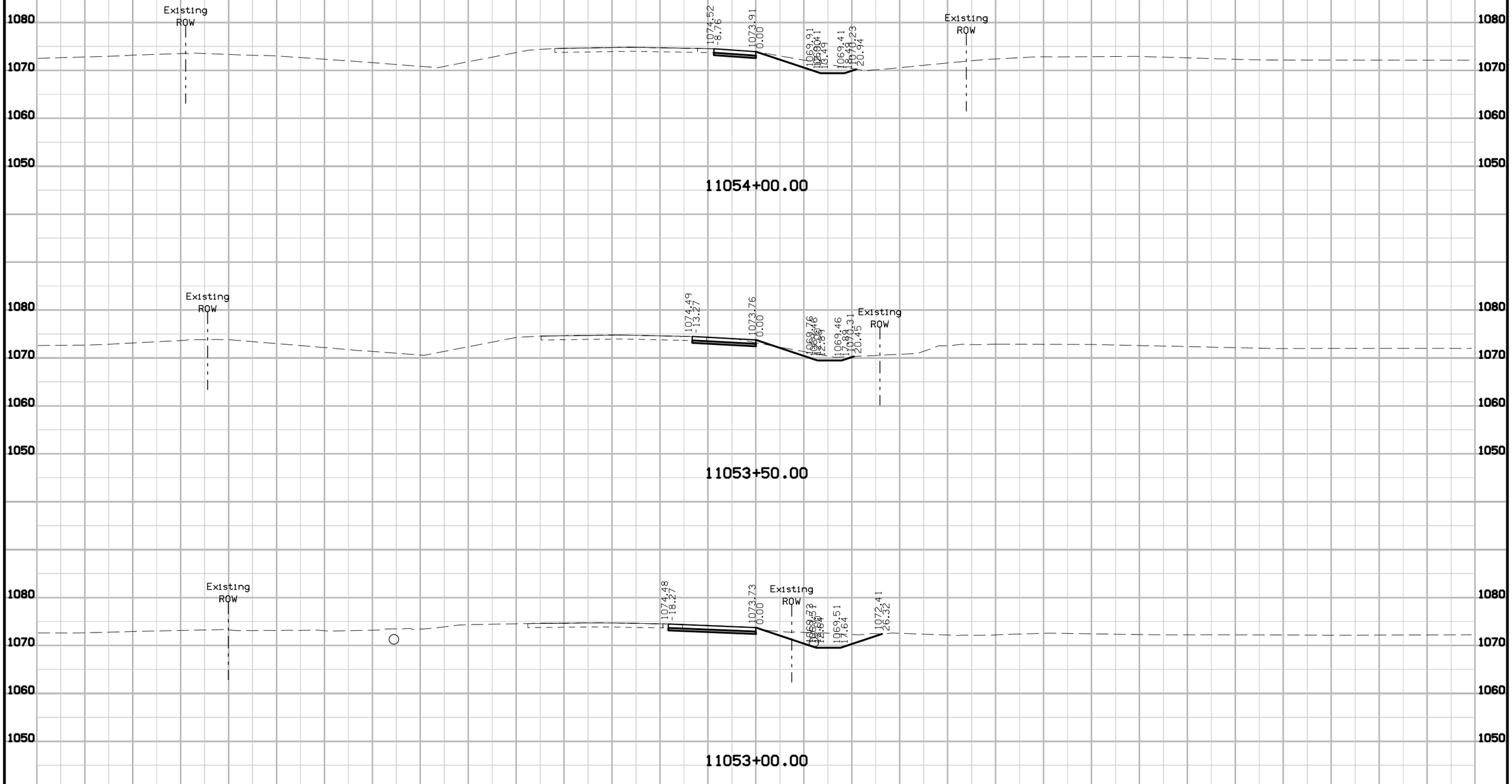
Detour 1
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER X.39

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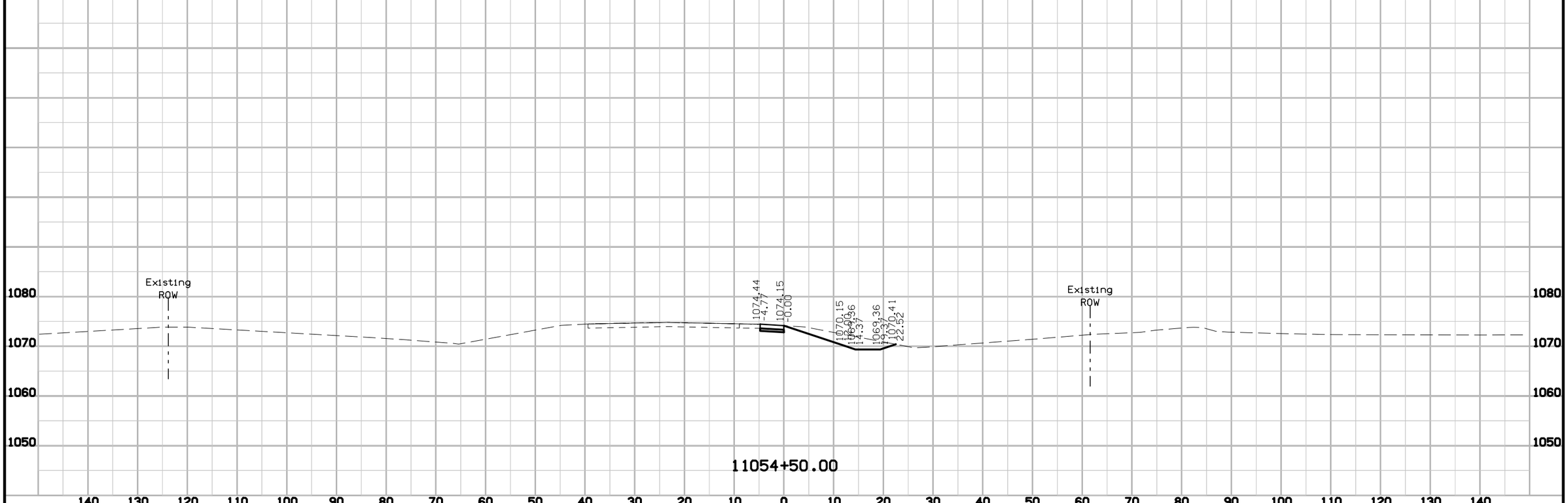
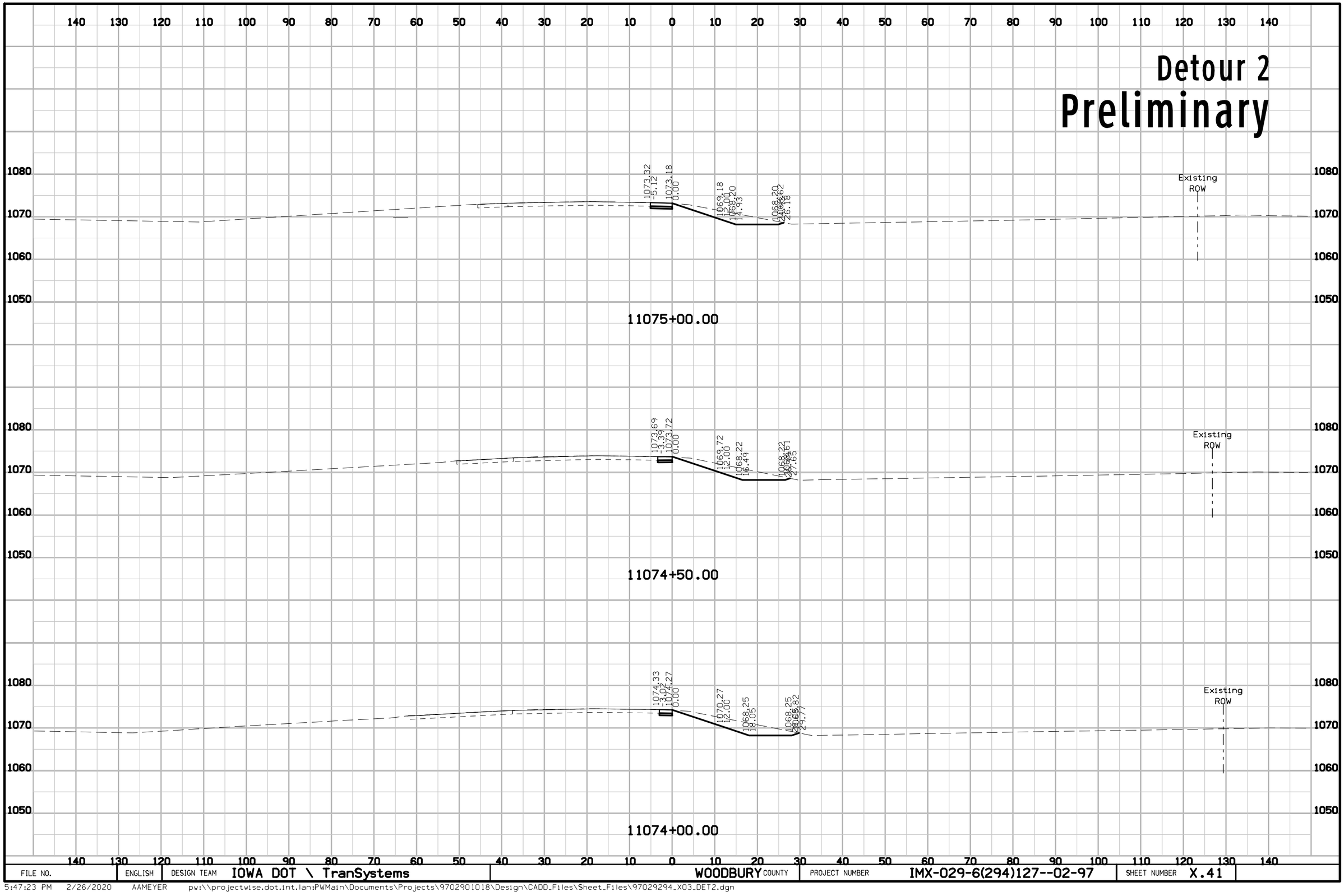
Detour 1
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.40

5:47:01 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_X02_DET1.dgn

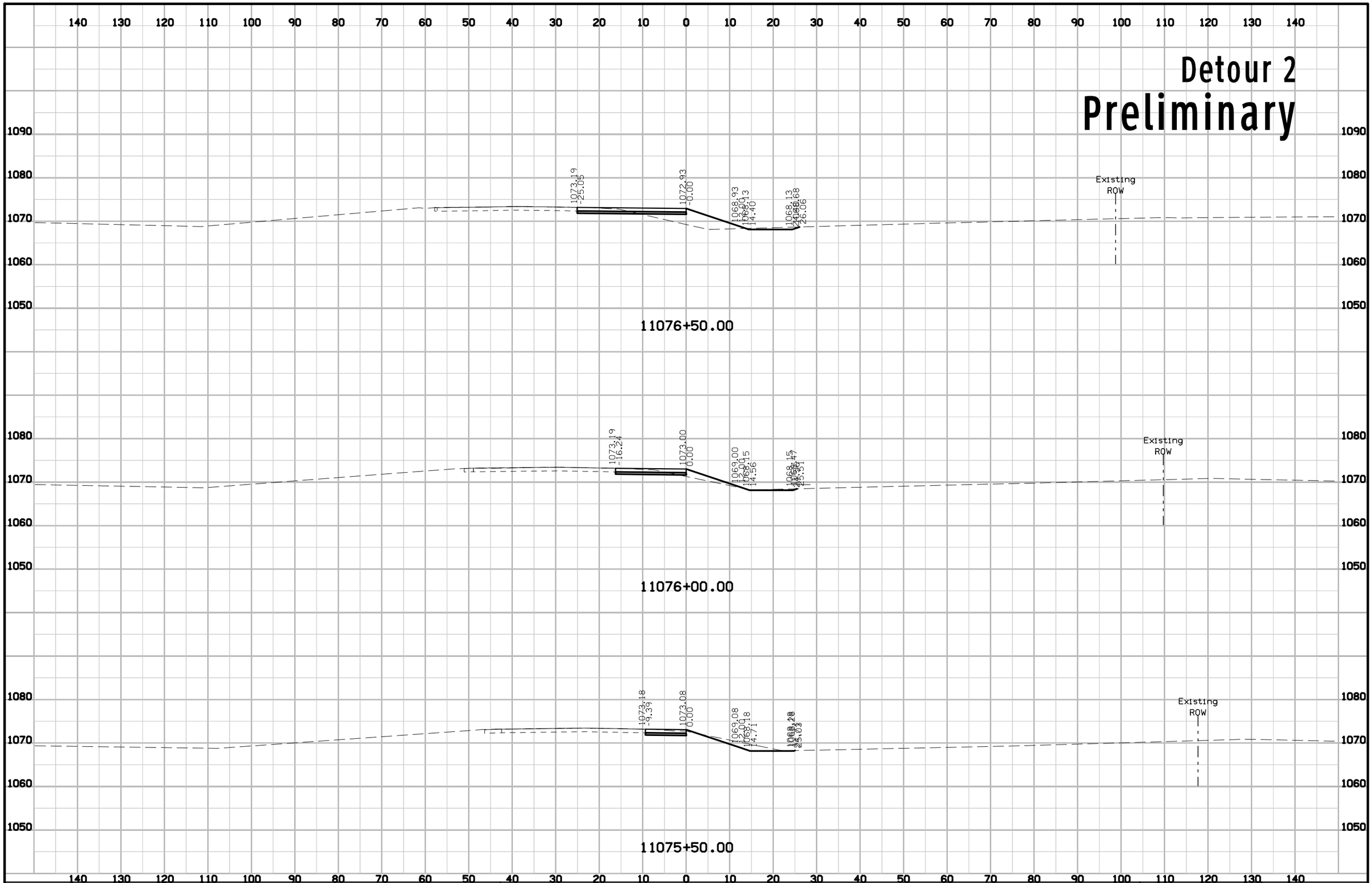
Detour 2
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.41

5:47:23 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_X03_DET2.dgn

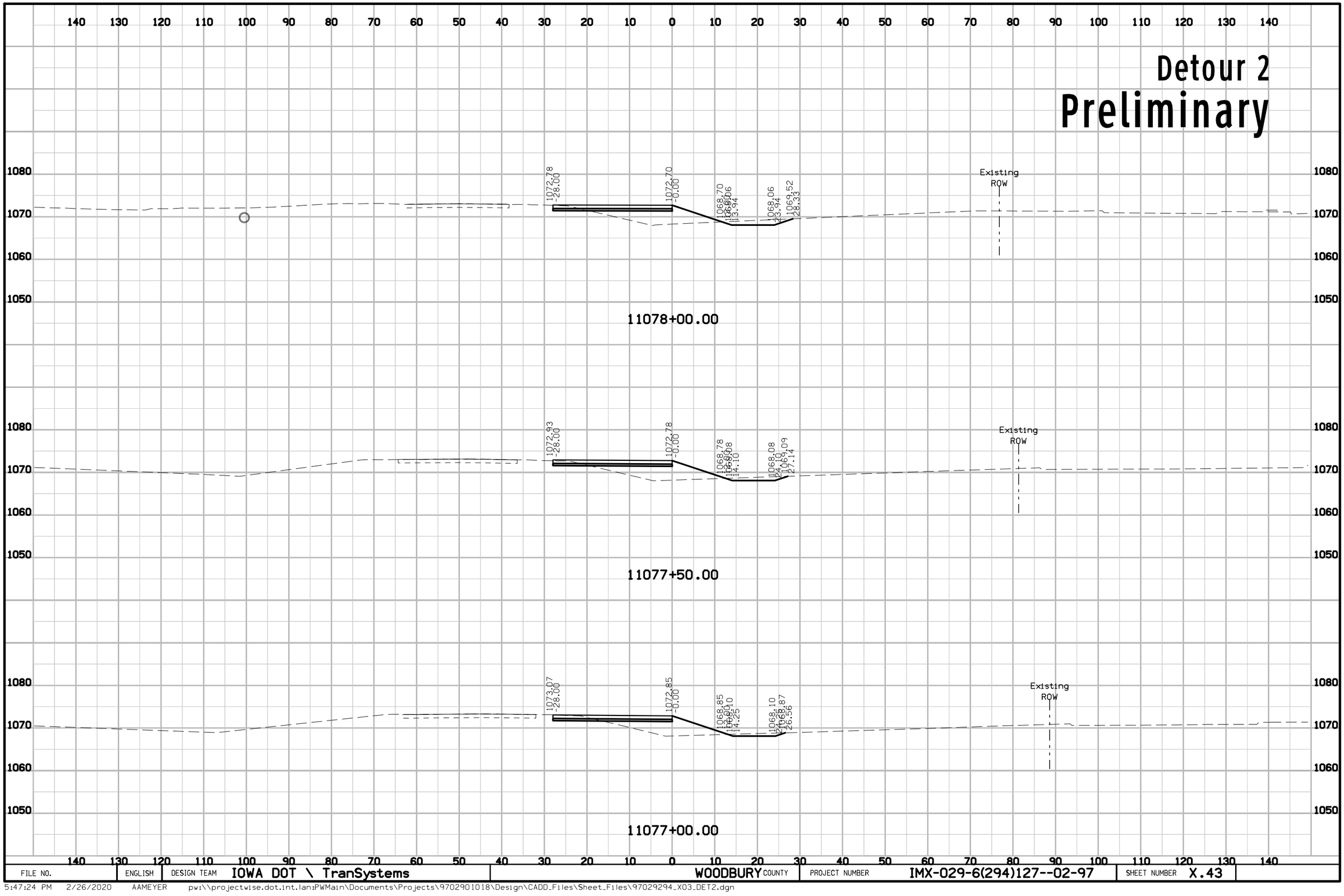
Detour 2
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.42

5:47:23 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_X03_DET2.dgn

Detour 2
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.43

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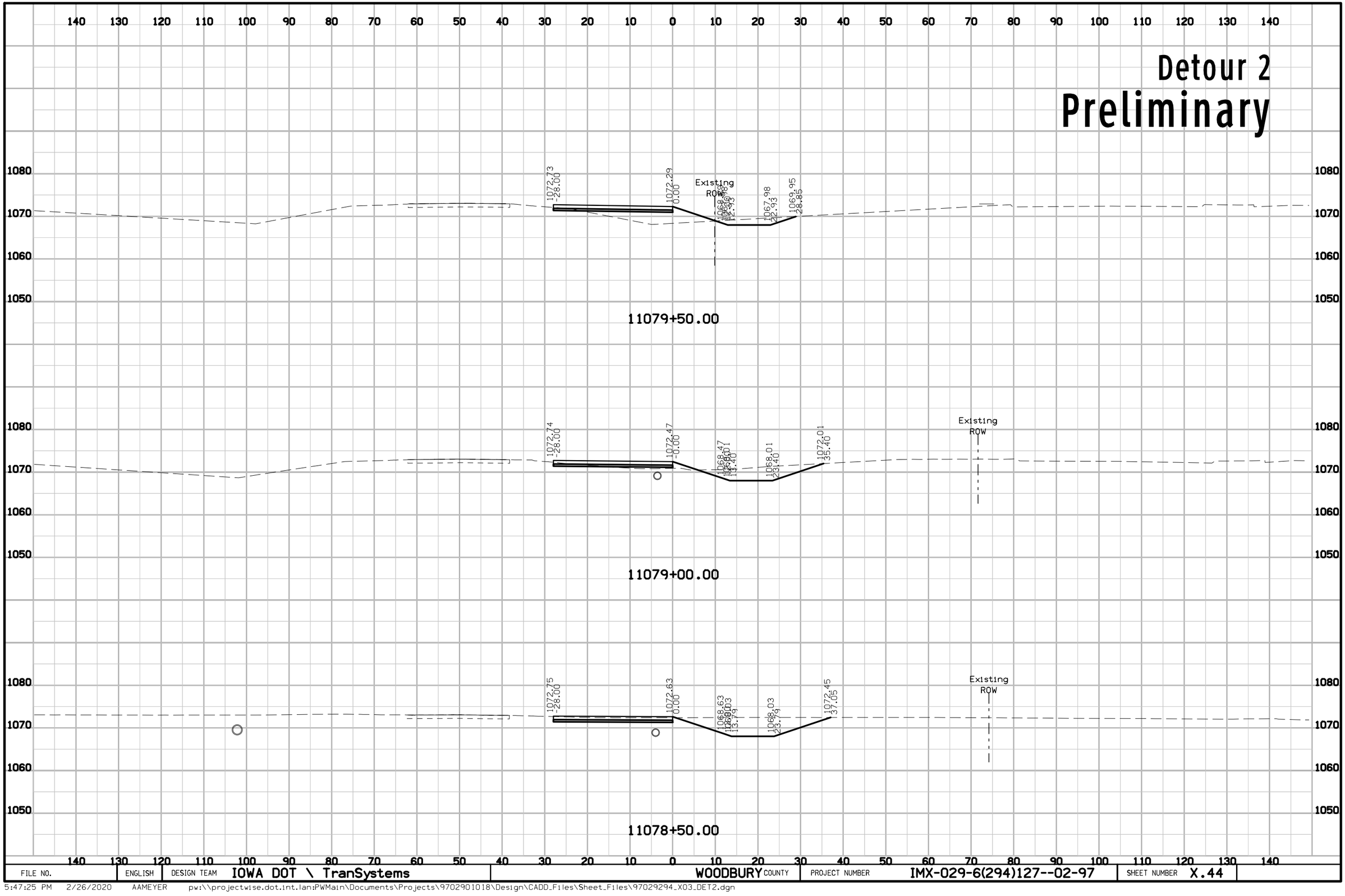
Detour 2
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.44

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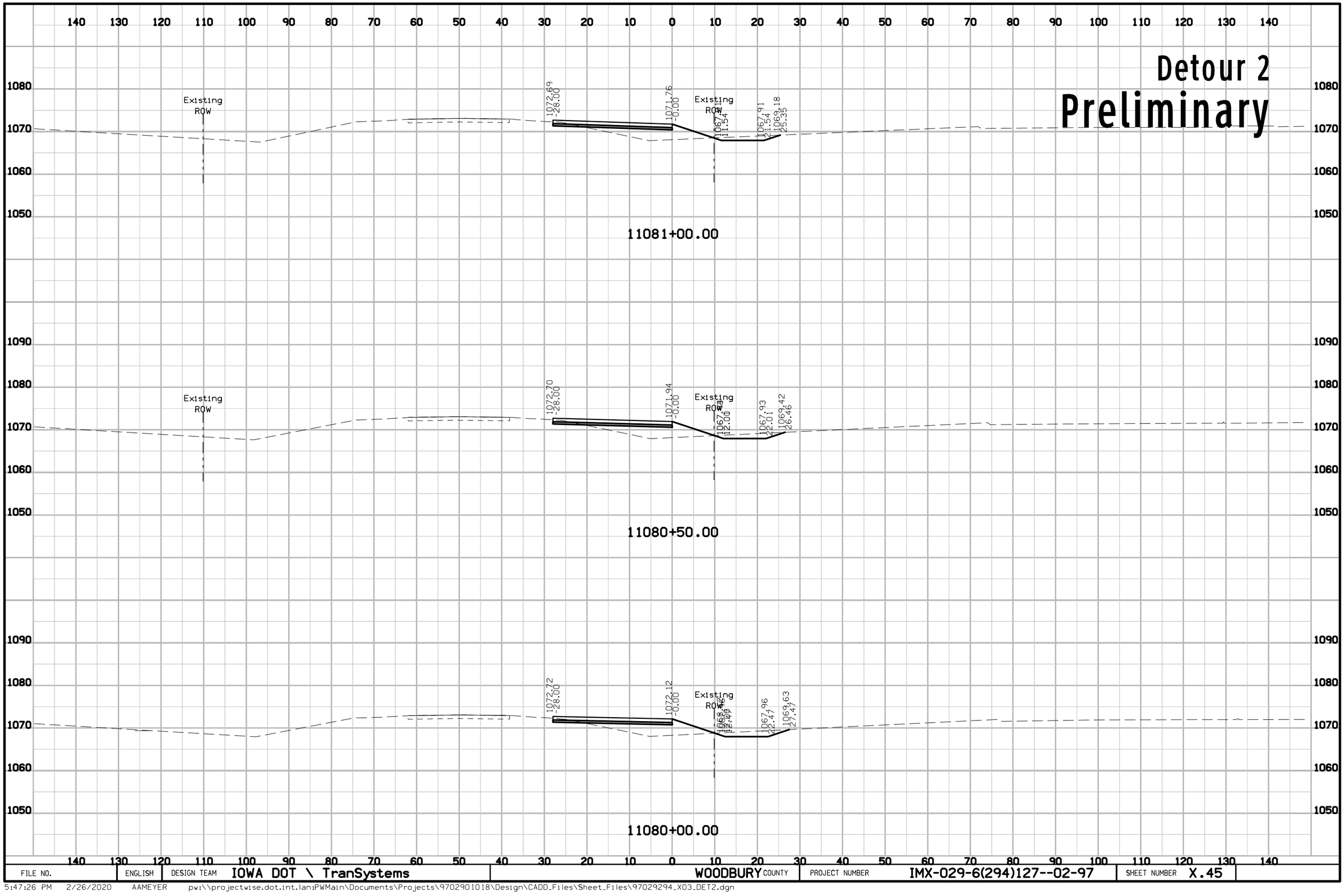
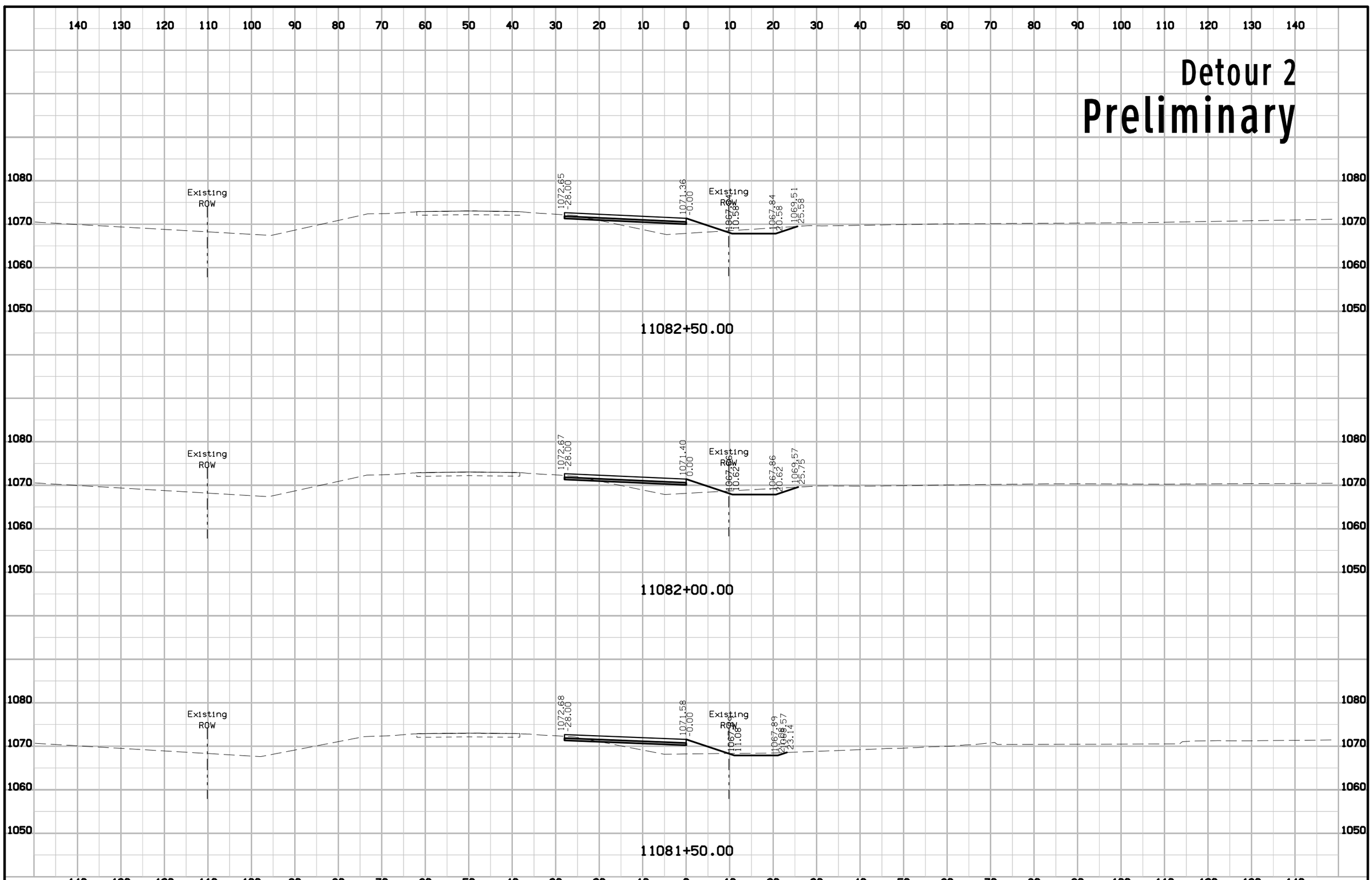
Detour 2
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.45

5:47:26 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_X03_DET2.dgn

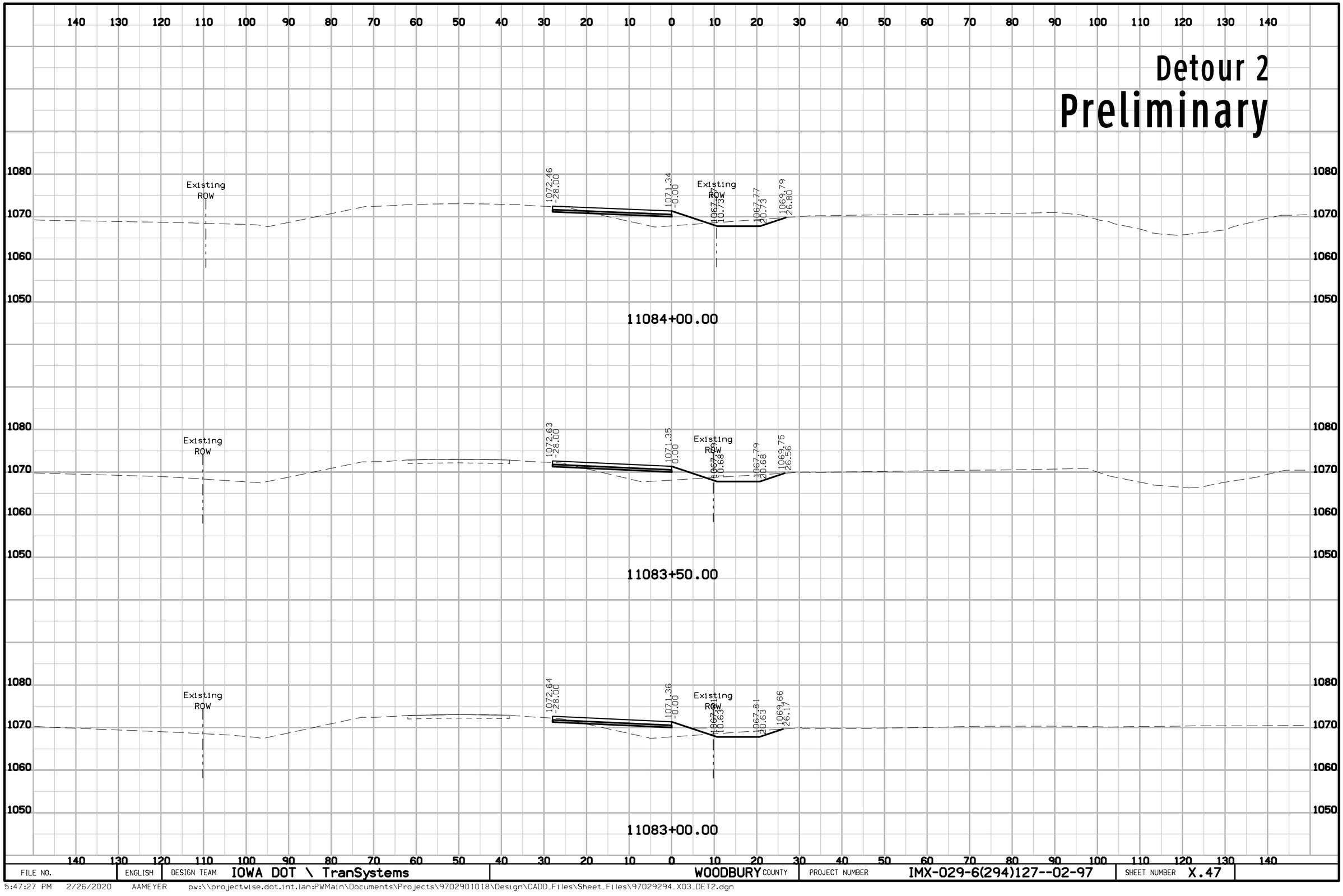
Detour 2
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.46

5:47:26 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_X03_DET2.dgn

Detour 2
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.47

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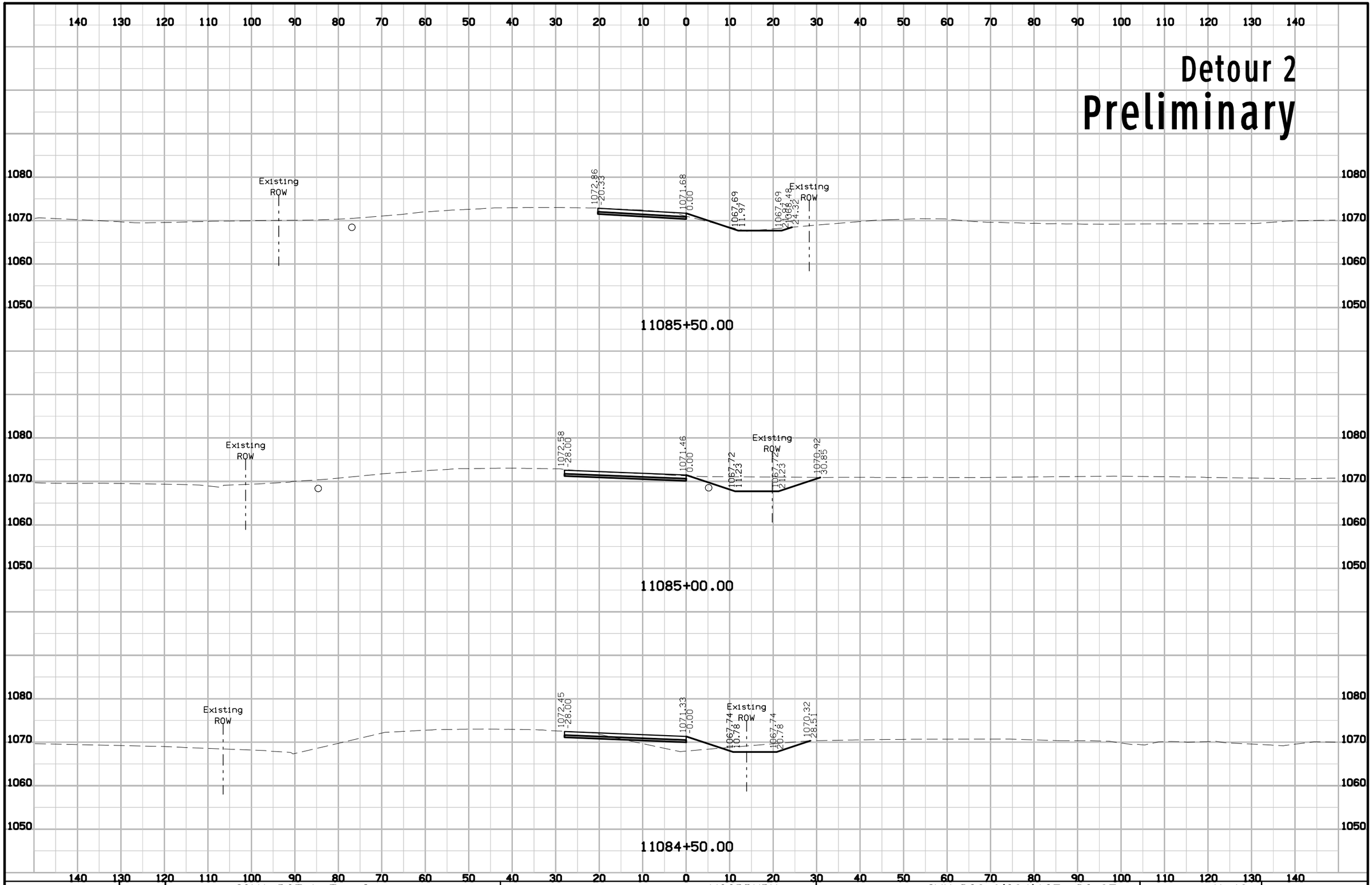
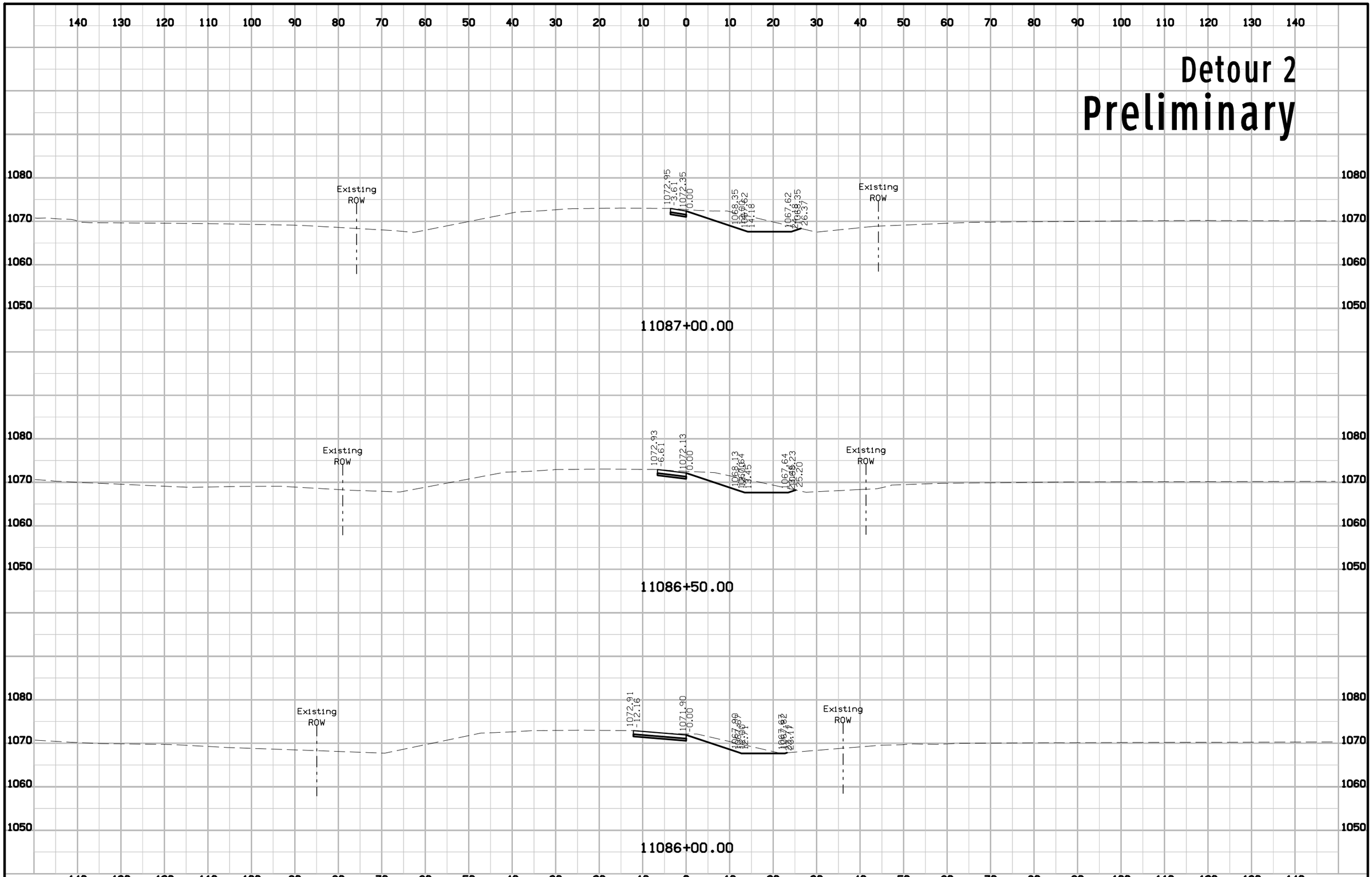
Detour 2
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.48

5:47:28 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_X03_DET2.dgn

Detour 2
Preliminary

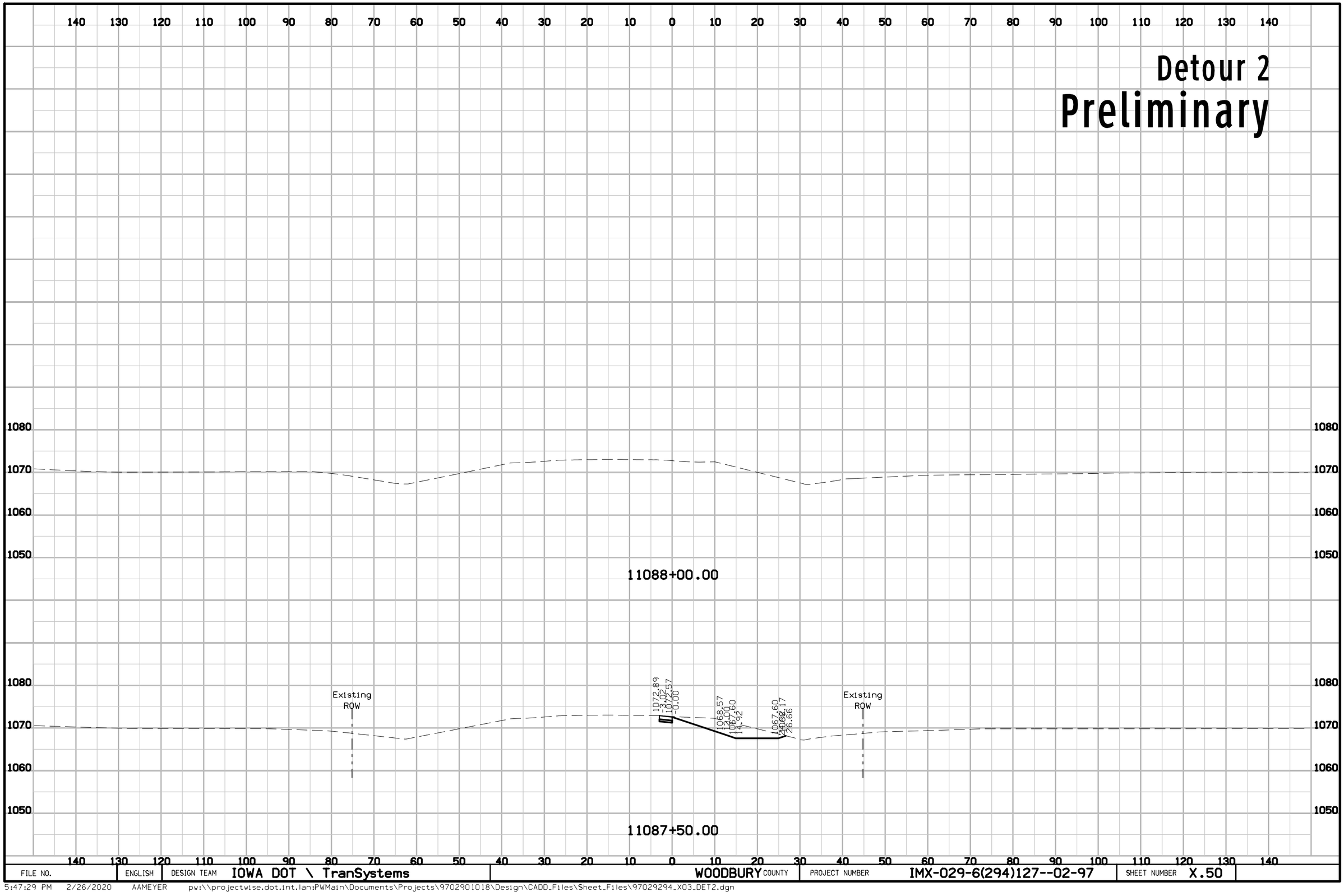


FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.49

5:47:28 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_X03_DET2.dgn

Detour 2

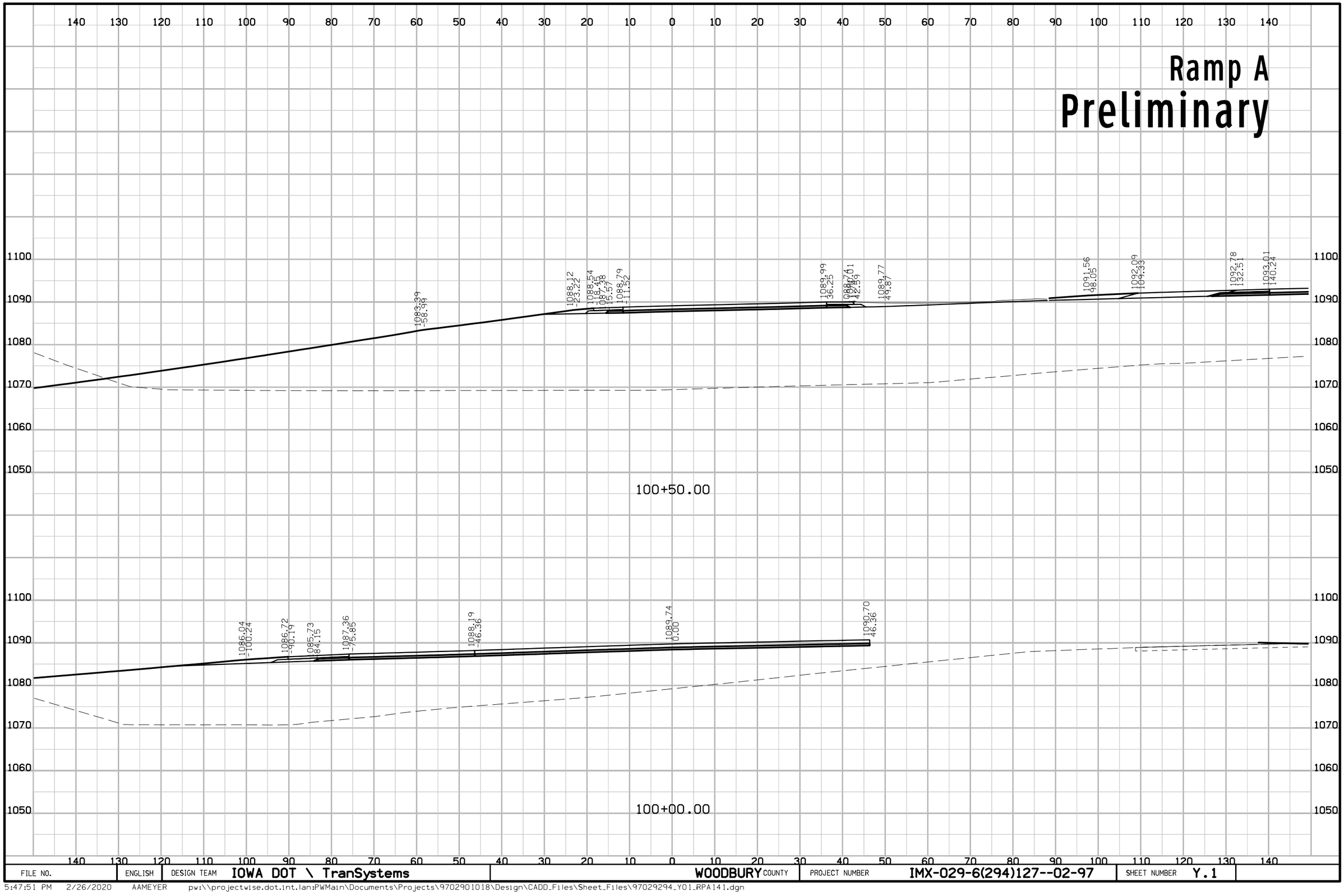
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	X.50

5:47:29 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_X03_DET2.dgn

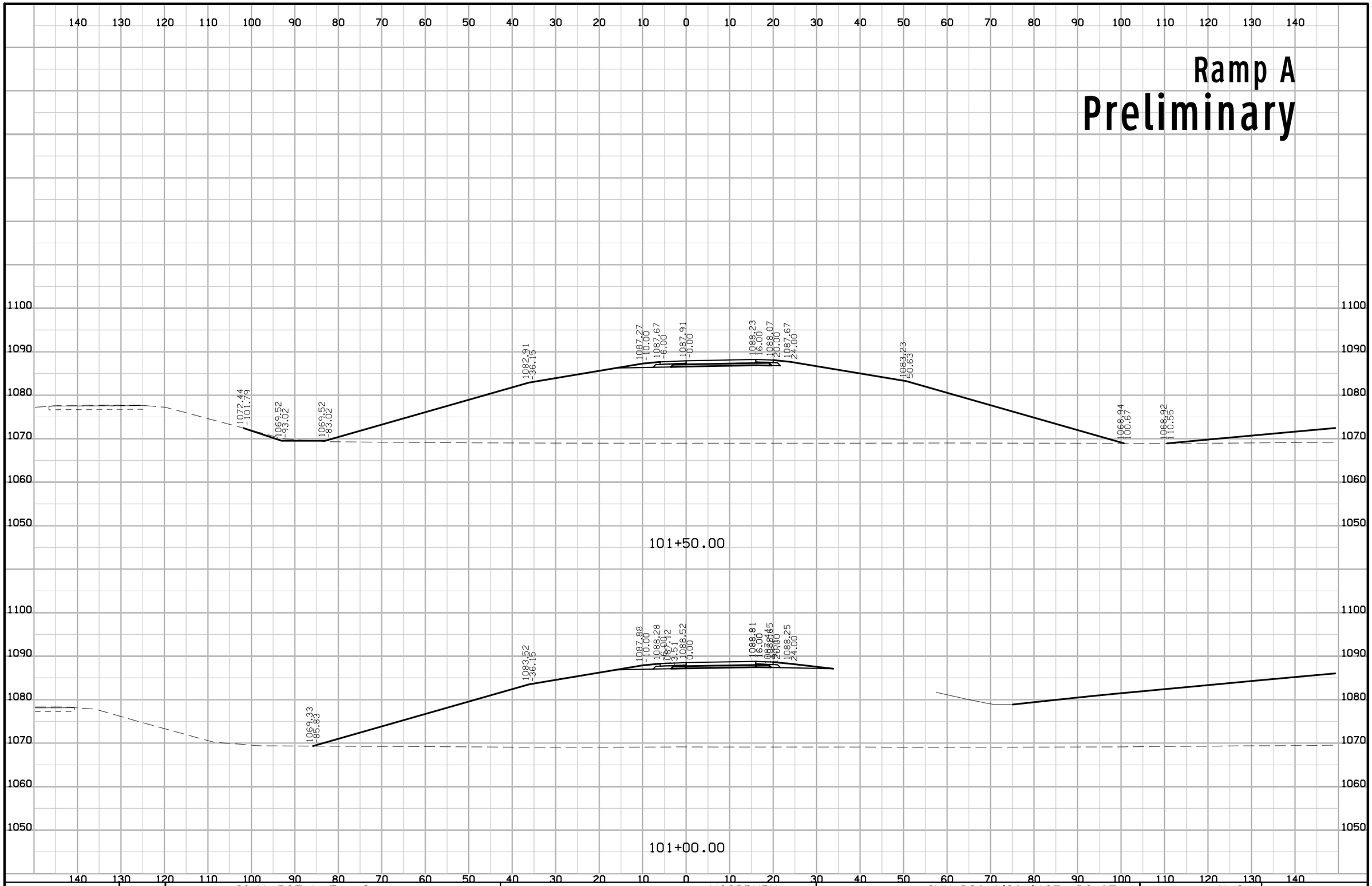
Ramp A
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.1

5:47:51 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y01_RPA141.dgn

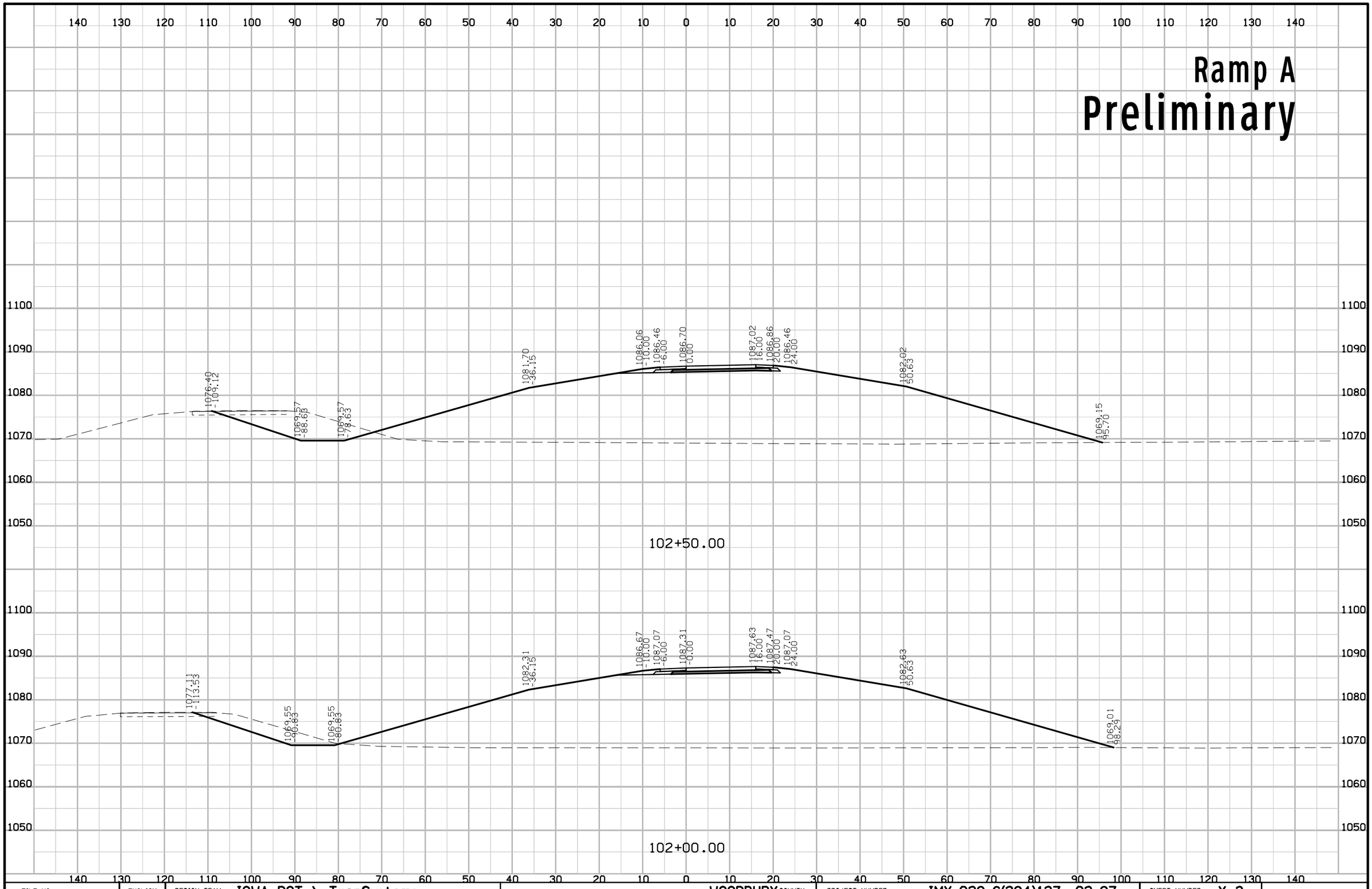
Ramp A
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.2

5:47:51 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y01_RPA141.dgn

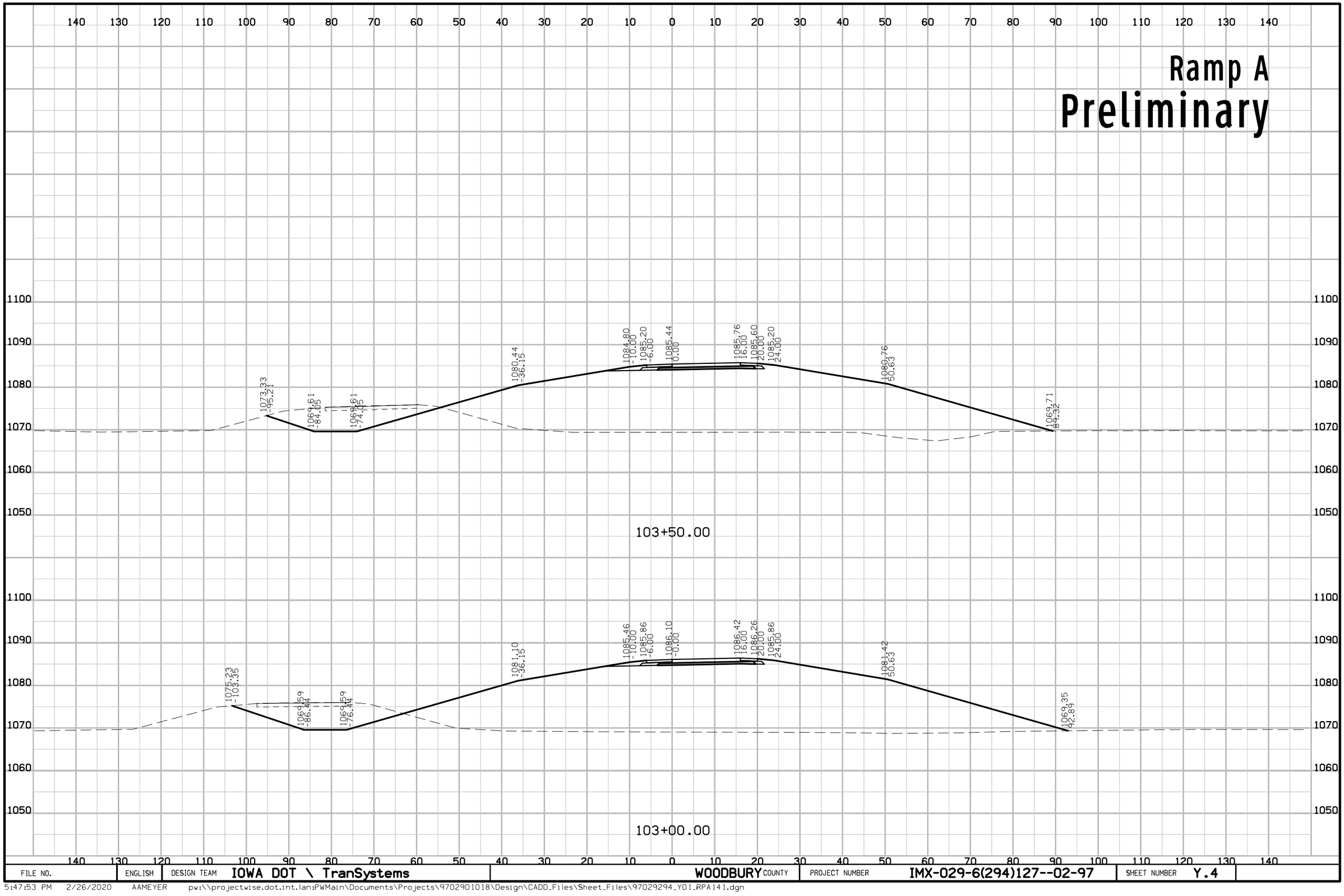
Ramp A
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.3

5:47:52 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y01_RPA141.dgn

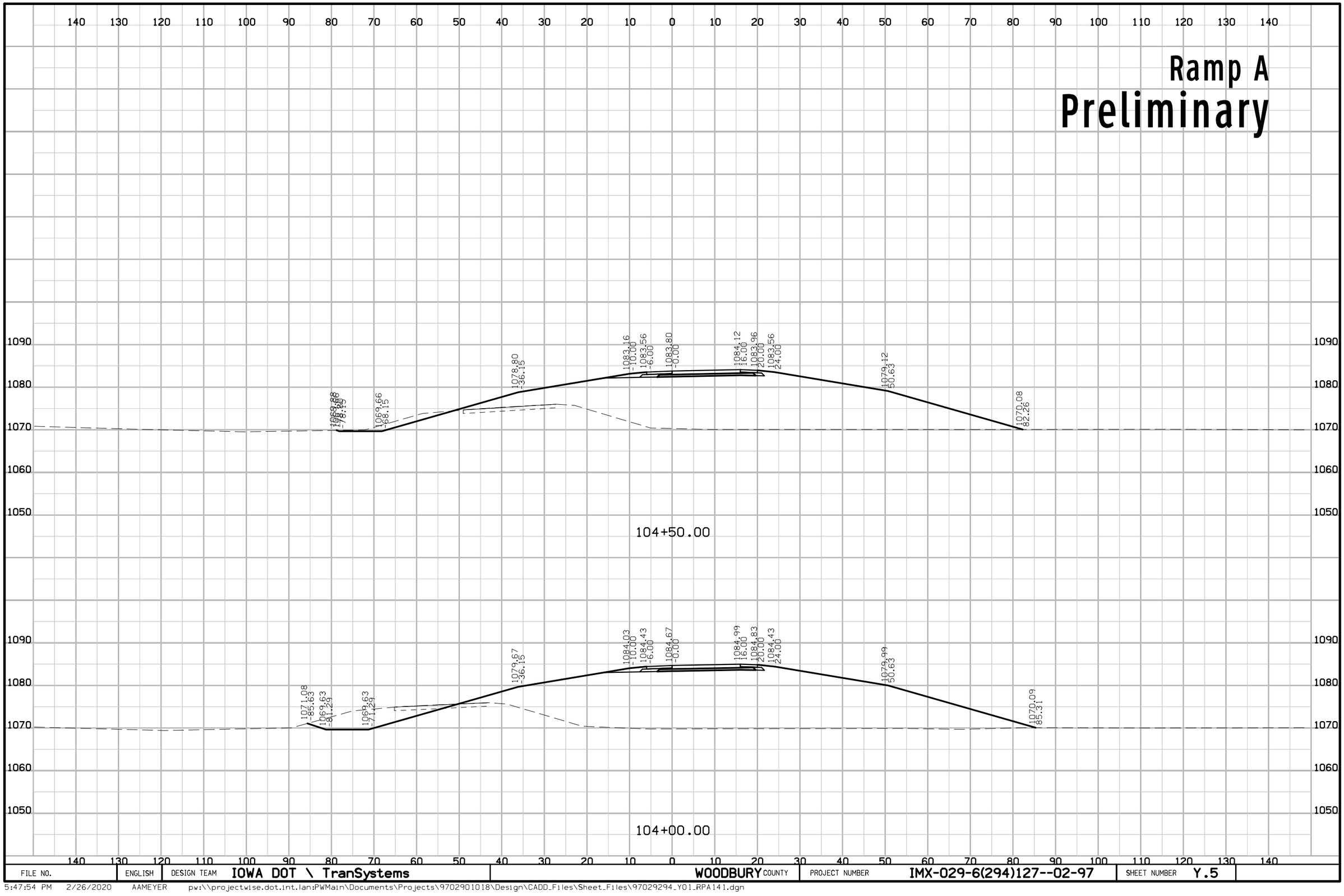
Ramp A
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.4

5:47:53 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y01_RPA141.dgn

Ramp A
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.5

5:47:54 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y01_RPA141.dgn

Ramp A
Preliminary

105+50.00

105+00.00

Existing ROW

1069.58
-61.17

1076.77
-35.99

1081.11
-10.00

1081.51
-6.00

1081.77
-0.00

1082.49
16.00

1082.34
20.00

1081.94
24.00

1077.49
50.74

1070.26
76.02

Existing ROW

1069.68
-72.25

1069.68
-64.62

1077.81
-36.15

1082.17
-10.00

1082.57
-6.00

1082.81
0.00

1083.30
16.00

1083.14
20.00

1082.74
24.00

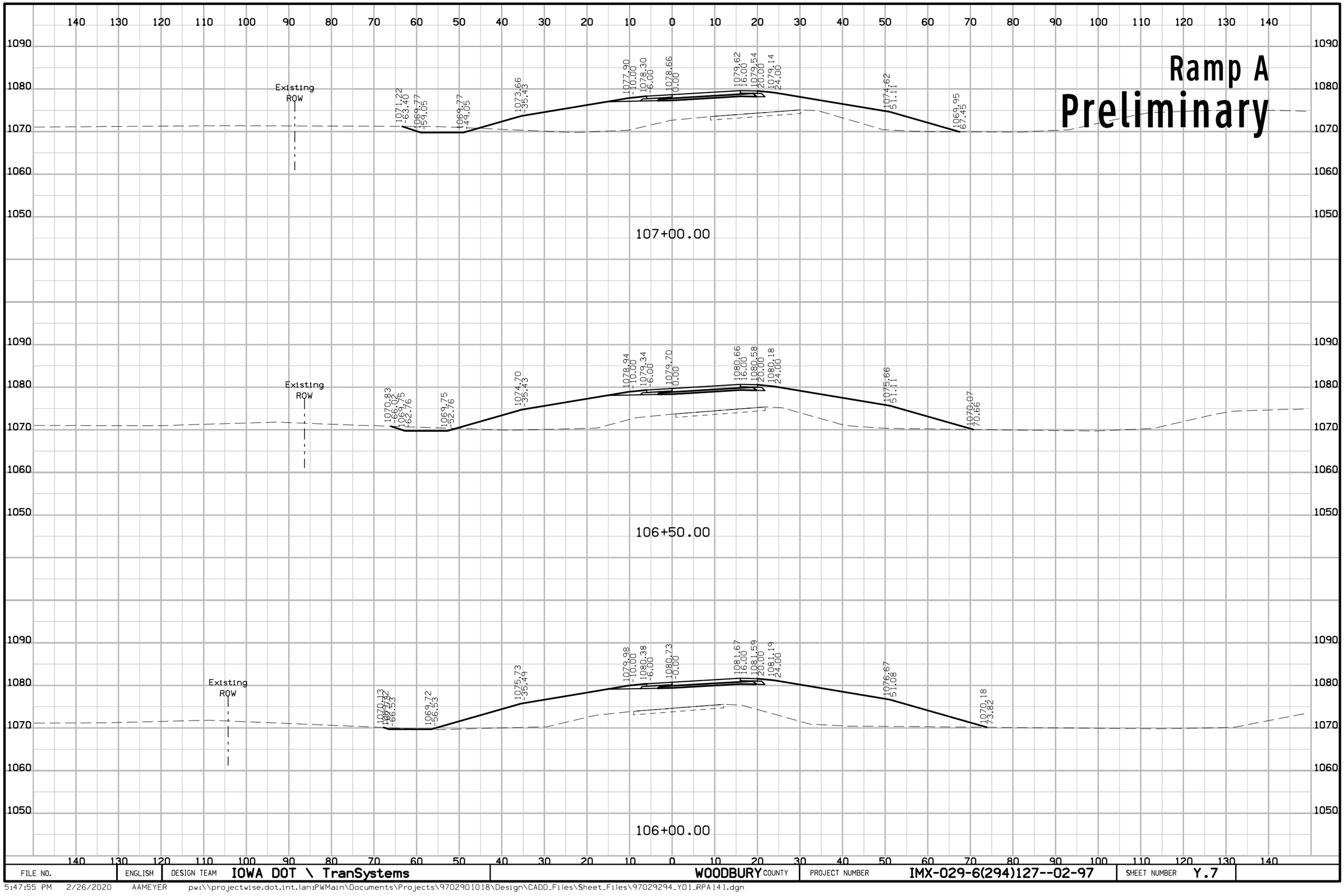
1078.30
50.63

1070.07
79.45

FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.6

5:47:54 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y01_RPA141.dgn

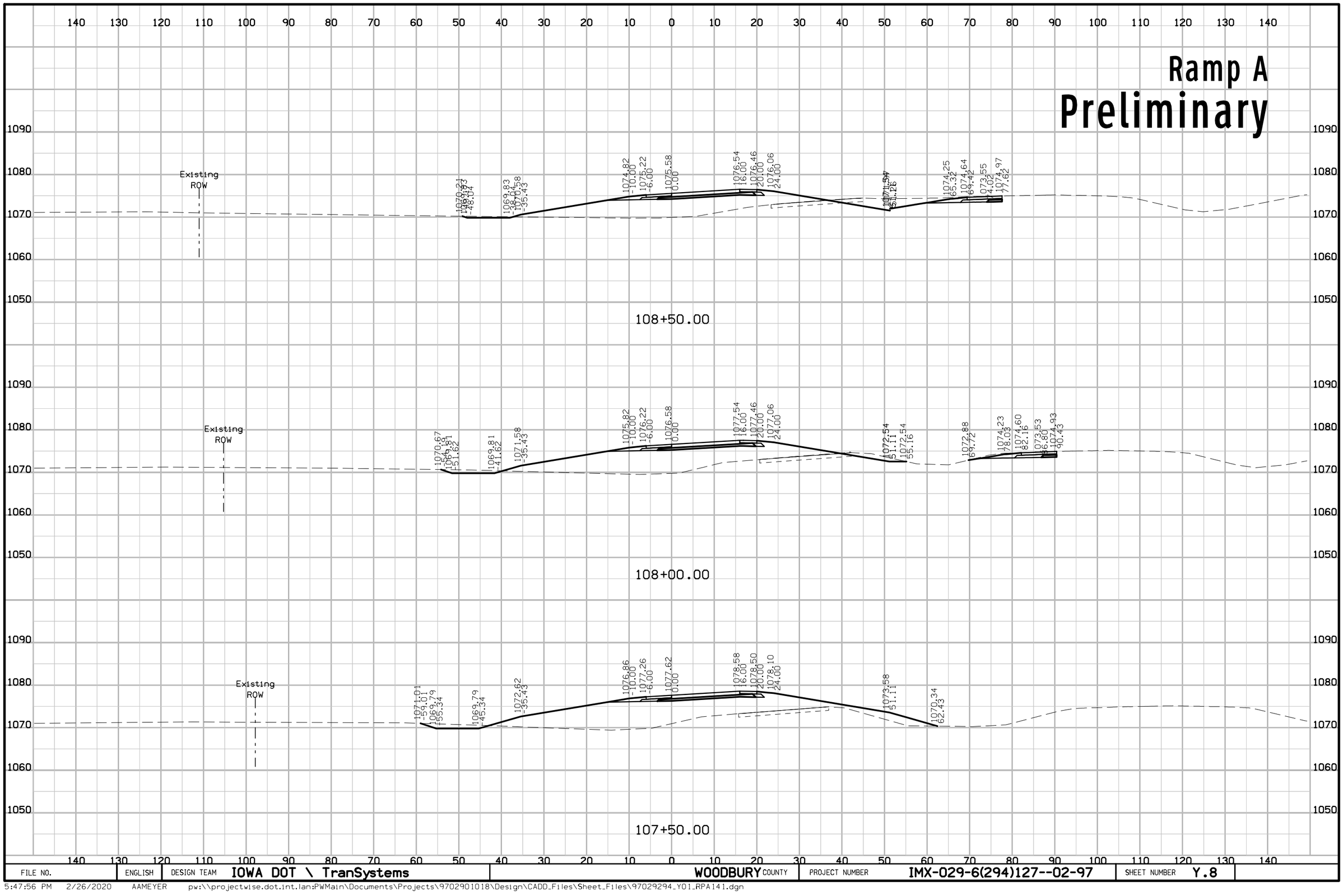
Ramp A
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.7

5:47:55 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y01_RPA141.dgn

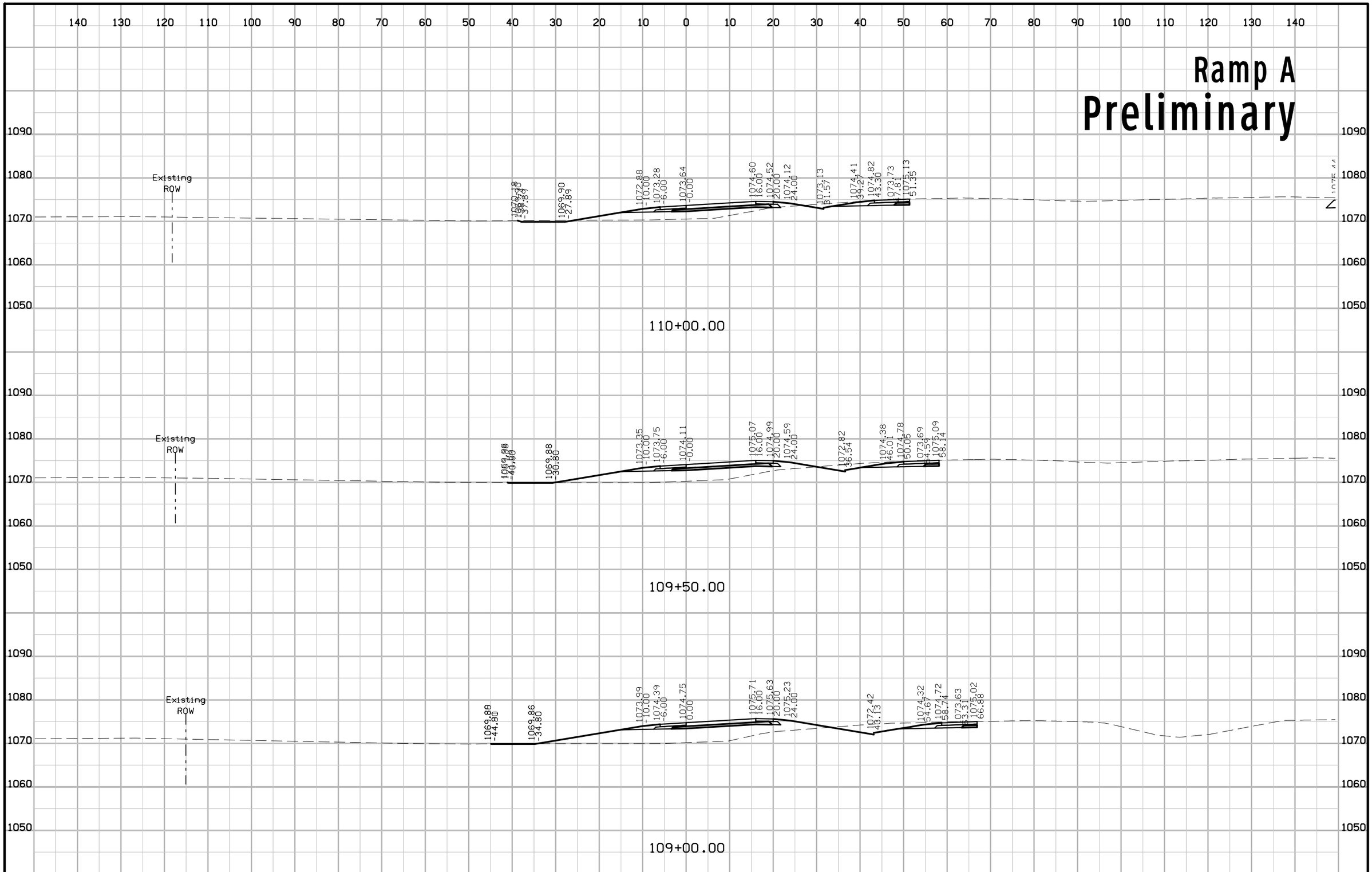
Ramp A
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.8

5:47:56 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y01_RPA141.dgn

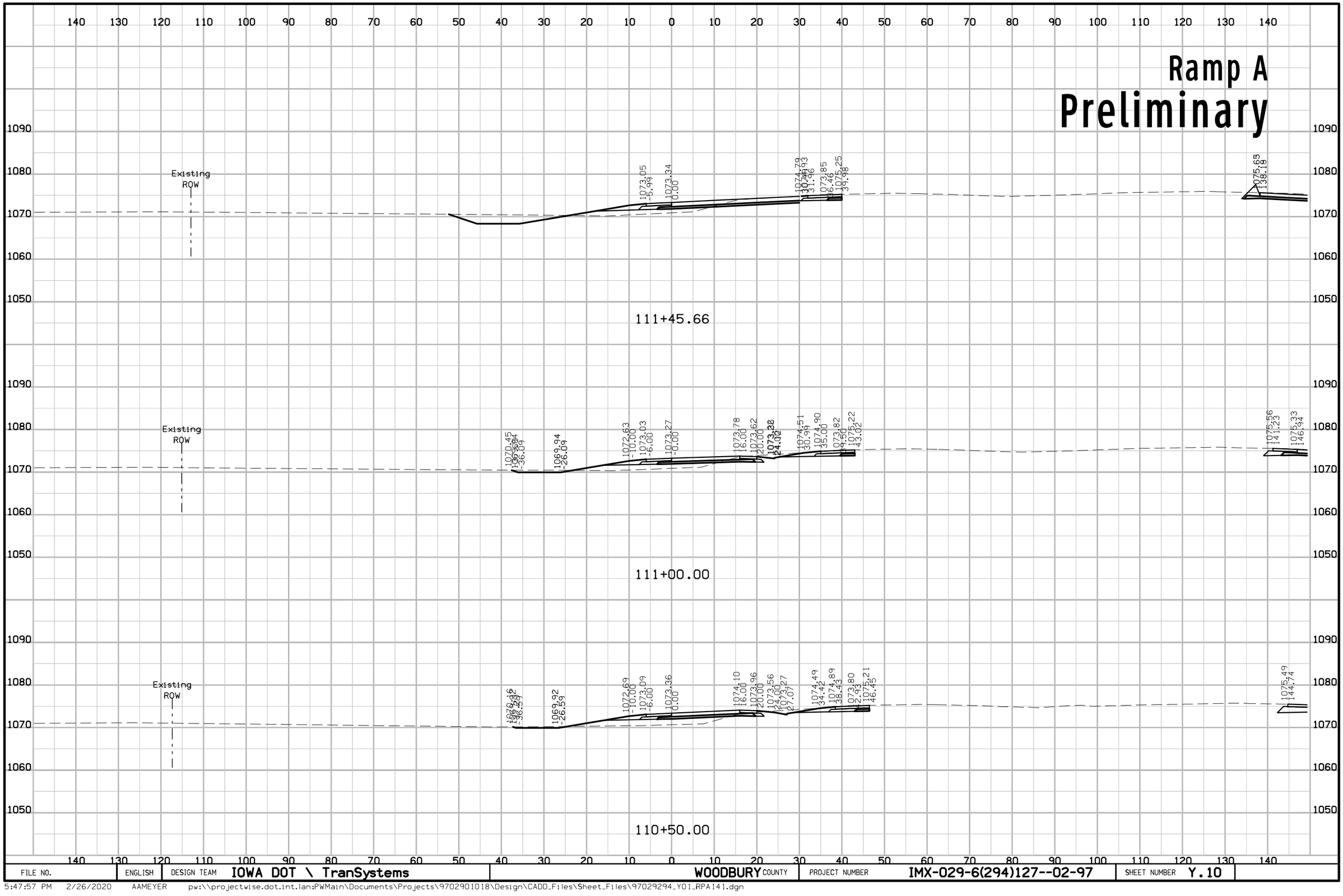
Ramp A
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.9

5:47:56 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y01_RPA141.dgn

Ramp A
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER Y.10

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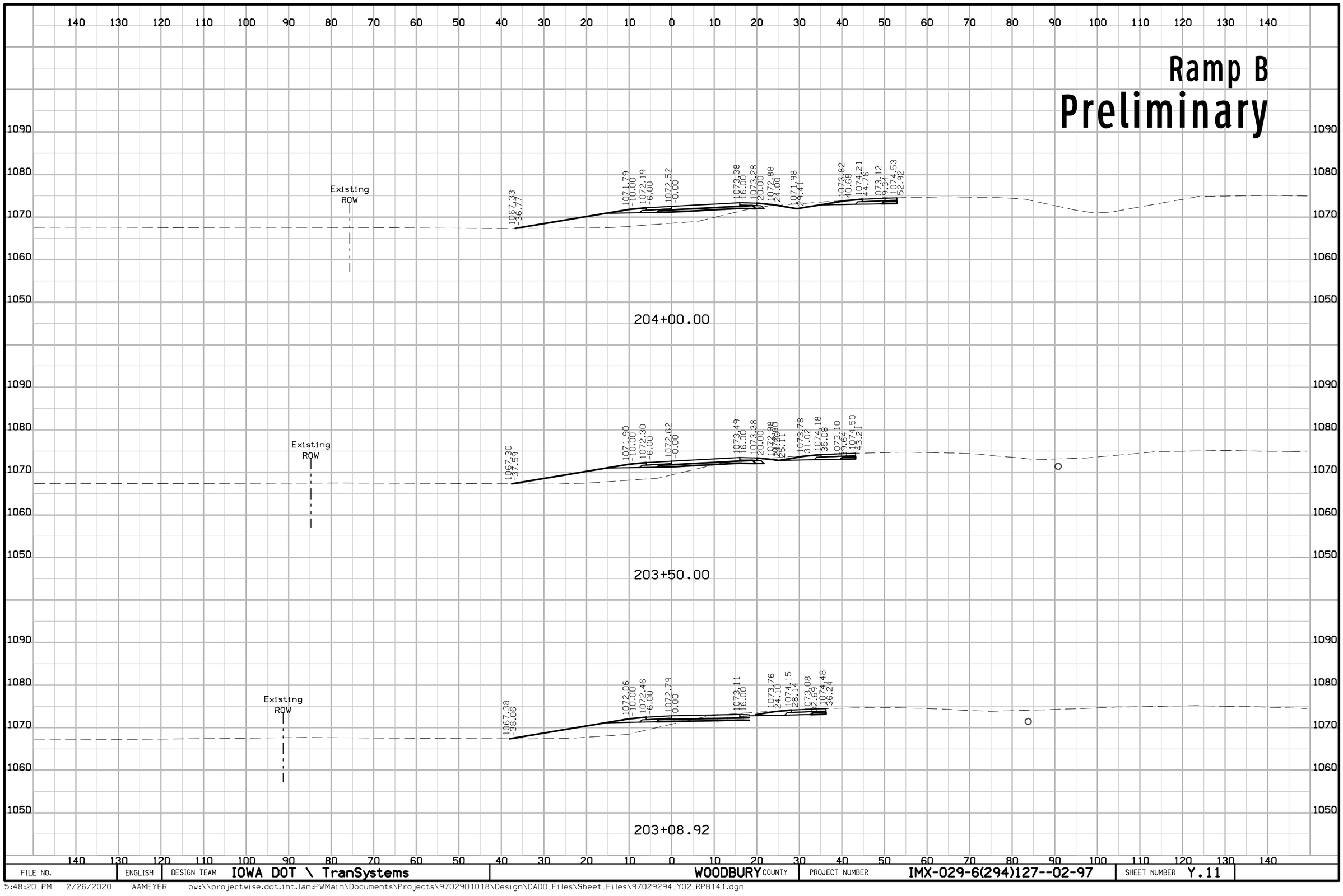
Ramp B
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER Y.11

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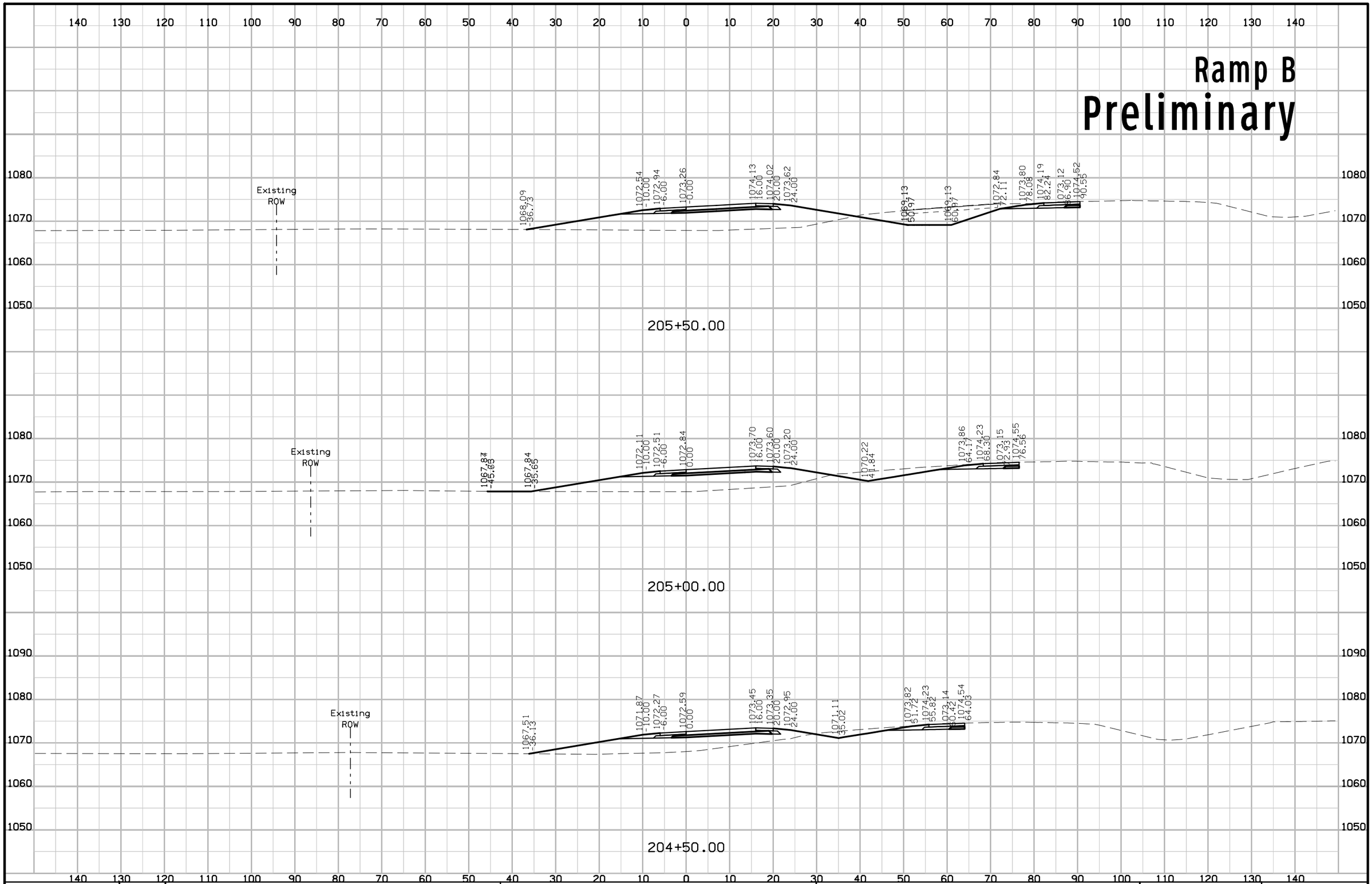
Ramp B
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.12

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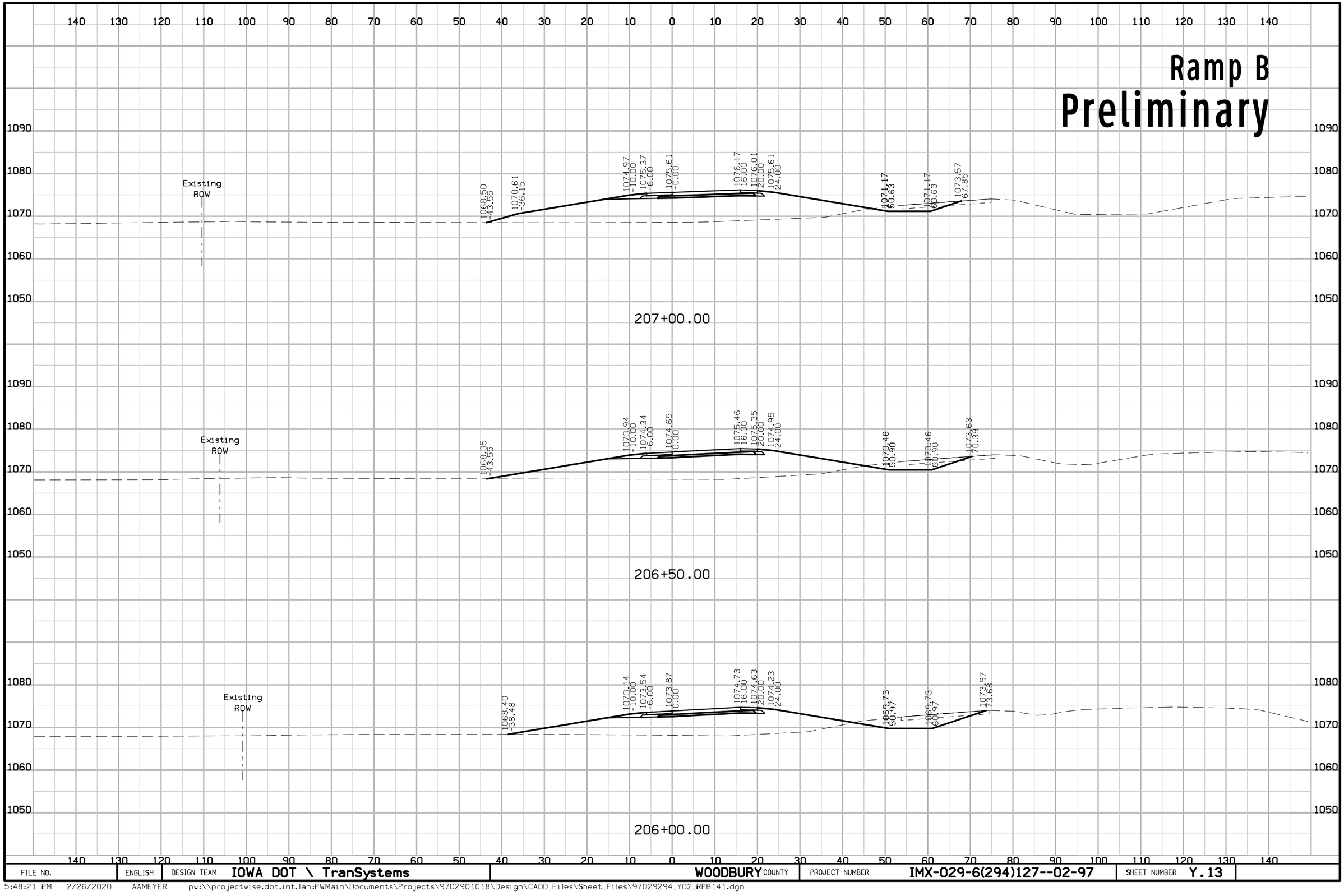
Ramp B
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.13

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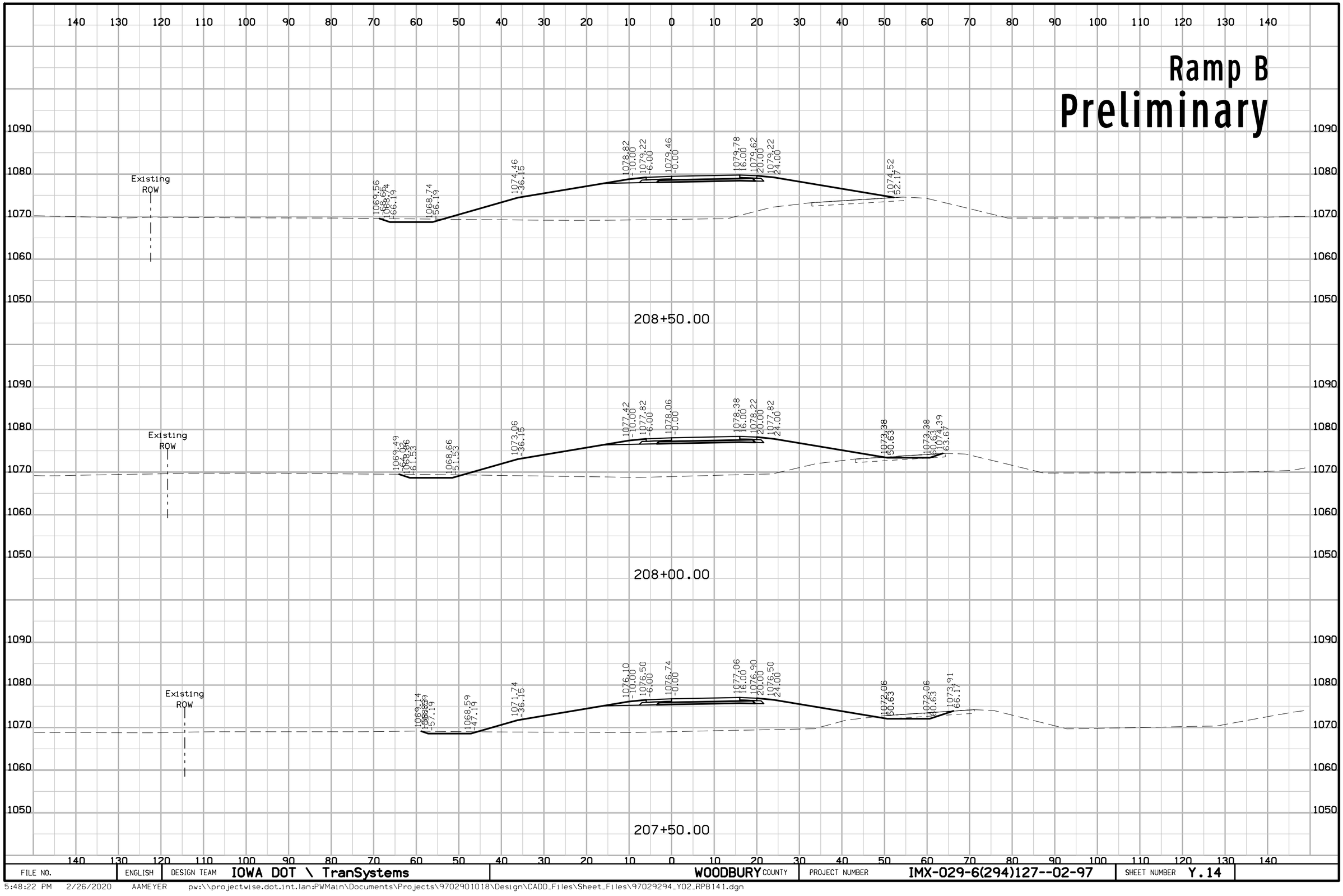
Ramp B
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER Y.14

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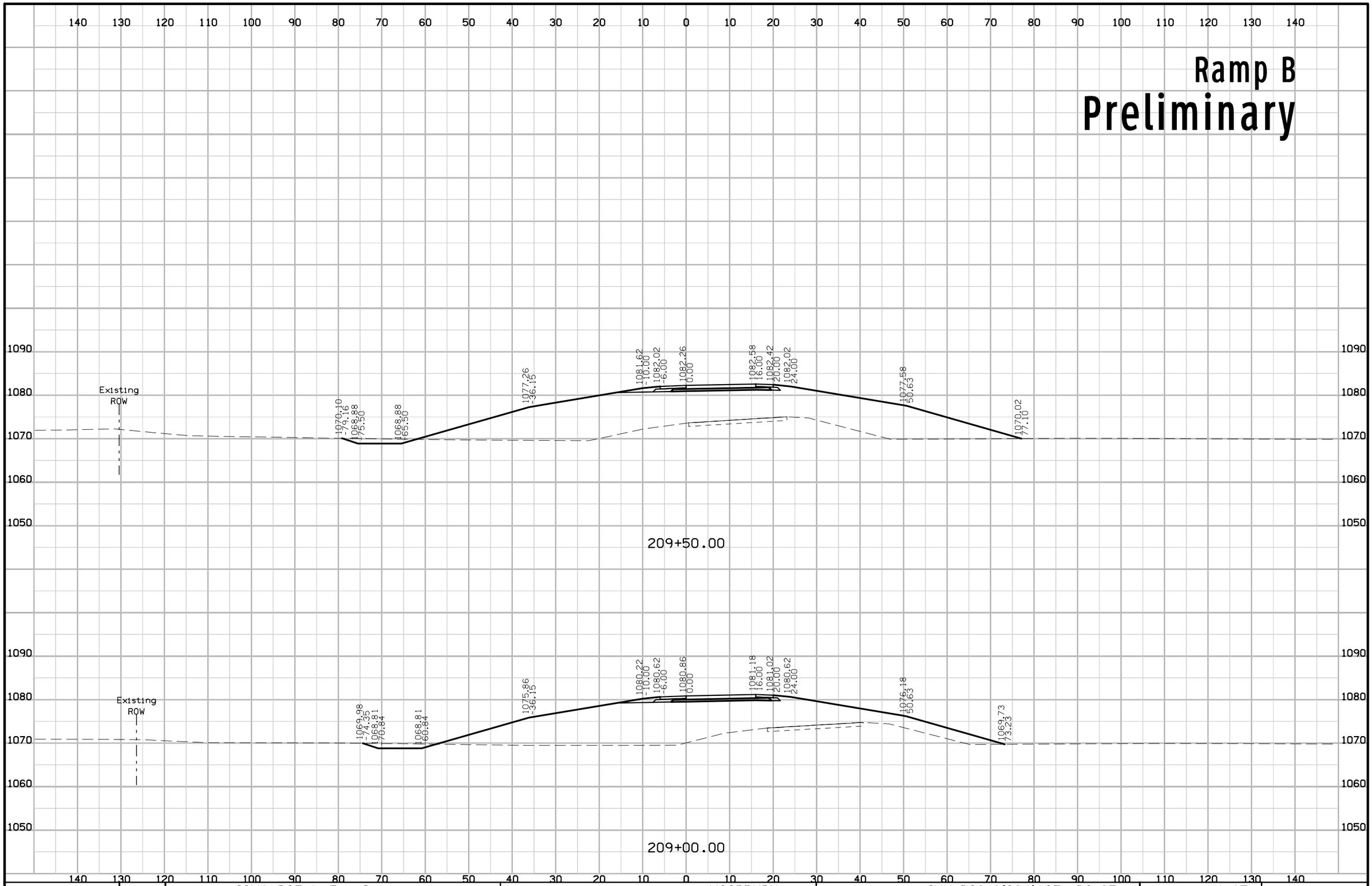
Ramp B
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.15

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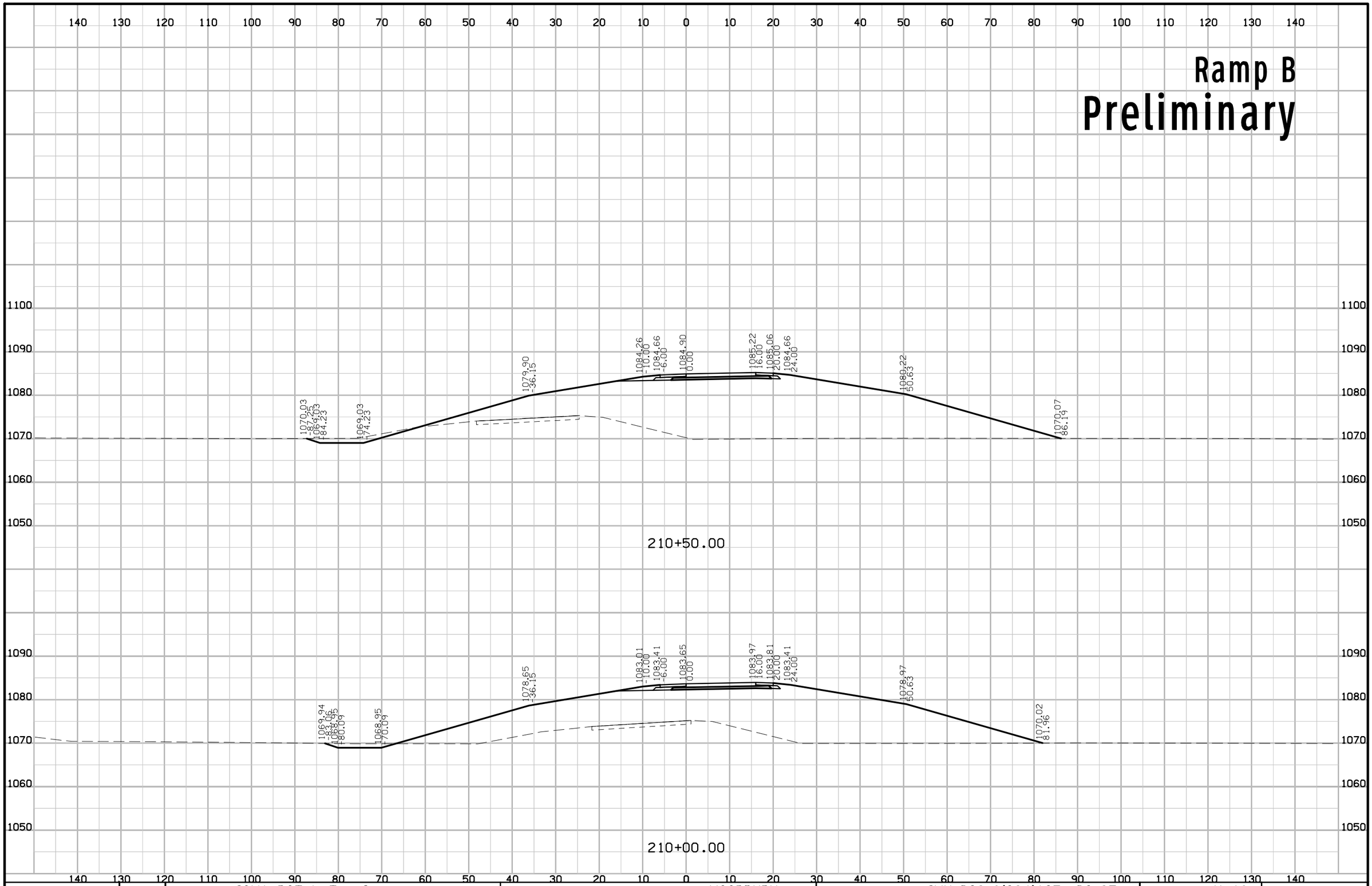
Ramp B
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.16

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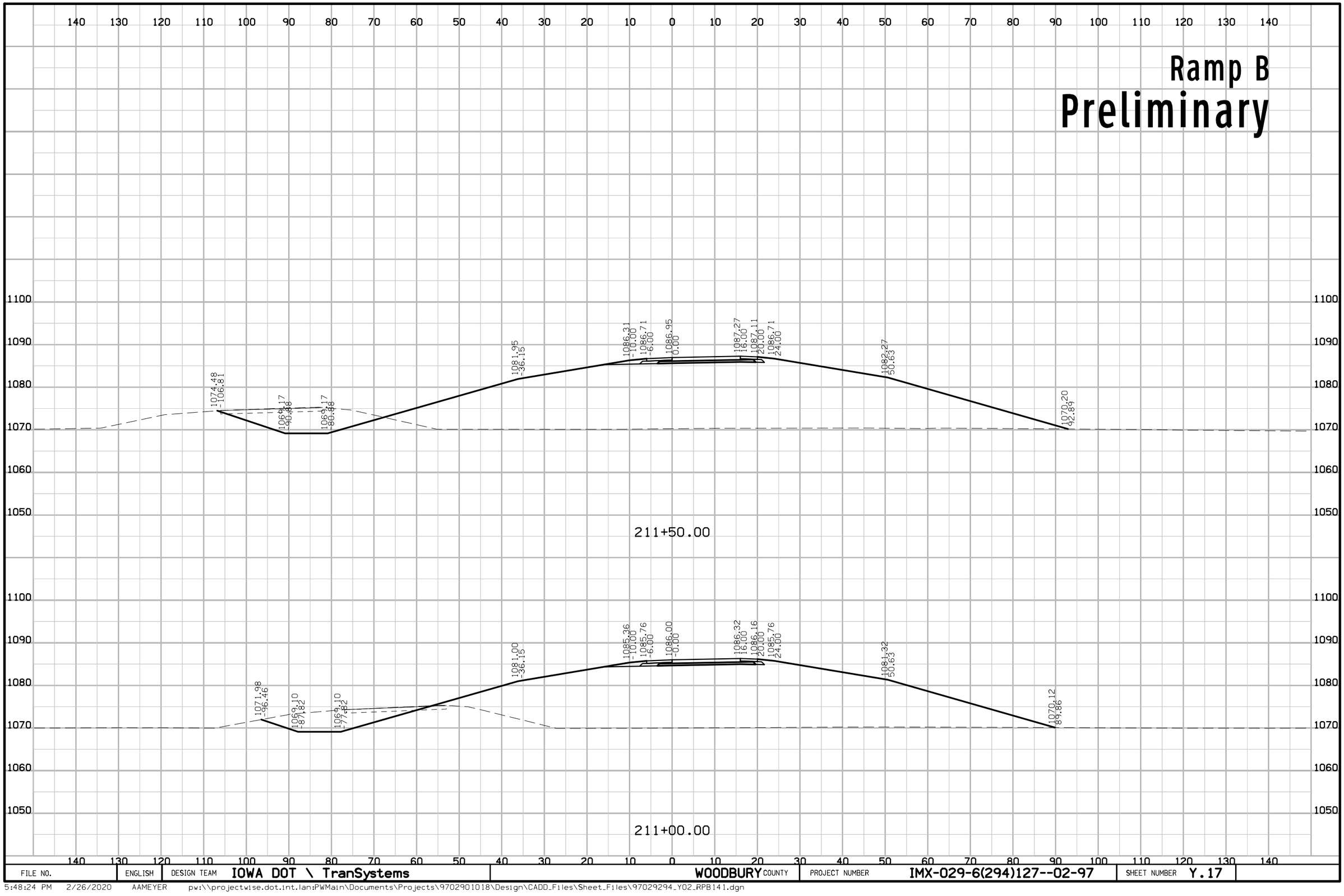
Ramp B
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.17

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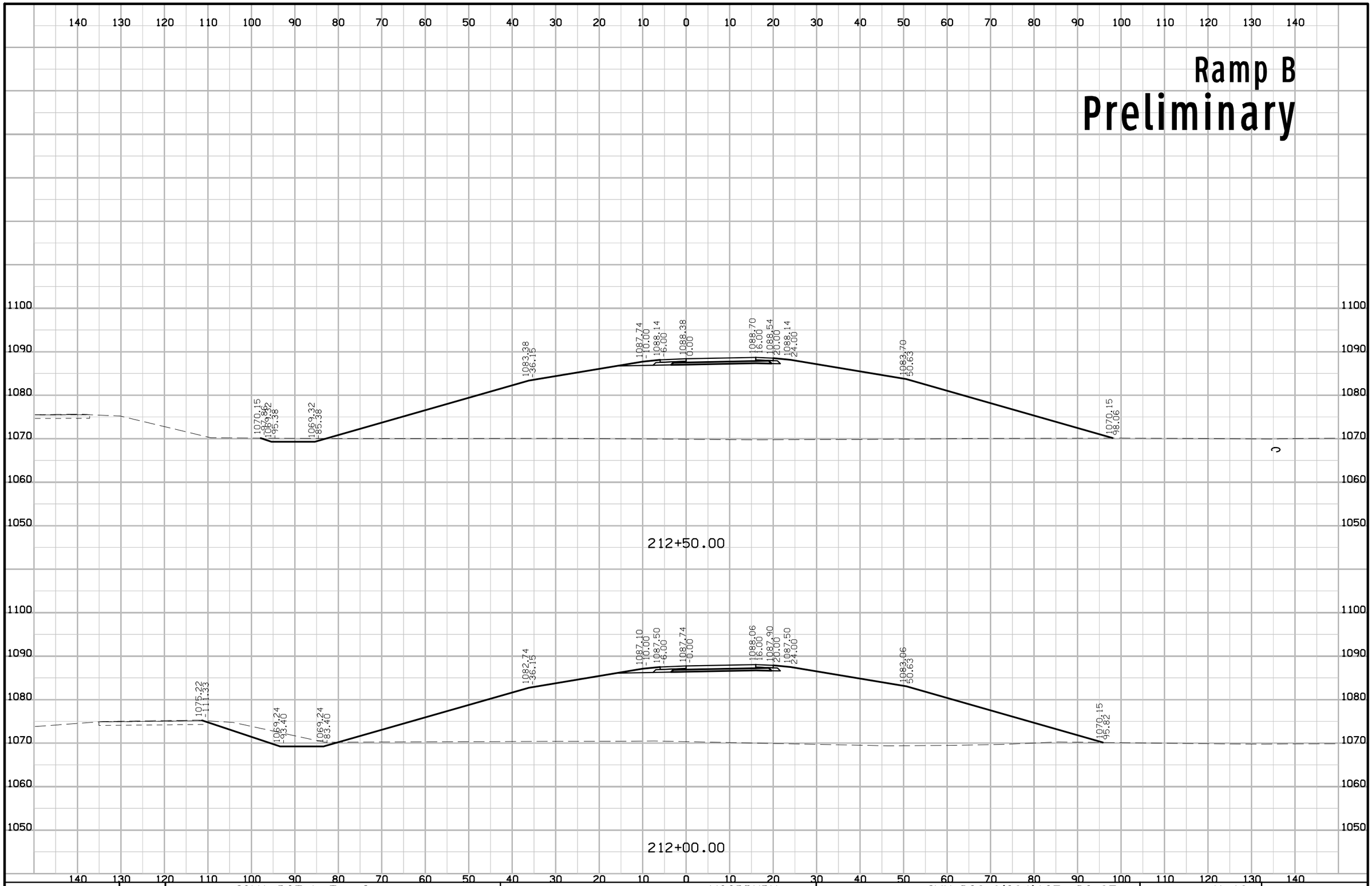
Ramp B
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.18

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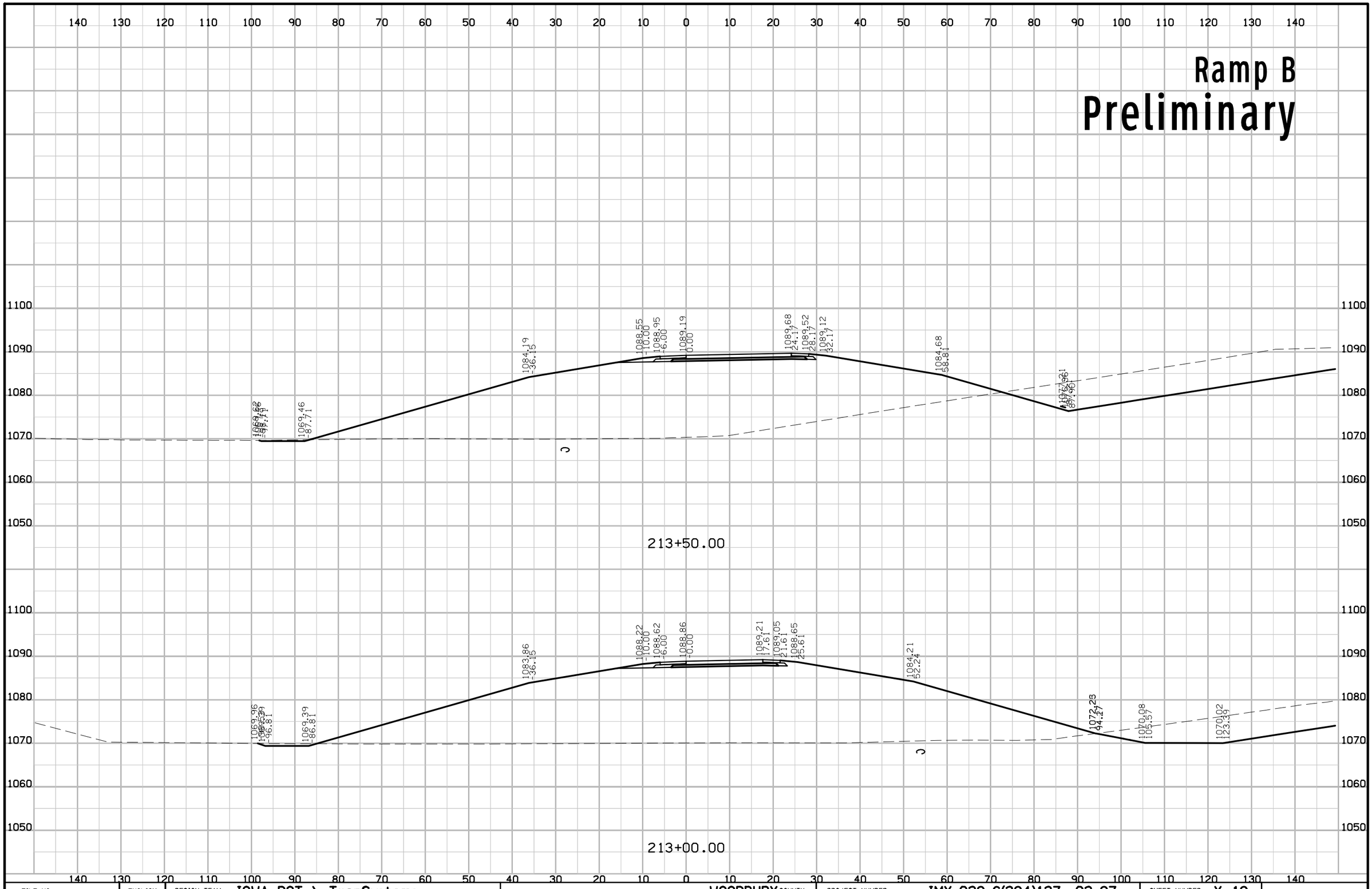
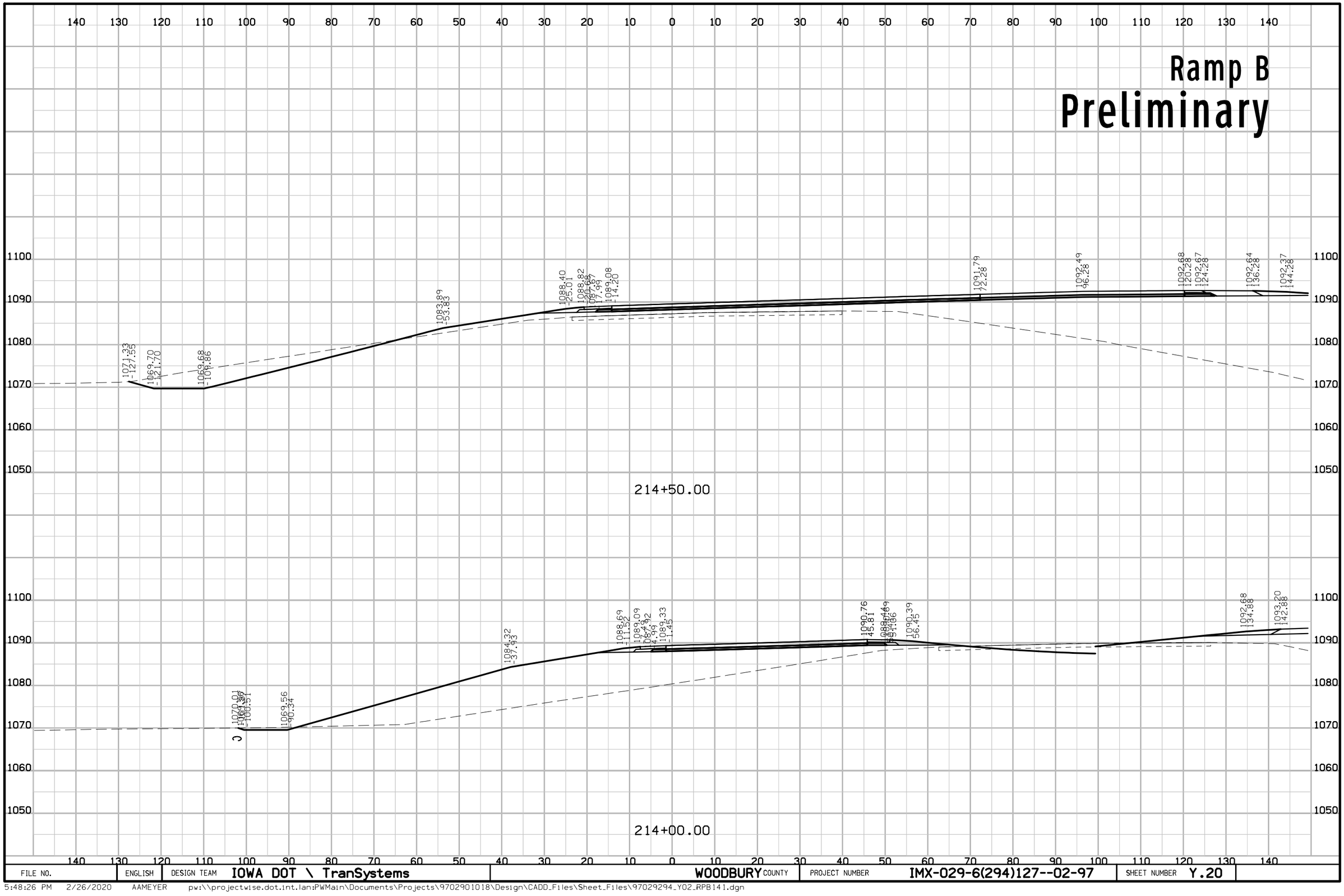
Ramp B
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.19

5:48:25 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y02_RPB141.dgn

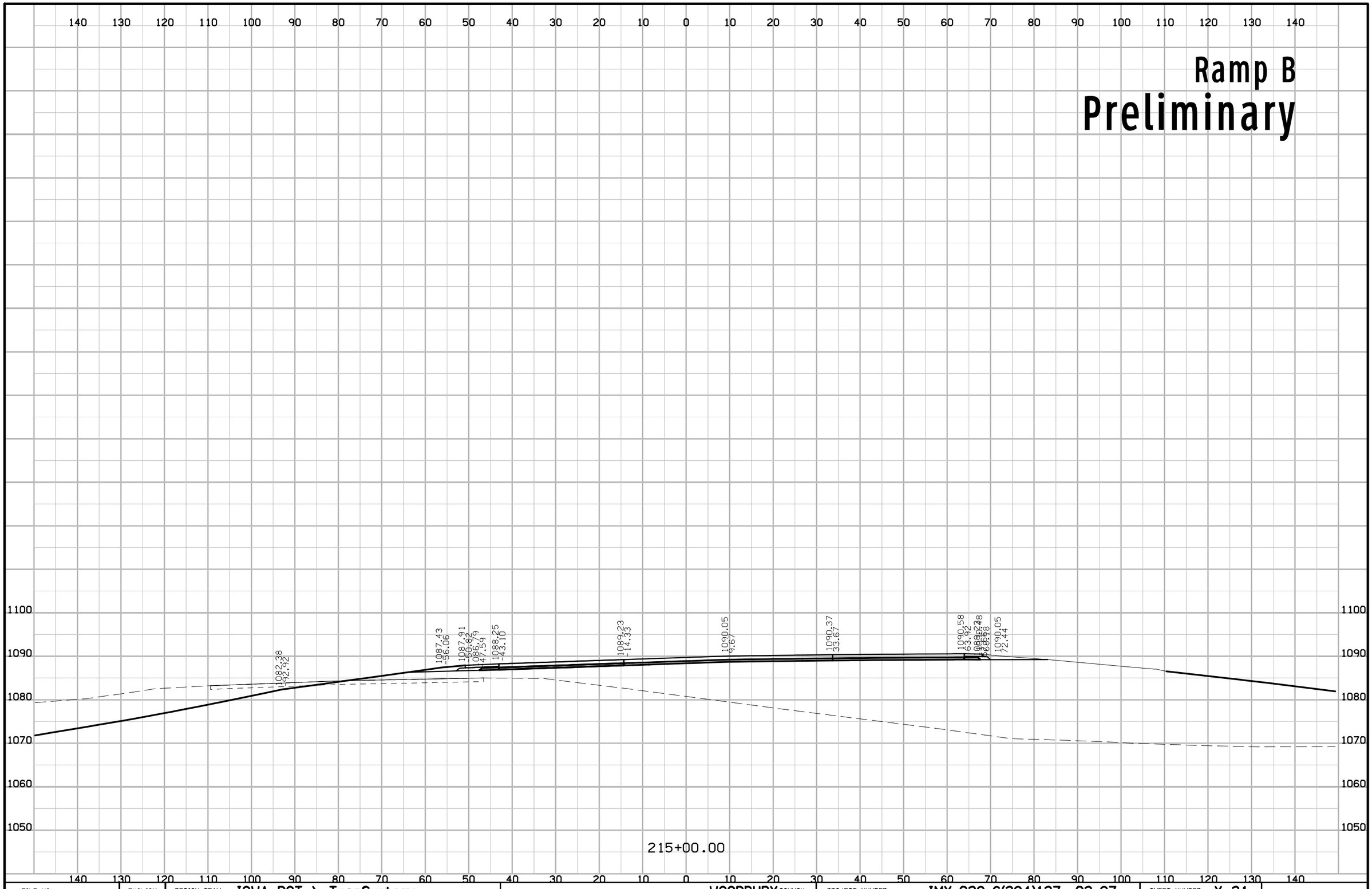
Ramp B
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.20

5:48:26 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y02_RPB141.dgn

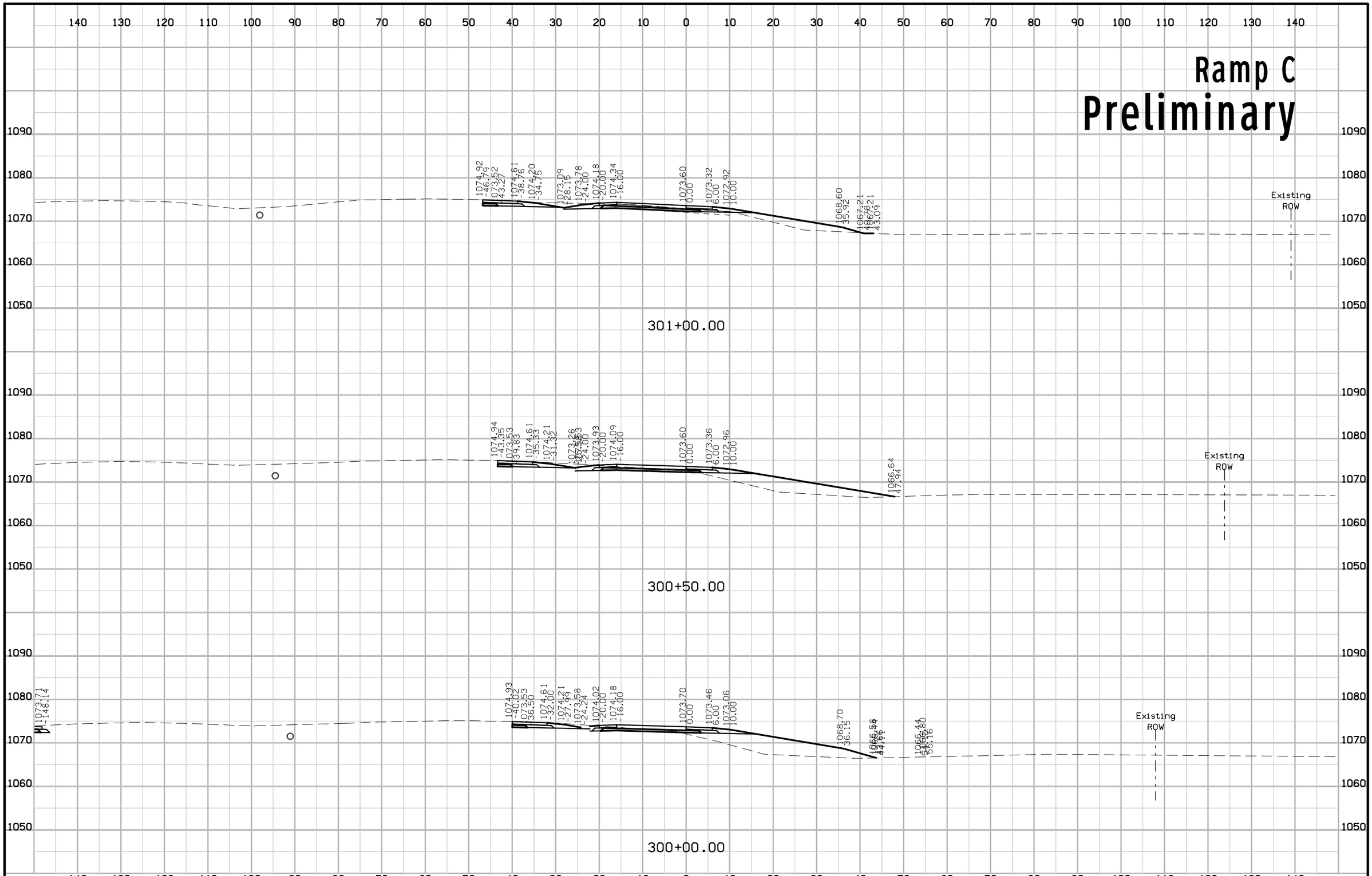
Ramp B
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.21

5:48:27 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y02_RPB141.dgn

Ramp C
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.22

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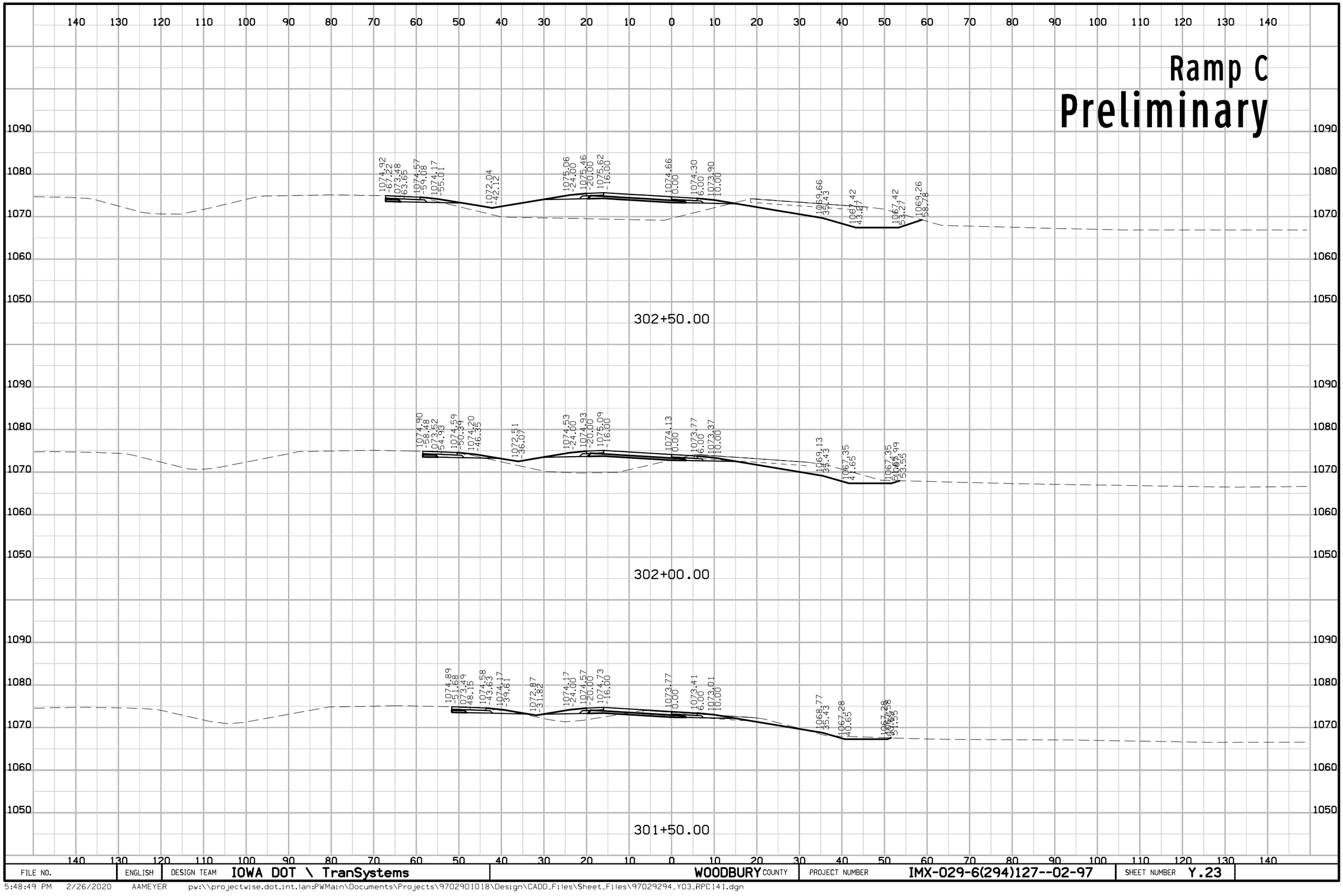
Ramp C

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.23

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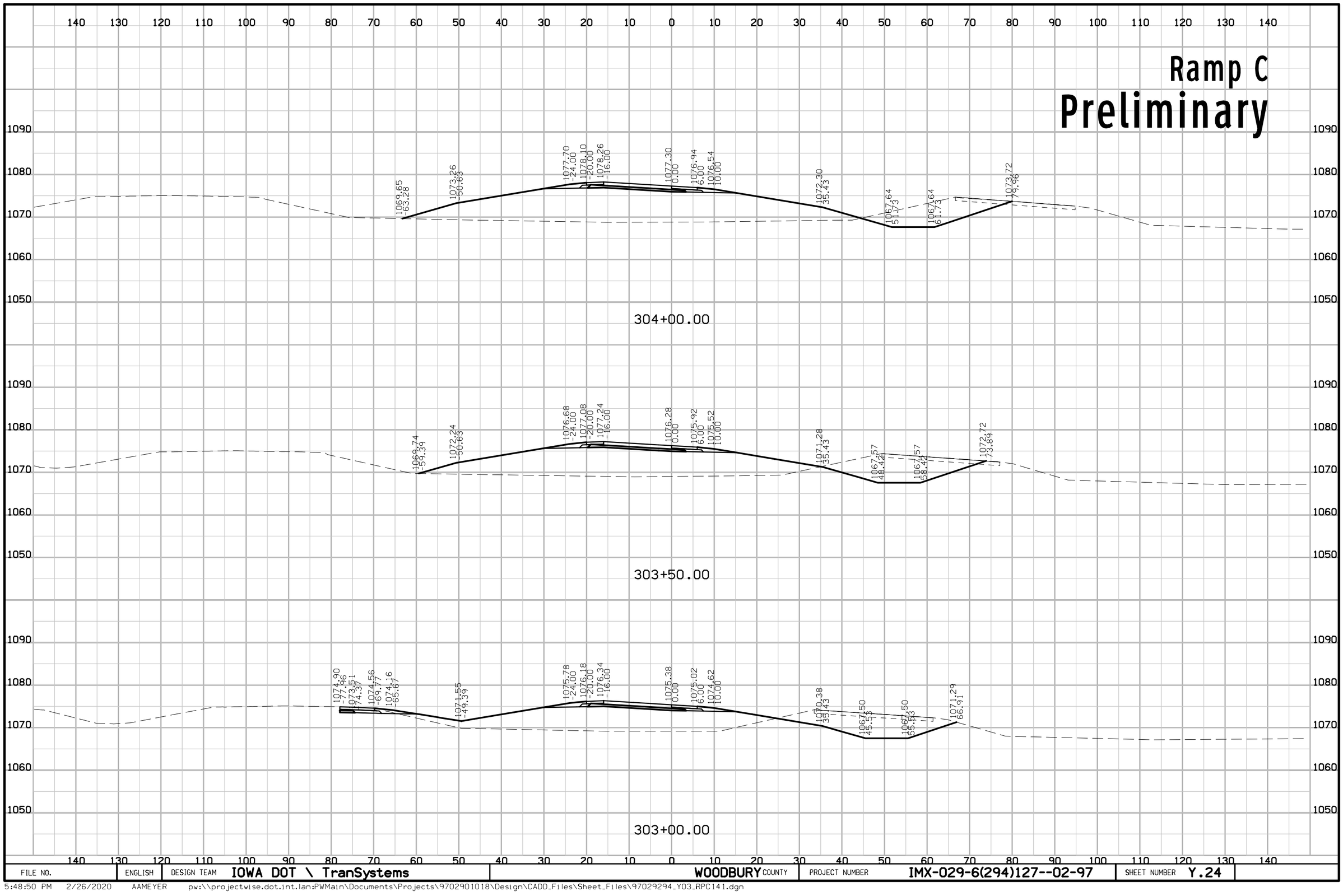
Ramp C
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER Y.24

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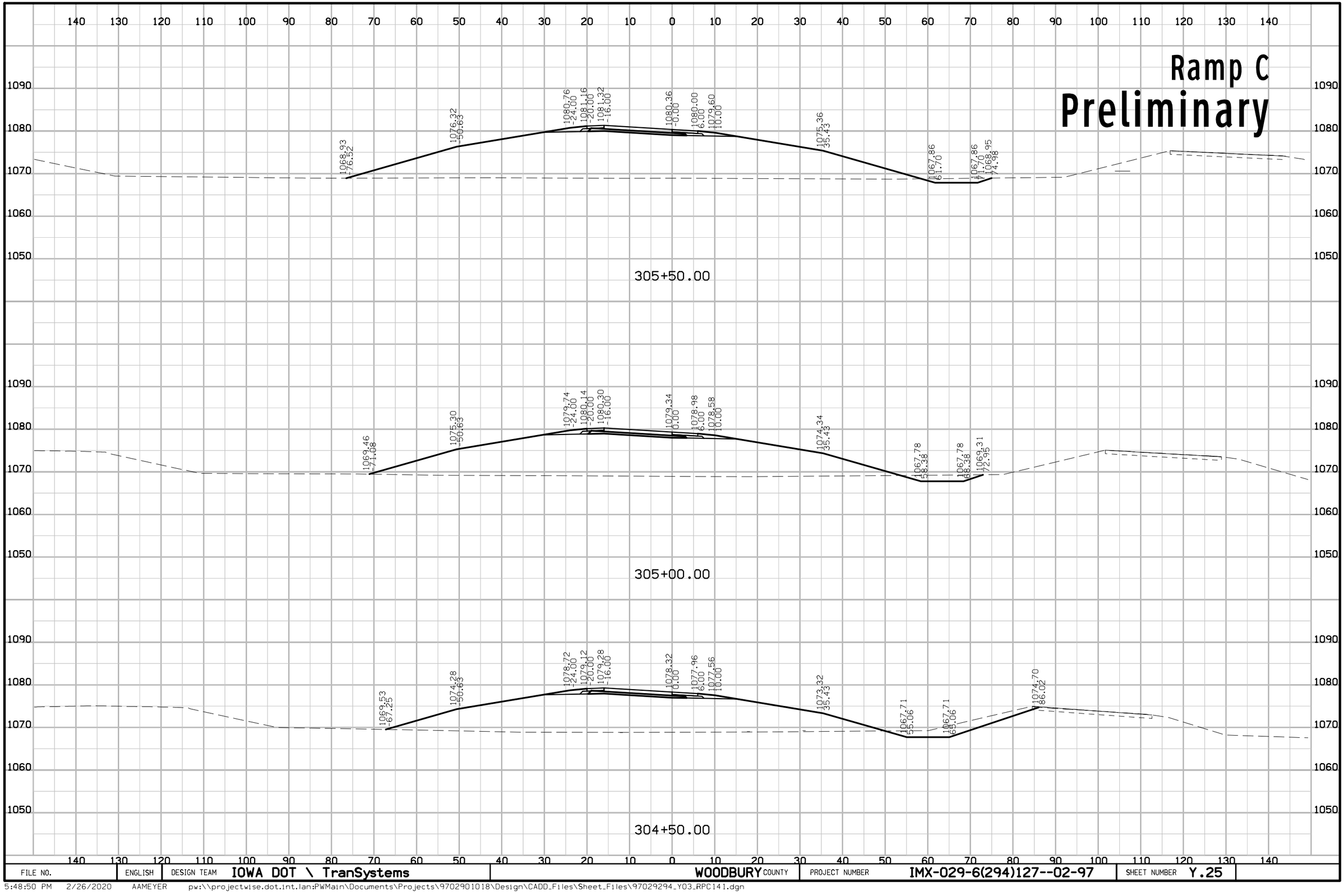
Ramp C
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.25

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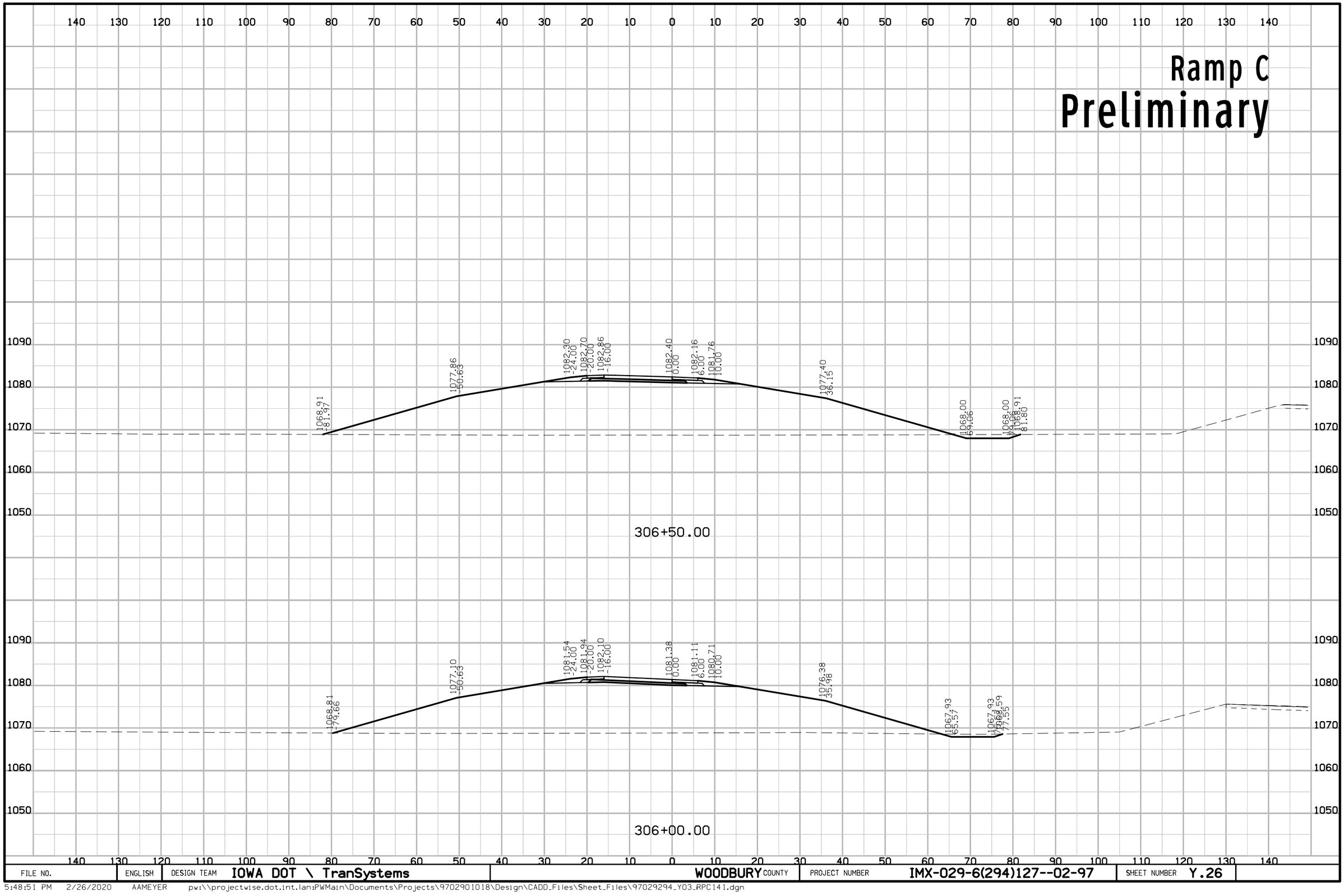
Ramp C

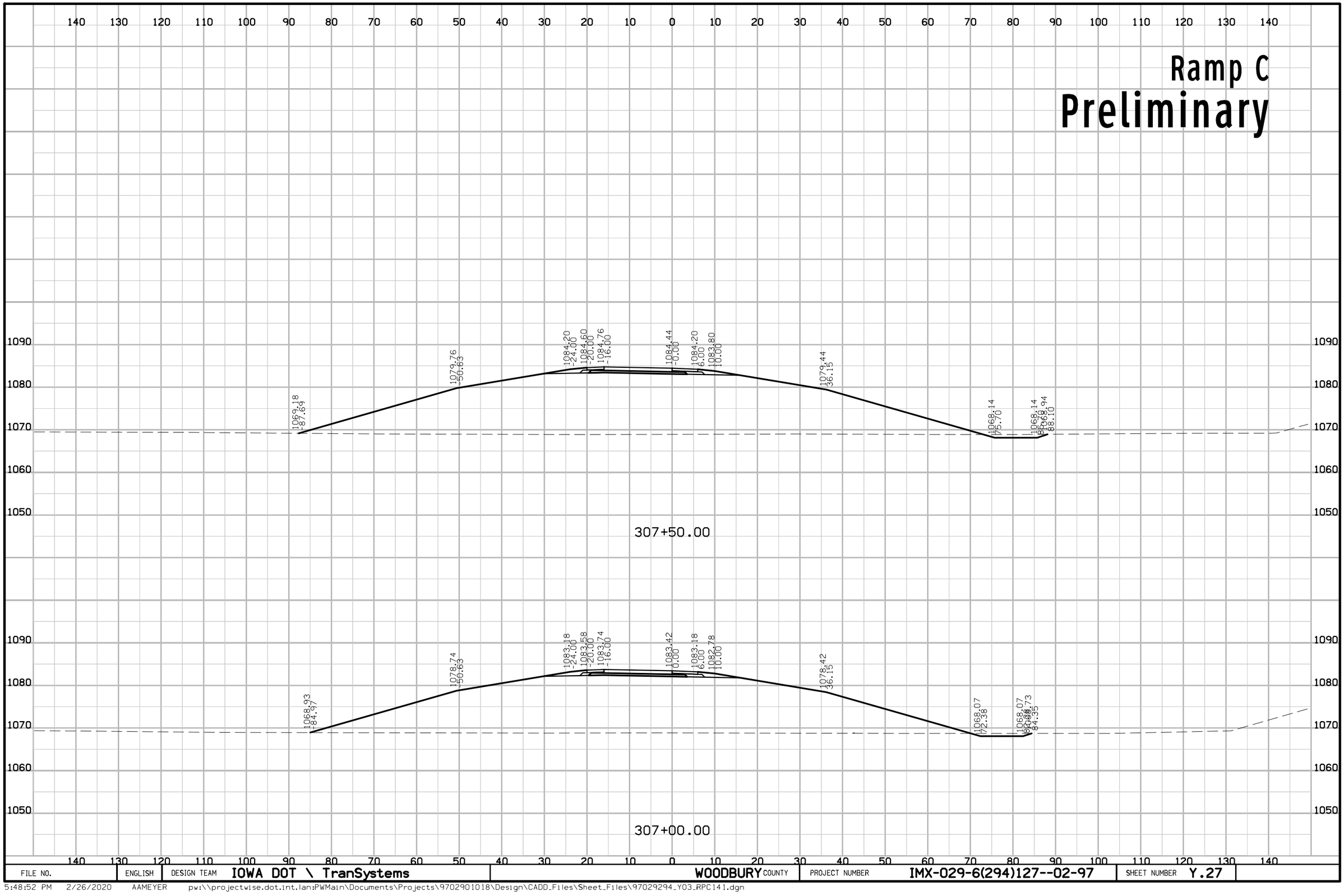
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.26

5:48:51 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y03_RPC141.dgn

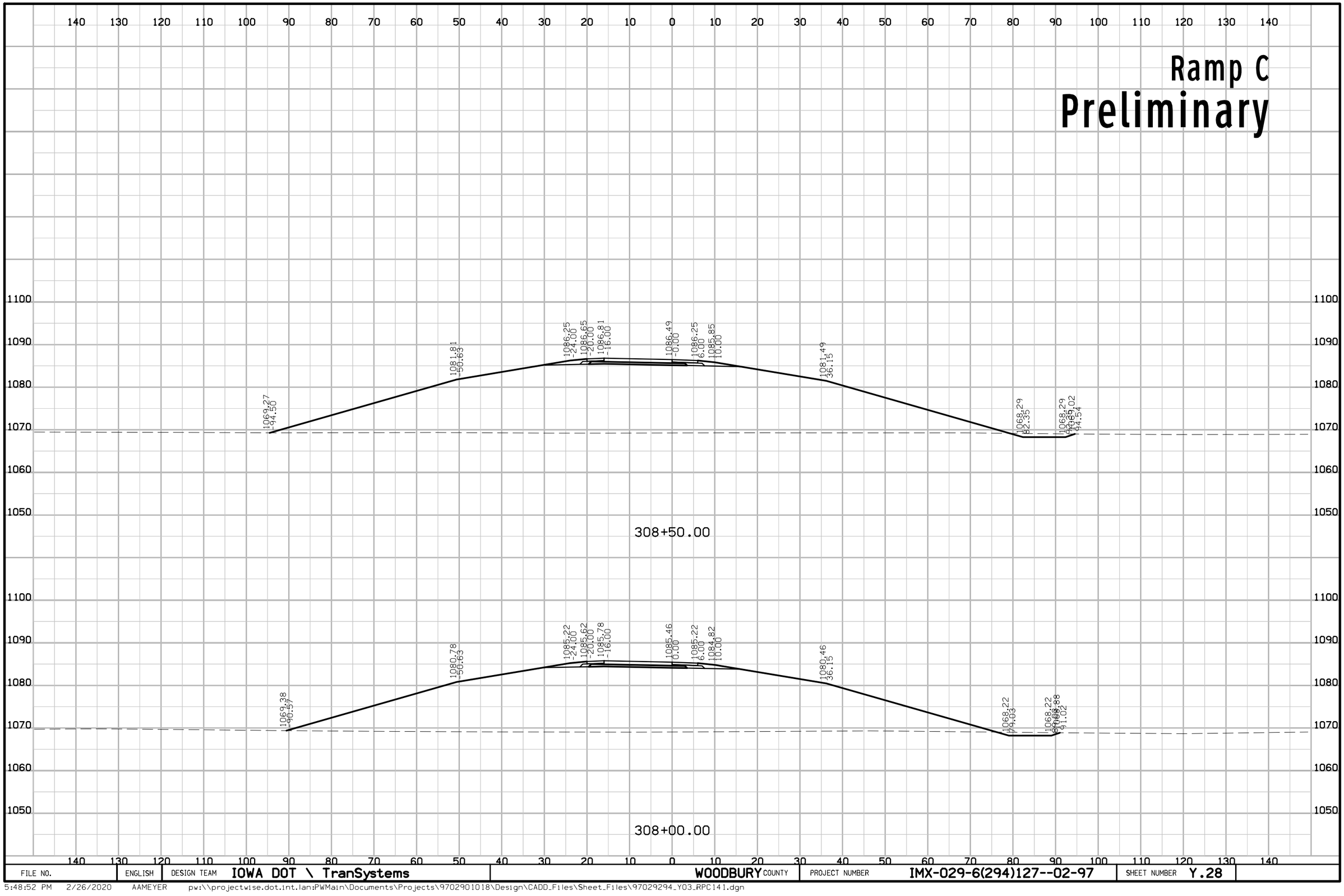
Ramp C
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.27

5:48:52 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y03_RPC141.dgn

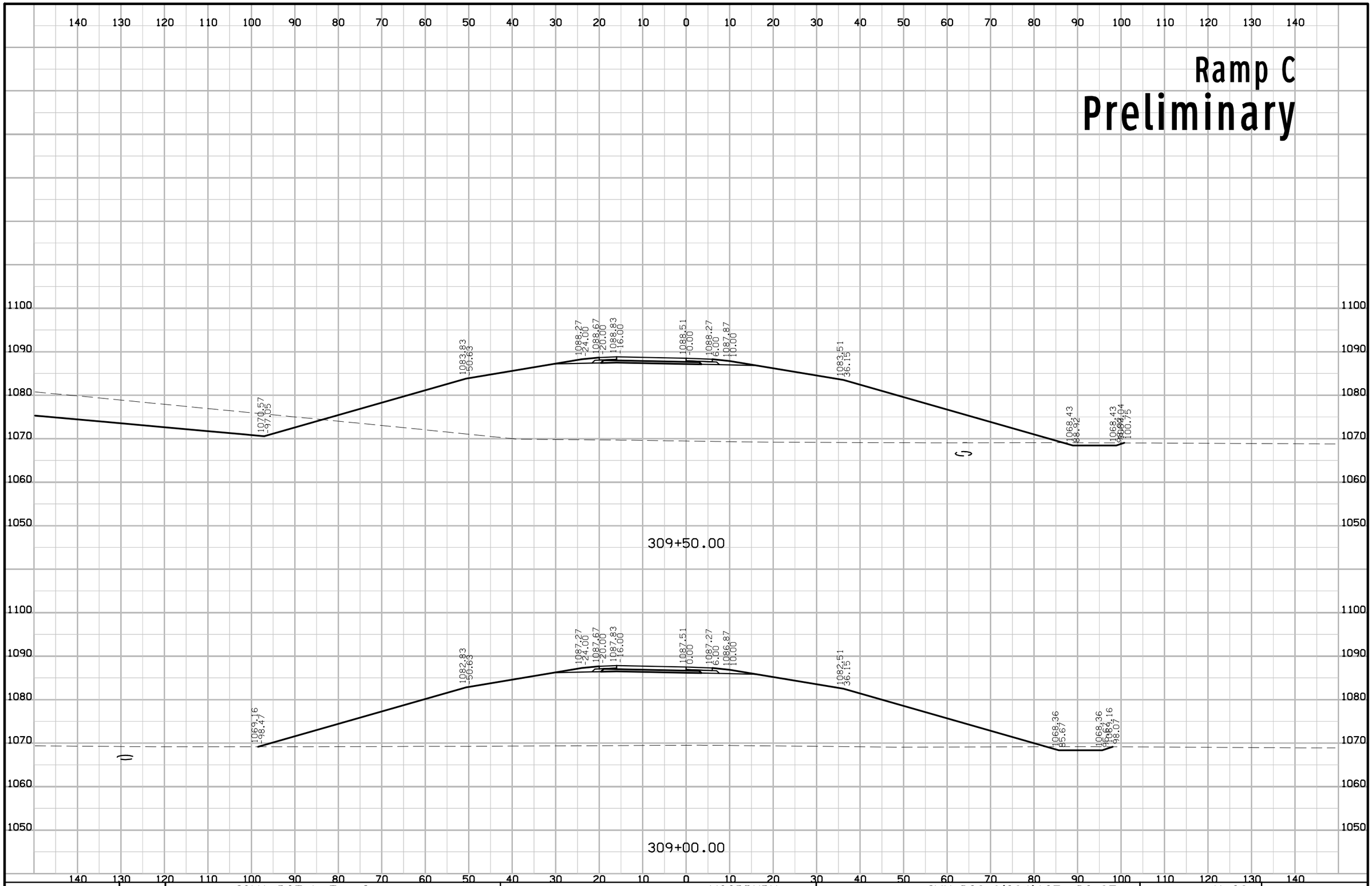
Ramp C
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.28

5:48:52 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y03_RPC141.dgn

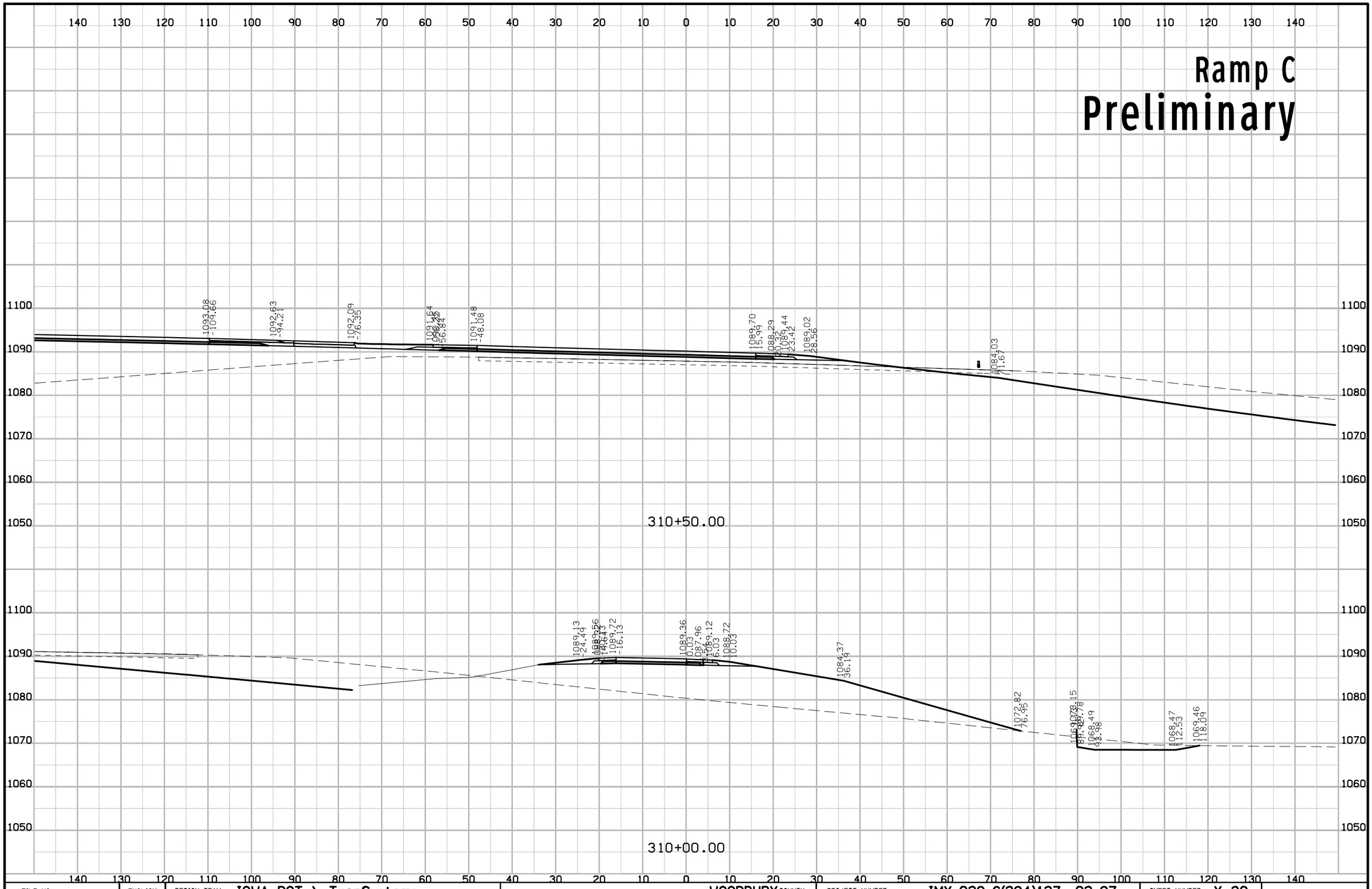
Ramp C
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.29

5:48:53 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y03_RPC141.dgn

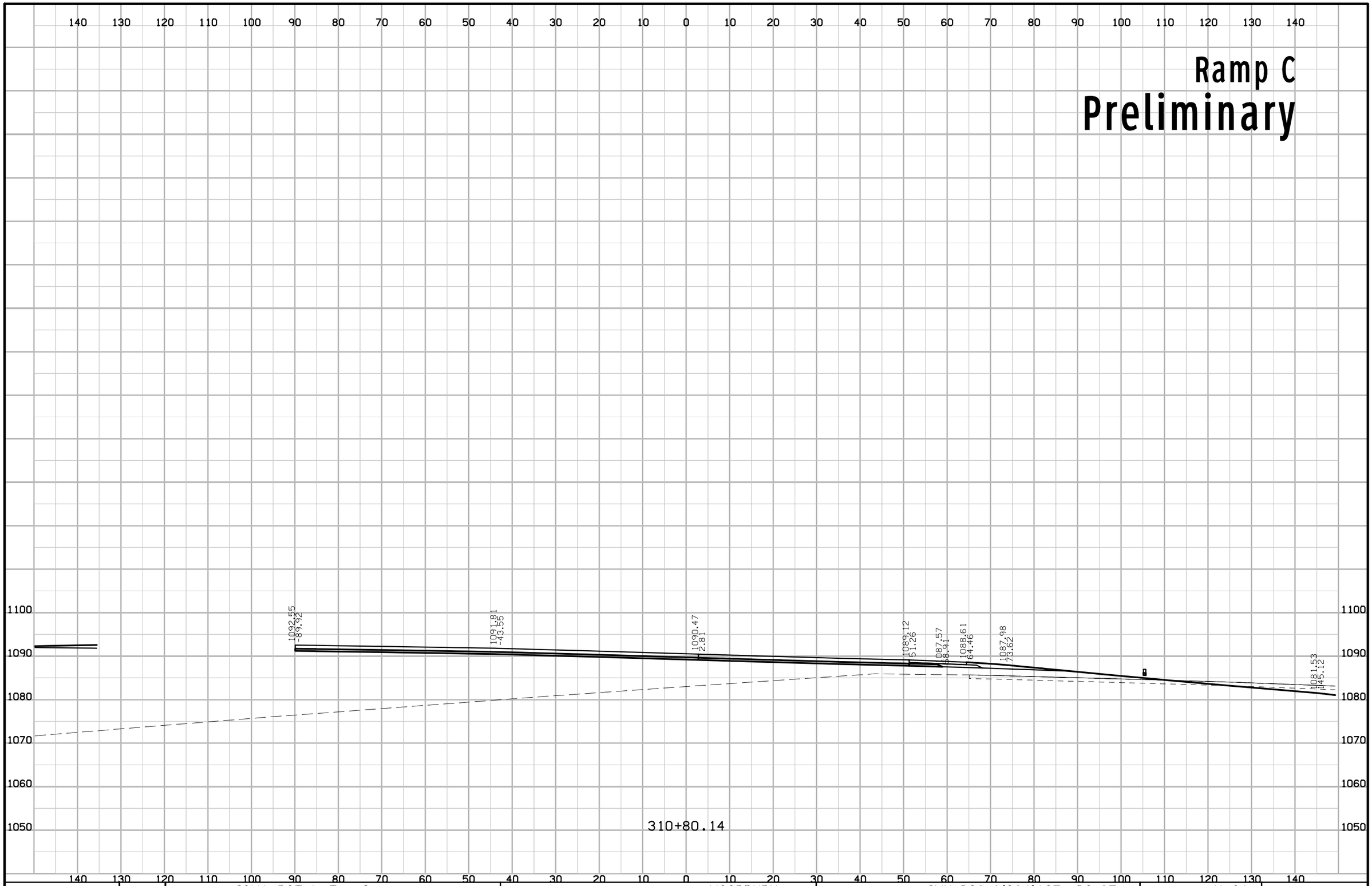
Ramp C
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.30

5:48:54 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y03_RPC141.dgn

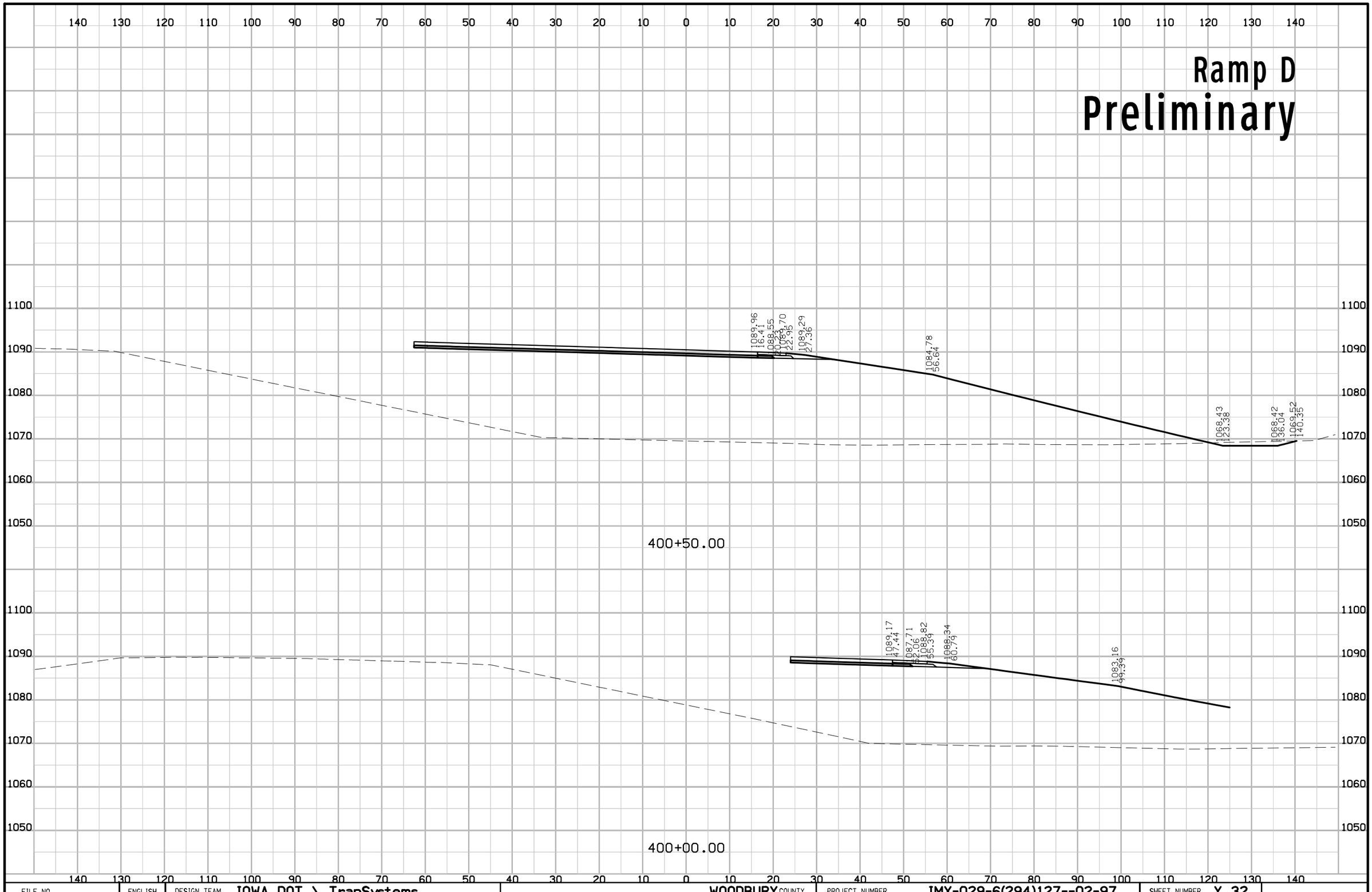
Ramp C
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.31

5:48:54 PM 2/26/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y03_RPC141.dgn

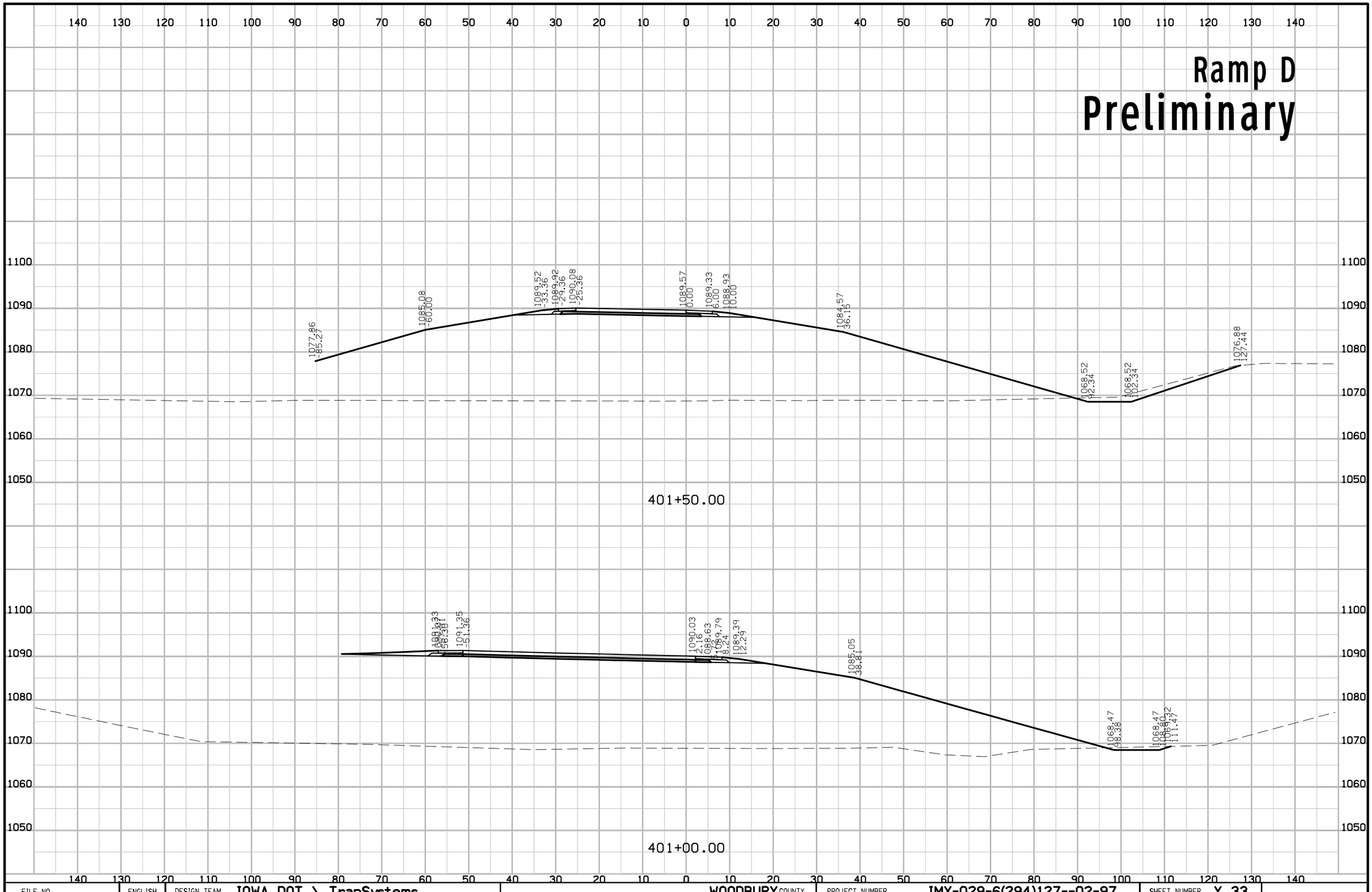
Ramp D
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.32

8:41:03 AM 2/27/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y04_RPD141.dgn

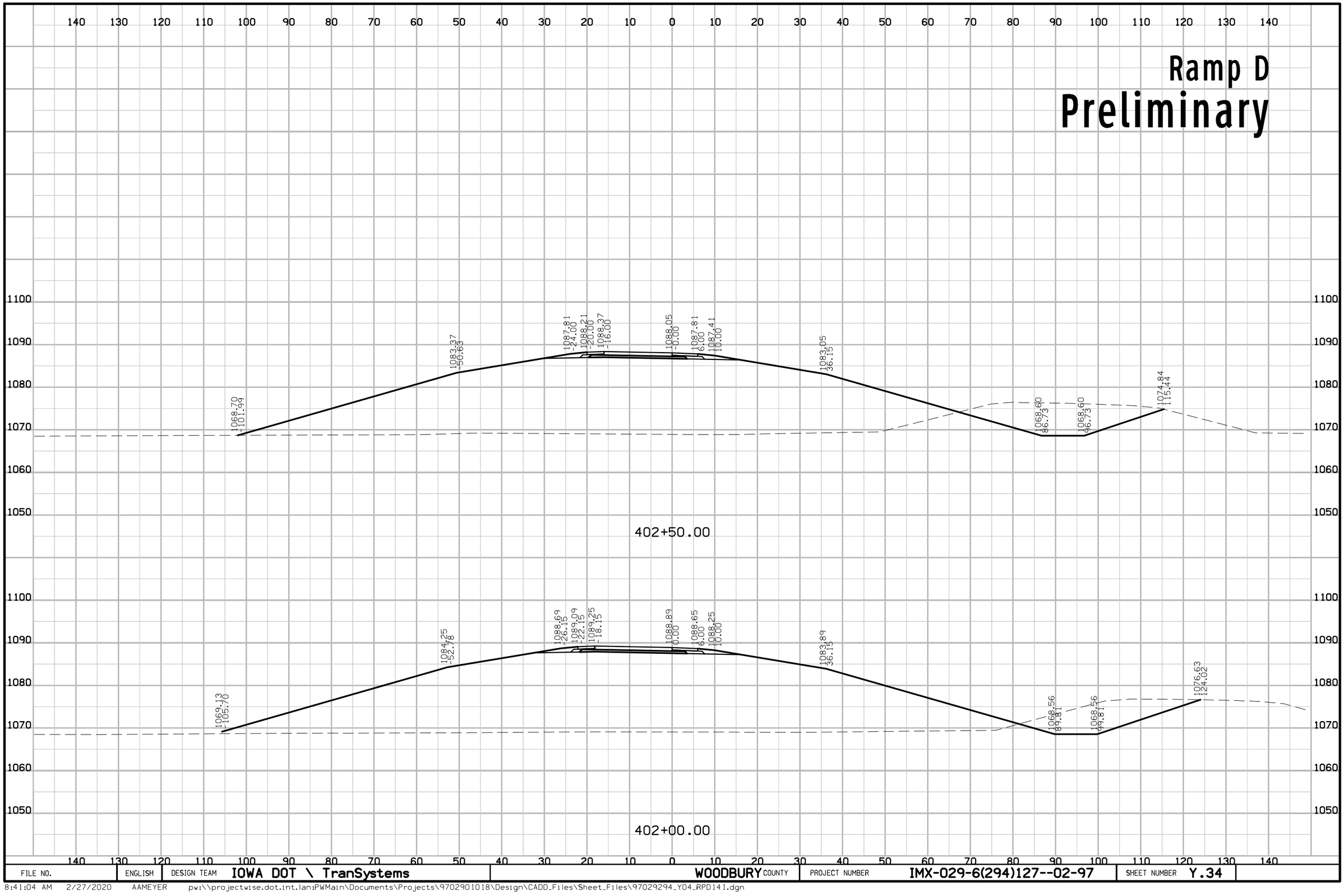
Ramp D
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.33

8:41:03 AM 2/27/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y04_RPD141.dgn

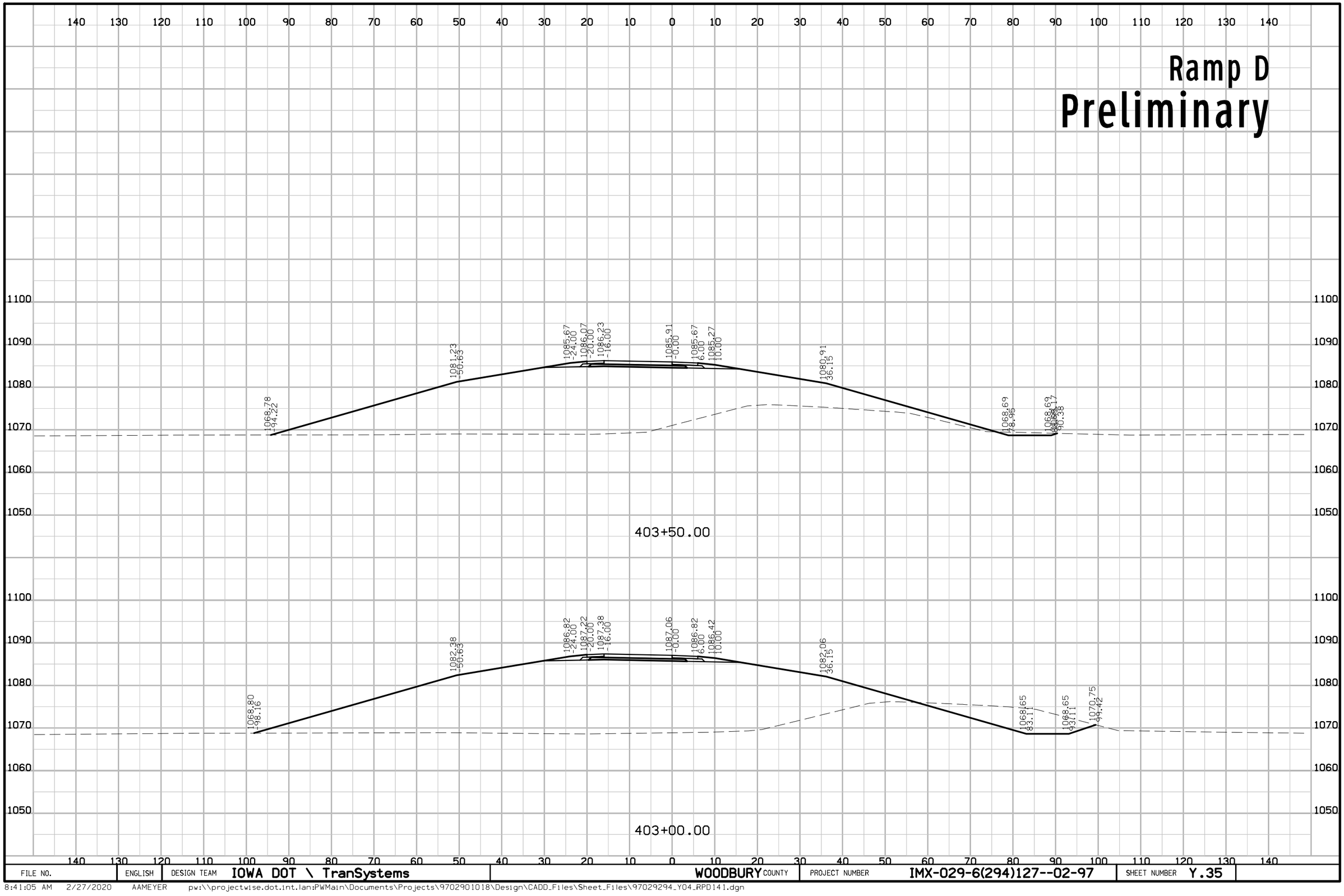
Ramp D
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.34

8:41:04 AM 2/27/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y04_RPD141.dgn

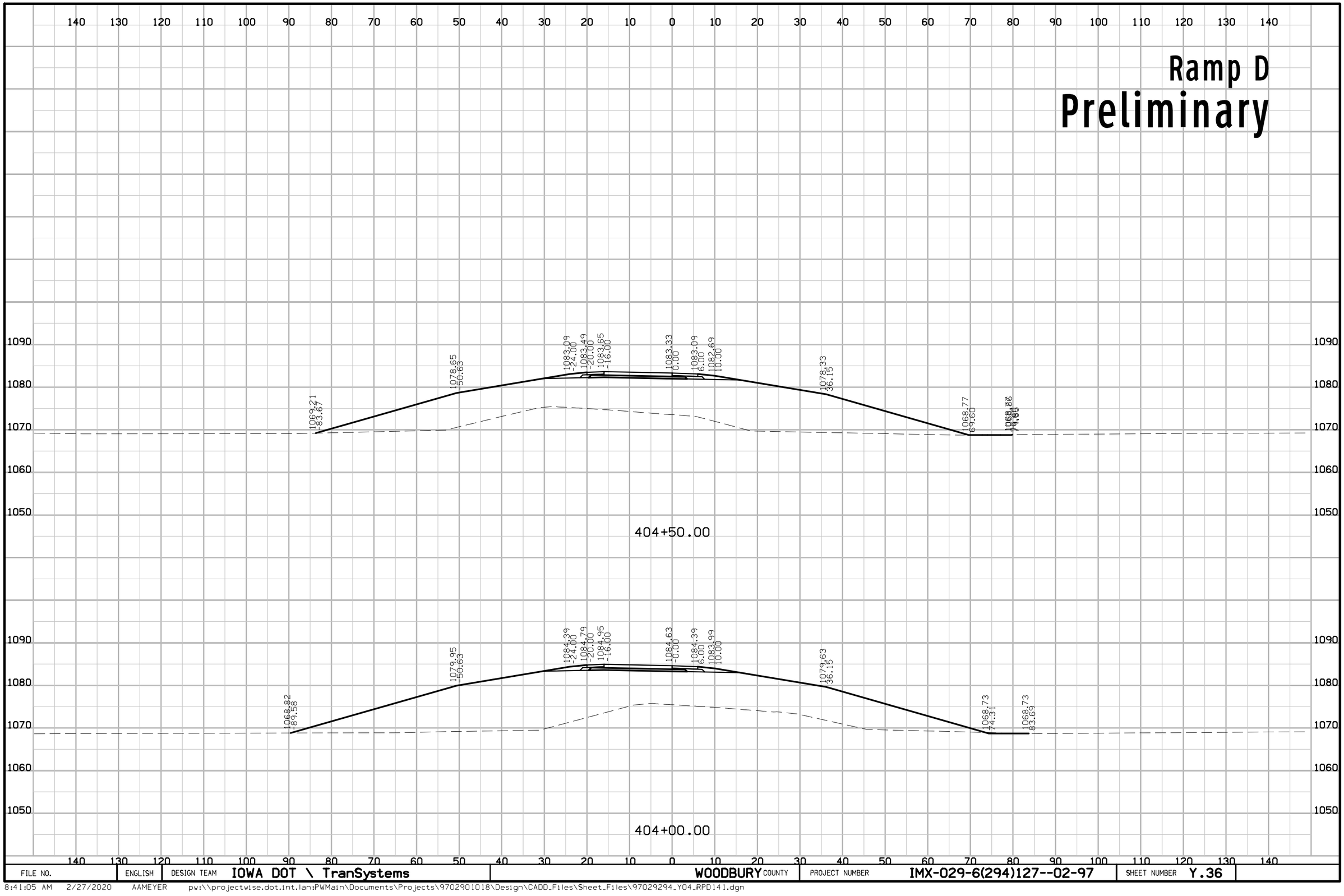
Ramp D
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.35

8:41:05 AM 2/27/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y04_RPD141.dgn

Ramp D
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.36

8:41:05 AM 2/27/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y04_RPD141.dgn

Ramp D
Preliminary

406+00.00

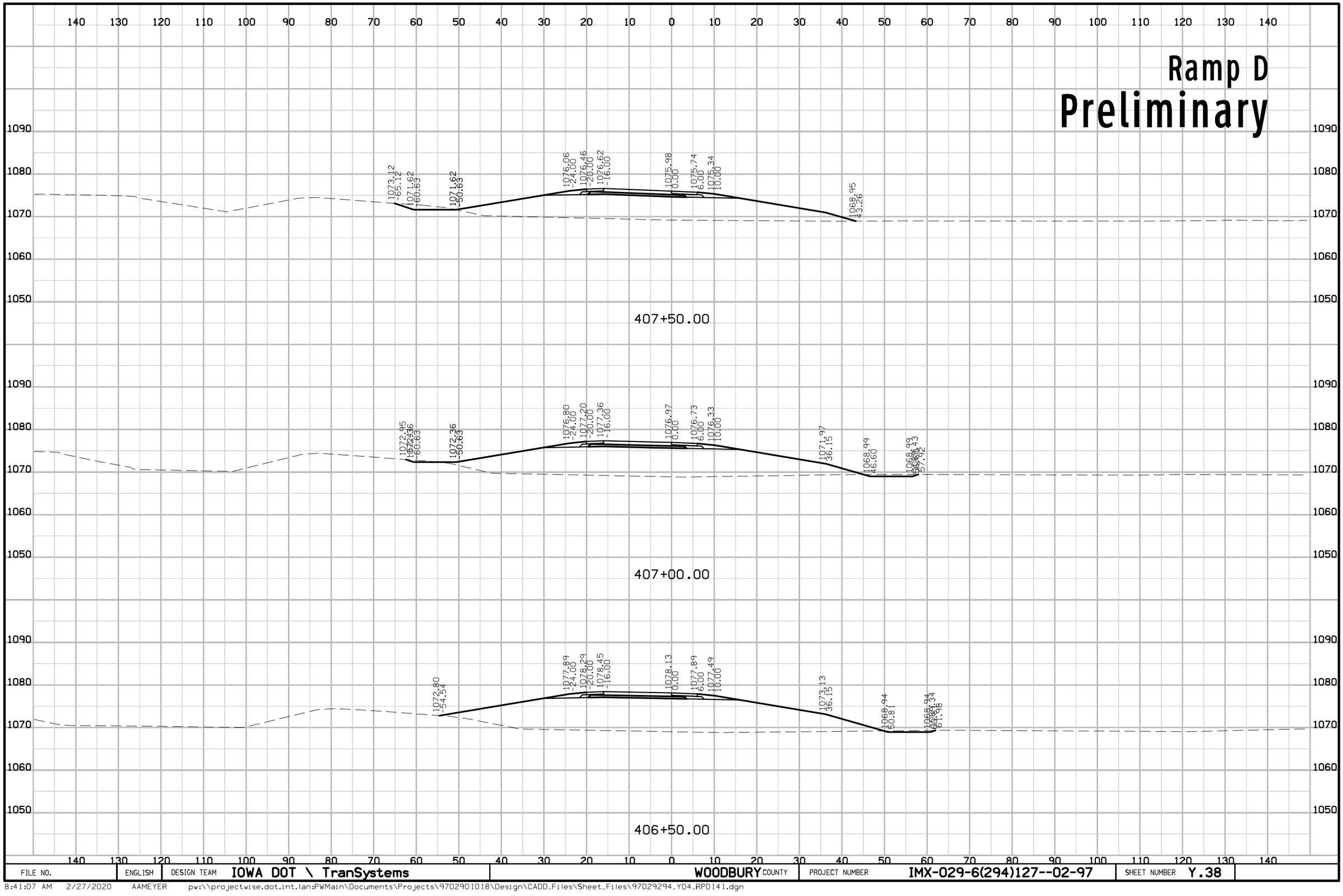
405+50.00

405+00.00

FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.37

8:41:06 AM 2/27/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y04_RPD141.dgn

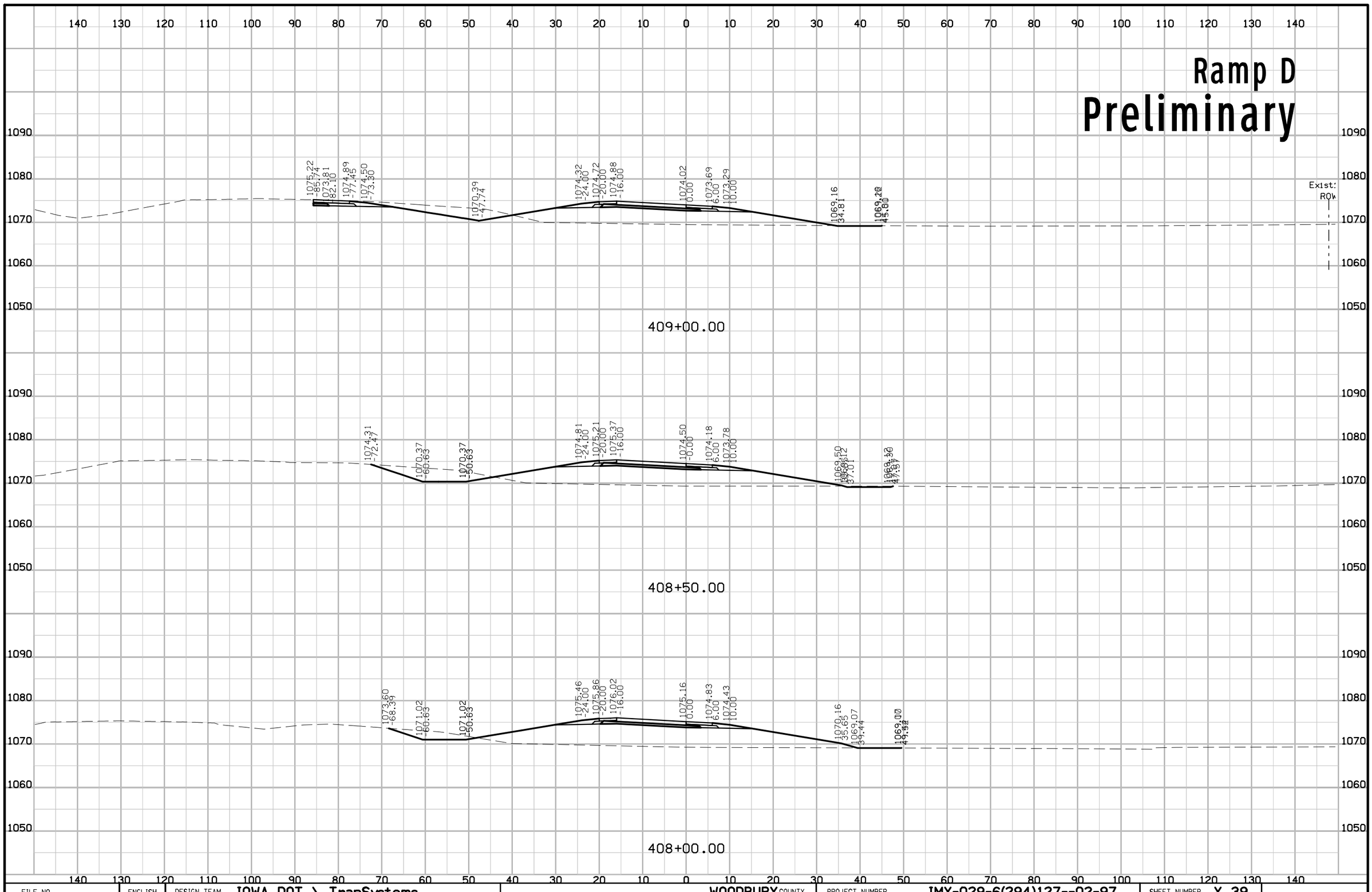
Ramp D
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER	Y.38

8:41:07 AM 2/27/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y04_RPD141.dgn

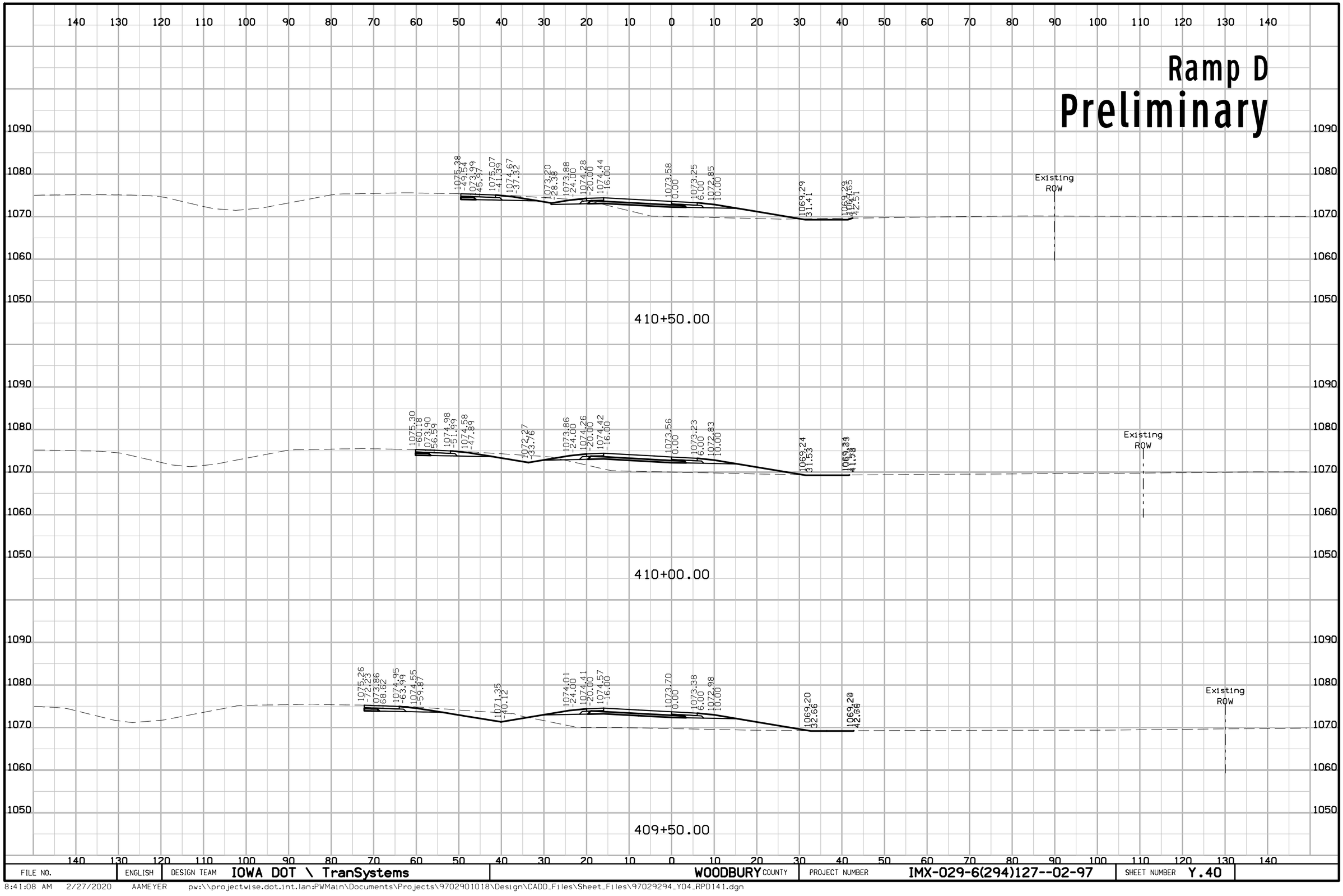
Ramp D
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER Y.39

8:41:07 AM 2/27/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y04_RPD141.dgn

Ramp D
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER Y.40

8:41:08 AM 2/27/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y04_RPD141.dgn

Ramp D
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

1090
1080
1070
1060
1050

1075.44
-36.24
1074.04
32.89

1075.12
-28.14
1074.71
-24.10

1074.73
-16.00

1073.87
-0.00

1073.54
6.00
1073.14
10.00

1069.35
32.75

1069.33
42.75

Existing
ROW

411+24.48

1075.42
-40.28
1074.02
36.72

1075.12
-32.17

1074.70
-28.11

1074.07
-24.33

1074.46
-20.00

1074.62
-16.00

1073.76
0.00

1073.44
6.00
1073.04
10.00

1069.33
32.24

1069.33
42.25

Existing
ROW

411+00.00

FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER	IMX-029-6(294)127--02-97	SHEET NUMBER Y.41

8:41:09 AM 2/27/2020 AAMEYER pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294_Y04_RPD141.dgn