IOWA DEPARTMENT OF TRANSPORTATION

TO OFFICE: Right of Way

DATE: June 6, 2013

ATTENTION: M. J. Sankey

REF. : Pottawattamie County
Proj. #: BRF-92-1(64)--38-78
ROW#: STPN-092-1(66)--2J-78
PIN: 10-78-092-010

FROM: J. M. Holst

OFFICE: Design

SUBJECT: Right of Way Submittal (D5)

This project involves replacing the bridge over Little Silver Creek on IA 92, approximately 0.3 miles west of County Road L-55. (FHWA No. 043820) The existing bridge is a 150 ft. by 28 ft. continuous concrete girder bridge that is proposed to be replaced with a 234 ft. by 44 ft. pretensioned prestressed concrete beam bridge. The typical cross section adjacent to the bridge will consist of a 24 ft. roadway (28 ft. wide pavement) with 10 ft. effective shoulders. This bridge will be replaced using ABC (accelerated bridge construction) methods.

Traffic will be maintained via road closure with detour.

There are no accesses within the project limits. Access rights will not need to be acquired on this project.

The project directory is
pw://projectwise.dot.int.lan:PWMain/Documents/Projects/7809201010/Design/

No printed plan sheets are included with this submittal. PDF files of the sheets can be found in ProjectWise at
pw://projectwise.dot.int.lan:PWMain/Documents/Projects/7809201010/Design/Design_Events/D5/

Plans and cross section files have been sheeted for batch plotting. The file, Project Documentation Shell.xls has a description of the MicroStation and GEOPAK files, chains and profiles.

Construction need lines required for this project are at the catch (intercept) point and have been added to the design file. The Office of ROW is advised to attach the following design models:

File	Model	Level	Need Type
78092064.dsn	Road_Design_Line_Work	dsnGroundlineIntercept	Permanent

Bridges and Structures Layout was completed (B1) on April 15, 2013. It is referenced in to the design file as 78092064.str from the “BRPrelim” folder.

A final borrow site is not required for this project. This project will have approximately 9,000 cubic yards of waste.

A special mitigation area is not required for this project.

This bridge will be constructed with ABC methods.

Utilities on this project are as follows:

MCI
FRONTIER COMMUNICATIONS OF IOWA
MIDAMERICAN ENERGY COMPANY
AT&T TRANSMISSION
LIGHTCORE (DIGITAL TELEPORT-A)

The current letting date is December 16, 2014.

You may indicate your acceptance or request additional information by e-mail.

JMH:mk
Attach.

cc:

M. J. Kennerly
K. D. Nicholson
D. L. Maifield
R. L. Stanley
S. C. Marler
E. J. Ranney
D. A. Widick
S. J. Gent
T. Crouch
E. C. Wright
J. N. McCollough
J. Vortherms
D. Newell
D. Stevens
Y. Jia
W. Cameron
N. L. McDonald
G. A. Novey
D. R. Claman
J. P. Rost
B. Hofer
L. C. Funnell
T. L. Gettings
M. A. Swenson
J. W. Smith
D. A. Popp
B. Bradley
W. Sorenson
T. A. Jerman
E. Keiner
J. Schoenrock

LETTING DATE

POTTAWATTAMIE Co. BRIDGE REPLACEMENT-PPCB
BRF-092-1(64)--38-78

Iowa Department of Transportation

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

POTTAWATTAMIE COUNTY

BRIDGE REPLACEMENT-PPCB

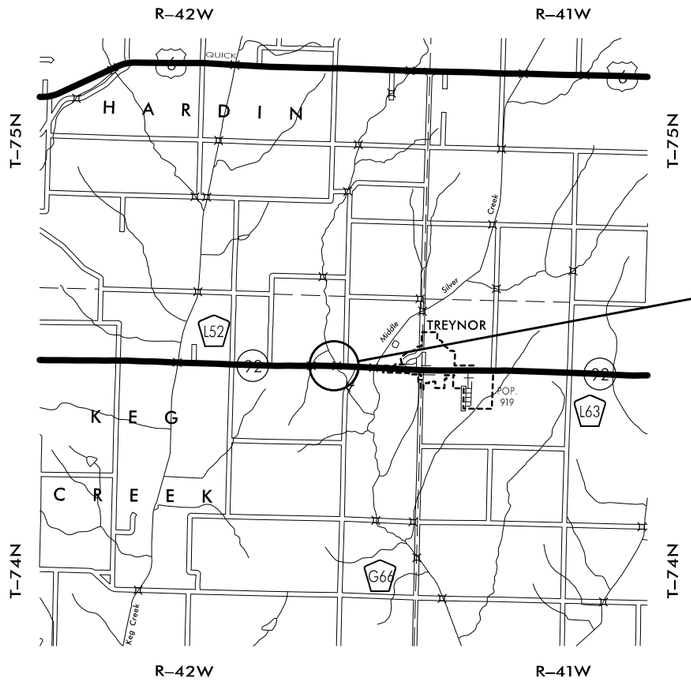
IA. 92 Over Little Silver Creek
0.3 Mie W. of Co. Rd. L-55

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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

NO MILEAGE SUMMARY



IA 92 over
Little Silver Creek
Maint. No. 7816.6S092
M.P. = 16.60

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

REVISIONS

	TOTAL
PROJECT IDENTIFICATION NUMBER	
10-78-092-010	
PROJECT NUMBER	
BRF-092-1(64)--38-78	
R.O.W. PROJECT NUMBER	
STPN-092-1(66)--2J-78	

INDEX OF SHEETS

LOCATION MAP SCALE
0 1 2 3
Miles

Design No. 115
File No. 30846

DESIGN DATA RURAL

2015 AADT	5,200	V.P.D.
2035 AADT	6,900	V.P.D.
20-- DHV		V.P.H.
TRUCKS	9	%
Total Design ESALs		

INDEX OF SEALS

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

PRELIMINARY PLANS

Subject to change by final design.

D5 PLAN – June 6, 2013

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-092-1(64)--38-78	SHEET NUMBER A.1

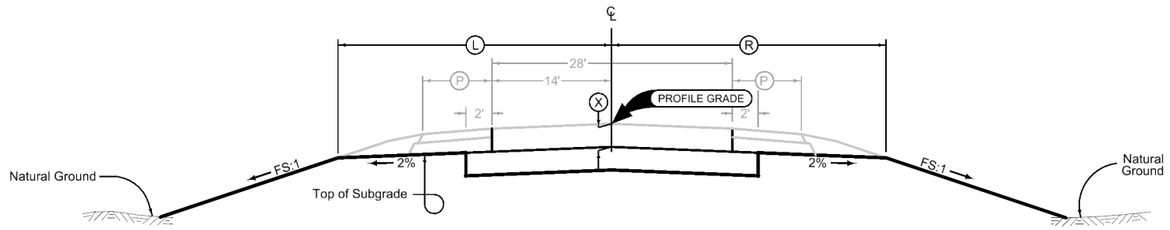
8:01:56 AM 6/6/2013 jholst pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7809201010\Design\78092064a01.sht

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	FS
IA 92	526+88	527+38	①	①	12	4
IA 92	530+21.6	530+71.6	①	①	12	4

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

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

Refer to Standard Road Plans RK-20 and RK-21 for additional details.



2_Grade
Modified

2 LANE GRADING

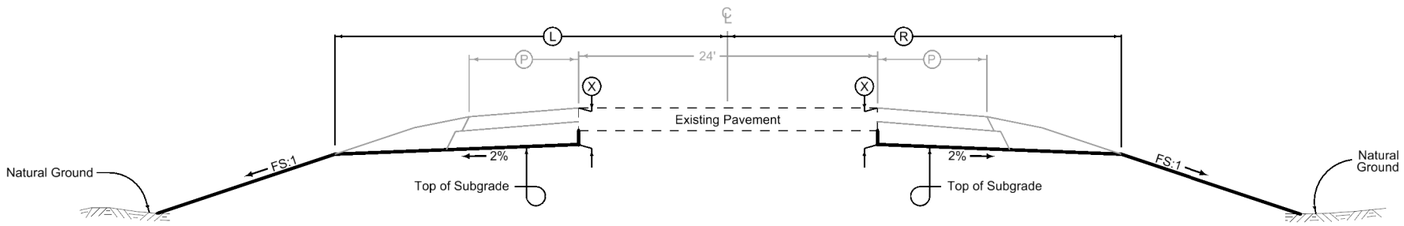
Notes:

① Refer to Typical 7156 and Standard Road Plans EW-301 for additional details.

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	FS
IA 92	525+50	526+43.5	①		6	4
IA 92	526+43.5	526+88.0	①		12	4
IA 92	530+71.6	531+62.5	①		12	4
IA 92	531+62.5	532+50.0	①		12	4-3
IA 92	525+00.0	525+97.5		①	6	3-4
IA 92	525+97.5	526+88.0		①	12	4
IA 92	530+71.6	531+16.5		①	12	4
IA 92	531+16.5	532+00.0		①	6	4-3

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

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



2_Grade
Modified

SHOULDER GRADING

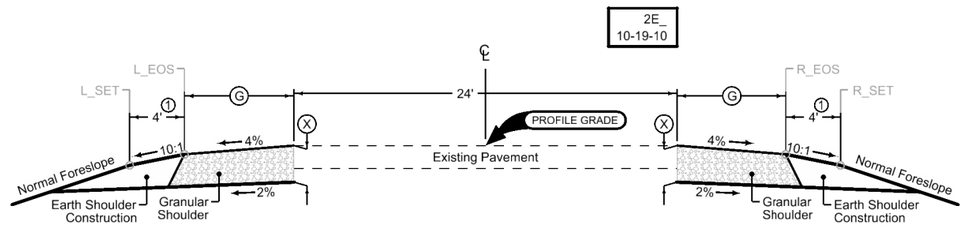
Notes:

① Refer to Typical 7156 and Standard Road Plans EW-301 for additional details.

Granular Shoulder

2_G_ MODIFIED			
STATION TO STATION		(G) Feet	(X) Inches
525+50	526+43.5	10	6
531+62.5	532+50	10	6

2E_
10-19-10



Granular Shoulder

2_G_ MODIFIED			
STATION TO STATION		(G) Feet	(X) Inches
525+00	525+97.5	10	6
531+16.5	532+00	10	6

Notes:

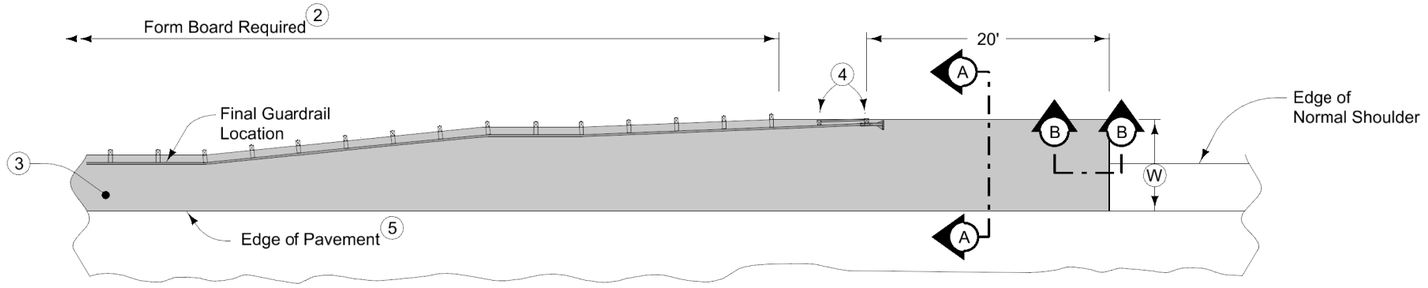
① Refer to Typical 7156 and Standard Road Plans EW-301 for additional details.

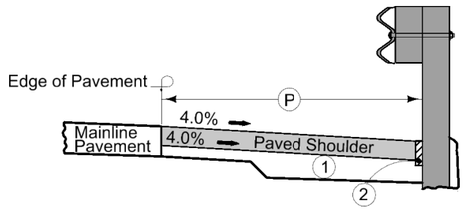
See Tab 112-9 for shoulder quantities.

IA 92

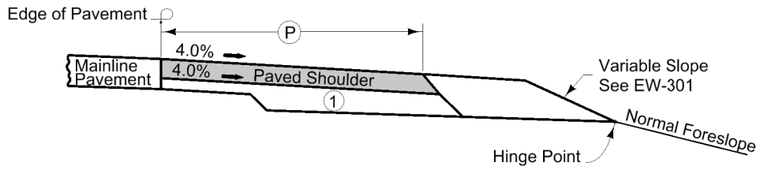
Design No. 115
File No. 30846

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-092-1(64)--38-78	SHEET NUMBER B.1

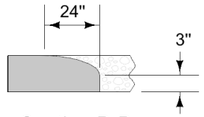




Typical Section with Form Board



Section A-A



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

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

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

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

Refer to Shoulder tabulation (112-9) for quantities.

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

PAVED SHOULDER AT GUARDRAIL

Design No. 115
File No. 30846

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-092-1(64)--38-78	SHEET NUMBER B.2

SURVEY SYMBOLS

- FW Wire Fence
- PPA Power Pole Co. 1
- TP TPD Telephone Pedestal
- TR Telephone Riser Pole
- LUM Luminaire
- PR Electic Riser Pole
- SIGN SI Sign
- GDL Guard Rail Steel
- D Centerline Draw or Stream (Down)
- DU Centerline Draw or Stream (Up)
- BNK Stream Bank
- DIK Centerline of Dike or Dam
- EW Edge of Water
- RIP Rip-Rap
- FO FOA Underground Fiber Optic Co. 1
- FO2 FOB Underground Fiber Optic Co. 2
- FO3 FOC Underground Fiber Optic Co. 3

UTILITY LEGEND

(MC1) MCI
Contact Name : Janette Harris
Contact Phone: 9727296650
Contact Email: janette.l.harris@verizonbusiness.com

(FCI) FRONTIER COMMUNICATIONS OF IOW
Contact Name : Sue White
Contact Phone: 5155731216
Contact Email: Sue-White@Frontiercorp.com

(M39) MIDAMERICAN ENERGY COMPANY
Contact Name : Gary Richardson
Contact Phone: 7123665651
Contact Email: GWRichardson@midamerican.com

(AT2) AT&T TRANSMISSION
Contact Name : PJ McDermott
Contact Phone: 8162754014
Contact Email: pjmcdermott@att.com

(DGT) LIGHTCORE (DIGITAL TELEPORT-A)
Contact Name : Robert Sampson
Contact Phone: 636-887-5367
Contact Email: robert.sampson@centurylink.com
Alt-Contact Email: qwest.ia1call@qwest.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
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
- Clearing & Grubbing Area
- Pavement Removal

RIGHT-OF-WAY LEGEND

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

Design No. 115
File No. 30846

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-092-1(64)--38-78	SHEET NUMBER D.1

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18" X 44.32 CMP
(U.A.C.)

Keg Creek TWP.
T-74N R-42W
SEC. 2

Sta. 534+78.69, 77.48 Lt.
36" X 79.13 Conc Pipe
DA = 21 AC H
(U.A.C.)

290th Street

Keg Creek TWP.
T-74N R-42W
SEC. 1

(U.A.C.)
Entrance

Sta. 525+00.00
Begin Construction

Sta. 526+88.00
Begin Approach Paving

POT Sta. 1528+95.00
= POT Sta. 528+95.00 (ML092)

Sta. 530+71.60
End Approach Paving

Sta. 532+50.00
End Construction

525

530

535

Channel (CH528)

IA 92 (ML092)

APPROX. SEC. LINE

PI Sta 534+45.54

APPROX. SEC. LINE

PC Sta 531+73.75

FO

FO2

FO3

Curve Data
Δ = 1° 21' 31.54" (RT)
T = 271.78
L = 543.54
R = 22,920.00
E = 1.61

House

Shed

Barn

Barn

(U.A.C.)
Entrance

Sta. 529+00.06
150 X 28 Continuous Conc Girder Bridge
44.5 End Spans - 61.0 Center Span
DA = 16.9 Square Miles VH to H
(REMOVE)

Sta. 528+80.00
Build 234'-0 x 44'
Prestressed Pretension
Concrete Beam Bridge
Skew 20° Rt Ahead

LITTLE SILVER CREEK

0 50
FEET

Keg Creek TWP.
T-74N R-42W
SEC. 11

Keg Creek TWP.
T-74N R-42W
SEC. 12

Design No. 115
File No. 30846

BEGIN GRADING
Sta. 525+00.00

BEGIN APPROACH PAVING
Sta 527+20.55
Tie-in Elv 1110.41

VPI +15.00
Elv 1,092.60
Len 760.00 ft
K = 70

END APPROACH PAVING
Sta 530+64.45
Tie-in Elv 1102.86

END GRADING
Sta 532+50.00

-5.870%

+4.980%

1120
1115
1110
1105
1100
1095
1090

Lt
Rt

U.A.C.
U.A.C.

Bridge
Bridge

U.A.C.
U.A.C.

1,110.20 1,109.10 1,108.09 1,107.16 1,106.33 1,105.59 1,104.93 1,104.36 1,103.89 1,103.50 1,103.20 1,102.99 1,102.87 1,102.84

522 523 524 525 526 527 528 529 530 531 532 533 534 535 536

C	ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-092-1(64)--38-78	SHEET NUMBER D.2

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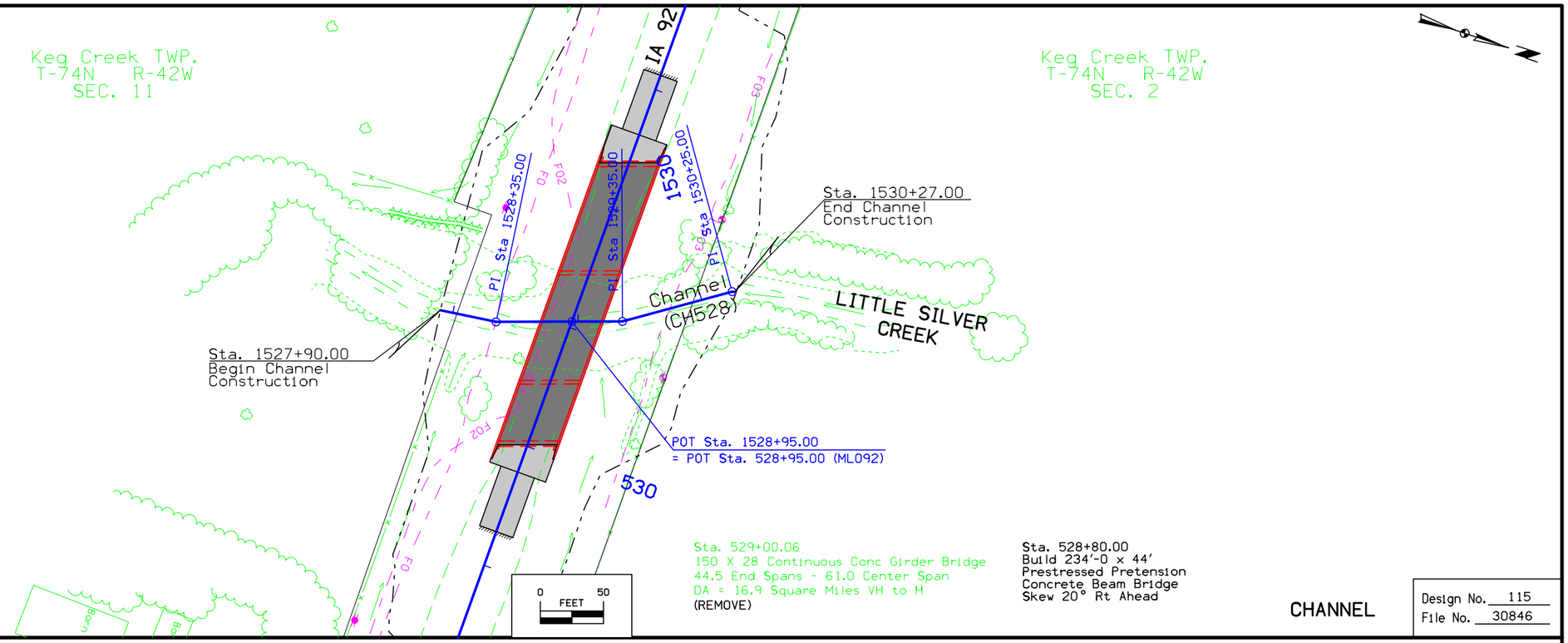
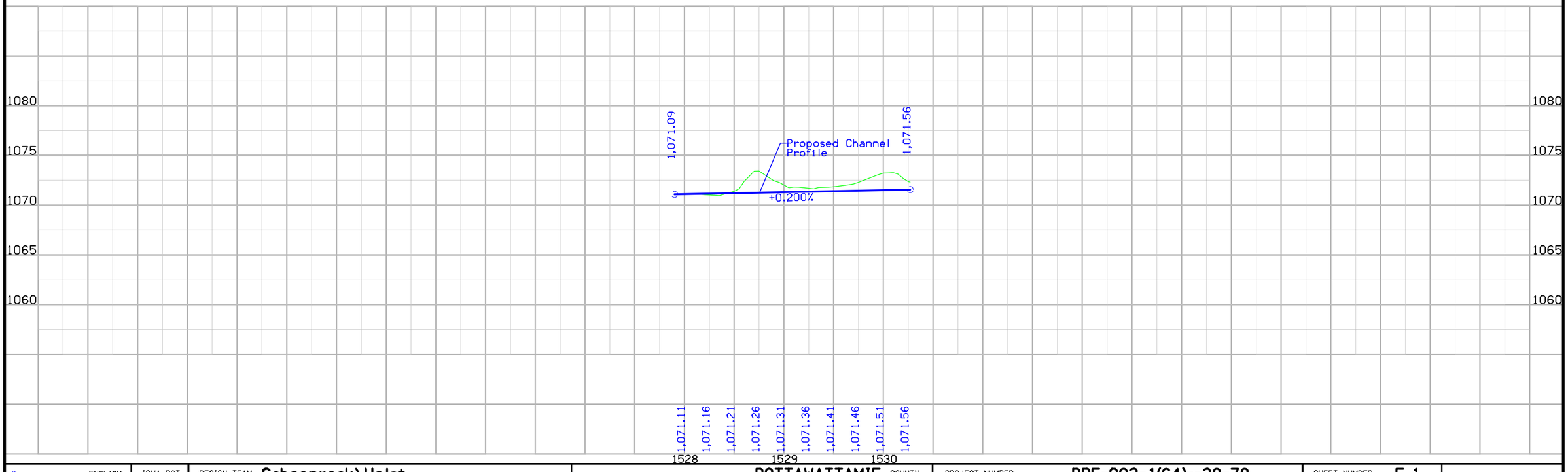


Sta. 529+00.06
150 X 28 Continuous Conc Girder Bridge
44.5 End Spans - 61.0 Center Span
DA = 16.9 Square Miles VH to H
(REMOVE)

Sta. 528+80.00
Build 234'-0 x 44'
Prestressed Pretension
Concrete Beam Bridge
Skew 20° Rt Ahead

CHANNEL

Design No. 115
File No. 30846



C	ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-092-1(64)--38-78	SHEET NUMBER E.1

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Survey Information

General Information

Measurement units for this survey are US survey feet. This survey is for proposed Bridge reconstruction and reconstruction of IA highway 92. Project datum and control information is provided by Design Survey Office. This project is a partial field survey for the digital terrain model with photo coverage.

Vertical Control

Vertical datum for this survey is relative to NAVD88.

All benchmark elevations were established with multiple observations using a GPS rover and base. Coordinates are the mean result of these observations. Any readings outside normal tolerances are removed and the benchmark is observed again. A minimum of three observations is required to establish coordinates.

Vertical equations are as follows:

BM # 501 this survey Elevation = 1103.65 NAVD 1988
= El. 1105.64 As Built Plans F.N. Project # 773

Horizontal Control

Control point 301 was used to transfer NAD83(1996) Iowa state plane south zone (US ft.) coordinates to project control. Five redundant RTK observations were used to verify these values. The project coordinates are scaled around control point 301 at 456364.500 N, 1053390.810 E, 1106.896 EL. A ground scale factor (1/combined factor) of 1.000100 was used to project the state plane coordinates to surface coordinates so that a scale of 1 can be applied for total station use and design when using project coordinates.

Alignment Information

The horizontal alignment for this survey is a retrace of As-built Plans F.N. Project # 773. Survey stationing was equated to the plan at PI Sta. 517+26.40 and run back and ahead without equation throughout the survey.

Equations are as follows:

PI Sta. 517+26.40 This Survey
= PI Sta. 517+26.40 As Built Plans F.N. Project # 773

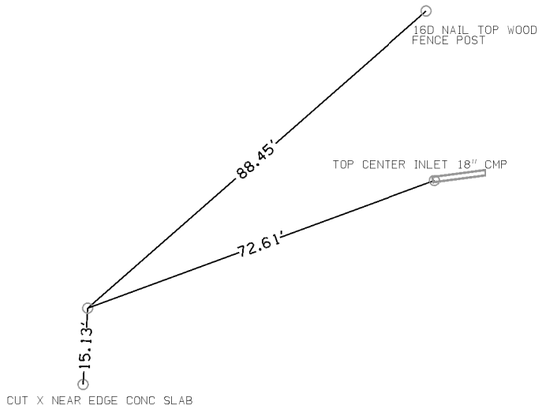
PI STA 534+45.54 this survey
= PI STA 534+48.8 As Built Plans F.N. Project # 773

VERTICAL CONTROL

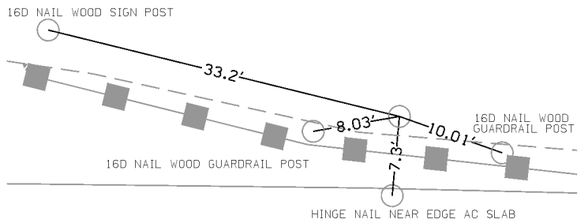
Point	North	East	Elevation	Station	Offset	Feature	Description
500	456446.6820	1052743.5110	1136.5260	521+31.73	-85.7217	BM	500 RR SPK WOOD BRACE POST
501	456358.9850	1053592.0050	1103.6480	529+82.22	-20.2127	BM	501 FND X NE CORNER BRIDGE
502	456337.7050	1054301.0130	1123.5920	536+91.06	-23.2991	BM	502 IHC BUTTON HDWL CATTLE PASS

Design No. 115
File No. 30846

CP Sta. 520+54.72, 26.57 Lt.
CP No. 300, Set Iron Pin
N= 456389.563, E=1052664.984, Z=1142.985



CP Sta. 527+80.95, 20.47 Lt.
CP No. 301, Set Iron Pin
N= 456364.500, E=1053390.810, Z=1106.896



CP Sta. 540+69.62, 25.72 Lt.
CP No. 302, Set Iron Pin
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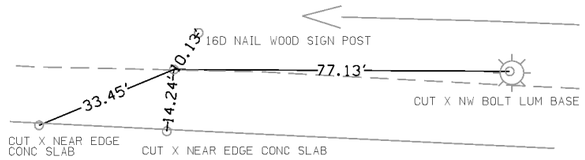

Design No. 115
File No. 30846

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-092-1(64)--38-78	SHEET NUMBER G.2

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ALIGNMENT COORDINATES

101-16
10-20-09

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
ML092																			
20005		510+18.40	456,370.18	1,051,628.06															
20020								514+84.94	456,371.10	1,052,094.58	517+26.40	456,371.58	1,052,336.05	519+67.83	456,365.27	1,052,577.43			
20050								531+73.75	456,333.78	1,053,782.94	534+45.54	456,326.68	1,054,054.63	537+17.30	456,313.14	1,054,326.08			
20070		544+98.09	456,274.25	1,055,105.90															
20080		560+72.00	456,195.85	1,056,677.86															
CH528																			
30105		1527+90.00	456,239.45	1,053,528.42															
30110		1528+35.00	456,284.16	1,053,523.32															
30120		1529+35.00	456,378.99	1,053,491.59															
30125		1530+25.00	456,454.04	1,053,441.91															
30130		1530+27.00	456,456.01	1,053,441.61															

SPIRAL OR CIRCULAR CURVE DATA

101-17
04-19-11

Name	Location	Δ_{scs}	Horizontal Alignment Data												Remarks
			Spiral Data								Curve Data				
			θs	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	Δ_c	T	L	R	E
20020											1° 36′ 34.36″ RT	241.47′	482.90′	17,190.00′	1.70′
20050											1° 21′ 31.54″ RT	271.78′	543.54′	22,920.00′	1.61′

Design No. 115
File No. 30846

PARCEL CHECK LIST

07/25/13 16:35 HSL PRINT FOR H S RICHEY PAGES: 1 - 1 GEN: 1

PARCEL CHECK BY PROJ UPDATED 07/25/13 16:34 PAGE: 1

R2360003 PARCEL CHECK LIST BY PROJECT NUMBER

COUNTY : POTTAWATTAMIE PROJECT NO. :STPN-092-1(66)--2J-78 PIN: 10-78-092010-00

CONSTRUCTION NO.:BRF-092-1(64)--38-78 ASSIGNED TO: NLC

DESCRIPTION : Ia. 92 Over Little Silver Creek 0.3 MileW. Of Co. Rd. L-55

PARCEL	KEY	OWNER	TYPE	R/W W.D OR EASE.	BORROW W.D OR EASE.	HOUSE OR OTHER	COMMERCIAL	OCC	ENVIRONMENTAL CONCERNS
0001	26801	LONE ELM FARMS, LTD.	FEE STATE OF IOWA	0.35 EASE ACRE					
0002	26826	CRAIG K. SUDMANN	FEE STATE OF IOWA						
		DONNA E. SUDMANN	FEE	0.03 EASE ACRE					
0003	26827	ST. PAUL'S LUTHERAN CHURCH OF TREYNOR	FEE						
0004	26828	ROBERT A. MEIS	FEE						

T.E. ONLY

T.E. ONLY

STATE OF IOWA

0.38 EASEMENT ACRES

4 TOTAL PARCELS ON PROJECT

	ENGLISH/METRIC	IOWA DOT - OFFICE OF ROW	COUNTY	PROJECT NUMBER	PCL

1

LONE ELM FARMS, LTD.

Keg Creek TWP.
T-74N R-42W
SEC. 2

Keg Creek TWP.
T-74N R-42W
SEC. 1

525+50
℄85'±EX.R/W

Sta. 525+00.00
Begin Construction

Sta. 526+88.00
Begin Approach Paving

528+55
℄145'

530+65
℄85'±EX.R/W

Sta. 530+71.60
End Approach Paving

Sta. 532+50.00
End Construction

525

530

535

(HPZR)

IA 92 (ML092)

290th Street

APPROX. SEC. LINE

Entrance

House

Shed

Barn

Barn

Barn

528+37±℄
℄120'(EX.R/W CORNER)

528+64±℄
℄120'

529+15±℄
℄115'

530+25
℄86'±EX.R/W

LITTLE SILVER CREEK

Keg Creek TWP.
T-74N R-42W
SEC. 11

Keg Creek TWP.
T-74N R-42W
SEC. 12

0 FEET 50

TEMPORARY EASEMENT
TO SHAPE

TEMPORARY EASEMENT
TO SHAPE

2

CRAIG K. & DONNA E
SUDMANN

4

ROBERT A.
MEIS

3

ST. PAUL'S LUTHERAN
CHURCH OF TREYNOR

Design No. 115
File No. 30846

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Richey/Cuva
ROW #: STPN-92-1(66)--2J-78
Plan Date: 7/25/13
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

C	ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-092-1(64)--38-78	SHEET NUMBER H.1

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1

LONE ELM FARMS, LTD.

Keg Creek TWP.
T-74N R-42W
SEC. 2

525+50
℄85'±EX.R/W

Sta. 525+00.00
Begin Construction

Sta. 526+88.00
Begin Approach Paving

528+55
℄145'

530+65
℄85'±EX.R/W

Sta. 530+71.60
End Approach Paving

Sta. 532+50.00
End Construction

525

530

Channel (CH528)

APPROX. SEC. LINE

290th Street

IA 92 (ML092)

APPROX. SEC. LINE

APPROX. SEC. LINE

F02

528+37±R
℄120'(EX.R/W CORNER)

528+64±R
℄120'

529+15±R
℄115'

530+25
℄86'±EX.R/W

LITTLE SILVER

Keg Creek TWP.
T-74N R-42W
SEC. 11

Entrance

Keg Creek TWP.
T-74N R-42W
SEC. 12

House

Shed

Barn

Barn

Barn

0 FEET 50

TEMPORARY EASEMENT TO SHAPE

TEMPORARY EASEMENT TO SHAPE

2

CRAIG K. & DONNA E. SUDMANN

4

ROBERT A. MEIS

3

ST. PAUL'S LUTHERAN CHURCH OF TREYNOR

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Gettings/Richey/Cuva
ROW #: STPN-92-1(66)--2J-78
Plan Date: 7/25/13
Color Legend:

- Property Lines
- Temporary Easement
- Permanent Acquisition

C	ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-092-1(64)--38-78	SHEET NUMBER H.1	

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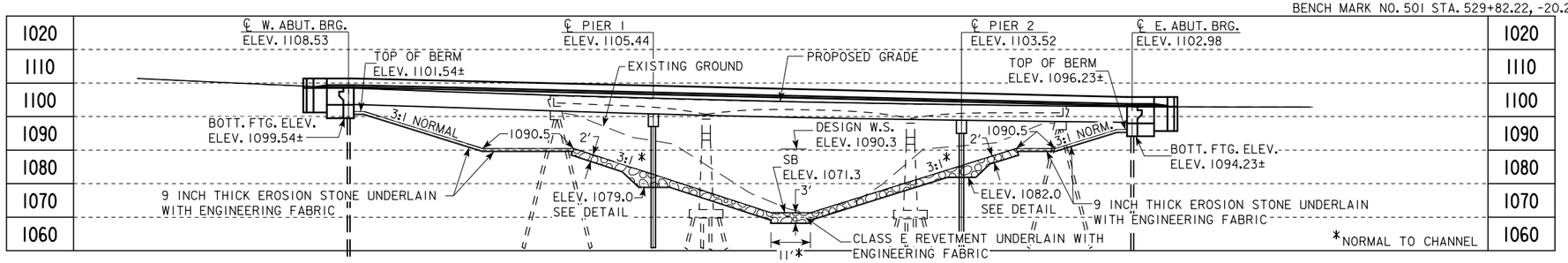
BENCH MARK NO. 501 STA. 529+82.22, -20.2127 FND X NE CORNER BRIDGE, ELEV. 1103.648



NOTES:

1. TOP OF BRIDGE DECK CROWN 0.03 BELOW PROFILE GRADE.
2. CONTINUE THE EROSION STONE BERM SLOPE PROTECTION ALONG THE BENCH TO THE TOP OF REVETMENT.
3. STA. 529+00.06 150' X 28' CONT. CONC. GIRDER BRIDGE (DESIGN NO. 5152) TO BE REMOVED.
4. ANY ENCOUNTERED REMNANTS OF OLD BRIDGE WOOD SUBSTRUCTURE TO BE REMOVED AS NECESSARY TO COMPLETE THE WORK.

LONGITUDINAL SECTION ALONG ℄ APPROACH ROADWAY

NOTES TO FINAL DESIGNER:

1. CHECK WITH JIM SCHOENROCK TO VERIFY UTILITIES.
2. TL-4 BARRIER RAIL.
3. PILE BENT PIERS PROPOSED.

G1= -5.870% G2= +4.980%

VPI STA = 530+15.00 VC = 760.00'
VPI ELEV = 1092.60

PROPOSED PROFILE GRADE IA 92

HYDRAULIC DATA

DRAINAGE AREA = 16.6 SQ. MI.
STREAM SLOPE = 10.6 FT./MI.
AVG. LOW WATER STAGE = 1072.3

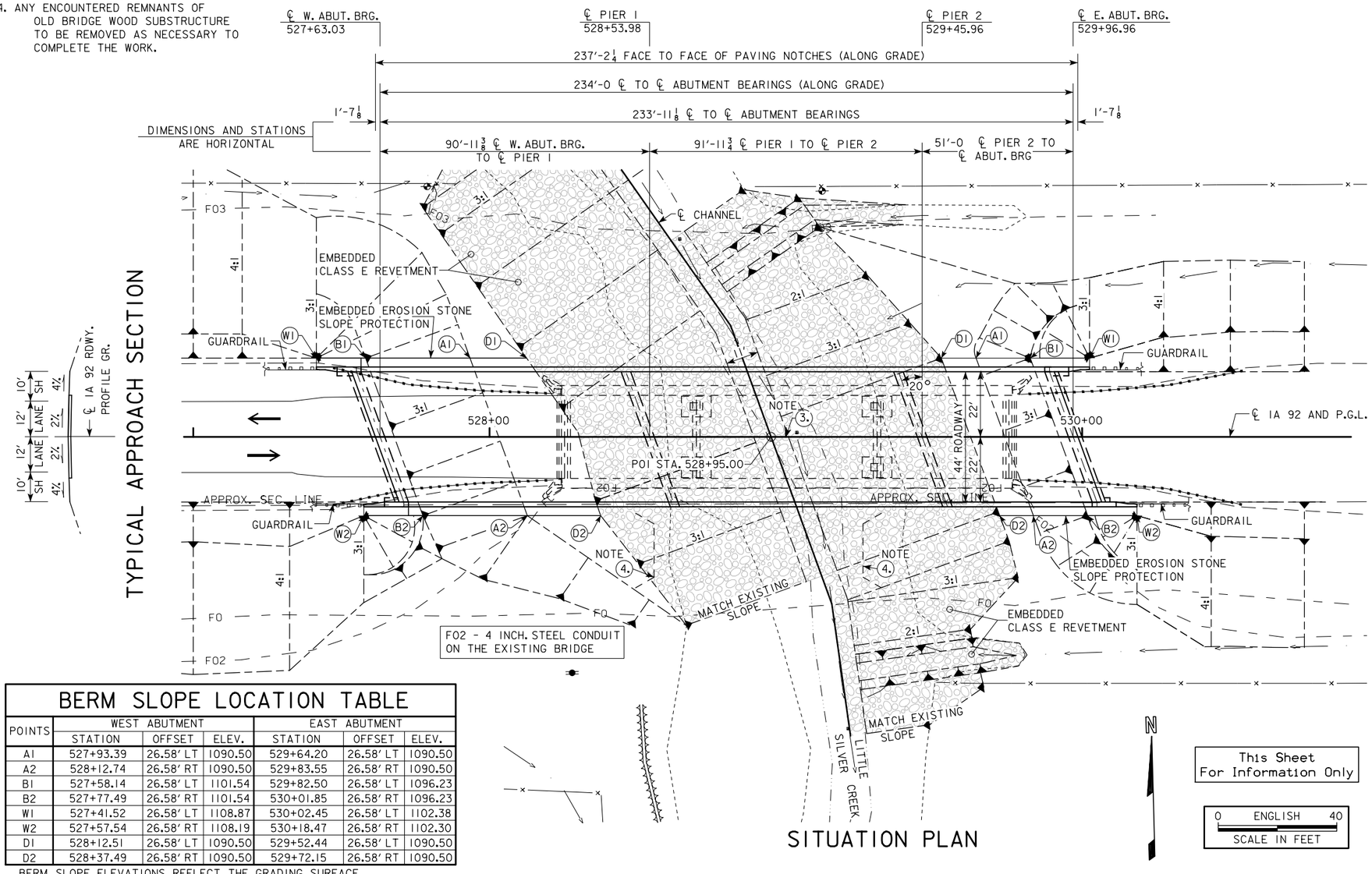
Q_{50} = 4530 CFS
STAGE = 1090.3
BACKWATER = 0.03 FT.
AVG. BRIDGE VELOCITY = 3.7 FPS

Q_{100} = 5460 CFS
STAGE = 1091.3
BACKWATER = 0.06 FT.

Q_{200} = 6290 CFS
STAGE = 1092.0
CALCULATED DESIGN SCOUR = 1068.3

Q_{500} = 7330 CFS
STAGE = 1092.7
CALCULATED CHECK SCOUR = 1068.3

ROADWAY OVERTOP 1102.84
STA. 530+46.17



SITUATION PLAN

UTILITIES LEGEND:

-POWER POLE - MIDAMERICAN ENERGY COMPANY
FO -FIBER OPTIC - AT&T TRANSMISSION
FO2 -FIBER OPTIC -MCI
FO3 -FIBER OPTIC - FRONTIER COMMUNICATIONS OF IOWA
NOT SHOWN- FIBER OPTIC -LIGHTCORE (DIGITAL TELEPORT-A)

TRAFFIC ESTIMATE

2015 AADT	5200	V.P.D.
2035 AADT	6900	V.P.D.
202_ DHV	_	V.P.H.
TRUCKS	9	%
TOTAL DESIGN ESALs	_	

LOCATION

IA 92 OVER LITTLE SILVER CREEK
T-74N R-42W
SECTION 2&11
KEG CREEK TOWNSHIP
POTTAWATTAMIE COUNTY
BRIDGE MAINT. NO. 7816.6S092
LATITUDE 41.232779°
LONGITUDE -95.634139°

PRELIMINARY

DESIGN FOR 20° SKEW (R.A.)

234'-0 X 44'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

91'-0 & 51'-0 END SPANS (BTC BEAM) 92'-0 INTERIOR SPAN

SITUATION PLAN

STATION 528+80.00 IA 92 APRIL 2013

POTTAWATTAMIE COUNTY

BERM SLOPE LOCATION TABLE

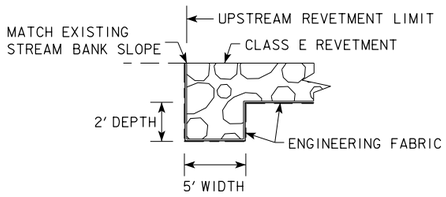
POINTS	WEST ABUTMENT			EAST ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	527+93.39	26.58' LT	1090.50	529+64.20	26.58' LT	1090.50
A2	528+12.74	26.58' RT	1090.50	529+83.55	26.58' RT	1090.50
B1	527+58.14	26.58' LT	1101.54	529+82.50	26.58' LT	1096.23
B2	527+77.49	26.58' RT	1101.54	530+01.85	26.58' RT	1096.23
W1	527+41.52	26.58' LT	1108.87	530+02.45	26.58' LT	1102.38
W2	527+57.54	26.58' RT	1108.19	530+18.47	26.58' RT	1102.30
D1	528+12.51	26.58' LT	1090.50	529+52.44	26.58' LT	1090.50
D2	528+37.49	26.58' RT	1090.50	529+72.15	26.58' RT	1090.50

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

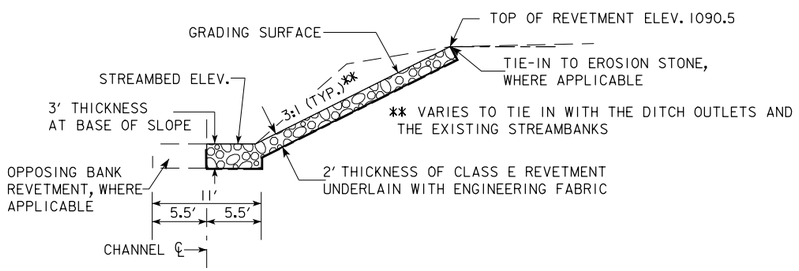
This Sheet For Information Only

0 ENGLISH 40
SCALE IN FEET

BENCH MARK NO. 501 STA. 529+82.22, -20.2127 FND X NE CORNER BRIDGE, ELEV. 1103.648



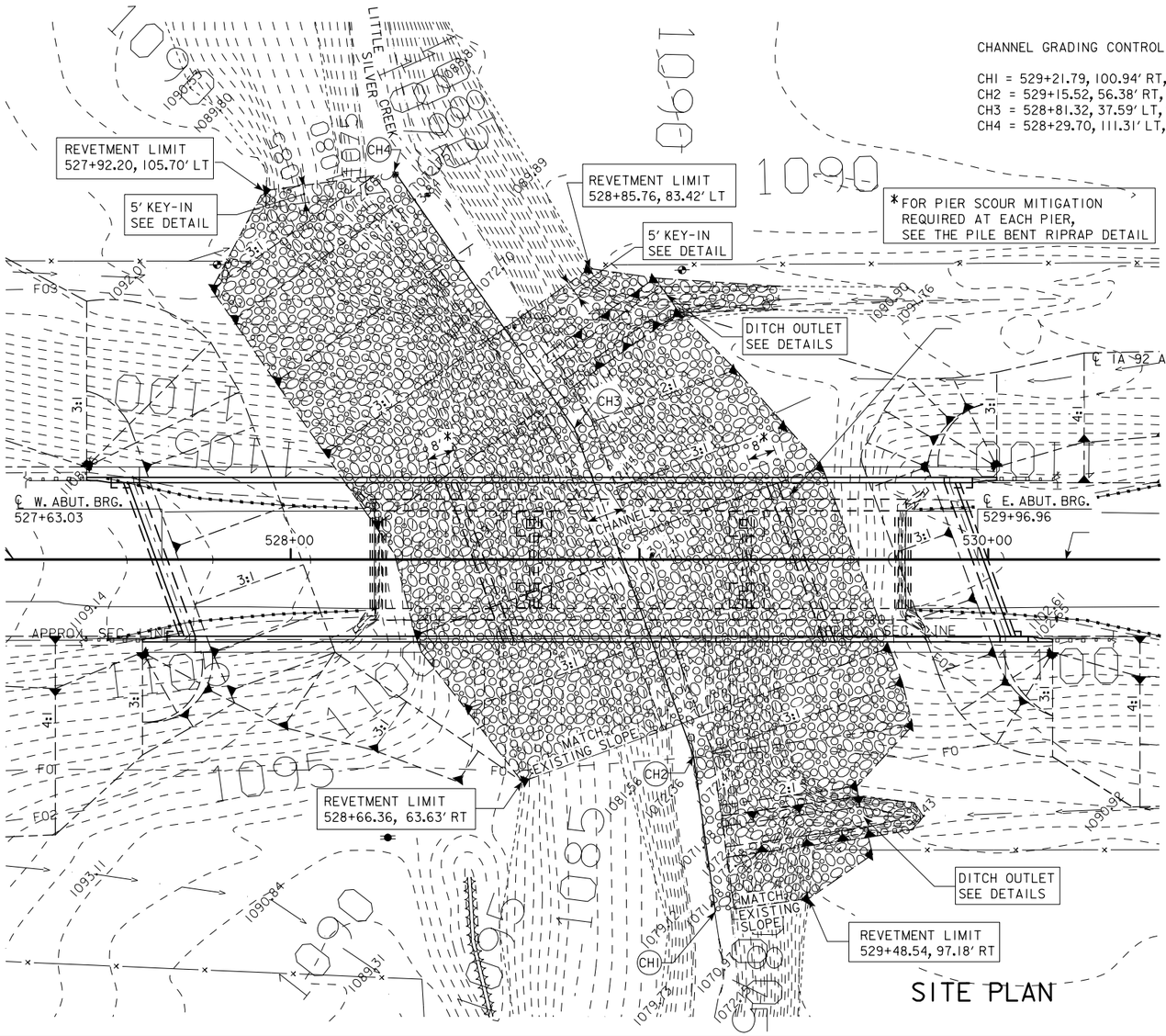
SECTION THROUGH KEY-IN TRENCH



TYPICAL CROSS SECTION
EMBEDDED RIPRAP BANK PROTECTION

ESTIMATED BERM ARMORING QUANTITIES				
LOCATION	REVETMENT CL. E (TON)	EROSION STONE (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
BERM/BANK LINING - WEST	1527.2	155.1	1771.8	1050.3
BERM/BANK LINING - EAST	1500.9	81.4	1599.4	988.3
TOTALS	3028.1	236.5	3371.2	2038.6

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE.



SITE PLAN

CHANNEL GRADING CONTROL POINTS:

CH1 = 529+21.79, 100.94' RT, STREAMBED ELEV. = 1071.09
CH2 = 529+15.52, 56.38' RT, STREAMBED ELEV. = 1071.18
CH3 = 528+81.32, 37.59' LT, STREAMBED ELEV. = 1071.38
CH4 = 528+29.70, 111.31' LT, STREAMBED ELEV. = 1071.56

N

0 ENGLISH 40
SCALE IN FEET

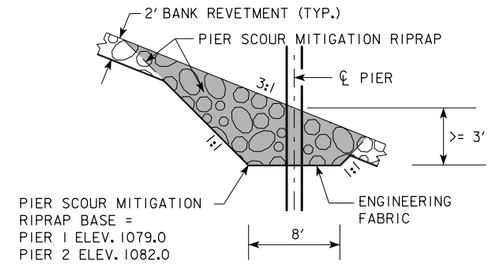
This Sheet For Information Only

PIER SCOUR MITIGATION NOTES:

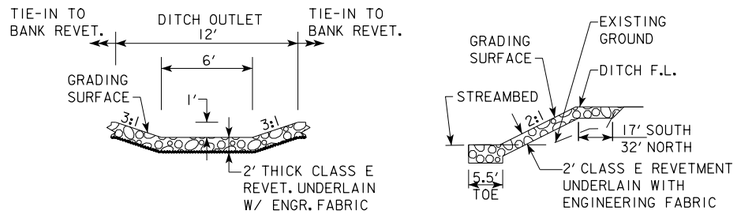
PIER SCOUR MITIGATION RIPRAP PROVIDED. LOCAL PIER SCOUR NOT INCLUDED IN DESIGN/CHECK SCOUR ELEVATIONS.

NBIS INSPECTION SHOULD VERIFY INTEGRITY OF RIPRAP.

CARRY PIER SCOUR MITIGATION RIPRAP 4 FEET BEYOND THE EDGE OF PILING UPSTREAM AND DOWNSTREAM.



TYPICAL PILE BENT RIPRAP
CROSS SECTION



TYPICAL SECTIONS AT DITCH OUTLET

PRELIMINARY

DESIGN FOR 20° SKEW (R.A.)

234'-0 X 44'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

91'-0 & 51'-0 END SPANS (BTC BEAM) 92'-0 INTERIOR SPAN

SITUATION PLAN - SITE

STATION 528+80.00 IA 92 APRIL 2013

POTTAWATTAMIE COUNTY

ENGLISH	IOWA DOT	DESIGN TEAM Design team 1\design team 2\design team 3	COUNTY COUNTY	PROJECT NUMBER POTTAWATTAMIE	PROJECT NUMBER BHF-[illegible]-I(64)--38-78	SHEET NUMBER V.2

2 2 30846 115

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LINE STYLE LEGEND OF CROSS SECTION SHEETS (ROAD)

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

LINE STYLE LEGEND OF CROSS SECTION SHEETS (SOILS)

- TS — Topsoil (Class 10)
- TS A — Topsoil (Type A Disposal)
- TS B — Topsoil (Type B Disposal)
- TS C — Topsoil (Type C Disposal)
- CL 10 — Class 10 Materials
- SEL LO — Select Loams And Clay-Loams
- SEL SA — Select Sand
- UNS A — Unsuitable Type A Disposal
- UNS B — Unsuitable Type B Disposal
- UNS C — Unsuitable Type C Disposal
- SHALE — Shale
- WASTE — Waste
- B&W LS — Broken and Weathered Rock
- ROCK — Solid Rock
- BLDRS — Boulders

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

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

SYMBOL LEGEND OF CROSS SECTION SHEETS

Existing ROW — Existing Right-of-Way Limit

Proposed ROW — Proposed Right-of-Way Limit

Temporary ROW — Temporary Right-of-Way Limit

Design No. 115
File No. 30846

CROSS SECTION LEGEND AND SYMBOL INFORMATION SHEET

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

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-092-1(64)--38-78	SHEET NUMBER W.1

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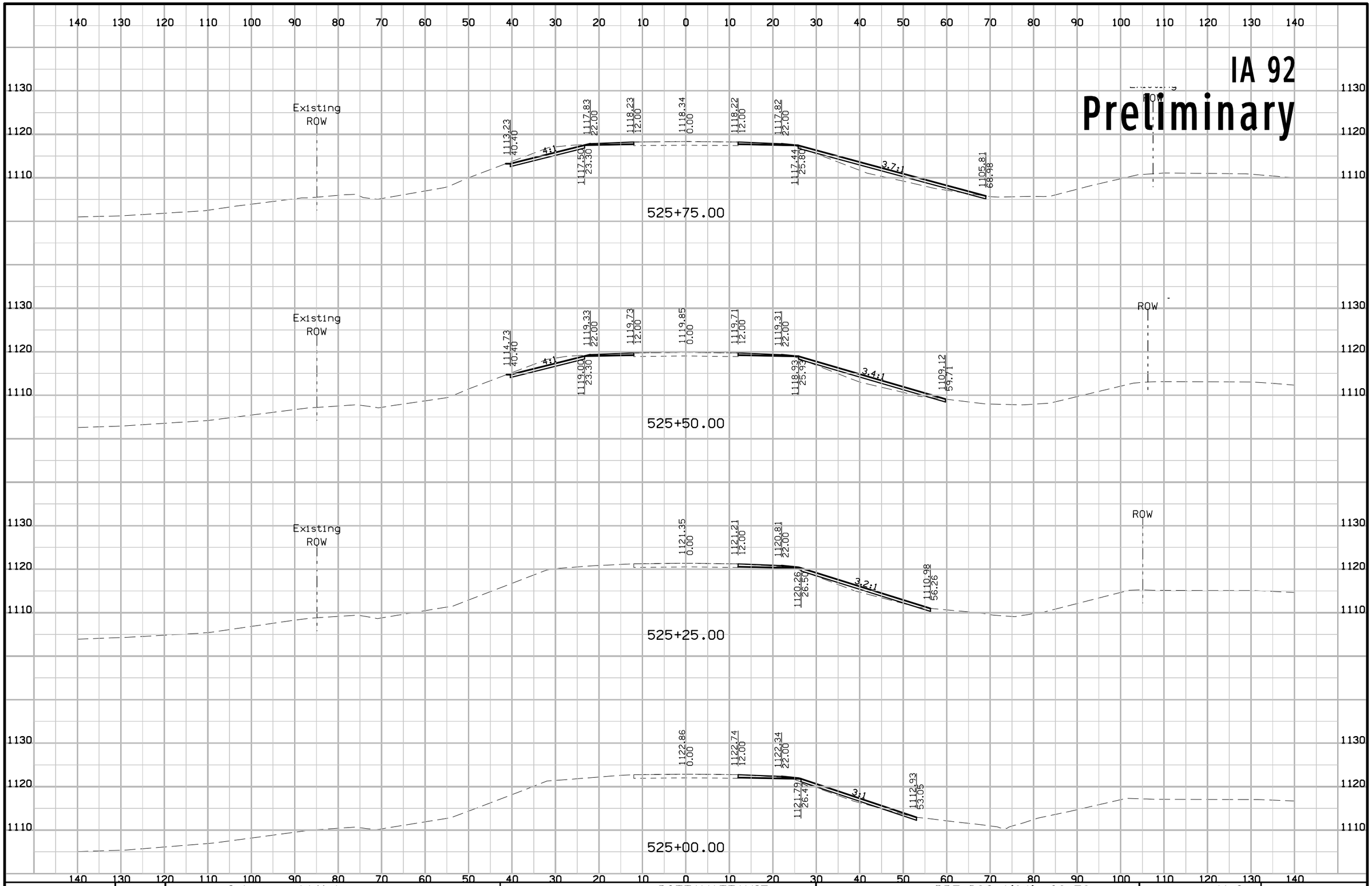
IA 92

Preliminary



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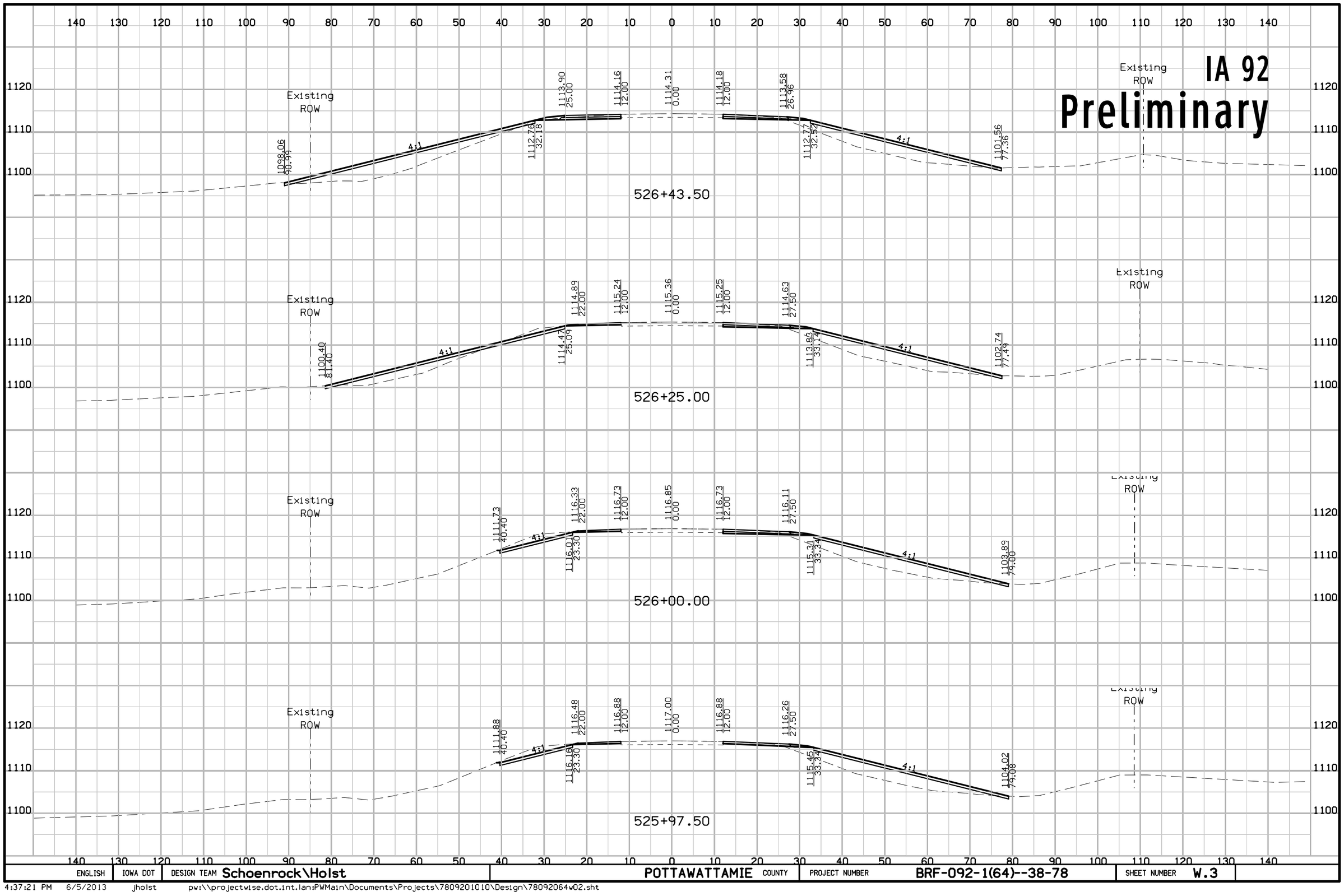
IA 92

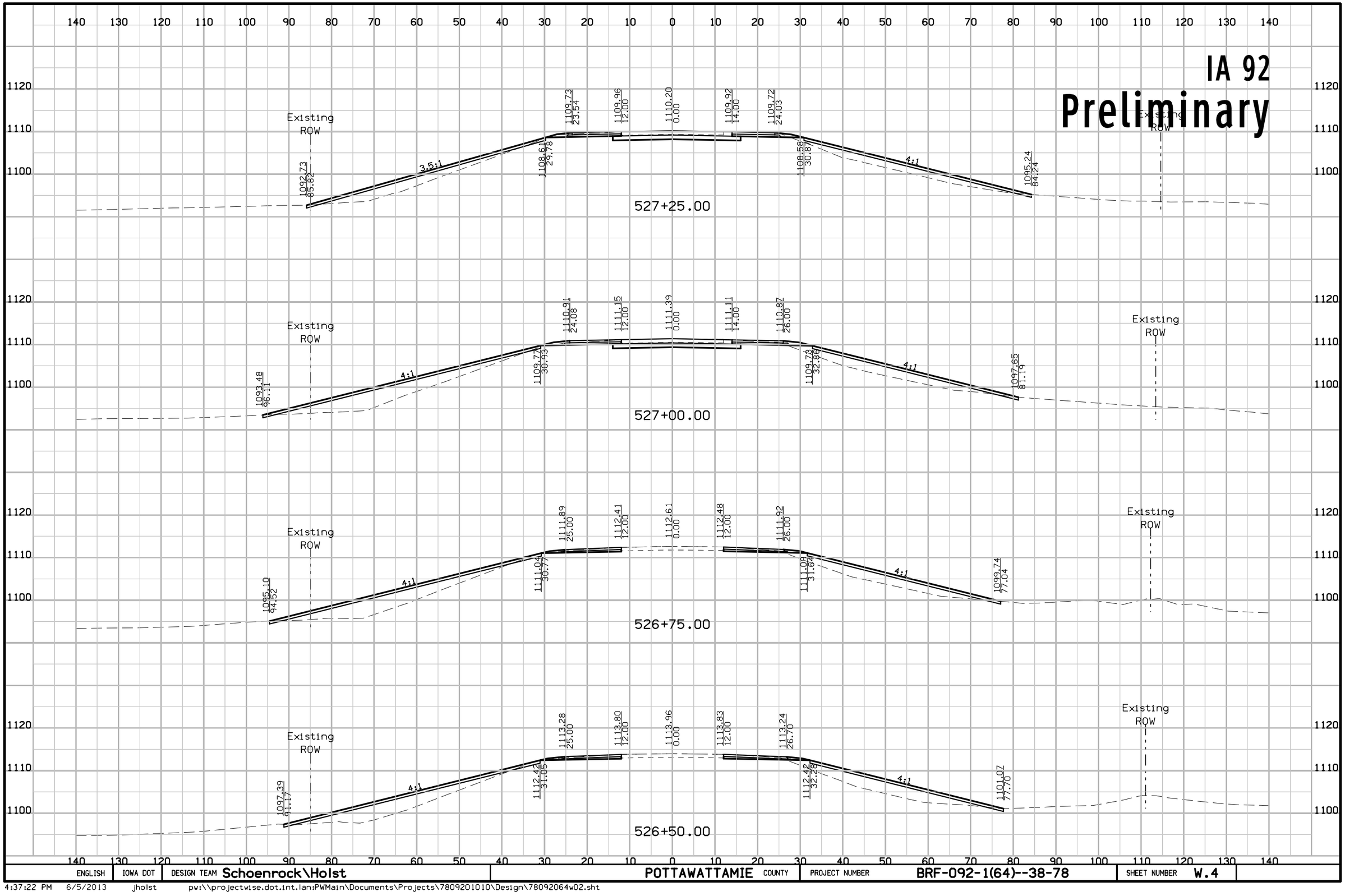
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-092-1(64)--38-78	SHEET NUMBER W.3

IA 92

Preliminary



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IA 92
Preliminary

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

1110
1100
1090

Existing ROW

527+75.00

Existing ROW

1110
1100
1090

Existing ROW

527+69.00

Existing ROW

1110
1100
1090

ROW

527+53.00

ROW

1120
1110
1100

Existing ROW

1092.42
74.96

3:1

1107.51
29.71

1108.63
23.54

1108.86
12.00

1109.10
0.00

1108.82
14.00

1108.63
23.54

1107.50
30.01

4:1

1092.98
88.09

Existing ROW

527+50.00

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

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-092-1(64)--38-78	SHEET NUMBER W.5

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IA 92
Preliminary

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

1110
1100
1090

ROW

530+00.00

ROW

1110
1100
1090

529+90.55

1100
1090
1080

529+66.00

1110
1100
1090
1080

Existing
ROW

528+08.00

Existing
ROW

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

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-092-1(64)--38-78	SHEET NUMBER W.6

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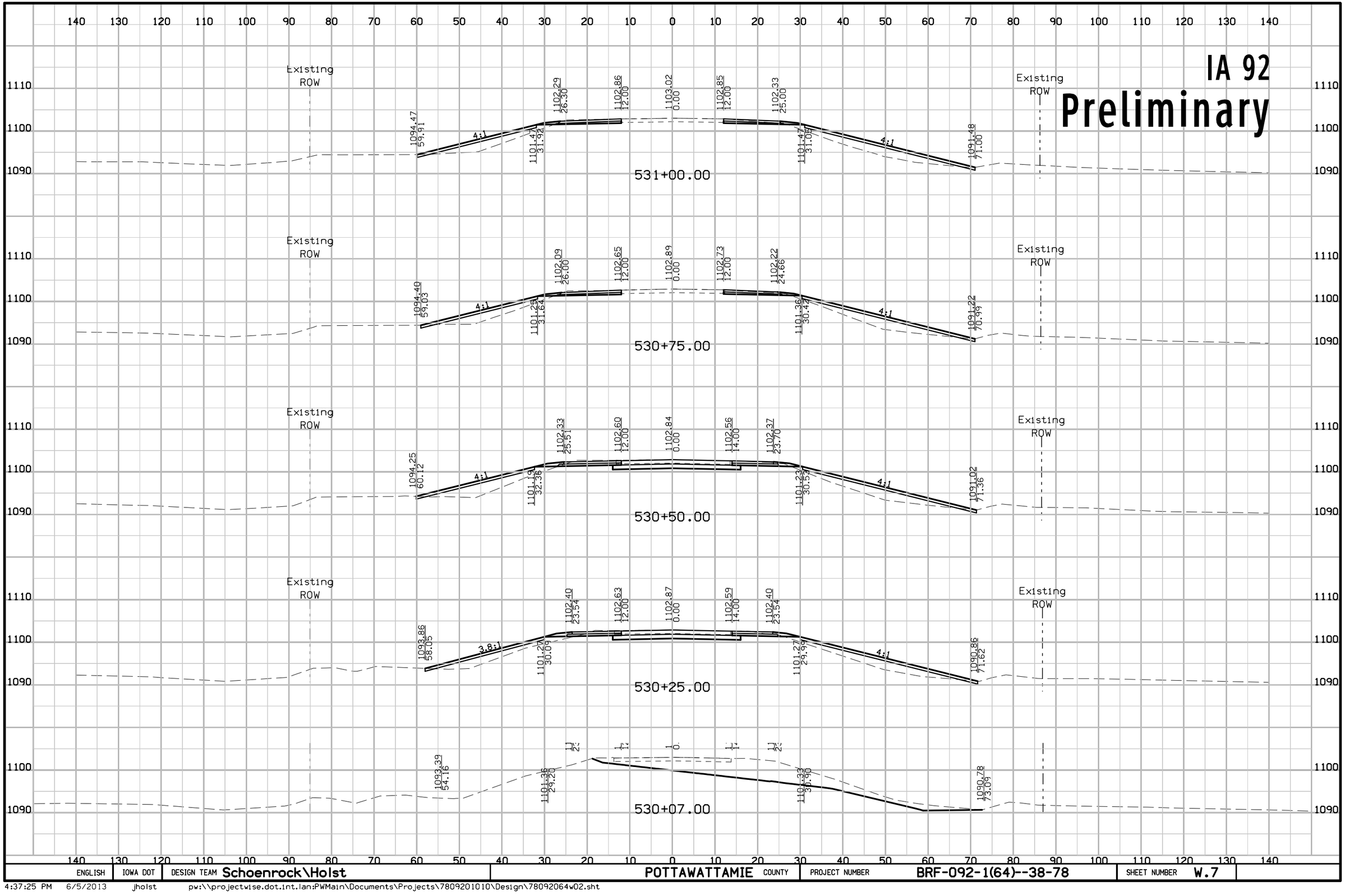
IA 92

Preliminary



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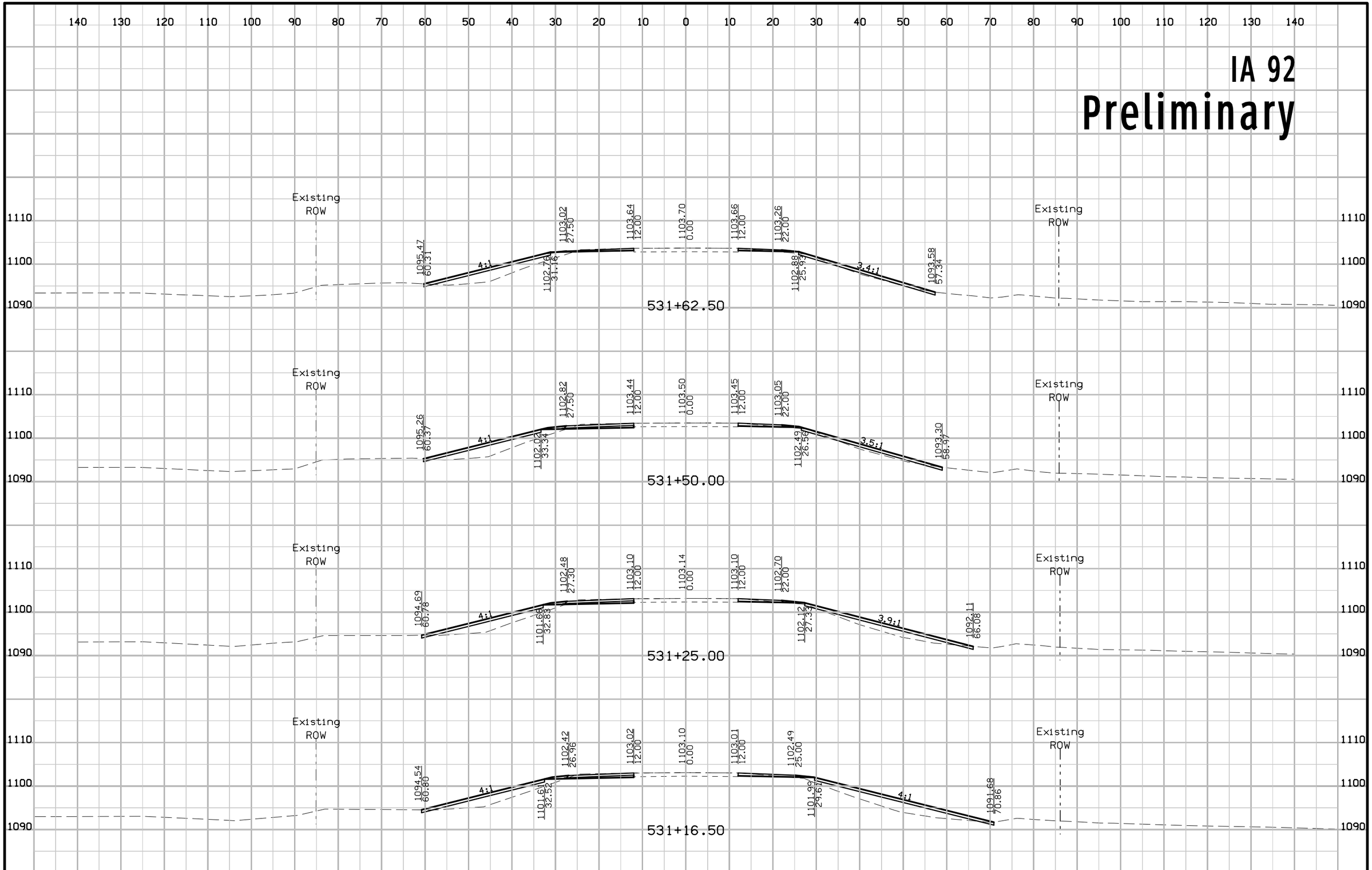
IA 92

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-092-1(64)--38-78	SHEET NUMBER W.8

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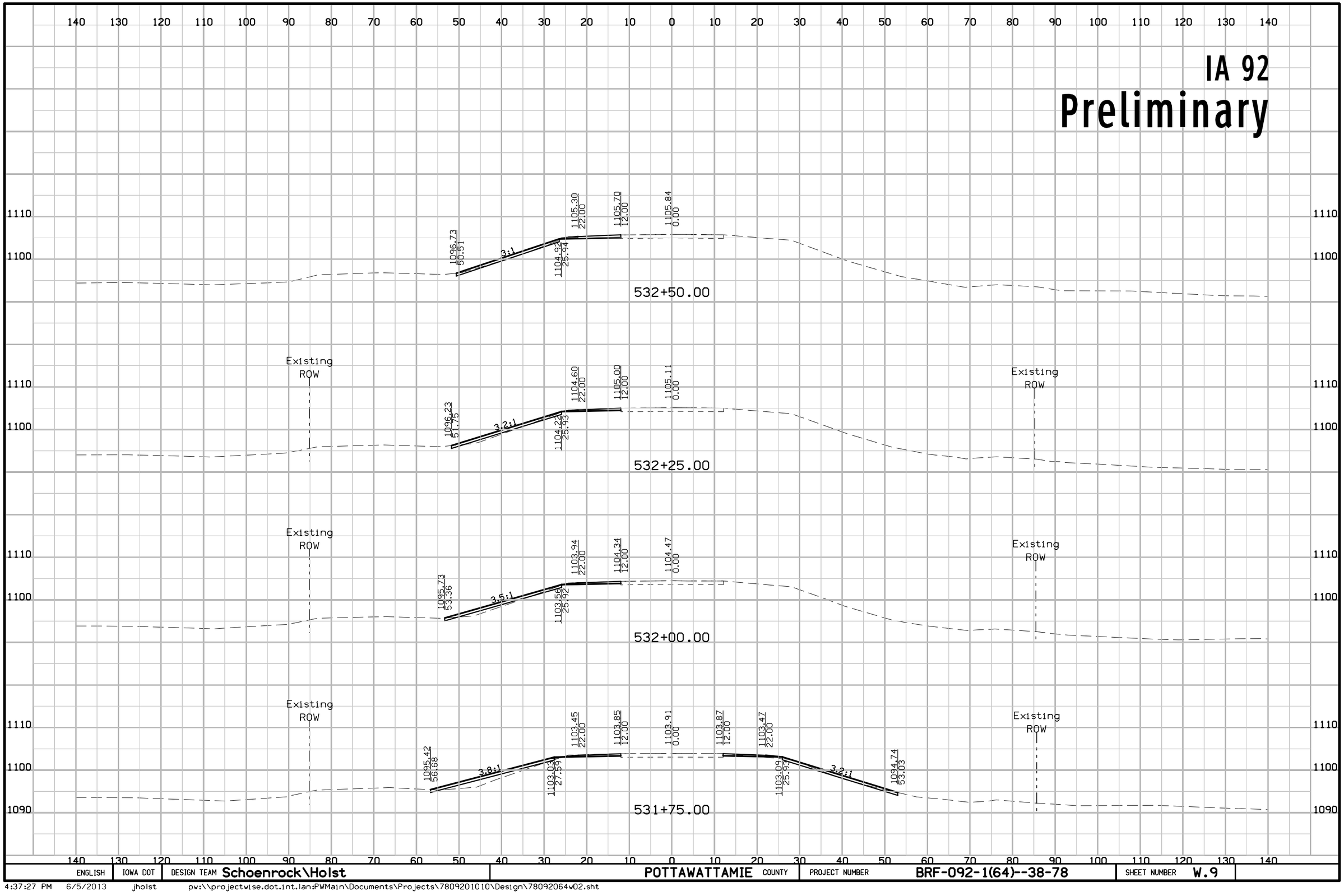
IA 92
Preliminary



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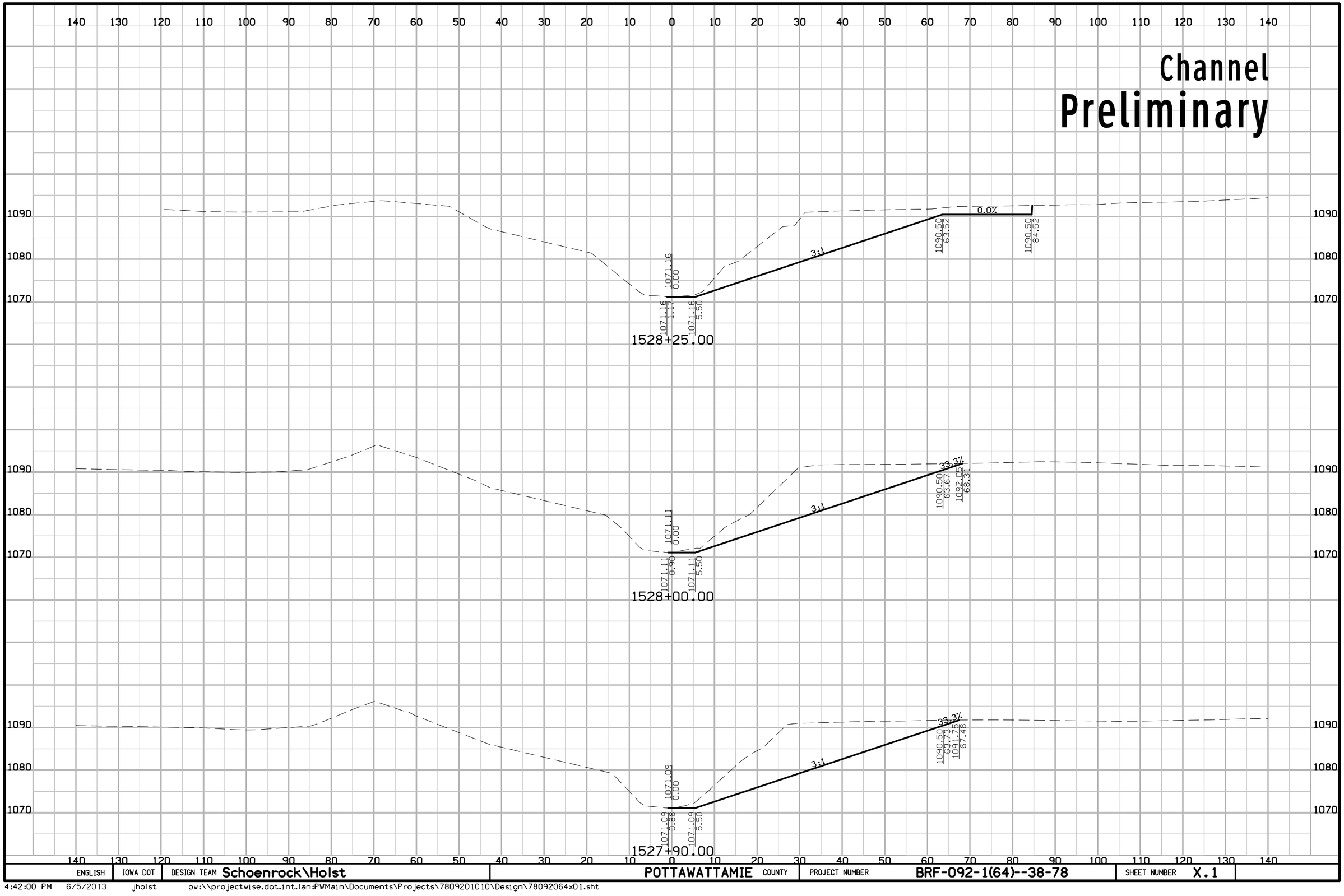
Channel
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-092-1(64)--38-78	SHEET NUMBER X.1

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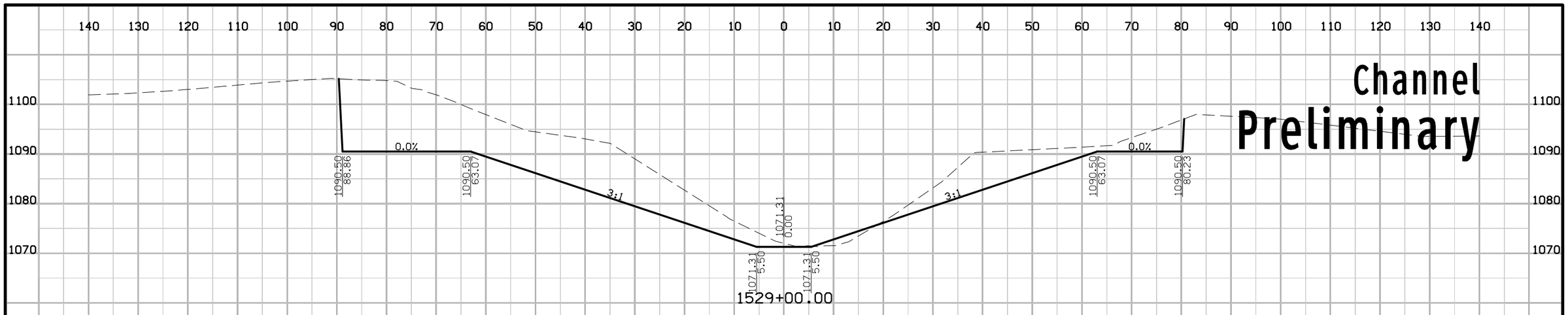
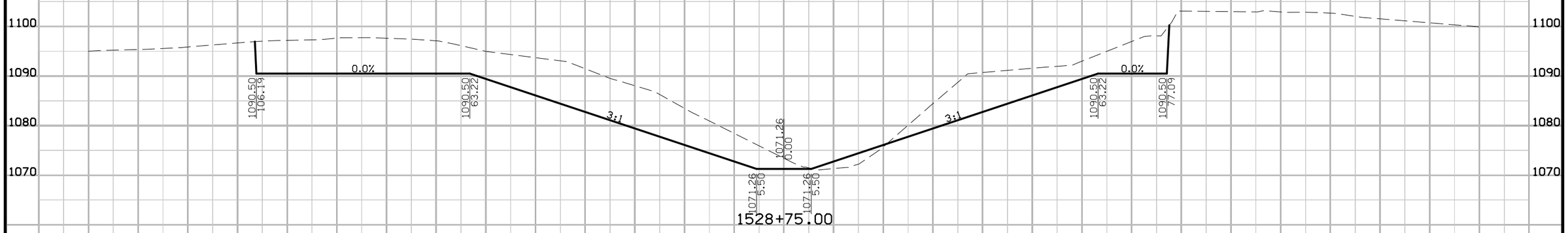
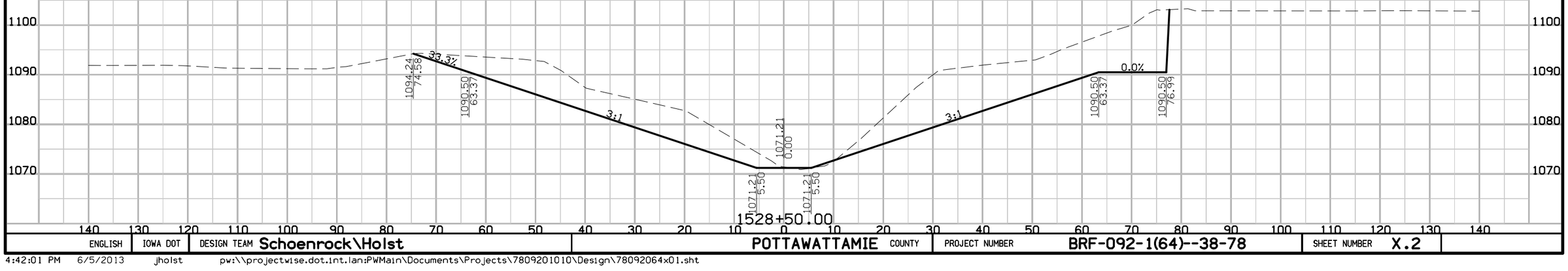
Channel

Preliminary







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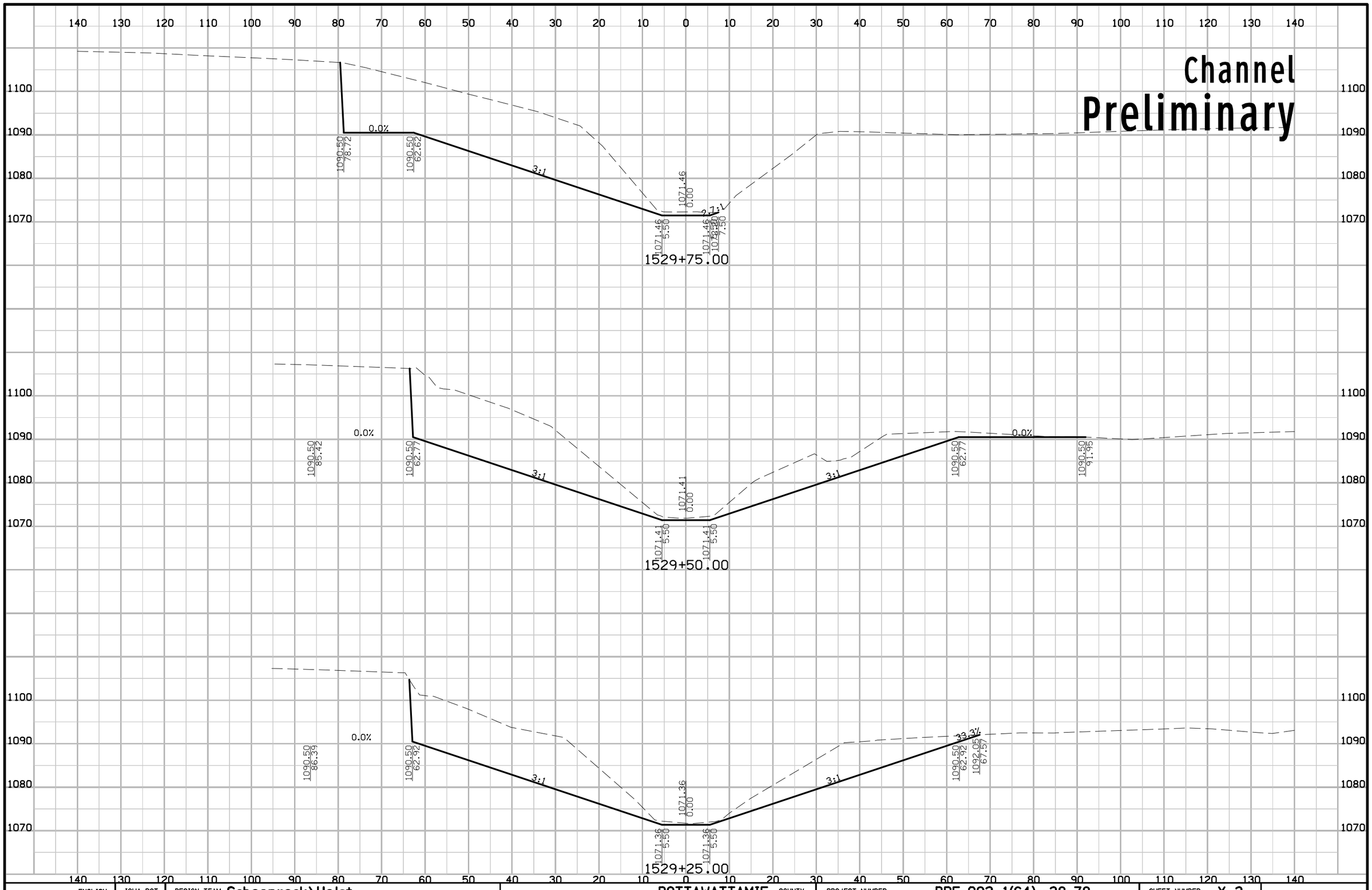
Channel
Preliminary



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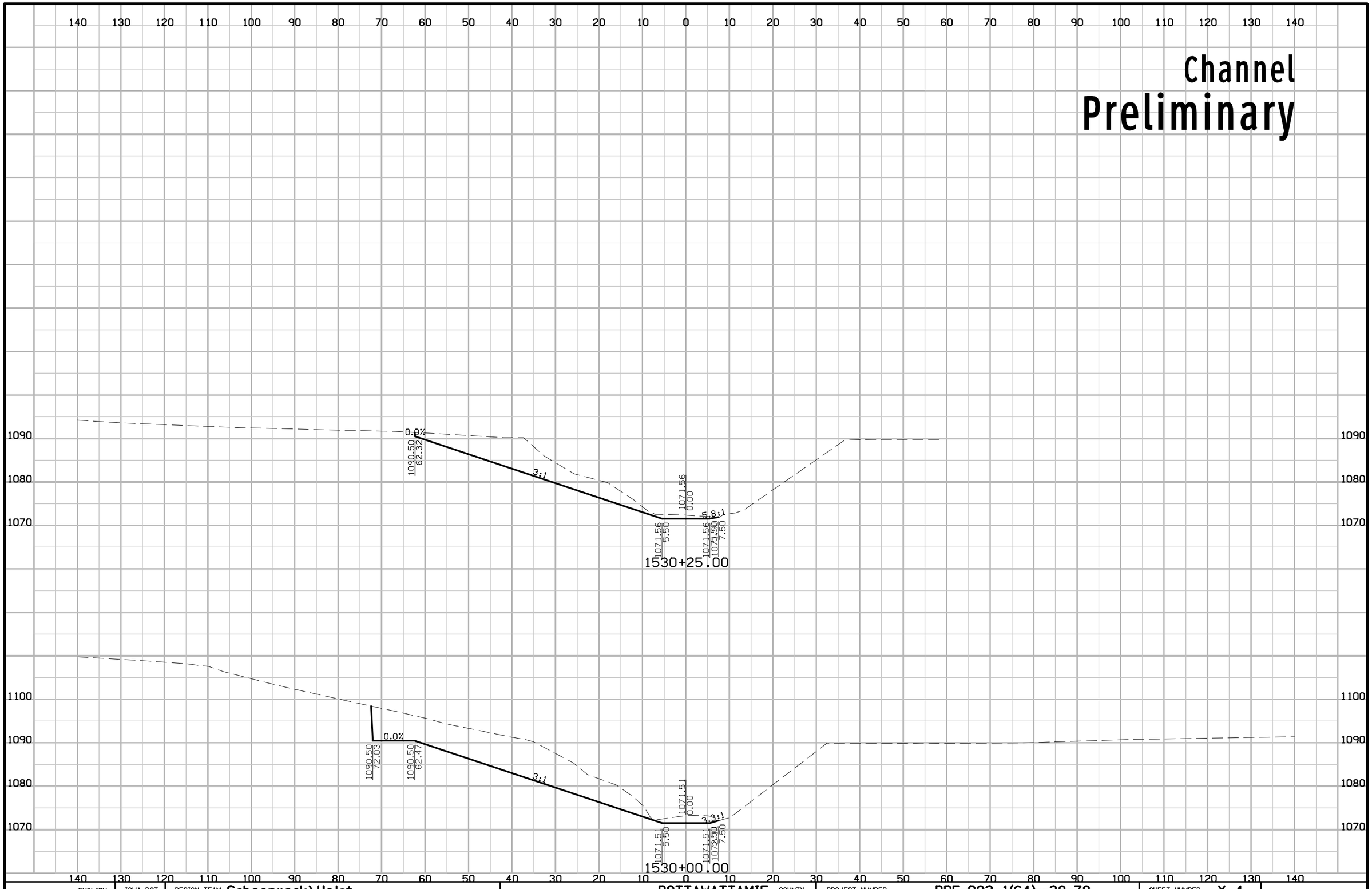
4:42:02 PM 6/5/2013 jholst pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7809201010\Design\78092064x01.sht

Channel
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Holst	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-092-1(64)--38-78	SHEET NUMBER X.4

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