

Information for File # MVP-2015-00132-SJW

Applicant: Eau Claire County Highway Department

Corps Contact: Samuel Woboril

Address: 1314 Contractors Blvd, Plover, Wisconsin 54467

E-Mail: samuel.j.woboril@usace.army.mil

Phone: (651) 290-5878

Primary County: Eau Claire

Project Location: The project site is located in Sec. 6, T. 26N., R. 7W., and Sections 19, 30, and 31, T. 27N., R. 7W., Eau Claire County, Wisconsin. (See attached project location map).

Information Complete On: January 22, 2015

Posting Expires On: February 25, 2015

Authorization Type: LOP-06-WI

This application is being reviewed in accordance with the practices for documenting Corps jurisdiction under Sections 9 & 10 of the Rivers and Harbor Act of 1899 and Section 404 of the Clean Water Act identified in Regulatory Guidance Letter 07-01. We have made a preliminary determination that the aquatic resources that would be impacted by the proposed project are regulated by the Corps of Engineers under Section 404 of the Clean Water Act. Our jurisdictional review and final jurisdictional determination could result in modifications to the scope of the project's regulated waterbody/wetland impacts and compensatory mitigation requirements identified above. An approved jurisdictional determination will be made prior to reaching a permit decision, and will be posted on the St. Paul District web page at <http://www.mvp.usace.army.mil/>.

Project Description:

The Eau Claire County Highway Department proposes to reconstruct a 2.04 mile section of CTH K. The project would consist of pulverizing and relaying the existing pavement structure and paving a new asphaltic surface. In addition to the rehabilitation work, the asphaltic shoulder would be widened throughout the project corridor from 3 to 4-feet to meet current design standards and would be given a safety edge. Multiple substandard vertical curves would be realigned to meet current design standards, and drainage structures would be replaced throughout the project length. Permanent signing, pavement marking, and beam guards would also be replaced as part of this project.

The existing pavement structure exhibits signs of fatigue and pavement distress including rutting, transverse cracking, and alligator cracking contributing to a poor pavement condition. In addition, numerous sections of CTH K have been patched and are breaking apart providing a rough ride for vehicular traffic. There are a few culvert pipes under the CTH K roadway that will also need to be replaced. The purpose of this project would be to improve substandard roadway conditions and geometry while improving vehicular travel safety along this portion of CTH K.

Impacts to Waters of the U.S.

The proposed project would result in the discharge of fill material into 1.23 acres of fresh (wet) meadow and 0.51 acres of sedge meadow wetlands.

Alternatives Considered

The following alternatives were explored:

Alternative 1 - Do Nothing: This alternative does not address the inadequate shoulder width, steep side slopes, substandard geometry, rough ride, or deteriorated pavement structure. The crash rate is high on this corridor and safety improvements need to be made. If improvements are not made to rehabilitate the existing pavement structure the pavement will continue to deteriorate leading to a total reconstruct. This alternative would not meet the project purpose and need of the proposed project and is not the preferred alternative.

Alternative 2 - Pavement Replacement using 3R standards (Match Existing): This alternative proposes overlaying the existing pavement structure, widening the asphaltic shoulder, paving a smooth driving surface, replacing drainage structures, new permanent signing, and new pavement marking. This alternative does not address the substandard vertical geometry found within the project corridor. This alternative would not meet current design standards. The new surface would last approximately 10-12 years which would result in the need for the roadway to be repaved in the near future; therefore, this alternative does not meet the project purpose and need and is not the preferred alternative.

Alternative 3 – Pavement Rehabilitation using 3R standards (No Improvements): This alternative proposes rehabilitating the existing pavement structure, widening the asphaltic shoulder and flattening side slopes to current design standards, paving a smooth driving surface, replacing drainage structures, new permanent signing, and new pavement marking. This alternative does not address the substandard vertical geometry located throughout the project corridor. This alternative is an improvement over alternatives 1 and 2, however it still does not meet the desirable design standards. This alternative is not preferred.

Alternative 4 – Pavement Replacement using 3R standards (Vertical Curve Adjustment): This alternative proposes rehabilitating the existing pavement structure, widening the asphaltic shoulder and flattening side slopes to current design standards, paving a smooth driving surface, replacing drainage structures, new permanent signing, and new pavement marking. This alternative proposes realignment of the substandard vertical curves to 55 mph (meets 3RC1 design standards). This alternative proposes use of 3:1 side slopes outside of the clear zone to minimize impacts to wetlands. Overall this alternative meets the purpose and need by rehabilitating/reconstructing CTH K and improving safety throughout the project corridor. This alternative meets design standards for the 3RC1 design class, and is the applicants preferred and recommended alternative.

Federally Listed Threatened and Endangered Species

According to the USFWS Midwest Region website, which was checked on January 22, 2015, the Gray wolf (endangered), the Northern long-eared bat (proposed as endangered), the Sheepnose (endangered), and the Karner blue butterfly (endangered) are found in Eau Claire County, Wisconsin.

Historic Properties

A search of the Wisconsin Historical Society Database was conducted on January 22, 2015, and no historic properties were found within or in close proximity to the project location.

Mitigation

At the time of this public notice the applicant has not provided a final compensatory mitigation plan to offset the wetland impacts that would occur as a result of this project. However, the applicant has stated that they are currently exploring the availability of mitigation credits from a Corps approved private commercial mitigation bank located within the corresponding bank service area of the project. The applicant's final mitigation proposal would be required to satisfy the 2008 Mitigation Rule and the Guidelines for Wetland Compensatory Mitigation in Wisconsin.

Drawings

See attached MVP-2015-00132-SJW, Page 1 of 26 through Page 26 of 26

310 E. Jackson Street
 Wisconsin Rapids, WI 54494
 phone: 715-424-2424
 fax: 715-424-2421

THIS DOCUMENT, THE IDEAS AND DESIGNS INCORPORATED HEREIN AS AN INSTRUMENT OF SERVICE, IS THE PROPERTY OF JEWELL ASSOCIATES ENGINEERS, INC. AND IS NOT TO BE USED IN WHOLE OR IN PART WITHOUT PRIOR WRITTEN AUTHORIZATION OF JEWELL ASSOCIATES ENGINEERS, INC.

**CTH K
 KOPPLIN ROAD - CTH SS
 EAU CLAIRE COUNTY, WISCONSIN**

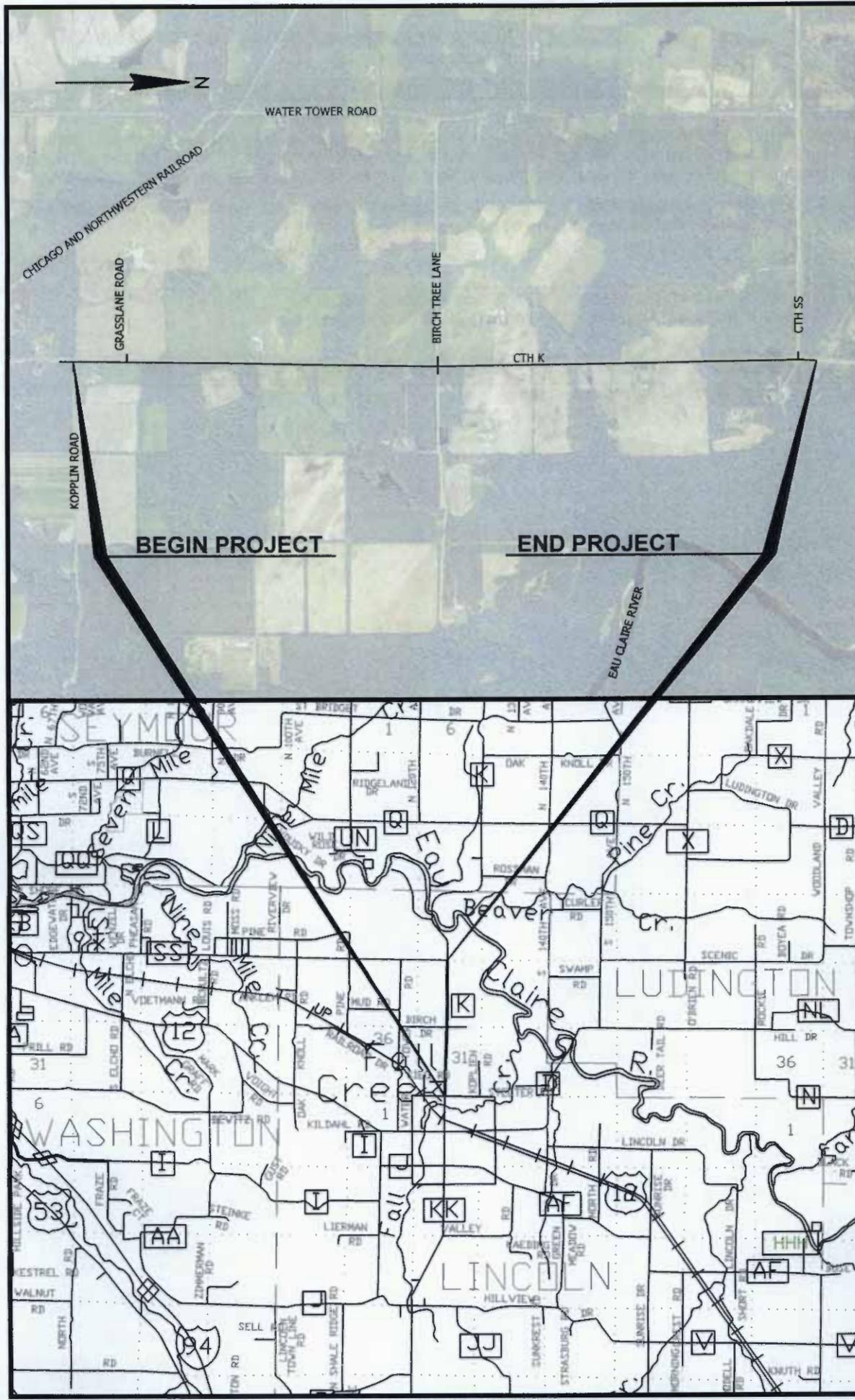
Date
 8/14/2014

2015-00132-SJW
 Page 1 of 26

Drawing Name
**PROJECT
 LOCATION
 MAP**

Sheet No.
A1.0
 Jewell Project Number
E30030

PLOT BY : ECKELBERG, PATRICK
 PLOT DATE : 8/14/2014

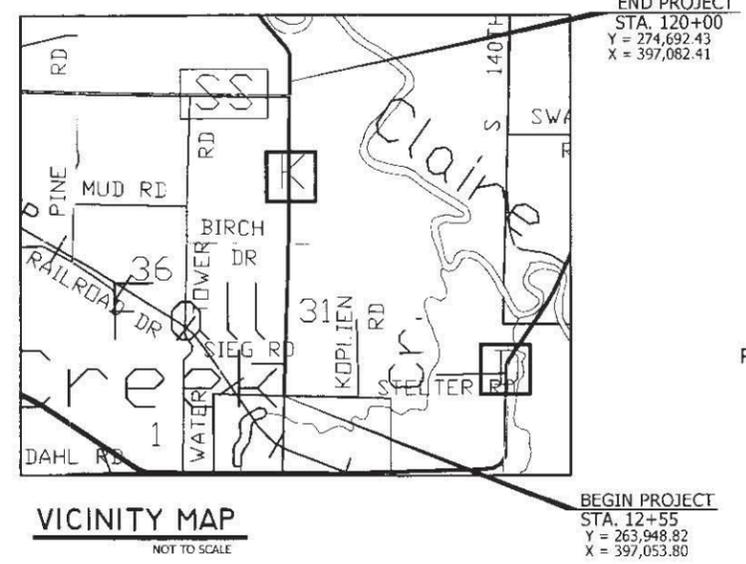


PLAN OF PROPOSED IMPROVEMENTS FOR CTH K RECONDITIONING KOPPLIN ROAD - CTH SS EAU CLAIRE COUNTY, WISCONSIN VILLAGE OF FALL CREEK AND TOWN OF LINCOLN

NOV 20 2015



PROJECT LOCATION



LEGEND & ABBREVIATIONS	
LEGEND	
▲ - SURVEY CONTROL POINT	— — — — — BUILDING (OBJECT LINE)
• - FD. I.P./REBAR	— — — — — ROAD/PARKING LOT EDGE
⊗ - FIRE HYDRANT	— x — x — FENCE
⊠ - UTILITY POLE	— T — T — UTILITY LINE
← - GUY WIRE	— SAN — — — UTILITY LINE
⊥ - SIGN/BILLBOARD	— — — — — TREE LINE
MH - MANHOLE	— — — — — CONTOURS INTERMEDIATE
GV - VALVE (TYPE)	— — — — — CONTOURS INDEX
⊗ - LIGHT POLE	— — — — — PROPERTY BORDER
⊙ - BENCH MARK	— — — — — PROPERTY LINE
⊠ - INLET	— — — — — LOT LINE
⊙ - TREE	— — — — — RIGHT OF WAY LINE
☆ - PINE TREE	⊘ - PLAN DETAIL
⊘ - SECTION DETAIL	
ABBREVIATIONS	
T - TELEPHONE	O.H.E. - OVERHEAD ELECTRIC
G - GAS	F.O. - FIBER OPTIC
E - ELECTRIC	S.S. - STORM SEWER
W.M. - WATER MAIN	SAN. - SANITARY SEWER
MH - MANHOLE	F.M. - FORCE MAIN

PROJECT DIRECTORY	
OWNER EAU CLAIRE COUNTY HIGHWAY DEPARTMENT 2000 SPOONER AVENUE ALTOONA, WI 54720 PH: (715) 839-2952 ATTN: MARCUS EVANS	UTILITIES
CIVIL ENGINEER JEWELL ASSOCIATES ENGINEERS, INC. 310 E. JACKSON STREET WISCONSIN RAPIDS, WI 54495 PH: (715)-424-2424 FAX: (715)-424-2421 ATTN: SCOTT WHITSETT EMAIL: SCOTT.WHITSETT@JEWELLASSOC.COM	ELECTRIC - TRANSMISSION XCEL ENERGY P.O. BOX 8 EAU CLAIRE, WI 54702-0008 ATTN: PAM TAYLOR PH: (715) 737-1306 EMAIL: PAMELA.L.TAYLOR@XCELENERGY.COM
DEPARTMENT OF NATURAL RESOURCES WISCONSIN DEPARTMENT OF NATURAL RESOURCES 1300 W CLAIRMONT STREET EAU CLAIRE, WI 54702-6127 ATTN: CHRIS WILLGER PH: (715) 839-1609 EMAIL: CHRISTOPHERJ.WILLGER@WISCONSIN.GOV	ELECTRIC - DISTRIBUTION EAU CLAIRE ENERGY COOPERATIVE 8214 US HIGHWAY 12 FALL CREEK, WI 54742 ATTN: DON DRAEGER PH: (715) 836-6474
 CALL 811 3 WORK DAYS BEFORE YOU DIG OR TOLL FREE (800) 242-8511 HEARING IMPAIRED TTY: (800) 542-2289 WWW.DIGGERSHOTLINE.COM	GAS XCEL ENERGY P.O. BOX 8 EAU CLAIRE, WI 54702-0008 ATTN: SCOTT SEAHOLM PH: (715) 737-1306 EMAIL: SCOTT.J.SEAHOLM@XCELENERGY.COM
	CABLE TV/FIBER OPTIC/TELEPHONE CENTURYLINK 835 REDIRON ROAD BLACK RIVER FALLS, WI 54615 ATTN: DONNA SMOTHERS PH: (715) 284-4375 EMAIL: DONNA.SMOTHERS@CENTURYLINK.COM
	UW-EAU CLAIRE LEARNING & TECHNOLOGY SERVICES LIBRARY 2100T EAU CLAIRE, WI 54702 ATTN: DAREN BAUER PH: (715) 836-5286 EMAIL: BAUERDP@UWEC.EDU

DRAWING INDEX	
CIVIL	TITLE SHEET
C1.0	TYPICAL SECTIONS
C2.0 - C2.1	INTERSECTION DETAILS
C2.2 - C2.3	CONSTRUCTION DETAILS
C2.4 - C2.19	EROSION CONTROL
C2.20 - C2.23	TRAFFIC CONTROL
C3.0 - C3.2	PERMANENT SIGNING/ PAVEMENT MARKING
C3.3 - C3.6	ALIGNMENT DETAILS
C4.0 - C4.2	PLAN & PROFILE
C5.0 - 5.10	CROSS SECTIONS
C6.0 - C6.35	

DESIGN DATA	
DESIGN SPEED	55 MPH
AADT (2014)	840
AADT (2034)	1250
PROJECT SCOPE	
PULVERIZE AND OVERLAY, HMA PAVEMENT TYPE E-1 AND BASE AGGREGATE SHOULDERS	
CTH K	2.04 MILES

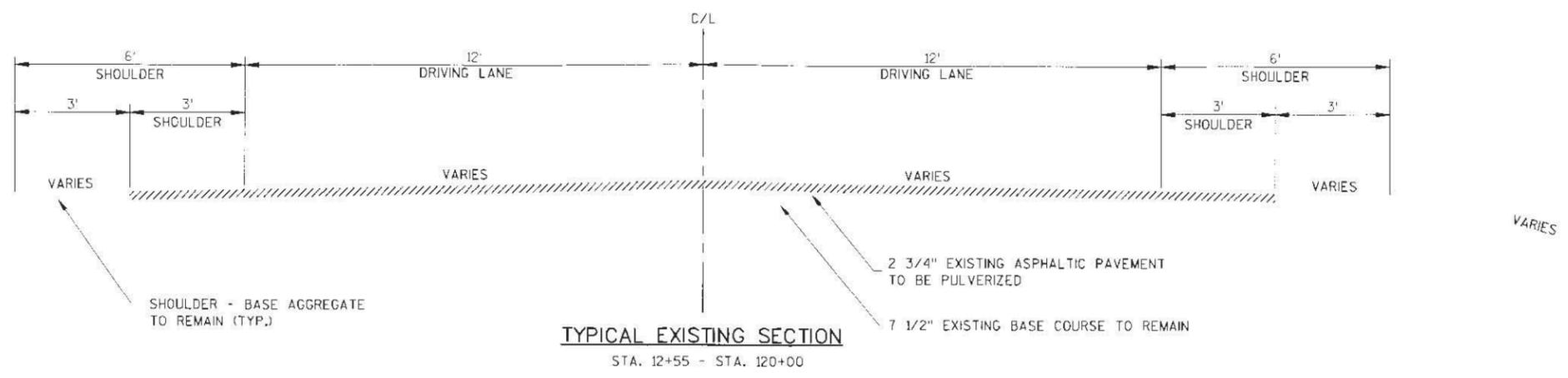
ORIGINAL PLANS PREPARED BY:	
SIGNATURE _____	DATE _____
Date	10/13/2014
Date	Revision

- GENERAL NOTES**
- EXISTING SITE TOPOGRAPHIC INFORMATION OBTAINED FROM SURVEY BY EAU CLAIRE COUNTY HIGHWAY DEPARTMENT (04/14/2014 & 09/11/2014).
 - ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
 - COORDINATES HEREIN REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), EAU CLAIRE COUNTY.
 - THE OWNER SHALL REVIEW ALL PRIVATE, COMMERCIAL, AND FIELD ENTRANCES TO DETERMINE ACCEPTANCE, RELOCATION, OR REJECTIONS.
 - THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND OR A DIRECT CALL TO THE UTILITIES WHICH HAVE FACILITIES IN THE AREA.
 - ACCESS TO ALL ENTRANCES SHALL BE MAINTAINED DURING CONSTRUCTION.
 - 3.5" INCHES OF HMA PAVEMENT TYPE E-1 SHALL BE CONSTRUCTED WITH A 1 3/4" UPPER LAYER AND A 1 3/4" LOWER LAYER. THE NOMINAL SIZE OF AGGREGATE USED FOR BOTH LAYERS SHALL BE 12.5 MM.
 - REMOVAL OF ASPHALTIC SURFACES WHERE AN ABUTTING ASPHALTIC SURFACE IS TO REMAIN IN PLACE SHALL REQUIRE A SAWCUT MEETING THE APPROVAL OF THE ENGINEER IN THE FIELD.
 - HMA PAVEMENT TYPE E-1 QUANTITIES WERE CALCULATED BASED ON DENSITY OF 115 LB/SY-IN.
 - TACK COAT HAS BEEN ESTIMATED AT AN APPLICATION RATE OF 0.025 GAL/SY.

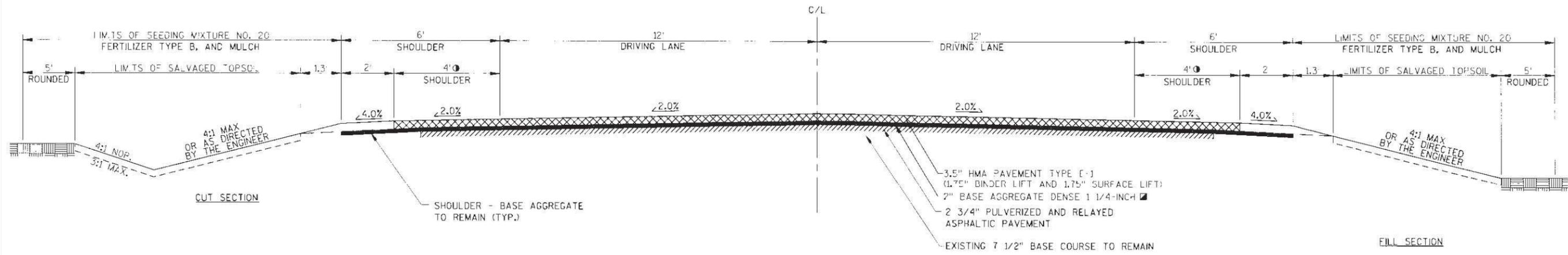
DESIGN IS IN ACCORDANCE WITH "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS" 2004 (AASHTO) EXCEPT AS PROVIDED FOR IN THE SPECIAL PROVISIONS. ALL WORK SHALL BE ACCOMPLISHED ACCORDING TO THE STATE OF WISCONSIN "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION" 2014 EDITION.	
EAU CLAIRE COUNTY	
RECOMMENDED FOR APPROVAL	
HIGHWAY COMMISSIONER _____	DATE _____

Drawing Name	Title Sheet
Sheet No.	C1.0
Jewell Project Number	E30030

**CTH K
 KOPPLIN ROAD - CTH SS
 EAU CLAIRE COUNTY, WISCONSIN**



TYPICAL EXISTING SECTION
 STA. 12+55 - STA. 120+00



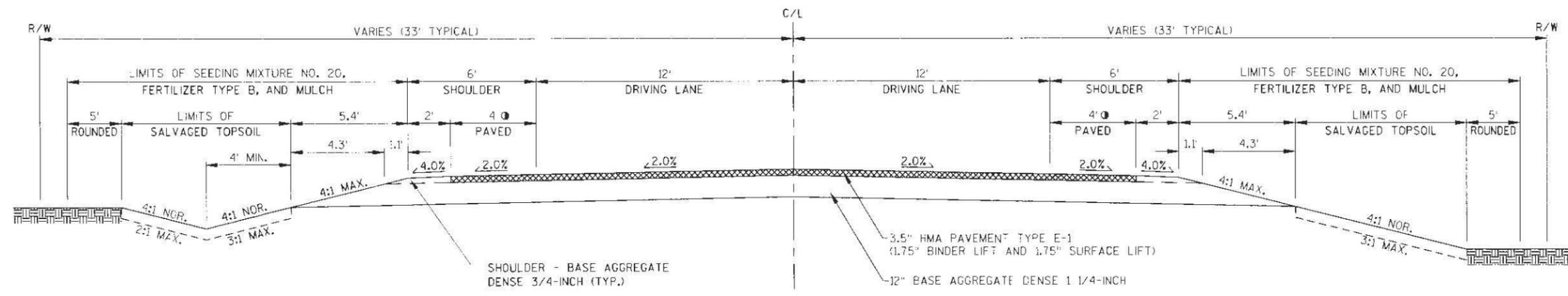
TYPICAL FINISHED SECTION
 STA. 26+50 - STA. 36+40
 STA. 44+95 - STA. 89+50
 STA. 106+35 - STA. 120+00

- ASPHALT SAFETY EDGE
- PLACE 2" OF BASE AGGREGATE DENSE 1 1/4-INCH ON TOP OF EXISTING ASPHALTIC SURFACE AND SHOULDERS PRIOR TO PULVERIZATION OPERATIONS.

Date	10/10/2014
Date	Revision
Drawing Name	
TYPICAL SECTIONS	
Sheet No.	
C2.0	
Jewell Project Number	
E30030	

THIS DOCUMENT, INCLUDING ANY NOTATIONS INCORPORATED HEREIN AS AN INSTRUMENT OF SERVICE, IS THE PROPERTY OF JEWELL ASSOCIATES ENGINEERS, ARCHITECTS AND SURVEYORS. IT IS TO BE USED ONLY IN CONNECTION WITH THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. NO PART OF THIS DOCUMENT IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.

**CTH K
 KOPPLIN ROAD - CTH SS
 EAU CLAIRE COUNTY, WISCONSIN**



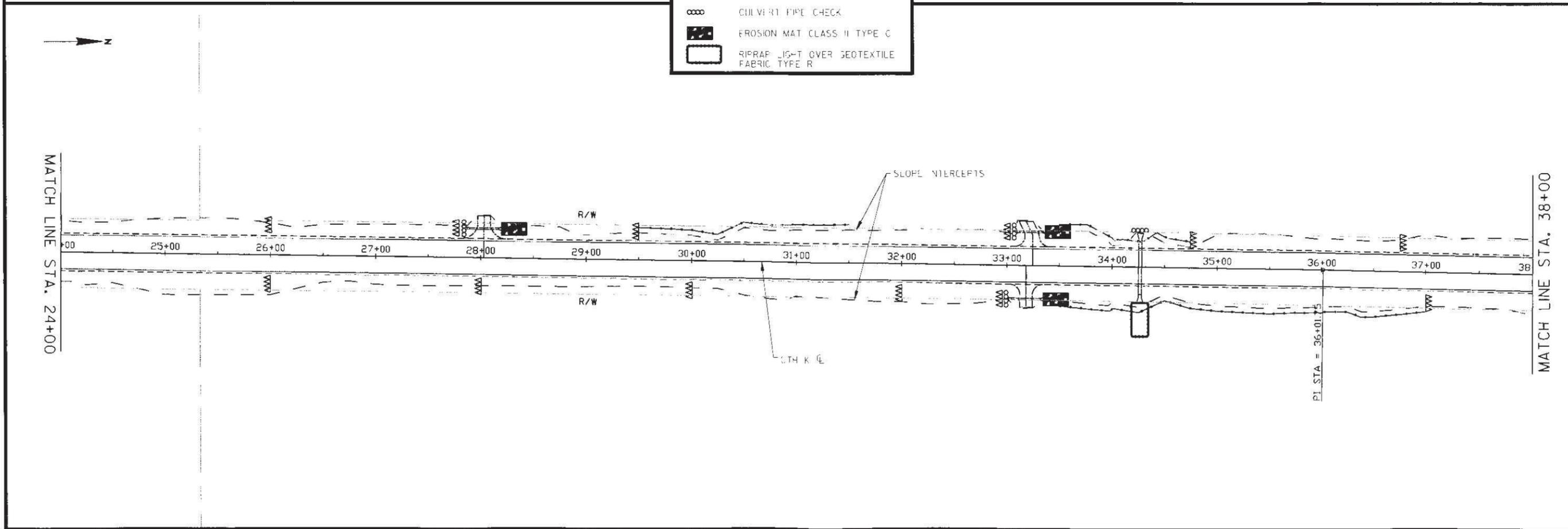
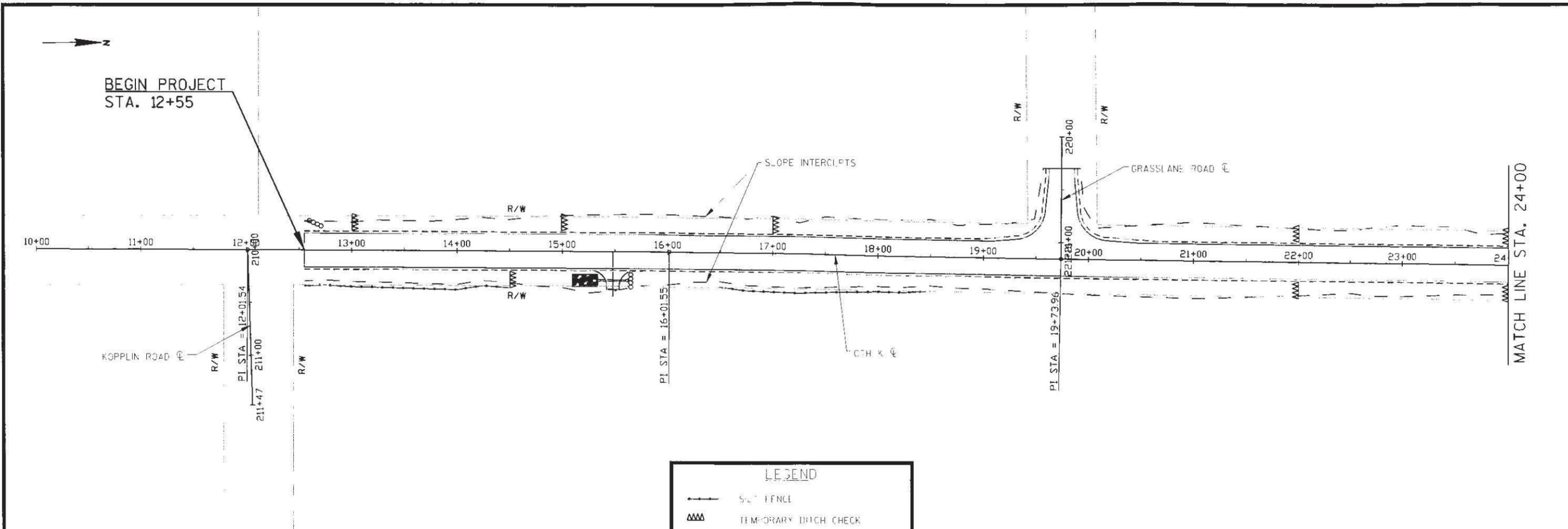
CUT SECTION

TYPICAL FINISHED SECTION
 STA. 12+55 - STA. 26+50
 STA. 36+40 - STA. 44+95
 STA. 89+50 - STA. 106+35

FILL SECTION

● ASPHALT SAFETY EDGE

Date	10/9/2014
Revision	
Date	
Revision	
Drawing Name	TYPICAL SECTIONS
Sheet No.	C2.1
Jewell Project Number	E30030



LEGEND

- SLOPE INTERCEPTS
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- EROSION MAT CLASS II TYPE C
- RIPRAP LIGHT OVER GEOTEXTILE FABRIC TYPE R

**CTH K
 KOPPLIN ROAD - CTH SS
 EAU CLAIRE COUNTY, WISCONSIN**

Date
 10/10/2014

Date Revision
 Drawing Name
EROSION CONTROL

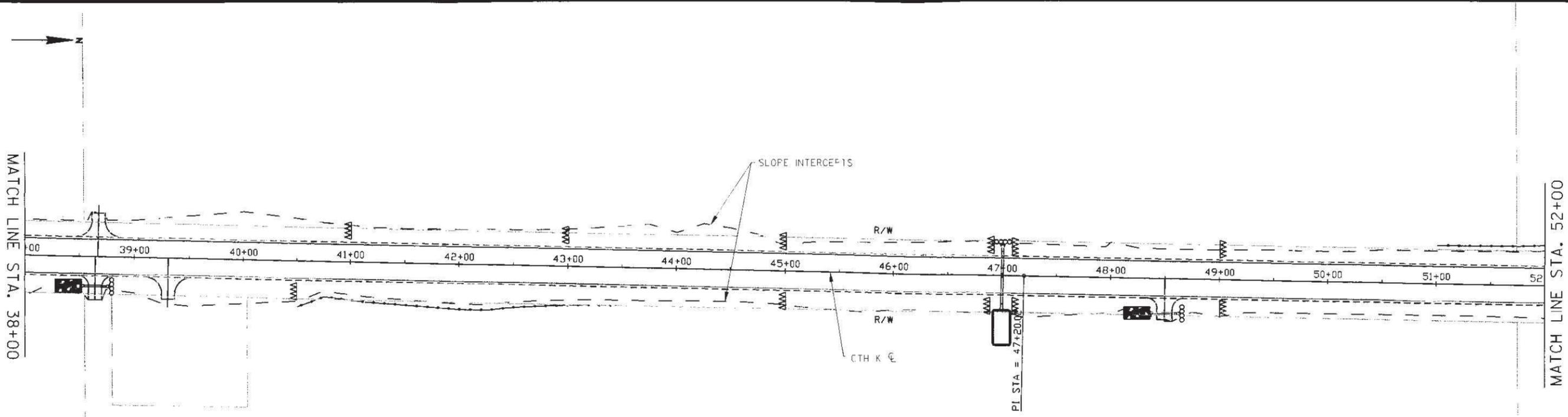
Sheet No.
C2.20
 Jewell Project Number
E30030

**CTH K
 KOPPLIN ROAD - CTH SS
 EAU CLAIRE COUNTY, WISCONSIN**

Date	10/10/2014
Revision	

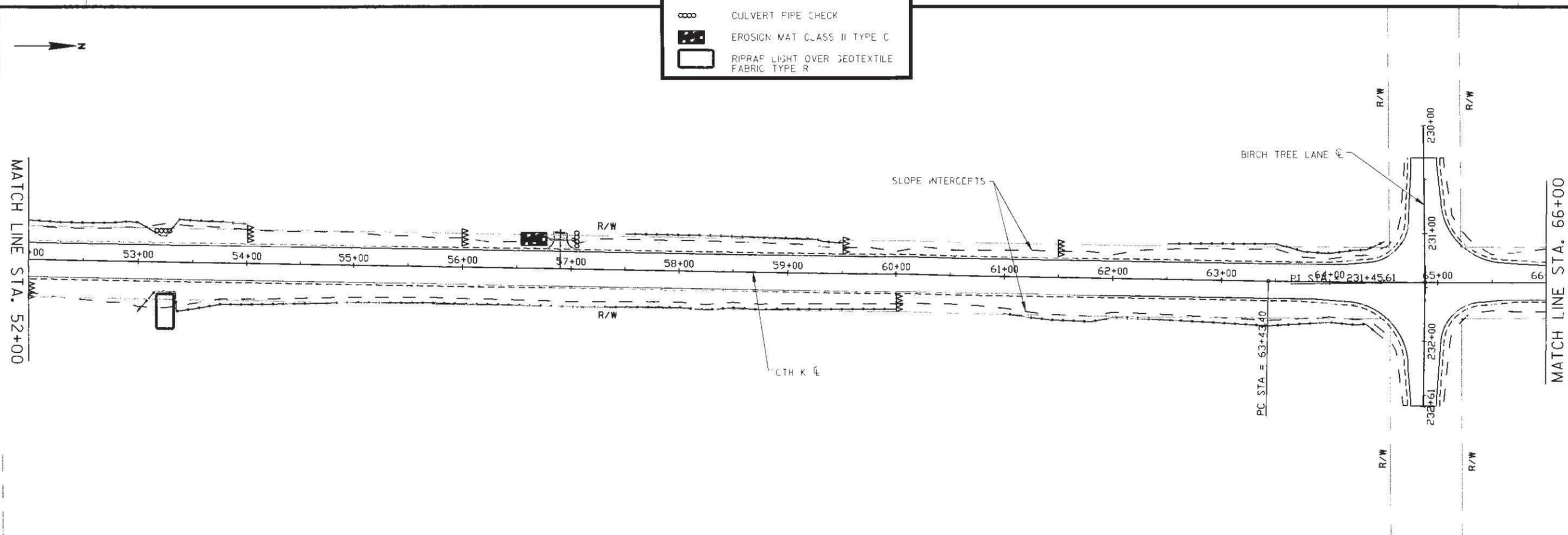
Drawing Name
EROSION CONTROL

Sheet No.
C2.21
 Jewell Project Number
E30030



LEGEND

- SILT FENCE
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- EROSION MAT CLASS II TYPE C
- RIPRAP LIGHT OVER GEOTEXTILE FABRIC TYPE R

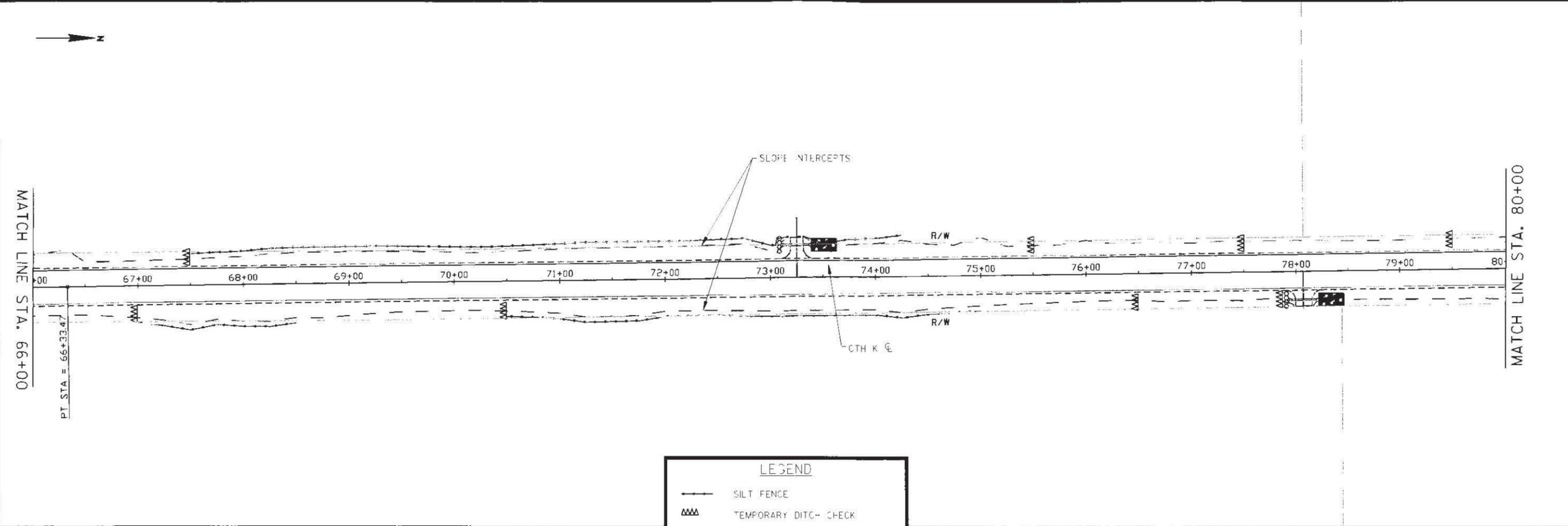


**CTH K
 KOPPLIN ROAD - CTH SS
 EAU CLAIRE COUNTY, WISCONSIN**

Date	10/10/2014

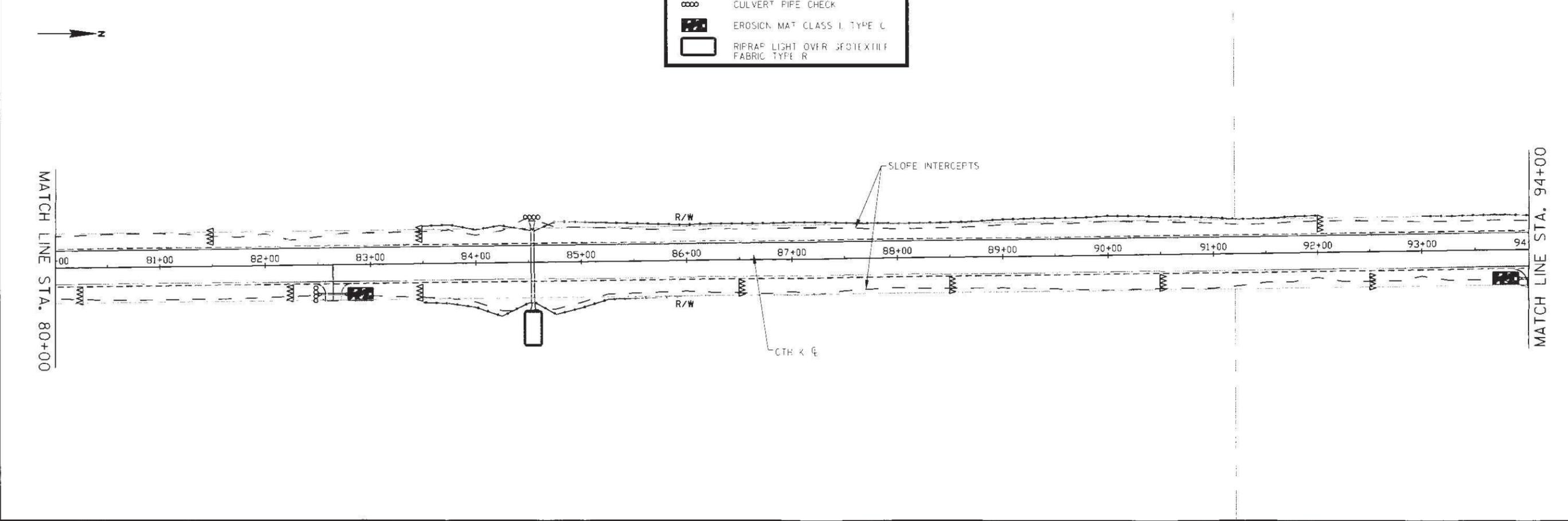
Date: Revision:
 Drawing Name
EROSION CONTROL

Sheet No.
C2.22
 Jewell Project Number
E30030



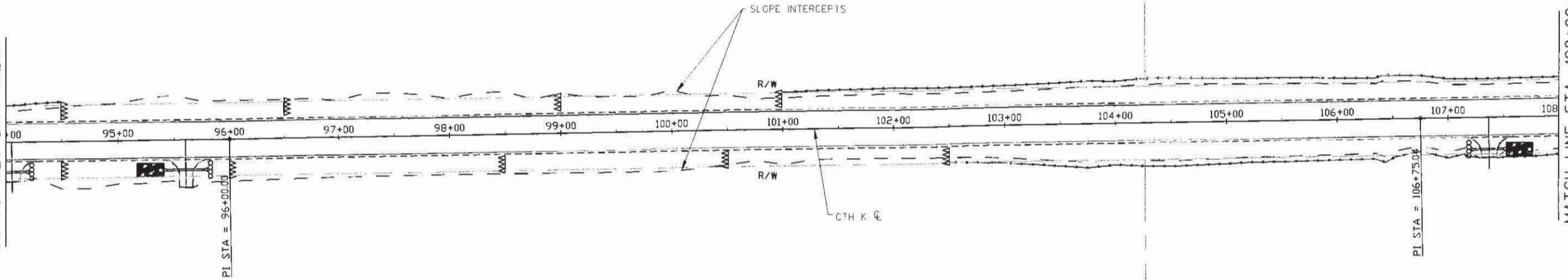
LEGEND

- SILT FENCE
- ▲▲▲ TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- EROSION MAT CLASS I, TYPE C
- RIPRAP LIGHT OVER GEOTEXTILE FABRIC TYPE R





MATCH LINE STA. 94+00



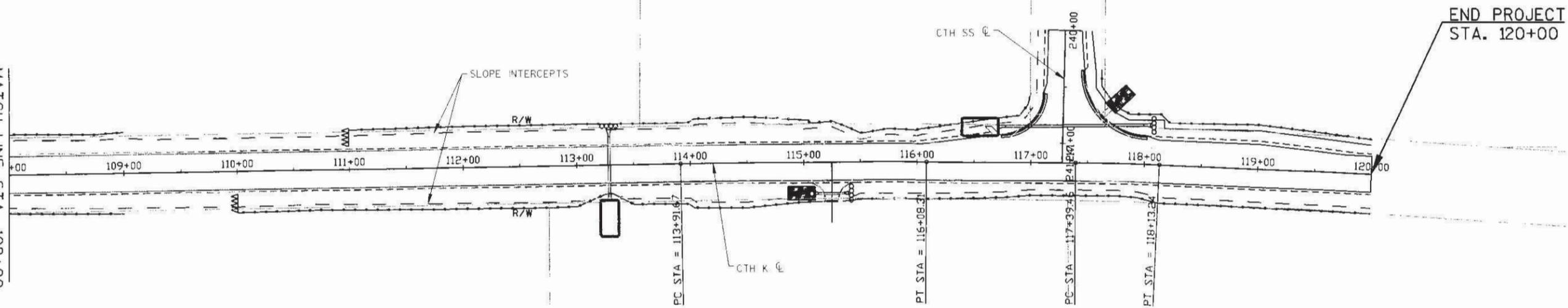
MATCH LINE STA. 108+00

LEGEND

- SILT FENCE
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- EROSION MAT CLASS II TYPE C
- RIPRAP LIGHT OVER GEOTEXTILE FABRIC TYPE R



MATCH LINE STA. 108+00



END PROJECT STA. 120+00

JEWELL
 associates engineers, inc.
 Engineers - Surveyors - Architects

310 E Jackson St
 Wisconsin Rapids, WI 54484
 phone: 715-424-2424
 fax: 715-424-2421

THIS DOCUMENT, THE IDEAS AND THE CONCEPTS CONTAINED HEREIN AS AN INSTRUMENT OF SERVICE, IS THE PROPERTY OF JEWELL ASSOCIATES ENGINEERS, INC. AND IS NOT TO BE USED IN ANY MANNER WITHOUT PRIOR WRITTEN PERMISSION OF JEWELL ASSOCIATES ENGINEERS, INC.

**CTH K
 KOPPLIN ROAD - CTH SS
 EAU CLAIRE COUNTY, WISCONSIN**

Date	10/10/2014
Revision	

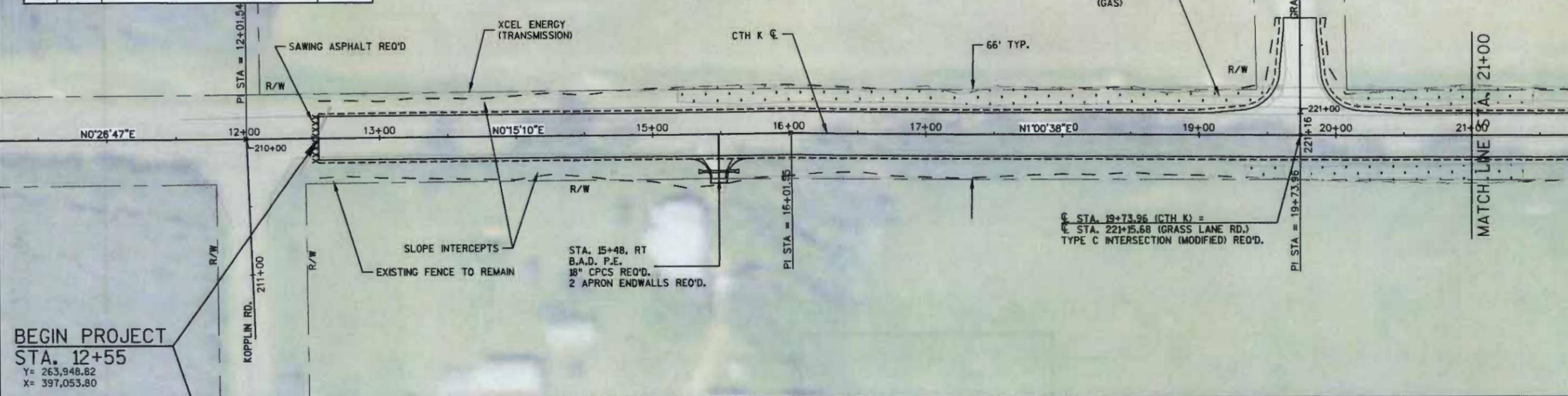
Drawing Name
EROSION CONTROL

Sheet No.
C2.23
 Jewel Project Number
E30030

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	00+00	xxx	000.00
2	00+00	xxx	000.00
3	00+00	xxx	000.00

STA. 12+53
EXISTING 18" C.P.R.C. TO REMAIN

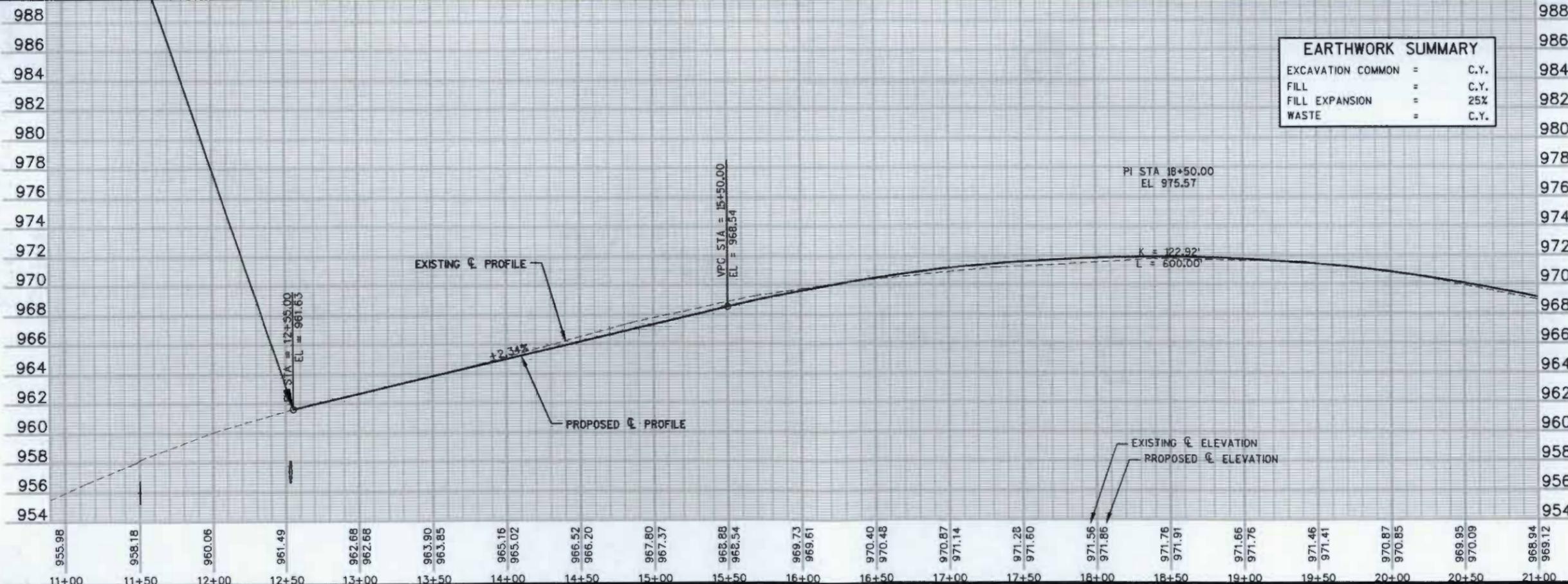


BEGIN PROJECT
STA. 12+55
Y = 263,948.82
X = 397,053.80

☉ STA. 19+73.96 (CTH K) =
☉ STA. 221+15.68 (GRASS LANE RD.)
TYPE C INTERSECTION (MODIFIED) REQ'D.

STA. 15+48, RT
B.A.D. P.E.
18" CPCS REQ'D.
2 APRON ENDWALLS REQ'D.

EARTHWORK SUMMARY	
EXCAVATION COMMON	= C.Y.
FILL	= C.Y.
FILL EXPANSION	= 25%
WASTE	= C.Y.



310 E. Jackson Street
Wisconsin Rapids, WI 54494
phone: 715-424-2424
fax: 715-424-2421

THIS DOCUMENT, THE IDEAS AND DESIGN INCORPORATED HEREIN AS AN INSTRUMENT OF SERVICE, IS THE PROPERTY OF JEWELL ASSOCIATES ENGINEERS, INC. AND IS NOT TO BE USED IN WHOLE OR IN PART WITHOUT PRIOR WRITTEN AUTHORIZATION OF JEWELL ASSOCIATES ENGINEERS, INC.

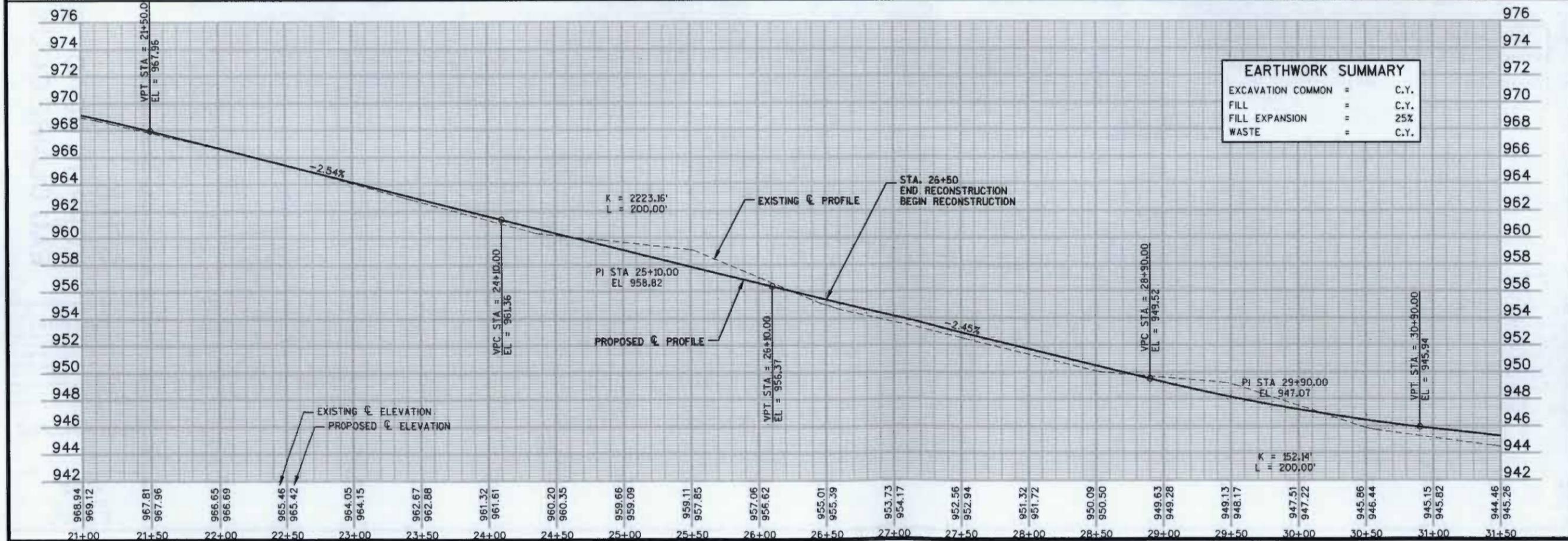
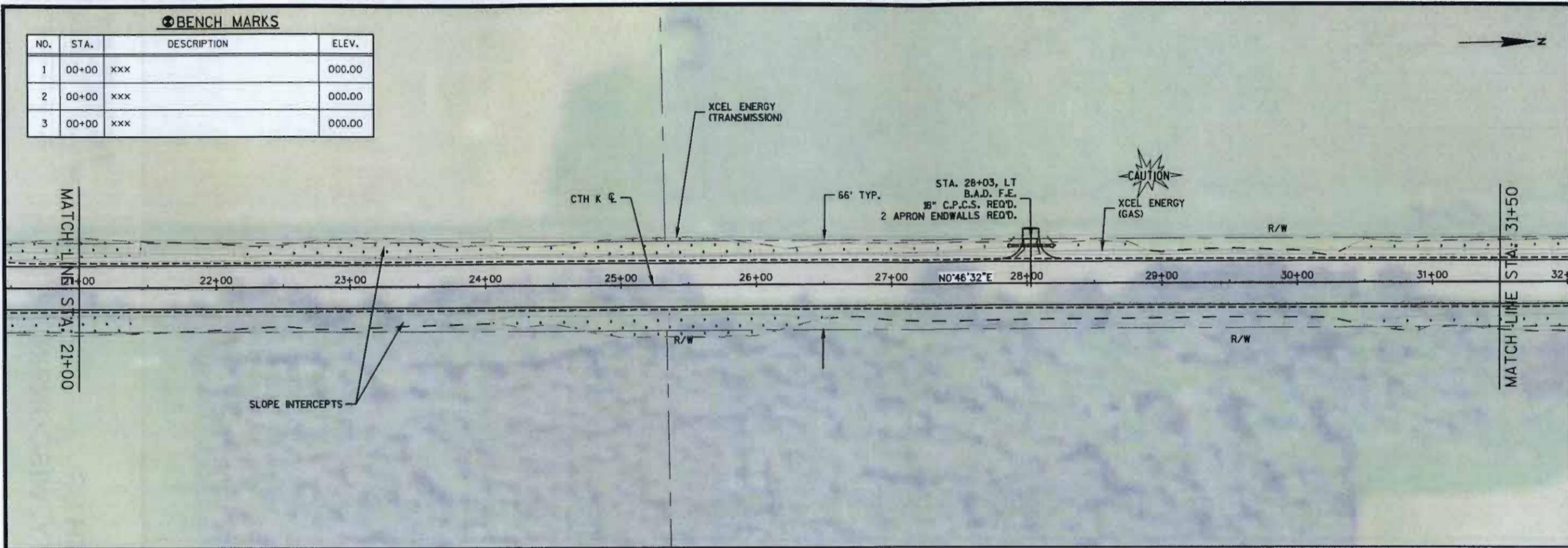
**CTH K
KOPPLIN ROAD - CTH SS
EAU CLAIRE COUNTY, WISCONSIN**

Date	10-14-2014
Revision	
Drawing Name	PLAN & PROFILE

Sheet No.
C5.0
Jewell Project Number
E30030

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	00+00	xxx	000.00
2	00+00	xxx	000.00
3	00+00	xxx	000.00



310 E. Jackson Street
 Wisconsin Rapids, WI 54494
 phone: 715-424-2424
 fax: 715-424-2421

THIS DOCUMENT, THE IDEAS AND DESIGN INCORPORATED HEREIN AS AN INSTRUMENT OF SERVICE, IS THE PROPERTY OF JEWELL ASSOCIATES ENGINEERS, INC. AND IS NOT TO BE USED IN WHOLE OR IN PART WITHOUT PRIOR WRITTEN AUTHORIZATION OF JEWELL ASSOCIATES ENGINEERS, INC.

**CTH K
 KOPPLIN ROAD - CTH SS
 EAU CLAIRE COUNTY, WISCONSIN**

Date	10-14-2014
Revision	
Drawing Name	PLAN & PROFILE

Sheet No.
C5.1
 Jewell Project Number
E30030

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	00+00	xxx	000.00
2	00+00	xxx	000.00
3	00+00	xxx	000.00

STA. 34+21
STA. 34+33
REMOVE EXISTING 24" x 55' C.P.R.C.

XCEL ENERGY
(TRANSMISSION)

STA. 38+67, LT
B.A.D. P.E.

XCEL ENERGY
(GAS)

STA. 33+26, LT
B.A.D. GRASS F.E.
18" C.P.C.S. REQ'D.
2 APRON ENDWALLS REQ'D.

STA. 33+16, RT
B.A.D. F.E.
18" C.P.C.S. REQ'D.
2 APRON ENDWALLS REQ'D.

STA. 39+31, RT
B.A.D. P.E.

STA. 38+65, RT.
B.A.D. P.E.
18" C.P.C.S. REQ'D.
2 APRON ENDWALLS REQ'D.

EAU CLAIRE ENERGY COOP.

SLOPE INTERCEPTS

PI STA = 36+01.75

PI STA 39+40.00
EL 950.77

VPT STA = 41+15.00
EL = 948.51

VPC STA = 37+55.00
EL = 947.69

K = 138.25'
L = 400.00'

K = 114.72'
L = 350.00'

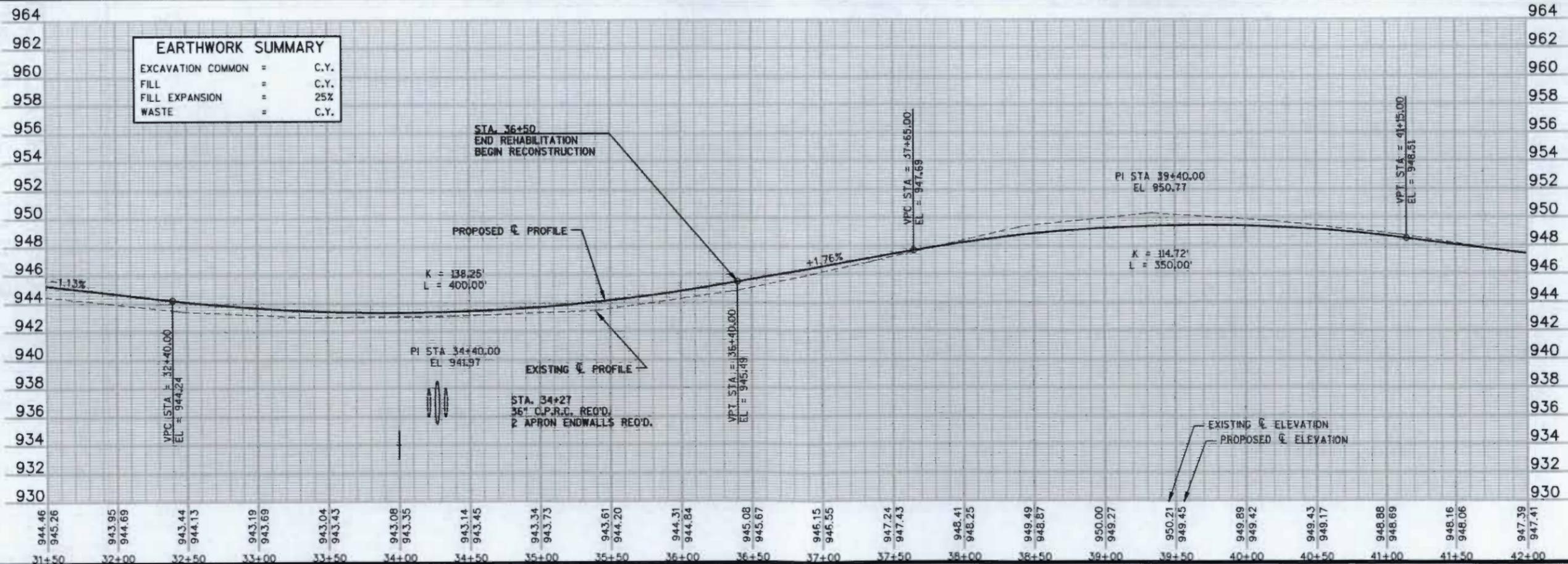
PI STA 34+40.00
EL 941.97

STA. 34+27
36" C.P.R.C. REQ'D.
2 APRON ENDWALLS REQ'D.

VPT STA = 36+40.00
EL = 945.48

EARTHWORK SUMMARY

EXCAVATION COMMON	=	C.Y.
FILL	=	C.Y.
FILL EXPANSION	=	25%
WASTE	=	C.Y.



310 E. Jackson Street
Wisconsin Rapids, WI 54494
phone: 715-424-2424
fax: 715-424-2421

THIS DOCUMENT, THE DATA AND DESIGN INFORMATION CONTAINED HEREIN ARE THE PROPERTY OF JEWELL ASSOCIATES ENGINEERS, INC. AND IS NOT TO BE USED IN WHOLE OR IN PART WITHOUT WRITTEN PERMISSION OF JEWELL ASSOCIATES ENGINEERS, INC.

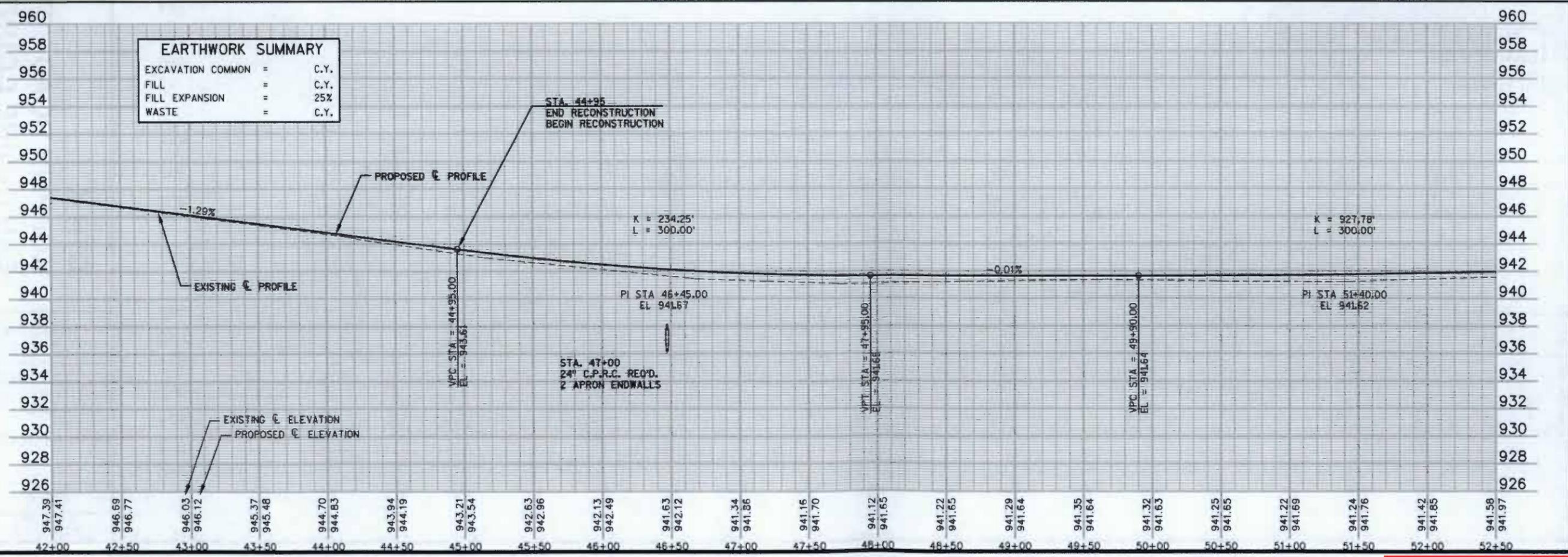
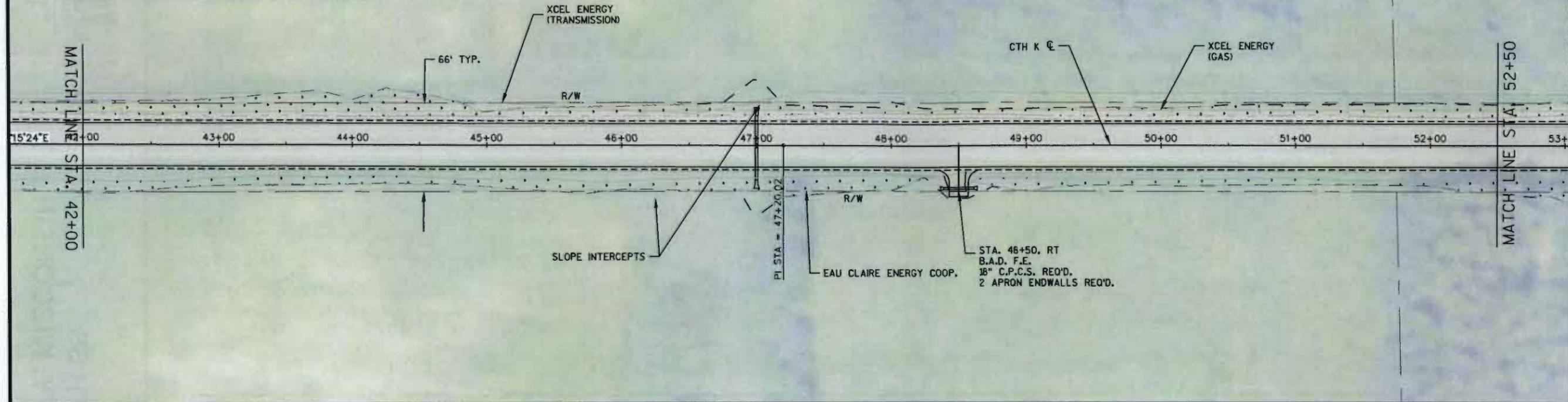
**CTH K
KOPPLIN ROAD - CTH SS
EAU CLAIRE COUNTY, WISCONSIN**

Date	10-14-2014
Revision	
Date	
Drawing Name	PLAN & PROFILE

Sheet No.
C5.2
Jewell Project Number
E30030

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	00+00	xxx	000.00
2	00+00	xxx	000.00
3	00+00	xxx	000.00



EARTHWORK SUMMARY

EXCAVATION COMMON	=	C.Y.
FILL	=	C.Y.
FILL EXPANSION	=	25%
WASTE	=	C.Y.



310 E. Jackson Street
 Wisconsin Rapids, WI 54494
 phone: 715-424-2424
 fax: 715-424-2421

THIS DOCUMENT, THE DATA AND SPECIFICATIONS HEREAFTER ARE THE PROPERTY OF JEWELL ASSOCIATES ENGINEERS, INC. AND IS NOT TO BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN AUTHORIZATION OF JEWELL ASSOCIATES ENGINEERS, INC.

**CTH K
 KOPPLIN ROAD - CTH SS
 EAU CLAIRE COUNTY, WISCONSIN**

Date	10-14-2014
Revision	
Date	
Drawing Name	PLAN & PROFILE
Sheet No.	C5.3
Project Number	E30030

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	00+00	xxx	000.00
2	00+00	xxx	000.00
3	00+00	xxx	000.00

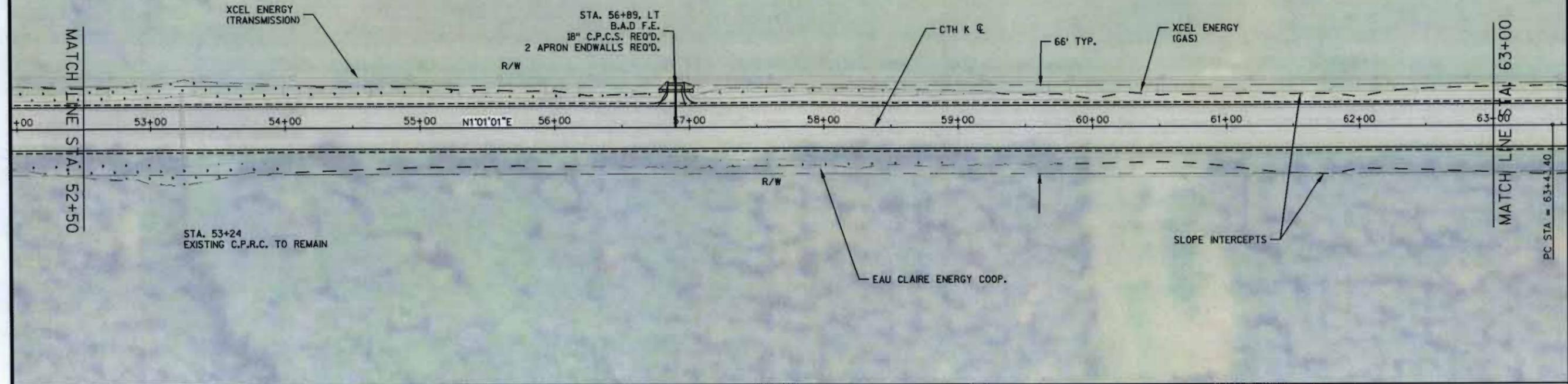


JEWELL
 associates engineers, inc.
 Engineers - Surveyors - Architects

310 E. Jackson Street
 Wisconsin Rapids, WI 54494
 phone: 715-424-2424
 fax: 715-424-2421

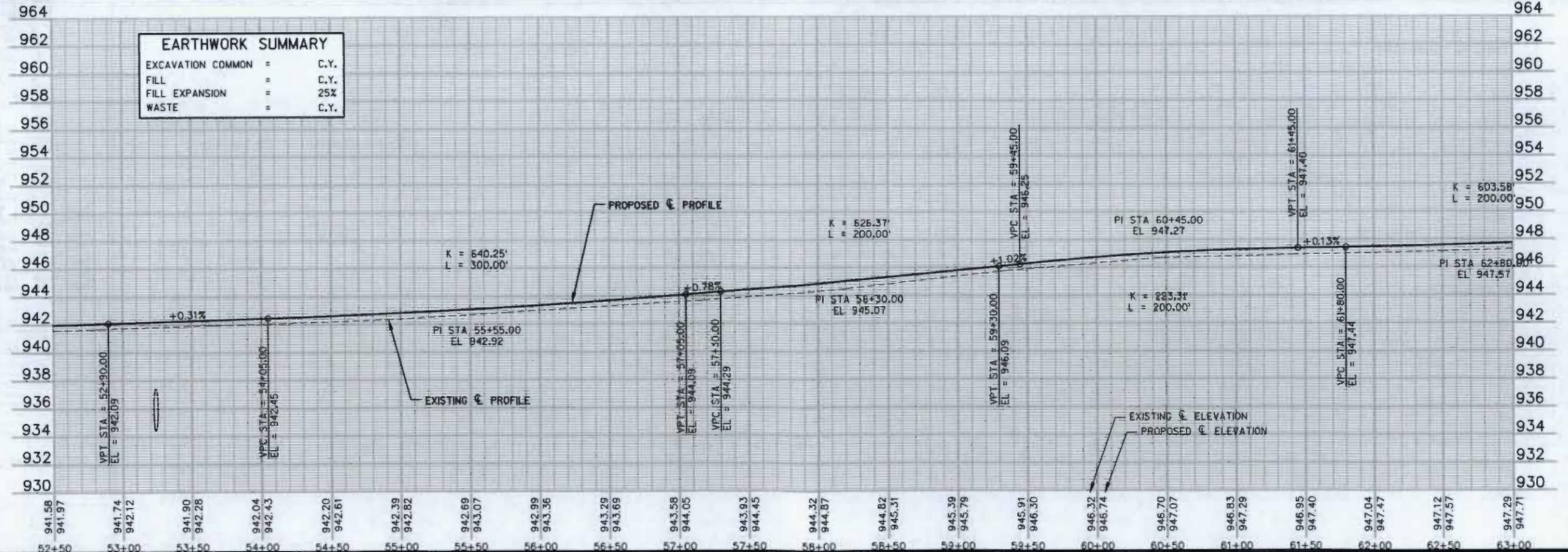
THIS DOCUMENT, THE DATA AND DESIGN INCORPORATED HEREIN AS AN INSTRUMENT OF SERVICE, IS THE PROPERTY OF JEWELL ASSOCIATES ENGINEERS, INC. AND IS NOT TO BE USED IN WHOLE OR IN PART WITHOUT WRITTEN PERMISSION OF JEWELL ASSOCIATES ENGINEERS, INC.

**CTH K
 KOPPLIN ROAD - CTH SS
 EAU CLAIRE COUNTY, WISCONSIN**



EARTHWORK SUMMARY

EXCAVATION COMMON	=	C.Y.
FILL	=	C.Y.
FILL EXPANSION	=	25%
WASTE	=	C.Y.



Date
 10-14-2014

Drawing Name
PLAN & PROFILE

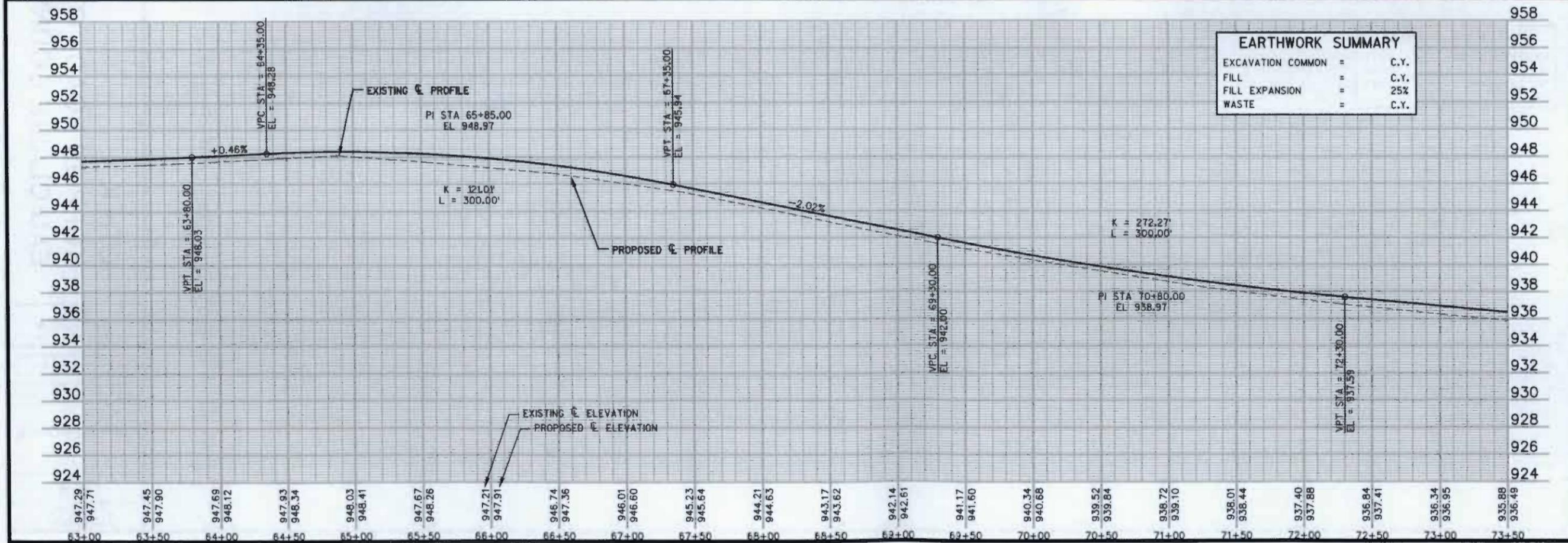
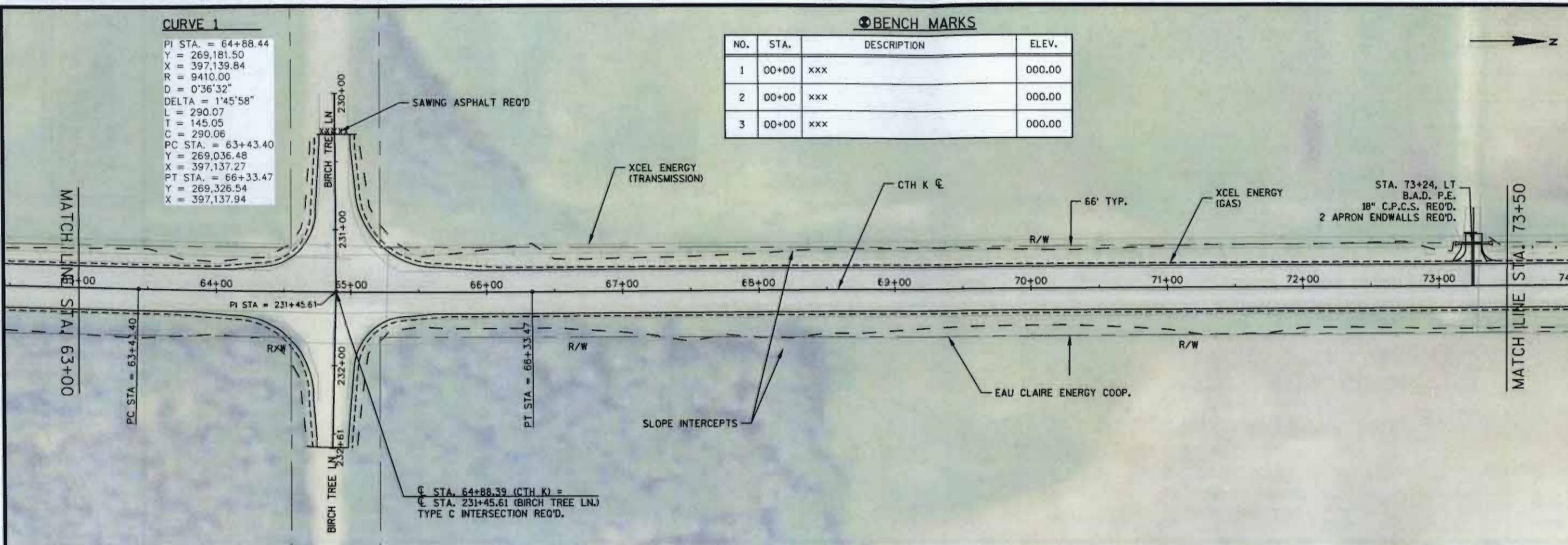
Sheet No.
C5.4
 Project Number
E30030

CURVE 1

PI STA. = 64+88.44
 Y = 269,181.50
 X = 397,139.84
 R = 9410.00
 D = 0°36'32"
 DELTA = 1°45'58"
 L = 290.07
 T = 145.05
 C = 290.06
 PC STA. = 63+43.40
 Y = 269,036.48
 X = 397,137.27
 PT STA. = 66+33.47
 Y = 269,326.54
 X = 397,137.94

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	00+00	xxx	000.00
2	00+00	xxx	000.00
3	00+00	xxx	000.00



EARTHWORK SUMMARY

EXCAVATION COMMON	=	C.Y.
FILL	=	C.Y.
FILL EXPANSION	=	25%
WASTE	=	C.Y.



310 E. Jackson Street
 Wisconsin Rapids, WI 54494
 phone: 715-424-2424
 fax: 715-424-2421

THIS DOCUMENT, THE SEALS AND SIGNATURE INCORPORATED HEREIN AS AN INSTRUMENT OF SERVICE, IS THE PROPERTY OF JEWELL ASSOCIATES ENGINEERS, INC. AND IS NOT TO BE USED IN WHOLE OR IN PART WITHOUT PRIOR WRITTEN AUTHORIZATION OF JEWELL ASSOCIATES ENGINEERS, INC.

**CTH K
 KOPPLIN ROAD - CTH SS
 EAU CLAIRE COUNTY, WISCONSIN**

Date
 10-14-2014

Revision

Date

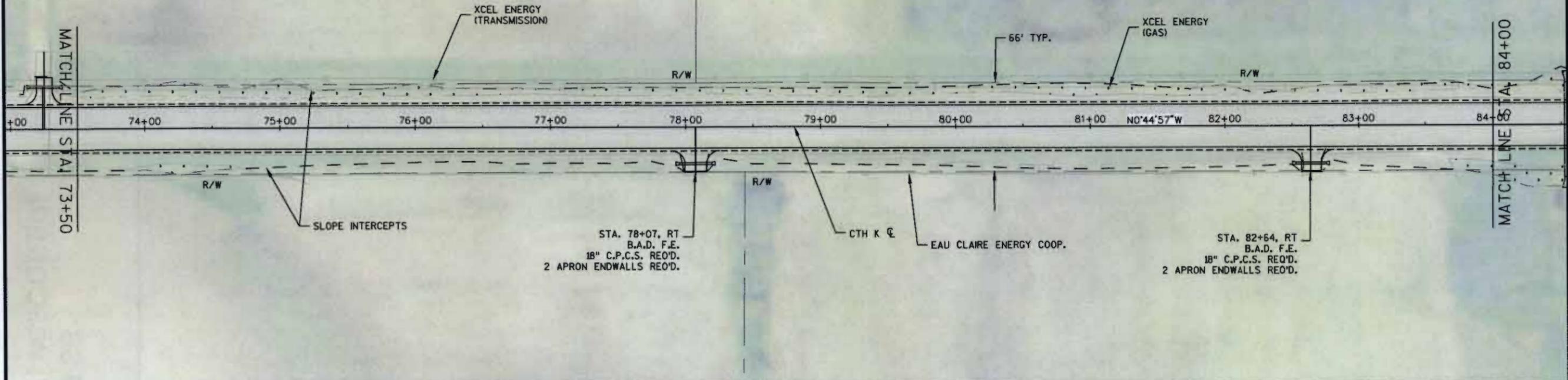
Drawing Name
PLAN & PROFILE

Sheet No.
C5.5

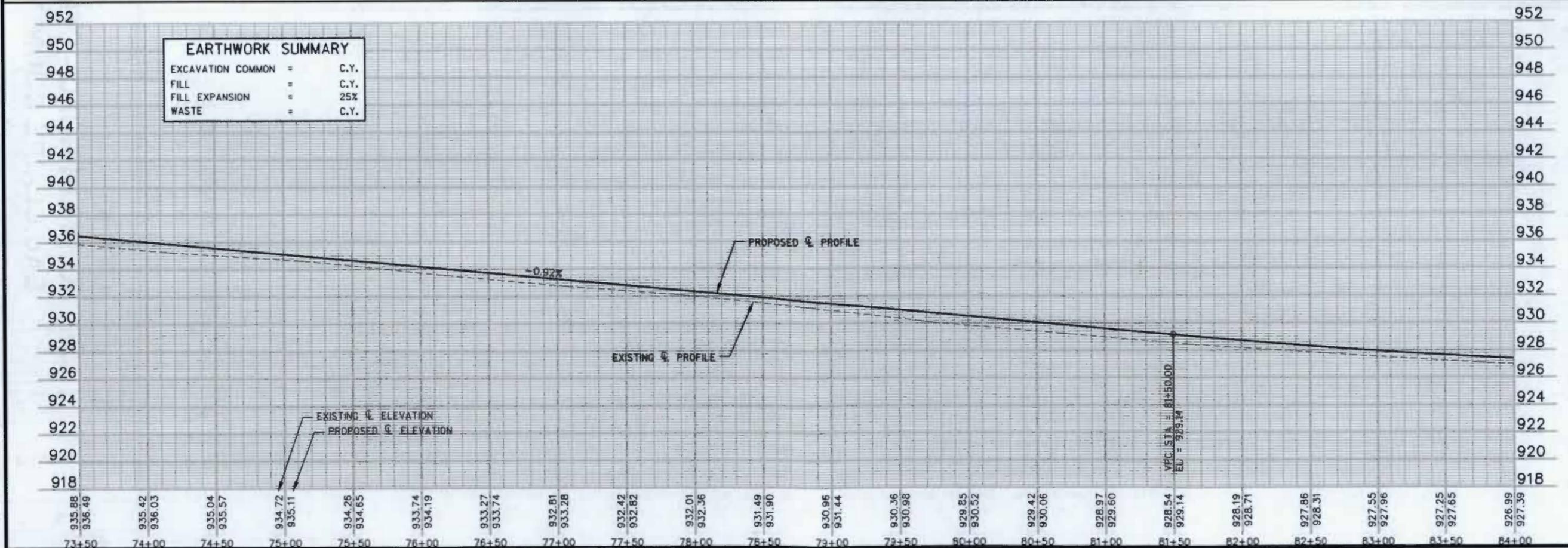
Project Number
E300330

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	00+00	xxx	000.00
2	00+00	xxx	000.00
3	00+00	xxx	000.00



EARTHWORK SUMMARY	
EXCAVATION COMMON	= C.Y.
FILL	= C.Y.
FILL EXPANSION	= 25%
WASTE	= C.Y.



JEWELL
 associates engineers, inc.
 Engineers - Surveyors - Architects

310 E. Jackson Street
 Wisconsin Rapids, WI 54494
 phone: 715-424-2424
 fax: 715-424-2421

THIS DOCUMENT, THE IDEAS AND DESIGN INCORPORATED HEREIN AS AN INSTRUMENT OF SERVICE, IS THE PROPERTY OF JEWELL ASSOCIATES ENGINEERS, INC. AND IS NOT TO BE USED IN ANY OTHER PROJECT WITHOUT PRIOR WRITTEN AUTHORIZATION OF JEWELL ASSOCIATES ENGINEERS, INC.

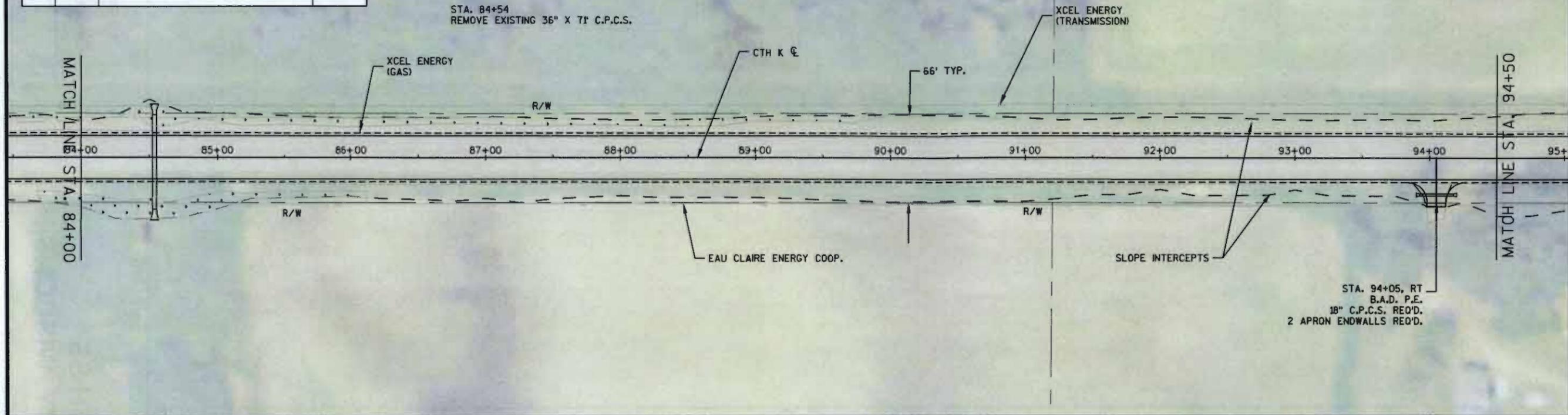
**CTH K
 KOPPLIN ROAD - CTH SS
 EAU CLAIRE COUNTY, WISCONSIN**

Date	10-14-2014
Revision	
Date	
Drawing Name	PLAN & PROFILE

Sheet No.
C5.6
 Total Project Number
E30030

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	00+00	xxx	000.00
2	00+00	xxx	000.00
3	00+00	xxx	000.00



STA. 84+54
REMOVE EXISTING 36" X 71" C.P.C.S.

XCEL ENERGY
(TRANSMISSION)

XCEL ENERGY
(GAS)

CTH K ϕ

66' TYP.

R/W

R/W

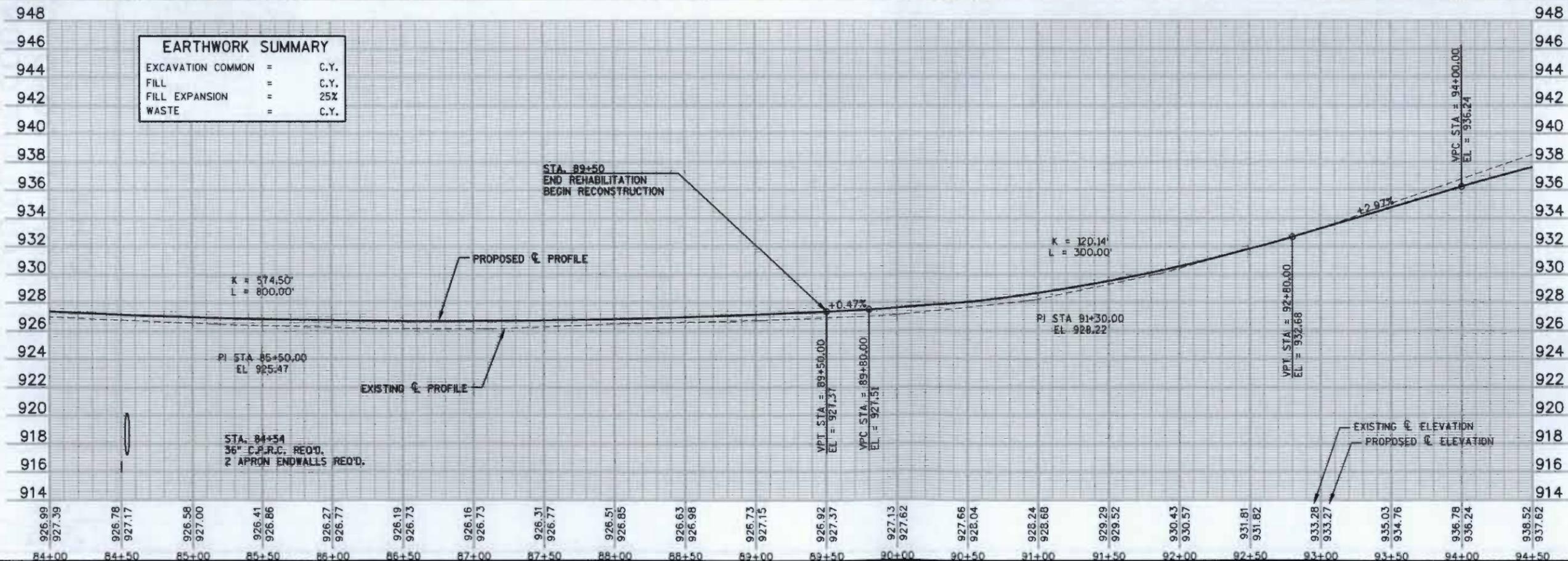
EAU CLAIRE ENERGY COOP.

SLOPE INTERCEPTS

STA. 94+05, RT
B.A.D. P.E.
18" C.P.C.S. REQ'D.
2 APRON ENDWALLS REQ'D.

EARTHWORK SUMMARY

EXCAVATION COMMON	=	C.Y.
FILL	=	C.Y.
FILL EXPANSION	=	25% C.Y.
WASTE	=	C.Y.



STA. 89+50
END REHABILITATION
BEGIN RECONSTRUCTION

PROPOSED ϕ PROFILE

K = 574.50
L = 800.00'

PI STA 85+50.00
EL 925.47

EXISTING ϕ PROFILE

STA. 84+54
36" C.P.R.C. REQ'D.
2 APRON ENDWALLS REQ'D.

+0.47%

VPT STA = 89+50.00
EL = 927.57

VPC STA = 89+80.00
EL = 927.57

K = 120.14
L = 300.00'

PI STA 81+30.00
EL 928.22

VPT STA = 92+80.00
EL = 932.68

+2.97%

VPC STA = 94+00.00
EL = 936.24

EXISTING ϕ ELEVATION
PROPOSED ϕ ELEVATION



310 E. Jackson Street
Wisconsin Rapids, WI 54494
phone: 715-424-2424
fax: 715-424-2421

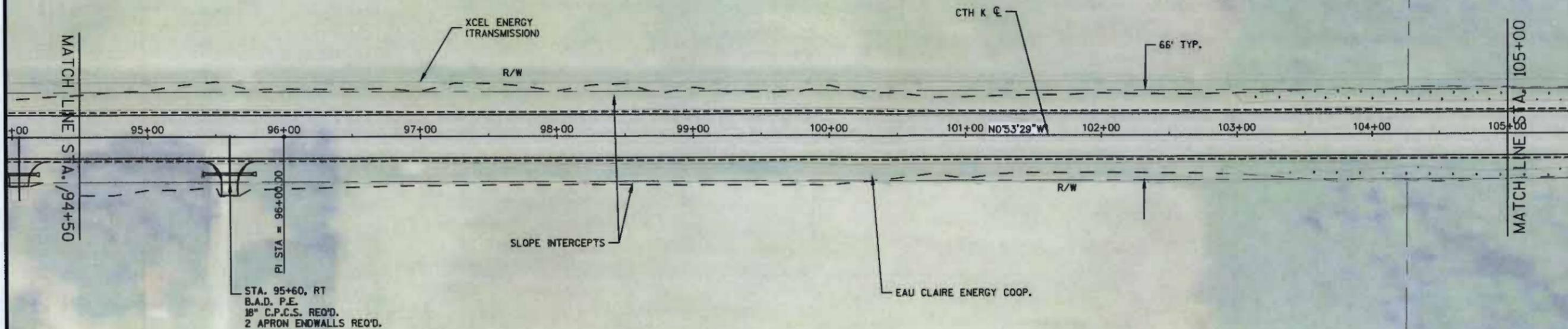
THIS DOCUMENT, THE DESIGN AND DRAWINGS INCORPORATED HEREIN AS AN INSTRUMENT OF SERVICE, IS THE PROPERTY OF JEWELL ASSOCIATES ENGINEERS, INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM WITHOUT THE WRITTEN PERMISSION OF JEWELL ASSOCIATES ENGINEERS, INC.

**CTH K
KOPPLIN ROAD - CTH SS
EAU CLAIRE COUNTY, WISCONSIN**

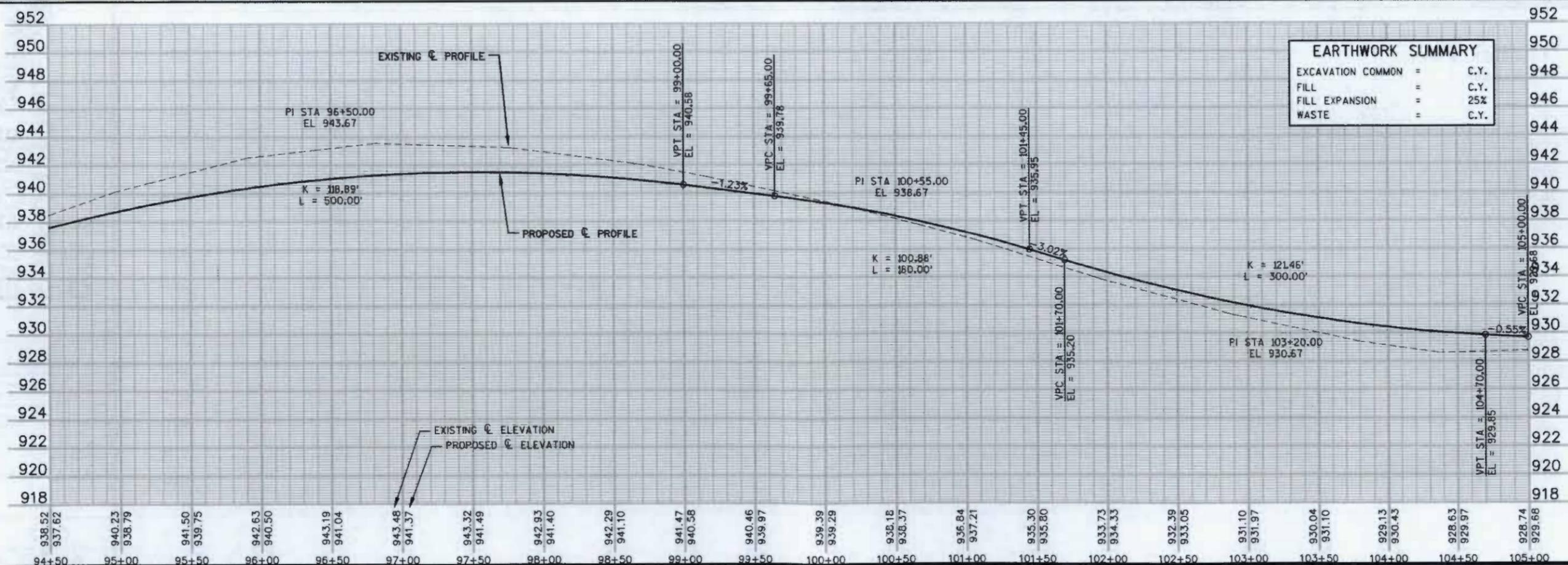
Date	10-14-2014
Revision	
Date	
Drawing Name	PLAN & PROFILE
Sheet No.	C5.7
Project Number	E30030

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	00+00	xxx	000.00
2	00+00	xxx	000.00
3	00+00	xxx	000.00



STA. 95+60, RT
B.A.D. P.E.
18" C.P.C.S. REQ'D.
2 APRON ENDWALLS REQ'D.



JEWELL
associates engineers, inc.
Engineers - Surveyors - Architects

310 E. Jackson Street
Wisconsin Rapids, WI 54494
phone: 715-424-2424
fax: 715-424-2421

THIS DOCUMENT, THE IDEAS AND DESIGNS INCORPORATED HEREIN AS AN INSTRUMENT OF SERVICE, IS THE PROPERTY OF JEWELL ASSOCIATES ENGINEERS, INC. AND IS NOT TO BE USED IN WHOLE OR IN PART WITHOUT PRIOR WRITTEN AUTHORIZATION OF JEWELL ASSOCIATES ENGINEERS, INC.

**CTH K
KOPPLIN ROAD - CTH SS
EAU CLAIRE COUNTY, WISCONSIN**

Date	10-14-2014
Revision	

Drawing Name
PLAN & PROFILE

Sheet No.
C5.8
Jewell Project Number
E30030

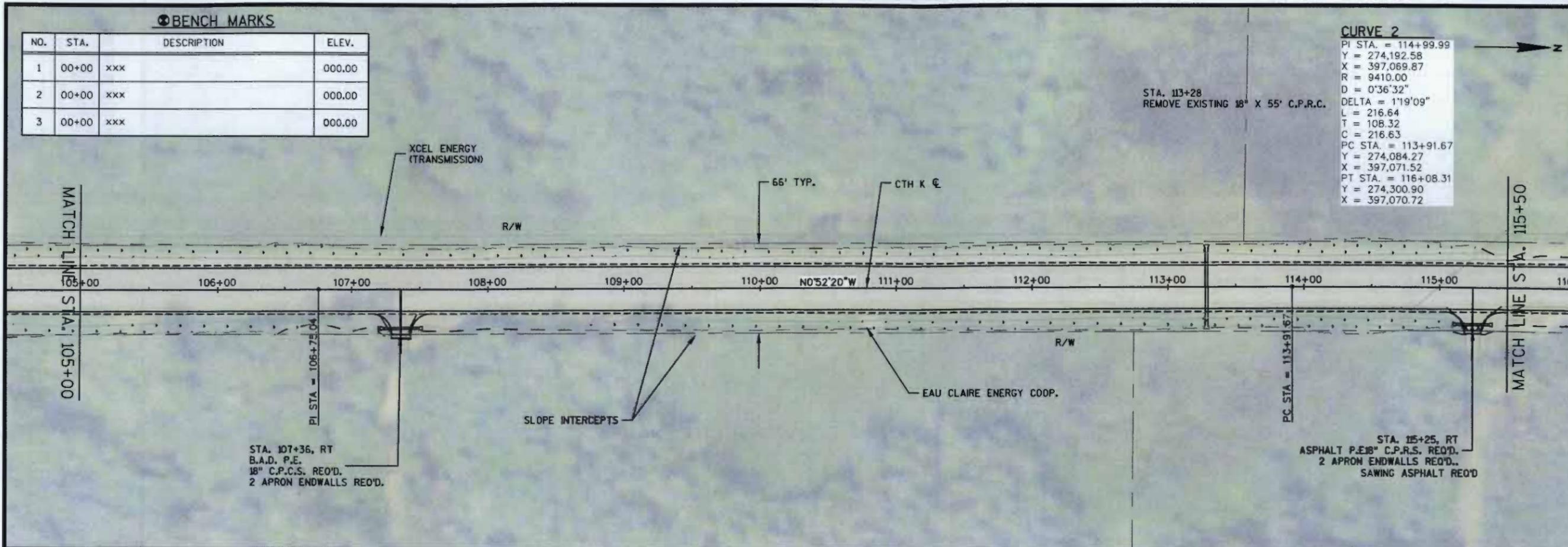
BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	00+00	xxx	000.00
2	00+00	xxx	000.00
3	00+00	xxx	000.00

CURVE 2

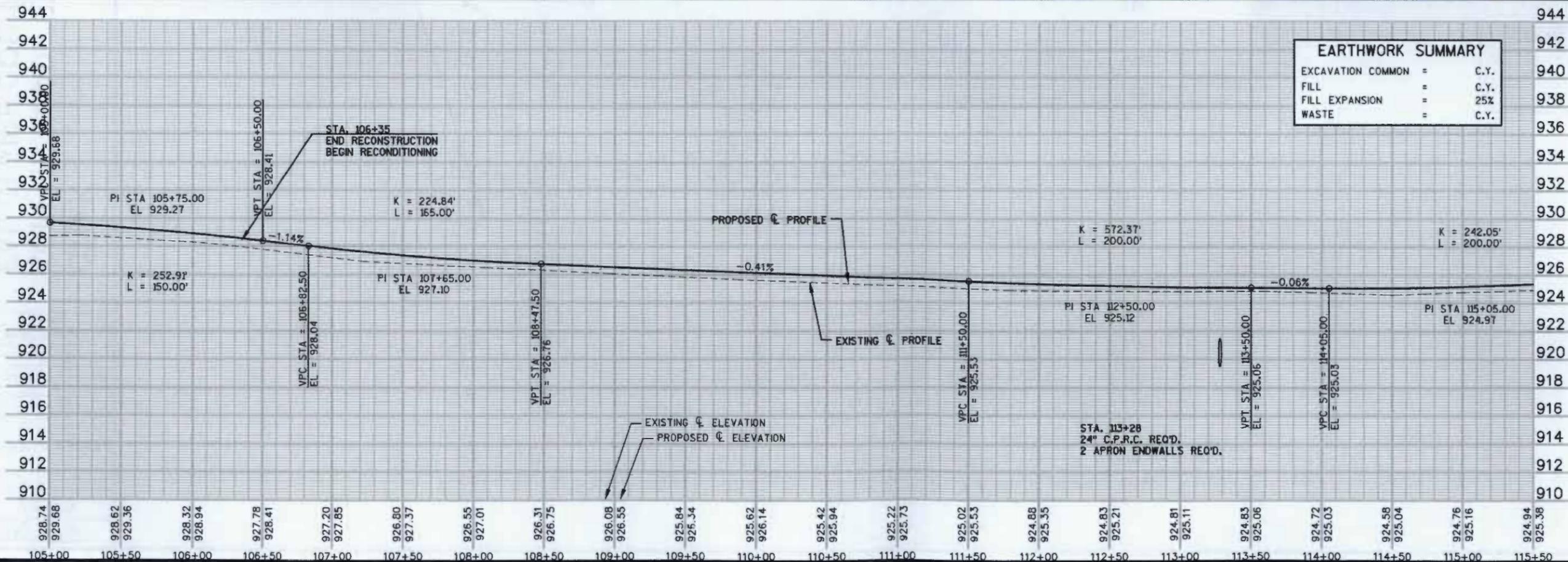
PI STA. = 114+99.99
 Y = 274,192.58
 X = 397,069.87
 R = 9410.00
 D = 0°36'32"
 DELTA = 1°19'09"
 L = 216.64
 T = 108.32
 C = 216.63
 PC STA. = 113+91.67
 Y = 274,084.27
 X = 397,071.52
 PT STA. = 116+08.31
 Y = 274,300.90
 X = 397,070.72

STA. 113+28
 REMOVE EXISTING 18" X 55' C.P.R.C.



STA. 107+36, RT
 B.A.D. P.E.
 18" C.P.C.S. REQ'D.
 2 APRON ENDWALLS REQ'D.

STA. 115+25, RT
 ASPHALT P.E. 18" C.P.R.S. REQ'D.
 2 APRON ENDWALLS REQ'D.
 SAWING ASPHALT REQ'D.



EARTHWORK SUMMARY	
EXCAVATION COMMON	= C.Y.
FILL	= C.Y.
FILL EXPANSION	= 25%
WASTE	= C.Y.



310 E. Jackson Street
 Wisconsin Rapids, WI 54494
 phone: 715-424-2424
 fax: 715-424-2421

THIS DOCUMENT, THE IDEAS AND DESIGN INCORPORATED HEREIN AS AN INSTRUMENT OF SERVICE, IS THE PROPERTY OF JEWELL ASSOCIATES ENGINEERS, INC. AND IS NOT TO BE USED IN WHOLE OR IN PART WITHOUT PRIOR WRITTEN AUTHORIZATION OF JEWELL ASSOCIATES ENGINEERS, INC.

**CTH K
 KOPPLIN ROAD - CTH SS
 EAU CLAIRE COUNTY, WISCONSIN**

Date	10-14-2014
Revision	
Date	
Drawing Name	PLAN & PROFILE
Sheet No.	C5.9
Jewell Project Number	E30030

BENCH MARKS

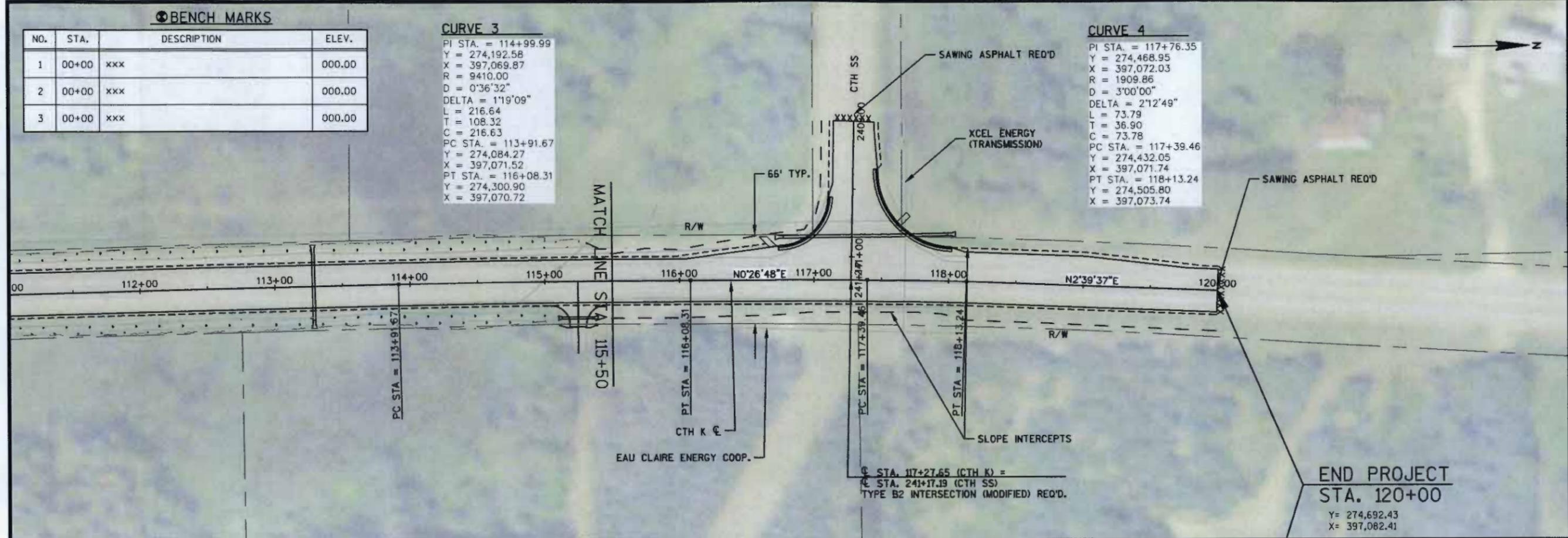
NO.	STA.	DESCRIPTION	ELEV.
1	00+00	xxx	000.00
2	00+00	xxx	000.00
3	00+00	xxx	000.00

CURVE 3

PI STA. = 114+99.99
 Y = 274,192.58
 X = 397,069.87
 R = 9410.00
 D = 0°36'32"
 DELTA = 1°19'09"
 L = 216.64
 T = 108.32
 C = 216.63
 PC STA. = 113+91.67
 Y = 274,084.27
 X = 397,071.52
 PT STA. = 116+08.31
 Y = 274,300.90
 X = 397,070.72

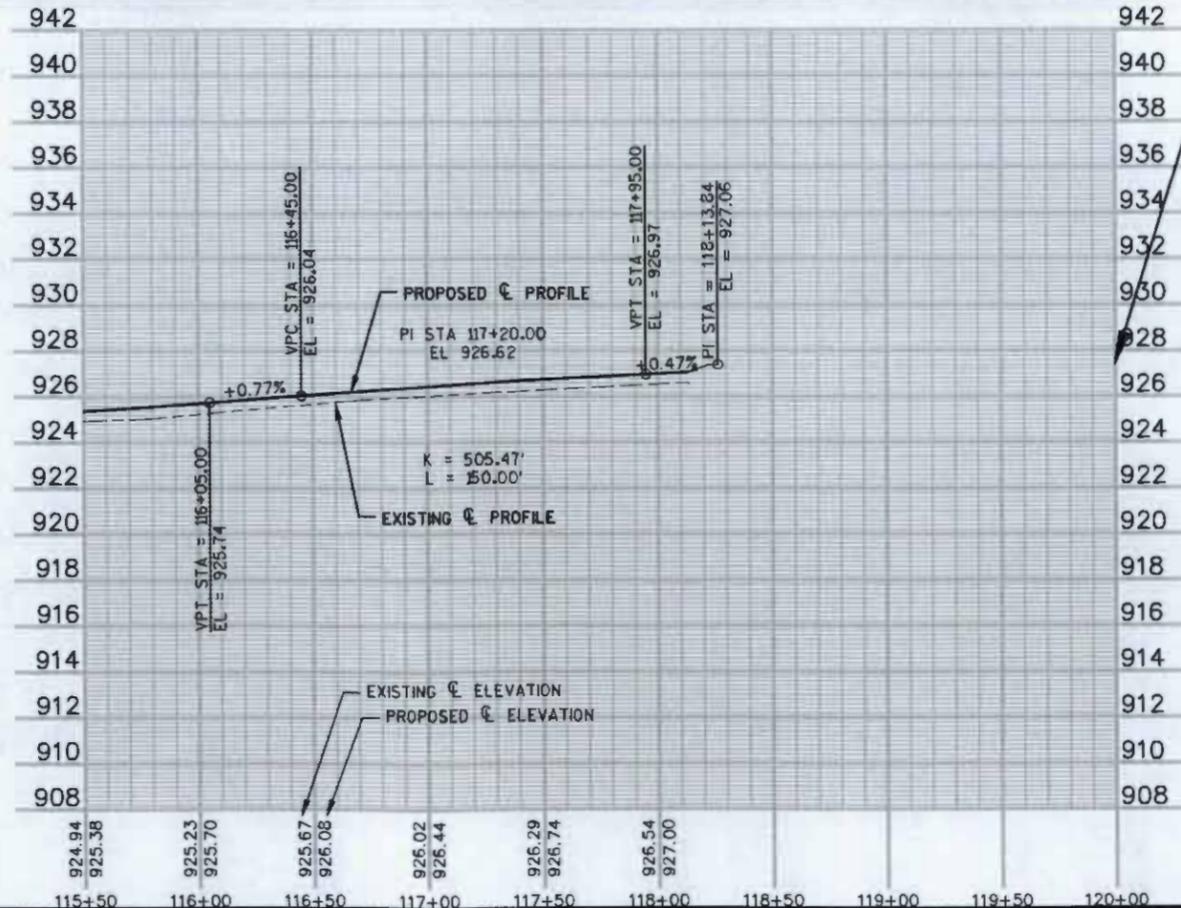
CURVE 4

PI STA. = 117+76.35
 Y = 274,468.95
 X = 397,072.03
 R = 1909.86
 D = 3°00'00"
 DELTA = 2°12'49"
 L = 73.79
 T = 36.90
 C = 73.78
 PC STA. = 117+39.46
 Y = 274,432.05
 X = 397,071.74
 PT STA. = 118+13.24
 Y = 274,505.80
 X = 397,073.74



EARTHWORK SUMMARY

EXCAVATION COMMON	=	C.Y.
FILL	=	C.Y.
FILL EXPANSION	=	25%
WASTE	=	C.Y.



310 E. Jackson Street
 Wisconsin Rapids, WI 54494
 phone: 715-424-2424
 fax: 715-424-2421

THIS DOCUMENT, THE IDEAS AND OPINIONS INCORPORATED HEREIN AS AN INSTRUMENT OF SERVICE, IS THE PROPERTY OF JEWELL ASSOCIATES ENGINEERS, INC. AND IS NOT TO BE USED IN WHOLE OR IN PART WITHOUT PRIOR WRITTEN AUTHORIZATION OF JEWELL ASSOCIATES ENGINEERS, INC.

**CTH K
 KOPPLIN ROAD - CTH SS
 EAU CLAIRE COUNTY, WISCONSIN**

Date
 10-14-2014

REVISION

Date

Drawing Name

PLAN & PROFILE

Sheet No.
C5.10
 Jewell Project Number
E30030

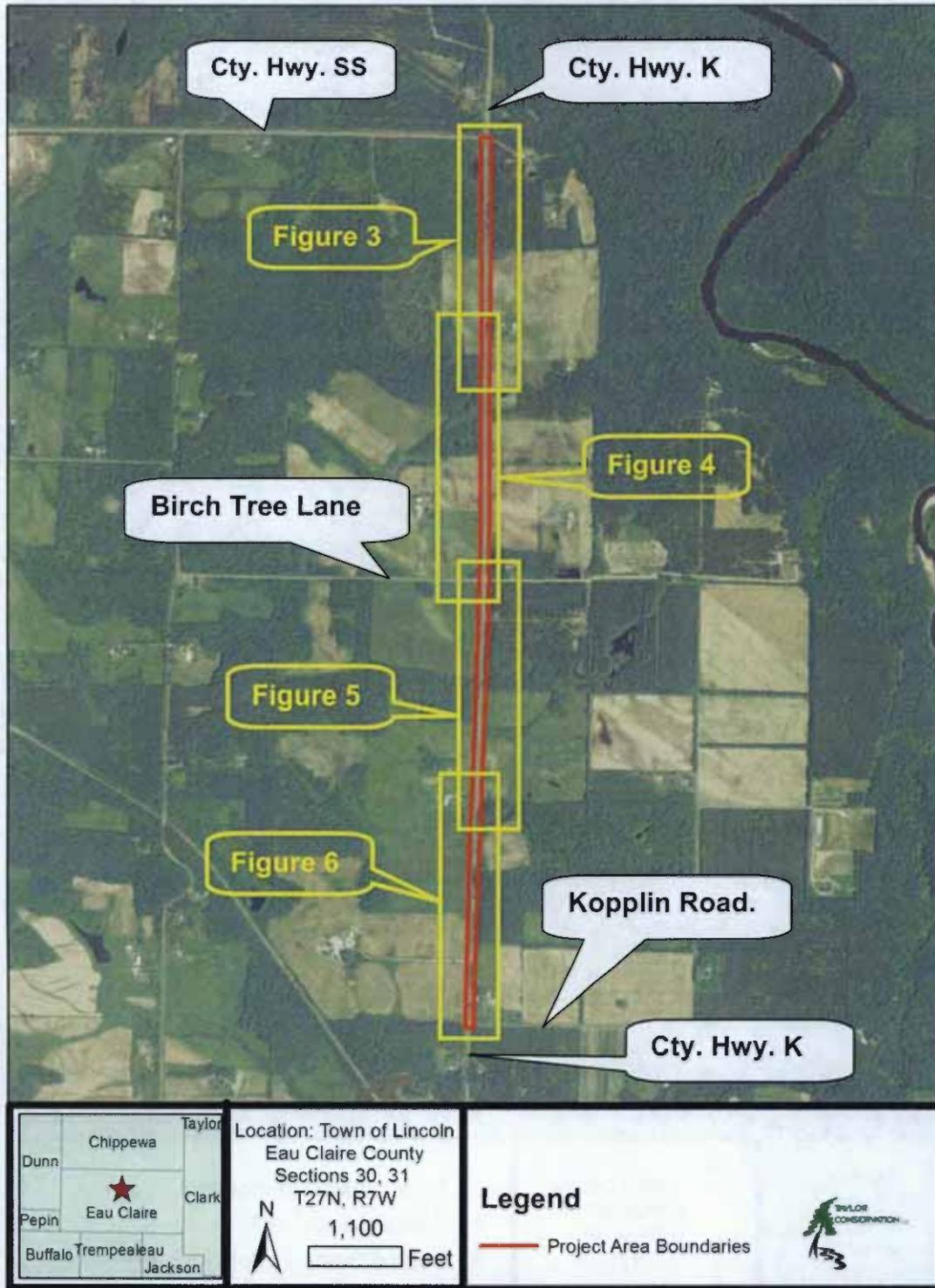
Figure 1: Landscape Overview Map.

Source: Aerial Photography – National Agricultural Imagery Program, 2013; Roads & Waters – Wisconsin Department of Natural Resources.



Figure 2: Project Area Overview Map.

Source: National Agricultural Imagery Program, 2013.



Fi

Figure 3: North Road Segment – Project Area, Wetlands & Sample Plots.

Source: National Agricultural Imagery Program, 2013.

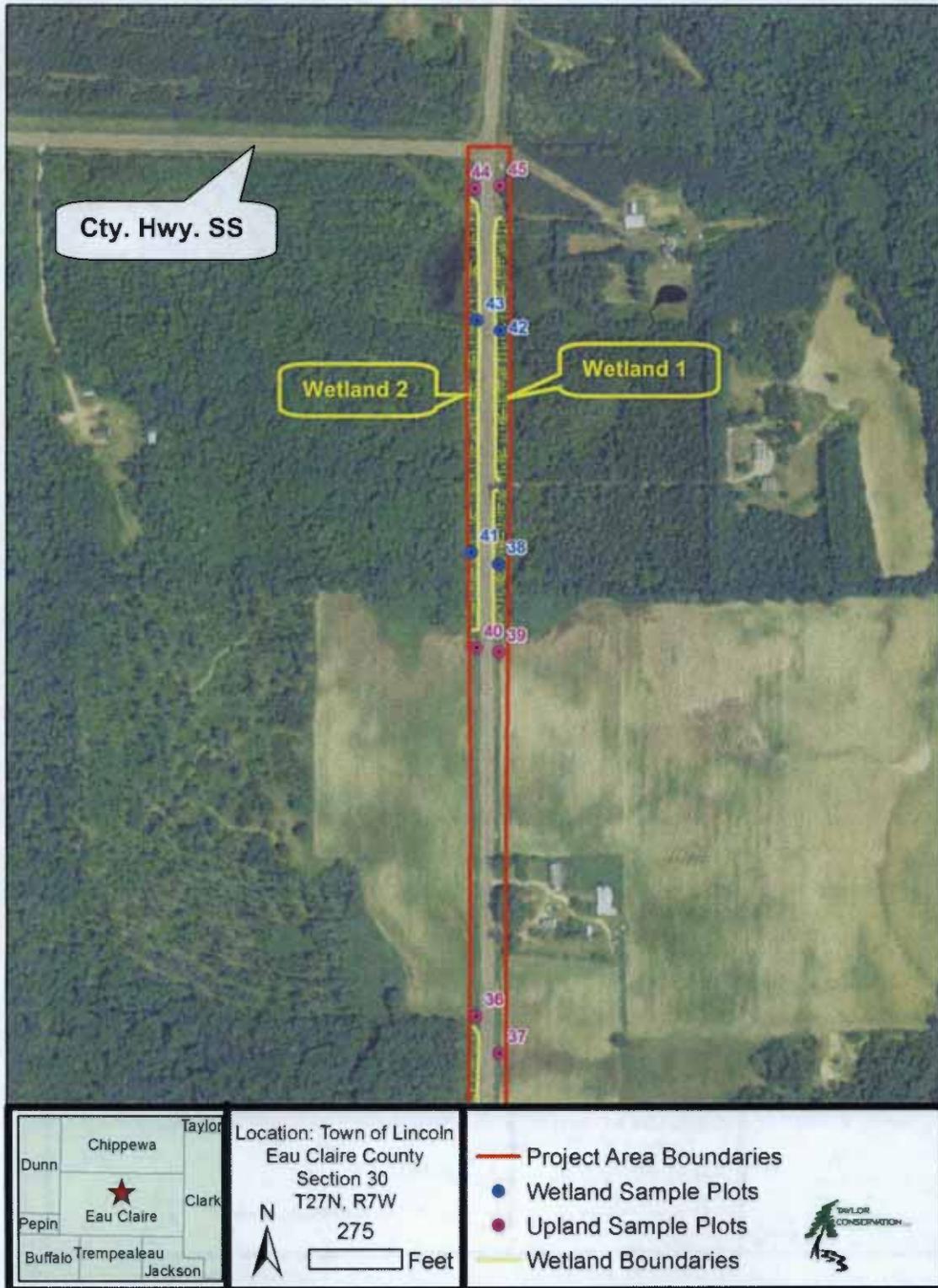


Figure 4: Northcentral Road Segment – Project Area, Wetlands & Sample Plots.
Source: National Agricultural Imagery Program, 2013. 2013.

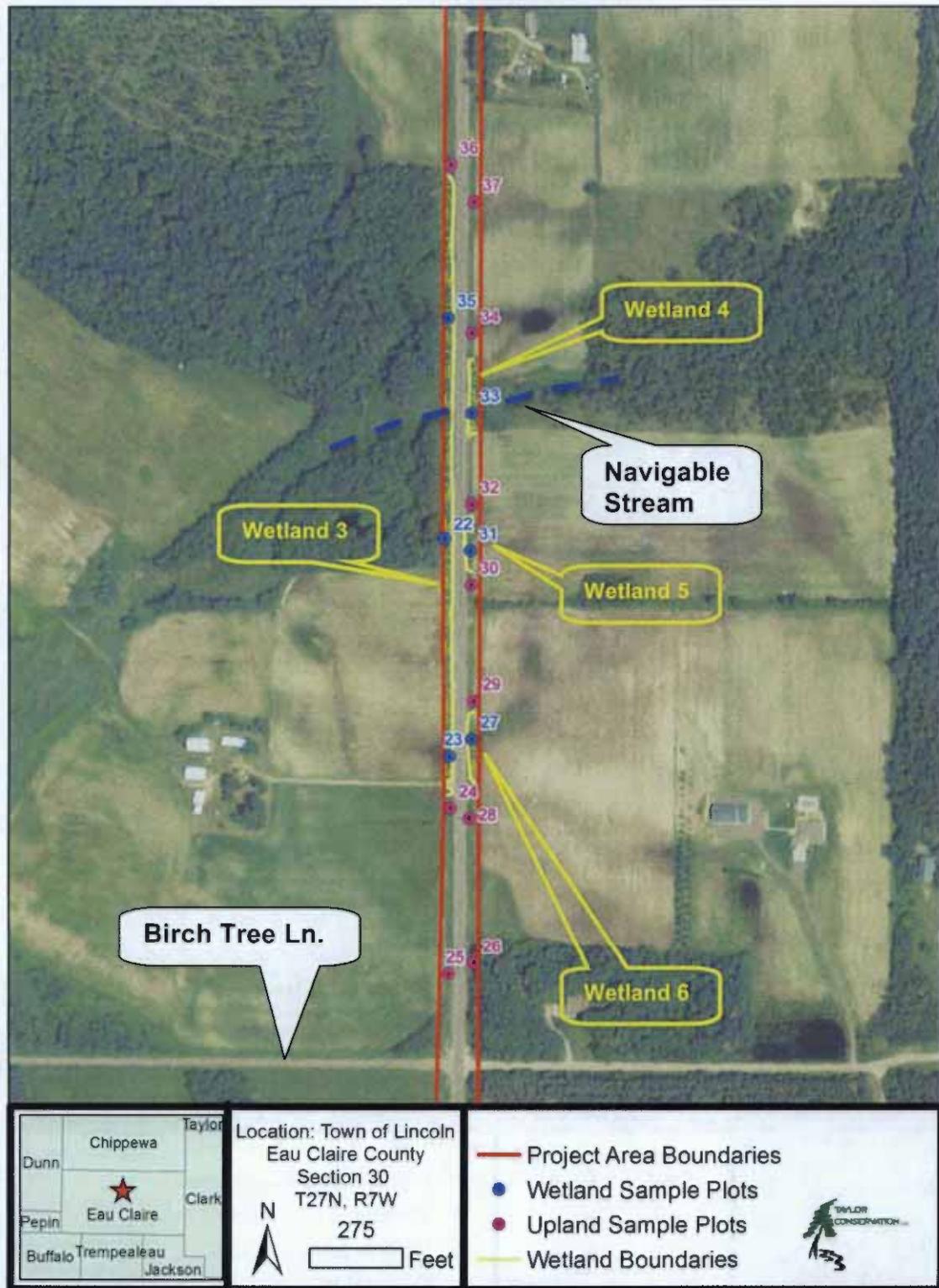


Figure 5: Southcentral Road Segment – Project Area, Wetlands & Sample Plots.
Source: National Agricultural Imagery Program,

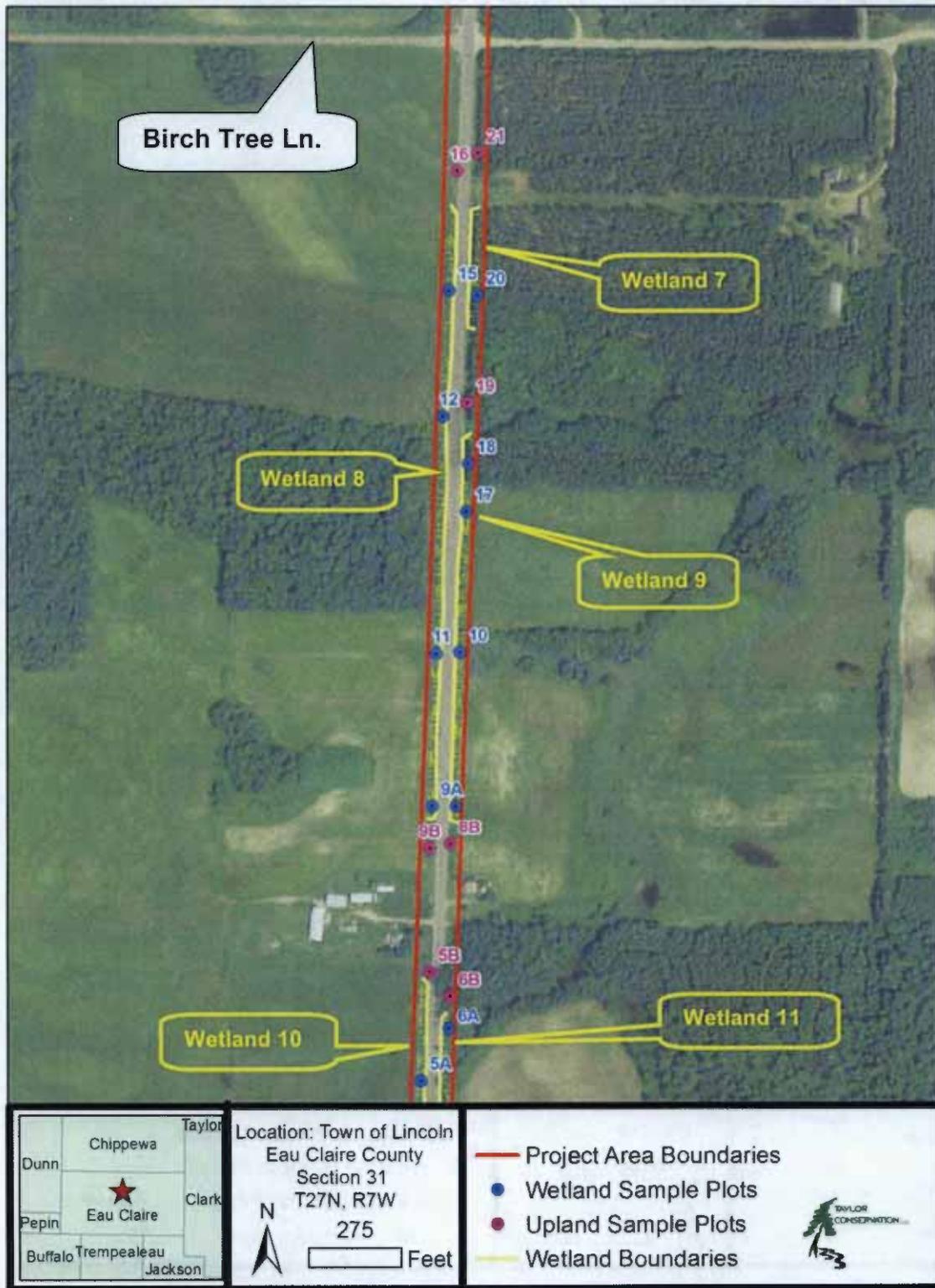


Figure 6: South Road Segment – Project Area, Wetlands & Sample Plots.

Source: National Agricultural Imagery Program, 2013.

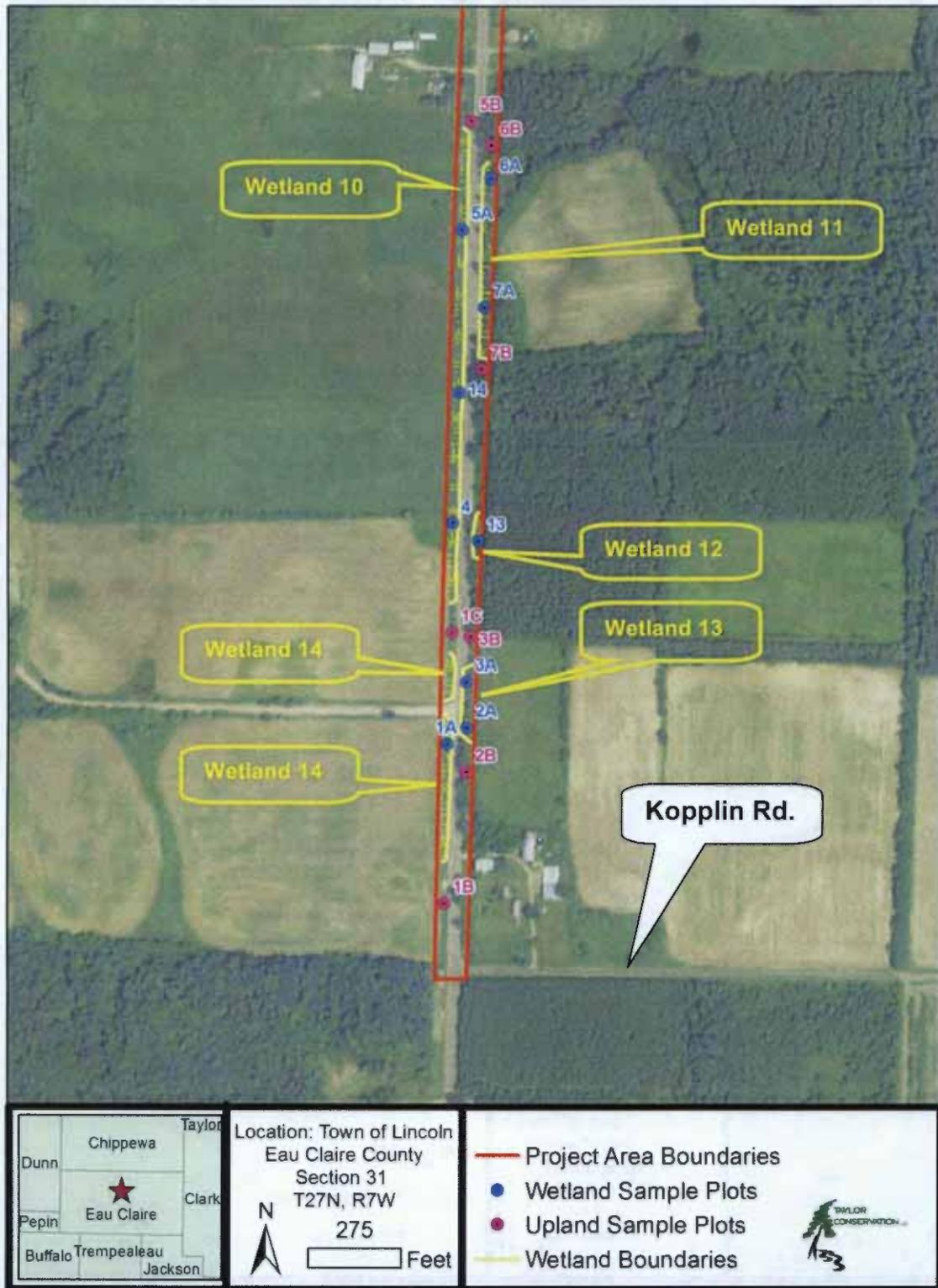


Figure 7: Topography.

Source: U.S.G.S. 7.5 Minute Topographical Map, Fall Creek Quadrangle.

