Information for File # 2011-02358-JTF

Applicant	**Carlton County Transportation Department**
Corps Contact	Josh Fitzpatrick
Address	1554 Highway 2, Suite 2, Two Harbors, MN 55616
E-Mail	joshua.t.fitzpatrick@usace.army.mil
Phone	(651) 290-5694
Primary County	Carlton
Sec/Township/Range:	Sec(s). 20, 21, 22, T. 49N., R. 17W.
Information Complete On	**May 1, 2013**
Posting Expires On	**May 10, 2013**
Authorization Type	LOP-10-FDL

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 PURPOSE & NEED: Carlton County Transportation Department and the Fond du Lac Band of Lake Superior Chippewa (FDL) are proposing to construct safer intersection crossings along County State Aid Highway (CSAH) 7, also known as Big Lake Road, within the FDL Reservation. Intersection improvements would occur where Big Lake Road crosses CSAH 5 (University Road) and County Road 114 (Trettle Lane). Included in the intersection improvements is the relocation of a non-motorized pedestrian trail along the south side of Big Lake Road. Because the trail crosses at these intersections, it is necessary to move the trail and create a safer alignment along the south side of Big Lake Road. This alignment extends from the FDL Tribal Center at University Road 1.5 miles to the FDL gas station at Pinewood Lane.

Big Lake Road from University Road to Pinewood Drive has a history of safety concerns and issues. To date, 20 reported accidents have occurred over the past ten years in this area. A majority of the accidents have occurred during dry conditions at the intersections addressed in this project. With 4,600 average daily vehicles and a speed limit of 50 mph, pedestrian traffic are uncomfortable walking here. Dedicated center left turn lanes are planned for Big Lake Road at both intersections, along with dedicated right turn lanes from University Road and Trettle Lane. The design of the dedicated lanes will improve safety for traffic flow and reduce or eliminate rear end crashes. An off-road trail would improve the comfort level of trail users as well as accommodate a safe route to school.

PROJECT DESCRIPTION:
The project will be constructed to the Minnesota State Design Preservation Standards (Administrative Rule 8820.9981). State design standards require minimum dimensions with an aggregate road and this type of ADT to have a lane width of 12 feet with two foot shoulders.

The project includes construction of the trail, creating turn lanes, shoulder widening, minor construction of ditches, and minor cross drainage. In most places ditching will be minimal and the trail will grade into surrounding wetlands.

NAME, AREA AND TYPES OF WATERS (INCLUDING WETLANDS) SUBJECT TO LOSS: The project would result in permanent impacts to 0.86 acre of shallow marsh (Type 3), 0.19 acre of fresh meadow (Type 2), and 0.20 acre of shrub-carr (Type 6) wetlands. The site would be restored as necessary upon completion of the project. Disturbed areas would be graded to restore the contours of the land to previous conditions. Erosion control structures would be removed after new growth has been established.

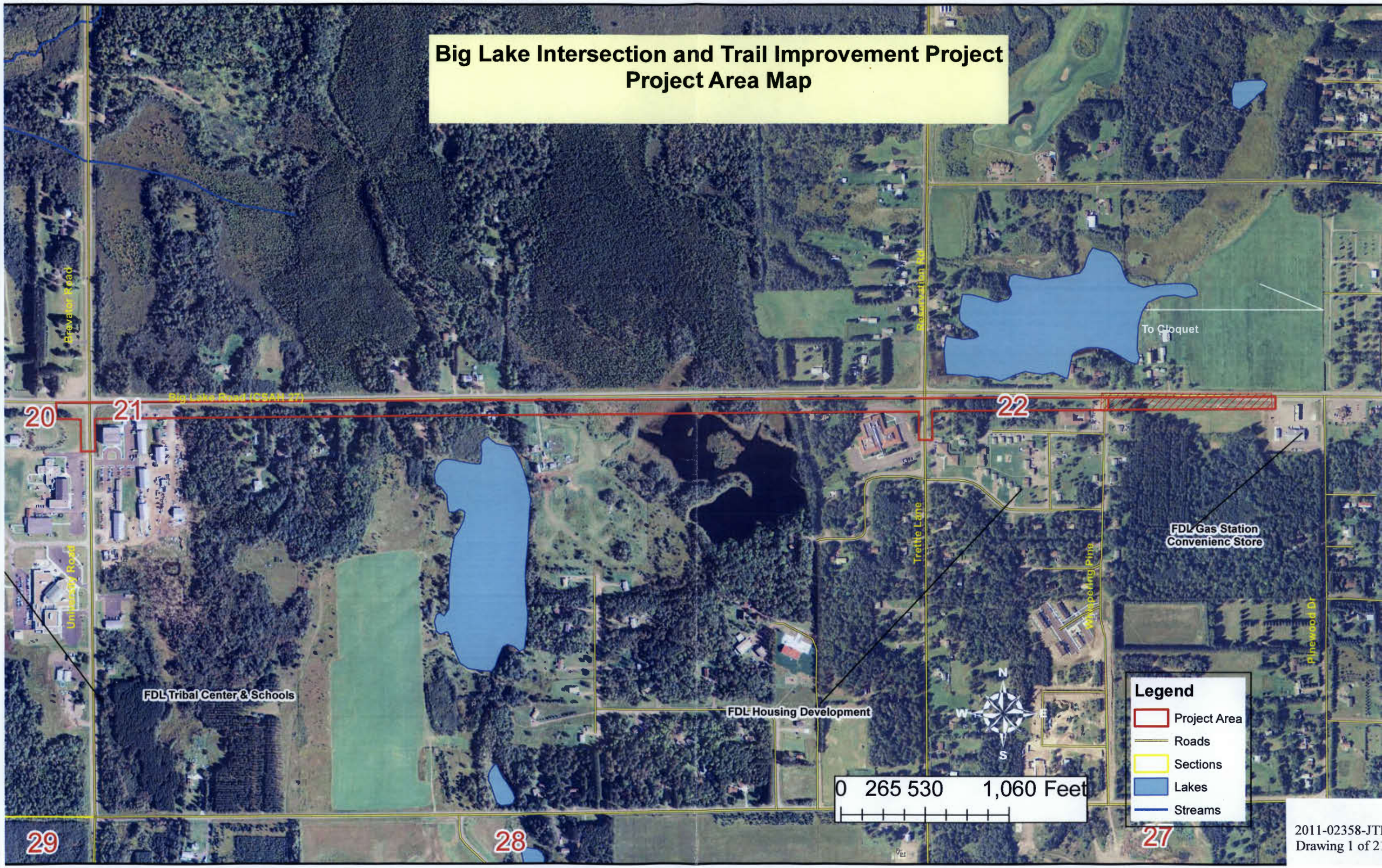
ALTERNATIVES CONSIDERED: The no-build alternative was dismissed due to failure to act would not address the traffic and pedestrian safety issues with Big Lake Road.

The second alternative of constructing the trail, creating turn lanes, minor construction of ditches, and minor cross drainage was chosen as the selected alternative. Avoidance and minimization decreased wetland impacts from 2.6 acres to 1.25 acres.

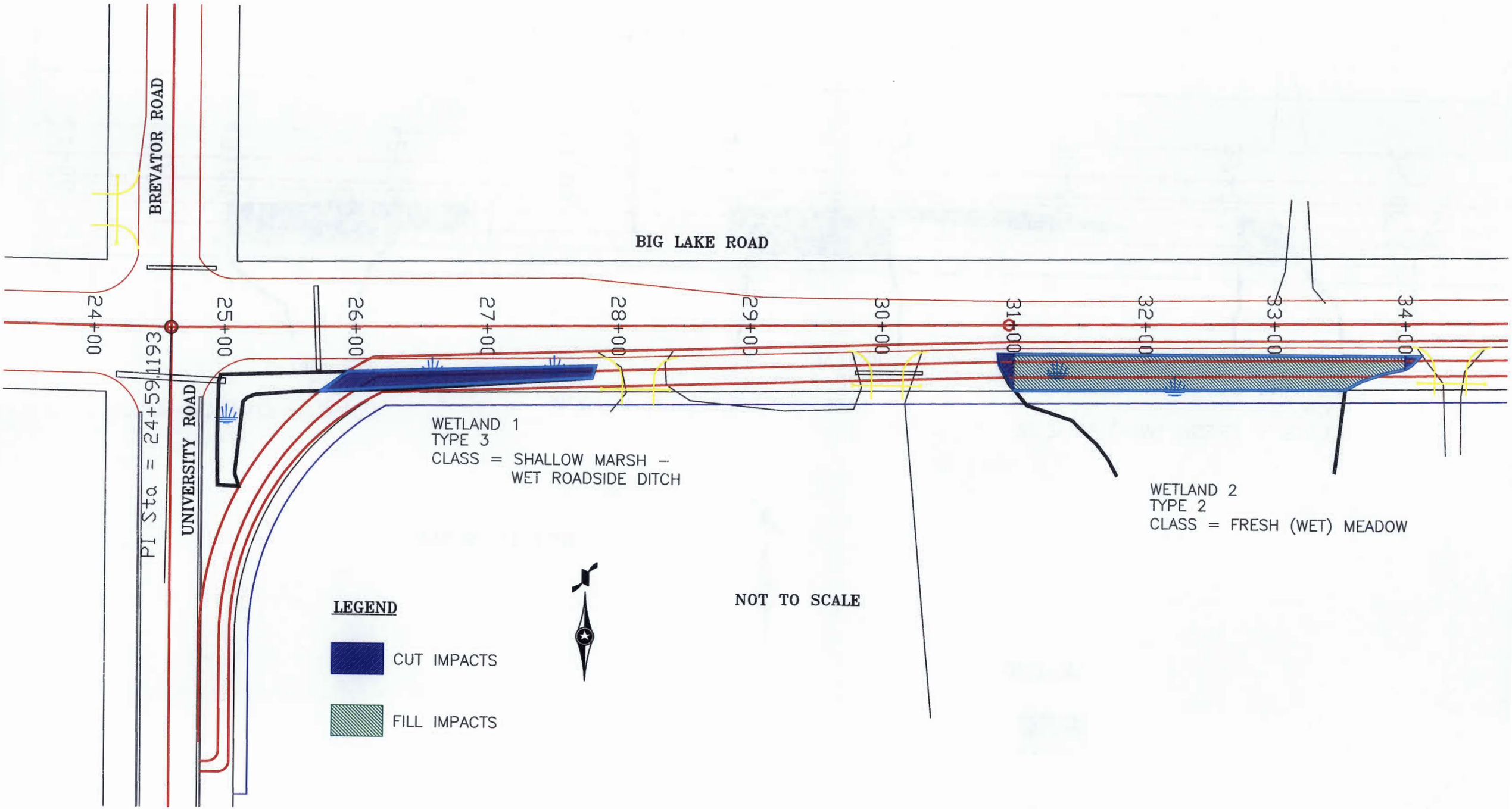
COMPENSATORY MITIGATION: The applicant has proposed to provide compensatory mitigation for the 1.26 acres of impact to wetlands through a mitigation bank in Bank Service Area 2. A 1:1 wetland compensation ratio will be required when using this bank.

DRAWINGS: See attached.

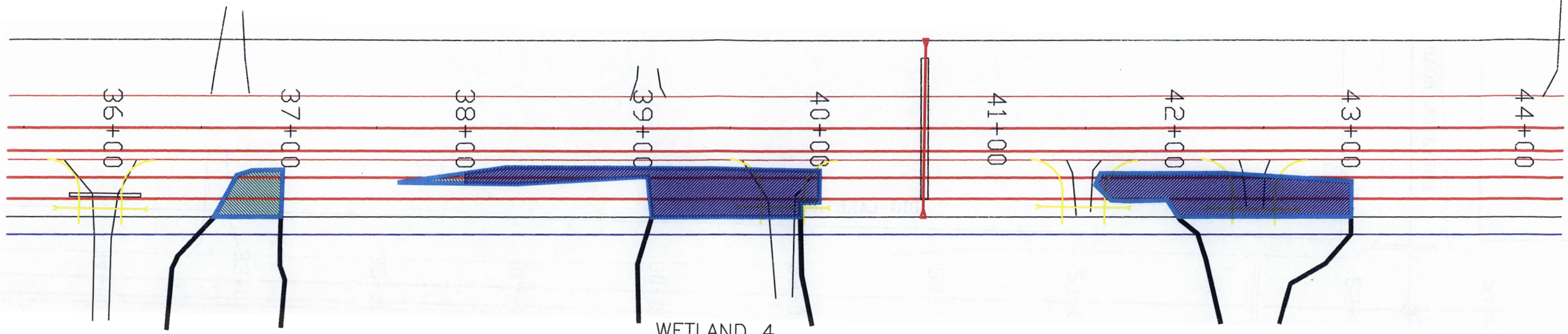
Big Lake Intersection and Trail Improvement Project
Project Area Map



2011-02358-JT
Drawing 1 of 2


BREVATOR ROAD
BIG LAKE ROAD
UNIVERSITY ROAD
PI Sta = 24+59.193
24+00
25+00
26+00
27+00
28+00
29+00
30+00
31+00
32+00
33+00
34+00
WETLAND 1
TYPE 3
CLASS = SHALLOW MARSH –
WET ROADSIDE DITCH
WETLAND 2
TYPE 2
CLASS = FRESH (WET) MEADOW
LEGEND
CUT IMPACTS
FILL IMPACTS
NOT TO SCALE

BIG LAKE ROAD



WETLAND 3
TYPE 2
CLASS = FRESH (WET) MEADOW

WETLAND 4
TYPE 2
CLASS = FRESH (WET) MEADOW

WETLAND 5
TYPE 3
CLASS = SHALLOW MARSH

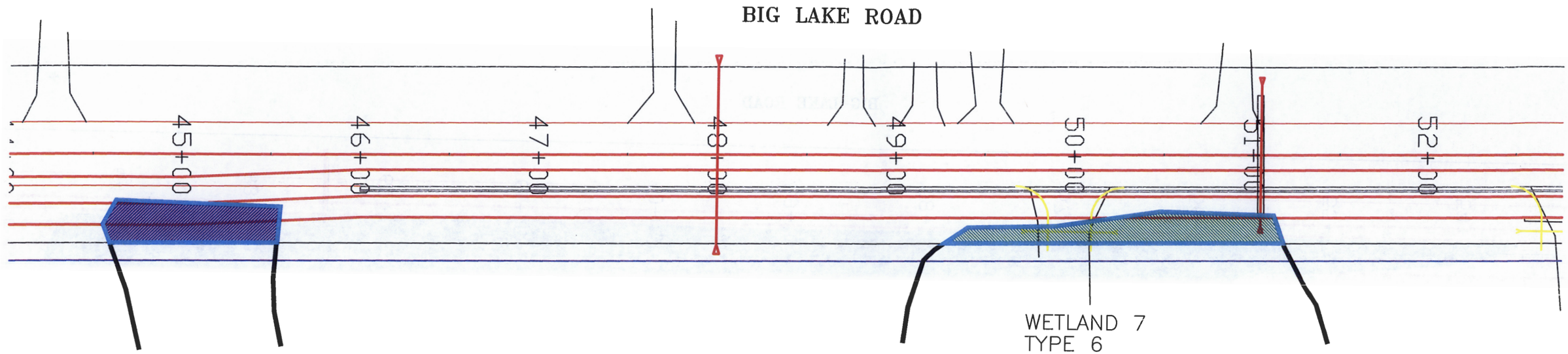
NOT TO SCALE

LEGEND

CUT IMPACTS

FILL IMPACTS

2011-02358-JTF
Drawing 3 of 21



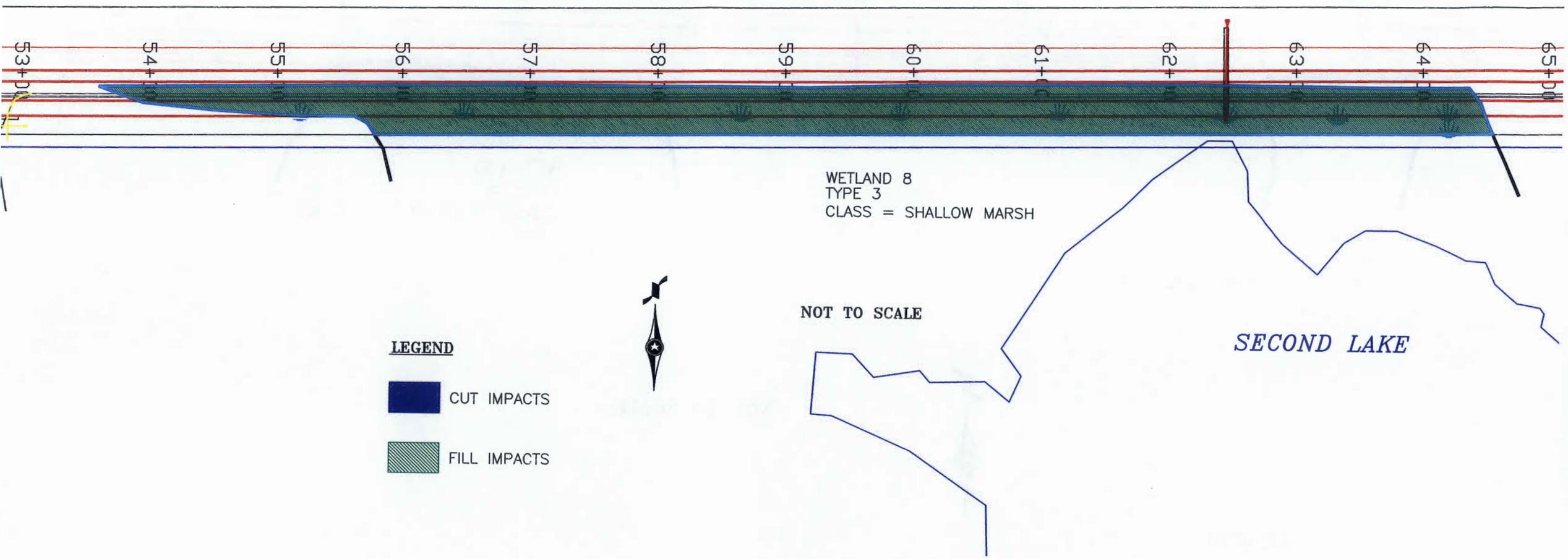
NOT TO SCALE

LEGEND

CUT IMPACTS

FILL IMPACTS

BIG LAKE ROAD

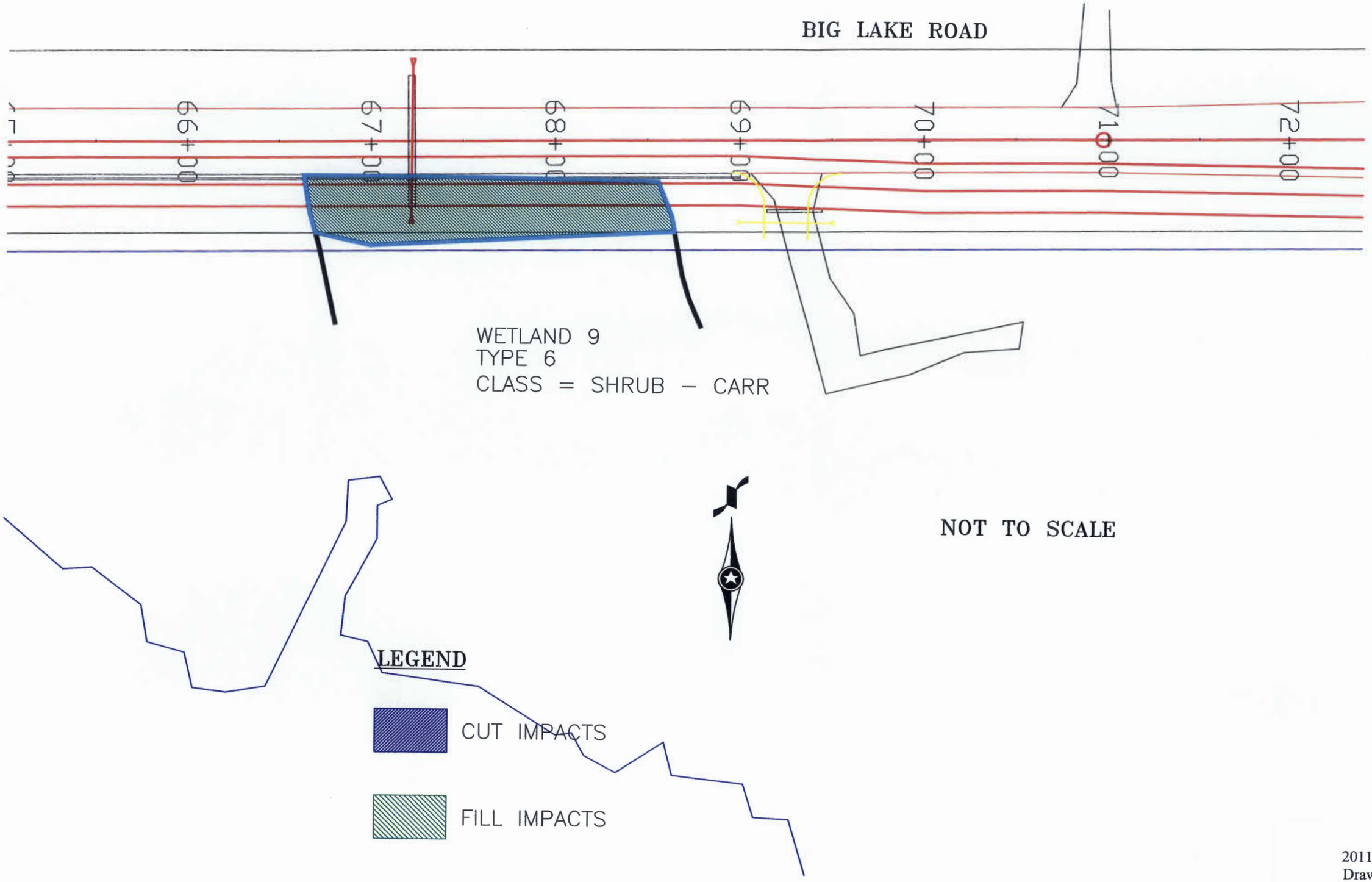


LEGEND

CUT IMPACTS

FILL IMPACTS

2011-02358-JTF
Drawing 5 of 21



2011-02358-JTF
Drawing 6 of 21

STATE OF MINNESOTA
CARLTON COUNTY

CONSTRUCTION PLAN FOR GRADING, AGGREGATE BASE, AND DRAINAGE STRUCTURES FOR THE PEDESTRIAN/BICYCLE TRAIL.

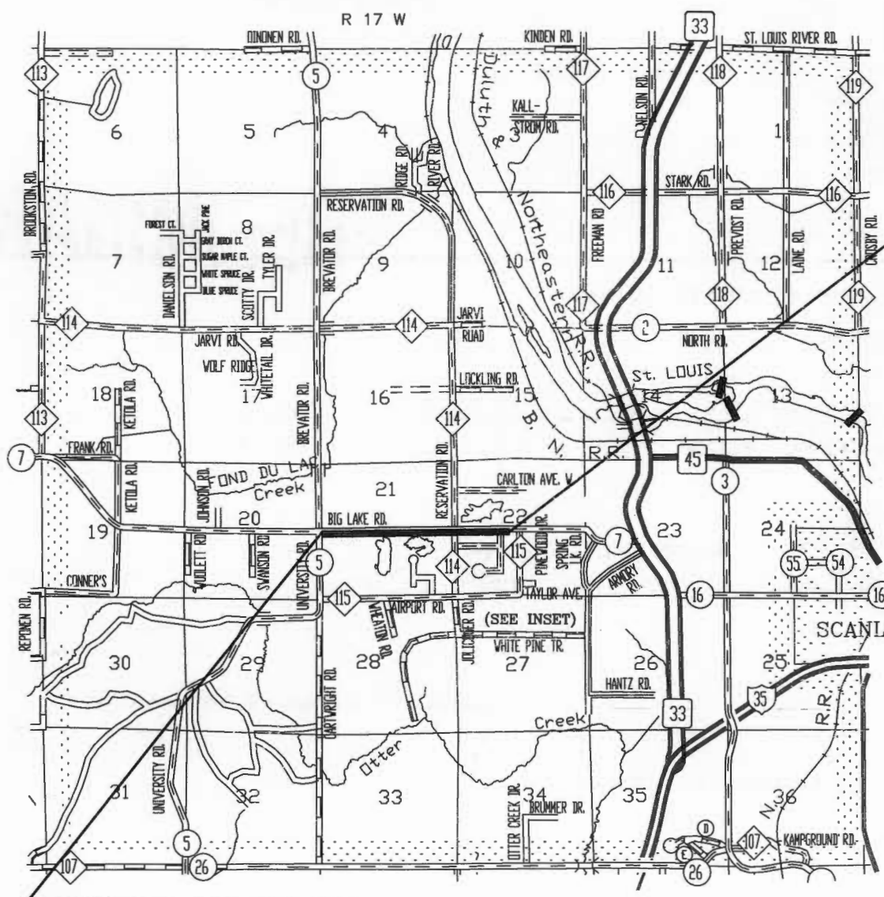
PROJECT NO. S.P. 091-090-065

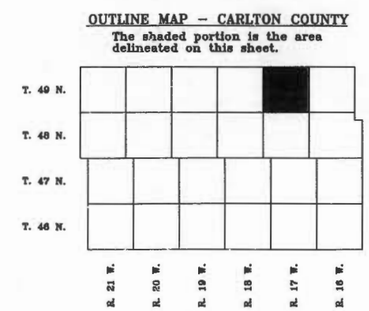
LOCATED ON C.S.A.H. #7 (BIG LAKE RD.) AT THE INTERSECTION WITH C.S.A.H. #5 (BREVATOR & UNIVERSITY RDS.) AND WITH Whispering Pines Drive (GEOGRAPHIC DESCRIPTION)

AT THE WEST 1/4 CORNER OF SEC. 21, T. 49 N., R. 17 W. AND AT 1,317.88' EAST OF THE WEST 1/4 CORNER OF SEC. 22, T. 49 N., R. 17 W. (LEGAL DESCRIPTION)

GROSS LENGTH	6,578.28	FEET	1.246	MILES
BRIDGES - LENGTH	0.00	FEET	0.000	MILES
EXCEPTIONS - LENGTH	0.00	FEET	0.000	MILES
NET LENGTH	6,578.28	FEET	1.246	MILES

PRELIMINARY





MINN PROJ NO. STPX 09?? ( )

GOVERNING SPECIFICATIONS

THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND REVISIONS SHALL GOVERN.

INDEX

DESCRIPTION	SHEET NO.
TITLE SHEET	1
ESTIMATED QUANTITIES	2
STANDARD PLATES	2
TYPICAL SECTIONS	3-4
TABULATION SHEETS	5-7
PLAN AND PROFILE SHEETS	8-10
CROSS SECTION SHEETS	11-17
STORM WATER POLLUTION PLAN	18-20
TRAFFIC CONTROL PLAN	21

(THIS PLAN CONTAINS 21 SHEETS)

DESIGN DESIGNATION

FUNCTIONAL CLASS= COLLECTOR IN URBAN BDY.
TON DESIGN= 10 TON

PRESENT ADT. (YEAR)= 4785 (2013)
PROJ. ADT. (YEAR)= 6219 (2033)
PROJ. HCADT. <350

DESIGN SPEED= 50 MPH
ΣN18= 1,205,464
R-VALUE= 20
SOIL FACTOR= 100 %

TRAFFIC LANES= 12
SHOULDER WIDTH= VARIES (SEE TYP. SECTIONS)

BASED ON STOPPING SIGHT DISTANCE:
HEIGHT OF EYE=
HEIGHT OF OBJECT=

DESIGN SPEED NOT ACHIEVED AT:
STA. TO STA.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 2013
MICHAEL L. TARDY, CARLTON COUNTY ENGINEER - LICENSE NO. 19416

DATE 2013
REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY:
DISTRICT STATE AID ENGINEER

APPROVED FOR STATE AID FUNDING:
STATE AID ENGINEER

STATE OF MINNESOTA
CARLTON COUNTY
CONSTRUCTION PLAN FOR GRADING, AGGREGATE BASE, AND DRAINAGE STRUCTURES FOR THE PEDESTRIAN/BICYCLE TRAIL.
PROJECT NO. S.P. 091-090-065
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STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER SECTION LINE
SIXTEENTH SECTION LINE
RIGHT OF WAY LINE
SLOPE EASEMENT
PRESENT RIGHT OF WAY LINE
CONTROL OF ACCESS LINE
PROPERTY LINE (VACATED PROPERTY LINE)
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
RAILROAD
RAILROAD RIGHT OF WAY LINE
RIVER OR CREEK
DRY RUN
DRAINAGE DITCH
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
RAILROAD SNOW FENCE
STONE WALL OR FENCE
HEDGE
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRICAL WARNING SIGN
CROSSING GATE
MEANDER CORNER
SPRINGS
MARSH
TIMBER
ORCHARD
BRUSH
NURSERY
CATCH BASIN
FIRE HYDRANT
CATTLE GUARD
OVERPASS (Highway Over)
UNDERPASS (Highway Under)
BRIDGE
BRIDGE (One Story Frame) F-FRAME C-CONCRETE S-STONE T-TILE B-BRICK ST-STUCCO
IRON PIPE OR ROD
MONUMENT (Stone,Concrete,or Metal)
WOODEN HUB
GRAVEL PIT
SAND PIT
BORROW PIT
ROCK QUARRY

UTILITIES SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH POLE LINE
JOINT TELEPHONE AND POWER ON POWER POLES
JOINT TELEPHONE AND POWER ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (Telephone Cable Terminal)
GAS MAIN
WATER MAIN
CONDUIT
TELEPHONE CABLE IN CONDUIT
ELECTRIC CABLE IN CONDUIT
TELEPHONE MANHOLE
ELECTRIC MANHOLE
BURIED TELEPHONE CABLE
BURIED ELECTRIC CABLE
AERIAL TELEPHONE CABLE
SEWER,(SANITARY OR STORM)
SEWER MANHOLE

SCALES

INDEX MAP 0 2900'

Plan Created By: R.N. Stigers Date: 3/5/2013
Plan Sheet Revised By: G.J. Thompson Date: 3/18/2013
Plan Revised By: G.J. Thompson Date: 4/1/2013
This plan sheet was prepared by me or under my direct supervision.
Michael L. Tardy, Carlton County Highway Engineer, License No. 19416

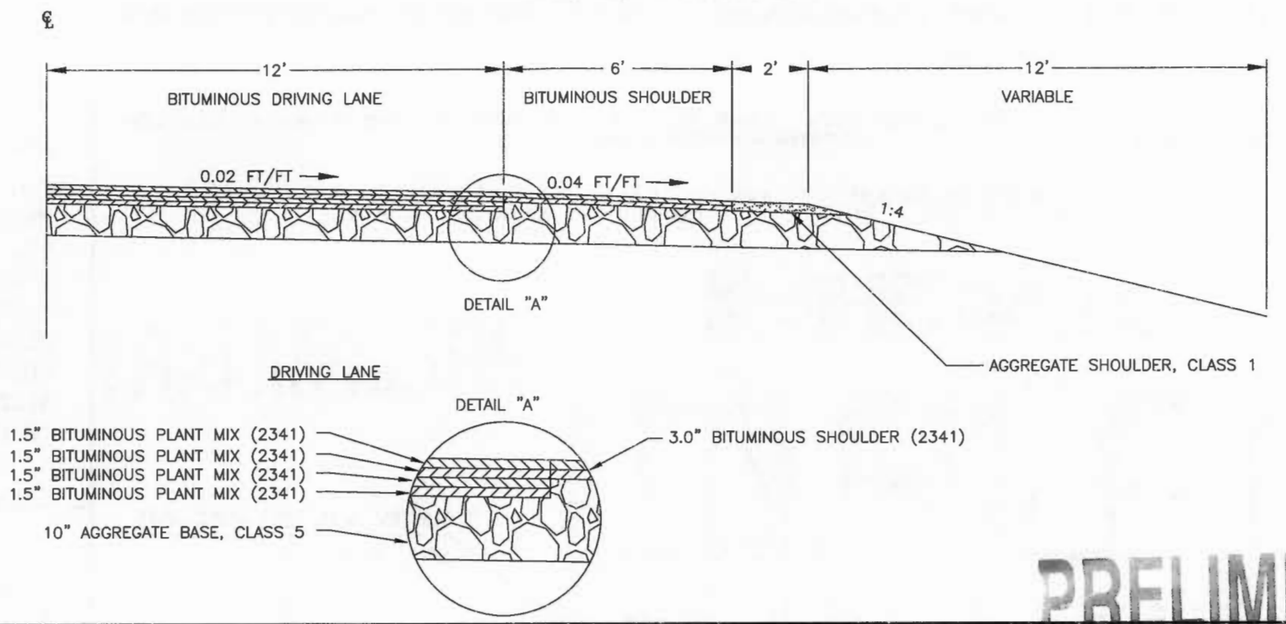
STATE PROJECT No. 091-090-065 (CSAH #7) SHEET

2011-02358-JTF
Drawing 7 of 21

EXISTING TYPICAL HALF SECTIONS

STA. 24+83.26 TO STA. 72+24.62

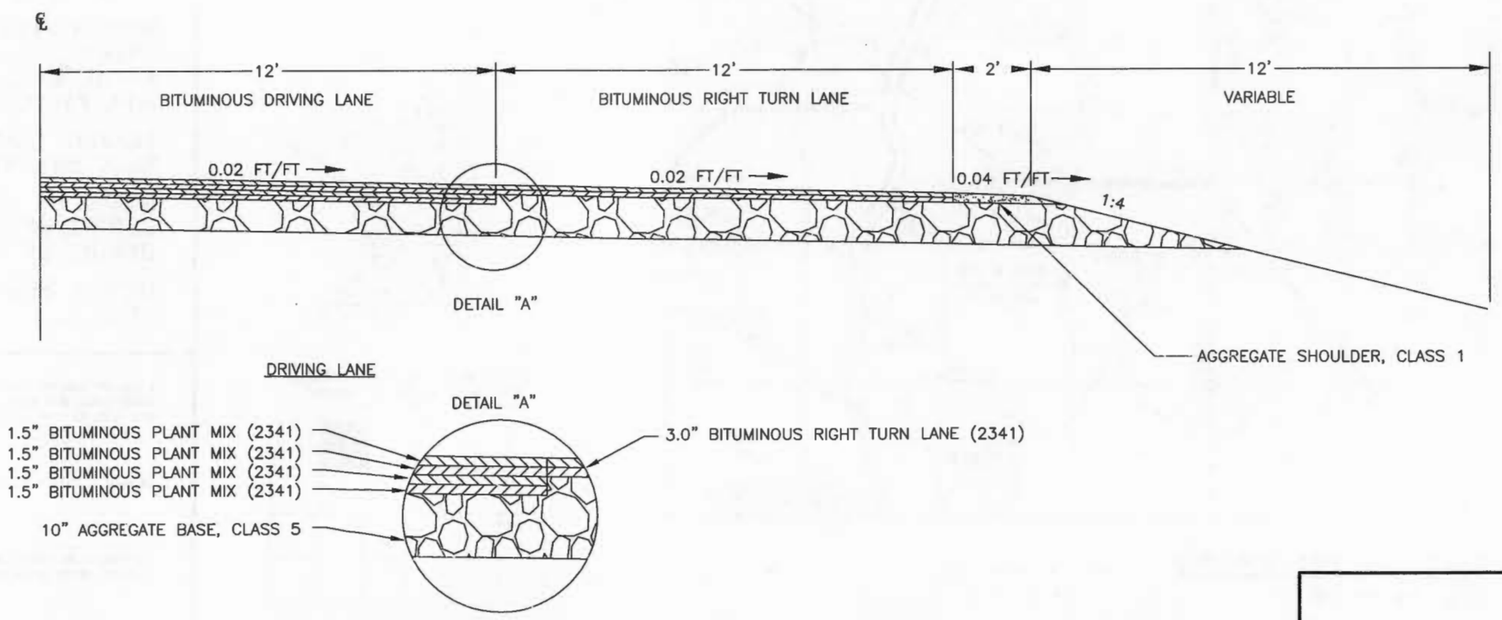
EXISTING RIGHT TYPICAL HALF SECTION



PRELIMINARY

STA. 72+24.62 TO STA. 77+34

EXISTING RIGHT TYPICAL HALF SECTION



2011-02358-JTF
Drawing 8 of 21

BIG LAKE TRAIL

TYPICAL SHEET

Plan Created By: R.N. Sligers
Date: 3/5/2013

Plan Sheet Revised By: G.J. Thompson
Date: 4/1/2013

Plan Revised By: G.J. Thompson
Date: 4/1/2013

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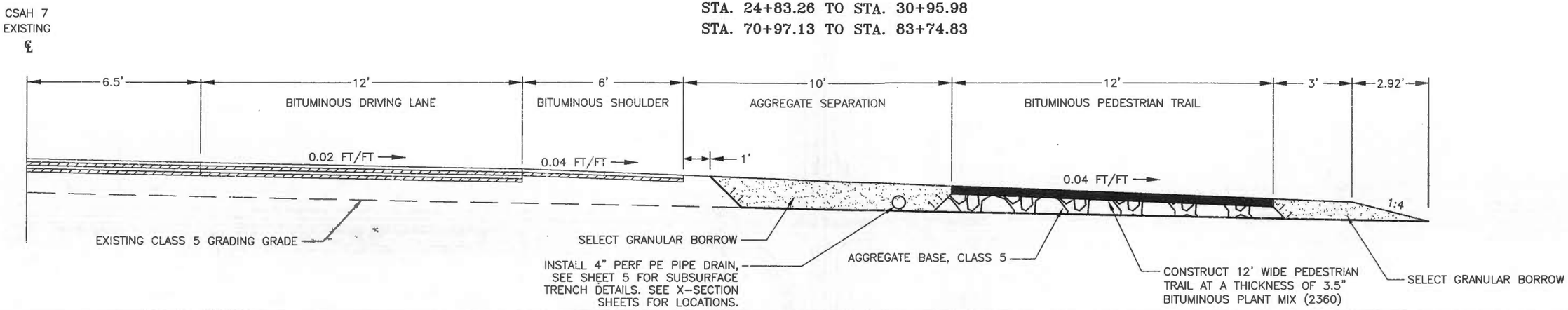
Michael L. Tardy
Michael L. Tardy, Carlton County Highway Engineer, License No. 19416

STATE PROJECT No. 091-090-065 (CSAH #7) SHEET NO. 3 OF ?? SHEETS.

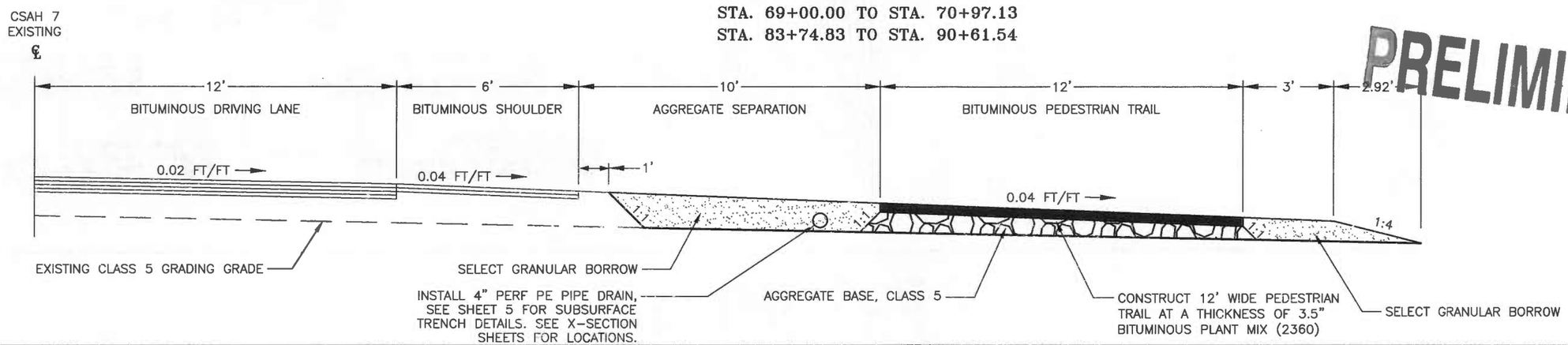
PROPOSED RIGHT TYPICAL HALF SECTIONS

STA. 24+83.26 TO STA. 30+95.98
STA. 70+97.13 TO STA. 83+74.83

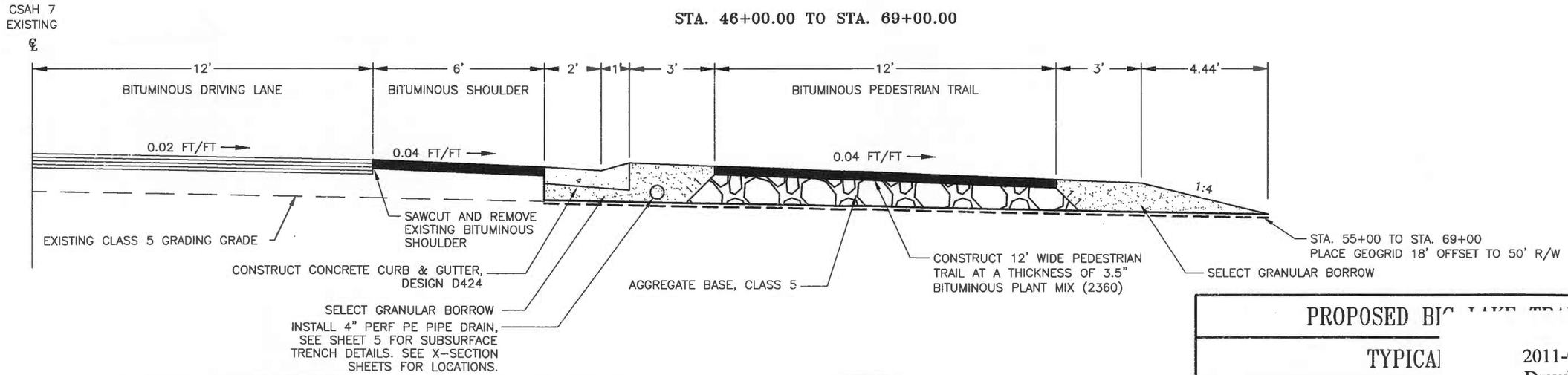


STA. 30+95.98 TO STA. 46+00.00
STA. 69+00.00 TO STA. 70+97.13
STA. 83+74.83 TO STA. 90+61.54

PRELIMINARY



STA. 46+00.00 TO STA. 69+00.00



PROPOSED BI

TYPICA

Plan Created By: R.N. Stigers
Date: 3/5/2013

Plan Sheet Revised By: G.J. Thompson
Date: 4/1/2013

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Date: 4/1/2013

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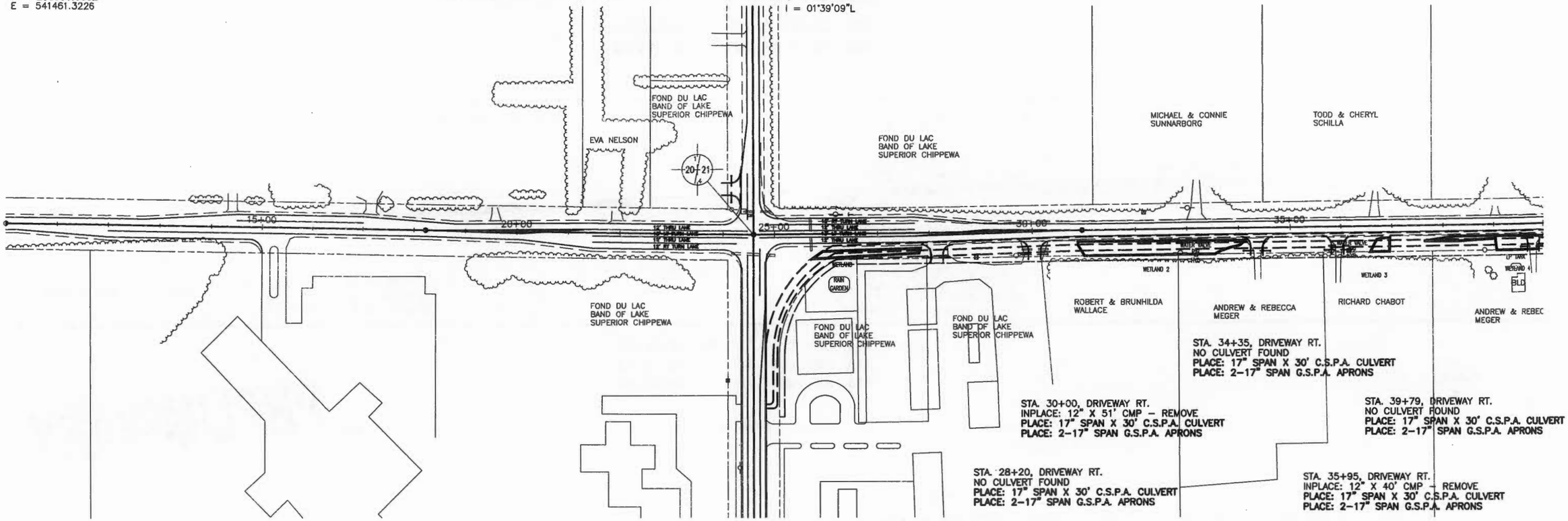
Michael L. Tardy, Carlton County Highway Engineer, License No. 19416

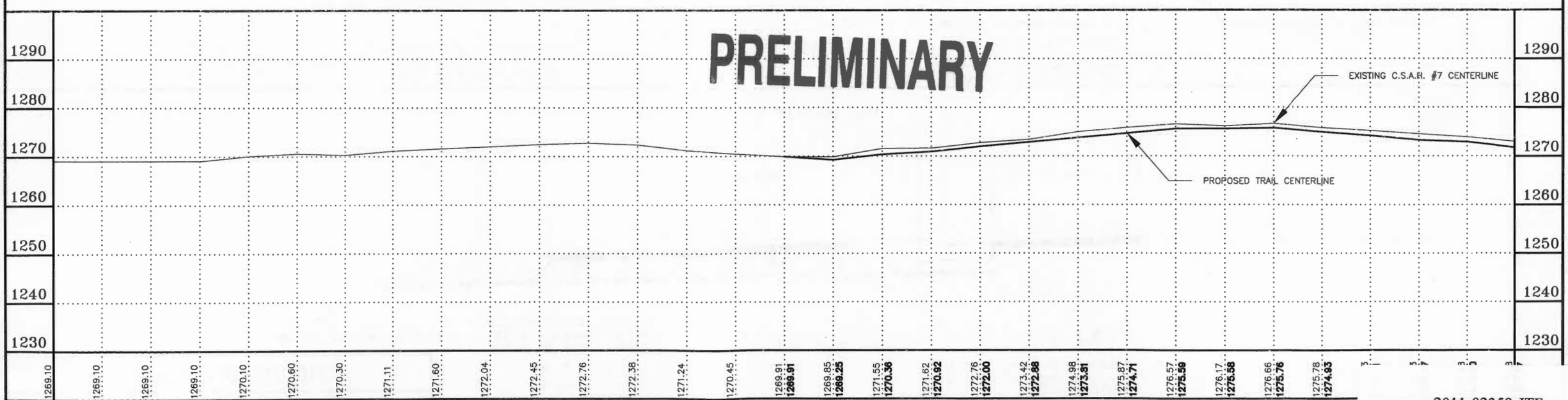
STATE PROJECT No. 091-090-065 (CSAH #7) SHEET

2011-02358-JTF
Drawing 9 of 21

BOP = 10+00.00
N = 208396.9952
E = 541461.3226

PI STA= 24+59.12
N = 208373.8095
E = 542920.2577
I = 01°39'09"L





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Date: 3/5/2013

Plan Revised By: G.J. Thompson
Date: 4/1/2013

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STATE PROJECT No. 091-090-065 (CSAH #7)

2011-02358-JTF
Drawing 10 of 21

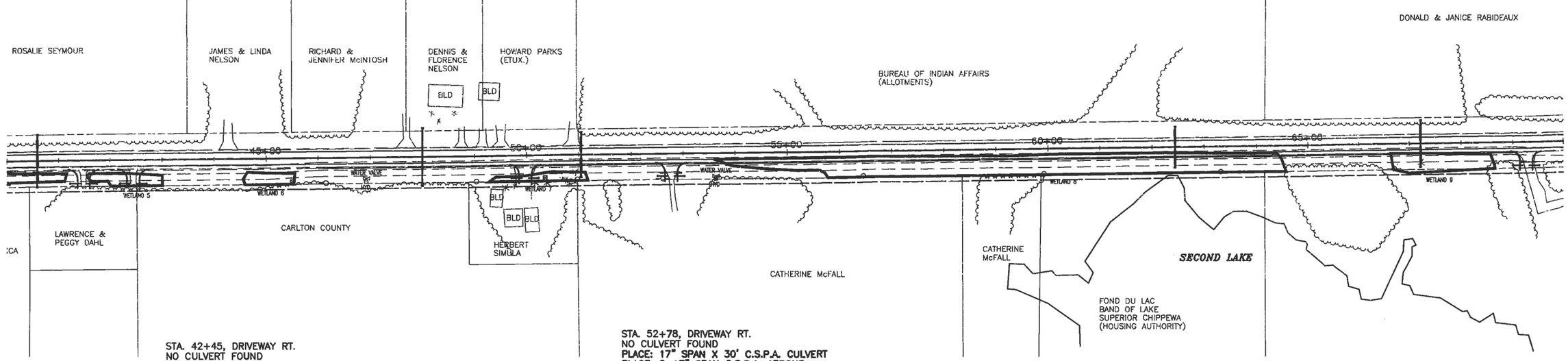
STA. 40+59, ℄
INPLACE: 18" X 80' CMP (REMOVE)
PLACE: 29" SPAN X 76' R.C.P.A. CULVERT
PLACE: 2-29" SPAN R.C.P.A. APRONS
PLACE: 8.2 C.Y. RANDOM RIPRAP, CLASS III AT INLET
PLACE: 8.2 C.Y. RANDOM RIPRAP, CLASS III AT OUTLET
PLACE: 61 C.Y. GRANULAR BEDDING

STA. 48+00, ℄
NO CULVERT INPLACE
PLACE: 29" SPAN X 86' R.C.P.A. CULVERT
PLACE: 2-29" SPAN R.C.P.A. APRONS
PLACE: 8.2 C.Y. RANDOM RIPRAP, CLASS III AT INLET
PLACE: 8.2 C.Y. RANDOM RIPRAP, CLASS III AT OUTLET
PLACE: 68 C.Y. GRANULAR BEDDING

STA. 51+04, ℄
INPLACE: 18" X 68' CMP (REMOVE)
PLACE: 29" SPAN X 64' R.C.P.A. CULVERT
PLACE: 2-29" SPAN R.C.P.A. APRONS
PLACE: 8.2 C.Y. RANDOM RIPRAP, CLASS III AT INLET
PLACE: 8.2 C.Y. RANDOM RIPRAP, CLASS III AT OUTLET
PLACE: 52 C.Y. GRANULAR BEDDING

STA. 62+44, ℄
INPLACE: 18" X 68' CMP (REMOVE)
PLACE: 29" SPAN X 60' R.C.P.A. CULVERT
PLACE: 2-29" SPAN R.C.P.A. APRONS
PLACE: 8.2 C.Y. RANDOM RIPRAP, CLASS III AT INLET
PLACE: 8.2 C.Y. RANDOM RIPRAP, CLASS III AT OUTLET
PLACE: 49 C.Y. GRANULAR BEDDING

STA. 67+22, ℄
INPLACE: 18" X 72' CMP (REMOVE)
PLACE: 29" SPAN X 66' R.C.P.A. CULVERT
PLACE: 2-29" SPAN R.C.P.A. APRONS
~~PLACE: 8.2 C.Y. RANDOM RIPRAP, CLASS III AT INLET~~
PLACE: 8.2 C.Y. RANDOM RIPRAP, CLASS III AT OUTLET
PLACE: 54 C.Y. GRANULAR BEDDING



STA. 42+45, DRIVEWAY RT.
NO CULVERT FOUND
PLACE: 17" SPAN X 30' C.S.P.A. CULVERT
PLACE: 2-17" SPAN G.S.P.A. APRONS

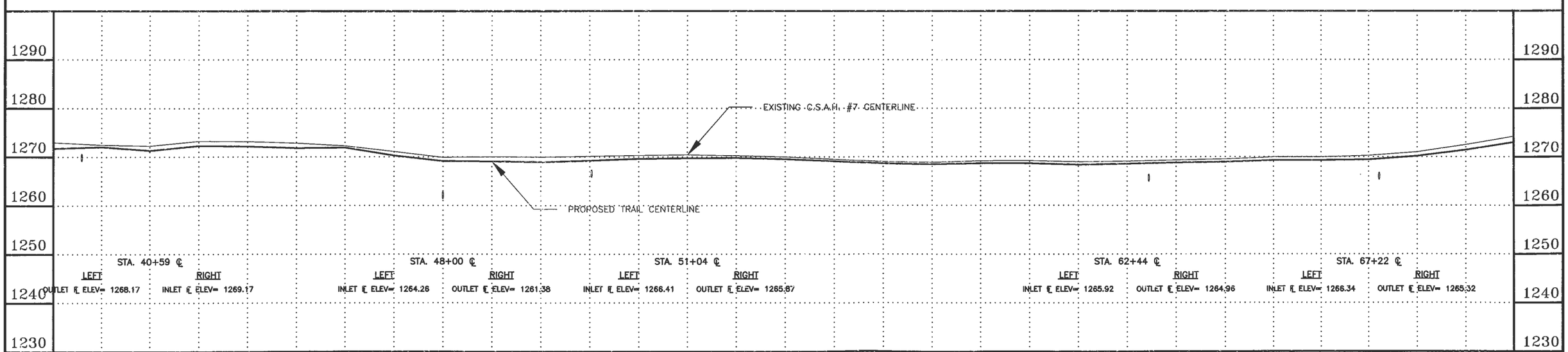
STA. 52+78, DRIVEWAY RT.
NO CULVERT FOUND
PLACE: 17" SPAN X 30' C.S.P.A. CULVERT
PLACE: 2-17" SPAN G.S.P.A. APRONS

STA. 41+50, DRIVEWAY RT.
NO CULVERT FOUND
PLACE: 17" SPAN X 30' C.S.P.A. CULVERT
PLACE: 2-17" SPAN G.S.P.A. APRONS

STA. 49+95, DRIVEWAY RT.
INPLACE: 12" X 51' CMP - REMOVE
PLACE: 17" SPAN X 30' C.S.P.A. CULVERT
PLACE: 2-17" SPAN G.S.P.A. APRONS

PRELIMINARY

STA. 69+30, DRIVEWAY RT.
INPLACE: 12" X 30' CMP - REMOVE
PLACE: 17" SPAN X 30' C.S.P.A. CULVERT
PLACE: 2-17" SPAN G.S.P.A. APRONS



Plan Created By: R.N. Stigers
Date: 3/5/2013

Plan Revised By: G.J. Thompson
Date: 4/1/2013

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Michael L. Tardy
Michael L. Tardy, Carlton County Highway Engineer, License No. 19416

STATE PROJECT No. 091-090-065 (CSAH #7)

2011-02358-JTF
Drawing 11 of 21

PI STA= 77+33.66
N = 208442.1189
E = 548194.3608
I = 01°23'16"R

STA. 85+82, ℄
INPLACE: 18" X 57' CMP (REMOVE)
PLACE: 29" SPAN X 84' R.C.P.A. CULVERT
PLACE: 2-29" SPAN R.C.P.A. APRONS
PLACE: 8.2 C.Y. RANDOM RIPRAP, CLASS III AT INLET
PLACE: 8.2 C.Y. RANDOM RIPRAP, CLASS III AT OUTLET
PLACE: 67 C.Y. GRANULAR BEDDING

EOP = 93+00.00
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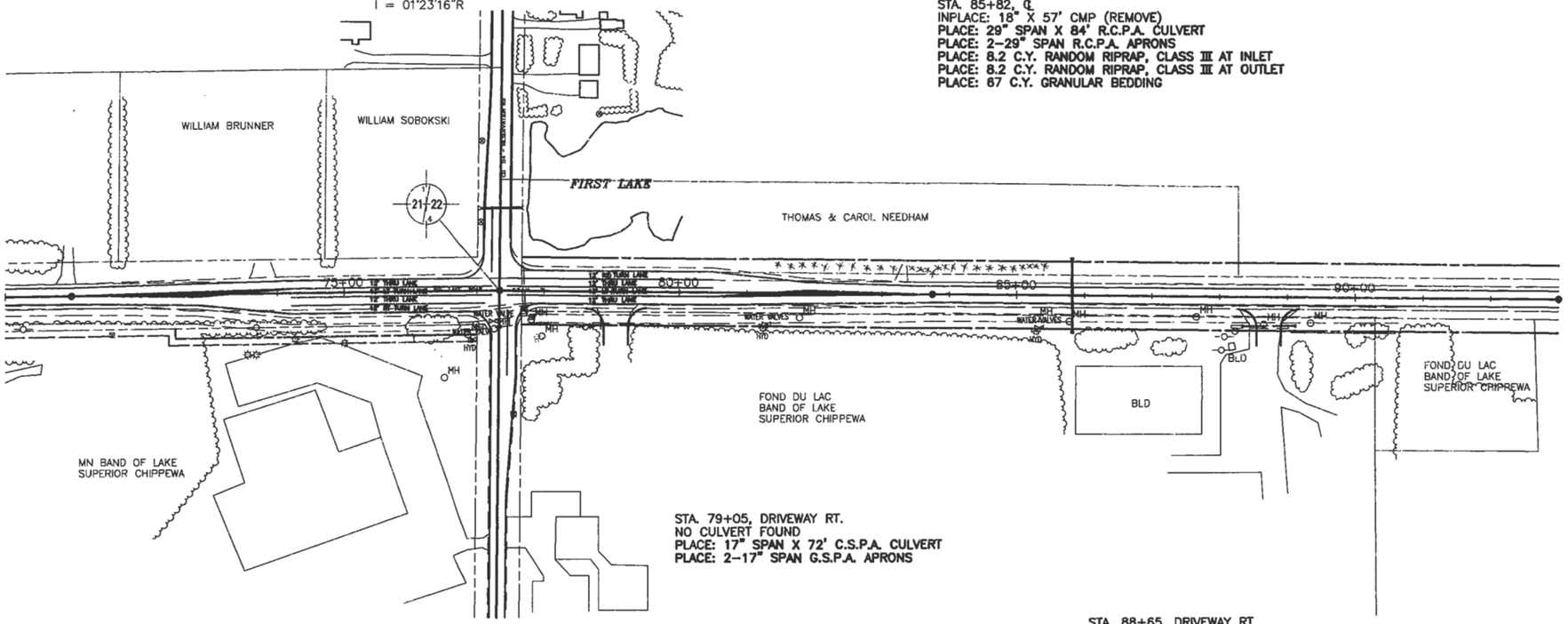
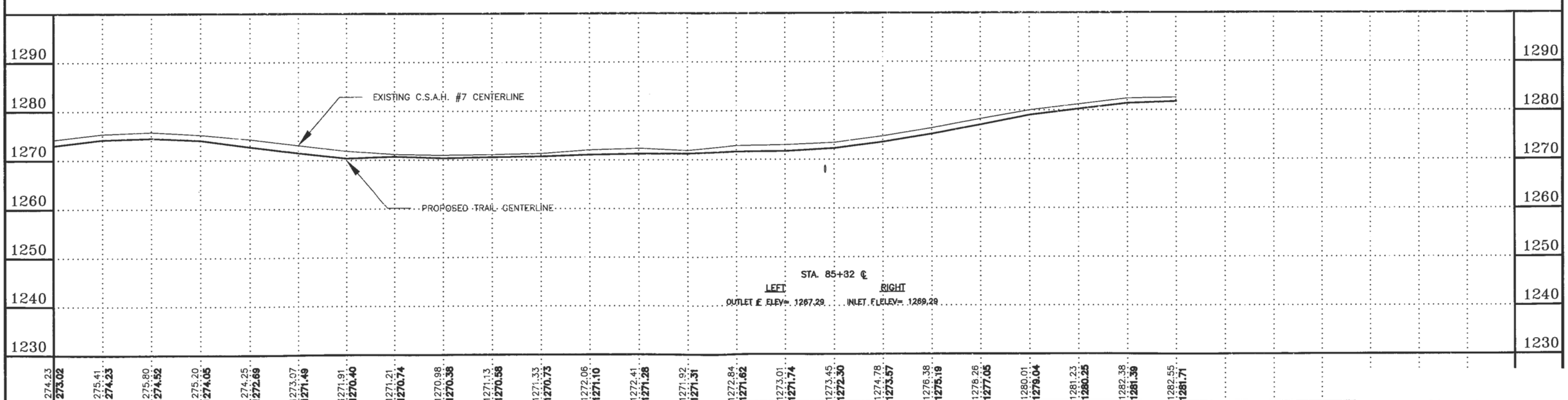
E = 549760.5965



STA. 79+05, DRIVEWAY RT.
NO CULVERT FOUND
PLACE: 17" SPAN X 72' C.S.P.A. CULVERT
PLACE: 2-17" SPAN G.S.P.A. APRONS

STA. 88+65, DRIVEWAY RT.
INPLACE: 12" X 82' CMP - REMOVE
PLACE: 17" SPAN X 72' C.S.P.A. CULVERT
PLACE: 2-17" SPAN G.S.P.A. APRONS

PRELIMINARY



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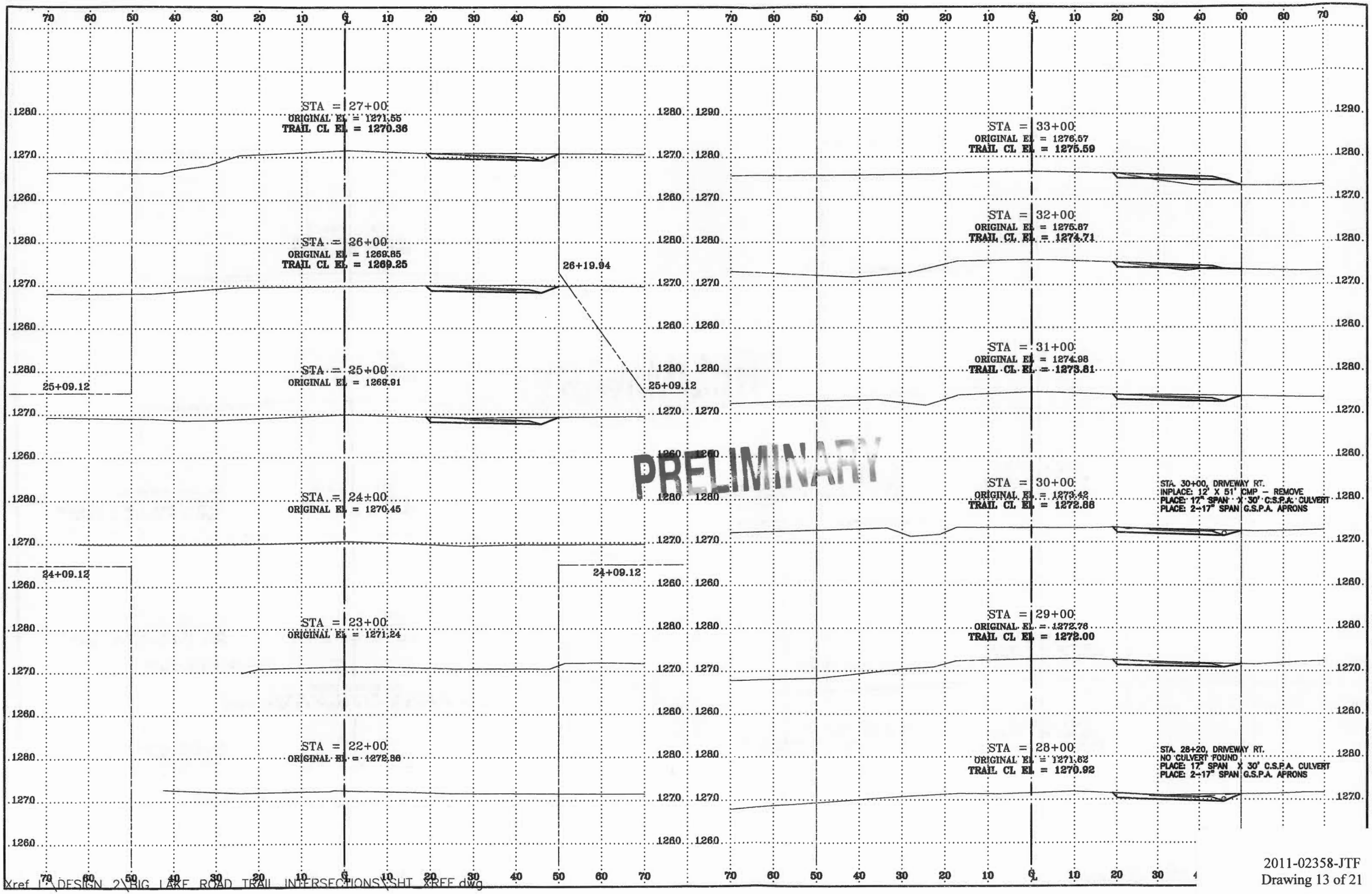
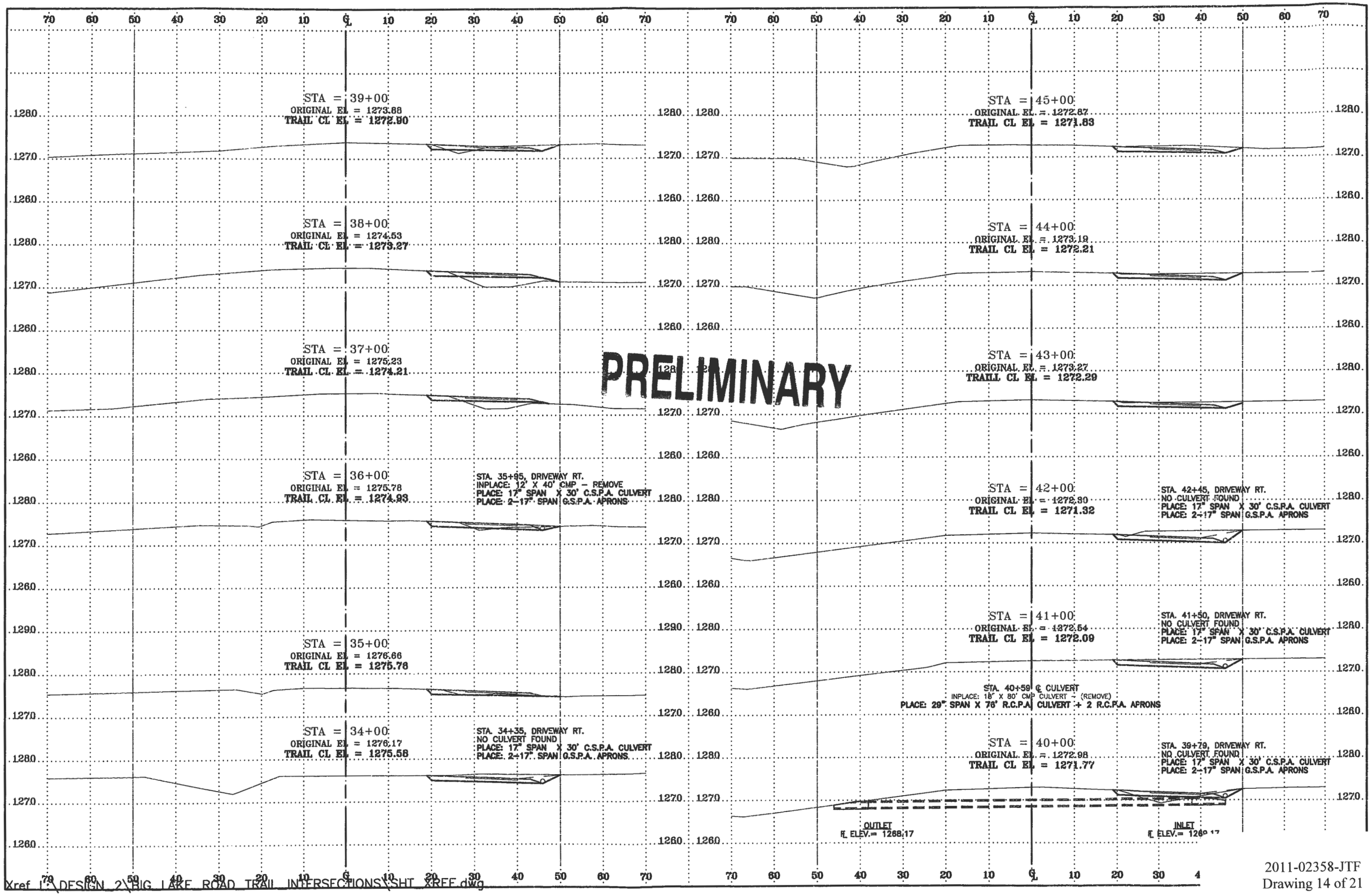
STATE PROJECT No. 091-090-065 (CSAH #7)

2011-02358-JTF
Drawing 12 of 21



2011-02358-JTF
Drawing 13 of 21



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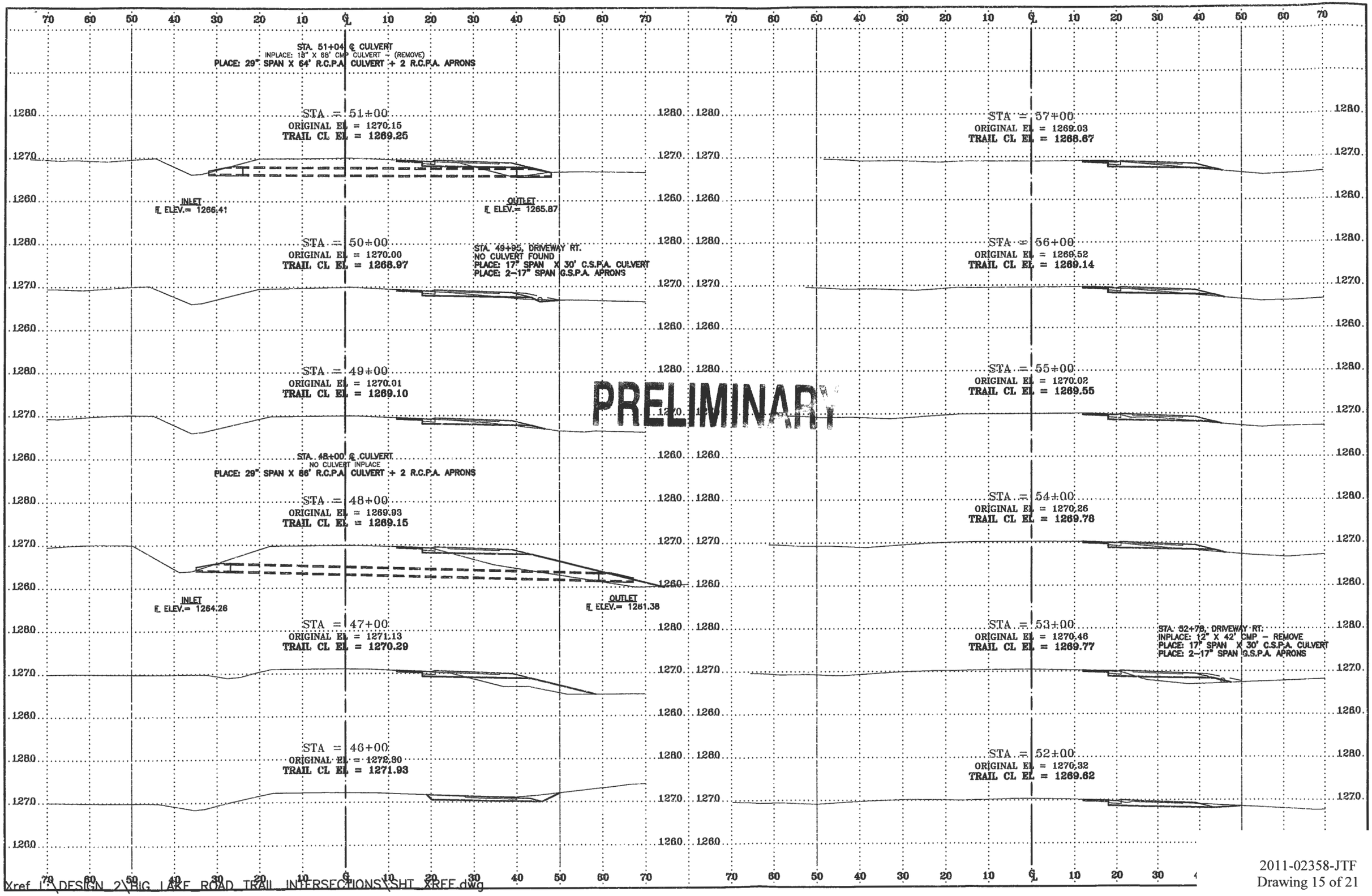

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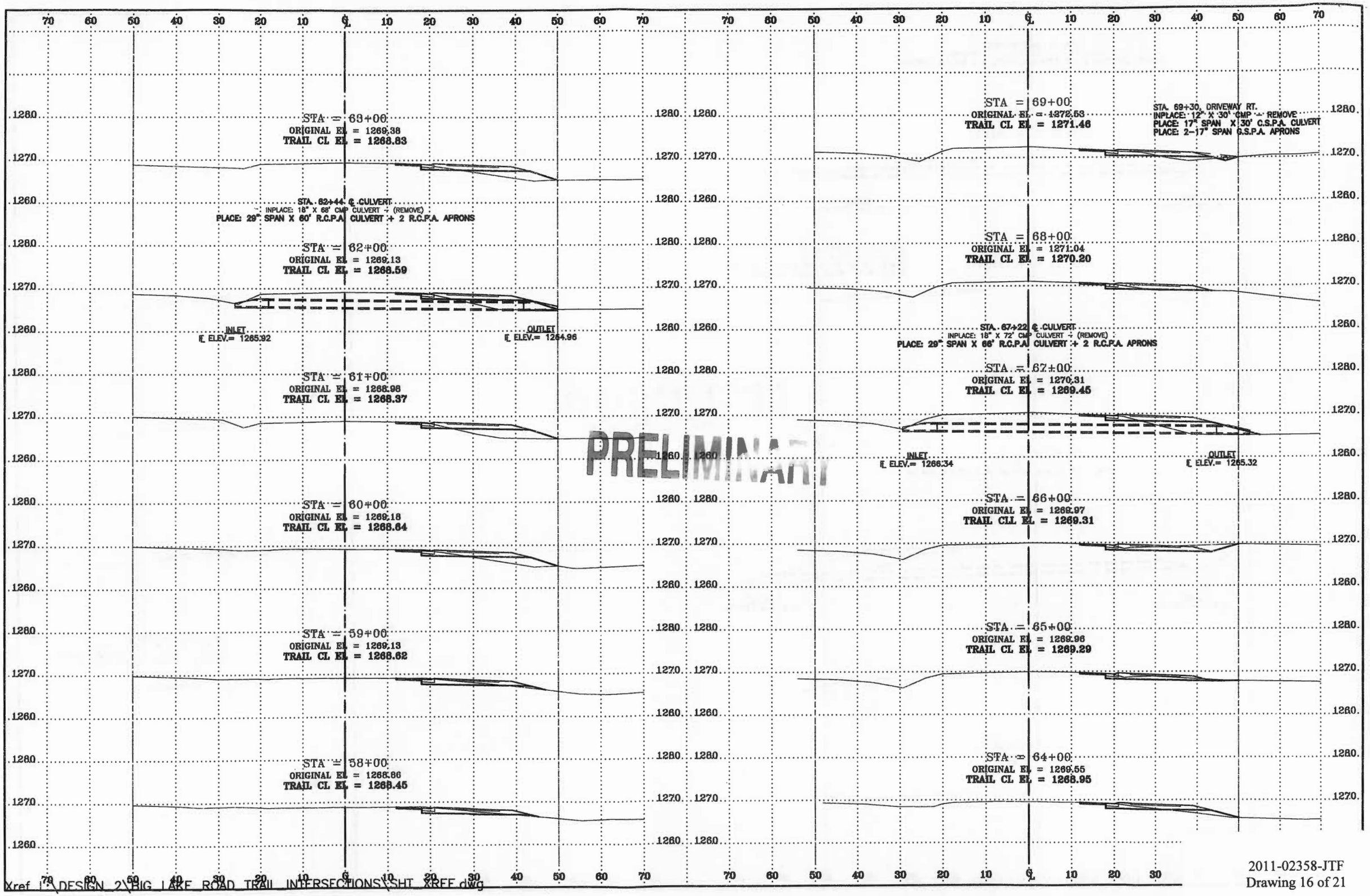

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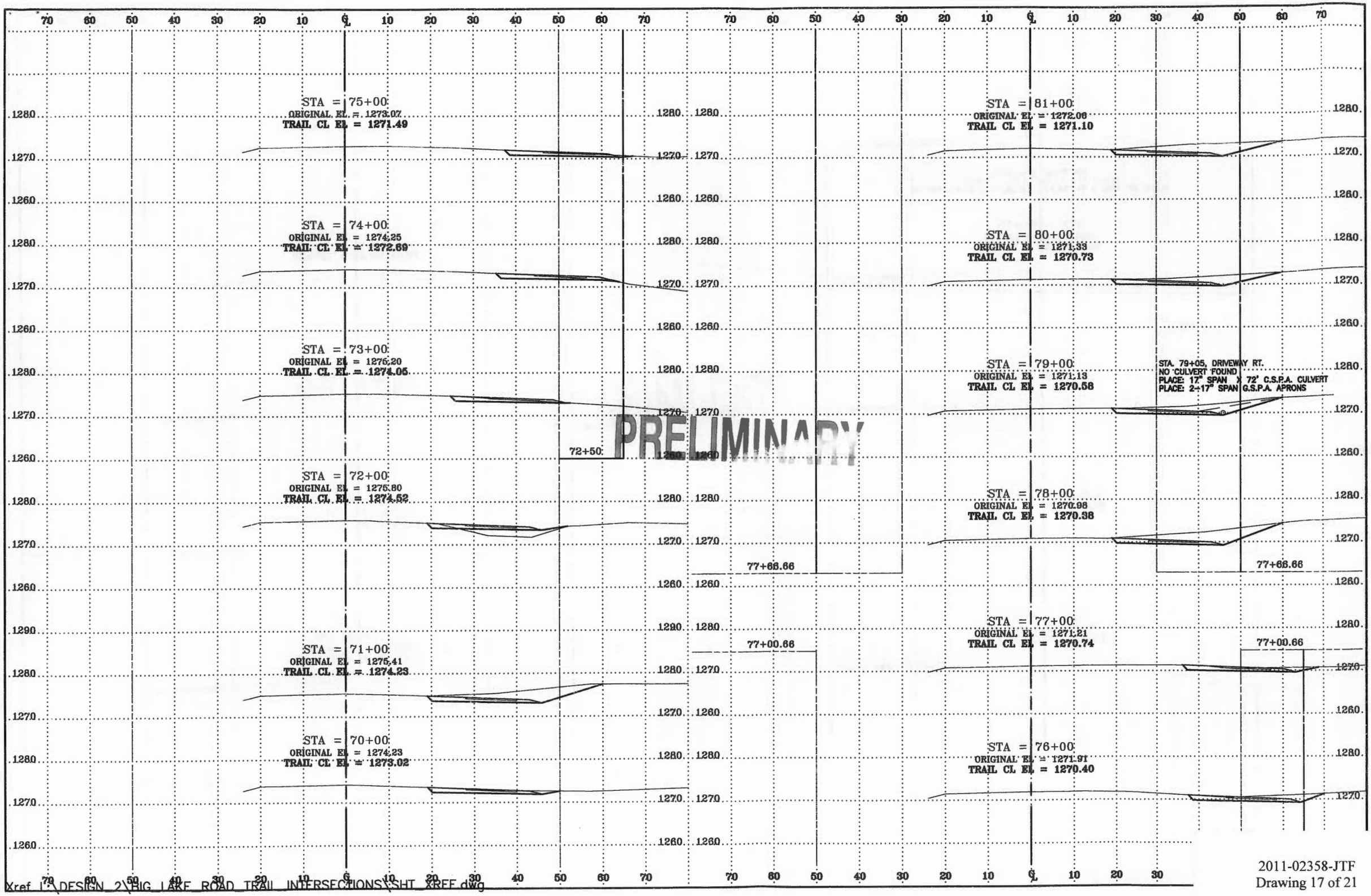

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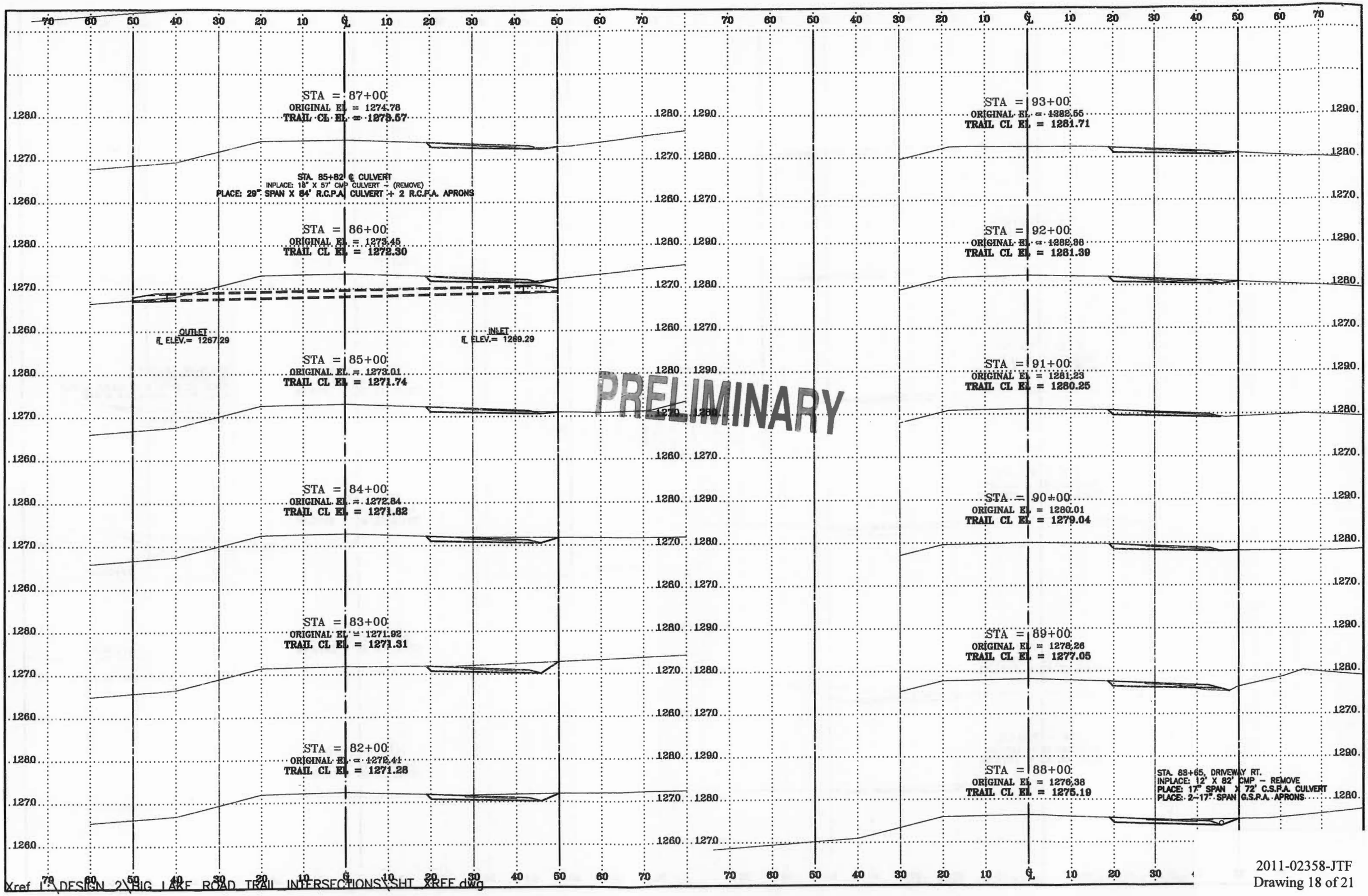
2011-02358-JTF
Drawing 17 of 21



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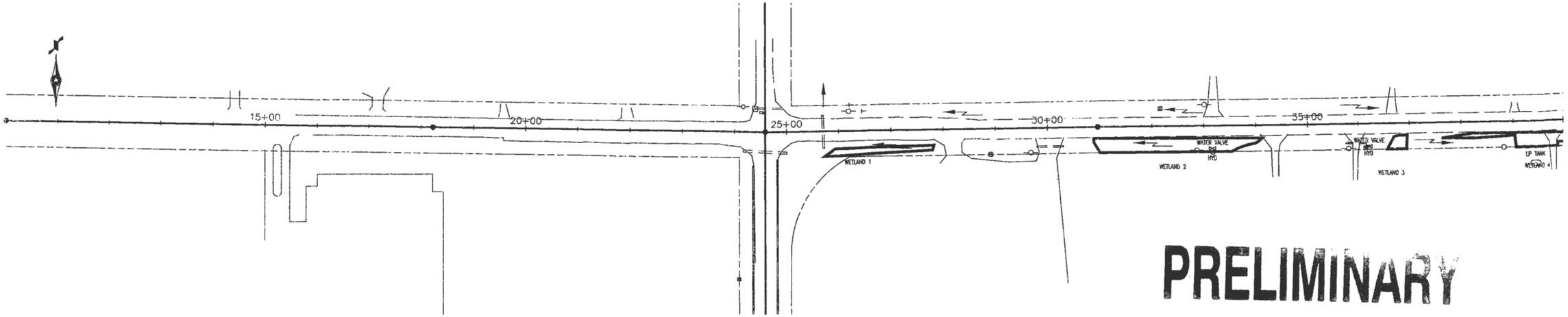
Drawing 18 of 21



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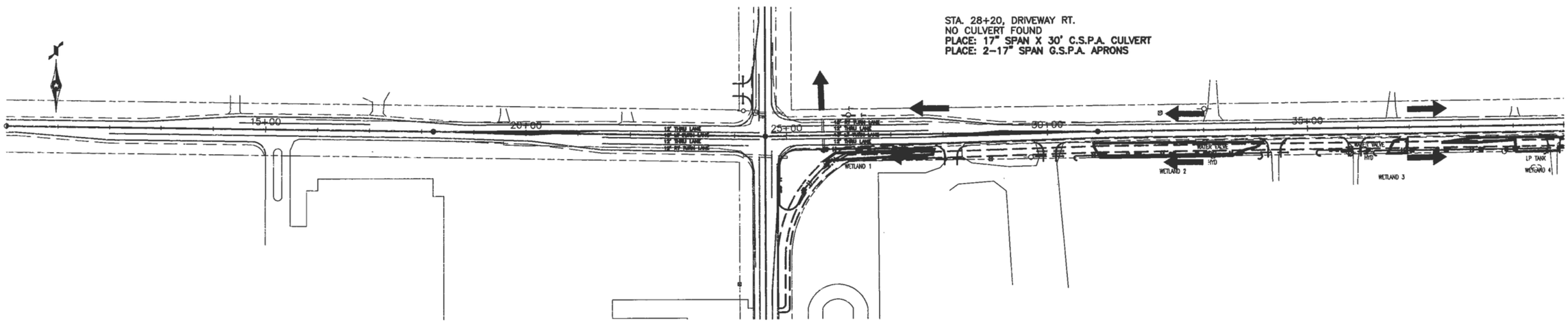

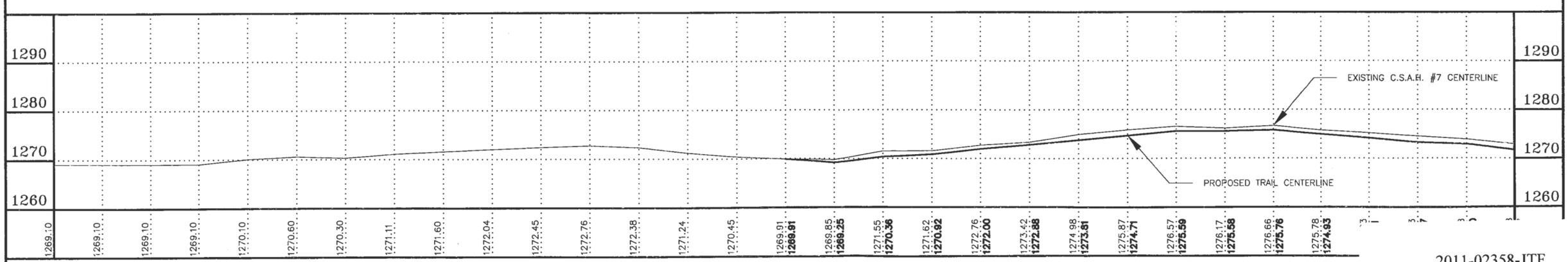

Plan Created By: R.N. Sligers
Date: 3/5/2013

Plan Sheet Revised By: G.J. Thompson
Date: 4/3/2013

Plan Revised By: G.J. Thompson
Date: 4/1/2013

This plan sheet was prepared by me or under my direct supervision.
Michael L. Tardy, Carlton County Highway Engineer, License No. 19416

STATE PROJECT No. 091-090-065 (CSAH #7) SHEET N

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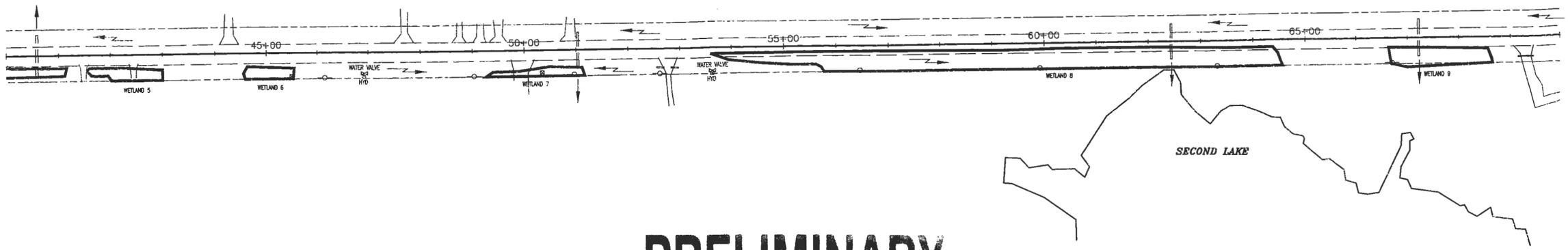

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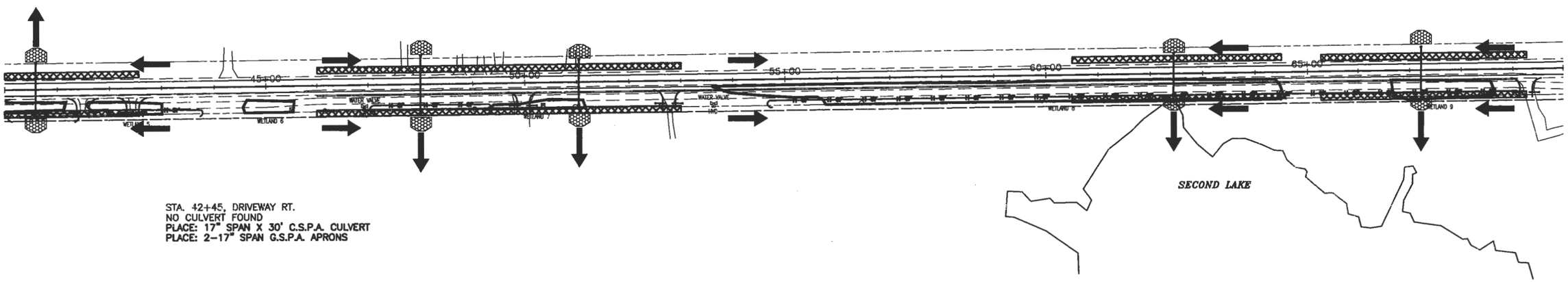
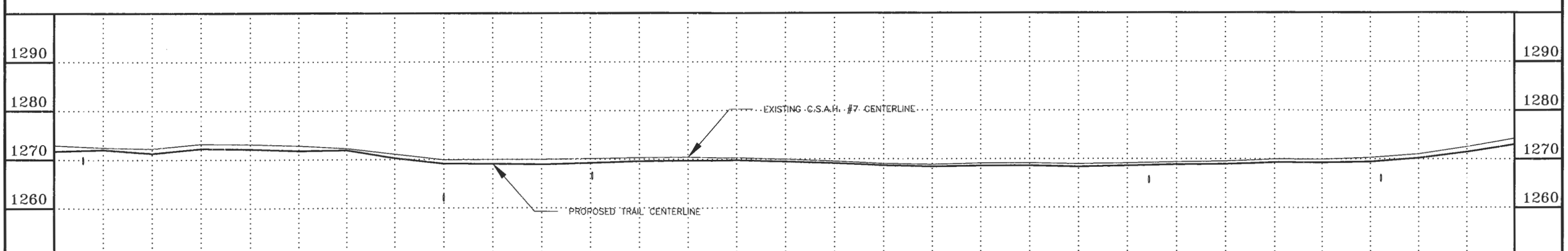


STA. 42+45, DRIVEWAY RT.
NO CULVERT FOUND
PLACE: 17" SPAN X 30' C.S.P.A. CULVERT
PLACE: 2-17" SPAN G.S.P.A. APRONS



	40+00	41+00	42+00	43+00	44+00	45+00	46+00	47+00	48+00	49+00	50+00	51+00	52+00	53+00	54+00	55+00	56+00	57+00	58+00	59+00	60+00	61+00	62+00	63+00	64+00	65+00	66+00
	1272.98	1272.54	1272.30	1273.27	1273.19	1272.87	1272.30	1271.13	1269.93	1270.01	1270.00	1270.15	1270.32	1270.46	1270.26	1270.02	1269.52	1269.03	1268.86	1269.13	1269.18	1268.98	1269.13	1269.38	1269.55	1269.96	1269.97
	1271.77	**1272.09**	**1271.32**	**1272.29**	**1272.21**	**1271.83**	**1271.93**	**1270.29**	**1269.15**	**1269.10**	**1268.97**	**1269.25**	**1269.62**	**1269.77**	**1269.78**	**1269.55**	**1269.14**	**1268.67**	**1268.45**	**1268.62**	**1268.64**	**1268.37**	**1268.59**	**1268.83**	**1268.95**	**1269.29**	**1269.31**

Plan Created By: R.N. Stigers
Date: 3/5/2013

Plan Sheet Revised By: G.J. Thompson
Date: 4/3/2013

Plan Revised By: G.J. Thompson
Date: 4/1/2013

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Michael L. Tardy
Michael L. Tardy, Carlton County Highway Engineer, License No. 19415

STATE PROJECT No. 091-090-065 (CSAH #7) SHEET

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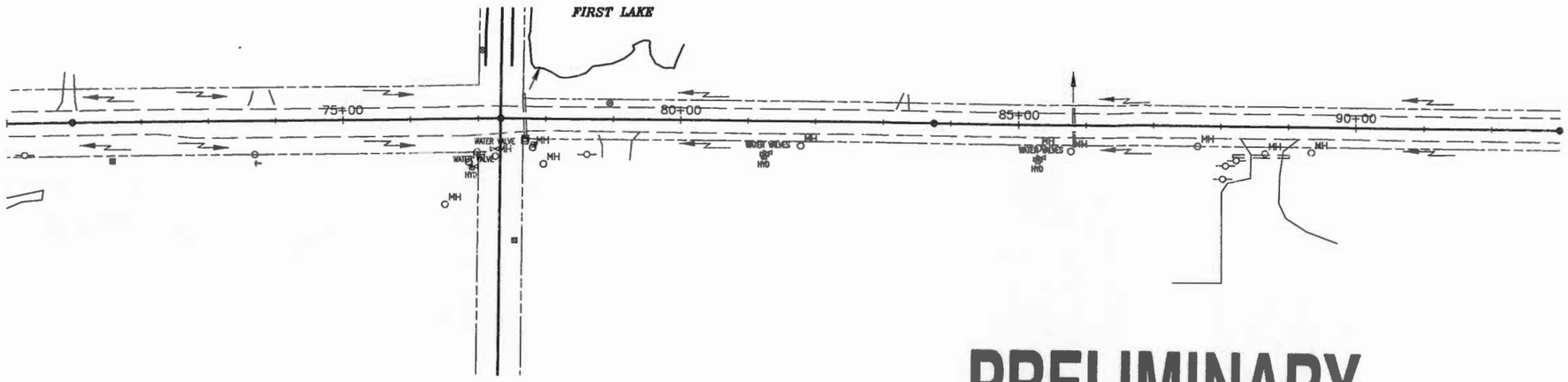
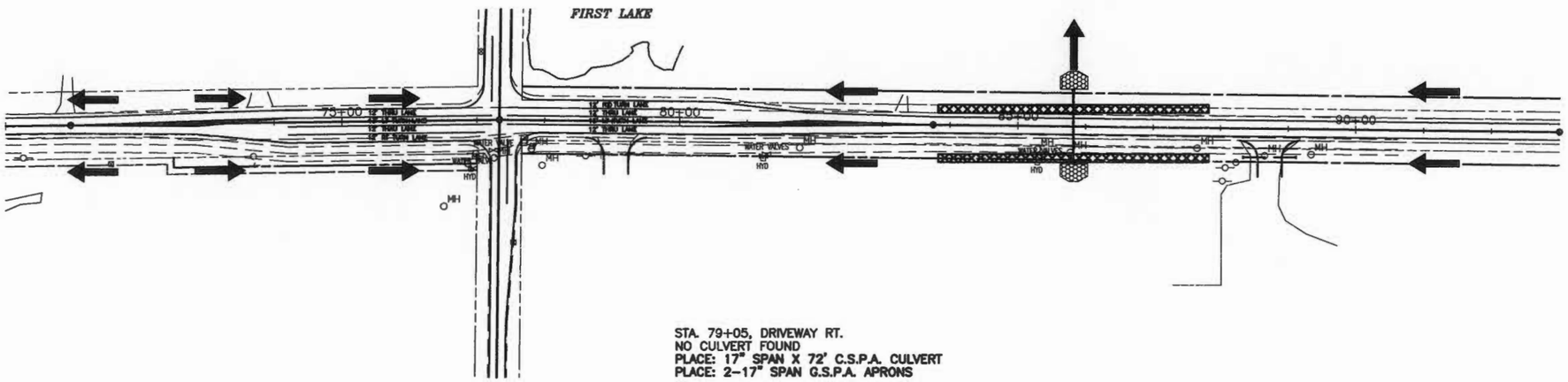
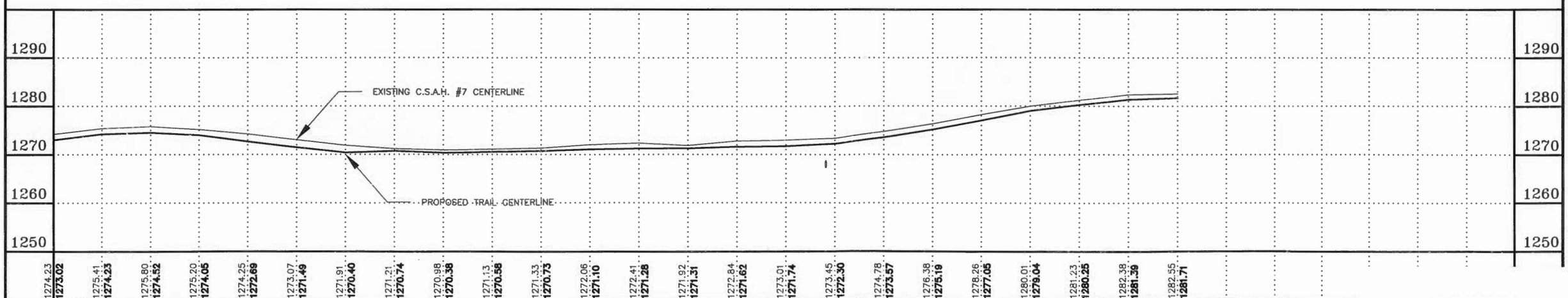
Drawing 20 of 21



PRELIMINARY



STA. 79+05, DRIVEWAY RT.
NO CULVERT FOUND
PLACE: 17" SPAN X 72' C.S.P.A. CULVERT
PLACE: 2-17" SPAN G.S.P.A. APRONS



Plan Created By: R.N. Stigers
Date: 3/5/2013

Plan Sheet Revised By: G.J. Thompson
Date: 4/3/2013

Plan Revised By: G.J. Thompson
Date: 4/1/2013

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STATE PROJECT No. 091-090-065 (CSAH #7) SHEET

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