





# FIELD EXAM CHECKLIST

1 - Duration of project?

1 year

2 - Speed Limit

55

3 - Speed Limit during construction

55

4 - Is sight distance a problem?

Yes, at Co.Rd. F-36

5 - Patching quantities-full depth, partial depth, and surface.

N/A

6 - Does patching need to be done in the project area or do the construction limits need to be extended?  
Who will provide locations of patches by milepost?

N/A

7 - Are rumble strips going to be placed with this project or a separate project?

Yes, with project

8 - Leveling and strengthening locations and lengths (i.e. station to station).

N/A

9 - Areas of haul-outs.

N/A

10 - Any survey needed? (culvert extensions, safety dikes, right turn lanes, horizontal curves, ext...)

Yes, Survey at Co.Rd. F-36. Ben,  
to send updated limits.

11 - Do any of the utilities need to be relocated (power/telephone poles) either permanently or temporarily for construction?

Sean Passick

12 - Names and addresses of affected utility companies.

Sean Passick

13 - Locations of entrances to be reshaped.

Sideroads at F-36 may need  
reconfigured.

14 - Are there existing drainage problems?

No

# FIELD EXAM CHECKLIST

15 - Note any special features not shown on plan.

No

16 - Note condition of existing culverts.

Culverts updated on Database

17 - Names of affected special events.

Garys Tab.

18 - Locations of mailboxes to be relocated to a minimum of 8' from the pavement edge.

There are a few houses/businesses  
that have mailboxes.

19 - Number and location of EF Joints.

N/A

20 - Disposition of bridge handrail and guardrail, including posts.

N/A

21 - Inventory of existing guardrail.

N/A

22 - Remove & Reinstall Signs - District Maintenance or by the Contractor?

Contractor

23 - Longitudinal joint repair locations (station to station).

N/A

24 - Locations and quantities of engineering fabric to be placed over random cracks.

N/A

25 - Tabulation of adjustment of fixtures.

N/A

26 - Clearing and grubbing quantities - by unit or by area?

Brandy B. to provide potential wetland areas to guide  
district 1 with clearing and grubbing locations.

27 - Resurfacing Projects - Is District Survey able to preserve Section Corners & Points?  
If "no", then add these items under Construction Survey.

Tony H.

# FIELD EXAM CHECKLIST

Contractor furnish borrow? (Yes) /  (No)

Full depth patches to be PCC? (Yes) /  (No)

Full depth PCC patches to be doveled? (Yes) /  (No)

Soils to determine and provide tabulation of subdrains?  (Yes) / (No)

Pollution Prevention Plan required?  (Yes) / (No)

Field Office?  (Yes) / (No)

Construction Survey and or Point Preservation by DOT or Contractor? See Dist. 1 Surveyor for this  (DOT) / (Contractor).

Survey by Office of Design?  (Yes) / (No)

Pavement markings for turn lanes as determined by the District?  (Yes) / (No)

Any RWIS or Traffic Recorder Sites within project limits? (Yes) /  (No)

Add Construction survey to bid items.



Cc: C. Purcell  
 M. Dell  
 M. A. Swenson  
 D. L. Newell  
 W. A. Sorenson  
 M. E. Ross  
 C. C. Poole  
 D. Stokes  
 K. K. Patel  
 C. Brakke  
 J. Bartholomew  
 D. Blue  
 S. Nielsen  
 M. Nop  
 V. Brewer  
 J. Vortherms  
 S. Nixon  
 D. Matulac  
 B. Ellis

M. J. Kennerly  
 J. S. Nelson  
 J. Hart  
 K. Olson  
 D. E. Sprengeler  
 A. A. Welch  
 B. E. Azeltine  
 S. J. Gent  
 M. Collins  
 E. Engle  
 N. Cuva  
 D. L. Maifield  
 E. D. Gansen  
 W. W. Musgrove  
 J. Garton  
 S. Ebel  
 S. Passick  
 G. Kretlow  
 C. Wilson

K. D. Nicholson  
 B. Beavers  
 K. Brink  
 J. W. Laaser-Webb  
 E. C. Wright  
 J. Harris  
 B. D. Hofer  
 S. Anderson  
 J. Ellis  
 T. Quam  
 M. Buttz  
 B. Smith  
 D. Heeren  
 M. Ortiz-Pagan  
 J. Becker  
 D. Skogerboe  
 B. Adey  
 A. Swisher  
 R. Dykstra

**CONCEPT ANALYSIS & SUPPORTING DATA:**

Necessary supporting data may be linked in the analysis to ProjectWise.

**Date of Field Review:** January 16, 2024

**Attendees:** Jeremy Vortherms and Ben Adey from District 1, Dustin Skogerboe and Jacob Imming from Marshalltown Construction and Ronnie Dykstra from Newton Maintenance

**PAVEMENT:**

**Existing Conditions:**

The existing pavement is showing signs of deterioration and needs replacement.

**Pavement History & PMIS Data:**

See attached PMIS sheets.

**Pavement Design & dTIMS Recommendation:**

From dTIMS:

Direction	Ref. Loc. To Ref. Loc.	Existing Pavement	Year Built	dTIMS Recommendation
Both	70.95 to 72.46	PCC	2030	PRI_ANC_DBR
Both	70.95 to 72.46	PCC	2030	PRI_DIAMOND_GRND
Both	70.95 to 72.46	PCC	2030	PRI_MAJ_REHAB_STR2

**Subdrains:**

New subdrain will be installed with this project.

**Patching/Curb Repairs:**

No patch tabs will be needed.

**ADA/Sidewalk/Trails:**

The sidewalk crossing of IA 14 at N 4<sup>th</sup> Avenue will be updated with this project.

**SAFETY:**

**3R Design Criteria:**

Acceptable Values for 3R Roadway Features						Project Values
DESIGN ELEMENT	FREEWAY	NON-FREEWAY				
Regulatory Speed (mph)	65/55	55	45	35	25	55
Minimum Vertical Curve (mph)	65/55	35	25	15	5	35
Maximum Horizontal Curve (degrees)	3	6	8	14	28	3.125
Maximum Gradient	3%	6%	7%	10%	13%	5.3%
Lane Width (feet)	12	12	11	11	11	12
Parking Lane Width (feet)	--	--	8	8	8	N/A
Shoulder Width (feet)	10/6	6	4	4	2	10/6
Foreslopes	3:1	3:1	3:1	--	--	3:1
Transverse Slopes	6:1	6:1	6:1	--	--	6:1
Horizontal Clearance (feet)						26
Bridge Width	Approach Lanes + Shoulder Width		Approach Lanes + Offset			
Vertical Clearance - Over NHS (feet)	16.5	16.5	16.5	16.5	16.5	N/A
Vertical Clearance - Over Local (feet)	14.5	14.5	14.5	14.5	14.5	N/A

(Document design decisions and/or mitigation efforts when criteria are not met.)

**Crash Analysis:**

See attached ICAT quick report with 5-year crash history summary.

**Corridor Crash History:**

Over the 5-year period from 2018 through 2022, the project limits had a total of 25 crashes. There were no fatalities, two suspected minor injuries and 3 possible/unknown injury within the project limits over this period. Of the 25 crashes, one was related to winter driving conditions and 13 were related to an animal.

**Intersection Crash History:**

10 of the 25 crashes within the project limits were intersection related (40%).

**Intersection Analysis:**

No additional turn lanes are warranted.

**Railroads:**

There are no railroad crossings located within the project limits.

**Additional Safety & Operation Considerations:**

The intersection of IA 14 and F36 is listed in the High PCR Category. This intersection will be reviewed for additional safety improvements.

**STRUCTURES and DRAINAGE:**

**Bridges:** (from Scoping Tool or SIIMS)

There are no numbered bridges or structures within the project limits.

**Culverts/Pipes:**

Newton Maintenance will provide a review of the culverts and pipes within their respective areas of the project limits.

**Guardrail:**

There is no guardrail located within the project limits.

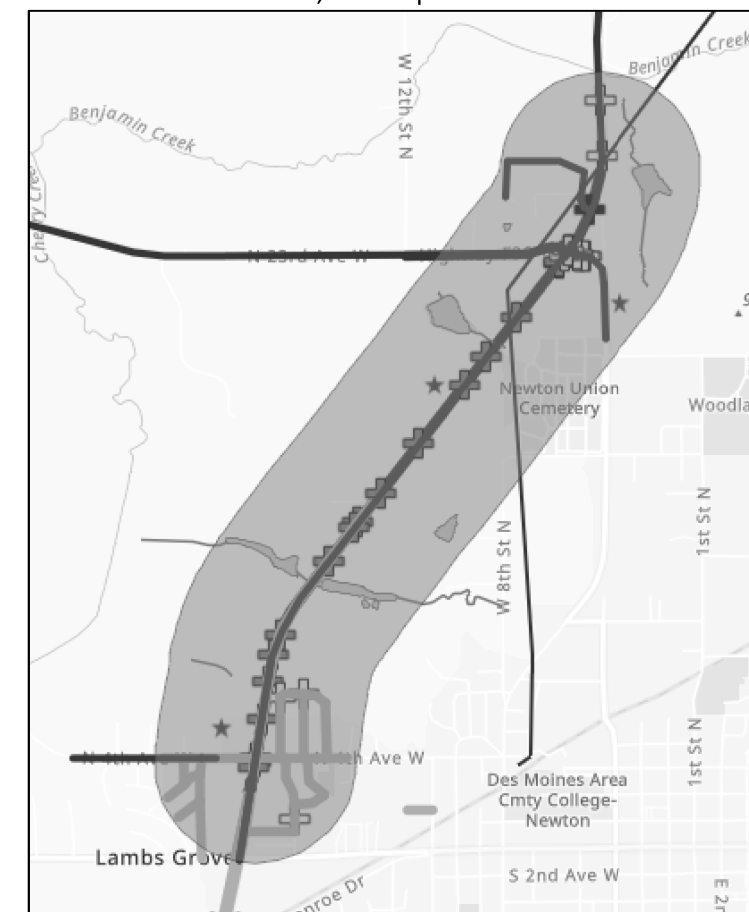
**Drainage District:**

Project is not located within a drainage district, so no coordination will be needed.

**PROJECT IMPACTS:**

**Impacts Map:**

The project area includes an RPA, transmission lines, 3 LUST Sites, 8 wetlands. The waterways within the project area include 2 stream watersheds, a floodplain and 19 streams.



**Environmental:**

No clearing and grubbing is anticipated to be done as a part of this project. No impacts to wetlands, parks, historic/cultural resources, etc. have been identified.

**TSMO/Traffic Control:**

During construction, IA 14 traffic will be maintained using an off-site detour. Contractor will be required to maintain access to local properties during construction.

**ROW:**

No permanent ROW is anticipated with this project. Temporary Construction Easements may be needed for sidewalk ramp reconstruction.

**Agreements/Notification Letters:**

Project will be constructed using a full road closure of IA 14 which will require a detour agreement. Newton will be invited to include work with this project.

**Project Coordination:**

No other DOT projects within the vicinity have been identified.

**Previous Projects List:**

Project Number	Project Type	Year
<b>Reference Location 70.31 to 70.96</b>		
N/A	9" PCC	1965
STPN-14-4(45)--2J-50	5" HMA	2005
<b>Reference Location 70.96 to 72.46</b>		
F-14-4(2)--17-50	9" PCC	1965

**FEASIBLE ALTERNATIVES & RECOMMENDATION:**

**FEASIBLE ALTERNATIVES:**

Option 1: 3" HMA Resurfacing for \$955,241 (20-year design)

Option 2: PCC Reconstruction for \$6,131,165 (40-year design)

**RECOMMENDATIONS:**

District 1 recommends proceeding with a PCC reconstruction for an estimated cost of \$6,131,165. The roadway will be constructed as a 24-ft wide PCC section with 10-ft effective shoulders (6-ft paved and 4-ft granular). The existing foreslopes will be used as constructed.

**FUNDS PROGRAMMED:**

Project is planned to be let on 10-20-2026 and will be funded with 3R Funds.

**Development Schedule:**

D00 – Pre-Design Concept	12-29-2023
TE0 – Desktop Review	02-02-2024
U00 – Preliminary Utility Review	02-02-2024
W00 – Preliminary Wetland Review	02-02-2024
D01 – Survey Plan and Photogrammetry	03-01-2024
D02 – Design Field Exam	05-03-2024
D03 – Plans for Preliminary Bridge	06-07-2024
B02 - Drainage Design	09-06-2024
D05 – Plans to Right of Way	10-04-2024
P09 – Public Information Meeting	03-05-2025
DM5 – Design Methods Turn-in	06-30-2026
D08 – Final Grade and Pave Plans	08-04-2026
L03 – Letting-Combination Grade and Pave	10-20-2026



### Estimate Items Report

Version D00-HMA Resurfacing  
Project PRJ-55725 PHASE-1

Item Number	Item Description	Units	Quantity	Cost Used	Suggested Cost	Line Total	Estimator Notes
						<b>SubTotal:</b>	
						<b>\$955,241.06</b>	
2303-1043502	HOT MIX ASPHALT HIGH TRAFFIC, SURFACE COURSE, 1/2 IN. MIX, FRICTION L 2	TON	4,000.000	\$31.29	\$31.29	\$125,160.00	
2303-1053502	HOT MIX ASPHALT VERY HIGH TRAFFIC, SURFACE COURSE, 1/2 IN. MIX, FRICTION L 2	TON	4,000.000	\$44.05	\$44.05	\$176,200.00	
2303-1258284	ASPHALT BINDER, PG 58-28H, HIGH TRAFFIC	TON	500.000	\$719.29	\$719.29	\$359,645.00	
2527-9263212	PAINTED PAVEMENT MARKINGS, HIGH-BUILD WATERBORNE	STA	1,000.000	\$10.00	\$0.00	\$10,000.00	
2527-9270112	GROOVES CUT FOR PAVEMENT MARKINGS	STA	1,000.000	\$15.00	\$0.00	\$15,000.00	
2528-8445110	TRAFFIC CONTROL	LS	1.000	\$13,182.33	1.38%	\$13,182.33	
2533-4980005	MOBILIZATION	LS	1.000	\$53,589.02	5.61%	\$53,589.02	
2548-0000100	MILLED SHOULDER RUMBLE STRIPS, HMA SURFACE	STA	300.000	\$25.87	\$25.87	\$7,761.00	
2548-0000310	MILLED CENTERLINE RUMBLE STRIPS, HMA SURFACE	STA	150.000	\$24.37	\$24.37	\$3,655.50	
PCT-999	UNQUANTIFIED	% of Project	955,241.060	20.00%		\$191,048.21	
						<b>Total:</b>	
						<b>\$955,241.06</b>	

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### Estimate Items Report

Version D00-PCC Reconstruction  
Project PRJ-55725 PHASE-1

Item Number	Item Description	Units	Quantity	Cost Used	Suggested Cost	Line Total	Estimator Notes
						<b>SubTotal:</b>	
						<b>\$6,131,164.83</b>	
2102-0425070	SPECIAL BACKFILL	TON	33,000.000	\$19.07	\$19.07	\$629,310.00	
2111-8174100	GRANULAR SUBBASE	SY	53,000.000	\$9.63	\$9.63	\$510,390.00	
2121-7425010	GRANULAR SHOULDERS, TYPE A	TON	13,000.000	\$30.53	\$30.53	\$396,890.00	
2122-5190009	PAVED SHOULDER, P.C. CONCRETE, 9 IN.	SY	16,000.000	\$52.59	\$52.59	\$841,440.00	
2123-7450000	SHOULDER CONSTRUCTION, EARTH	STA	300.000	\$262.67	\$262.67	\$78,801.00	
2301-1003090	STANDARD OR SLIP-FORM PORTLAND CEMENT CONCRETE PAVEMENT, QM-C, CLASS 3 DURABILITY, 9 IN.	SY	31,000.000	\$71.10	\$71.10	\$2,204,100.00	
2502-8212034	SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.	LF	11,400.000	\$7.65	\$7.65	\$87,210.00	
2502-8221303	SUBDRAIN OUTLET, DR-303	EA	30.000	\$313.85	\$313.85	\$9,415.50	
2510-6745850	REMOVAL OF PAVEMENT	SY	41,000.000	\$8.39	\$8.39	\$343,990.00	
2527-9263212	PAINTED PAVEMENT MARKINGS, HIGH-BUILD WATERBORNE	STA	300.000	\$10.00	\$0.00	\$3,000.00	
2527-9270112	GROOVES CUT FOR PAVEMENT MARKINGS	STA	300.000	\$15.00	\$0.00	\$4,500.00	
2528-8445110	TRAFFIC CONTROL	LS	1.000	\$52,728.02	0.86%	\$52,728.02	
2533-4980005	MOBILIZATION	LS	1.000	\$335,987.83	5.48%	\$335,987.83	
2548-0000200	MILLED SHOULDER RUMBLE STRIPS, PCC SURFACE	STA	300.000	\$46.95	\$46.95	\$14,085.00	
2548-0000320	MILLED CENTERLINE RUMBLE STRIPS, PCC SURFACE	STA	150.000	\$41.34	\$41.34	\$6,201.00	
PCT-999	UNQUANTIFIED	% of Project	6,131,164.830	10.00%	0.00%	\$613,116.48	
						<b>Total:</b>	
						<b>\$6,131,164.83</b>	

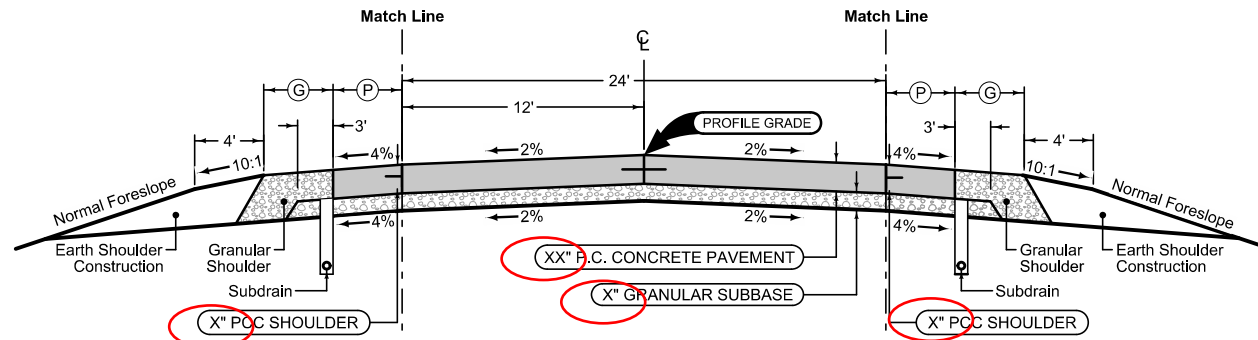
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**Full Depth PCC Combination Shoulder**

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

2_C_FullPCC_04-20-21			
STATION TO STATION	(P) Feet	(G) Feet	
	6	4	



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

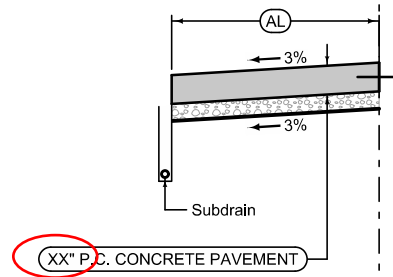
2P_04-21-20	
STATION TO STATION	

Get pavement  
 Determination from  
 Danny Z.

**Auxiliary Lane**

Longitudinal joint: L or KT  
 Transverse joint: Match Mainline

2_AuxLane_PCC_10-18-16	
STATION TO STATION	(AL) Feet



**Full Depth PCC Combination Shoulder**

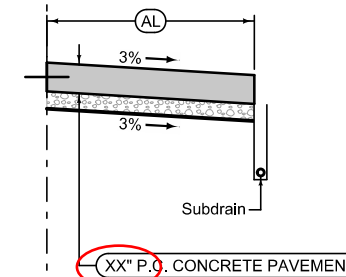
Shoulder Jointing:  
 Longitudinal joint: BT-2, L-2 or KT-2  
 Transverse joints: C at 17' spacing

2_C_FullPCC_04-20-21			
STATION TO STATION	(P) Feet	(G) Feet	
	6	4	

**Auxiliary Lane**

Longitudinal joint: L or KT  
 Transverse joint: Match Mainline

2_AuxLane_PCC_10-18-16	
STATION TO STATION	(AL) Feet

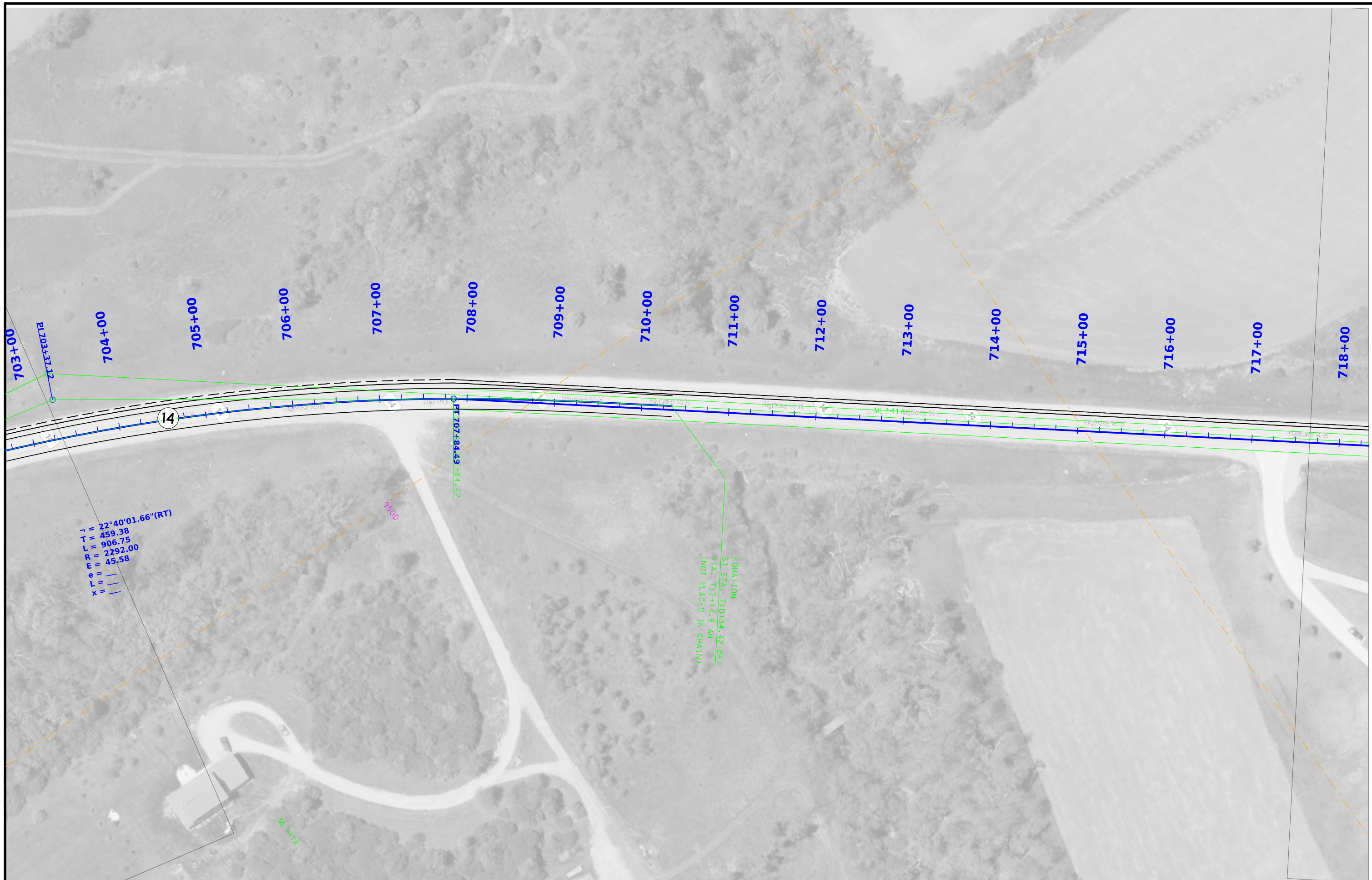


See Tab 100-24 or 100-25 for pavement quantities.  
 See Tab 112-9 for shoulder quantities.

**IA 14 PCC RECONSTRUCTION**







$\Delta = 22^{\circ}40'01.66''(\text{RT})$   
 $T = 459.38$   
 $L = 906.75$   
 $R = 2292.00$   
 $E = 45.58$   
 $e = \text{---}$   
 $L = \text{---}$   
 $x = \text{---}$

EQUATION  
 ST. STA. 710+34.42 BK=  
 STA. 712+14.8 AH  
 (NOT PLACED IN CHAIN)





733+00

734+00

735+00

736+00

737+00

738+00

739+00

740+00

741+00

742+00

743+00

744+00

745+00

746+00

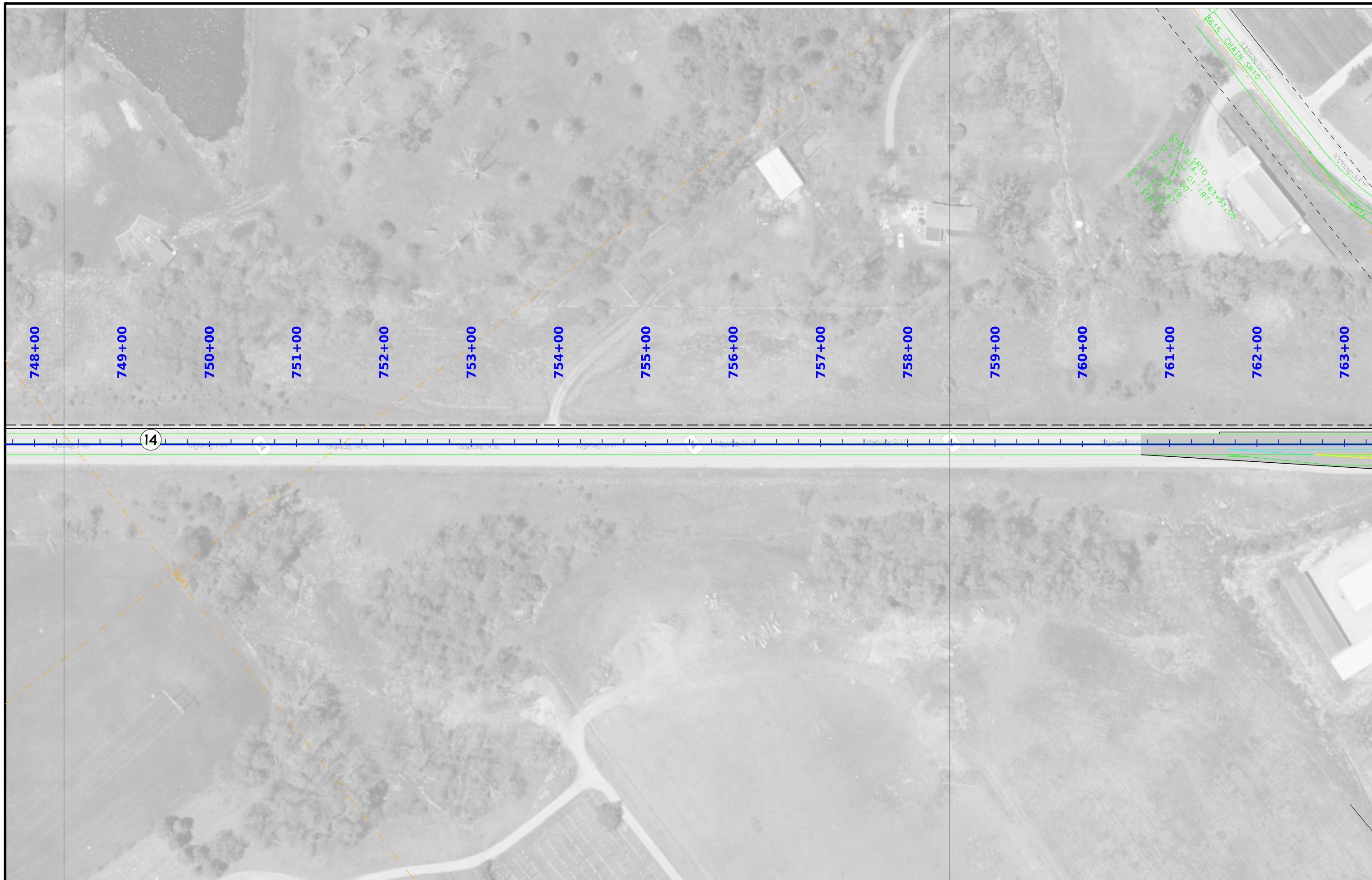
747+00

748+00

14

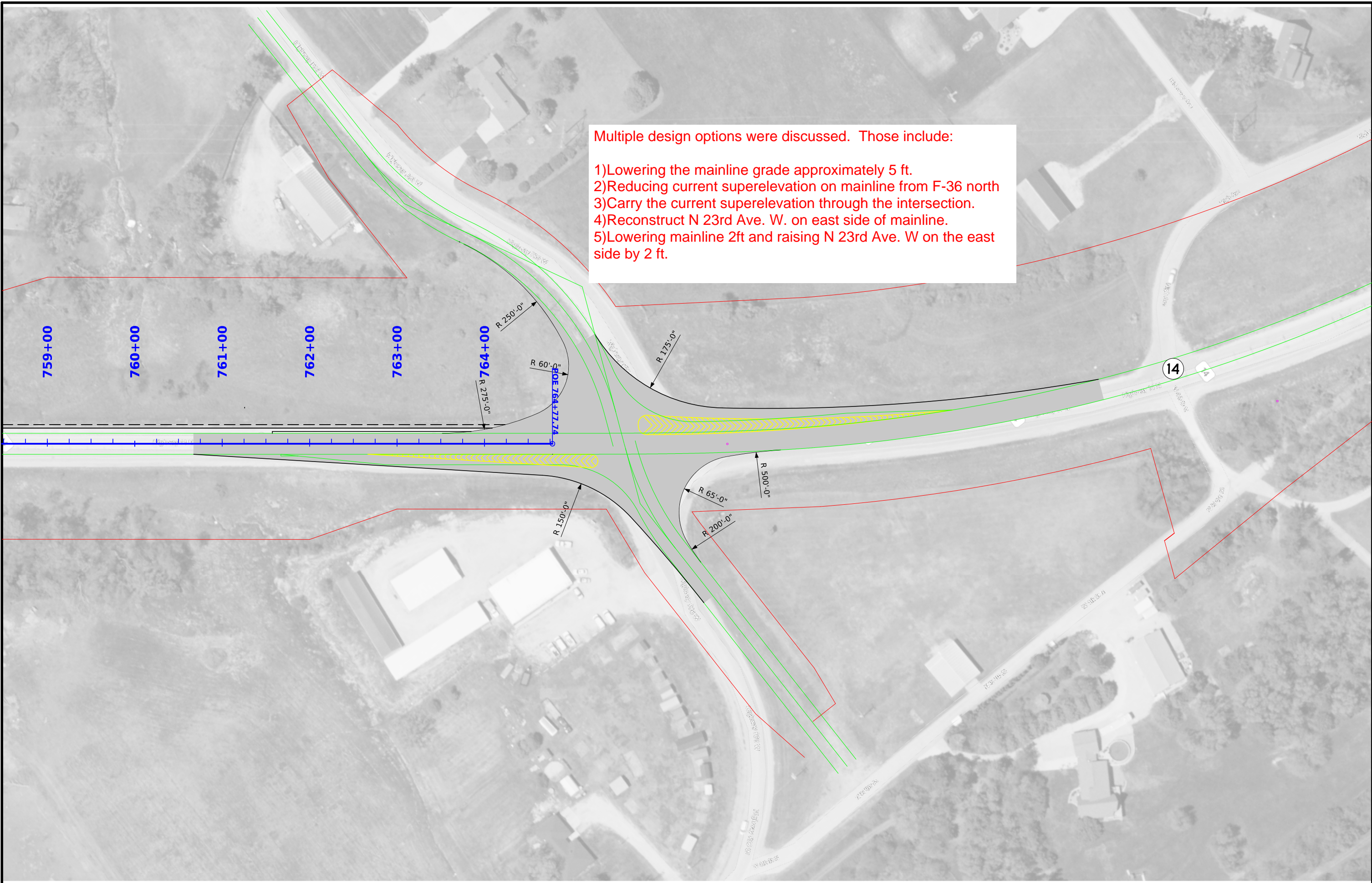
ML 141A





Multiple design options were discussed. Those include:

- 1) Lowering the mainline grade approximately 5 ft.
- 2) Reducing current superelevation on mainline from F-36 north
- 3) Carry the current superelevation through the intersection.
- 4) Reconstruct N 23rd Ave. W. on east side of mainline.
- 5) Lowering mainline 2ft and raising N 23rd Ave. W on the east side by 2 ft.



**108-23A**  
08-01-08

### TRAFFIC CONTROL PLAN

IA 14 shall be closed to traffic and traffic will be detoured.  
Refer to Sheet J.2 for detour route.

**Note that Co.Rd. F-36 and 4th Ave should not be closed at the same time.**

**111-01**  
04-17-12

### COORDINATED OPERATIONS

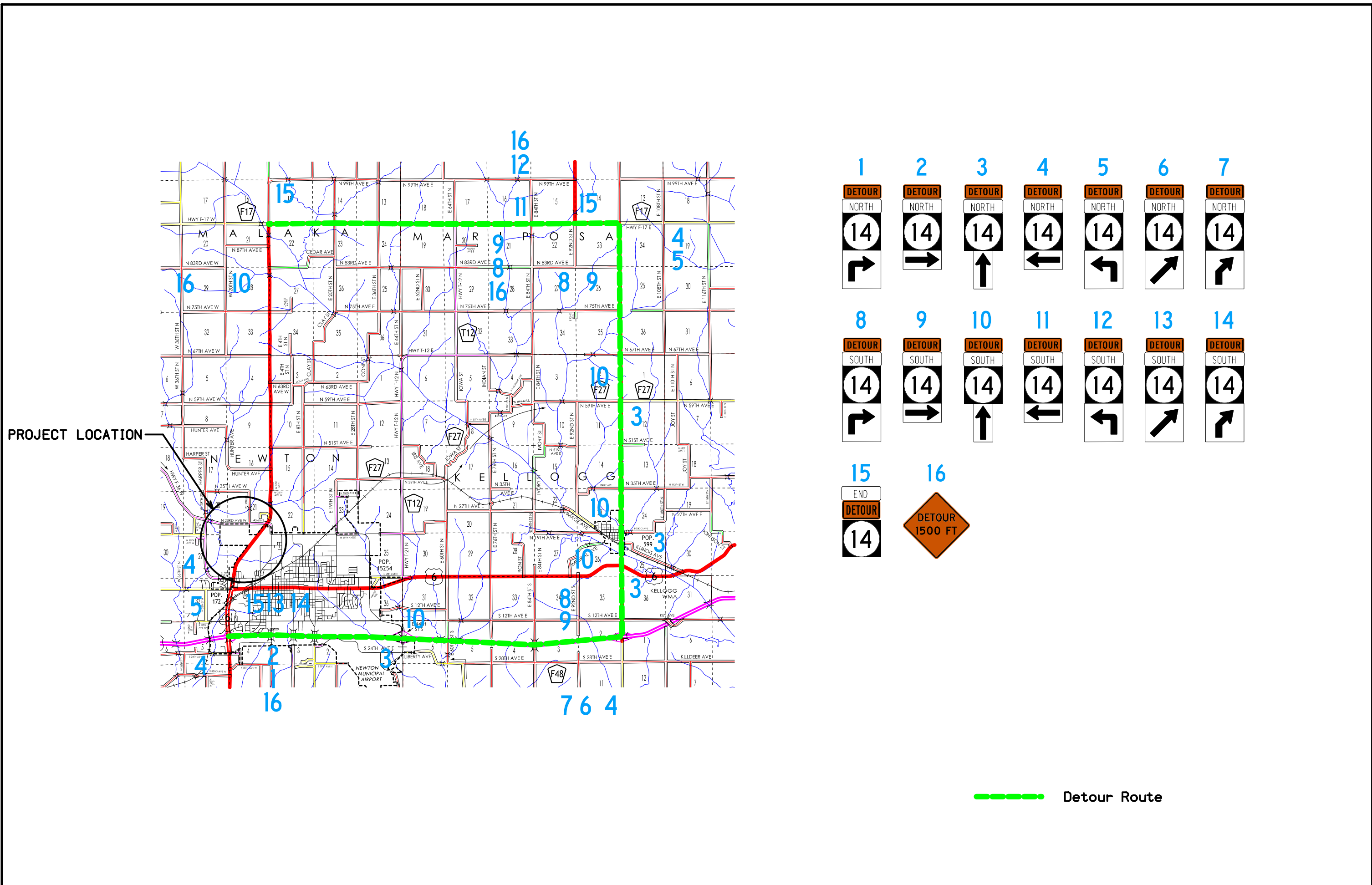
Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
Provided at turn-in	

**108-25**  
10-21-14

### 511 TRAVEL RESTRICTIONS

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
IA 14	NB/SB	Jasper	Closed Road	Detoured route	Traffic Control Device		Horizontal					



PROJECT LOCATION

- 1  
DETOUR  
NORTH  
14  
Right Turn
- 2  
DETOUR  
NORTH  
14  
Through
- 3  
DETOUR  
NORTH  
14  
Through
- 4  
DETOUR  
NORTH  
14  
Left Turn
- 5  
DETOUR  
NORTH  
14  
Left Turn
- 6  
DETOUR  
NORTH  
14  
Through
- 7  
DETOUR  
NORTH  
14  
Right Turn
- 8  
DETOUR  
SOUTH  
14  
Right Turn
- 9  
DETOUR  
SOUTH  
14  
Through
- 10  
DETOUR  
SOUTH  
14  
Through
- 11  
DETOUR  
SOUTH  
14  
Left Turn
- 12  
DETOUR  
SOUTH  
14  
Left Turn
- 13  
DETOUR  
SOUTH  
14  
Through
- 14  
DETOUR  
SOUTH  
14  
Right Turn
- 15  
END  
DETOUR  
14
- 16  
DETOUR  
1500 FT

----- Detour Route