

Protecting Fargo-Moorhead Regional Mobility

Minnesota Department of
Transportation

US 75 & I 94 Interchange



May 21, 2015

Introductions

- **Seth Yliniemi** – MnDOT, Project Manager
- **Pat McGraw** – Stantec, Senior Project Manager
- **Dale Grove** – Stantec, Senior Associate
- **Peggy Harter** – Stantec, Fargo Office Manager, Project Manager
- **Jerimiah Moerke** - MnDOT District 4 Public Affairs
- **Tom Trowbridge** – City of Moorhead, Assistant City Engineer
- **Others?**



Announcements

Housekeeping:

- Come and go at will (3:00 – 7:00p.m.)
- Sign-in-sheet
- Comment cards
- Restrooms
- Safety Moment:
 - Emergencies: 1st responders?, 911, exits
 - Special needs?



Agenda – Why are we here?

- Reiterate project need.
- Review construction staging alternatives considered.
- Present expectations regarding selected staging alternative (VISSIM Videos).
- Establish or continue working relationship with stakeholders
- Receive input
- Answer questions



A Critically Important Facility

Regional connections

Local destinations

Dozens of employment centers

Several colleges,

universities, and other

educational campuses

~80,000 Current Daily Users



A Growing Problem

~130,000 Projected Daily Users

Diminishing levels of service

Diminished safety

Diminished quality of life



Project Development

What's been done to-date

- 2006 study
- 2012/2013 Value Engineering Study
- Intersection Control Evaluation (ICE)
- Study Review Committee
- Level I Geometric Layout
- IAMR



Project Development

What's been done to-date

- 40% Plans
- 60% Plans
- 90% Plans

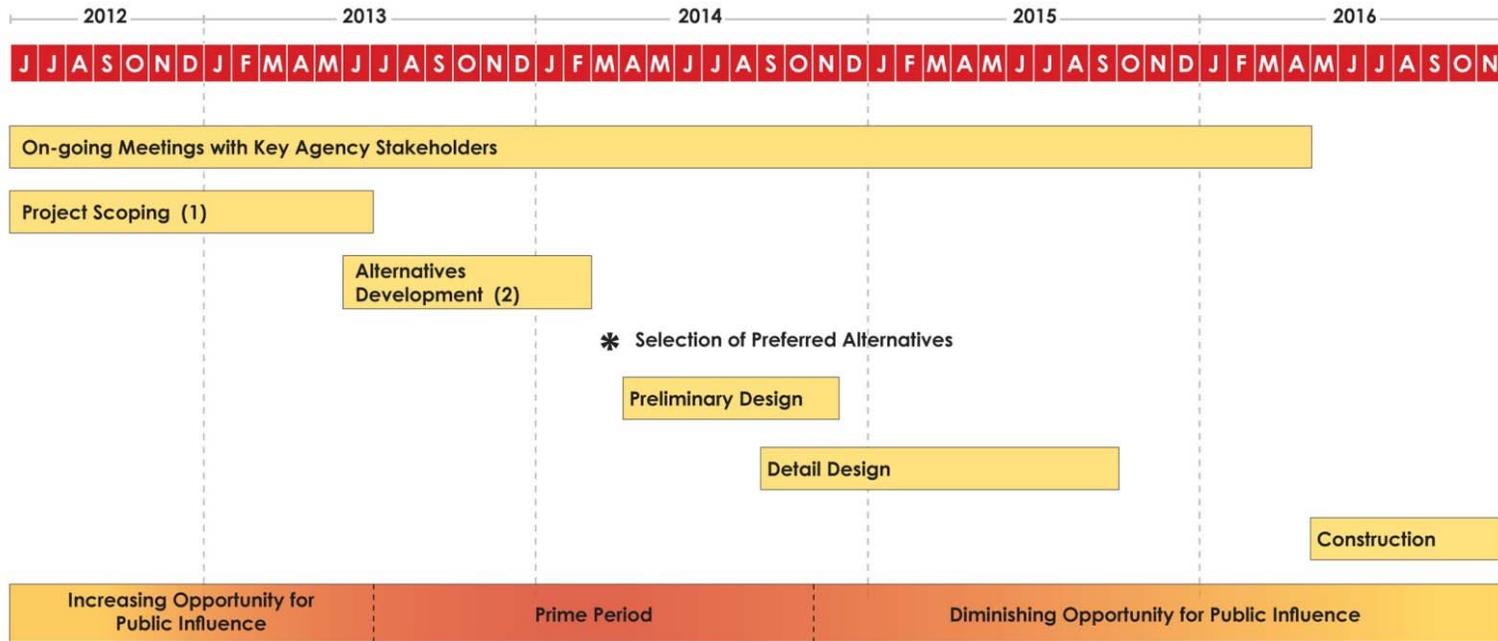


Project Development



US 75 & I-94 Interchange

PROJECT TIMELINE



(1) Identify and Analyze Issues and Define Palette of Potential Solutions

(2) Evaluate and Compare Top Tier Alternative Solutions

Note: All dates are approximate and subject to change without notice



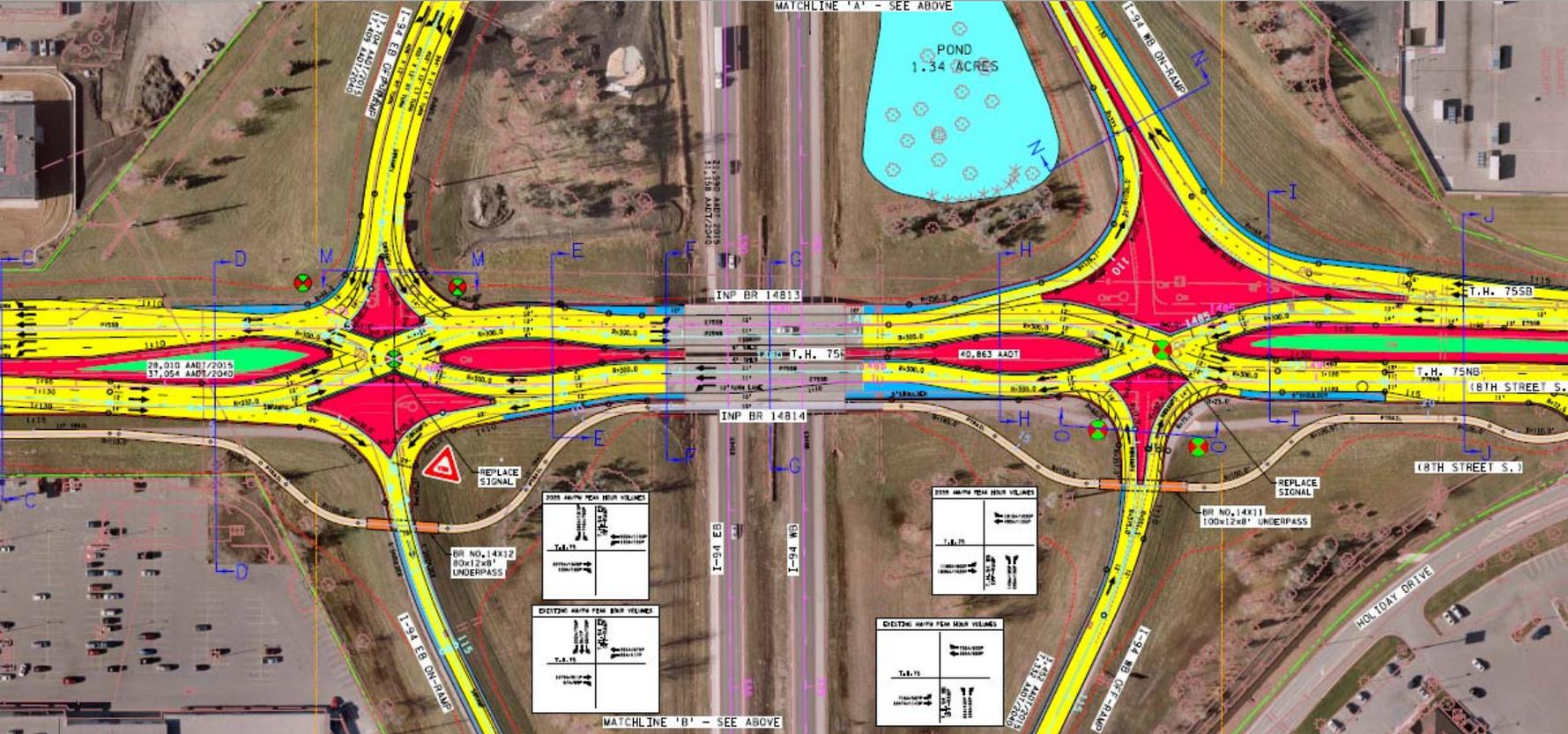
Slide 9

MP1

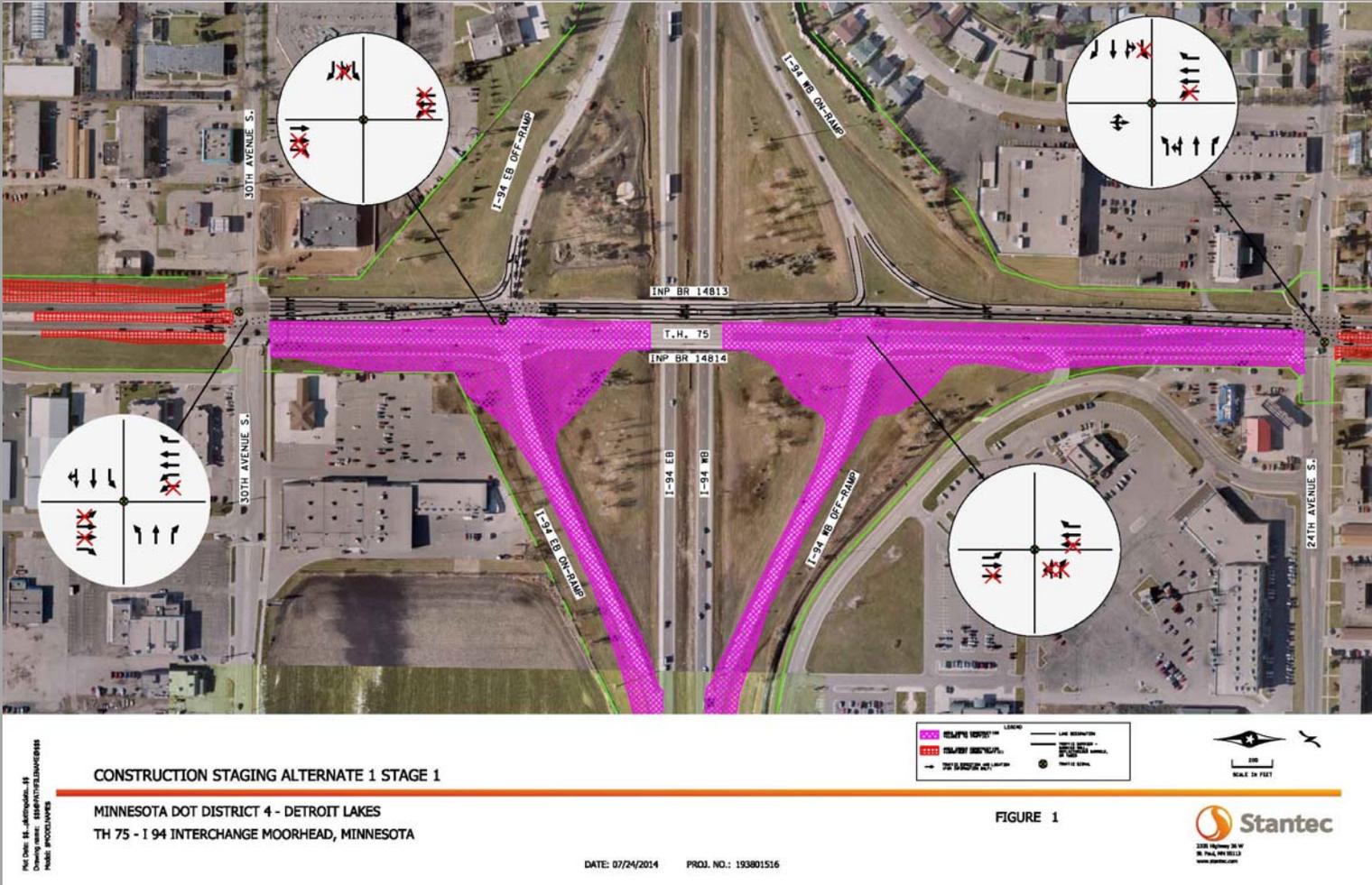
Update graphic

McGraw, Pat, 8/27/2014

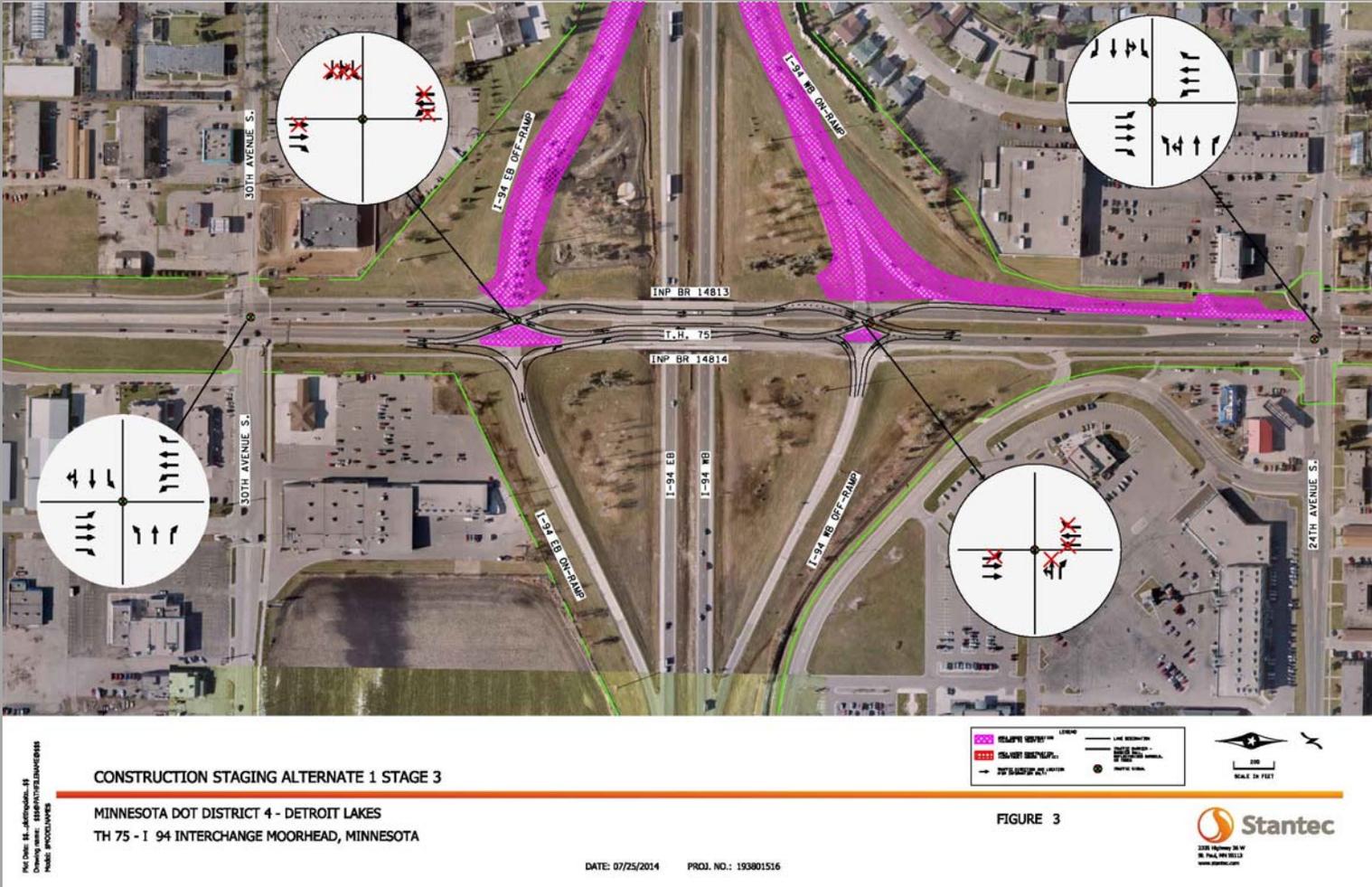
Preferred Alternative



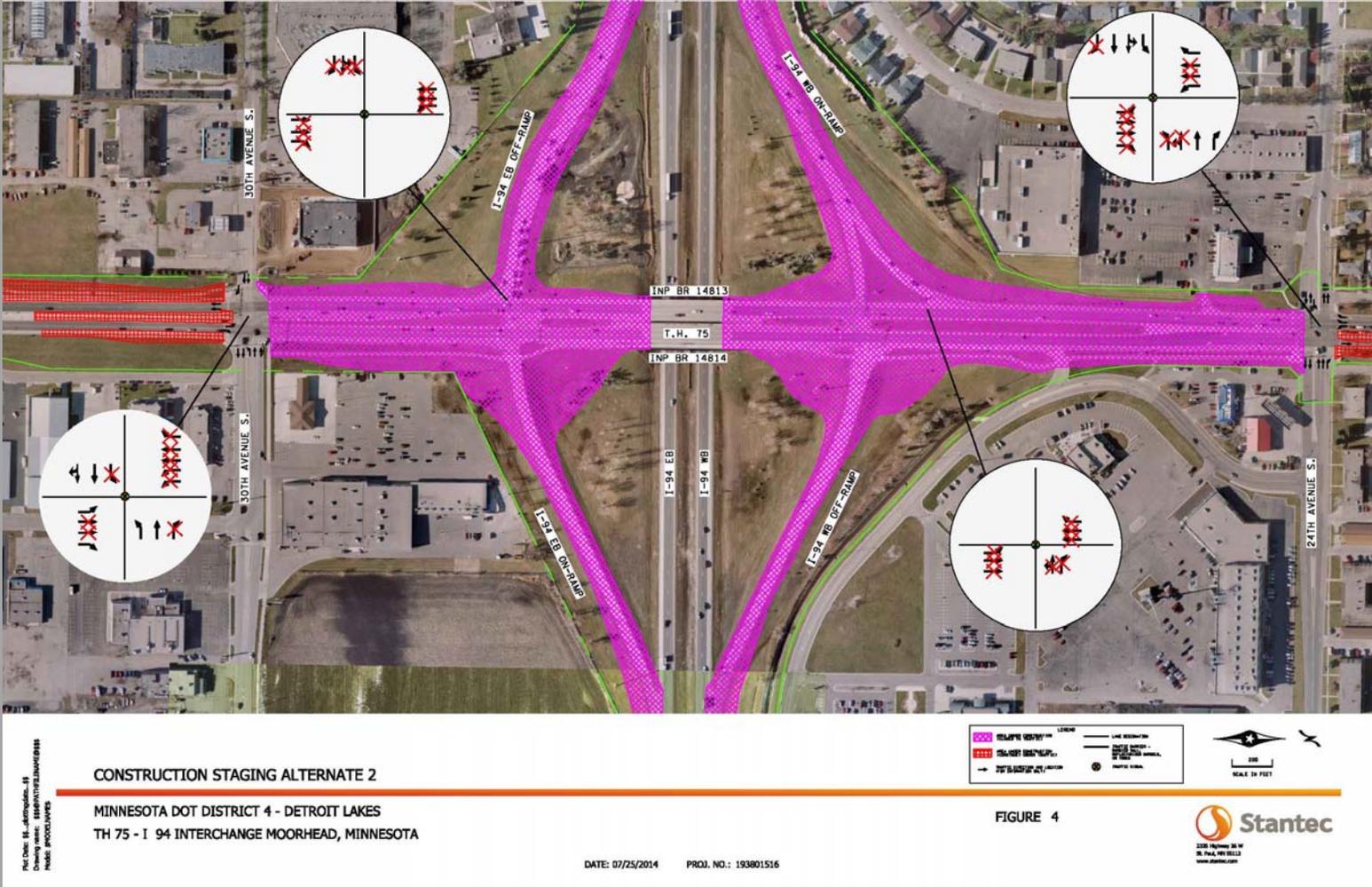
Staging Alternatives – Alt 1, Stg 1



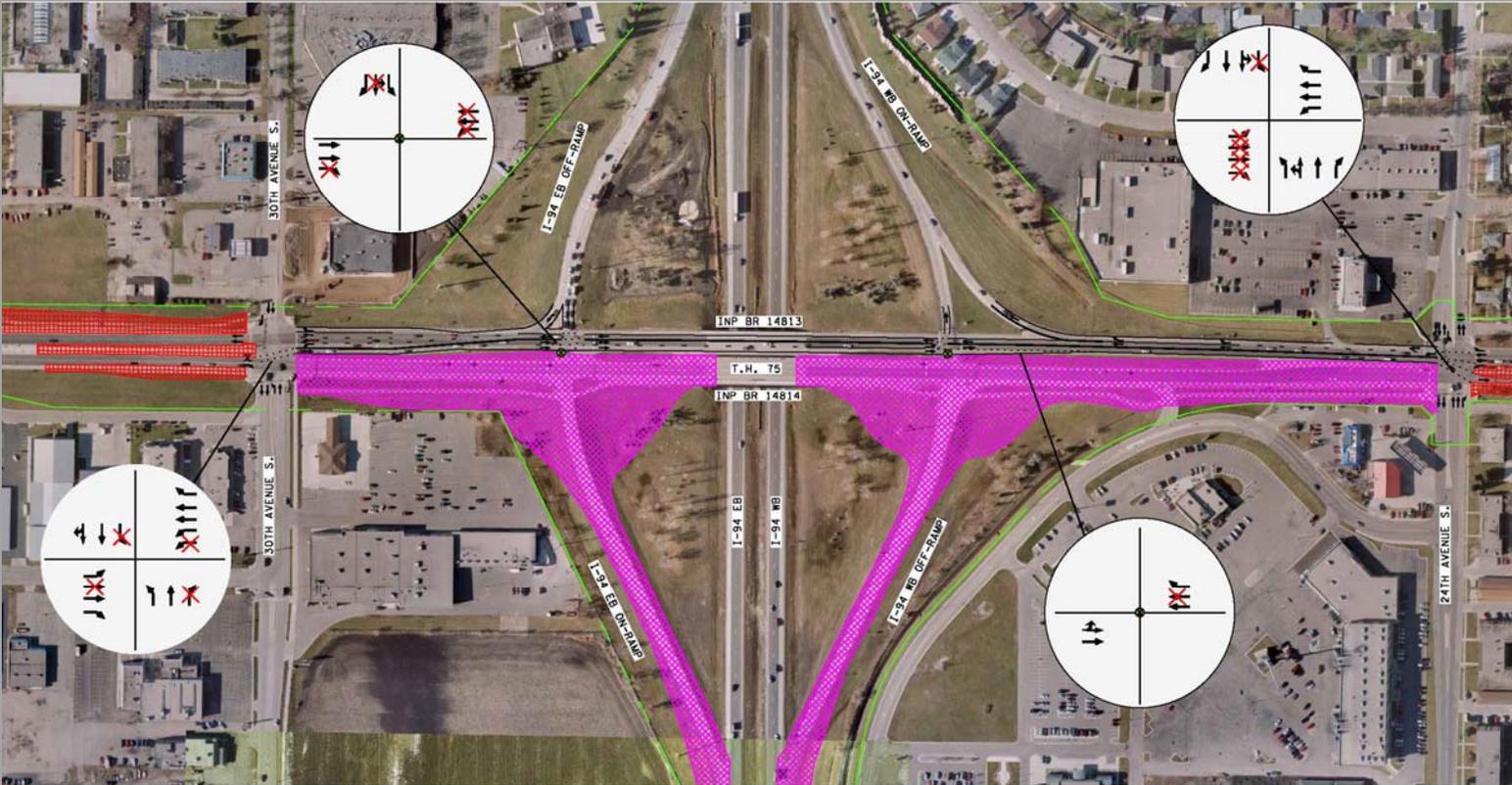
Staging Alternative – Alt 1, Stg 3



Staging Alternative – Alt 2



Staging Alternative 3



CONSTRUCTION STAGING ALTERNATE 3 STAGE 1

MINNESOTA DOT DISTRICT 4 - DETROIT LAKES
 TH 75 - I 94 INTERCHANGE MOORHEAD, MINNESOTA

LEGEND

- STAGING AREA
- STAGING AREA
- STAGING AREA
- LINE RESERVATION
- STAGING AREA
- STAGING AREA
- STAGING AREA

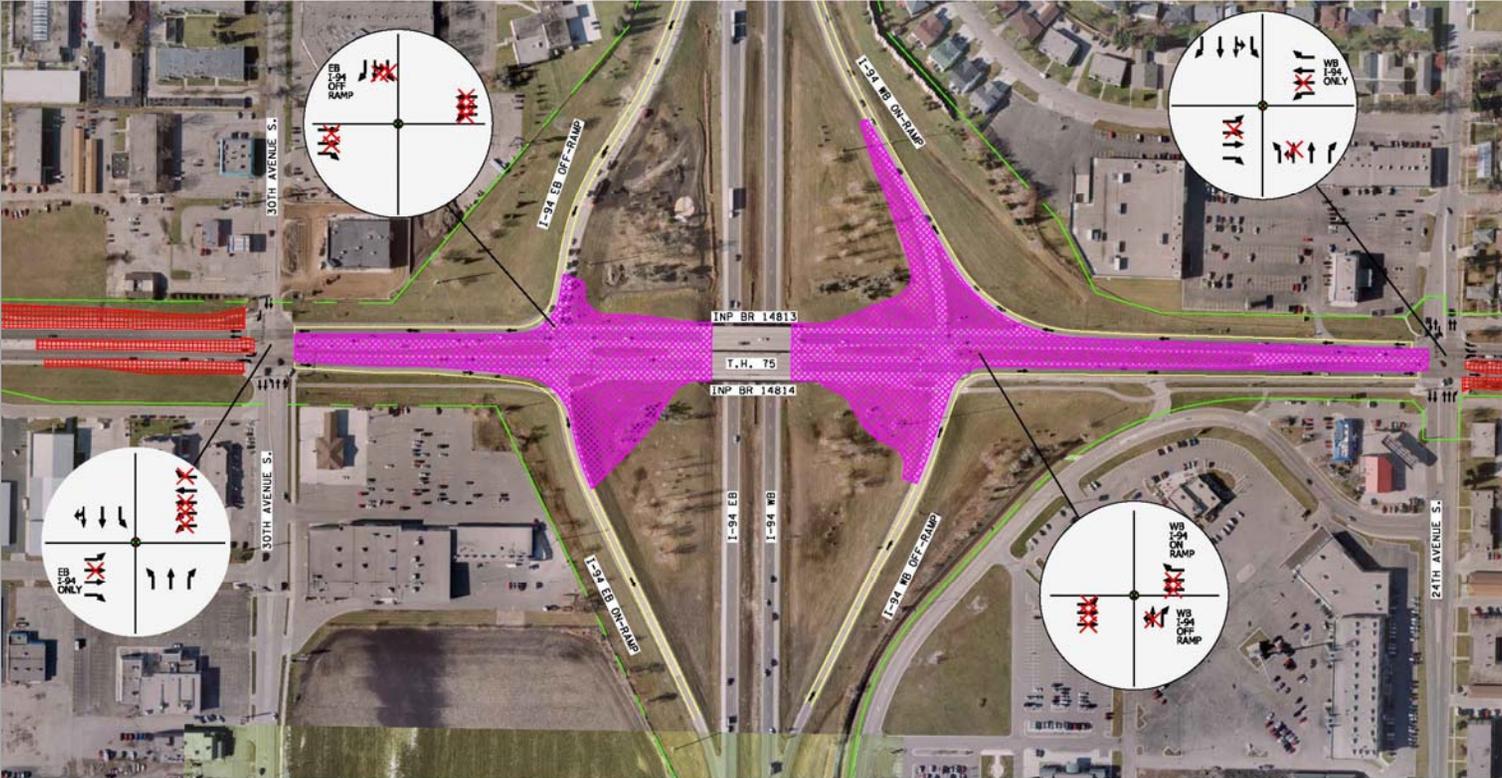
Plot Date: 04/22/2014 10:11 AM
 Drawing Name: 1338101516-TH75-94-INT-01
 User: JRODOLAN

DATE: 07/25/2014 PROJ. NO.: 193801516

FIGURE 5



Staging Alternative 4



CONSTRUCTION STAGING ALTERNATE 4

MINNESOTA DOT DISTRICT 4 - DETROIT LAKES
 TH 75 - I-94 INTERCHANGE MOORHEAD, MINNESOTA

FILE DATE: 8/27/2014
 DRAWING NO.: 21146-04-01-01-01-01
 PROJECT: Alternative 4

DATE: 08/27/2014 PROJ. NO.: 193801516

FIGURE 8



Staging Alternatives – Alt 1, Stg 1

Intersection	Segment Row	No-Build				Alternative 1 – Stage 1			
		ADT	V/C Ratio			ADT	V/C Ratio		
			AM	PM	OP		AM	PM	OP
TH 75 & 30 th Avenue South	TH 75 (north of 30 th Ave S) – Northbound	13897	0.61	0.57	0.45	13112	1.18	1.06	0.72
20 th Street & 30 th Avenue South	20 th St (north of 30 th Ave S) – Southbound	4946	0.36	0.80	0.36	5671	0.39	0.99	0.40
	20 th St (north of 30 th Ave S) – Northbound	5536	1.05	0.69	0.39	5401	0.93	0.59	0.42
TH 75 & I-94	I-94 (west of TH 75) – Westbound	14714	0.69	0.98	0.54	15682	0.86	1.13	0.54
	I-94 (west of TH 75) – Eastbound	16357	0.71	1.02	0.62	15602	0.59	0.88	0.62
	TH 75 (north of I-94) – Southbound	18450	0.67	1.05	0.53	18166	0.62	0.99	0.57
	TH 75 (north of I-94) – Northbound	19434	0.93	0.86	0.56	16361	1.23	1.15	0.96
	TH 75 (south of I-94) – Northbound	13897	0.61	0.57	0.45	13112	1.18	1.06	0.72
TH 75 & 24 th Avenue South	TH 75 (south of 24 th Ave S) – Southbound	18450	0.67	1.05	0.53	18166	0.59	0.95	0.55
	TH 75 (south of 24 th Ave S) – Northbound	17609	0.67	0.66	0.45	16361	1.23	1.15	0.96
TH 75 & 20 th Avenue South	20 th Ave S (east of TH 75) – Westbound	1347	0.26	0.74	0.08	1483	0.34	0.82	0.08
20 th Street & 28 th Avenue South/I-94 Ramps	20 th St (north of I-94) – Southbound	8507	0.82	1.17	0.62	8083	0.75	1.12	0.59
	20 th St (north of I-94) – Northbound	6904	0.59	0.63	0.45	7544	0.85	0.78	0.45
	20 th St (south of I-94) – Southbound	4946	0.36	0.80	0.36	5671	0.39	0.99	0.40
	20 th St (south of I-94) – Northbound	5536	1.05	0.69	0.39	5401	0.93	0.59	0.42
20 th Street & 24 th Avenue South	20 th St (north of 24 th Ave S) – Northbound	7330	0.71	0.83	0.56	7027	0.65	0.86	0.53
	20 th St (south of 24 th Ave S) – Southbound	7650	0.69	0.81	0.60	7265	0.64	0.85	0.56
	= Uncongested		= Approaching Congestion				= Congested		



Staging Alternatives – Alt 1, Stg 2

Intersection	Segment Row	No-Build				Alternative 1 – Stage 2			
		ADT	V/C Ratio			ADT	V/C Ratio		
			AM	PM	OP		AM	PM	OP
• TH 75 & 30 th Avenue South	TH 75 (north of 30 th Ave S) – Northbound	13897	0.61	0.57	0.45	13720	1.03	1.01	0.80
• 20 th Street & 30 th Avenue South	30 th Ave S (west of 20 th St) – Westbound	2805	0.25	0.50	0.22	4730	0.45	1.02	0.34
	20 th St (north of 30 th Ave S) – Southbound	4946	0.36	0.80	0.36	6696	0.64	1.25	0.43
	20 th St (north of 30 th Ave S) – Northbound	5536	1.05	0.69	0.39	5374	1.01	0.61	0.39
TH 75 & I-94	I-94 (west of TH 75) – Westbound	14714	0.69	0.98	0.54	14983	0.81	0.96	0.54
	I-94 (west of TH 75) – Eastbound	16357	0.71	1.02	0.62	14130	0.52	0.48	0.62
	TH 75 (north of I-94) – Southbound	18450	0.67	1.05	0.53	17501	1.05	1.65	1.00
	TH 75 (north of I-94) – Northbound	19434	0.93	0.86	0.56	17843	0.70	0.67	0.56
	TH 75 (south of I-94) – Northbound	13897	0.61	0.57	0.45	13720	1.03	1.01	0.80
TH 75 & 24 th Avenue South	TH 75 (south of 24 th Ave S) – Southbound	18450	0.67	1.05	0.53	17501	1.05	1.65	1.00
20 th Street & 28 th Avenue South/I-94 Ramps	20 th St (north of I-94) – Southbound	8507	0.82	1.17	0.62	8635	0.86	1.22	0.62
	20 th St (south of I-94) – Southbound	4946	0.36	0.80	0.36	6696	0.64	1.25	0.43
	20 th St (south of I-94) – Northbound	5536	1.05	0.69	0.39	5374	1.01	0.61	0.39
20 th Street & 24 th Avenue South	20 th St (north of 24 th Ave S) – Northbound	7330	0.71	0.83	0.56	7245	0.73	0.87	0.54
	20 th St (south of 24 th Ave S) – Southbound	7650	0.69	0.81	0.60	7673	0.72	0.90	0.58
	= Uncongested		= Approaching Congestion				= Congested		



Staging Alternatives – Alt 1, Stg 3

Intersection	Segment Row	No-Build				Alternative 1 – Stage 3			
		ADT	V/C Ratio			ADT	V/C Ratio		
			AM	PM	OP		AM	PM	OP
TH 75 & 60 th Avenue South	60th Ave S (west of TH 75) – Westbound	5085	0.68	0.64	0.41	6942	0.95	0.93	0.54
20th Street & 30 th Avenue South	30th Ave S (west of 20th St) - Westbound	2805	0.25	0.50	0.22	7123	0.47	0.98	0.65
	20th St (north of 30th Ave S) – Southbound	4946	0.36	0.80	0.36	9147	0.64	1.17	0.73
	20 th St (north of 30 th Ave S) – Northbound	5536	1.05	0.69	0.39	5922	0.69	0.45	0.54
TH 75 & I-94	I-94 (west of TH 75) – Westbound	14714	0.69	0.98	0.54	NA	0.00	0.00	0.00
	I-94 (west of TH 75) – Eastbound	16357	0.71	1.02	0.62	NA	0.00	0.00	0.00
	TH 75 (north of I-94) – Southbound	18450	0.67	1.05	0.53	9843	0.50	0.74	0.61
	TH 75 (north of I-94) – Northbound	19434	0.93	0.86	0.56	11786	0.57	0.59	0.35
TH 75 & 24 th Avenue South	TH 75 (south of 24th Ave S) – Southbound	18450	0.67	1.05	0.53	9843	0.28	0.41	0.34
TH 75 & 20 th Avenue South	20th Ave S (east of TH 75) - Westbound	1347	0.26	0.74	0.08	1483	0.34	0.82	0.08
20th Street & 28th Avenue South/I-94 Ramps	I-94 (west of 20 th Street) - Westbound	8109	0.59	0.48	0.27	16643	0.88	0.78	0.64
	20th St (north of I-94) – Southbound	8507	0.82	1.17	0.62	13400	1.45	1.65	0.97
	20th St (south of I-94) – Southbound	4946	0.36	0.80	0.36	9147	0.64	1.17	0.73
	20th St (south of I-94) - Northbound	5536	1.05	0.69	0.39	5922	0.69	0.45	0.54
20 th Street & 24 th Avenue South	20th St (north of 24th Ave S) – Northbound	7330	0.71	0.83	0.56	10318	1.11	1.22	0.76
	20th St (south of 24th Ave S) – Southbound	7650	0.69	0.81	0.60	11822	1.19	1.38	0.88
			= Uncongested		= Approaching Congestion				= Congested



Staging Alternatives – Alt 2

Intersection	Segment Row	No-Build				Alternative 2			
		ADT	V/C Ratio			ADT	V/C Ratio		
			AM	PM	OP		AM	PM	OP
TH 75 & 60 th Avenue South	60th Ave S (west of TH 75) – Westbound	5085	0.68	0.64	0.41	5462	1.09	1.01	0.32
	TH 75 (north of 60th Ave S) – Southbound	4835	0.55	0.51	0.36	4147	0.90	0.77	0.18
20 th Street & 40 th Avenue South	40th Ave S (west of 20th St) – Eastbound	1477	0.31	0.21	0.08	4253	0.86	0.65	0.22
	40th Ave S (east of 20th St) – Eastbound	822	0.12	0.10	0.04	3184	0.83	0.55	0.07
20th Street & 30 th Avenue South	30th Ave S (west of 20th St) – Westbound	2805	0.25	0.50	0.22	12781	0.81	1.25	1.23
	30th Ave S (west of 20th St) – Eastbound	3957	0.60	0.48	0.20	11521	0.67	0.69	0.87
	20th St (north of 30th Ave S) – Southbound	4946	0.36	0.80	0.36	15915	0.97	1.36	1.38
	20 th St (north of 30 th Ave S) – Northbound	5536	1.05	0.69	0.39	12276	0.92	0.79	1.23
TH 75 & I-94	I-94 (west of TH 75) – Westbound	14714	0.69	0.98	0.54	NA	0.00	0.00	0.00
	I-94 (west of TH 75) – Eastbound	16357	0.71	1.02	0.62	NA	0.00	0.00	0.00
	TH 75 (north of I-94) – Southbound	18450	0.67	1.05	0.53	NA	0.00	0.00	0.00
	TH 75 (north of I-94) – Northbound	19434	0.93	0.86	0.56	NA	0.00	0.00	0.00
TH 75 & 24 th Avenue South	TH 75 (south of 24th Ave S) – Southbound	18450	0.67	1.05	0.53	NA	0.00	0.00	0.00
20th Street & 28th Avenue South/I-94 Ramps	20th St (north of I-94) – Southbound	8507	0.82	1.17	0.62	18283	1.41	1.42	1.56
	20th St (north of I-94) – Northbound	6904	0.59	0.63	0.45	13602	0.62	0.66	1.08
	20th St (south of I-94) – Southbound	4946	0.36	0.80	0.36	15915	0.97	1.36	1.38
	20th St (south of I-94) – Northbound	5536	1.05	0.69	0.39	12276	0.92	0.79	1.23
20 th Street & 24 th Avenue South	20th St (north of 24th Ave S) – Northbound	7330	0.71	0.83	0.56	13274	1.10	0.99	1.13
	20th St (south of 24th Ave S) – Southbound	7650	0.69	0.81	0.60	16183	1.20	1.15	1.41
	20th St (south of 24th Ave S) – Northbound	6667	0.64	0.60	0.43	11529	0.39	0.46	0.96
		= Uncongested		= Approaching Congestion			= Congested		



Staging Alternatives – Alt 4

Intersection	Segment Row	No-Build				Alternative 4			
		ADT	V/C Ratio			ADT	V/C Ratio		
			AM	PM	OP		AM	PM	OP
TH 75 & 60 th Avenue South	60th Ave S (west of TH 75) – Westbound	5085	0.68	0.64	0.41	4554	0.80	0.82	0.29
TH 75 & 30 th Avenue South	TH 75 (north of 30th Ave S) – Southbound	17012	0.29	0.64	0.42	8118	0.36	1.06	0.44
20th Street & 30 th Avenue South	30th Ave S (west of 20th St) - Westbound	2805	0.25	0.50	0.22	8271	0.55	0.88	0.78
	20th St (north of 30th Ave S) – Southbound	4946	0.36	0.80	0.36	10726	0.67	1.18	0.88
	20th St (north of 30 th Ave S) – Northbound	5536	1.05	0.69	0.39	8498	0.90	0.65	0.79
TH 75 & I-94	I-94 (west of TH 75) – Westbound	14714	0.69	0.98	0.54	11865	0.56	0.98	0.40
	I-94 (west of TH 75) – Eastbound	16357	0.71	1.02	0.62	8118	0.24	0.71	0.29
	TH 75 (north of I-94) – Southbound	18450	0.67	1.05	0.53	11865	0.84	1.46	0.61
	TH 75 (north of I-94) – Northbound	19434	0.93	0.86	0.56	7436	0.43	0.47	0.47
	TH 75 (south of I-94) – Southbound	17012	0.29	0.64	0.42	8118	0.36	1.06	0.44
TH 75 & 24 th Avenue South	TH 75 (south of 24th Ave S) – Southbound	18450	0.67	1.05	0.53	11865	0.84	1.46	0.61
20th Street & 28th Avenue South/I-94 Ramps	20th St (north of I-94) - Southbound	8507	0.82	1.17	0.62	12999	1.05	1.40	1.04
	20th St (south of I-94) – Southbound	4946	0.36	0.80	0.36	10726	0.67	1.18	0.88
	20th St (south of I-94) - Northbound	5536	1.05	0.69	0.39	8498	0.90	0.65	0.79
20 th Street & 24 th Avenue South	20th St (north of 24th Ave S) – Northbound	7330	0.71	0.83	0.56	10646	0.96	1.08	0.84
	20th St (south of 24th Ave S) – Southbound	7650	0.69	0.81	0.60	11810	0.95	1.08	0.97
			Uncongested	Approaching Congestion			Congested		



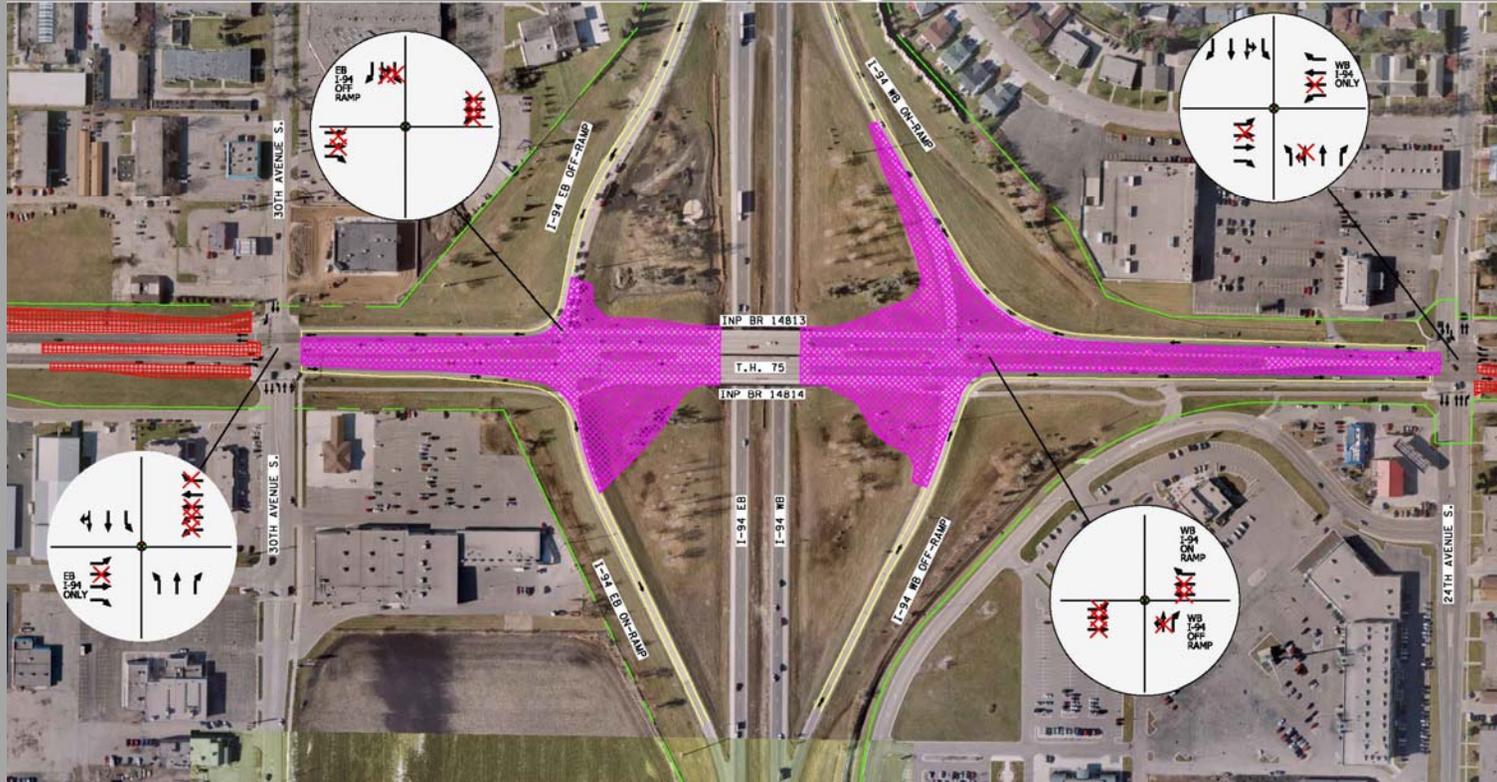
Preferred Staging Alternative

Basis of selection

- Traffic Impacts (Alt 4 least impactful)
- Duration (Alt's 2 and 4 quickest)
- Cost (Alt's 2 and 4 lowest cost)



Preferred Staging Alternative



File Date: 02/27/2014
 Drawing Name: 211046-04-01-01-01-01-01
 Project: Alternative 4

CONSTRUCTION STAGING ALTERNATE 4

MINNESOTA DOT DISTRICT 4 - DETROIT LAKES
 TH 75 - I 94 INTERCHANGE MOORHEAD, MINNESOTA

DATE: 08/27/2014 PROJ. NO.: 193801516

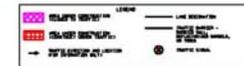
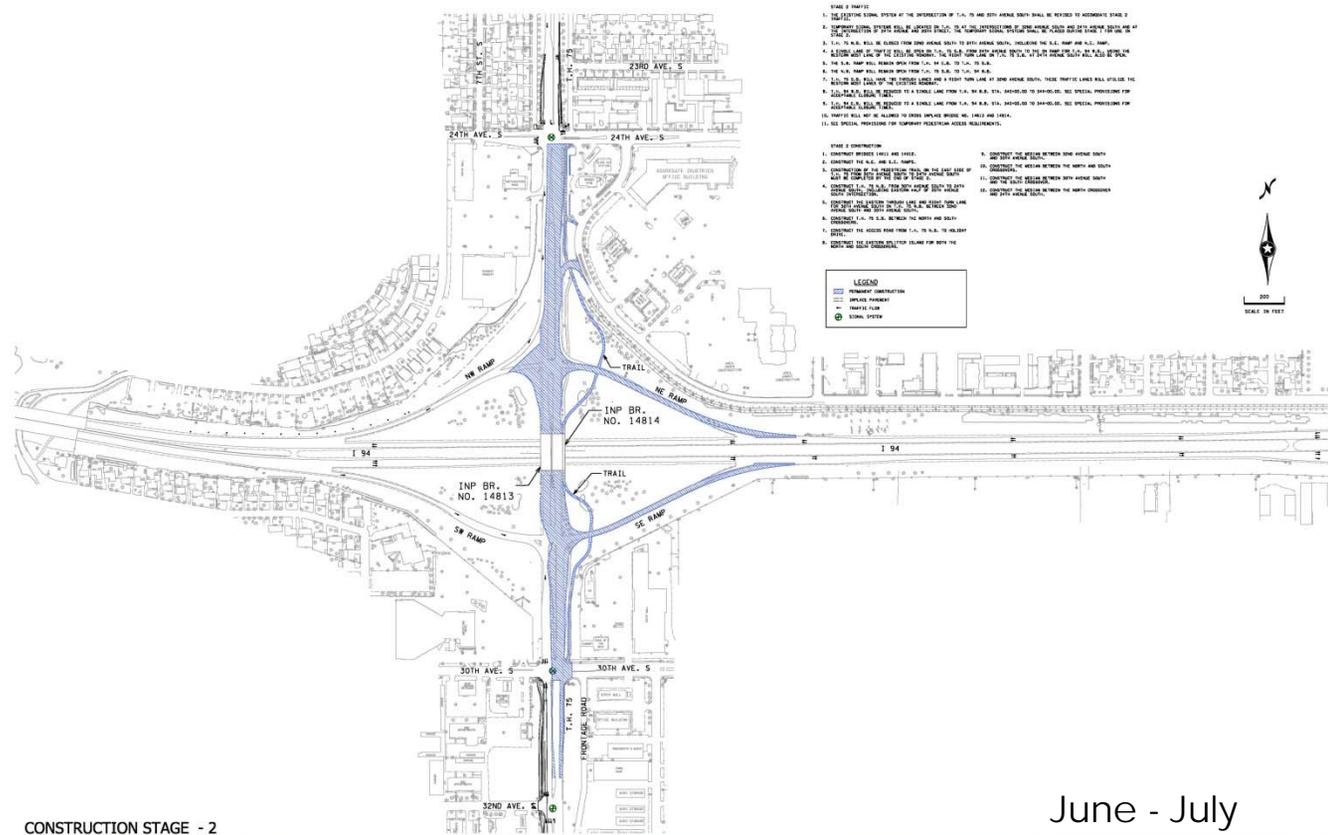


FIGURE 8



Current Staging Plan



CONSTRUCTION STAGE - 2

MNDOT DISTRICT 4 - DETROIT LAKES
TH 75 - I 94 INTERCHANGE MOORHEAD, MINNESOTA

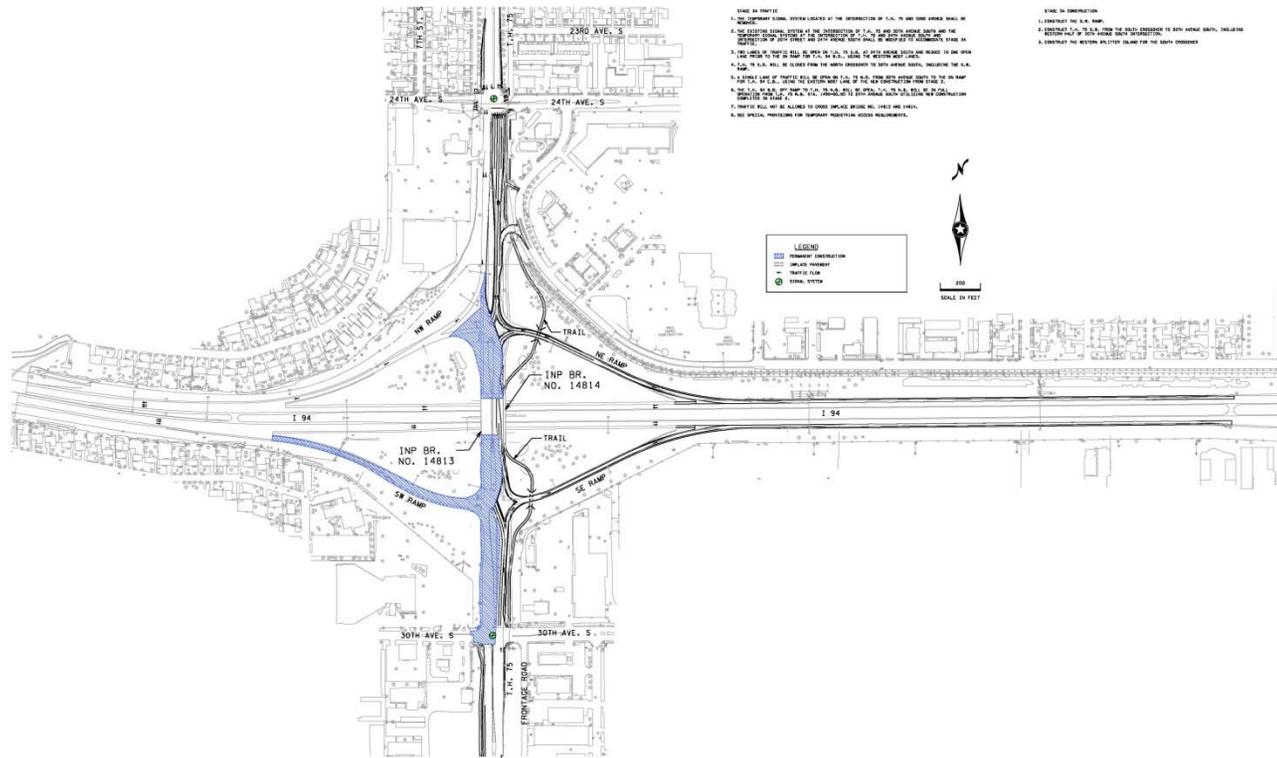
June - July

FIGURE 2S

DATE: 05/21/2015 PROJ. NO.: SP - 1406-66 - STANTEC 193801516



Current Staging Plan



July - August

CONSTRUCTION STAGE - 3A

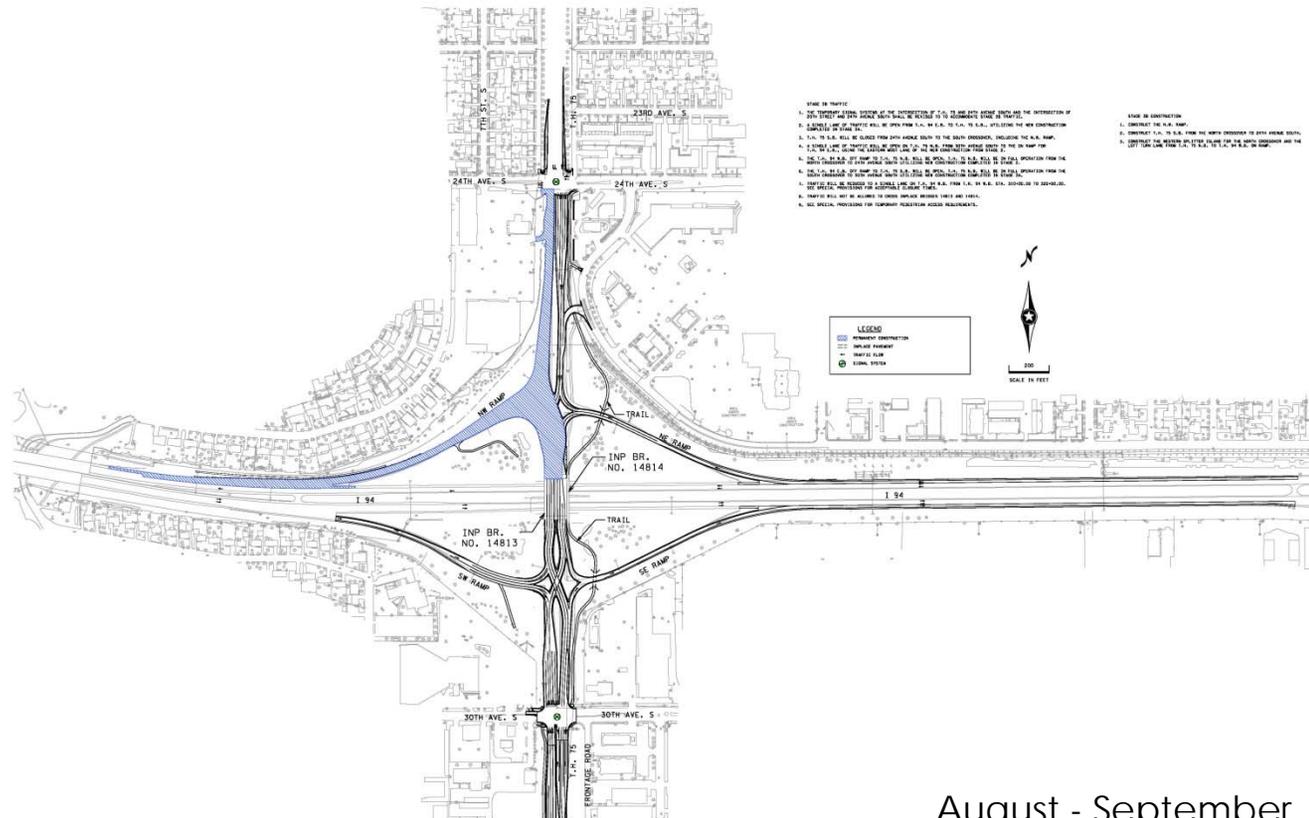
MNDOT DISTRICT 4 - DETROIT LAKES
TH 75 - I 94 INTERCHANGE MOORHEAD, MINNESOTA

FIGURE 3S

DATE: 05/21/2015 PROJ. NO.: SP - 1406-66 - STANTEC 193801516



Current Staging Plan



CONSTRUCTION STAGE - 3B

MNDOT DISTRICT 4 - DETROIT LAKES
TH 75 - I 94 INTERCHANGE MOORHEAD, MINNESOTA

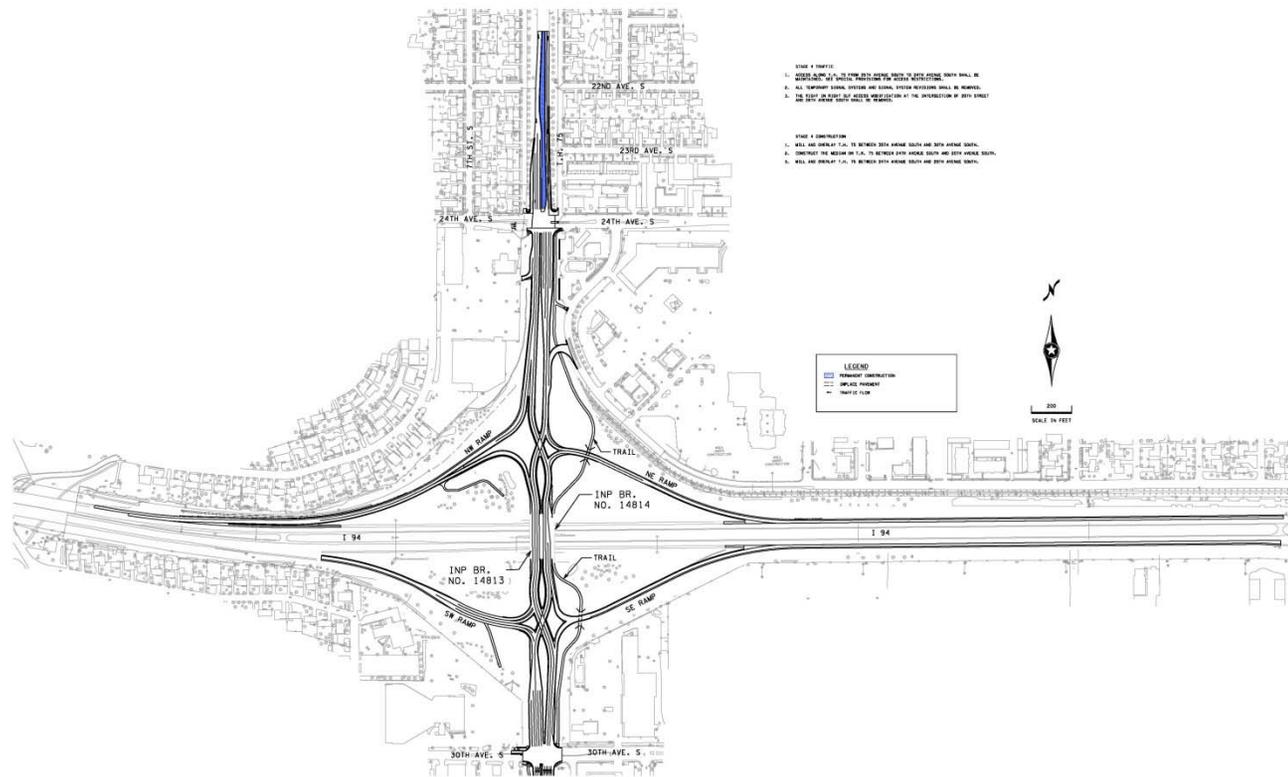
August - September

FIGURE 4S

DATE: 05/21/2015 PROJ. NO.: SP - 1406-66 : STANTEC 193801516



Current Staging Plan



September - October

CONSTRUCTION STAGE - 4

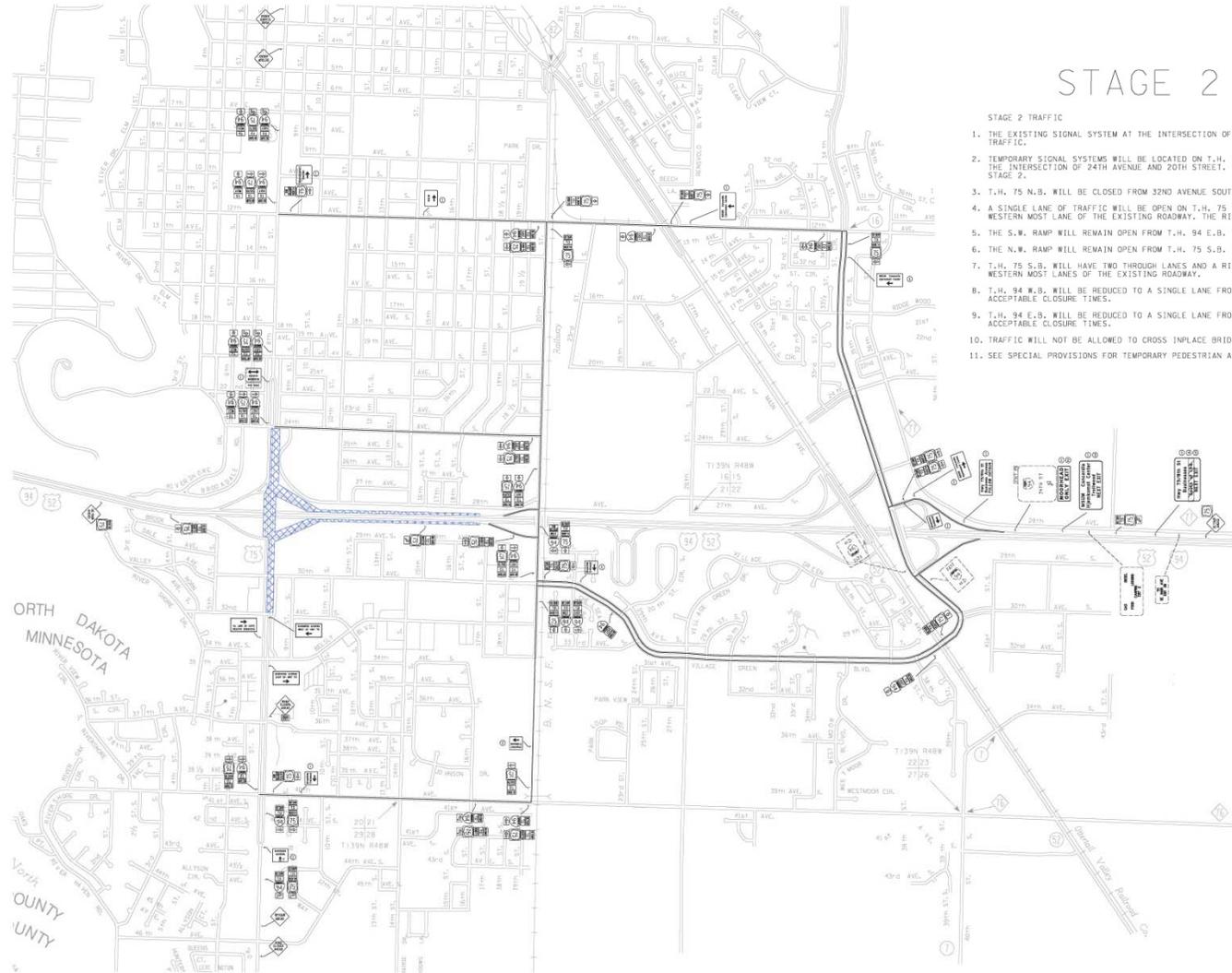
MNDOT DISTRICT 4 - DETROIT LAKES
TH 75 - I 94 INTERCHANGE MOORHEAD, MINNESOTA

FIGURE 55

DATE: 05/21/2015 PROJ. NO.: SP - 1406-66 : STANTEC 193801516



Current Staging Plan



STAGE 2 DETOUR

STAGE 2 TRAFFIC

1. THE EXISTING SIGNAL SYSTEM AT THE INTERSECTION OF T.H. 75 AND 30TH AVENUE SOUTH SHALL BE REVISED TO ACCOMMODATE STAGE 2 TRAFFIC.
2. TEMPORARY SIGNAL SYSTEMS WILL BE LOCATED ON T.H. 75 AT THE INTERSECTIONS OF 32ND AVENUE SOUTH AND 24TH AVENUE SOUTH AND AT THE INTERSECTION OF 24TH AVENUE AND 20TH STREET. THE TEMPORARY SIGNAL SYSTEMS SHALL BE PLACED DURING STAGE 1 FOR USE IN STAGE 2.
3. T.H. 75 N.B. WILL BE CLOSED FROM 32ND AVENUE SOUTH TO 24TH AVENUE SOUTH, INCLUDING THE S.E. RAMP AND N.E. RAMP.
4. A SINGLE LANE OF TRAFFIC WILL BE OPEN ON T.H. 75 S.B. FROM 24TH AVENUE SOUTH TO THE ON RAMP FOR T.H. 94 W.B., USING THE WESTERN MOST LANE OF THE EXISTING ROADWAY. THE RIGHT TURN LANE ON T.H. 75 S.B. AT 24TH AVENUE SOUTH WILL ALSO BE OPEN.
5. THE S.W. RAMP WILL REMAIN OPEN FROM T.H. 94 E.B. TO T.H. 75 S.B.
6. THE N.W. RAMP WILL REMAIN OPEN FROM T.H. 75 S.B. TO T.H. 94 W.B.
7. T.H. 75 S.B. WILL HAVE TWO THROUGH LANES AND A RIGHT TURN LANE AT 32ND AVENUE SOUTH. THESE TRAFFIC LANES WILL UTILIZE THE WESTERN MOST LANES OF THE EXISTING ROADWAY.
8. T.H. 94 W.B. WILL BE REDUCED TO A SINGLE LANE FROM T.H. 94 W.B. STA. 340+00.00 TO 344+00.00. SEE SPECIAL PROVISIONS FOR ACCEPTABLE CLOSURE TIMES.
9. T.H. 94 E.B. WILL BE REDUCED TO A SINGLE LANE FROM T.H. 94 W.B. STA. 340+00.00 TO 344+00.00. SEE SPECIAL PROVISIONS FOR ACCEPTABLE CLOSURE TIMES.
10. TRAFFIC WILL NOT BE ALLOWED TO CROSS INPLACE BRIDGE NO. 14813 AND 14814.
11. SEE SPECIAL PROVISIONS FOR TEMPORARY PEDESTRIAN ACCESS REQUIREMENTS.

STAGE 2 CONSTRUCTION

1. CONSTRUCT BRIDGES 14X11 AND 14X12.
2. CONSTRUCT THE N.E. AND S.E. RAMPS.
3. CONSTRUCTION OF THE PEDESTRIAN TRAIL ON THE EAST SIDE OF T.H. 75 FROM 30TH AVENUE SOUTH TO 24TH AVENUE SOUTH MUST BE COMPLETED BY THE END OF STAGE 2.
4. CONSTRUCT T.H. 75 N.B. FROM 30TH AVENUE SOUTH TO 24TH AVENUE SOUTH, INCLUDING EASTERN HALF OF 30TH AVENUE SOUTH INTERSECTION.
5. CONSTRUCT THE EASTERN THROUGH LANE AND RIGHT TURN LANE FOR 30TH AVENUE SOUTH ON T.H. 75 N.B. BETWEEN 32ND AVENUE SOUTH AND 30TH AVENUE SOUTH.
6. CONSTRUCT T.H. 75 S.B. BETWEEN THE NORTH AND SOUTH CROSSOVERS.
7. CONSTRUCT THE ACCESS ROAD FROM T.H. 75 N.B. TO HOLIDAY DRIVE.
8. CONSTRUCT THE EASTERN SPLITTER ISLAND FOR BOTH THE NORTH AND SOUTH CROSSOVERS.
9. CONSTRUCT THE MEDIAN BETWEEN 32ND AVENUE SOUTH AND 30TH AVENUE SOUTH.
10. CONSTRUCT THE MEDIAN BETWEEN THE NORTH AND SOUTH CROSSOVERS.
11. CONSTRUCT THE MEDIAN BETWEEN 30TH AVENUE SOUTH AND THE SOUTH CROSSOVER.
12. CONSTRUCT THE MEDIAN BETWEEN THE NORTH CROSSOVER AND 24TH AVENUE SOUTH.



DETOUR ROUTE STAGE 2

MNDOT DISTRICT 4 - DETROIT LAKES
TH 75 - I 94 INTERCHANGE MOORHEAD, MINNESOTA

DATE: 05/21/2015 PROJ. NO.: SP-1406-66 : STANTEC 193801516

FIGURE 1D



Mitigation

Stakeholder Engagement

Analysis

Temporary Signals

RIRO at 28th Ave S & 20th Street

Contractor Incentives



Next Steps

Stakeholder Engagement

Plans Complete in June

Project Let in September

Construction in 2016

New Interchange!



Return to Open House

Ask Questions
Share your thoughts



May 21, 2015