

# Northeast Transportation Network Feasibility Study

## Subarea Transportation Plan and Program

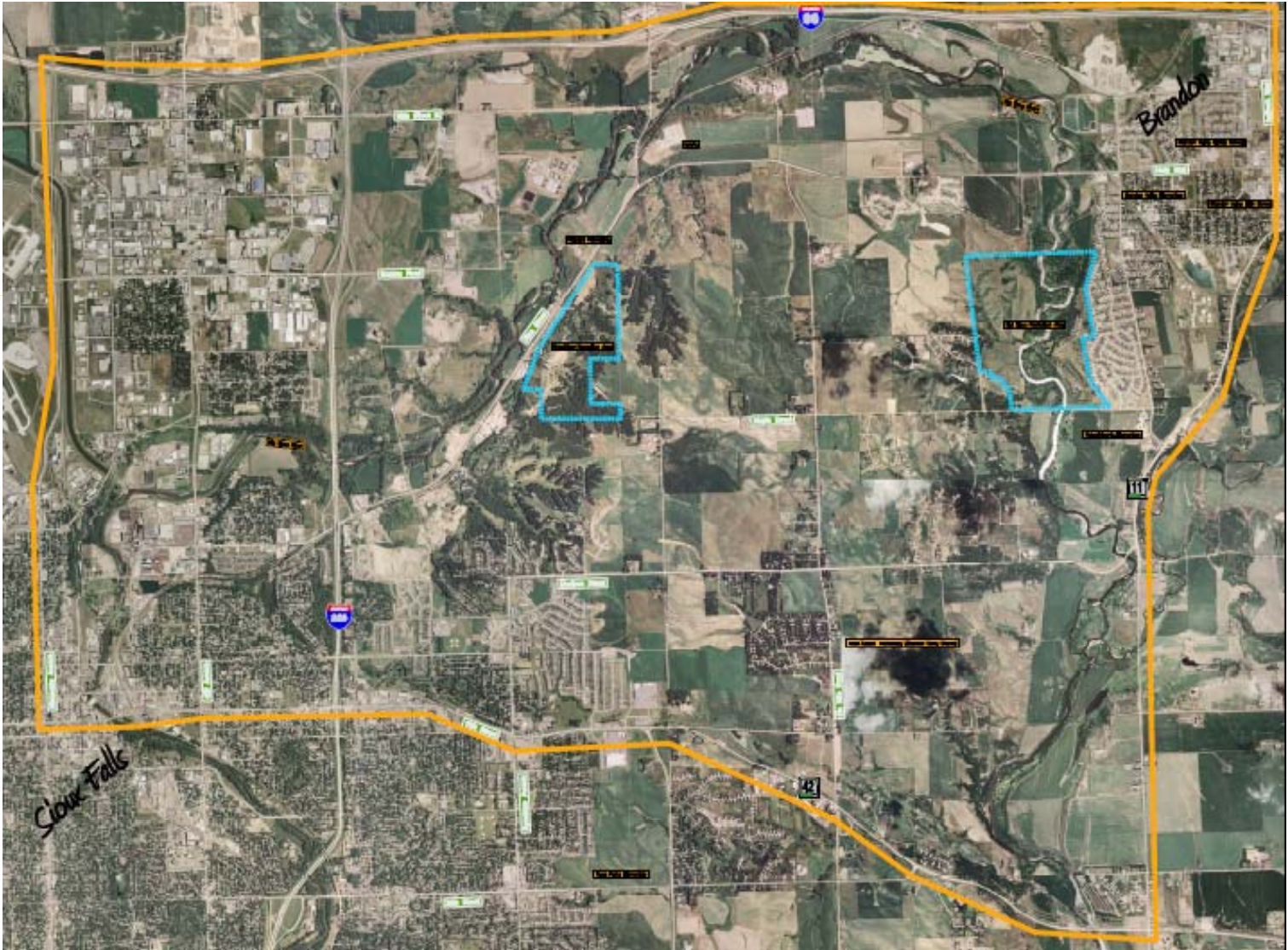




# Purpose and Need

- Limited arterial/collector street connectivity due to topography, environmental constraints
- Planned growth of Sioux Falls and Brandon – need to coordinate transportation
- Evaluate projects for LRTP update in 2010
- Reduce existing and forecast congestion

# Study Area





# Process

- Develop Master List of Needs
- Analyze physical and financial feasibility of projects
- Prepare list of projects
- Study Team (SDDOT, City of Brandon, SECOG, City of Sioux Falls)

# Master List of Needs

NEED	IMPROVEMENT CONCEPT	SOURCE
EAST-WEST CONNECTIVITY	RUSSELL/RICE CONNECTION	L RTP
	RICE/MAPLE CONNECTION	L RTP
	BENSON/HOLLY CONNECTION	L RTP
	60TH ST. N/REDWOOD CONNECTION	L RTP
FILL GAPS IN TRANSPORTATION NETWORK	BAHNSON/RICE CONNECTION	L RTP
	SYCAMORE/RICE CONNECTION	L RTP
	ARTERIAL EAST OF SIX-MILE RD.	L RTP
ADD CAPACITY 10TH/ARROWHEAD CORRIDOR	MORE LANES	L RTP
	REVERSIBLE LANES	L RTP
	PARALLEL STREETS	L RTP
	TRANSIT	L RTP
NORTH-SOUTH CONNECTIVITY	SIX-MILE ROAD/I-90 CONNECTION	L RTP, BRANDON COMP.
	MINNESOTA AVENUE EXTENSION	L RTP
	I-229/60TH ST N CONNECTION	L RTP
ADD CAPACITY HOLLY BLVD.	ADDITIONAL LANES	L RTP, BRANDON COMP.
	TRANSIT	L RTP
ADD CAPACITY MADISON ST.	ADDITIONAL LANES	L RTP, BRANDON COMP.
	TRANSIT	L RTP
ADD CAPACITY SPLITROCK BLVD.	ADDITIONAL LANES	L RTP, BRANDON COMP.
IMPROVE I-90/SPLITROCK INTERCHANGE	SIGHT DISTANCE, GEOMETRIC NEEDS	PUBLIC COMMENT
ADD CAPACITY REDWOOD BLVD.	ADDITIONAL LANES	L RTP, BRANDON COMP.
ADD CAPACITY CHESTNUT BLVD.	ADDITIONAL LANES	L RTP, BRANDON COMP.
ADD CAPACITY ASPEN BLVD.	ADDITIONAL LANES	L RTP, BRANDON COMP.
PROVIDE PEDESTRIAN ACCESS	BUILD SIDEWALKS, PATHS AS PART OF DEVELOPMENT	L RTP, PEDESTRIAN PLAN
PROVIDE BICYCLE ACCESS	PLANNED ARROWHEAD TRAIL	TRAILS MASTER PLAN
	PLANNED SD 100 TRAIL	TRAILS MASTER PLAN
	PLANNED GREAT BEAR TRAIL	TRAILS MASTER PLAN
	PLANNED BRANDON TRAIL EXTENSIONS	BRANDON COMP. PLAN
COLLECTOR STREET SYSTEM	BIKE LANES, SIDEPATH	MPO BIKE PLAN, ETC.
	PLAN COLLECTOR NETWORK	L RTP, OTHER PLANS
TIMBERLINE ROAD, I-90 TO HEMLOCK	ADDITIONAL LANES	FORECAST MODEL
60TH ST. N, SYCAMORE TO SD 100	ADDITIONAL LANES	FORECAST MODEL
MAPLE ST., SD 100 TO 1/2 MI. EAST	ADDITIONAL LANES	FORECAST MODEL
SD 11, SD 42 TO ASPEN	ADDITIONAL LANES	FORECAST MODEL
6TH ST., SYCAMORE TO DUBUQUE	ADDITIONAL LANES	FORECAST MODEL
8TH ST., MAIN TO CLIFF	ADDITIONAL LANES	FORECAST MODEL
CLIFF AVE., 10TH TO 12TH	ADDITIONAL LANES	FORECAST MODEL
PROVIDE TRANSIT SERVICE	ROUTE/SERVICE EXTENSIONS	FED. PLANNING REGS.

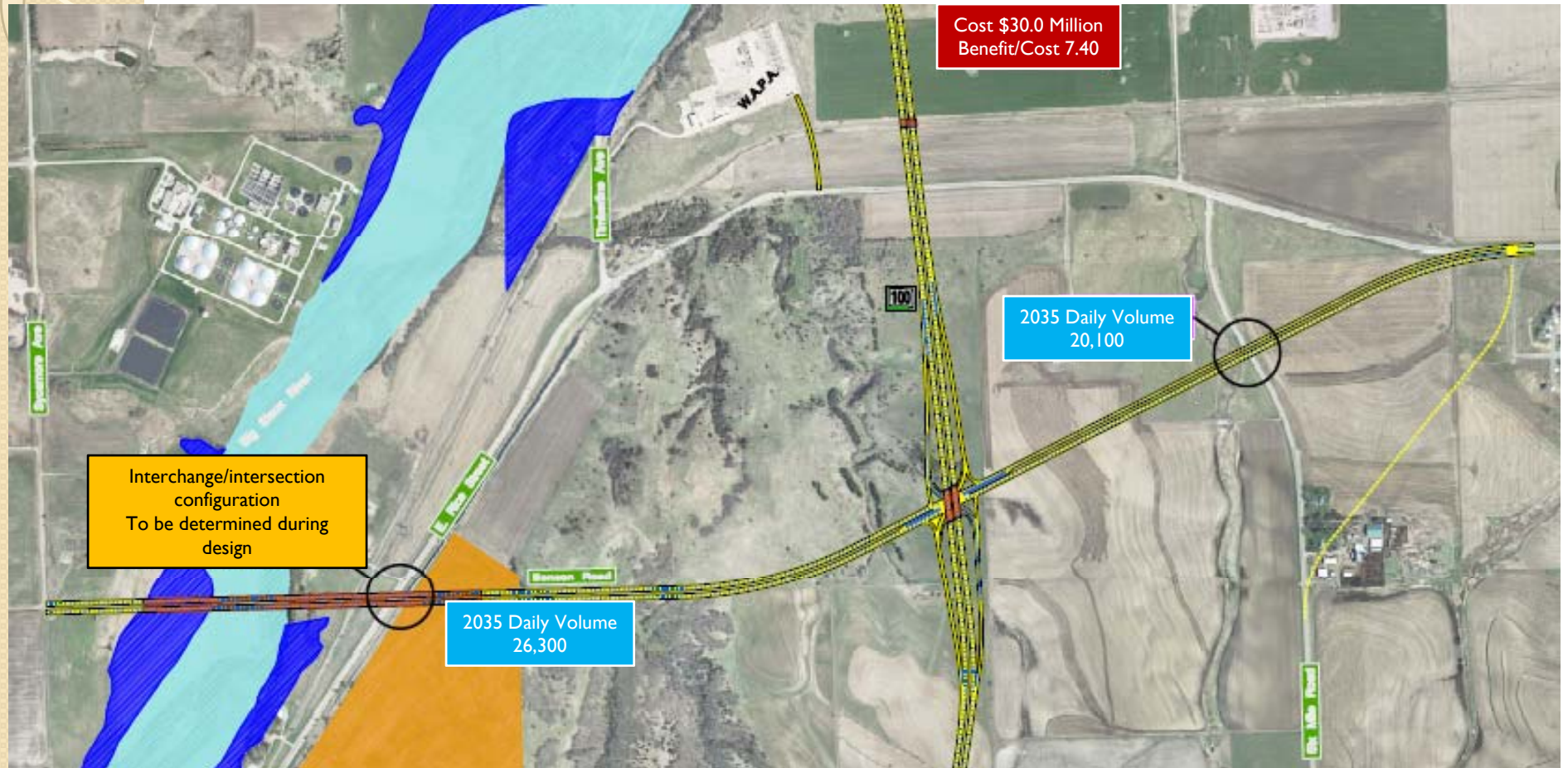
# Russell/Rice Connection



# Rice/Maple Connection



# Benson/Holly Connection

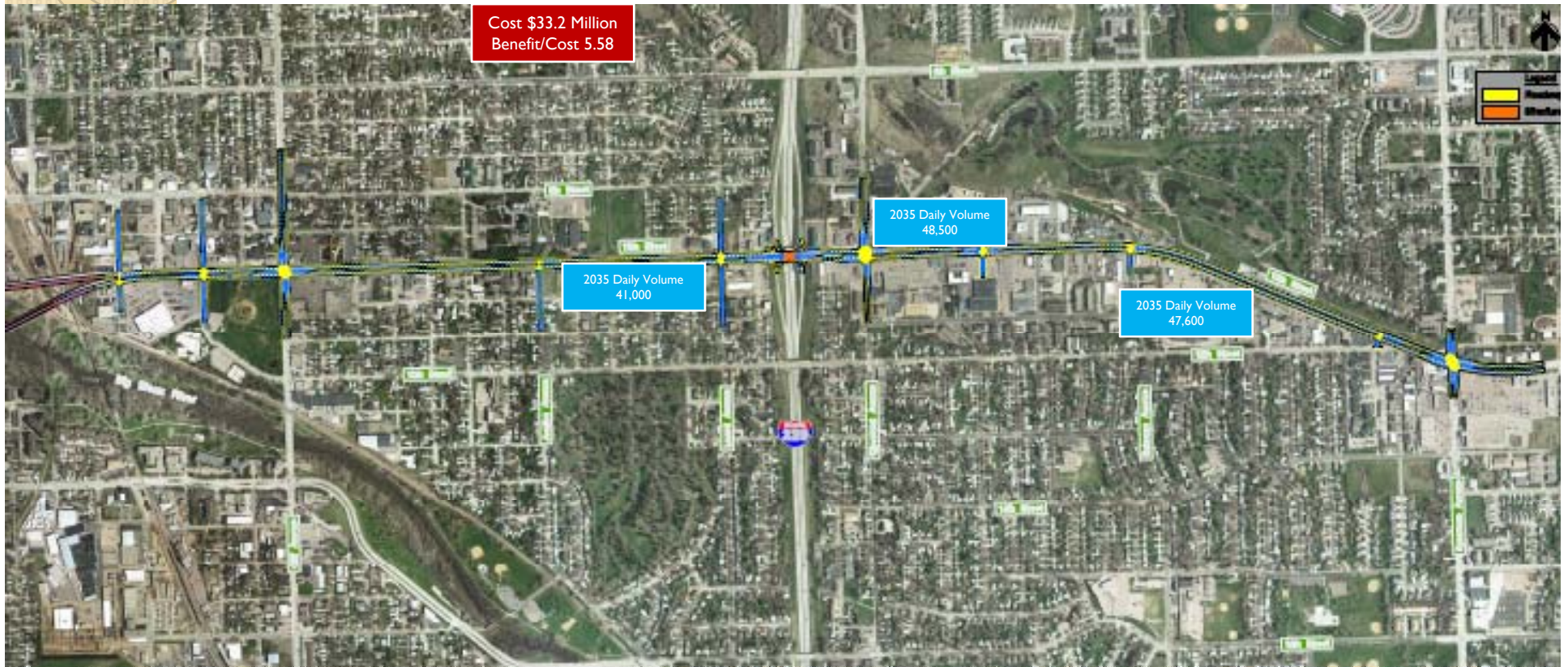




# Bahnson/Rice Connection



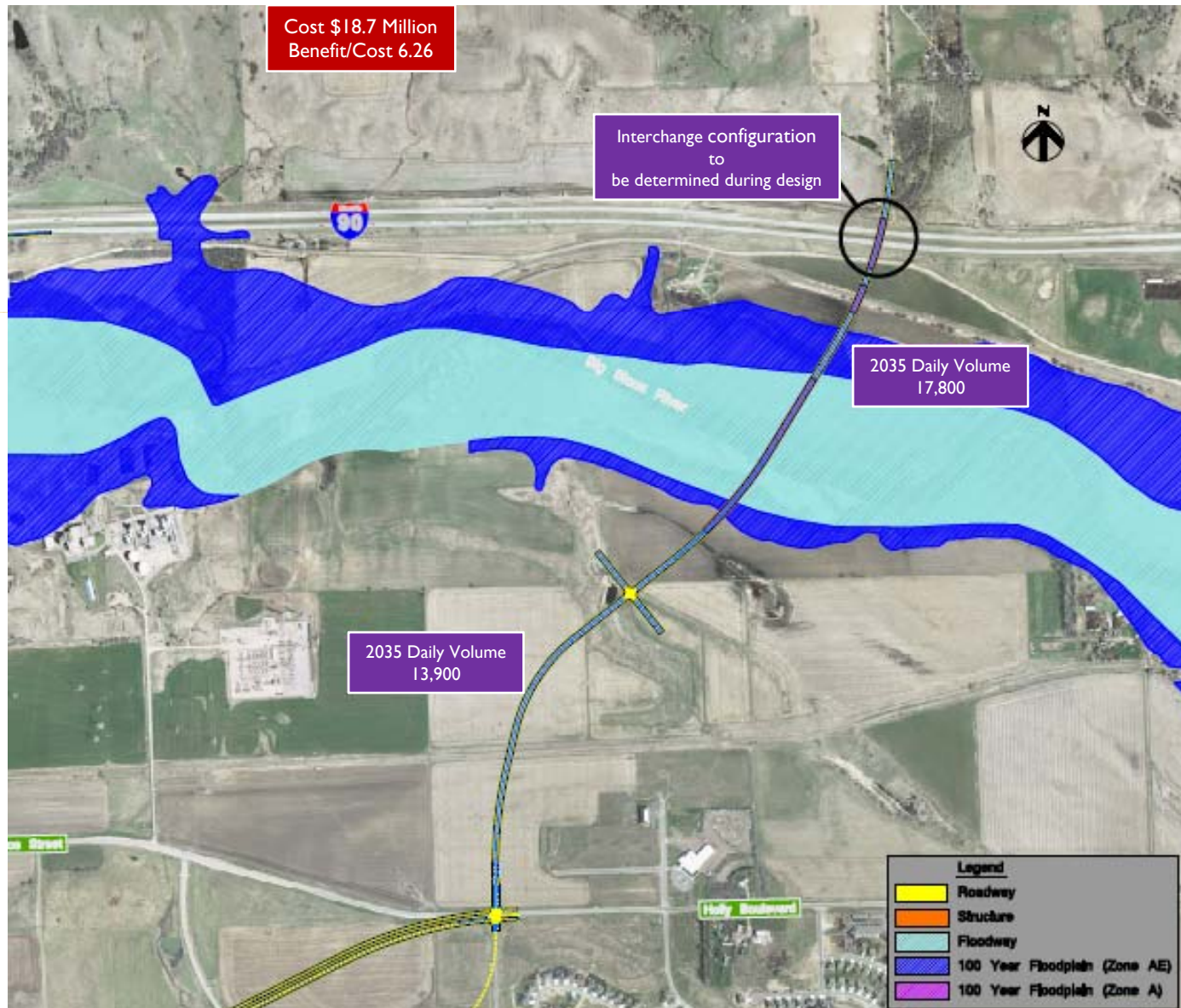
# 10<sup>th</sup> Street – Additional Lanes



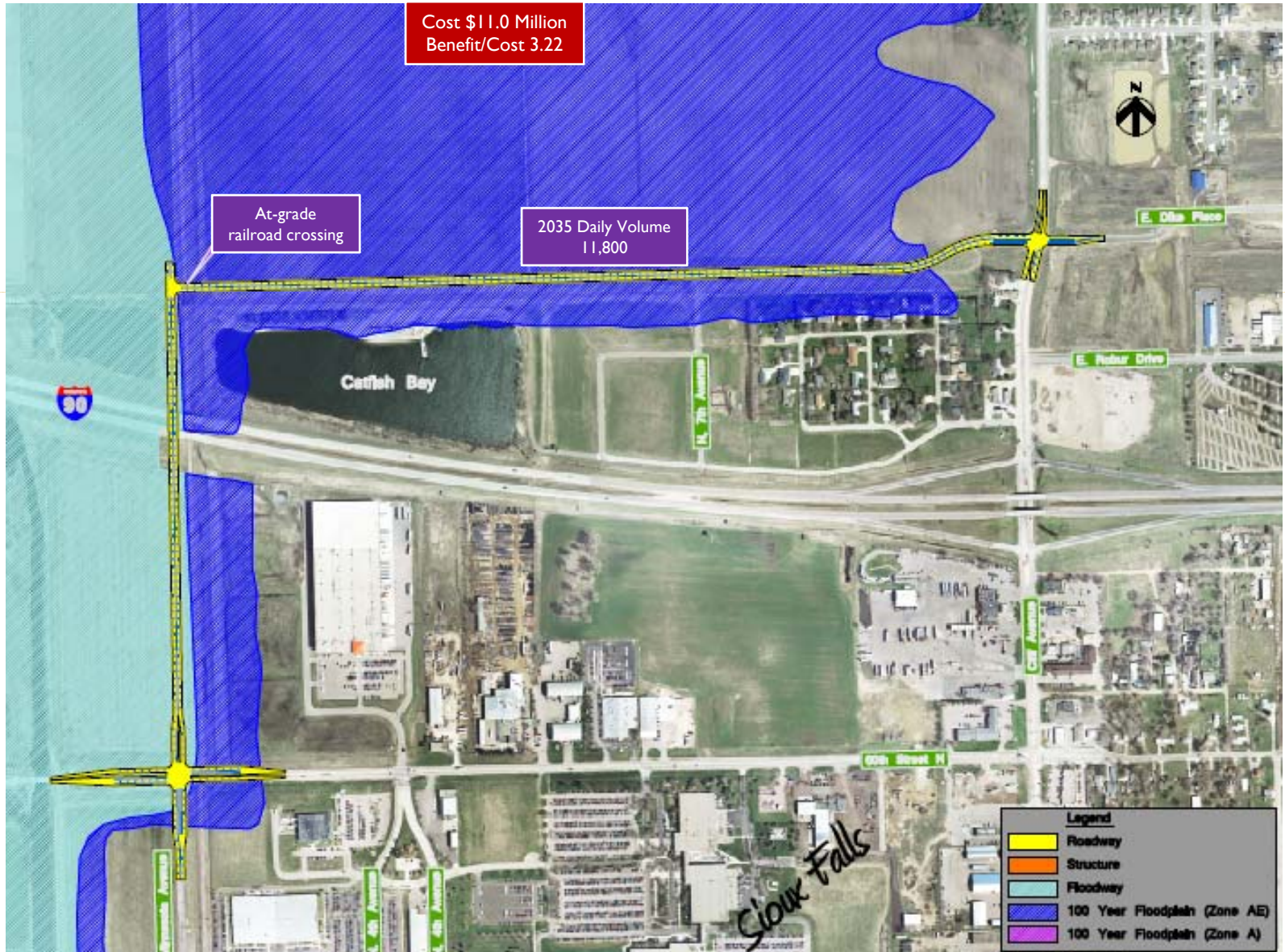
# 10<sup>th</sup> Street – Parallel Streets



# Six-Mile/I-90 Connection



# Minnesota Avenue Extension



# I-229/60<sup>th</sup> Street N. Connection





# Other Projects

- Capacity Additions
  - Transit
  - Bike/Pedestrian
  - Collector Streets
-

# Project Benefits and Costs

IMPROVEMENT CONCEPT	ANNUAL PUBLIC BENEFITS			PUBLIC COSTS		BENEFIT/COST RATIO
	TRAVEL TIME	FUEL USE	ACCIDENT SAVINGS	CONSTRUCTION	ANNUAL MAINTENANCE	
RUSSELL/RICE CONNECTION (OPTION 1)	\$ 4,353,050	\$ 1,641,250	\$ 100,000	\$ 22,808,700	\$ 11,500	3.30
RUSSELL/RICE CONNECTION (OPTION 2)	\$ 4,353,050	\$ 1,641,250	\$ 100,000	\$ 27,940,000	\$ 14,400	2.70
RUSSELL/RICE CONNECTION (OPTION 3)	\$ 4,353,050	\$ 1,641,250	\$ 100,000	\$ 69,453,000	\$ 15,100	1.09
RICE/MAPLE CONNECTION	\$ 6,529,600	\$ 2,954,250	\$ 70,200	\$ 10,286,225	\$ 18,500	11.24
BENSON/HOLLY CONNECTION	\$ 13,059,150	\$ 4,923,750	\$ 205,000	\$ 30,040,900	\$ 37,000	7.40
BAHNSON/RICE CONNECTION	\$ 2,176,525	\$ 820,625	\$ 175,000	\$ 944,950	\$ 4,700	38.67
SYCAMORE/RICE CONNECTION	\$ 4,353,050	\$ 1,641,250	\$ 46,800	\$ 5,184,900	\$ 6,400	14.23
10TH STREET						
ADDITIONAL LANES	\$ 10,882,625	\$ 4,103,125	\$ 321,000	\$ 33,193,800	\$ 62,000	5.58
PARALLEL STREETS	\$ 3,264,800	\$ 1,230,900	\$ 29,200	\$ 28,573,500	\$ 57,700	1.91
SIX-MILE RD./I-90 CONNECTION	\$ 6,529,575	\$ 2,461,875	\$ 555,000	\$ 18,700,600	\$ 17,700	6.26
MINNESOTA AVE. EXTENSION	\$ 1,958,900	\$ 738,600	\$ 205,000	\$ 10,995,900	\$ 14,400	3.22
I-229/60TH ST. N. CONNECTION	\$ 2,176,525	\$ 820,625	\$ 292,000	\$ 10,148,800	\$ 19,600	3.91
HOLLY BLVD. (SIOUX BLVD TO WCL) - ADD LANES	\$ 391,800	\$ 147,700	\$ 100,000	\$ 6,778,400	\$ 39,500	1.07
MADISON ST. (DUBUQUE TO SIX-MILE)- ADD LANES	\$ 305,000	\$ 115,000	\$ 100,000	\$ 3,988,300	\$ 30,900	1.44
I-90/SPLITROCK INTERCHANGE IMP.	\$ 838,000	\$ 357,000	\$ 300,000	\$ 4,413,600	\$ 2,800	4.18
MAPLE ST. (SD 100 TO 1/2 MI. EAST) - ADD LANES	\$ 133,000	\$ 50,100	\$ 12,500	\$ 1,413,600	\$ 4,000	1.65
SD 11 (SD 42 TO ASPEN) - ADD LANES	\$ 1,856,600	\$ 700,000	\$ 400,000	\$ 11,046,000	\$ 6,400	3.30
6TH ST. (SYCAMORE TO DUBUQUE) - ADD LANES	\$ 653,000	\$ 246,200	\$ 50,000	\$ 2,079,600	\$ 4,000	5.51



# Project List

Recommendations for study and programming,  
In priority order

- Bahnson/Rice Connection
- Sycamore/Rice Connection
- Rice/Maple Connection
- Benson/Holly Connection
- Six-Mile Road/I-90 Connection
- 10<sup>th</sup> Street/Arrowhead Parkway
- 6<sup>th</sup> Street, Sycamore to Dubuque
- I-90/Splitrock Interchange Improvements



## Project List, continued

- I-229/60<sup>th</sup> Street North Connection
- Russell/Rice Connection
- SD 11, SD 42 to Aspen Blvd.
- Minnesota Ave. Extension
- Maple St., SD 100 to 1/2 mile east
- Madison St., Dubuque to Six-Mile Road
- Holly Blvd., Sioux to Brandon City Limits



# Next Steps

- MPO approval
- Public comments through Nov. 30
- Complete study report
- Program projects for development, study

# Questions?

- Full report and graphics available at:  
<http://www.siouxfalls.org/publicworks.aspx>
- Contact for CD:

Rick Laughlin

HDR Engineering, Inc.

6300 S. Old Village Place, Suite 100

Sioux Falls, SD 57108

605-977-7740

[rick.laughlin@hdrinc.com](mailto:rick.laughlin@hdrinc.com)