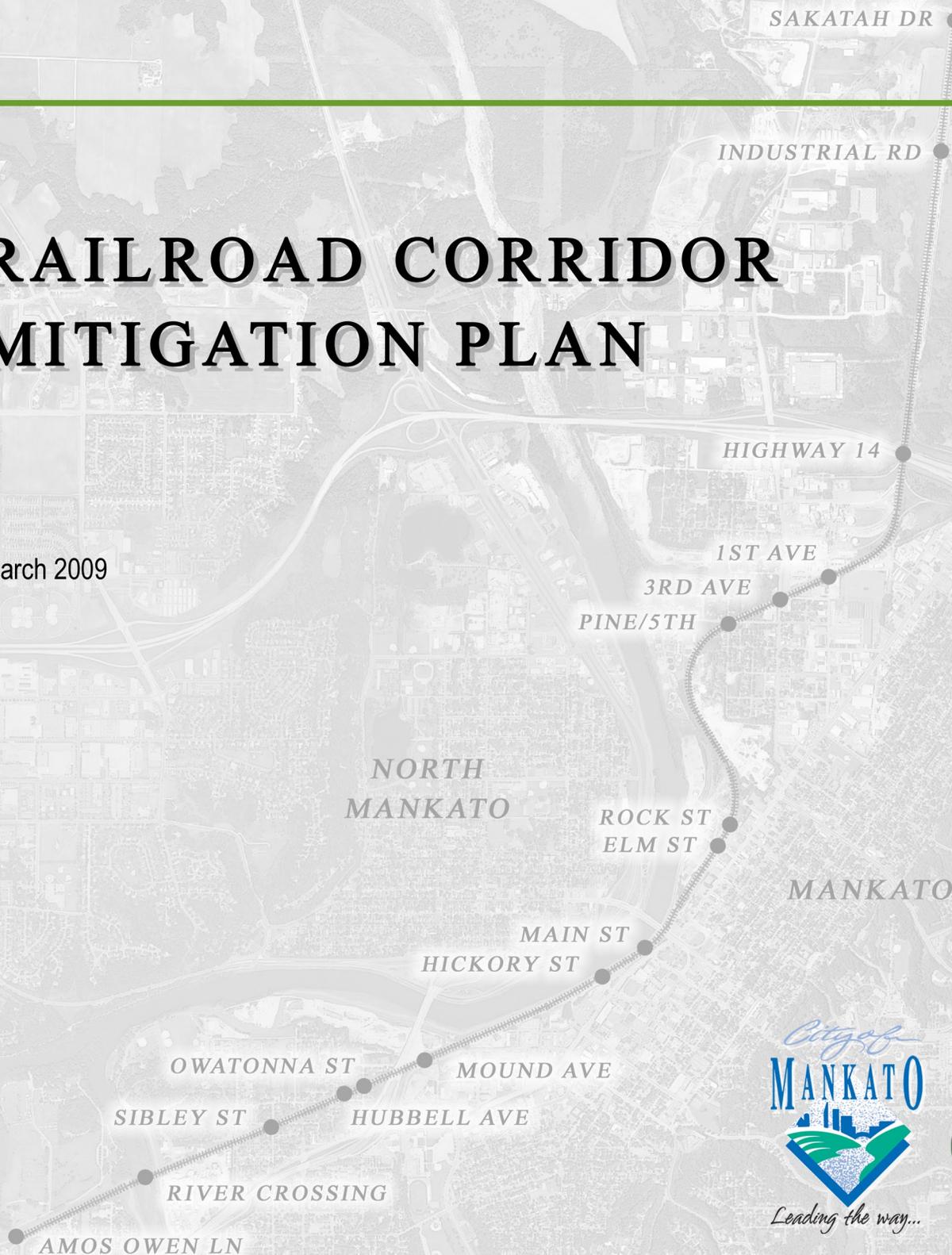
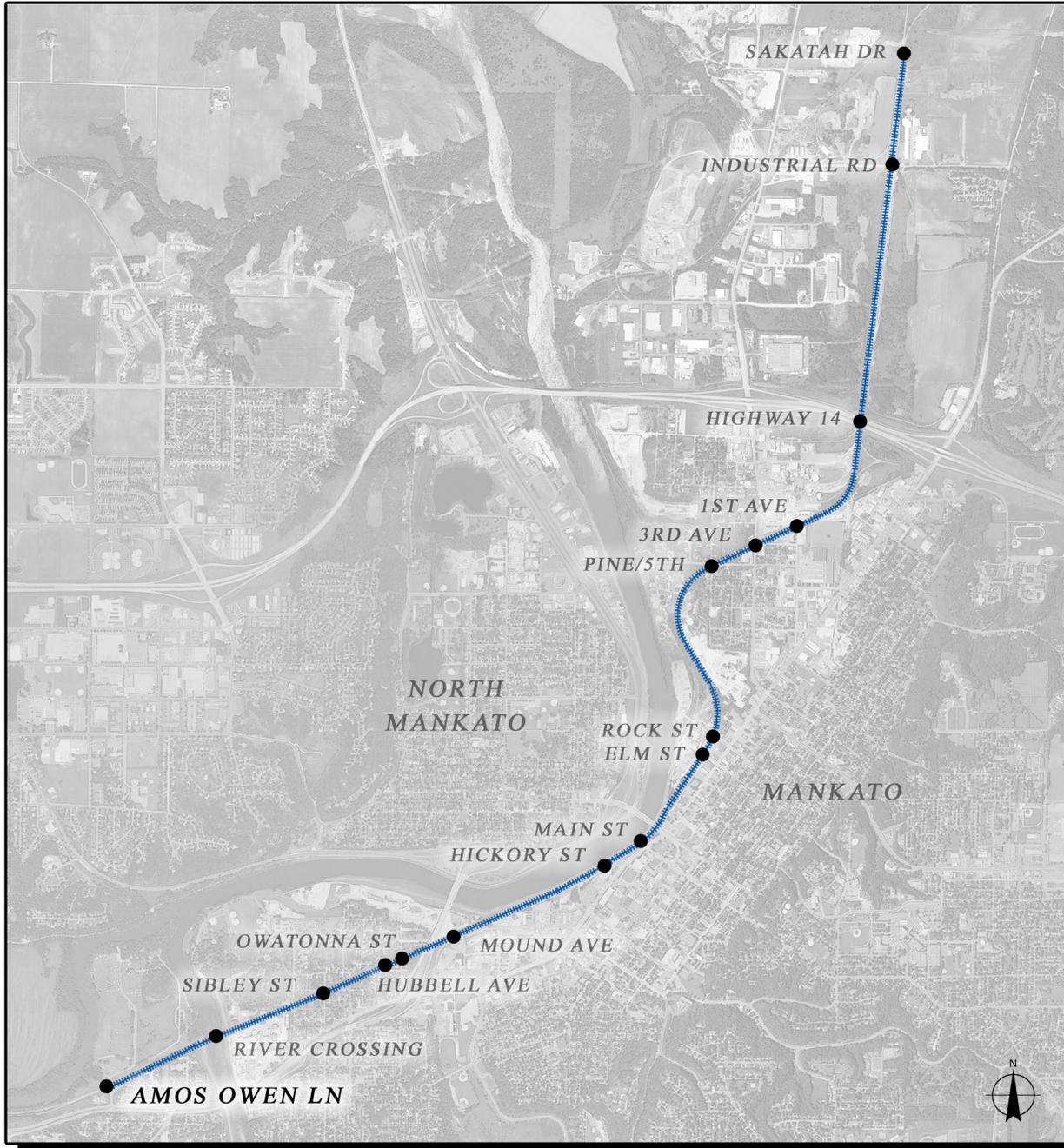


RAILROAD CORRIDOR MITIGATION PLAN

March 2009

Amos Owen Ln
River Crossing
Sibley St
Hubbell Ave
Owatonna St
Mound Ave
Hickory St
Main St
Elm St
Rock St
Pine/5th
3rd Ave
1st Ave
Highway 14
Industrial Rd
Sakatah Dr





**RAILROAD CORRIDOR
MITIGATION PLAN**

- Amos Owen Ln
- River Crossing
- Sibley St
- Hubbell Ave
- Owatonna St
- Mound Ave
- Hickory St
- Main St
- Elm St
- Rock St
- Pine/5th
- 3rd Ave
- 1st Ave
- Highway 14
- Industrial Rd
- Sakatah Dr

AMOS OWEN LN

This crossing is the entrance to the Land of Memories, a City of Mankato-sponsored park and overnight campground. A whistle-free crossing at this location will provide relief from the noise experienced in this residential township site. The gated crossing and security fence will also provide a safe avenue for vehicles, bicycles, and pedestrians crossing the joint use track. Landscaping consistent with the adjacent park and campground design is also planned.

ESTIMATED COST:
\$638,000

LANDSCAPE BUFFER

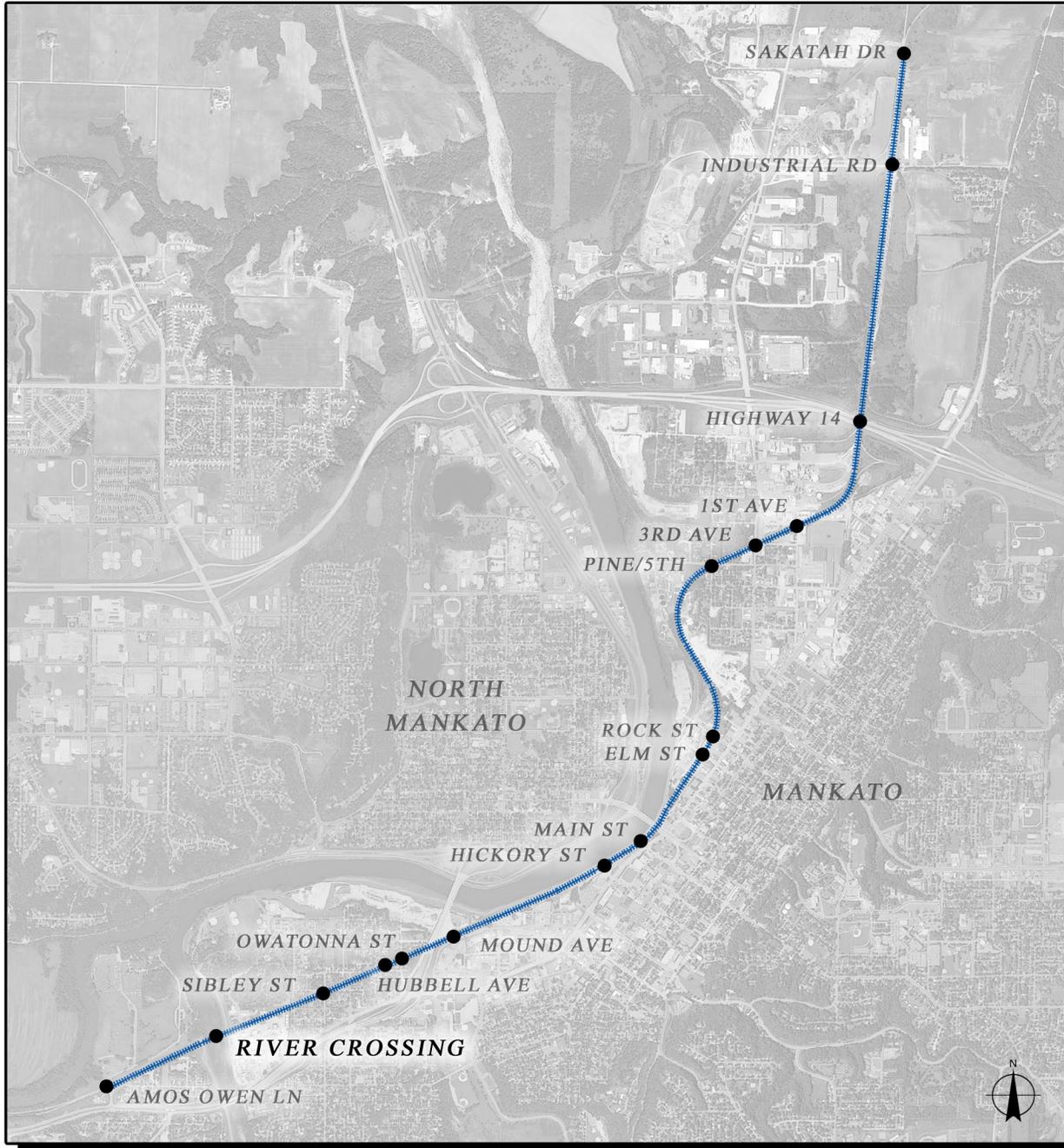
AMOS OWEN LN

SECURITY FENCE

AMOS OWEN LN COMPONENTS

- Four (4) arm gated crossing
- Security fence
- Landscaping adjacent to security





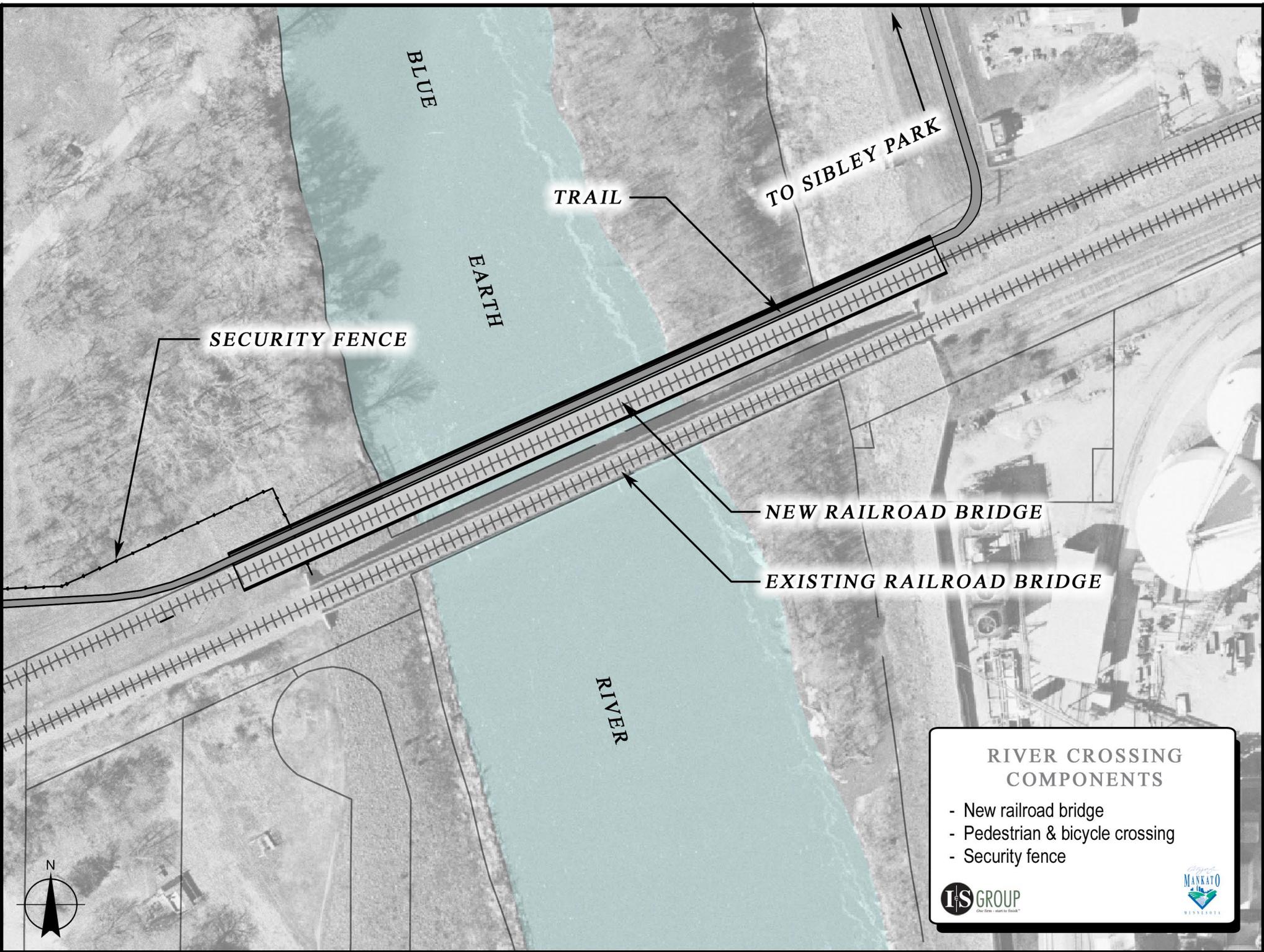
**RAILROAD CORRIDOR
MITIGATION PLAN**

- Amos Owen Ln
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RIVER CROSSING

Sibley Park and West Sibley Park comprise a regional park maintained by the city. Both sides of the park accommodate both passive and active uses including baseball, softball, soccer, and frisbee golf. The east and west sections of the park, separated by the Blue Earth River, are linked via an off-site access which includes a suspended walkway attached to the existing railroad bridge. Pedestrian and bicycle friendly crossing facilities are needed at the river. The concept of attaching a pedestrian/bicycle access along with the construction of new rail river crossing, or constructing an independent crossing, is warranted by the high utilization of the park for recreational uses.

ESTIMATED COST:
\$2,903,000



BLUE
EARTH

TRAIL

TO SIBLEY PARK

SECURITY FENCE

RIVER

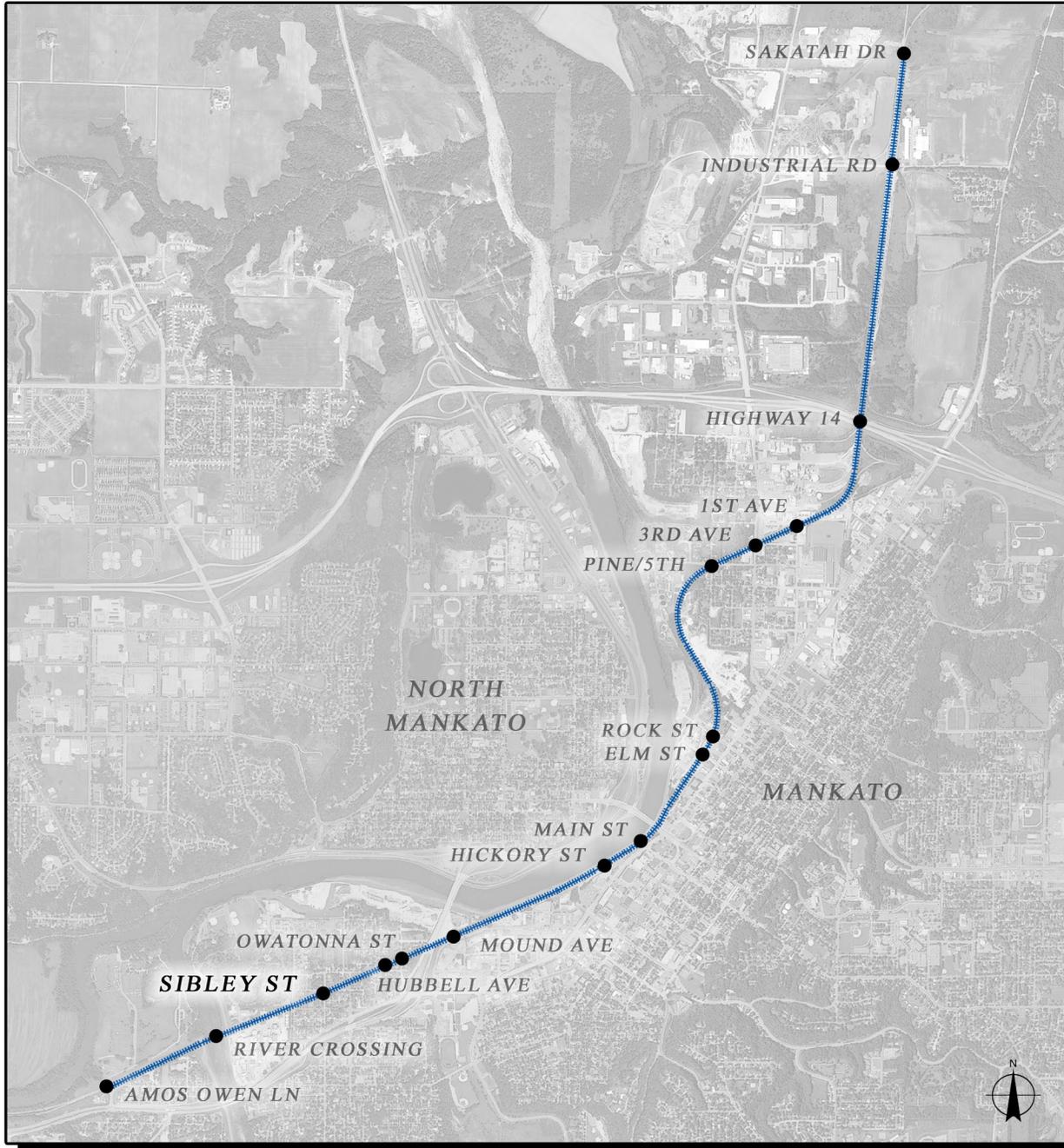
NEW RAILROAD BRIDGE

EXISTING RAILROAD BRIDGE

**RIVER CROSSING
COMPONENTS**

- New railroad bridge
- Pedestrian & bicycle crossing
- Security fence





**RAILROAD CORRIDOR
MITIGATION PLAN**

- Amos Owen Ln
- River Crossing
- Sibley St
- Hubbell Ave
- Owatonna St
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- Industrial Rd
- Sakatah Dr

SIBLEY ST

Proposed improvements at this previously closed crossing will provide sound abatement and increased pedestrian safety for this residential area. A pedestrian underpass at Sibley Street, combined with closure of the at-grade crossings at Hubbell Avenue and Owatonna Street and construction of security fence/sound abatement wall along the rail corridor would provide a safe pedestrian crossing and mitigate existing noise issues. The pedestrian underpass would consist of an 8x10 reinforced concrete rail underpass connecting school sidewalks in the neighborhood to prevent inadvertent or undesired crossing of the track's security fence. The underpass would also accommodate the passage of emergency vehicles beneath the rail line at this location. Landscaping in keeping with the residential nature of the area would be provided as well.

ESTIMATED COST:
\$1,237,000

CONNECTION TO HUBBELL ST.

W 2ND ST

LANDSCAPE BUFFER

SIBLEY ST

SOUND ABATEMENT WALL

PEDESTRIAN UNDERPASS

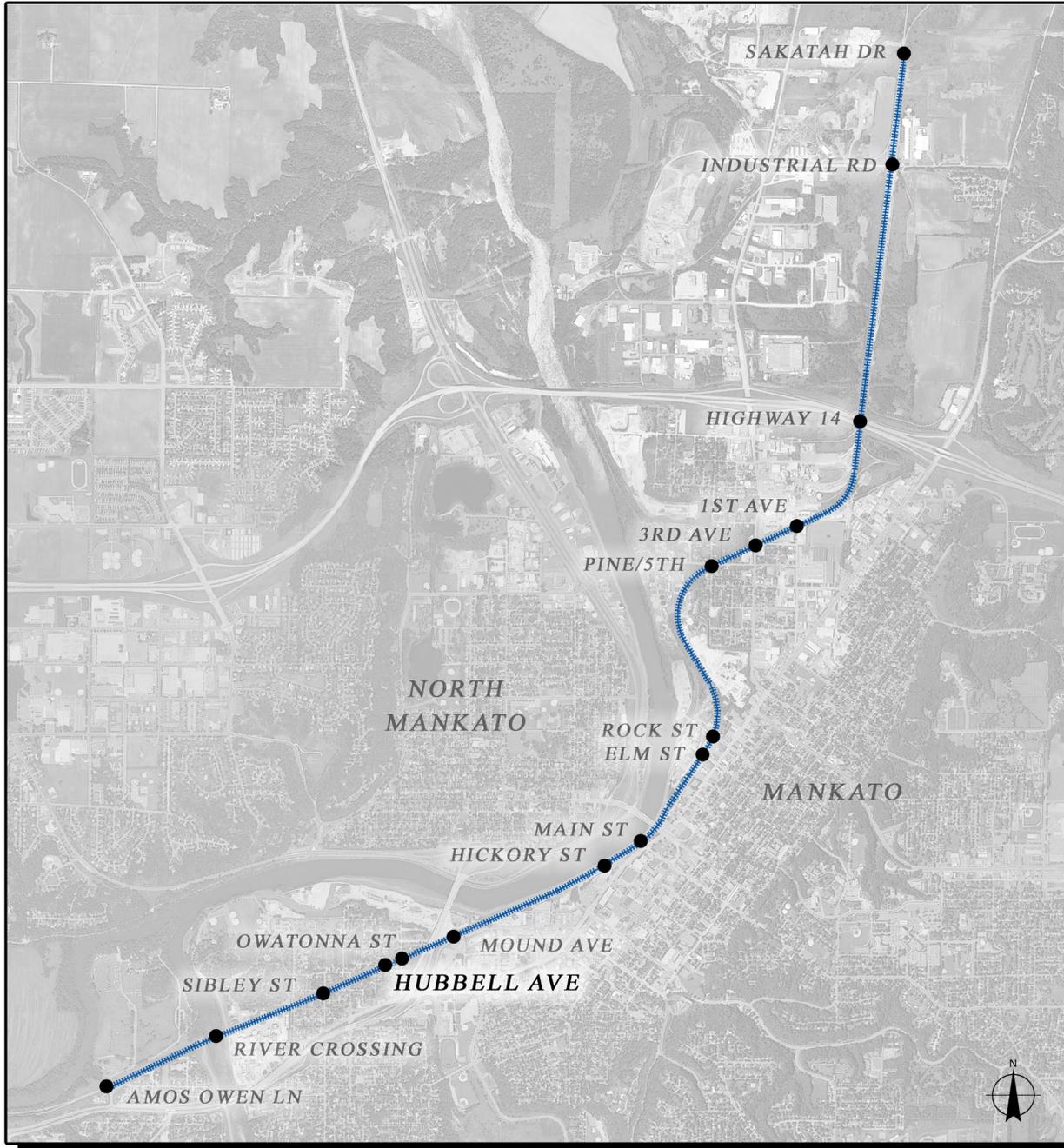
W 3RD ST



SIBLEY ST COMPONENTS

- Crossing closure
- Connection to Hubbell Street
- Pedestrian underpass
- Sound abatement walls with adjacent landscaping
- Emergency vehicle access





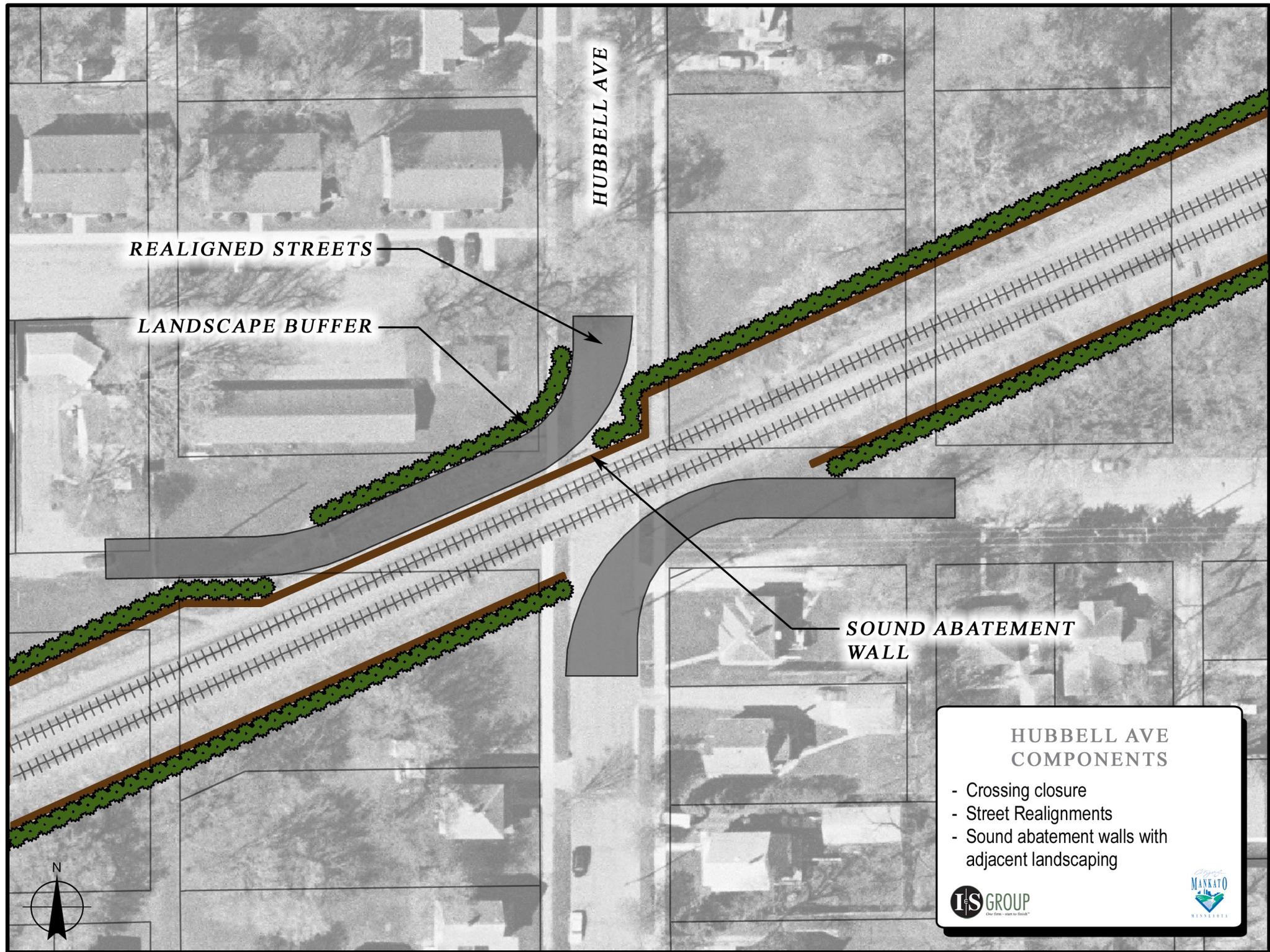
**RAILROAD CORRIDOR
MITIGATION PLAN**

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HUBBELL AVE

This existing crossing would be closed. Hubbell Avenue north of the railroad would be connected to West 2nd Street with an alley-like connection utilizing the north side right-of-way of the railroad. Hubbell Avenue south of the railroad would be connected to West 2nd Street alley in a similar fashion to provide additional circulation at that location. Sound abatement security fence and wall and landscaping consistent with the residential neighborhood would be provided as well.

ESTIMATED COST:
\$361,000



HUBBELL AVE

REALIGNED STREETS

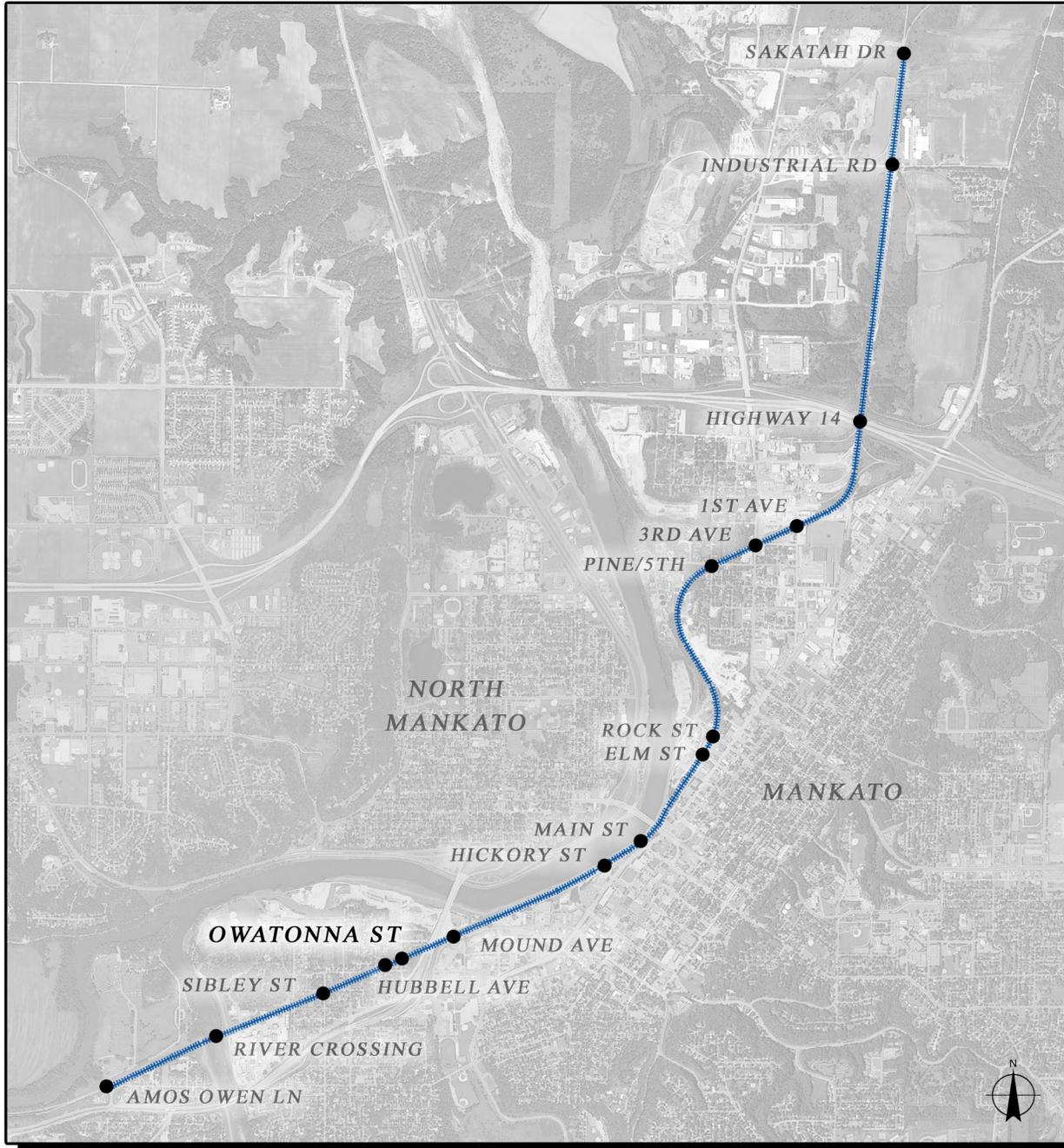
LANDSCAPE BUFFER

SOUND ABATEMENT WALL

HUBBELL AVE COMPONENTS

- Crossing closure
- Street Realignments
- Sound abatement walls with adjacent landscaping





**RAILROAD CORRIDOR
MITIGATION PLAN**

- Amos Owen Ln
- River Crossing
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OWATONNA ST

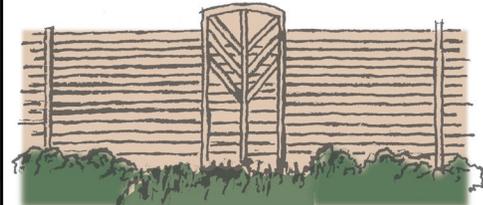
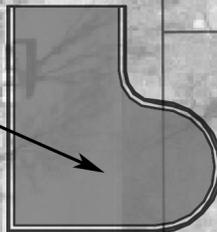
A gated crossing and security fence at this location would allow the crossing to remain in place gated off. Turnarounds would be provided north and south of the gated crossing. Crossing here would be by permit only, or under very special emergency vehicle access conditions such as activities related to flood control, water treatment plant equipment, or access for equipment not able to utilize the standard bridge clearance openings at Mound Avenue and Woodland. Sound abatement wall and landscaping consistent with the residential neighborhood would be provided in addition to the security fence.

ESTIMATED COST:
\$404,000

VEHICLE TURN-AROUND

SECURITY FENCE/ EMERGENCY
VEHICLE ACCESS

LANDSCAPE BUFFER



SOUND
ABATEMENT WALL

OWATONNA ST
COMPONENTS

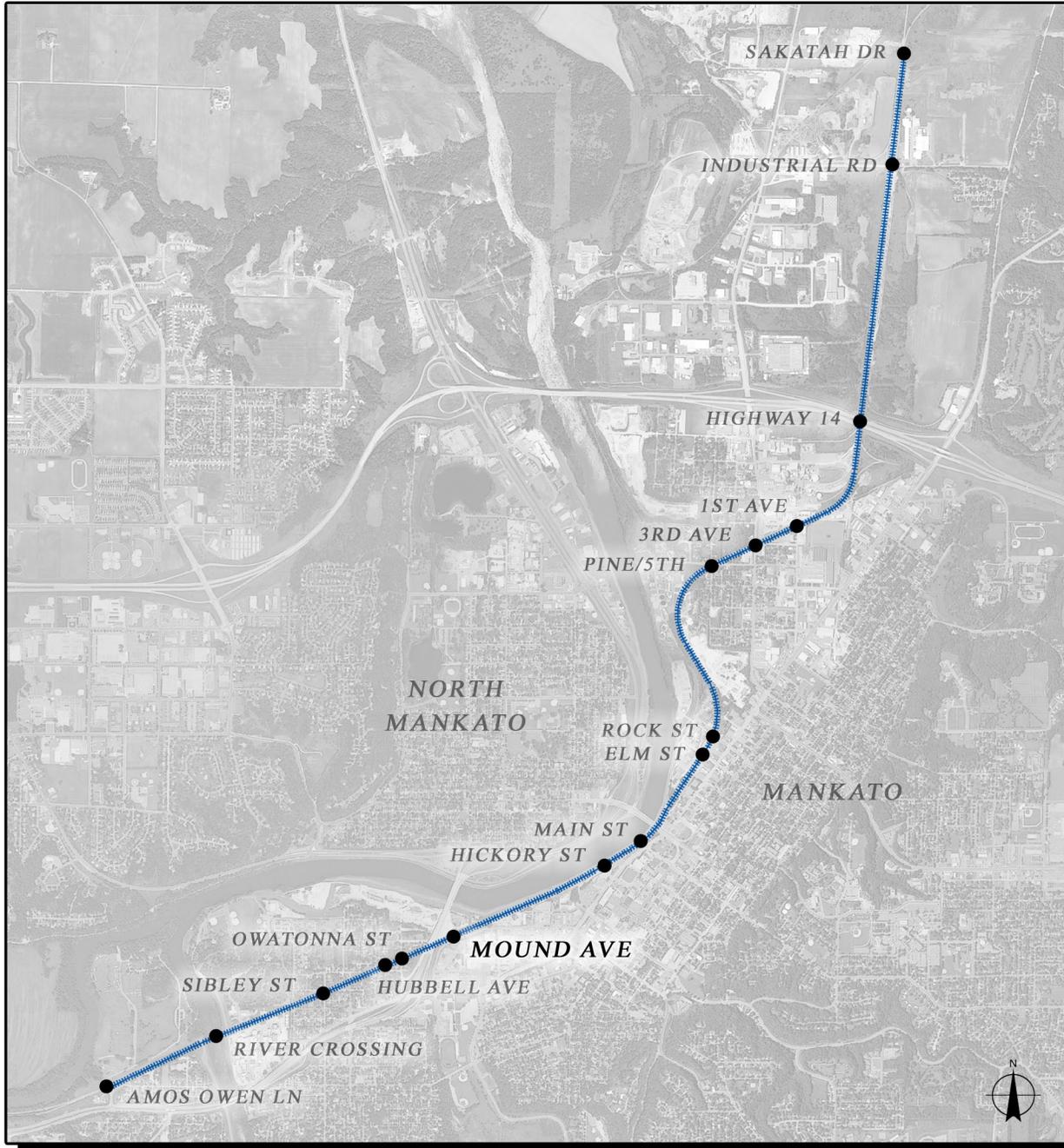
- Crossing closure
- Vehicle turn arounds
- Sound abatement walls with adjacent landscaping
- Emergency vehicle access



WEST 2ND ST

OWATONNA ST





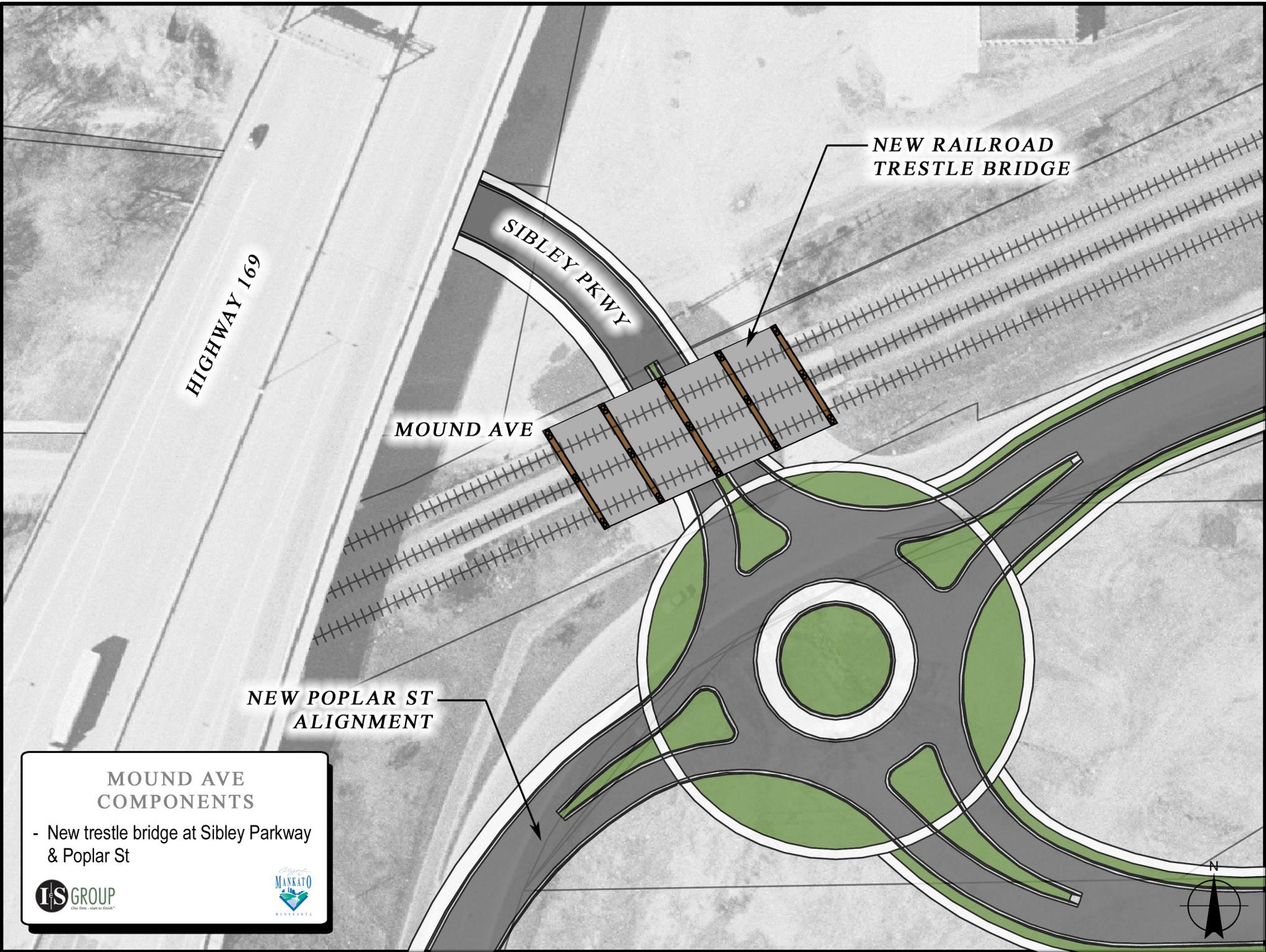
**RAILROAD CORRIDOR
MITIGATION PLAN**

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MOUND AVE

This existing railroad overpass structure at Mound Avenue is substandard. It would be replaced with a new bridge capable of accommodating the new Sibley Parkway while providing Minnesota State Aid approved horizontal and vertical clearances. The City has acquired the necessary right-of-way, and is making plans to accommodate a new 3-track rail overpass at the Sibley Parkway location. A roundabout intersection at Poplar Street and a storm water lift station are required with this new grade separation project.

ESTIMATED COST:
\$5,568,000.00



HIGHWAY 169

SIBLEY PKWY

NEW RAILROAD
TRESTLE BRIDGE

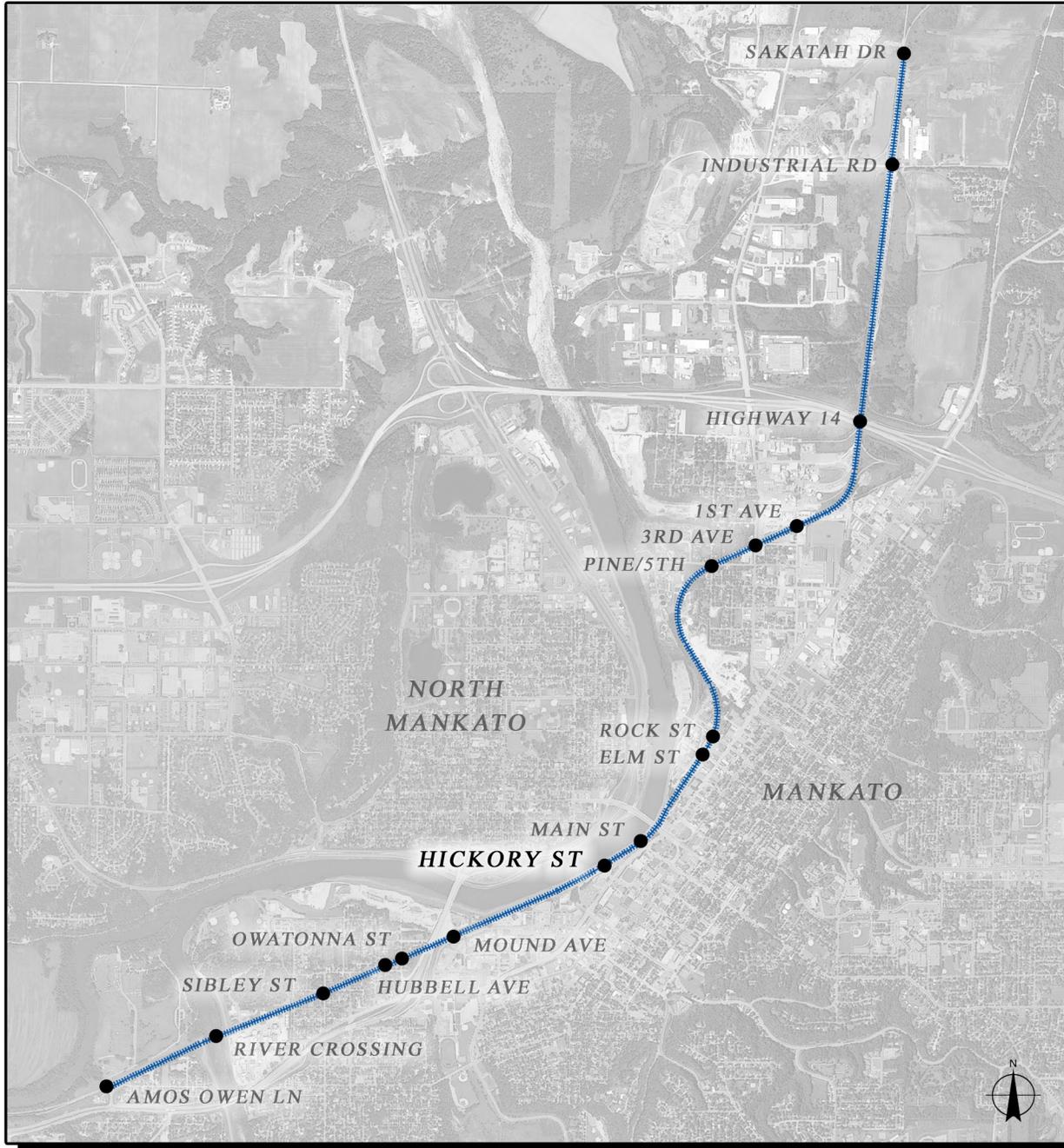
MOUND AVE

NEW POPLAR ST
ALIGNMENT

**MOUND AVE
COMPONENTS**

- New trestle bridge at Sibley Parkway & Poplar St





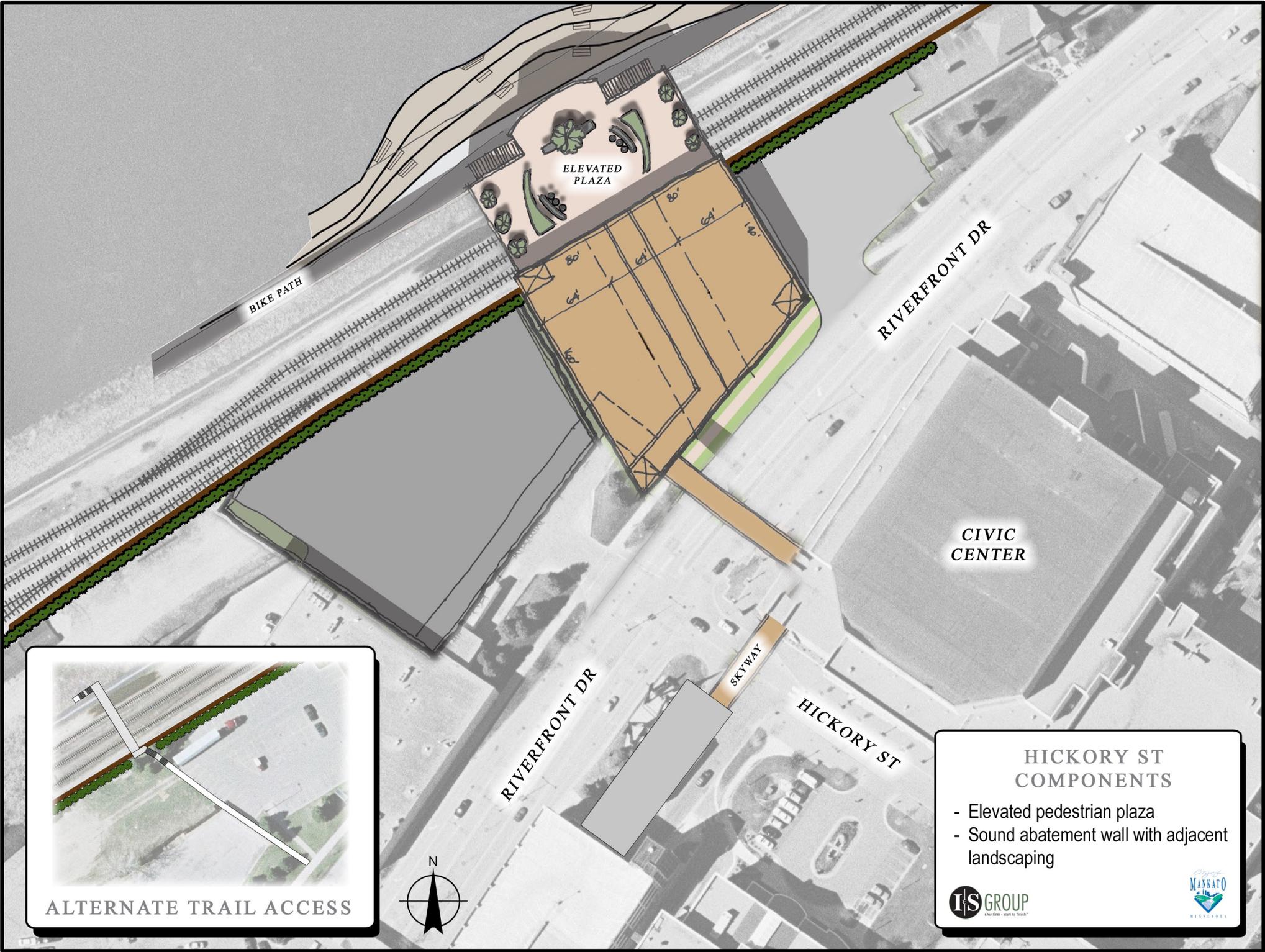
**RAILROAD CORRIDOR
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HICKORY ST

Still in the conceptual stages, river and trail access may be provided in this area with an elevated plaza. By reserving air rights over the joint use trackage and connecting the city's second level skyway system, the downtown mall, the parking garages, and the Civic Center are connected to this public space with views and access to the river and trails. The project would include sound abatement landscaping consistent with public spaces and the central business district. This landscaping would extend from the industrial area near Warren Street to north of Main Street.

ESTIMATED COST:
\$3,282,000



BIKE PATH

ELEVATED PLAZA

RIVERFRONT DR

CIVIC CENTER

RIVERFRONT DR

SKYWAY

HICKORY ST



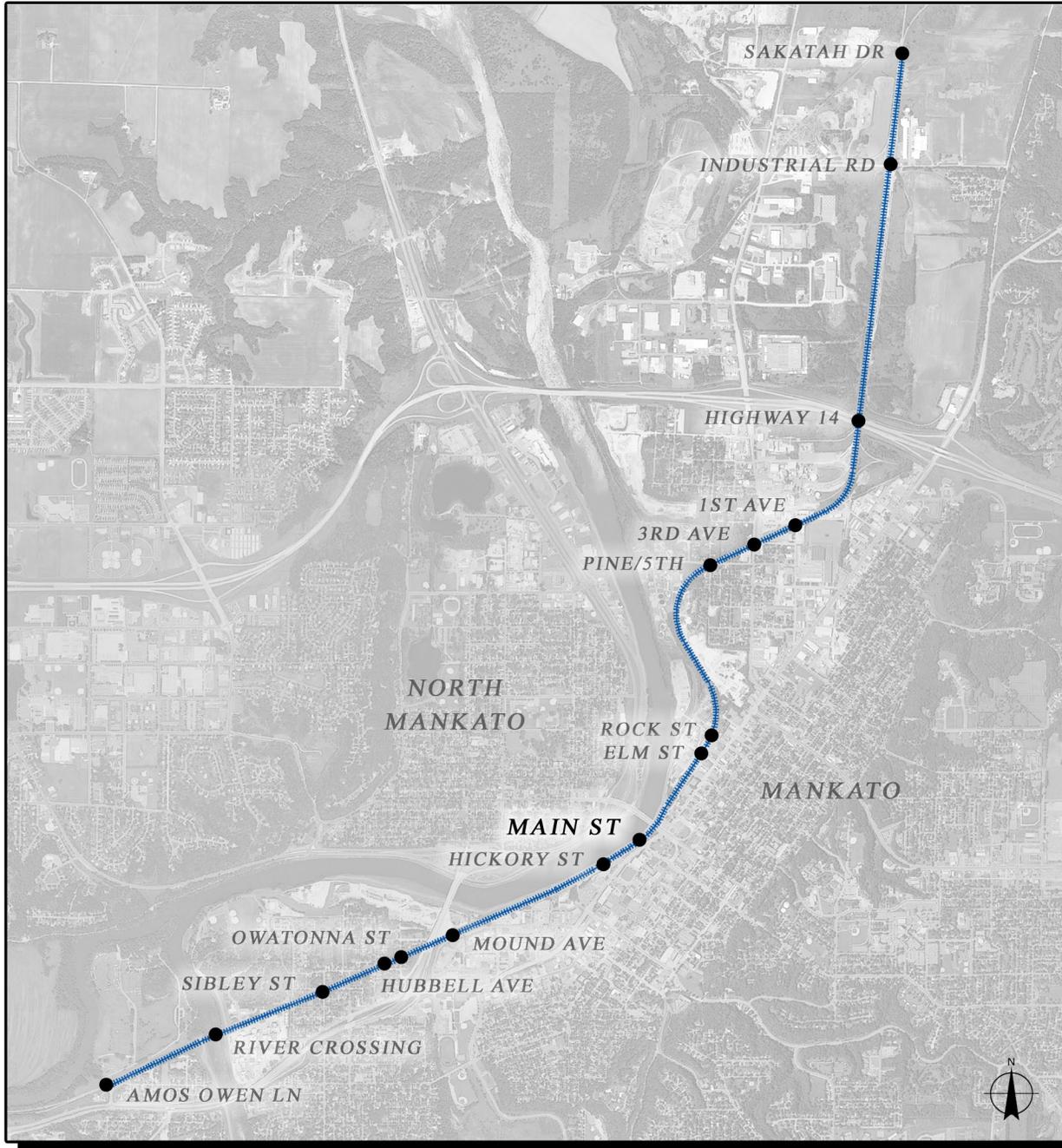
ALTERNATE TRAIL ACCESS



HICKORY ST COMPONENTS

- Elevated pedestrian plaza
- Sound abatement wall with adjacent landscaping





**RAILROAD CORRIDOR
MITIGATION PLAN**

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MAIN ST

The existing at-grade crossing of the tracks at Main Street, while attractive, is unsafe, and would be closed. Should the plaza system not be feasible, an alternative ramp design in the vicinity of the Blue Earth County Library is anticipated. Security fencing, sound abatement and landscaping would complement the historic Union Depot just south of Main Street and continue through the commercial area.

ESTIMATED COST:
\$ 362,000

FLOOD WALL

SECURITY GATES

SOUND ABATEMENT WALL

LANDSCAPE BUFFER

RIVERFRONT DR

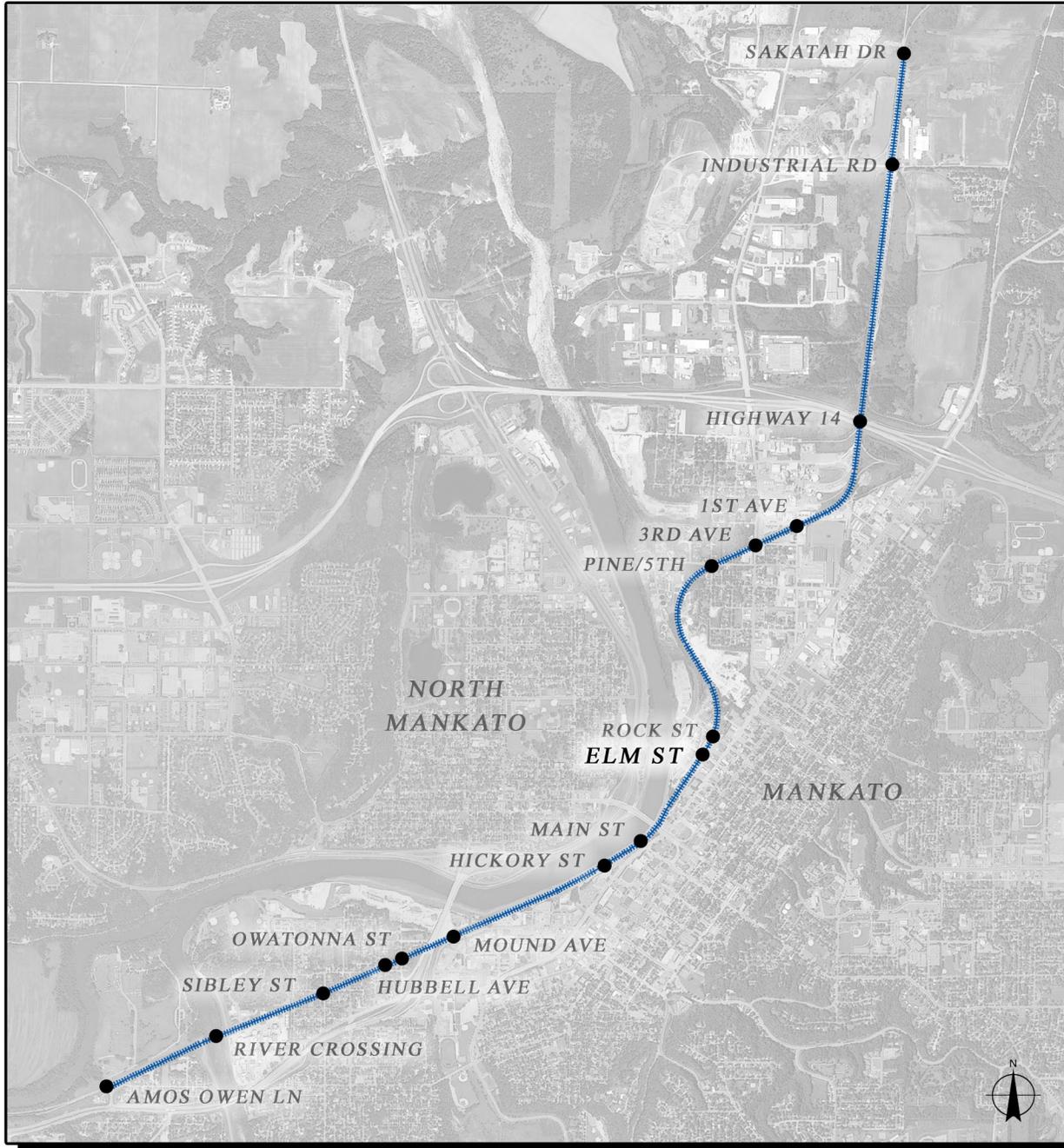
MAIN ST

RIVERFRONT DR

MAIN ST COMPONENTS

- Security gate at floodwall opening
- Sound abatement wall with landscape screening





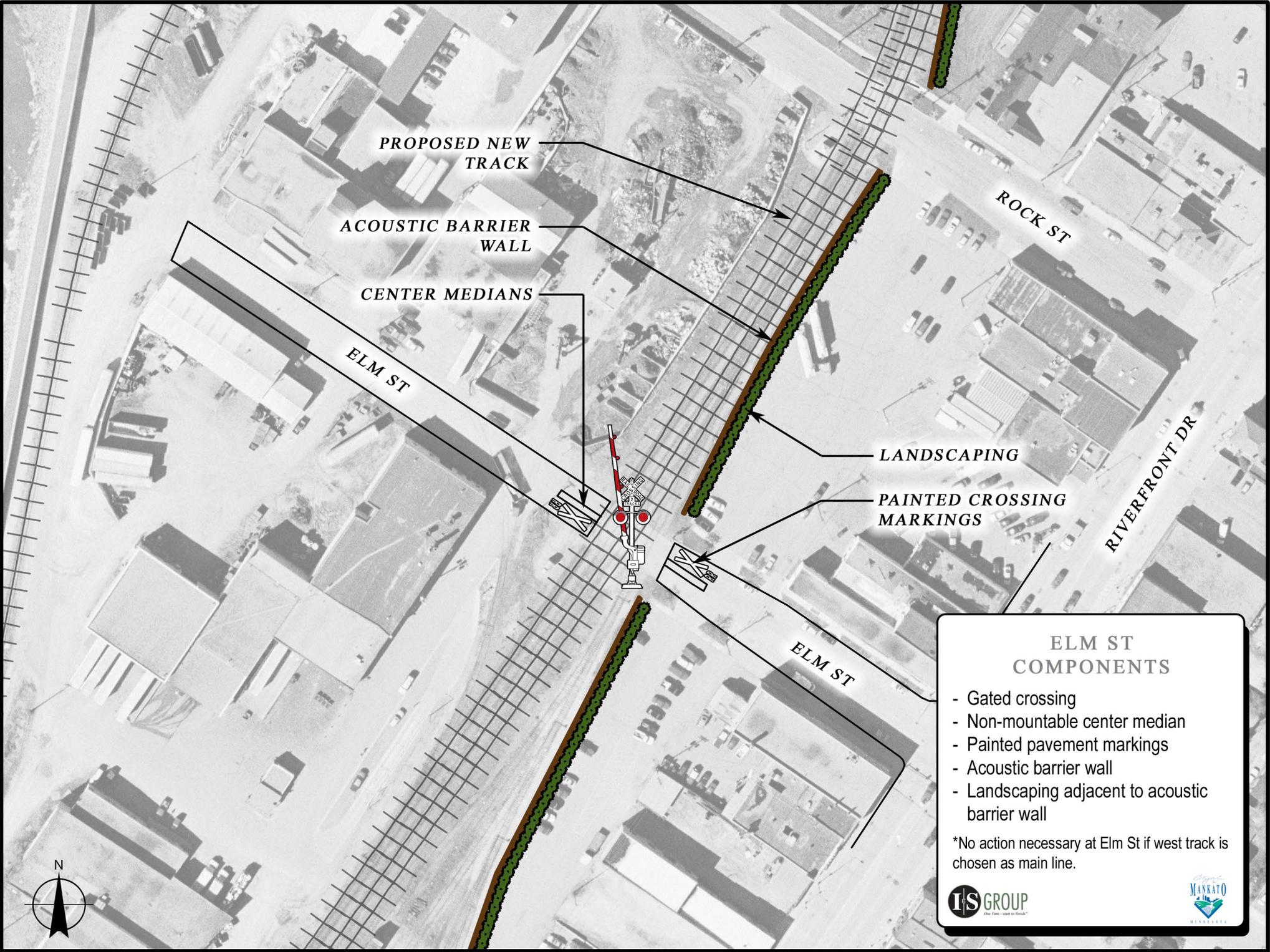
**RAILROAD CORRIDOR
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ELM ST

An at-grade crossing on Elm Street just west of Riverfront Drive provides access to the adjacent industrial area. A grade separation at this location would be prohibitively expensive. Consequently, gated crossings with medians are recommended here to provide a safe crossing with whistle-free operation.

ESTIMATED COST:
\$511,000



PROPOSED NEW TRACK

ACOUSTIC BARRIER WALL

CENTER MEDIANS

ELM ST

ROCK ST

RIVERFRONT DR

LANDSCAPING

PAINTED CROSSING MARKINGS

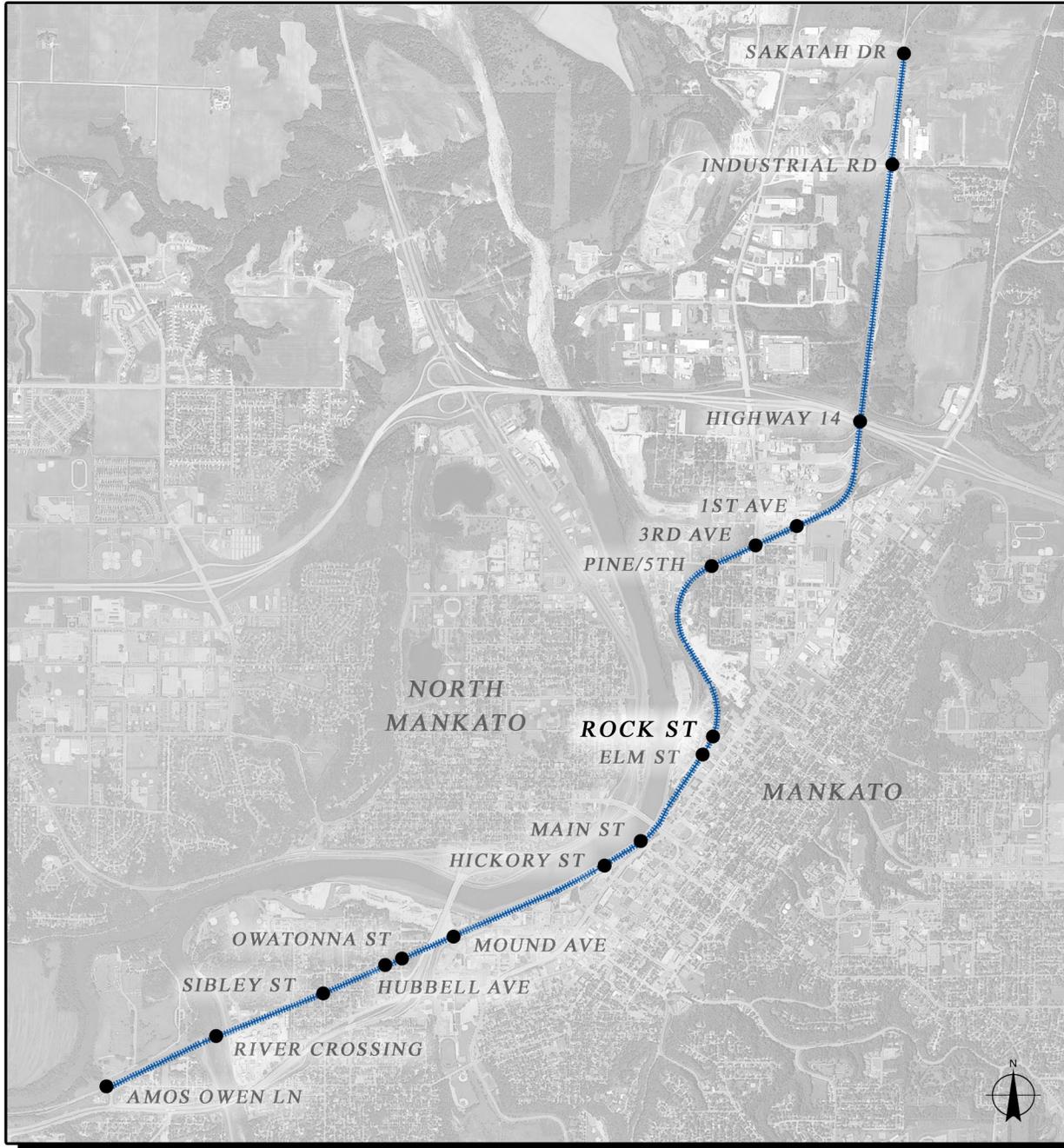
ELM ST

ELM ST COMPONENTS

- Gated crossing
- Non-mountable center median
- Painted pavement markings
- Acoustic barrier wall
- Landscaping adjacent to acoustic barrier wall

*No action necessary at Elm St if west track is chosen as main line.





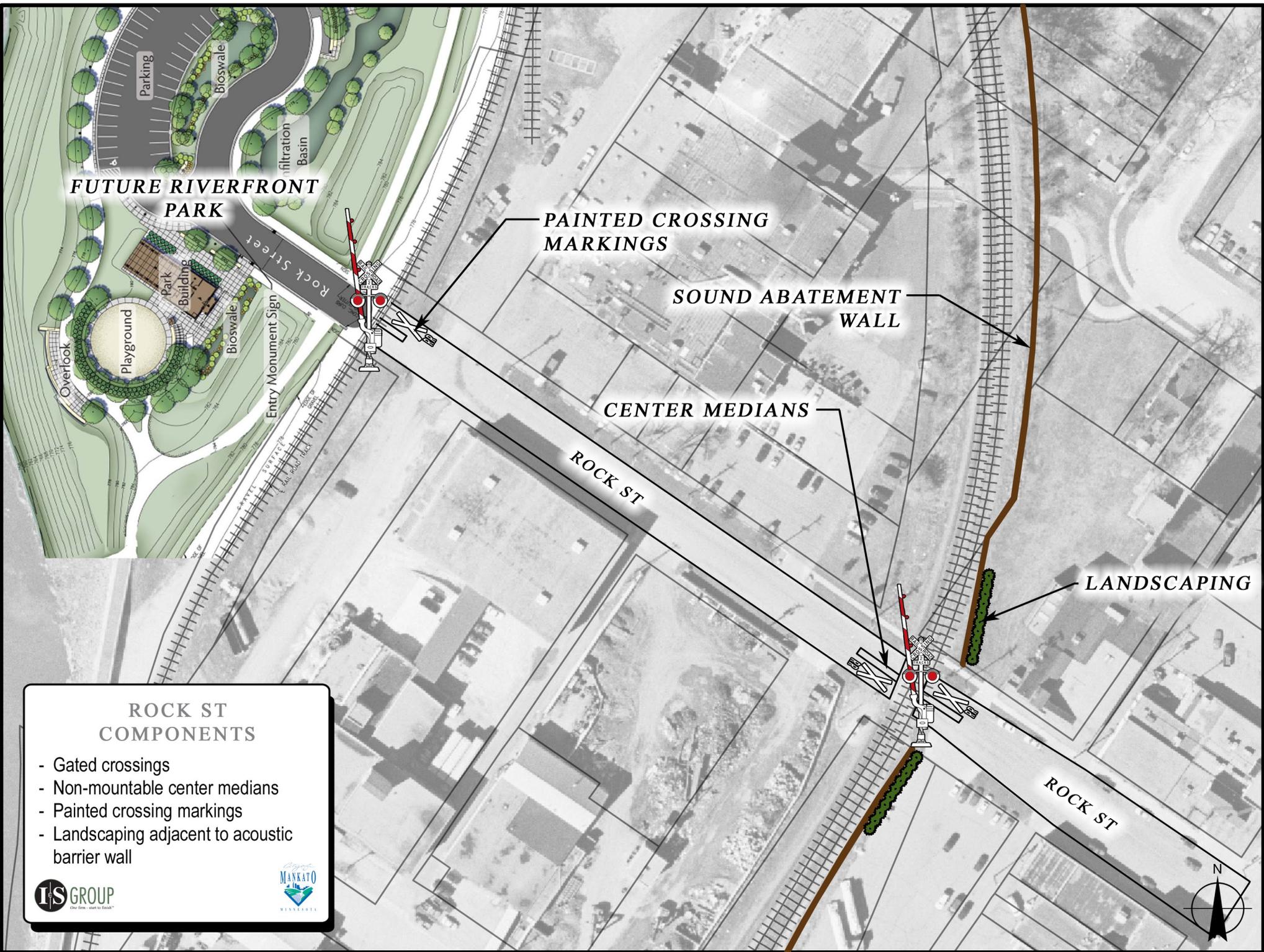
**RAILROAD CORRIDOR
MITIGATION PLAN**

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ROCK ST

There are two at-grade crossings, one over the dual mainline tracks and one over the industry tracks on Rock Street between Riverfront Drive and the river. This section of Rock Street provides access to the adjacent industrial area and Riverfront Park, the city's new regional park on the north end of town. It is not known at this time whether a new mainline track would be constructed adjacent to the present mainline track, or adjacent to the industry track. While a grade separation is desirable at this location, existing grades and industrial facilities would make this prohibitively expensive. Requests to shorten the industry track were submitted but have not been acted on since the route has mainline potential. Consequently, gated crossings with medians are recommended at both at-grade crossings on Rock Street.

ESTIMATED COST:
\$758,000



FUTURE RIVERFRONT PARK

PAINTED CROSSING MARKINGS

SOUND ABATEMENT WALL

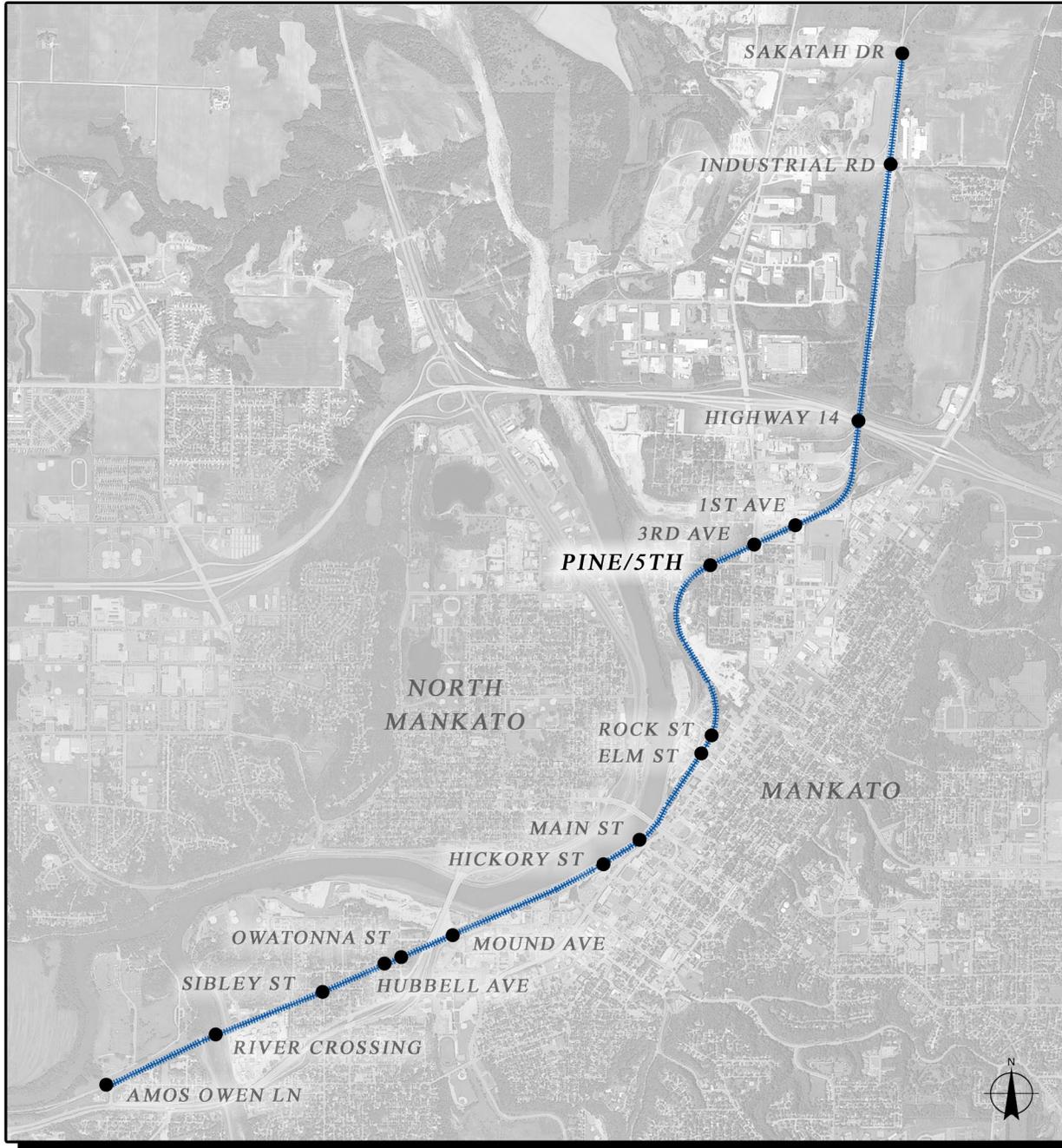
CENTER MEDIANS

LANDSCAPING

ROCK ST COMPONENTS

- Gated crossings
- Non-mountable center medians
- Painted crossing markings
- Landscaping adjacent to acoustic barrier wall





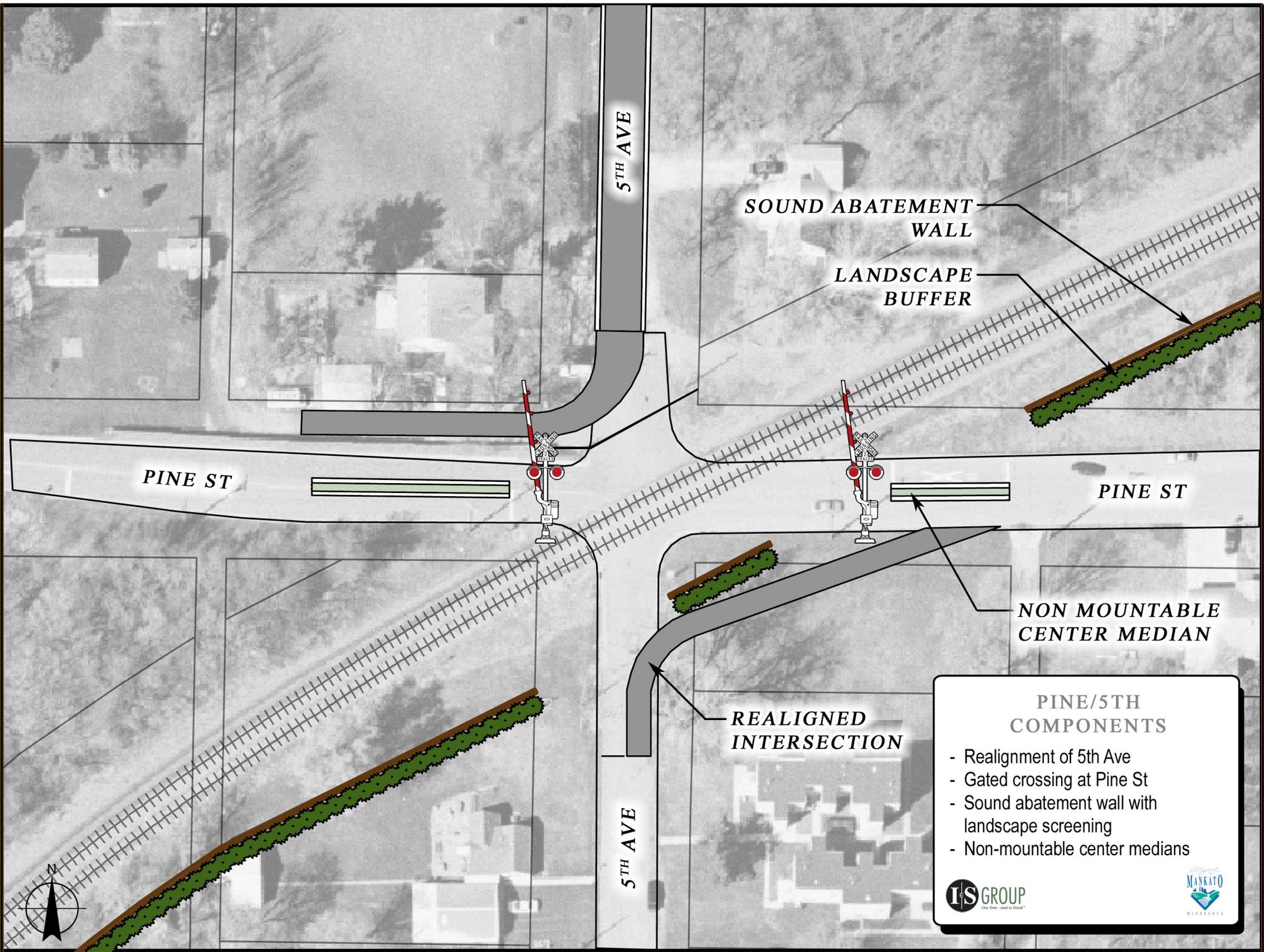
RAILROAD CORRIDOR MITIGATION PLAN

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- Sakatah Dr

PINE/5TH

A federally financed project is scheduled to provide a safe whistle-free crossing of this diagonal intersection. The gated crossing with medians, sound abatement wall and landscaping is scheduled for funding in 2011. The 5th Avenue crossing of the tracks is eliminated, with traffic diverted east and west onto Pine Street. The improvements provide a safe, whistle-free crossing, and make the area attractive for the abutting residential properties as well.

ESTIMATED COST:
\$598,000



SOUND ABATEMENT WALL

LANDSCAPE BUFFER

PINE ST

PINE ST

5TH AVE

5TH AVE

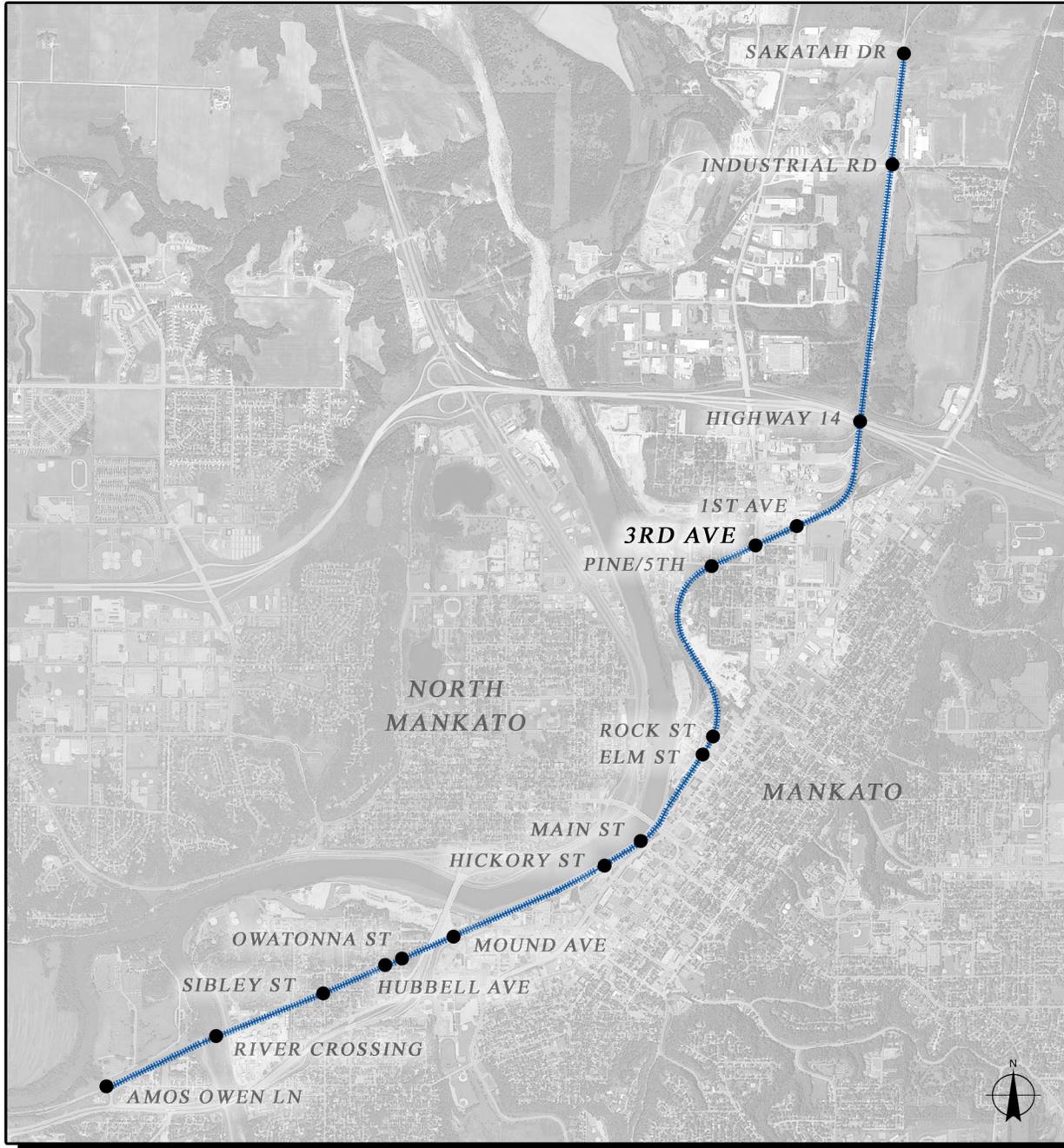
NON MOUNTABLE CENTER MEDIAN

REALIGNED INTERSECTION

PINE/5TH COMPONENTS

- Realignment of 5th Ave
- Gated crossing at Pine St
- Sound abatement wall with landscape screening
- Non-mountable center medians





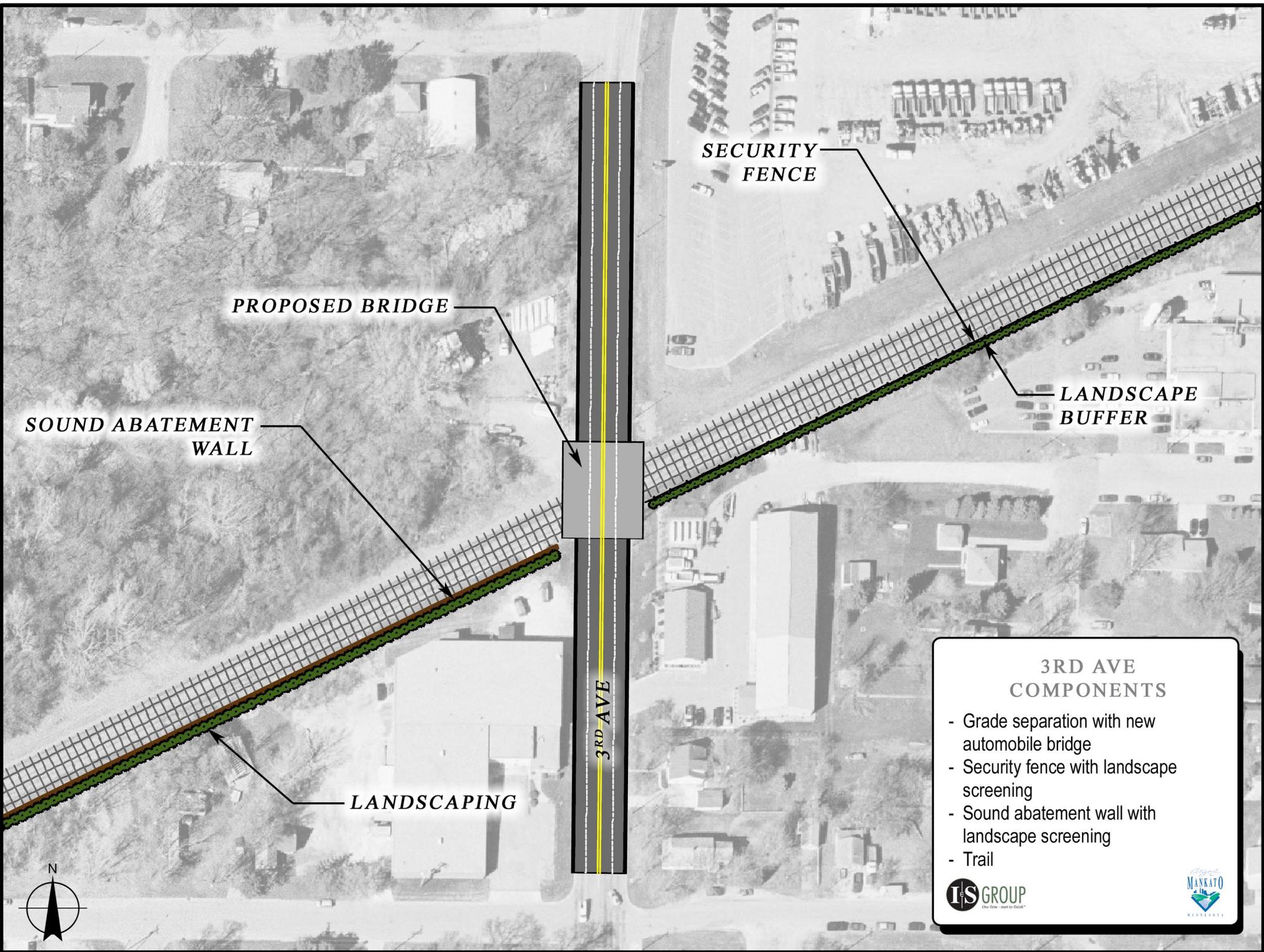
**RAILROAD CORRIDOR
MITIGATION PLAN**

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3RD AVE

It is anticipated that train and car traffic numbers will increase to a level where eventually a grade separation project is justified. A short, but high, overpass of 3rd Avenue across the two mainline joint use tracks would necessitate the construction of bridge approaches from Pine Street to Brook Street, one block either side of the existing rail crossing. Rail clearance requires the fill to be constructed within the narrow right-of-way to minimize the impact on abutting properties. Sound abatement wall in the residential area and a security fence are appropriate applications for this area.

ESTIMATED COST:
\$1,699,000



SECURITY FENCE

PROPOSED BRIDGE

SOUND ABATEMENT WALL

LANDSCAPE BUFFER

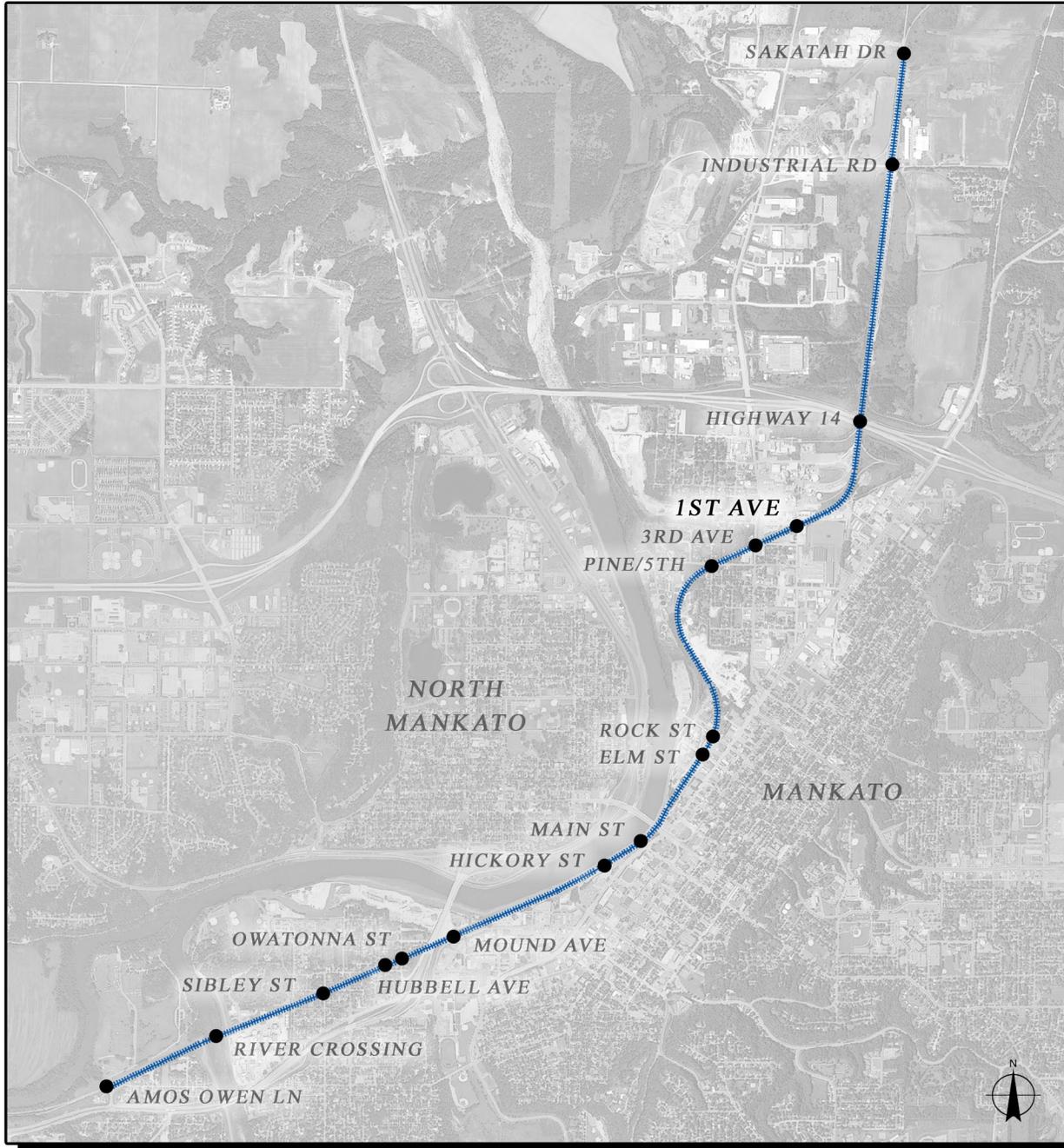
3RD AVE

LANDSCAPING

3RD AVE COMPONENTS

- Grade separation with new automobile bridge
- Security fence with landscape screening
- Sound abatement wall with landscape screening
- Trail





RAILROAD CORRIDOR MITIGATION PLAN

- Amos Owen Ln
- River Crossing
- Sibley St
- Hubbell Ave
- Owatonna St
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- Elm St
- Rock St
- Pine/5th
- 3rd Ave
- 1st Ave
- Highway 14
- Industrial Rd
- Sakatah Dr

1ST AVE

This crossing will be closed when the vehicle volume and the safety conditions meet the standards. Security fencing will be constructed along the south side of the tracks to separate the residential area from the commercial/industrial area.

ESTIMATED COST:
\$157,000



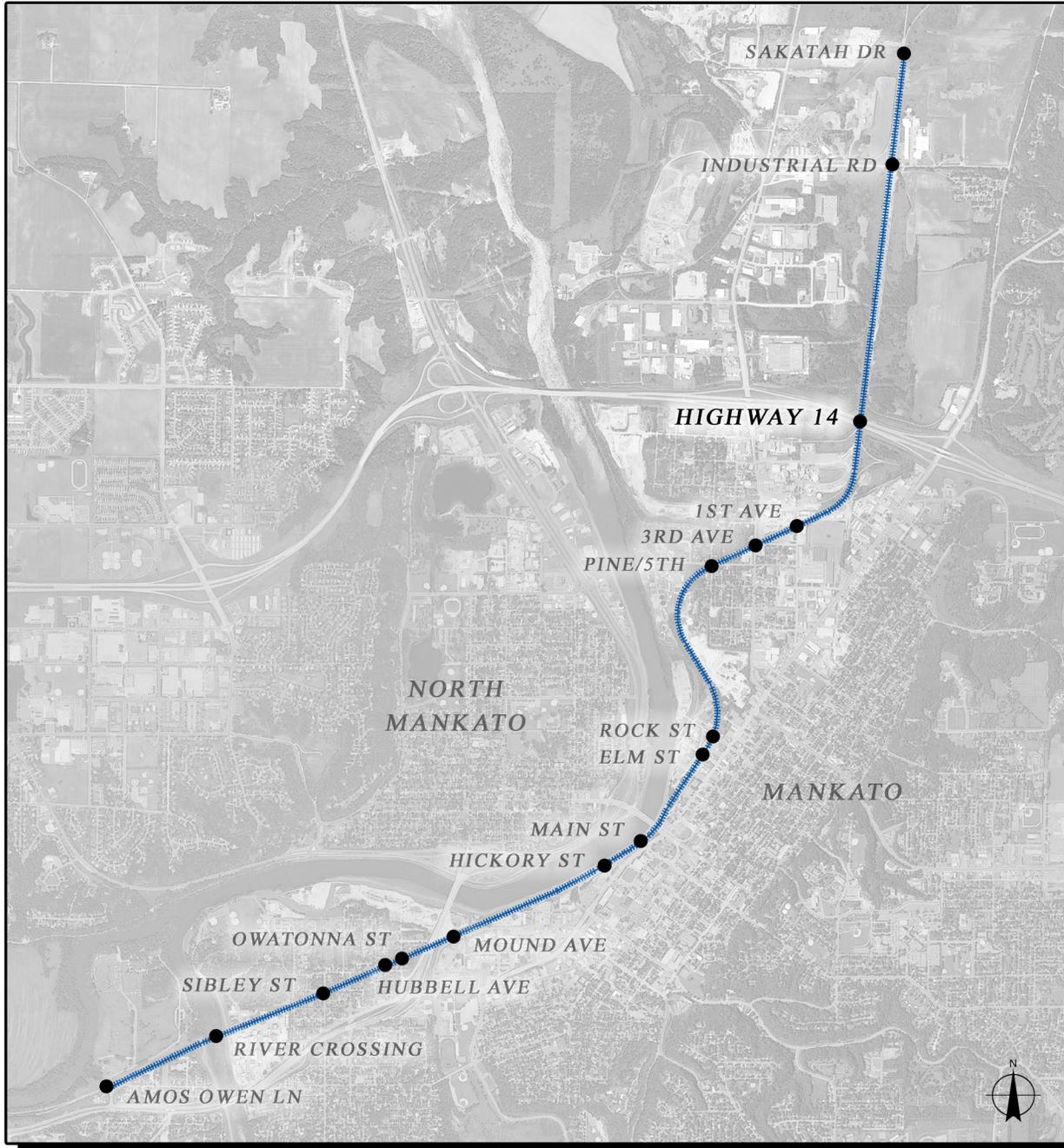
1ST AVE

SECURITY FENCE

1ST AVE COMPONENTS

- Crossing closure
- Security fence





RAILROAD CORRIDOR MITIGATION PLAN

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HIGHWAY 14

Construction of the new mainline under TH 14 will require the extension of three highway bridges, the east-bound lane, the west-bound lane, and the bicycle/pedestrian bridge just north of the highway in the trunk highway right-of-way.

ESTIMATED COST:
\$1,723,000

TRUNK HIGHWAY 14

ADDITIONAL SPANS TO
HIGHWAY BRIDGE

TRUNK HIGHWAY 14



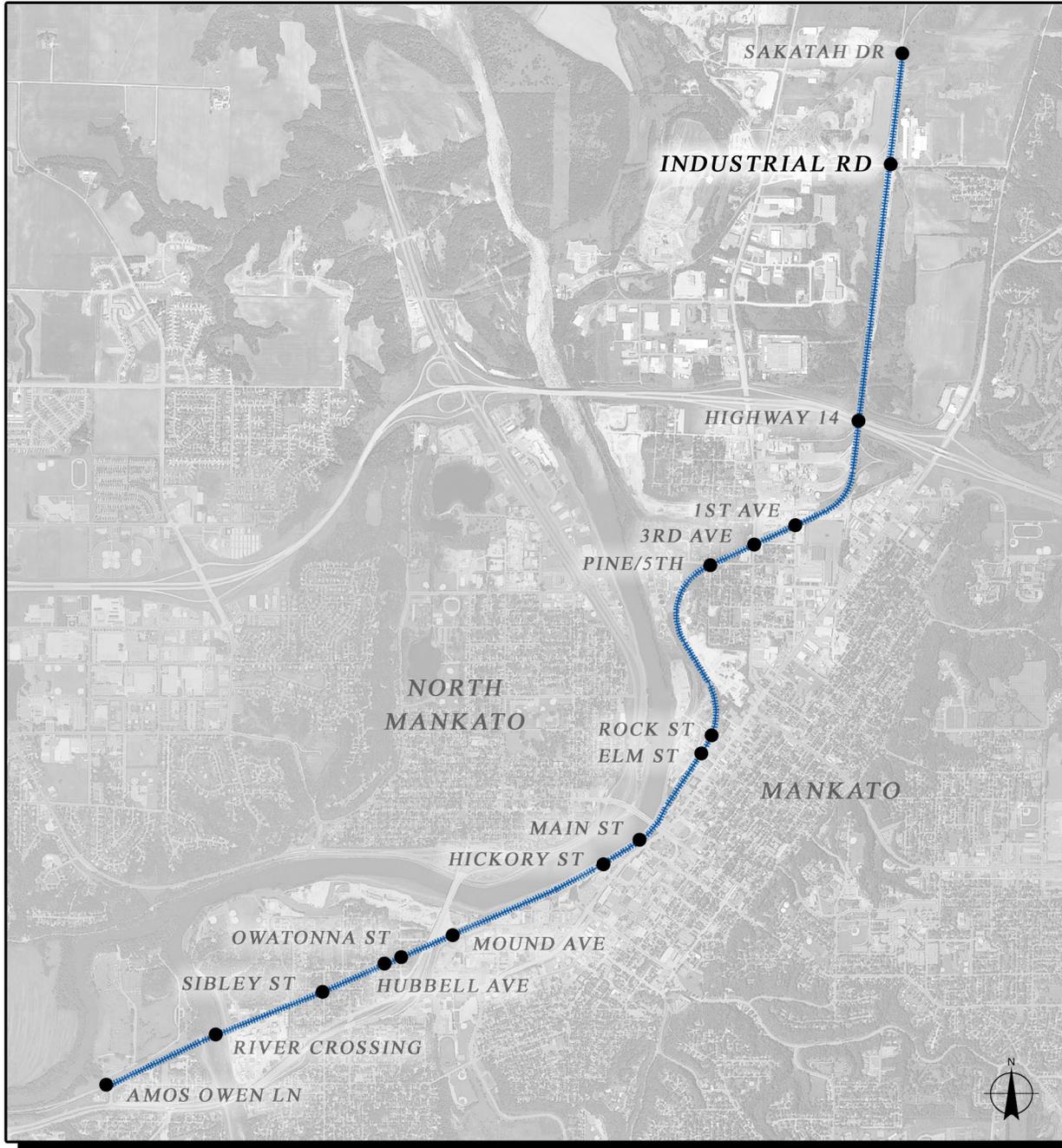
**HIGHWAY 14
COMPONENTS**

- Additional bridge spans to accomodate expanded rail line



TS GROUP
Our Time... spent to Finish™

CITY OF
MANKATO
MINNESOTA



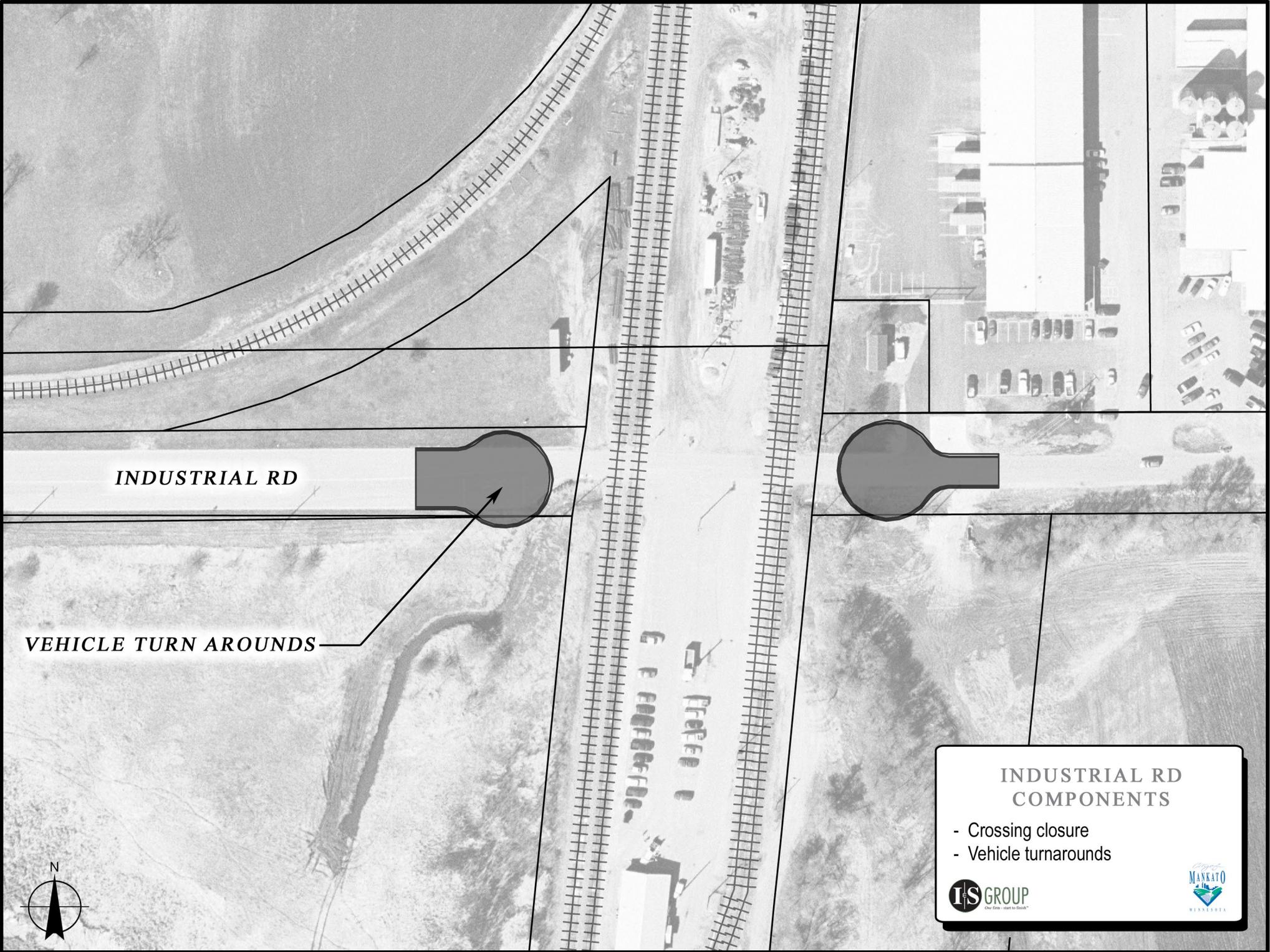
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INDUSTRIAL RD

Efforts to provide a whistle free corridor will eventually require the closing of Industrial Road on each side of the tracks. Turnarounds are provided east and west of the tracks, while at the same time allowing access for switchyard employees. Ultimately, a grade separation project may be necessary and more feasible further north.

ESTIMATED COST:
\$81,000



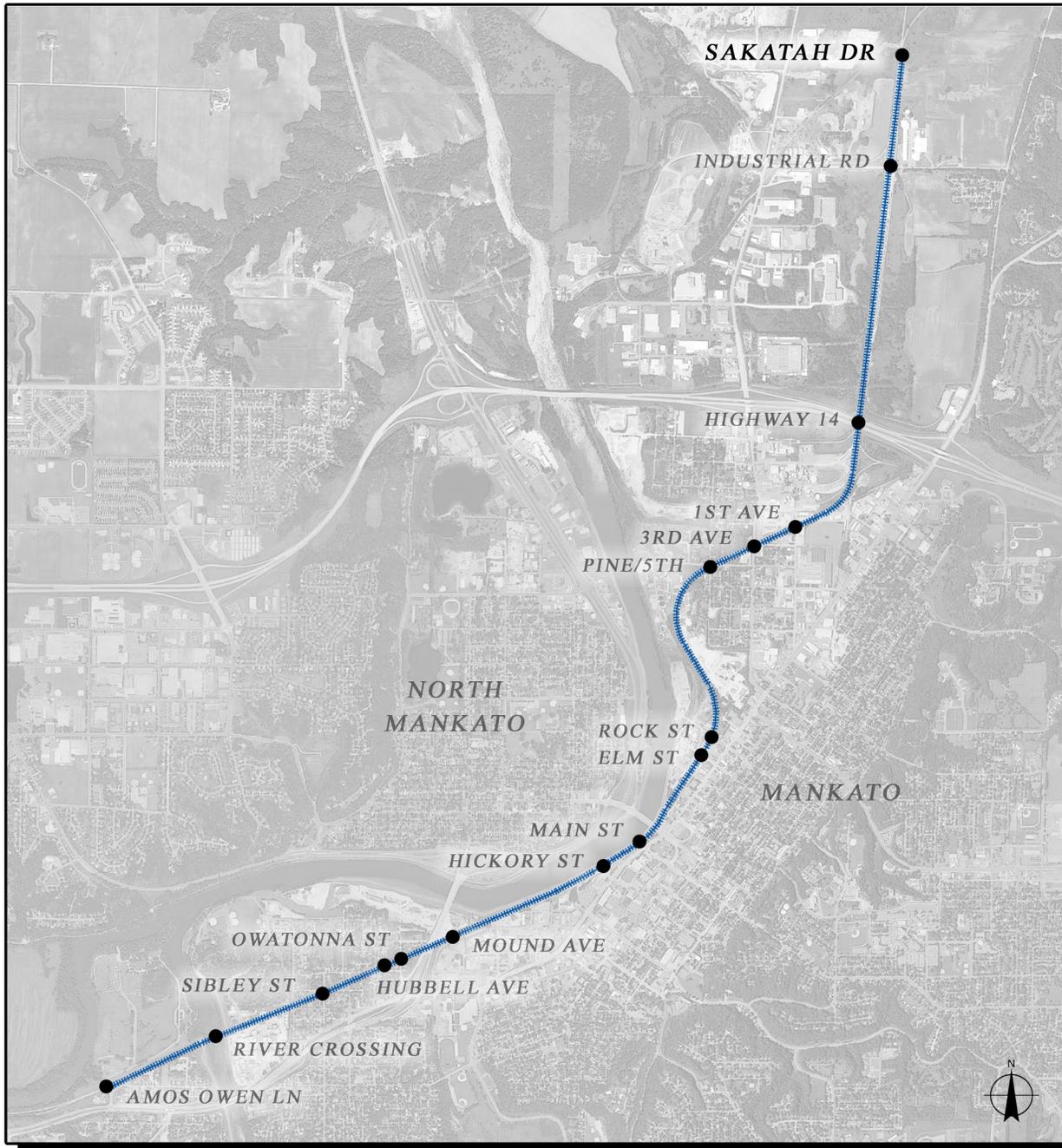
INDUSTRIAL RD

VEHICLE TURN AROUNDS

**INDUSTRIAL RD
COMPONENTS**

- Crossing closure
- Vehicle turnarounds





**RAILROAD CORRIDOR
MITIGATION PLAN**

- Amos Owen Ln
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SAKATAH DR

The ultimate plan involves a grade separation at the junction of the UP and DM&E/CP trackage just north of the city limits. It is anticipated that a significant bridge structure would cross the tracks at the location shown. However make-up trains would continue to be on parallel sidings to the UP line at this location. The project would include extension of Sakatah Drive and Wayside Road, which would extend from existing Lime Valley Road westerly to Third Avenue, on newly acquired right-of-way.

ESTIMATED COST:
\$4,989,000

PROPOSED BRIDGE

SAKATAH DR EXTENSION

**SAKATAH DR
COMPONENTS**

- Grade separation with new automobile bridge
- Sakatah Dr extension



Location	Noise Attenuation Wall (\$)	Landscaping (\$)	Security Fence (\$)	Bituminous Surface & Curb (\$)	Gated Crossings (\$)	Bridge (\$)	Other (\$)	Design, Legal, Administrative (\$)	Total (\$)
Amos Owen Lane	--	\$26,625	\$42,600	--	\$480,000	--	--	\$109,900	\$660,000
Blue Earth River Crossing	--	--	--	--	--	\$2,502,500	--	\$500,500	\$3,003,000
Sibley Street	\$598,500	\$35,625	--	--	--	--	\$432,000	\$213,300	\$1,280,000
Hubbell Avenue	\$241,500	\$14,375	--	\$54,824	--	--	--	\$62,200	\$373,000
Owatonna Street	\$308,700	\$18,375	\$1,600	\$19,145	--	--	--	\$69,600	\$418,000
Mound Avenue	--	--	--	--	--	--	\$4,800,000	\$960,000	\$5,760,000
Hickory Street	\$282,030	\$16,788	--	--	--	\$2,530,000	--	\$565,800	\$3,395,000
Main Street	\$311,430	--	--	--	--	--	--	\$62,300	\$374,000
Elm Street	\$191,310	\$6,250	--	\$2,760	\$240,000	--	--	\$88,100	\$529,000
Rock Street	\$160,650	\$9,563	--	\$2,580	\$480,000	--	--	\$130,600	\$784,000
Pine Street/5th Avenue	\$193,200	\$11,500	--	\$50,400	\$240,000	--	\$20,000	\$103,100	\$619,000
3rd Avenue	\$70,140	\$10,700	\$10,440	\$300,107	--	\$1,072,500	--	\$292,800	\$1,757,000
1st Avenue	--	\$6,875	\$26,400	\$101,889	--	--	--	\$27,100	\$163,000
Highway 14	--	--	--	--	--	\$1,485,000	--	\$297,000	\$1,782,000
Industrial Road	--	--	--	\$69,733	--	--	--	\$14,000	\$84,000
Sakatah Drive	--	--	--	\$1,220,222	--	\$3,080,000	--	\$860,100	\$5,161,000

Estimated Total of All Projects \$26,142,000

**RAILROAD CORRIDOR
MITIGATION PLAN**

- Amos Owen Ln
- River Crossing
- Sibley St
- Hubbell Ave
- Owatonna St
- Mound Ave
- Hickory St
- Main St
- Elm St
- Rock St
- Pine/5th
- 3rd Ave
- 1st Ave
- Highway 14
- Industrial Rd
- Sakatah Dr