THE ARTERY STREETSCAPE MASTERPLAN

CITY OF HOPKINS, MN

THE ARTERY

Submittted to

CITY OF HOPKINS, MN

September 2015

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Acknowledgements

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Public participants who provided feedback to help define the final recommendations for this project.

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Table of Contents

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Executive Summary

Downtown Hopkins is a vibrant and evolving city-center rich in historic character. For a long time, the city has had a desire to make this "hidden gem" more visible from Excelsior Boulevard and other major roadways. With the expansion of the Southwest Light Rail Transit (LRT) line, there exists enormous potential for growth, redevelopment, and the ability to make a stronger connection to downtown for residents and visitors. The future Downtown Hopkins station will be located at 8th Avenue and Excelsior Boulevard, just two blocks from Hopkins Mainstreet. The vision for 8th Avenue is to create a vibrant, interactive and pedestrian-seductive, multimodal connection into downtown Hopkins that announces to all those passing by on Excelsior Boulevard and the future LRT that this is a special place, inviting them to come and explore. This unique connection has been named the Artery.

The Artery

The City's mission is to Inspire, Educate, Involve, and Communicate. The 8th Avenue Artery will become a corridor that is imbued with this mission by creating places that people can experience each of these ideals. It is a place that will be sensitive to the history of Hopkins and also provides a progressive multimodal connection opportunity to the Downtown Hopkins LRT station. The design for the Artery enhances the experience for pedestrians and cyclists by creating bike and pedestrian focused infrastructure while allowing for efficient vehicular circulation. The Artery will be a vibrant public space that can accommodate events and activities at multiple scales that encourage social interaction, gatherings, experience and creation of art, while enjoying this active public realm. Proposed improvements for the Artery include:

- Two-way cycle track connecting the Lake Minnetonka Regional Trail with the Cedar Lake Regional Trail/ Minnesota River Bluffs Tail
- One-way vehicular traffic from 1st Street to Mainstreet
- Art installations from local & regional artists
- Places that invite pop-up art performances
- An iconic gateway feature
- Interactive "art rooms"
- Stormwater Best Management Practices (BMPs), including bio-filtration opportunities
- Connection to the Hopkins Downtown LRT Station
- Decorative street closure gates for community events
- The Artery Plaza, a community gathering space
- Energy efficient and interactive lighting for both pedestrian and vehicular use
- Informational kiosks

1.2

Streetscape Improvements

A key component to the Artery is creating a safe and accessible pedestrian environment that is inviting for residents and visitors. Elements of the streetscape will create a consistent theme and evoke a specific character throughout the Artery. Specific improvements with a consistent thematic presence for sense of place include:

- Decorative concrete paving and unit pavers within the sidewalks
- ADA compliant pedestrian ramps
- Decorative crosswalks at intersections
- New street paving with minimal use of curb and gutter
- Differentiation of paving between sidewalk and cycle track
- Decorative lighting armatures unique to the Artery and history of Hopkins
- A family of site furnishings including: planter pots, bike racks, benches, litter/recycling receptacles, and bollards
- Efficient overhead lighting, as well as interactive art/sculpture lighting
- Seasonal planting design consisting of low maintenance, regional specific plant species
- Food truck or food cart opportunity areas

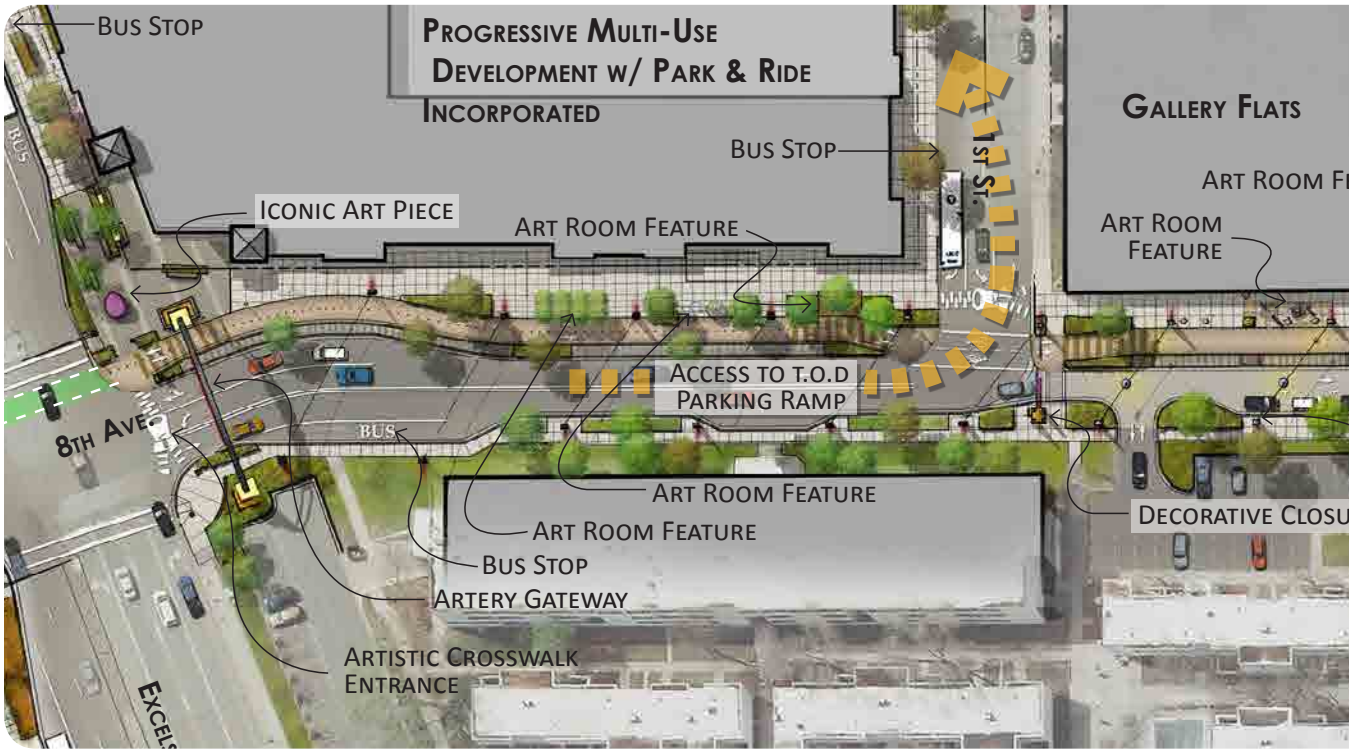

Figure 1.1 - The Artery Overall Plan

Construction of the Artery is expected to start in the spring of 2017, contingent upon release of available funding & coordination with adjacent private redevelopment. This will likely be constructed in segments eliminating the need to fully close the corridor in an effort to respect the needs of local residents, businesses and other redevelopment projects slated for the Artery corridor.

Figures 1.1 & 1.2 provide an overview of proposed concepts for specific program elements that are included in the Artery Master Plan. Each piece of the design is part of the overall vision and will play a substantial role in the place-making of the Artery.

Figure 1.2 - The Artery Overall Plan

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Background & Project Goals

Project Location

The proposed Artery corridor is located along 8th Avenue South from the Lake Minnetonka LRT Regional Trail system, located one-half block north of Mainstreet, to Excelsior Boulevard.

Downtown Hopkins Station

The Downtown Hopkins Station is part of the proposed Southwest LRT, an extension of the Green Line LRT transit system. It is located at the intersection of Excelsior Boulevard and 8th Avenue South, adjacent to the Cedar Lake LRT/Minnesota River Bluffs Trail. This station will serve as the transportation hub for the area, with the Green Line Extension, commuter parking, and Metro Transit bus facilities. The Downtown Hopkins Station also provides opportunity for pedestrians and cyclists to connect to multiple trail systems, adjacent residential neighborhoods, and the commercial district of downtown Hopkins.

Project Goals

The City's mission is to Inspire, Educate, Involve, and Communicate. The 8th Avenue Artery will become a corridor that is imbued with this mission by creating places that people can experience each of these ideals. It is a place that will be sensitive to the history of Hopkins and also provide a progressive multimodal connection opportunity to the Downtown Hopkins LRT station. The vision for 8th Avenue is to create a vibrant, interactive and pedestrian-seductive, multimodal artery into downtown. It will include signature gateway features and art pieces along the corridor to capture the interests of users and serve as a catalyst for special events and activities, large and small. People will be invited to make the space their own with places for pop-up art, interactive features, and gathering places. The design for the Artery enhances the experience for pedestrians and cyclists by creating a bike and pedestrian environment, while also allowing for efficient vehicular circulation. The development of the Artery will also be integrated and designed in collaboration with future private transit oriented redevelopment along the corridor.

Project History

The concept for the Artery emerged early in LRT station area planning. In 2012, the City of Hopkins received a Local Implementation Capacity grant from the Metropolitan Council to begin planning for a pedestrian corridor that would connect the future Downtown Hopkins LRT station with Hopkins' Mainstreet. The project included an Art Summit that was held in February of 2013 with the community to create a vision and process for the integration of public art into the experience of the corridor project. The City hired IBI group to assist with the work, and they produced a report that began to outline the elements that would ultimately be included in the Artery plans, as well as an outline for the implementation and financing for the project.

In the summer of 2013, the City held a Visioning Hopkins Mainstreet event that included several PechaKucha style presentations from a variety of stakeholders. One of them included a vision for the Artery that began to help shape the collective concept for this street project in the minds of the community.

2.2

In the spring of 2014, the City engaged Bolton & Menk to begin preliminary design and engineering on the corridor and to assist with the preparation of documents that would be included in an application for an LCA-TOD grant from the Metropolitan Council to fund the construction of the Artery. The City received $1.325 million of LCA-TOD funds through this process. A community open house was held at LTD Brewing on 8th Avenue and Mainstreet to depute the preliminary design work and elicit feedback from the community.

Turn-out at this event was very high and the general feedback was extremely positive. At this open house people were asked to vote on a preferred visual aesthetic for the corridor among a series of options, and a “post-industrial” look was strongly favored among participants.

Following the open house the City continued to work with Three Rivers Park District on the design of the cycle-track and the park district agreed to fund 50 percent of the cost of the cycle-track, up to $375,000. The City also continued to work with the new owner of the Johnson Building site, a key redevelopment site needed to accommodate the additional right of way that the design of the Artery would require. Based on the timing of the redevelopment of this site, the Artery project is being planned for 2017 construction.

In the summer of 2015, the City held the Artery Experiment, a three day “test run” of the Artery. With the help of grants from Blue Cross Blue Shield and Hennepin County, the city was able to temporarily lay out the Artery along 8th Avenue. A festival was held on a Saturday, which tested out closure of the road and invited the community into the space to try it out and give feedback. Approximately 2,000 people came out to test ride the cycle-track, buy art, listen to music, eat food, hang out, and experience what the corridor might be like once completed. 161 people filled out surveys indicating which elements of the Artery they thought were most important (See Appendix E). Overall feedback was extremely positive.

The City will also inform the final design with a series of focus groups intended to identify how best to create a space that will be able to be embraced and used by the community and artists to inject life into the space.

2.4 Artery Circulation Alternatives & Recommendations

The construction of the Southwest LRT line will have a significant impact on the circulation of residents and visitors in and out of Hopkins. Hopkins will likely see an influx of visitors, and the ability to adapt and cater to this increase in circulation is a critical step in the growth of Hopkins. The timing of the Artery construction and the proposed circulation improvements will help improve the efficient flow of traffic to and from the Downtown Hopkins LRT station and Mainstreet. The following is a description of the analysis of the preliminary street design:

Multiple circulation alternatives were considered to the Artery corridor based on existing and proposed traffic volumes and flows. This included one-way and two-way alternatives on 8th Avenue South, the potential for roundabouts within the system, and the adjustment of intersections at 8th Avenue South and Excelsior Boulevard, and 9th Avenue South and Excelsior Boulevard. The preferred concept was ultimately arrived upon based on the impact level of existing properties, the ability to convey proposed pedestrian and vehicular volumes, and the flexibility to use the Artery for special events. This includes two-way traffic on 8th Avenue South from Excelsior Boulevard to 1st Street South and one-way traffic northbound from 1st Street South to Mainstreet. This allows full access to the signalized intersection at Excelsior Boulevard but also allows more flexible space in the existing corridor north of 1st Street South. (See Appendix C) Second Street at the intersection of 8th Avenue South is also planned to close and a right in, right out with turn lane will be developed off of Excelsior Boulevard to 2nd Street midblock between 6th and 7th Avenue South, providing a direct connection to businesses that front Excelsior and also eliminating a dangerous intersection. (See Appendix B)

In addition to the roadway, a two-lane cycle track is planned for the west side of the corridor that ties into the Downtown Hopkins station and connects the Cedar lake Regional Trail with the Lake Minnetonka LRT Regional Trail to the north. This allows a safe, separated cycle corridor that connects through the heart of Hopkins. Pedestrian sidewalks are planned for both sides of the corridor, with wider sidewalks on the west side of the corridor to allow a safe and efficient corridor for walking traffic. The City intends to require additional right of way in the event of future development on the east side to allow for wider sidewalks at that time.

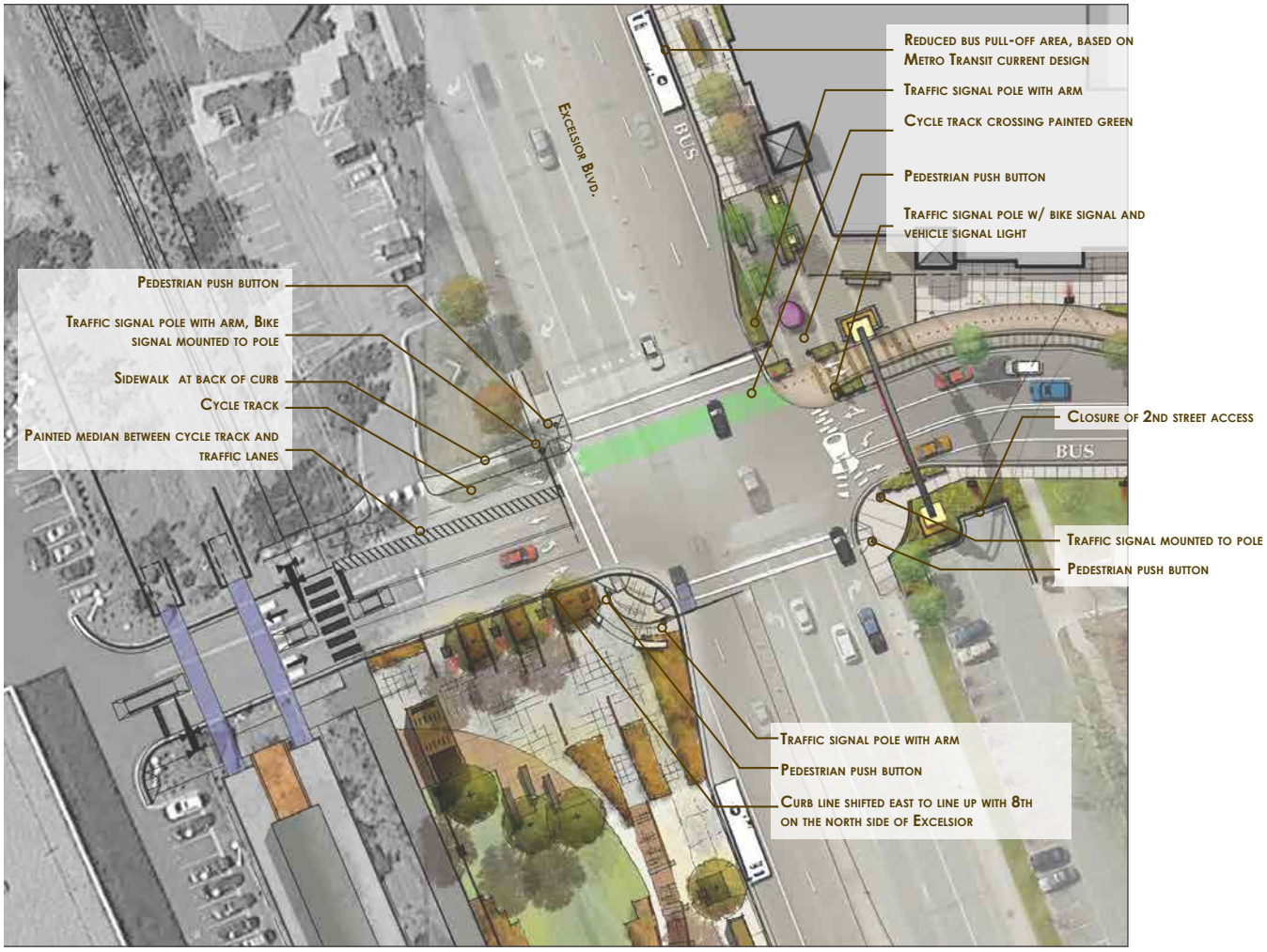

Figure 2 - Excelsior & 8th Avenue Intersection

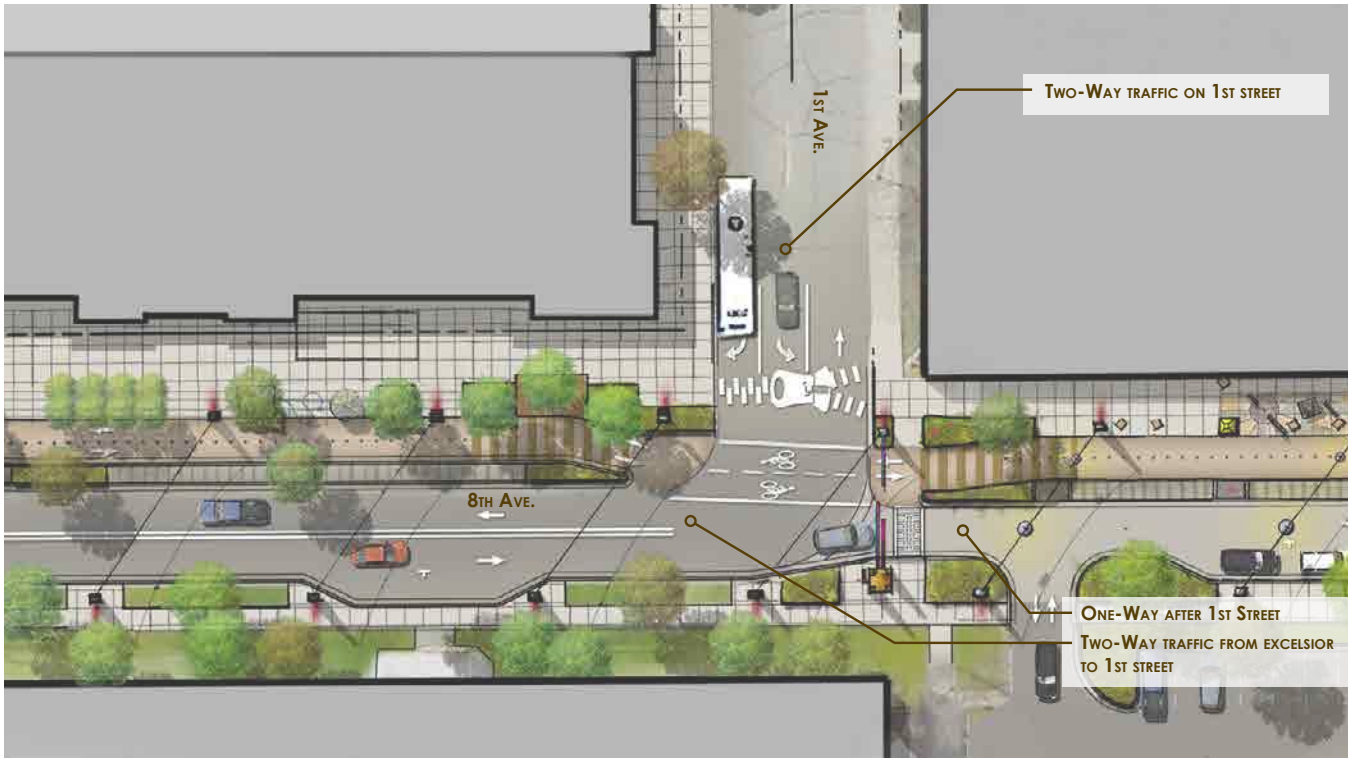

Figure 3 - Two-Way/One-Way Transition

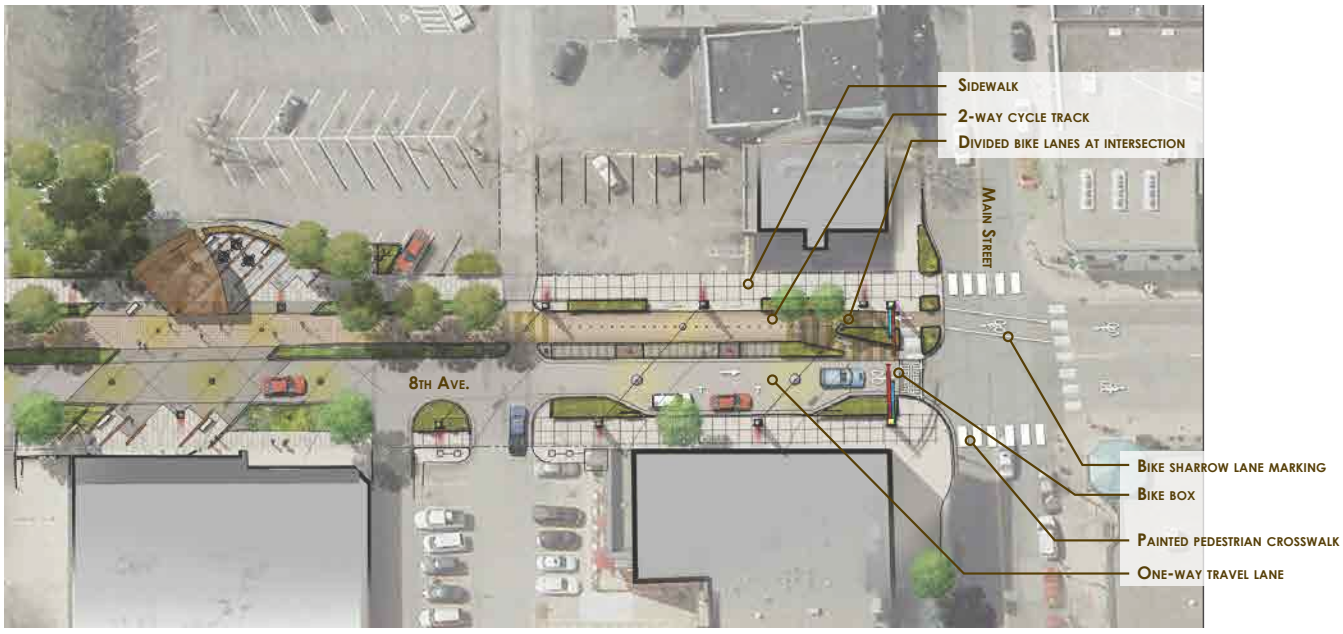

Figure 4 - 8th Avenue & Main Street Intersection

Figure 5 - Right-In/Right-Out On 2nd Street

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Preliminary Design Concepts

Downtown Hopkins Station Plaza

The Downtown Hopkins station is unique along the Southwest LRT corridor in that it will have a large station plaza that ties together multiple Metro transit bus stops, a 190-stall park and ride, and the Downtown Hopkins LRT station. The plaza is highly visible from Excelsior Boulevard and will be the terminus for the Artery corridor. The concept for the plaza at the Downtown Hopkins station incorporates a similar design aesthetic as the Artery and includes similar principals: promoting pedestrian circulation, public art, interaction, decorative paving, and using plant material for its form and function. The goal for the Downtown Hopkins station plaza is to provide a unique pass-through experience for users of the regional trail system and the LRT line, including people transferring from Metro transit buses and residents from nearby neighborhoods. For LRT passengers, the station plaza is the first impression of Hopkins and this arrival experience should be intriguing and reflect the character of the corridor. The station plaza is to be considered as an extension of the Artery with similar materials, form, and details. Final design and construction of the Downtown Hopkins station plaza will be done by the Southwest LRT Project Office.

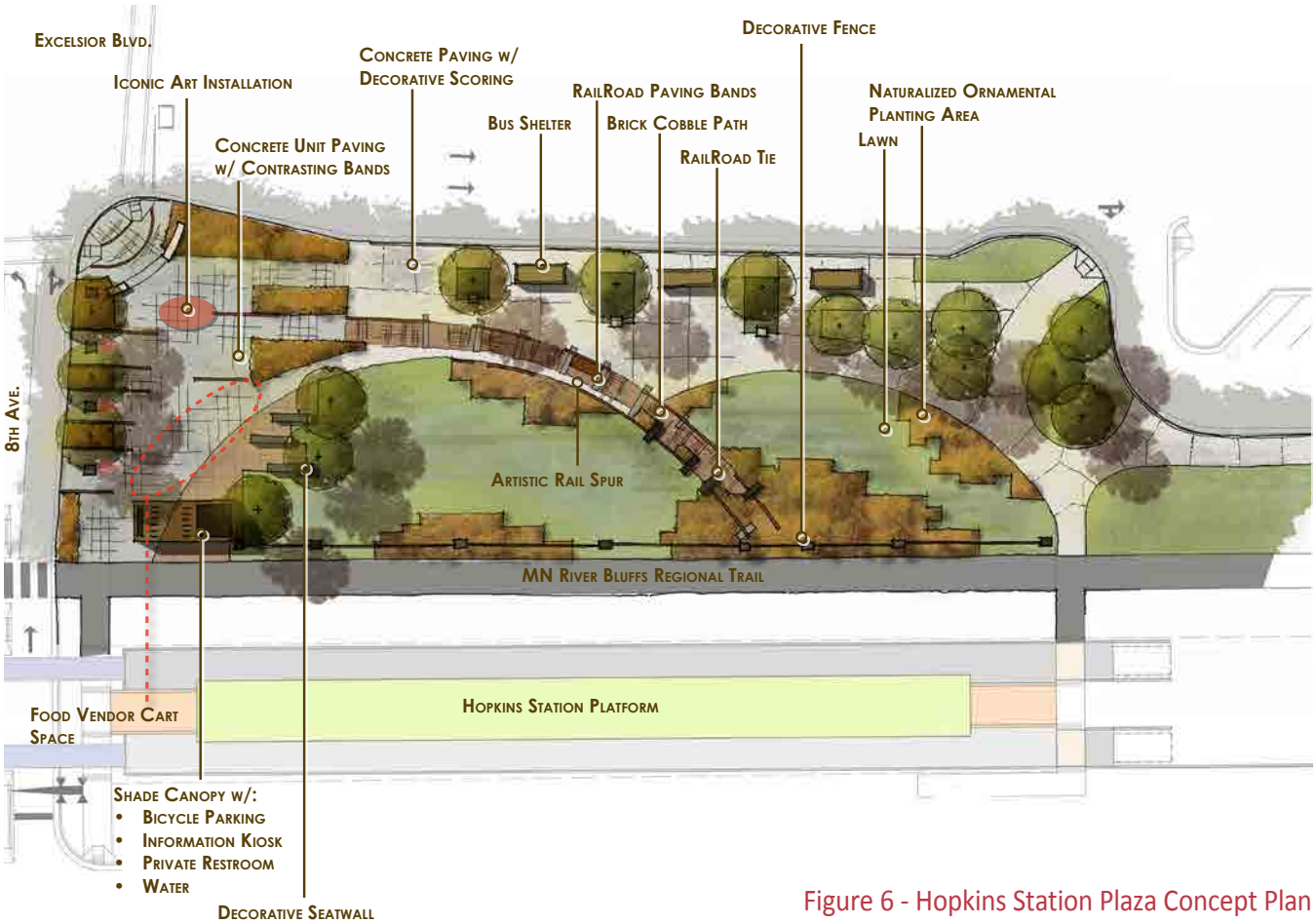


Figure 6 - Hopkins Station Plaza Concept Plan

3.2

The incorporation of art found in the Artery and the innovative use of stormwater management practices shall carry through the plaza. Amenities include:

- Bus-stops and bus shelters
- Efficient pedestrian circulation to and from bus stops, parking areas, and the Downtown Hopkins station
- Connection to regional bike trails, including bicycle lockers/parking and drinking fountain
- Iconic public art
- Hopkins location marker
- Private restroom for Metro Transit employees
- Decorative seatwalls and paving
- Food vendor cart space
- Naturalized ornamental planting areas
- Informational kiosk

Figure 7 - Hopkins Station Plaza North Perspective

Johnson Building Property

The redevelopment of the Johnson Building Property will have a significant impact on the Artery as a major anchor at the Excelsior Boulevard intersection. The setback and façade of the building should allow for an expanded pedestrian space and interaction with the streetscape. The concept for this parcel includes a street level plaza at the southeast corner of the building to include an iconic sculpture enhancing the arrival experience to the Artery.

Preliminary concepts for the multi-family housing development include an imbedded parking structure with vehicular access from 1st Street that will serve both the public park and ride and residential units. Among the opportunities to enhance the streetscape along the Artery, the city's design team envisions a public/private "biker's lounge" that will include outdoor gather space, bike fix-it stations, water bottle filling stations, trail maps, seating and charging areas, and potential vending opportunities for various bike gear.

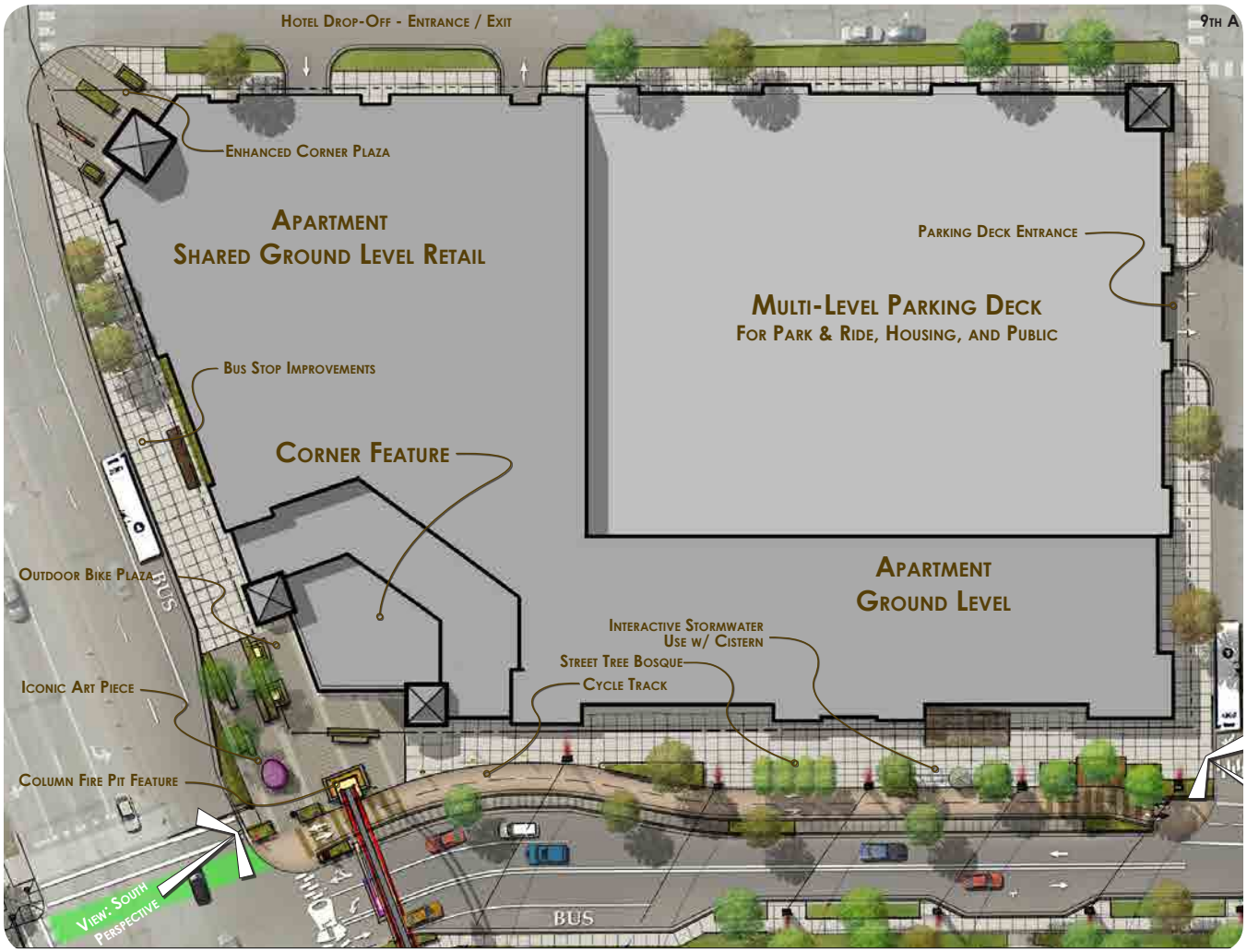


Figure 8 - Johnson Building Property Concept Plan

3.4

The design of the Johnson Building site is currently underway and is being completed by a private developer. It is anticipated that the redevelopment of the Johnson Building will be underway prior to the start of construction on the Artery.

Figure 9 - Johnson Building Concept - South Perspective

Figure 10 - Johnson Building Concept - North Perspective

Artery Plaza

The Artery Plaza is located within the portion of the Artery that is restricted to one-way vehicular traffic and designed as a congregation space within the corridor. The vision for this space is to provide a reprieve from the sun and heat, allow people to take in the sights and sounds of passersby and create an opportunity for pop-up performances. During street closure events, the plaza expands into the street to accommodate large gatherings and performances.

This space has a unique character with contrasting paving to the surrounding sidewalk and cycle track. Seating opportunities will incorporate stone benches and moveable table and chairs. An overhead shade structure will provide filtered shade to the space. The support of this structure shall not impede circulation but rather fit into the context of the space. With close proximity to adjacent public parking, separation of the plaza will be achieved through a combination of plant material and decorative fencing.

To accommodate proper drainage while also presenting a seemingly "flat" surface for gathering without hindrance by curbs, the Artery Plaza is proposed to be located at a high point. Drainage is proposed to shed away from the center of the corridor in each direction.

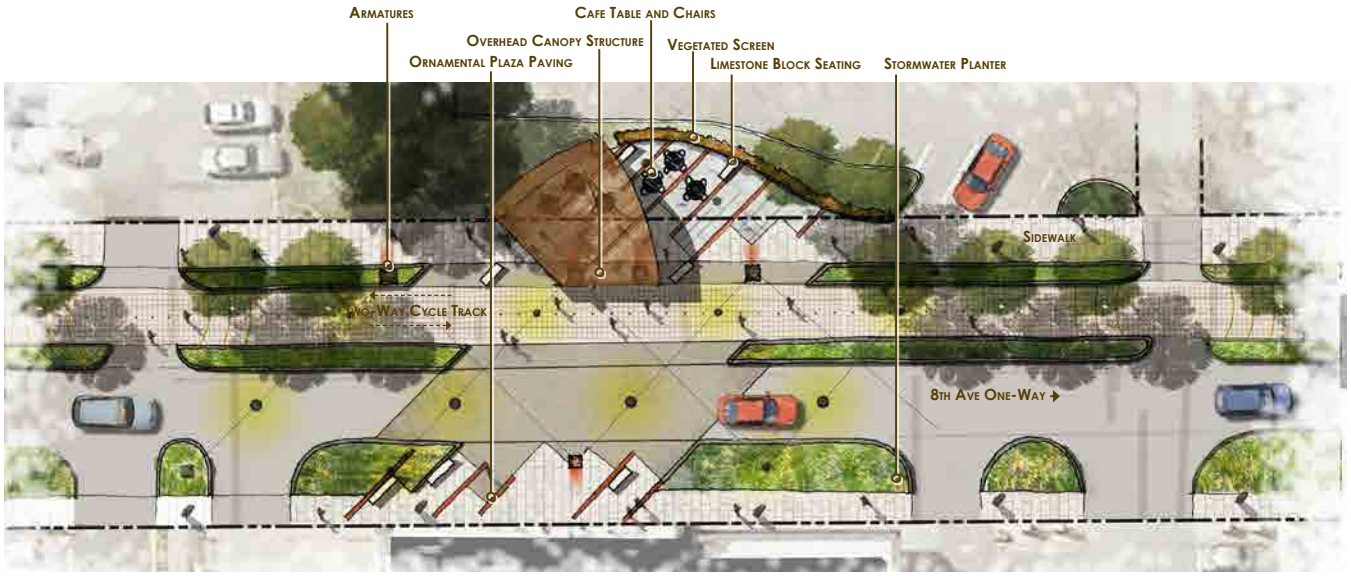


Figure 11 - Artery Plaza Concept Plan

3.6

Sustainability

One of the critical success factors behind the design for the Artery is to incorporate sustainable solutions into the paving, stormwater management, lighting and planting design. Diverse use of BMPs strategically designed into the corridor will provide interaction and interpretation as well as a functioning stormwater management system. With the creative use of stormwater management, the Artery will be used as a catalyst for incorporating sustainable design into the progressive development that will continue within the city of Hopkins.

Beyond ecological sustainability, the Artery corridor also functions to be economically and socially sustainable. This is achieved by using tried and true, available materials that the City can maintain long-term. By creating usable pedestrian space and connection to local circulation routes, the Artery is promoting local businesses. People affiliate with areas where they can socialize, eat, and recreate, and the Artery provides all of these opportunities. The increased activity, timeless furnishings/finishes, and usability will attract more users, thus promoting economic and development growth.

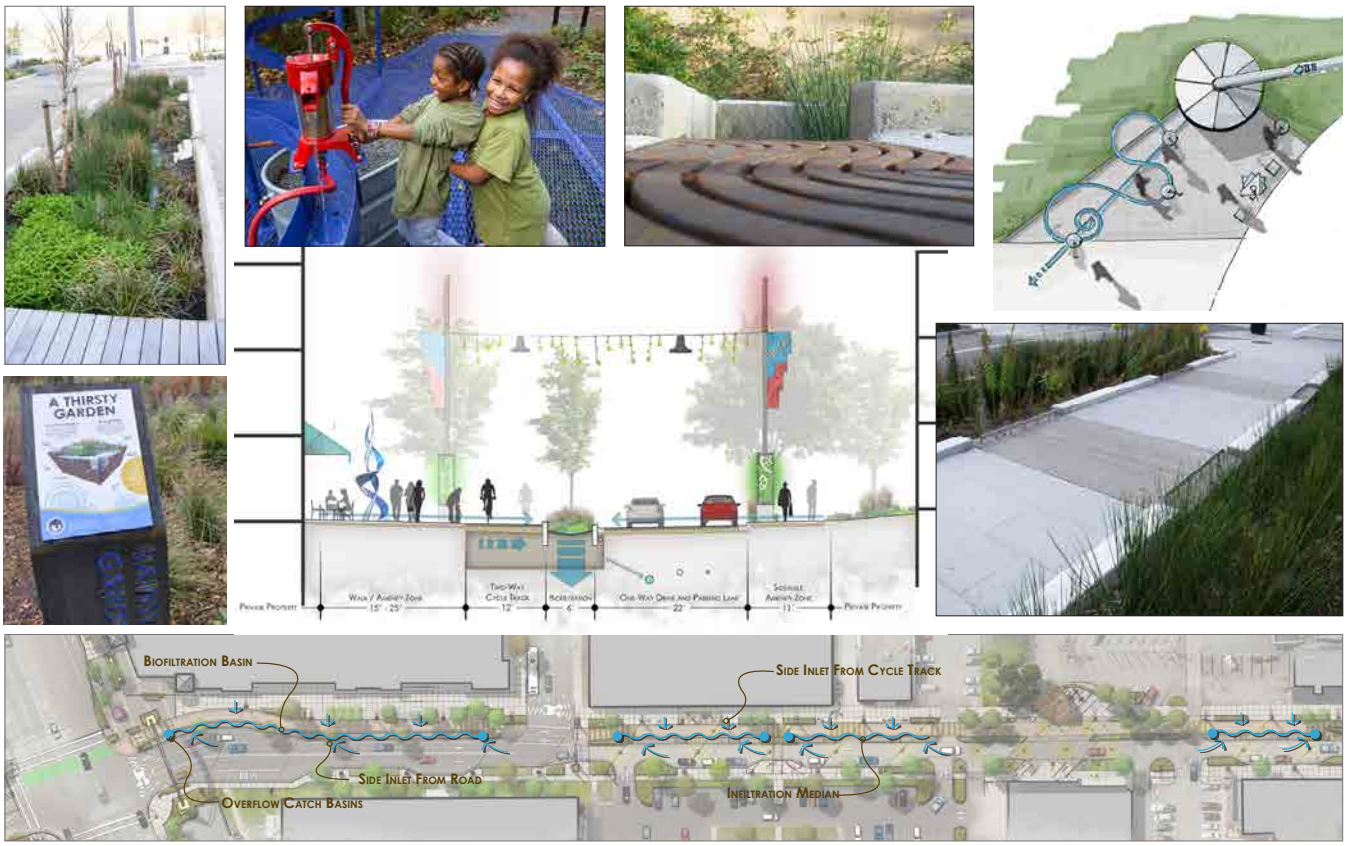


Figure 12 - Interactive Stormwater Management BMPs

Art Rooms

Public art is building a presence in the community of Hopkins and part of the vision for the Artery is to create more opportunities for public art. Art within the corridor will be an integral component and not used as a filler in leftover space. The master plan identifies strategic locations for iconic pieces and outdoor "rooms" that will suggest the history of Hopkins as well as contribute to the place-making of the Artery.

Interaction and education through art is encouraged through art rooms which are designed as part of the Artery. These are locations that incorporate art and sculpture in a way that allows users to touch, feel, listen and experience art in a way typically not provided by public art sculptures. A specific example of this is an opportunity to develop an interactive pump and cistern system that is part of the overall stormwater management integration. The artful use of stormwater also brings an educational value to the user interacting with the artwork as they feed the network of troughs and bowls.

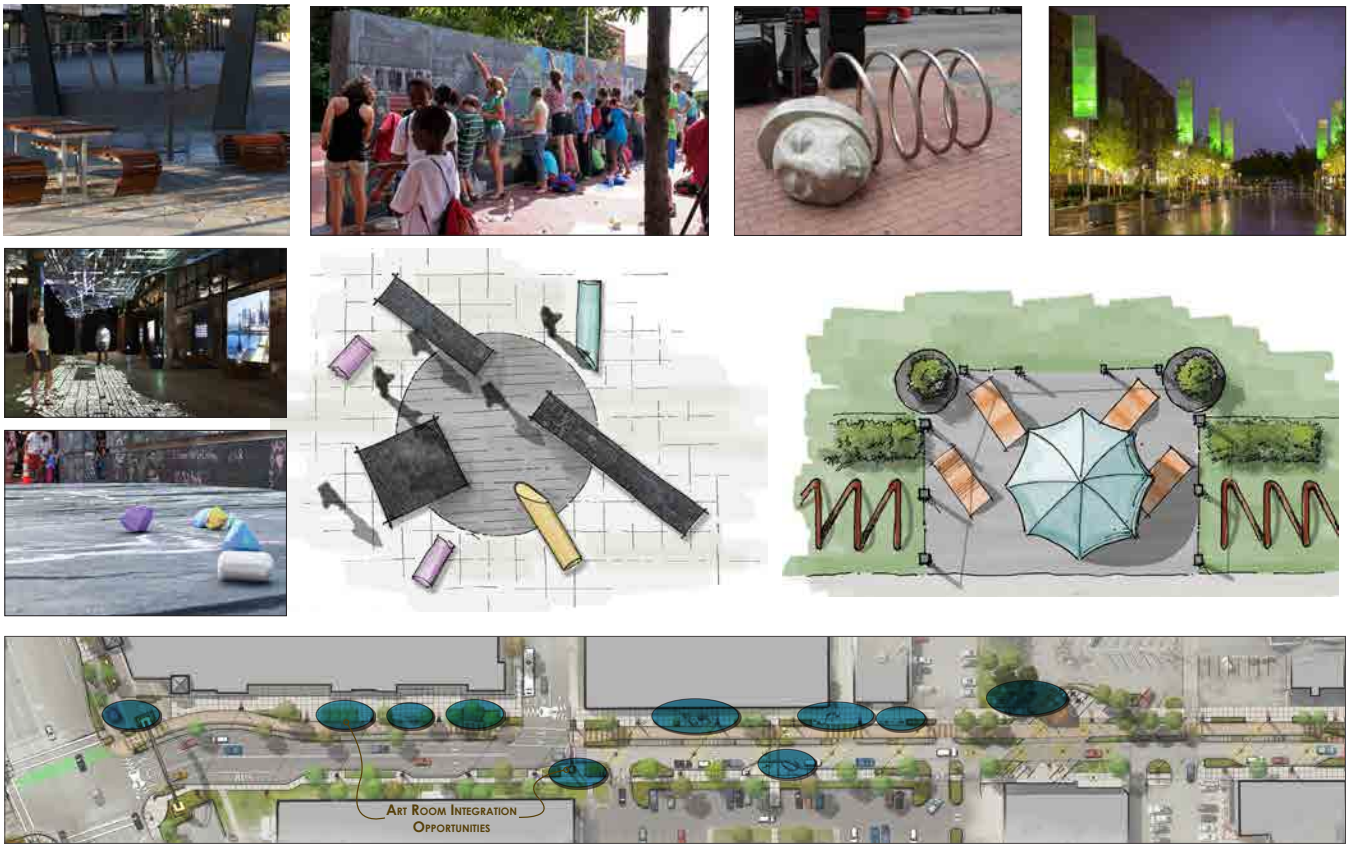


Figure 13 - Art Room Concepts

3.8 Lighting and Technology

Lighting throughout the Artery is to be designed with multiple purposes including, 1) provide a safe, well lit environment for pedestrians and vehicular travel, 2) enhance the user experience through interaction, and 3) placemaking & gateway elements. The various lighting amenities include:

- Pedestrian level LED lighting with color changing capabilities
- Art/sculpture in-ground lighting allowing flexibility for changing displays
- Street lighting, LED fixtures, cable hung lighting over roadway and/or mounted on armatures
- Interactive light projections
- Holiday/festival lighting, programmable for specific events and integral to overall street/pedestrian lighting
- Kiosk and informational signage lighting

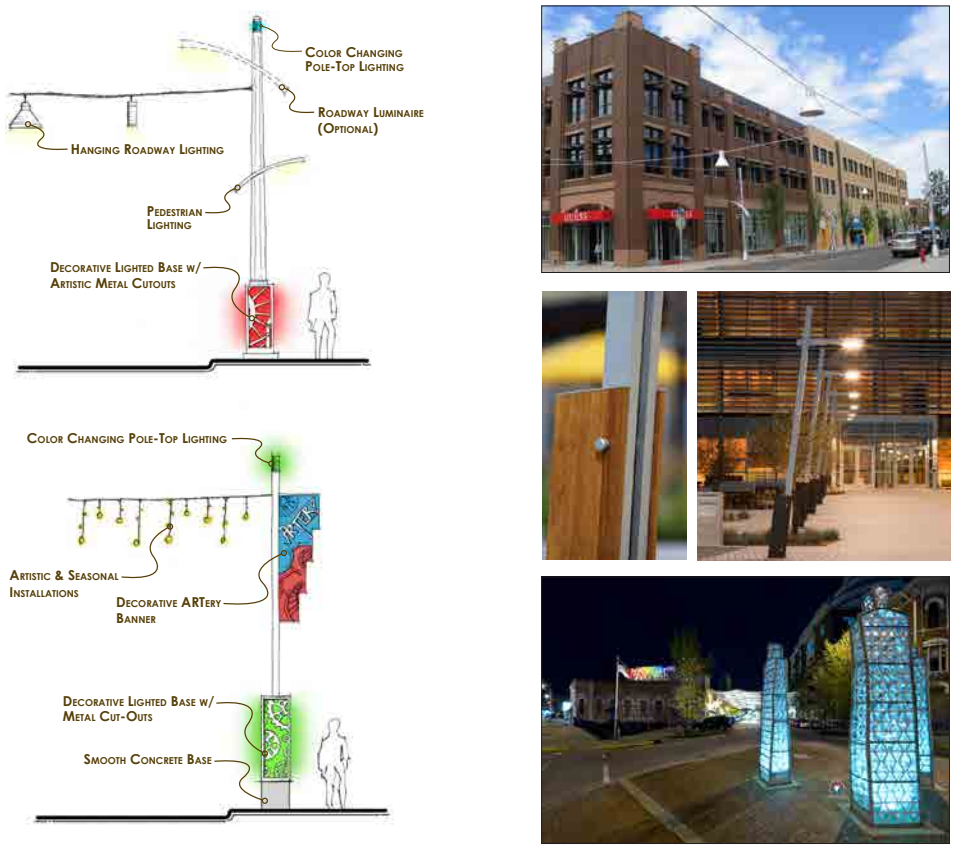


Figure 14 - Lighting Concepts

All of the selected lighting shall be consistent with the overall theme of the Artery, be energy efficient and also easily controlled. Digital kiosks will be incorporated into the streetscape at key locations to help orient visitors through the Artery and into Downtown, as well as post information for local events. Related features will also include a family of wayfinding and informational signage.

Character Preference Survey

The location of the Artery is unique as it is the link between the LRT Line, which is a very progressive project with modern technology; and downtown Hopkins, which has a rich historical character. The vision for the Artery is that the design incorporates contemporary nuances but marries them with some of the historical/industrial character that is the backbone of Hopkins, specifically the Minneapolis Threshing Machine (MTM) Company (later merged to form Minneapolis Moline.)

At a community open house, attendees were asked to share their opinion about what character they preferred for the Artery. The four choices were: Historic, Contemporary, Post Industrial, and Whimsical. The character imagery used specific to each of the four styles can be viewed in Appendix D. The preferred character style is shown here, Post Industrial, receiving the most "likes" while whimsical received the least. As such, it is recommended that final design proceed with further development of the Artery corridor plans utilizing a post-industrial theme.

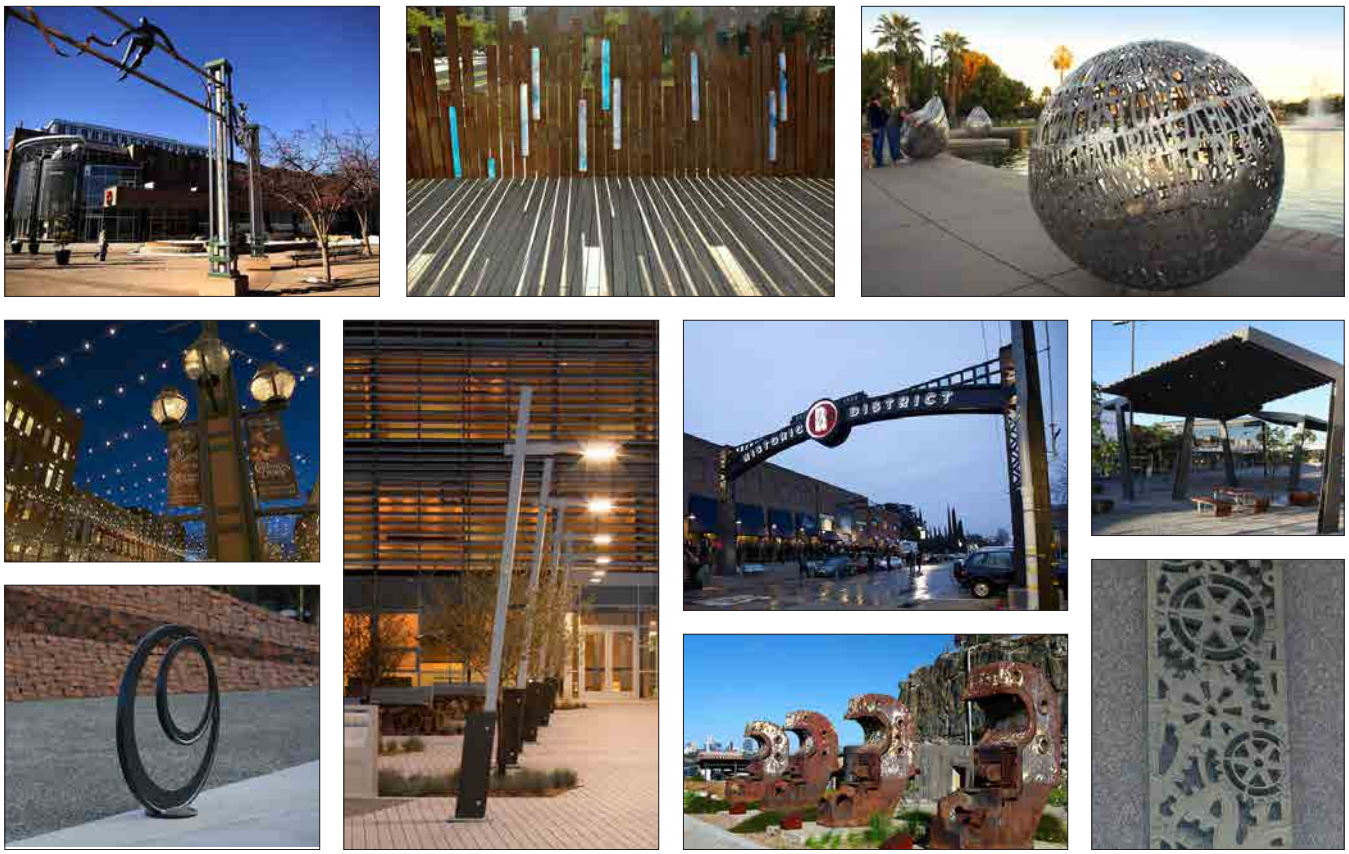


Figure 15 - Character Preference: Post-Industrial

5.1 Phasing

Phasing for the Artery project is influenced by several factors, most notably, the redevelopment of the Johnson Building property, maintaining the flow of traffic, and minimizing the disturbance to businesses which will stay open through construction. The coordination of other development projects will reduce the need for re-work and could reduce the length of disturbance to the corridor.

As identified in the Phasing Plan, it is anticipated that the redevelopment of the Johnson Building block will happen in phase one, along with sidewalk and pedestrian zone improvements in that area. Phase two includes the area from Excelsior Boulevard to 1st Street. This will allow traffic to flow around the Artery when Phase Three is under construction. Phase three will be the remaining portion of the Artery between 1st Street S. and Mainstreet. In order to provide a successful project with minimal disturbance, final completion date will vary based on coordination efforts and construction timeline of other development projects within the corridor. Construction completion is targeted to be completed on or before the opening of the Hopkins Downtown station.

5.3

PRELIMINARY LEVEL COST ESTIMATE - 8TH AVE. [EXCELSIOR TO MAINSTREET]

ITEM NO.	ITEM	UNIT	ESTIMATED UNIT PRICE	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
STREETS AND WALKS					
1	MOBILIZATION	LS	$300,000.00	1.00	$300,000
2	TRAFFIC CONTROL	LS	$15,000.00	1.00	$15,000
3	REMOVE CONCRETE CURB AND GUTTER	LF	$5.00	2,180	$10,900
4	REMOVE CONCRETE PAVEMENT	SY	$6.00	2,025	$12,200
5	SAWCUT BITUMINOUS PAVEMENT	LF	$3.00	460	$1,400
6	BITUMINOUS WEAR COURSE	TON	$85.00	352	$29,900
7	BITUMINOUS NON WEAR COURSE	TON	$80.00	352	$28,200
8	BITUMINOUS MATERIAL FOR TACK COAT	GAL	$5.00	116	$600
9	CL. 5 AGGREGATE BASE	CY	$20.00	1,310	$26,200
10	SELECT GRANULAR BORROW	CY	$15.00	220	$3,300
12	SUBGRADE EXCAVATION	CY	$15.00	220	$3,300
11	COMMON EXCAVATION	CY	$15.00	1,680	$25,200
13	B618 CURB & GUTTER	LF	$20.00	2,700	$54,000
14	8" CONCRETE PAVEMENT (COMMERCIAL/INDUSTRIAL)	SY	$70.00	1,389	$97,200
15	TURF RESTORATION	LS	$5,000.00	1.00	$5,000
16	PAVEMENT STRIPING - 8TH AVE	LS	$3,000.00	1.00	$3,000
17	CYCLE TRACK (COLORED CONCRETE)	SY	$65.00	1500	$97,500
18	SIDEWALK	SY	$50.00	2575	$128,800
19	DECORATIVE PLAZA TREATMENTS	SF	$10.00	8550	$85,500
20	TRUNCATED DOMES	SF	$35.00	104	$3,600
21	DECORATIVE CROSSWALK	EA	$1,500.00	5	$7,500
22	CYCLE TRACK CROSSWALK	EA	$1,500.00	3	$4,500
SUBTOTAL - STREETS AND WALKS					**$942,800**
AMENITIES AND LIGHTING FOR PUBLIC AREAS					
23	BIKE RACK	EA	$1,000.00	20	$20,000
24	BIKE SHARING	EA	$5,000.00	1	$5,000
25	BIKE FIX-IT STATION AND BIKER LOUNGE W/ SEATS	EA	$30,000.00	1	$30,000
26	BENCHES	EA	$1,500.00	15	$22,500
27	TABLES AND CHAIRS	EA	$3,000.00	6	$18,000
28	LIMESTONE BLOCK 2'X4'	EA	$1,200.00	15	$18,000
29	MOVABLE BOLLARDS	EA	$1,000.00	15	$15,000
30	INFORMATIONAL SIGNS	EA	$1,000.00	15	$15,000
31	WAYFINDING	EA	$2,000.00	15	$30,000
32	DIGITAL KIOSKS	EA	$15,000.00	2	$30,000
33	SOUND SYSTEM	LS	$20,000.00	1	$20,000
34	ARTERY PLAZA - SPECIALTY LIGHTING	LS	$10,000.00	1	$10,000
35	SCULPTURAL LIGHTING	LS	$50,000.00	1	$50,000
36	ARMATURES (INCLUDES STREET LIGHTING ELEMENT)	EA	$12,000.00	35	$420,000
37	EXCELSIOR GATEWAY	EA	$100,000.00	1	$100,000
38	MAINSTREET GATEWAY	EA	$25,000.00	1	$25,000
39	BARRICADE STRUCTURE - AT 1ST STREET	LS	$20,000.00	1	$20,000
40	ART INSTALLATIONS	EA	$30,000.00	6	$180,000
41	DECORATIVE FENCING	LF	$200.00	300	$60,000
42	CANOPY STRUCTURE - ARTERY PLAZA	LS	$30,000.00	1	$30,000
43	FEATURE GATHERING SPACE	LS	$20,000.00	1	$20,000
SUBTOTAL - AMENITIES AND LIGHTING FOR PUBLIC AREAS					**$1,138,500**
LANDSCAPING (STORMWATER OR PLACEMAKING-RELATED ONLY)					
44	PERMEABLE PAVER MEDIAN	SF	$12.00	3500	$42,000
45	LANDSCAPE BIORETENTION CELLS	SF	$8.00	6100	$48,800
46	ABOVE GRADE PLANTERS	EA	$1,000.00	25	$25,000
47	STORMWATER SCULPTURE	LS	$15,000.00	1	$15,000
48	LANDSCAPE TREES	EA	$525.00	45	$23,600
49	PERENNIAL PLANTINGS	LS	$25,000.00	1	$25,000
SUBTOTAL - LANDSCAPING					**$179,400**

PRELIMINARY LEVEL COST ESTIMATE - 8TH AVE. [EXCELSIOR TO MAINSTREET]

ITEM NO.	ITEM	UNIT	ESTIMATED UNIT PRICE	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
UTILITIES - SANITARY SEWER AND WATERMAIN					
50	REMOVE SANITARY SEWER PIPE	LF	$8.00	825	$6,600
51	REMOVE SANITARY SEWER MANHOLE	EA	$500.00	4	$2,000
52	SANITARY SEWER MH CASTING ASSEMBLY	EA	$700.00	1	$700
53	6" SDR-26 PVC SAN SWR SERVICE	LF	$35.00	320	$11,200
54	8"x6" PVC WYE	EA	$350.00	8	$2,800
55	8" SDR-35 PVC SAN SWR	LF	$35.00	825	$28,900
56	SANITARY MANHOLE	EA	$3,000.00	4	$12,000
57	CONNECT TO EXISTING SANITARY SEWER SERVICE	EA	$150.00	8	$1,200
58	CONNECT TO EXISTING SANITARY SEWER	EA	$500.00	8	$4,000
59	REMOVE WATERMAIN	LF	$8.00	1100	$8,800
60	REMOVE HYDRANT	EA	$300.00	2	$600
61	1" TYPE K COPPER WATER SERVICE	LF	$35.00	400	$14,000
62	1" CORPORATION STOP	EA	$350.00	10	$3,500
63	1" CURB STOP	EA	$350.00	10	$3,500
64	HYDRANT	EA	$5,000.00	2	$10,000
65	6" GV & BOX	EA	$1,500.00	10	$15,000
66	6" DI WATERMAIN	LF	$40.00	1100	$44,000
67	DUCTILE IRON FITTINGS	LB	$8.00	1000	$8,000
68	REMOVE STORM SEWER PIPE	LF	$8.00	1310	$10,500
69	REMOVE DRAINAGE STRUCTURE	EA	$300.00	30	$9,000
70	STORM SEWER CASTING	EA	$700.00	16	$11,200
71	2'X3' CATCH BASIN	EA	$1,500.00	9	$13,500
72	STORM MANHOLE	EA	$2,500.00	7	$17,500
73	4" PERFORATED PVC DRAINTILE	LF	$8.00	1900	$15,200
74	15" STORM SEWER MAIN	LF	$35.00	430	$15,100
75	24" STORM SEWER MAIN	LF	$45.00	30	$1,400
76	30" STORM SEWER MAIN	LF	$60.00	40	$2,400
77	36" STORM SEWER MAIN	LF	$85.00	200	$17,000
78	42" STORM SEWER MAIN	LF	$90.00	400	$36,000
79	48" STORM SEWER MAIN	LF	$150.00	20	$3,000
80	CONNECT TO EXISTING STORM SEWER	LF	$500.00	5	$2,500
81	FIBER OPTIC INSTALLATION	LS	$65,000.00	1	$65,000
82	WIRELESS INTERNET ACCESS	LS	$15,000.00	1	$15,000
SUBTOTAL - UTILITIES					**$411,100**
SUBTOTAL - 8TH AVE FROM EXCELSIOR TO MAINSTREET					**$2,671,800**
20% CONTINGENCY					$534,000
ESTIMATED CONSTRUCTION COST - 8TH AVE FROM EXCELSIOR TO MAINSTREET					**$3,205,800**
25% SOFT COSTS (ENGINEERING & ADMIN)					**$802,000**
TOTAL ESTIMATED PROJECT COST - 8TH AVE FROM EXCELSIOR TO MAINSTREET					**$4,007,800**

5.5

PRELIMINARY LEVEL COST ESTIMATE - CYCLE TRACK [NORTH OF MAINSTREET]

ITEM NO.	ITEM	UNIT	ESTIMATED UNIT PRICE	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	REMOVE DRAINAGE STRUCTURE	EACH	$300.00	2	$600
2	2'X3' CATCH BASIN	EACH	$1,500.00	2	$3,000
3	REMOVE LIGHT POLE	EACH	$500.00	3	$1,500
4	NEW LIGHT POLES	EACH	$4,000.00	3	$12,000
5	MODIFY TRAFFIC SIGNAL W/ BIKE AND NEW ALIGNMENT	EACH	$25,000.00	1	$25,000
6	PEDESTRIAN PUSH BUTTONS	LIN FT	$1,000.00	1	$1,000
7	REMOVE CONCRETE CURB AND GUTTER	LIN FT	$5.00	480	$2,400
8	REMOVE CONCRETE PAVEMENT	SQ YD	$6.00	1,300	$7,800
9	SAWCUT BITUMINOUS PAVEMENT	LIN FT	$3.00	575	$1,700
10	COMMON EXCAVATION	CU YD	$15.00	215	$3,200
11	CYCLE TRACK - STANDARD CONCRETE	SY	$50.00	578	$28,900
12	CONC. SIDEWALK	SY	$50.00	300	$15,000
13	CONC. DRIVEWAY	SY	$70.00	111	$7,800
14	B618 CURB & GUTTER	LIN FT	$20.00	470	$9,400
15	MEDIAN - STANDARD PAVERS	SF	$12.00	1500	$18,000
16	MEDIAN - DECORATIVE BOLLARD	EACH	$1,000.00	8	$8,000
17	TRUNCATED DOMES - CYCLE TRACK	SF	$35.00	24	$800
18	TRUNCATED DOMES - WALK	SF	$35.00	12	$400
19	CROSSWALK - PEDESTRIAN	EACH	$1,500.00	1	$1,500
20	CROSSWALK - CYCLE TRACK	EACH	$2,000.00	1	$2,000
21	BIKE RACKS	EACH	$1,500.00	2	$3,000
22	PAVEMENT STRIPING - 8TH AVE	LUMP SUM	$2,000.00	1	$2,000
ESTIMATED COST - SUBTOTAL					**$155,000**
20% CONTINGENCY					$31,000
ESTIMATED CONSTRUCTION COST - CYCLE TRACK NORTH OF MAINSTREET					**$186,000**
25% SOFT COSTS (ENGINEERING & ADMIN)					**$47,000**
TOTAL ESTIMATED PROJECT COST - CYCLE TRACK NORTH OF MAINSTREET					**$233,000**

PRELIMINARY LEVEL COST ESTIMATE - 2ND STREET

ITEM NO.	ITEM	UNIT	ESTIMATED UNIT PRICE	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$25,000.00	1	$25,000
2	TRAFFIC CONTROL	LUMP SUM	$10,000.00	1	$10,000
3	REMOVE CONCRETE CURB AND GUTTER	LIN FT	$3.50	1300	$4,550
4	CLEAR & GRUB TREE	TREE	$300.00	12	$3,600
5	SAWCUT BITUMINOUS PAVEMENT	LIN FT	$5.00	100	$500
6	REMOVE BITUMINOUS PAVEMENT	SQ YD	$4.00	2600	$10,400
7	REMOVE SIDEWALK	SQ YD	$4.00	125	$500
8	REMOVE CATCH BASIN	EACH	$500.00	5	$2,500
9	REMOVE STORM SEWER PIPE	LIN FT	$15.00	70	$1,050
10	RECLAIM BITUMINOUS PAVEMENT	SQ YD	$5.00	1900	$9,500
11	CL. 5 AGGREGATE BASE	CU YD	$20.00	440	$8,800
12	3" BITUMINOUS NON WEAR COURSE	TON	$85.00	320	$27,200
8	2" BITUMINOUS WEAR COURSE	TON	$80.00	210	$16,800
9	BITUMINOUS STREET PATCH	TON	$90.00	310	$27,900
10	B618 CURB & GUTTER	LIN FT	$20.00	1400	$28,000
11	STORM SEWER	LUMP SUM	$50,000.00	1	$50,000
12	ADJUST CASTING	EACH	$500.00	5	$2,500
13	4" CONCRETE SIDEWALK	SQ FT	$5.00	6100	$30,500
14	VALLEY GUTTER	LF	$20.00	400	$8,000
15	RETAINING WALL	SQ FT	$40.00	750	$30,000
16	FENCE	LIN FT	$50.00	250	$12,500
17	4" SOLID LINE WHITE - EPOXY	LIN FT	$1.50	800	$1,200
18	RELOCATE SIGN	EACH	$300.00	6	$1,800
19	RELOCATE SIGNAL POLE - 5TH AVENUE	LUMP SUM	$50,000.00	1	$50,000
20	RELOCATE STREET LIGHT	EACH	$5,000.00	4	$20,000
21	LANDSCAPING	LUMP SUM	$5,000.00	1	$5,000
22	TURF RESTORATION	SQ YD	$5.00	700	$3,500
ESTIMATED COST - SUBTOTAL					**$391,000**
20% CONTINGENCY					**$78,000**
ESTIMATED CONSTRUCTION COST - 2ND STREET					**$469,000**
25% SOFT COSTS (ADMINISTRATION, ENGINEERING, LEGAL, ETC.)					**$117,000**
TOTAL ESTIMATED PROJECT COST - 2ND STREET					**$586,000**

6.1 Maintenance of the Artery Components

Landscaping Maintenance Overview

The improvements to the 8th Avenue corridor should be contemplated simultaneous with an ongoing maintenance considerations. The Artery will require ongoing, routine maintenance to be a viable public feature in the long term. The recommendations for this section of the report deals with elements which require monitoring and/or maintenance corresponding to that of the materials installed along the Artery corridor. Plant materials are only one component included within the Artery that will require periodic maintenance to maximize the Artery's longevity and timeless design.

Street Trees

Though these make up a small fraction of the total vegetation within the project area, street trees require annual monitoring to ensure that they remain healthy. Major pruning projects should be generally be undertaken during the winter months when trees are dormant. Trees should be monitored so that any problems can be accessed and treated promptly. The fall months provide opportunity to plant trees, after the heat of summer has passed. Collection of leaves in late fall for mulching or composting is another activity to address prior to the onset of winter. As part of the final design of the project, it is recommended street trees be designed with appropriate underlying conditions for retention of moisture, perhaps through a combination of drain tile and structure soils.

Perennials and Ornamental Grasses

The window for maintenance on most perennials and ornamental grasses is much reduced from that of trees and shrubs. With the onset of winter, these plants mainly die back until the warmth and moisture of spring. Therefore, maintenance really begins in early spring with cutting back of ornamental grasses to 6 inches above ground before new growth occurs. Ornamental grasses could be trimmed back in November, but plants are typically maintained to provide color and interest during the winter months. Waiting until the spring also allows for this material to be removed during cleanup of the beds which occurs in early spring. These plantings are not proposed to be irrigated, therefore it is recommended that hardy plantings be selected during final design to be tolerant of dry conditions. Additionally, many of the plantings are proposed to be located in areas receiving salt laden runoff during winter and early spring conditions. It is recommended plantings in these spaces be selected which are generally more salt tolerant to some degree.

Bioretention Cells

Bioretention cells are designed to infiltrate water through the planting medium. In order to provide adequate infiltration the planting median is designed with a modified soil mix and plant material that will require additional water the first year to aid in establishment. The plant material used for bioretention cells are tolerant to this modified soil and extremes of wet and dry conditions once established requiring similar maintenance requirements as typical planting beds. The removal of trash and sediment buildup from within the bioretention cells will need to be done periodically as these are collection areas for the streets and sidewalks. The addition of pre-treatment devices, such as a "Rain Guardian" which has successfully been used elsewhere in Hopkins, can be used to filter out the unwanted sediment and trash prior to entering the bioretention cells, thus minimizing the maintenance and extending the lifespan of the bioretention cell modified soil. It is recommended that pretreatment devices be considered at bioretention basins and

implemented where appropriate. It is also recommended underdrain cleanout risers be provided to enable cleaning of the underdrain system.

Pavers

Maintenance of concrete pavers should be minimized to placing additional sand periodically and replacing broken pavers. This can be any time when temperatures are sufficient to allow the sand used in the setting bed to be leveled without freezing. However, it would be best to check pavers It is recommenedrecommended pavers be inspected once each spring and fall when checking plant material for pruning and general bed maintenance. Cracked, severely chipped, or sunk pavers should be removed and replaced. When you inspect pavers, check for cracked or chipped pavers.

Permeable Pavers

Maintaining surface infiltration and resulting underdrain exfiltration is key to long-term pavement performance. Permeable areas should be observed periodically during rain events for proper drainage. After several years, it may be necessary to enlist a commercialutilize a vacuum truck to remove existing aggregate and accumulated sediment and refill the voids with clean aggregate. No special requirements are needed for snow removal other than de-icing chemicals can be used sparingly because of the insulated qualities of the system and the warmer temperatures in the substrate. Due to the modular make-up of the pavers, repairs are easily made by removing the damaged paver and replacing it with a new one.

Lighting

Maintenance of lighting includes not only street lighting but also up-lighting of corridor elements. The use of LED fixtures will help ensuring ensure that all lights remain in working order and not become a burdening maintenance burden activity for the City, . as anAn LED luminaire will typically last 20 years without replacement. Networking platform control systems are available now that make it easy and affordable to increase the efficiency, safety, and versatility of a municipal lighting system. These wireless systems can provide user control over each individual light as well as provide usage and failure analysis creating a more efficient and scheduled maintenance regime.

Snow Removal

It is recommended the efficient collection and removal of snow from the Artery be thoroughly and routinely considered as part of the final design elements. During the winter months, the Artery can will require snow clearing and removalbe cleared with large equipment as preferred to be used by the city of Hopkinsby the City.. DuringCity. During final design of the Artery in consideration of large equipment use, the Artery amenities should be strategically positioned along the sidewalks and cycle track to minimize non-accessible areas for larger snow clearing equipment, thereby minimizing the use of smaller equipment or hand operated tools. TFrom the preliminary design plan, the proposed median between the cycle track and roadway is considered a maintenance median allowing for snow to be temporarily stored in small events, or pushed across to the parking stalls on 8th avenue for temporary storage in large following extreme events. It is recommended that all central biofiltration facilities be designed with median noses or other creative means to prevent damage to the Artery facilities, maintenance equipment, or discomfort/

6.3

injury to equipment operators. Minimal use of blunt edges in the Artery's final design is proposed. It is recommended a maintenance review be conducted at various milestones with appropriate City Staff to further guide the project in addition to the design team's considerations. In designing forlarge equipment use, the Artery amenities are strategically positioned along the sidewalks and cycle track to minimize non-accessible areas.

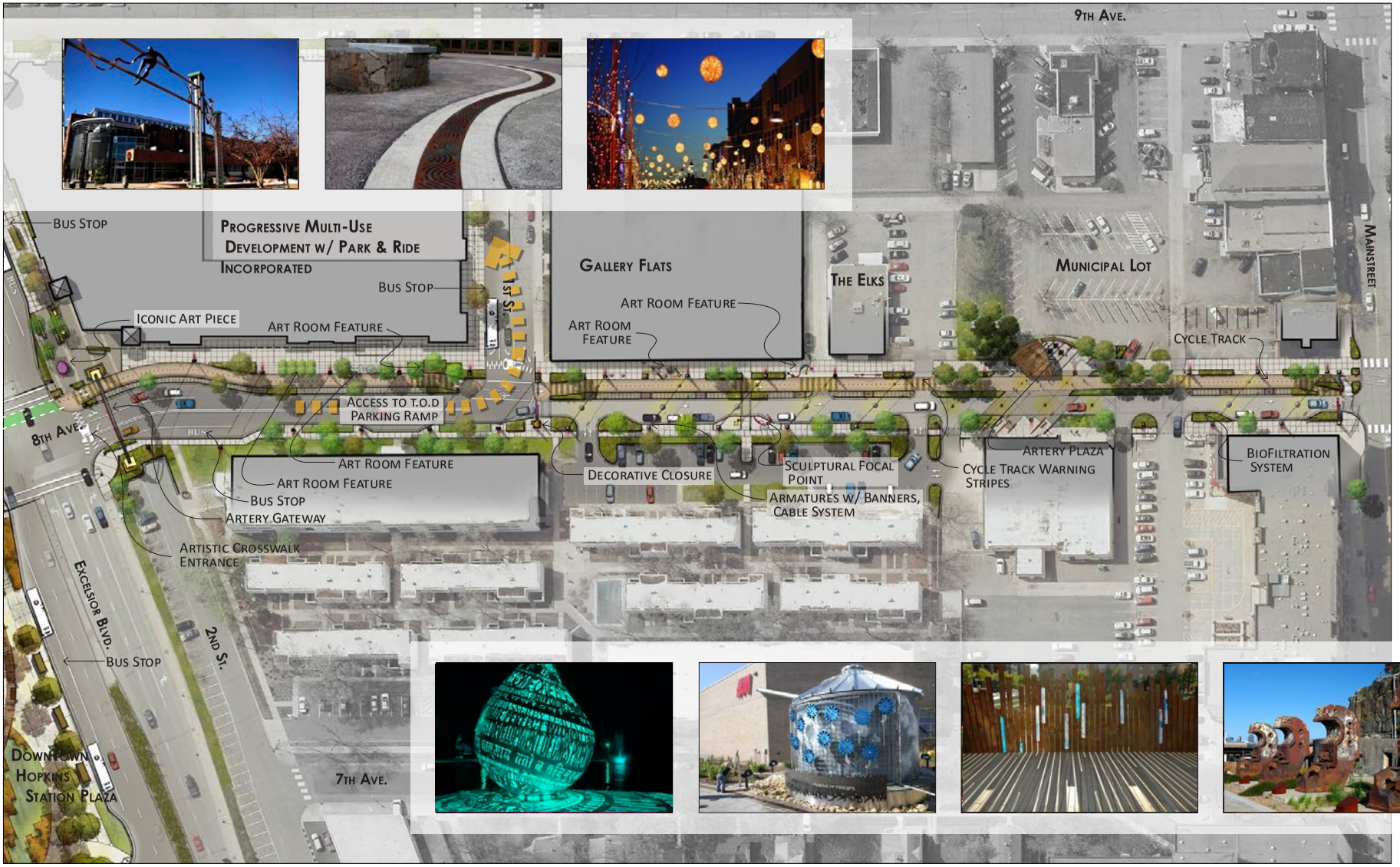
Specialty Items

Within the Artery corridor will be specialty items that will each have their own maintenance requirements that cannot be detailed at this time. As design moves from concept into reality, it is our intention to design each specialty item with maintenance and longevity in mind. Assistance will also be provided in the programming and commissioning of artist and art installations within the corridor. Upon final design of the Artery corridor, a maintenance guidelines can be provided to assist in managing the overall corridor and individual items within.

Appendix A -
Design Recommendation Graphics

Presentation and Deliverables

Development Project Site Plan



North

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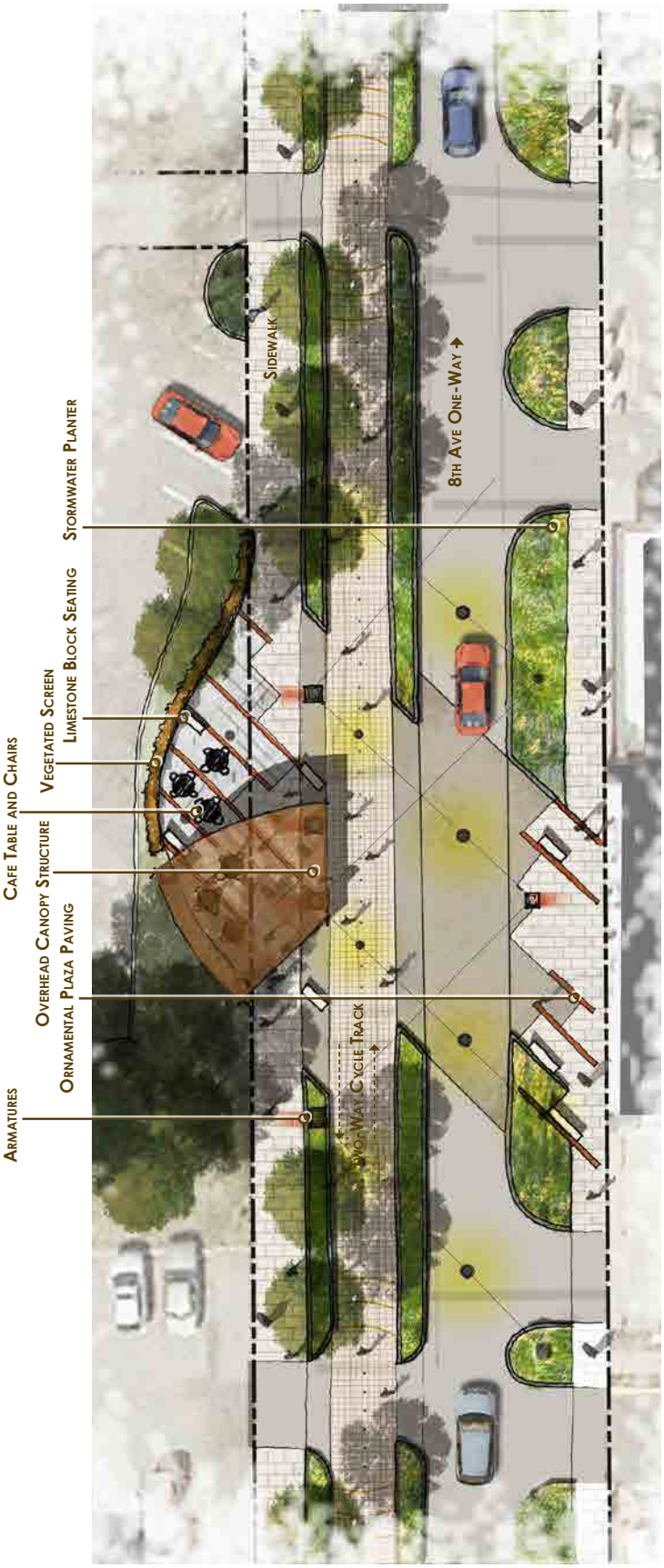
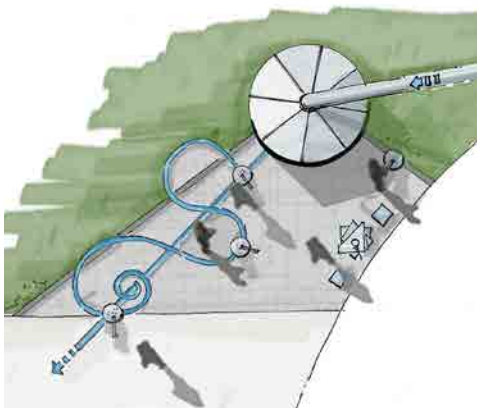
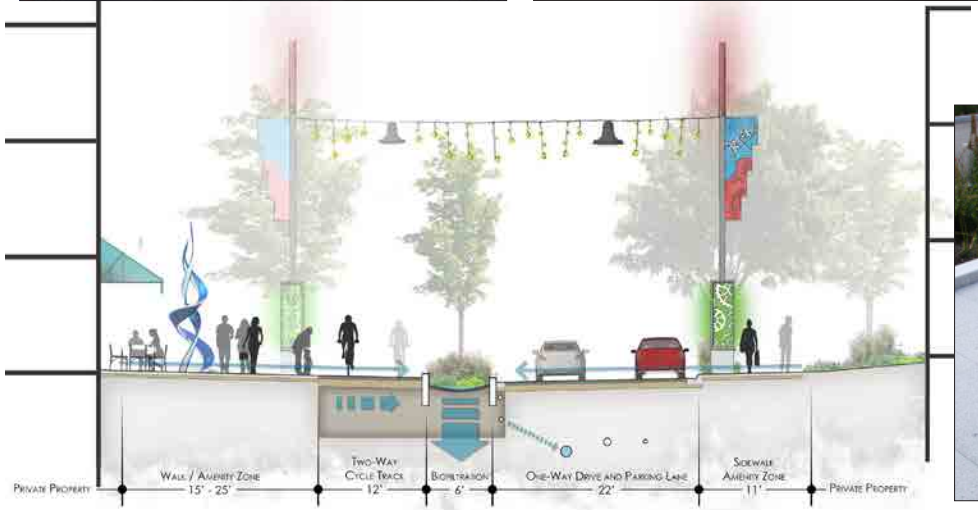
ARTERY City of Hopkins, Minnesota

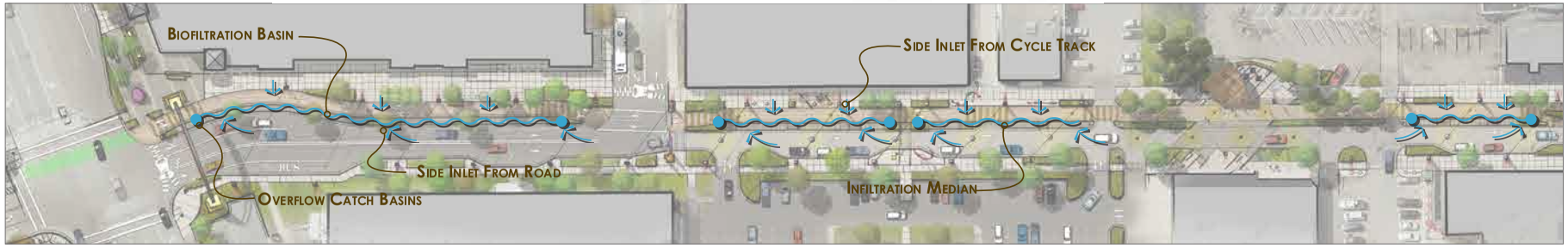
Artery Plaza: Concept Plan



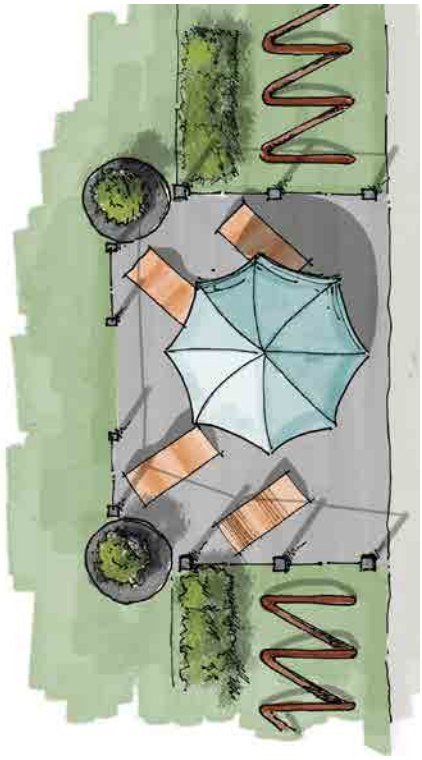
Sustainability: Stormwater & Landscape

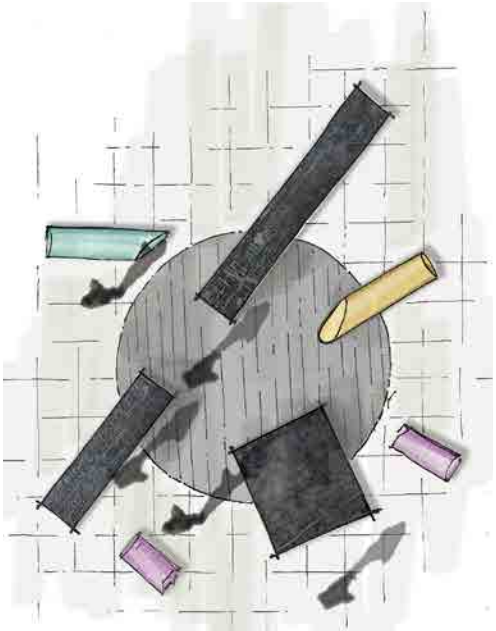




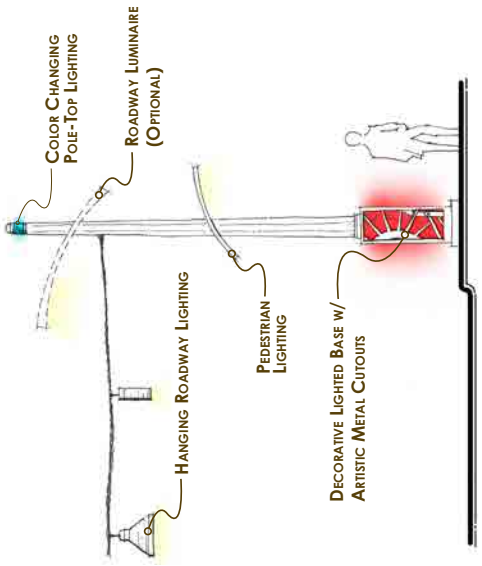


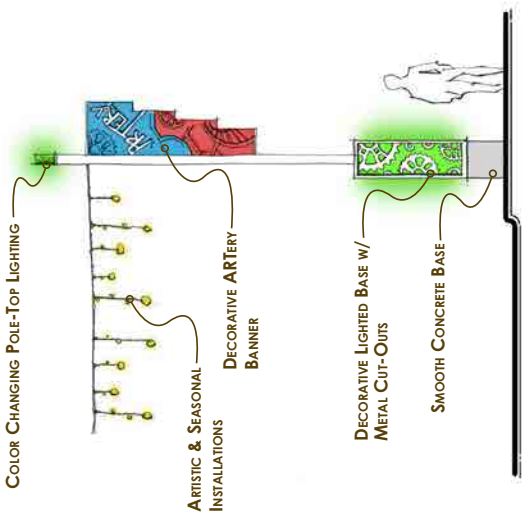
Art Room Integration



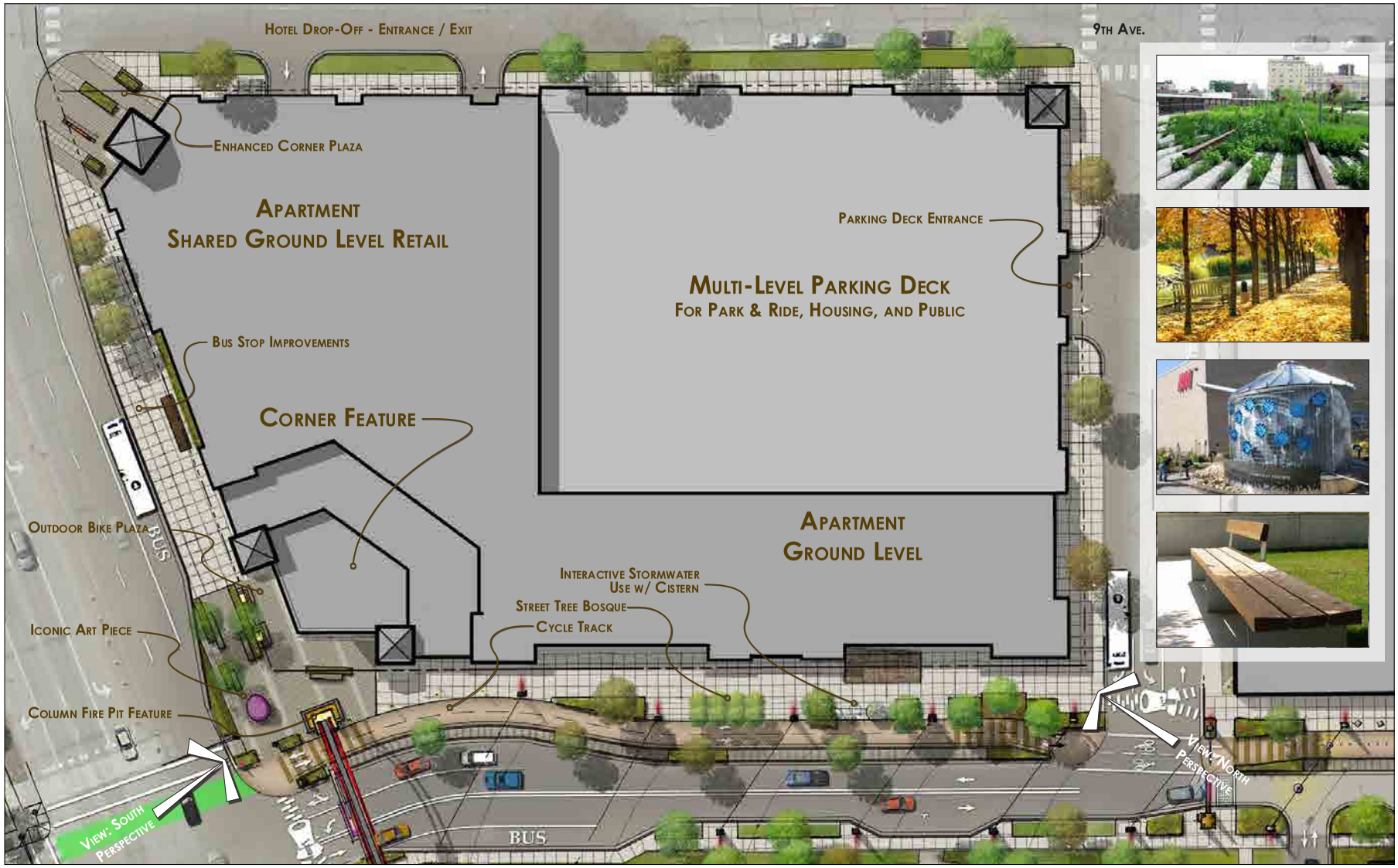


Street Lighting & Armatures





Johnson Building Property: Concept Site Plan



North

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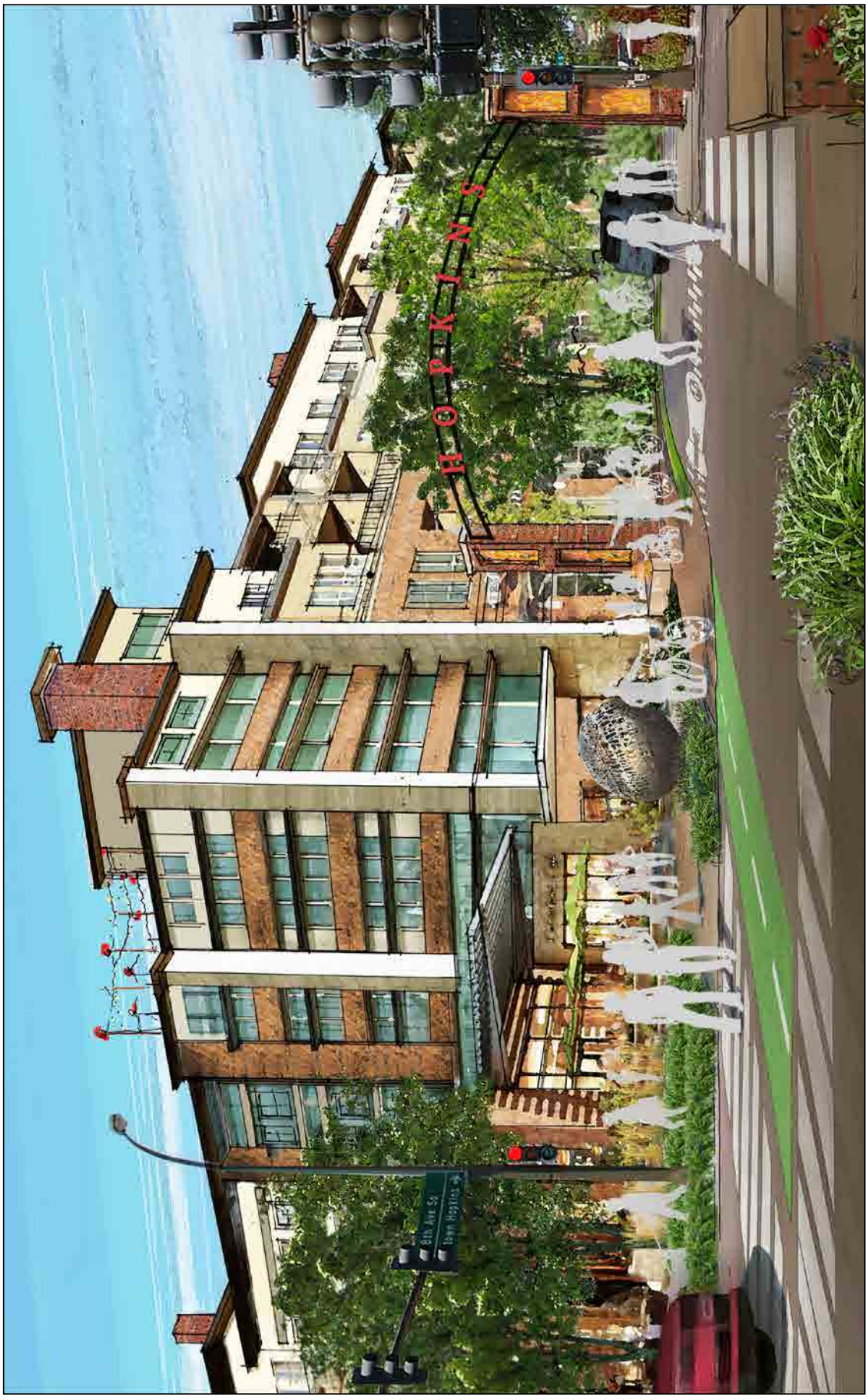
ARTery City of Hopkins, Minnesota

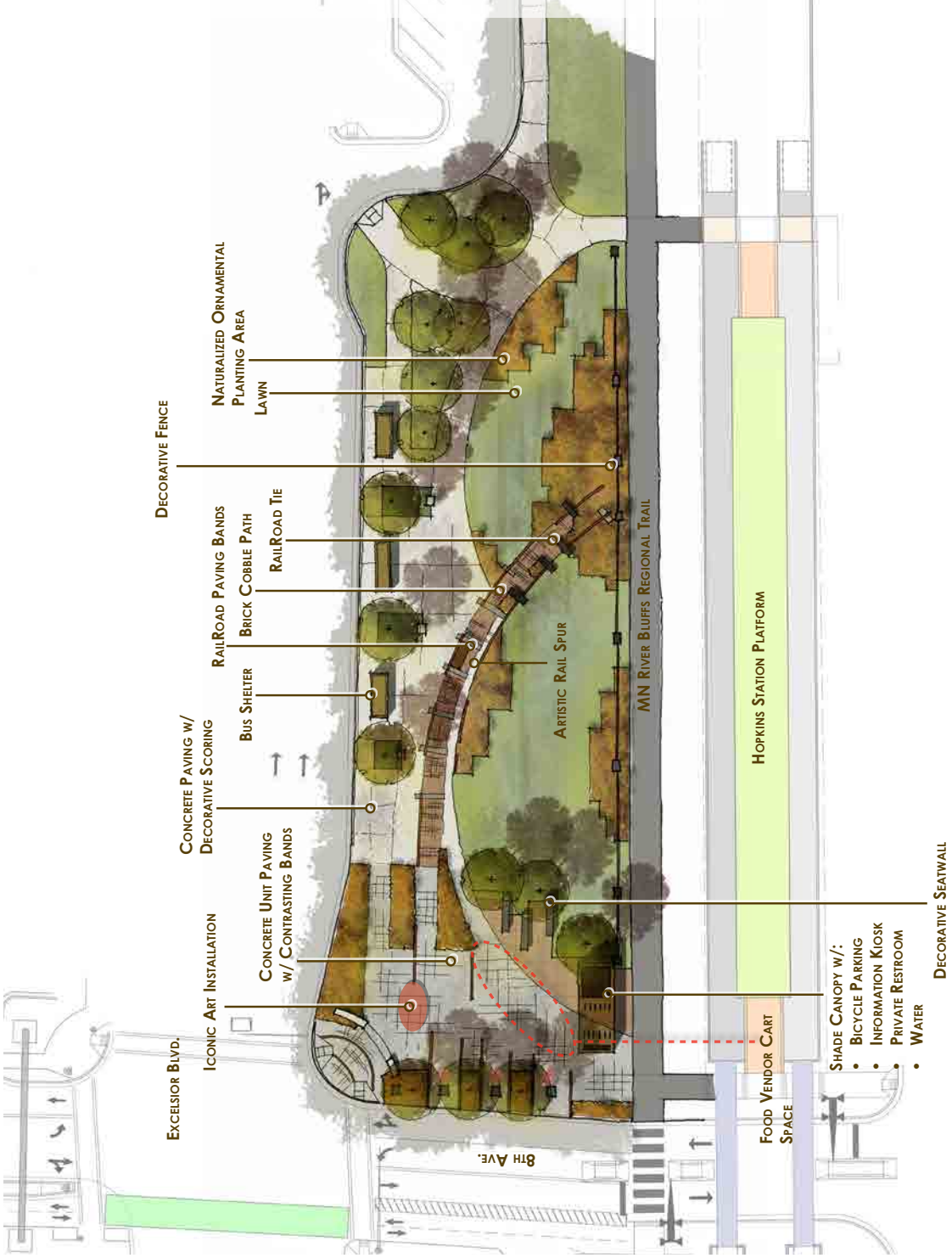
Johnson Building Property: North Perspective

Johnson Building Property: South Perspective



A.10

Hopkins Station Plaza: Concept Plan



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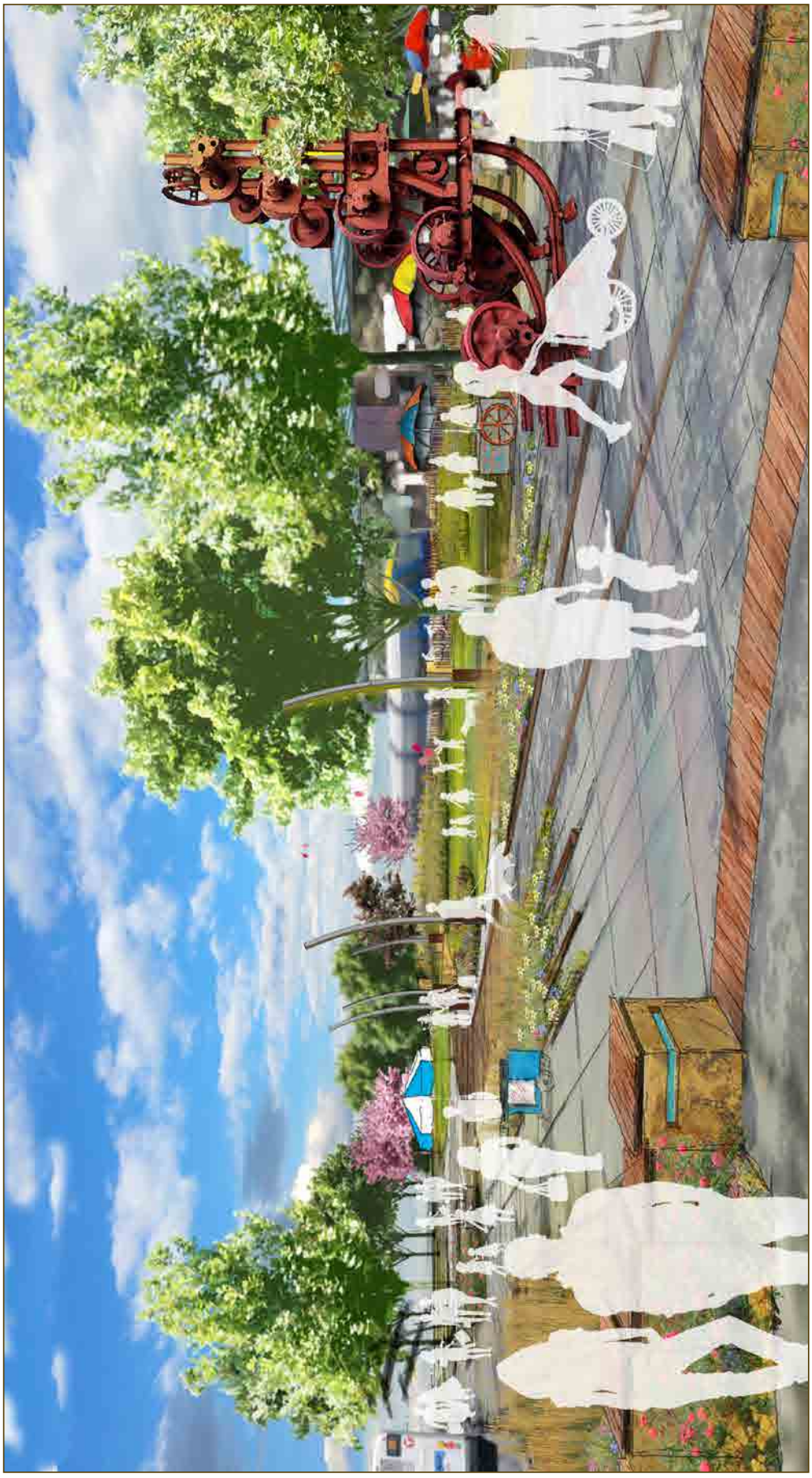
Hopkins Station Plaza: Concept Perspective



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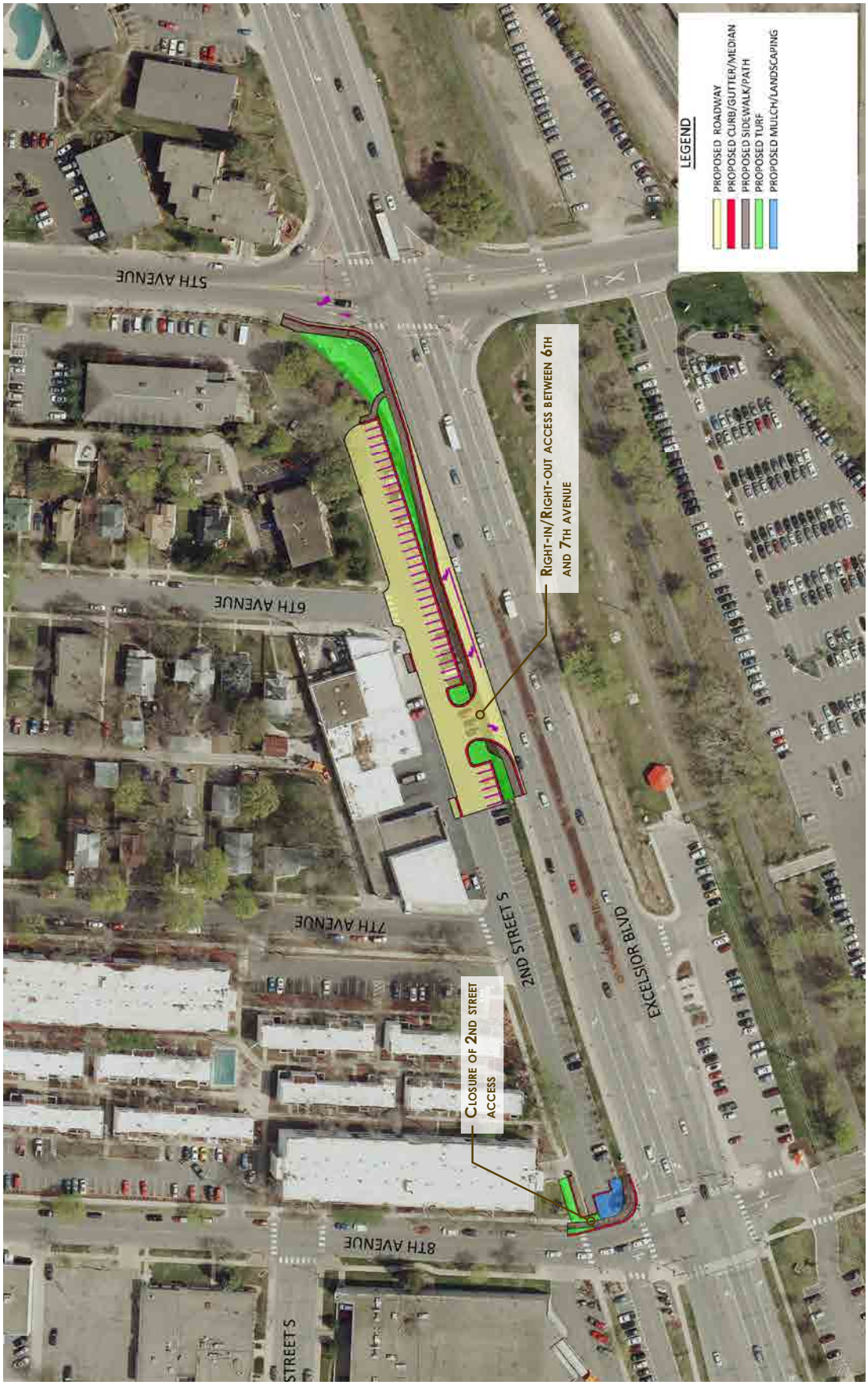
Appendix B -
2nd Street S. Access Modifications
Presentation and Deliverables

Circulation Coordination: 2nd Street S.

B.2



ARTERY City of Hopkins, Minnesota

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M E M O R A N D U M

Date: March 28, 2014
To: City of Hopkins
From: Bryan Nemeth, P.E., PTOE
Molly Stewart, P.E.
Subject: 2nd St S Analysis of Traffic & Impacts

I. Introduction

The purpose of this study is to analyze the operational impacts of the proposed access changes on 2nd St S between 6th Ave S and 7th Ave S in the City of Hopkins. There is currently a commercial properties located on 2nd St S between 7th Ave S and 6th Ave S that generates heavy vehicle traffic. Local residents have voiced concern over the amount of heavy vehicles accessing the site via 7th Ave S and 6th Ave S. A concept layout that closes access to both 6th Ave S and 7th Ave S and creates a right in/right out intersection on Excelsior Blvd (C.S.A.H. 3) for the commercial properties was proposed to the City of Hopkins. **Figure 1** details the concept layout showing the proposed 2nd St S access changes.

II. Data Collection

24-hour turning movement counts were completed at the intersections of 2nd St S/7th Ave S and 2nd St S/6th Ave S on February 19, 2014. Additionally, a tube count was completed on westbound Excelsior Blvd (C.S.A.H. 3) between 5th Ave S and 8th Ave S on March 5, 2014. Turning movement counts collected from previous work in the area were also used to fill in gaps around the study area. **Figure 2** displays the traffic volumes in the study area for the existing conditions and the rerouted volumes for the proposed 2nd St S access change condition.

III. Traffic Operations Analysis Intersection Delay/Level of Service (LOS)

Intersection Delay/Level of Service (LOS)

The LOS results are based on average delay per vehicle as calculated by the 2010 Highway Capacity Manual (HCM), which defines the level of service, based on control delay. Control delay is the delay experienced by vehicles slowing down as they approach the intersection, the wait time at the intersection, and the time for the vehicle to speed up through the intersection and enter into the traffic stream. Intersections and each intersection approach are given a ranking from LOS A through LOS F. LOS A through D is generally perceived to be acceptable to drivers. LOS E indicates that an intersection is operating at, or very near, its capacity and that drivers experience considerable delays. LOS F indicates an intersection where demand exceeds capacity and drivers experience substantial delays.

The LOS and its associated intersection delay for signalized and unsignalized intersections is presented in **Table 1**. The delay threshold for unsignalized intersections is lower for each LOS compared to signalized intersections, which accounts for the fact that people expect a higher level of service when at a stop-controlled intersection.

Table 1 – Level of Service Criteria

LOS	Signalized Intersection Delay (sec)	TWSC/AWSC* Intersection Delay (sec)
A	≤ 10	≤ 10
B	> 10 to ≤ 20	> 10 to ≤ 15
C	> 20 to ≤ 35	> 15 to ≤ 25
D	> 35 to ≤ 55	> 25 to ≤ 35
E	> 55 to ≤ 80	> 35 to ≤ 50
F	>80	>50

*TWSC = Two-Way Stop Control, AWSC = All Way Stop Control

Modeling Methodology

Synchro/SimTraffic was used to analyze the following intersections for LOS, delay, and queuing:

- Excelsior Blvd at 8th Ave S
- Excelsior Blvd at 5th Ave S
- Proposed Commercial Entrance on Excelsior Blvd (C.S.A.H. 3)

Three different scenarios were modeled and analyzed to determine the traffic impacts of the proposed 2nd St S Access Change including 2014 Existing Conditions and with the proposed 2nd St S Access Change. Both the AM and PM peak hours were modeled for the scenarios, however traffic volumes were significantly higher during the PM peak hour so only those results are discussed below.

Existing Conditions

The existing conditions were analyzed to determine the current level of operations of the study area and to set a baseline for the existing intersections. **Table 2** summarizes the results of this analysis for the PM peak hour.

Table 2 – Existing Conditions Intersection Analysis Summary (2014 PM Peak)

Intersection	Control Type	Method	LOS of Worst Movement	Delay (s/veh)	LOS
Excelsior Blvd at 5th Ave S	Signalized	HCM 2010	LOS D (EBL, WBL, NBL, NBT, & SBL)	17	B
Excelsior Blvd at 8th Ave S	Signalized	HCM 2010	LOS D (SBL)	9	A

All intersections have acceptable operations with a LOS of B or better and no unacceptable movements.

2nd St S Access Change

The scenario is based on the concept layout shown in **Figure 1**. Traffic was redistributed with the access changes along 2nd St S and the key intersections were analyzed to determine the resulting traffic impacts. **Table 3** summarizes the results of this analysis for the PM peak hour.

Table 3 – 2nd St Access Change Intersection Analysis Summary (2014 PM Peak)

Intersection	Control Type	Method	LOS of Worst Movement	Delay (s/veh)	LOS
Excelsior Blvd at 5th Ave S	Signalized	HCM 2010	LOS D (EBL, WBL, NBL, NBT, SBL, & SBT)	18	B
Excelsior Blvd at 8th Ave S	Signalized	HCM 2010	LOS D (SBL)	10	A
Excelsior Blvd at Commercial Entrance	Stop Controlled (side St)	HCM 2010	LOS A (SBR)	3	A

All intersections are anticipated to have acceptable operations with a LOS of B or better. There are no unacceptable traffic movements.

Overall, the proposed condition is anticipated to operate acceptably.

IV. Truck Traffic

The traffic going to and from the commercial properties includes both passenger vehicles and heavy vehicles. **Figure 3** details the specific types of truck traffic and heavy vehicles observed daily within the study area under existing conditions. Approximately 4.4% of the traffic on 6th Ave S and 7th Ave S are trucks. A typical residential street has about 2% heavy vehicles, primarily consisting of garbage trucks, delivery vehicles, and school buses.

The proposed condition would be anticipated to reduce the truck traffic using both 6th Ave S and 7th Ave S as depicted in **Figure 4**. With the proposed access changes, the proposed Commercial Entrance on Excelsior Blvd (C.S.A.H. 3) should be designed to accommodate a WB-62 truck which was the largest

heavy vehicle observed accessing the commercial properties.

V. School Bus Traffic

Of special significance in this area are the multiple school buses that routinely travel from 6th Ave S and 7th Ave S to 2nd St S and vice versa on weekdays as identified in the vehicle classification tables shown on **Figure 3**. If access is restricted on 2nd St S as shown in **Figure 1**, these school buses are going to have to back up in order to drop children off along 2nd St S, 6th Ave S, and/or 7th Ave S. Currently, the school buses are able to circle around the block, but under the proposed condition, they will be unable to do so. School buses do not routinely back up due to safety considerations of making such movements around children. **Figure 4** illustrates the redistributed school bus traffic within the study area under the 2nd St S access change condition.

VI. County Road Access Considerations

The concept layout depicted in **Figure 1** shows an additional intersection on Excelsior Blvd (C.S.A.H. 3). Excelsior Blvd is an A Minor Arterial roadway under the jurisdiction of Hennepin County. The new Commercial Entrance would be approximately 525 feet from both 5th Ave S and 8th Ave S which are the adjacent signalized intersections. Based on the functional classification of the roadway, partial access (unsignalized) intersection spacing as consistent with Hennepin County access management guidelines is 1/8 mile. These guidelines are also consistent with MnDOT's access management guidelines. A review of the existing access points in the study area and the proposed access point indicate that the intersection spacing is sufficiently close to meeting the recommended guidelines. The operational analysis confirms that the access location spacing can operate acceptably.

Table 4 – Summary of Recommended Access Spacing

Area or Facility	Typical Functional Class	Intersection Spacing	
		Full Movement Access	Partial Access
Urban	Minor Arterials (Divided)	1/4 Mile	1/8 Mile

Source: Hennepin County Access Management Brochure

VII. 5th Ave S Intersection

The concept layout depicted in **Figure 1** shows the removal of the existing southbound, eastbound, and westbound channelized right turns at the intersection 5th Ave S and Excelsior Blvd (C.S.A.H. 3). All three movements would be signal controlled instead of yielding free-right turns. An exclusive right turn lane is shown for the southbound movement as well. This alternative was analyzed and the results are summarized in **Table 3**. Two other alternatives for the southbound right turn at this intersection were also analyzed. **Figure 5** depicts a southbound channelized right with a yield sign and no added westbound lane. This alternative is currently what exists at this intersection. **Figure 6** depicts an uncontrolled southbound channelized right turn with an added lane that becomes the right turn lane for the Commercial Entrance. **Table 5** summarizes the results of the three different southbound right alternatives.

Table 5 – 5th Ave S Intersection Analysis Summary (2014 PM Peak)

Intersection	SB Right Configuration	Method	SB Right		Intersection	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS
Excelsior Blvd at 5th Ave S	Separate right turn lane	HCM 2010	3	A	18	B
Excelsior Blvd at 5th Ave S	Channelized right with yield (existing)	HCM 2010	3	A	17	B
Excelsior Blvd at 5th Ave S	Uncontrolled channelized right with added WB lane	HCM 2010	3	A	17	B

All alternatives have acceptable operations for the southbound right movement with a LOS of A and acceptable operations for the entire intersection with a LOS of B.

The different alternatives do not significantly impact operations for the intersection or for the southbound right movement. **Table 6** includes a summary of the positives and negatives of the alternatives.

Table 6 – Alternatives Summary

Alternative	Potential Positives	Potential Negatives
Separate right turn lane	- SB right turning vehicles have their own lane	- SB right is more difficult for trucks with the removal of the channelized right
Channelized right with yield (existing)	- Channelized right is easier for trucks - SB right turns would not be signalized	- Channelized right turning radius would have to be reduced to accommodate WB right turn lane at the Commercial Entrance - Smaller radius for SB right could be difficult for trucks - Vehicles would have to yield to WB thru vehicles
Uncontrolled channelized right with added WB lane	- Channelized right is easier for trucks - SB right would be uncontrolled, minimal delay for vehicles - SB right turning vehicles would have their own lane to turn into, no conflicts with WB thru vehicles	- Weaving would happen for SB right turning vehicles not wishing to turn into the Commercial Entrance - Channelized right turning radius would have to be reduced to accommodate WB right turn lane at the Commercial Entrance - Smaller radius for SB right could be difficult for trucks

VIII. Conclusion

The proposed 2nd St S access changes do not significantly impact the existing intersections in the study area and would reduce the truck traffic on 6th Ave S and 7th Ave S. However, there are some operational issues with school bus traffic and their access to and from 2nd St S with the access changes. Further discussion should be completed with the school district to understand the current bus routes and their access needs along 2nd St S, 6th Ave S, and 7th Ave S. Removing the channelized right turns at the intersection of 5th Ave S and Excelsior Blvd (C.S.A.H. 3) for southbound, westbound and eastbound would impact right turning trucks. Further investigation into the design would need to be completed to make sure truck movements are accommodated. The vehicle weaving that occurs for westbound traffic for the alternative shown in **Figure 6** is also a concern that should be taken into account if this alternative is selected.

FIGURE 1

CITY OF HOPKINS, MINNESOTA
2ND ST S ANALYSIS OF TRAFFIC & IMPACTS

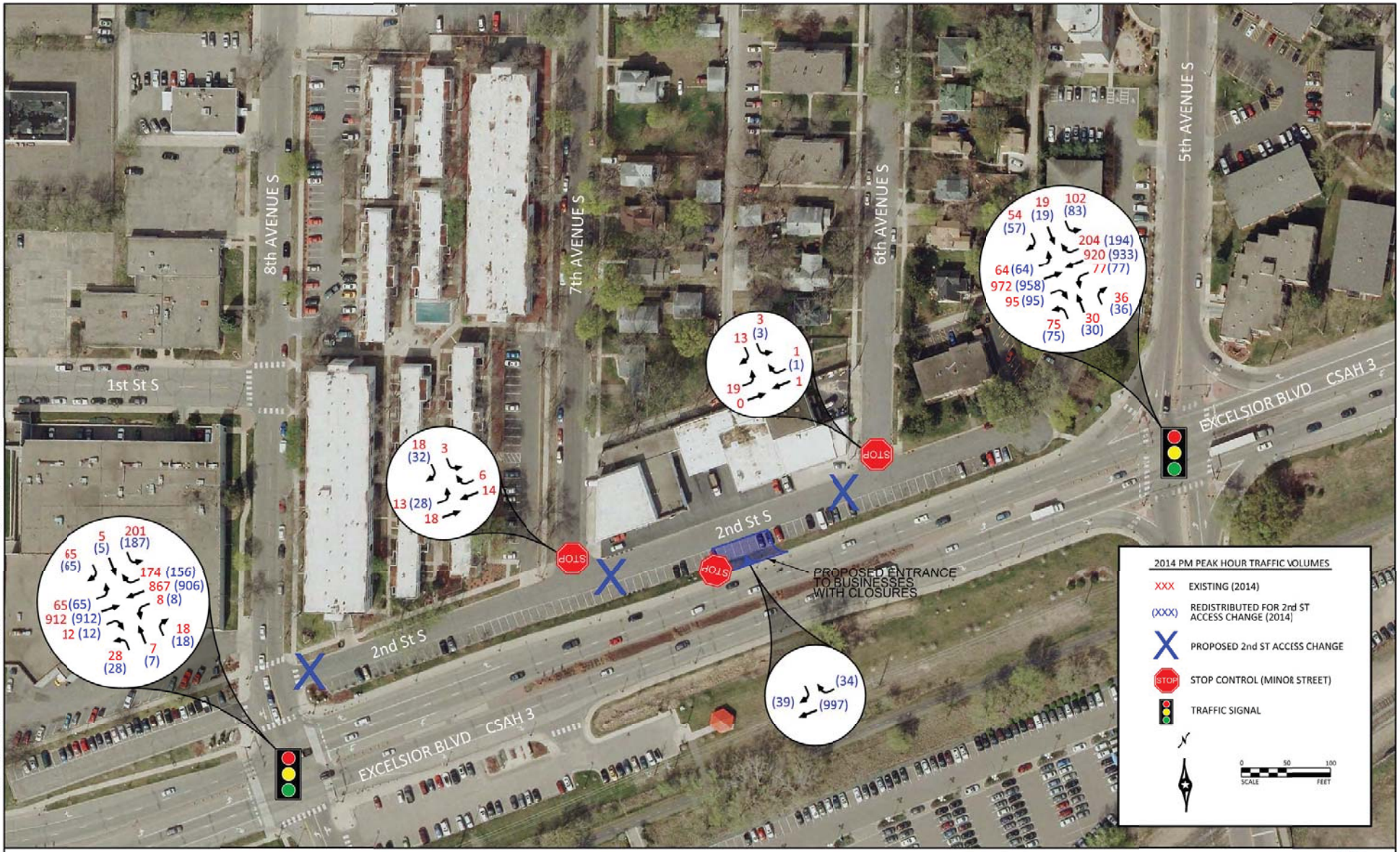

FIGURE 2 - 2014 PM PEAK HOUR TRAFFIC VOLUMES

CITY OF HOPKINS, MINNESOTA
2ND ST S ANALYSIS OF TRAFFIC & IMPACTS

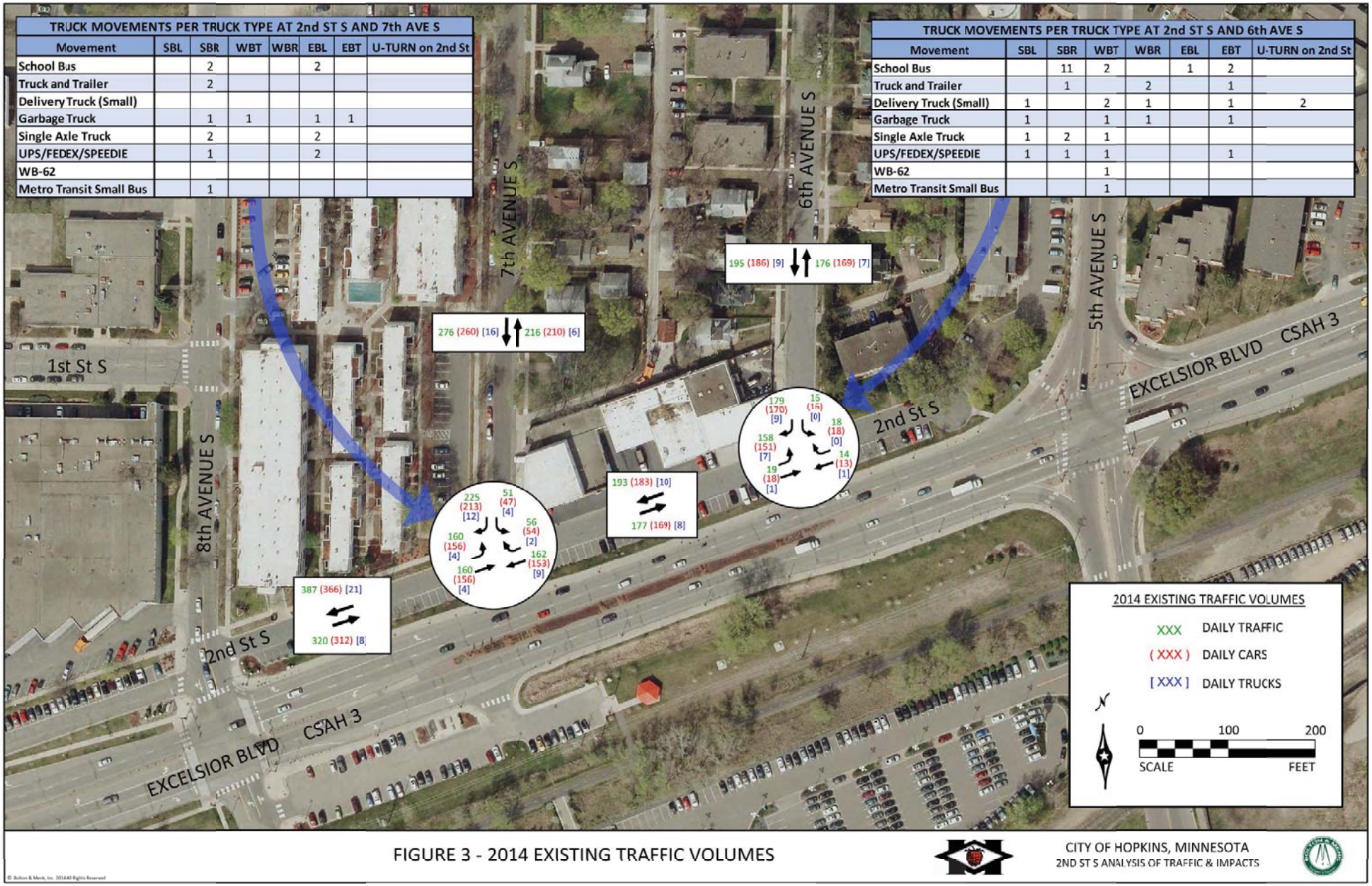

FIGURE 3 - 2014 EXISTING TRAFFIC VOLUMES

CITY OF HOPKINS, MINNESOTA
2ND ST S ANALYSIS OF TRAFFIC & IMPACTS

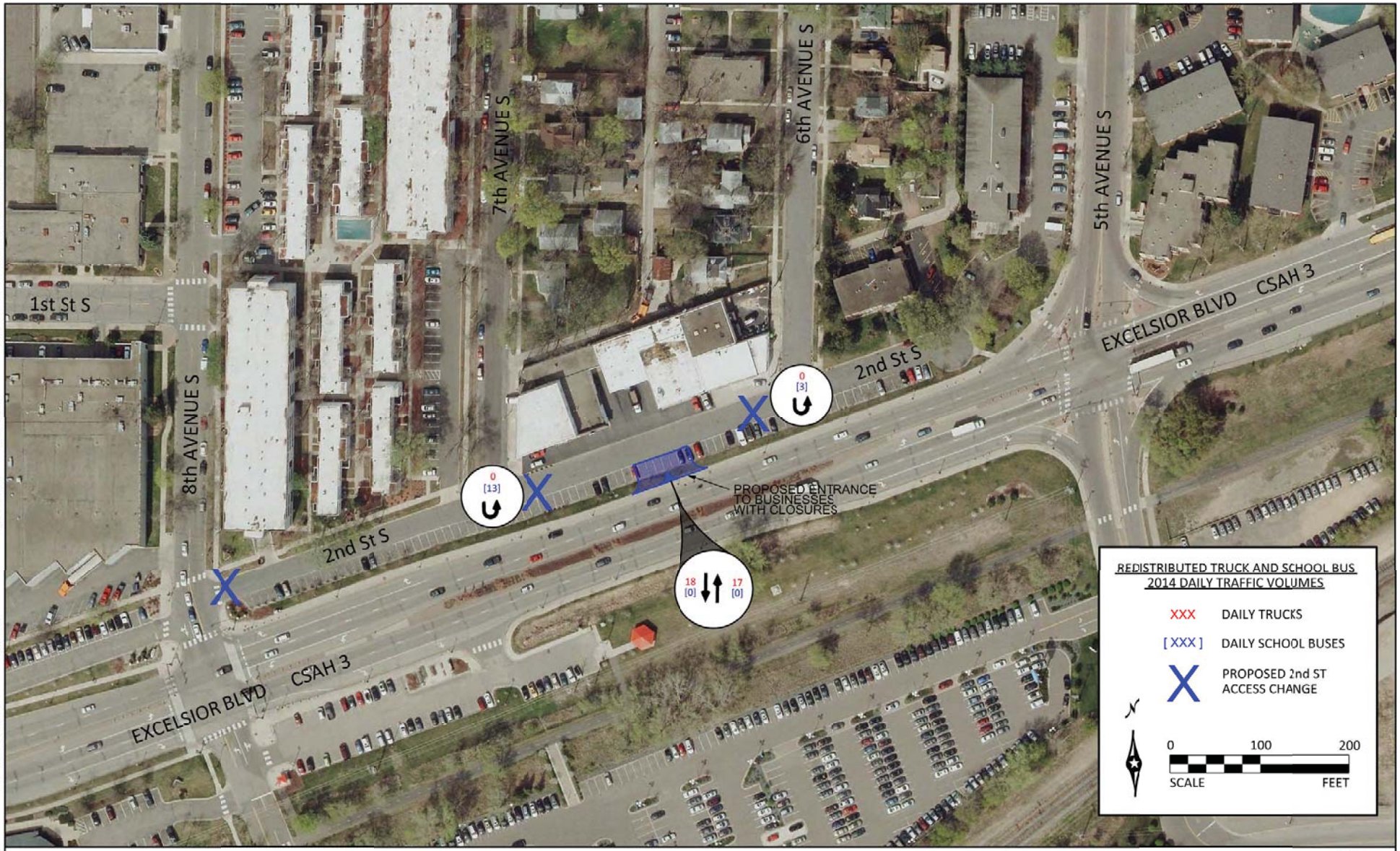

FIGURE 4 - REDISTRIBUTED TRUCK AND SCHOOL BUS 2014 DAILY TRAFFIC VOLUMES

CITY OF HOPKINS, MINNESOTA
2ND ST S ANALYSIS OF TRAFFIC & IMPACTS

FIGURE 5

CITY OF HOPKINS, MINNESOTA
2ND ST S ANALYSIS OF TRAFFIC & IMPACTS

FIGURE 6

CITY OF HOPKINS, MINNESOTA
2ND ST S ANALYSIS OF TRAFFIC & IMPACTS

Appendix C -
Artery Traffic Circulation Analysis

Presentation and Deliverables

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Consulting Engineers & Surveyors
12224 Nicollet Avenue • Burnsville, MN 55337
Phone (952) 890-0509 • Fax (952) 890-8065
www.bolton-menk.com

M E M O R A N D U M

Date: March 28, 2014
To: City of Hopkins
From: Bryan Nemeth, P.E., PTOE
Molly Stewart, P.E.
Subject: ARTery Analysis of Traffic, Intersection Configurations & Impacts

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I. Introduction

The purpose of this study is to determine whether alternatives exist to effectively control traffic and increase the availability of physical space along 8th Ave S referred to as "the ARTery", through the use of one way pairs on 8th Ave S and 9th Ave S. This analysis proposes several options for traffic operations for 8th Ave S and consequently 9th Ave S under some alternatives. The study involves documenting the conditions as it relates to operational impacts of the different corridor alternatives for key intersections in the study area. **Figure 1** illustrates the study location and the key intersections analyzed.

The outcome of this analysis is to define available options for the development of street and intersection layouts which will then be developed further during preliminary design of the ARTery corridor and related improvement projects.

II. Data Collection

Traffic counts were collected on 9th Ave S between 1st St S and 2nd St S, 8th Ave S between 1st St and Excelsior Blvd (C.S.A.H. 3), and 1st St S between 8th Ave S and 9th Ave S on March 5, 2014. Turning movement counts collected from previous work in the area were also used to fill in gaps around the study area. **Figure 1** displays the existing 2014 traffic volumes in the study area.

III. One Way vs Two Way Considerations

When considering whether to go with a one way or two way street design the following should be considered:

- Two way streets are preferred by local businesses that depend on their visibility from passing vehicles
- Two way streets are typically less confusing for visitors to the area than one way streets.
- One way streets would provide additional space for amenities both on and off the roadway.
- One way streets typically result in higher traffic flow and have increased capacity over two way streets
- One way streets typically have fewer conflicting turning movements at their intersections.

IV. Traffic Operations Analysis Intersection Delay/Level of Service (LOS)

Intersection Delay/Level of Service (LOS)

The LOS results are based on average delay per vehicle as calculated by the 2010 Highway Capacity Manual (HCM), which defines the level of service based on control delay. Control delay is the delay experienced by vehicles slowing down as they approach the intersection, the wait time at the intersection, and the time for the vehicle to speed up through the intersection and enter into the traffic stream. Intersections and each intersection approach are given a ranking from LOS A through LOS F. LOS A through D is generally perceived to be acceptable to drivers. LOS E indicates that an intersection is operating at, or very near, its capacity and that drivers experience considerable delays. LOS F indicates an intersection where demand exceeds capacity and drivers experience substantial delays.

The LOS and its associated intersection delay for signalized and unsignalized intersections is presented in **Table 1**. The delay threshold for unsignalized intersections is lower for each LOS compared to signalized intersections, which accounts for the fact that people expect a higher level of service when at a stop-controlled intersection.

Table 1 – Level of Service Criteria

LOS	Signalized Intersection Delay (sec)	TWSC/AWSC* Intersection Delay (sec)
A	≤ 10	≤ 10
B	> 10 to ≤ 20	> 10 to ≤ 15
C	> 20 to ≤ 35	> 15 to ≤ 25
D	> 35 to ≤ 55	> 25 to ≤ 35
E	> 55 to ≤ 80	> 35 to ≤ 50
F	>80	>50

*TWSC = Two-Way Stop Control, AWSC = All Way Stop Control

Modeling Methodology

Synchro/SimTraffic was used to analyze the following intersections for LOS, delay, and queuing:

- Mainstreet at 8th Ave S
- Mainstreet at 9th Ave S
- 1st St S at 8th Ave S
- 1st St S at 9th Ave S
- Excelsior Blvd (C.S.A.H. 3) at 8th Ave S
- Excelsior Blvd (C.S.A.H. 3) at 9th Ave S

Six different alternative concepts were developed for the study area. The existing conditions and these alternatives were modeled and analyzed to determine the traffic impacts of each. 2014 existing volumes were used and redistributed based on the roadway changes for each alternative. Both the AM and PM peak hours were modeled for the existing conditions and all six alternatives, however traffic volumes were significantly higher during the PM peak hour therefore those results were used for comparison and are discussed below.

Existing Conditions

The existing conditions were analyzed to determine the current level of operations of the study area and to set a baseline for the existing intersections. **Table 2** summarizes the results of this analysis for the PM peak hour.

Table 2 – Existing Conditions Intersection Analysis Summary (2014 PM Peak)

Intersection	Control Type	Method	LOS of Worst Movement	Delay (s/veh)	LOS
Mainstreet at 8th Ave S	Signalized	HCM 2010	LOS C (WBL)	12	B
Mainstreet at 9th Ave S	Signalized	HCM 2010	LOS B (EBL, WBL, NBL, & SBL)	8	A
1st St S at 8th Ave S	OWSC	HCM 2010	NONE	2	A
1st St S at 9th Ave S	AWSC	HCM 2010	NONE	5	A
Excelsior Blvd at 8th Ave S	Signalized	HCM 2010	LOS D (SBL)	9	A
Excelsior Blvd at 9th Ave S	OWSC	HCM 2010	NONE	2	A

All intersections have acceptable operations with a LOS of B or better and do not have any unacceptable movements.

Existing Conditions with Proposed 240-stall Parking Ramp

A 240 stall parking ramp is currently being considered for the southwest corner of 8th Ave S and 1st St S as shown on **Figure 1**. The ramp is proposed to serve the needs of the future Hopkins light rail station on the south side of Excelsior Blvd. To provide the most conservative situation, during the PM peak hour, it was assumed that all 240 vehicles would exit the parking ramp with 25 percent exiting onto 1st St S and 75 percent exiting onto 8th Ave S. This additional traffic is distributed through the study area and the key intersections are analyzed to determine the anticipated impacts. **Table 3** summarizes the results of this analysis for the PM peak hour.

Table 3 – Existing Conditions with 240-stall Parking Ramp Intersection Analysis Summary (2014 PM Peak)

Intersection	Control Type	Method	LOS of Worst Movement	Delay (s/veh)	LOS
MainSt at 8th Ave S	Signalized	HCM 2010	LOS C (WBL)	11	B
MainSt at 9th Ave S	Signalized	HCM 2010	LOS B (EBL, WBL, NBL, & SBL)	8	A
1st St S at 8th Ave S	OWSC	HCM 2010	NONE	4	A
1st St S at 9th Ave S	AWSC	HCM 2010	NONE	5	A
Excelsior Blvd at 8th Ave S	Signalized	HCM 2010	LOS D (SBL & SBT)	13	B
Excelsior Blvd at 9th Ave S	OWSC	HCM 2010	NONE	2	A

All intersections have acceptable operations with a LOS of B or better and do not have any unacceptable movements. The proposed parking ramp and the increased traffic is not anticipated to negatively impact the operations of the key intersections.

Alternative 1A

Figure 2 illustrates the proposed Alternative 1A traffic operations. Alternative 1A converts 8th Ave S and 9th Ave S into one way pairs between 1st St S and Mainstreet. A free right is added for the eastbound movement at the intersection of 1st St South and 8th Ave South. At the intersection of 9th Ave S and 1st St S a divider is placed to restrict the southbound thru and right movement as well as the northbound thru movement. This essentially provides a southbound free movement with no stops. The redistributed traffic in the study area and the key intersections are analyzed to determine the operational impacts. **Table 4** summarizes the results of this analysis for the PM peak hour.

Table 4 – Alternative 1A Intersection Analysis Summary (2014 PM Peak)

Intersection	Control Type	Method	LOS of Worst Movement	Delay (s/veh)	LOS
MainSt at 8th Ave S	Signalized	HCM 2010	LOS C (WBT)	14	B
MainSt at 9th Ave S	Signalized	HCM 2010	LOS C (WBL, WBT, & WBR)	20	C
1st St S at 8th Ave S	OWSC	HCM 2010	NONE	3	A
1st St S at 9th Ave S	Unsignalized	HCM 2010	NONE	2	A
Excelsior Blvd at 8th Ave S	Signalized	HCM 2010	LOS C (NBL, NBT, SBL, & SBT)	15	B
Excelsior Blvd at 9th Ave S	OWSC	HCM 2010	NONE	2	A

All intersections have acceptable operations with a LOS of C or better and do not have any unacceptable movements. Results indicate that operations are not significantly different than existing. It should be noted that operations at the worst intersection (Excelsior Blvd at 8th Ave S) were improved by the Alternative 1A condition.

Alternative 1B

Figure 3 illustrates the proposed Alternative 1B traffic operations. Alternative 1B converts 8th Ave S and 9th Ave S into one way pairs between 1st St S and Mainstreet. A free right is added for the eastbound approach at the intersection of 1st St S and 8th Ave S. This alternative removes the divider at the intersection of 1st St S and 9th Ave S from Alternative 1A. The redistributed traffic in the study area and the key intersections are analyzed to determine the impacts. **Table 5** summarizes the results of this analysis for the PM peak hour.

Table 5 – Alternative 1B Intersection Analysis Summary (2014 PM Peak)

Intersection	Control Type	Method	LOS of Worst Movement	Delay (s/veh)	LOS
MainSt at 8th Ave S	Signalized	HCM 2010	LOS B (EBL, WBT, NBL, & SBL)	8	A
MainSt at 9th Ave S	Signalized	HCM 2010	LOS C (WBL)	13	B
1st St S at 8th Ave S	OWSC	HCM 2010	NONE	2	A
1st St S at 9th Ave S	AWSC	HCM 2010	NONE	6	A
Excelsior Blvd at 8th Ave S	Signalized	HCM 2010	LOS D (SBL)	15	B
Excelsior Blvd at 9th Ave S	OWSC	HCM 2010	NONE	2	A

All intersections have acceptable operations with a LOS of B or better and do not have any unacceptable movements. Results indicate that operations are not significantly different than existing.

Alternative 2A

Figure 4 illustrates the proposed Alternative 2A traffic operations. Alternative 2A converts 8th Ave S and 9th Ave S into one way pairs between 1st St S and Mainstreet. A roundabout is added at the intersection of 8th Ave S and 1st St S. The redistributed traffic in the study area and the key intersections are analyzed to determine the impacts. **Table 6** summarizes the results of this analysis for the PM peak hour.

Table 6 – Alternative 2A Intersection Analysis Summary (2014 PM Peak)

Intersection	Control Type	Method	LOS of Worst Movement	Delay (s/veh)	LOS
MainSt at 8th Ave S	Signalized	HCM 2010	LOS B (EBL, WBT, NBL, NBT, & SBL)	9	A
MainSt at 9th Ave S	Signalized	HCM 2010	LOS C (WBL)	15	B
1st St S at 8th Ave S	Roundabout	HCM 2010	NONE	6	A
1st St S at 9th Ave S	AWSC	HCM 2010	NONE	4	A
Excelsior Blvd at 8th Ave S	Signalized	HCM 2010	LOS D (SBL)	16	B
Excelsior Blvd at 9th Ave S	OWSC	HCM 2010	NONE	2	A

All intersections have acceptable operations with a LOS of B or better and do not have any unacceptable movements. Results indicate that operations are not significantly different than existing.

Alternative 2B

Figure 5 illustrates the proposed Alternative 2B traffic operations. Alternative 2B converts 8th Ave S and 9th Ave S into one way pairs between 1st St S and Mainstreet. Roundabouts are added at the intersections of 9th Ave S/1st St S and 8th Ave S/1st St S. The redistributed traffic in the study area and the key intersections are analyzed to determine the impacts. **Table 7** summarizes the results of this analysis for the PM peak hour.

Table 7 – Alternative 2B Intersection Analysis Summary (2014 PM Peak)

Intersection	Control Type	Method	LOS of Worst Movement	Delay (s/veh)	LOS
MainSt at 8th Ave S	Signalized	HCM 2010	LOS B (EBL, WBT, NBL, NBT, & SBL)	9	A
MainSt at 9th Ave S	Signalized	HCM 2010	LOS C (WBL)	14	B
1st St S at 8th Ave S	Roundabout	HCM 2010	NONE	6	A
1st St S at 9th Ave S	Roundabout	HCM 2010	NONE	5	A
Excelsior Blvd at 8th Ave S	Signalized	HCM 2010	LOS D (SBL)	15	B
Excelsior Blvd at 9th Ave S	OWSC	HCM 2010	NONE	2	A

All intersections have acceptable operations with a LOS of B or better and do not have any unacceptable movements. Results indicate that operations are not significantly different than existing. Extremely limited change in operations was noted between Alternatives 2A and 2B. Therefore, any value in adding a roundabout to the intersection of 1st St S and 9th Ave S appears minimal from a vehicular traffic operations standpoint.

Alternative 3

Figure 6 illustrates the proposed Alternative 3 traffic operations. Alternative 3 adds a roundabout at the intersection of 8th Ave S and 1st St S but 8th Ave S and 9th Ave S are maintained as two way roadways. Existing traffic is analyzed for the key intersections with the traffic control changes to determine the impacts. **Table 8** summarizes the results of this analysis for the PM peak hour.

Table 8 – Alternative 3 Intersection Analysis Summary (2014 PM Peak)

Intersection	Control Type	Method	LOS of Worst Movement	Delay (s/veh)	LOS
MainSt at 8th Ave S	Signalized	HCM 2010	LOS B (EBL, WBL, WBT, NBL, SBL, & SBT)	9	A
MainSt at 9th Ave S	Signalized	HCM 2010	LOS B (EBL, EBT, WBL, WBT, NBL, & WBL)	10	B
1st St S at 8th Ave S	Roundabout	HCM 2010	NONE	5	A
1st St S at 9th Ave S	AWSC	HCM 2010	NONE	6	A
Excelsior Blvd at 8th Ave S	Signalized	HCM 2010	LOS D (SBL & SBT)	15	B
Excelsior Blvd at 9th Ave S	OWSC	HCM 2010	NONE	2	A

All intersections have acceptable operations with a LOS of B or better and do not have any unacceptable movements. Results indicate that operations are not significantly different than existing.

Alternative 4

Figure 7 illustrates the proposed Alternative 4 traffic operations. Alternative 4 converts 8th Ave S and 9th Ave S into one way pairs between Excelsior Blvd and Mainstreet. 9th Ave S is realigned south of 1st St S to form a new T-intersection. The redistributed traffic in the study area and the key intersections are analyzed to determine the impacts. **Table 9** summarizes the results of this analysis for the PM peak hour.

Table 9 – Alternative 4 Intersection Analysis Summary (2014 PM Peak)

Intersection	Control Type	Method	LOS of Worst Movement	Delay (s/veh)	LOS
MainSt at 8th Ave S	Signalized	HCM 2010	LOS B (EBL, WBT, NBL, & SBL)	8	A
MainSt at 9th Ave S	Signalized	HCM 2010	LOS C (WBL)	14	B
1st St S at 8th Ave S	OWSC	HCM 2010	NONE	2	A
1st St S at 9th Ave S	AWSC	HCM 2010	LOS B (WBL & WBT)	7	A
Excelsior Blvd at 8th Ave S	Signalized	HCM 2010	LOS D (SBL & SBT)	14	B
Excelsior Blvd at 9th Ave S	OWSC	HCM 2010	NONE	2	A
New T-Intersection	OWSC	HCM 2010	LOS B (NBR)	2	A

All intersections have acceptable operations with a LOS of B or better and do not have any unacceptable movements. Results indicate that operations are not significantly different than existing.

V. Conclusion

The six alternatives do not significantly impact the traffic operations in the study area. All intersections are anticipated to operate at an acceptable LOS under each of the alternatives presented. **Table 10** includes a summary of the restricted movements with alternative routes for the now restricted movements for the different Alternatives analyzed. **Table 11** includes a matrix of the positives and negatives of the alternatives considered.

Table 10 – Restricted Movements with One Way Operation

Alternative	Intersection	Restricted Movement(s)	Other Considerations
1A, 1B, 2A, 2B, 4	Mainstreet/9th Ave S	NBT, NBL, NBR	Vehicles can make these movements at the intersection of Mainstreet/8th Ave S
1A, 1B, 2A, 2B, 4	Mainstreet/8th Ave S	EBR, WBL, SBT	Vehicles can make these movements at the intersection of Mainstreet/9th Ave S
1A	1st St S/9th Ave S	EBT	Vehicles can travel north to Mainstreet, then south on 9th Ave S to access 1st St S between 9th Ave S and 8th Ave S
1A, 1B, 2A, 2B, 4	1st St S/9th Ave S	EBL	Vehicles can make this movement at 10th Ave S
1A	1st St S/9th Ave S	WBT	Vehicles can travel north to Mainstreet then south on 10th Ave S to access 1st St S between 10th Ave S and 9th Ave S
1A	1st St S/9th Ave S	WBL	Vehicles can make these movements at the intersection of 1st St S/8th Ave S
1A, 1B, 2A, 2B, 4	1st St S/9th Ave S	WBR	Vehicles can travel north via 8th Ave S
4	1st St S/9th Ave S	NBL	Vehicles can access 1st St S via 8th Ave S
1A	1st St S/9th Ave S	NBR	Vehicles can travel north via 8th Ave S
1A, 1B, 2A, 2B, 4	1st St S/9th Ave S	NBT	Vehicles can travel north via 8th Ave S
1A	1st St S/8th Ave S	NBL	Vehicles can travel north to Mainstreet, then south on 9th Ave S to access 1st St S between 9th Ave S and 8th Ave S
1A, 1B, 2A, 2B, 4	1st St S/8th Ave S	SBT	Vehicles can travel south via 5th Ave S or 11th Ave S
1A, 1B, 2A, 2B, 4	1st St S/8th Ave S	SBR	Vehicles can travel south on 9th Ave S to access 1st St S between 9th Ave S and 8th Ave S

Table 11 – Alternatives Summary

Alternative	Operations (Avg LOS)	Potential Positives	Potential Negatives
Existing	A	- Two way traffic maintained	- No additional space on ARTery for amenities
Existing + Parking Facility	A	- Two way traffic maintained - Large parking facility space provided	- No additional space on ARTery for amenities
1A	A	- One way traffic on 8th and 9th Ave S provides additional space for amenities on ARTery - Southbound one way is continuous - Large parking facility space provided - Continuous southbound movement provided	- 1st St S is one way - Access is limited at 1st St S/9th Ave S intersection
1B	A	- One way traffic on 8th and 9th Ave S provides additional space for amenities on ARTery - Large parking facility space provided	- No continuous southbound movement
2A	A	- One way traffic on 8th and 9th Ave S provides additional space for amenities on ARTery - Roundabout provides an access feature - Large parking facility space provided	- No continuous southbound movement
2B	A	- One way traffic on 8th and 9th Ave S provides additional space for amenities on ARTery - Roundabout provides an access feature	- Roundabout at 1st St S and 9th Ave S impacts multiple properties - Parking facility design slightly smaller
3	A	- Two way traffic maintained - Roundabout provides an access feature - Large parking facility space provided	- No additional space on ARTery for amenities
4	A	- One way traffic on 8th and 9th Ave S provides additional space for amenities on ARTery - Southbound one way is continuous - Southbound one way maintains travel speeds (no turns)	- Parking ramp design impacted - Larger footprint of public ROW, less tax generating property

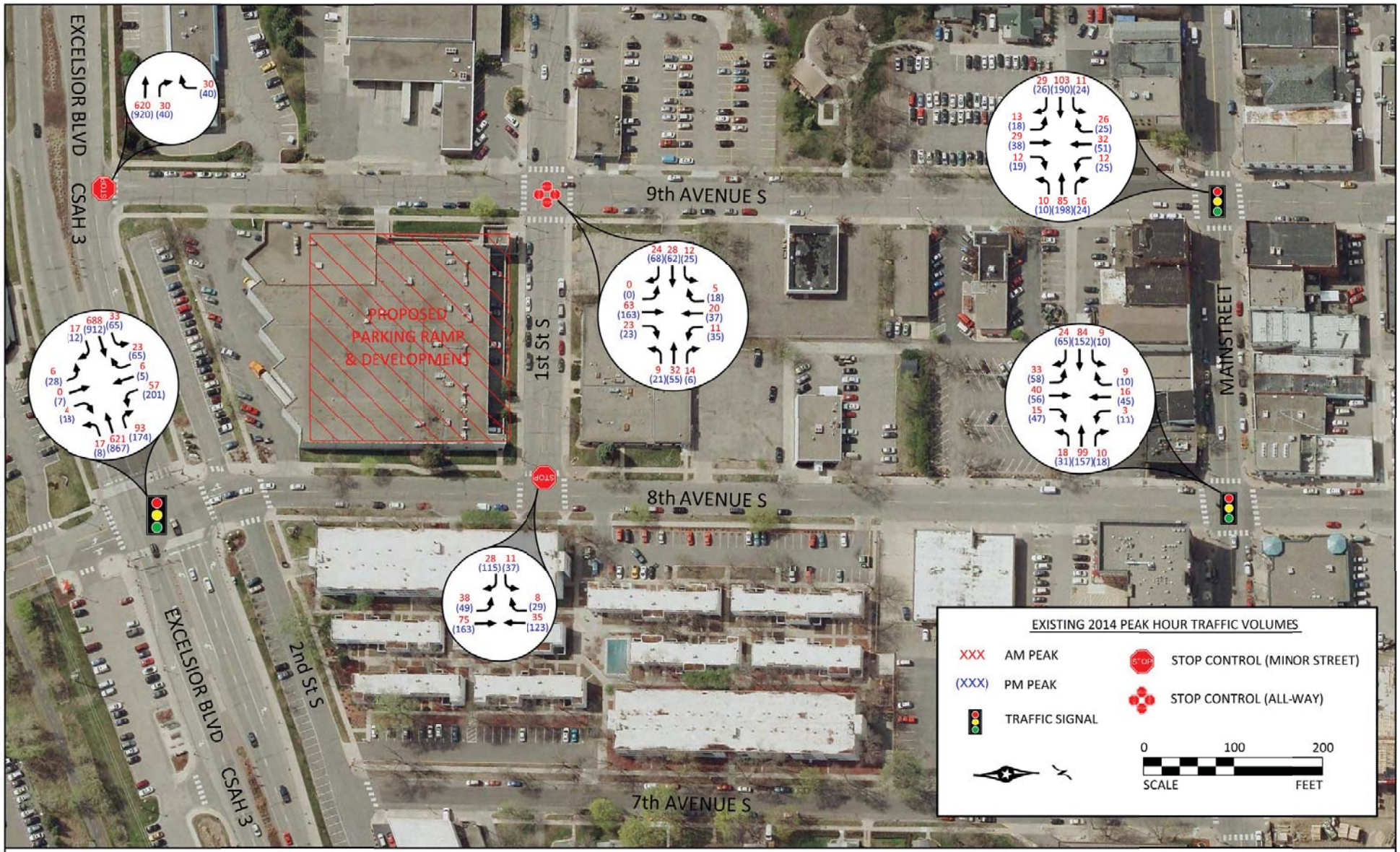

FIGURE 1 - EXISTING 2014 PEAK HOUR TRAFFIC VOLUMES

CITY OF HOPKINS, MINNESOTA
ARTERY ANALYSIS OF TRAFFIC, INTERSECTION CONFIGURATIONS & IMPACTS

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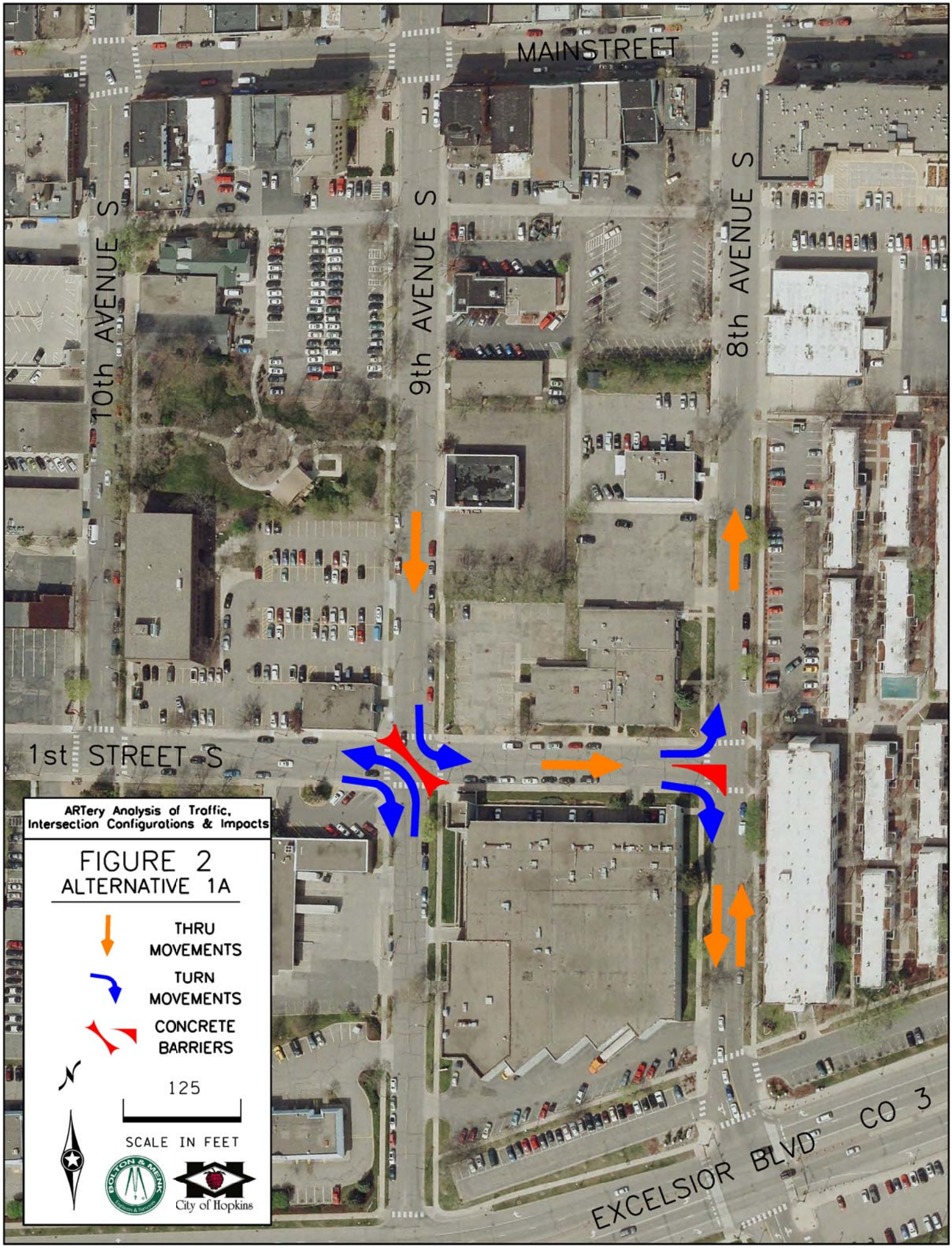
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10th AVENUE S
9th AVENUE S
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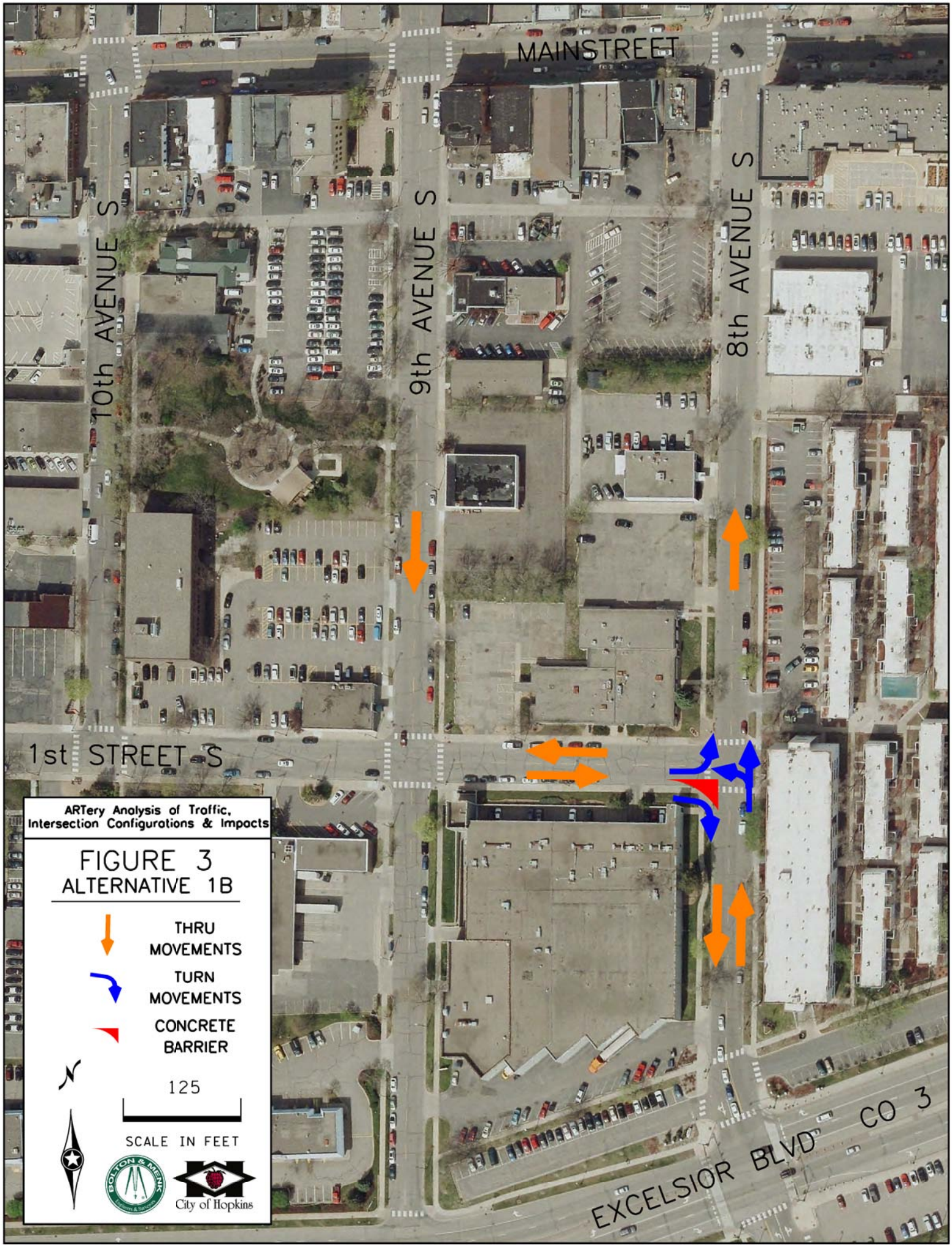
1st STREET S
EXCELSIOR BLVD
CO 3
ARTery Analysis of Traffic, Intersection Configurations & Impacts
FIGURE 2
ALTERNATIVE 1A
THRU MOVEMENTS
TURN MOVEMENTS
CONCRETE BARRIERS
125
SCALE IN FEET
BOLTON & MENK
City of Hopkins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ARTery Analysis of Traffic, Intersection Configurations & Impacts
FIGURE 3
ALTERNATIVE 1B
THRU MOVEMENTS
TURN MOVEMENTS
CONCRETE BARRIER
125
SCALE IN FEET
BOLTON & MENK
City of Hopkins


MAINSTREET
10th AVENUE S
9th AVENUE S
8th AVENUE S
1st STREET S
EXCELSIOR BLVD
CO 3
ARTery Analysis of Traffic, Intersection Configurations & Impacts
FIGURE 4
ALTERNATIVE 2A
THRU MOVEMENTS
ROUNDABOUT
ROADWAY RELOCATION
N
125
SCALE IN FEET
BOLTON & MENK
City of Hopkins


MAINSTREET
10th AVENUE S
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EXCELSIOR BLVD
CO 3
ARTery Analysis of Traffic, Intersection Configurations & Impacts
FIGURE 5
ALTERNATIVE 2B
THRU MOVEMENTS
ROUNDABOUT
ROADWAY RELOCATION
125
SCALE IN FEET
BOLTON & MENK
City of Hopkins


MAINSTREET
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1st STREET S
EXCELSIOR BLVD
CO 3
ARTery Analysis of Traffic, Intersection Configurations & Impacts
FIGURE 6
ALTERNATIVE 3
THRU MOVEMENTS
ROUNDABOUT
ROADWAY RELOCATION
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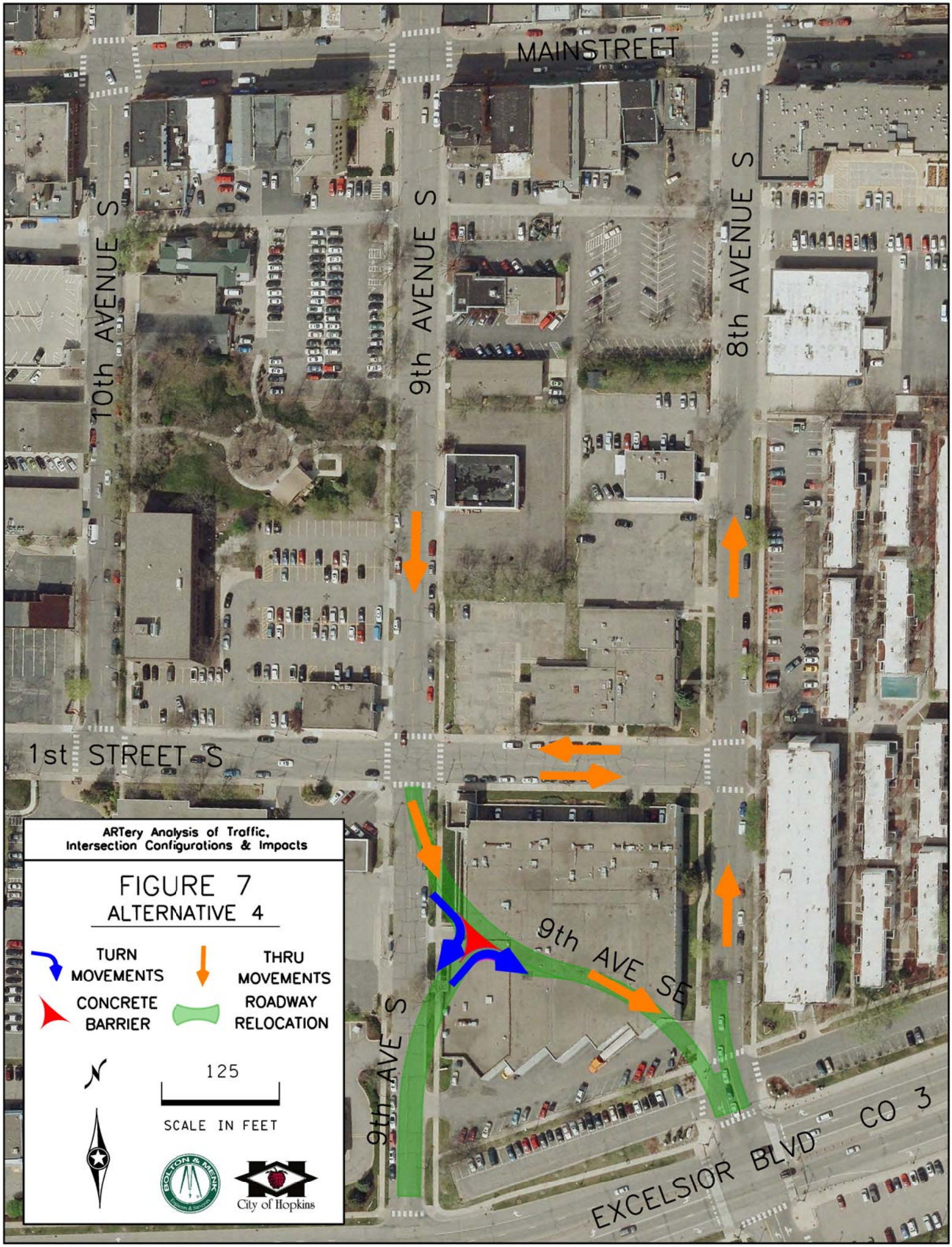
SCALE IN FEET
BOLTON & MENK
City of Hopkins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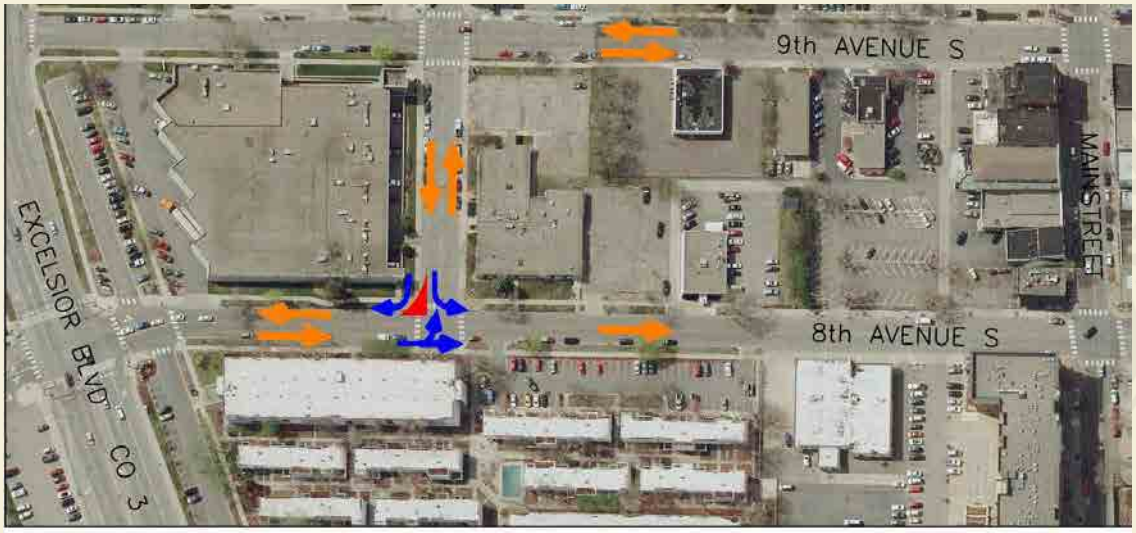
CO 3
ARTery Analysis of Traffic, Intersection Configurations & Impacts
FIGURE 7
ALTERNATIVE 4
TURN MOVEMENTS
THRU MOVEMENTS
CONCRETE BARRIER
ROADWAY RELOCATION
N
125
SCALE IN FEET
BOLTON & MENK
City of Hopkins

Appendix D -
December 2014 Open House

Presentation and Photos

D.2

The Artery | **Balancing the Public Space**



BOLTON & MENK, INC.
Consulting Engineers & Surveyors

The Artery | **Balancing the Public Space**

- Competing Interests for Space:
  - Open space for pedestrians on West side: 15’-25’
  - Traffic Lanes: 11’ – Each
  - Parking Lanes: 8’ – 10’ Each
  - Bicycle Facility: 12’
  - Stormwater Management Space: 6’
  - Sidewalk & Boulevard on East side: 11’
- **Total of 82’ – 98’ but only 66’ to work within**

BOLTON & MENK, INC.
Consulting Engineers & Surveyors

The Artery | **Thematic Styles**

Which thematic style best fits your vision for the Artery?

- Styles can complement or contrast adjacent uses
- Styles can tell a story – history, art, geography
- Styles set a precedent for all elements of the project – small to large scale

BOLTON & MENK, INC.
Consulting Engineers & Surveyors

The Artery | **Public Engagement**

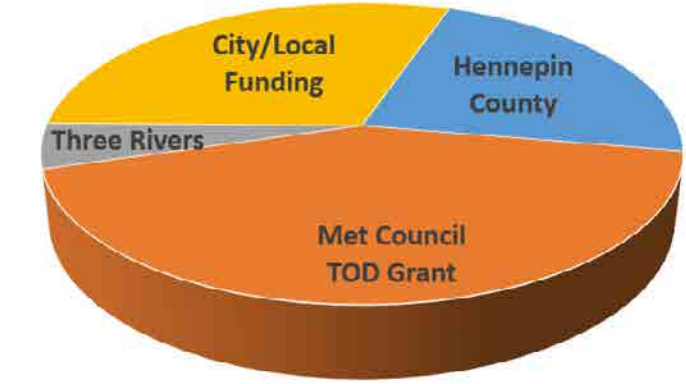
- ✓ Art Summit
- ✓ Meeting with 2nd St Commercial Properties
- ✓ Neighborhood Meeting: 6th & 7th Avenue Properties
- ✓ Meeting(s) with 8th Avenue Properties
- ✓ Artist Outreach
- ***Public Open House***
- 3-Day Tactical Visualization (Summer, 2015)

BOLTON & MENK, INC.
Consulting Engineers & Surveyors

D.4

The Artery | **Project Costs & Funding**

- Estimated Project Cost of Artery is $3.1 million
  - $695,000 Hennepin County Funding
  - $1,325,000 Met Council TOD Grant
  - Three Rivers Park District Participation
  - City Funds



BOLTON & MENK, INC.
Consulting Engineers & Surveyors

The Artery | **Project Update**

Project Next Steps

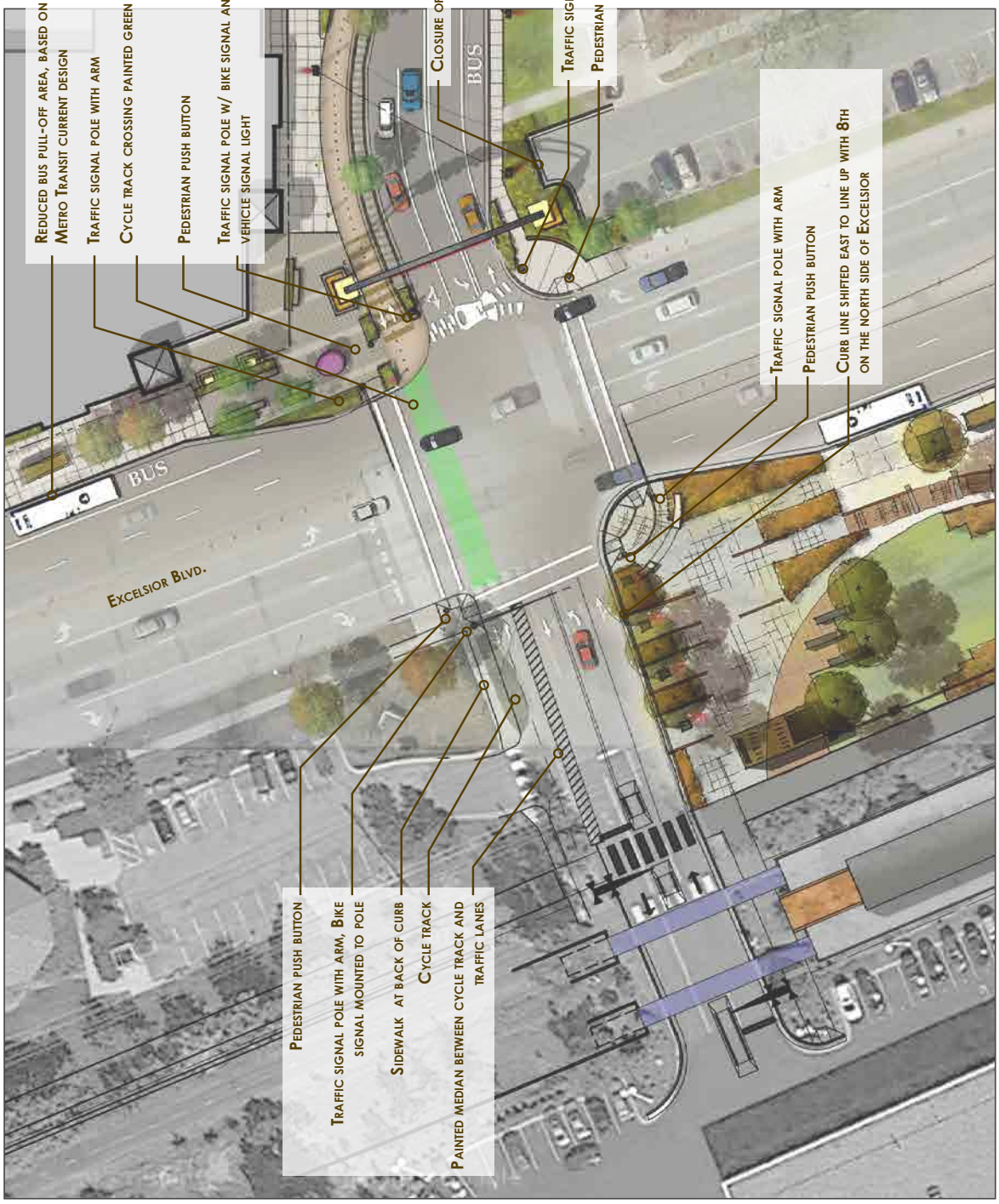
- Tonight's input for the project will be analyzed and compiled
- Preliminary plans will be finalized based on comments
- Final design technical plans developed
- Final design art input sought out as technical plans are developed

BOLTON & MENK, INC.
Consulting Engineers & Surveyors


LIVE THE DREAM
LTD

Circulation Coordination: 8th & Excelsior

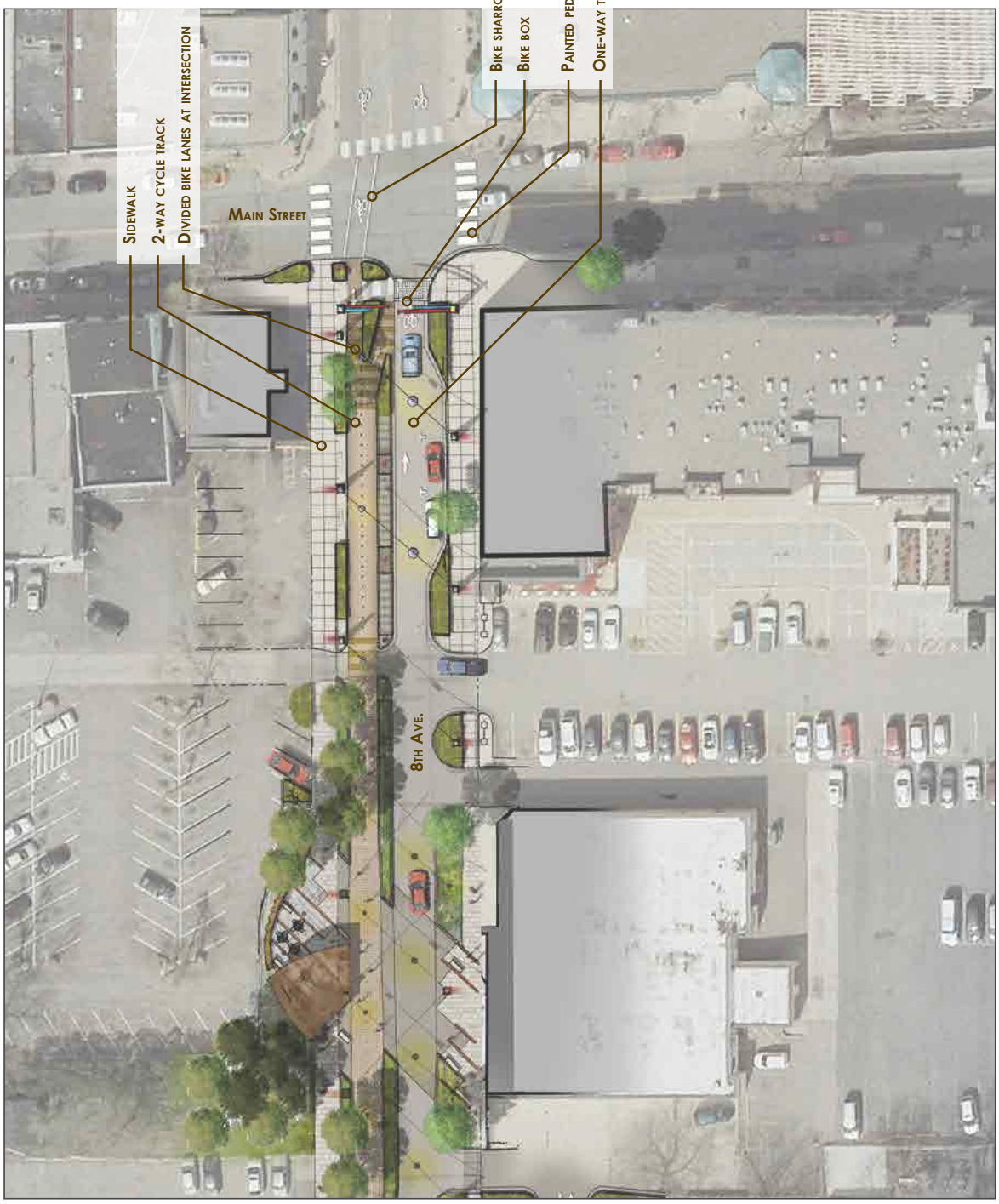
D.6



ARTERY City of Hopkins, Minnesota

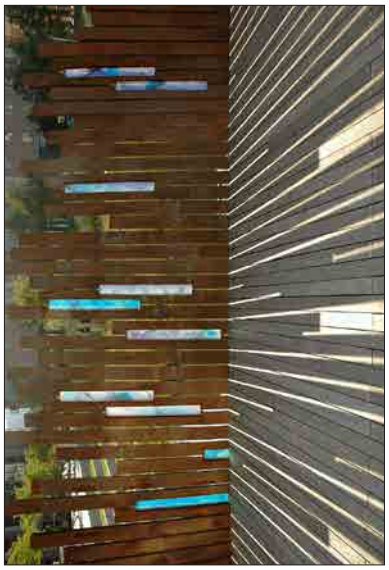
Circulation Coordination: 8th 2-Way/1-Way

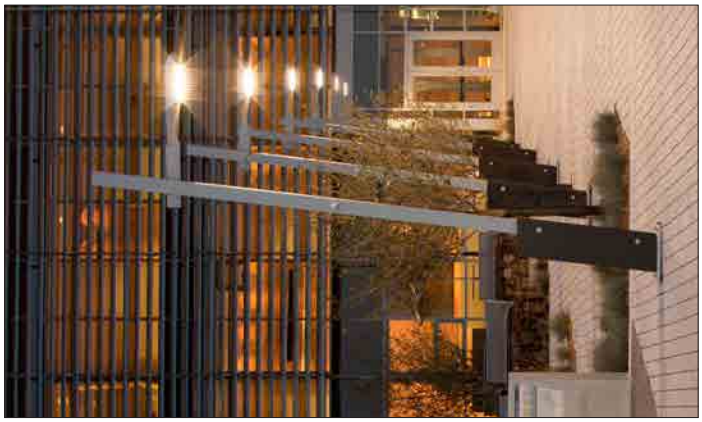
Circulation Coordination: 8th & Mainstreet



Character Preference: Historic

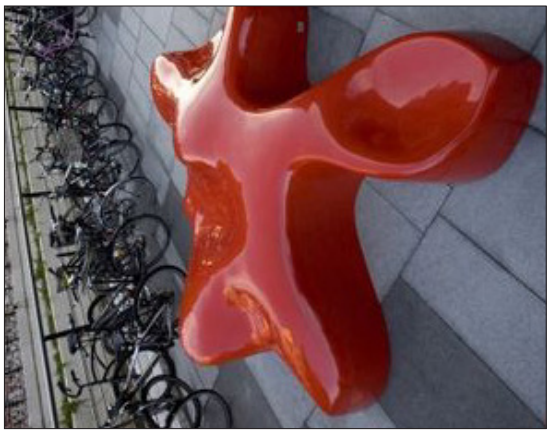
Character Preference: Post Industrial

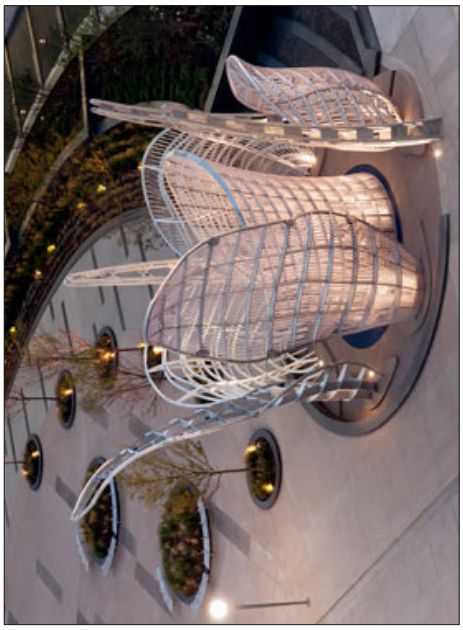




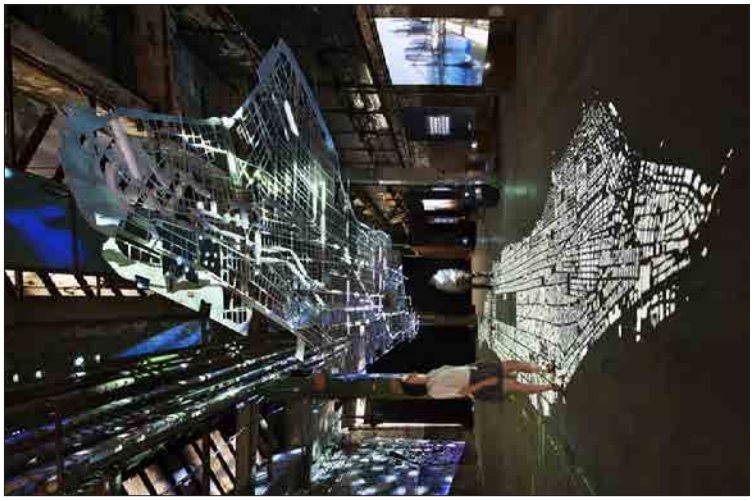
Character Preference: Contemporary

Character Preference: Whimsical





Incorporating Technology



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Appendix E -
Artery Experiment Report

Photos and Report

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THE ARTERY EXPERIMENT

An open streets event designed to educate residents and visitors of Hopkins, Minnesota about the Artery and solicit their feedback on its final design

Summer 2015

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Funding for The Artery Experiment is provided by the Center for Prevention at Blue Cross and Blue Shield of Minnesota, as part of Blue Cross' long-term commitment to tackling the leading causes of preventable disease: tobacco use, lack of physical activity, and unhealthy eating.

The Artery Experiment was also made possible in part thanks to these generous sponsors:

This report was written by:
Alyssa Kelley
Economic Development Intern
Planning and Economic Development
City of Hopkins
July 2015

All photographs appearing in this document were taken by City staff or volunteers unless otherwise noted.

The Artery Experiment would not have been possible without the vision and kind direction of Kersten Elverum, Director of Planning and Economic Development, City of Hopkins, and of Meg Beekman, Community Development Coordinator, City of Hopkins; nor without the generous support provided by the City's Public Works Department and the many volunteers who contributed their time and energy and provided feedback to the project.

Thank you.

Table of Contents

Executive Summary

Restricted by budgetary, information, and time constraints, governments are often unable to produce community projects that truly reflect the preferences and needs of the community. The City of Hopkins did not want to fall victim to such a circumstance when planning one of its major undertakings, the Artery; rather, it wanted to actively ensure that the money it would be spending on a large-scale reconstruction project would be well spent *and* that the project itself would be beneficial to and desired by the community.

Enter the Artery Experiment. Held on Saturday, July 11, 2015, this well attended one-day event was designed to introduce to Hopkins residents and visitors plans for the Artery – a reconstruction of 8th Avenue South – and to seek their feedback on the proposed designs. Featuring nearly twenty different temporary installations, meant to mimic permanent components featured in the initial plans, the Artery Experiment provided guests with an opportunity to experience what is proposed currently for 8th Avenue South and to influence what will actually be built.

This report presents a summary of each of the installations featured at the Artery Experiment. When relevant, a "lessons learned" section is included and is intended to aid people who may be planning similar events in the future. The report also contains summaries of the feedback provided in the preference surveys that were distributed to guests at the event.

The collaborative and cooperative approach that was essential to the successful planning and execution of the Artery Experiment cannot be overemphasized. The event was a substantial endeavor involving the energy and expertise of many different people from many different areas, including: artists, planners, Hopkins' Public Works employees, government agency staff, elected officials, Hopkins' Police and Fire Departments, volunteers, engineers, bicycle enthusiasts, supporters of the arts, health professionals, musicians, etc. The Artery Experiment was a success because of the dedication of all those who contributed to it.

Right: Illuminated trees line 8th Avenue South the night of the Artery Experiment. As seen in the photo, the cycle track remained throughout the weekend, though the other installations were taken down. Light installations, meant both to increase safety and provide visual interest, are a featured design element in the final Artery plans.

Overview

The Artery

The need to improve the connection between Excelsior Boulevard and Mainstreet for vehicles, pedestrians, *and* bicyclists has long been known by the City of Hopkins, its residents, and its visitors.

The plan for a Southwest LRT Green Line Extension station at 8th Avenue South and Excelsior Boulevard has only increased that need and brought additional attention to fulfilling it. A completed line and this station - named Downtown Hopkins - will further increase the need to safely accommodate pedestrians, bicyclists, and vehicle drivers who are traveling between, to, and from the light rail station and Downtown Hopkins.

8th Avenue South is a sensible location for accommodating this need through a north-south connection between Mainstreet and Excelsior Boulevard for a few reasons, namely:

- It is the intersection of the future Downtown Hopkins LRT station;
- It has signaled intersections at both Excelsior Boulevard and Mainstreet;
- There is an approximate 3-block missing link between two major regional trails; 8th Avenue South has been identified as the connection between the Lake Minnetonka Regional Trail and the Cedar Lake Regional Trail; and
- It presents significant redevelopment opportunities – one of which is the recently completed Gallery Flats Apartments on the former Park Nicollet medical clinic site on the corner of 8th Avenue South and 1st Street South.

The City of Hopkins has created a plan and design for a "vibrant, interactive, and pedestrian seductive" 8th Avenue South – one that fully captures the connection between the proposed Downtown Hopkins LRT station and its historic Mainstreet and builds upon the corridor's existing strengths. This connection will be called the Artery.

The Artery, as proposed, includes the following:

- Conversion of 8th Avenue into a one-way road from north of 1st Street South to Mainstreet
- Construction of a two-way cycle track that connects the Minnetonka Regional Trail with the Cedar Lake Regional Trail
- Enlargement of the pedestrian space
- Addition of landscaping and storm water treatment
- Creation of places for people to gather and experience art in its various forms

Opposite page: A rendering of the reconstructed Excelsior Boulevard and 8th Avenue South intersection – a crucial redesign featured in plans for the Artery – from the City's website
At right: three of the proposed plans for the Artery, featuring the two-way cycle track (top), sustainable water management components (middle), and Artery Plaza (bottom), a shaded and vegetated seating area

The Artery Experiment

The Artery *Experiment* was a temporary installation of the permanent design elements planed for the Artery. This Artery "test-run" was designed to encourage Hopkins residents and visitors to experience the layout and functionality of the initial design and construction plans and then to provide comments and feedback that would be used to inform the final plans.

Top: Children from the crowd are invited to dance with students from House of Dance Twin Cities
Bottom: Members of the Blake Road Corridor Collaborative's newly formed bike group ride through the cycle track

The main goals of this fun-filled open streets event were: to introduce the project to the community, to test out plans for the Artery, and to ask them to shape the final design of this special place.

Many of the elements of the final design appeared in temporary installations at the Artery Experiment. Because of their temporary nature, many of the Artery Experiment elements were *interpretations* of the final elements; they were meant to capture the intent of the final designs. Pamphlets, featuring explanations of the installations and a map of the event, were available. It also appears in the Appendix.

Nearby every installation at the Artery Experiment was a "What is This Thing?" sign. Meant to educate and inform attendees of all ages and literacy abilities, these signs used both colorful depictions and simple text to relay their messages. Signs explained what an installation was, but also identified *why* the installation was part of the Artery Experiment and *what it related to* in the Artery's final design. A complete list of the installations is detailed in the next section; all of the "What is This Thing?" signs can be found in the Appendix.

The Artery Experiment was held on Saturday, July 11, from 11:00 A.M to 4:00 P.M. along the proposed Artery site – 8th Avenue South, from just north of Mainstreet at the terminus of the Lake Minnetonka Regional Trail, to Excelsior Boulevard. The open streets component was between Mainstreet and 1st Street South; vehicular traffic was still permitted on 8th Avenue north and south of the designated area.

Based on food sales (approximately 450 meals were sold from one vendor) and the number of event pamphlets distributed (approximately 600), it was estimated that upwards of 1,500 people attended the event.

Installations

Cycle Track

A cycle track, also known as a protected bikeway, separates cyclists from vehicular traffic and pedestrians for the increased safety of everyone using the street. Because the cycle track is one of the most prominent features of the Artery, strong attempts were made to have the temporary installation mimic the final design planned. The track extended along 8th Avenue South from just north of Mainstreet, at a terminus of the Lake Minnetonka Regional Trail, to Excelsior Boulevard.

The final installation will extend across Excelsior Boulevard, connecting the cycle track to the Cedar Lake Regional Trail, as well; however, the temporary installation was unable to intersect the heavily trafficked Excelsior Boulevard without more substantial traffic calming and safety measures. The cycle track measured approximately 0.2 miles long.

In an effort to provide the greatest number of bicyclists exposure to the cycle track, the installation remained open throughout the weekend. Though the Artery Experiment was a one-day event, the cycle track remained functional through Monday morning when it was then taken down.

The exterior barrier of the cycle track was comprised of a few distinct elements. Both vertical and horizontal elements were used in order to provide the most visually stimulating experience in an attempt to make pedestrians and bicyclists aware of the track.

Above: Groups of bicyclists using the immensely popular cycle track throughout the day

A private firm was contracted to close down the street, to post signage to divert traffic, and to lay the cycle track designation on the ground using roadway tape.[1]

Astroturf, purchased at a local home improvement store, was also used. Strips that measured one and a half feet wide by twelve feet long were placed in an alternating pattern with the tape.

Small potted plants and shrubs, larger potted trees, and orange and white traffic cones were placed along the barrier to provide variations in height and color in order to make the barrier more visible.

Public Works Department employees also identified entrances and exits to the cycle track with bicyclist stencil markings.

Lessons learned: Despite best efforts, there are always some unanticipated happenings that occur during a planned event. Though it was not especially windy, the small trees kept toppling over. A solution was found the day before the event, as it was then that the cycle track was first able to be setup and it was discovered that the trees were not stable.

The trees were placed in larger pots and were then surrounded with sand to keep them steady. The trees also began to wilt in the hot sun on the street pavement. A good soak from the Public Works' watering truck was just what they needed.

Though minor, the wind was able to flip some of the Astroturf pieces. A simple solution was to place the traffic markers, plants, and trees on either end of the Astroturf to keep it on the ground.

The crucial assistance, especially regarding the road closure and the cycle track, provided by Public Works staff cannot be emphasized enough.[2]

For more details and costs associated with the cycle track, please see the Appendix.

Left: A family enjoying the cycle track – the installation was very well used by cyclists of all ages and abilities
Right: Employees from the City of Hopkins' Public Works Department helping set up the cycle track

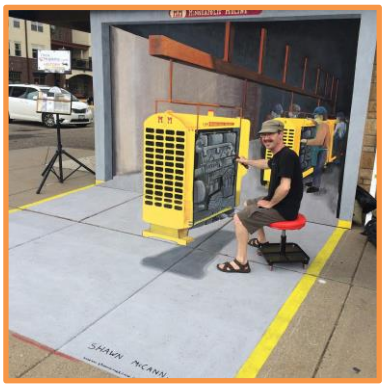
[1] The costs associated with the street closure and road taping were shared equally between the Public Works Department and the grant funding awarded for the Artery Experiment. See the Appendix for more details.
[2] It is estimated that the Public Works Department contributed approximately 96 man hours in helping to plan, set-up, and take-down the Artery Experiment.

Public Art

Public art is one of the most prominent components of the Artery, as is made clear in the project's name. As such, it was also a large part of the Artery Experiment. Efforts were made to incorporate public art in its various forms. Four major installations, detailed below, aimed to do just that.

Shawn McCann's 3-D Chalk Drawing

Mr. Shawn McCann, a professional children's book illustrator, muralist, and street chalk artist, created a one-of-a-kind 3-D chalk rendering for the event. The temporary painting, completed in chalk and tempera paints, depicted an assembly line at the Minneapolis-Moline plant. When positioned correctly, guests standing on the painting appeared as though they were working on the assembly line.



The purpose of this artistic installation was twofold: one was to assess whether people like the idea of having a larger scale piece of art that serves as a type of amenity, attraction, or photo-op – much like the Cherry and Spoon sculpture at the Walker Art Center in Minneapolis. The second purpose is to see whether people would like to incorporate some sort of historic or locally relevant theme throughout the Artery.

Based on the overwhelming interest in the project and the positive feedback received, both elements are desired for the Artery.

Left, right, and top: Guests having their photos taken at Shawn McCann's 3-D rendering of a Minneapolis-Moline tractor assembly line. The large artwork, with both horizontal and vertical elements, took nearly four days to complete.

Jimmy Longoria's Interactive Mural

Mr. Jimmy Longoria, a professional artist and muralist, along with children from Minneapolis' Step-Up summer youth employment program, painted a live, large-scale, interactive mural.

Like that of the 3-D rendering, the purpose of this painting installation was to determine more specifically the role that art will play in the Artery. Again it was to inquire whether an amenity, photo-op type artwork would be appropriate for the Artery; but it was also to test whether an *interactive* type of installation would be supported by pedestrians in the corridor, especially children.

Based on the overwhelming interest in the project and the positive feedback received, both elements are desired for the Artery.

Design Your Own Crosswalk

The Design Your Own Crosswalk installation was intended to have participants create their own version of a crosswalk in an attempt to bring creativity and public participation into an otherwise plain and unexciting, but nonetheless important element of pedestrian safety.

Much of the interest in the installation came from children – who often took the opportunity to create their own artwork rather than design a crosswalk.

Although unanticipated, the results were happily received and encouraged. Instead of a collection of individual crosswalks, a large piece of public art was created by children working alone and working together.

The installation brought a nice pop of color to the street and showed children – and adults – that participation in planning projects can be a fun and creative process.

Lessons learned: Sometimes parts of events do not go as planned; sometimes they turn out even better than initially thought! With the Design Your Own Crosswalk installation, it was not anticipated that there would be such an excited response from children – but we went with it. And it turned out better than we imagined.

Opposite left: Artwork from the Design Your Own Crosswalk feature
Opposite top right: Performers from House of Dance Twin Cities break dancing
Opposite bottom right: Children from Jimmy Longoria's installation painting murals

The Depot Music and Dance Performances

Some of the most exciting attractions at the Artery Experiment were the live music and dance performances orchestrated by the Depot Coffeehouse. By providing a variety of music and dance performances, the Depot was able to appeal to a wide range of attendees. The music and dance, meant to show how live performances can be a real part of the Artery, brought a lively atmosphere to the event. Having the stage setup in Municipal Lot 200 allowed for ample seating and dancing areas – and for the crowd to join in!

Outdoor Art Room

The Outdoor Art Room was located on the corner of 8th Avenue South and 1st Street South where the open streets event officially began and vehicular traffic was prohibited during the duration of the event. Designed to provide pedestrians with a comfortable and safe place to stop, rest, and take in the surrounding artwork, the outdoor room was very well utilized by both children and adults.

Its light-up, inflatable furniture and giant Jenga set added a whimsical and inviting air to the space – and were used to mimic the furniture, light installations, and interactive art components that would be featured in the actual reconstruction.

Lessons learned: The inflatable furniture was a huge success with guests! Fortunately, cooperative weather kept the furniture on the ground; however, a windier day may have taken the furniture for a ride. Some sort of tethering system would have been necessary. As an ad-hoc precautionary measure, Jenga blocks were placed upon the furniture when it was not in use to ensure that it didn't move.

Artery Plaza

Like the Outdoor Art Room, Artery Plaza was intended to provide passersby with a place to sit, relax, and enjoy the live performances. A gazebo, furniture, and palm plants were used to represent a few key elements of the final design, namely: a canopy structure to provide shade; café tables and chairs to provide a place to sit and eat; and a vegetated screen to provide additional shade and structure to the outdoor space. Located near both Mainstreet Bar & Grill's food tent and the Depot's performance stage, Artery Plaza was also well utilized throughout the day.

Left: People relaxing in Artery Plaza
Right: A child playing giant Jenga in the Outdoor Art Room (photo credit: Antonio Rosell)

Chalkboard

The giant chalkboard invited passersby to describe their idea of a perfect street. Designed for those who feel more comfortable writing down their thoughts than verbally sharing them with another person, the chalkboard provided another opportunity for input and feedback. It also provided curious guests to see what others wrote – and an opportunity to contemplate those contributions and then either agree or disagree.

Participants were instructed to take some of the chalk provided, to take a moment to ponder the incomplete sentence written at the top of the board: "I imagine a street where I get to..." and then to complete the sentence. Responses are found in the Appendix.

Artery Board

The Artery Board was another installation designed to gather feedback from guests. Adjacent to the City's information tent, the Artery Board was intended to provide attendees with a place to share their thoughts about the public realm in an effort to incorporate those ideas and elements into the final Artery design. Three questions were posed:

1. How would you use this street?
2. What other elements would you like to see present along this street?
3. What's your favorite public place?

Lessons learned: Unfortunately, the placement of the Artery Board prevented full utilization of the tool. Located behind the City's information tent, the Board had a lot of potential traffic; however, weather required a change in setup – and that change

Above: A woman writing her thoughts on the chalkboard
Below: Community Development Coordinator Meg Beekman explaining the Artery; note the display blocking the Artery Board in the background

consequently blocked sight of the Board. Because the wind was blowing signs off of easels, the signs had to be zip-tied to the tent; they then impeded the line of sight leading to the Artery Board. For future events, it is important to keep in mind how weather, however minor, may impact setup and how a contingency plan for one installation may affect another.

Community Table & Raspberry Sundaes

The Community Table was the third public engagement tool utilized at the Artery Experiment. The "table," which was actually three picnic tables in a row, was a place to invite people to sit down and to talk about the Artery. As an incentive for participation, free raspberry ice cream sundaes were provided to participants care of the Hopkins Activity Center.

Community Development staff knew well both the popularity of the sundaes and the need at times for a "carrot" approach to encouraging public participation. Combining the two allowed for guests to sit down and "break bread" with their neighbor and talk about their ideas for the Artery.

Guests at the table were encouraged to complete the question prompts written on the table coverings and to converse with their neighbors. After the event, the comments were transcribed; they appear in the Appendix of this report.

Lessons learned: Ice cream is exciting. Especially free ice cream. It brings a crowd! Many people lined-up for a free sundae and many of those people contributed to the Community Table. However, it wasn't the ideal 1 to 1 ratio. Because there were so many people at times, it was difficult to oversee the crowd and make sure that those who were receiving ice cream were also sitting down at the table. An additional volunteer encouraging participation and facilitating conversation would have been helpful.

Left and center: People writing their comments and talking with their neighbors at the Community Table
Right: Volunteers and staff from the Hopkins Activity Center scooping ice cream to a line of people
Opposite page: Staff and volunteers from Hennepin County manning their community tent and the Design Your Own Crosswalk installation

Community Tents

Dispersed along 8th Avenue South were various community tents. Each organization or governmental entity – all members of Hennepin County's Active Living Group – presented information to the public, gathered feedback, or did both. All organizations were especially helpful in explaining the purpose of the Artery Experiment and its relationship to the final reconstruction of 8th Avenue.

City of Hopkins

The City's tent was ground zero for explanation of the Artery. At the tent were renderings of the Artery and its different components produced by Bolton & Menk, Inc. City staff stationed there explained the drawings to onlookers, answered questions about the proposed plans, solicited feedback, and asked people to complete a preference survey – the results of which can be found in the "Public Feedback and Observations" section of this report. Information on concurrent and future City events, like the Artstreet program, was also provided at the City's tent.

Hennepin County

Staff from Hennepin County not only helped to oversee the Design Your Own Crosswalk installation, they also provided guests with information about the County's regional trail system and about the Southwest Light Rail Transit Project currently being planned.

City of Hopkins Police Department

Bike patrol officers from the Hopkins' Police Department were on site to give bicycle safety demonstrations and answer any questions.

Three Rivers Park District

Three Rivers Park District staff graciously provided loaner bikes to attendees interested in giving the cycle track a test run, but who did not have bikes of their own. Staff also provided information on the regional trail system and other bike-related events.

Cycles for Change

Staff from Cycles for Change were busy helping make minor repairs to bicycles and educating cyclists on how to make the repairs themselves.

Blake Road Corridor Collaborative

The BRCC was on site to invite Hopkins residents and visitors to join its newly formed biking club and to provide more information on its organization in general.

Water Wall

The water wall was a temporary water installation intended to emphasize sustainability – one of the major goals of the Artery. The Artery will promote sustainability through effective storm water management, including biofiltration measures, sufficient green space, and interactive water features. The interactive water feature was the component that could be replicated most easily in a temporary fashion. It was also that which appealed most to children! The water wall – made of pegboard, PVC pipe, and plastic tubing and stationed in the lawn games area – was a way to draw attention to the role that effective water management will play along the Artery.

Lawn Games

Intended for children and adults alike, the lawn games area was a place simply for guests to enjoy themselves outside. Featuring giant yard bowling, giant Jenga, and tetherball, the lawn games component of the Artery Experiment was meant to remind people that the Artery will be, among other things, a place for outdoor entertainment.

Art from the Attic and Plein Air Painting Competition

Both coordinated by the Hopkins Center for the Arts, the Art from the Attic Sale and the Plein Air painting competition were two elements of the Artery Experiment that greatly added to the event's artistic focus.

The Art from the Attic sale received great press leading up to the event and undoubtedly contributed to the day's high attendance numbers. Its popularity could potentially reflect support for a permanent art gallery along the Artery. The Plein Air painting competition, which was among artists dispersed throughout the downtown painting various scenes, also contributed to the artfulness of the event. Copies of the paintings are found in the Appendix.

Lessons learned: Only one Plein Air painter was stationed along 8th Avenue; additional artist visible on or from 8th Avenue may have had more of an impact.

Bike Lounge and Corral

The cycle track, bicycle lounge, and bike corral were components designed to emphasize the desire to accommodate bicyclists and the importance of bicycle safety along 8th Avenue. The lounge, featuring loaner bicycles, a place for repairs, and place to rest and recuperate from a long ride, was meant to imitate a bicycle and repair shop and a café or outdoor restaurant of sorts that could potentially occupy space along the Artery. The bike corral was meant to represent short- and long-term bike storage that could also be found in the corridor. All three attractions were popular with attendees.

Top left: Staff from Cycles for Change help repair a bicycle as the owner looks on
Bottom left: Guests peruse donated art at the Art from the Attic sale hosted by the Hopkins Center for the Arts (photo credit: James Warden)
Right: Children playing with the giant lawn bowling game (photo credit: James Warden)

Public Feedback and Observations

Preference Survey

Community Development staff stationed at the City's tent explained drawings of the proposed Artery plans to onlookers, answered their questions, solicited their feedback, and also asked them to complete a preference survey.

This simple, visual preference survey asked respondents to indicate their top five most preferred elements of the Artery. It included photos of the elements listed that corresponded to those images that appeared on the "What is This Thing?" signs, so that people could associate the two.

In the event that all initially proposed elements would be unable to be included, City staff could prioritize those elements that were identified by respondents as most important and ensure that those elements would be included in the Artery's final design.

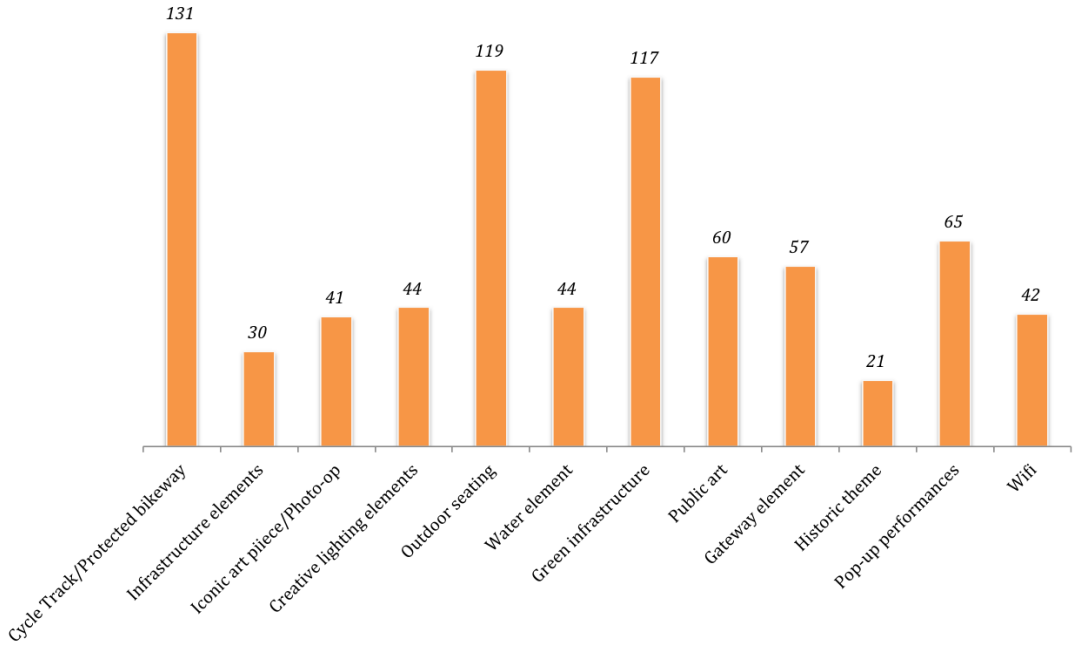
As is often the case, some respondents did not completely adhere to the instructions provided. Instead of numerically ranking their preferred Artery elements, they simply indicated with a marking their favored components. As such, the two types of responses were separated into two analyses.

There were a total of 161 preference surveys completed. These surveys identified 771 distinct preferences for components of the Artery. Of the 161 respondents, 107 (66%) did not rank their preferences; 54 (34%) respondents did.

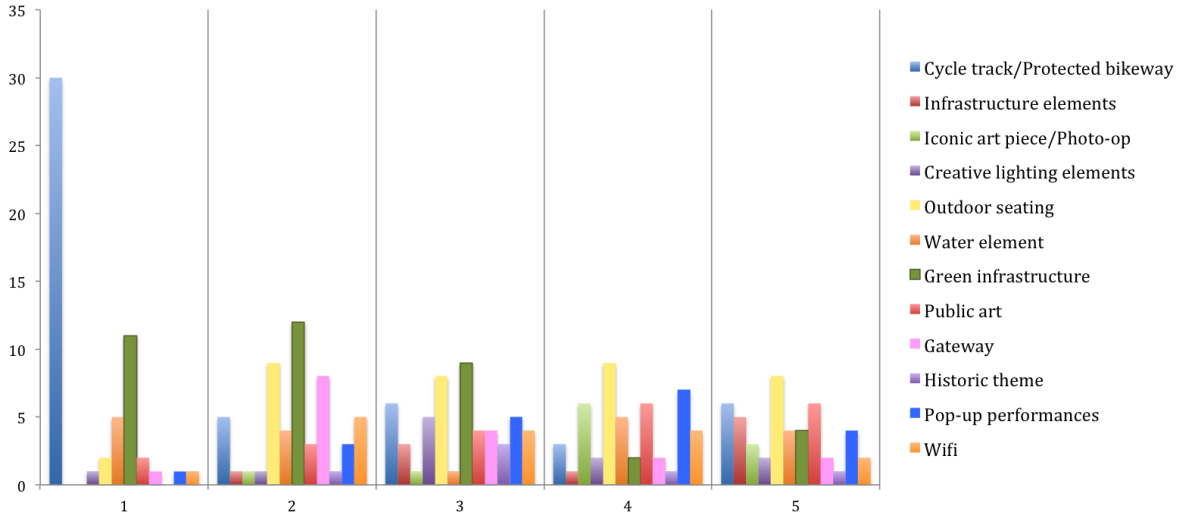
For those surveys in which preferences were not ranked, the cycle track was the element with the most indications (131), followed by outdoor seating (119), and green infrastructure (117). Elements pertaining to a historic theme (21), general infrastructure (30), and artwork providing photo-ops (41) were those cited least frequently. Results can be viewed in the orange graph on page 21.

The results of those surveys in which preferences *were* ranked were quite similar. The cycle track was the most important element to the most people; green infrastructure was also a high priority for many. Space for pop-up performances was also frequently cited, though it was given a lower priority. Additional results are detailed in the multi-colored graph on page 21.

Space was also provided for additional comments on the reverse side of the preference survey. Those responses are listed in the Appendix.



Results from the survey that were not ranked by preference are found in the above graph; those responses that were ranked are found below. In the graph below, the responses are grouped according to the number of times that they were given a certain ranking.



Appendix

I. Event Pamphlet

A printed event pamphlet was available at certain locations of the Artery Experiment for attendees' information; City staff also carried them on their persons to hand out to passersby. The pamphlets, designed by Kristi Bucher, the City's graphic designer, featured detailed information about each of the installations, an event map, and information about other events happening in Hopkins.

THERE'S EVEN MORE TO SEE IN HOPKINS!

The 81st Raspberry Festival starts today and continues until July 19. For more details, check out www.raspberrycapital.com.

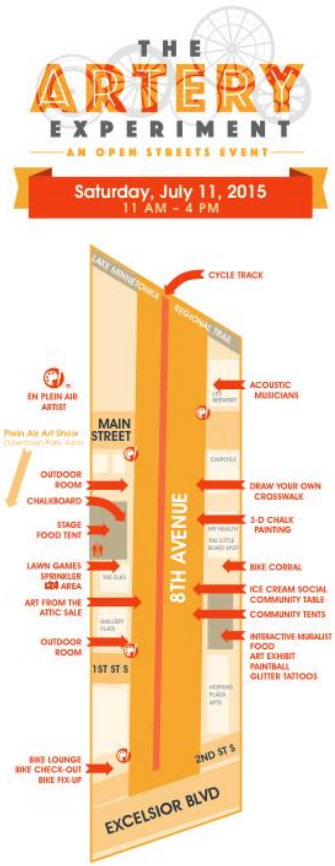
Did you know there's even more art scattered around downtown? Take the Artstreet tour and vote for your favorite piece! Stop by the City's tent for more information or to get a ballot.

The Hopkins Farmers' Market is every Saturday, from 7:30 A.M. until noon, on 9th Avenue, one-half block south of Mainstreet.

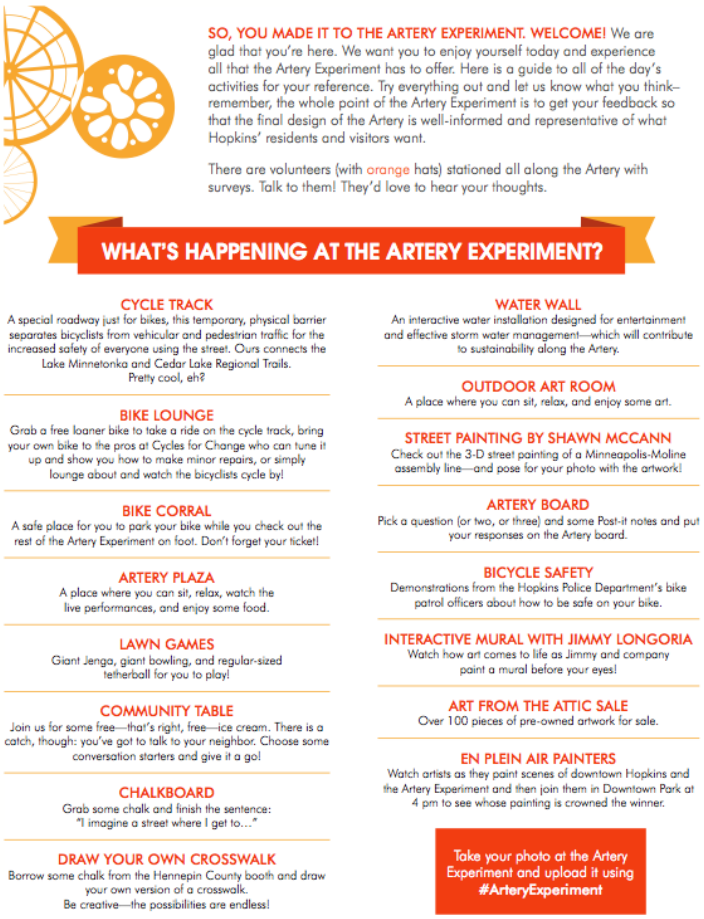
Download the City's Think Hopkins mobile app to stay up to date on everything happening in Hopkins! Go to www.thinkhopkins.com/app.

BROUGHT TO YOU BY:

Back cover



Front cover



SO, YOU MADE IT TO THE ARTERY EXPERIMENT. WELCOME! We are glad that you're here. We want you to enjoy yourself today and experience all that the Artery Experiment has to offer. Here is a guide to all of the day's activities for your reference. Try everything out and let us know what you think–remember, the whole point of the Artery Experiment is to get your feedback so that the final design of the Artery is well-informed and representative of what Hopkins' residents and visitors want.

There are volunteers (with orange hats) stationed all along the Artery with surveys. Talk to them! They'd love to hear your thoughts.

WHAT'S HAPPENING AT THE ARTERY EXPERIMENT?

CYCLE TRACK
A special roadway just for bikes, this temporary, physical barrier separates bicyclists from vehicular and pedestrian traffic for the increased safety of everyone using the street. Ours connects the Lake Minnetonka and Cedar Lake Regional Trails. Pretty cool, eh?

BIKE LOUNGE
Grab a free loaner bike to take a ride on the cycle track, bring your own bike to the pros at Cycles for Change who can tune it up and show you how to make minor repairs, or simply lounge about and watch the bicyclists cycle by!

BIKE CORRAL
A safe place for you to park your bike while you check out the rest of the Artery Experiment on foot. Don't forget your ticket!

ARTERY PLAZA
A place where you can sit, relax, watch the live performances, and enjoy some food.

LAWN GAMES
Giant Jenga, giant bowling, and regular-sized tetherball for you to play!

COMMUNITY TABLE
Join us for some free—that's right, free—ice cream. There is a catch, though: you've got to talk to your neighbor. Choose some conversation starters and give it a go!

CHALKBOARD
Grab some chalk and finish the sentence: "I imagine a street where I get to..."

DRAW YOUR OWN CROSSWALK
Borrow some chalk from the Hennepin County booth and draw your own version of a crosswalk. Be creative—the possibilities are endless!

WATER WALL
An interactive water installation designed for entertainment and effective storm water management—which will contribute to sustainability along the Artery.

OUTDOOR ART ROOM
A place where you can sit, relax, and enjoy some art.

STREET PAINTING BY SHAWN MCCANN
Check out the 3-D street painting of a Minneapolis-Moline assembly line—and pose for your photo with the artwork!

ARTERY BOARD
Pick a question (or two, or three) and some Post-it notes and put your responses on the Artery board.

BICYCLE SAFETY
Demonstrations from the Hopkins Police Department's bike patrol officers about how to be safe on your bike.

INTERACTIVE MURAL WITH JIMMY LONGORIA
Watch how art comes to life as Jimmy and company paint a mural before your eyes!

ART FROM THE ATTIC SALE
Over 100 pieces of pre-owned artwork for sale.

EN PLEIN AIR PAINTERS
Watch artists as they paint scenes of downtown Hopkins and the Artery Experiment and then join them in Downtown Park at 4 pm to see whose painting is crowned the winner.

Take your photo at the Artery Experiment and upload it using #ArteryExperiment

Interior of pamphlet

II. Budget

The budget for the Artery Experiment is listed below. The spreadsheet contains information regarding the purchased items, where they were procured, service providers, additional notes, initial budgeted amounts, and actual dollars spent. The actual project costs, including staff time, were $5.03 under budget.

	Budget for the Artery Experiment - $15,000.00					
	Budget Item	Provider	Notes	Budgeted Amount	Actual Amount	Receipt ID
	3-D Street Painting	Shawn McCann	Chalk artist	$ 3,000.00	$ 3,000.00	27
	Interactive Mural	Jimmy Longoria	Muralist		$ 200.00	28
	Owlized		Public engagment tool	$ 3,000.00	$ -	N/A
Furniture	Bike lounge Inflatable furniture	Modern Inflatables	Lounge chairs, couches, upright chairs, ottomans	$ 1,000.00	$ 661.00	14
Furniture	Rug	Menard's	Outdoor Art Room	$ -	$ 17.87	6
Furniture	Bistro seating	Apres Rentals	Artery Plaza	$ 300.00	$ 190.55	16
Furniture	Pergola	Overstock.com	Artery Plaza	$ 599.00	$ 416.69	12
Furniture	Performance space		Picnic tables from Public Works and Addison	$ -	$ -	N/A
Music	Stage, sound equipment	The Depot	Borrowed from Hopkins Center for the Arts, Police Department	$ 500.00	$ -	N/A
Music	Advertising	Community Development		$ 100.00	$ -	N/A
Music	Permits			$ -	$ -	N/A
Music	Performer stipends		5 acts, including dance group	$ 500.00	$ 500.00	26
Lighting	Overhead			$ 250.00	$ -	N/A
Lighting	Trees	EMI Audio	Projected battery-operated lighting	$ 400.00	$ 425.00	15
Lighting	Apartments	Target	5 sets of tube string lights	$ 100.00	$ 68.58	23
Cycle Track	AstroTurf	Menard's	Arrowhead green	$ 500.00	$ 277.81	04, 06
Cycle Track	Trees	The Home Depot	Crimson King Maples, Autumn Blaze Maples, American Elms	$ 600.00	$ 372.56	01, 02
Cycle Track	Plants	Menard's	Purple Leaf Sand Cherry, Purple Persian Lilacs, Cat Palms, Huron Dogwoods	$ 100.00	$ 194.96	5
Cycle Track	Pots	Dollar Tree, Target	For shrubs and trees	$ -	$ 269.97	08, 09, 10
Cycle Track	Paint	Safety Signs	$5,500: half paid by Public Works, half by Community Development	$ -	$ 2,750.00	27
Cycle Track	Lights	Target	For fence in front of Hopkins Plaza	$ 100.00	$ 85.79	22
Cycle Track	What is This? Signs	Bolton & Menk	At every installation	$ -	$ -	N/A
Community Engagement	Easels	Community Development	To hold "What is This Thing?" signs	$ -	$ -	N/A
Community Engagement	Tent rental		4 tents from the Police Department	$ 150.00	$ -	N/A
Community Engagement	Posters	Community Development	Printed in-house	$ -	$ -	N/A
Food	Sink	On-site Sanitation	SaniSink	$ 150.00	$ 92.00	17
Food	Permits	Hennepin County	Itinerant license and multi-booth inspection	$ -	$ 154.00	18
Food	Raspberry sundaes		HCA	$ 250.00	$ 346.50	24
Miscellaneous	Water	The Home Depot/Menard's	Water wall	$ 50.00	$ 47.41	4
Miscellaneous	Bathrooms	On-site Sanitation	2 regular, 1 handicap, 1 handwashing	$ -	$ 361.00	17
Miscellaneous	Kids' area	Target	Lawn games	$ 100.00	$ 10.48	10
Miscellaneous	Chalk	Target, Dollar Tree	For Design Your Own Crosswalk	$ 50.00	$ 86.52	08, 20
Miscellaneous	Apparel	Amazon	Hats	$ -	$ 168.49	13
Miscellaneous	Food tickets	Mainstreet Bar & Grill	20 food and drink tickets for staff and volunteers	$ -	$ 210.00	26
Miscellaneous	Table cloths	Party City	For tables in Artery Plaza	$ -	$ 17.15	11
Miscellaneous	Donuts	A Baker's Wife	For staff and volunteers	$ -	$ 40.64	19
Miscellaneous	Paint Out	Hopkins Center for the Arts	Coordinator stipend, food, t-shirts, awards	$ 600.00	$ 640.00	25
Miscellaneous	Staff time	Alyssa Kelley	$12 per hour (282.5 hours)	$ 3,390.00	$ 3,390.00	
			Total costs	$ 15,789.00	$ 14,994.97	
			Money available	$ 15,000.00	$ 15,000.00	
			Over/(under) budgeted amount	$ 789.00	$ (5.03)	

III. Press and Advertising

The Artery Experiment was fortunate to receive significant local and statewide press attention prior to and after the event. Featured articles are listed below.

Nielsen, M. (2015). Hopkins to host Artery Experiment. Sun Sailor. Retrieved from http://sailor.mnsun.com/2015/07/10/hopkins-to-host-artery-experiment/

Owings, C. (2015). Hopkins testing out art-filled avenue. Finance & Commerce. Retrieved from http://finance-commerce.com/2015/07/hopkins-testing-out-art-filled-avenue/

Owings, C. (2015). Experiment brings Hopkins' Artery concept to life | Transit Talk. Finance-commerce.com. Retrieved from http://finance-commerce.com/transit/2015/07/13/experiment-brings-hopkins-artery-concept-to-life/

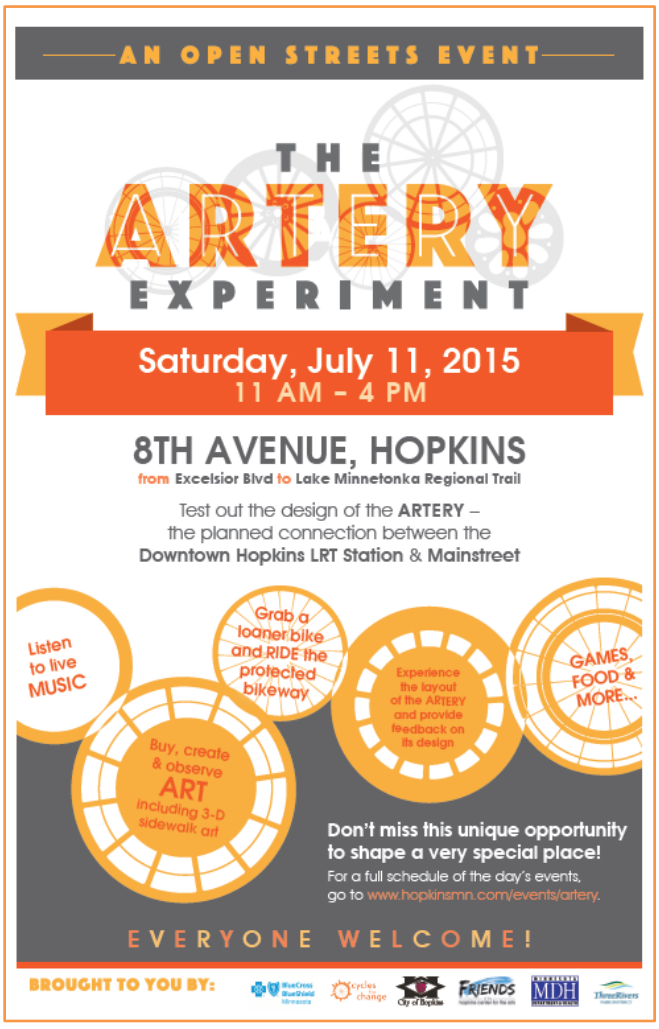
Pratt, A. (2015). Hopkins Center for Arts hosting artsy garage sale. Star-Tribune. Retrieved from http://www.startribune.com/hopkins-center-for-arts-hosting-artsy-garage-sale/312199761/

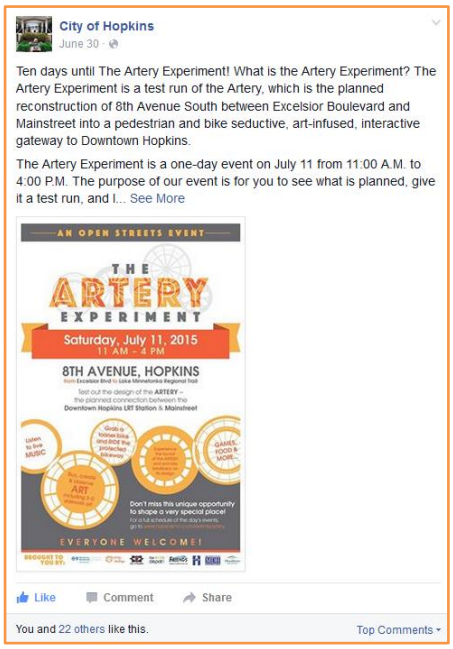
Wahl, P. (2015). 'Artstreet' showcases West Metro artists in Hopkins. Sun Sailor. Retrieved from http://sailor.mnsun.com/2015/06/04/artstreet-showcases-west-metro-artists-in-hopkins/

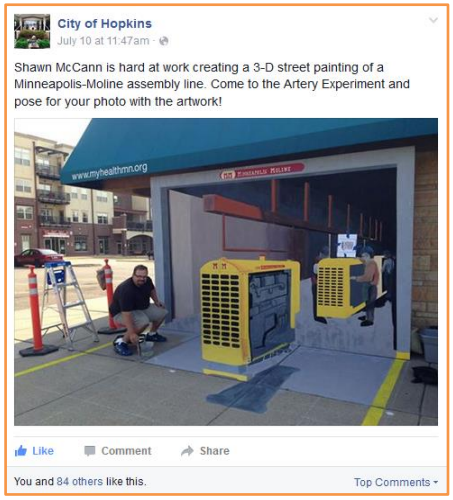
Warden, J. (2015). Show, Don't Tell: "The Artery" in Hopkins. streets.mn. Retrieved from http://streets.mn/2015/07/13/show-dont-tell-the-artery-in-hopkins/

Significant efforts were made to publicize the event. A flyer, which appears below, was used in press releases. It was also posted in commercial, retail, and restaurant locations throughout Hopkins and in rental housing complexes in the City's downtown. Driskill's Food, a grocery store located downtown, graciously agreed to put flyers in their grocery bags the week before the event.

In the days leading up to the event, several posts were made on the City's Facebook page – each describing different features of the Artery Experiment or relaying general information about the event. Information was also posted on the websites of the Hopkins Center for the Arts and Hopkins Raspberry Festival.







IV. Outreach along 8th Avenue

Many of the installations of the Artery Experiment would not have been possible without the support of businesses, organizations, and apartment complexes along 8th Avenue South.

- Hopkins Plaza, an apartment and townhome complex, was an enthusiastic and supportive community partner. When alerted that the road closure for the open streets event would block access to one of their resident parking lots, the development and management teams happily agreed to turn the situation into a positive and host complementary activities on their property. Mr. Michael Boyd, property manager of Hopkins Plaza, programed various activities for their parking lot, including: a photography exhibit and sale, a food truck, a paintball fundraiser, and a fire truck. Management also allowed Jimmy Longoria's interactive mural installation to be located in the parking lot.

- Gallery Flats, another apartment complex on 8th Avenue, permitted the City to use its Wi-Fi for credit card transactions made at the Art from the Attic Sale.

- Little Blind Spot, a window covering store and showroom, allowed the City to station its bike corral in one of its parking lots.

- Members of the Hopkins Elks Lodge #2221 granted the City permission to use its yard and parking lot for the lawn games installation. They also had a cookout open to the public.

- myHealth for Teens and Young Adults, a medical clinic, graciously permitted the City to place a large vertical wooden structure in front of their building days before the event for Shawn McCann to create his 3-D chalk rendering.

- Mainstreet Bar & Grill had an outdoor setup near Artery Plaza from which they sold various lunch items.

Right: Hungry bicyclists approach the Loud Mouth food truck stationed in the Hopkins Plaza parking lot (photo credit: Antonio Rosell)

V. Preference Survey and Qualitative Responses

The preference survey that was distributed to and completed by guests appears below. Room for additional comments was provided on the reverse side.

THE ARTERY EXPERIMENT
AN OPEN STREETS EVENT

Preference Survey

Take a look at some of the proposed elements of the Artery below. Which are most important to you? **Identify the top 5 items below that are most important to you** – the ones that complete your idea of the best possible version of the Artery.

Have additional comments? Please feel free to write them on the back of this paper.

_____ Cycle track/ Protected bikeway

_____ Green infrastructure and landscaping

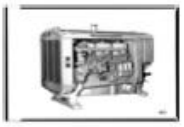
_____ One-of-a-kind infrastructure elements

_____ Public Art

_____ Iconic art piece/ Photo-Op

_____ Gateway on Excelsior Boulevard

_____ Creative lighting elements



_____ Historic theme

_____ Outdoor seating and gathering space

_____ Places for pop-up performances

_____ Interactive water element

_____ Wifi and Charging Stations

The following responses were provided in the “Additional Comments” section on the preference surveys.

ID	Comments
15	Music needs to be at safe decibels.
25	Careful cutting off the people who live south of Excelsior in Hopkins! Already lost one road/access to Excelsior Boulevard.
39	Bikeway is cool! (McCartney Walker)
55	When traveling on the bike lane southbound the cars also heading south on 8th and turning west cut off bikers going straight ahead in the bike lane as they turned.
56	Go Hopkins!
61	So excited for this!!! Can't wait to see the finished design.
69	Any way to connect this with 9th? Connect to Downtown Park, Farmers Market, Town Square - all 3 of these seem underutilized - signs perhaps? Must make it unique with lots of greenery, places to hang out, inviting - if $ is an issue, keep it condensed - don't spread out too thin or it will seem like nothing. Love it!! Go Hopkins! If you build it well, they will come!
84	Cycle track: But timing most important. Needed now!
92	Hopkins already has lots of outdoor seating and gathering space; water bottle refill; Nice Ride
97	Dog parks
99	More places for dogs
106	Cycle track: This is all that I want.
107	Feedback on the temporary bike trail: it was confusing while entering the artery from main road which was on your right side (going left might cause confusion); while crossing the roads do we continue to bike on bike trail or we need to bike on the zebra crossing lines; will need sufficient signals at every crossing.
108	We took the Cedar-Lake Trail from the Depot to 8th Ave and then came North - we are wondering how the cycle track will connect up with crossing Excelsior Boulevard (we were on the right side of 8th when crossing Excelsior and then needed to cross over 8th to the left side to enter the cycle track); also we were wondering about crossing Mainstreet - if bikers need to cross at the crosswalk or can continue straight ahead; will there be markings on the street? Also wondering how to exit the track if we want to go some place mid-block; it was great to have a protected track and to connect the two trails. Thanks!
139	Connect to light rail station; cycle track connected to current trails
140	Places for pop-up performances: Noise issue for nearby residents!
152	Love the St. Patrick's day parade! The mayor is a great guy. Center for the Arts is cool. Good new beer places/LTD and 819 rock. Please change date of Raspberry Festival its always the week of our family reunion
153	Add a grocery store like Kowalski's
155	I'd really to see something about the Dow House incorporated into this.

VI. Transcribed Comments from Community Table

The following comments were transcribed verbatim from the Community Table table-coverings, on which guests were instructed to answer the question prompts and provide additional feedback as well. The comments were transcribed exactly as they appeared initially. If the same response was provided more than once, its total tally is listed in parentheses on the right; similar, but inexact responses were kept separate to relay their nuances.

Bicycle Related Comments

To me, my bike is:
Transportation
Recreation
Just for fun
Great!
For man hunting
Perfect
Takes me to my friends
Family time
Broken

I bike because:
It saves time and energy, parking is free, and I enjoy the weather (in all seasons)
It makes me happy
It is fun (2)
I have no car!
Exercise (2)
It is a great way to see things.
Faster than walking
Keeps me young
Fun for family
Good for the environment
Makes me feel younger
Feels great, able to experience people and nature along the way
Great exercise, love the fresh air
Cheaper than a car and gym membership
Best way to see the outdoors
I like it
It is fun and faster than walking
It is relaxing and I can see more of the city and places.

I would bike more if:
I had more time (ditto)
The weather was better all year long
If there were more bike trails (are you kidding?)
The bike trails are longer

I had connecting trails – let's make it happen
Women drivers wouldn't text
Good biking
I had someone to bike with

I would bike if:
My back were stronger
I had a bike (2)
I had a helmet
Lots of gardens and flowers and chimes
The weather was better
Nice Ride station
More roads like this were built
The resting shelters had shade covers
Safe on street when kids walking
I was safe with autos
Always bike, like being away from the traffic
Trails are great – I do bike all over on trails
My kids were older and could bike with me
More connections
It was safer/more trails
Safer way to get from Excelsior to library and other trails

I named my bike:
Giddy-up
Shiney
Cool
Barbara
Barbie bike
The Silver Streak
Maniac
Low-rider trike

Public Realm Related Comments

My favorite walk or trail is:
Around Lake Calhoun
Lakes Harriet, Calhoun, Lake of the Isles
Around Central Park and the Regional Trail
The regional trail from Hopkins and North (beautiful, well manicured)
The Minnesota Landscape Arboretum, 3 Mile, plus the gardens, etc. etc. etc.
Around Lake of the Isles (same – 1st time I got lost)
Regional trail to Lake Calhoun (ditto!)
Down a city street that is alive with people, music, and food (me, too!) (me too!)
All of the bike trails are good
Cider lake trail
The trail by Lunds

Calhoun to Victoria (Hopkins in middle)
LRT – yes let's make it happen
Dakota Rail Trail
Along Lake Minnetonka – very beautiful
Lake Minnetonka Regional Trail thru Hopkins
Like the bike lanes
The trail to my fridge
Cedar Lake LRT Trail
Cedar Lake Trail North or Midtown Greenway
Big Willow
North Corridor Trail
Minnetonka Regionals (3)
Superior Hiking Trail
11th Avenue North – gateway to great neighborhood and city venues
Luce line

My favorite public place is ____ because it makes me feel ____:
Blake Road Grocery; human not black or colorful
Hopkins Library; happy reading books
The Depot; healthy
Shady Oak Beach
The Twin Cities
Willow Park
The Farmers' Market (2); connected to real people who grow my food
Movie Theatre (2)
Eisenhower Community Center; happy to gather with people
Hopkins Center for the Arts
Hopkins Activity Center
Library (2); comfortable

My favorite street is:
Excelsior Boulevard
The market – I like to shop
Mainstreet – I love the historic look and the patio at 819
14th Avenue North by Mazefold Field – great activities to watch
1st Street and Mainstreet
Main Street USA because it is my most place that I can relax and have fun!
Mainstreet (14)
Mainstreet – great for walking
11th & Mainstreet – my favorite groomer just moved in
Main Street Minnesota
Blake Road
10th Avenue
5th Avenue
4th Street
Pedestrian Mall, Iowa City, Iowa
Mainstreet, but more restaurants, fewer bars, love farmers market, music in the park

11th Street (library)
11th Street (SS Billiards)
Texas
8th Avenue North
7th

I want more:
Bike racks in downtown
Traffic circles
Bike trails (2)
Roundabouts
Taco Johns
Time for vacations (2)
Bookstores (4)
Time for family
Local coffee/café
Water games for kids
Time
Money
Better health
Better drivers
Crosswalks
Local food vendors (4)
With organic produce/options and outdoor seating at restaurants
Raspberry sundaes
Ice cream (5)
Shady park and street benches
Raspberry patches
Community activities – yes!
Skate park
Good unique restaurants
Improved and expanded farmers market
Art (2)
Outdoor meditation space
Clock tower
Music in the Park
Movie theater
Bagel store
Small shops
Raspberries grown in Hopkins
Antique mall
Outdoor, good music (2)
Weekly activities
Organic eateries
Nightclubs/social bars
Ice skating rinks open year-round
Coffee/bars with patios – not chain stores

Ways to get transportation to Minneapolis/St. Paul
Small, local businesses
Art classes for kids
Restaurants with ethnic food
Starbucks
Dog parks
Public drinking fountains
Nice toilets along the trails
Beaches

I would walk more if:
It was 65 and sunny everyday without bugs
Music was a string quartet
I could always feel safe
I had to
There was space
There was a walking group to inspire to walk
The street lighting was better
More shade
It was 75
My dog walked better

Artery Specific Comments

The Artery should be:
Safe (2)
Family friendly (3)
A friendly place for people of all races and cultures
Right where it is
Right here
Interactive street full of features to work with all your senses; light/sound/touch, etc.
Good small ethnic restaurants
Get people outside and talking
Done already – love the concept!

My idea for the Artery:
Water fountain
Pit stop kind of area with free air
Free air for bikes – great!
Landscaping and flowers
Pool
Don't use federal money

Hopkins Specific Comments

I love Hopkins because:
Sidewalks (2)
Connected, caring community
Love local activities
It is the sister city to Borispryl, Ukraine
Great sense of community
Antique mall
Walking and biking paths
Yummy raspberry sundaes (thank you!) (2)
Cute, old Main Street
The people, downtown, and ANA (Avenues Neighborhood Association)
LTD Brewery (3)
Walkability
Friendly, small town feel
Has been very quaint
House of Dance!
Diversity
Nice main street
Neighbor!

Additional Notes:
Make sure there are plenty public water fountains and restrooms and doggy water stations
More art sale stuff and local artist crafts
Loved the art sale and raspberry sundaes – thanks!
More coffee shops (2)

VII. Chalkboard Responses

Participants were instructed to take a moment to ponder the incomplete sentence written at the top of the board, "I imagine a street where I get to..." and then to complete the sentence. A photograph of the board taken after the event is below.

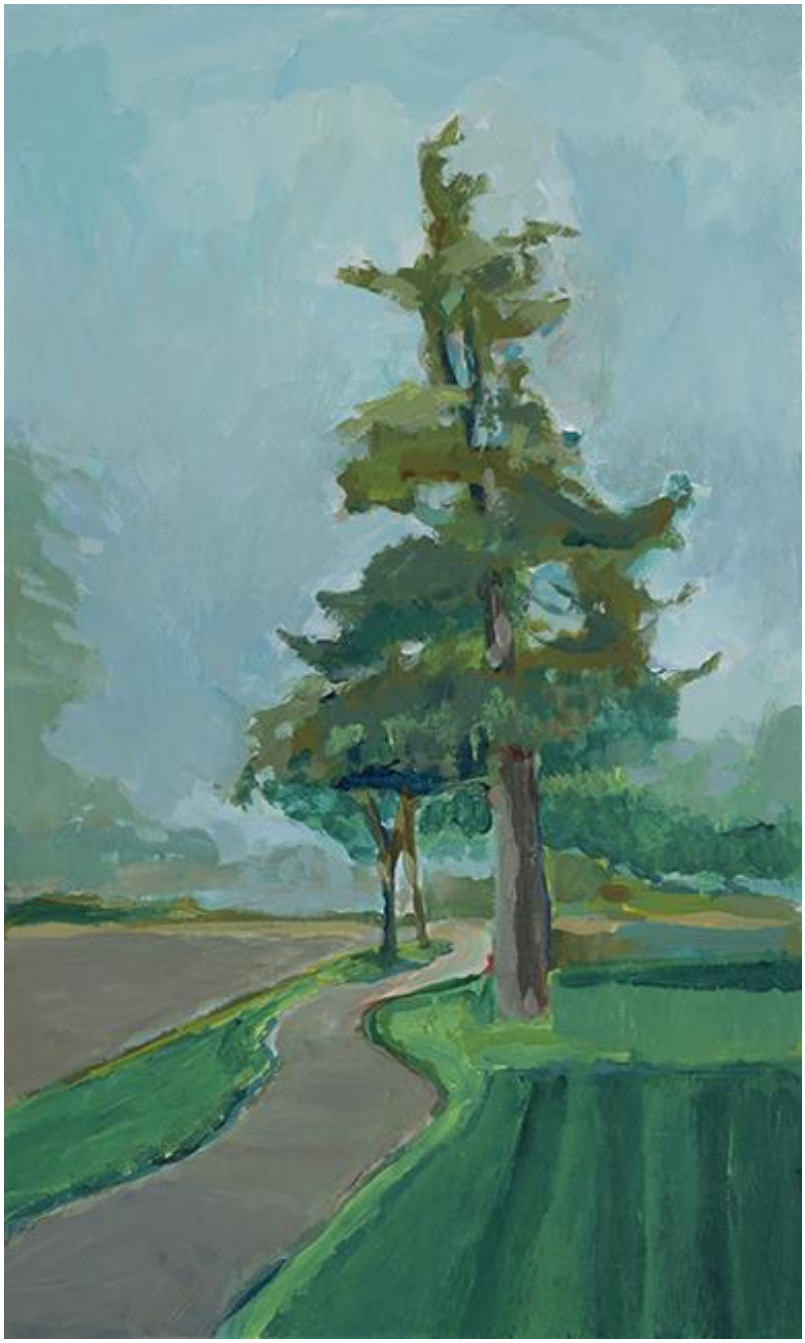
VIII. Plein Air Painting Competition Contestants and Winners

Planning and Economic Development staff partnered with Hopkins Center for the Arts (HCA) staff in an effort to incorporate even more artful elements into the Artery Experiment. In addition to the Art from the Attic Sale, the HCA planned a "Plein Air" painting competition – in which artists painted the outdoor scenes before them. After painting at various locations throughout downtown Hopkins, Plein Air contestants gathered in Downtown Park for a reception at 4:00 P.M. during which the winners of the competition were announced.

1st place: Angeleta Smith
2nd place: Greg Lecker
3rd place: Jane McKinlay

Copies of the seven paintings created during the competition are found on the following pages.

Painting by Jane McKinlay



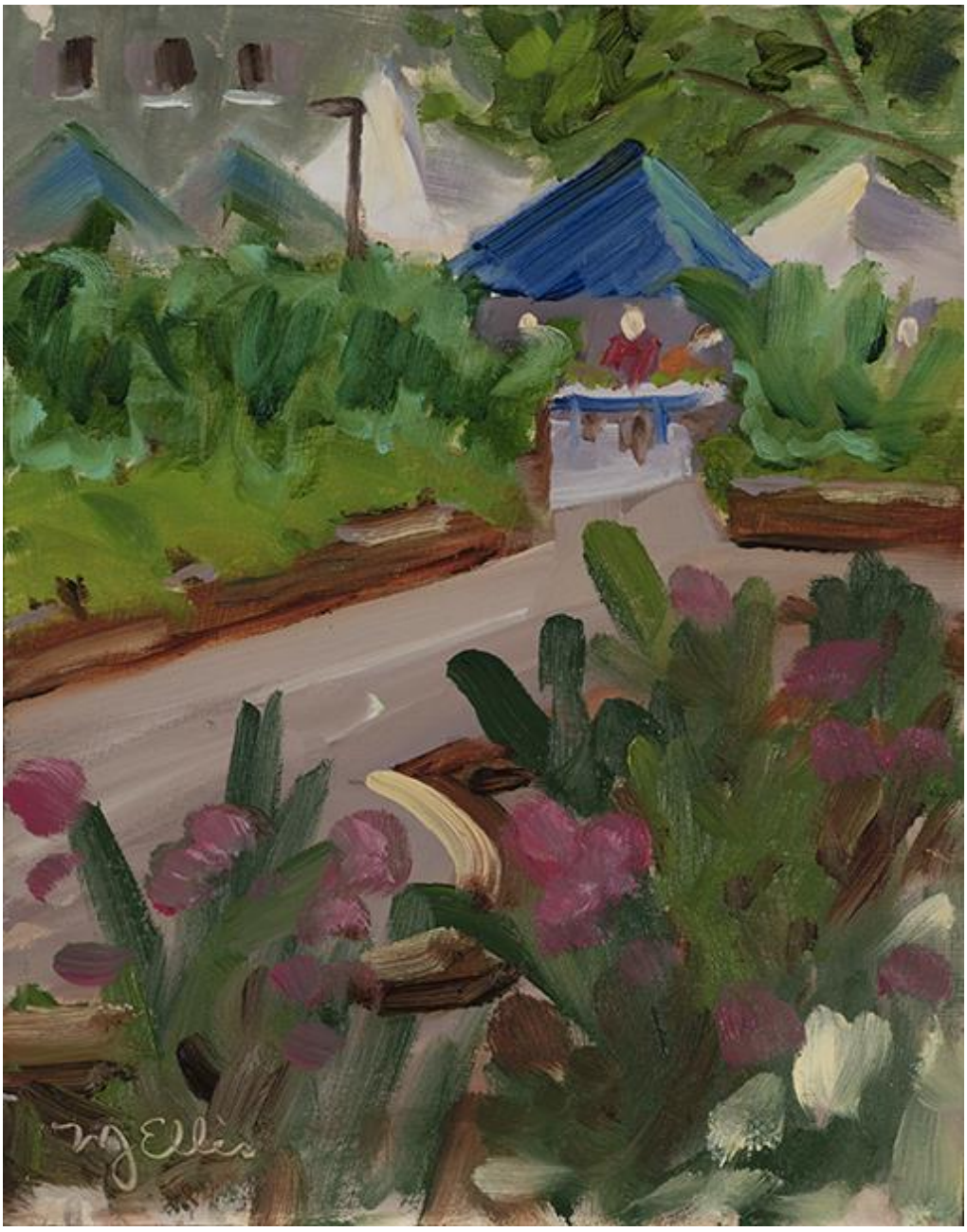
Painting by Angeleta Smith

Painting by David Distad

Painting by Elaine Beaty

Painting by Greg Lecker

Painting by Judith Anderson



Painting by MJ Ellis

IX. "What is This Thing?" Signs

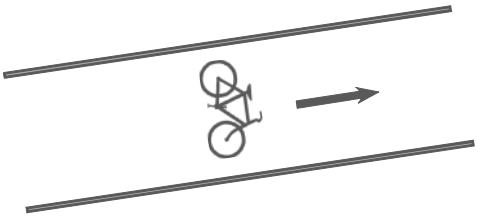
Nearby every installation at the Artery Experiment was a "What is This Thing?" sign. Meant to educate and inform attendees of all ages and literacy abilities, these signs used both colorful depictions and simple text to relay their messages. Signs not only explained what an installation was, they also identified *why* the installation was part of the Artery Experiment and *what it related to* in the Artery's final design. The signs were designed by City staff and by Bolton & Menk, Inc., the consulting engineering and surveying firm that works with the City on the final Artery plans; the signs were produced by Bolton & Menk, Inc.

IT IS THE ARTERY EXPERIMENT

The Artery Experiment is **A TEST RUN OF THE ARTERY**, the reconstruction of 8th Avenue from Excelsior Boulevard to Mainstreet into a pedestrian seductive, art-infused, interactive corridor!

It has a cycle track, outdoor art rooms, temporary water and art installations, live performances, games, food, and much more!

...And it is for you to try!
Come on in and check it out!
Then tell us what you think.



Thanks to those who made the Artery Experiment possible:

For more information, check out:
http://www.hopkinsmn.com/development/current/eighth-artery/index.php

ARTERY CITY OF HOPKINS, MINNESOTA

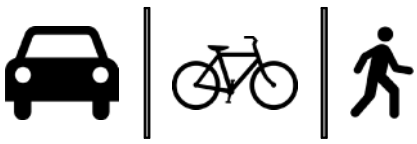
IT IS A CYCLE TRACK

- ALSO KNOWN AS -

A PROTECTED BIKEWAY

IT SEPARATES

cyclists from vehicular traffic and pedestrians to increase the safety of all.



IT CONNECTS

the Lake Minnetonka Regional Trail and the Cedar Lake Regional Trail.

IT IS PART OF THE ARTERY EXPERIMENT

a test run of the Artery, the reconstruction of 8th Avenue from Excelsior Boulevard to Mainstreet into a pedestrian seductive, art-infused, interactive corridor!

And it is for you to try!
Tell us what you think!

For more information, check out:
http://www.hopkinsmn.com/development/current/eighth-artery/index.php

ARTERY CITY OF HOPKINS, MINNESOTA

WHAT IS THIS THING?

WHAT IS THIS THING?

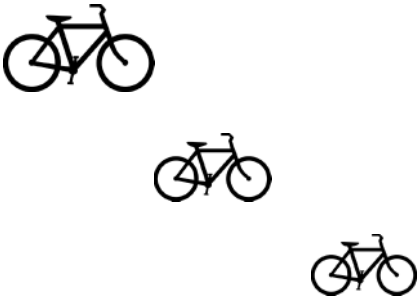
IT IS A **BICYCLE LOUNGE**

- PRESENTED FOR -

YOUR EDUCATION AND ENJOYMENT

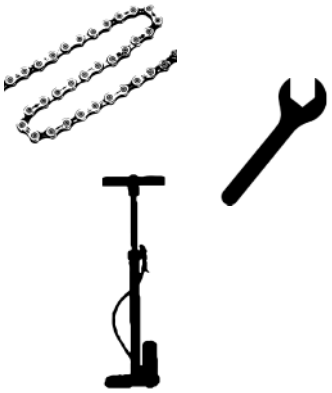
GRAB A BIKE

Grab a free loaner bike to test out the cycle track!
[bikes for both adults and kids are available **]**



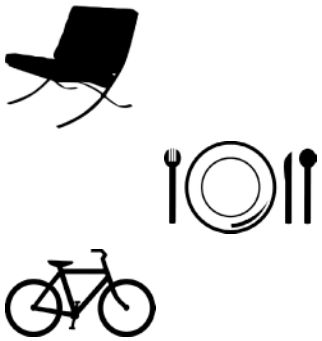
LEARN FROM THE PROS

and have your bike tuned up by staff from *Cycles for Change*!



RELAX

in one of our outdoor rooms, have something to eat, and watch the bikes go by!



ARTERY City of Hopkins, Minnesota

WHAT IS THIS THING?

IT IS A **BIKE CORRAL**

- A SAFE PLACE -

TO STORE YOUR BIKE WHILE YOU CHECK OUT THE ARTERY EXPERIMENT!

Here's what to do:

1. Let the volunteer know you would like to park your bike.

2. Park your bike.

3. Take a ticket.

4. Enjoy the Artery Experiment!

5. Bring your ticket back for your bike when you're finished.

ARTERY City of Hopkins, Minnesota

WHAT IS THIS THING?

IT IS A TEMPORARY RENDITION

- OF -

ARTERY PLAZA!

This place will have a few key elements, including:

CANOPY STRUCTURE
to provide users with some shade.

canopy precedent

CAFE TABLES AND SEATING
to provide passers-by a place to site and relax or enjoy a meal.

cafe tables and seating precedent

VEGETATED SCREEN
to provide additional structure and shade to the outdoor room area.

vegetated screen precedent

WHAT IS THIS THING?

IT IS A TEMPORARY RENDITION

- OF -

AN OUTDOOR ART ROOM!

This could be a place where you sit, relax and check out some art!

A place like this will likely have:

FURNITURE

LIGHT INSTALLATIONS

INTERACTIVE ART FEATURES

And could look like this!

IT IS A PLACE CHOCK-FULL

- OF -

LAWN GAMES FOR YOU TO PLAY!

The Artery will be a place for you to get outside and enjoy yourself!

Why not start now?

Here are some games for you to play:

GIANT JENGA

GIANT LAWN BOWLING

TETHER BALL

ARTERY City of Hopkins, Minnesota

IT IS THE COMMUNITY TABLE

- A PLACE FOR YOU TO -

TALK WITH US ABOUT THE ARTERY!

Sit down and have some *FREE ICE CREAM* on us! But, wait...there's a catch.

LET US KNOW
what you think about the Artery!

ANSWER THE QUESTIONS
that are posed on the paper. Grab some markers and give it your best shot!

TALK IT OUT
with your neighbor! Ask them what they think about the Artery and then tell us!

And thanks to the **Hopkins Activity Center** for their Raspberry Sundaes and for making the Community Table possible!

ARTERY City of Hopkins, Minnesota

WHAT IS THIS THING?

WHAT IS THIS THING?

IT IS THE GIANT CHALKBOARD

- A PLACE FOR YOU TO -

DESCRIBE YOUR PERFECT STREET!

Grab some chalk and then take a moment to ponder this incomplete sentence:

"I IMAGINE A STREET WHERE I GET TO..."

AND THEN

GIVE IT A GO!

Think about what you would like to do here or how you would like to be able to use this street.

ARTERY City of Hopkins, Minnesota

WHAT IS THIS THING?

WHAT IS THIS THING?

IT IS A PLACE FOR YOU

- TO DESIGN YOUR VERY OWN -

STREET CROSSWALK!

Here's what to do:

1
BORROW CHALK
at the Hennepin County booth.

2
DRAW
your own version of a crosswalk. Be creative - your crosswalk can be as simple or as complex as you can imagine!

3
NAME / RETURN
Put your name next to your crosswalk and return the chalk to Hennepin County. Bask in the glory of your masterpiece!

ARTERY City of Hopkins, Minnesota

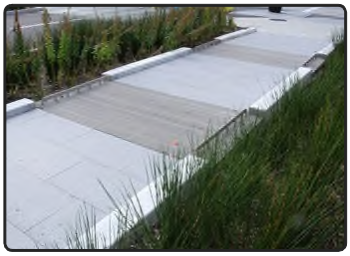
IT IS A **WATER-WALL**

- A TEMPORARY WATER INSTALLATION -

FOR YOU TO TRY OUT!

Sustainability, through effective stormwater management and landscaping, is an important goal of The Artery.

BIOFILTRATION
The reconstruction will feature biofiltration and overflow catch basins.



GREEN SPACE
Lots of green space and natural grasses to allow for increased water filtration.

WATER
Interactive water installations designed for both entertainment and effective water management!

So, check it out! Give the water-wall a whirl and let us know what you think!

ARTERY City of Hopkins, Minnesota

WHAT IS THIS THING?

IT IS A **ONE OF A KIND STREET PAINTING**

- COMPLETED BY PROFESSIONAL ARTIST -

SHAWN McCANN!

Come over and check out this wild 3-D image!
Take your photo and post it to the City's Facebook page:
www.facebook.com/hopkinsmn

SO WHAT DO YOU THINK?

Of course art is going to play a major role in the Artery.
We want to know more about what you think that role should be.

Do you like the idea of having a permanent art fixture that serves as a type of attraction or **photo-op?**

Would you like to see the **Minneapolis-Moline** history theme played out in a future installation? Is there another theme you would prefer?

ARTERY City of Hopkins, Minnesota

WHAT IS THIS THING?

IT IS THE ARTERY BOARD

- A PLACE FOR YOU TO -

TELL US WHAT YOU THINK!

Here are three questions for you to think about:

1. **How would you use this street?**
2. **What other elements would you like to see present along this street?**
3. **What's your favorite public place?**

Grab a marker and a post-it note (make sure it is the same color as the question you are answering). Then give it a go! Answer your questions and stick your responses onto the board!



ARTERY City of Hopkins, Minnesota

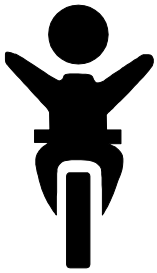
IT IS A DEMONSTRATION

- PRESENTED BY THE HOPKINS POLICE DEPARTMENT -

ON BICYCLE SAFETY!

LEARN FROM THE PROS: Hopkins Police Bike Patrol Officers

1. Hand signals
2. Proper safety equipment
3. Sharing the road


ARTERY City of Hopkins, Minnesota

WHAT IS THIS THING?
WHAT IS THIS THING?

IT IS A LIVE, INTERACTIVE MURAL

- CREATED BY PROFESSIONAL ARTIST -

JIMMY LONGORIA!

Come over and check out this one-of-a-kind mural!
Take your photo and post it to the City's Facebook page:

www.facebook.com/hopkinsmn

SO WHAT DO YOU THINK?

Art is going to play a major role in the Artery.
We want to know more about what you think that role should be.

Do you like the idea of having a permanent art fixture that serves as a type of **attraction** or **photo-op?**



Do you like the idea of having an art installation that is **temporary** and **interactive** - one that you can help create?

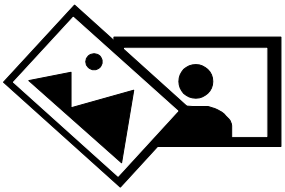
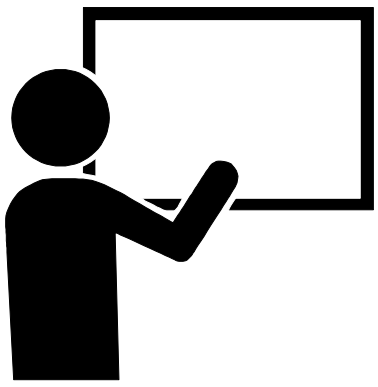

ARTERY City of Hopkins, Minnesota

IT IS THE ART FROM THE ATTIC SALE!

REDUCE, REUSE, REDECORATE!

Looking for something **green** for your home?

We have some wonderul pre-owned artwork for sale.
Begin the search for a new **masterpiece** for your home!


ARTERY City of Hopkins, Minnesota

WHAT IS THIS THING?

WHAT IS THIS THING?

I AM AN **"EN PLEIN AIR" PAINTER!**

WHO IS THIS?

"En Plein air" is a French expression meaning **"in the open air"** used to describe artists who paint outdoors.

My fellow painters and I are painting different scenes of downtown Hopkins and the Artery Experiment.

Come see my finished work, as well as other painters work,

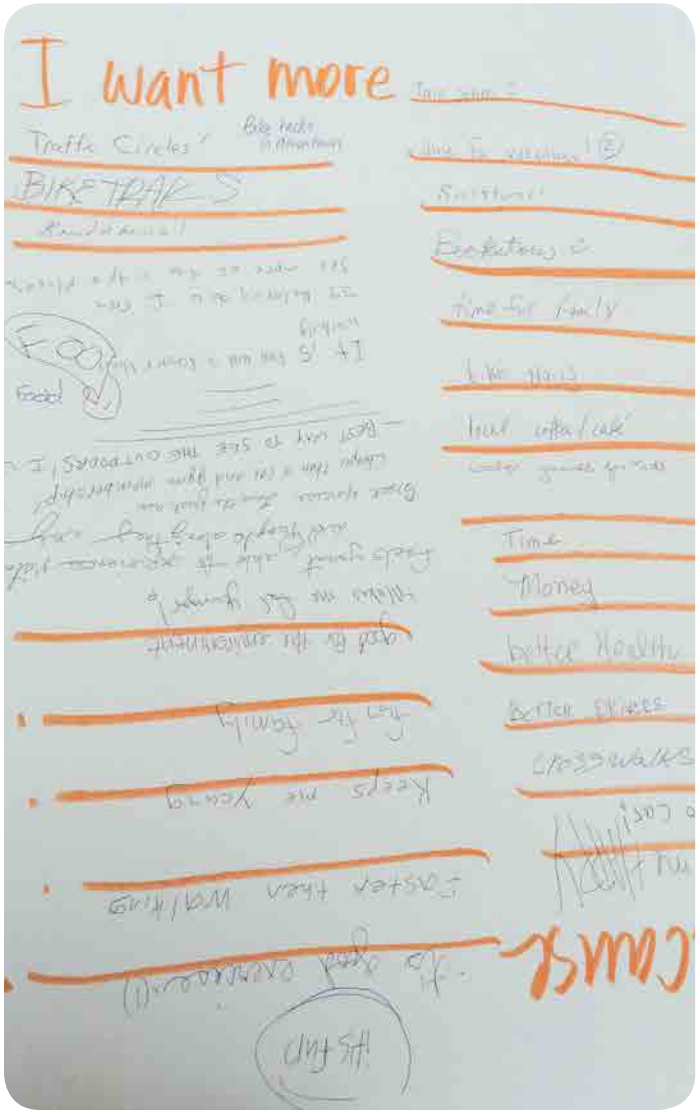
"On Display"
at 4:00 P.M.
in Downtown Park.

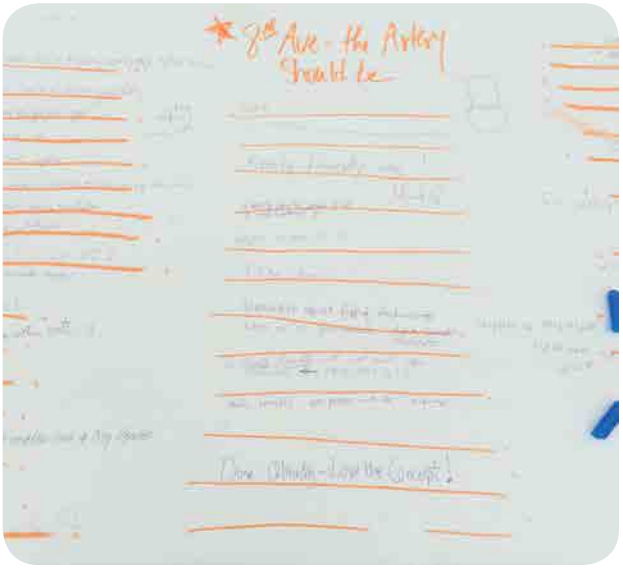
Join us for **snacks** and see who is crowned the **WINNER** of the plein air competition!

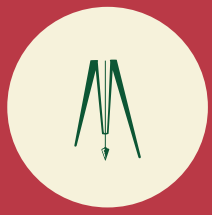
ARTERY CITY OF HOPKINS, MINNESOTA

Thanks from Kersten, Meg, and Alyssa!


STREET


I want more
Traffic Circles
BIKE TRAILS
Time
Money
better Health
Crosswalks


9th Ave - the Artery



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