



Mounds Boulevard Station

Public Realm Upgrades
for Bicyclists and Pedestrians

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Executive Summary

The Gateway Corridor is a regional transitway currently proposed to run from the newly restored Union Station in downtown St Paul to the metropolitan region's eastern edge near Woodbury. The transitway will connect at Union Station to proposed intra-city rail and bus services, the Metro Green rail line and existing bus services, and future Metro intercity and regional rail and bus lines. While an exact alignment and mode for the Gateway Corridor have not been selected at this time, a station has been proposed for Mounds Boulevard as it passes through Dayton's Bluff, a neighborhood to the northeast of downtown St Paul's Lowertown district. In contrast to other proposed stations along the Gateway corridor, the Mounds Boulevard station will be urban in character, with passengers coming and going by foot or bicycle rather than parking and riding. As such, this planning phase presents an opportunity to address the state of pedestrian and bicycle connections between the station and the surrounding neighborhood.

A thorough examination of existing conditions in Dayton's Bluff paints a picture of a neighborhood with a diverse and socioeconomically mixed population and a physical fabric that retains much of its historical character despite significant intrusion by out-of-scale automobile infrastructure. The significant draw of destinations in the neighborhood, and its potential as a point of origin for riders heading elsewhere in the region, demonstrate the value that the Mounds Boulevard station will bring to the neighborhood if the needs of pedestrians and bicyclists can be put into better balance with those of the automobile. The report fast forwards a few decades to see what that future might look like, checking the paper and hearing what

residents have to say about how their neighborhood has transformed into a place where walking and biking is the favored means of getting around.

To realize that future, the report outlines a series of action steps that rebalance the presence of the automobile with upgrades that recognize the unique needs of pedestrians and bikers. These recommendations focus specifically on a new neighborhood spine created along Maria Avenue, and prescribes repairs to the length of Mounds Boulevard as it passes through the neighborhood to connect it to Indian Mounds Park. Specific fixes to the physical environment are described, along with new features and amenities that enhance the value and sense of identity of the neighborhood and strengthen connections to the proposed transit station.

The actions suggested by this report are just that: suggestions. While they are grounded in real expertise about how pedestrians and bikers move through urban neighborhoods, the urban neighborhood itself is what matters. The report concludes with a few ideas for how stakeholders can be convened to gather ideas and impact change to realize a future for Dayton's Bluff that reflects the district's unique sense of identity and place.

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Introduction

The City of St Paul seeks potential improvements to pedestrian and bicycle connections from the proposed Gateway Corridor station at Mounds Boulevard to neighborhood destinations, including Metropolitan State University, commercial corridors, the Indian Mounds Park area, and further into residential Dayton's Bluff. The city recognizes the tension present on Mounds Boulevard, the street that is home to the future transit station. While the road operates as a vital piece of automobile infrastructure connecting I-94 from the eastern suburbs to Lowertown and eastern St Paul, it also has been the focus of neighborhood efforts to calm traffic and make changes that reflect its presence in a traditional neighborhood fabric.

This plan addresses pedestrian and bicycle connections to the proposed station by using the tensions on Mounds Boulevard as a starting point. An analysis of the existing neighborhood conditions describes a place that is thoroughly St Paul in character, with a mix of socioeconomic conditions and a diverse population. The neighborhood retains much of the traditional fabric that made it such a desirable place to live in its early days, and it continues to be a strong destination for local and regional residents due to the presence of institutions, parks, and commercial enterprises.

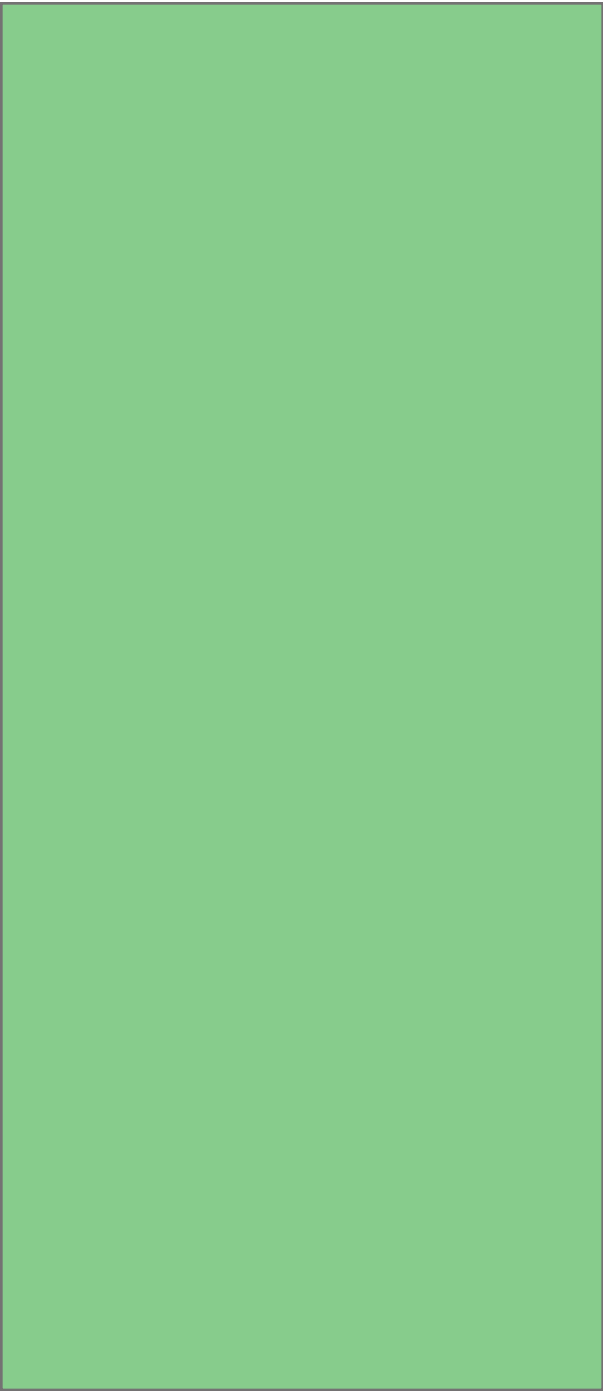
Despite these strengths, the neighborhood suffers from an environment that has prioritized automobile infrastructure over people. The neighborhood is served by several bus lines but lacks a well-connected and comfortable pedestrian connection between those lines and the proposed Gateway station.

Access to the beautiful parks around the neighborhood, and the regional bicycle system that is so tantalizingly close, is hampered by topography, uninvitingly large roadways, and a lack of signage to direct and protect park visitors. These same conditions are reflected throughout the neighborhood, where the small-scale pedestrian-village feel of some streets contrasts with the multi-lane highway-style Mounds Boulevard. These conditions present a host of challenges for promoting walking and biking to and from the proposed transit station and throughout the neighborhood.

To bridge the gap between the challenges for walkers and bikers today and a more promising future in the age of the Mounds Boulevard station, a future vision is presented. This vision draws upon the historical foundation of the neighborhood to reinforce the neighborhood's identity and sense of community. The reader will hear from neighborhood "residents" who use the future Mounds Boulevard station and describe what their neighborhood looks like decades from today, when the neighborhood is served by Gateway Corridor transit and changes have created a more welcoming place for pedestrians and bikers.

To achieve that vision for the future of Dayton's Bluff, a way forward is suggested for the neighborhood that focuses on rebalancing the presence of automobiles with the needs of pedestrians and bicyclists, with the knowledge that biking and walking only flourishes when streets are designed to prioritize those activities first.

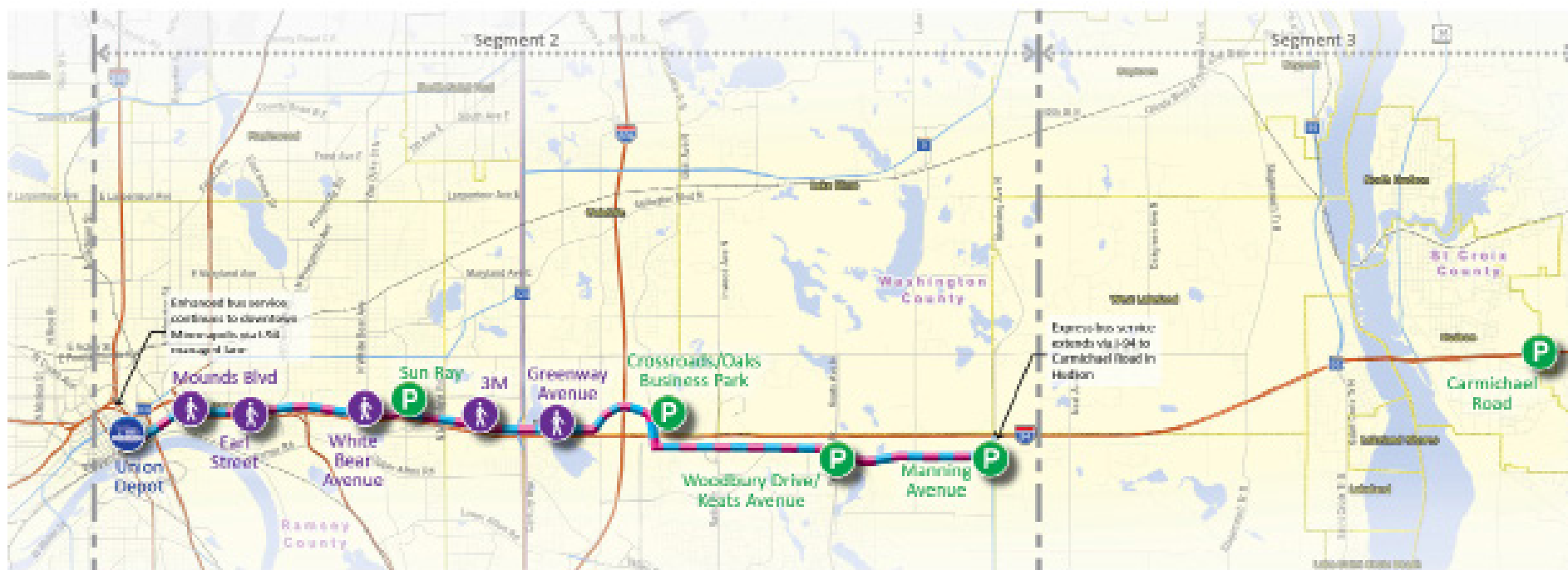




A series of actions focuses on three major changes. First, Maria Avenue is designated as a neighborhood “spine,” with excellent bike infrastructure and a welcoming walking environment. Second, a connection is provided from this Maria spine to Mounds Boulevard for bikers and walkers, passing the Mounds Boulevard proposed station and crossing over Mounds itself in a way that is safe and inviting. Finally, Mounds Boulevard itself is given a series of treatments that maintain its role as a vital piece of automobile infrastructure while also accommodating new users traveling through the neighborhood and to and from the proposed station. Together, these changes reflect a renewed approach to the public realm that recognizes the unique needs of pedestrians and bikers and the role they play in contributing to urban vitality and neighborhood identity.

This report draws upon the expertise of architects, planners, urban thinkers, and academics. Its recommendations are the result of careful analysis of existing proposals and conversations with neighborhood stakeholders. Ideas were vetted by administrators at a variety of city departments, who provided invaluable input that bridged urban design concepts with the many practical concerns about how the city works. The actions bring together ideas from all corners, but there are many more residents and stakeholders who have a vision for this special neighborhood and can benefit from integrating the Mounds Boulevard station into the neighborhood. The most important step, more essential than all the others described here, is to engage directly with those stakeholders. This report should be considered a starting point for conversation, but the real work

begins when stakeholders come together to continue building a future that reflects the community’s values and priorities. The conclusion of this report presents a few ideas for how to engage meaningfully with those stakeholders in a process that builds community identity and produces stronger, more effective outcomes.



Legend:



Union Depot Station



Park and Ride Transit Station



Walk up Transit Stop

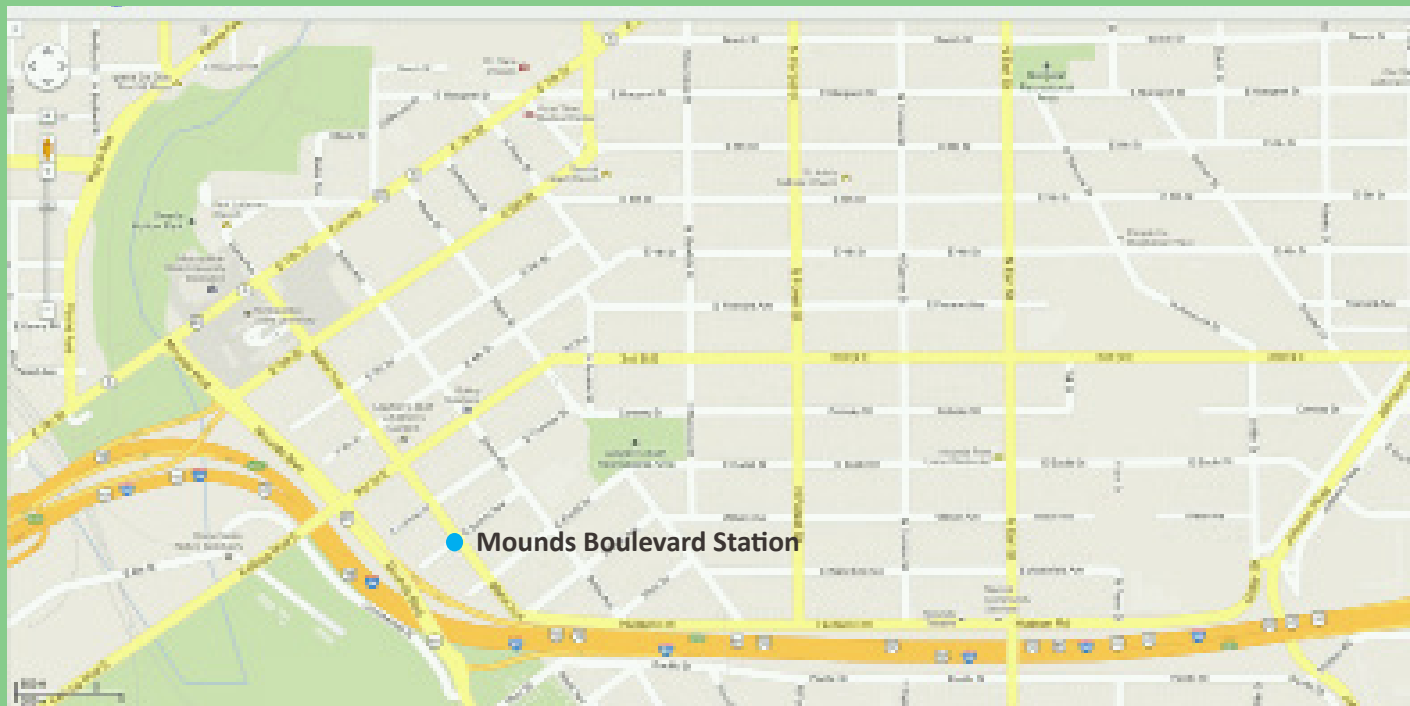
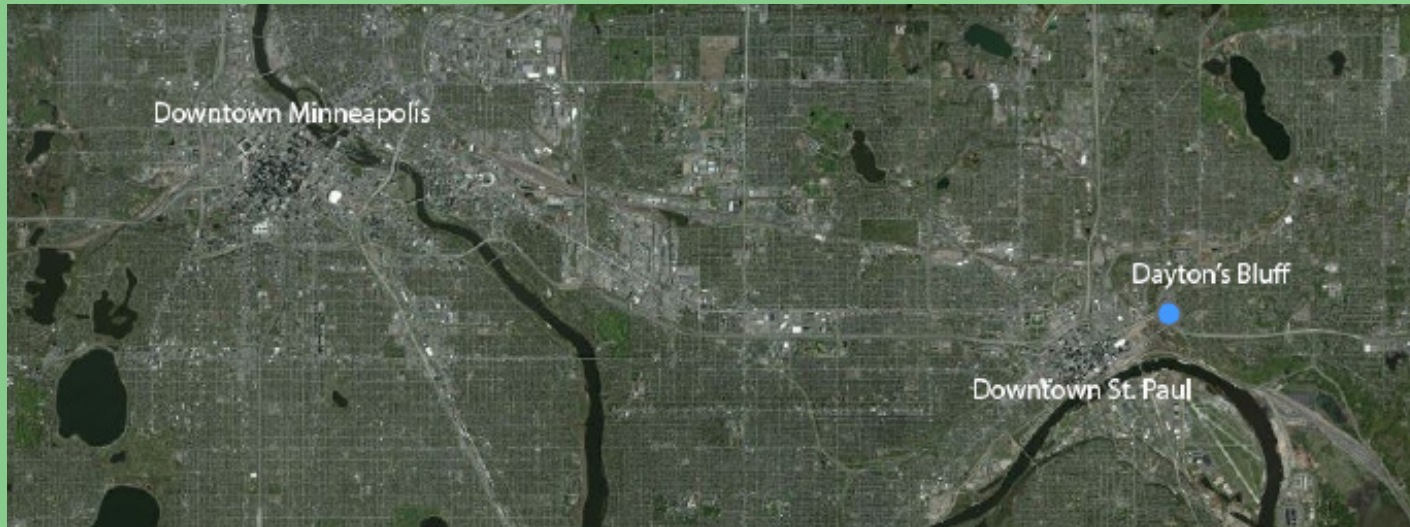
Alternatives 3 and 5 BRT/LRT



Optimized Alternatives 3 and 5: BRT -Hudson Road and LRT-Hudson Road
October 4, 2012

CH2MHILL Team

Gateway Corridor Alternatives Analysis



Top: Dayton's Bluff is located just to the northeast of downtown St Paul, and approximately 13 miles southeast of downtown Minneapolis. Bottom: The proposed transit station at Mounds Boulevard is located on the western edge of the Dayton's Bluff neighborhood. Plans in this document reference several streets in the area.

Existing Conditions

As part of the Gateway Corridor, a regional transitway extending from downtown St. Paul east to Woodbury, a station is proposed for the Dayton's Bluff neighborhood. This station, at the intersection of Mounds Boulevard and Third Street, will be the first stop along the route eastbound from Union Depot. While the exact alignment has yet to be finalized, existing proposals provide enough information to undertake an analysis of the conditions in the area surrounding the proposed station site.

This section explores the demographics, character, and amenities of the neighborhood and places it in a broader regional context. Along with descriptive information is an analysis of the ways in which the many assets of the neighborhood are limited by physical conditions that this report seeks to address. This section makes the case for additional investment in the public realm of Dayton's Bluff, to increase bicycle and walking connections to the station and, more broadly, to put the needs of the automobile in appropriate balance with the human experience on city streets.

Dayton's Bluff: The Basics

Dayton's Bluff is a historical neighborhood located in East St. Paul. The neighborhood is separated from points south and west by major grade changes and Interstate 94. The neighborhood is bounded by Grove Street and East 7th Street to the north, and Johnson Parkway and Minnehaha Avenue to the east. The neighborhood boasts access to significant regional amenities, including the Bruce Vento Nature Sanctuary, Swede Hollow and Indian Mounds Parks, Metropolitan State University, and the East 7th Street commercial corridor.

According to 2010 Census data from the Wilder Foundation, the neighborhood demographics are as follows:

Population

Increased about 6% since 2000 to 16,434.

Race

The majority of residents are non-white (55%). The largest communities of color are Asian (24%), African American (16%), and Hispanic (15%).

Car ownership

About 14% of residents do not own a vehicle, which is the same percentage as the city of St. Paul.

Transportation to work

About 9% of residents take public transportation, the same percentage as the city of St. Paul. However, 7% walk, bike, or work from home, which is 3.5% less than the city average.

Median household income

\$41,864, which is about \$4,162 less than the city average.

Housing Vacancy

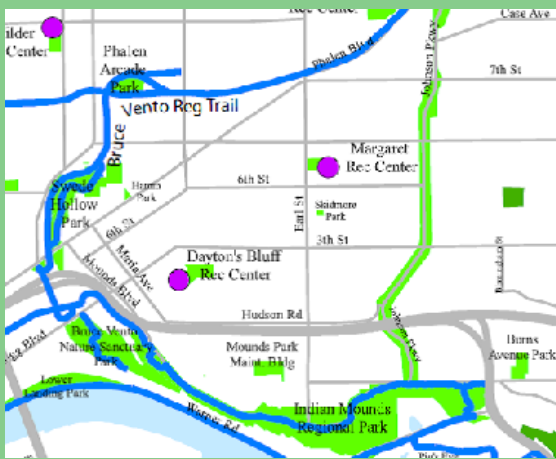
Vacant units are concentrated in the northwest quadrant of the neighborhood, and the lowest vacancy rate is found along the bluff and southeastern quadrant of the neighborhood, near the proposed station location. The overall vacancy rate is 13%, which is slightly above the citywide average of 8%.

Tenancy

Like the city, the neighborhood is split evenly among renters and homeowners. The Twin Cities average homeownership rate is 70%.



Above: A section of Mounds Boulevard that sees heavy foot traffic but lacks a sidewalk makes clear that this is a place where cars are favored over pedestrians. Below: The Dayton's Bluff neighborhood is encircled by bike trails, but has little infrastructure within.



A traditional, human-scaled place

Despite the construction of Interstate 94, which changed the relationship between Dayton's Bluff and the neighborhoods around it, the neighborhood still retains much of its traditional fabric and people-friendly scale. Like many old neighborhoods developed during the streetcar era, this one is primarily residential but served by a commercial corridor on East Seventh Street. The majority of land adjacent to the proposed station site is zoned for residential uses; while most parcels are presently single-family homes, there are some multi-family units, particularly along Maria Avenue. The population density of the neighborhood is 6,017 persons per square mile, which is above the citywide density of 5,074 persons per square mile and, again, is consistent with the character of streetcar-era neighborhoods.

Because it was built as a traditional urban neighborhood, Dayton's Bluff has many attributes that make it "shovel ready" for pedestrian and cycling improvements. Chief among these is the nature of its street grid. Blocks in the neighborhood are relatively short. For example, many of the blocks along Maria Avenue between the proposed station location and Metropolitan State University are about 250 feet in length. Compare that to the 300-foot short-end standard length of blocks in Macalester-Groveland, or the 600-foot "blocks" in proposed suburban station locations (albeit those are hardly walkable blocks in any conventional sense). Short blocks and narrow streets (of which the neighborhood has many) favor pedestrians and cyclists by providing variety and options for travel and by slowing automobile traffic. This densely developed street network provides an optimal setting for pedestrian and cyclist access to neighborhood destinations.

The character of the street network is complemented by the traditional environment that has built up around it. In Dayton's Bluff, property parcels are small, setbacks are short, architecture is historic and humanly-scaled, and sidewalks can be found almost everywhere. These qualities signal to pedestrians and cyclists that the urban realm belongs to them, providing a pleasing contrast to places where the balance between humans and cars so thoroughly favors the latter.

Limitations

The benefits of this traditional scale are tempered somewhat due to the physical conditions of the neighborhood that put the needs of automobile travel first. While sidewalks are wide and welcoming in some places, in others they are broken, deteriorated, insufficiently wide, or lacking in the sense of enclosure that makes walkers feel safe and comfortable. In others, sidewalks are missing altogether. These conditions signal to pedestrians and drivers that, despite the traditional urban environment, walking is a lower priority than other modes of travel.

The state of affairs for bikers is also inconsistent. Designated bike routes encircle the neighborhood, but bikers are not provided a safe space of their own on surface streets. Streets within the neighborhood are not designated in such a way as to signal to either drivers or cyclists that bikes are welcome to mix with traffic. The result is an environment that discourages active travel by bicycle and signals drivers and bicyclists alike that the streets are for cars alone. The efforts of would-be cyclists to access nearby amenities, such as the Bruce Vento Trail, are further hampered by a lack of signage and striping that establishes

a safe and direct route to reach parks and trails.

The neighborhood is both an origin and a destination.

Because Dayton's Bluff acts as both an origin for transit ridership and a destination for riders from other places, use of the Gateway Corridor will be increased by siting a station at Mounds Boulevard. Similarly, a station here serves the neighborhood itself by bringing in additional people (and investment) and connecting neighborhood residents to a regional network of jobs and amenities.

Riders originating at the Mounds Boulevard station

By the time the Gateway Corridor opens, transit riders boarding at Mounds Boulevard will be able to travel westbound, to the beautifully renovated Union Depot, and at that terminus access a whole host of citywide, regional, and intra-city transit services. This site will also provide access to Lowertown and the new ballpark for visitors who opt for a quick ride rather than a leisurely walk. Union Depot will be one of two major transit hubs in the region, and neighborhood residents will benefit by having such convenient access to the city's core, Minneapolis, and beyond.

The rider boarding from Mounds Boulevard and traveling eastbound soon reaches the retail node at Earl Street, on the opposite end of Dayton's Bluff, and additional shopping opportunities near stations at White Bear and Sunray.

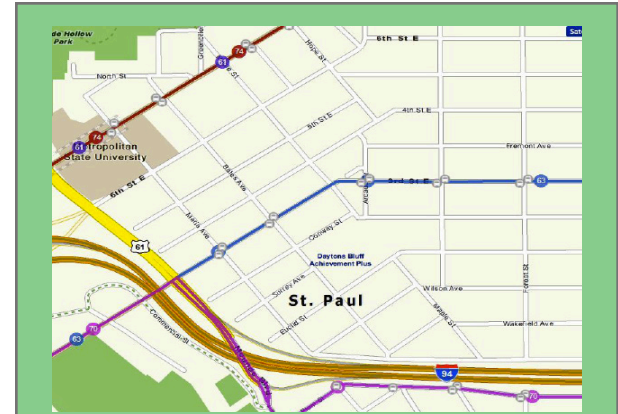
Deeper into the eastern suburbs, the line will provide service to major job centers around the 3M headquarters and Carlson Business Park. Two percent of neighborhood residents com-

mute to job opportunities in Woodbury, which is along the Gateway alignment; these residents may benefit from access to the transitway.

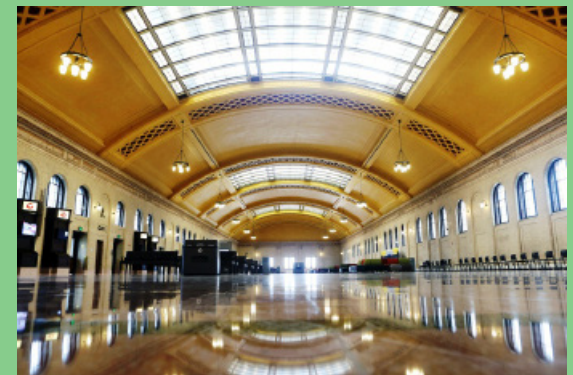
Access to these employment opportunities is a boon for Dayton's Bluff residents, many of whom do not own cars and work outside the neighborhood itself. Residents report overwhelmingly that they commute to St Paul or Minneapolis for work. But according to 2010 Census data, approximately 14% of households within the neighborhood do not own a vehicle (which is the same percentage as for the city as a whole). While 84% of neighborhood residents reported using a personal car to get to work, 9% use public transportation and 7% walk or bike. This last figure is lower than the citywide average of 11%; despite the neighborhood's close proximity to the downtown job center, the barrier presented by topography and the I-94 freeway infrastructure may disincentivize people from walking or biking to work. The Gateway Corridor presents an opportunity to incite a mode shift and connect to downtown and regional jobs through strengthened transit connections.

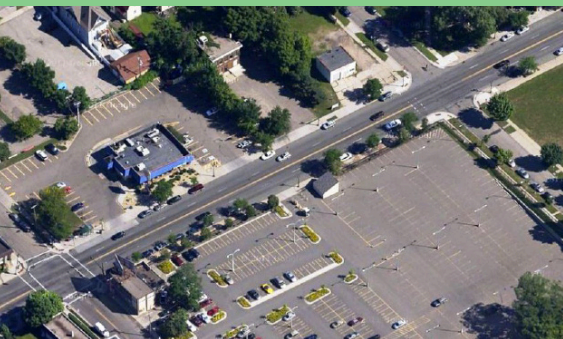
Riders destined for the Mounds Boulevard station

There are a number of strong destination draws for riders arriving at Mounds Boulevard from elsewhere in the region. Metropolitan State University brings 11,000 students and a large support staff to the neighborhood. Ninety-six percent of Metropolitan State students currently drive to school; while many of these are non-traditional students who rely on cars to juggle work and academic demands, the opportunity exists to serve and grow the small share of student who arrive by other means.



Above: Existing bus routes through the area near the station. Below: The splendidly restored interior of Union Depot, which provides a connection between Dayton's Bluff and region-wide transit services.





Top: Swede Hollow Cafe, a neighborhood landmark on East Seventh Street. Middle: Highway-style signage makes Mounds Boulevard a forbidding pedestrian environment. Bottom: Pedestrian-unfriendly parking lots and empty space along East Seventh.

Metropolitan State University is the major institutional employer in the neighborhood, but small businesses thrive here too. A 2010 survey by the City of St Paul discovered that small businesses in the area benefit from the central location, easy accessibility, and diverse population; the same survey cited beautification as a top concern by commercial operators. East Seventh Street is just a short walk from the proposed station location and is well-served by complementary transit services, reinforcing the capacity this area has to serve as a small-business job and retail center in the future.

Many other destinations exist within a half-mile walk of the station, including the Dayton’s Bluff Community Center and the beautiful Mounds and Swede Hollow Parks that anchor the neighborhood to the south and north, respectively. Providing safe, easy access to these neighborhood destinations for regional visitors will increase the value of the station proposed for Mounds Boulevard.

Limitations

Despite the strong draw of destinations within Dayton’s Bluff, and the importance of the proposed station as an origin point for connections to regional jobs and amenities, the effectiveness of the station is limited by a surrounding environment that puts the needs of automobiles first. The area immediately around the proposed Mounds Boulevard station provides a stark example of this limitation. Drivers exiting I-94 eastbound are provided a two-lane, highway-grade offramp that is indistinguishable from the six-lane boulevard that it meets in front of the station site. Everything about this environment puts top priority on quick movement of cars through the neighborhood. The signage is overhead, as on a

freeway; sidewalks are mostly absent or relegated to tiny treeless strips on one side; driving lanes are wide and intersections are few, giving no reason for drivers to slow their speed. Even the curvature of the roadway optimizes vehicle movement, treating this stretch of urban boulevard between Plum and East Seventh as little more than an extension of the freeway that serves the city, not the neighborhood. There is no implicit or explicit visual cue that drivers have exited the high-speed freeway and entered a fine-grained urban environment; there is no indication that pedestrians and bicyclists should be honored here. To reinforce the priority of the automobile, the neighborhood itself has had its street access cut off from this vehicle conduit. In short, the public realm becomes the domain of the car, and the human experience is forgotten.

This is perhaps the most egregious example in Dayton’s Bluff of prioritizing vehicle movement at the expense of all other public realm priorities, and the situation at Mounds Boulevard will need to be addressed through an entirely new paradigm if pedestrian and bicycle access to the station is to be taken seriously. But there are other examples throughout the neighborhood in which automobiles have been given top priority, leaving all other users feeling unwelcome and out of place in the public realm. The aforementioned absence of bike lanes is one; the presence of blank walls and empty lots (and parking lots, which feels like an empty lot to the walker) and the absence of street trees are two more. While there is much to commend about the good urban “bones” of this district, the public realm suffers as the balance of modes so heavily favors cars. Fortunately, the opening of a station at Mounds Boulevard is a chance to ad-

just these priorities, rebalance the needs of pedestrians and cyclists with those of cars, and increase patronage on the Gateway line as a result.

Dayton's Bluff is surrounded by amenities.

While the draw of destinations within the core of the neighborhood is strong, Dayton's Bluff is anchored at each edge by regionally significant parks and trails that are visited by residents from the neighborhood and people around the region alike. These places allow for outdoor activities and scenic views for residents and visitors to enjoy year-round.

- To the south - Indian Mounds Park is a historical site with numerous recreational amenities including tennis courts, barbeque grills, and a scenic overlook of the Mississippi River.
- To the west - Bruce Vento Nature Sanctuary is an urban oasis, restored to its native condition by numerous stakeholders, including neighborhood residents. An abundance of wildlife and plants can be enjoyed through activities such as bird-watching and bike/walk trails.
- To the north – Swede Hollow Park, named after the area's first settlers, was restored in the late 1970's. Today, the Park includes a picnic area and public art installation, and is connected to the Bruce Vento Nature Sanctuary. The Bruce Vento Regional Trail originates here, and terminates 13 miles later in White Bear Lake.

Limitations

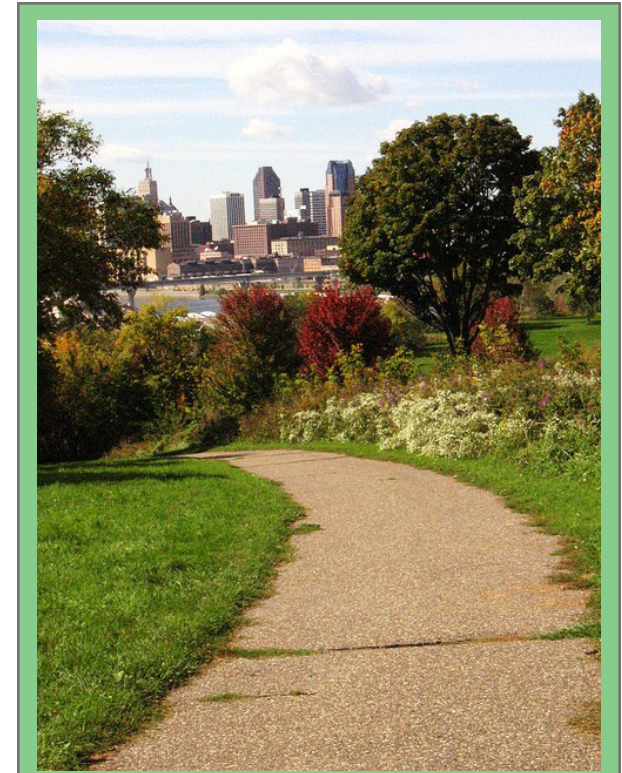
Currently, these recreational amenities are not easily accessible by residents within the neighborhood due to poor quality pedestrian and bicycle connections along the existing road network. Conversely, recreational visitors lack inviting connections to the

neighborhood, which can be detrimental to commercial vibrancy along the East 7th commercial corridor.

Although the neighborhood is home to the trail head of the Bruce Vento, Dayton's Bluff currently lacks a robust on-street bicycle network that connects intuitively and safely to the regional network. For example, the neighborhood contains one bike-friendly pathway which traverses the eastern edge of the neighborhood along Johnson Parkway from Interstate 94 to East 7th Street. The condition of this route is less than ideal for safety, as it consists of a narrow space along the road shoulder. Apart from this route, bicyclists must utilize existing pedestrian pathways or automobile-dominated streets to traverse the neighborhood.

Aerial images of the area surrounding the proposed station at Mounds Boulevard illustrate the stark contrast between the leafy, human-scaled grid of blocks within Dayton's Bluff and the built and topographical barriers that stand between the neighborhood and much of the rest of the city. Interstate 94 severs what would have been a continuous street connecting north and south portions of the neighborhood; Mounds Boulevard operates with the quality of a limited-access highway along the neighborhood's western border; the neighborhood is further disconnected from its surroundings by the steep bluffs that lend it its name.

Sidewalks are present on all streets in the general site area of the proposed transit station at Third Street and Mounds Boulevard. However, these sidewalks lack connectivity to Mounds Blvd. On Mounds Blvd, the pedestrian walkway is located on the southwest side. This poses a challenge to pe-



Above: The view from Indian Mounds Park to downtown St Paul.
Below: The entrance to historic Swede Hollow Park.





Above: Portland's Pioneer Square multi-modal station is one of the city's most important public spaces, exemplifying the potential of transit facilities to spur improvements to the human-scaled environment.

pedestrians seeking to connect to points southeast of the station area, as there are no clear, safe paths across Mounds Blvd in this direction. Further, connections from the station into the neighborhood do not exist currently, as each of these streets (Conway St., Surrey Ave., Euclid St., and Wilson Ave) end in cul-de-sacs. The proposed station area will require significant pedestrian infrastructure investments to facilitate movement to destinations both at the edge and within the neighborhood. Thus, the sta-

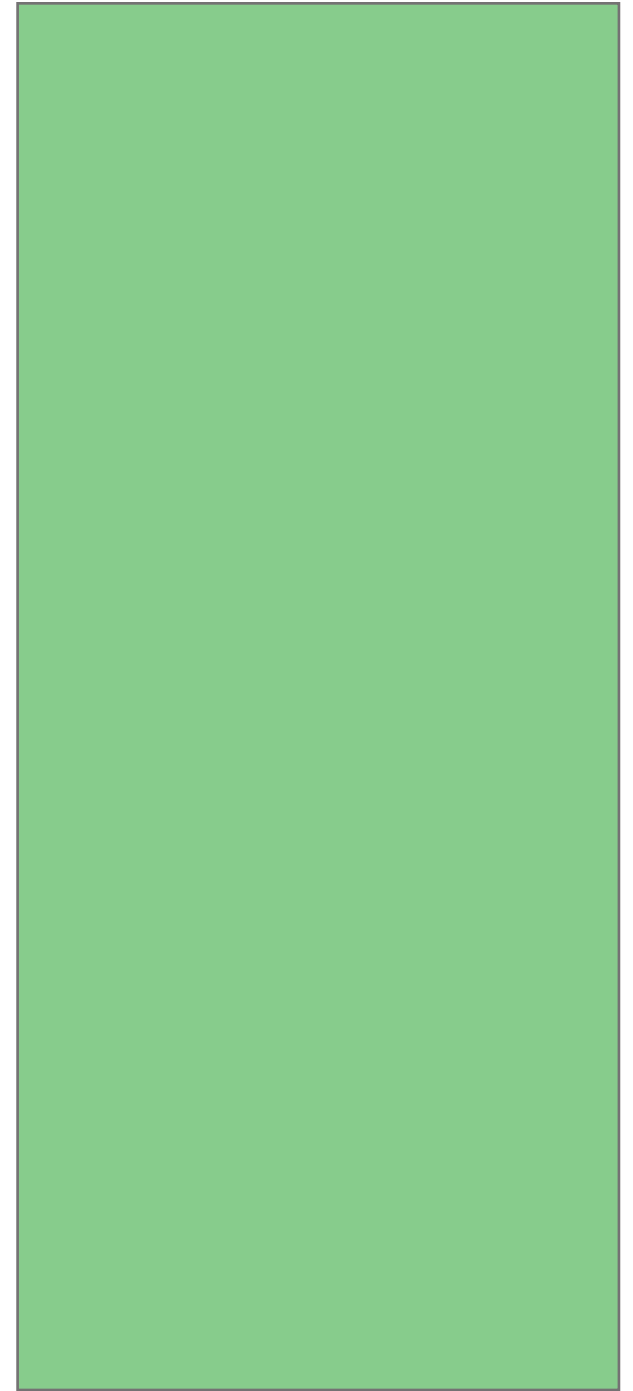
A way forward

Government agencies and pro-transit stakeholders may view the opening of a station at Mounds Boulevard as a blessing for the neighborhood, as property values and access to employment are both likely to increase. Neighborhood residents and local stakeholders, however, may see the opening of the station as an inconvenience, a disruption, and a misplaced investment that benefits the region at the expense of the neighborhood (just as I-94 did so many decades ago). A lack of support from neighborhood stakeholders is a significant limitation in the success of the transitway, and local concerns represent the very real investment residents have in maintaining the character and spirit of this place.

This limitation can be overcome by reframing the challenge the line might pose for the neighborhood as an opportunity for additional investment. The opening of a transit station brings a level of interest, attention, and investment to Dayton's Bluff that is rare for an urban district. The focus must be shifted from the station and transit line itself to the potential for the long-term benefit: if a station is indeed coming to the neighborhood, what benefit

can the neighborhood receive through improvements and upgrades to the public realm? How does this investment present an opportunity to reassert the human-scale character of this neighborhood?

By reconceiving city streets as places that welcome pedestrians and cyclists throughout the neighborhood, the process of building the station and changing the neighborhood around it can deliver tremendous value back to Dayton's Bluff. The next section of this report presents a vision of that bright future as told by residents of, and visitors to, the neighborhood.



Vision

Dayton's Bluff is the most picturesque and beautiful district of the city. Sloping back from the river bluff for nearly a mile, it commands from every point a wider and finer prospect the city and the Mississippi valley than any other portion of the city east of the Mississippi.

St. Paul Pioneer Press, January 1, 1887

Even from the early days, the spectacular assets of Dayton's Bluff were obvious. Its natural beauty combined with its strong connections to the rest of the city, making the neighborhood a highly desirable district in which to live. Over time, economic changes and the incursion of freeways have disfavored this special neighborhood. The opening of the Gateway Corridor is a moment in the city's history where the neighborhood can strengthen once again. What might people say about this place a decade or so after the station opens?

- **An elderly neighborhood resident:** "When I was young and living in the neighborhood, I thought I'd never be able to grow old here. Thankfully, all my friends have stayed in the neighborhood with me. We walk to meet each other at the coffee shop every day. The streets are safe and inviting, and walking everywhere is so good for my health. I never have to worry about driving with my poor eyesight because the neighborhood is so accommodating for us old folks!"
 - **A stay-at-home parent:** "I load the twins into the stroller and walk down to Indian Mounds Park every day in the summer. That walk was so treacherous a few years back, but thanks to street improvements along Mounds Boulevard we're able to make it there along a safe and inviting sidewalk. Traffic is calmer now because
- of the curb bump-outs and special signals just for walkers. On the walk back from the park, we like to stop at the corner store for ice cream."
- **A teenager:** "I got a great summer job at a warehouse in Woodbury. My parents thought about buying me a car, but it's just so easy to bike to the station and hop on the Gateway line. I've put the extra money that I would've spent on the car toward saving for college. Sometimes on the way back after work I'll bike down to the Rec Center to meet my friends, and then we all bike home together."
 - **A reverse commuter from downtown St Paul to the eastern suburbs:** "I take the Gateway line out to my office every day. It's really convenient. I decided to get off today at Mounds on my way back because I'd heard about all the shops on East Seventh and needed a gift for my wife's birthday. What a great selection of shopping you have! This neighborhood is so charming, and without the station here and the great signage I might not have stopped and discovered this wonderful gem."
 - **A student at Metropolitan State University:** "I heard that a few years back almost everybody drove to Metro State. I can't imagine that today! I walk to class from the Mounds station and love the sense of connection that I get to the neighborhood. It's a lovely walk and makes me feel like I'm in a really special place where I want to hang out and spend time with other students."
 - **A business owner:** "I sometimes drive and sometimes take the Gateway line here. I think business has actually increased in the neighborhood since the station opened, in part because we have so many options for how to get here. Even though traffic moves a little bit slower on



Top: Pedestrian-friendly streets provide a place for elderly neighbors to meet. Middle: A family enjoys a walk in the park. Bottom: Comfortable, inviting streets give teens a safe place to hang out.



Top: A vibrant, inviting sidewalk atmosphere invites students to linger together. Middle: Landscaping treatments make this sidewalk a comfortable place for pedestrians and cyclists. Bottom: A bike route sign directs bikers and alerts drivers of their presence.

Mounds Boulevard now, I think that has made the neighborhood a much safer and more inviting place for everyone. I'm glad that people finally see what a special place Dayton's Bluff is." The opening of the transit station at Mounds Boulevard introduces a new choice for mobility in the Dayton's Bluff neighborhood, and presents a unique and rare opportunity to rethink connectivity and quality of life in the neighborhood. The lack of a park-and-ride facility at Mounds Boulevard means that ridership at this station depends on effective human-scaled movement through the neighborhood. Therefore, the success of this station requires useful, high-quality people-powered connections to and from neighborhood destinations for the transit user. Previous outside investments in the neighborhood have come in the form of freeway infrastructure, which prioritized automobile use at the expense of other modes at the neighborhood's edge and disconnected Dayton's Bluff from the social and economic fabric of the rest of the city. Despite these challenges, the neighborhood remains remarkably resilient and continues to adapt and invest in its own assets. The opening of the transit station at Mounds Boulevard is another turning point for the neighborhood. To provide the experience described by future residents in the quotes above requires a bold shift in thinking about how neighborhood and transportation planning prioritize people while accomplishing multimodal mobility goals. The opening of the station provides an opportunity for new investment that elevates the human experience in the neighborhood, using infrastructure to bring positive change and capitalize on the potential of existing neighborhood social and economic assets. While connections between the

station site and neighborhood destinations are already physically present, it is the quality of those connections that will determine how much people actually use them. To foster that use and realize the full potential of this station requires re-conceiving of this neighborhood as a place where the human environment takes precedence over automobile accommodation. In this re-envisioning, Dayton's Bluff is to be a fully connected neighborhood where active travel is the most convenient choice. While some speed and convenience may be lost for cars passing through the neighborhood, the neighborhood itself benefits from increased choice and a more welcoming streetscape. The action plan laid out in the next section builds upon the idea of rebalancing modes according to the following principles:

- **Bicyclists:** Dayton's Bluff will provide designated routes for bikers that are safe and accessible for commuters and recreational users. Clear signage and lane markings will direct bikers to destinations where they'll find amenities, such as designated parking, that make biking even more convenient.
- **Pedestrians:** The natural and architectural assets of the neighborhood will be accessible for those on foot by safe, inviting sidewalks in good repair. Walkers will find pleasant, attractive routes to the park, the transit station, and other neighborhood destinations.
- **Cars:** Dayton's Bluff will continue to be a neighborhood accessible by car. Traffic routes through Dayton's Bluff will be clearly marked and danger from conflict between cars and people will be minimized, encouraging a safe environment for everyone on city streets.
- **Transit:** Dayton's Bluff will be an easy, con-

venient neighborhood to travel to and through by transit. Bikers and walkers in the neighborhood will find safe, attractive, and clearly marked routes to transit stops from anywhere in the neighborhood.

- **Neighborhood Vitality:** The opening of the Mounds Boulevard station will unlock the potential of Dayton's Bluff by improving the public realm and connecting neighborhood destinations to each other and to transit stops. By encouraging walking and biking and reconceiving the public realm at the human scale, neighborhood residents and outside visitors alike will be drawn to Dayton's Bluff for its unique character and spectacular natural and social assets.

Rebalancing the human experience with automobile-driven development in Dayton's Bluff does not mean treating all modes of travel the same. In fact, even when planners place the needs of bikers and walkers on par with cars, the specific needs and large scale of automobile infrastructure can dominate the more finely-grained details that make a place inviting for non-automobile uses. The same environments that invite people to walk, bike, and enjoy the safe streets of the neighborhood are less conducive to the expedited movement and accommodation of cars. Given this inherent conflict, this action plan falls firmly on the side of prioritizing investment at the human scale, where the greatest benefits to residents will be realized. The following action plan presents a means of moving from today's car-first environment to a more human-scaled neighborhood. We recognize that a shift in thinking that prioritizes the human scale is a bold change, but one that is necessary to realize the vision of a fully connected station at Mounds Boulevard.



Above: A vision for the commercial streets in Dayton's Bluff, which will be walkable, green, and pedestrian-friendly. Below: A sign provides for safe usage of busy streets by walkers.





Overview of treatments to proposed station area.
 Green: Pedestrian and bikeway connections. Tan: Road and intersection diet.

Dayton's Bluff is the most pedestrian friendly district in the city. Situated atop the river bluff, its natural beauty can be appreciated by pedestrians and bicycle enthusiasts alike as the preeminent gateway into St. Paul. The reemergence of the neighborhood as a safe and welcoming haven for walkers and cyclists dates back to a strategic pivot in thinking when the Gateway Corridor brought a station to Mounds Boulevard.

St. Paul Pioneer Press, January 1, 2028

Action Plan

Introduction

This action plan improves the vitality of Dayton's Bluff by focusing on street-level improvements in three specific places: Maria Avenue, the approach to Indian Mounds Park, and Mounds Boulevard. Each has a critical role in neighborhood mobility (as is evident in traffic analyses and interviews with local stakeholders), and each is an important component of the neighborhood's historical and present-day identity. This action plan establishes Maria Avenue as a pedestrian and bicyclist spine through the neighborhood that connects the station area to nearby destinations. Improvements along Surrey Avenue, including a new crossing for pedestrians over Mounds Boulevard, will connect Maria to Indian Mounds Park. Finally, upgrades to Mounds Boulevard correct the imbalance of automobiles in the public realm along this significant piece of infrastructure.

Each of these three places is described in terms of its neighborhood significance and its future potential. The action plan then answers the critical question, "How do we get there?", through a series of proposed actions. Also considered are potential challenges to implementing each solution, and resources that can help with funding and provide design guidelines. Unless otherwise indicated, it should be assumed that the proposed actions are to be undertaken at a time, and funded in coordination with, the construction and implementation of the Gateway Corridor and its station at Mounds Boulevard.

That said, many of the solutions proposed here can be implemented to great benefit of the neighborhood independent of station construction itself. The final section of this action plan describes how to meaningfully engage the neighborhood in building its own future - to create support for projects, surface bold new ideas, and engender a strong sense of ownership over the public realm.

Maria Avenue: A safe, inviting neighborhood spine that connects destinations through Dayton's Bluff.

Neighborhood significance

Third and Maria was one of the first commercial strips in the neighborhood, and was the terminus of the Grand Avenue-Maria streetcar line. Real estate brokers advertised homes on Maria as being within walking distance of work, as people walked from the street directly into downtown. These connections to downtown have been effectively severed by the I-94 freeway trench and the uninviting quality of Mounds Boulevard.



A series of treatments on the Maria bikeway. Top: Sharrows. Middle: Pedestrian and bike refuge island. Bottom: speed humps.

Goal: What is the future of this place?

Maria should function as a neighborhood spine directing pedestrians and bikers from the station onto residences and destinations further within the neighborhood. The street acts a complement to Mounds Boulevard, where the focus is primarily on automobile infrastructure, and is a conduit for bikes and walkers between neighborhood destinations and the station and park to the south and west.

What steps should be taken to achieve this goal?

Bike boulevard

Establish Maria as a primary bikeway through Dayton's Bluff, using signage and striping to create a safe and easily navigable environment. Restripe the street surface of Maria to eliminate the center strips for automobiles and, in their place, put sharrows indicating that the street is primarily a bike boulevard. A sharrow is a stamp in the roadway with an arrow and the figure of a bicyclist, indicating that bikes and cars are to share the road. Slow car speed by installing two speed humps on every block. Prioritize continuous bike movement on Maria by reorienting stop signs between 6th and Surrey. Install a refuge island at Maria and Third to provide a place for pedestrians and bikes to wait while traffic passes through this uncontrolled intersection.

Pedestrian improvements

Install lighting along Maria to ensure that each block has at least two sidewalk lamps. While streetlights are typically taller, cast a brighter and wider light, and are of a more institutional design, sidewalk lamps are geared for the pedestrian: they cast a softer glow, are built to a shorter scale to

illuminate the pedestrian space, and often are of a design that is compatible with neighborhood architectural character. Many blocks on Maria feature only one light; the addition of one more on each block will promote pedestrian safety and make Maria a more attractive street, potentially increasing property values.

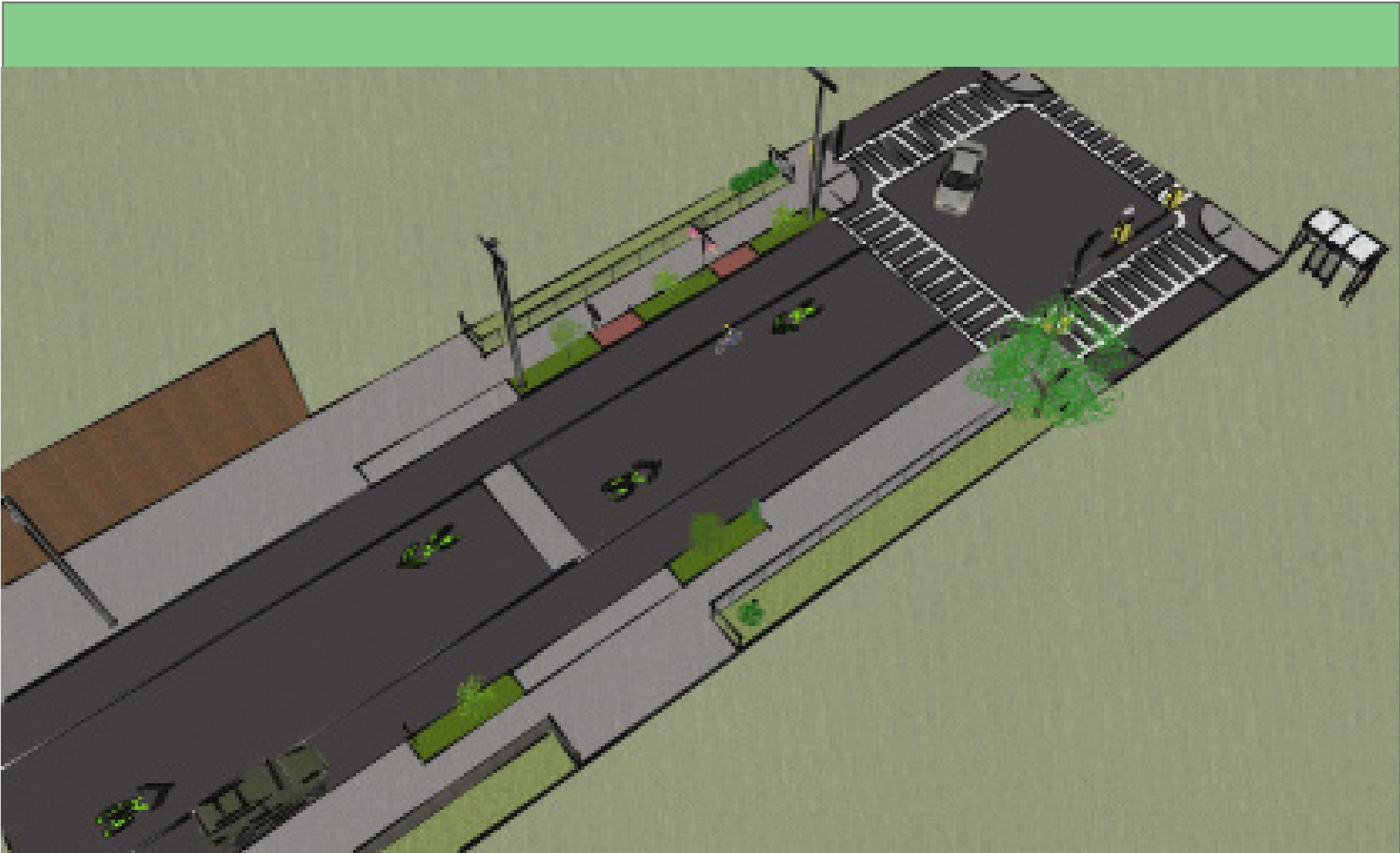
Paint zebra stripes at every crosswalk, on all four sides of the intersection, along Maria between Seventh and Surrey. Zebra stripes are an internationally recognized standard for pedestrian visibility, and require only a few cans of white paint. They reinforce that Maria is a neighborhood street where people are welcome and cars should proceed cautiously.

Introduce parking on the four-lane section of Third Street, where parked cars can act as a buffer between cars passing through the neighborhood and sidewalk users passing to and from the station area along this street.

Signage

Signs along Maria should alert drivers to make way for the people around them. Other signs, directed toward walkers and bicyclists, should direct them to all the destinations accessible from this important neighborhood spine.

Wayfinding signage: Install signage, consistent with other wayfinding signage throughout the neighborhood, that directs people to destinations throughout Dayton's Bluff. Signs should provide human-scaled distances (i.e., "Rec Center, 2 Blocks") and



Above: A sketch of proposed improvements for a Maria Avenue bikeway. Note the sharrow stamps, the speed hump at center, a slightly widened sidewalk with boulevard landscaping, and the striped zebra crossings. Note also that parking is retained on both sides of the street.



Above: A neighborhood portal in San Leandro, California, which provides a distinctive entry point with a uniquely pedestrian scale. Below: Cars stopped for pedestrians at a very visible zebra-striped crossing in Chicago.



should include as many destinations as possible. Directional signage must be carried through between Maria and the subject destination, providing help at every turn.

Advisory signage: Install signage that makes clear to drivers that they are in an environment that gives top priority to bikers and pedestrians. There is a whole menu of options for doing this; in addition to advisory bike signage, others alert drivers to crossing pedestrians, the presence of crosswalks, playing children, and the presence of speed humps. All these are cues to drivers to make way for the people around them.

A distinctive connection on Surrey

The block of Surrey between Maria and the Mounds station is a critical piece in connecting the Maria spine to the station and Indian Mounds Park. This block sees little vehicle traffic volume and should be given a special treatment that draws people into the neighborhood and to destinations within it. This space can be made more inviting to pedestrians and bikers by installing brick or cobblestone streets, in keeping with the district's historical nature, and by upgrading landscaping. Sidewalks can be made wider, or pedestrians can be invited to use the street itself for walking by reducing curb height. Bike connections, in particular, should be emphasized here by the deployment of paint and wayfinding signage, reinforcing this street as a route between other parts of the broader bicycle network. Finally, a set of stairs (and an ADA-compliant ramp) should be installed at the end of Surrey to provide a visually strong

connection between the station and the street.

Potential challenges: Peak-hour traffic may require that parking be disallowed on Third Street between Mounds and Maria. A traffic study can determine the best way to implement parking here. A similar study can evaluate the impact of reconfiguring stop signage along Maria and impact (if any) of zebra striping at pedestrian crossings.

Resources: The solutions suggested here are relatively low-cost and provide a strong impact on the character of the street. Transit for Livable Communities and its program, Bike-Walk Twin Cities, are a local administrator of bikeway funds that has gained expertise through its implementation of St Paul's Jefferson Avenue bikeway. For more information about refuge islands, speed humps, lighting, and signage, refer to "Notes on Tools" in the Appendix.

The Approach to Indian Mounds Park: The neighborhood's most significant recreational bike connection.

Neighborhood significance

Indian Mounds Park is a historical landmark within the Dayton's Bluff neighborhood, as some features date back over two thousand years. Today, the park grounds boast some of the best views in St Paul, and offer important recreational amenities such as softball fields, tennis courts, and gathering places. The park is an asset that is less easily accessible because Mounds Boulevard imposes a

barrier between the people-friendly environments of the park and the Dayton's Bluff neighborhood.

Goal: What is the future of this place?

Indian Mounds Park will be a highly utilized gathering and recreational space for neighborhood residents and visitors. The regional significance is underscored by a new approach from the Dayton's Bluff neighborhood and Mounds Boulevard transit station. This approach elevates the experience of bikers and cyclists by establishing a seamless connection between the park, the new station, and the newly established neighborhood spine on Maria.

Action: What steps should be taken to achieve that goal?

Provide bicycle and pedestrian routes, and install signage, which together will create easier access to the park by residents and visitors. Further emphasize connections by providing public art the end of this new pathway.

A pedestrian and bicycle crossing at Surrey Avenue

The section of Mounds Boulevard is a major physical and psychological barrier between the park and the neighborhood. The section of Mounds Boulevard that passes the proposed station currently operates as the primary entrance into downtown St Paul from the eastern suburbs. The road engineering through this section is consistent with such a role, and the road currently handles average daily traffic volumes of approximately 15,300 trips. While the road design promotes quick and efficient vehicle movement, the design is not conducive to pedestrian and bicycle users.

To maintain vehicle access to downtown while also making way for new pedestrians and bicyclists using the proposed station, a crossing for those users should be provided on Mounds Boulevard at Surrey Avenue to allow safe movement from one side of Mounds Boulevard to the other. See the diagram [xx] for the new pedestrian and bicycle routing around the station area and the approach to Indian Mounds Park.

At the Surrey Avenue end of the proposed transit station, install a signal specifically for pedestrians and bicyclists. A push-button signal is appropriate here, and could be activated from both sides of Mounds. The light design can include a flashing light over travel lanes as well as lighted strips along the crosswalk. To ensure that vehicles allow appropriate distance to slow down, install a corresponding flashing advisory light at the beginning of the freeway exit ramp. This solution is particularly effective when paired with a neighborhood portal, which signals to drivers that they have entered a neighborhood environment and should adjust their driving accordingly.

Legal challenges: Legal ownership of this right of way is determined by Federal Highway Administration (FHWA) regulation, and FHWA offramp design standards extend to at least 150 feet east of Third Street. Any potential design changes that vary significantly from FHWA standards will require approval from engineers at the city of St Paul and at the Minnesota Department of Transportation (in its role as FHWA local administrator). As planning and en-



Above: Cars parallel parked along the roadway provide real protection and a comfortable sense of enclosure for pedestrians. Below: Embedded lights provide additional visibility for walkers crossing the street at night.





Above: A rendering showing the proposed crossing from Surrey Avenue (at bottom) across Mounds Boulevard, with additional improvements over the Mounds Boulevard bridge. Note the zebra striped crosswalk, the overhead pedestrian warning signal for cars, and the bike lane along Mounds Boulevard.

gineering cultures at all levels increasingly embrace Complete Street policies and other strategies for incorporating all users, stakeholders should be engaged to identify opportunities to change the legal framework to reflect those new paradigms.

Functional challenges: Regardless of legal designation, the sweeping curve, two-lane width, and lack of visual stimuli send subtle but powerful design cues to drivers that this area is an extension of the I-94 freeway. As such, any suggestion of reorienting this section of road as a place that welcomes non-vehicle use may be met with concerns about pedestrian safety. There is ample space for drivers to slow from freeway speeds to pedestrian-safe speeds as they exit the freeway. The distance between the start of the freeway exit and Surrey Avenue is 1500 feet, which far exceeds off-ramp lengths in urban settings throughout the metro. Design solutions can be implemented to slow drivers down: landscaping, improved sightlines, and reducing lanes from two to one are among the many strategies that should be considered when the transit line construction provides the opportunity to redesign this off-ramp. Most importantly, design solutions are more effective in reducing actual speeds than simply posting lower speed limits. A proposed crossing at Surrey can only be safely implemented by also addressing driver speeds on the approach from westbound I-94.

Resources: Few, if any, design guidelines exist to guide engineers and planners in implementing these recommendations. This is an opportunity for the city of St Paul to set a new standard, and the emerging approaches in the city to codify a Complete Streets policy could provide an opening for addressing context-sensitive design solutions in places like this as well. The changes suggested here are directly related to the proposed station, and as such could be funded as part of a package for corridor-wide improvements. If a grant cannot be obtained through the corridor construction process, the city's capital improvement budget may provide an alternative source of funding.

Landscaping

Install trees and other landscaping elements along the pedestrian connection between the station and the park, as well as along the westbound exit lanes from I-94 as drivers approach the proposed Surrey crossing. The presence of street trees has a powerful influence on driver behavior by reducing the perception of street width (and drivers proceed more slowly down streets perceived to be narrower). Trees also provide a host of benefits including shade, a sense of enclosure, and shelter from the elements. Trees are associated with positive improvements in property values, and have valuable environmental benefits such as air filtration and rainwater absorption. While tree installation comes at some expense, they provide significant benefit to pedestrians and bicyclists in the barren and automobile-oriented environment between the station and the park.



Above: Streetscape improvements to the Surrey Avenue pedestrian crossing. This will facilitate active to Indian Mounds Park from the proposed station area.

A *Street Tree Assessment* should be taken for District 4. Assessments quantify the benefit that trees can give to the district and provide important statistics about existing neighborhood tree cover. These data points provide a basis for measuring improvements and for getting specific about recommendations on which trees should be planted to be compatible with localized soils and other necessary considerations. Completion of this assessment provides a powerful way to win support for trees in the areas in Dayton's Bluff where they are noticeably absent and most critically needed. Once an assessment is completed, trees should be planted and maintained as consistent with the St Paul Street and Park Tree Master Plan.

Potential challenge: A site-specific assessment will need to be taken to determine the viability of species in the somewhat hostile environment around this heavy vehicle infrastructure. Only street trees that can grow to maturity in this environment should be considered. Finally, a maintenance plan (and maintenance funding) should be included to ensure that this new landscaping is an attractive neighborhood asset for decades to come.

Resources: See the City of St Paul Street and Park Tree Master Plan and Walkable Communities, Inc (2006) for additional information about landscaping and its benefits. Funding for landscaping often can be obtained on conjunction with street

reconstruction or resurfacing. For more information about implementing, refer to "Notes on Tools" in the Appendix.

Signage

Install signs directing drivers to yield to pedestrians and bicyclists. Install directional signage to help pedestrians and bicyclists find the park and amenities within.

Crossing signage: These signs, directed toward motorists, advise caution and to pause for people crossing the street on foot or bicycle. This will draw attention to bikers and walkers at unsignalized crossings on Mounds Boulevard between the station site and Indian Mounds Park.

Wayfinding signage: To make reaching the park a trouble-free and intuitive experience, wayfinding signage should be installed on Mounds Boulevard that directs walkers between the park entrance and the station area. The signage should be scaled appropriately for pedestrians and bikers and feature arrows and graphics, such as a map, to provide a full understanding of how to cross through such a busy area. Additional information about distance to city- or region-wide trails will be of value to bicyclists in particular.

Resources: Funding comes from existing city resources. Signage should be consistent with the city's unified signage guidelines. For additional information about how to promote pedestrian and bicyclist safety and

navigation through signage, contact Transit for Livable Communities. For more information about how to implement signage, refer to “Notes on Tools” in the Appendix.

New two-way bike lane

The new bikeway on Maria will connect to the bike infrastructure in Indian Mounds Park by a new bike pathway on the south side of Mounds Boulevard. Bicyclists will emerge from Surrey Avenue and cross Mounds (see “Ped Crossing at Surrey”) all the way to the outer side of Mounds, where two bi-directional bike lanes will be installed using one lane existing traffic lane. To provide ample space for the bike lanes, the median on the Mounds Bridge will be removed.

Potential challenge: The proposal to remove a lane on the Mounds Bridge may be met with resistance given the heavy traffic volumes through the area. However, the great majority of southbound traffic on the bridge is destined for eastbound I-94, and that traffic favors the left turn lane rather than the right through lane. Combining the two lanes should have only a minor impact on traffic movement through this stretch.

Resources: This can be implemented using existing city budget, or can be funded as part of the broader project to provide a crossing across Mounds at Surrey (in conjunction with station construction). Neighborhood support should be sought, emphasizing the more robust bike infrastructure proposed for Maria. Refer to “Notes on Tools” in the Appendix for additional information about using bike lanes.

Traffic circle (Mounds @ Plum)

A traffic circle on Mounds Boulevard, just north of Plum Street, will calm traffic that at the present moment tends to accelerate onto the eastbound entrance to I-94 near the far West entrance to Indian Mounds Park. The high number of left-hand turns at this intersection makes a traffic circle an ideal solution. Additional benefits include a potential reduction in vehicle crashes due to reduced conflict between vehicles and pedestrians and vehicles themselves, and a reduction in vehicle travel speeds to below twenty-five miles per hour.

Resources: The traffic circle should be installed at the same time as the other structural improvements between Surrey and the park entrance. If this is not feasible, the circle should be constructed at the time that Mounds Boulevard is reconstructed.

Public Art

A sculpture just south of the proposed traffic circle should be installed to mark the entrance to Indian Mounds Park. The design could be created by the local community and could reflect the historical significance of the grounds. A large-scale sculptural installation will provide a vista point that will guide bikers and walkers to the park entrance, reducing the feeling of distance over the Mounds Boulevard bridge. The public art project provides a wonderful opportunity to engage neighborhood residents in a creative process that reinforces a sense of place and adds visual impact to the entrance to this beautiful park.



Above: Public art, as in this traffic circle in India, can be used to convey the cultural significance of a place while also providing definition and visual impact to the streetscape.



Above and below: Median treatments beautify the streetscape and are proven to slow vehicle movements.



Resources: A number of nonprofits, such as Public Art St Paul, are engaged with neighborhoods around the city in promoting public art projects. In addition, a percentage of city reconstruction budgets are set aside for art. For more information about installing public art, refer to “Notes on Tools” in the Appendix.

Mounds Boulevard: A true urban boulevard that accommodates all users in an attractive streetscape.

Neighborhood significance

To complete the suite of approaches to and from the station, we have to also address the street itself. Mounds Boulevard was once the primary east-west connection through the edge of Dayton’s Bluff into Lowertown. Over time, this road has come to function, in design and in practice, as an extension of the freeway that scarcely acknowledges the needs of pedestrians or bicyclists. Existing pathways are unsafe, not easily accessible, and lack the human scale that invites non-auto modes of travel. For example, no street-level path connects Seventh Street to Indian Mounds Park, and no provision is made for bicyclists at all, despite the adjacent Kellogg Bridge serving as the main bicycle route into downtown from the east side neighborhoods.

Goal: What is the future of this place?

The Gateway Corridor provides the opportunity to reorient Mounds Boulevard as a beautiful and inviting urban boulevard, where transit, pedestrians, and bicyclists are welcome and safe. Landscaping and public art will com-

plete the experience, signifying to travelers of all kinds that they are in a distinctive place.

Action: What steps should be taken to achieve that goal?

Reduce the functional size and feel of the boulevard; use the resulting extra space to add new amenities that beautify the street and reinforce that pedestrians are welcome here.

Rightsize the road

As improvements to Maria, the station area, and the approach to the park make this section of Dayton’s Bluff more inviting to pedestrians and bicycles, the appropriate next step is to reduce the size of Mounds Boulevard to be more compatible with the neighborhood streets around it. In particular, a reduction in capacity on Mounds can slow vehicle movements, diminishing the potential for conflicts with pedestrians in the station area. The introduction of a transit corridor guideway on part of Mounds Boulevard will require a rebuilding of significant portions of the street. Undertake a complementary analysis early in the engineering phase that identifies places where multiple lanes between Third and Seventh provide excess capacity. Remove or combine excess lanes to rebalance the presence of automobiles and provide space for new amenities.

Identify places on Mounds Boulevard where *a lane can be removed*. For example, the right turn lane and through lane on northbound Mounds, at Third Street, could be combined. Similar opportunities exist throughout this stretch of road. By combining lanes, turning radii are unaffected and additional street

width can be reassigned for other uses. A trial of any suggested changes can be easily undertaken by simply repainting the street to remove the excess lanes. The trial period can help to determine how the street will operate under a right-sizing scenario without actually undertaking major structural alterations. A trial also allows a period of time in which to neighborhood residents can provide input before changes become permanent.

Potential challenge: Truck traffic through this area will remain heavy as long as Mounds and surrounding streets are designated as truck routes. Trucks require specific turning radii and lane widths which act as visual cues for cars to speed. A more aggressive intervention for pedestrians is to narrow lane widths to ten feet, which has been shown to reduce speeds without sacrificing traffic efficiency. However, the necessity to move trucks through this area precludes lane narrowing as a useful solution here.

Resources: A rightsizing project can take place in conjunction with other structural changes to Mounds Boulevard related to the transitway project. Rightsizing can be structural or accomplished simply by repainting the street, depending on the scale and specific strategies identified in the analysis. For further information about bringing roads down to size, refer to “Notes on Tools” in the Appendix, and, see “Rightsizing Best Practices” by the Project for Public Spaces.

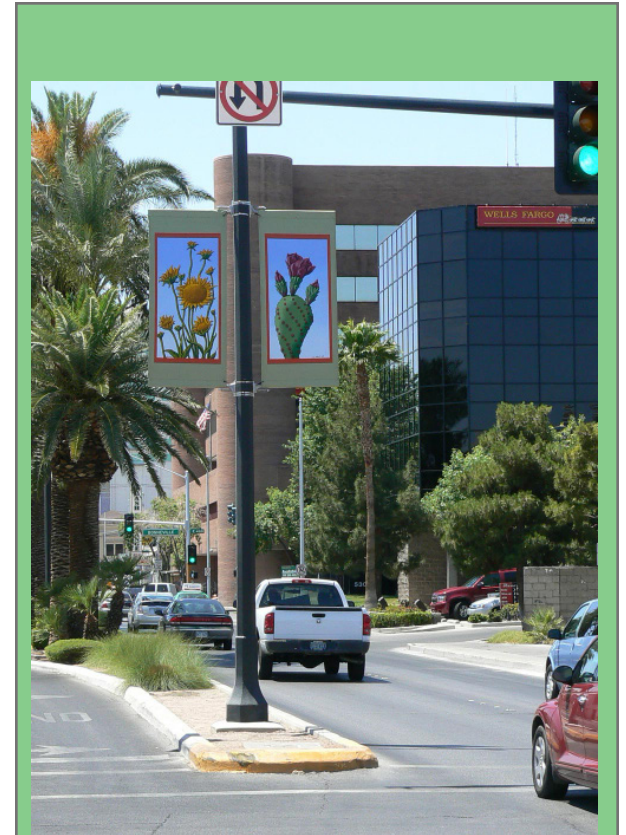
Streetscaping

Use the excess roadway space provided by the right-sizing project to provide new amenities or features that enhance neighborhood safety and aesthetics.

Median treatments: A widened median running the length of Mounds Boulevard can be programmed in a way that creates a true sense of place for what currently looks drab and uninviting. Depending on project scope and traffic safety considerations, the median could be landscaped with native grasses, filled with a linear art installation, or could be home to colorful banners celebrating the neighborhood. Median treatments provide a visual break that reduces the visual distance across this wide boulevard and create an attractive street environment.

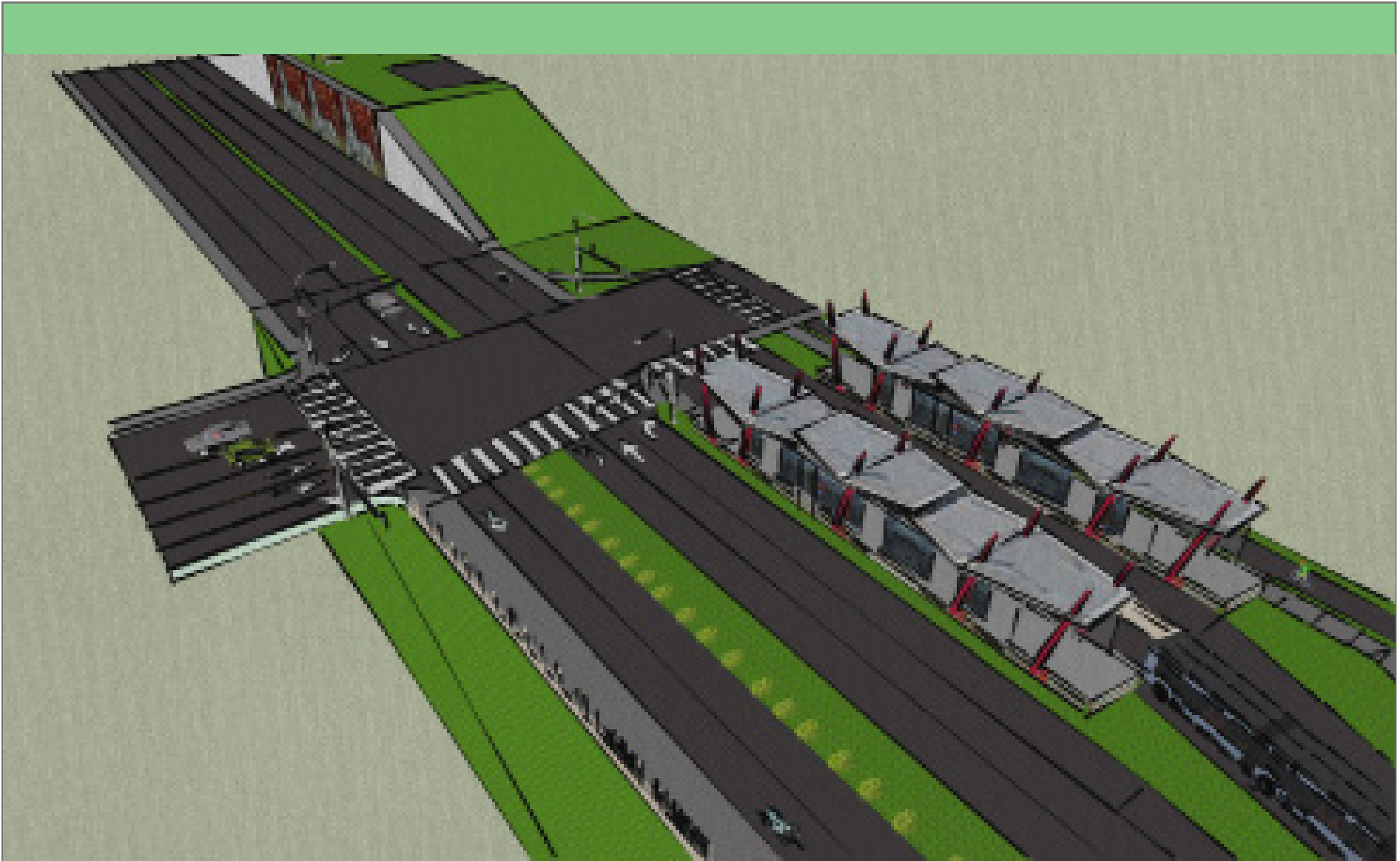
Streetside treatments: If a median proves unfeasible or undesirable, similar treatments can be applied at the side of the roadway. Decorative fencing, distinctive lighting, and vertical elements such as banners can be inexpensive, effective ways to enhance streetside aesthetics without sacrificing roadway functionality.

Wall mural: Use the long section of retaining wall between Third and Sixth Streets as a canvas for the neighborhood to express its identity. A youth-designed large-scale art piece on this wall will liven up this empty wall, confounding its freeway-like visual impact and engendering a new sense of pride for neighborhood residents.



Above: Banners provide visual height in this median and require very little ground space. Below: A community mural on the wall facing Mounds near Sixth Street is a great way to improve aesthetics while strengthening community identity.





Above: A sketch of proposed improvements to the area immediately surrounding the Mounds Boulevard transit station. Note the removal of lanes from the roadway, the zebra-striped crossings, the introduction of bike sharrows, and the wall mural at top.

Potential challenges: Aesthetic improvements pack a powerful punch in improving sense of place on this urban boulevard, but the road still must function effectively. Treatments to the median or street-side should take into consideration such operational concerns as snow removal, maintenance, and driver sightlines. Some of these concerns are mitigated by the presence of banners or other vertical elements which reduce the sense of void for pedestrians while not imposing undue challenges on functionality.

Resources: The funding and timing for streetscaping improvements will depend on the preferred solution. Engage the neighborhood to determine which treatments are most favored within the feasible options. Solutions that are merely aesthetic might be implemented when public realm improvement funds are available, such as under the yearly streets and utilities grants process. Other solutions that require more significant structural changes may be undertaken as part of the more significant reconfiguration of Mounds Boulevard that will be required to accommodate the new transitway. Refer to “Notes on Tools” in the Appendix for more information about how to use public art, banners, and landscaping.

Intersection rightsize audit

As the street right-sizing brings automobiles more into balance with the surrounding neighborhood character, so can subtle changes to inter-

section design support a more pedestrian- and bike-friendly public realm. Undertake an audit of intersections to determine where structural and/or design changes can be implemented to reduce the size of intersections without sacrificing functionality. Here are a few possible changes:

Disallow right-hand turns on red. This reduces conflict between pedestrians and drivers by requiring that drivers actually come to a complete stop. It also allows walkers more time to cross this wide boulevard without compromising their safety.

Tighten curb geometries, which are currently engineered to accommodate wide truck turns at the expense of pedestrian safety. Reducing curb radii reduces the overall width of the intersection for pedestrians and directs the attention of car drivers to what is in front of them rather than to the oncoming traffic into which they are merging.

Reprogram signals to display a “walk” sign automatically when lights are green. Doing this reinforces to drivers and walkers alike that pedestrians are welcome in this environment and are not an intrusion on the vehicle realm. Automatic walk signals encourage pedestrian activity by reducing overall walking trip time and eliminating the need to climb over snowbanks or other obstacles to reach a button at each block.

Potential challenges: Any engineering solution requires extensive analysis which considers the movements of trucks, buses, and



Top: Push-button crosswalk does not accommodate walker. Middle: Landscaping makes transit stops an attractive community amenity. Bottom: Traditional pedestrian-scale lighting.



Above: Wayfinding signs that provide meaningful distances for people. Below: Signage reinforces to drivers that bicyclists have a legal right to the road and must be accommodated accordingly.



other large vehicles. Still, these solutions can have a lighter impact on road functioning while achieving the same ends. For example, where a right-angle curb is not possible, refuge islands can make way for trucks and make pedestrians safer too. Similarly, concerns over right-hand turn delays at intersections with automatic walk signals may be unfounded as vehicles are only delayed when pedestrians are present and are free to proceed when crosswalks are clear.

Resources: Because these changes are structural in nature and are dependent not only on the corners themselves but what lies beneath the street, intersection rightsizing should be completed in conjunction with other major street restructuring. The transitway construction may provide the opportunity to redesign some intersections, repairs to adjacent bridges, such as Kellogg, may as well. Funding may be available as part of those larger projects, or may also be provided as part of the city’s capital improvement plan. For more information on altering intersection geometries and signal programming, refer to “Notes on Tools” in the Appendix.

Upgrade elevated sidewalk between 3rd and 6th
 This section of sidewalk provides a key secondary connection between the station area and Metropolitan State University. The sidewalk here is elevated above the boulevard and connects to Fourth and Fifth Streets, but the present condition of the sidewalk itself and a lack of pedestrian

amenities limits the value of those connections. Make this a special pedestrian place by introducing landscaping, lighting, and seating where walkers can pause to take in beautiful views of downtown St Paul and the Mississippi river valley.

Landscaping: Install low-maintenance native plantings and identify a space for a community garden. Native grasses reinforce the historical nature of this area while not blocking views to the west. Existing trees and shrubbery should be pruned to maximize views and so as not to block the sidewalk. A community garden makes use of extra space along the sidewalk and provides a place for the neighborhood to gather and connect.

Pedestrian lighting: Install pedestrian-scale lamps along this elevated stretch to ensure that each block has at least two. While streetlights are typically taller, cast a brighter and wider light, and are of a more institutional design, sidewalk lamps are geared for the pedestrian: they cast a softer glow, are built to a shorter scale to illuminate the pedestrian space, and often are of a design that is compatible with neighborhood architectural character. Installation of lights here will guide pedestrians toward Metropolitan State University and transit stops near Seventh Street and will warm up what is today a rather uninviting environment that can be perceived as unsafe at night.

Seating: Install benches or movable ta-

bles and chairs at the end of each cul-de-sac where they meet the elevated sidewalk. Seating provides a place of rest for the elderly, a place for neighborhood residents to meet, and a spot to take in the magnificent westward views.

Resources: Use streetscaping funds made available through the road rightsizing project (see above) or other street improvement project funds. For more information about how to use landscaping and lighting to improve streetscapes, refer to “Notes on Tools” in the Appendix.

Signage

Most of the signage on Mounds Boulevard is consistent with what is used on local freeways: large-scale, overhead, and geared toward vehicle navigation rather than the immediate environment. Advisory signage at streetside will alert drivers to what is around them, while wayfinding signage will help pedestrians and bikers reach their destinations and will direct them to Maria, which is designed specifically for their safety and comfort.

Wayfinding signage: Install signs, directed to pedestrians and bicyclists and built to their scale, that orient them to the neighborhood and point the way to major destinations. The signs should make it easy to find major destinations, such as Indian Mounds Park, the Dayton’s Bluff Recreation Center, Metropolitan State University, and nearby transit connections. To be useful, they should refer to

human-scaled distances (“Rec Center, 3 blocks) and should be installed at frequent intervals between the station and the corresponding destination. For added benefit, they can be designed in a manner consistent with public art treatments to enhance the neighborhood’s visual brand.

Advisory signage: The addition of signs such as “Share the Road” and “Give Way for Pedestrians” will make drivers more aware of, and more obedient to, the rules that make Mounds Boulevard a safe environment for all users. These signs should be designed in a manner consistent with other street signage and should be scaled for visibility by passing motorists.

Resources: Funding comes from existing city resources. Signage should be consistent with the city’s unified signage guidelines. For additional information about how to promote pedestrian and bicyclist safety and navigation through signage, contact Transit for Livable Communities. Refer also to “Notes on Tools” in the Appendix more general implementation information.

Public Involvement

The actions proposed in this section bring to Dayton’s Bluff a broader paradigm shift that is happening in city administrative offices around the country. Where freeways and highways once drove automobiles into neighborhoods and destroyed the pedestrian fabric, a new way of practice is emerging that rebalances the needs and impacts of automobiles



Above: Another example of a neighborhood gateway in California that reflects the identity of the place.

and celebrates the human experience in the public realm. To complete that vision for Dayton's Bluff requires moving beyond the significant structural changes proposed here for Maria Avenue, Mounds Boulevard, and the approach to Indian Mounds Park. Only by engaging the neighborhood meaningfully and consistently will the changes result in the greatest possible impact for the residents of Dayton's Bluff and ensure that the paradigm shift in effect reflects neighborhood values and vision.

Create neighborhood portals that reinforce the cohesive identity of Dayton's Bluff

A significant problem in the design of the streets coming into Dayton's Bluff is that they look and feel just like the highways from which they come. They are designed to operate as freeway offramps, and tell the driver nothing about the wonderful neighborhood that they have entered. Building portal structures over the key entry points to Dayton's Bluff signals to visitors and residents that they have entered a neighborhood. Not only does this cue to drivers that the freeway has ended and their speed should be accordingly reduced, but it also powerfully reinforces that Mounds Boulevard belongs to the neighborhood. Portals can take any number of forms, but should be more than a roadside sign. Their design should be striking, and consistent with neighborhood identity. Their materials should be distinctive. Portals can be used to great effect at these entry points to the neighborhood:

- Sixth St at Mounds Blvd
- Kellogg Bridge at Mounds Blvd
- I-94 WB offramp/Mounds Blvd btwn Euclid and Surrey

As with any amenity that is meant to reflect neighborhood identity, neighbors themselves

must be an integral part of the design process. Engage residents meaningfully in seeking designs, vetting alternatives, and building support and excitement for these unique projects.

Embrace community design.

Talking with neighborhood residents about the design of portals is but one way to encourage active participation. Professionals bring expertise from years of experience in the field, but working with neighborhood residents often injects a project with the soul and pride of place that increases the value and long-term viability of a solution. Invite residents into the design process by sharing alternatives under consideration and seeking meaningful input. Demonstrate commitment to neighborhood values by allowing projects to evolve in response to what neighbors express is important to them. When a set of solutions isn't available yet, get creative by asking neighbors what they'd like to see on that empty lot or what their vision is for an important but underloved place. Here are two potential strategies among many for partnering with neighborhood stakeholders:

Workshops: In conjunction with the District Council and St Paul Planning and Economic Development, hold a Streets Workshop to present recommendations and seek community feedback and ideas. The workshop should be held in the neighborhood at a time convenient for most residents, such as a Saturday afternoon. Activities should make it easy for active participation among all ages and abilities, gathering the broadest possible set of ideas and feedback from many user groups.

Walking Tour and Charette: Organize a neighborhood walking tour to the sites identified in this action plan. The neighborhood walking tour should be led by the Dayton's Bluff District Council volunteers who are most intimately aware of the area's history and current context. After the tour, hold a charrette where participants can assess recommendations based on how they experienced each place. The charette provides a chance to improve upon and modify proposed upgrades to best meet neighborhood-identified constraints and opportunities.

Engage residents in events that celebrate the neighborhood and build ownership over the public realm.

Dayton's Bluff boasts an active community spirit with tremendous pride in the neighborhood and its assets. Events all year long celebrate the neighborhood's history and build toward a great future. Five existing events in particular provide a chance for the city to meet neighbors, present plans, and build excitement for the coming transitway and the neighborhood as a destination along the corridor:

- Children's Parade
- Home Tour
- National Night Out
- Upfront Gardens
- Spring Carnival

Engaging residents at these events allows for a more informal interaction and ties potential projects to the deep pride that residents feel for this special neighborhood.



Above: A charrette provides the public an opportunity to shape the design of their surroundings.

Conclusion

The City of St Paul has commissioned this report on the occasion of the proposal for a station for the Gateway Corridor at Mounds Boulevard, in the Dayton's Bluff neighborhood on St Paul's eastside. The location of the station in an established urban setting dictates that people will use the station on foot, and by bicycle, rather than coming and going by car. This report explores the dimensions of walkability and bicycle-friendliness around the station and suggests paths forward for improving both.

An assessment of existing conditions in Dayton's Bluff, and in the immediate area surrounding the station, paints a picture of a traditionally scaled historical neighborhood full of walkable features but marred by the intrusion of over-engineered automobile infrastructure. The pedestrian scale at the interior of the neighborhood, and the density of its destinations, is in conflict with the automobile-scale infrastructure at its edges that caters to car movements and leaves an uninviting environment for people in its wake.

A new vision for Dayton's Bluff unfolds after the Gateway station opens on Mounds Boulevard. The neighborhood becomes a place where people walk, where the pace of life revolves around human social interaction and local economic activity, and where the neighborhood's harmonious urban identity is restored and sustained. In this vision, the role of the car and all its infrastructure is put into balance as the streets become places for people to reach the stations and neighborhood destinations with safety, dignity, and pleasure.

The action plan laid out thereafter focuses on

improvements in three key parts of the neighborhood. First, Maria Avenue becomes a spine connecting the station to destinations within the neighborhood; its pedestrian-friendly streetscape is further enhanced by a bikeway and visual upgrades. Second, a new connection is made to connect Maria Avenue to the proposed station site, across the formerly forbidding terrain of Mounds Boulevard, and onward to Indian Mounds Park at the neighborhood's edge. Third, Mounds Boulevard itself is enhanced into a true urban boulevard that provides a secondary route for bikers and walkers while slowing vehicle movements through creative design solutions.

Finally, and most importantly, a series of ideas is provided for how to engage community residents in the process that will remake their neighborhood and connect them to opportunities across the region. This document is intended to provide a starting point for conversations with neighborhood residents, but it is their ideas and their input that will bring to the surface the most valuable and longest-lasting solutions. While some upgrades can be made today - such as signage and street restriping - the larger structural changes require a meaningful public process so that they are implemented in a way that reflects neighborhood values and the enduring identity of Dayton's Bluff.

Appendices

- 45 Notes on Tools
- 49 Works Consulted
- 53 Image Credits
- 55 Interviews

Notes on Tools

A key suggestion of this report is that professionals from the worlds of planning, engineering, and government engage closely and meaningfully with residents and stakeholders who are embedded in the Dayton's Bluff community. While this report is written with those professional audiences in mind, there is tremendous expertise about the life of the community waiting to be tapped by others who may read this report and wish to participate. This section is included to facilitate that participation by providing a non-exhaustive list of resources and general information about the kinds of tools and considerations that are commonplace in professional practice.

Advisory bike lane

- A bike lane used on roads too narrow to accommodate dedicated bike and car lanes.
- Should only be used when a mandatory bike lane cannot be used.
- Minimum of 5 ft. width bike lanes recommended.
- Not a common practice currently; U.S. Federal Highway Administration experimenting with implementation and usage.
- UK study found that advisory bike lanes are associated with reduced average auto daily trips (AADTs), reduced auto collisions, and increased bicycle usage.

Resources

- Association of Pedestrian and Bicycle Professionals, "Advisory Bike Lanes"
- Bike/Walk Twin Cities: "How to Get Bike Lanes"
- MN/DOT, "Bicycle Modal Plan":
- MN/DOT, "Bikeway Facility Design Manual"
- Gehl, Jan. Cities for People, Ch 4.9: Good cities for bicycling.
- Speck, Jeff. Walkable City: How Downtown Can Save America, One Step At Time, Step 6: Welcome Bikes.

Extend curb geometries to decrease size of intersection

- No set design specifications – dependent upon project.
- Bumps out/enlarges curbs at intersections.
- Keeps intersections tight, slowing speeds and increasing safety for pedestrians and drivers.
- Key consideration is turning movements for vehicles that use intersection.
- Increases visibility of pedestrians by drivers, and vice-versa.
- Can provide space for public art, street trees, bike parking, or other street furniture
- Gives intersection narrower feel and may calm traffic.
- Often used in conjunction with pedestrian refuge islands.

Resources:

- U.S. Det. of Transportation – Federal Highway Administration "Intersection Geometry" presentation
- Speck, Jeff. Walkable City: How Downtown Can Save America, One Step At Time, Step 5: Protect the Pedestrian.

Pedestrian/bicycle refuge island

- No set dimensions, but minimums recommended: size should be at least 50 sq. ft., not less than 4 ft. wide from face of curb to face of curb, not less than 12 ft. long or the width of the crosswalk – whichever is greater.
- Should be delineated by curbs, guideposts, signs, or other treatments.
- Should be visible to motorists at all times with sufficient warning of presence.
- Should be designed to minimize the potential hazard to motorists and pedestrians alike.
- Typically used on roads with 4 or more lanes and high traffic volumes.

Resources:

- Institute of Transportation Engineers, "Design and Safety of Pedestrian Facilities"
- U.S. Dept. of Transportation – Federal Highway Administration, "Manual on Uniform Traffic Control Devices."

Public Art St Paul

- Established in 1987, the non-profit Public Art Saint Paul engages artists in shaping the form and experience of Minnesota's capital city.
- Through advocacy and support, artists collaborate in the planning and design of public places and structures; create works of art for public places; develop temporary installations; and produce public art events.

Resources

- City of St. Paul, "East Seventh Street Design Guidelines."
- Project for Public Spaces, "Funding Sources for Public Art."
- Public Art St Paul, "About Us."

- Gehl, Jan. *Cities for People*, p 179: Art in city space.

Push-button vs. automatic walk signal for pedestrians

- “When high or regular pedestrian traffic exists during a majority of the day, fixed-time signals should be used to consistently allow crossing opportunities. Pedestrian actuation should only be used when pedestrian crossings are intermittent and should be made accessible to all pedestrians, including those with disabilities.”
- Quick response to actuation should be programmed into signal.
- “Signal cycles should be kept short (ideally 90 seconds maximum) to reduce pedestrian delay.”
- “A simple, useful change is the Leading Pedestrian Interval (LPI). An LPI gives pedestrians an advance walk signal before the motorists get a green light, giving the pedestrian several seconds to start in the crosswalk where there is a concurrent signal. This makes pedestrians more visible to motorists and motorists more likely to yield to them.”

Resources

- Pedestrian and Bicycle Information Center, “Signals and Signs.”
- Gehl, Jan. *Cities for People*, p. 124: Walking in crowds and waiting forever.

Road diets / road rightsizing

- The classic roadway reconfiguration, commonly referred to as a “road diet,” involves converting an undivided four lane roadway into

three lanes made up of two through lanes and a center two-way left turn lane. The reduction of lanes allows the roadway to be reallocated for other uses such as bike lanes, pedestrian crossing islands, and/or parking.

- Road diets have multiple safety and operational benefits for vehicles as well as pedestrians, such as: Decreasing vehicle travel lanes for pedestrians to cross, providing room for a pedestrian crossing island, improving safety for bicyclists when bike lanes are added, providing the opportunity for on-street parking, reducing rear-end and side-swipe crashes, improving speed limit compliance, and decreasing crash severity when crashes do occur.
- Lane narrowing reduces lanes to between 11 ft. and 9 ft. – excess roadway on shoulder repurposed or center median created or expanded – has traffic calming effects.

Resources

- Bike-Walk Twin Cities, “Glossary”
- Project for Public Spaces, “Rightsizing Street Guide”
- U.S. Dept. of Transportation – Federal Highway Administration, “Tech Brief”
- U.S. Dept. of Transportation – Federal Highway Administration, “Road Diet”
- U.S. Dept. of Transportation – Federal Highway Administration, “Road Design”
- Speck, Jeff. *Walkable City: How Downtown Can Save America, One Step At Time*, Step 5: Protect the Pedestrian.

Speed Humps

- Height: 3 to 4 inches.
- Often placed in a series, 300 to 600 feet apart.
- Usually not placed on bus routes.

- Generally include warning signage and pavement marking.
- Found to reduce traffic speeds 20-25% on average.
- Slower emergency vehicle response times if on primary emergency.
- Faster deterioration from snow plow use; one possible remedy is removable rubber speed humps which could be lifted during snow season.
- May increase noise from braking and accelerating.

Resources:

- Institute of Transportation Engineers, “Traffic Calming Measures.”
- Transportation Alternatives, “Streets for People.”

Street banners

- City of St. Paul sells banner space on light poles and skyway bridges to interested parties for \$53+tax per banner.
- Requests for permits are made to and approved by the St. Paul Marketing Office.
- Legal codes regulate dimensions and purposes allowed.
- Banners lend height and definition to street space when larger structural or landscaping elements (such as street trees or aligned building facades) are not feasible.

Resource:

- City of St. Paul, “Banners.”

Street landscaping standards - trees and plants / Median landscaping standards

- Decisions are made on a project-by-project basis on the recommendations of a landscape architect.
- Potential issues include
 - Maintaining views and sightlines
 - Branches growing against buildings, poles, signs, or power lines
 - Adequate room for root growth
 - Adequate water supply and drainage
 - Maintenance funding and schedule.
- Trees and plants need to be chosen for specific attributes and viability in a given project, including soil quality considerations.
- Trees need a minimum of 4ft x 4ft area and need adequate water, lest roots grow up and upheave sidewalks.

Resources

- Metropolitan Design Center, “Rethinking East 7th Street.”
- Gehl, Jan. Cities for People, p. 179: Beautiful cities – green cities.
- Speck, Jeff. Walkable City: How Downtown Can Save America, One Step At Time, Step 8: Plant Trees.

Unified signage standards

- Bicycle-related signs on roadways and bike-ways serve three basic purposes:
 - Regulating bicycle usage
 - Directing bicyclists along pre-established route
 - Warning cyclists of unexpected conditions.
- All signs must be user-friendly and easily understood.
- Main classifications of bicycle signs (for specific examples of signs go to resources below):
 - Regulatory signs: notify bicyclists, pedestrians, and motorists of traffic laws.
 - Warning signs: alert bicyclists or motorists of potentially hazardous conditions on or adjacent to roadway.
 - Route guide signs and bicycle route markers: inform bicyclists of changes in route direction and help confirm that this direction has been accurately understood.
- Make sure bicycle signage will not confuse drivers.
- Conservative use of signage recommended. If used in excess they lose their effectiveness

Resources

- MN/DOT, “Bicycle Modal Plan”:
- MN/DOT, “Bikeway Facility Design Manual.”
- Gehl, Jan. Cities for People, Ch 4.9: Good cities for bicycling.
- Speck, Jeff. Walkable City: How Downtown Can Save America, One Step At Time, Step 6: Welcome Bikes.

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Interviews

Consultants for this project met with a series of stakeholders on the east side of St Paul, as well as representatives of the city and other subject-matter experts. The purpose of these interviews was to understand the multitude of priorities and perspectives that inform the political and technical processes behind a project as large and complex as the Mounds Boulevard station. As government entities proceed with plans for the Gateway Corridor and the Mounds Boulevard, this list should be expanded to include new stakeholders as well as revisit conversations with those who have already been invited into the process.

Interviewees

Kathleen Anglo, Design and Construction, Department of Parks and Recreation, City of St Paul.

Nancy Bagshaw-Reasoner, Director of Facilities, Metropolitan State University.

Monica Beeman, Engineer, Traffic Division, Public Works, City of St Paul.

Ellien Biales, Legislative Aide to President Kathy Lantry, City Council, City of St Paul.

Mikael Carlson, Manager, Engage Eastside.

Steve Clark, Twin Cities Bike/Walk Program Manager, Transit for Livable Communities.

Ruben Collins, Bicycle Coordinator, Planning and Economic Development, City of St Paul.

Karin DuPaul, Community Organizer, Dayton's Bluff Community Council (St Paul District 4).

Beth Elliot, Senior Planner, City Planning and Economic Development, City of Minneapolis.

Louis Jambois, Executive Director, St Paul Port Authority.

Anton Jerve, PLanner, Public Works, City of St Paul.

Eriks Ludins, Transportation Engineer, Public Works, City of St Paul.

Rafael Ortega, Commissioner, Ramsey County Parks and Public Works.

Jessica Treat, Executive Director, St Paul SMART Trips.