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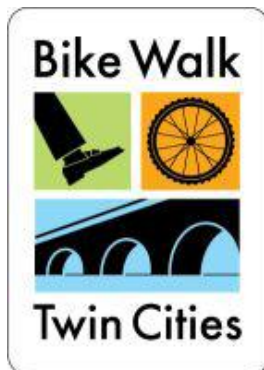
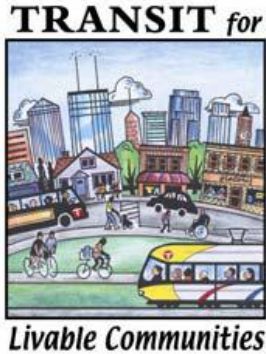
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1.0 METHODOLOGY



1.1 PROJECT GOAL

The goal of this project, funded by a Non-Motorized Transportation Pilot Program award from Bike/Walk Twin Cities (BWTC) administered by Transit for Livable Communities (TLC), was to compile a list of infrastructure improvements that would improve bicycle and pedestrian connections to transit within the project study area (Figure 1). Communities can then use this list to apply for funding to complete identified improvements through Transit for Livable Communities' Bike/Walk Twin Cities program or other funding sources if they choose to do so.

1.2 PROJECT APPROACH

The project involved analyzing existing conditions in each of the corridors identified by Metropolitan Transit. These corridors had been ranked by Metropolitan Transit into three "tiers" (Figure 1) based on the frequency of service, bicycle and pedestrian count data, and the number of recorded pedestrian and bicycle crashes in the area.

This project was conducted in phases:

1. As part of the data collection process, a questionnaire was developed and distributed to agency and community representatives to identify issues pertaining to bicycle and pedestrian access to transit and sources of available information.
2. Bus stops within the project area were then ranked based on their need for improvements using Geographic Information System (GIS). Existing data from the Metropolitan Council, Metropolitan Transit, and communities was used in this analysis. Existing data was supplemented by collecting field data along three corridors.
3. The results of the bus stop rankings were then further evaluated by identifying the types of improvements required to promote better access to transit, defining potential projects, and assigning estimated costs for project implementation.

2.0 ANALYSIS



Source: Bicycling & Transit Presentation - John Siqveld



Source: Central Atlanta Progress & the Midtown Alliance

2.1 TECHNICAL ADVISORY COMMITTEE INPUT

A Technical Advisory Committee (TAC) provided input on critical aspects of this project. The list of TAC members is included in the acknowledgements in the front of this report. Three meetings were held with the TAC. The role of the TAC was to provide input on the information collected, analyses conducted, and types of infrastructure improvements to be included. The TAC helped develop ranking criteria for bus stop prioritization ranking and provided input on project identification. The TAC also provided the following input regarding system-wide access to transit issues.

- Providing third bicycle rack

One hindrance cited as affecting the bicyclist use of transit was that bicyclists sometimes have to let more than one bus go by in order to get an open space on a bus bike rack. There are currently at least two bike racks on all buses with the option of allowing one additional bike to be carried onto a bus. Metropolitan Transit could add space to accommodate up to three bicycles per bus, after that the State Patrol has issues with the racks interfering with illumination. **The addition of the third bicycle rack is something that could be considered by TLC or Metropolitan Transit as a way to facilitate bike-to-transit-commuting.**

- Providing wayfinding information

The availability of wayfinding information (information on transit connections, connecting modes, trailheads, bike sharing kiosks, storage, etc.) was discussed at the meeting. **Since it is not currently available, the addition of wayfinding information is something that could be considered by the TLC or Metropolitan Transit as a way to facilitate both bicycle and pedestrian access.**

- Need for additional bicycle parking at major bus stops

The availability of more bicycle parking at major bus stops was identified as something that could be considered by TLC or Metropolitan Transit as way to facilitate bike-to-transit commuting.

2.0 ANALYSIS

2.2 QUESTIONNAIRE AND DATA COLLECTION

A summary of the responses to the questionnaire that was distributed to agency and community representatives is included in Appendix A. The sources identified for existing data were contacted as part of this project and the data received was incorporated in the bus stop prioritization ranking database. Two additional system-wide access-related issues that would pertain to most communities and corridors were identified that could benefit from funding:

- Lack of snow removal

The lack of snow removal in the vicinity of bus stops, particularly the mounds left by snow plows, was identified as an access issue. Some of the stops are maintained by the Metropolitan Council, some by area merchants and others by the local community (if they are constructed locally rather than by Metropolitan Council). ***The development and implementation of a process resulting in more consistent snow removal is a method that could be considered by the TLC or Metropolitan Transit as a way to facilitate access to transit.***

- ADA accessibility is a priority need

ADA accessibility is a legal requirement and should be given the highest priority in improving access.

2.3 BUS STOP PRIORITIZATION RANKING

2.3.1 Ranking Process

The bus stop prioritization ranking process examined the bus stops within the project area and ranked them based on their need for improvements to facilitate access for both bicyclists and pedestrians. The bus stops that received the highest scores were the most deficient and, correspondingly, were most in need of improvement.

The TAC helped to identify and rank variables that affect access and convenience of use. The pyramid to the left represents the prioritization of issues that affect pedestrian/bicycle use of transit. Following the general principal of the triangular graphic, access to meet legal ADA requirements, is most critical. Once this legal access is gained, safety becomes the next critical issue. As the categories of issues are addressed from the top of the



Source: Prioritization of Issues that affect Transit Use, TLC

2.0 ANALYSIS

pyramid to the base, the appeal of bicycle/pedestrian usage increases.

Table 1 lists the improvement variables that factored into each bus stop's total score and indicates the maximum number of points that could be awarded per variable.

- Variables that fell under Legal Access were determined to be the most important and could score from 0 points (not needing improvement) to 3 points (most in need of improvement).
- Variables that fell under Safety could score between 0 points (not needing improvement) to 2 or 3 points (most in need of improvement), depending upon the importance that the TAC placed on the particular variable. One of the variables, crash history, was used as an indicator of a need for overall safety improvements even though the crashes themselves may not be related to a lack of facilities or to the solutions being proposed. Crash history has more to do with the general environment for bicycling or walking.
- Variables that fell under Facilities or ways to make using transit more comfortable or more convenient could score from 0 (not needing improvement) to 1 point (most in need of improvement).

2.0 ANALYSIS

| TABLE 1 | | |
|----------------------------|---------------|------------|
| BUS STOP RANKING SYSTEM | | |
| Variable | Type | Max. Score |
| ADA Accessible | Legal Access† | 3 points |
| ADA Pad for Wheelchair | Legal Access† | 4 points |
| Crash History - Bicycle | Safety | 3 points |
| Crash History - Pedestrian | Safety | 3 points |
| Safety Crosswalk Access‡ | Safety | 3 points |
| Lighting†† | Safety | 3 points |
| Level of Service | Safety | 2 points |
| Sidewalk Access | Safety | 2 points |
| Bike Lane Access | Safety | 2 points |
| Right-of-Way Buffer | Safety | 2 points |
| Shelter | Facilities | 1 point |
| Bench | Facilities | 1 point |
| Bus Schedule | Facilities | 1 point |
| Trash | Facilities | 1 point |
| Bike Locker | Facilities | 1 point |

† The ADA Legal Access variables do not pertain to access issues for the hearing and visually impaired.

‡ Intersection timing issues - both crossing time and waiting time - were not incorporated into this analysis.

†† Lighting is assumed to be at street level as opposed to pedestrian level.

2.0 ANALYSIS



Source: TLC Minnesota

A Level of Service (LOS) index indicates the risk to the cyclist of having an accident. A larger index value indicates that a road is more dangerous for bicycling; the streets can then be compared to determine which streets are safer for bicycling. The LOS analysis used seven categories of data:

- Average daily traffic flows
- Speed limits
- The number of travel lanes
- Whether or not parallel parking exists on the road
- Whether or not buses and/or trucks regularly use the road
- Whether or not the road has curbs
- Whether or not "side friction" exists

Raw bicycle LOS values were calculated using the following equation:

$$\text{LOS} = \frac{(\text{Average Daily Traffic}/67) * (\text{Speed Limit} - \text{Cyclist's Speed})^2}{10 * (\text{Number of Travel Lanes}) + 4 * (\text{Usable Bike Space})^2}$$

By dividing the Average Daily Traffic by 67 the formula approximates the number of vehicles encountered during 10 minutes on the road during peak hours. By comparing roads based on spending 10 minutes bicycling on the road, the time spent on the interval is controlled.

The second part of the numerator, (Speed Limit – Cyclist's Speed)², deals with how fast the cars are passing the cyclist on the road. The speed at which a car passes the cyclist is known to increase the risk of accidents. For this analysis, the speed of the cyclist is held constant at 10 miles per hour (mph), a realistic assumption for the study area. By squaring this difference, this component is weighted more heavily than the actual number of cars passing the cyclist.

The denominator of the formula shows the amount of space the bicyclist has at their disposal. The more room a cyclist has on a street, the safer that street is for cycling. The first part of the denominator [10 * (Number of Travel Lanes)], indicates that as the traffic is dispersed throughout all lanes, a lower percentage of cars traveling on that road might interfere with a cyclist, thus increasing the safety of the cyclist.

2.0 ANALYSIS



Source: Bicycling & Transit Presentation - John Siqveland

By adding the second half of the denominator [$4 \cdot (\text{Usable Bike Space})^2$], the amount of space the cyclist has available also greatly increases the safety to the cyclist. The Usable Bike Space is determined by first finding the width of the travel lane nearest to the curb, or the curb lane. Next, one foot is subtracted from this width if there is a curb, another foot is subtracted if buses and/or trucks regularly use the road, and another foot is subtracted if "side friction" is determined to exist on that road. Side friction is described below. Finally, an additional nine feet is subtracted if parallel parking exists on that roadway. By squaring the usable bike space and then multiplying by four, the usable bike space plays a more significant role in determining the safety of that road for cycling.

The category "side friction" reflects whether or not a bicyclist would feel comfortable about the amount of activity occurring along the side of the road. Other than traffic already on the street, are there enough entryways onto the street that would cause a cyclist to be concerned about interfering with vehicles entering or leaving the street?

Due to the lack of data availability the following values were universally assigned for this evaluation:

- Usable Bike Space = 0.
- Number of Travel Lanes = 4, except when a value was available from field data collected by a HR Green field technician.
- Cyclist's Speed = 10 miles per hour.

The raw LOS value was then converted into a LOS score ranging from 0 to 2 by grouping the raw scores into three quantiles. Bus stops with raw LOS values in the highest third received a LOS score of 2 while those in the middle third received a score of 1 and those in the bottom third received a score of 0. Comprehensive data is not available for a number of the variables. Except for the default values used in calculating LOS values, a lack of data resulted in no points being awarded for that variable.

2.3.3 Weighted Bus Stop Total Score

As part this project, Metropolitan Transit assigned Tier rankings to the bus routes included in the study area. These routes had been ranked into three "tiers" (Figure 1) based on the frequency of service, bicycle and pedestrian count data,

2.0 ANALYSIS



Source: Bicycling & Transit Presentation - John Siqveld



Source: Bicycling & Transit Presentation - John Siqveld

2.4 FIELD DATA COLLECTION

Field data was collected on bicycle along three corridors selected by the in cooperation with the TAC:

- Bass Lake Road (Brooklyn Center)
- 66th Street (Richfield)
- W 7th Street (St. Paul)

The field data was collected over the course of two Saturdays in the fall of 2008. The data was included in the GIS model for determining bus stop prioritization. Data was collected for bus stops on both sides of the street while navigating the route in a single direction. A follow-up check of the route was then conducted on the return ride to the starting point of the corridor. The field data collected included:

- Sidewalk adjacent to bus stop
- Bench at bus stop
- Distance to crosswalk
- Shade tree at bus stop
- Speed limit along bus route
- Crosswalk location
- Route info at bus stop
- Pedestrian/ADA curb cut on corner near bus stop
- Bike lane along bus route
- Bike rack at bus stop
- Right-of-way buffer
- Bus schedule at bus stop
- Trail access near bus stop
- Controlled signal crossing location
- Covered bike rack at bus stop

2.0 ANALYSIS



Metropolitan Transit Bus Shelter
 Source: HR Green

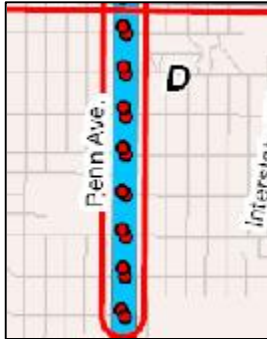
- ADA access to shelter at bus stop
- Lighting at bus stop
- Bike locker at bus stop
- Wide shoulder along bus route
- Trash can at bus stop
- Distance to signalized intersection
- Skewed intersection

ADA comments were added if it was determined that there were additional ADA factors not addressed by curb cuts and shelter access. If it was deemed that a physically impaired person would be able to access the stop, the stop was populated as ADA accessible. If not, it was not considered ADA accessible.

Crosswalks were identified by signage or street markings. Unmarked crosswalks were not counted as crosswalks during the field study. All field data was populated by visual inspection using a handheld PDA.

The field data is much more detailed than the information currently available from the Metropolitan Council, Metropolitan Transit, or communities. ***Now that the framework and methodology for collecting this data has been established it would be relatively inexpensive for the TLC or Metropolitan Transit to collect the data for more or even all of the corridors in the study area so that a more complete database is available for future evaluations.***

3.0 PROJECT IDENTIFICATION



Corridor Project Example



Cluster Project Example



Isolated Project Example

3.1 PROCESS

Project Identification was the third phase of this project. Bus stop rankings from the previous phase were graphically plotted (Figures 2 through 7). The weighted total scores were graphically converted to an even distribution of green, yellow, and red circles. This phase of the project focused on the red circles, which represent most deficient bus stops. Projects were primarily identified based on the graphical plot and further refined based proximity of stops with similar deficiencies and are mapped in Figure 4.

Table 1 lists the 15 improvement variables used to rank a bus stop, this was the guideline used to group similar deficient stops. GIS was used to look at the 15 improvement variables individually, providing improvement patterns. Improvement patterns allowed for the addition of a few less deficient bus stops represented by yellow circles. For example, if a group of bus stops all have a lighting deficiency and within this group, one stop is rated yellow, but has lighting deficiency, it was included with the group of red bus stops.

The identified projects fell in one of three groups:

- **Corridor projects** - routes consisting of several adjacent stops along a particular route within the limits of a particular city. Corridor projects that involve major road reconstruction are not accounted for in this report.
- **Cluster projects** - small groupings of bus stops that share similar characteristics within a city.
- **Isolated projects** - bus stops that are unique to a given location and do not fall within the corridor or cluster project groupings.

3.2 IMPROVEMENT ITEMS

The various bus stop improvements were divided into three categories; legal access, safety, and facilities. Improvements were recommended based on GIS data, Google Earth images, Google Street View, and Annual Average Daily Traffic (AADT).

3.0 PROJECT IDENTIFICATION



Source: TLC Minnesota



Lake Harriet/Lake Calhoun, MN
 Source: HR Green



Pedestrian Curb Cut/ADA Ramp
 Source: City of Portland

Possible improvements and their category are listed below:

- **Legal Access**
 - ADA pad
 - Pedestrian curb cut and ADA ramp

- **Safety**
 - Bike lane
 - Bump-out
 - Crosswalk paint
 - Crosswalk raised
 - Hawk Signal
 - Median treatment
 - Median/Refuge island
 - Mid-block crossing
 - Pedestrian scale lighting
 - Restripe "Road Diet" add bike lane
 - Sidewalk
 - Signal countdown timer
 - Street lights

- **Facilities**
 - Bench
 - Bike lockers
 - Shelter (pedestrian)
 - Trash receptacle

A typical description of each possible enhancement was created and an opinion of probable cost was then generated for each corridor improvement. A typical description of the each enhancement alternatives is listed below:

ADA Pad

An 8'x10' (80 SF) concrete pad was used as the typical ADA pad size. This pad would typically be located adjacent to an existing sidewalk and would allow ADA access to the transit system. For cost estimate purposes, installation of ADA pads was recommended at all deficient stops.

Pedestrian Curb Cut and ADA Ramp

A typical 5'x18' pedestrian curb cut and ADA ramp was used to allow for ADA access. For cost estimate purposes, a pedestrian curb cut and ADA ramp was recommended at all deficient stops. For more images refer to:

<http://www.pedbikeimages.org/searchResult.cfm?searchtype=simple&categoryId=21&fromCategory=19>

3.0 PROJECT IDENTIFICATION



Bike Lane
 Source: HR Green



Independence Ave., Champlin, MN
 Source: HR Green



SRTS Guide, Tucson AZ
 Source: Michael Cynecki



Source: Caka Seiderman
 Transportation Program
 Manager, City of Cambridge

Bike Lane

The painting/stripping of an existing roadway was used to designate a typical bike lane. For cost estimate purposes, a bike lane was recommended when adequate shoulder space was available.

<http://www.pedbikeimages.org/searchResult.cfm?searchtype=simple&categoryId=177&fromCategory=19>

Bump-out

A typical bump-out, also known as a “curb extension”, is defined as a shortening of the distance a pedestrian must walk to cross a street. They are typically located at the intersection. An 8’x20’ (160 SF) area would be a typical bump-out size.

Crosswalk Paint

The painting/stripping of an existing roadway was used to designate a typical pedestrian crossing either at mid-block or at the intersection. For cost estimate purposes, crosswalks were included on a project by project basis and had an average length of 40’.

Raised Crosswalk

The raising of a pedestrian crossing approximately 6” was used to eliminate the curb and provide a smooth transition for pedestrians either at mid-block or at an intersection.

<http://www.portlandonline.com/transportation/index.cfm?&a=62149&c=35932#se55th>

Hawk Signal

This device is activated by a pedestrian or bicyclist who wishes to cross the street by flashing yellow and red signals to vehicles at designated crossings. For cost estimate purposes, a Hawk system was included at non-signalized locations with high pedestrian crashes.

Median Treatment

Landscaping or fencing can be installed in a median to discourage pedestrians from crossing the street at unwanted locations. For cost estimate purposes, median treatments were included in commercial areas with higher AADT and pedestrian crashes. Median fences can be unattractive and discourage pedestrian movement. Landscaping, sometimes in

3.0 PROJECT IDENTIFICATION



Pedestrian Scale Lighting
 Source: HR Green



Metropolitan Transit Shelter
 Source: HR Green

conjunction with fences, can reduce these effects.

Median/Refuge Island

The typical median needs to have a curb cut and be at least 6 feet wide. The typical median needs to have a curb cut and be at least 6 feet wide. We are assuming a typical median island of 6'x20' (120 SF) for this study. For costing purposes, a refuge island was included when the road layout allowed and when there was greater distance between intersections or a significant draw on one side of the road.

<http://www.pedbikeimages.org/searchResult.cfm?searchtype=simple&categoryId=176&fromCategory=19>

Mid-block Crossing

These crossings are painted/striped and should be accompanied by signs or signals. If the roadway is more than 2 lanes wide a median/refuge island should be provided. We are assuming the typical roadway is two lanes for this study.

Pedestrian Scale Lighting

The installation of a 12' to 15' tall lighting fixture was used to provide illumination for the sidewalk and roadway. It was assumed the cost includes both installation and cost of the fixture. For cost estimate purposes, pedestrian scale lighting was generally not included. Stops that have a lighting deficiency are accounted for under the Street Light item. Pedestrian scale lighting is a good option and should be considered on a project by project basis.

Restripe "Road Diet" Add Bike Lane

A typical reduction in the width of 4 existing drive lanes down to 3 lanes was used to accommodate the addition of a striped bike lane. According to State Aid regulations and for cost estimate purposes, a road diet was recommended on 4 lane roads with no shoulder and an AADT less than 15,000. Current road layout was based on Google Earth aerials.

<http://www.tfhr.gov/safety/hsis/pubs/04082/index.htm>

Sidewalk

A typical sidewalk for estimation purposes is defined as a 5' wide (4" thick) band of concrete from the street corner/curb cut to an identified bus stop/shelter located at the back of curb.

3.0 PROJECT IDENTIFICATION



University Ave. Signal, St. Paul, MN
 Source: HR Green

<http://www.pedbikeimages.org/searchResult.cfm?searchtype=simple&categoryId=20&fromCategory=19>

Signal Countdown Timer

Signals were located at intersections and it was assumed that all 4 pedestrian crosswalks would have countdown timers installed at all curbs (8 per intersection). For cost estimate purposes, signal countdown timers were included based on Google street view data, data should be confirmed on a project by project basis.

Street Light

Street lighting is used to light both the roadway and any adjacent sidewalks. The cost includes both installation and cost of the fixture. For cost estimating purposes, a street light is included at all stops that are listed as deficient.

Bench

The cost and installation of a typical 6' heavy duty grade steel bench. For cost estimating purposes, a bench is included at all stops that are listed as deficient.

Bike Locker

The cost and installation of a typical heavy duty grade steel bike locker for a minimum of four bikes. For cost estimate purposes, a bike shelter was included at every 5th stop.

http://www.dot.state.mn.us/bike/pdfs/Bicycle%20and%20Pedestrian%20Toolbox_2008_04.pdf

Shelter

The cost and installation of a typical shelter (6'x8'). For cost estimate purposes, a shelter was recommended every 3rd stop.

Trash receptacle

The cost and installation of a typical heavy duty grade steel trash receptacle. For cost estimate purposes, a trash receptacle was included at all stops listed as deficient.

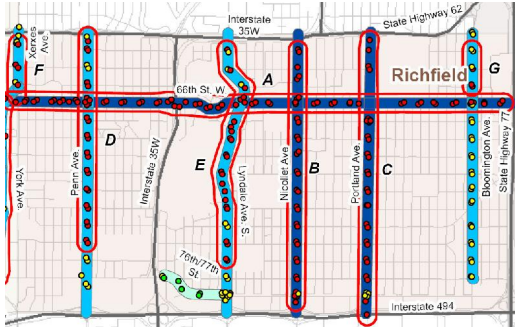
3.0 PROJECT IDENTIFICATION

Complete Street

A complete street is defined as a total renovation of an existing corridor to accommodate all modes of transportation. A project could be designated to receive a complete street but no cost analysis was assigned due to the variety of conditions. Complete streets may be identified but are not analyzed in this study. <http://www.completestreets.org/>

3.0 PROJECT IDENTIFICATION

RICHFIELD



3.3 PROJECTS

3.3.1 Richfield

The GIS data gathered for existing sidewalks within the City of Richfield is inaccurate. Due to a programming error the data on existing sidewalks was documenting them as non-existent for its analysis. This results in an inaccurate representation of existing sidewalks in Richfield. Most importantly, the corridor rankings are affected but not significantly enough to place the identified corridors in a different ranking level. The overall Richfield corridor rankings remain accurate.

Richfield A

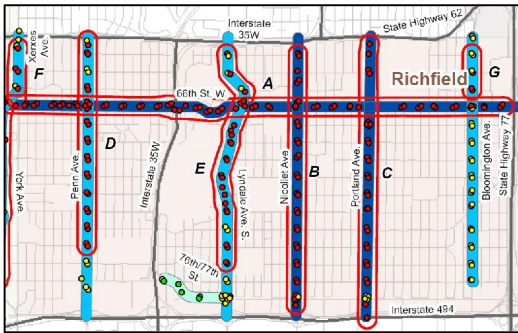
The entire east-west route along 66th Street in Richfield was identified as a corridor project. This was a result of observing similar patterns in the various GIS mapping exercises along this Richfield corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Richfield “A” project include the following:

- A) ADA pads
- B) Crosswalk (paint)
- C) Crosswalk (raised)
- D) Hawk signals
- E) Median treatment
- F) Signal countdown timers
- G) Street lights
- H) Benches
- I) Bike lockers
- J) Shelters
- K) Trash receptacles

3.0 PROJECT IDENTIFICATION

RICHFIELD



Traffic volumes are too high to recommend a road diet, much of the corridor already had a center shared turn lane. A complete street concept would be needed to add bike lanes to this project area. This would require major reconstruction of the roadway. The majority of the bike safety issues are at the intersection of 66th Street and York Ave, an intersection improvement project is recommended to make this intersection pedestrian and bike friendly.

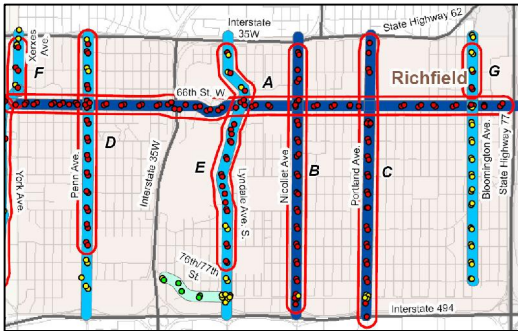
Median treatment is recommended on 66th from Lake Shore Dr to 1st Ave, median treatment would discourage mid-block crossing through this commercial zone and improve pedestrian safety. A Hawk Signal system could be utilized in this same vicinity to provide an efficient and safe means for pedestrians to cross 66th.

There are many locations along 66th St that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

The corridor project contains locations along 66th Street that have deficient facilities near bus stops. Improvements, such as ADA access, painted or raised crosswalks, benches, bike lockers, shelters, and trash receptacles would facilitate accessibility and the transit experience.

3.0 PROJECT IDENTIFICATION

RICHFIELD



Richfield B

The north-south route along Nicollet Avenue in Richfield was identified as a corridor project. This proposed project runs the entire length of Nicollet Avenue from Highway 62 on the northern end through Interstate 494 along the southern edge of Richfield. This was a result of observing similar patterns in the various GIS mapping exercises along this Richfield corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Richfield “B” project include the following:

- A) ADA pads
- B) Crosswalk (paint)
- C) Median treatment
- D) Restripe “Road Diet” add bike lane
- E) Signal countdown timers
- F) Benches
- G) Bike lockers
- H) Shelters
- I) Trash receptacles

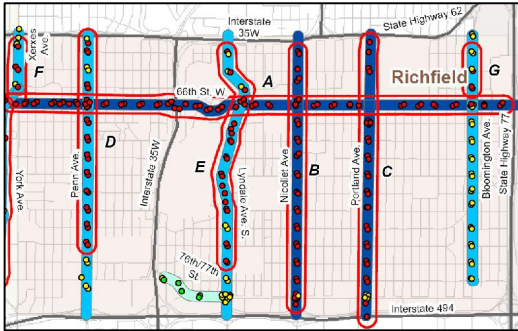
The section of Nicollet Ave between 66th St and 75th St is a candidate for a road diet (less than 15,000 ADT); this road diet would reduce automobile accidents, provide room for bikers, and provide a buffer between pedestrians and traffic.

Median treatment is recommended on Nicollet from 64th St to 67th St, median fences will discourage mid block crossing through this commercial zone and improve pedestrian safety.

The corridor project contains locations along Nicollet Avenue that have deficient site facilities near bus stops Improvements, such as ADA access, painted or raised crosswalks, benches, bike lockers, shelters, and trash receptacles would facilitate accessibility and the transit experience.

3.0 PROJECT IDENTIFICATION

RICHFIELD



Richfield C

The north-south route along Portland Avenue in Richfield was identified as a corridor project. This proposed project runs the entire length of Nicollet Avenue from Highway 62 on the northern end through Interstate 494 along the southern edge of Richfield. This was a result of observing similar patterns in the various GIS mapping exercises along this Richfield corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Richfield “C” project include the following:

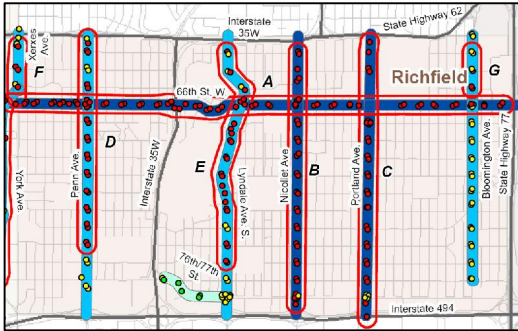
- A) ADA Pads
- B) Crosswalk (paint)
- C) Restripe “Road Diet” add bike lane
- D) Signal countdown timers
- E) Streetlights
- F) Benches
- G) Bike lockers
- H) Shelters
- I) Trash receptacles

The section of Portland Ave between 66th St and 75th St is a candidate for a road diet; this road diet would reduce automobile accidents, provide room for bikers, and provide a buffer between pedestrians and traffic.

The cluster project contains locations along Portland Avenue that have deficient site facilities near bus stops. Improvements, such as ADA access, painted or raised crosswalks, benches, bike lockers, shelters, and trash receptacles would facilitate accessibility and the transit experience.

3.0 PROJECT IDENTIFICATION

RICHFIELD



Richfield D

The north-south route along Penn Avenue in Richfield was identified as a corridor project. This proposed project runs from Highway 62 through W. 74th Street. This was a result of observing similar patterns in the various GIS mapping exercises along this Richfield corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Richfield “D” project include the following:

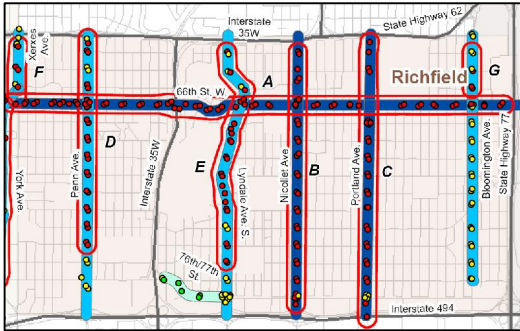
- A) ADA Pads
- B) Crosswalk (paint)
- C) Restripe “Road Diet” add bike lane
- D) Signal countdown timers
- E) Streetlights
- F) Benches
- G) Bike lockers
- H) Shelters
- I) Trash receptacles

The section of Penn Ave between 66th St and 75th St is a candidate for a road diet; this road diet would reduce automobile accidents, provide room for bikers, and provide a buffer between pedestrians and traffic.

The corridor project contains locations along Penn Avenue that have deficient site facilities near bus stops. Improvements, such as ADA access, painted or raised crosswalks, benches, bike lockers, shelters, and trash receptacles would facilitate accessibility and the transit experience.

3.0 PROJECT IDENTIFICATION

RICHFIELD



Richfield E

The north-south route along Lyndale Avenue in Richfield was identified as a corridor project. This proposed project runs from Highway 62 along the northern edge of Richfield through W. 75th Street in southern Richfield. This was a result of observing similar patterns in the various GIS mapping exercises along this Richfield corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Richfield “E” project include the following:

- A) ADA Pads
- B) Crosswalk (paint)
- C) Median treatment
- D) Restripe “Road Diet” add bike lane
- E) Signal countdown timers
- F) Streetlights
- G) Benches
- H) Bike lockers
- I) Shelters
- J) Trash receptacles

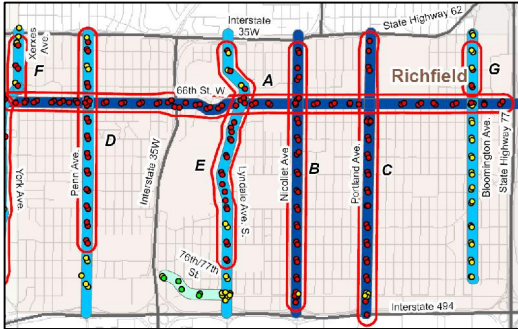
The section of Lyndale Ave between 66th St and 75th St is a candidate for a road diet; this road diet would reduce automobile accidents, provide room for bikers, and provide a buffer between pedestrians and traffic.

Median treatment is recommended on Lyndale from 64th St to 67th St. Median fences will discourage mid block crossing through this commercial zone and improve pedestrian safety.

The corridor contains locations along Lyndale Avenue that have deficient site facilities near bus stops Improvements, such as ADA access, painted or raised crosswalks, benches, bike lockers, shelters, and trash receptacles would facilitate accessibility and the transit experience.

3.0 PROJECT IDENTIFICATION

RICHFIELD



Richfield F

The north-south route along Xerxes Avenue in Richfield was identified as a cluster project. This proposed project runs from Xerxes Avenue along the western edge of the City through 66th Street in northwestern Richfield. This was a result of observing similar patterns in the various GIS mapping exercises along this Richfield corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

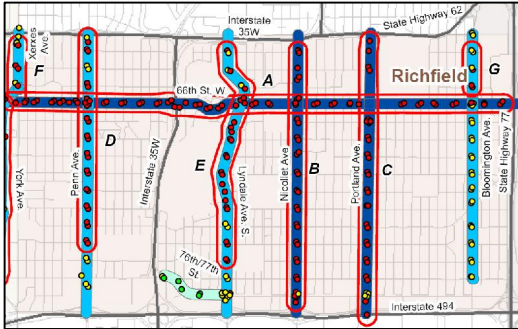
Tasks recommended for the Richfield “F” project include the following:

- A) ADA Pads
- B) Crosswalk (paint)
- C) Streetlights
- D) Benches
- E) Bike lockers
- F) Shelters
- G) Trash receptacles

The cluster project contains locations along Xerxes Avenue that have deficient site facilities near bus stops. Improvements, such as ADA access, painted or raised crosswalks, benches, bike lockers, shelters, and trash receptacles would facilitate accessibility and the transit experience.

3.0 PROJECT IDENTIFICATION

RICHFIELD



Richfield G

The north-south route along Bloomington Avenue in Richfield was identified as a cluster project. This proposed project runs from E. 64th Street through E. 66th Street in northeastern Richfield. This was a result of observing similar patterns in the various GIS mapping exercises along this Richfield corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

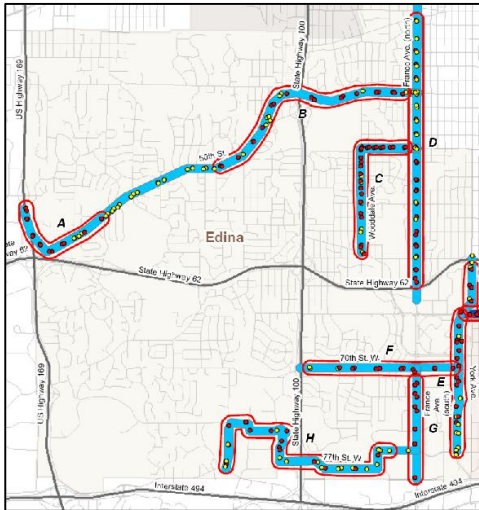
Tasks recommended for the Richfield “G” project include the following:

- A) ADA Pads
- B) Crosswalk (paint)
- C) Benches
- D) Bike lockers
- E) Shelters
- F) Trash receptacles

The cluster project contains locations along Bloomington Avenue that have deficient site facilities near bus stops. Improvements, such as ADA access, painted or raised crosswalks, benches, bike lockers, shelters, and trash receptacles would facilitate accessibility and the transit experience.

3.0 PROJECT IDENTIFICATION

EDINA



3.3.2 Edina

Edina A

The identified corridor project runs from the first transit stop south of the Londonderry Road along Lincoln Drive and continues eastward as London Drive turns into Vernon Avenue South ending near Gleason Road. This was a result of observing similar patterns in the various GIS mapping exercises along this Edina corridor. The criteria used to evaluate this corridor include: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Edina “A” project include the following:

- A) ADA Pads
- B) Curb cuts
- C) Crosswalk (paint)
- D) Streetlights
- E) Benches
- F) Bike lockers
- G) Shelters
- H) Trash receptacles

There are many locations along the project corridor that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

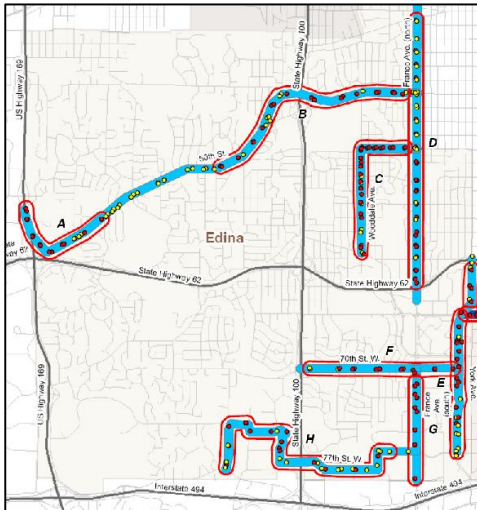
Improving the experience and safety with increased ADA access, painted crosswalks, benches, bike lockers, shelters and other site facilities such as trash receptacles will enhance use of alternative modes of transportation.

Edina B

The identified corridor project runs along Vernon Avenue South/50th Street West from Johnson Drive at the western end to France Avenue along the eastern edge of Edina. This was a result of observing similar patterns in the various GIS mapping exercises along this Edina corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA

3.0 PROJECT IDENTIFICATION

EDINA



pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Edina “B” project include the following:

- A) ADA Pads
- B) Curb cuts
- C) Crosswalk (paint)Median/Refuge islands
- D) Streetlights
- E) Benches
- F) Bike lockers
- G) Shelters
- H) Trash receptacles

There are many locations along Vernon Avenue/50th Street that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

Improving the experience and safety with increased ADA access, painted crosswalks, benches, bike lockers, shelters and other site facilities such as trash receptacles will enhance accessibility and the transit experience of alternative modes of transportation.

Edina C

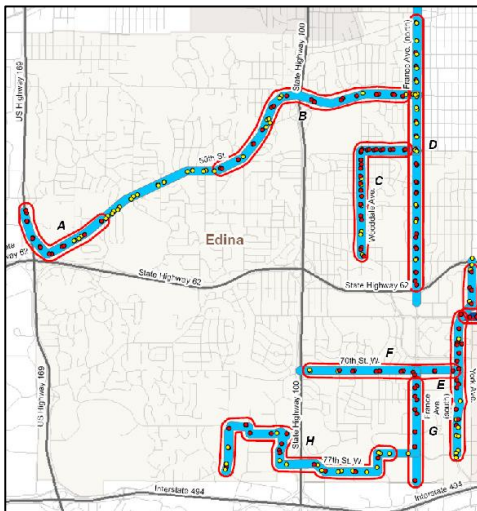
The identified corridor project runs along Wooddale Avenue South beginning at Valley View Road at the southern end and continuing northward and continuing eastward along 54th Street ending at France Avenue along the eastern edge of Edina. This was a result of observing similar patterns in the various GIS mapping exercises along this Edina corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Edina “C” project include the following:

- A) ADA Pads
- B) Curb cuts
- C) Bike Lanes
- D) Crosswalk (paint)

3.0 PROJECT IDENTIFICATION

EDINA



- E) Streetlights
- F) Benches
- G) Bike lockers
- H) Shelters
- I) Trash receptacles

There are many locations along Wooddale/54th Street that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

Improving experience and safety with increased ADA access, benches, bike lockers, painted crosswalks, shelters and other site facilities such as trash receptacles will enhance use of alternative modes of transportation.

The addition of a designated bike lane along the corridor would also promote transportation alternatives and increase pedestrian safety.

Edina D

The identified corridor project runs north/south along France Avenue from 39th Street W. along the northern edge of Edina through the intersection with Highway 62 on the southern end. This was a result of observing similar patterns in the various GIS mapping exercises along this Edina corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

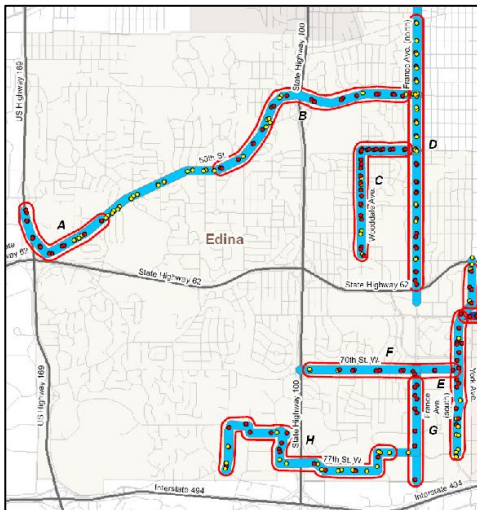
Tasks recommended for the Edina “D” project include the following:

- A) ADA Pads
- B) Curb cuts
- C) Crosswalk (paint)
- D) Streetlights
- E) Benches
- F) Bike lockers
- G) Shelters
- H) Trash receptacles

There are many locations along France Avenue that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

3.0 PROJECT IDENTIFICATION

EDINA



Improving the experience and safety with increased ADA access, benches, bike lockers, painted crosswalks, shelters and other site facilities such as trash receptacles will enhance use of alternative modes of transportation.

Edina E

The identified corridor project runs north/south along York Avenue S. from 66th Street on the northern end and 76th Street at the southern end. This was the result of observing similar patterns in the various GIS mapping exercises along this Edina corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Edina “E” project include the following:

- A) ADA Pads
- B) Curb cuts
- C) Crosswalk (paint)
- D) Streetlights
- E) Benches
- F) Bike lockers
- G) Shelters
- H) Trash receptacles

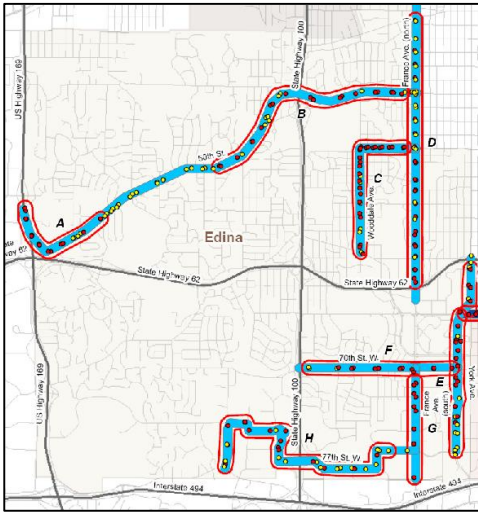
Traffic volumes are too high to recommend a road diet. A complete street concept would be needed to add bike lanes to this project area. The majority of the bike safety issues are at the intersection of 66th Street and York Ave, an intersection improvement project is recommended to make this intersection pedestrian and bike friendly.

There are many locations along York Avenue S. that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

Improving the experience and safety with increased ADA access, painted crosswalks, benches, bike lockers, shelters and other site facilities such as trash receptacles will enhance use of alternative modes of transportation.

3.0 PROJECT IDENTIFICATION

EDINA



Edina F

The identified corridor project runs north/south along Xerxes Avenue S. from W. 66th Street to Highway 62 along the northern edge. This was a result of observing similar patterns in the various GIS mapping exercises along this Edina corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Edina “F” project include the following:

- A) ADA Pads
- B) Curb cuts
- C) Crosswalk (paint)
- D) Streetlights
- E) Benches
- F) Bike lockers
- G) Shelters
- H) Trash receptacles

There are many locations along Xerxes Avenue that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

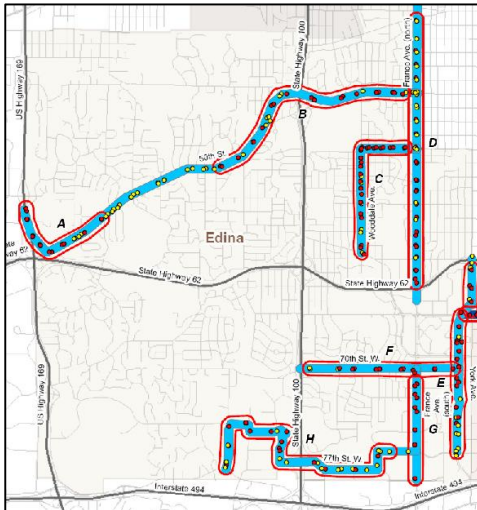
Improving the experience and safety with increased ADA access, painted crosswalks, benches, bike lockers, shelters and other site facilities such as trash receptacles will enhance use of alternative modes of transportation.

Edina G

The identified corridor project runs north/south along France Avenue S. from 70th Street down to Minnesota Drive. This was a result of observing similar patterns in the various GIS mapping exercises along this Edina corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

3.0 PROJECT IDENTIFICATION

EDINA



Tasks recommended for the Edina “G” project include the following:

- A) ADA Pads
- B) Curb cuts
- C) Crosswalk (paint)
- D) Streetlights
- E) Benches
- F) Bike lockers
- G) Shelters
- H) Trash receptacles

There are many locations along France Avenue S. that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

Improving the experience and safety with increased ADA access, painted crosswalks, benches, bike lockers, shelters and other site facilities such as trash receptacles will enhance use of alternative modes of transportation.

Edina H

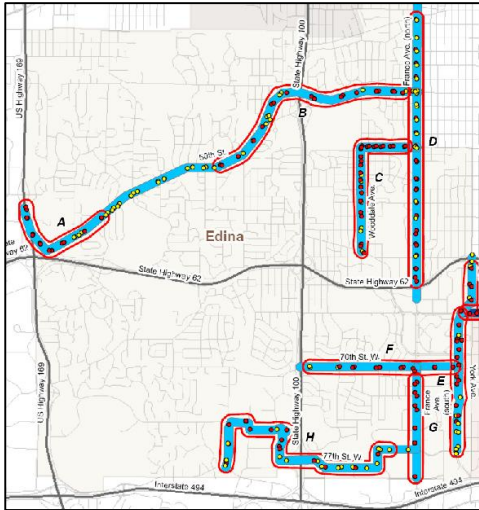
The identified corridor project runs mainly east/west along an established bus route. Beginning at the intersection of 76th Street W. and France Avenue, the route runs westerly along 76th Street, turning south along Parklawn Avenue and continuing west along 77th Street until turning north at Metro Boulevard. The route turns west at 74th Street W. and again turning north at Bush Lake Road. The project area then turns west at Dewey Hill Road and curves to the south along Cahill Road. The project ends at the intersection of Cahill Road and W. 78th Street. This was a result of observing similar patterns in the various GIS mapping exercises along this Edina corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Edina “H” project include the following:

- A) ADA Pads
- B) Curb cuts
- C) Crosswalk (paint)
- D) Streetlights
- E) Benches

3.0 PROJECT IDENTIFICATION

EDINA



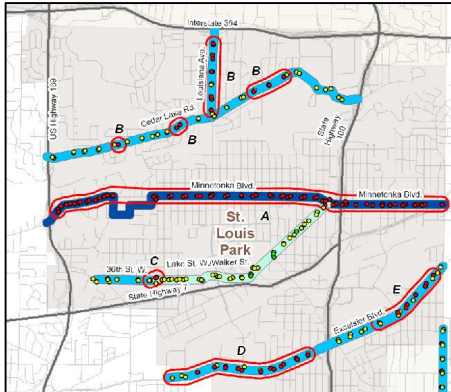
- F) Bike lockers
- G) Shelters
- H) Trash receptacles

There are many locations along the corridor that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

Improving the experience and safety with increased ADA access, painted crosswalks, benches, bike lockers, shelters and other site facilities such as trash receptacles will enhance use of alternative modes of transportation.

3.0 PROJECT IDENTIFICATION

ST LOUIS PARK



3.3.3 St. Louis Park

St. Louis Park A

The identified corridor project runs the entire east/west length of Minnetonka Boulevard through St. Louis Park. This specific project was a result of observing similar patterns in the various GIS mapping exercises along this St. Louis Park corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the St. Louis Park “A” project include the following:

- A) ADA Pads
- B) Crosswalk (paint)
- C) Streetlights
- D) Benches
- E) Bike lockers
- F) Shelters
- G) Trash receptacles

There are many locations along Minnetonka Boulevard that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

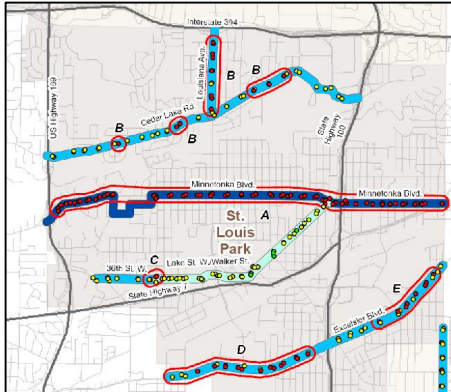
Improving the experience and safety with increased ADA access, painted crosswalks, benches, bike lockers, shelters and trash receptacles will enhance use of alternative modes of transportation.

St. Louis Park B

The identified cluster project includes locations on both Cedar Lake Road and Louisiana Avenue S. Beginning along the western portion of Cedar Lake Road and moving eastward, the following intersections are included; Cedar Lake Road/Yukon Ave. S, Cedar Lake Road/Quebec Ave. S, Cedar Lake Road/Florida Ave. S, Cedar Lake Road/Franklin Ave. W and Cedar Lake Road/Blackstone Ave. S. The Louisiana intersections included in this cluster include; Louisiana/Cedar Lake Road, Louisiana/W 22nd St., Louisiana/W 18th St.

3.0 PROJECT IDENTIFICATION

ST LOUIS PARK



Louisiana/W 16th St., and Louisiana/W 14th St. This was a result of observing similar patterns in the various GIS mapping exercises along this St. Louis Park corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the St. Louis Park “B” project include the following:

- A) ADA Pads
- B) Crosswalk (paint)
- C) Streetlights
- D) Benches
- E) Bike lockers
- F) Shelters
- G) Trash receptacles

There are many locations along Cedar Lake Road and Louisiana Avenue that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

Improving the experience and safety with increased ADA access, painted crosswalks, benches, bike lockers, shelters and trash receptacles will enhance use of alternative modes of transportation.

St. Louis Park C

The identified isolated project is at the intersection of W. 36th Street and Texas Avenue in southwestern St. Louis Park. This project was a result of observing similar patterns in the various GIS mapping exercises along this St. Louis Park corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the St. Louis Park “C” project include the following:

- A) ADA Pads
- B) Curb cuts

3.0 PROJECT IDENTIFICATION

ST LOUIS PARK



- C) Streetlights
- D) Benches
- E) Bike lockers
- F) Trash receptacles

Pedestrian level lights near this bus stop would improve pedestrian safety.

Improving the experience and overall safety with increased ADA access, benches, bike lockers and trash receptacles will enhance use of alternative modes of transportation.

St. Louis Park D

The identified corridor project runs east/west along Excelsior Boulevard from Powell Drive on the western end and Highway 100 on the eastern end of the project. This was a result of observing similar patterns in the various GIS mapping exercises along this St. Louis Park corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the St. Louis Park “D” project include the following:

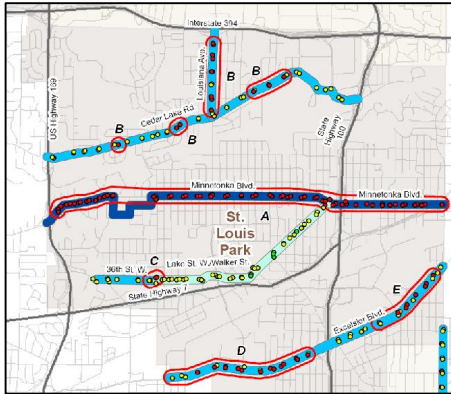
- A) ADA Pads
- B) Curb cuts
- C) Crosswalk (paint)
- D) Streetlights
- E) Benches
- F) Bike lockers
- G) Trash receptacles

There are many locations along Excelsior Boulevard that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

Improving the experience and safety with increased ADA access, painted crosswalks, benches, bike lockers and trash receptacles will enhance use of alternative modes of transportation.

3.0 PROJECT IDENTIFICATION

ST LOUIS PARK



St. Louis Park E

The identified corridor project runs southwest/northeast along Excelsior Boulevard from Grand and Excelsior on the western end and France Avenue on the eastern end of the project. This was a result of observing similar patterns in the various GIS mapping exercises along this St. Louis Park corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the St. Louis Park “E” project include the following:

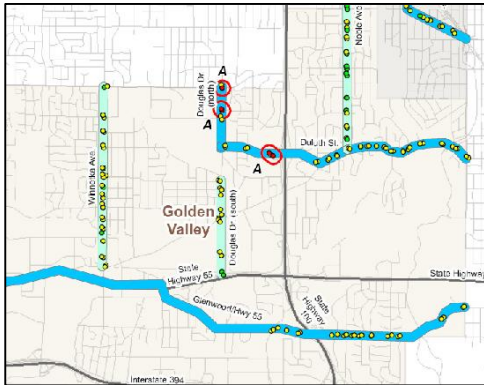
- A) ADA Pads
- B) Crosswalk (paint)
- C) Streetlights
- D) Benches
- E) Bike lockers
- F) Trash receptacles

There are many locations along Excelsior Boulevard that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

Improving the experience and safety with increased ADA access, painted crosswalks, benches, bike lockers and trash receptacles will enhance use of alternative modes of transportation.

3.0 PROJECT IDENTIFICATION

GOLDEN VALLEY



3.3.4 Golden Valley

Golden Valley A

The identified corridor project runs east/west along Duluth Street from Highway 100 west to Douglas Drive North and then turns north/south between Douglas Drive North and 27th Avenue North. This was a result of observing similar patterns in the various GIS mapping exercises along this Golden Valley corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Golden Valley “A” project include the following:

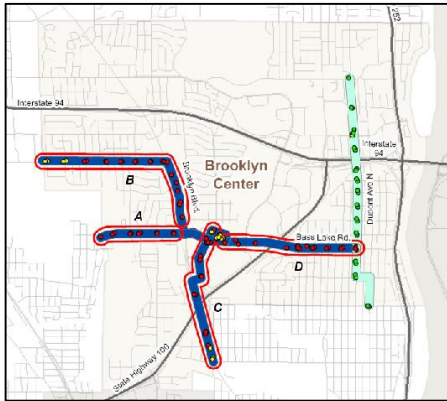
- A) ADA Pads
- B) Streetlights
- C) Benches
- D) Bike lockers
- E) Shelters
- F) Trash receptacles

There are many locations along Douglas Drive N. and Duluth Street that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

Improving the experience and safety with increased ADA access, benches, bike lockers, shelters and trash receptacles will enhance use of alternative modes of transportation.

3.0 PROJECT IDENTIFICATION

BROOKLYN CENTER



3.3.5 Brooklyn Center

Brooklyn Center A

The identified corridor project runs east/west along 58th Avenue North from Major Avenue North on the western edge to Brooklyn Boulevard on the eastern end. This was a result of observing similar patterns in the various GIS mapping exercises along this Brooklyn Center corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Brooklyn Center “A” project include the following:

- A) ADA Pads
- B) Streetlights
- C) Bike lockers
- D) Shelters
- E) Trash receptacles

There are many locations along 58th Avenue North that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

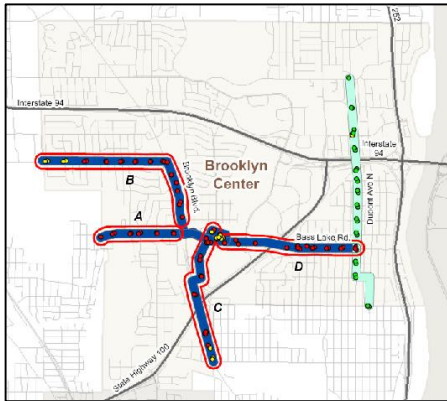
Improving the experience and safety with increased ADA access, bike lockers, shelters and other site facilities such as trash receptacles will enhance use of alternative modes of transportation.

Brooklyn Center B

The identified corridor project runs east/west along 63rd Avenue N. from Vera Cruz Lane on the western edge and turns north/south along Brooklyn Boulevard from 63rd Avenue N. at the northern end to Bass Lake Road at the southern end of the project. This was a result of observing similar patterns in the various GIS mapping exercises along this Brooklyn Center corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

3.0 PROJECT IDENTIFICATION

BROOKLYN CENTER



Tasks recommended for the Brooklyn Center “B” project include the following:

- A) ADA Pads
- B) Benches
- C) Bike lockers
- D) Shelters
- E) Trash receptacles

There are many locations along 63rd Avenue N that have deficient site facilities near bus stops. Improvements, such as ADA access, painted or raised crosswalks, benches, bike lockers, shelters, and trash receptacles would facilitate accessibility and the transit experience.

Brooklyn Center C

The identified corridor project runs north/south along Xerxes Avenue from Northway Boulevard at the northern end to 55th Avenue North where the project turns east/west along 55th Avenue North until intersecting and turning north/south along Brooklyn Boulevard ending at 49th Avenue North at the southern end of the project corridor. This was a result of observing similar patterns in the various GIS mapping exercises along this Brooklyn Center corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

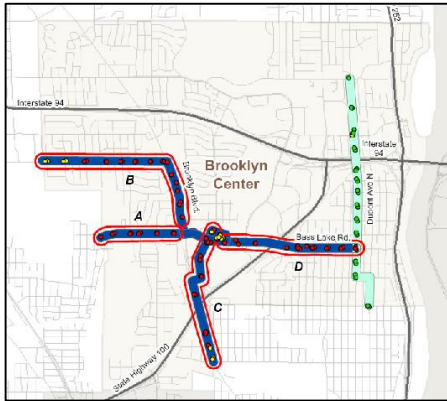
Tasks recommended for the Brooklyn Center “C” project include the following:

- A) ADA Pads
- B) Curb cuts
- C) Streetlights
- D) Benches
- E) Bike lockers
- F) Shelters
- G) Trash receptacles

There are many locations along Xerxes and Brooklyn Boulevard that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

3.0 PROJECT IDENTIFICATION

BROOKLYN CENTER



Improving the experience and safety with increased ADA access, benches, bike lockers, shelters and trash receptacles will enhance use of alternative modes of transportation.

Brooklyn Center D

The identified corridor project runs east/west along 57th Avenue N. from Xerxes Avenue N. along the western edge to Dupont Avenue N. and 57th Avenue N. functioning as the eastern edge of the corridor. This is a result of observing similar patterns in the various GIS mapping exercises along this Brooklyn Center corridor. The criteria used to evaluate this corridor includes; lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Brooklyn Center “D” project include the following:

- A) ADA Pads
- B) Streetlights
- C) Benches
- D) Bike lockers
- E) Shelters
- F) Trash receptacles

There are many locations along 57th Avenue that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

There are a few locations along 57th Avenue that have deficient ADA pads near bus stops. Upgrading the pads and other site facilities, such as adding benches, bike lockers, shelters and trash receptacles near the bus stops would improve pedestrian safety and accessibility and the transit experience.

3.0 PROJECT IDENTIFICATION

FRIDLEY



3.3.6 Fridley

Fridley A

The identified cluster project runs north/south along the intersection of Central Avenue NE and Highway 65 and Medtronic Parkway. This was a result of observing similar patterns in the various GIS mapping exercises along this Fridley corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Fridley “A” project include the following:

- A) ADA Pads
- B) Benches
- C) Bike lockers
- D) Shelters
- E) Trash receptacles

There are a few locations along Central Avenue/Highway 65 that have deficient ADA pads near bus stops. Upgrading the pads and other site facilities, such as adding benches, bike lockers, shelters and trash receptacles near the bus stops would improve safety and accessibility and the transit experience.

3.0 PROJECT IDENTIFICATION

FRIDLEY



Fridley B

The identified cluster project is located along University Avenue NE at the intersection of Satellite Lane NE and University Avenue NE and the intersection of Rice Creek Terrace NE and University Avenue NE. This was a result of observing similar patterns in the various GIS mapping exercises along this Fridley corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Fridley “B” project include the following:

- A) ADA Pads
- B) Curb cuts
- C) Streetlights
- D) Benches
- E) Bike lockers
- F) Trash receptacles

There are many locations along University Avenue NE that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

There are a couple locations along University Avenue NE that have deficient ADA pads near bus stops. Upgrading the pads and other site facilities near the bus stops would improve safety and accessibility and the transit experience.

3.0 PROJECT IDENTIFICATION

COLUMBIA HEIGHTS



3.3.7 Columbia Heights

Columbia Heights A

The identified corridor project runs north/south along Central Avenue NE from 37th Avenue NE (County Road D) in the south to 53rd Avenue NE to the north. This was a result of observing similar patterns in the various GIS mapping exercises along this Columbia Heights corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Columbia Heights “A” project include the following:

- A) ADA Pads
- B) Streetlights
- C) Benches
- D) Bike lockers
- E) Shelters
- F) Trash receptacles

There are many locations along Central Avenue NE that have deficient lighting near bus stops. Pedestrian level lights near the bus stops would improve pedestrian safety.

Improving the experience and safety with better ADA access, benches, bike lockers, shelters and other site facilities such as trash receptacles will enhance use of alternative modes of transportation.

3.0 PROJECT IDENTIFICATION

COLUMBIA HEIGHTS



Columbia Heights B

The identified corridor project runs north/south along University Avenue NE from 44th Avenue NE in the south to 52nd Avenue NE to the north. This was a result of observing similar patterns in the various GIS mapping exercises along this Columbia Heights corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Columbia Heights “B” project include the following:

- A) ADA Pads
- B) Curb cuts
- C) Benches
- D) Bike lockers
- E) Shelters
- F) Trash receptacles

There are many locations along University Avenue NE that have deficient site facilities near bus stops. Pedestrian level improvements, such as, ADA access, painted crosswalks, benches, bike lockers, shelters, and trash receptacles facilitate accessibility and the transit experience.

3.0 PROJECT IDENTIFICATION

ST ANTHONY



3.3.8 St. Anthony

St. Anthony A

The isolated project is located along 37th Avenue NE (County Road D) between Penrod Lane and Chelmsford Road NE. This was a result of observing similar patterns in the various GIS mapping exercises along this St. Anthony corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the St. Anthony “A” project include the following:

- A) ADA Pads
- B) Curb cuts
- C) Bench
- D) Shelter
- E) Trash receptacle

There are many locations along 37th Avenue NE that have deficient site facilities near bus stops. Improvements, such as ADA access, painted or raised crosswalks, benches, bike lockers, shelters, and trash receptacles would facilitate accessibility and the transit experience.

3.0 PROJECT IDENTIFICATION

ROSEVILLE



Roseville

Roseville A

The identified corridor project runs north/south along Snelling Avenue N from Roselawn Avenue W in the south to County Road B W to the north. This was a result of observing similar patterns in the various GIS mapping exercises along this Roseville corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Roseville “A” project include the following:

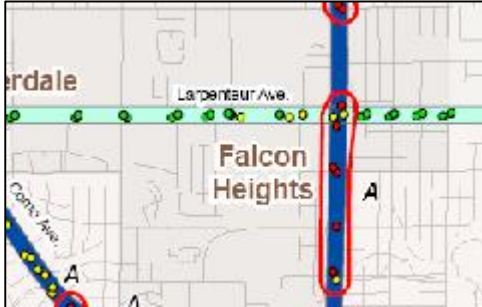
- A) Median/Refuge islands
- B) Benches
- C) Bike locker
- D) Shelter
- E) Trash receptacles

There are many locations along Snelling Avenue that have deficient site facilities near bus stops. Improvements, such as ADA access, painted or raised crosswalks, benches, bike lockers, shelters, and trash receptacles would facilitate accessibility and the transit experience.

An addition of a median island would also improve pedestrian safety and promote alternative modes of transportation.

3.0 PROJECT IDENTIFICATION

FALCON HEIGHTS



3.3.9 Falcon Heights

Falcon Heights A

The identified corridor project runs north/south along Snelling Avenue N from Midway Parkway in the south to Larpenteur Avenue W to the north. This is a result of observing similar patterns in the various GIS mapping exercises along this Falcon Heights corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the Falcon Heights “A” project include the following:

- A) ADA Pads
- B) Benches
- C) Bike locker
- D) Shelter
- E) Trash receptacles

There are many locations along Snelling Avenue that have deficient site facilities near bus stops. Improvements, such as ADA access, painted or raised crosswalks, benches, bike lockers, shelters, and trash receptacles would facilitate accessibility and the transit experience.

3.0 PROJECT IDENTIFICATION

ST PAUL



3.3.10 St. Paul

St. Paul A

The identified corridor project runs mainly east/west along Como Avenue from Hunting Valley Road in the northwest to Stella Street in the southeast. This was a result of observing similar patterns in the various GIS mapping exercises along this St. Paul corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the St. Paul “A” project include the following:

- A) ADA Pads
- B) Crosswalk (paint)
- C) Benches
- D) Bike locker
- E) Shelter
- F) Trash receptacles

There are many locations along Como Avenue that have deficient site facilities near bus stops. Improvements, such as ADA access, painted or raised crosswalks, benches, bike lockers, shelters, and trash receptacles would facilitate accessibility and the transit experience.

St. Paul B

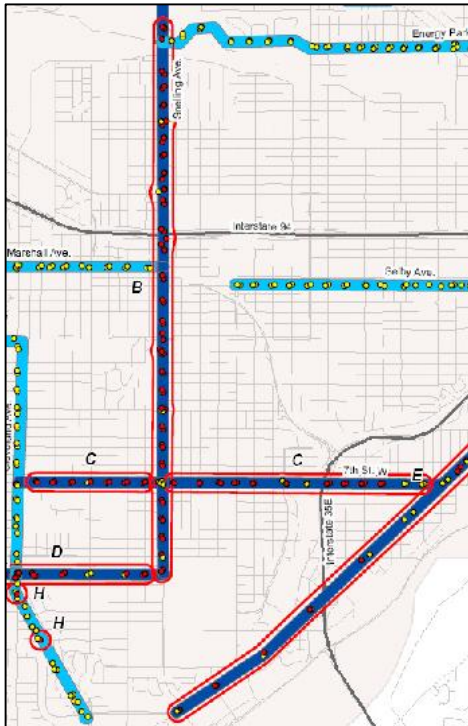
The identified corridor project runs mainly east/west along Snelling Avenue N from Energy Park Drive in the north to Ford Parkway in the south. This was a result of observing similar patterns in the various GIS mapping exercises along this St. Paul corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the St. Paul “B” project include the following:

- A) ADA Pads

3.0 PROJECT IDENTIFICATION

ST PAUL



- B) Crosswalk (paint)
- C) Hawk Signal
- D) Median treatment
- E) Median/Refuge island
- F) Signal countdown timer
- G) Benches
- H) Bike lockers
- I) Shelters
- J) Trash receptacles

There are many locations along Snelling Avenue that have deficient site facilities near bus stops. Improvements, such as ADA access, painted or raised crosswalks, benches, bike lockers, shelters, and trash receptacles would facilitate accessibility and the transit experience.

The addition of a Hawk Signal and a median island would also be an asset for pedestrian safety and mobility.

St. Paul C

The identified corridor project runs east/west along Randolph Avenue from Snelling Avenue S in the east to Cleveland Avenue S in the west. This was a result of observing similar patterns in the various GIS mapping exercises along this St. Paul corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

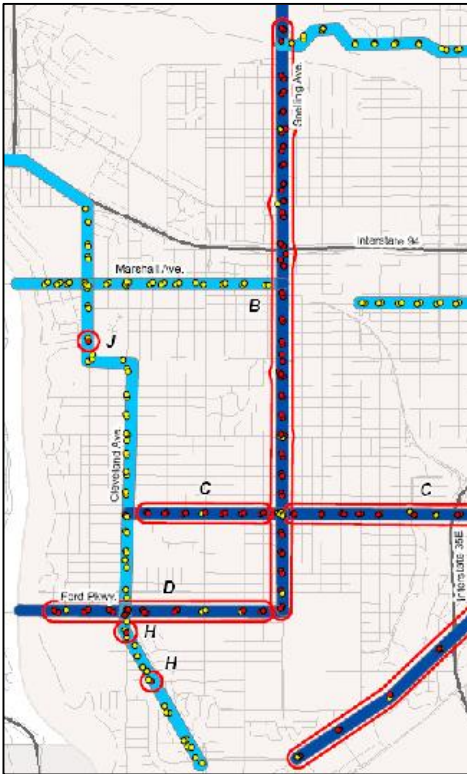
Tasks recommended for the St. Paul “C” project include the following:

- A) ADA Pads
- B) Crosswalk (paint)
- C) Benches
- D) Bike lockers
- E) Shelters
- F) Trash receptacles

There are many locations along Randolph Avenue that have deficient site facilities near bus stops. Improvements, such as ADA access, painted crosswalks, benches, bike lockers, shelters, and trash receptacles would improve use.

3.0 PROJECT IDENTIFICATION

ST PAUL



St. Paul D

The identified corridor project runs mainly east/west along Ford Parkway from Snelling Avenue S in the east to Woodlawn Avenue in the west. This was a result of observing similar patterns in the various GIS mapping exercises along this St. Paul corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the St. Paul “D” project include the following:

- A) ADA Pads
- B) Crosswalk (paint)
- C) Benches
- D) Bike lockers
- E) Shelters
- F) Trash receptacles

There are many locations along Ford Parkway that have deficient site facilities near bus stops. Improvements, such as, ADA access, painted crosswalks, benches, bike lockers, shelters, and trash receptacles would improve accessibility and the transit experience.

St. Paul E

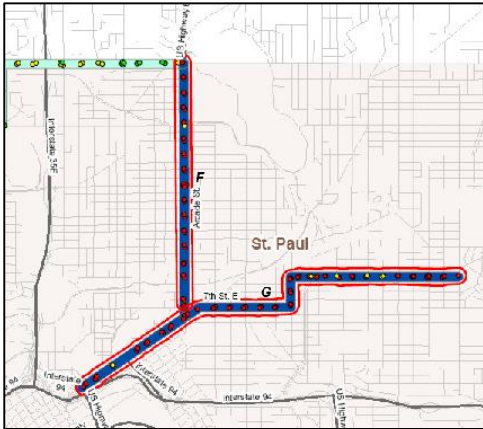
The identified corridor project runs southwest to northeast along 7th Street West from St. Paul Avenue in the southwest to Kellogg Boulevard in the northeast. This was a result of observing similar patterns in the various GIS mapping exercises along this St. Paul corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the St. Paul “E” project include the following:

- A) ADA Pads

3.0 PROJECT IDENTIFICATION

ST PAUL



- B) Crosswalk (paint)
- C) Benches
- D) Bike lockers
- E) Trash receptacles

There are many locations along 7th Street West that have deficient site facilities near bus stops. Improvements, such as, ADA access, painted crosswalks, benches, bike lockers, shelters, and trash receptacles would improve accessibility and the transit experience.

St. Paul F

The identified corridor project runs north/south along Arcade Street from Larpenteur Avenue in the north to 7th Street East in the south. This was a result of observing similar patterns in the various GIS mapping exercises along this St. Paul corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the St. Paul “F” project include the following:

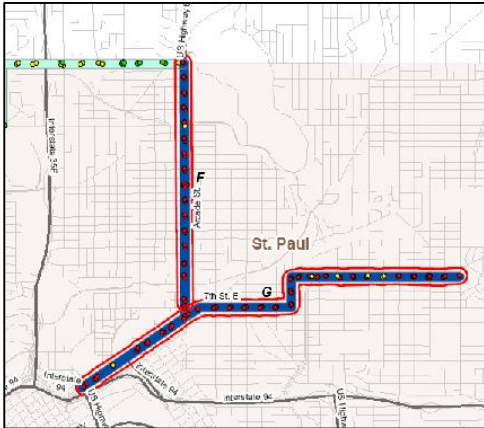
- A) ADA Pads
- B) Bike lanes
- C) Crosswalk (paint)
- D) Restripe “Road Diet” add bike lane
- E) Benches
- F) Bike lockers
- G) Shelters
- H) Trash receptacles

There are many locations along Arcade Street that have deficient site facilities near bus stops. Pedestrian level improvements, such as, ADA access, painted crosswalks, benches, bike lockers, shelters, and trash receptacles would improve pedestrian safety.

The identified project is a candidate for a road diet; this reduction in vehicle lanes and addition of dedicated bike lanes would reduce automobile accidents, provide room for bikers, and provide a buffer between pedestrians and traffic.

3.0 PROJECT IDENTIFICATION

ST PAUL

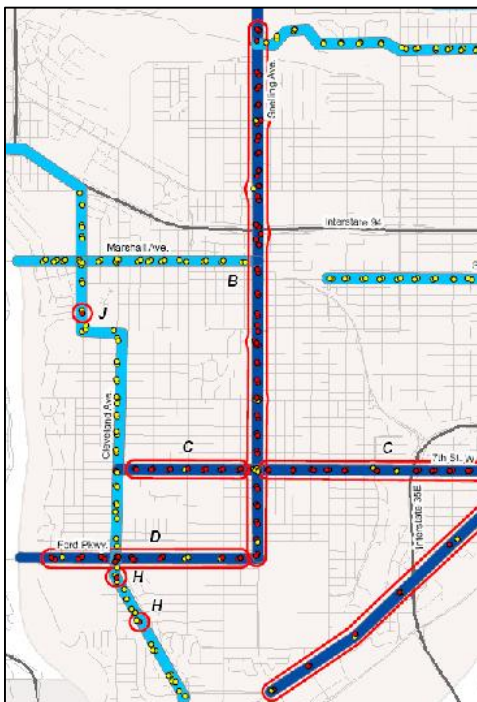


St. Paul G

The identified corridor project runs mainly east/west along 7th Street East from Lafayette Road N to Minnehaha Avenue E. The corridor then follows Minnehaha Avenue E from 7th Street E to Atlantic Street N where it turns north/south along Atlantic Street N to 7th Street E. The corridor then follows 7th Street E to Hazel Street N. This was a result of observing similar patterns in the various GIS mapping exercises along this St. Paul corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the St. Paul “G” project include the following:

- A) ADA Pads
- B) Crosswalk (paint)
- C) Median/Refuge islands
- D) Restripe “Road Diet” add bike lane
- E) Benches
- F) Bike lockers
- G) Shelters
- H) Trash receptacles



There are many locations along 7th Street East and Atlantic Street North that have deficient site facilities near bus stops. Improvements, such as, ADA access, painted crosswalks, benches, bike lockers, shelters, and trash receptacles would improve accessibility and the transit experience.

The identified project is a candidate for a road diet; this reduction in vehicle lanes and addition of dedicated bike lanes would reduce automobile accidents, provide room for bikers, and provide a buffer between pedestrians and traffic.

St. Paul H

The identified cluster project is located on St. Paul Avenue at the intersection of St. Paul Avenue/Bohland Avenue and St. Paul Avenue/Yorkshire Avenue. This was a result of observing similar patterns in the various GIS mapping

3.0 PROJECT IDENTIFICATION

ST PAUL



exercises along this St. Paul corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the St. Paul “H” project include the following:

- A) ADA Pads
- B) Curb cuts
- C) Crosswalk (paint)
- D) Benches
- E) Bike locker
- F) Shelters
- G) Trash receptacles

There are many locations along St. Paul Avenue that have deficient site facilities near bus stops. Improvements, such as, ADA access, painted crosswalks, benches, bike lockers, shelters, and trash receptacles would improve accessibility and the transit experience.

St. Paul I

The identified cluster project is located on Horton Avenue between Midway Parkway and N Lexington Parkway and at the intersections of Van Slyke Avenue and Argyle Street and the intersection of Van Slyke Avenue and W Como Boulevard. This was a result of observing similar patterns in the various GIS mapping exercises along this St. Paul corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the St. Paul “I” project include the following:

- A) ADA Pads
- B) Curb cuts
- C) Crosswalk (paint)
- D) Benches
- E) Bike locker

3.0 PROJECT IDENTIFICATION

ST PAUL



- F) Shelter
- G) Trash receptacles

There are many locations along Horton and Van Slyke Avenue that have deficient site facilities near bus stops. Pedestrian level improvements, such as, ADA access, painted crosswalks, benches, bike lockers, shelters, and trash receptacles would improve accessibility and the transit experience.

St. Paul J

The identified isolated project is at the intersection of Cremin Avenue N and Exeter Place. This was a result of observing similar patterns in the various GIS mapping exercises along this St. Paul corridor. The criteria used to evaluate this corridor included: lighting, crosswalk access, bike lockers, bike lane access, bike crashes, pedestrian crashes, benches, ADA access, ADA pads, right-of-way buffers, shelters, sidewalk access and Level of Service rankings. As a result of the analysis, the corridor was identified as a high priority project.

Tasks recommended for the St. Paul “J” project include the following:

- A) ADA Pad
- B) Bench
- C) Bike locker
- D) Trash receptacle

This is an isolated location along Cremin Avenue N. Enhancing the pedestrian experience and safety with improved ADA access and other site facilities such as a bench, a bike locker and a trash receptacle will promote use of alternative modes of transportation.

4.0 PROJECT COST

An opinion of probable costs is included in Appendix C.

5.0 REFERENCES

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Minnesota Department of Transportation, *The Mn/DOT Bicycle Modal Plan*, January 2005

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