ACTION TRANSMITTAL No. 2015-23

DATE: May 7, 2015

TO: Transportation Advisory Board FROM: **Technical Advisory Committee**

PREPARED BY: Joe Barbeau, Senior Planner (651-602-1705)

SUBJECT: Scope Change Request for Hennepin County Surface

Transportation Program Project

REQUESTED ACTION:

Hennepin County requests modification to the scope of its Surface Transportation Program-funded project (SP # 027-653-021) in 2016 to change two intersection signals to roundabouts, change bicycle facility termini, change the project termini, and reduce the number of

travel lanes.

MOTION:

RECOMMENDED Recommend that the Transportation Advisory Board approve the request to modify the scope for the Surface Transportation Program-funded project (SP # 027-653-021) in 2016 to change two intersection signals to roundabouts, change bicycle facility termini, change the project termini, and reduce the number of travel lanes.

BACKGROUND AND PURPOSE OF ACTION: Hennepin County received \$7,000,000 (\$7,840,000 after inflation adjustment) Surface Transportation Program (STP) funding for reconstruction of CSAH 53 from just west of Washburn Avenue to 16h Avenue in Richfield for FY 2016.

The County is requesting a scope change that would expand upon its original scope. The original scope calls for a four-lane undivided roadway with left turn lanes and channelization only at major intersections. It includes no bicycle facilities and walkways are adjacent to the curb and are not ADA-compliant.

As shown in the attached request, the following changes are proposed:

- Provision of a left turn lane and channelization beyond major intersections. The extension of turn lanes beyond the major intersections is anticipated to improve safety and reduce crash rates currently exceeding critical rates.
- Protected bicycle facilities for the length of the project. The integration of bicycle mode will provide users additional choices, improve user access to existing transit, and improve connections to local and regional trails.
- Improved pedestrian facilities that include; ADA compliance, separation from vehicles, staged crossings, accessible pedestrian signals, and rectangular rapid flashing beacons (RRFB) will enhance the pedestrian safety and experience, and improve routes to existing transit features.
- Boulevards will provide an area for snow storage, signs, and a clear zone for the bicycle facilities.

- Signal to roundabout conversions are anticipated to improve vehicle/pedestrian safety and reduce the number of injury related crashes.
- The total project cost would increase from \$19,700,000 to \$40,000,000.
 All additional funds would be absorbed by the County.
- The project description would change from "from just west of Washburn Ave to 16th Ave in Richfield-Reconstruct" to From CSAH 31 (Xerxes Ave) to Richfield Parkway. The project length would increase from 3.3 miles to. 3.44 miles.
- Type of work would change from "turn lanes" to "grade and surface."

Hennepin County provided the following reasons that the project cost increases so much:

- An increase in project lane-miles. The increase in lane-miles is directly tied to proposed safety enhancements that include a center turn lane with median addition between Penn Avenue and 35W, and additional approach reconstruction for the proposed roundabouts.
- The length and type of bicycle facilities. The addition of protected bicycle facilities for the entire length of the project vs. bike lanes east of Portland Avenue only. This increased the roadway centerline length of bicycle facility by 2.8 miles and is a safety benefit for all users.
- The current estimate includes \$4M in City of Richfield utility reconstruction. This work is for city water main & sanitary sewer. The extent of city utility replacement was unknown at the time of application.
- The original planning level estimate was lower than more recent bid results. The application falls in the range of \$1.2M per lane mile. Recent bid results for similar type corridors let by Hennepin County have come in around \$2M per lane mile.

RELATIONSHIP TO REGIONAL POLICY: Projects that receive funding through the regional solicitation process are subject to the regional scope change policy. The purpose of this policy is to ensure that the project is designed and constructed according to the plans and intent described in the original application. Additionally, federal rules require that any federally-funded project scope change must go through a formal review and TIP amendment process if the project description or total project cost changes substantially. The scope change policy and process allow project sponsors to make adjustments to their projects as needed while still providing substantially the same benefits described in their original project applications.

A TIP amendment is not needed because the changes, if approved, will be incorporated into the new 2016-2019 TIP. The project will not be authorized prior to approval of that TIP.

STAFF ANALYSIS: Staff reviewed the submitted scope change request. The project originally scored 708 points and was ranked second out of seven projects that applied in the "A" Minor Relievers category. Staff review, which included sharing the proposed update with some of the scorers from the 2011 solicitation, examined whether the updated project would have scored well enough to be funded. The most notable scoring change was "Crash Reduction Cost Effectiveness", which dropped by roughly 50% due to the large project cost increase. The below table highlights all categories:

#	Category	Max	Orig	New	Notes
A	Relative Importance of Route	100	74	74	NOT PROVIDED TO SCORER: Not likely to change
B.1	Crash Reduction		80	80	Scorer reports Scores not likely to change.
B.2	Air Quality	100	0	0	Scorer reports scores not likely to change.
B.3	Congestion Reduction	150	75	75	Scorer reports scores not likely to change.
C.1	Crash Reduction Cost Effectiveness	125	125	71	Scorer reports reduction due to increase cost.
C.2	Congestion Reduction Cost Effectiveness	75	0	0	Scorer reports scores not likely to change.
C.3	Air Quality Cost Effectiveness	75	4	4	Scorer reports scores not likely to change.
D.1	Development Framework Planning Area Objectives	100	100	100	Scorer reports scores not likely to change.
D.2	Progress Toward Affordable Housing Goals	50	30	30	Scores were done by assessments; would not change.
D.3	Land Use And Access Mgmt Planning	75	50	50	Scorer reports scores not likely to change
D.4	Access Management Improvements	75	35	35	Scorer reports scores not likely to change
D.5	Integration of Modes	125	125	125	Probably improved for biking, but already at top score.
Е	Maturity of Project Concept	100	10	10	Scorer reported no change
TOT	TOTAL		708	654	

The score drops to 654, which is below the 687 that an unfunded project (also sponsored by Hennepin County) received.

No scorer indicated that the project will diminish in quality. The entire scoring reduction is the result of the sharp impact that the cost increase has on the crash reduction cost effectiveness score. Note that denial will leave \$7,000,000 of uncommitted STP funds for 2016.

COMMITTEE COMMENTS AND ACTION: At its April 16, 2015, meeting, the Funding and Programming Committee unanimously recommended approval of this scope change request. Members cited the difficulty in assigning an updated cost effectiveness score without re-evaluating the costs of competing projects. At its May 6, 2015, meeting, TAC recommended approval of the scope change request.

ROUTING

ТО	ACTION REQUESTED	DATE COMPLETED
TAC Funding & Programming Committee	Review & Recommend	April 16, 2015
Technical Advisory Committee	Review & Recommend	May 6, 2015
Transportation Advisory Board	Review & Approve	



Hennepin County Transportation Department

Public Works Facility 1600 Prairie Drive Medina, MN 55340-5421 Phone: 612-596-0300 FAX: 763-478-4000 TDD: 763-478-4030 www.hennepin.us

March 19, 2015

Mr. Timothy Mayasich Chair, TAC Funding and Programming Committee Metropolitan Council 390 Robert Street North St. Paul, MN 55101

Re: S.P. 027-653-021

Scope Change Request

CSAH 53 (66th Street South) - Richfield

Dear Mr. Mayasich,

Please consider this formal scope change request from Hennepin County for the CSAH 53 reconstruction project (Attachment A – Project Location). The State Transportation Improvement Program (STIP) currently has \$7,840,000 of federal funding scheduled in year 2016 for the referenced project. We respectfully request that the Metropolitan Council TAC Funding and Programming Committee consider this scope change request at its April 16th, 2015 meeting.

PROJECT INTENT

The intent and overall objective of the proposed CSAH 53 reconstruction project is to improve the existing condition of the roadway and respond to existing and future transportation needs. CSAH 53 is an arterial reliever that parallels TH 62. Existing average daily traffic volume (ADT) on CSAH 53 ranges from 12,000 to 22,000. The existing configuration is substantially a 4-lane undivided roadway with left turn lanes and channelization at major intersections only, there are no bicycle facilities, and walkways are adjacent to the curb and non-ADA compliant.

An extensive two year public involvement process concluded with Richfield City Council approval of all Preliminary Layout elements in early 2015. The process included monthly Richfield Transportation Commission meetings, periodic Technical Advisory Committee meetings, five (5) public open houses, and multiple council work sessions. Technical analysis during the development period included local and regional traffic modeling, with independent traffic model reviews. The reconstruction plan resulting from this effort is consistent with the project intent and overall objective and will provide substantial benefits on both a local and regional level that include safety, transit, and multimodal improvements. Key proposed improvements include:

- Provision of a left turn lane and channelization beyond major intersections. The extension of turn lanes beyond the major intersections is anticipated to improve safety and reduce crash rates currently exceeding critical rates.
- Protected bicycle facilities for the length of the project. The integration of bicycle mode will provide users additional choices, improve user access to existing transit, and improve connections to local and regional trails.
- Improved pedestrian facilities that include; ADA compliance, separation from vehicles, staged crossings, accessible pedestrian signals, and rectangular rapid flashing beacons (RRFB) will enhance the pedestrian safety and experience, and improve routes to existing transit features.
- Boulevards will provide an area for snow storage, signs, and a clear zone for the bicycle facilities.
- Signal to roundabout conversions are anticipated to improve vehicle/pedestrian safety and reduce the number of injury related crashes.

Hennepin County requests that the TAC Funding and Programming Committee also consider the current estimated construction cost of \$40,000,000 in its review of the scope change. The 2016-2019 STIP will be updated to reflect the current estimated construction cost. The estimate does not increase the amount of federal funding (\$7,840,000) for the project. Additional funds will be secured by the county.

REQUESTED SCOPE CHANGES

Based on the Federal STP-UG Funding Application (Attachment B – Form 1 Cover Sheet) and current scope change policy, the following scope changes have been identified for the proposed reconstruction plan:

- Change in intersection control signal to roundabout
- Change in bicycle facility termini
- Change in project termini
- Reduction in the number of travel lanes

Discussion on each item is provided below.

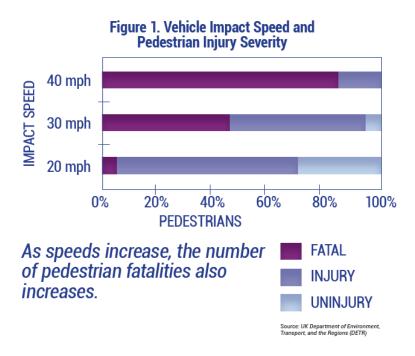
CHANGE INTERSECTION CONTROL – SIGNALS TO ROUNDABOUTS

The proposed reconstruction will convert the following two (2) signalized intersections to roundabouts:

- CSAH 53 at Lyndale Avenue
- CSAH 53 at Nicollet Avenue

The feasibility of roundabout conversion was discussed at several other locations along the corridor. However, these two locations best provided a balance of the project goals and impacts.

Improved pedestrian and vehicle safety is the primary benefit of constructing roundabouts at the specified locations. Based on crash history, approximately 30% of the crashes occurring at these intersections are severe (noted injury/possible injury). Roundabouts, by way of geometric design, reduce vehicle speeds to typically less than 20 mph at the intersection and greatly reduce the potential for injury crashes. This benefit is further extended to pedestrians, who are particularly vulnerable. The chart below provides an indication of the risk a pedestrian faces when crossing higher speed facilities.



Speed studies conducted at part of the traffic investigation indicate that 85th percentile vehicle speeds along the segments containing these two intersections is greater than 40 mph (35 posted speed limit). The proposed roundabouts are expected to influence vehicle speeds at, and in the vicinity of the intersection, further reducing risk to the large number of pedestrians that use these areas.

According to Metro Transit data, CSAH 53 has the second highest ridership for an east/west corridor in the metro area (Lake Street has the highest). Transit related pedestrian activity is further supported by the existing commercial nodes and adjacent school.

CHANGE IN BICYCLE FACILITY TERMINI

A key difference between the funding application and the proposed plan is the incorporation of bicycle facilities for the entire length of the project. The funding application specifies on road bike lanes for the east end of the project (Portland to 16th Avenue, approximately 0.86 mile). The proposed plan includes bicycle facilities for the entire project length. One-way protected bicycle facilities are proposed between Penn Avenue and the east project termini, and a shared-use path is proposed between Penn Avenue and the west termini. The proposed plan increases the centerline length (as measured along the roadway) of bicycle facilities from 0.86 mile to 3.44 miles and

greatly improves the integration of modes for the project. Much of the proposed bicycle facility is protected by curb and gutter. This type of bicycle facility (often referred to as a cycle track) is considered by supporters to be more desirable and safer for a broader spectrum of users. The proposed bicycle facilities are anticipated to promote higher use of the transit along the corridor through safe and convenient access to transit stops and facilities.

CHANGE IN PROJECT TERMINI

The change in project termini facilitates proper connection of the proposed bicycle facilities that run the length of the corridor. Proposed changes in the project termini are indicated in Table 1 below.

Table 1 Summary of Project Termini Changes

	Proposed Termini	Centerline Difference (ft)	Funding Termini	NOTES	
WEST END	Xerxes Avenue	+ 550 feet		Full depth roadway reconstruction will end at the funding terminus. Construction beyond	
			150 feet west of Washburn Avenue South	the funding terminus to Xerxes Avenue will facilitate the extension of the proposed shared-use path on the north side of CSAH 53 only.	
ďD			16 th Avenue South	Full depth roadway reconstruction will end at the funding terminus. Construction beyond the funding terminus to Richfield Parkway will facilitate the connection of proposed bicycle facilities to the Three Rivers Park District regional trail through restriping and curb ramps.	
EAST END	Richfield Parkway	+ 295 feet			

The proposed changes increase the overall project length from 3.3 miles to 3.44 miles.

REDUCTION IN THE NUMBER OF TRAVEL LANES

The proposed plan for the roadway segment between Nicollet Avenue and Portland Avenue is a 3-lane roadway. After appropriate lane transitions are provided, five blocks of this eight block segment are proposed as a 3-lane cross section. This differs from the funding application which describes a "similar to existing" cross section for the segment, currently a 4-lane undivided cross section.

The selection of the appropriate roadway cross section for this segment included consideration of:

- Crash data (crash rates for the existing 4-lane exceed critical crash rates for the segment)
- Number of driveway/alleys

Hennepin County Scope Change Request S.P. 027-653-021 March 19, 2015

- Potential property impacts (widening would require additional total acquisitions)
- 2012 traffic volumes (12,900) and 2030 traffic volumes (14,100)
- Public feedback against further widening of the roadway segment.

Based on consideration of the above, a 3-lane section best handles the anticipated traffic volume, addresses the safety issues, facilitates driveway and alley access, and eliminates the need for total acquisitions. The 3-lane section provides the appropriate balance between the project goals, impacts, and associated costs.

CONCLUSION

We look forward to discussing the proposed project and above requested scope changes with you. If you have any questions or require additional information, please contact me.

Sincerely,

James Grube, P.E.

Director, Transportation Department, and County Engineer

612-596-0307

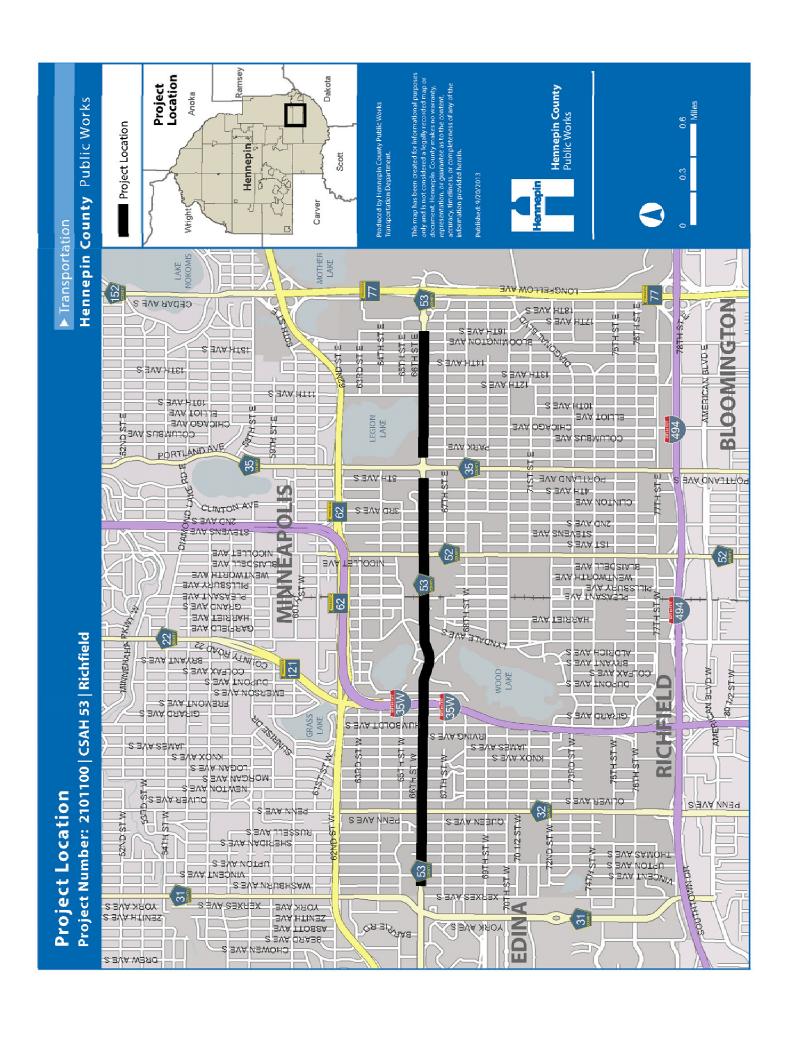
Attachments: Attachment A – Project Area Map

James M. Lrube

Attachment B – 2011 Federal Funding Application (Form 1)

Attachment A

Project Location



Attachment B

Federal Funding Application (Form 1) - Cover Sheet

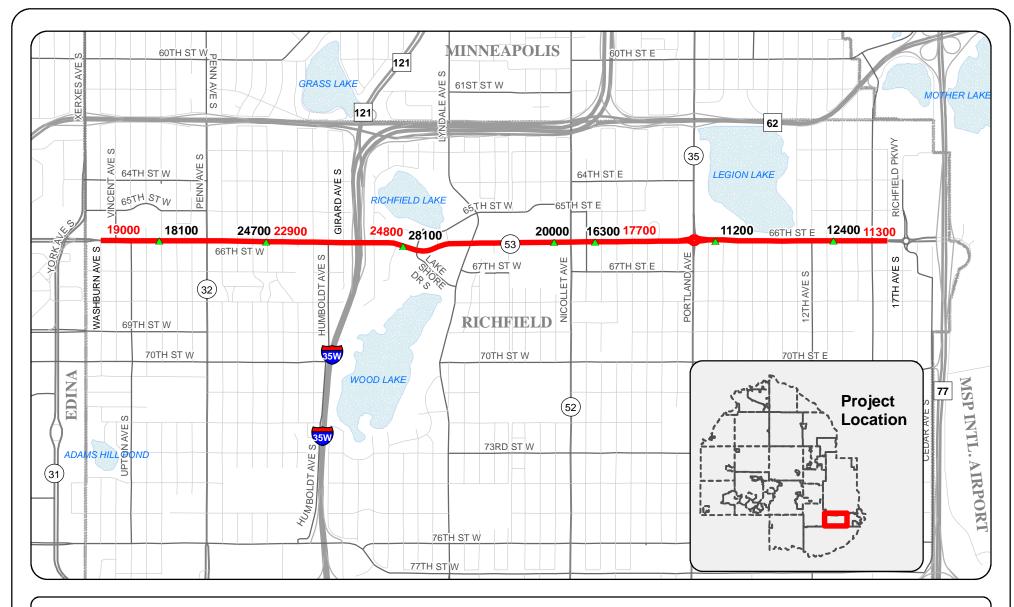
Federal STP-UG Funding Application (Form 1)

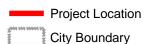
INSTRUCTIONS: Complete and return completed application to Kevin Roggenbuck, Transportation Office Use Only Coordinator, Transportation Advisory Board, 390 North Robert St., St. Paul, Minnesota (651) 602-1728. Form 1 needs to be filled out electronically. Please go to Metropolitan Council's Regional Solicitation website for instructions. Applications must be received by 5:00 PM at the Metropolitan Council FTP site or postmarked on July 18, 2011. *Be sure to complete and attach the Project Information form. I. GENERAL INFORMATION 1. APPLICANT: Hennepin County 2. JURISDICTIONAL AGENCY (IF DIFFERENT): Hennepin County Public Works 3. MAILING ADDRESS: 1600 Prairie Drive CITY: Medina STATE: MN ZIP CODE: 55340 4. COUNTY: Hennepin **TITLE: Transportation Department** PHONE NO. 5. CONTACT PERSON: James N. Grube (612) 596-0307 **Director and County Engineer** CONTACT E-MAIL ADDRESS: james.grube@co.hennepin.mn.us II. PROJECT INFORMATION 6. PROJECT NAME: CSAH 53 (66th Street) Reconstruction Project 7. BRIEF PROJECT DESCRIPTION (Include location, road name, type of improvement, etc...): This project, located on CSAH 53 (66th Street) from 150 feet west of Washburn Avenue South to 16th Avenue South in Richfield, would reconstruct and upgrade 3.3 miles of the existing 4-lane divided and undivided urban roadway to an urban roadway with a cross-section similar to the existing roadway between the west end of the project and CSAH 35 (Portland Avenue). Between CSAH 35 and the east end of the project, the cross-section would be revised to a 3-lane road section with a center two-way left turn lane. Project elements would include a 10-Ton design, a raised concrete median or a continuous left-turn-lane, pedestrian and biking accommodations, ADA-compliant curb ramps, and the replacement of existing signals. CSAH 53 (66th Street) in the project location is an aging urban roadway that was originally constructed in 1958 with segments being reconstructed as late as 1987. The project area is a mix of residential, commercial, central business district, and open space park land uses. Pedestrian facilities along the proposed project are noncompliant with today's ADA standards. Recently, Richfield has reconstructed CSAH 53 (66th Street) to the east of this proposed project. Metro Transit has multiple bus routes (111, 515, and 558) which travel along CSAH 53 and multiple bus-stops within the project limits. Transit advantages and improvements will be provided where practical with the project to benefit existing transit service. The expected year of construction is 2016. 8. STP PROJECT CATEGORY - Check only one project grouping in which you wish your project to be scored. "A" Minor Arterials: **⊠Reliever** Expander Non-Fwy. Principal Arterial Connector ☐ Augmenter ☐Bikeway/Walkway III. PROJECT FUNDING 9. Are you applying or have you applied for funds from another source(s) to implement this project? No 🖂 Yes 🗌 If yes, please identify the source(s): 10. FEDERAL AMOUNT: \$7,000,000 13. MATCH % OF PROJECT TOTAL: 53% 11. MATCH AMOUNT: \$8,000,000 14. SOURCE OF MATCH FUNDS: Local and State Funds 12.* PROJECT TOTAL: \$15,000,000 15. REQUESTED PROGRAM YEAR (CIRCLE): ☐2015 ☐2016

17. TITLE: Assistant County Administrator, Public Works

16. SIGNATURE

^{*}Figure should match the subtotal on the Project Elements and Construction Cost table





2009 AADT (2030 Forecasted AADT)

Project Location CSAH 53 C.P. 1011

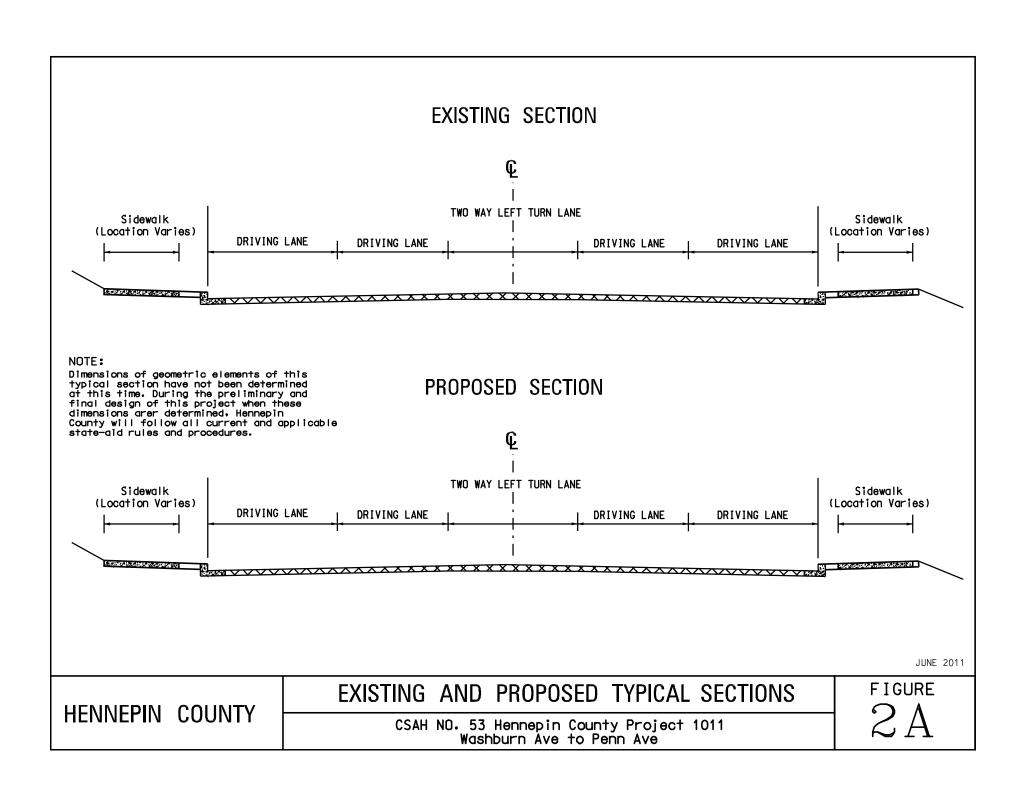
Located in the City of Richfield Hennepin County, Minnesota

Figure 1



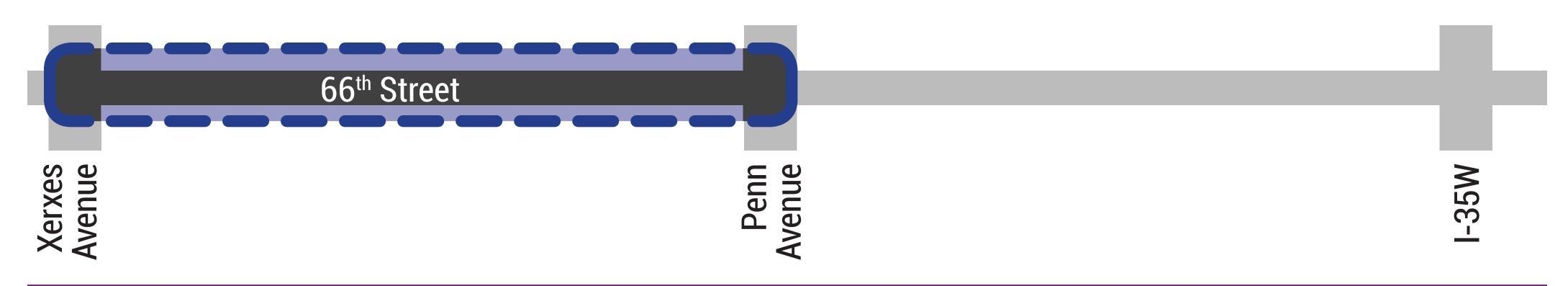


Printing Date: 7/25/2011
File: 053_1011_Location.mxd
Produced by Hennepin County Transportation Planning

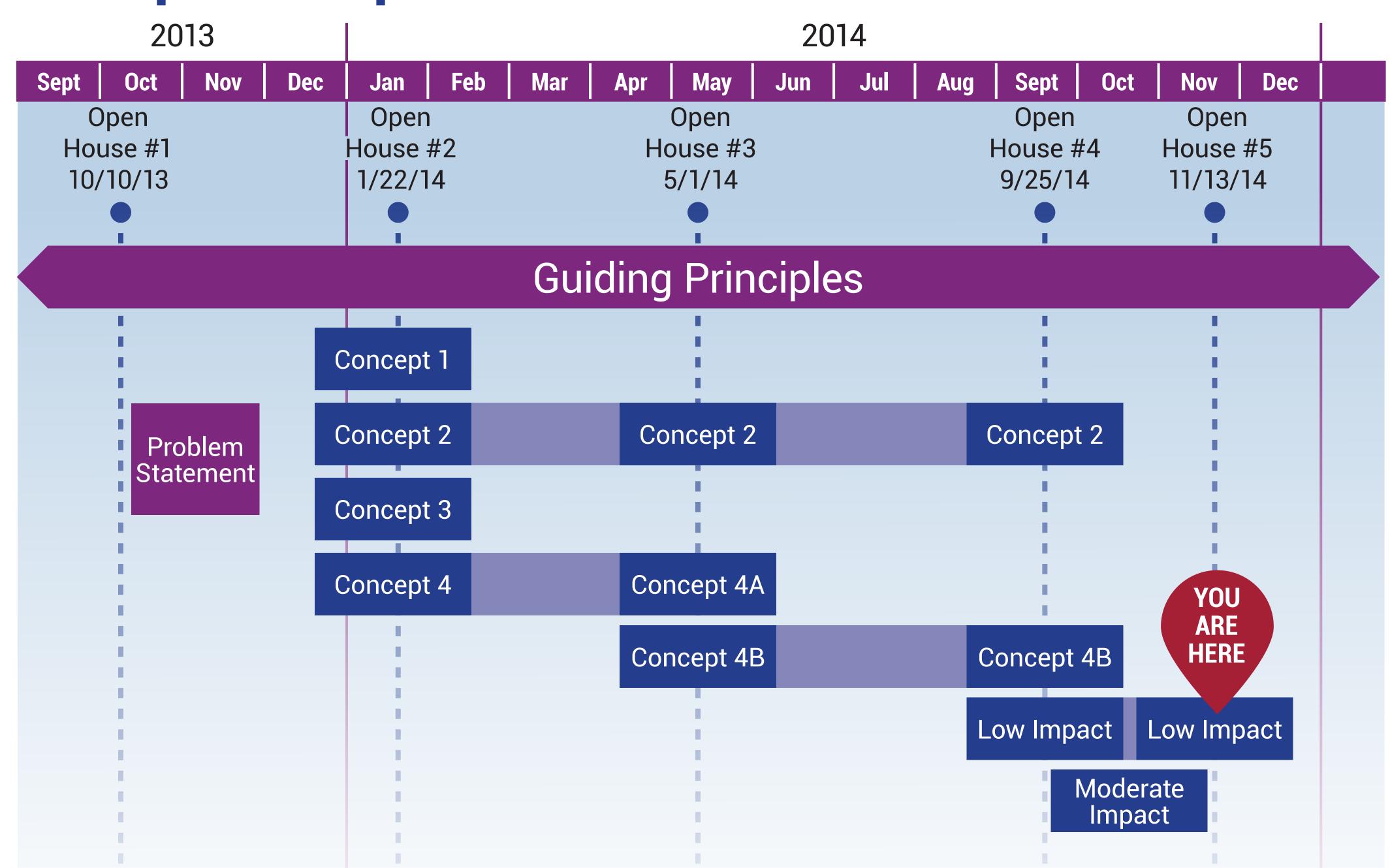


RECOMMENDED CONCEPT

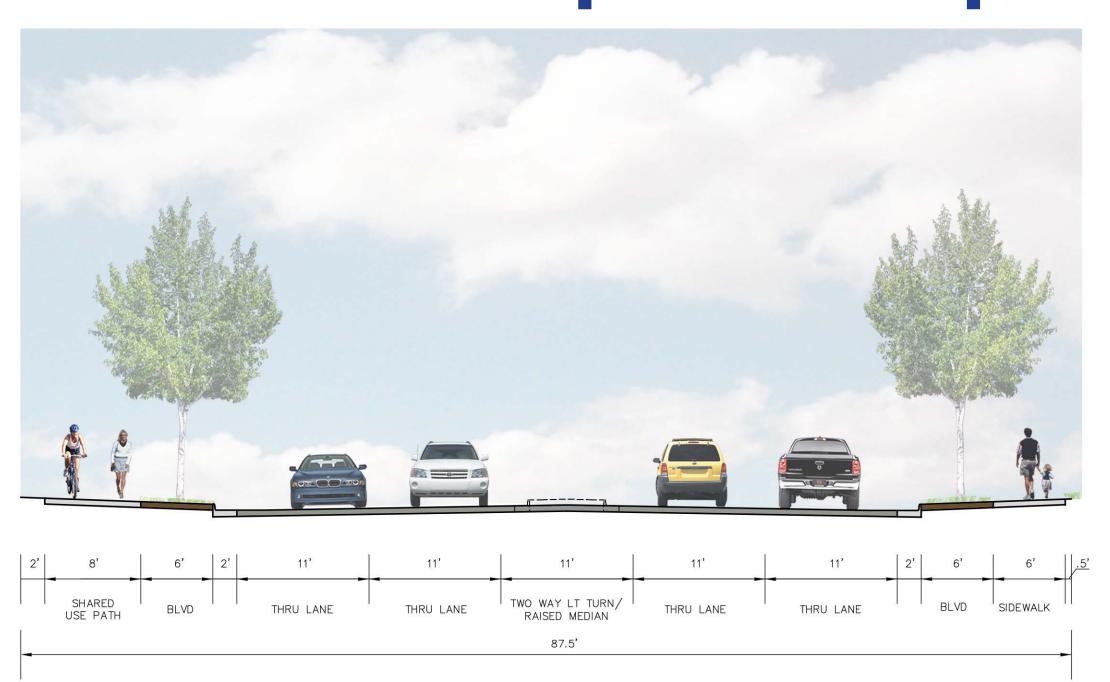
Xerxes Avenue to Penn Avenue



Concept Development Process



Recommended Concept-Low Impact



Project Goals Achieved

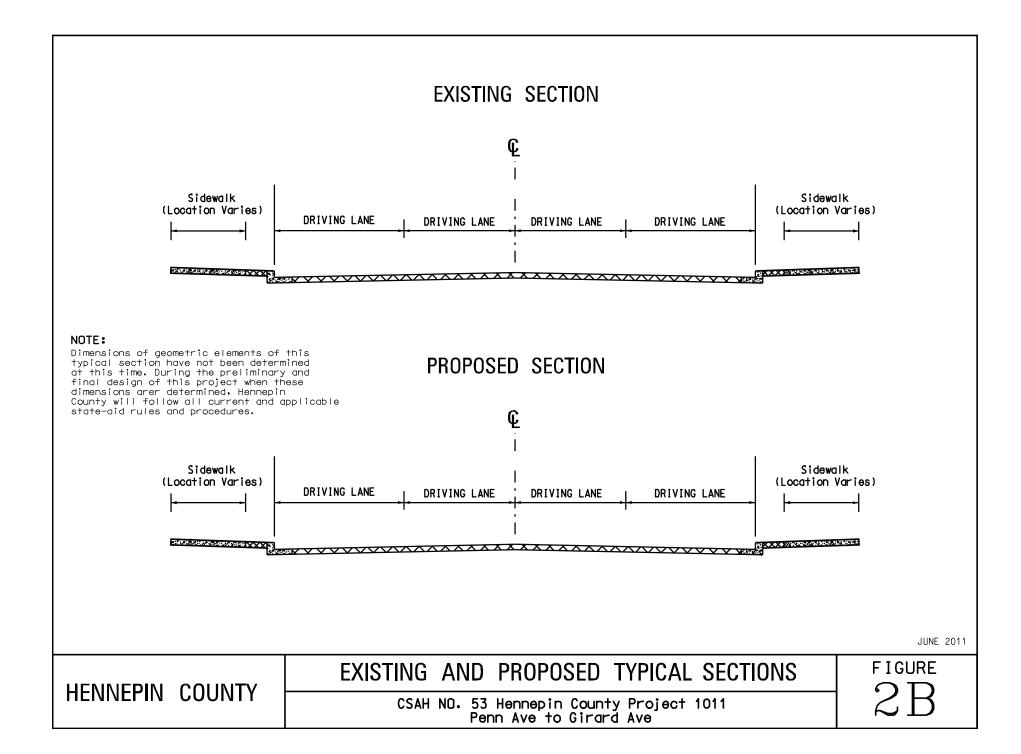
- ✓ Pedestrian
- ✓ Transit
- **☑** Recreational Bicyclist
- □ Commuter Bicyclist
- ✓ Vehicle Safety
- **☑** Environmental
- **☑** Maintenance

Design influenced by the following Guiding Principles:

- Multimodal Design
- Connectivity and Public Realm
- Design for People
- Sustainable Solutions
- Healthy and Active Lifestyles

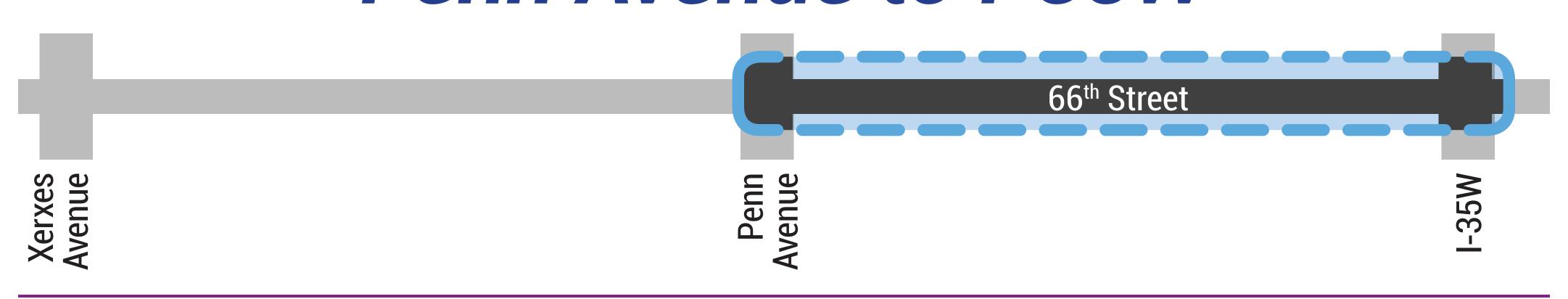




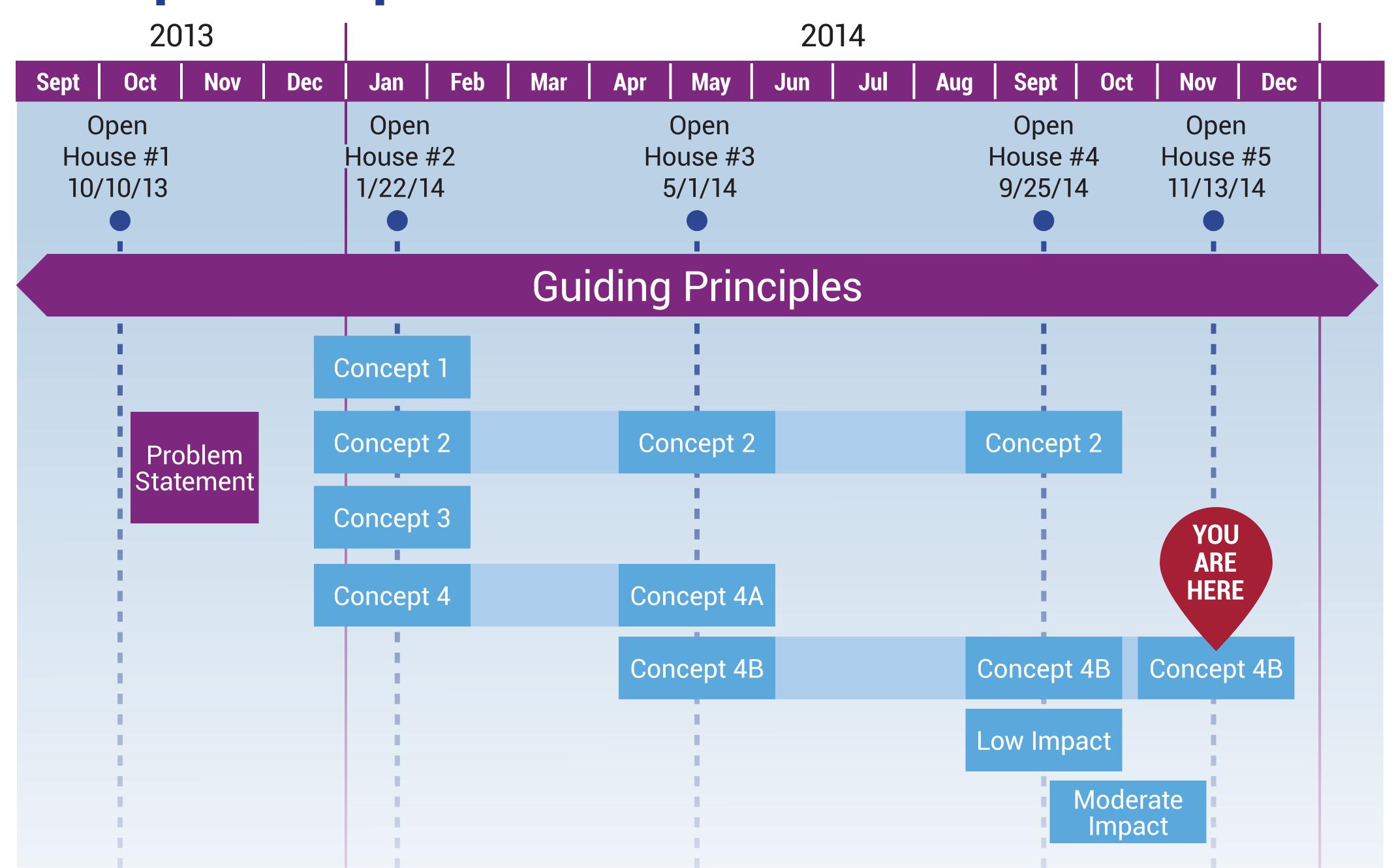


RECOMMENDED CONCEPT

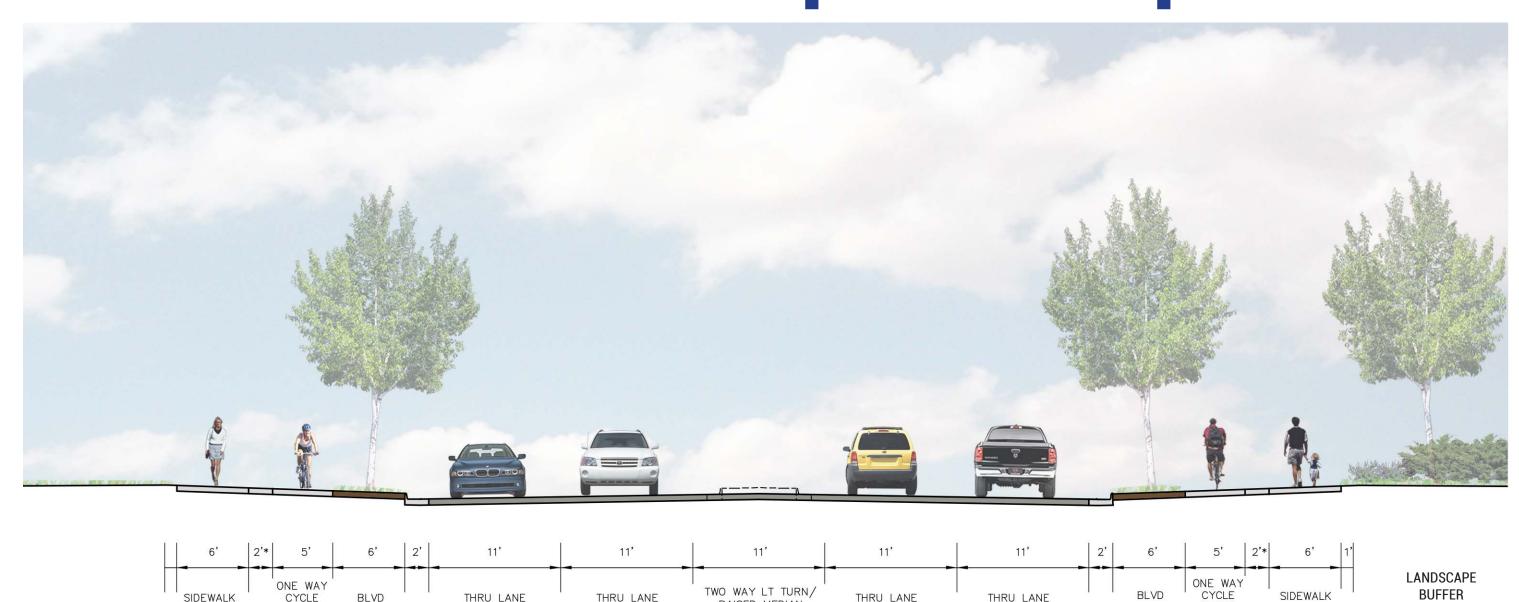
Penn Avenue to I-35W



Concept Development Process



Recommended Concept-Concept 4B



Project Goals Achieved

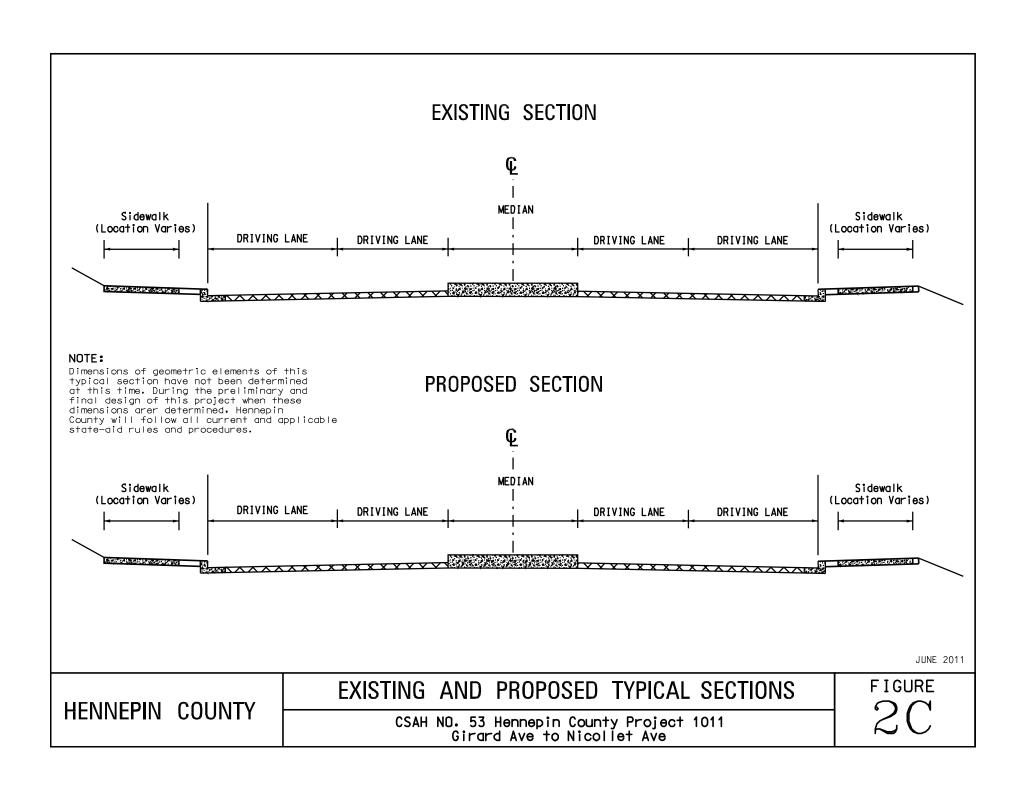
- ✓ Pedestrian
- **☑** Transit
- **☑** Recreational Bicyclist
- **☑** Commuter Bicyclist
- ✓ Vehicle Safety
- **☑** Environmental
- **☑** Maintenance

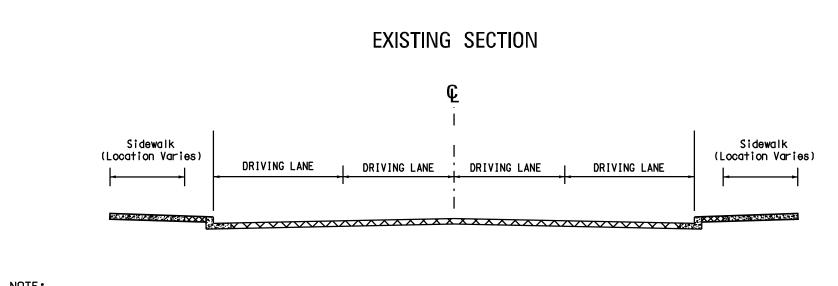
Design influenced by the following Guiding Principles:

- Multimodal Design
- Connectivity and Public Realm
- Design for People
- Sustainable Solutions
- Healthy and Active Lifestyles





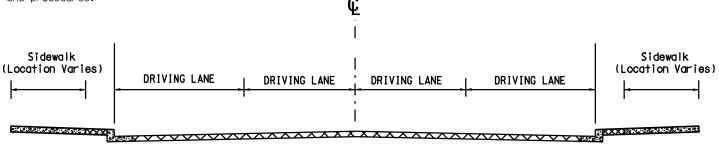




NOTE:

Dimensions of geometric elements of this typical section have not been determined at this time. During the preliminary and final design of this project when these dimensions arer determined. Hennepin County will follow all current and applicable state-aid rules and procedures.

PROPOSED SECTION



JUNE 2011

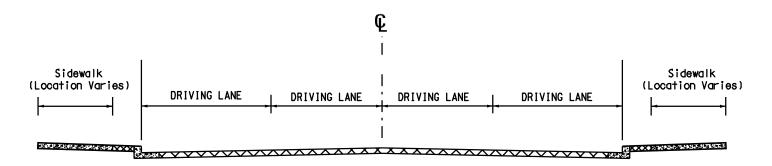
HENNEPIN COUNTY

EXISTING AND PROPOSED TYPICAL SECTIONS

CSAH NO. 53 Hennepin County Project 1011 Nicollet Ave to Portland Ave

FIGURE

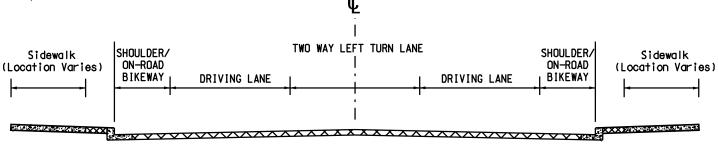




NOTE:

Dimensions of geometric elements of this typical section have not been determined at this time. During the preliminary and final design of this project when these dimensions arer determined. Hennepin County will follow all current and applicable state-aid rules and procedures.

PROPOSED SECTION



JUNE 2011

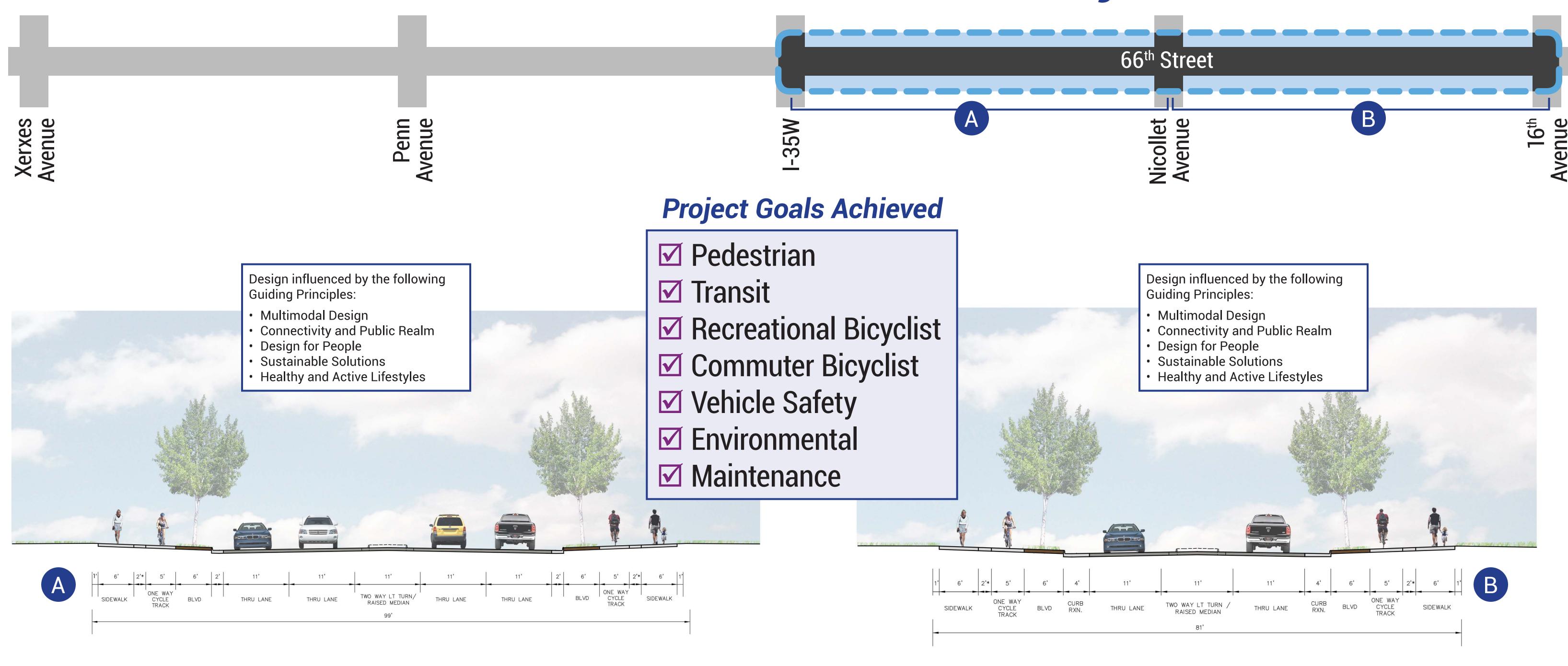
HENNEPIN COUNTY

EXISTING AND PROPOSED TYPICAL SECTIONS

CSAH NO. 53 Hennepin County Project 1011 Portland Ave to 16th Ave FIGURE 2F

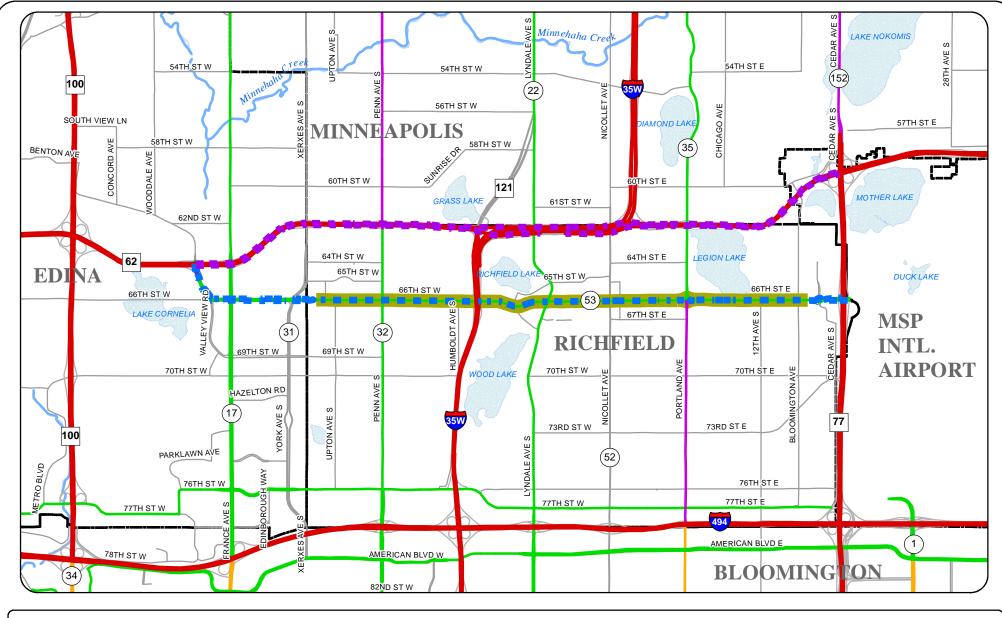
RECOMMENDED CONCEPT

Concept #4B - One-Way Cycle Tracks with 2 Sidewalks, Boulevard Between Vehicles and Cycle Track











Reliever Route CSAH 53 C.P. 1011

Located in the City of Richfield Hennepin County, Minnesota

Figure 3





Printing Date: 7/22/2011 File: 053_1011_Reliever_Route.mxd Produced by Hennepin County Transportation Planning

Transportation Advisory Board

of the Metropolitan Council of the Twin Cities

Process to evaluate scope change requests for regionally-selected projects

Adopted by the Transportation Advisory Board on March 16, 2011 ACTION TRANSMITTAL 2011-35

consistent with final project documentation that is sent to the FHWA.

Projects submitted for consideration through the regional solicitation are often just concepts or unrefined ideas. Project sponsors work on the preliminary and final design, environmental studies etc... after the TAB awards funds to the project. Sometimes during project development the project sponsor has to make significant design changes or finds that the construction cost was underestimated. When that happens, project sponsors may be required to request a scope change and TIP/STIP amendment because the scope and cost in the TIP/STIP has to be

Projects sponsors, Met Council and TAB staff, the TAC Funding & Programming Committee (F&PC) and the region would benefit from an adopted methodology to evaluate requested project scope changes. MN/DOT Metro State Aid has been very good at sorting out the significant scope changes that require action from the TAB. The FHWA has provided guidance on when a cost increase triggers a TIP/STIP amendment, and when a change in a project's design requires a scope change and TIP/STIP amendment (attached). The TAC and TAB want to be comfortable that the revised project scope of a regionally-selected project still provides about the same benefits as the original project scope and would have scored high enough to have been selected like the original project scope – to be fair to the other projects not selected. Below is a proposed outline of a process and guidelines for scope change requests.

- 1) Any construction elements added to the project scope must be eligible according to the solicitation criteria used to evaluate the original project submittal, unless the additional elements are already programmed in the STIP.
- 2) Additional federal funds will not be provided and federal funds cannot be swapped between projects of the same or different sponsor.
- 3) Met Council and TAB staff will provide data on the original project to the TAC F&PC, including cover page, project description, location map, layouts, sketches or schematics, and the original project cost estimate.
- 4) The project sponsor must provide data on the revised project scope to the TAC F&PC, including a complete project description, location map, project layout or sketches or schematics, checklist of work that still needs to be done and a revised project cost estimate.
- 5) The project sponsor must also recalculate the responses to certain key criteria based on the revised project scope and provide them to the TAC F&PC. Met Council and TAB staff may consult with the scoring group chair and individual project scorers if necessary to evaluate the recalculated responses and estimate the change in the original project score.
- 6) The TAC F&PC will base their recommendation on whether the estimated score of the revised project scope would have been high enough to have been awarded funds through the regional solicitation. A recommendation to approve the scope change and adopt a TIP amendment will go before the TAC, TAB Programming Committee and full TAB for adoption, then to the Metropolitan Council for concurrence. A recommendation to reject the scope change and TIP amendment will go before the TAC, TAB Programming Committee and full TAB for approval.