Draft Memorandum

SRF No. 11047.00

To: Andrew G. Gillett, Community Works Project Coordinator
Community Works | Hennepin County Public Works

From: Joni Giese, Principal
Stewart Crosby, Senior Associate
Emily Gross, Associate

Date: December 13, 2018

Subject: Bottineau Community Works Infrastructure Advanced Planning Study

Introduction

Since 2014, the Hennepin County Bottineau LRT Community Works Program has been collaborating with METRO Blue Line Extension stakeholders to maximize the quality of life benefits that can result from the implementation of this significant infrastructure investment. Extensive research and analysis has been performed, resulting in the development of valuable community-based visions and plans for future physical enhancements that will improve health outcomes, improve access to employment and resources, and support economic development and equity for residents along the METRO Blue Line Extension corridor. This study focused on bicycle/pedestrian infrastructure enhancements to improve biking/walking connections to/from the proposed Blue Line Extension Light Rail Transit (BLRT) stations. The study area extends from Golden Valley to Brooklyn Park, and includes eight proposed stations across four communities.

Project Purpose and Intent

With the recent award of the FTA grant, Hennepin County Community Works and corridor partners are now able to move the visions and plans developed to date one step closer to implementation. The intent of this project was to advance the planning and design of desired bicycle and pedestrian infrastructure enhancements that will facilitate safe, comfortable, and convenient access to and from the planned stations. This project reviewed and compiled a comprehensive inventory of proposed bicycle and pedestrian enhancements that have been brought forward in previous studies. This compiled list was reviewed with community stakeholders to ensure it is as comprehensive as possible. From there, 20 projects were selected to explore in more depth, resulting in the development of conceptual design options for each of the 20 projects. These options were evaluated, and 10 projects were selected for further refinement into 60 percent construction plans and associated opinions of probable construction costs.

Public Engagement

Public engagement was performed as part of a separate contract with Hennepin County and findings from those efforts will be documented in a separate report. The resulting public engagement findings informed the development of evaluation criteria used to select projects for conceptual and 60 percent design.

Bottineau Technical Infrastructure Committee

The Bottineau Technical Infrastructure Committee (BTIC) was assembled to provide guidance to the consultant team and to review draft work products. BTIC Members include:

Andrew Gillett – Hennepin County

Joan Vanhala – Hennepin County

Kerri Pearce Ruch – Hennepin County

Jordan Kocak – Hennepin County

Nathaniel Hood – Hennepin County

Brent Rusco – Hennepin County

Kimberly Berggren – City of Brooklyn Park

Jennifer Jordan – City of Brooklyn Park

Dan Olson – City of Crystal

John Sutter – City of Cristal

Rick Pearson – City of Robbinsdale

Marcia Glick – City of Robbinsdale

Jason Zimmerman – City of Golden Valley

Emily Goellner – City of Golden Valley

Adam Arvidson – Minneapolis Parks

Ann Rexine – Three Rivers Park District

Alicia Vap – Metro Transit

Michael Mechtenberg – Metro Transit

Michael Larson, Metropolitan Council'

Eric Wojchik, Metropolitan Council

Consultant Team:

SRF Consulting Group

Nelson\Nygaard

Community Design Group

Rani Engineering

Schedule

The consultant team met with the BTIC eight times between January and December 2018. The schedule below highlights the study process, along with deliverables and desired outcomes for each BTIC meeting.

Project Tasks	Year 2018											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Task 1: Project Management												
Work Plan Coordinated with Community Engagement Plan												
Community Engagement Support		(1)										
Project Team/Project Manager Coordination & Monthly Progress Updates												
Task 2: Review Completed Work												
Task 3: Station Area Circulation & Connectivity Assessment												
Task 4: Bicycle/Pedestrian Connections Implementation Plan												
Develop Project Selection Approach & Confirm 20 projects for Conceptual Design												
Prepare Conceptual Designs & Estimated Costs for 20 Projects												
Refine Project Prioritization Framework & Update Prioritization												
Bicycle & Pedestrian Design Plans (up to 10 projects)												
Task 5: Shared Mobility Feasibility												
Research Proposed Bus Operations Plans & National Best Practices												
Proposed mobility strategies, ownership/operations, & costs												
Technical Memorandum												
Stakeholder Engagement Integration												
BTIC Meeting #1 (February) - Present map of compiled ped/bike projects (existing, funded, and planned) to get feedback from BTIC members - Present draft evaluation criteria/metrics to get feedback from BTIC members		BTIC 1										
BTIC Meeting #2 (March) - Present shared mobility research findings (national best practices). Draft memo to be provided to BTIC in advance of meeting.			BTIC 2									
BTIC Meeting #3 (April) - Confirm/finalize the prioritization process (evaluation criteria/metrics) to be used to select the 20 projects for conceptual design. - Review the shared mobility draft/potential strategies for the BLRT stations.				BTIC 3								
BTIC Meeting #4 (May) - Confirm the 20 projects selected via the prioritization process. - Discuss approach for developing & prioritizing conceptual designs					BTIC 4							
BTIC Meeting #5 (July) - Present the conceptual designs for the 20 projects (up to 60 concepts) - Finalize the prioritization process (20 to 10) projects							BTIC 5					
BTIC Meeting #6 (August) - Confirm the 10 projects from conceptual design options selected for the design phase								BTIC 6				
BTIC Meeting #7 (October) - Review 30% design plans with BTIC for 10 projects - Review shared mobility memo										BTIC 7		
BTIC Meeting #8 (December) - Review 60% design plans with BTIC for 10 projects												BTIC 8

Compilation of Potential Projects

This study focused on the proposed BLRT stations in Brooklyn Park, Crystal, Robbinsdale, and Golden Valley (see list of stations below). The stations included within the City of Minneapolis boundaries were not included as part of this study.

- Oak Grove Station – City of Brooklyn Park
- 93rd Avenue Station – City of Brooklyn Park
- 85th Avenue Station – City of Brooklyn Park
- 63rd Avenue Station – City of Brooklyn Park
- Bass Lake Road Station - City of Crystal
- Robbinsdale Station - City of Robbinsdale
- Golden Valley Road Station – City of Golden Valley

Prior to compiling a list of previously identified bike/pedestrian projects, the bikeshed and walkshed was identified for each station. The bikeshed was developed for the Bottineau LRT/METRO Blue Line Extension Bicycle Study and was based on energy expenditure, which takes into account topography. In general, the bikeshed was identified to be approximately 4.4 miles on flat ground from the station. Note that this represents the travel distance to/from the station based on the roadway or planned bikeway network.

The walkshed was developed for this project and was identified to be approximately one mile. Similar to the bikeshed, the walkshed is distance-based. The walkshed includes trail and streets regardless of whether a sidewalk or trail is currently present. Unless the roadway was classified as an interstate or highway, which pedestrians were not assumed as a route option to access the station.

Previous Planning Efforts

A review of previous planning work was completed to identify existing and planned bike/pedestrian projects within the study area as well as key findings from the studies that may influence this project. The following plans were reviewed:

1. METRO Blue Line LRT Extension 90% Submittal Layouts
2. Bottineau LRT/METRO Blue Line Extension Bicycle Study
3. Hennepin County 2040 Bicycle Transportation Plan
4. City of Robbinsdale Pedestrian and Bicycle Plan
5. Bottineau Health Impact Assessment
6. Bottineau LRT Station Area Plans (Golden Valley, Robbinsdale, Crystal, and Brooklyn Park)
7. Bottineau Transitway Station Area Pre-Planning Study
8. Bottineau Land Use Planning Framework

Potential Projects

Based on the bikeshed and walkshed, an initial list of bike/pedestrian projects were identified and presented to the BTIC members. The BTIC reviewed the list to remove any projects that had been recently constructed as well as to add projects that were not included in the planning studies. The resulting list of projects includes 269 bike projects and 198 pedestrian projects. Shared-use trail projects were included as both a bike and a pedestrian project. These projects are mapped in Figure 1 and Figure 2, respectively.

Figure 1. Bicycle Network

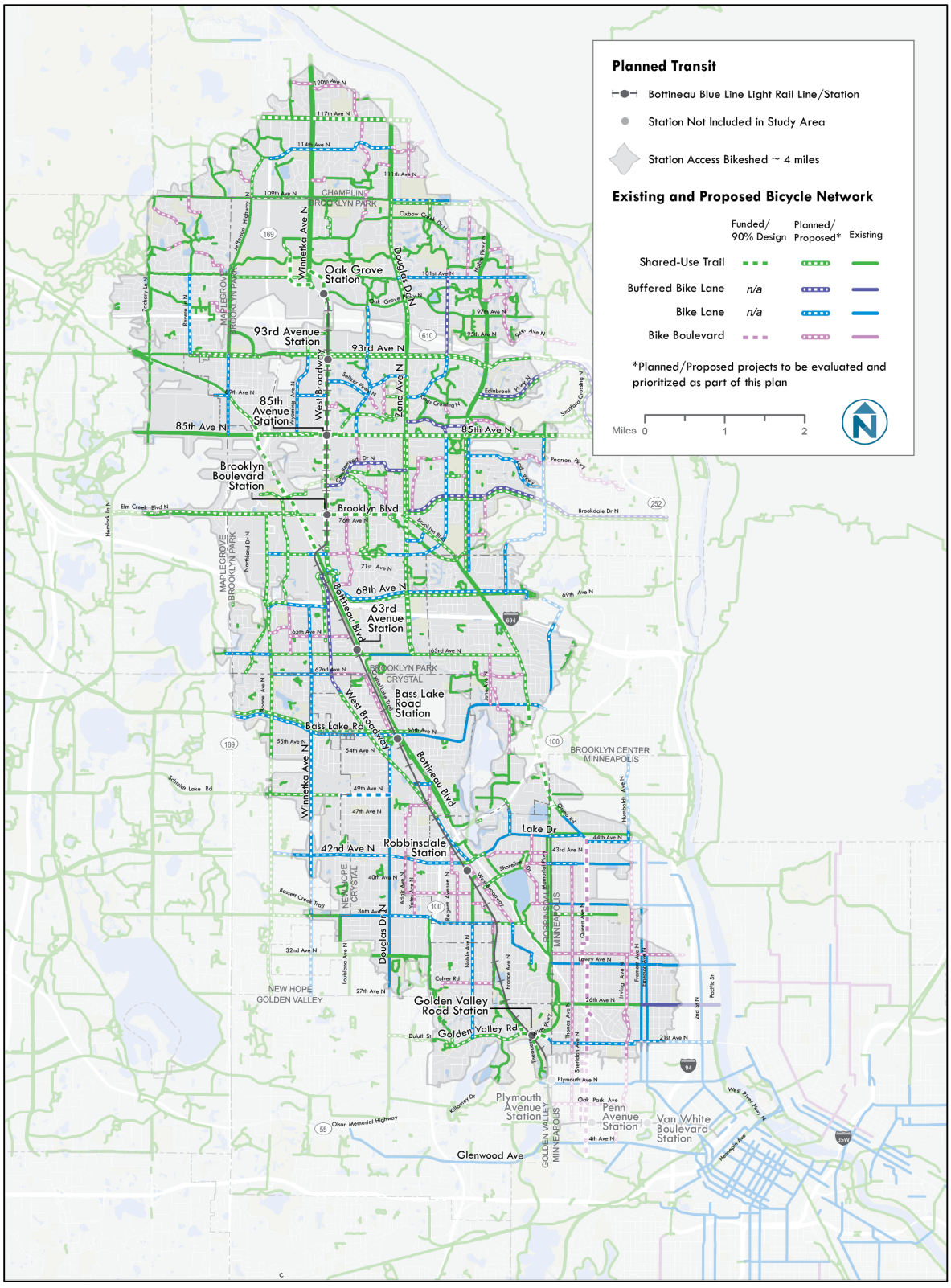
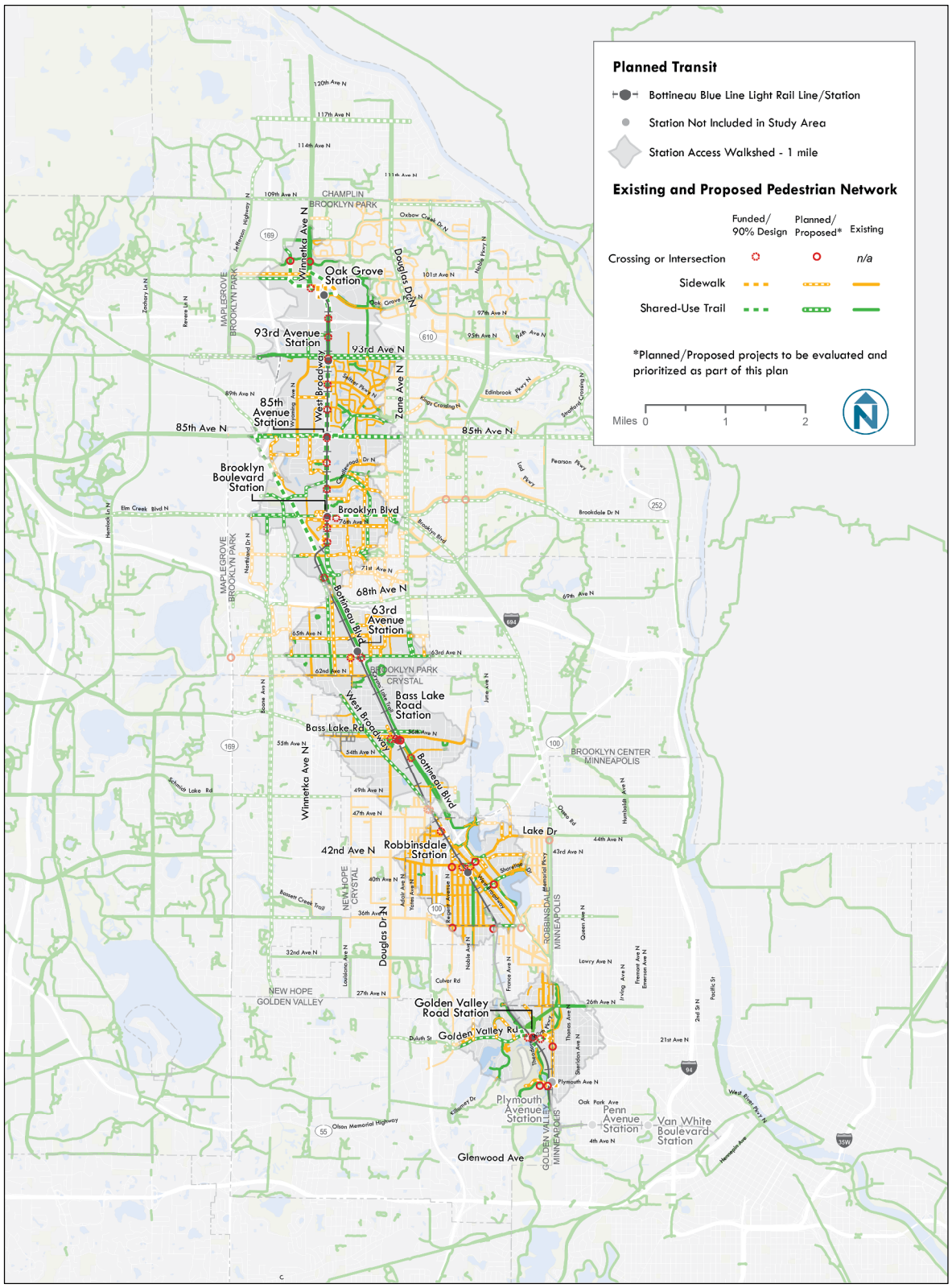


Figure 2. Pedestrian Network



Top 20 Projects

Prior to scoring the 269 bike and 198 pedestrian projects, an initial review of the projects was performed. Projects located within the bikeshed/walkshed but not within the city boundaries of Brooklyn Park, Crystal, Robbinsdale, or Golden Valley were removed, projects that overlapped were removed, and projects that could be combined into a single project were consolidated.

Screening to 20 Projects

The remaining bicycle and pedestrian projects were evaluated based on the Phase 1 screening criteria summarized in Table 1 and Table 2. The criteria was developed using the framework from the Bottineau LRT/METRO Blue Line Extension Bicycle Study and input from the BTIC members. The weight applied to each criterion was based on feedback from the Engagement Study and discussion with BTIC members.

Table 1. Bicycle Project Evaluation Criteria Phase 1

	Prioritization Criteria	Notes	Value	Weight
1	**Existing Level of Traffic Stress**	Simplified LTS to identify highest stress segments	Ranked by LTS from 1-4 (4 being the most stressful)	15%
2	Connects to regional trail network and/or regional bicycle transportation network	Direct connection to trail or bicycle transportation network	4 points for trail, 2 points for county bikeway	12.5%
3	**Concentration of employees and residents served**	Jobs (LEHD data points) and population (adjacent blocks)	Ranked in comparison by quartiles	15%
4	Project readiness (in a CIP)	Is this project on a CIP list?	Yes or No	10%
5	**Creates direct connection to an LRT station**	Connection to an LRT station or project in design	Yes or No	12.5%
6	Serves people in need	Populations of people of color, people with limited English proficiency, and people living in poverty	Ranked in comparison by quartiles	10%
7	**Concentrations of people likely to bike to transit**	Zero-car, age 19-35	Ranked in comparison by quartiles	10%
8	Within bike shed (proximity to station)	Percentage of the project within the bike shed	Ranked in comparison by quartiles	5%
9	**Concurrent planning efforts**	Listed as priority in another Plan	Yes or No	5%
10	Directly serves schools, libraries, business nodes and other destinations	Schools, libraries, businesses and destinations per mile	Ranked in comparison by quartiles	5%
				100%

Table 2. Pedestrian Project Evaluation Criteria Phase 1

	Prioritization Criteria	Notes	Value	Weight
1	**Existing Pedestrian Level of Traffic Stress**	Simplified LTS to identify highest stress segments	Ranked by LTS from 1-4 (4 being the most stressful)	15%
2	Connects to regional trail network	Direct connection to regional trail	4 points	12.5%
3	**Concentration of employees and residents served**	Jobs (LEHD data points) and population (adjacent blocks)	Ranked in comparison by quartiles	15%
4	Project readiness (in a CIP)	Is this project on a CIP list?	Yes or No	10%
5	**Creates direct connection to an LRT station**	Connection to an LRT station or project in design	Yes or No	12.5%
6	Serves people in need	Populations of people of color, people with limited English proficiency, and people living in poverty	Ranked in comparison by quartiles	10%
7	**Concentrations of people likely to walk to transit**	Young people, older adults, zero-car	Ranked in comparison by quartiles	10%
8	Within walk shed (proximity to station)	Percentage of the project within the walk shed	Ranked in comparison by quartiles	5%
9	**Concurrent planning efforts**	Listed as priority in another Plan	Yes or No	5%
10	Directly serves schools, libraries, business nodes and other destinations	Schools, libraries, businesses and destinations per mile	Ranked in comparison by quartiles	5%
				100%

While the bicycle and pedestrian projects were evaluated separately based on the criteria in Table 1 and Table 2, for projects included on both the bicycle and pedestrian project list, the higher score was used. Using the screening criteria, the top 20 projects were identified, which are mapped in Figure 3 and summarized in Table 3. The scores for all bicycle/pedestrian projects evaluated are included in Appendix A.

Figure 3. Top 20 Projects

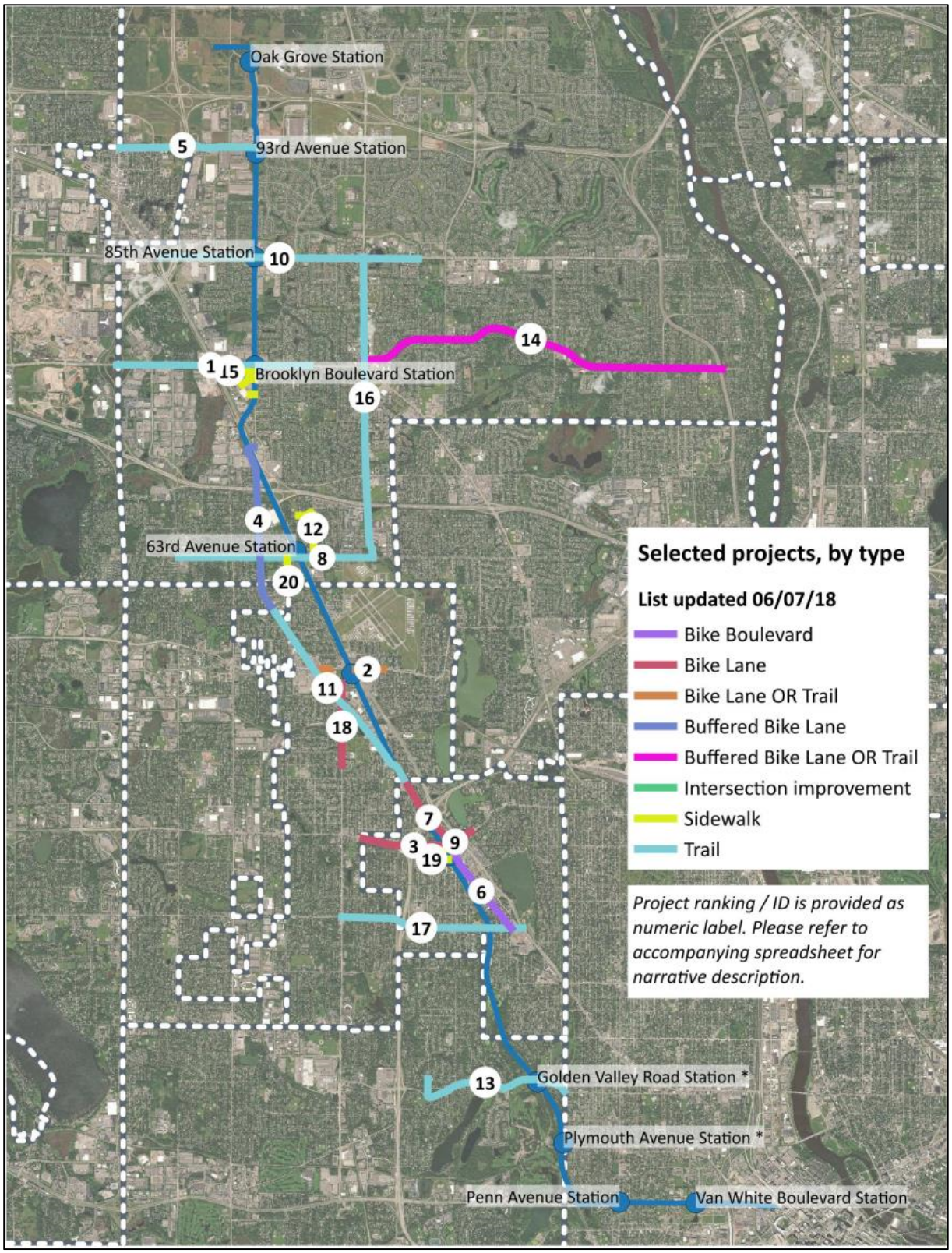


Table 3. Top 20 Project Description

Rank	Project	Project Limits	City
1	Brooklyn Boulevard	Highway 169 to Hampshire Avenue	Brooklyn Park
2	Bass Lake Road	Bottineau Blvd to the vicinity of Xenia & Yates Avenues (and Sherburne Avenue to the vicinity of West Broadway	Crystal
3	42nd Avenue	Adair Avenue to Lake Road	Robbinsdale
4	West Broadway Avenue	County Road 81 (Bottineau Boulevard) to 60th Avenue	Brooklyn Park
5	93rd Avenue	From the BLRT station going west to tie in to Osseo at Jefferson Highway/Central Avenue.	Brooklyn Park
6	Hubbard Avenue	42nd Avenue to 36th Avenue	Robbinsdale
7	West Broadway to 42nd Avenue	47th Avenue to 42nd Avenue	Robbinsdale
8	63rd Avenue	Boone Avenue to Zane Avenue	Brooklyn Park
9	Lake Drive and County Road 81	Intersection Improvement	Robbinsdale
10	85th Avenue	CR 81 to Regent Avenue	Brooklyn Park
11	West Broadway Avenue	60th Avenue to 47th Avenue	Crystal
12	Hampshire Avenue North	66th Avenue to 63rd Avenue on Hampshire Avenue and 66th Avenue from Hampshire Road to Lakeland Park	Brooklyn Park
13	Bassett Creek Trail	Golden Valley Road from Regent Avenue to Xerxes Avenue and on Regent Avenue from just south of Westbound to Golden Valley Road/Duluth Street	Golden Valley
14	Brookdale Drive	Zane Avenue to TH 252	Brooklyn Park
15	Starlite Center connections to Brooklyn Boulevard Stations	Improved pedestrian connections through parking lot to businesses west of West Broadway	Brooklyn Park
16	Zane Avenue	85th Avenue to 63rd Avenue	Brooklyn Park
17	36th Avenue	Douglas Drive to County Road 81	Robbinsdale
18	Sherburne Avenue to Douglas Drive	Douglas Drive from 55th Avenue to the Crystal Community Center near 48th Avenue	Crystal
19	Streets in station area without sidewalks	[Prior to concept development, the City of Robbinsdale removed this project from consideration]	Robbinsdale
20	Louisiana Avenue North	63rd Avenue to 62nd Avenue	Brooklyn Park

Concept Development for 20 Projects

Concept worksheets were developed for the top 20 projects. Each worksheet included the following:

- Project name/extents, municipality
- Map of the project extents
- Proposed bicycle/pedestrian enhancement (i.e. shared-use trail, buffered bike lane, bike lane, bike boulevard, sidewalk, intersection improvement)
- General description of the project (route, relation to other proposed projects)
- Project segments (projects were split into character segments based on corridor conditions, such as available right-of-way and roadway configuration)
- Project description (typical roadway section, number of through lanes, average daily traffic volume (ADT), speed limit, roadway width, available right-of-way, roadway jurisdiction, noted if the roadway was a state aid facility, presence of curb & gutter, presence of a median, presence of on-street parking, presence of a shoulder, presence of center left-turn lane (and width), presence of an existing sidewalk/sidepath, width of the boulevard or buffer from roadway, approximate length of segment, transit routes along/across the project, noted if the project interacts with the Blue Line Extension LRT 90% Submittal Layouts, and noted if the concept is consistent with the recommendations from the 90% Submittal Layouts)
- General design guidelines and standards used to develop concepts (assumptions provided by Hennepin County staff)

Concepts were developed for each of the segments in the top 20 projects. The segment concepts were illustrated via existing/proposed cross-sections. A description was provided for each segment cross-section that summarized the concept and noted potential impacts to right-of-way, on-street parking, stormwater infrastructure/gutter, transit, and signalized intersections; in addition, if a turn lane or thru lane was modified the worksheet noted if additional traffic analysis would be required. The segment concepts were grouped together to form project concepts. Up to three (3) project concepts were identified for each of the top 20 projects. The worksheets developed for each of the top 20 projects are included in Appendix B.

Top 10 Projects

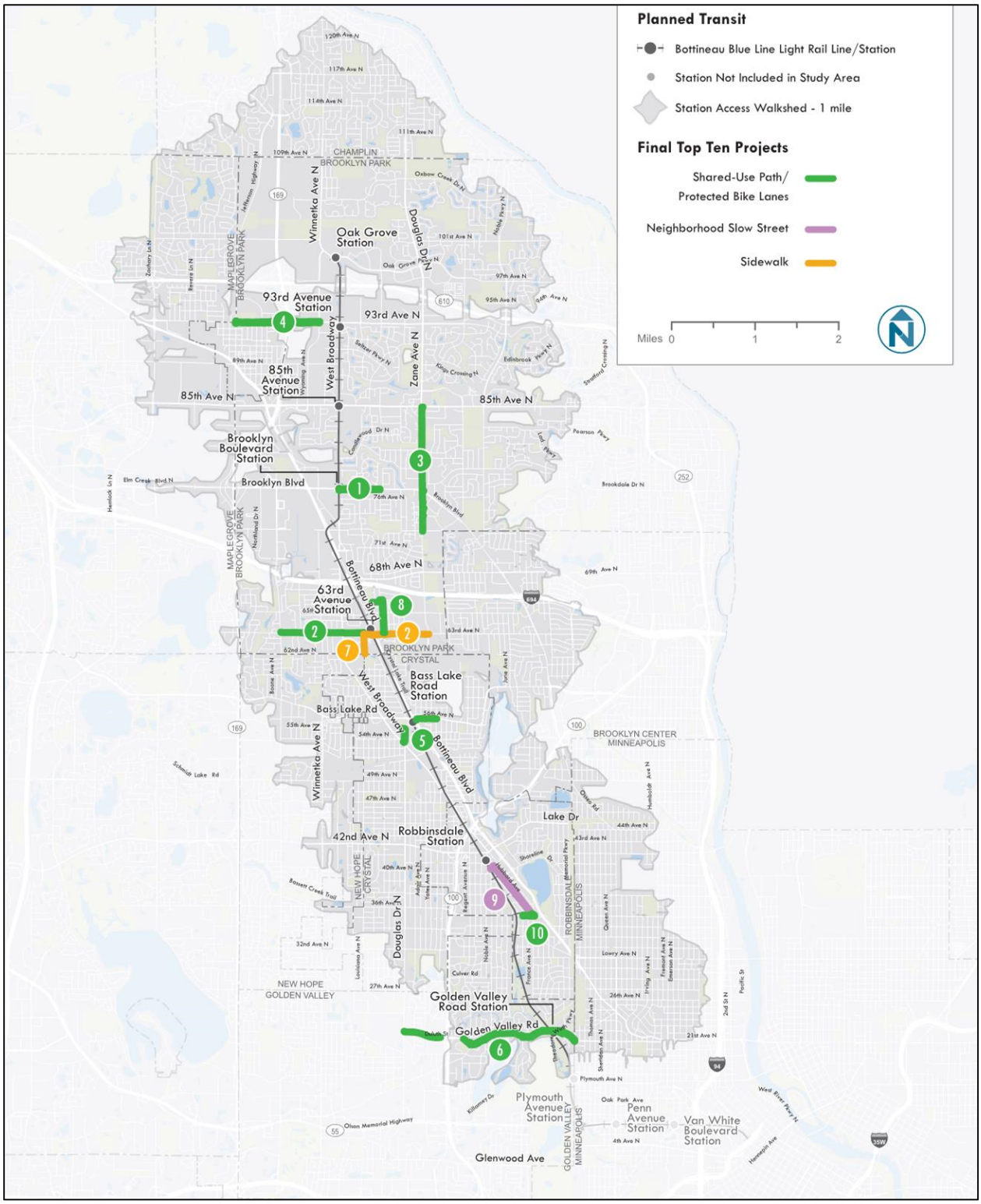
Screening to 10 Projects

The top 20 project concepts were evaluated based on the Phase 2 screening criteria summarized in Table 4. These criteria were established based on discussions with the BTIC members. Each project had up to three (3) project concepts that were evaluated, resulting in 50 project concepts that were scored. Using the screening criteria, the top 10 projects were identified, which are mapped in Figure 4. The scores for project concepts evaluated are included in Appendix C.

Table 4. Project Evaluation Criteria Phase 2

	Prioritization Criteria	Notes	Recommended Value	Weight
1	**Proposed Level of Traffic Stress with project**	Does the project get to LTS 1 on at least one side?	Yes=1, No=0	10%
2	**Proposed Level of Traffic Stress degrees of improvement**	Level of improvement from existing LTS to Proposed LTS	Difference between Existing and Proposed LTS, values from 0 to 3	10%
3	**Ease of implementation**	Cost estimate and available right-of-way	Rank by cost/scale of construction	15%
4	**Project Leveraging (was Project Readiness)**	Is the project primed for design or construction due to other funding opportunities or advanced planning work?	Grant applications in process = 1; Some funding secured = 1; An adjacent project is in design = 1 (cumulative score up to **3**)	15%
5	**Serves transit reliant populations**	Populations of people of color, people with limited English proficiency, and people living in poverty	Ranked in comparison 1 to 4	10%
6	**Fills a bike network gap**	Connections to low stress facilities	Makes a connection to 1 low stress facility = 1; Makes a connection to 2 low stress facilities = 2; Makes a connection to 3 or more low stress facilities = 3; no connection = 0	10%
7	**Projects proportional to number of stations**	Each city will be allocated the highest scoring projects in proportion to the number of sites in the city.	n/a	N/A
8	**Concept Readiness**	Is there a reason that this concept could not be ready for design such as timing, the need for a traffic study, complexity, or extensive interagency coordination?	No traffic study needed = 1, Intersection studies needed= 0.5, Corridor study needed (road diet and ADT> 13,000) = 0 Simple or established agency coordination expected and no parking impacts = 1; Parking impacts on one side = 0.5; Complex agency coordination and/or parking impacts both sides = 0 No additional ROW needed = 1; ROW impacts of 1' or less per side = 0.5; ROW impacts greater than 1' per side = 0 (cumulative score up to 3)	30%
				100%

Figure 4. Top 10 Projects



The selection process was two-tiered; after projects were scored Criteria #7 was applied to ensure that each city was allocated projects in proportion to the number of stations in the city. It should also be noted that based on discussions with City staff, additional adjustments were applied based on project feasibility. As a result, the StarLite Shopping Center project in Brooklyn Park and the West Broadway project in Robbinsdale were removed from consideration for detailed design and the next highest scoring project in each city was selected.

Table 5. Top 10 Project Description

Rank	Project	Project Limits	City
1	Brooklyn Boulevard	Hampshire Avenue to ½ block east of West Broadway Avenue	Brooklyn Park
2	Bass Lake Road/ Douglas Drive	Bass Lake Road from Yates Avenue to Bottineau Blvd and Douglas Drive from West Broadway to 55th Avenue	Crystal
5	93rd Avenue	North Oak Drive to Jefferson Highway	Brooklyn Park
6	Hubbard Avenue	36th Avenue to 41st Avenue and west along 41st Avenue for ½ block	Robbinsdale
8	63rd Avenue	Zane Avenue to Forest Avenue and West Broadway to Boone Avenue	Brooklyn Park
12	Hampshire Avenue North	Hampshire Avenue from 63rd Avenue to 66th Avenue and 66th Avenue from Hampshire Avenue to Lakeland Park	Brooklyn Park
13	Bassett Creek Trail	Golden Valley Road from Xerxes Avenue to Duluth Street and Duluth Street from Golden Valley Road to Douglas Drive	Golden Valley
16	Zane Avenue	73rd Avenue to 85th Avenue	Brooklyn Park
17	36th Avenue	France Avenue to Halifax Avenue	Robbinsdale
20	Louisiana Avenue North	62nd Avenue to 63rd Avenue	Brooklyn Park

Design Plans (30 Percent and 60Percent) for 10 Projects

The intent for developing the 60 percent plans was to assist corridor communities in advancing these projects towards implementation. The level of design provided helped identify potential implementation challenges that needed to be resolved in order to construct these facilities. A preliminary opinion of estimated construction cost was prepared for each project to inform corridor communities of expected funding needed to implement the projects as currently designed. The corridor communities could use this information in a variety of ways, such as soliciting potential funding sources, performing community engagement to solicit input and feedback on the concepts, or to initiate discussions with key project stakeholders.

Initial layouts at a 30 percent engineering level were created for the final 10 projects based on aerial photography overlaid with Hennepin County right-of-way data. The layouts were used to convey project extents, along with conceptual pedestrian and bicycle facility alignments and sizing. These were shared with the BTIC for review and comment.

Concurrent with the development of the 30 percent layouts, topographic surveys were being performed on the 10 project sites. Survey data was collected for all utility covers and rim elevations. Data on back of curb locations, road centerlines, sidewalks, fences, etc. were collected on approximately 50-foot cross-section intervals.

Based on the topographic survey, LIDAR data, and files received from the corridor communities, design plans at the 60 percent engineering level were developed. The plans included:

- Title sheet
- General layout
- Special signage – wayfinding and furnishing locations and details
- Typical sections
- Existing topography, in-place utilities and removals
- Construction plan and profiles
- Cross sections

The 60 percent plans are considered preliminary and have been developed as a recommendation that will be considered with other information and options at the time of final design.

Project Issues Identified

Design issues identified over the course of developing the 60 percent plans are noted on the plan sheets as a convenient way of linking outstanding or substantive issues with current design efforts. Table 6 summarizes some of the primary issues identified to date and shared at the final BTIC meeting.

Table 6. 60 Percent Design Primary Issues Summary

Project	Outstanding Issue	City
Brooklyn Boulevard	Trail location options: a) stay within right-of-way with no planting buffer or b) provide planting buffer, but extend outside of current right-of-way	Brooklyn Park
93rd Avenue	Requires installation of a culvert and associated wetland impacts	Brooklyn Park
Hubbard Avenue	Trail connection to 36th Avenue will impact existing gateway plaza and vegetation. City will need to decide how to reconfigure plaza space and how best to incorporate trail into new design	Robbinsdale
63rd Avenue	Numerous utility impacts along corridor	Brooklyn Park
Bassett Creek Trail	Impacts to existing retaining walls. Extension of creek culvert needed.	Golden Valley
Zane Avenue	Impacts to parking lots north of Brooklyn Boulevard. Analyze traffic to determine feasibility of eliminating free right turn lanes at Brooklyn Boulevard and 85th Avenue	Brooklyn Park
36th Avenue	Impacts to townhouse steps	Robbinsdale
Louisiana Avenue North	Sidewalk location options for southern portion of project: a) stay within right-of-way with no planting buffer or b) provide planting buffer, but extend outside of current right-of-way	Brooklyn Park

Appendix A
Phase 1 Scoring

Phase 1 Scoring (Top 20 Selection Process)

ID	Location	Municipali	Type	Rank	Score
B304	Brooklyn Blvd	Brooklyn Park	SUP	1	3.85
B340	Bass Lake Rd	Crystal	Bike Lane OR SUP	2	3.75
B97	42nd Ave (combined with B353)	Robbinsdale	Bike Lane	3	3.50
B72	West Broadway Ave (combo with B157)	Brooklyn Park	Buffered Bike Lane	4	3.35
B164	93rd Ave	Brooklyn Park	SUP	5	3.15
B349	Shoreline Dr	Robbinsdale	SUP	6	3.10
B64	Hubbard Ave	Robbinsdale	Bike Boulevard	6	3.10
B342	West Broadway to 42nd Ave	Robbinsdale	Bike Lane	8	3.00
B75	63rd Ave	Brooklyn Park	SUP	9	2.95
X255	Lake Drive and County Road 81	Robbinsdale	Intersection Improvement	10	2.95
B70	85th Ave	Brooklyn Park	SUP	11	2.90
B327	West Broadway Ave	Crystal	SUP	12	2.85
P172	Hampshire Avenue North	Brooklyn Park	Sidewalk	12	2.85
B300	Bassett Creek Trail	Golden Valley	SUP	14	2.70
B313	Brookdale Dr	Brooklyn Park	Buffered Bike Lane OR SUP	14	2.70
P47	Starlite Center connections to Brooklyn Blvd Stations	Brooklyn Park	Sidewalk	16	2.70
P11	Xeres Ave N from 26th Ave N to Plymouth Ave	Golden Valley	Sidewalk	17	2.65
B172	Regent Ave (combo with 174)	Brooklyn Park	Bike Lane	18	2.60
B273	74th Ave to Unity Ave	Brooklyn Park	Bike Lane	19	2.55
B130	Zane Ave (combo with 149)	Brooklyn Park	SUP	20	2.50
B311	68th Ave	Brooklyn Park	Bike Lane OR SUP	20	2.50
P164	73rd Avenue North	Brooklyn Park	Sidewalk	20	2.50
X262	Regent Ave and 42nd Ave	Robbinsdale	Intersection Improvement	23	2.50
B292	36th Ave (combo with 329)	Robbinsdale	SUP	24	2.45
B330	Sherburne Ave to Douglas Dr	Crystal	Bike Lane	24	2.45
P26	Streets in station area without sidewalks - Railroad from 41st to Perry	Robbinsdale	Sidewalk	24	2.45
P27	Streets in station area without sidewalks - 41st from Quail to Railroad	Robbinsdale	Sidewalk	24	2.45
P28	Streets in station area without sidewalks - Perry from 41st to Railroad	Robbinsdale	Sidewalk	24	2.45
P38	Streets in station area without sidewalks - Lakeview from 41st to Twin Oak Dr	Robbinsdale	Sidewalk	24	2.45
B150	Candlewood Dr	Brooklyn Park	Buffered Bike Lane	30	2.45
B156	73rd Ave to Winnetka Ave	Brooklyn Park	SUP	31	2.40
P86	West Broadway	Brooklyn Park	Sidewalk	31	2.40
B171	Edinbrook Ter	Brooklyn Park	Buffered Bike Lane	33	2.40
P103	65th Avenue North	Brooklyn Park	Sidewalk	33	2.40
P214	65th Avenue North	Brooklyn Park	Sidewalk	33	2.40
P76	Hampshire Avenue North	Brooklyn Park	Sidewalk	33	2.40
P77	76th Avenue North	Brooklyn Park	Sidewalk	33	2.40
B233	73rd Ave	Brooklyn Park	Bike Lane	38	2.35
B266	Shingle Creek Dr South	Brooklyn Park	SUP	38	2.35
B351	Winnetka Ave connection to W Broadway	Brooklyn Park	SUP	38	2.35
P125	West Broadway	Brooklyn Park	Sidewalk	38	2.35
P157	Hampshire Avenue North	Brooklyn Park	Sidewalk	38	2.35
P25	Streets in station area without sidewalks - Regent, 42-1/2, Railroad	Robbinsdale	Sidewalk	38	2.35
X268	Plymouth and Theodore Wirth	Golden Valley	Intersection Improvement	38	2.35
B153	Hampshire Ave to Douglas Dr	Brooklyn Park	SUP	45	2.35
P235	West Broadway	Robbinsdale	Sidewalk	46	2.30
P39	Streets in station area without sidewalks - 43rd from Lake Road to Indiana	Robbinsdale	Sidewalk	46	2.30
B219	73rd Ave	Brooklyn Park	Bike Lane	48	2.30
B82	West Broadway	Brooklyn Park	SUP	48	2.30
P64	73rd Avenue North	Brooklyn Park	Sidewalk	48	2.30
B136	Yates Ave	Brooklyn Park	Bike Boulevard	51	2.25
B348	Vera Cruz Ave	Crystal	Bike Boulevard	51	2.25
X256	Shoreline Drive and County Road 81	Robbinsdale	Intersection Improvement	53	2.25

Phase 1 Scoring (Top 20 Selection Process)

ID	Location	Municipali	Type	Rank	Score
B63	June Ave	Robbinsdale	Bike Boulevard	54	2.20
P153	Hampshire Avenue North	Brooklyn Park	Sidewalk	54	2.20
P227	43rd Avenue North	Robbinsdale	Sidewalk	54	2.20
B126	63rd Ave	Brooklyn Park	SUP	57	2.20
B344	Kentucky Ave	Brooklyn Park	Bike Boulevard	57	2.20
P82	73rd Avenue North	Brooklyn Park	Sidewalk	57	2.20
B354	Xylon Ave	Brooklyn Park	SUP	60	2.15
B128	Zane Ave to Douglas Dr east side trail	Brooklyn Park	SUP	61	2.15
B169	Douglas Dr to Regent Pkwy	Brooklyn Park	SUP	61	2.15
B218	73rd Ave	Brooklyn Park	Bike Boulevard	61	2.15
B309	Noble Ave	Brooklyn Park	Bike Lane OR SUP	61	2.15
B315	Edinbrook Pkwy	Brooklyn Park	Buffered Bike Lane OR SUP	65	2.15
B261	Hampshire Ave	Brooklyn Park	Bike Lane	66	2.10
B65	38th Ave / Abbot Ave to Victory Memorial Dr	Robbinsdale	Bike Boulevard	66	2.10
P159	78th Avenue North	Brooklyn Park	Sidewalk	68	2.10
B230	East of Boone Ave Trail	Brooklyn Park	SUP	69	2.05
B293	38th Ave to Lee Ave	Robbinsdale	Bike Boulevard	69	2.05
B103	France Ave	Robbinsdale	Bike Lane	71	2.05
B186	Hamilton Park	Brooklyn Park	SUP	71	2.05
P10	26th Ave N from Kewanee Way to Vincent Ave N	Golden Valley	Sidewalk	73	2.00
P147	Oak Grove Parkway North	Brooklyn Park	Sidewalk	73	2.00
B141	Noble Parkway	Brooklyn Park	SUP	75	2.00
B335	Elmhurst Ave	Crystal	Bike Boulevard	75	2.00
B336	42nd Ave	Crystal	Bike Lane	75	2.00
B345	Corvallis Ave	Crystal	Bike Lane	75	2.00
B346	40th Ave to Fairview Avew	Crystal	Bike Boulevard	75	2.00
P4	Elmhurst Avenue	Crystal	Sidewalk	75	2.00
B152	Georgia Ave	Brooklyn Park	SUP	81	2.00
B275	42nd Ave	Robbinsdale	Bike Lane	82	1.95
B60	Quail Ave to Regent Ave	Robbinsdale	Bike Boulevard	82	1.95
B231	Bass Creek Park Trail	Brooklyn Park	SUP	84	1.90
B306	Boone Ave	Brooklyn Park	SUP	84	1.90
B220	65th Ave	Brooklyn Park	Bike Boulevard	86	1.90
B222	Xerxes Ave to 74th Ave	Brooklyn Park	Bike Lane	86	1.90
B66	43rd Ave	Robbinsdale	Bike Boulevard	86	1.90
B151	West of Shingle Creek Dr	Brooklyn Park	SUP	89	1.90
P184	Georgia Avenue North	Brooklyn Park	Sidewalk	89	1.90
B154	Brooklyn Blvd	Brooklyn Park	SUP	91	1.85
B215	Setzler Pkwy	Brooklyn Park	Bike Lane	91	1.85
B343	West Broadway to 36th Ave	Robbinsdale	Bike Lane	91	1.85
B189	Douglas Dr	Brooklyn Park	Bike Boulevard	94	1.85
P17	Plymouth/Theodore Wirth Pkwy from Washburne Ave to Park future welcome center/ped bridge	Golden Valley	Sidewalk	94	1.85
P188	79th Avenue North	Brooklyn Park	Sidewalk	94	1.85
P73	Douglas Drive North	Brooklyn Park	Sidewalk	94	1.85
X20	Intersection of Xerces Ave and Golden Valley Rd	Golden Valley	Intersection Improvement	94	1.85
P144	101st Avenue North	Brooklyn Park	Sidewalk	99	1.80
B250	Duluth St	Golden Valley	SUP	100	1.80
B257	109th Ave	Brooklyn Park	SUP	100	1.80
B80	Jefferson Highway	Brooklyn Park	Bike Lane	100	1.80
B188	93rd Ave to Pearson Pkwy	Brooklyn Park	Bike Boulevard	103	1.80
B191	83rd Ave to Lad Pkwy	Brooklyn Park	Bike Lane	103	1.80
B320	Regent Ave to Noble Ave	Brooklyn Park	SUP	103	1.80
B62	39th Ave	Robbinsdale	Bike Boulevard	103	1.80
B168	North of Tessman Ter	Brooklyn Park	SUP	107	1.80
P80	71st Avenue North	Brooklyn Park	Sidewalk	107	1.80
B179	Edinbrook Ter	Brooklyn Park	Bike Boulevard	109	1.75

Phase 1 Scoring (Top 20 Selection Process)

ID	Location	Municipali	Type	Rank	Score
X18	Crossing of Bassett Creek to access trail	Golden Valley	Intersection Improvement	109	1.75
B295	Maplebrook Ter	Brooklyn Park	Bike Boulevard	111	1.75
B92	Abbot Ave	Robbinsdale	Bike Lane	111	1.75
P158	Idaho Circle North	Brooklyn Park	Sidewalk	111	1.75
P91	Kentucky Avenue North	Brooklyn Park	Sidewalk	111	1.75
X266	Grade seperation of Rush Creek Trail under Winnetka Ave	Brooklyn Park	Intersection Improvement	115	1.70
B328	Noble Ave	Crystal	Bike Lane	116	1.70
P12	Manor Dr	Golden Valley	Sidewalk	116	1.70
P152	Shingle Creek Drive North	Brooklyn Park	Sidewalk	116	1.70
P56	Golden Valley Road	Golden Valley	Sidewalk	116	1.70
B184	Northeast of College Pkwy	Brooklyn Park	SUP	120	1.70
B190	Shingle Creek Dr	Brooklyn Park	Bike Boulevard	120	1.70
B59	Regent Ave	Robbinsdale	Bike Boulevard	120	1.70
P83	Florida Avenue North	Brooklyn Park	Sidewalk	120	1.70
P88	65th Avenue North	Brooklyn Park	Sidewalk	120	1.70
P89	Welcome Avenue North	Brooklyn Park	Sidewalk	120	1.70
P182	Florida Avenue North	Brooklyn Park	Sidewalk	126	1.70
P187	Idaho Avenue North	Brooklyn Park	Sidewalk	126	1.70
B216	89th Ave	Brooklyn Park	Bike Lane	128	1.65
B234	73rd Ave	Brooklyn Park	Bike Lane	128	1.65
B90	Yates Ave	Robbinsdale	Bike Boulevard	128	1.65
P176	89th Avenue North	Brooklyn Park	Sidewalk	128	1.65
P213	Winnetka Avenue North	Brooklyn Park	Sidewalk	128	1.65
X261	36th Ave and June Ave	Robbinsdale	Intersection Improvement	128	1.65
P154	Shingle Creek Drive North	Brooklyn Park	Sidewalk	134	1.65
P173	Idaho Avenue North	Brooklyn Park	Sidewalk	134	1.65
P179	Edgewood Avenue North	Brooklyn Park	Sidewalk	134	1.65
P180	65th Avenue North	Brooklyn Park	Sidewalk	134	1.65
P185	Louisiana Avenue North	Brooklyn Park	Sidewalk	134	1.65
P48	Park Square connections to Brooklyn Blvd Stations	Brooklyn Park	Sidewalk	134	1.65
B232	Bass Creek Park Trail	Brooklyn Park	SUP	140	1.65
B119	Modern Rd	Brooklyn Park	Bike Lane	141	1.60
B176	Tessman Pkwy to Neddersen Pkwy	Brooklyn Park	Bike Lane	141	1.60
B178	Regent Pkwy	Brooklyn Park	Bike Lane	141	1.60
B78	Winnetka Ave	Brooklyn Park	Bike Lane	141	1.60
B89	39th Ave	Robbinsdale	Bike Boulevard	141	1.60
B94	42nd Ave	Robbinsdale	Bike Boulevard	141	1.60
B170	East of Douglas Dr	Brooklyn Park	SUP	147	1.60
B262	83rd Ave	Brooklyn Park	Bike Boulevard	147	1.60
P160	Sumter Avenue North	Brooklyn Park	Sidewalk	149	1.55
P178	College Park Drive North	Brooklyn Park	Sidewalk	149	1.55
X265	Xylon Ave and Rush Creek Trail	Brooklyn Park	Intersection Improvement	149	1.55
B260	Edinbrook Ter	Brooklyn Park	Buffered Bike Lane	152	1.55
B334	49th Ave	Crystal	Bike Boulevard	152	1.55
B263	81st Ave	Brooklyn Park	Bike Boulevard	154	1.55
B207	Noble Ave	Brooklyn Park	Bike Boulevard	155	1.50
B185	Hampshire Ct	Brooklyn Park	Bike Boulevard	156	1.50
B121	Xylon Ave	Brooklyn Park	Bike Boulevard	157	1.45
B177	Regent Ave	Brooklyn Park	Buffered Bike Lane	157	1.45
B213	99th Ave	Brooklyn Park	Bike Boulevard	157	1.45
B291	Adair Ave	Robbinsdale	Bike Boulevard	157	1.45
P94	Xylon Avenue North	Brooklyn Park	Sidewalk	157	1.45
B175	Hampshire Ave	Brooklyn Park	Bike Lane	162	1.45
B67	43rd Ave	Robbinsdale	Bike Boulevard	162	1.45
B71	Idaho Ave	Brooklyn Park	Bike Boulevard	162	1.45
B180	93rd Ave to Windsor Ter	Brooklyn Park	SUP	165	1.40
B316	101st Ave	Brooklyn Park	SUP	165	1.40
B337	June Ave	Crystal	Bike Boulevard	165	1.40

Phase 1 Scoring (Top 20 Selection Process)

ID	Location	Municipali	Type	Rank	Score
B76	63rd Ave	Brooklyn Park/Maple Gr	Bike Lane	165	1.40
P13	South from intersection of Parkview Blvd and Manor Dr across Glenview Terrace Park to Golden Valley Station	Golden Valley	Sidewalk	165	1.40
X258	Regent Ave and 36th Ave	Robbinsdale	Intersection Improvement	165	1.40
B182	Fallgold Pkwy to 94th Ave	Brooklyn Park	Bike Boulevard	171	1.35
B209	101st Ave	Brooklyn Park	Bike Lane	171	1.35
B259	Regent Ave	Brooklyn Park	Bike Boulevard	173	1.35
B264	Inverness Cir	Brooklyn Park	Bike Boulevard	173	1.35
B280	Idaho Ave	Brooklyn Park	Bike Boulevard	173	1.35
P191	Hampshire Avenue North	Brooklyn Park	Sidewalk	173	1.35
B323	109th Ave	Brooklyn Park	Bike Lane OR SUP	177	1.30
B187	75th Ave to June Ave	Brooklyn Park	Bike Boulevard	178	1.30
B339	Adair Ave	Crystal	Bike Boulevard	178	1.30
B93	Beard Ave	Robbinsdale	Bike Boulevard	178	1.30
P171	Off-street between 88th Ave and Zane Ave	Brooklyn Park	Sidewalk	178	1.30
P228	France Avenue North	Robbinsdale	Sidewalk	178	1.30
P230	46th Avenue North	Robbinsdale	Sidewalk	178	1.30
P84	Idaho Avenue North	Brooklyn Park	Sidewalk	184	1.25
B318	109th Ave to Oxbow Creek Dr	Brooklyn Park	SUP	185	1.25
B331	Yates Ave	Crystal	Bike Boulevard	185	1.25
B85	Wyoming Ave	Brooklyn Park	Bike Lane	185	1.25
P161	83rd Avenue North	Brooklyn Park	Sidewalk	188	1.20
B122	Cherokee Dr	Brooklyn Park	Bike Boulevard	189	1.20
B265	Kings Ter	Brooklyn Park	Bike Boulevard	189	1.20
B302	June Ave	Robbinsdale	Bike Lane OR SUP	189	1.20
B183	Founders Pkwy	Brooklyn Park	Bike Boulevard	192	1.15
B217	Tessman Pkwy	Brooklyn Park	Bike Lane	192	1.15
B258	107th Ave to Oxbow Creek Dr	Brooklyn Park	SUP	192	1.15
B294	Douglas Dr	Brooklyn Park	Bike Boulevard	195	1.10
B163	79th Ave to East	Brooklyn Park	SUP	196	1.10
B53	Noble Ave	Golden Valley	Bike Lane	197	1.05
B120	Winnetka Ave	Brooklyn Park	Bike Lane	198	1.05
P198	Lakeland Avenue North	Brooklyn Park	Sidewalk	198	1.05
P9	Parkview Blvd from Manor Dr to 26th Ave N	Golden Valley	Sidewalk	200	1.00
B137	Culver Rd	Golden Valley	Bike Boulevard	201	0.95
B139	Culver Rd	Golden Valley	Bike Boulevard	201	0.95
P14	Southeast from end of Kewanee Way across Glenview Terrace Park	Golden Valley	Sidewalk	203	0.90
P8	Legend Dr from Golden Valley Rd to northern terminus	Golden Valley	Sidewalk	203	0.90
B282	Jersey Dr	Brooklyn Park	Bike Boulevard	205	0.85
P7	Bassett Creek Dr from Golden Valley Rd to northern terminus	Golden Valley	Sidewalk	205	0.85
P16	Noble Ave N from Golden Valley Rd to Culver Rd	Golden Valley	Sidewalk	207	0.75

Appendix B
Top 20 Concept Sheets

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 01
Revision: 08/16/18

Project: Brooklyn Blvd - TH169 to Zealand and Broadway to Hampshire
City: Brooklyn Park
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: Highway 169
- Route covers: Brooklyn Boulevard, except Xylon Avenue North to West Broadway (currently planned by others)
- Route ends: Hampshire Avenue

Relation to other proposed projects

- Blue Line station at intersection with West Broadway
- Planned improvements at CR81 and east of Hampshire (10ft trail on south side)

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration are generally constant along the route

- Segment 1: Four lane, two way section west of Xylon Avenue North to Highway 169
- Segment 2: Four lane, two way with medians and center left and right turn lanes east of West Broadway Avenue to Hampshire Avenue

Project Description
Segments to be Considered

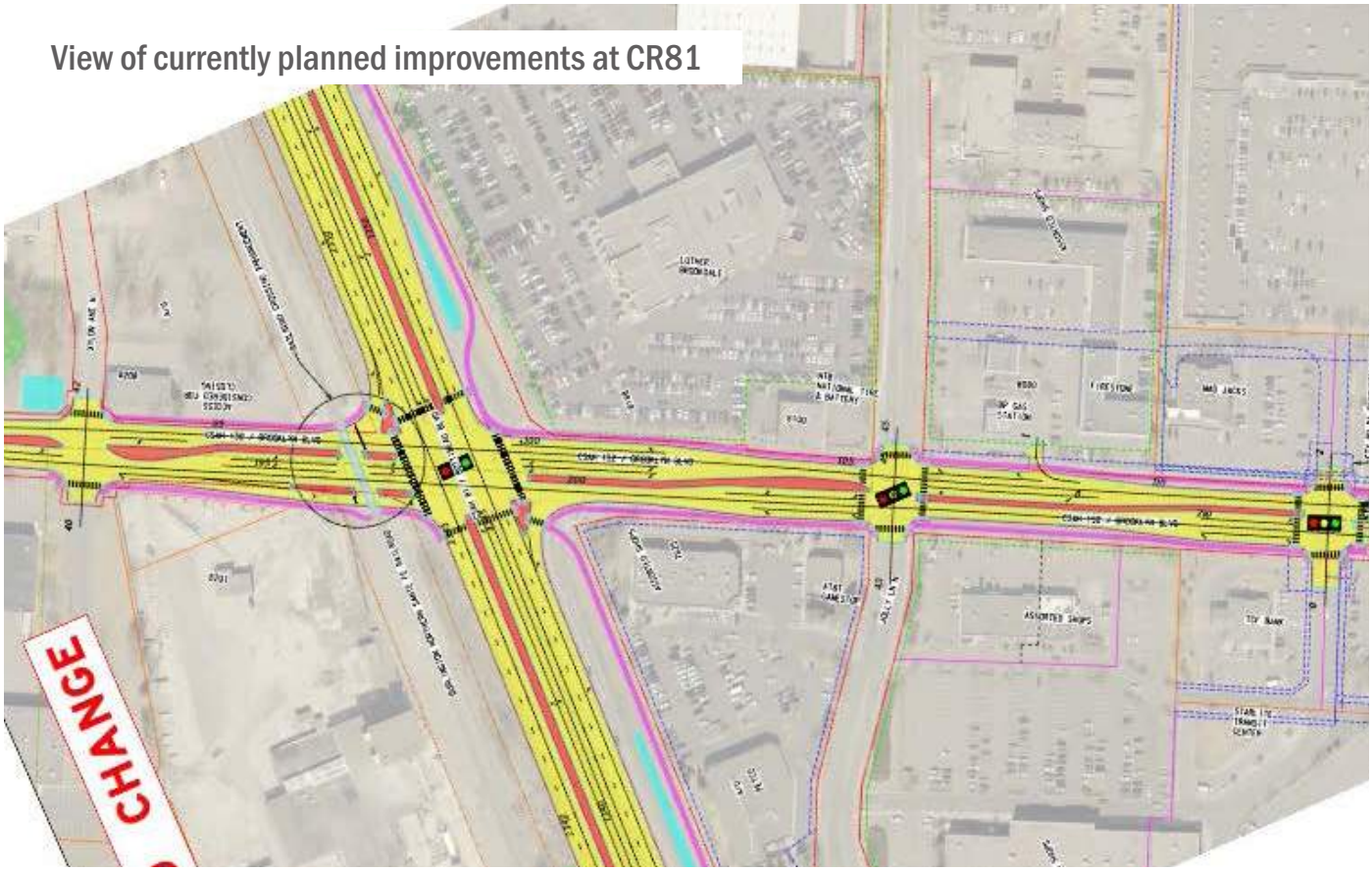
ID: 01
Revision: 08/16/18

Segments considered and general project location.

Project Description
Other Currently Planned Improvements

ID: 01
Revision: 08/16/18

View of currently planned improvements at CR81



Project Description
Description of Segments

ID: 01
Revision: 08/16/18

Categories	Segment 1	Segment 2
Description of typical roadway section	Four lane, two way	Four lane, two way with center left turn lanes
Number of through lanes (typ. config.)	4	4
AADT (typ.)	16,000 to 16,900	18,800 to 19,500
Speed limit (mph)	40	45
Roadway (curb-to-curb) width typ. (ft)	50	70
Available right-of-way typ. (ft)	72 - 80	100
Roadway jurisdiction	Hennepin County	Hennepin County
State Aid Facility?	Yes - CSAH 152	Yes - CSAH 152
Curb & gutter (urban) section?	Yes	Yes
Median present?	No	Yes - 7 ft
On-street parking present?	No	No
Shoulder present?	No	No
Width of shoulder or parking lane	N/A	N/A
Width of driving lane(s)	12	12
Center left turn lane?	No	Yes
Width of center turn lane	N/A	12
Sidewalk or sidepath present?	10 ft sidepath on south side between Northland and Boone - 5 ft sidewalk along north (east of Boone)	5 ft sidewalk on north and south (east of Zealand)
Boulevard or buffer from roadway (typ)	7.5 ft on north	5.5 ft - 9 ft on north and south
Approximate length of segment (ft)	4,050 ft	2,610 ft
Transit service along project	721	705, 724
Transit service across project	None	782,764

Project Description
Description of Segments - CONTINUED

ID: 01
Revision: 08/16/18

Categories	Segment 1	Segment 2
Segment interacts with the 90% plans?	No	Yes: one block east and west from W Broadway Ave
Recommendation from 90% plans	No	Trail on north and south side of Brooklyn Blvd between block east and west of station. Two lane, two way traffic on road, with a landscape median, as well as left and right turn lanes at intersections.
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A	Trail on one side (south) or both sides
Do the recommendations conflict or preclude each other?	N/A	No

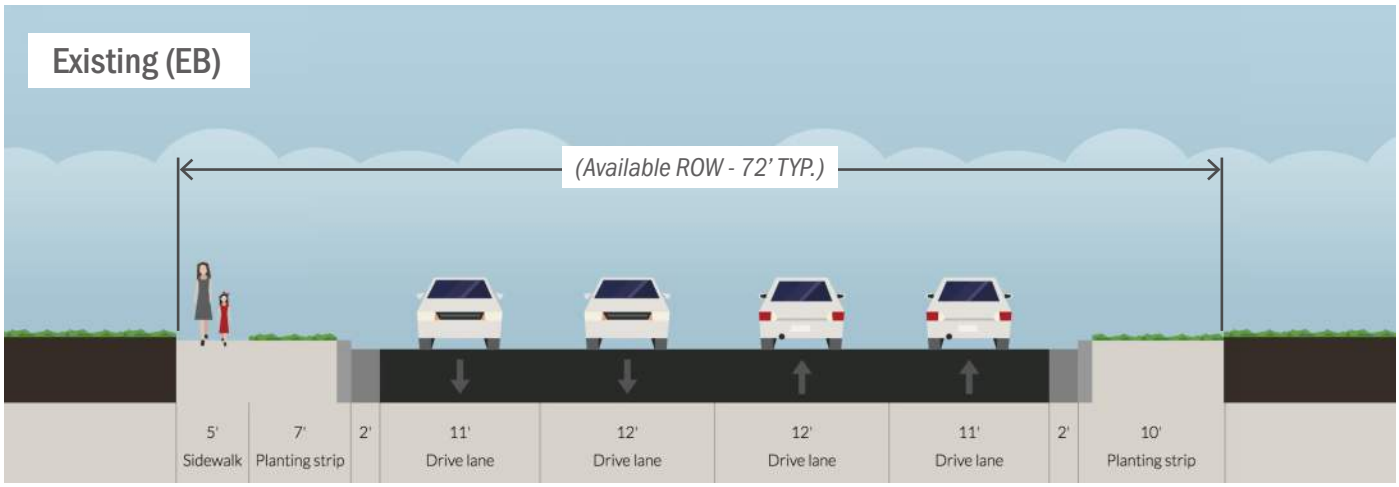
Project Description
General Guidelines and Standards

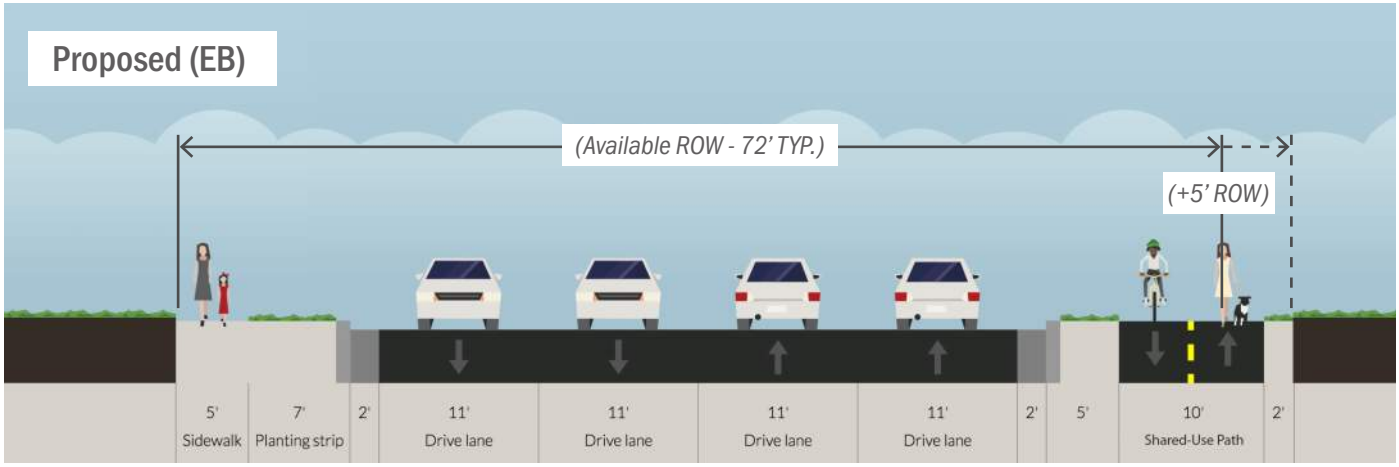
ID: 01
Revision: 08/16/18

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

Concept Proposal
TYPE: Shared-Use Path

ID: 01-A
Revision: 08/16/18
Segment 1





GENERAL DESCRIPTION

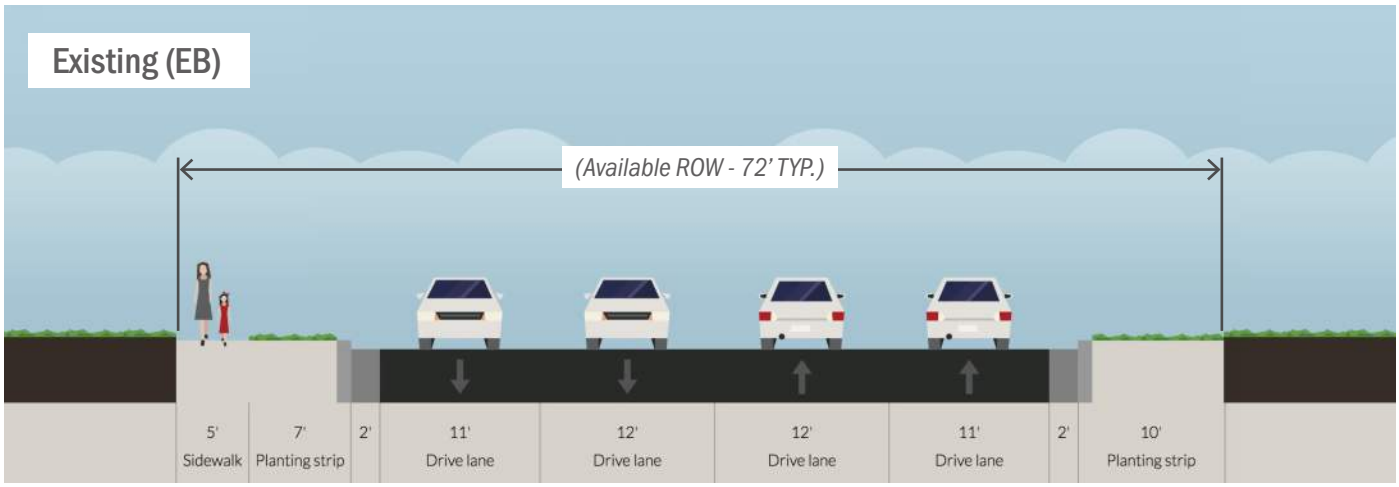
- Single Two-way Shared-use Path / Trail
- Implement one two-way shared-use path / trail along the south side of roadway
  - One segment currently existing between Northland and Boone
  - Brooklyn Park project for Hampshire to Zane will provide trail on south side
  - Existing trail on south side west of Jefferson Highway
- Requires reconstruction and modifications to existing roadway cross-section width and curb line
  - South curb and gutter only
- Requires up to 5 ft acquisition or easement beyond existing ROW for select parcels

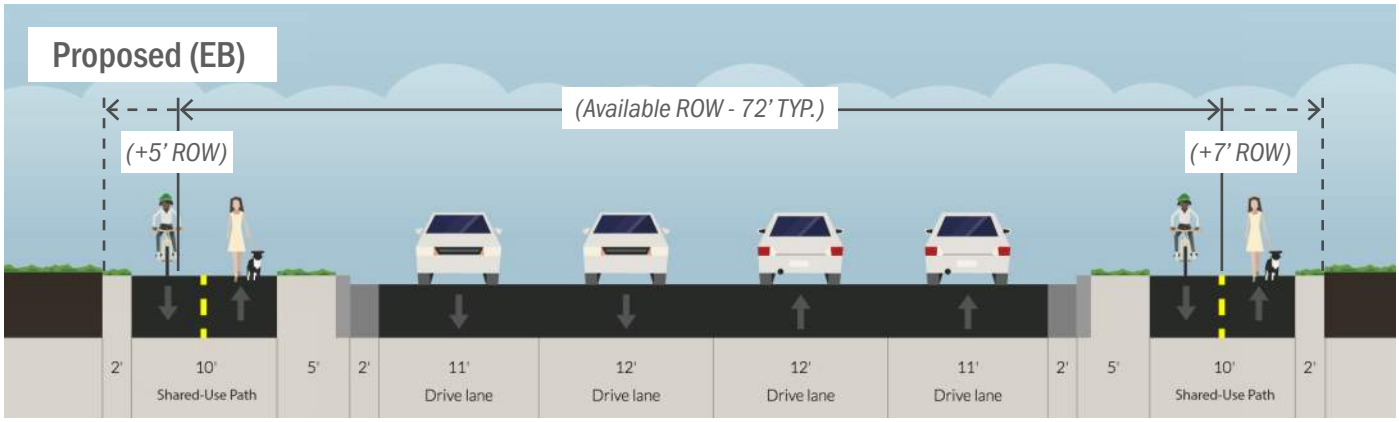
OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - None at this time
- Any turn lane removal will require traffic analysis
- Impacts at signalized intersections
  - Potential impact to newly installed APS at Boone
  - ADA compliant pedestrian ramps
  - APS at intersections

Concept Proposal
TYPE: Shared-Use Path

ID: 01-B
Revision: 08/16/18
Segment 1





GENERAL DESCRIPTION

Double Two-way Shared Use Paths / Trails

- Implement two Two-way Shared Use Paths / Trails
- No change to existing roadway cross-section width or roadway components
- Requires up to 12 ft acquisition or easement beyond existing ROW for select parcels

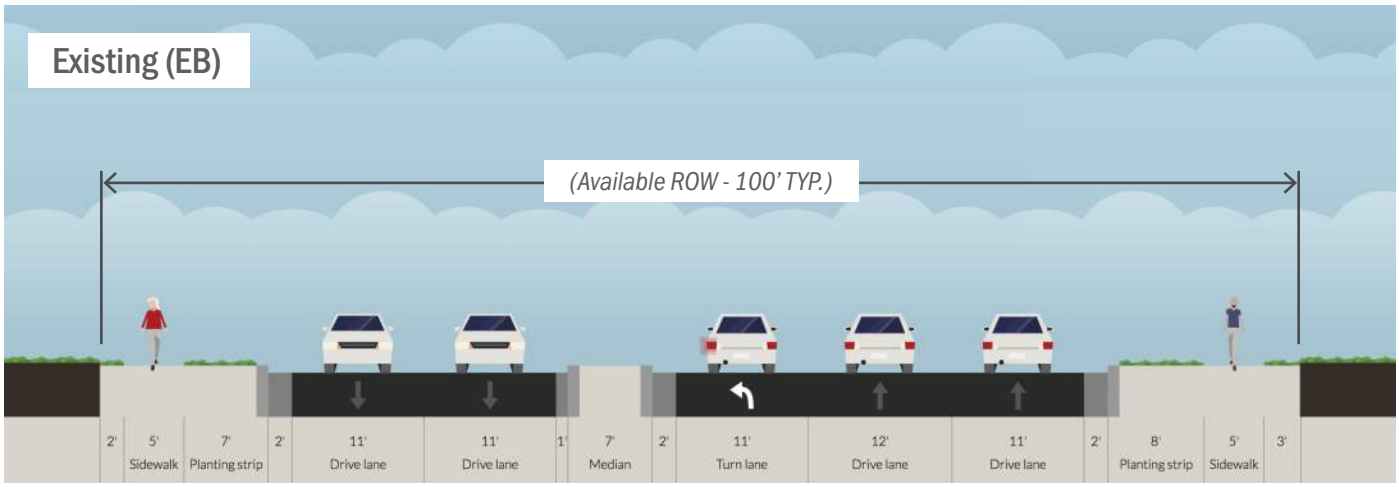
OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

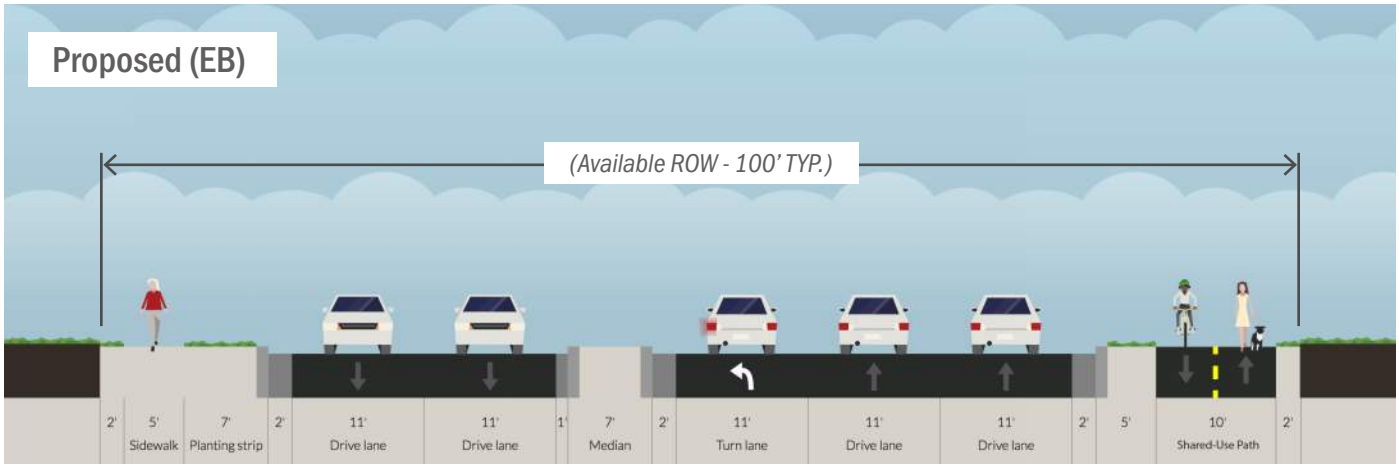
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts to stormwater by adding 10' of impervious surface per SUP
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - None at this time
- Any turn lane removal will require traffic analysis
- Impacts at signalized intersections
  - Potential impact to newly installed APS at Boone
  - ADA compliant pedestrian ramps
  - APS at intersections

Concept Proposal
TYPE: Shared-Use Path

ID: 01-C
Revision: 08/16/18

Segment 2





GENERAL DESCRIPTION

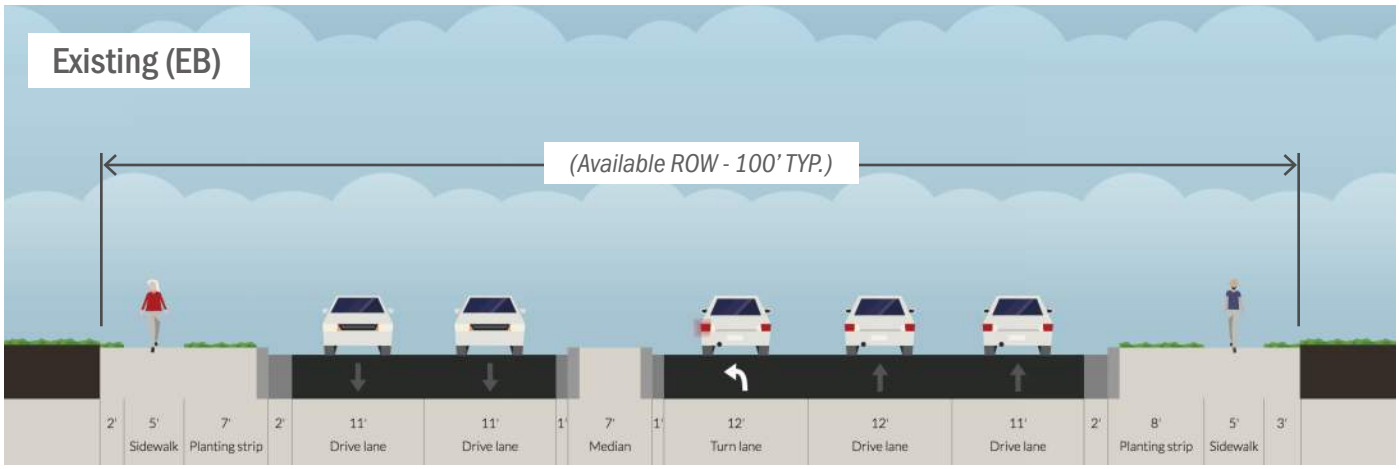
- Implement one two-way shared-use path / trail along the south side of roadway
  - One segment currently existing between Northland and Boone
  - Brooklyn Park project for Hampshire to Zane will provide trail on south side
  - Existing trail on south side west of Jefferson Hwy
- Requires reconstruction and modifications to existing roadway cross-section width and curb line
  - South of median

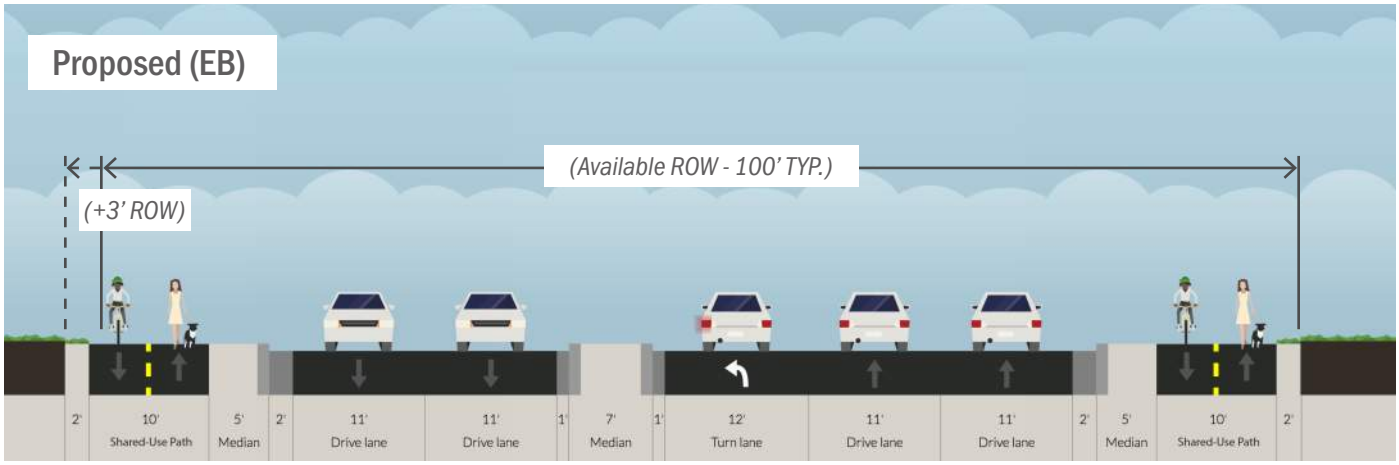
OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

Concept Proposal
TYPE: Shared-Use Path

ID: 01-D
Revision: 08/16/18
Segment 2





GENERAL DESCRIPTION

Double Two-way Shared Use Paths / Trails

- Implement two Two-way Shared Use Paths / Trails
- Requires reconstruction and modifications to existing roadway cross-section width and curb line
  - South curb and gutter only

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts to stormwater with addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Implementing an 8' trail on north side reduces ROW impacts
- Implementing an 8' trail on south side eliminates curb and gutter impacts
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 02
Revision: 08/17/18

Project: Bass Lake Rd - Broadway to Sherburne and Bottineau to Yates
City: Crystal
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: West Broadway Ave
- Route covers: Bass Lake Rd, except Becker Park
- Route ends: Yates Ave N

Relation to other proposed projects

- Connects to Project ID 11
- Upcoming trail improvements at Becker Park
- Blue Line station just south of intersection with Bottineau Blvd

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route

- Segment 1: Four lane, two way section with center left turn lane and median west of Sherburne Avenue
- Segment 2: Four lane, two way with center left turn lane, and median between Bottineau Blvd and Zane Ave
- Segment 3: Four lane, two way east of Zane Avenue

Project Description
Segments to be Considered

ID: 02
Revision: 08/17/18

Segments considered and general project location.

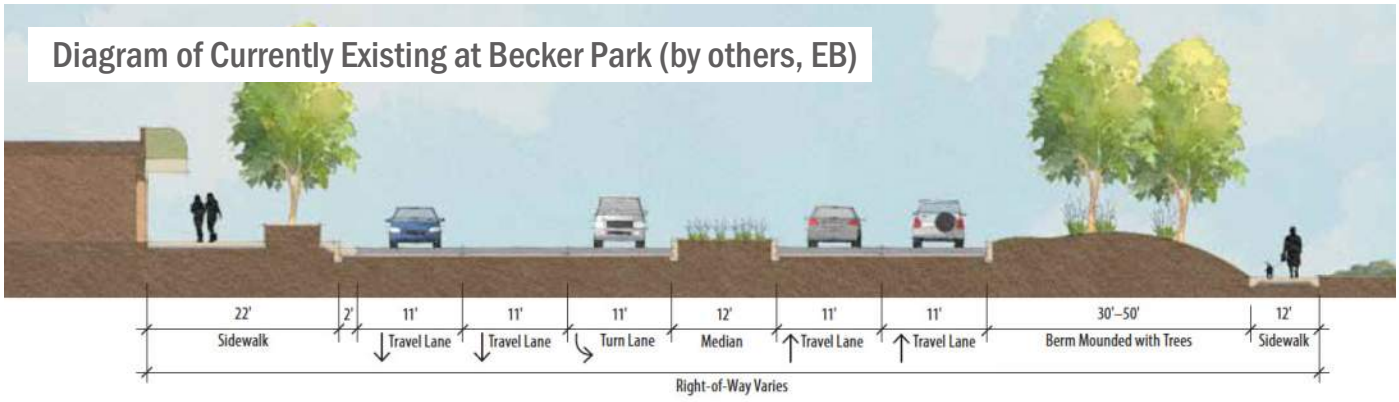
Project Description
Segments to be Considered - CONTINUED

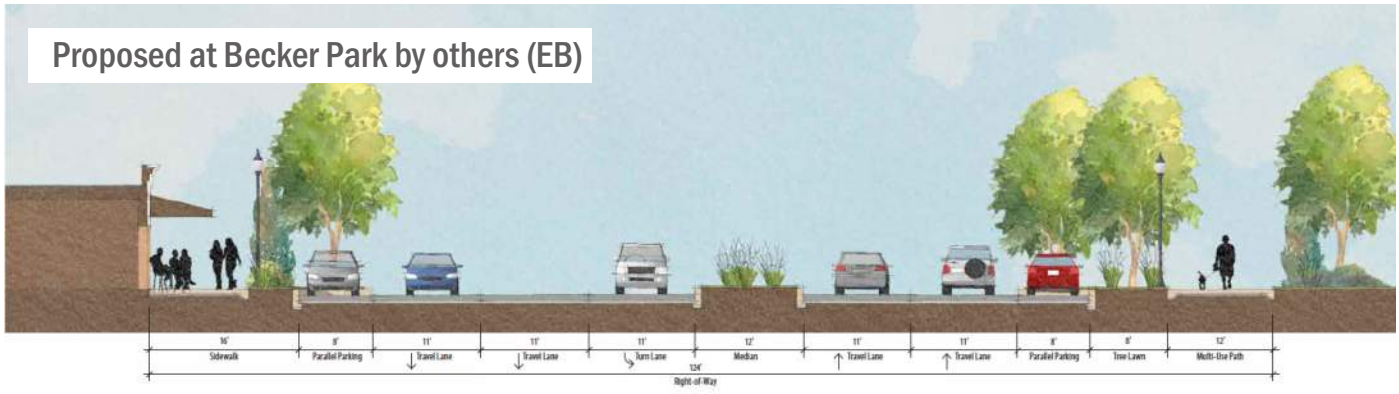
ID: 02
Revision: 08/17/18

Project Description
Segments to be Considered - CONTINUED

ID: 02
Revision: 08/17/18

Becker Park - Currently in development by City of Crystal and Hennepin County





Project Description
Description of Segments

ID: 02
Revision: 08/17/18

Categories	Segment 1	Segment 2	Segment 3
Description of typical roadway section	Four lane, two way road with a center left turn lane and median	At Bottineau: Four lanes, two way, with additional right turn and center-left turn lanes, and median	Four lanes, two way
Number of through lanes (typ. config.)	4	4	4
AADT (typ.)	<< pending >>	11,600 (21,200 just west of Bottineau)	18,800 to 19,500
Speed limit (mph)	30	30	30
Roadway (curb-to-curb) width typ. (ft)	70	90	48
Available right-of-way typ. (ft)	100	115	66
Roadway jurisdiction	Hennepin County	Hennepin County	Hennepin County
State Aid Facility?	Yes - CSAH 10	Yes - CSAH 10	Yes - CSAH 10
Curb & gutter (urban) section?	Yes	Yes	Yes
Median present?	Yes - 6 ft	Yes	No
On-street parking present?	No	No	No
Shoulder present?	No	No	No
Width of shoulder or parking lane	N/A	N/A	N/A
Width of driving lane(s)	13	11.5	11.5
Center left turn lane?	Yes	Yes	No
Width of center turn lane	12	14, 11.5	N/A
Sidewalk or sidepath present?	9 ft sidewalk both sides	8 ft sidewalk both sides	5 ft sidewalk on north, 8 ft sidewalk on south
Boulevard or buffer from roadway (typ)	None	Varied	3 ft on north, none south
Approximate length of segment (ft)	800 ft	670 ft	340 ft
Transit service along project	721	721	721
Transit service across project	None	None	None

Project Description
Description of Segments - CONTINUED

ID: 02
Revision: 08/17/18

Categories	Segment 1	Segment 2	Segment 3
Segment interacts with the 90% plans?	No	No	No
Recommendation from 90% plans	N/A	N/A	N/A
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A	N/A	N/A
Do the recommendations conflict or preclude each other?	N/A	N/A	N/A

Project Description
General Guidelines and Standards

ID: 02
Revision: 08/17/18

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

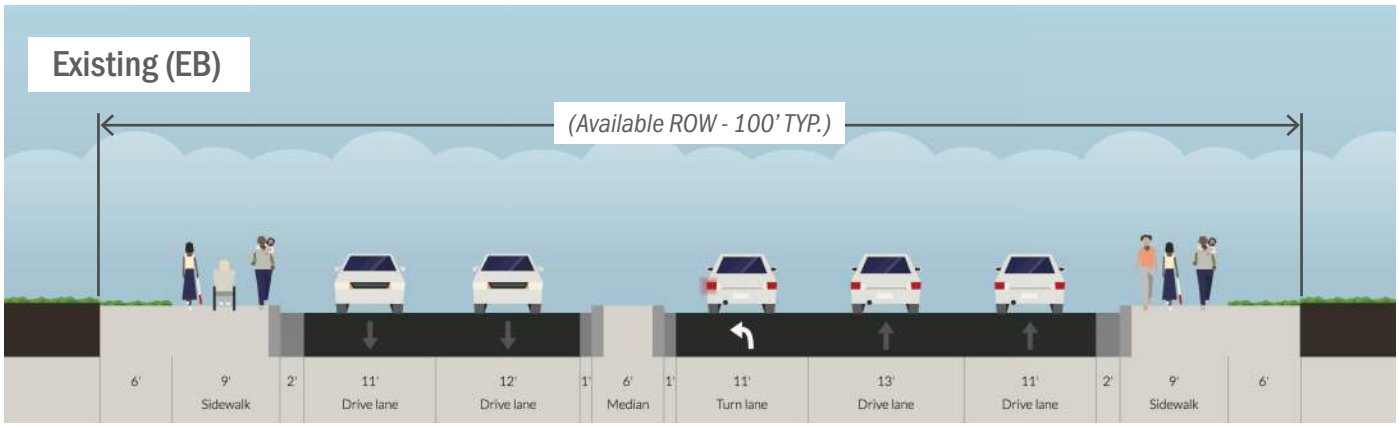
Concept Proposal

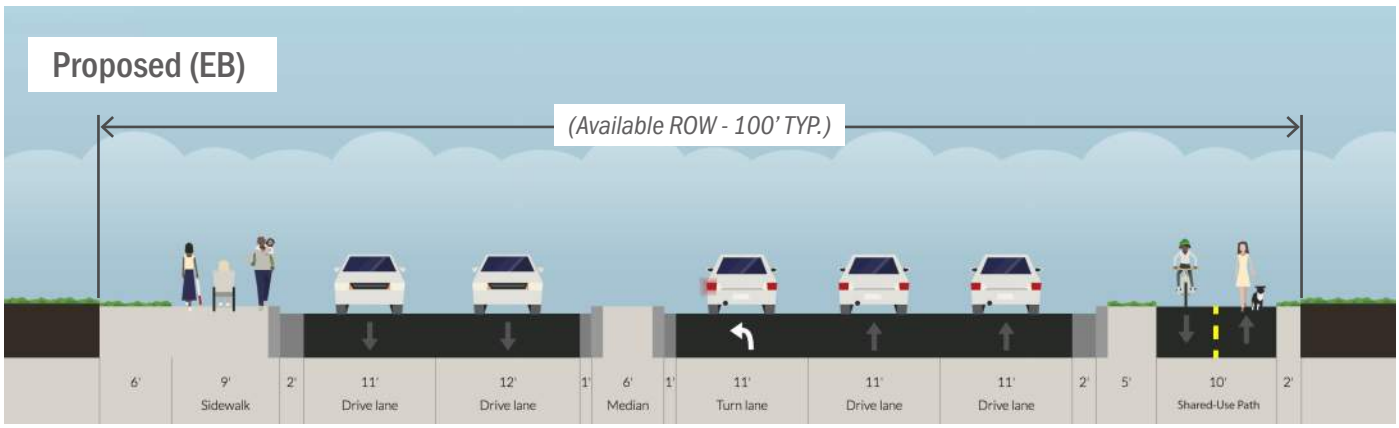
TYPE: Two-way Shared-Use Path / Trail - single side (south)

ID: 02-A

Revision: 08/17/18

Segment 1





GENERAL DESCRIPTION

Single Two-way Shared-use Path / Trail

- Implement one two-way shared-use path / trail along the south side of Bass Lake Rd
  - Matches location of trail proposed for Becker Park
- Requires reconstruction and modifications to existing roadway cross-section width and curb line
  - South curb and gutter

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Any turn lane removal will require traffic analysis
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections

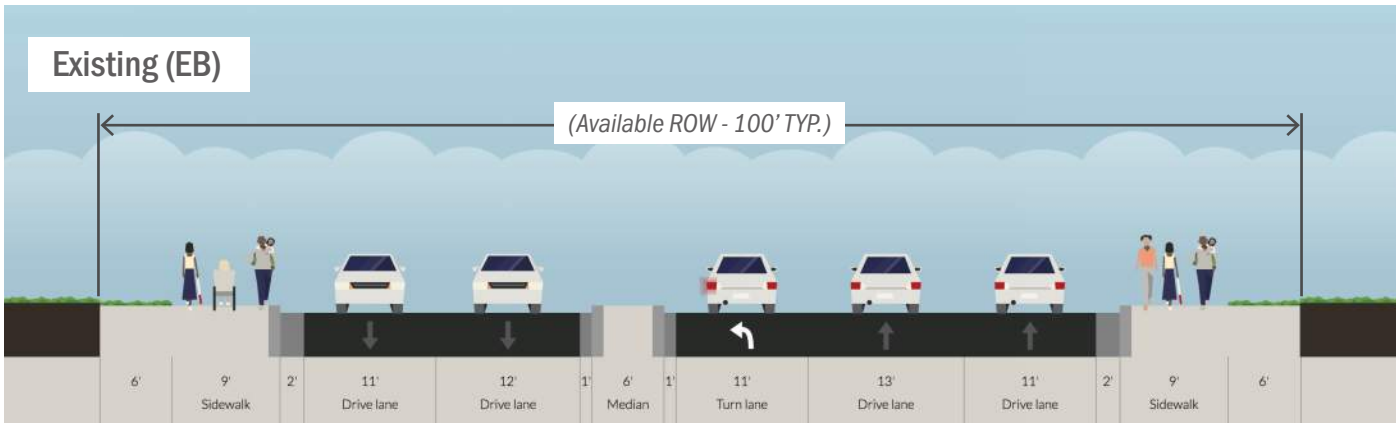
Concept Proposal

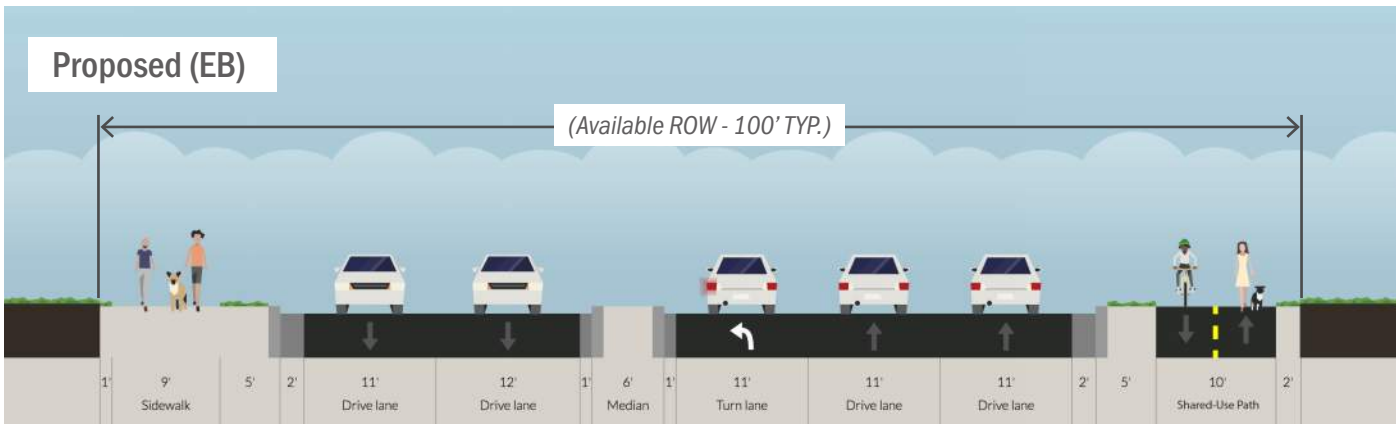
TYPE: Two-way Shared-Use Path / Trail - single side (south)

ID: 02-B

Revision: 08/17/18

Segment 1





GENERAL DESCRIPTION

Improve Sidewalk and Single Two-way Shared-use Path / Trail

- Reconstruct sidewalk on north side of Bass Lake Rd to provide greater setback / separation from roadway and improve experience for pedestrians
  - Matches location as proposed across Becker Park
- Implement one two-way shared-use path / trail along the south side of Bass Lake Rd
  - Matches location of trail proposed for Becker Park
- Requires reconstruction and modifications to existing roadway cross-section width and curb line
  - South curb and gutter

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - None
- Any turn lane removal will require traffic analysis
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections

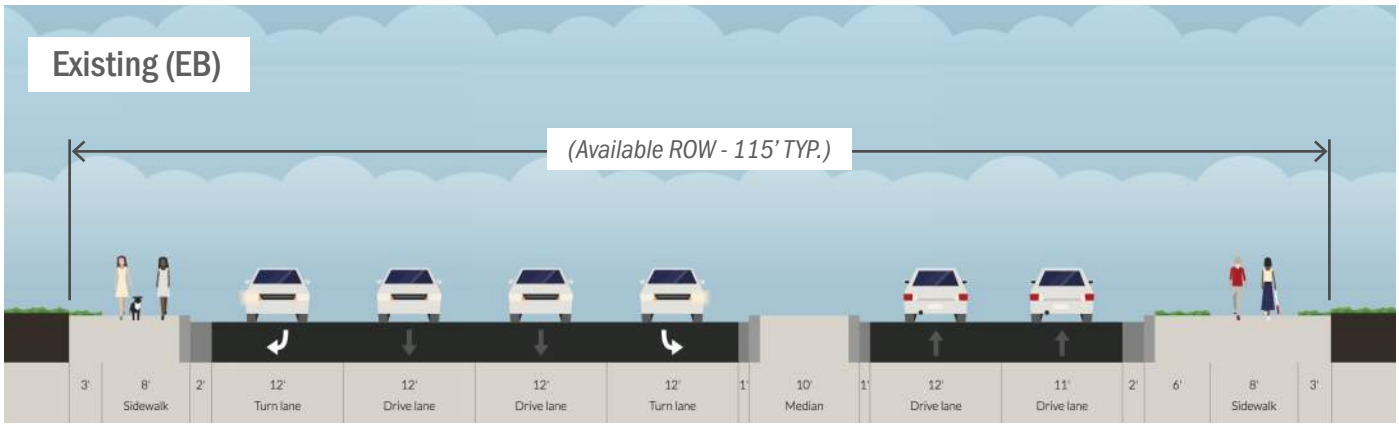
Concept Proposal

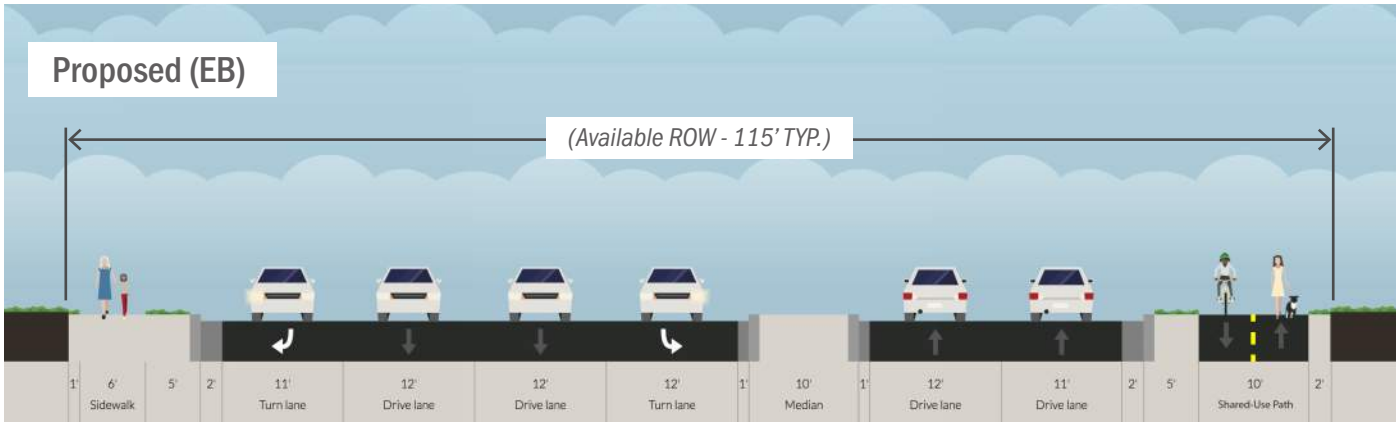
TYPE: Two-way Shared-Use Path / Trail - single side (south)

ID: 02-C

Revision: 08/17/18

Segment 2





GENERAL DESCRIPTION

Improve Sidewalk and Single Two-way Shared-use Path / Trail

- Reconstruct sidewalk on north side of Bass Lake Rd to provide greater setback / separation from roadway and improve experience for pedestrians
  - Implement one two-way shared-use path / trail along the south side of Bass Lake Rd
  - Matches location of trail proposed for Becker Park
- Requires reconstruction and modifications to existing roadway cross-section width and curb line
  - North curb and gutter
- Reduction in buffer between sidewalk and roadway could eliminate curb and gutter impacts

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts to stormwater by adding 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - None
- Any turn lane removal will require traffic analysis
- Review considerations for safe pedestrian and bicycle travel across the Bottineau Blvd intersection
  - Explore protected intersection or similar treatments
- Impacts on driving lanes
  - None
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections

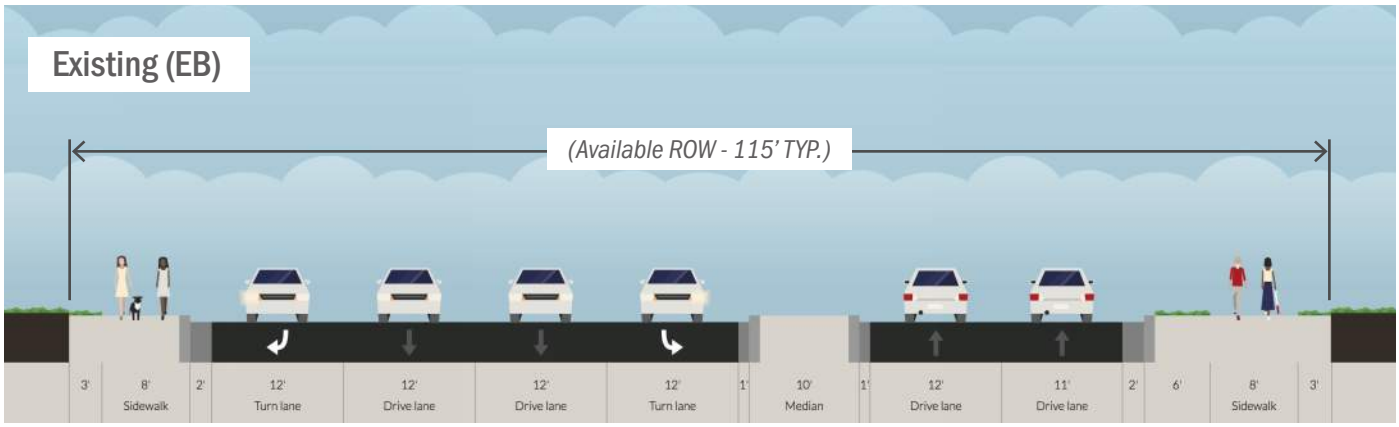
Concept Proposal

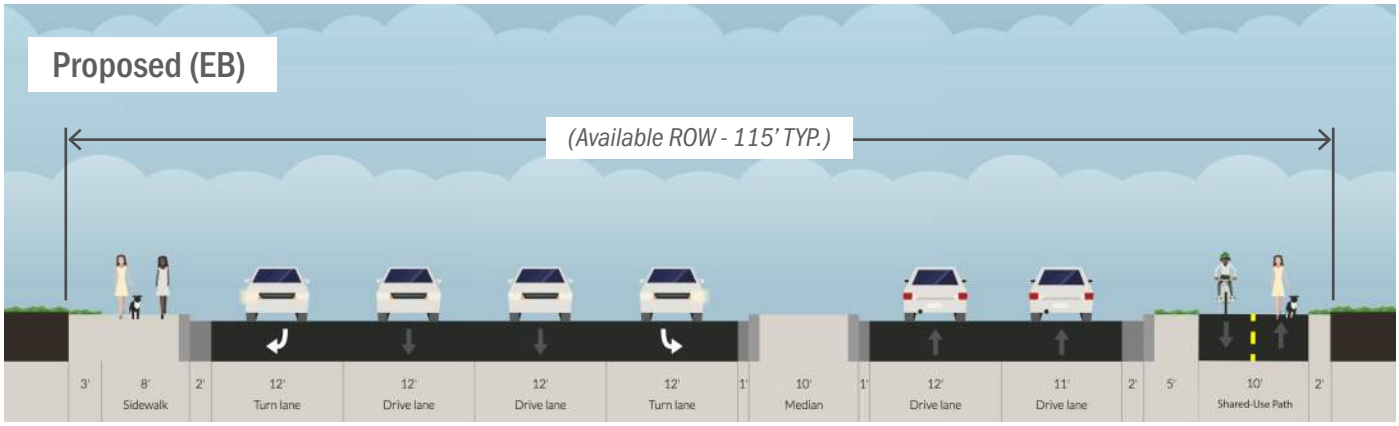
TYPE: Two-way Shared-use Path / Trail - single side (south)

ID: 02-F

Revision: 08/17/18

Segment 2





GENERAL DESCRIPTION

Improve Sidewalk and Single Two-way Shared-use Path / Trail

- Reconstruct sidewalk on north side of Bass Lake Rd to provide greater setback / separation from roadway and improve experience for pedestrians
  - Implement one two-way shared-use path / trail along the south side of Bass Lake Rd
  - Matches location of trail proposed for Becker Park
- No change to existing roadway cross section width or roadway components

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts to stormwater by adding 8' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - None
- Any turn lane removal will require traffic analysis
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections

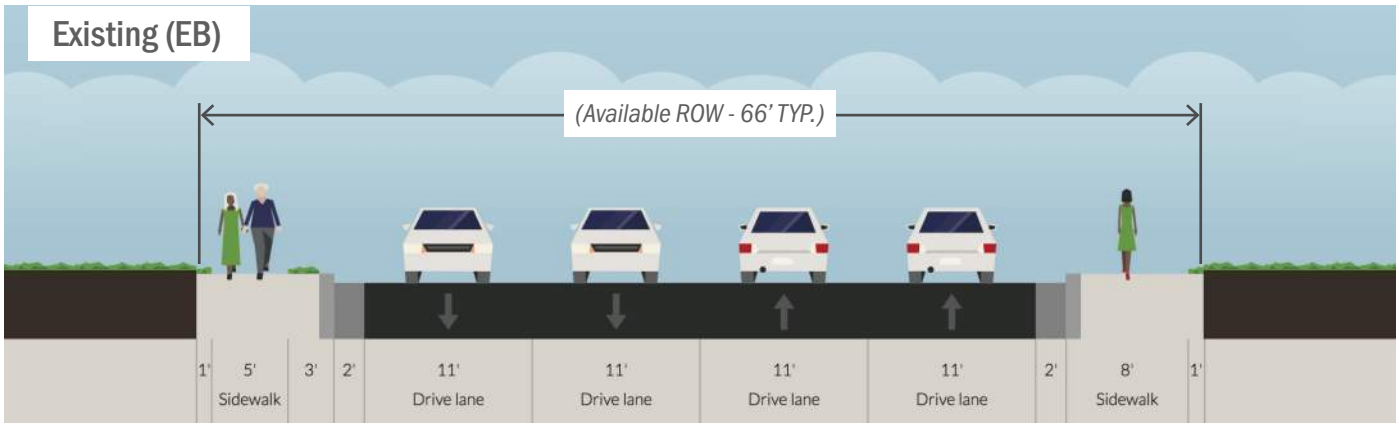
Concept Proposal

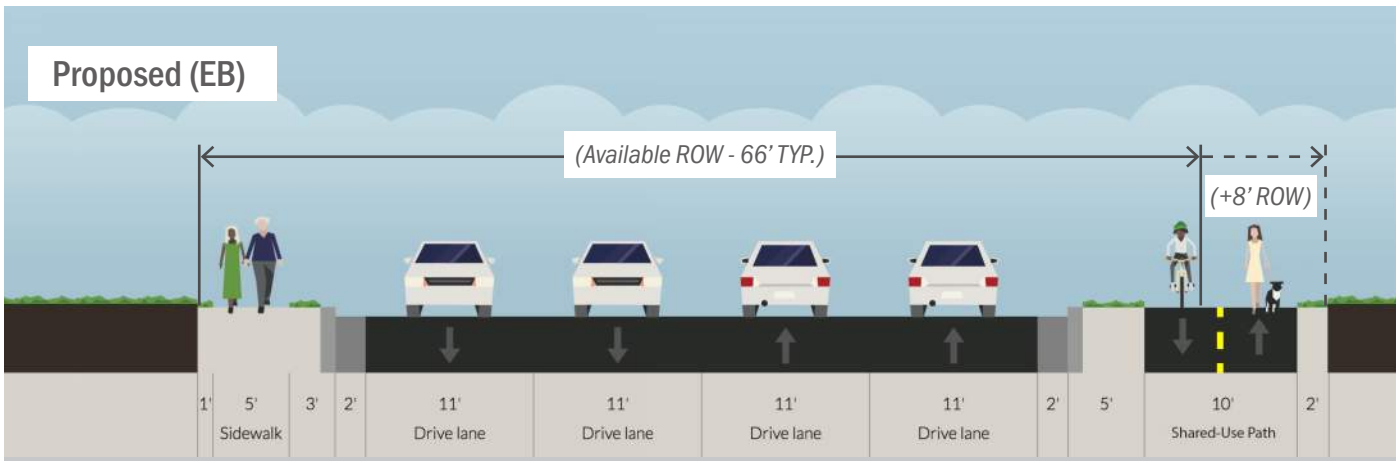
TYPE: Two-way Shared-Use Path / Trail - single side (south)

ID: 02-D

Revision: 08/17/18

Segment 3





GENERAL DESCRIPTION

Single Two-way Shared-use Path / Trail

- Implement one two-way shared-use path / trail along the south side of Bass Lake Rd
  - Matches location of trail proposed for Becker Park
- No change to existing roadway cross-section width or roadway components
  - Maintains existing curb line
  - Given current traffic volumes, limited opportunity to implement a three lane conversion
- Requires 8' acquisition or easement beyond existing ROW
  - 8' trail width could reduce ROW impacts

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts to stormwater by adding 8' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - None
- Any turn lane removal will require traffic analysis
- Transition of SUP to the existing on-street bike lanes east of project limits will require limited restriping of Bass Lake Road to include bike lanes and three lane section immediately west of Yates

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 03
Revision: 08/16/18

Project: 42nd Avenue N
City: Robbinsdale
Mode(s): Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: 42nd Avenue N at Adair Ave N (for concept discussion, extend to Douglas Drive N in Crystal)
- Route covers: 42nd Avenue N
- Route ends: 42nd Avenue N at West Broadway

Relation to other proposed projects

- Connects to Project IDs 06, 07 and 09
- Blue Line station just south of intersection with Hubbard Ave N

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route

- Segment 1: Four lane section west of Welcome Ave N
- Segment 2: Freeway ramps, medians, four lane section, and freeway ingress and egress between Welcome Ave N and Regent Ave N
- Segment 3: Four lane section between Regent Ave N and West Broadway Avenue

Project Description
Segments to be Considered

ID: 03
Revision: 08/16/18

Segments considered and general project location.

Project Description
Segments to be Considered - CONTINUED

ID: 03
Revision: 08/16/18

Project Description
Description of Segments

ID: 03
Revision: 08/16/18

Categories	Segment 1	Segment 2	Segment 3
Description of typical roadway section	Four lane, two way	Four lane, two way with freeway access, multiple turn lanes	Four lane, two way
Number of through lanes (typ. config.)	4	4	4
AADT (typ.)	no data for segment - closest are 20,500 to west, 13,000 to east	no data for segment - closest are 20,500 to west, 13,000 to east	13,000
Speed limit (mph)	35	35	30
Roadway (curb-to-curb) width typ. (ft)	48	48 to 100	48
Available right-of-way typ. (ft)	66	108 (bridge width)	66
Roadway jurisdiction	Hennepin County	Hennepin County	Hennepin County
State Aid Facility?	Yes - CSAH 9	Yes - CSAH 9	Yes - CSAH 9
Curb & gutter (urban) section?	Yes	Yes	Yes
Median present?	No	Yes - 8 ft	No, except narrow medians between railroad and Broadway (to be extended with the BLRT Project)
On-street parking present?	No	No	No
Shoulder present?	No	Yes - north only	No
Width of shoulder or parking lane	N/A	10	N/A
Width of driving lane(s)	12	12	12
Center left turn lane?	No	No	No
Width of center turn lane	N/A	N/A	N/A
Sidewalk or sidepath present?	Sidewalk on north (5ft) and south (5ft)	Sidewalk on north (7ft) and south (7ft)	Sidewalk on north (7ft) and south (7ft)
Boulevard or buffer from roadway (typ)	4 ft	None	None
Approximate length of segment (ft)	1,270 ft	1,840 ft	1,240 ft
Transit service along project	716, 717, 764	716, 717, 764	716, 717
Transit service across project	None	None	None

Project Description
Description of Segments - CONTINUED

ID: 03
Revision: 08/16/18

Categories	Segment 1	Segment 2	Segment 3
Segment interacts with the 90% plans?	No	No	Yes
Recommendation from 90% plans	N/A	N/A	Four lane, two way with sidewalk. Does not include bike lane.
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A	N/A	<< pending >>
Do the recommendations conflict or preclude each other?	No	No	N/A

Project Description
General Guidelines and Standards

ID: 03
Revision: 08/16/18

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

Concept Proposal

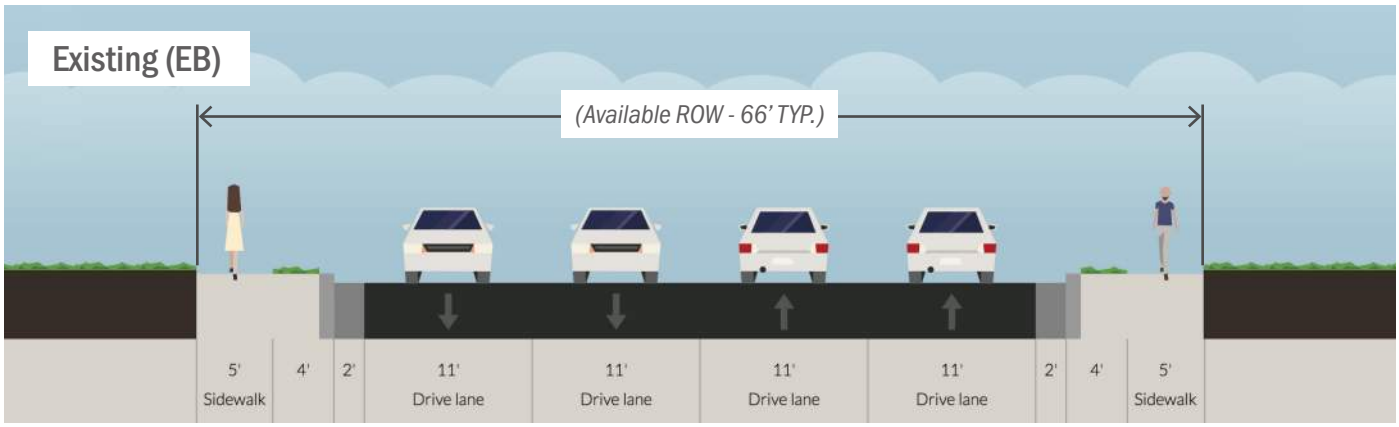
TYPE: Two-way Shared-Use Path / Trail - single side (south)

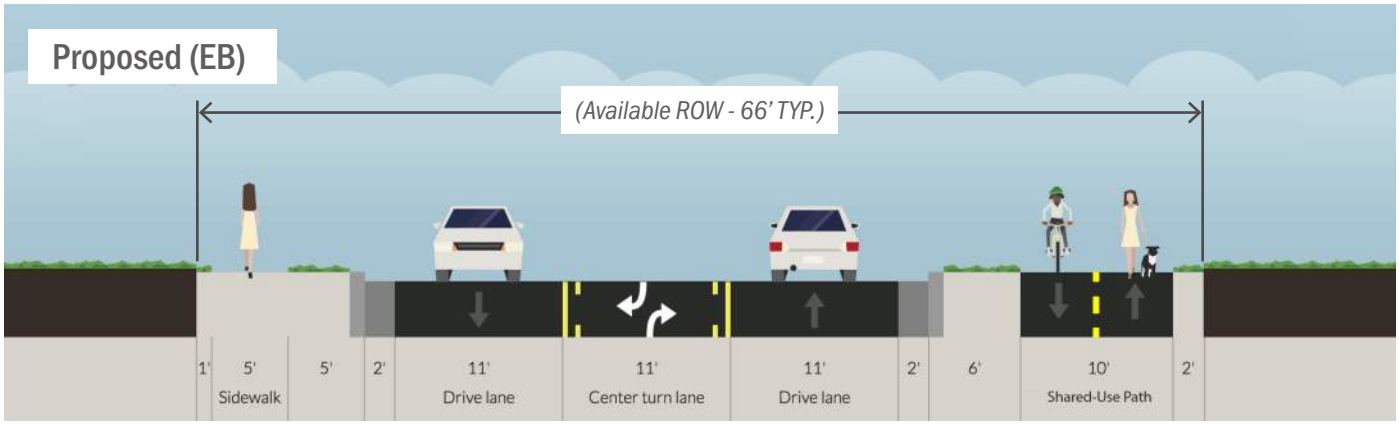
ID: 03-A

Revision: 08/16/18

Segment 1

Segment 3





GENERAL DESCRIPTION

Three Lane Conversion and Shared-Use Path

- Implement a three lane conversion ("Road Diet") for Segments 1 and 3
  - ADT at Segment 3 is within range for conversion; ADT at Segment 1 is currently not available but may also be within range for conversion
  - Conversion frees up space for off-road bicycle facilities
- Implement Single Two-way Shared-Use Path
- Requires change to existing roadway curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - None at this time
- Overhead power lines and poles along the south side may require relocation

Concept Proposal

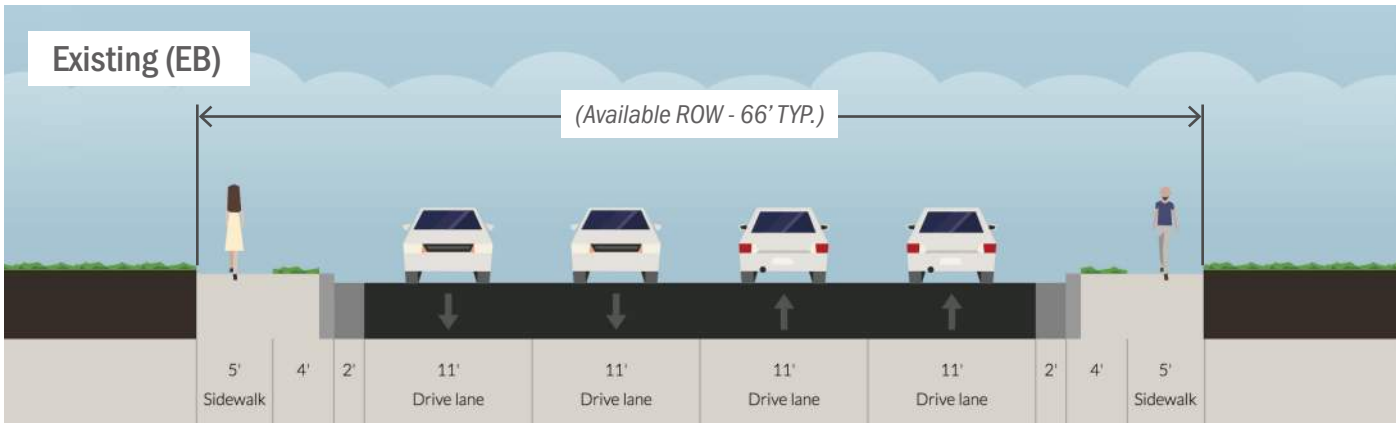
TYPE: Separated / Protected Bicycle Lanes - both sides

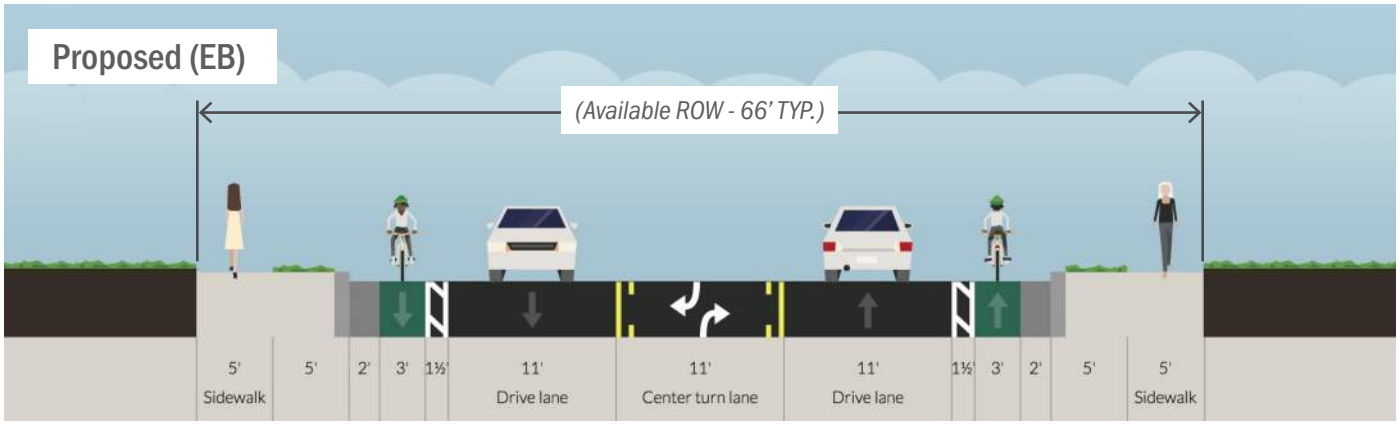
ID: 03-B

Revision: 08/16/18

Segment 1

Segment 3





GENERAL DESCRIPTION

Three Lane Conversion and Separated Bicycle Lanes

- Implement a three lane conversion ("Road Diet") for Segments 1 and 3
  - ADT at Segment 3 is within range for conversion; ADT at Segment 1 is currently not available but may also be within range for conversion
  - Conversion frees up space for on-road separated bicycle facilities
- Implement separated bicycle lanes along both sides of roadway
  - Requires change to existing roadway curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Potential railroad crossing impacts

Concept Proposal

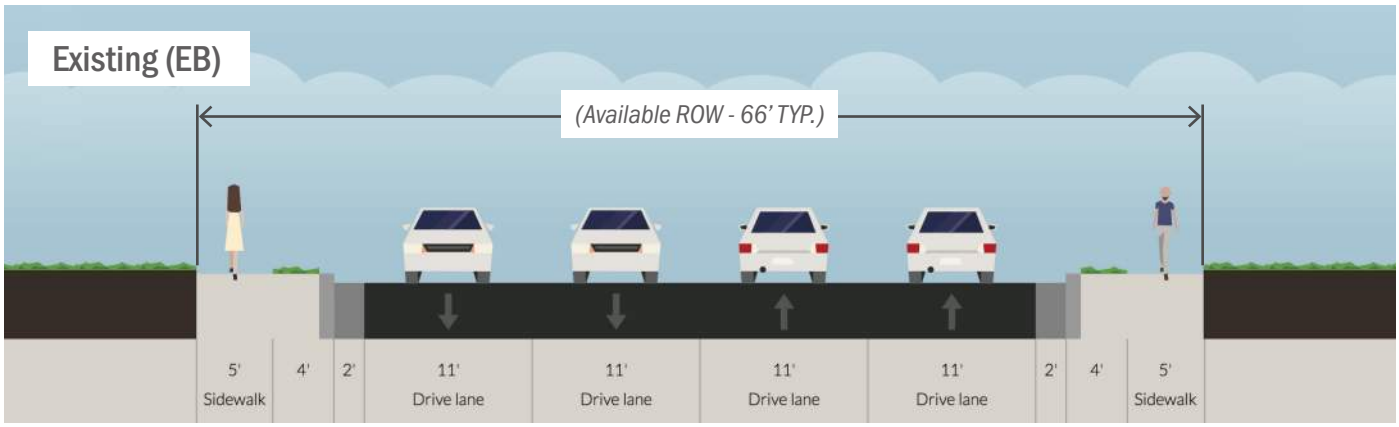
TYPE: Separated / Protected Bicycle Lanes - both sides

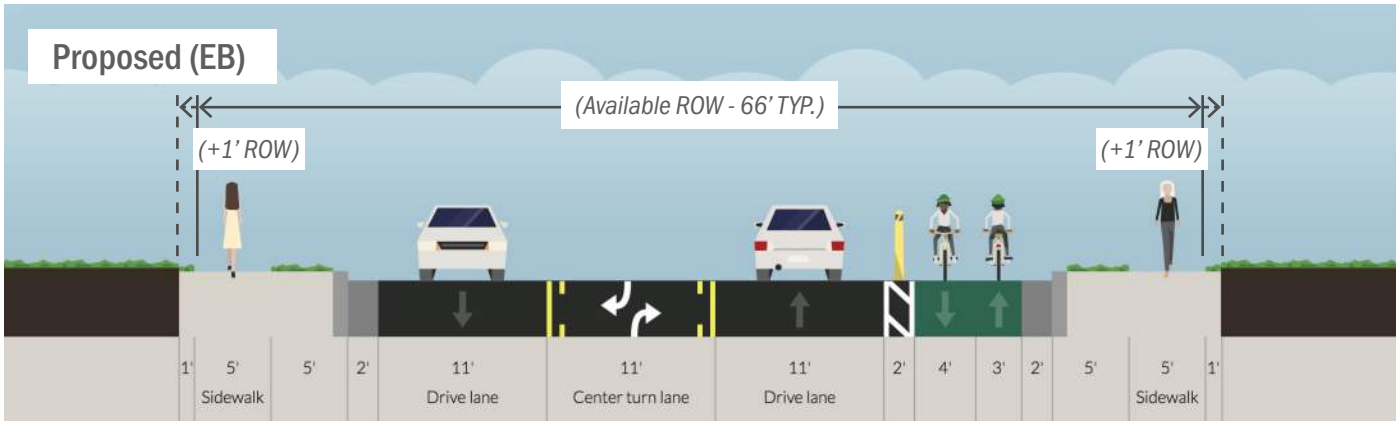
ID: 03-C

Revision: 08/16/18

Segment 1

Segment 3





GENERAL DESCRIPTION

Three Lane Conversion and Two-way Separated Bike Lanes

- Implement a three lane conversion ("Road Diet") for Segments 1 and 3
  - ADT at Segment 3 is within range for conversion; ADT at Segment 1 is currently not available but may also be within range for conversion
  - Conversion frees up space for on-road separated bicycle facilities
- Implement one two-way separated/protected bike lanes along the south side of 42nd Ave N
  - Facilitates connection to / from Blue Line station south of 42nd and Hubbard
  - Requires change to existing roadway curb line
- Requires 2' acquisition or easement beyond existing ROW

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter (bike friendly)
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - Account for adjustments to accommodate two-way bike lane on one side of the roadway.
  - ADA compliant pedestrian ramps
  - APS at intersections
- Overhead power lines and poles along the south side may require relocation.
- Reduction in buffer width between sidewalks and curbs could eliminate ROW impacts

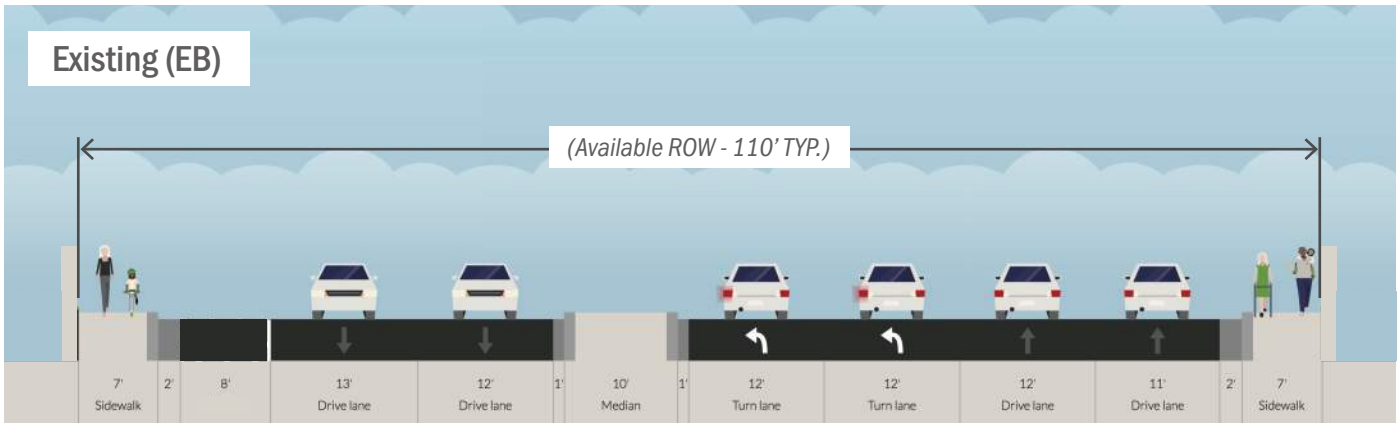
Concept Proposal

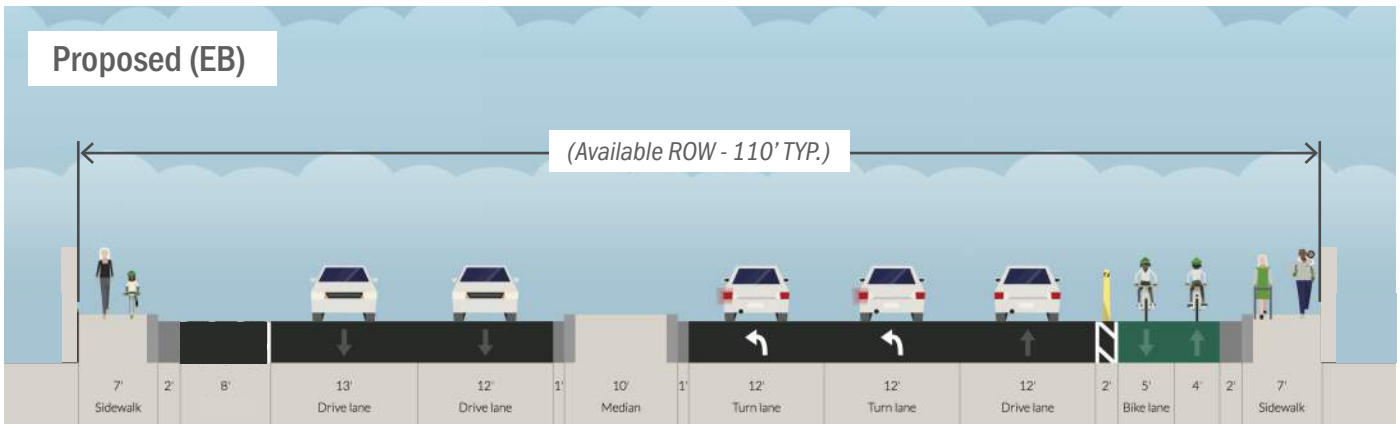
TYPE: Two-way Separated / Protected Bicycle Lanes - single side (south)

ID: 03-D

Revision: 08/16/18

Segment 2





GENERAL DESCRIPTION

Three Lane Conversion and Two-way Separated / Protected Bike Lanes

- Implement a three lane conversion ("Road Diet") for Segment 2
  - ADT at adjoining Segment 3 is within range for conversion; ADT at Segment 2 is currently not available but may also be within range for conversion
  - Partial conversion at this location (removal of one EB lane) frees up space for on-road separated bicycle facilities
- Implement one two-way protected bike lanes along the south side of 42nd Ave N
  - Facilitates connection to / from Blue Line station south of 42nd and Hubbard
  - Does not requires change to existing roadway curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Bike friendly drainage grates
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
  - Account for adjustments to accommodate two-way bike lane on one side of the roadway
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow

Concept Proposal

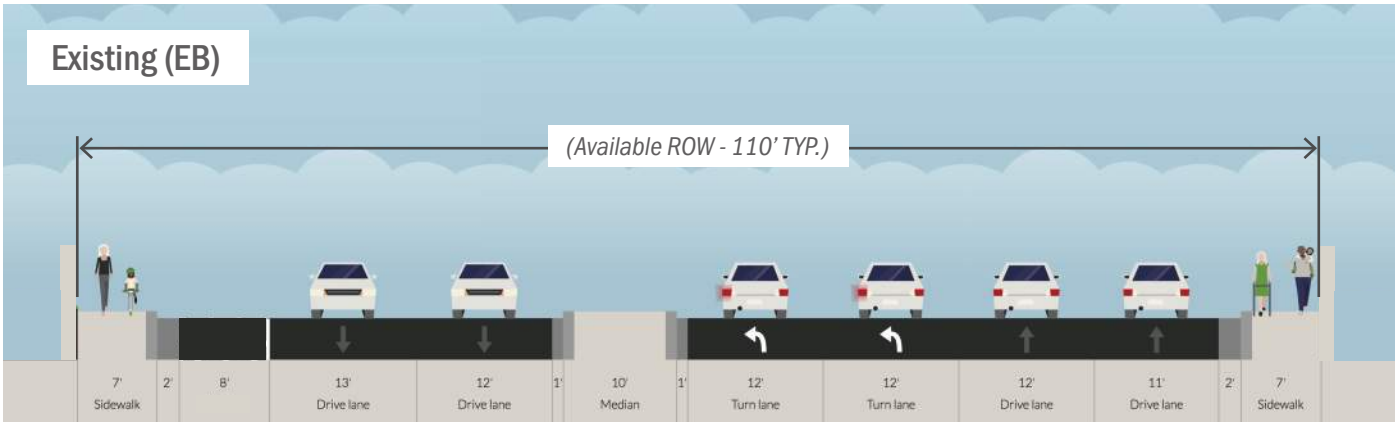
TYPE: Two-way Separated / Protected Bicycle Lanes - single side (south)

ID: 03-E

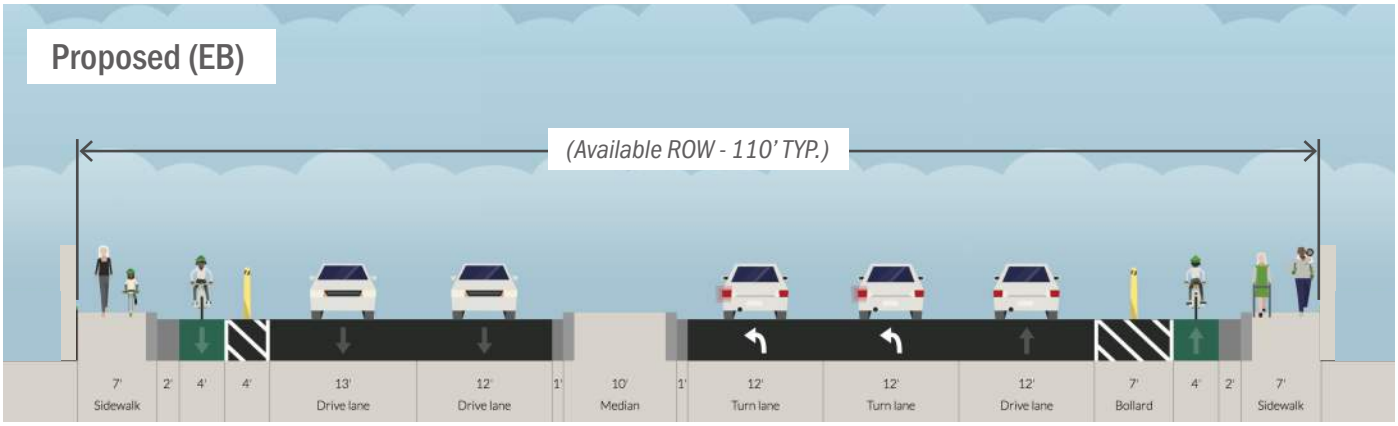
Revision: 08/16/18

Segment 2

Existing (EB)



Proposed (EB)



GENERAL DESCRIPTION

Three Lane Conversion and Two-way Separated / Protected Bike Lanes

- Implement a three lane conversion ("Road Diet") for Segment 2
  - ADT at adjoining Segment 3 is within range for conversion; ADT at Segment 2 is currently not available but may also be within range for conversion
  - Partial conversion at this location (removal of one EB lane) frees up space for EB separated bike lane
  - Existing shoulder space along north side repurposed to WB separated bike lane
- Implement separated protected bicycle lanes along both sides of roadway
  - Does not requires change to existing roadway curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Bike friendly drainage grates
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
  - Account for adjustments to accommodate one-way bike lanes
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 04
Revision: 08/14/18

Project: West Broadway Avenue - 60th Avenue North to CR81
City: Brooklyn Park
Mode(s): Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: 60th Avenue
- Route covers: West Broadway Avenue
- Route ends: 71st Avenue/CR 81

Relation to other proposed projects

- Connects to Project IDs 08 and 11

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route

- Segment 1: Two lane, two way roadway between 60th and 69th Ave N
- Segment 2: Four lane, two way with center turn lane and median north of 69th Ave N

Project Description
Segments to be Considered

ID: 04
Revision: 08/14/18

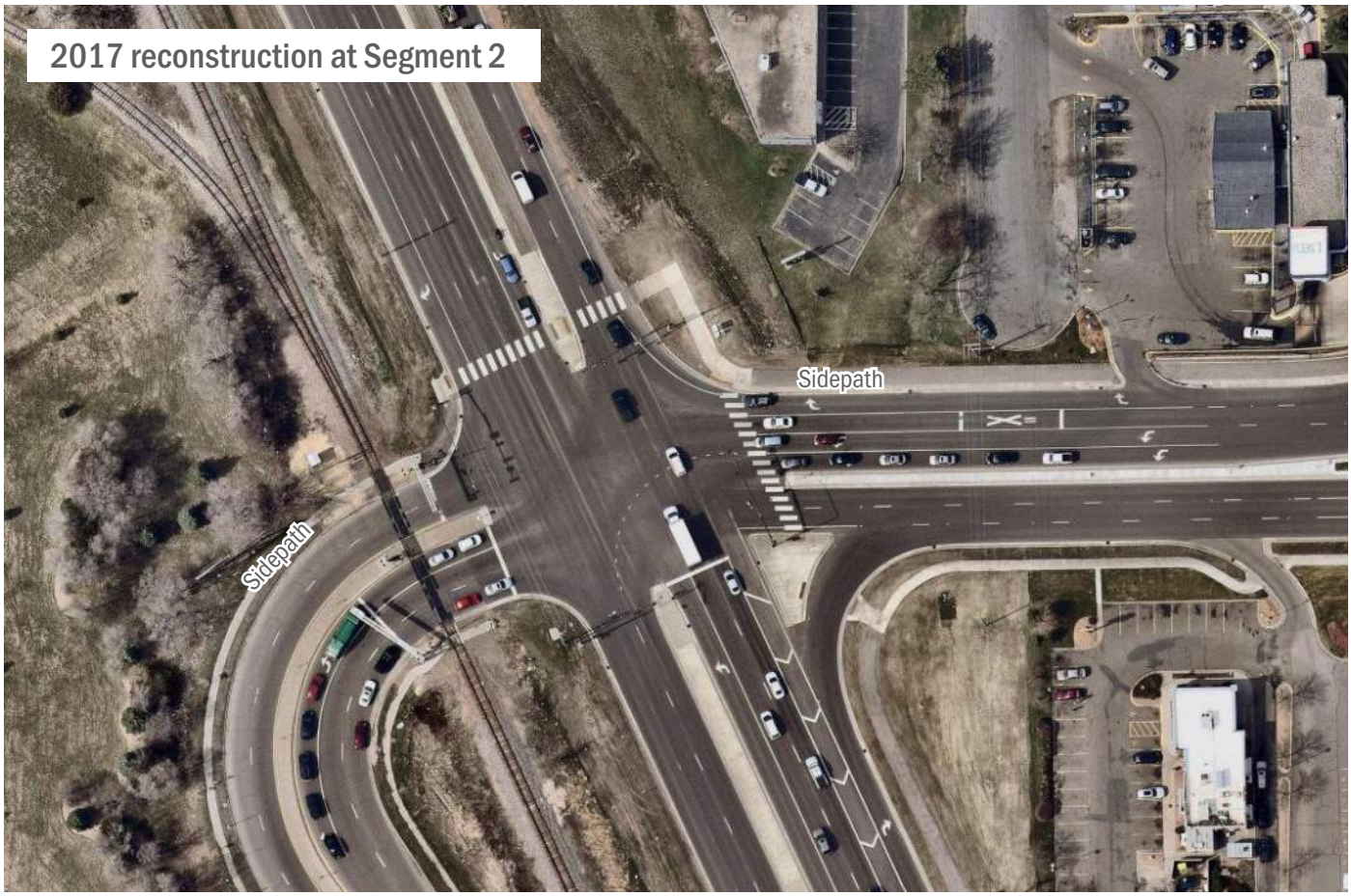
Segments considered and general project location.

Project Description
Segments to be Considered - CONTINUED

ID: 04
Revision: 08/14/18

Project Description
Segments to be Considered - CONTINUED

ID: 04
Revision: 08/14/18



Project Description
Description of Segments

ID: 04
Revision: 08/14/18

Categories	Segment 1	Segment 2
Description of typical roadway section	Two lane, two way	Four lanes, two way with a center turn lane
Number of through lanes (typ. config.)	2	4
AADT (typ.)	6,300	8,700 to 12,100
Speed limit (mph)	30	30
Roadway (curb-to-curb) width typ. (ft)	38 to 40	86
Available right-of-way typ. (ft)	74 to 82	105
Roadway jurisdiction	Hennepin Co	Hennepin Co
State Aid Facility?	Yes - CSAH 8	Yes - CSAH 8
Curb & gutter (urban) section?	No, except east side south of 62nd Ave	Yes
Median present?	No	Yes
On-street parking present?	No	No
Shoulder present?	Yes	No
Width of shoulder or parking lane	8	N/A
Width of driving lane(s)	11	12.5
Center left turn lane?	No	Yes
Width of center turn lane	N/A	11.5
Sidewalk or sidepath present?	Sidewalk on east south of 62nd Ave	Sidewalk on west and east, north of 69th Ave N
Boulevard or buffer from roadway (typ)	8 ft	9 ft
Approximate length of segment (ft)	6,970 ft	1,520 ft
Transit service along project	705, 716, 767, 764	705, 764
Transit service across project	None	782
Segment interacts with the 90% plans?	No	Yes

Project Description
Description of Segments - CONTINUED

ID: 04
Revision: 08/14/18

Categories	Segment 1	Segment 2
Recommendation from 90% plans	N/A	Intersection was reconstructed in 2017. Sidewalk on west side of road, no sidewalk on east side of road. Trail provided on west side of CR81
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A	Separated bike lanes (both sides) and single bidirectional trail (on west).
Do the recommendations conflict or preclude each other?	No	No

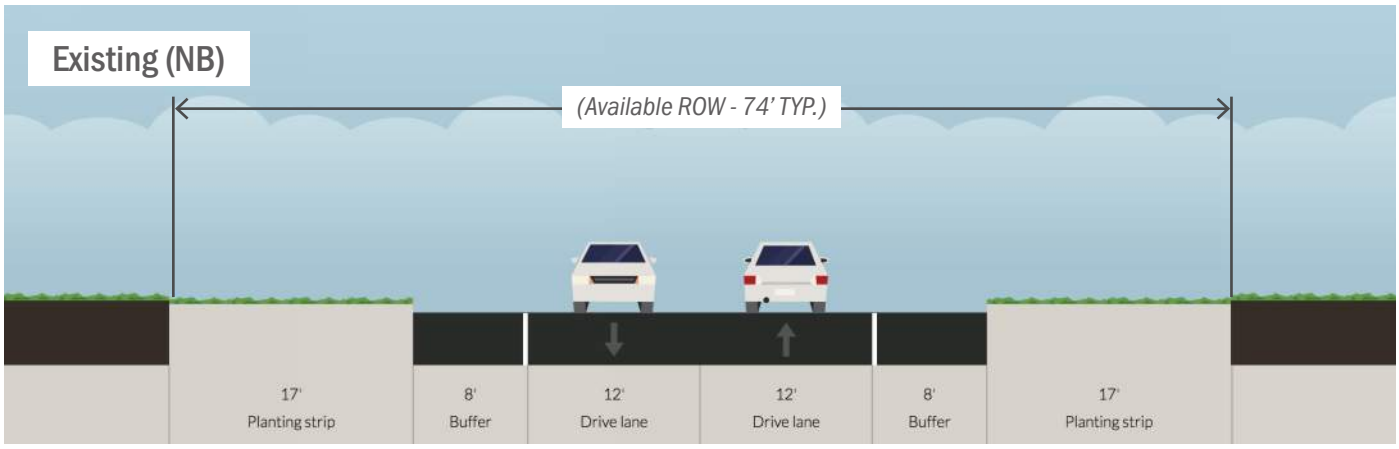
Project Description
General Guidelines and Standards

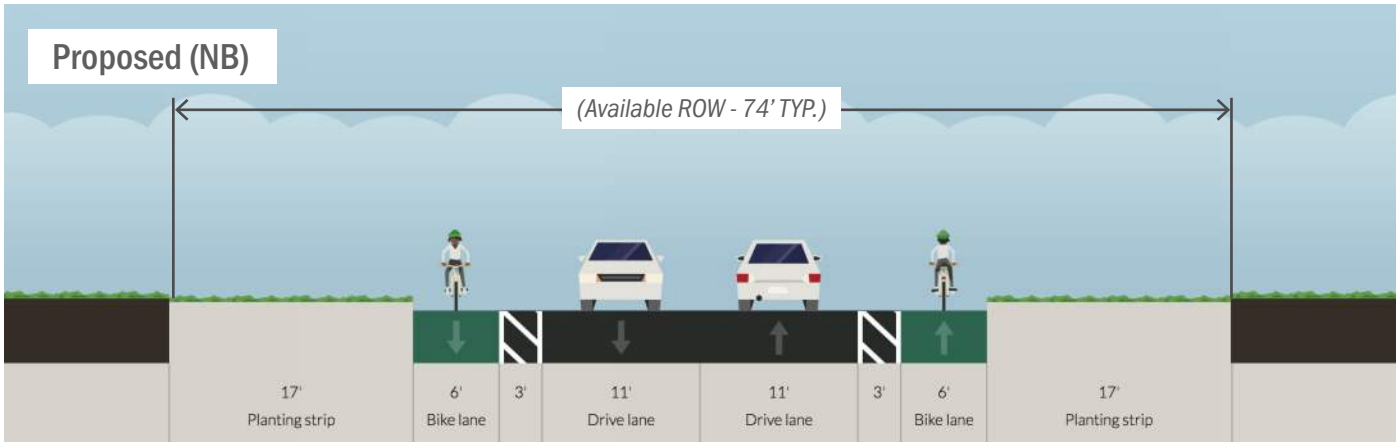
ID: 04
Revision: 08/14/18

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

Concept Proposal
TYPE: Buffered Bike Lanes

ID: 04-A
Revision: 08/14/18
Segment 1





GENERAL DESCRIPTION

Buffered Bicycle Lane

- Buffered bicycle lanes provided in the existing shoulder
- No change to existing roadway cross-section width

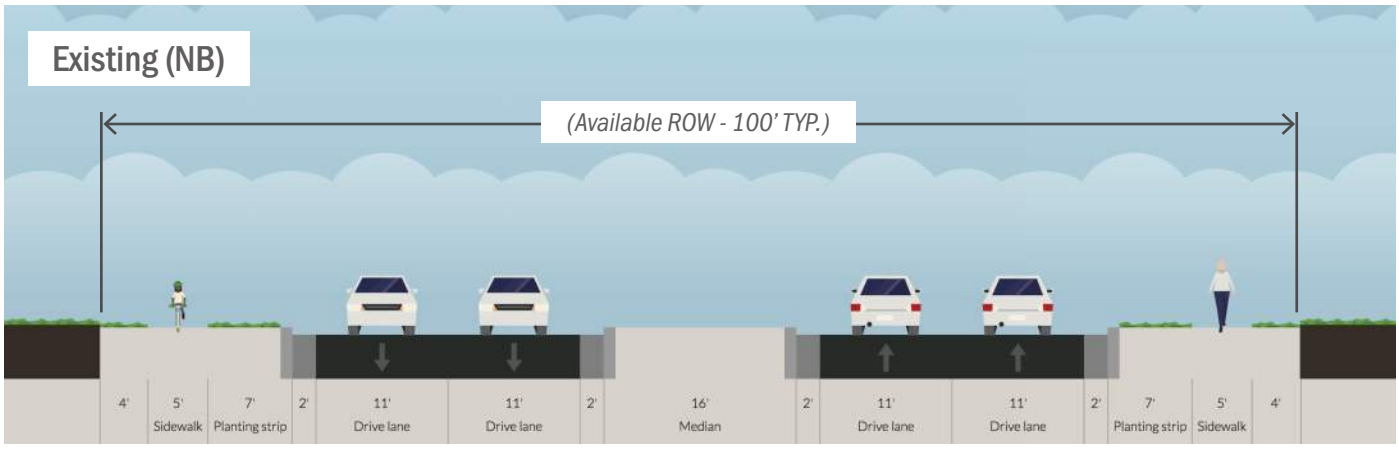
OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

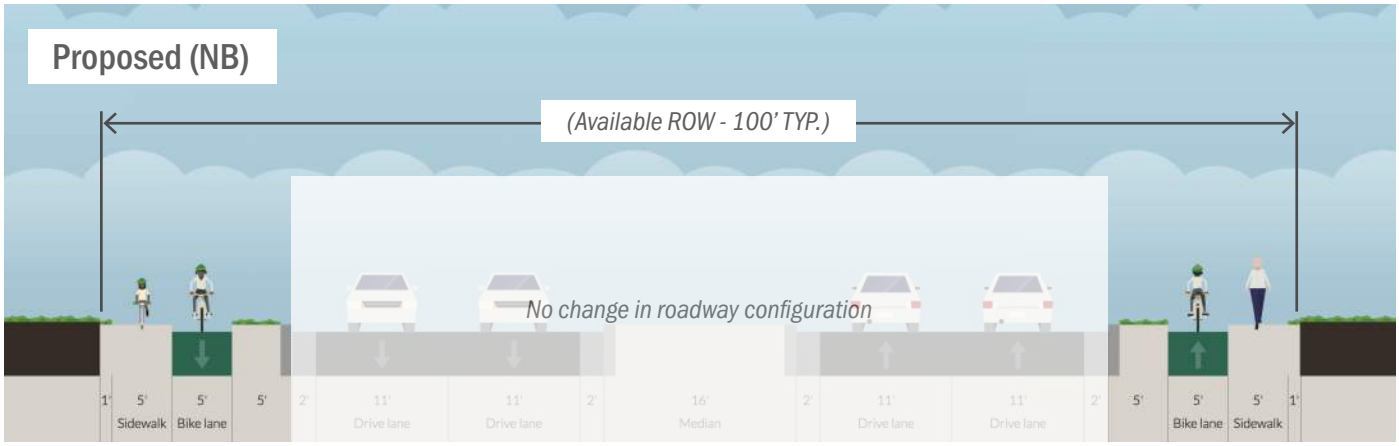
- Impacts to existing on-street parking
  - Access to mailboxes for mailtrucks
- Impacts to existing stormwater infrastructure / gutter
  - Verify impacts of roadway spread changes, if any
- Impacts to existing transit
  - Eliminates bus pull-over area
- Impacts to signalized intersections
  - Potential use of separate bike signal

Concept Proposal
TYPE: Bike Lanes

ID: 04-B
Revision: 08/14/18

Segment 2





GENERAL DESCRIPTION

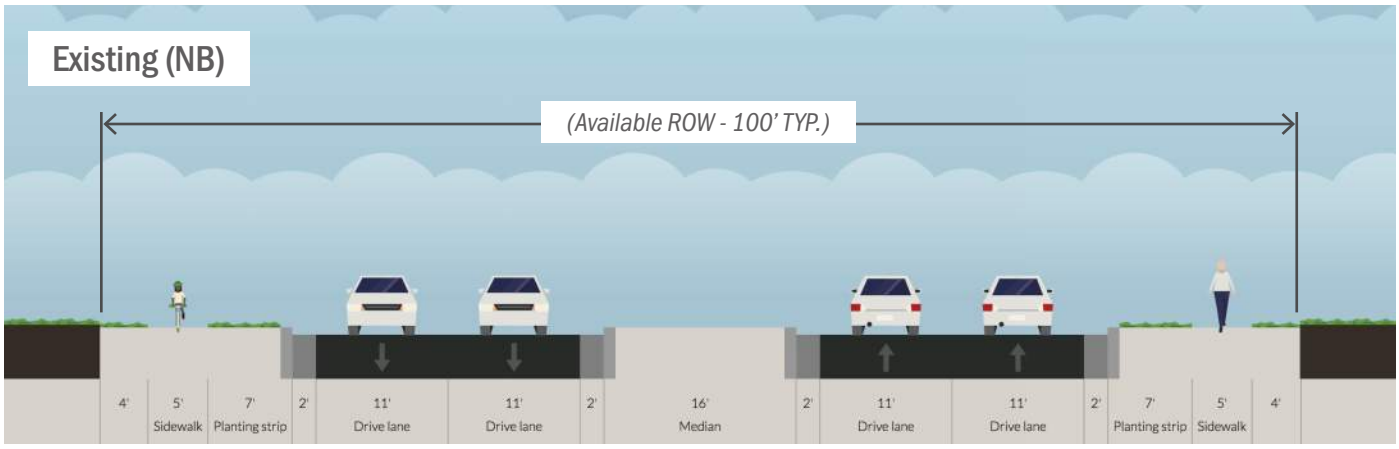
- Provide separated / protected bicycle lane (both sides) in space adjacent to the sidewalk and separated from the roadway by boulevard
- No change to existing roadway cross-section width or roadway components
- Fills in sidewalk gap on east side

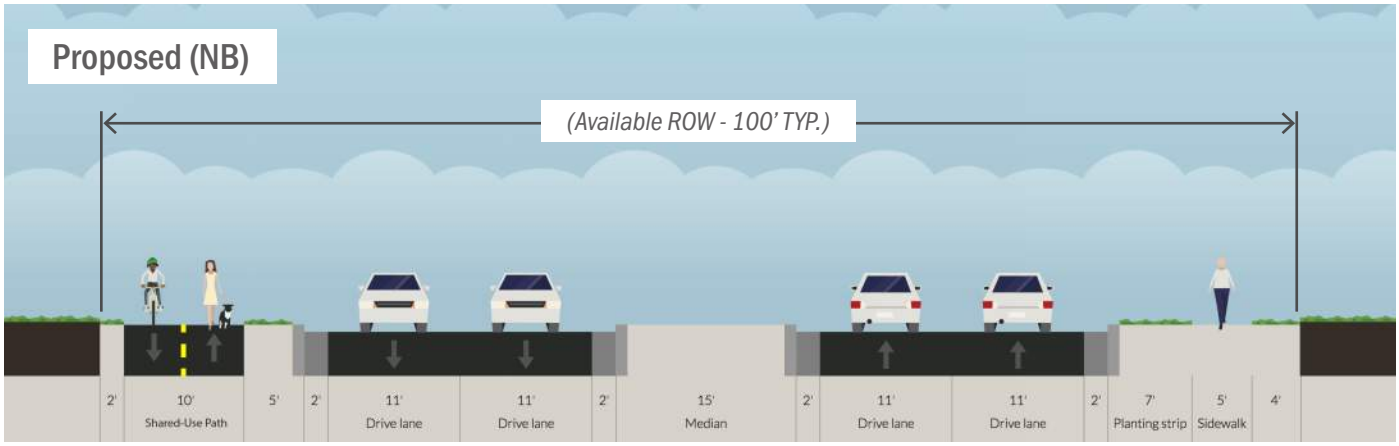
OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - None
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Evaluate turning templates if changing intersection turning radii

Concept Proposal
TYPE: Shared-Use Path

ID: 04-C
Revision: 08/14/18
Segment 2





GENERAL DESCRIPTION

Single Two-way Shared-use Path / Trail

- Implement one two-way shared-use path / trail along the west side of roadway
  - Ties to facility across recently reconstructed CR81
  - Transition Segment 1 facility to single side before reaching Segment 2
- Requires reconstruction and modification to existing roadway cross-section width and curb line
  - Median and west side only
  - Reduction in buffer between path and road could eliminate roadway and median impacts
- Fills in sidewalk gap on east side

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Evaluate turning templates if changing intersection turning radii
- Need to determine location and method for transition between segment one (on-road treatment) and segment two (off-road treatment)

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 05
Revision: 08/15/18

Project: 93rd Avenue North - Jefferson Highway to Blue Line Station
City: Brooklyn Park
Mode(s): Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: Jefferson Highway North / Central Avenue
- Route covers: 93rd Avenue North / 7th Street North
- Route ends: West Broadway Avenue

Relation to other proposed projects

- Blue Line station just south of West Broadway

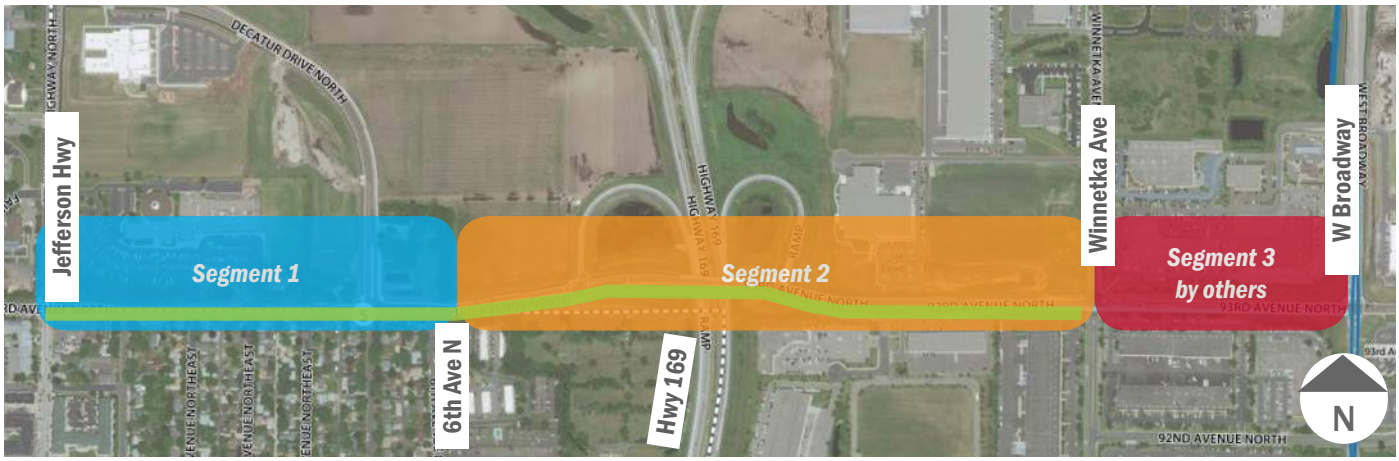
UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route

- Segment 1: Two lane section west of 6th Ave N, with occasional center left and right turn lanes
- Segment 2: Four lane section between 6th Ave N and Wyoming Ave, including center left and right turn lanes.
- Segment 3: Two lane, two way, center left turn east of Wyoming Avenue

Project Description
Segments to be Considered

ID: 05
Revision: 08/15/18



Segments considered and general project location.

Project Description
Segments to be Considered - CONTINUED

ID: 05
Revision: 08/15/18

View of trail along Segment 2 (EB)

View of Segment 3 (EB)

View of Segment 3 at West Broadway (EB)

Project Description
Description of Segments

ID: 05
Revision: 08/15/18

Categories	Segment 1	Segment 2	Segment 3
Description of typical roadway section	Two lane, two way (occasional center left and right turn lanes)	Four lane, two way (with center left and right turn lanes)	Two lane, two way (with center left turn lane)
Number of through lanes (typ. config.)	2	4	2
AADT (typ.)	no data available	7,600 to 8,600	7,600 to 5,800
Speed limit (mph)	35	40	40
Roadway (curb-to-curb) width typ. (ft)	22-50 (48 typ)	60-82	32
Available right-of-way typ. (ft)	66 ft	100	100
Roadway jurisdiction	Hennepin County	Hennepin County	Hennepin County
State Aid Facility?	Yes - CSAH 30	Yes - CSAH 30	Yes - CSAH 30
Curb & gutter (urban) section?	No	Yes	No
Median present?	No	Yes (8 - 12 ft)	Yes (painted, 8ft)
On-street parking present?	No	No	No
Shoulder present?	Yes	No	Yes (unpaved)
Width of shoulder or parking lane	2 - 5	N/A	2 - 7
Width of driving lane(s)	12	12	11
Center left turn lane?	Yes	Yes	Yes
Width of center turn lane	10.5	11	10
Sidewalk or sidepath present?	None	8 ft sidepath on north and south (west of 169) - 12 ft sidewalk north and south on bridge over 169 - 8 ft sidepath on south (east of 169)	None
Boulevard or buffer from roadway (typ)	N/A	5.5 ft on north, 7 ft on south (west of 169) - none (east of 169)	N/A
Approximate length of segment (ft)	1,930 ft	3,380 ft	1,310 ft
Transit service along project	None	None	724

Project Description
Description of Segments - CONTINUED

ID: 05
Revision: 08/15/18

Categories	Segment 1	Segment 2	Segment 3
Transit service across project	782	None	None
Segment interacts with the 90% plans?	No	No	Yes: Wyoming Ave N to W Broadway Ave
Recommendation from 90% plans	N/A	N/A	Trail on north and south side of 93rd of W Broadway Ave. Two lane, two way traffic on road, w/ a landscape median, and left and right turn lanes at intersections.
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A	N/A	Shared-use path on one or both sides of road
Do the recommendations conflict or preclude each other?	N/A	N/A	No

Project 05 Segment 3 is being designed as a four-lane divided roadway with trails on both sides as part of LRT station plans.

Project Description
General Guidelines and Standards

ID: 05
Revision: 08/15/18

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

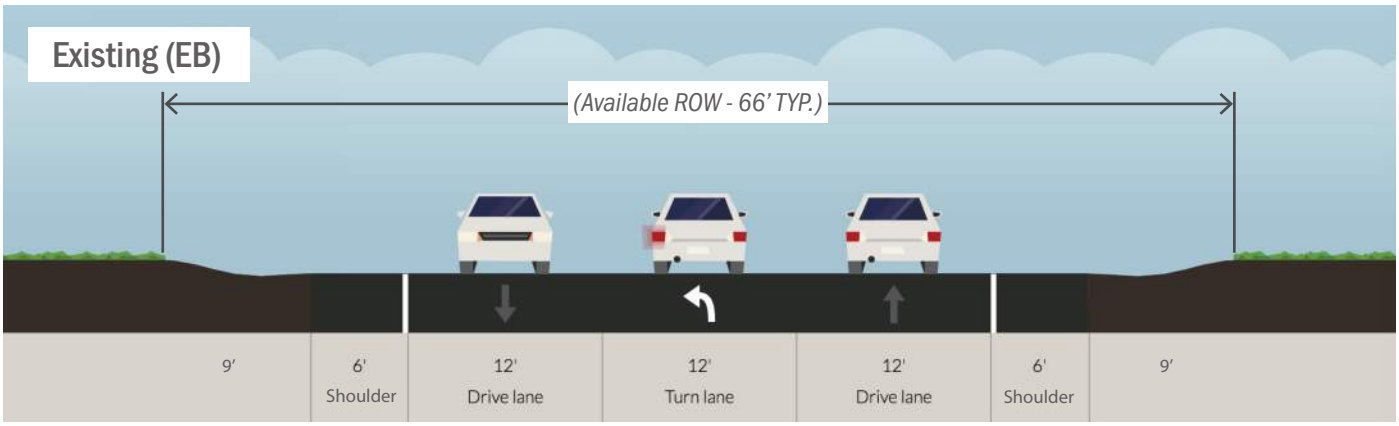
Concept Proposal

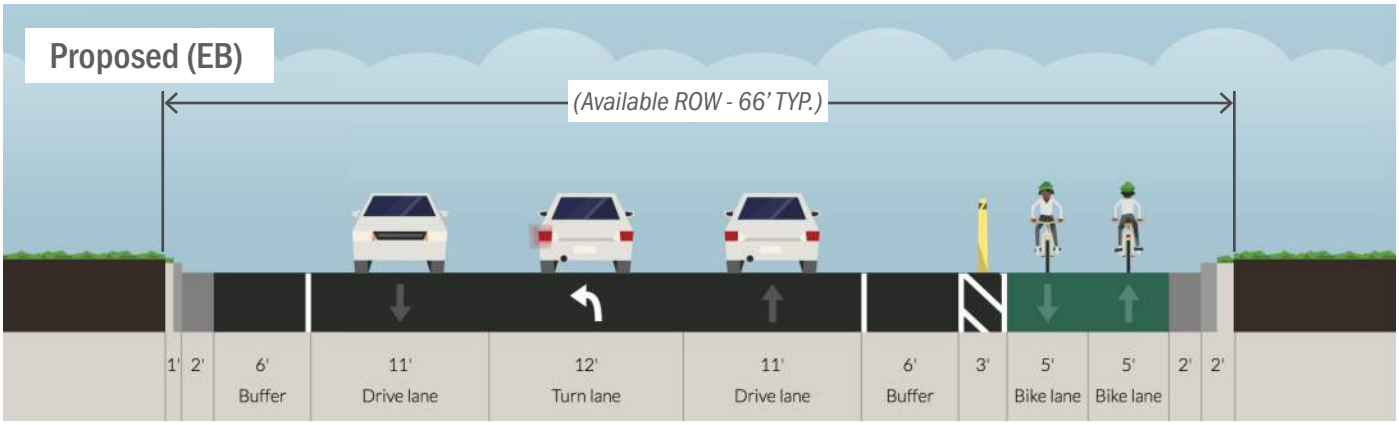
TYPE: Two-way Separated / Protected Bicycle Lane - single side (south)

ID: 05-A

Revision: 08/15/18

Segment 1





GENERAL DESCRIPTION

Two-way separated/protected bicycle lane

- Implement one two-way separated/protected bicycle lane
  - Place on south side to facilitate connection with Blue Line station
- Requires reconstruction and modification to roadway cross-sections and curb and gutters

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage/curb and gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - Potential change to turning radii at intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

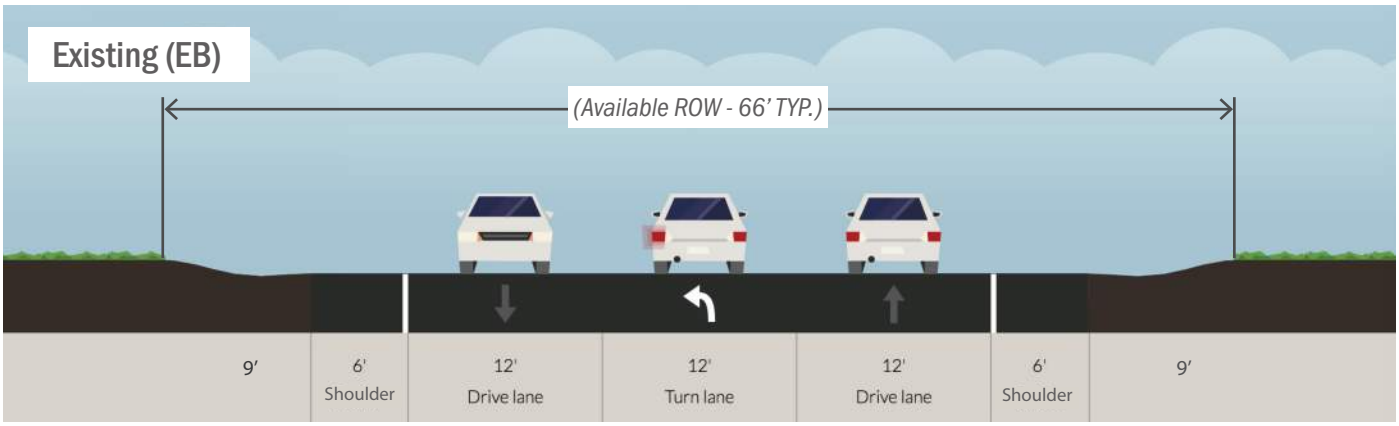
Concept Proposal

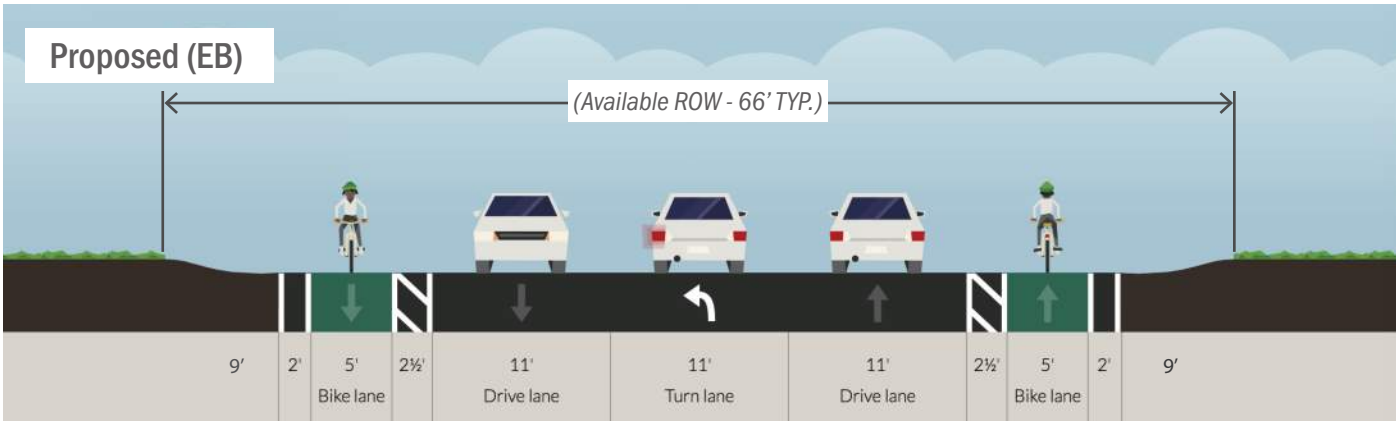
TYPE: One-way Buffered Bicycle Lanes - both sides

ID: 05-B

Revision: 08/15/18

Segment 1





GENERAL DESCRIPTION

One-way Buffered Bicycle Lanes

- Implement a pair of one-way buffered bicycle lanes on roadway shoulder
  - Shoulder remains accessible by motor-vehicles
- Maintains existing roadway cross-section width
  - Maintains existing roadway edge line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - May require ditch regrading
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - Potential change to turning radii at intersections

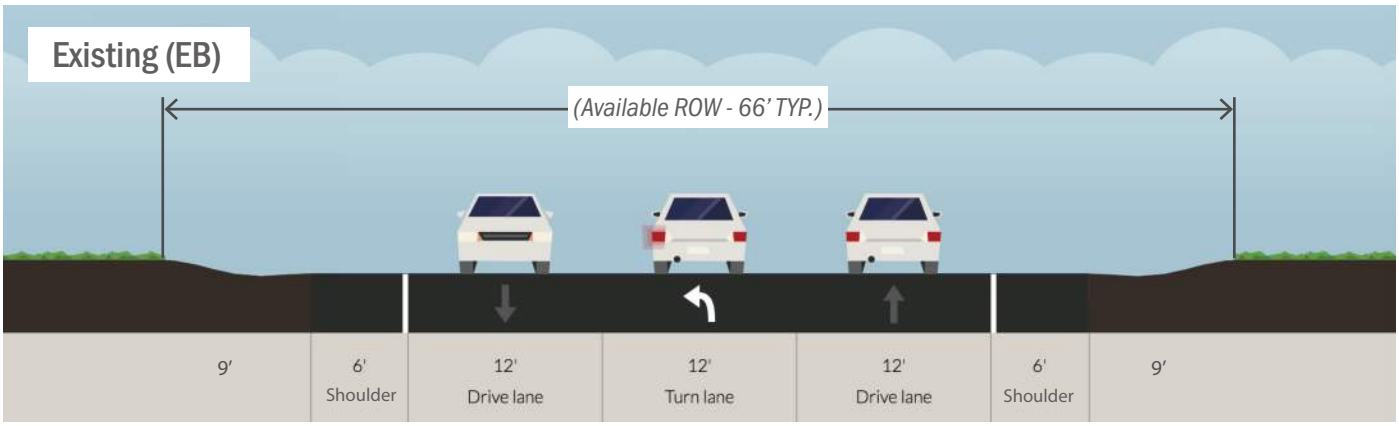
Concept Proposal

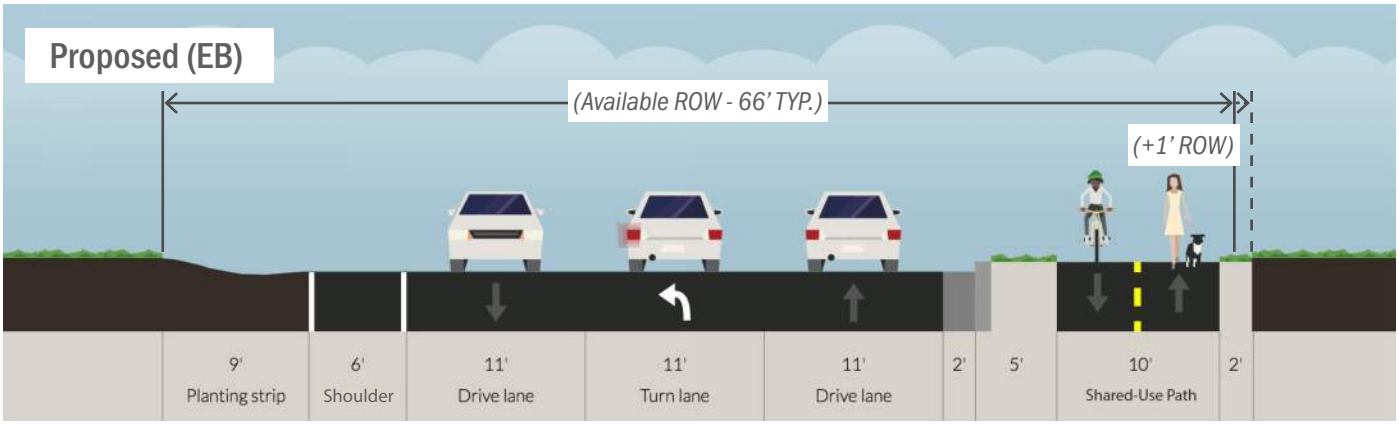
TYPE: Two-way Shared-Use Path / Trail - single side (south)

ID: 05-C

Revision: 08/15/18

Segment 1





GENERAL DESCRIPTION

Single Two-way Shared-use Path / Trail

- Implement one two-way shared-use path / trail
  - Place on south side to facilitate connection with Blue Line station
- Maintains existing roadway cross-section width
  - Requires construction of curb and gutter and modification of existing curb line on one side

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage/curb and gutter
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - Potential change to turning radii at intersections
- 1' acquisition or easement beyond existing ROW
  - Reducing path to 9' would eliminate ROW impacts

Concept Proposal

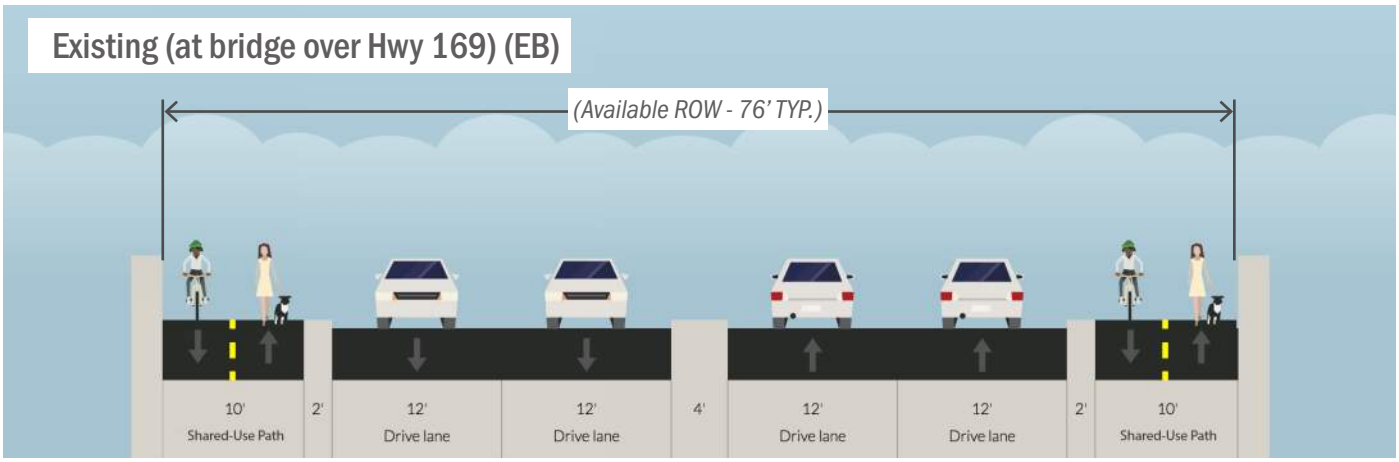
TYPE: Two-way Shared-Use Path / Trail - both sides

ID: 05-D

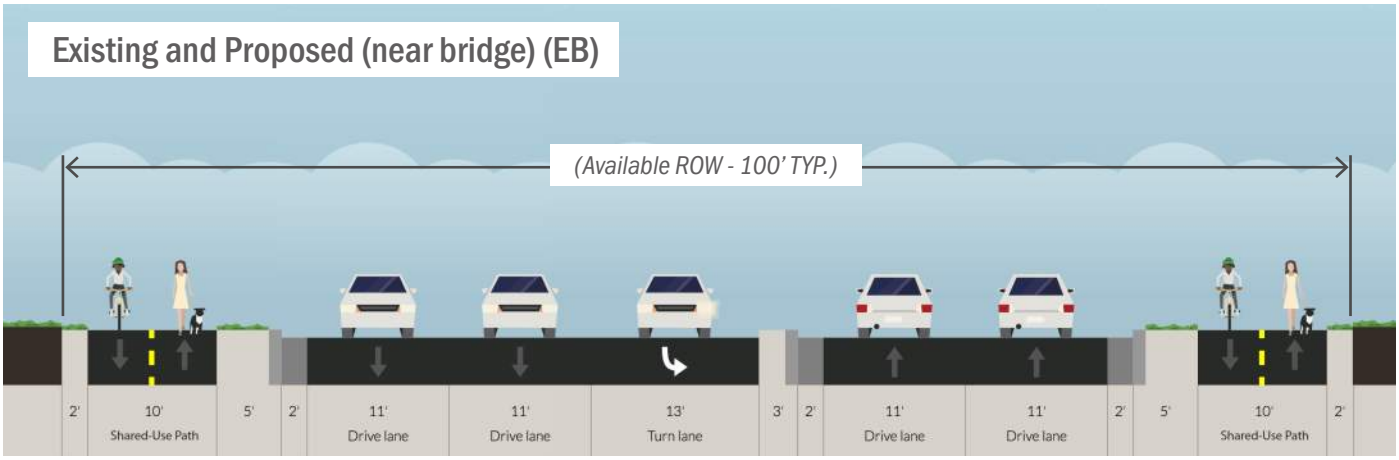
Revision: 08/15/18

Segment 2

Existing (at bridge over Hwy 169) (EB)



Existing and Proposed (near bridge) (EB)



GENERAL DESCRIPTION

Two-way Shared-use Paths / Trails

- Implement two-way shared-use path / trails along both sides of the roadway
  - Trails and accommodation are already provided on both sides of approaches and bridge over Hwy 169, and in one or both sides of segment 2
  - If necessary, prioritize connection and development of trails on south side to facilitate connection with Blue Line station

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter between 6th Ave and N. Oak (south side)
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - Potential change to turning radii at intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Potential wetland impacts between 6th Ave and N. Oak on south side

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 06
Revision: 08/13/18

Project: Hubbard Avenue
City: Robbinsdale
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location and traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: 42nd Avenue N and Hubbard Avenue N
- Route covers: Hubbard Avenue N
- Route ends: 36th Avenue N and Hubbard Avenue N

Relation to other proposed projects

- Connects to Project IDs 03 and 17
- Blue Line station nearby, south of 42nd Ave N

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration are generally constant along the route

- Minor variation in cross-section elements between north and south of 41st Avenue North

Project Description
Segments to be Considered

ID: 06
Revision: 08/13/18

Segments considered and general project location.

Project Description
Description of Segments

ID: 06
Revision: 08/13/18

Categories	Segment 1	Segment 2
Description of typical roadway section	Two lane, two way	Two lane, two way
Number of through lanes (typ. config.)	2	2
AADT (typ.)	1,200	740 to 780
Speed limit (mph)	30	30
Roadway (curb-to-curb) width typ. (ft)	30	32
Available right-of-way typ. (ft)	50	60
Roadway jurisdiction	Robbinsdale	Robbinsdale
State Aid Facility?	Yes - MSAS	Yes - MSAS
Curb & gutter (urban) section?	Yes	Yes
Median present?	No	No
On-street parking present?	Yes, one side	Yes, both sides
Shoulder present?	No	No
Width of shoulder or parking lane	8	6 (not marked)
Width of driving lane(s)	11	10 (not marked)
Center left turn lane?	No	No
Width of center turn lane	N/A	N/A
Sidewalk or sidepath present?	Sidewalk on east and west	Sidewalk on east and west (north of 38th Ave N) - Sidewalk on east (south of 38th Ave N)
Boulevard or buffer from roadway (typ)	None	6 ft
Approximate length of segment (ft)	960 ft	4,000 ft
Transit service along project	14, 32, 716, 717, 758	None
Transit service across project	N/A	14, 32
Segment interacts with the 90% plans?	Yes	No

Project Description
Description of Segments - CONTINUED

ID: 06
Revision: 08/13/18

Categories	Segment 1	Segment 2
Recommendation from 90% plans	Sidewalk improvements, redesigned curb of Hubbard at 42nd Ave N	N/A
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	Neighborhood Slow Street	N/A
Do the recommendations conflict or preclude each other?	No	No

Project Description
General Guidelines and Standards

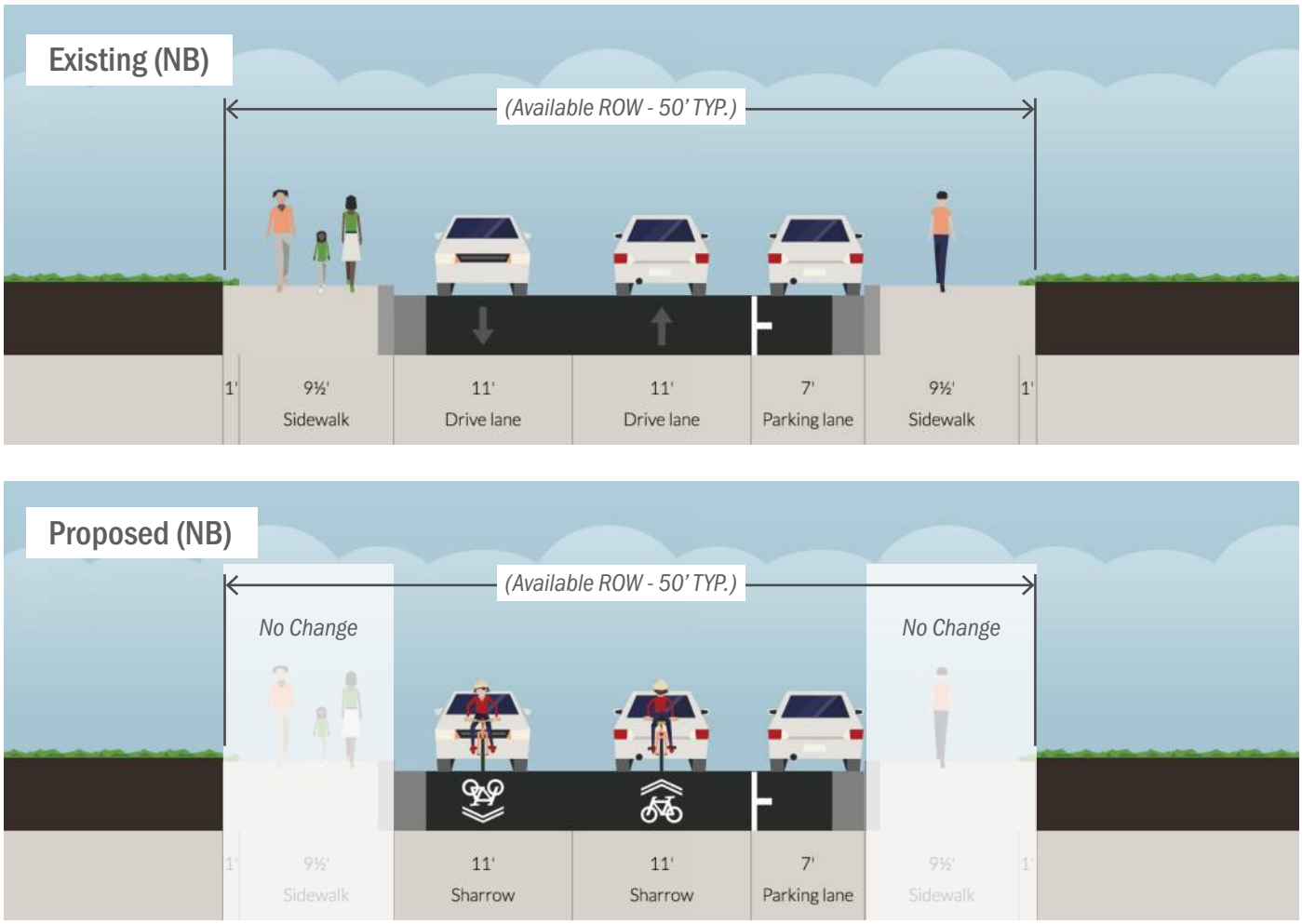
ID: 06
Revision: 08/13/18

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

Concept Proposal
TYPE: Neighborhood Slow Street

ID: 06-A
Revision: 08/13/18

Segment 1



GENERAL DESCRIPTION

Neighborhood Slow Street

- Implement Neighborhood Slow Street (traffic-calmed street)
  - Suitable solution given low volumes of traffic (significantly below 3,000 ADT threshold)
- Introduce traffic calming elements to calm traffic speeds to 25 mph or less:
  - Reorient stop signs to stop cross street / perpendicular traffic
  - Add traffic-calming elements, including traffic circles, bump-outs (curb extensions), medians, diverters or speed tables
  - Add wayfinding markers and route signs
  - Add pavement markings, including oversize sharrow or bike boulevard markings
- Investigate and develop solutions for movement across intersections and connection for:
  - Crossing 41st Ave North (route includes zig-zag along 41st)

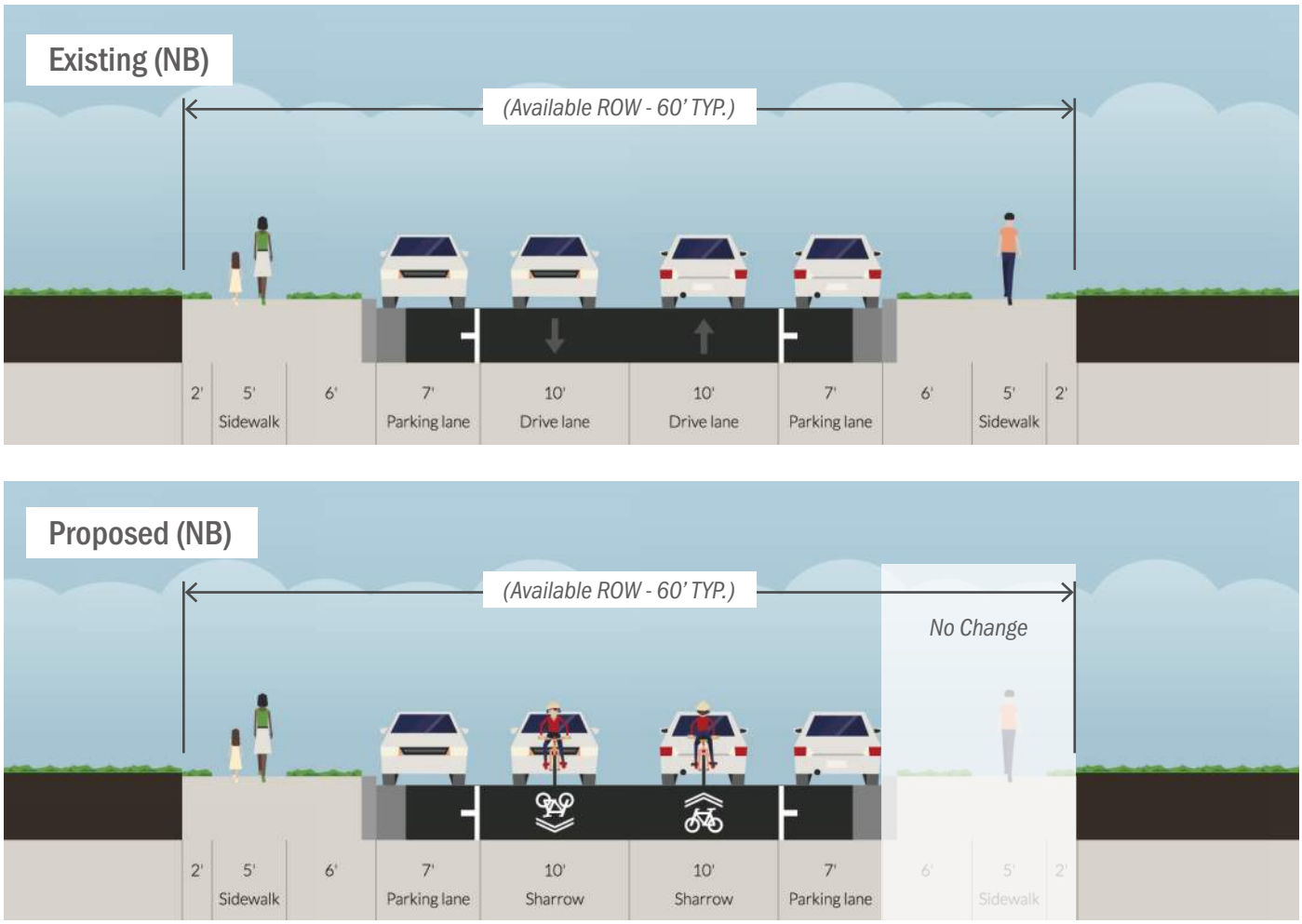
OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - None
- Impacts to existing transit
  - Work with Metro Transit to maintain appropriate access from 41st Ave N to Lake Dr / 42nd Ave N
- Impacts at signalized intersections
  - N/A

Concept Proposal
TYPE: Neighborhood Slow Street

ID: 06-B
Revision: 08/13/18

Segment 2



GENERAL DESCRIPTION

Neighborhood Slow Street

- Implement Neighborhood Slow Street (traffic-calmed street)
  - Suitable solution given low volumes of traffic (significantly below 3,000 ADT threshold)
- Introduce traffic calming elements to calm traffic speeds to 25 mph or less:
  - Reorient stop signs to stop cross street / perpendicular traffic
  - Add traffic-calming elements, including traffic circles, bump-outs (curb extensions), medians, diverters or speed tables
  - Add wayfinding markers and route signs
  - Add pavement markings, including oversize sharrow or bike boulevard markings
- Develop sidewalk segments where not currently existing (west side south of 38th Ave N)
- Investigate and develop solutions for southern terminus at 36th Avenue North, and connection to other bicycle facilities

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - None
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - N/A

Concept Proposal
TYPE: Neighborhood Slow Street

ID: 06
Revision: 08/13/18

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 07
Revision: 08/14/18

Project: West Broadway from 42nd Avenue North to 47th Avenue North
City: Robbinsdale
Mode(s): Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location and traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: 42nd Avenue N and W Broadway Ave
- Route covers: W Broadway Avenue
- Route ends: 47th Avenue N and W Broadway Ave

Relation to other proposed projects

- Connects to Project IDs 03, 06 and 11
- Southern terminus in proximity to Blue Line station

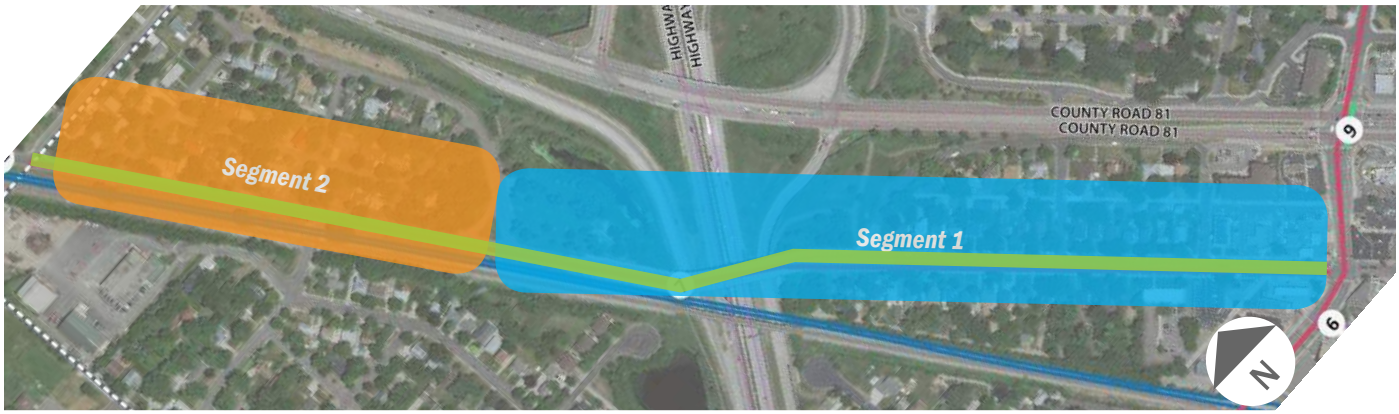
UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration are generally constant along the route

- Segment 1: Two lane section with parking, curb and gutter south of Lakeland Avenue
- Segment 2: Two lane section, rural shoulder, north of Lakeland Ave

Project Description
Segments to be Considered

ID: 07
Revision: 08/14/18



Segments considered and general project location.

Project Description

ID: 07
Revision: 08/14/18

Project Description
Description of Segments

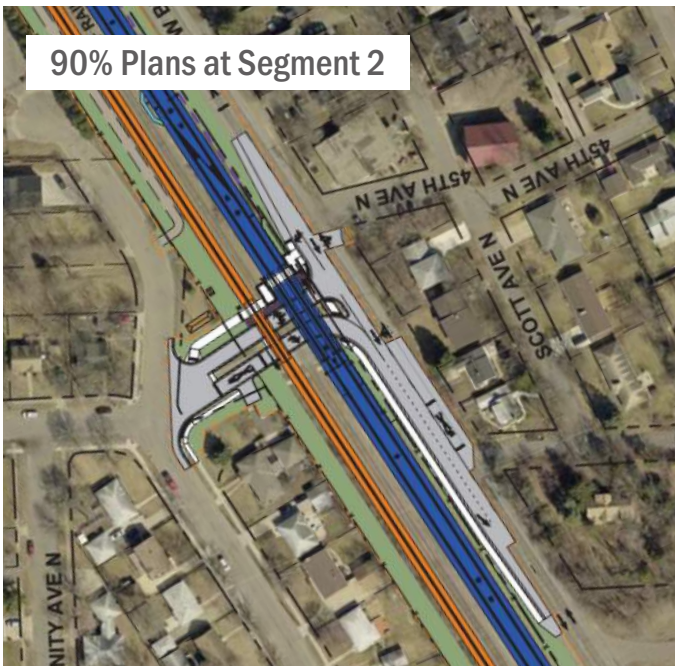
ID: 07
Revision: 08/14/18

Categories	Segment 1	Segment 2
Description of typical roadway section	Two lane, two way with parking lane	Two lane, two way with shoulder
Number of through lanes (typ. config.)	2	2
AADT (typ.)	5,200	3,700
Speed limit (mph)	30	30
Roadway (curb-to-curb) width typ. (ft)	44	40
Available right-of-way typ. (ft)	66	66
Roadway jurisdiction	Hennepin County	Hennepin County
State Aid Facility?	Yes - CSAH 8	Yes - CSAH 8
Curb & gutter (urban) section?	Yes	No
Median present?	No	No
On-street parking present?	Yes - except at bridge over Highway 100	No
Shoulder present?	No - except at bridge over Highway 100	Yes
Width of shoulder or parking lane	9	8
Width of driving lane(s)	13	12
Center left turn lane?	No	No
Width of center turn lane	N/A	N/A
Sidewalk or sidepath present?	Yes, 5 ft sidewalk both sides	No
Boulevard or buffer from roadway (typ)	6 ft	None
Approximate length of segment (ft)	1,420	2,490
Transit service along project	None	None
Transit service across project	None	717
Segment interacts with the 90% plans?	Yes	Yes

Project Description
Description of Segments - CONTINUED

ID: 07
Revision: 08/14/18

Categories	Segment 1	Segment 2
Recommendation from 90% plans	Improved sidewalks at 42nd Ave N intersection, center left turn and painted median between 42nd Ave n and 42nd ½ Ave N. No indication for bike facilities or boulevard.	Redesign 45 1/2 Ave N with new right turn lane, new sidewalk on west side of road (see below)
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	Two way separated bicycle facility on the west side of the road, boulevard between sidewalk and road.	Proposal 7-A is two-way separated bicycle lane on the west side of the roadway. Proposal 7-B calls is one-way separated bicycle lane on both sides of street.
Do the recommendations conflict or preclude each other?	Geometry does not preclude our recommended concept from working.	Potentially yes - proposed 90% designs do not seem to include space for separated bike lane on west side as needed for either 7-A or 7-B, but could be addressed to resolve.



Project Description
General Guidelines and Standards

ID: 07
Revision: 08/14/18

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

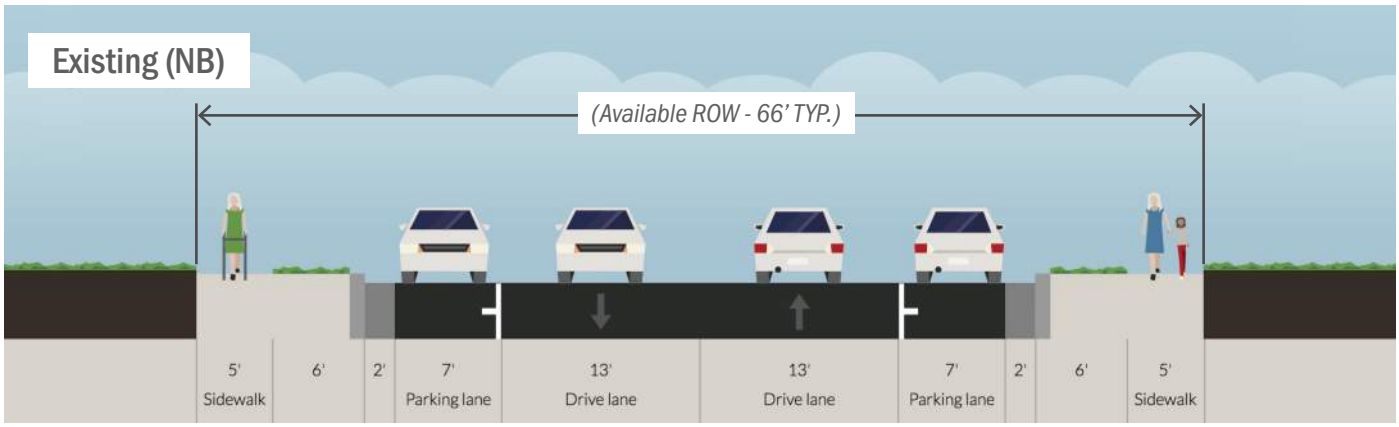
Concept Proposal

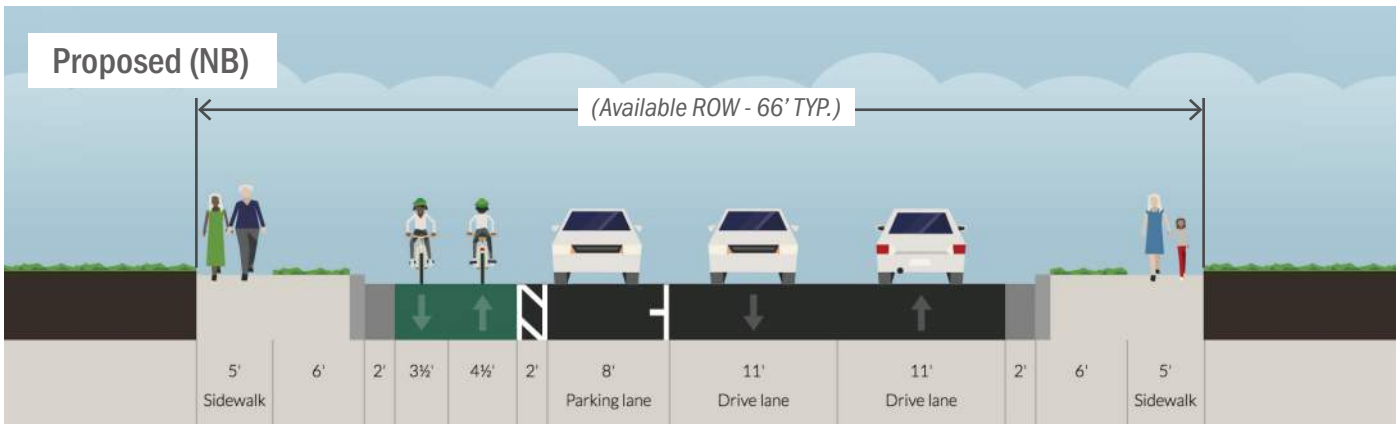
TYPE: Two-way Separated / Protected Bicycle Lane - single side (west)

ID: 07-B

Revision: 08/14/18

Segment 1





GENERAL DESCRIPTION

Two-way Separated / Protected Bicycle Lane

- Implement a two-way separated bicycle lane
  - Place on west side to reduce number of intersections
- No change to existing roadway cross-section
  - Maintains existing curb line
- Removes one lane of existing parking
  - Maintain parking lane along west side to accommodate multi-family and commercial uses along Segment 1

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - Elimination of east side parking lane
- Impacts to existing stormwater infrastructure / gutter
  - Bike friendly drainage grates
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections

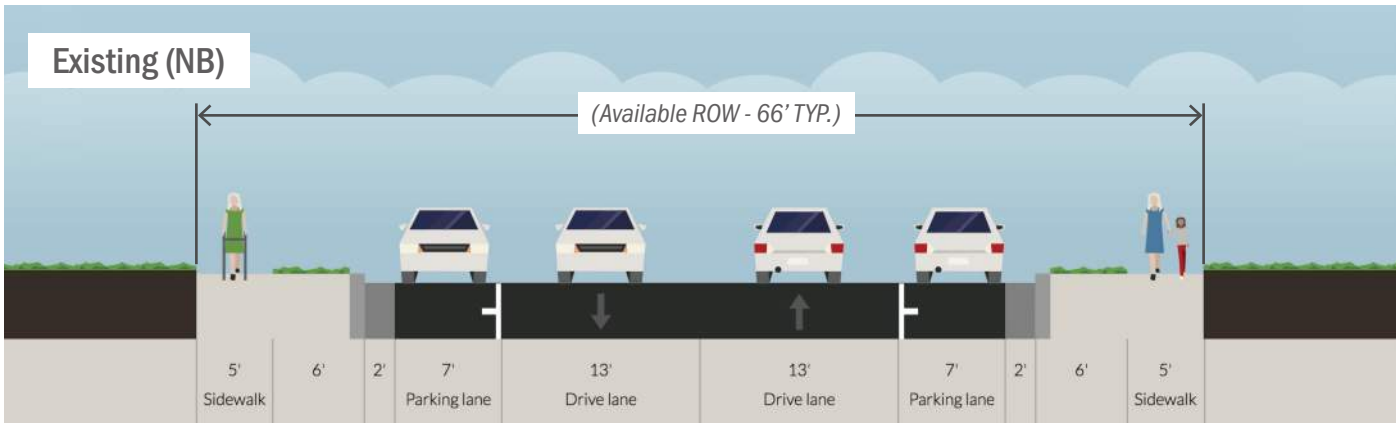
Concept Proposal

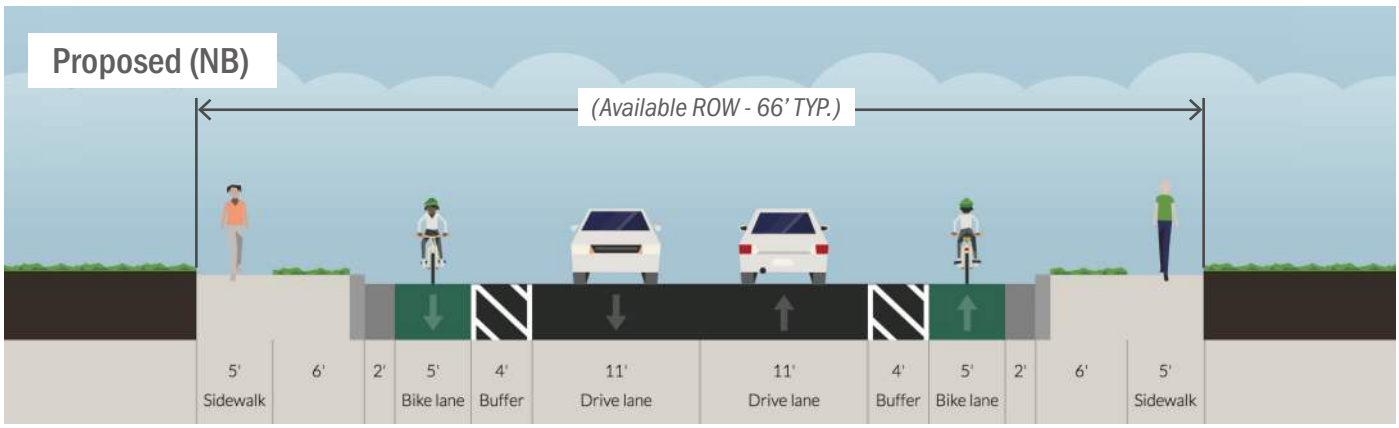
TYPE: One-way Buffered Bicycle Lanes - both sides

ID: 07-C

Revision: 08/14/18

Segment 1





GENERAL DESCRIPTION

One-way Buffered Bicycle Lanes

- Implement a pair of one-way buffered bicycle lanes
- Maintains existing roadway cross-section width
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - Elimination of parking on both sides
- Impacts to existing stormwater infrastructure / gutter
  - Bike friendly drainage grates
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections

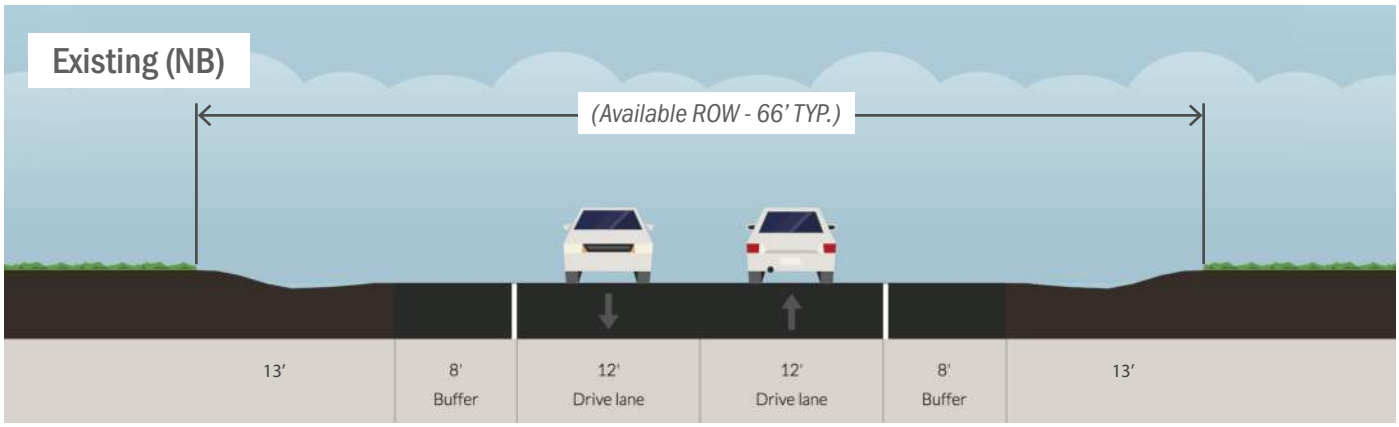
Concept Proposal

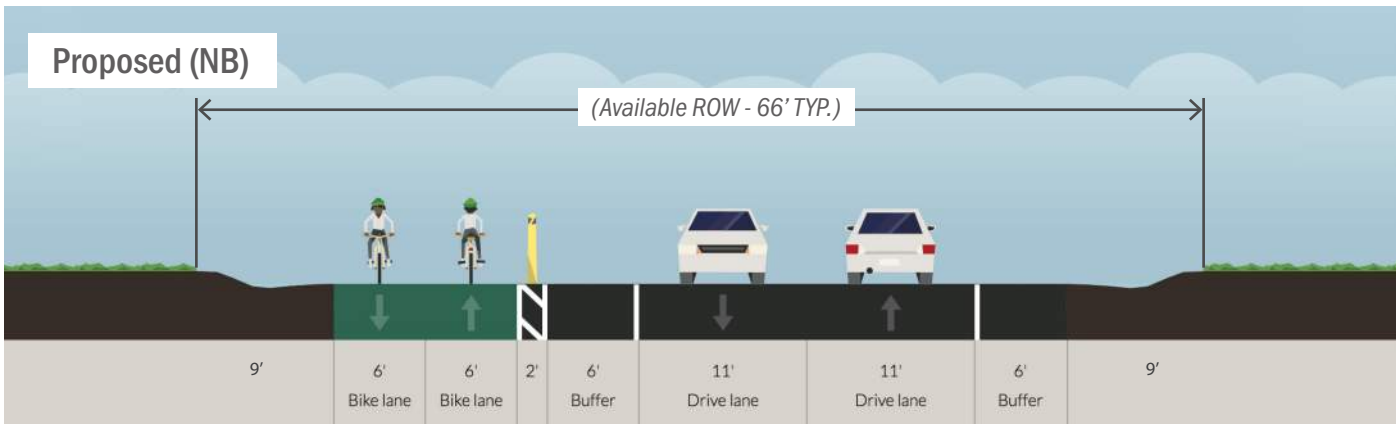
TYPE: Two-way Separated / Protected Bicycle Lane - single side (west)

ID: 07-D

Revision: 08/14/18

Segment 2





GENERAL DESCRIPTION

Two-way Separated / Protected Bicycle Lane

- Implement a two-way separated bicycle lane
  - Place on west side to reduce number of intersections
- Reconstruction and modification of roadway cross-section

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Potential impacts to stormwater by adding impervious surface
  - Re-grading of drainage ditches
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - N/A

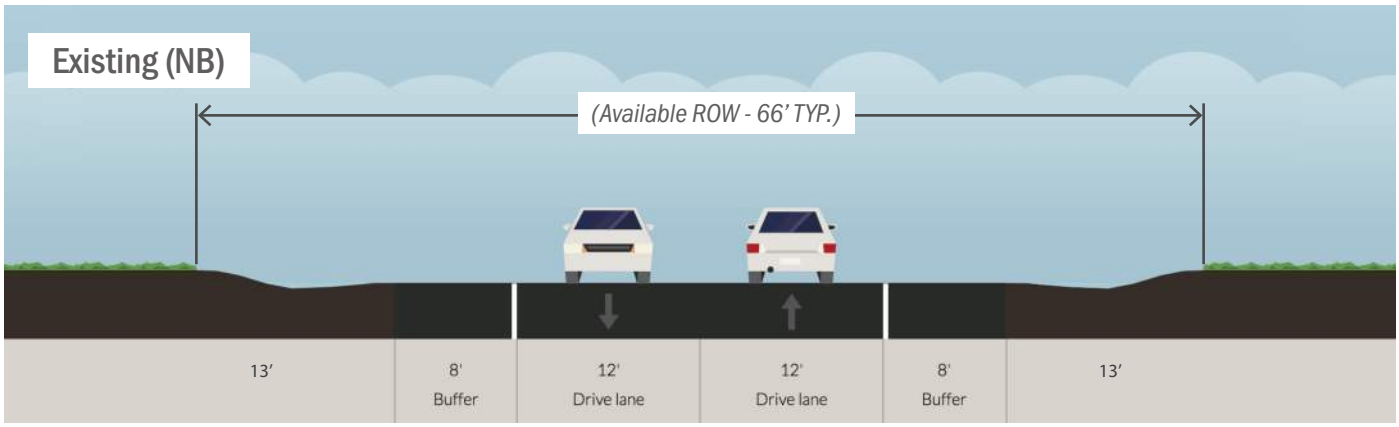
Concept Proposal

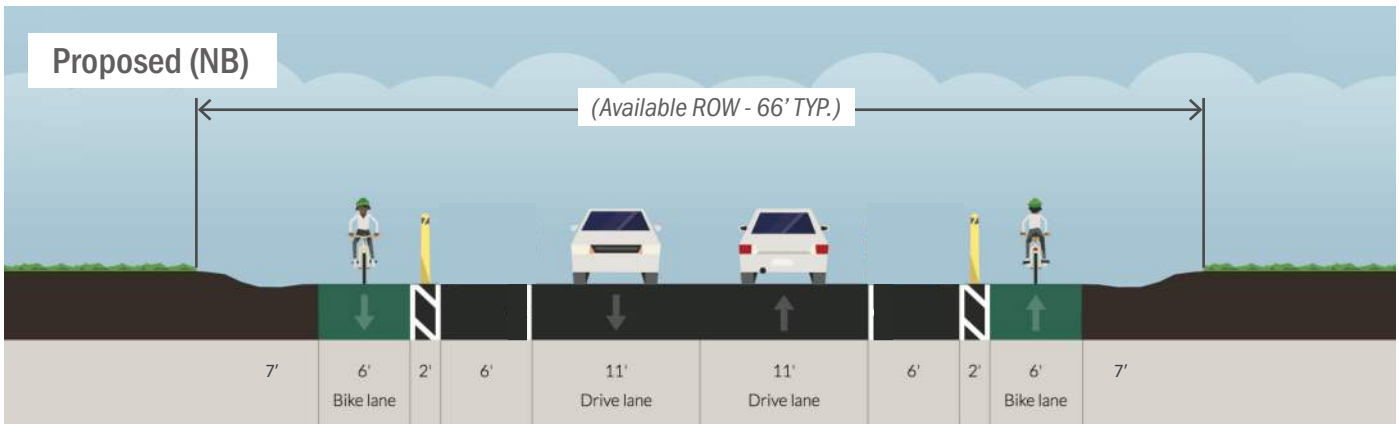
TYPE: One-way Separated / Protected Bicycle Lanes - both sides

ID: 07-E

Revision: 08/14/18

Segment 2





GENERAL DESCRIPTION

One-way Separated / Protected Bicycle Lanes

- Implement a pair of one-way separated protected bicycle lanes

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Potential impacts to stormwater by adding impervious surface
  - Re-grade drainage ditches
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - N/A

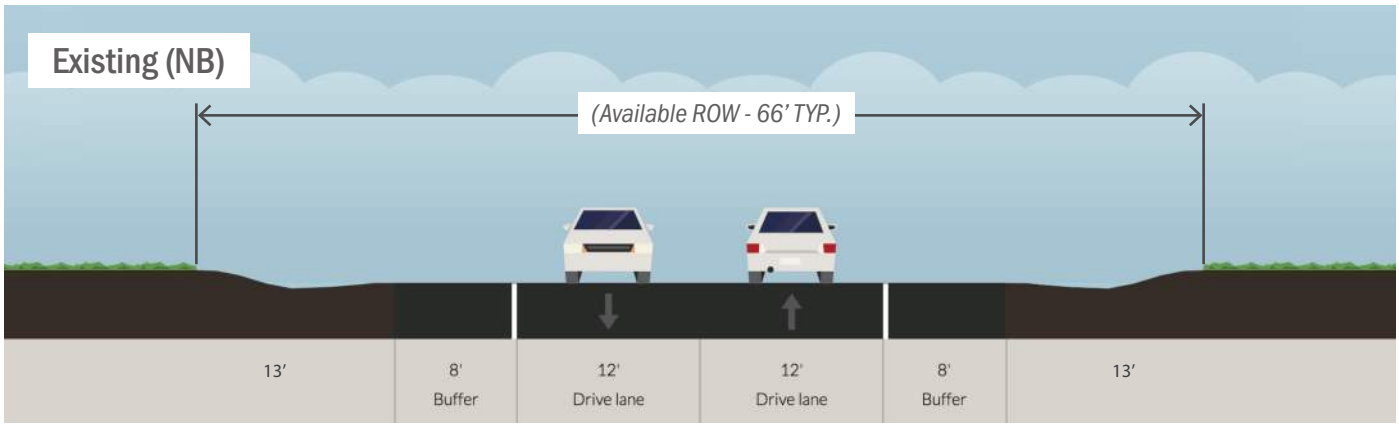
Concept Proposal

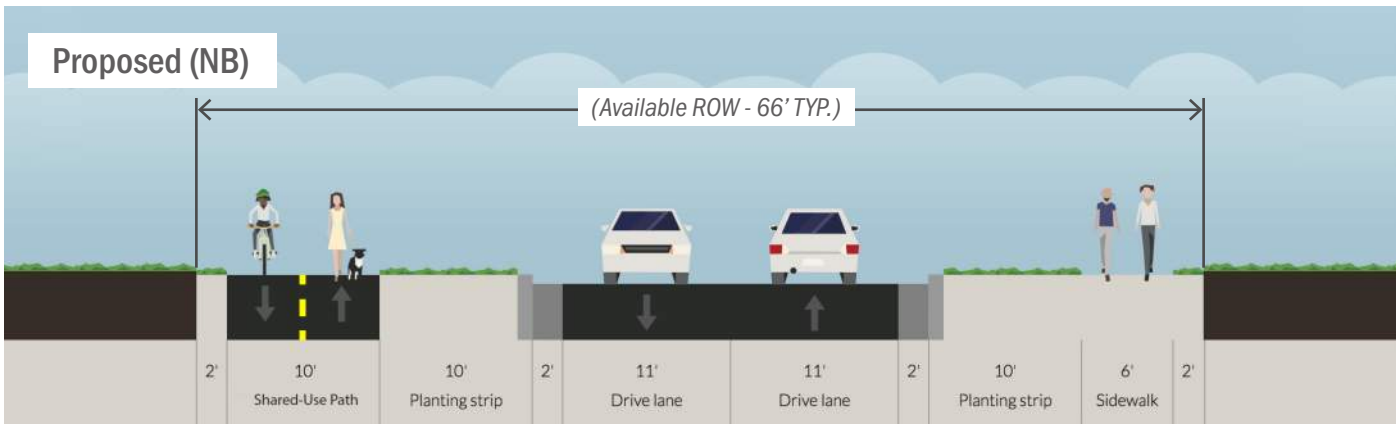
TYPE: Two-way Shared-use Path/Trail (west)

ID: 07-F

Revision: 08/14/18

Segment 2





GENERAL DESCRIPTION

Single Two-way Shared-use Path / Trail

- Implement a two-way shared-use path / trail
  - Place on west side to reduce number of intersections
  - Requires construction of curb and gutter
- Implement sidewalk on east side to accommodate pedestrian uses from adjoining residential areas

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - N/A

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 08
Revision: 08/15/18

Project: 63rd Avenue - from Boone Avenue to Zane Avenue
City: Brooklyn Park
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: Boone Avenue
- Route covers: 63rd Avenue
- Route ends: Zane Avenue

Relation to other proposed projects

- Connects to Project IDs 04, 20, 12, and 16
- Blue Line station just north of intersection with Bottineau Blvd

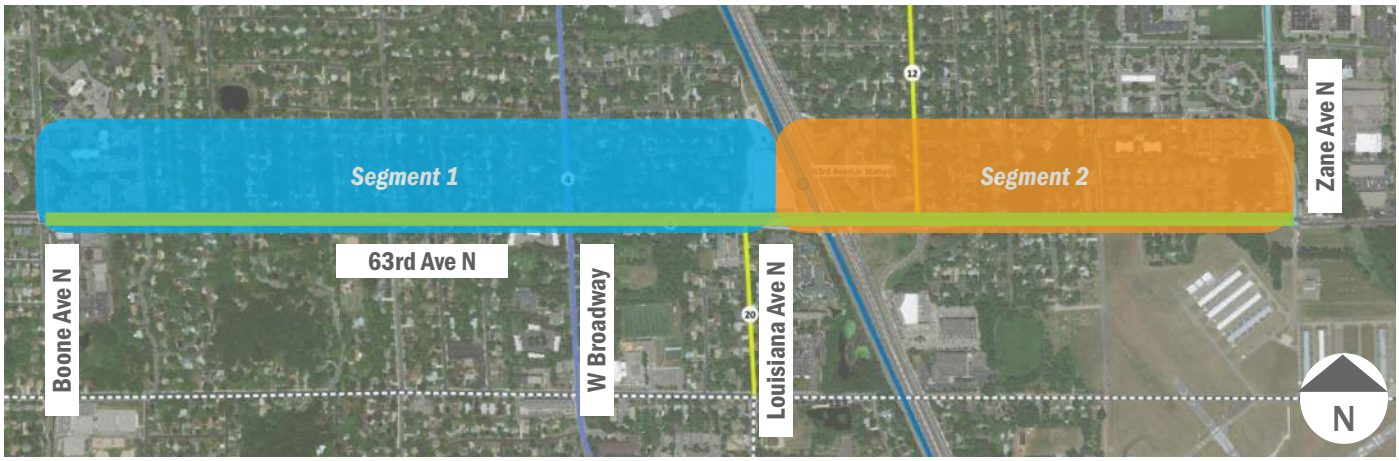
UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route

- Segment 1: Two lane, two way road west from Louisiana Avenue North
- Segment 2: Four lane, two way road with center left turn lane east from Louisiana Avenue North

Project Description
Segments to be Considered

ID: 08
Revision: 08/15/18



Segments considered and general project location.

Project Description
Segments to be Considered - CONTINUED

ID: 08
Revision: 08/15/18

Project Description
Description of Segments

ID: 08
Revision: 08/15/18

Categories	Segment 1	Segment 2
Description of typical roadway section	Two lane, two way	Two lane, two way with center left turn lane
Number of through lanes (typ. config.)	2	2
AADT (typ.)	6,900	7,200 to 12,100
Speed limit (mph)	30	30
Roadway (curb-to-curb) width typ. (ft)	30	50
Available right-of-way typ. (ft)	66	70
Roadway jurisdiction	Brooklyn Park	Brooklyn Park
State Aid Facility?	Yes - MSAS	Yes - MSAS
Curb & gutter (urban) section?	Yes	Yes
Median present?	Yes (painted)	No
On-street parking present?	No	No
Shoulder present?	No	No
Width of shoulder or parking lane	N/A	N/A
Width of driving lane(s)	13	11
Center left turn lane?	Some	Yes
Width of center turn lane	N/A	12
Sidewalk or sidepath present?	5 ft widewalk on north and south	8 ft sidewalk both sides (west of Bottineau), 10 ft shared use path both sides (east of Bottineau), 5 ft sidewalk on north only (east of Forest Ave N)
Boulevard or buffer from roadway (typ)	10 ft on north, 12 ft on south (east of Yukon Ave)	6 ft (east of Forest Ave N)
Approximate length of segment (ft)	5,250 ft	4,090 ft
Transit service along project	716, 767	716, 767
Transit service across project	705, 721, 764, 767	724, 760

Project Description
Description of Segments - CONTINUED

ID: 08
Revision: 08/15/18

Categories	Segment 1	Segment 2
Segment interacts with the 90% plans?	Yes: at corner of Louisiana Ave N and 63rd Ave N	Yes: at Louisiana Ave N to Lakeland Ave N
Recommendation from 90% plans	Redesign sidewalk corners at intersection to provide direct crossing from north to south side of 63rd Ave N, as well as east to west on Louisiana Ave N	East of Bottineau Blvd: Sidewalk on north and south side of 63rd Ave N. One lane, two way traffic on road, w/ a median, as well as two left turn lanes and one right turn lane via east from Louisiana Ave N to Bottineau/63rd intersection. A right and left turn lane via west from Bottineau/63rd intersection to Louisiana Ave N. West of Bottineau Blvd: Remains the same.
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	Shared-use path on on one side (north) or on both sides both sides of 63rd Ave N	Shared-use path on both sides of 63rd Ave N Separated / protected bicycle lane on one side (north) or on both sides
Do the recommendations conflict or preclude each other?	No	No

Project Description
General Guidelines and Standards

ID: 08
Revision: 08/15/18

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

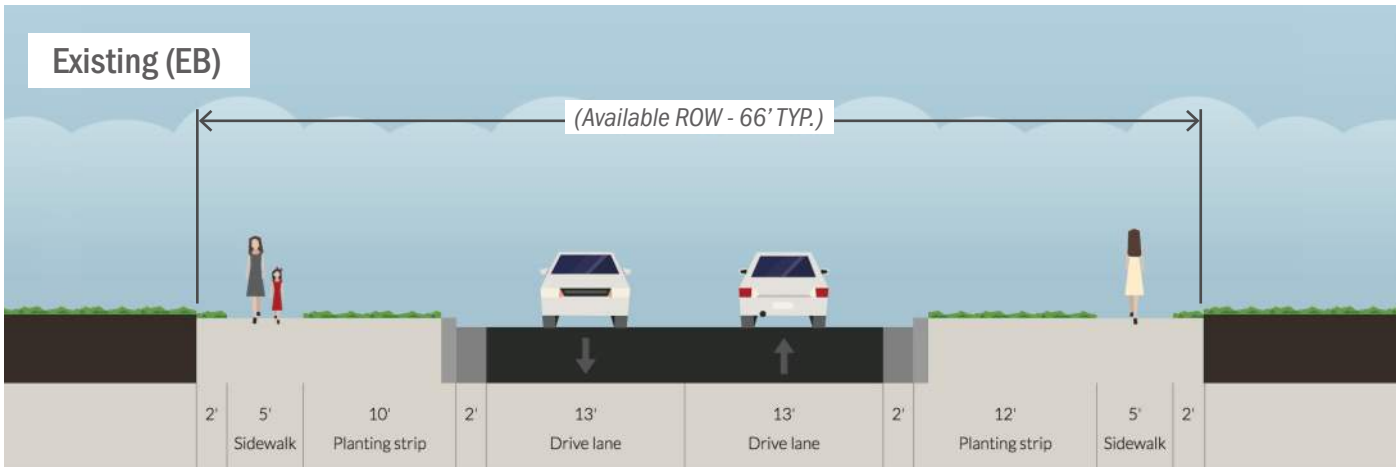
Concept Proposal

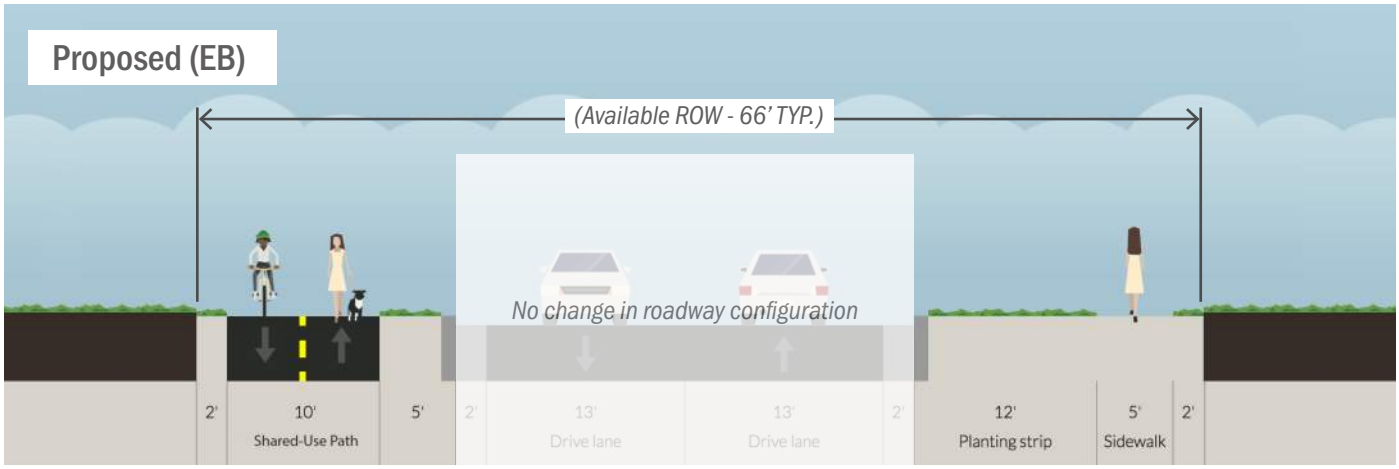
TYPE: Two-way Shared-Use Path / Trail - single side (north)

ID: 08-A

Revision: 08/15/18

Segment 1





GENERAL DESCRIPTION

Single Two-way Shared-use Path / Trail

- Implement one two-way shared-use path / trail along the north side of 63rd Avenue
  - Place on north side to facilitate connection with Blue Line station
- No change to existing roadway cross-section width or roadway components

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
  - Space constrictions at West Broadway to accommodate turn lanes

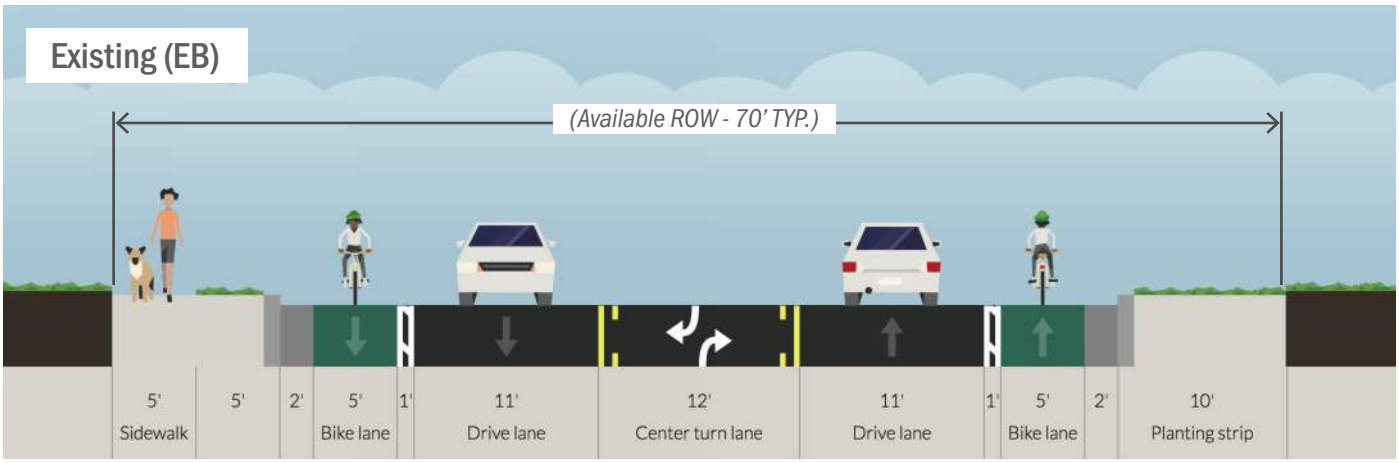
Concept Proposal

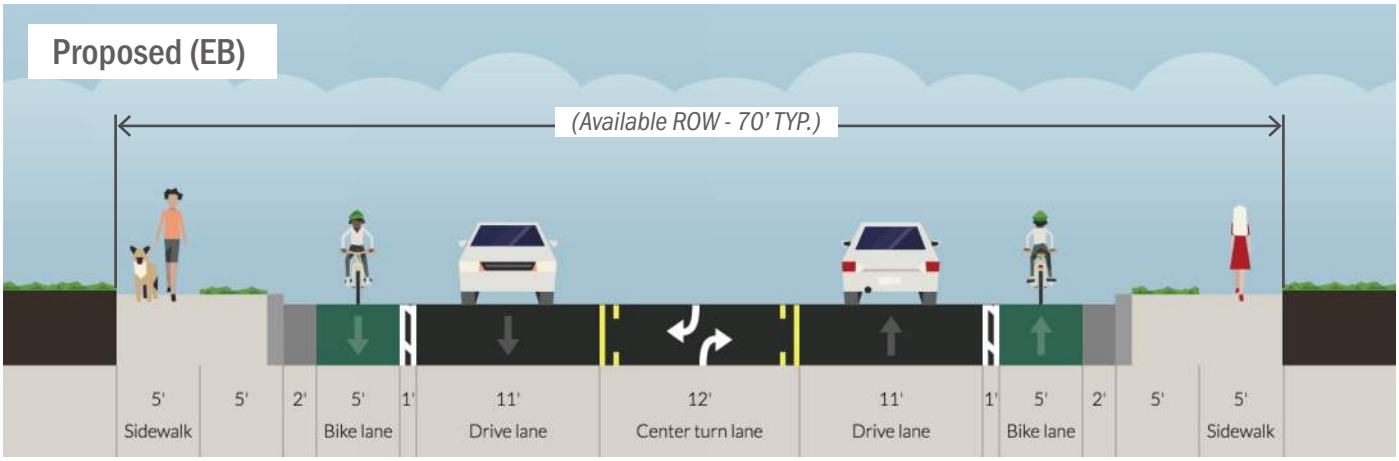
TYPE: Sidewalk- single side (south)

ID: 08-F

Revision: 08/15/18

Segment 2





GENERAL DESCRIPTION

Sidewalk

- Implement sidewalk along south side of roadway.

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 5' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - None
- Impacts at intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 09
Revision: 08/14/18

Project: Intersection improvement - Lake Drive and County Road 81
City: Robbinsdale
Mode(s): Pedestrian

EXISTING CONDITIONS AND CONTEXT

General project location and Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Intersection improvement

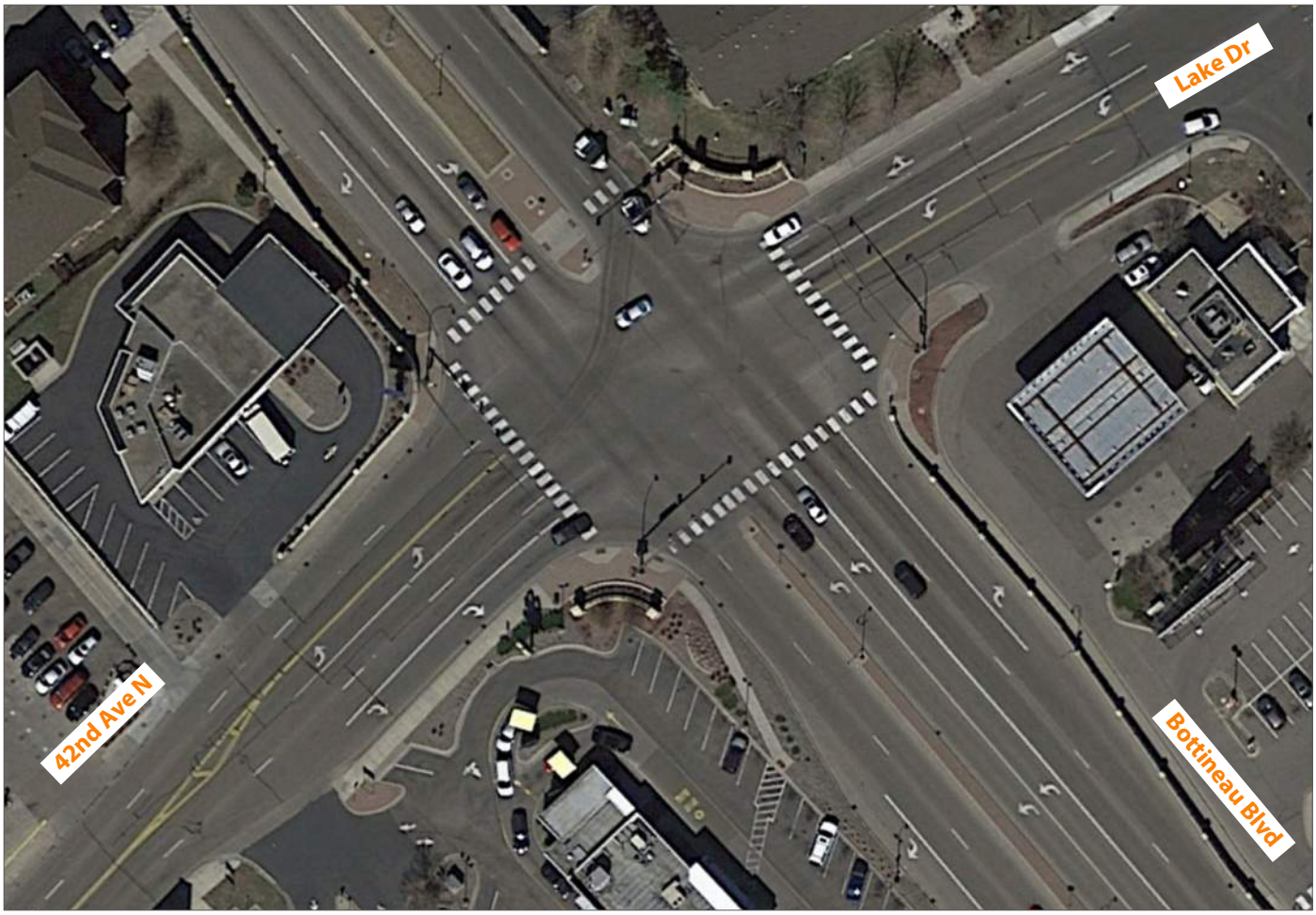
- Improvement for pedestrian travel along 42nd Avenue across Bottineau Boulevard / County Road 81
- Note: Intersection currently not under consideration for bike facilities due to expected impacts to property and/or traffic diversion.

Relation to other proposed projects

- Blue Line Station is located south of 42nd Ave / Hubbard Ave N Intersection

Project Description
Detail View

ID: 09
Revision: 08/14/18



Close up view of intersection

UNIFORMITY/VARIABILITY ALONG ROUTE

On 42nd Avenue / Lake Drive

- ADT
  - 12,400 west of Bottineau
  - 9,900 east of Bottineau
- Lanes and configuration
  - EB: 1LTOL, 2TH, 1RTOL
  - EB receiving: 2 lanes
  - WB: 1RT+TH, 1TH, 1LTOL
  - WB receiving: 2 lanes

UNIFORMITY / VARIABILITY ALONG ROUTE

On Bottineau Blvd / County Road 81

- ADT
  - 20,900 north of 42nd Ave N
  - 21,400 south of 41st Ave
- Lanes and configuration
  - NB: 1RTOL, 2TH, 2LTOL
  - NB receiving: 2 lanes
  - SB: 1LTOL, 2TH, 1RTOL
  - SB receiving: 2 lanes

Project Description
Segments to be Considered - Continued

ID: 09
Revision: 08/14/18

View of 42nd Ave N/Lake Drive at County Road 81 (EB)

Project Description
Description of Segments

ID: 09
Revision: 08/14/18

Categories	Intersection Area
Description of typical roadway section	Four lane, two way with major intersection, multiple turn lanes
Number of through lanes (typ. config.)	4
AADT (typ.)	12,400 to 9,900
Speed limit (mph)	30
Roadway (curb-to-curb) width typ. (ft)	48 to 72 (Bottineau)
Available right-of-way typ. (ft)	85 at Bottineau
Roadway jurisdiction	Hennepin County
State Aid Facility?	Yes - CSAH 9
Curb & gutter (urban) section?	Yes
Median present?	No
On-street parking present?	No
Shoulder present?	No
Width of shoulder or parking lane	N/A
Width of driving lane(s)	11-13
Center left turn lane?	Yes
Width of center turn lane	12
Sidewalk or sidepath present?	Sidepath on north (10 ft) and sidewalk on south (7 ft)
Boulevard or buffer from roadway (typ)	None (west of Lakeland Ave N) - 6 ft on north, 11.25 ft on south (east of Lakeland Ave N)
Approximate length of segment (ft)	1,130 ft
Transit service along project	717
Transit service across project	None
Segment interacts with the 90% plans?	No

Project Description
Description of Segments - Continued

ID: 09
Revision: 08/14/18

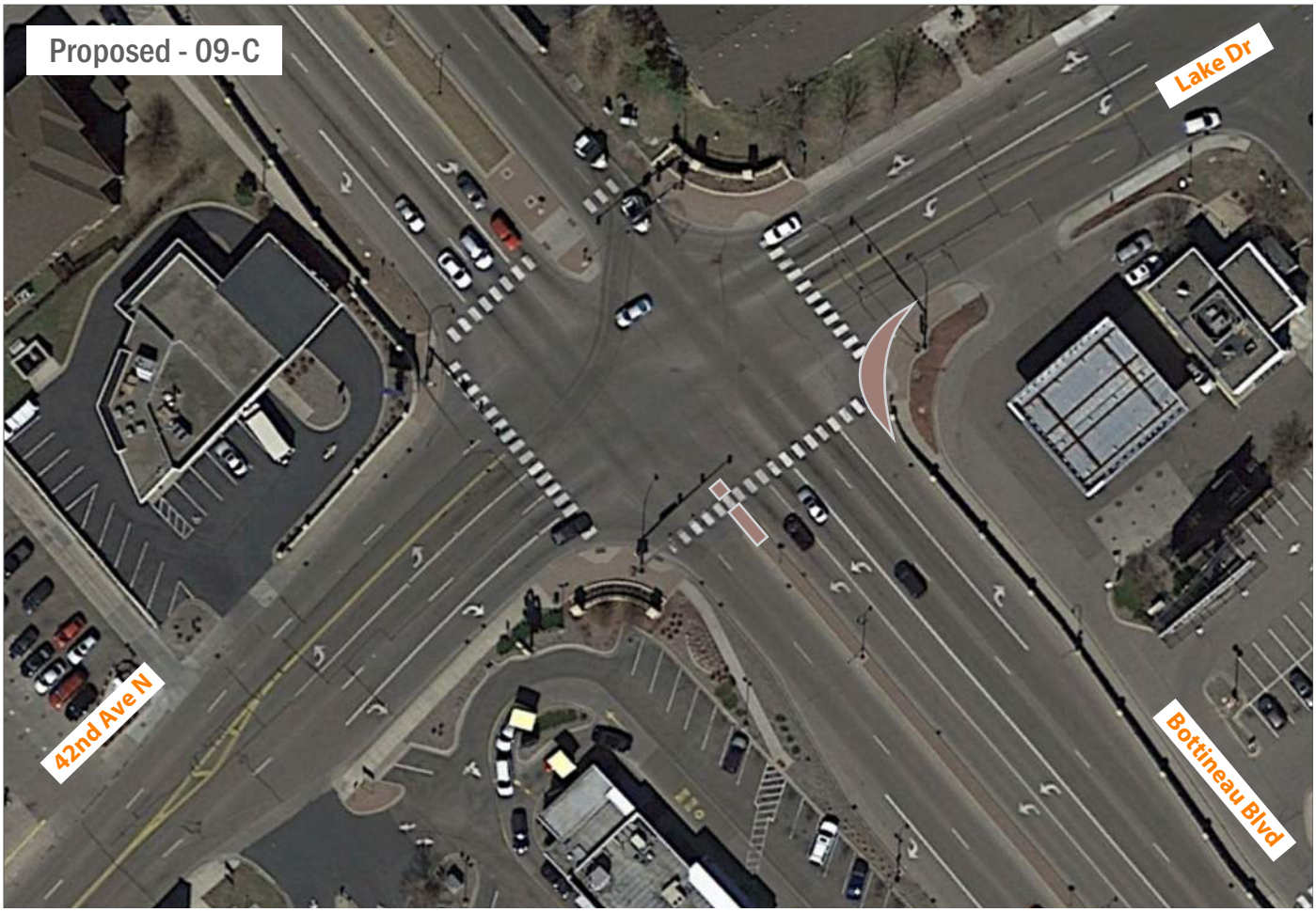
Categories	Intersection Area
Recommendation from 90% plans	N/A
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A
Do the recommendations conflict or preclude each other?	No

GENERAL GUIDELINES AND STANDARDS

- Driving lanes must be at least 11' wide to accommodate trucks and buses
- Parking lane minimum of 8' due to accommodate winter plowing concerns
- 2' gutters required (in addition to min. 11' lanes)
- Do not include gutter as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2' clear zone to traffic and from edge of ROW
- State aid requires 6' shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5' to allow for snow storage
- Removal of any turn or travel lanes require traffic analysis
- Changing radii at intersections require turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

Concept Proposal
TYPE: Pedestrian Crossing Enhanced

ID: 09-C
Revision: 08/14/18



GENERAL DESCRIPTION

Enhanced Pedestrian Crossing

- Reduce curb radii on southeast quadrant of intersection
  - Reduces pedestrian exposure to vehicles
- Extend southern median on County Road 81 further north to buffer crosswalk
  - Depress median to accommodate pedestrian crossing
  - Provides pedestrian refuge if pedestrian doesn't make full crossing during pedestrian signal phase

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to on-street parking
  - None
- Impacts to stormwater infrastructure / gutter
  - May impact storm drains
- Impacts to existing transit
  - Not yet determined

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 10
Revision: 08/14/18

Project: 85th Avenue - CR81 to Regent Avenue North
City: Brooklyn Park
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: County Road 81
- Route covers: 85th Avenue North
- Route ends: Regent Avenue North

Relation to other proposed projects

- Connects to Project ID 16
- Blue Line station at W Broadway Ave

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route (please see next page for illustrations)

- Segment 1: Four lane, two way with additional right turn lane, Highway 169 ingress/egress, two center left turn lanes, and median west of Xylon Ave N
- Segment 2: Four lane, two way with additional center turn lane, right turn lane, and median east of Xylon Ave N

Project Description
Segments to be Considered

ID: 10
Revision: 08/14/18

Segments considered and general project location.

Project Description
Segments to be Considered - CONTINUED

ID: 10
Revision: 08/14/18

Project Description
Description of Segments

ID: 10
Revision: 08/14/18

Categories	Segment 1	Segment 2
Description of typical roadway section	Four lane, two way, with additional right turn lane, Highway 169 ingress/egress, and two center left turn lanes	Four lanes, two way with additional center turn lane, right turn lane
Number of through lanes (typ. config.)	8	5
AADT (typ.)	18,500	18,900 to 15,100
Speed limit (mph)	45	45
Roadway (curb-to-curb) width typ. (ft)	110 - 134	82
Available right-of-way typ. (ft)	126 - 140	122
Roadway jurisdiction	Hennepin County	Hennepin County
State Aid Facility?	Yes - CSAH 109	Yes - CSAH 109
Curb & gutter (urban) section?	Yes	Yes
Median present?	Yes - 10 ft	Yes - 6ft
On-street parking present?	No	No
Shoulder present?	No	No
Width of shoulder or parking lane	N/A	N/A
Width of driving lane(s)	12	12
Center left turn lane?	Yes	Yes
Width of center turn lane	12	11.5
Sidewalk or sidepath present?	Sidewalk on north side, (5 ft)	Both sides (5 ft)
Boulevard or buffer from roadway (typ)	11.5 ft	Varied
Approximate length of segment (ft)	1,200 ft	11,190 ft
Transit service along project	None	723, 724, 760
Transit service across project	782	722

Project Description
Description of Segments - CONTINUED

ID: 10
Revision: 08/14/18

Categories	Segment 1	Segment 2
Segment interacts with the 90% plans?	No	Yes: Maplebrook Pkwy N to College Pkwy
Recommendation from 90% plans	N/A	Trail on north and south side of 85th Ave N. Two lane, two way traffic on road, w/ a landscape median, as well as left and right turn lanes at intersections.
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A	Trail on north and south side of 85th Ave N
Do the recommendations conflict or preclude each other?	N/A	No

Project Description
General Guidelines and Standards

ID: 10
Revision: 08/14/18

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

Concept Proposal (Segments 1 AND 2)

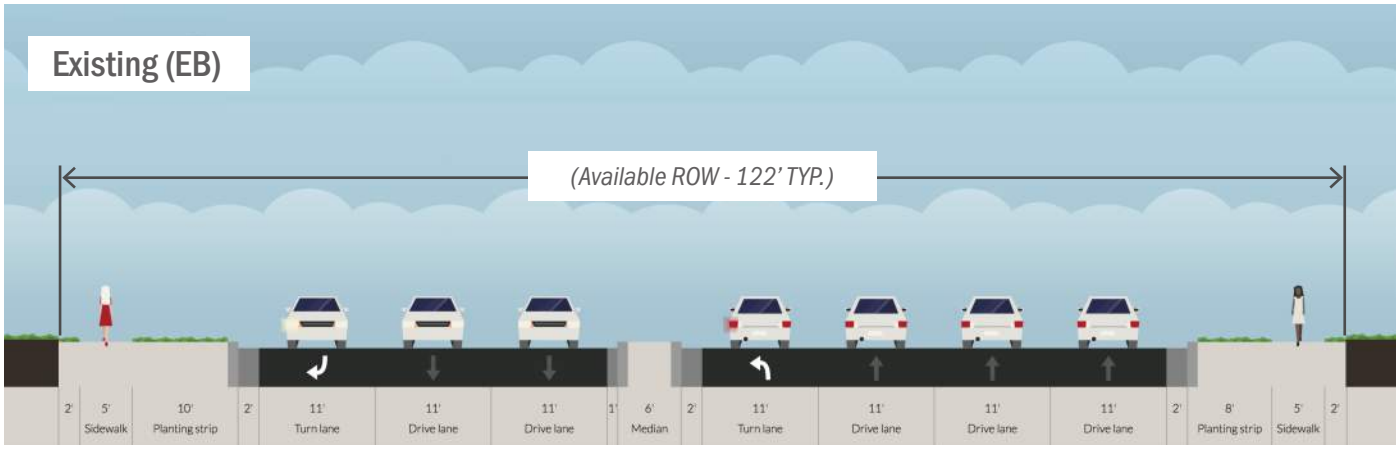
TYPE: Two-way Shared-Use Path and Trails

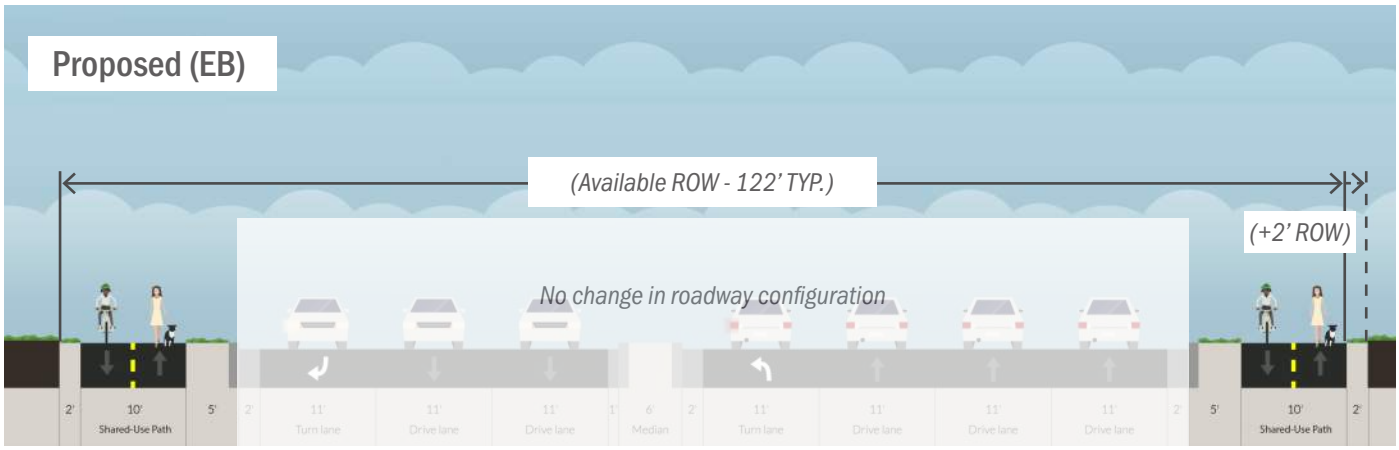
ID: 10-A

Revision: 08/14/18

Segment 1

Segment 2





GENERAL DESCRIPTION

Double Two-way Shared-Use Paths / Trails

- Implement two-way shared-use paths / trails along each side of Segments 1 and 2
  - Given current traffic volumes, reduction in number of lanes or conversion to three lane is unlikely
  - Given current traffic speeds, traffic volumes and number of lanes, pedestrian or bicycle crossing of 85th Avenue to reach a facility would be difficult and less likely to be attempted
  - On-street facilities not recommended
  - Important to reduce speeds for vehicles turning across the trails at intersections (many locations include high-speed right turns)
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Adds up to 10' of impervious surface each side; spread of stormwater to be evaluated to ensure requirements are met
- Impacts to existing transit
  - None
- Impacts at signalized intersections
  - Not yet determined
- Requires 2' acquisition or easement beyond existing right-of-way
  - Reducing trail to 8' would eliminate right-of-way impacts

Concept Development for Walk/Bike Connectivity

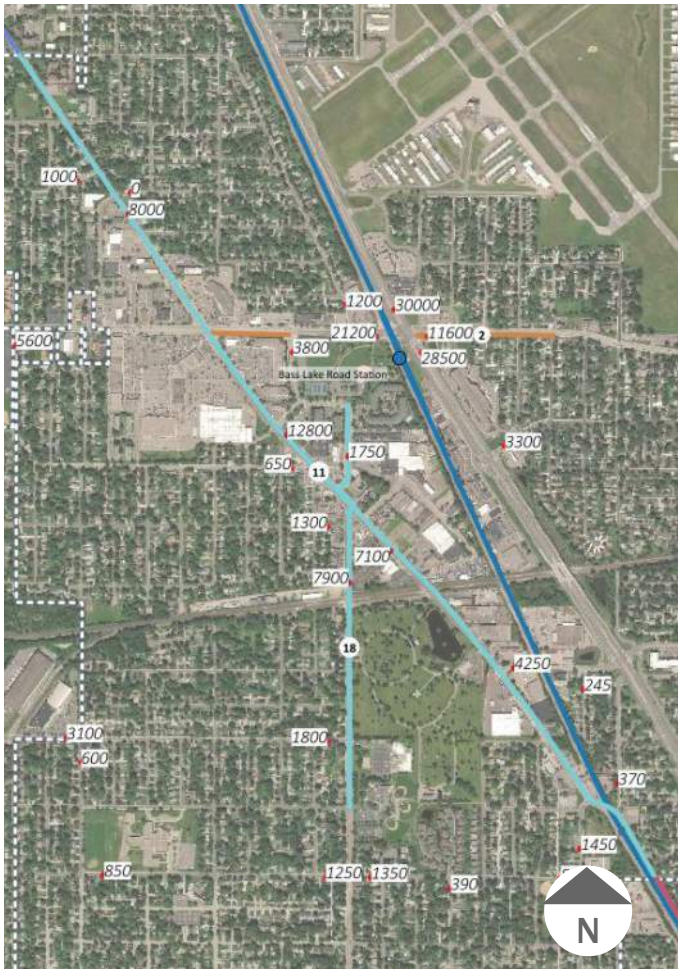
Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 11
Revision: 08/14/18

Project: West Broadway Avenue - 47th Ave N to 60th Ave N
City: Crystal
Mode(s): Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.



Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: 47th Ave N
- Route covers: West Broadway Avenue
- Route ends: 60th Ave

Relation to other proposed projects

- Connects to Project ID 07 at 47th and Project ID 04 at 60th; intersects Project ID 18 and ID 02
- Blue Line station at W Broadway Ave

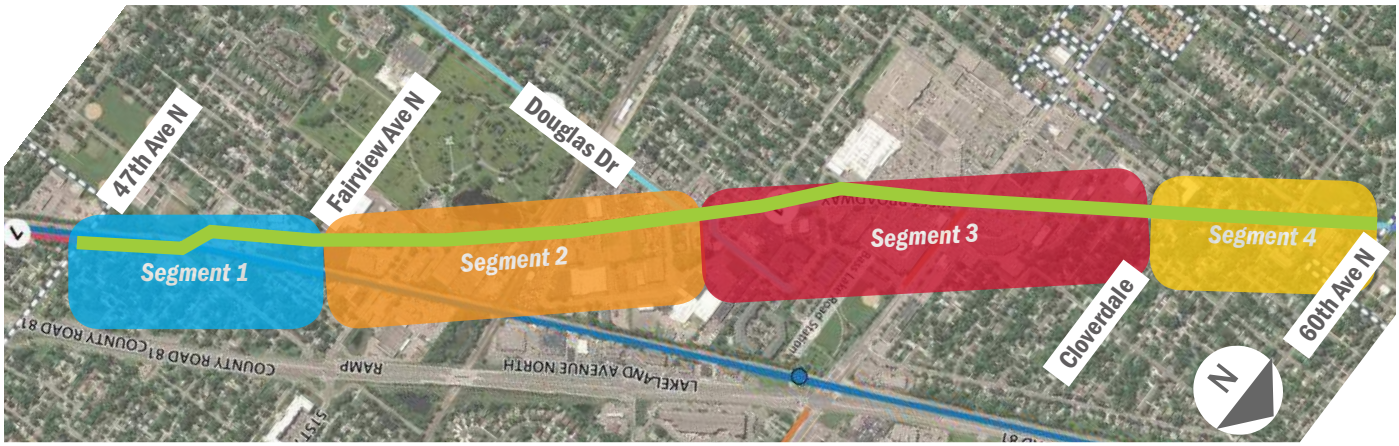
UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route

- Segment 1: Two lane, two way and shoulder south of Fairview Ave N
- Segment 2: Four lane, two way between Fairview Ave N and Douglas Dr N
- Segment 3: Four lane, two way with center left turn lane between Douglas Dr N and Cloverdale Ave
- Segment 4: Two lane, two way and shoulder north of Cloverdale Ave

Project Description
Segments to be Considered

ID: 11
Revision: 08/14/18



Segments considered and general project location.

Project Description
Segments to be Considered - Continued

ID: 11
Revision: 08/14/18

View of Segment 2 (NB)

View of Segment 3 (NB)

View of Segment 4 (NB)

Project Description
Description of Segments

ID: 11
Revision: 08/14/18

Categories	Segment 1	Segment 2	Segment 3	Segment 4
Description of typical roadway section	Two lane, two way with shoulder	Four lane, two way	Four lane, two way with center left turn lane	Two lane, two way with shoulder
Number of through lanes (typ. config.)	2	4	4	2
AADT (typ.)	no data currently available	7,100	8,000 to 12,800	8,000
Speed limit (mph)	30	30	35	35
Roadway (curb-to-curb) width typ. (ft)	40	52	70	40
Available right-of-way typ. (ft)	66	80	90	66
Roadway jurisdiction	Hennepin	Hennepin	Hennepin	Hennepin
State Aid Facility?	Yes - CSAH 8	Yes - CSAH 8	Yes - CSAH 8	Yes - CSAH 8
Curb & gutter (urban) section?	No	Yes	Yes	No
Median present?	No	No	Yes - 6 ft	No
On-street parking present?	No	No	No	No
Shoulder present?	Yes	No	No	Yes
Width of shoulder or parking lane	8	N/A	N/A	9.5
Width of driving lane(s)	12	12.5	12.5	12.5
Center left turn lane?	No	No	Yes	No
Width of center turn lane	N/A	N/A	12	N/A
Sidewalk or sidepath present?	No	Yes - 5 wide sidewalk, both sides	Yes - 5 wide sidewalk, both sides	No
Boulevard or buffer from roadway (typ)	N/A	7	3	N/A
Approximate length of segment (ft)	1,780	2,180	3,320	2,130
Transit service along project	716, 767	716, 767	716, 767	716, 767
Transit service across project	None	721	None	None
Segment interacts with the 90% plans?	Yes	No	No	No

Project Description
Description of Segments - Continued

ID: 11
Revision: 08/14/18

Categories	Segment 1	Segment 2	Segment 3	Segment 4
Recommendation from 90% plans	Half block before Welcome Ave provide sidewalk on east and west side W Broadway Ave. West of Welcome Ave N provide trail. One lane, two way traffic on road, w/ a median, as well as left turn and right turn lanes at the Fairview/ Broadway intersection. One lane, two way road a block north, west, and south of W Broadway Ave. Roundabout at Vera Cruz/Broadway	N/A	N/A	N/A
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	Separated / protected bicycle lanes on west side or both sides, and a trail on west side	N/A	N/A	N/A
Do the recommendations conflict or preclude each other?	No - can adapt selected concept to work with 90% plan	No	No	No

GENERAL GUIDELINES AND STANDARDS

- Driving lanes must be at least 11' wide
- Parking lane minimum of 8'
- 2' gutters required (in addition to min. 11' lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2' clear zone to traffic and from edge of ROW
- 6' shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5' for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

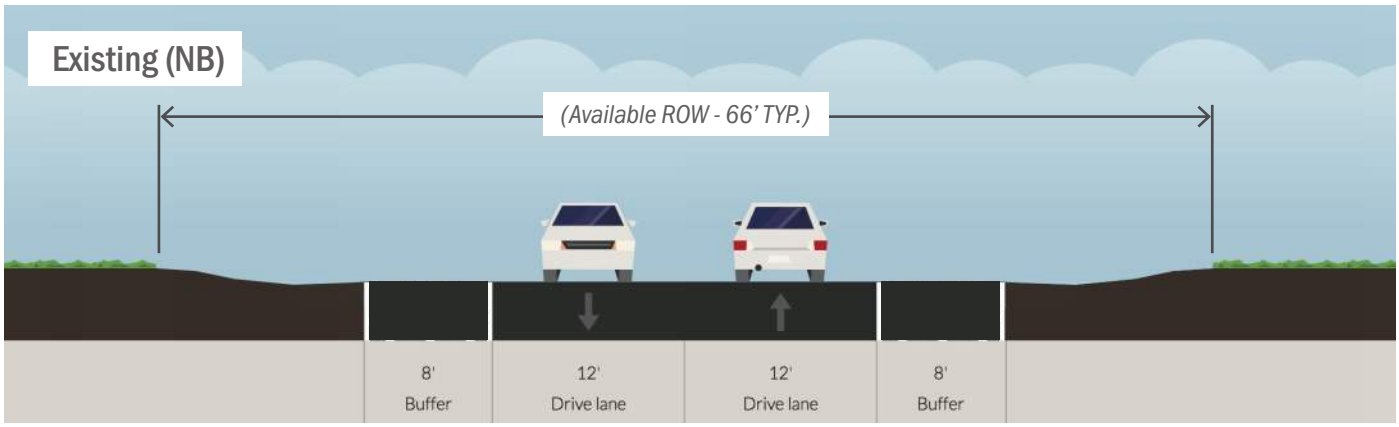
Concept Proposal

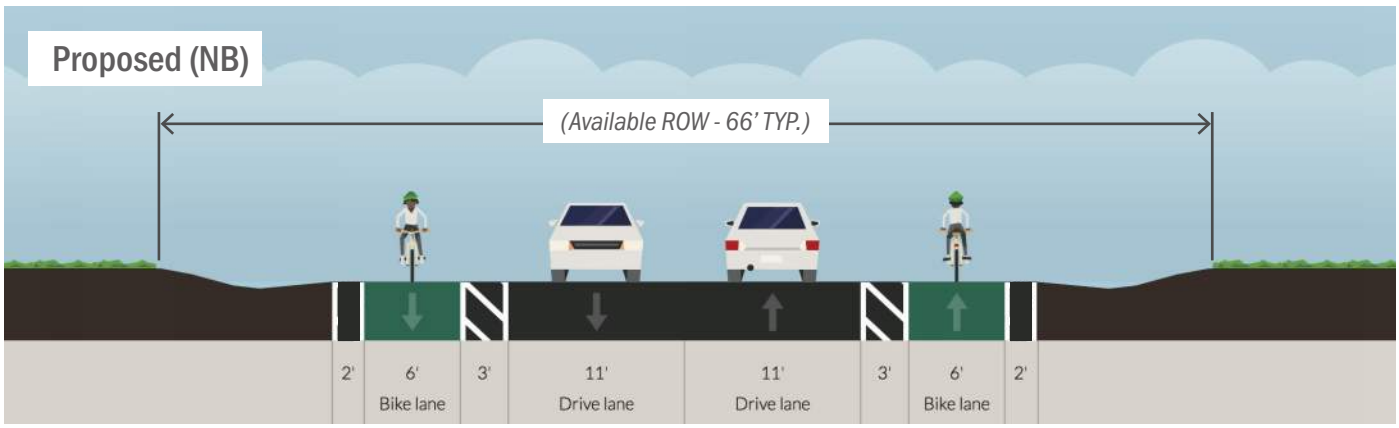
TYPE: One-way / Buffered Bicycle Lanes - both sides

ID: 11-A

Revision: 08/14/18

Segment 1





GENERAL DESCRIPTION

One-way Buffered Bicycle Lanes

- Implement a pair of one-way buffered bicycle lanes
- Maintains existing roadway cross-section width
  - Maintains existing roadway edge line
  - May require ditch re-grading

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential ditch grading
- Impacts to existing transit
  - Bike lane conflicts with bus boarding and alighting

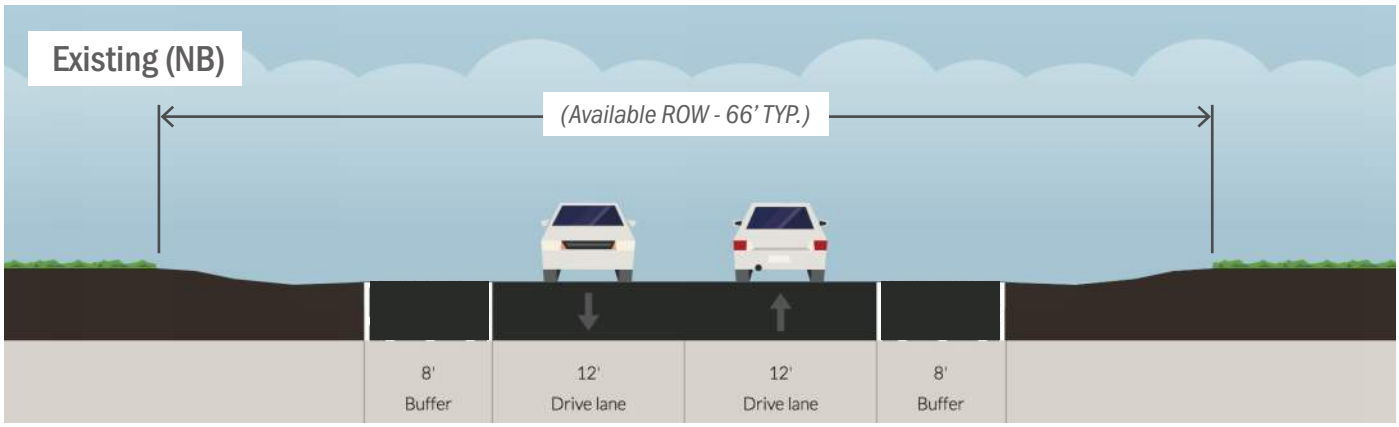
Concept Proposal

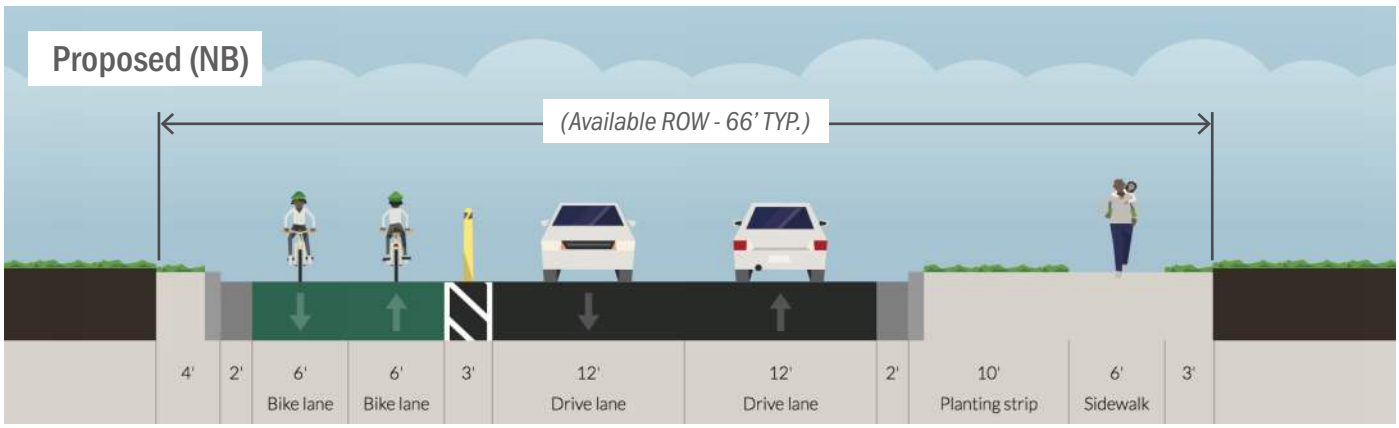
TYPE: Two-way Protected Bicycle Lane - single side (west)

ID: 11-B

Revision: 08/14/18

Segment 1





GENERAL DESCRIPTION

Single Two-way Protected Bike Lane

- Implement one two-way Protected Bike Lane
  - Place on west side to reduce number of intersections
  - Requires construction of curb and gutter
- Implement sidewalk on east side to accommodate pedestrian uses from adjoining residential areas south of Lakeside Ave N

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage / curb and gutter
- Impacts to existing transit
  - Eliminates pull-over shoulder
  - Bike lanes conflict with bus boarding and alighting

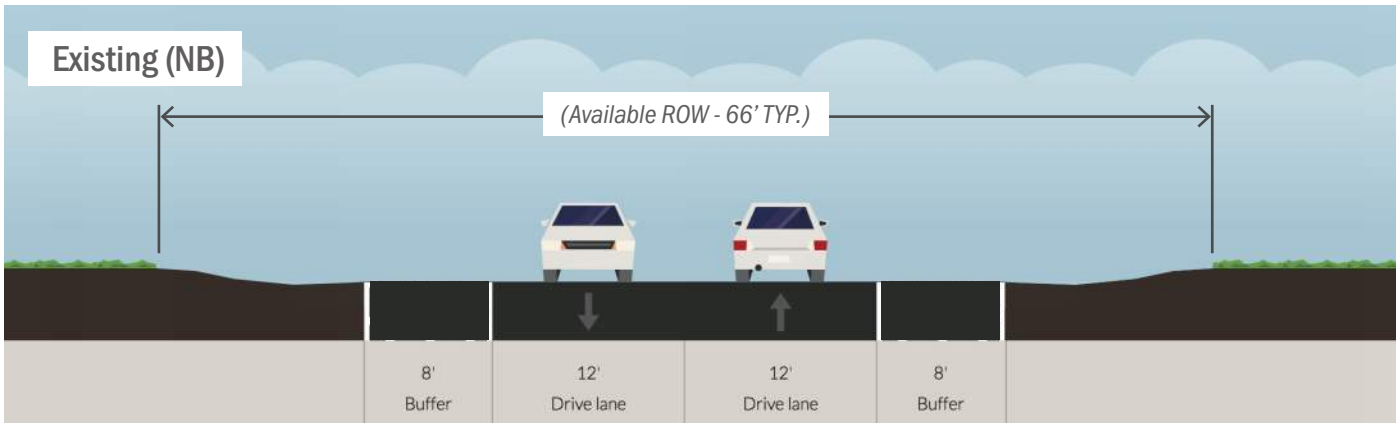
Concept Proposal

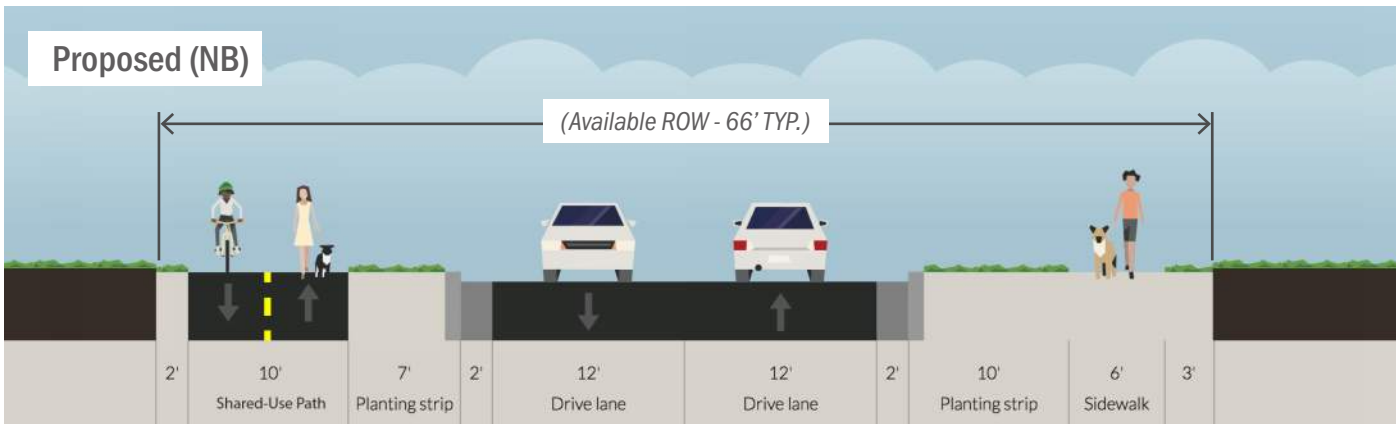
TYPE: Two-way Shared-Use Path / Trail - single side (west)

ID: 11-C

Revision: 08/14/18

Segment 1





GENERAL DESCRIPTION

Single Two-way Shared-use Path / Trail

- Implement a two-way shared-use path / trail
  - Place on west side to reduce number of intersections
  - Requires construction of curb and gutter
- Implement sidewalk on east side to accommodate pedestrian uses from adjoining residential areas south of Lakeside Ave N

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage / curb and gutter
- Impacts to existing transit
  - Eliminates pull-over shoulder

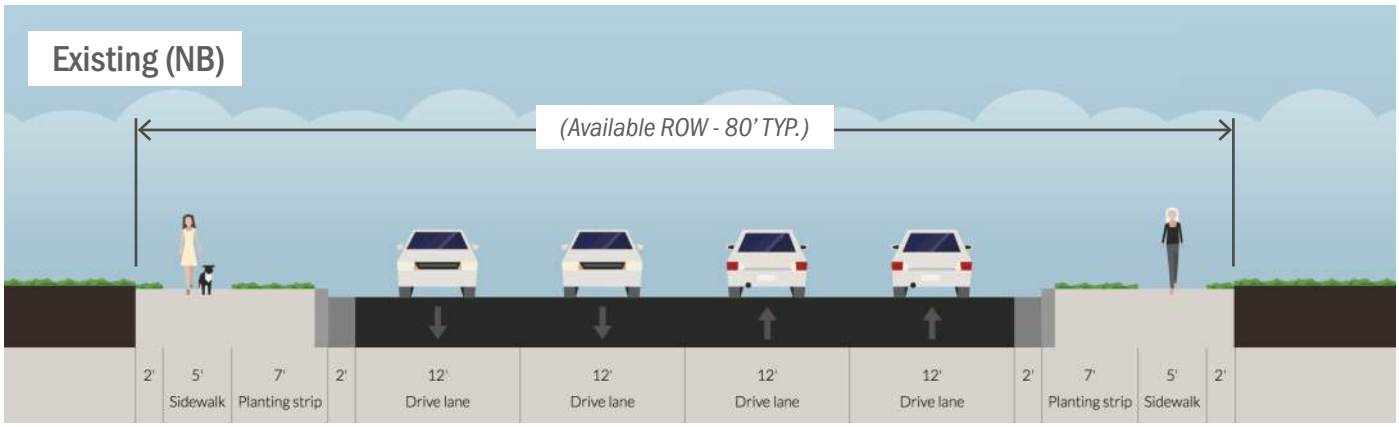
Concept Proposal

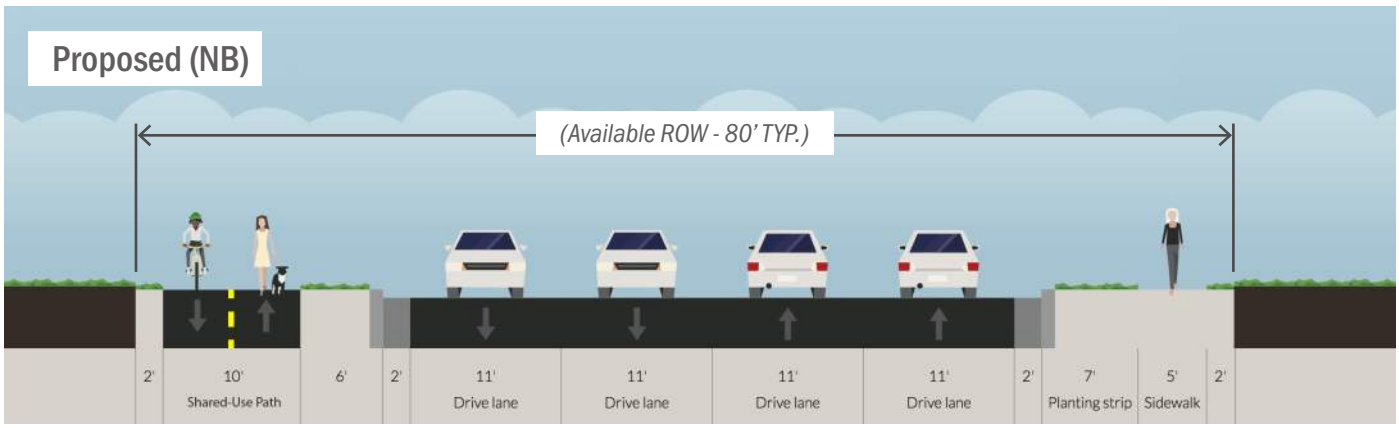
TYPE: Two-way Shared-use Path / Trail - single side (west)

ID: 11-D

Revision: 08/14/18

Segment 2





GENERAL DESCRIPTION

Single Two-way Shared-use Path / Trail

- Implement one two-way shared-use path / trail
- Requires reconstruction and modification to existing roadway cross-section width and curb lines

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage/curb and gutter on west side of road
- Impacts to existing transit
  - Not yet determined

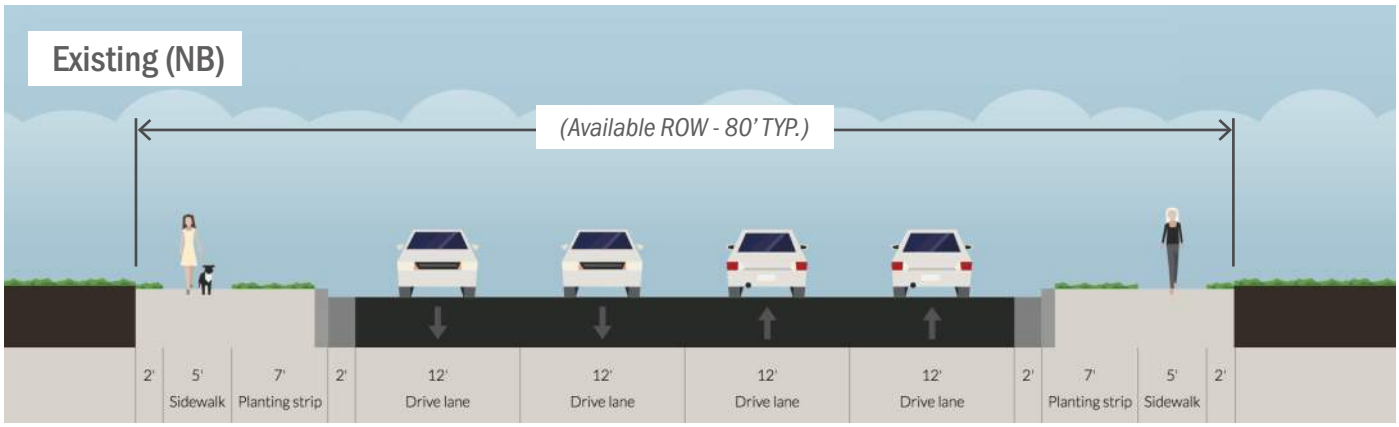
Concept Proposal

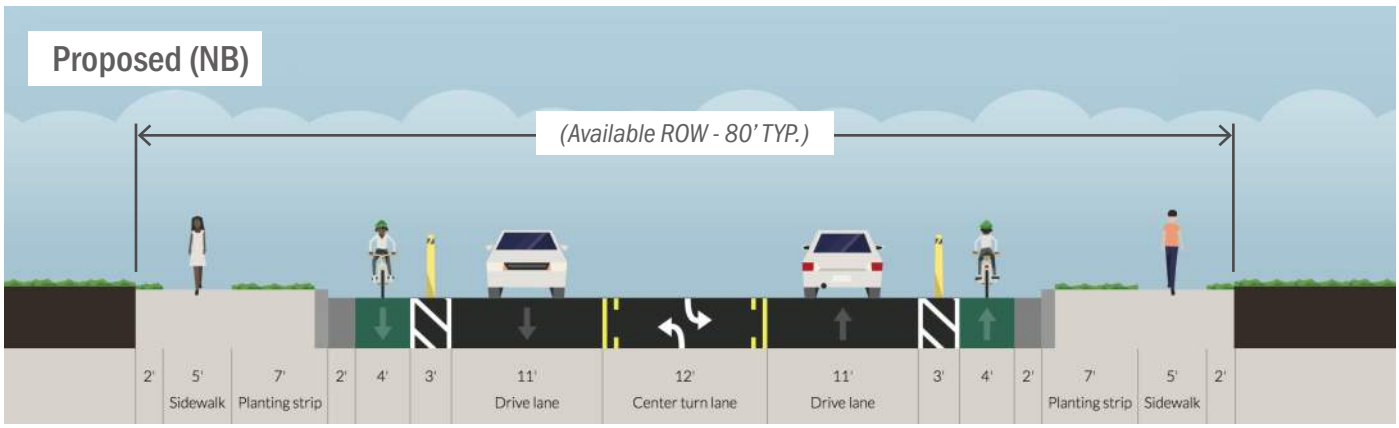
TYPE: One-way Separated / Protected Bicycle Lanes - both sides

ID: 11-F

Revision: 08/14/18

Segment 2





GENERAL DESCRIPTION

Three Lane Conversion and Separated / Protected Bicycle Lanes

- Implement a three lane conversion ("Road Diet") for roadway along Segment 2
  - ADT is within range for conversion
  - Requires traffic analysis
  - Conversion frees up space for on-road bicycle facilities
- Implement one-way separated / protected bicycle lanes along both sides of roadway
- Maintains existing roadway cross-section width
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - None
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting

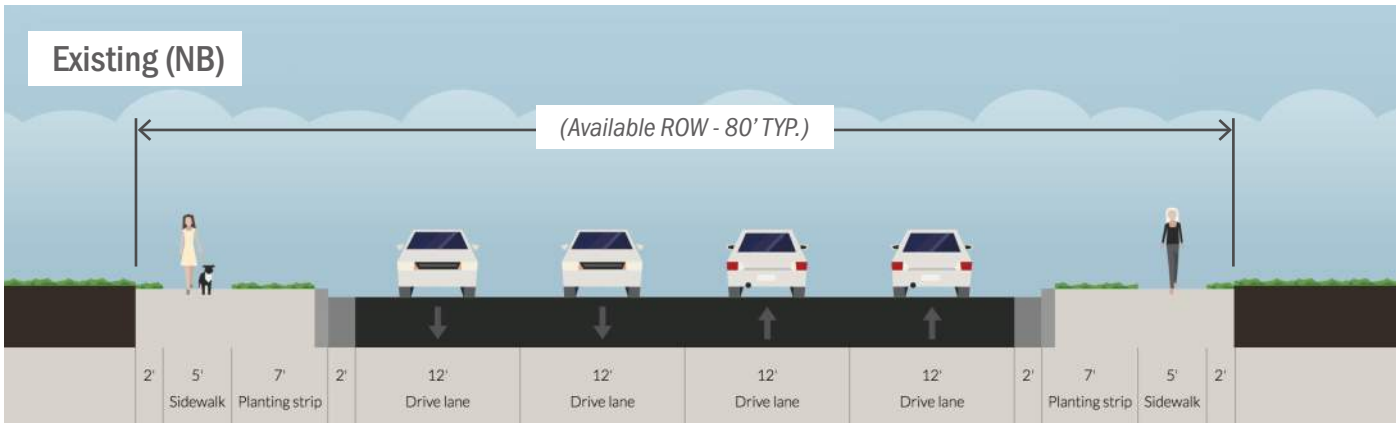
Concept Proposal

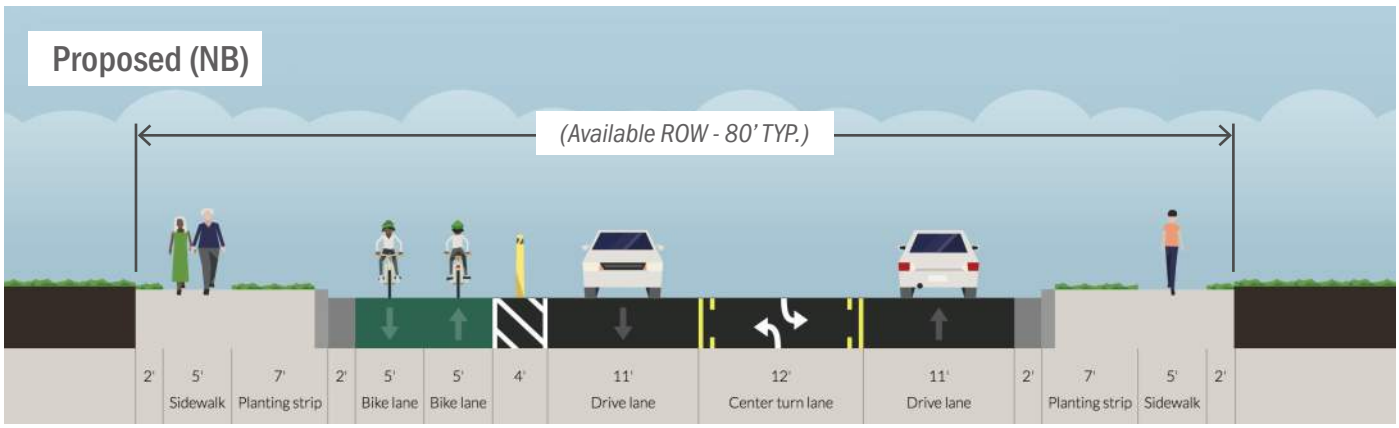
TYPE: Two-way Separated / Protected Bicycle Lane - single side

ID: 11-G

Revision: 08/14/18

Segment 2





GENERAL DESCRIPTION

Three Lane Conversion and Separated / Protected Bicycle Lane

- Implement a three lane conversion ("Road Diet") for roadway along Segment 2
  - ADT is within range for conversion
  - Requires traffic analysis
  - Conversion frees up space for on-road bicycle facilities
- Implement a two-way separated / protected bicycle lane along one side of roadway
- Maintains existing roadway cross-section width
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - None
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting

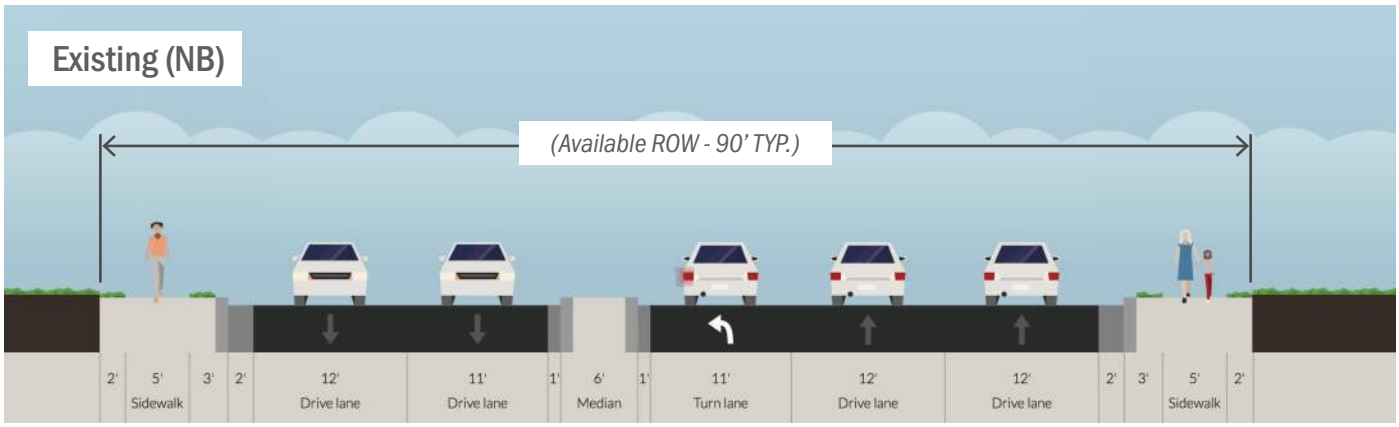
Concept Proposal

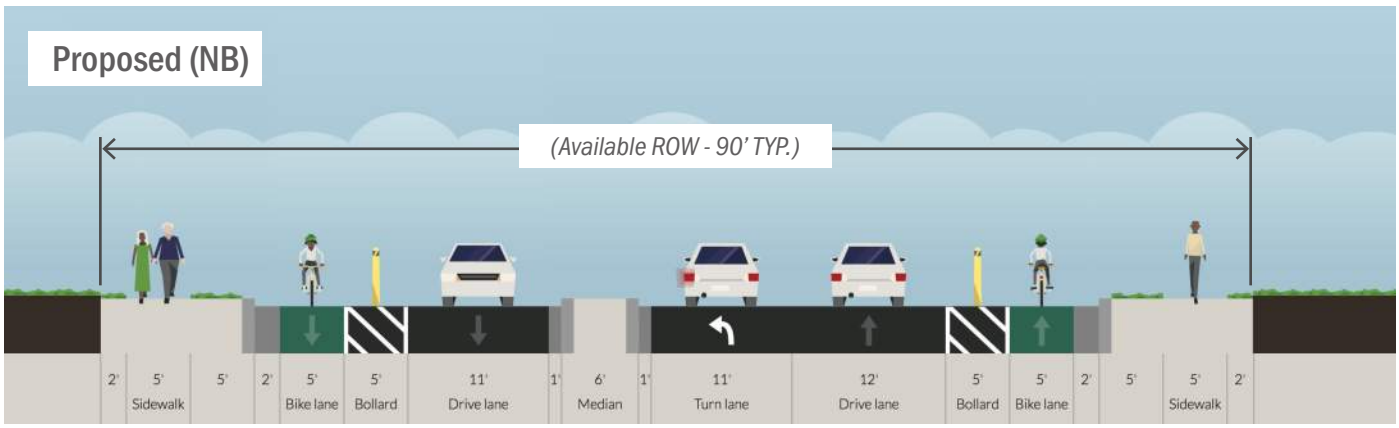
TYPE: One-way Separated / Protected Bicycle Lanes - both sides

ID: 11-H

Revision: 08/14/18

Segment 3





GENERAL DESCRIPTION

Three Lane Conversion and Separated / Protected Bicycle Lanes

- Implement a three lane conversion ("Road Diet") for roadway along Segment 3
  - ADT is within range for conversion
  - Requires traffic analysis
  - Conversion frees up space for on-road bicycle facilities
- Implement one-way separated / protected bicycle lanes along both sides of roadway
- Requires reconstruction and modification to existing roadway cross-section width and curb lines

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction and modifications to existing roadway cross-section width and curb line
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Reductions in buffer widths between roadway and sidewalk could eliminate curb and gutter impacts
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

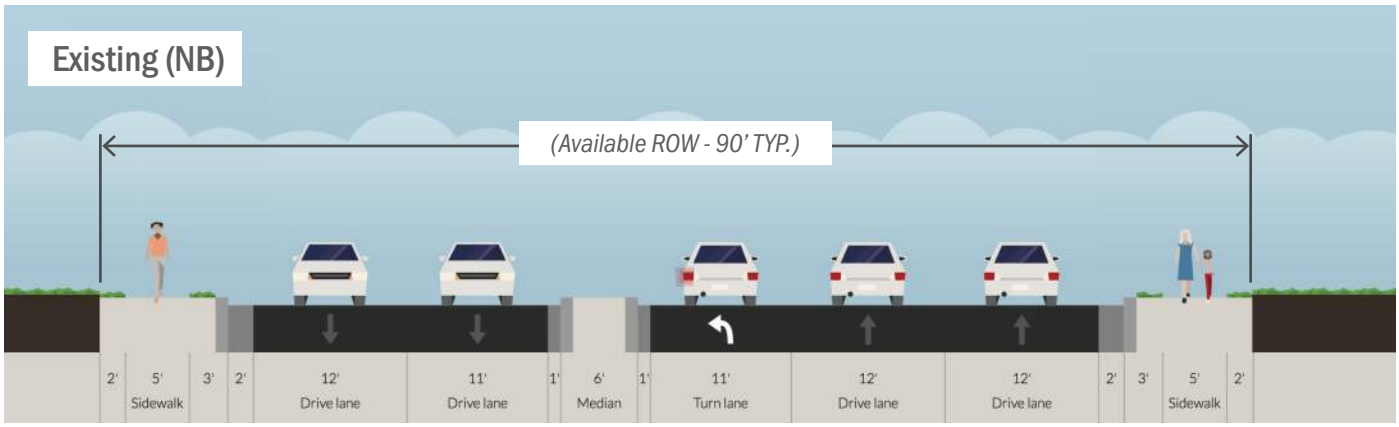
Concept Proposal

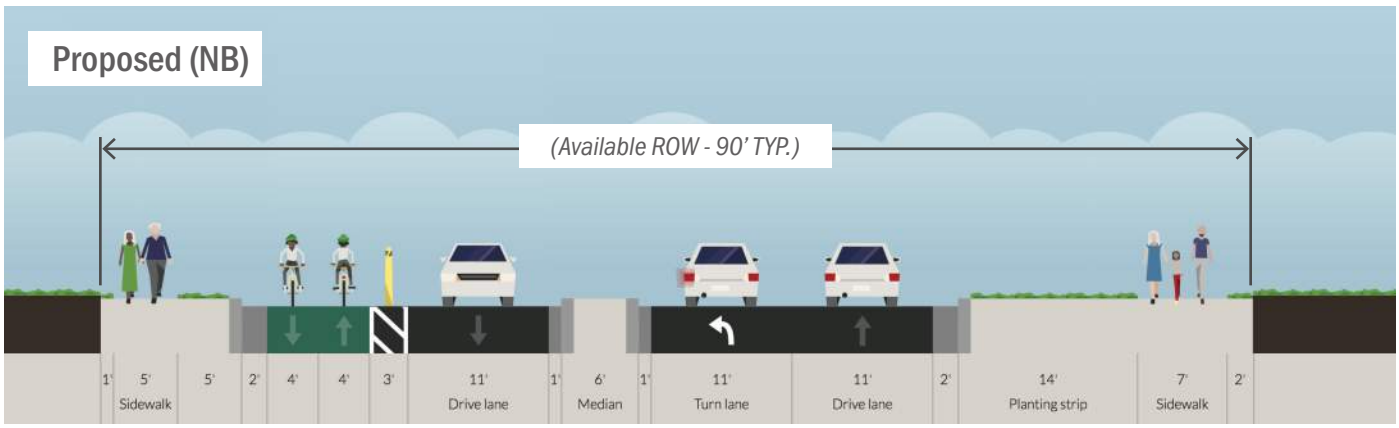
TYPE: Two-way Separated / Protected Bicycle Lanes - west sides

ID: 11-I

Revision: 08/14/18

Segment 3





GENERAL DESCRIPTION

Three Lane Conversion and Separated / Protected Bicycle Lanes

- Implement a three lane conversion ("Road Diet") for roadway along Segment 3
  - ADT is within range for conversion
  - Requires a traffic analysis
  - Conversion frees up space for on-road bicycle facilities
- Implement two-way separated / protected bicycle lanes along west side of roadway
- Reconstruct curb and gutter on east side
  - Provides generous planted buffer and wider sidewalk on east side

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage/curb and gutter on east side
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

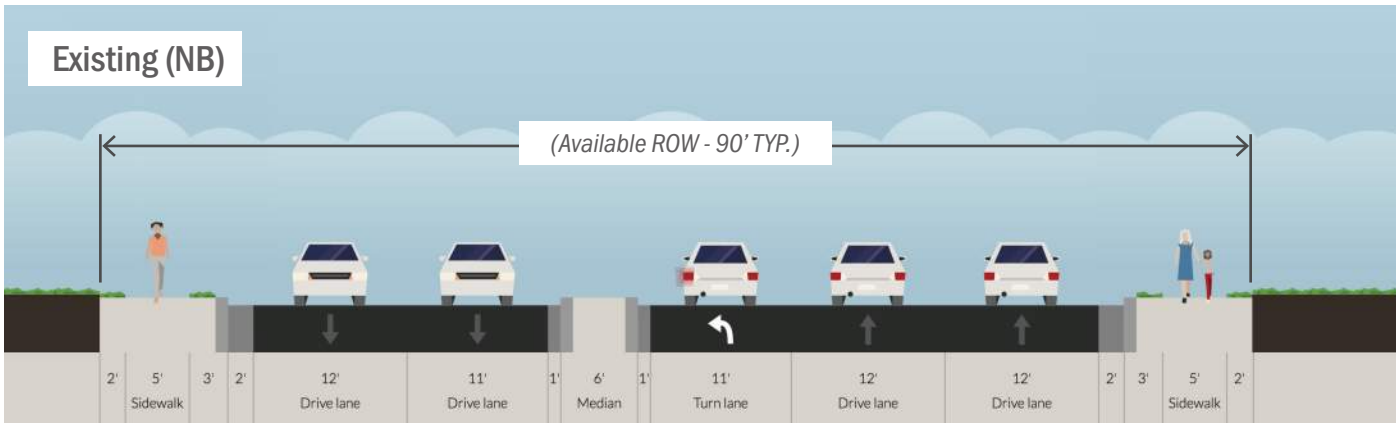
Concept Proposal

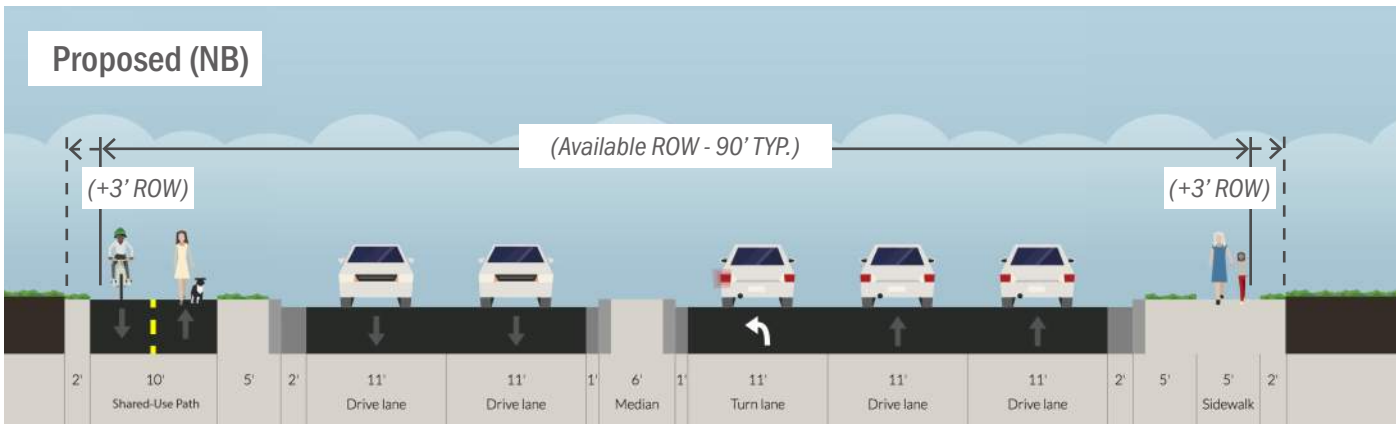
TYPE: Two-way Shared-Use Path / Trail - west side

ID: 11-J

Revision: 08/14/18

Segment 3





GENERAL DESCRIPTION

Double Two-way Shared-use Path / Trail

- Implement two-way shared-use path / trail along west side of roadway
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line
- Requires 6' acquisition or easement beyond existing ROW on west side

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction and modifications to existing roadway cross-section width and curb line
- Impacts to existing transit
  - Not yet determined

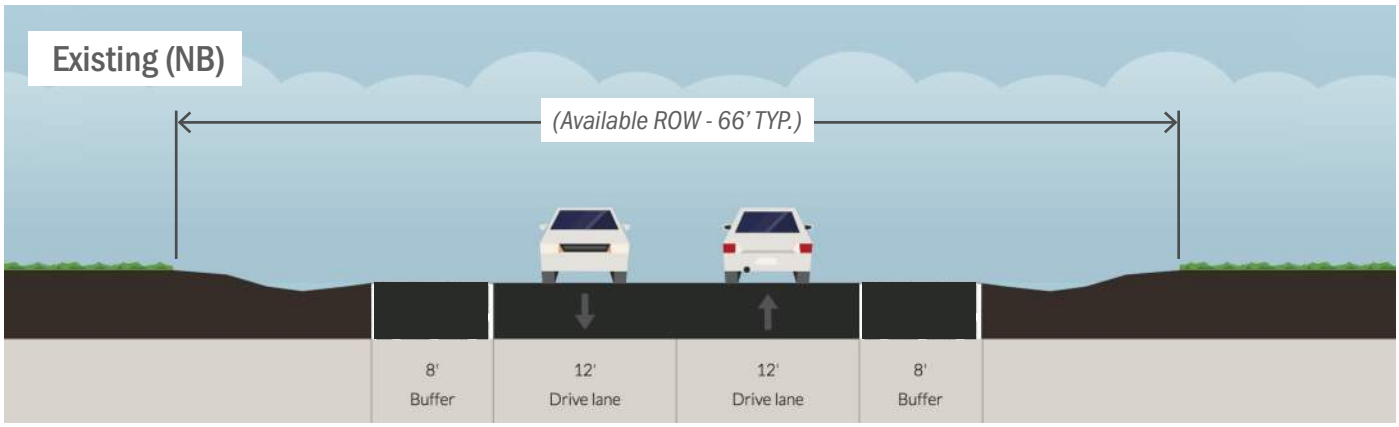
Concept Proposal

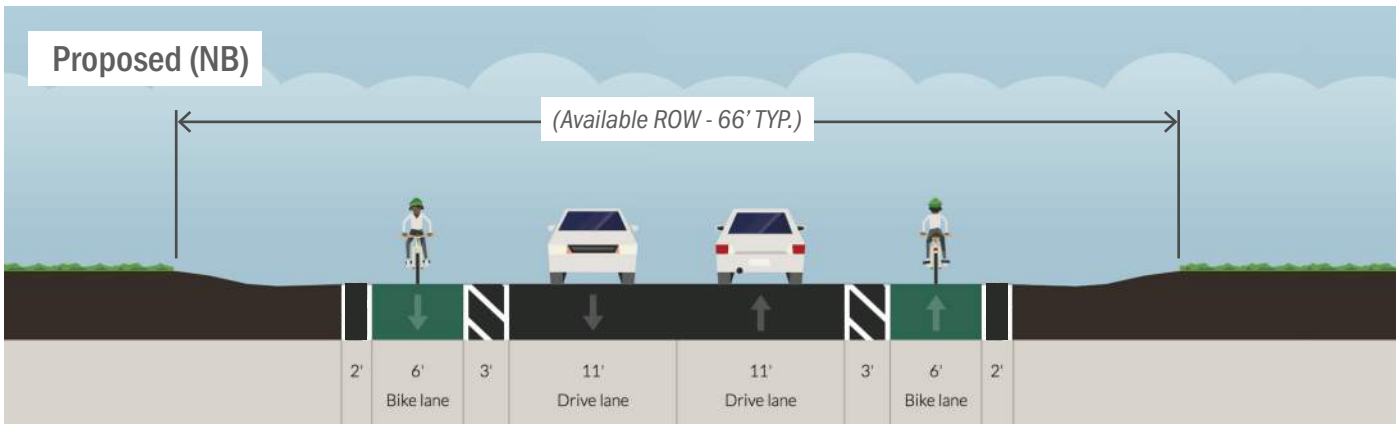
TYPE: One-way Separated / Protected Bicycle Lanes - both sides

ID: 11-L

Revision: 08/14/18

Segment 4





GENERAL DESCRIPTION

One-way Buffered Bicycle Lanes

- Implement a pair of one-way buffered bicycle lanes
- Maintains existing roadway cross-section width
  - Maintains existing roadway edge line
  - May require itch re-grading
- Reduce speed limit to 30 mph
- Maintains bike facility continuity with ID 04-A

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential ditch grading
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Potential overhead utility impacts on north side

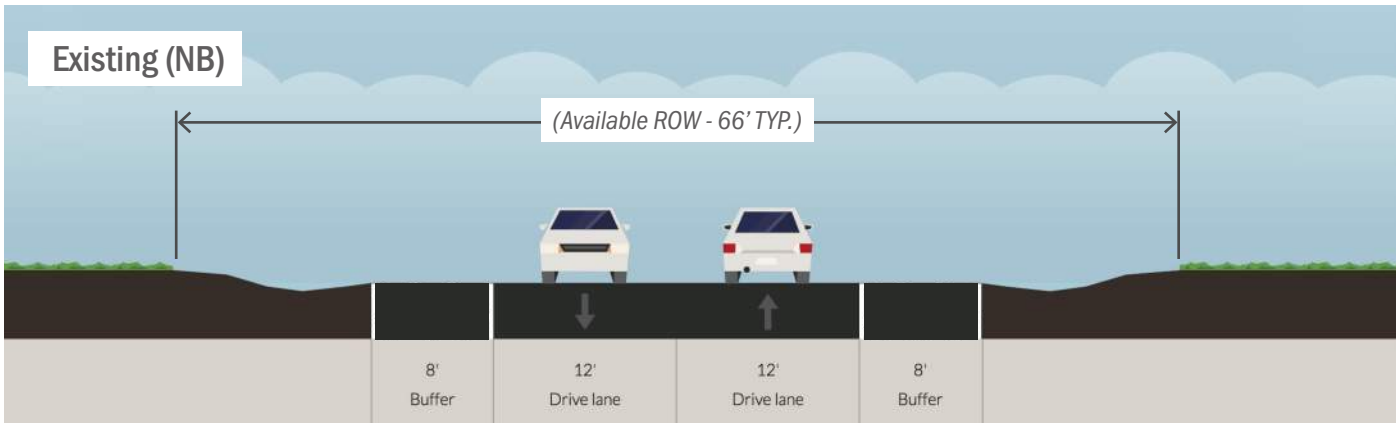
Concept Proposal

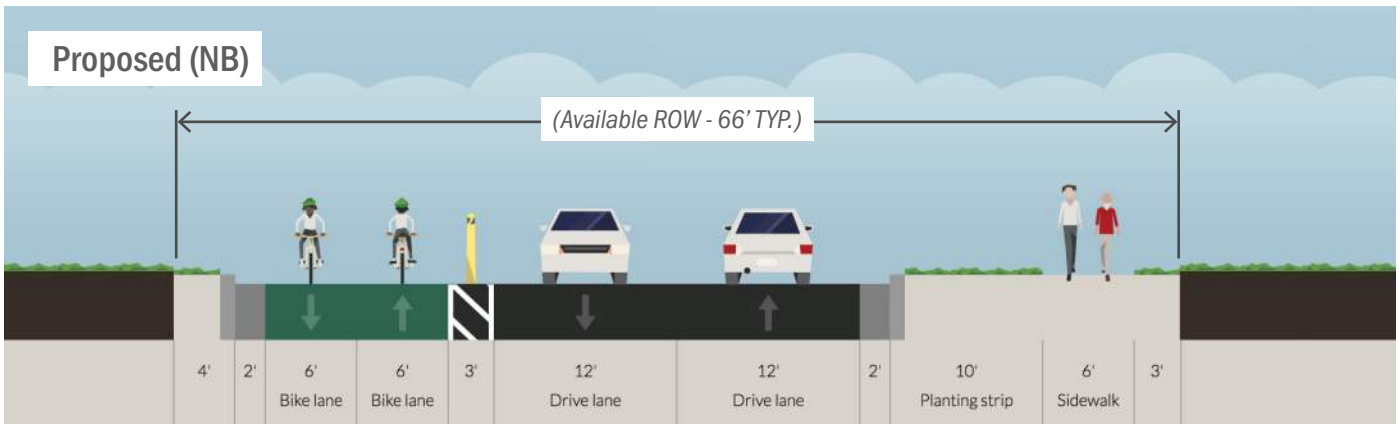
TYPE: Two-way Separated / Protected Bicycle Lane - single side

ID: 11-M

Revision: 08/14/18

Segment 4





GENERAL DESCRIPTION

Single Two-way Protected Bicycle Lane

- Implement one two-way protected bike lane
  - Place on west side to reduce number of intersections
  - Requires construction of curb and gutter
- Implement sidewalk on east side to accommodate pedestrian uses from adjoining residential areas south of Lakeside Ave N

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Potential overhead utility impacts on north side

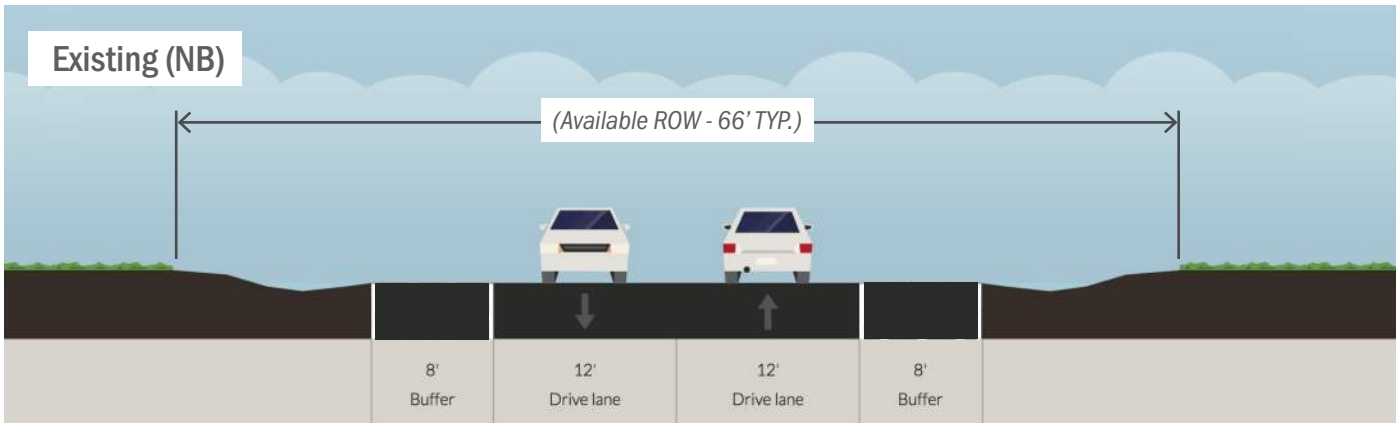
Concept Proposal

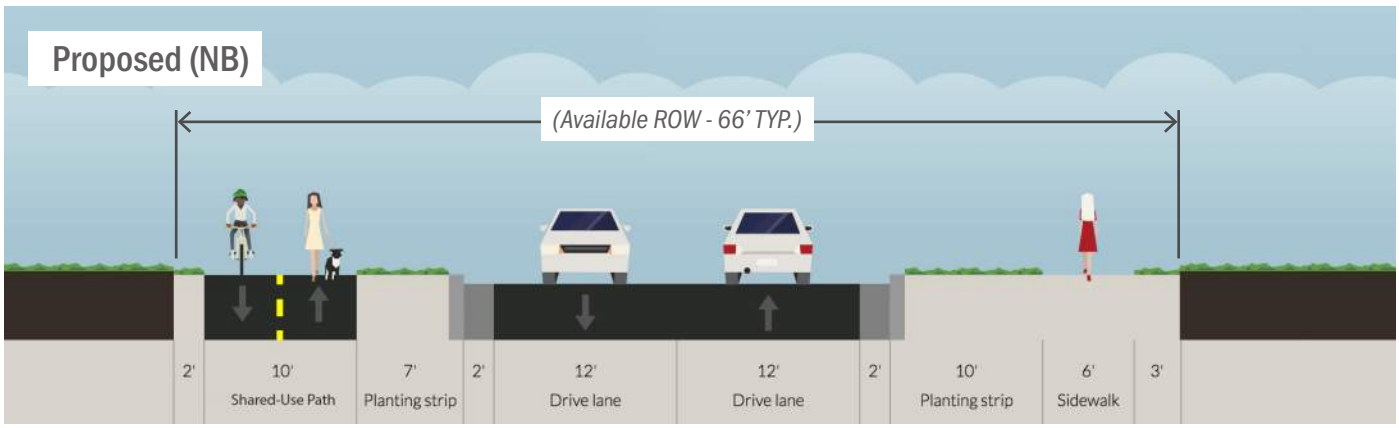
TYPE: Two-way Shared-Use Path / Trail - single side (west)

ID: 11-N

Revision: 08/14/18

Segment 4





GENERAL DESCRIPTION

Single Two-way Shared-use Path / Trail

- Implement a two-way shared-use path / trail
  - Place on west side to reduce number of intersections
  - Requires construction of curb and gutter
- Implement sidewalk on east side to accommodate pedestrian uses from adjoining residential areas south of Lakeside Ave N

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 12
Revision: 08/13/18

Project: Hampshire Avenue North
City: Brooklyn Park
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location, traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: 63rd Avenue North
- Route covers: Hampshire Ave N, 66th Ave N
- Route ends: Lakeland Park

Relation to other proposed projects

- Connects to Project ID 08
- Blue Line station at Bottineau Blvd

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration are generally constant along the route

- Segment 1: Two way residential street

Project Description
Segments to be Considered

ID: 12
Revision: 08/13/18

Segments considered and general project location.

Project Description
Description of Segments

ID: 12
Revision: 08/13/18

Categories	Segment 1
Description of typical roadway section	Two way, two lanes
Number of through lanes (typ. config.)	2
AADT (typ.)	No data available
Speed limit (mph)	30
Roadway (curb-to-curb) width typ. (ft)	30 on Hampshire, 28 at 66th
Available right-of-way typ. (ft)	66 on Hampshire, 60 on 66th Ave N
Roadway jurisdiction	Brooklyn Park
State Aid Facility?	No
Curb & gutter (urban) section?	Yes
Median present?	No
On-street parking present?	Yes
Shoulder present?	No
Width of shoulder or parking lane	N/A
Width of driving lane(s)	14 ft
Center left turn lane?	No
Width of center turn lane	N/A
Sidewalk or sidepath present?	None
Boulevard or buffer from roadway (typ)	N/A
Approximate length of segment (ft)	2,910 ft
Transit service along project	716
Transit service across project	767
Segment interacts with the 90% plans?	No

Project Description
Description of Segments - CONTINUED

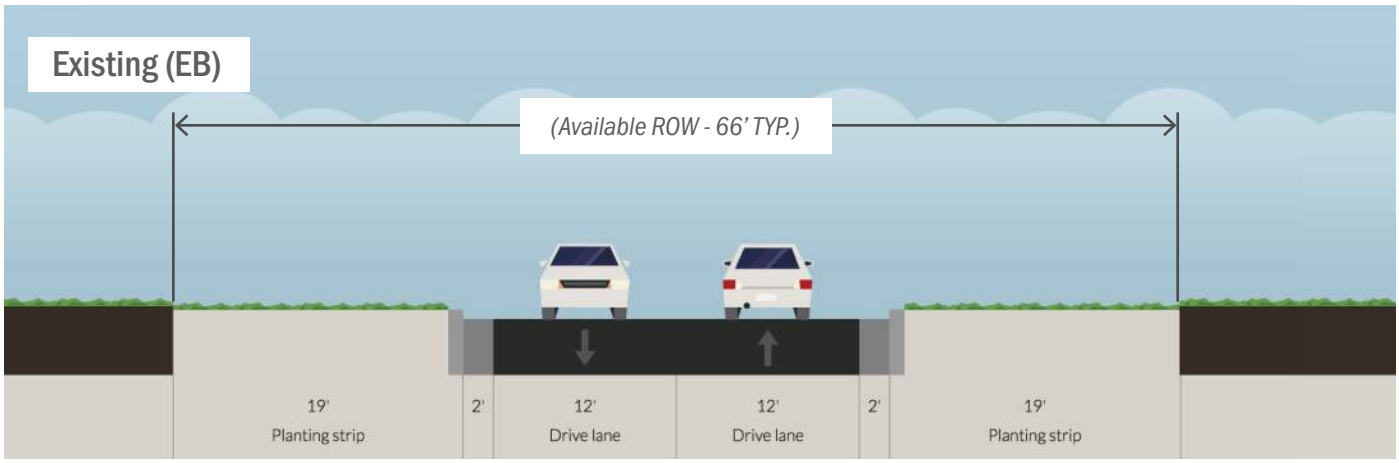
ID: 12
Revision: 08/13/18

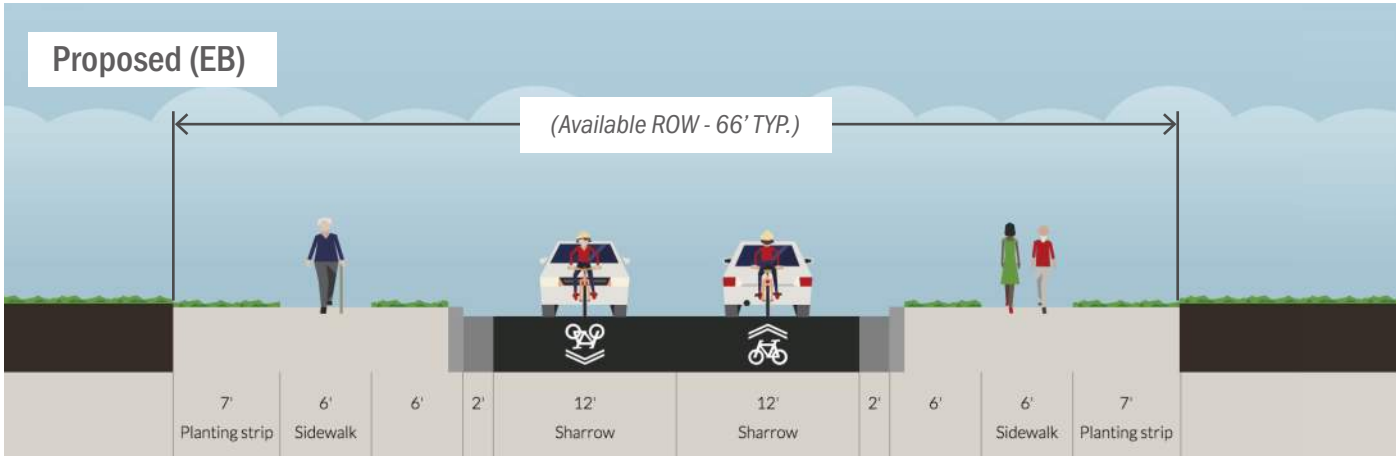
Categories	Segment 1
Recommendation from 90% plans	N/A
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A
Do the recommendations conflict or preclude each other?	N/A

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

Concept Proposal
TYPE: Sidewalks and Neighborhood Slow Street

ID: 12-A
Revision: 08/13/18
Segment 1





GENERAL DESCRIPTION

Sidewalks and Neighborhood Slow Street

- Develop sidewalks along both sides of street
- Implement Neighborhood Slow Street (traffic-calmed street, also known as Bicycle Boulevard)
  - Include traffic calming elements, typically in and near inter-sections, including traffic circles, bump-outs or medians, way-finding markers, route signs, and bicycle boulevard markings
- Maintains existing roadway cross-section width and roadway components
  - Maintain existing curb line and on-street parking

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at intersections
  - ADA compliant pedestrian ramps

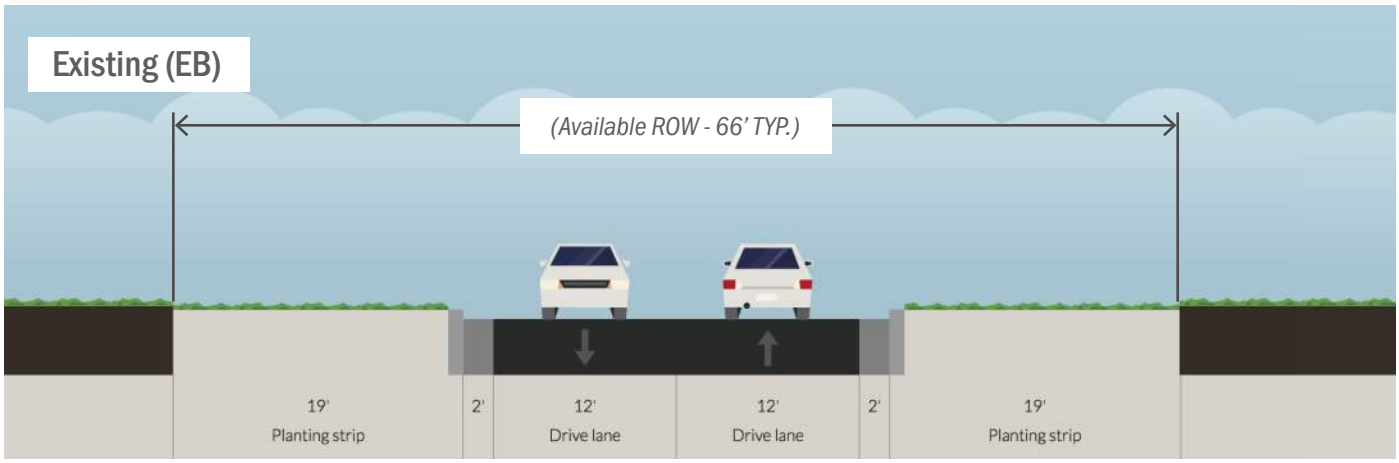
Concept Proposal

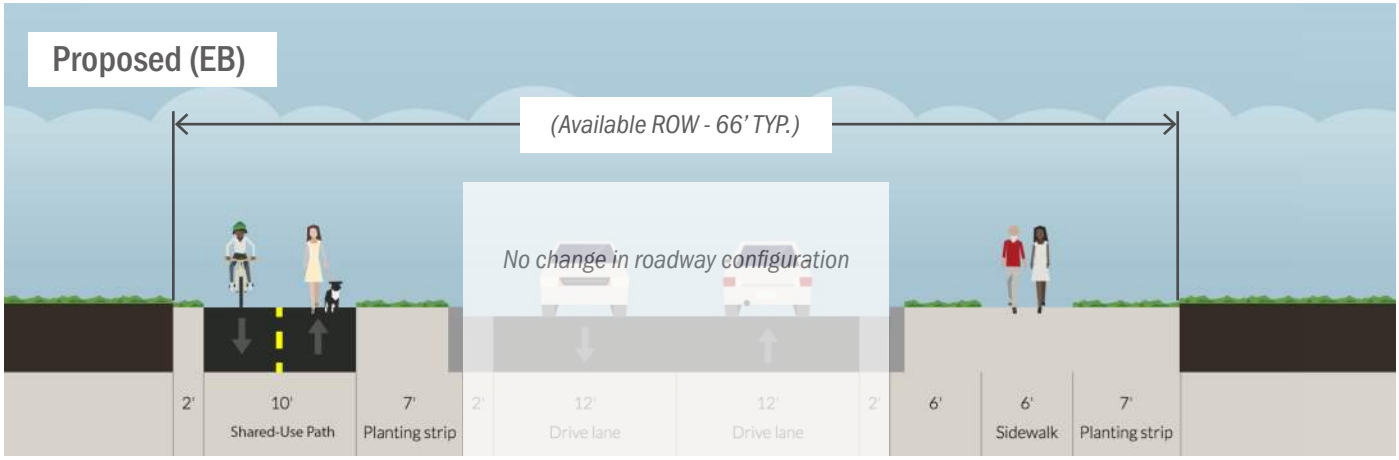
TYPE: Two-way Shared-Use Path / Trail - single side (west)

ID: 12-B

Revision: 08/13/18

Segment 1





GENERAL DESCRIPTION

Bidirectional Shared-use Path / Trail

- Implement a two-way shared-use path / trail along the west side of Hampshire Avenue, and north side of 66th Avenue
  - Place on west side to facilitate connection with trail on 63rd Ave N and Blue Line station
- Provide sidewalk on other side of street
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - None
- Impacts to existing transit
  - Not yet determined
- Impacts at intersections
  - ADA compliant pedestrian ramps

Concept Development for Walk/Bike Connectivity

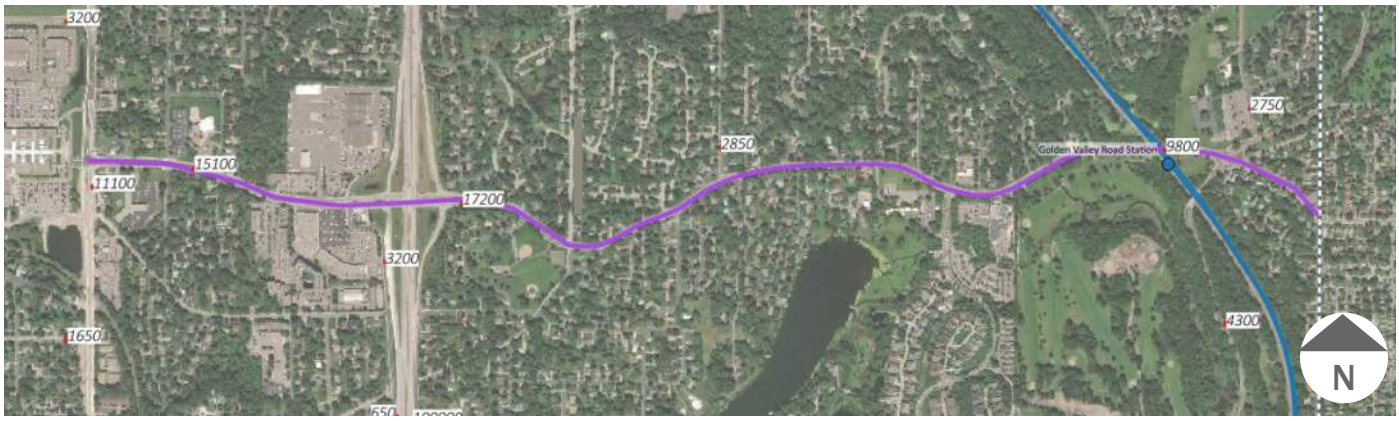
Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 13
Revision: 08/16/18

Project: Bassett Creek Trail - Regent to Golden Valley Road to Xerxes Avenue North
City: Golden Valley
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.



Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: Douglas Drive
- Route covers: Duluth Street and Golden Valley Road
- Route ends: Xerxes Avenue

Relation to other proposed projects

- Blue Line station near Theodore Wirth Parkway

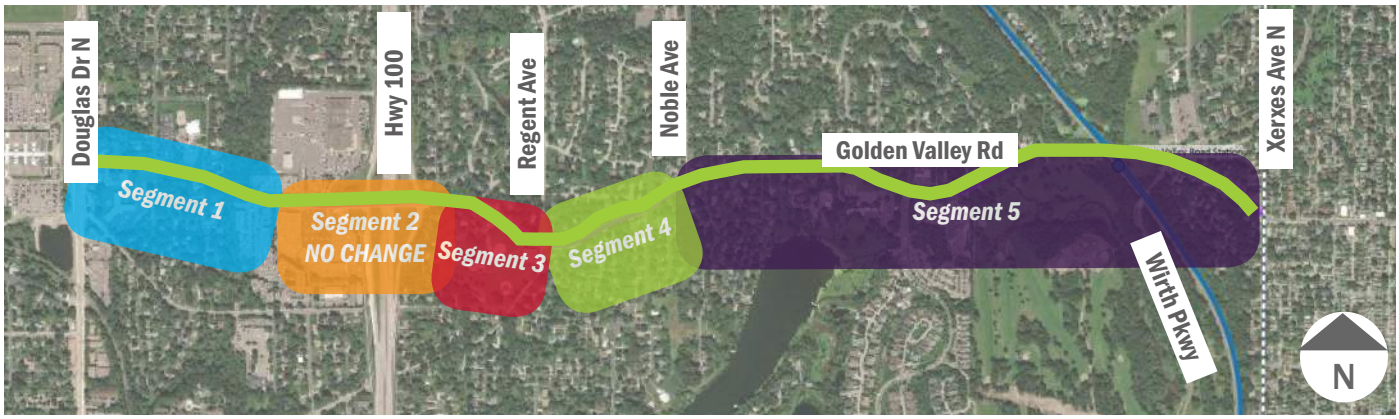
UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route

- Segment 1: Four lane, two way road west of Lilac Drive
- Segment 2: Four lane, two way road and interchange with Hwy 100 between Lilac Dr and Toledo Ave
- Segment 3: Four lane, two way road between Toledo Ave and Regent Ave
- Segment 4: Four lane, two way road between Regent Ave and Noble Ave
- Segment 5: Two lane, two way road east of Noble Ave

Project Description
Segments to be Considered

ID: 13
Revision: 08/16/18



Segments considered and general project location.

Project Description
Segments to be Considered

ID: 13
Revision: 08/16/18

Project Description
Segments to be Considered

ID: 13
Revision: 08/16/18

Project Description
Description of Segments

ID: 13
Revision: 08/16/18

Categories	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5
Description of typical roadway section	Four lane, two way	Four lane, two way	Four lane, two way	Four lane, two way	Two lane, two way
Number of through lanes (typ. config.)	4	4	4	4	2
AADT (typ.)	15,000	17,200	17,200	No data available	9,800
Speed limit (mph)	35	35	35	35	35
Roadway (curb-to-curb) width typ. (ft)	65	78 -104	48	48	34
Available right-of-way typ. (ft)	66-120	85+	66	66	66
Roadway jurisdiction	Hennepin County	Hennepin County	Hennepin County	Hennepin County	Hennepin County
State Aid Facility?	Yes - CSAH 66	Yes - CSAH 66	Yes - CSAH 66	Yes - CSAH 66	Yes - CSAH 66
Curb & gutter (urban) section?	Yes	Yes	Yes	Yes	Yes
Median present?	Select locations, physical	Yes, physical	None	Select locations, painted	Select locations, painted
On-street parking present?	No	No	No	No	No
Shoulder present?	No	No	No	No	6 ft bike lane on shoulder
Width of shoulder or parking lane	N/A	N/A	N/A	N/A	6 ft
Width of driving lane(s)	12	12	12	11.5	12
Center left turn lane?	No	No	No	No	No
Width of center turn lane	N/A	N/A	N/A	N/A	N/A
Sidewalk or sidepath present?	7 ft sidewalk on north and south	10 ft sidepath on north - 7 ft sidewalk on south, 10 ft sidepath on south (under bridge only)	7 ft sidewalk on south, 10ft sidepath on north (non-conforming condition near pedestrian bridge at Regent Ave N)	6 ft sidewalk on south	5 ft sidewalk north and south (west of Wirth Pkwy) - 8 ft sidewalk south only (east of Wirth Pkwy)
Boulevard or buffer from roadway (typ)	5 ft grass buffer on both sides (at and west of Brunswick Ave N) - none (east of Brunswick Ave N)	None	None, except near pedestrian bridge at Regent Ave N (varied dimensions)	None	5 ft pavement buffer both sides (west of Wirth Pkwy) - none (east of Wirth)

Project Description
Description of Segments - CONTINUED

ID: 13
Revision: 08/16/18

Categories	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5
Approximate length of segment (ft)	2,000 ft	1,600 ft	776 ft	1,490 ft	5,520 ft
Transit service along project	14, 758	14, 758	14, 758	14 and 758	None
Transit service across project	705	None	None	None	30
Segment interacts with the 90% plans?	No	No	No	No	Yes: Bonnie Lane to Zephyr Place
Recommendation from 90% plans	N/A	N/A	N/A	N/A	Trail on south side of GV road between Bonnie Lane and Station. Two lane, two way traffic on road, w/ center left turn lane at intersections.
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A	N/A	N/A	N/A	Separated / protected bike lane on both sides of street and trail on single side
Do the recommendations conflict or preclude each other?	No	No	No	No	No

Project Description
General Guidelines and Standards

ID: 13
Revision: 08/16/18

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

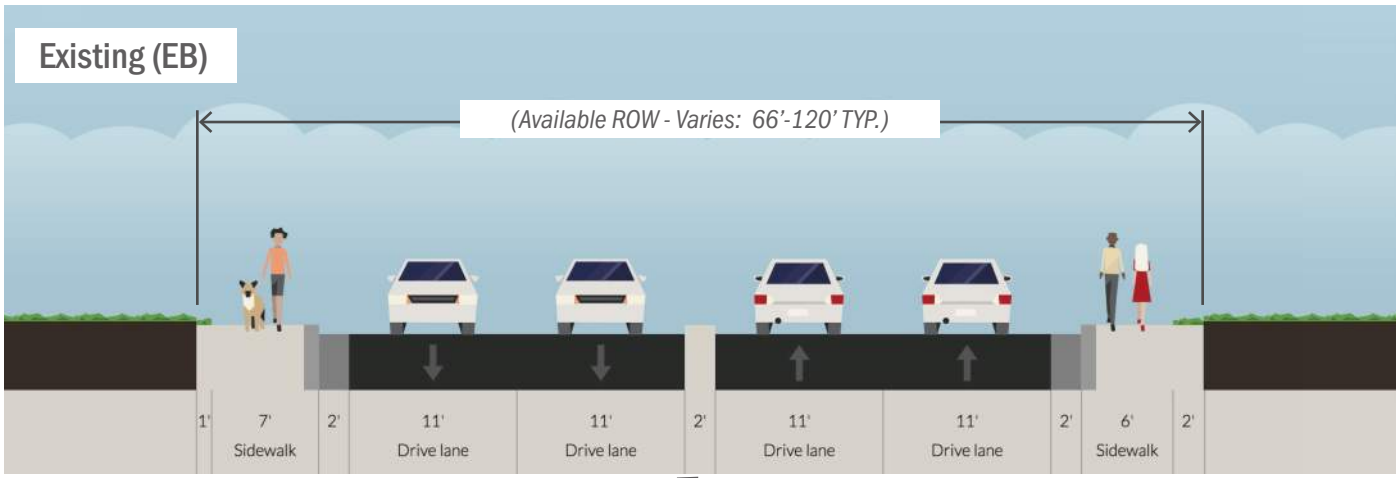
Concept Proposal

TYPE: Shared-Use Path / Trail - one side

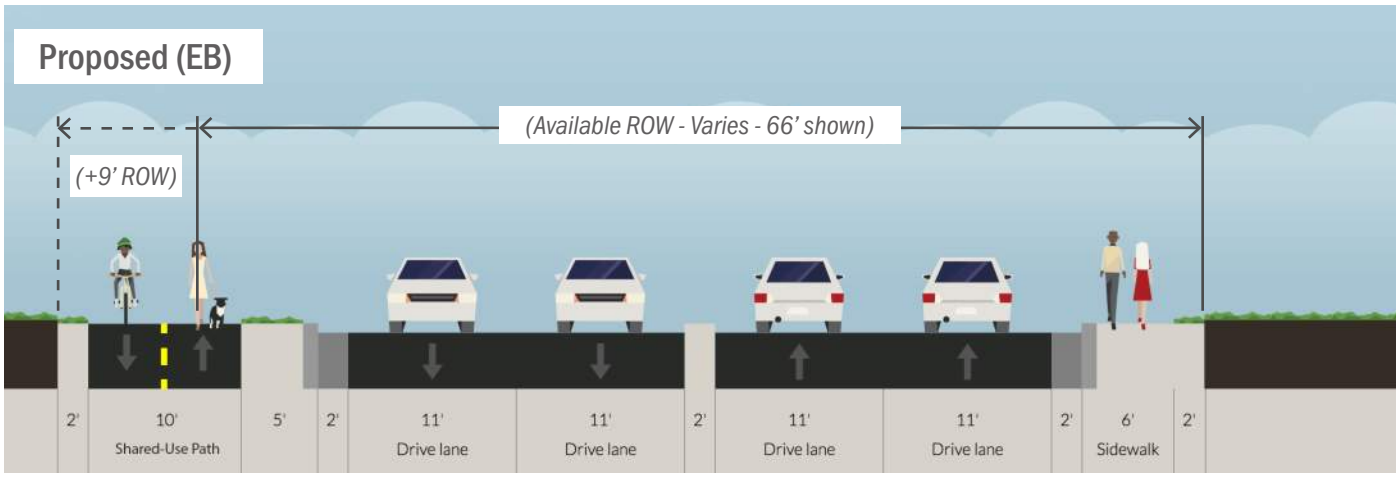
ID: 13-K

Revision: 08/16/18

Segment 1



Varies with turn lanes



Varies with turn lanes

GENERAL DESCRIPTION

Two-way Shared-use Path / Trail

- Implement a two-way shared-use path/trail along north side of the roadway
  - Provide sidewalk along south side of roadway
- Maintains existing roadway cross-section width, components, and curb line.
- Requires up to 9 ft acquisition or easement beyond existing ROW for select parcels

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Potential impacts due to additional impervious surface.
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Requires extension of Bassett Creek culvert

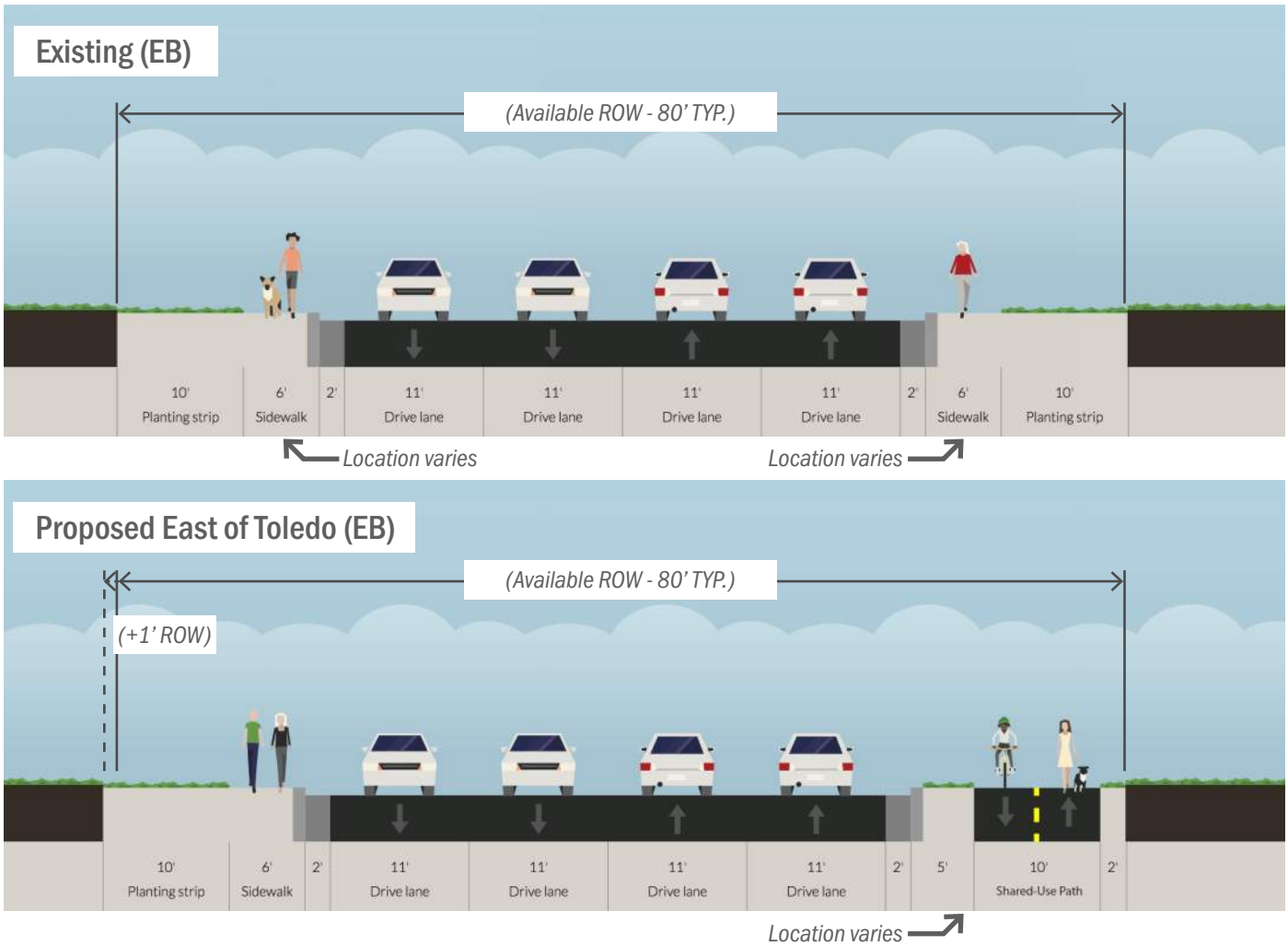
Concept Proposal

TYPE: Two-way Shared-Use Path / Trail - single side

ID: 13-J

Revision: 08/16/18

Segment 3



GENERAL DESCRIPTION

Two-way Shared-use Path / Trail

- Implement a two-way shared-use path/trail along one side of the roadway
  - Trail north of street west of Toledo Ave and south of street east of Toledo
  - West of Toledo, trail located at back of curb. No additional ROW required
  - Provide sidewalk along the other side of roadway
- Maintains existing roadway cross-section width, components, and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Potential impacts due to additional impervious surface
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Requires 1 ft acquisition or easement beyond existing ROW (east of Toledo Ave)
  - Reducing buffer between street and trail could eliminate ROW impacts
- Pedestrian flasher needed at Toledo Ave for trail crossing

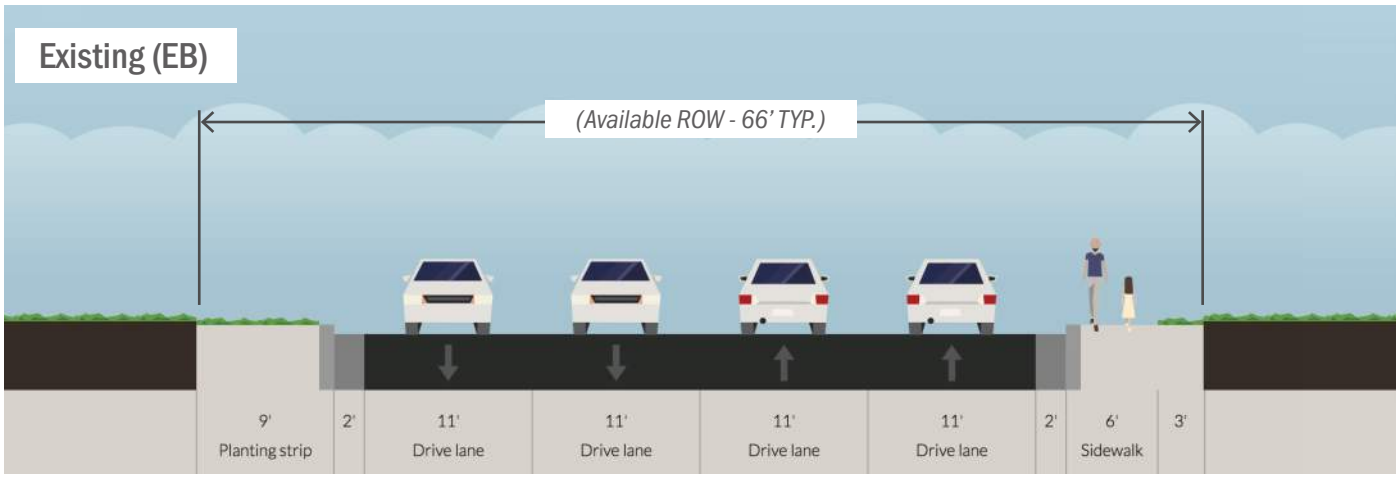
Concept Proposal

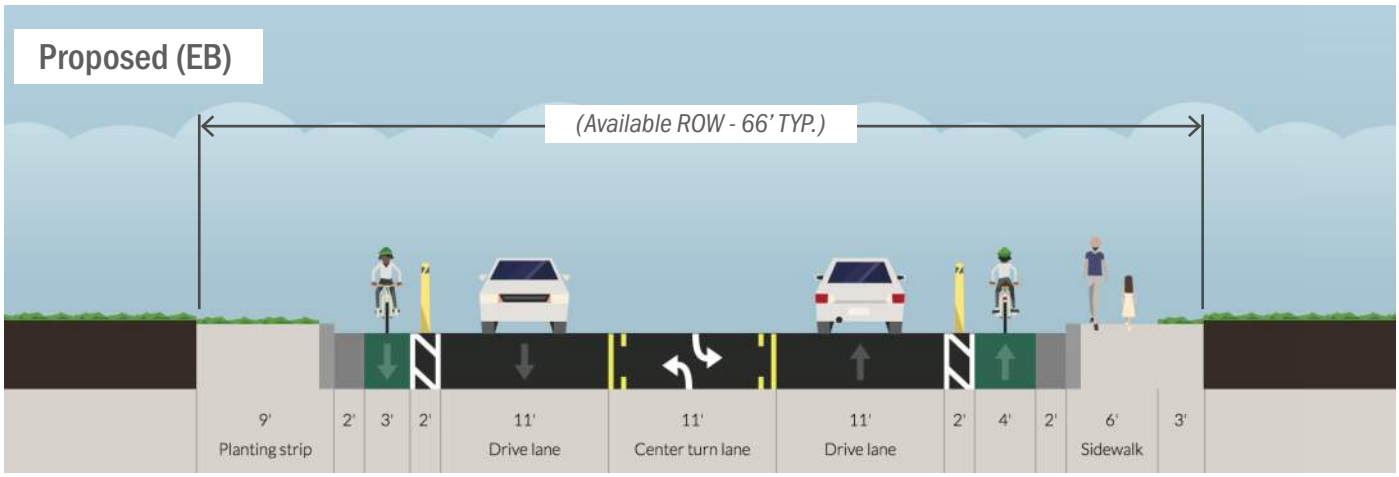
TYPE: Three Lane Conversion and Separated / Protected Bike Lanes - both sides

ID: 13-E

Revision: 08/16/18

Segment 4





GENERAL DESCRIPTION

Three Lane Conversion and Separated / Protected Bike Lanes

- Implement a three lane conversion ("Road Diet") for roadway along Segment 4
  - No data for Segment 4, but ADT in nearby segments is within range for conversion
  - Conversion frees up space for on-road bicycle facilities
- Implement one-way separated / protected bicycle lanes
- Maintains existing roadway cross-section width
  - Maintains existing curb line on one side of roadway

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
  - Requires bike friendly drainage grates
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections
- Impacts on travel lanes
  - Elimination of driving lane each way will require traffic analysis

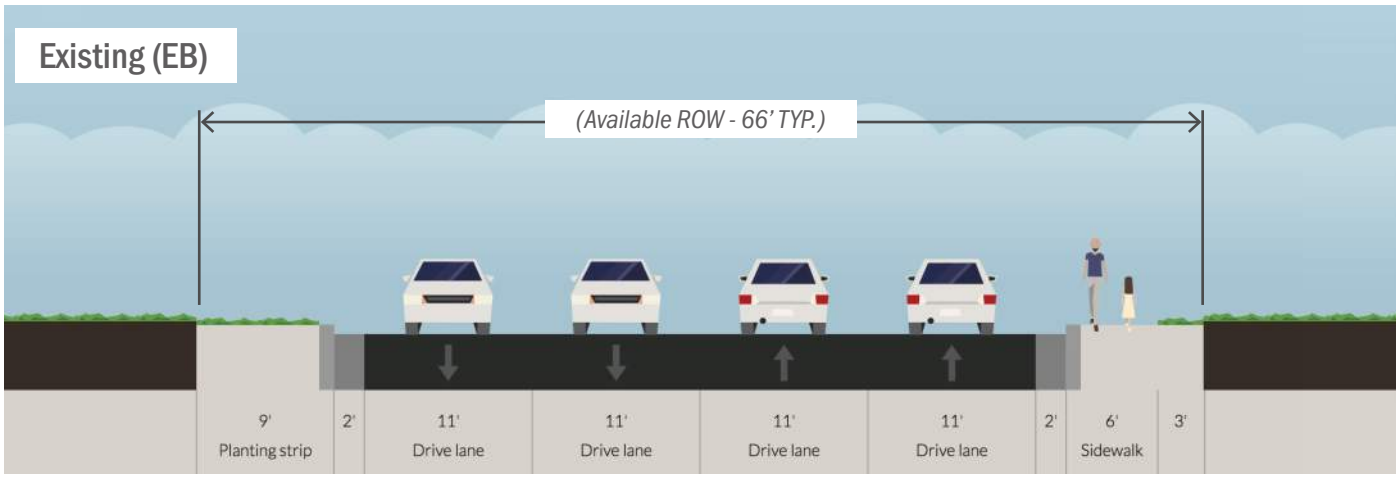
Concept Proposal

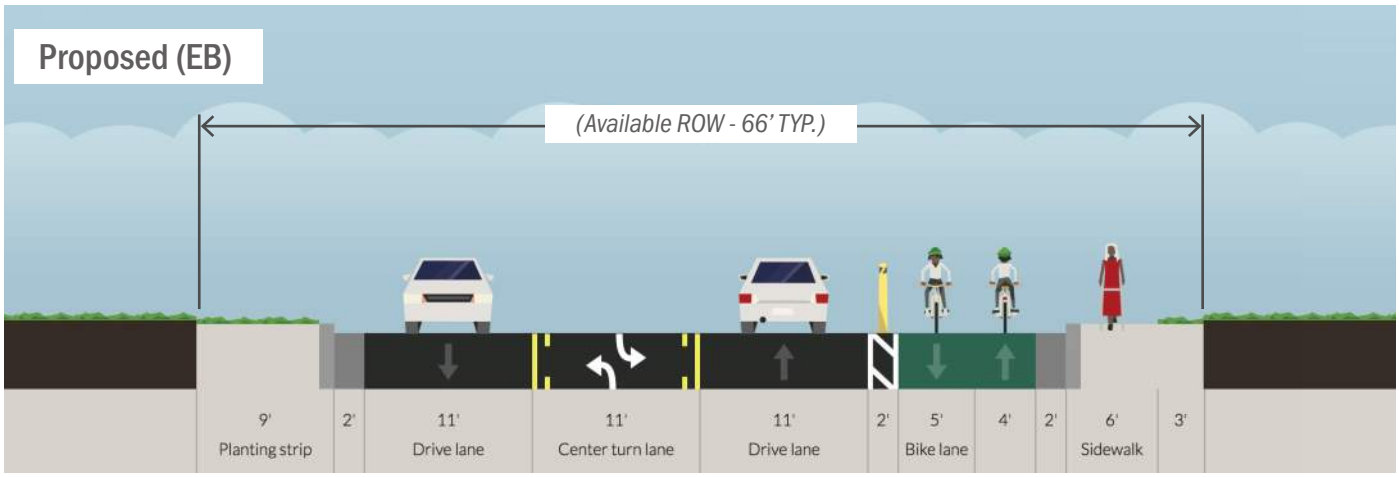
TYPE: Three Lane Conversion and Two-way Separated / Protected Lanes - one side

ID: 13-F

Revision: 08/16/18

Segment 4





GENERAL DESCRIPTION

Three Lane Conversion and Separated / Protected Bike Lanes

- Implement a three lane conversion ("Road Diet") for roadway along Segment 4
  - No data for Segment 4, but ADT in nearby segments is within range for conversion
  - Conversion frees up space for on-road bicycle facilities
- Implement two-way separated / protected bicycle lane
- Maintains existing roadway cross-section width
  - Maintains existing curb line on both sides of roadway

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires bike-friendly drainage grates
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections
- Impacts on travel lanes
  - Elimination of driving lane each way will require traffic analysis

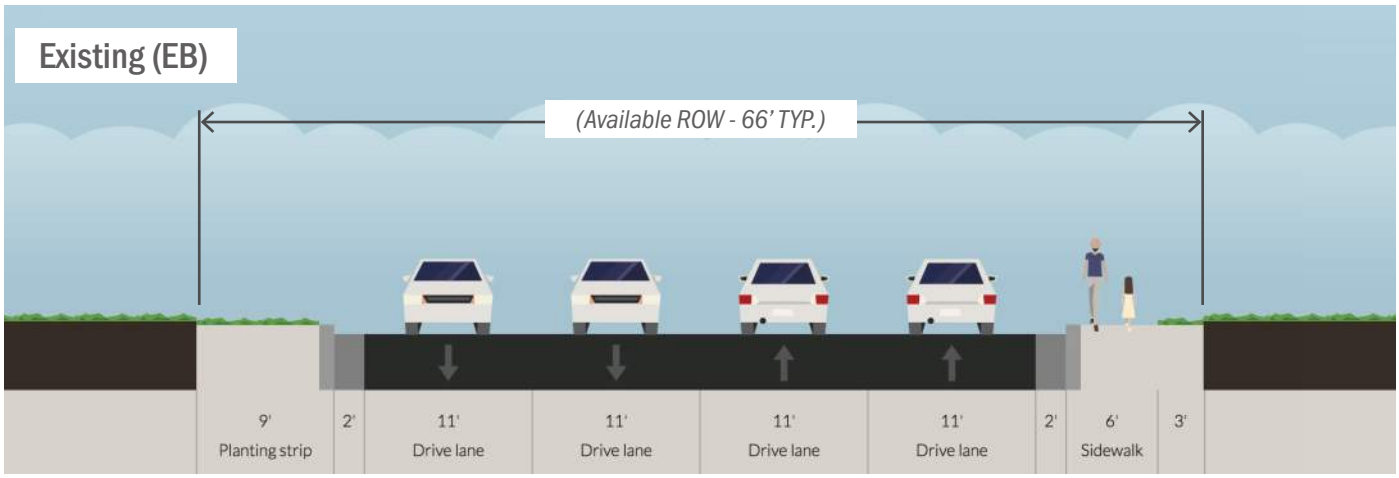
Concept Proposal

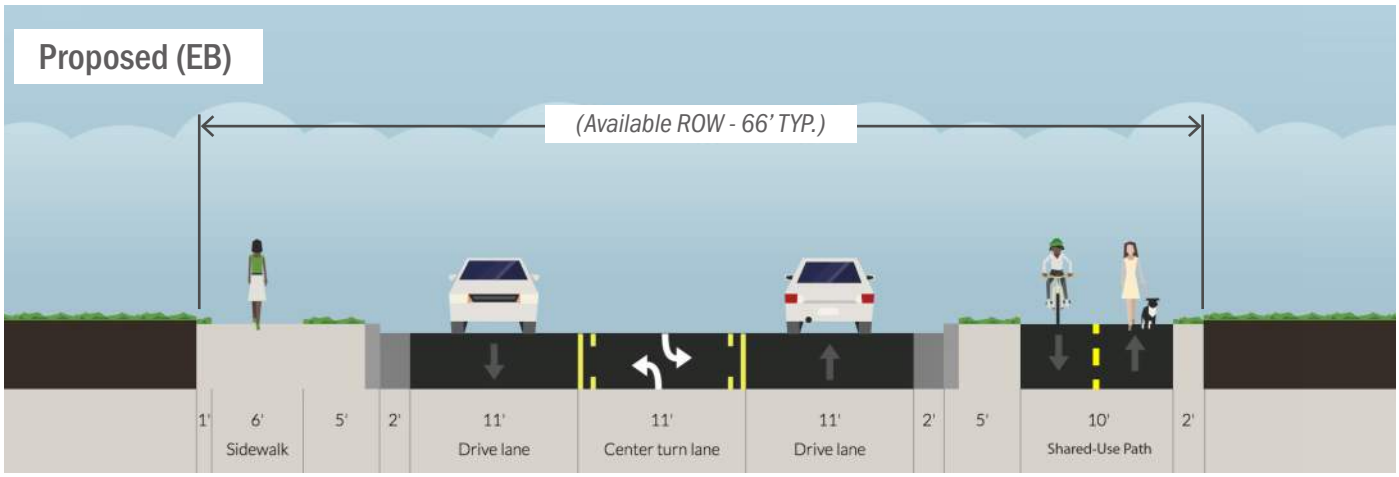
TYPE: Three Lane Conversion and Two-way Shared-Use Path / Trail - one side

ID: 13-G

Revision: 08/16/18

Segment 4





GENERAL DESCRIPTION

Three Lane Conversion and Two-way Shared-Use Path / Trail

- Implement a three lane conversion ("Road Diet") for roadway along Segment 4
  - No data for Segment 4, but ADT in nearby segments is within range for conversion
  - Conversion frees up space for off-road bicycle facilities
- Implement a two-way shared-use path / trail along one side of the roadway
  - Provide sidewalk along the other side of roadway
- Requires reconstruction and modification to existing roadway cross-section width, roadway components, and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / gutter
  - Potential impacts due to additional impervious surface
- Impacts to existing transit
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
  - Potential bike / walk signal at intersection
- Impacts on travel lanes
  - Reduction of one traffic lane each way, will require traffic analysis

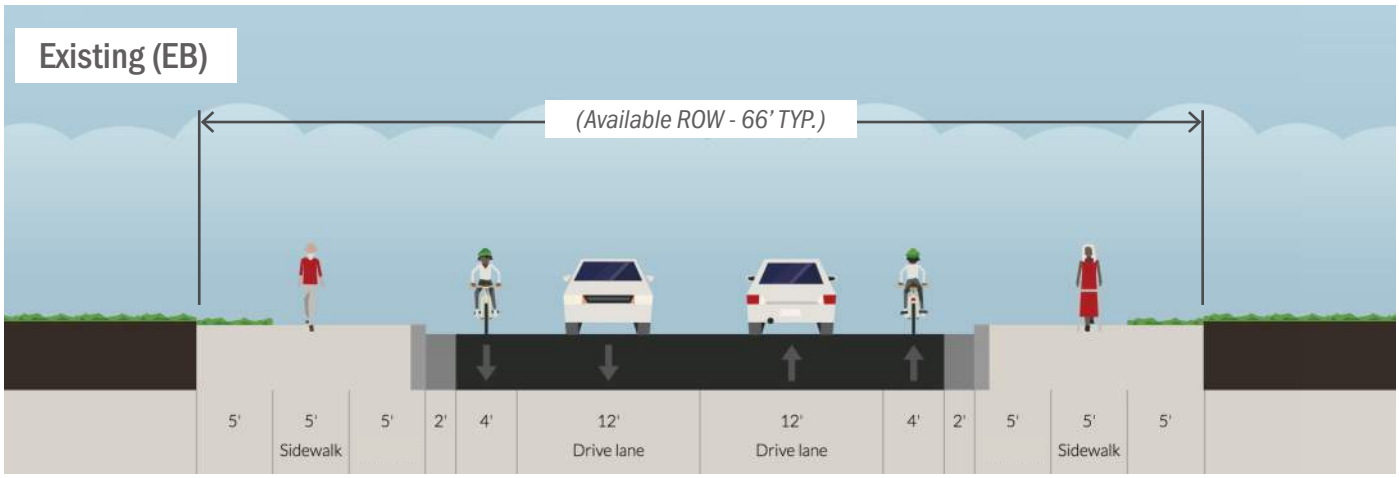
Concept Proposal

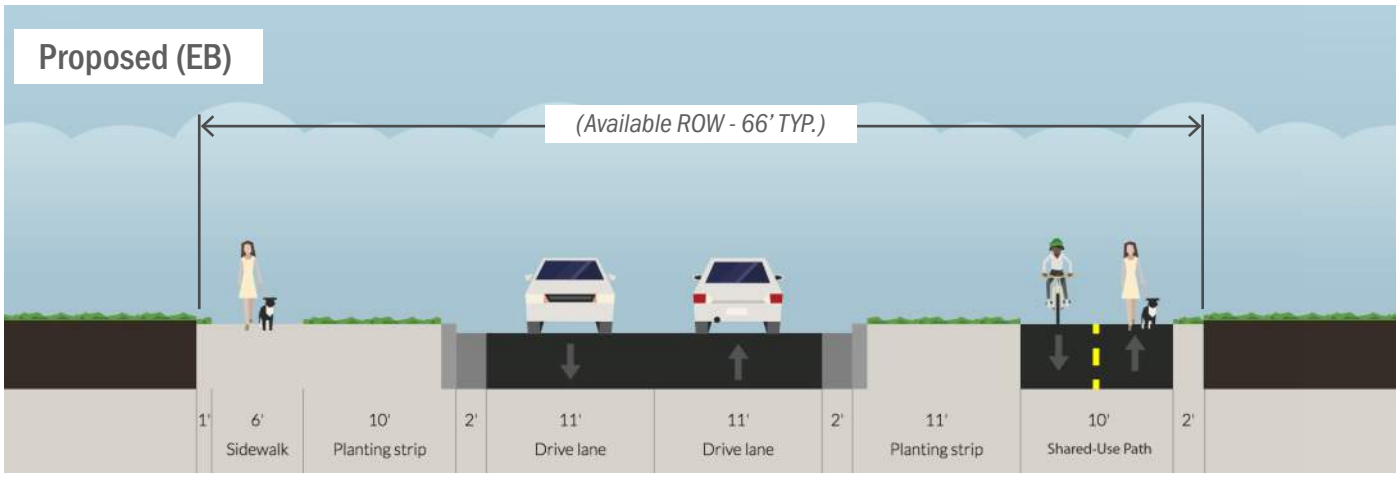
TYPE: Two-way Shared-Use Path / Trail - single side

ID: 13-I

Revision: 08/16/18

Segment 5





GENERAL DESCRIPTION

Two-way Shared-use Path / Trail

- Implement a two-way shared-use path / trail on one side of Segment 5
  - Provide facility behind boulevard to provide separation from the roadway
  - Provide sidewalk for pedestrian travel along the other side of roadway
- Requires reconstruction and modification to existing roadway cross-section width, roadway components, and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections

Concept Development for Walk/Bike Connectivity

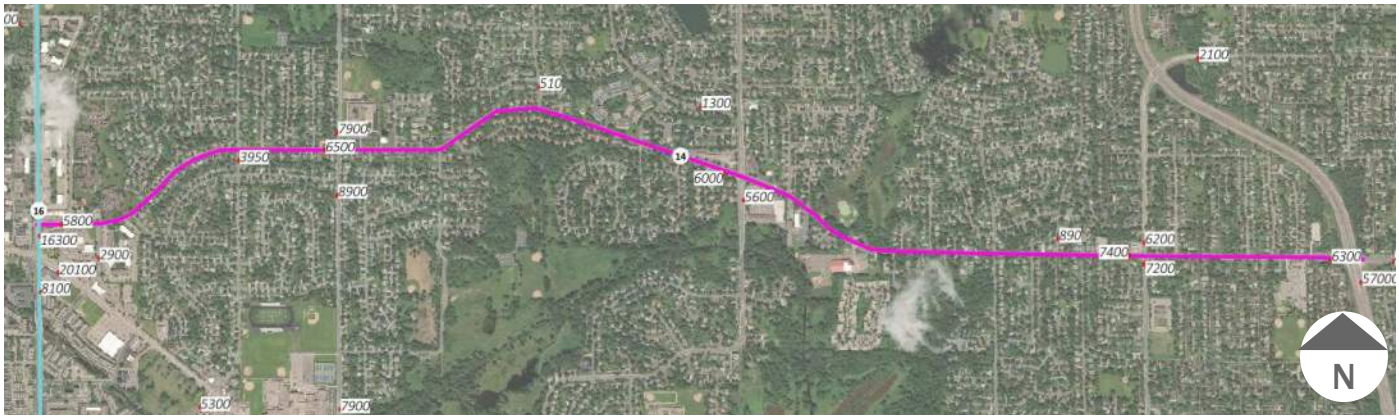
Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 14
Revision: 08/17/18

Project: Brookdale Drive
City: Brooklyn Park
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.



Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: Zane Avenue North
- Route covers: Brookdale Drive North
- Route ends: TH 252

Relation to other proposed projects

- Connects to Project ID 16

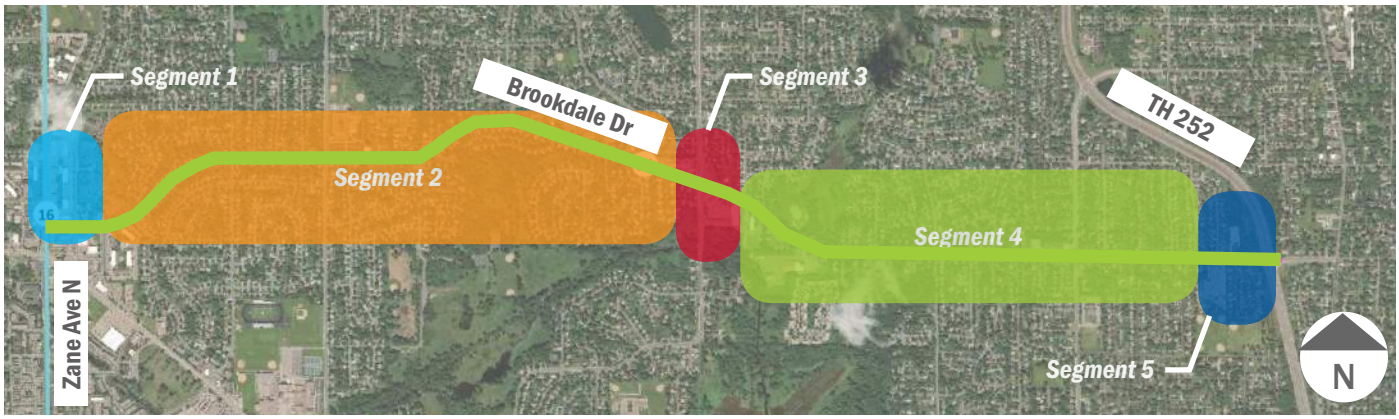
UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route

- Segment 1: Four lane, two way road from Zane Avenue North to Welcome Avenue North
- Segment 2: Two lane, two way road from Welcome Avenue North to York Lane North
- Segment 3: Two lane, two way road with additional right turn lane and center left turn lane from York Lane North to Vincent Avenue North
- Segment 4: Two lane, two way road, Vincent Avenue North to Colfax Avenue North
- Segment 5: Four lane, two way road and center left turn lanes and right turn lanes from Colfax to TH 252

Project Description
Segments to be Considered

ID: 14
Revision: 08/17/18



Segments considered and general project location.

Project Description
Segments to be Considered - Continued

ID: 14
Revision: 08/17/18

Project Description
Description of Segments

ID: 14
Revision: 08/17/18

Categories	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5
Description of typical roadway section	Four lane, two way	Two lane, two way	Two lane, two way, with additional right turn lane and center left turn lane	Two lane, two way	Four lane, two way
Number of through lanes (typ. config.)	4	2	2	2	4
AADT (typ.)	5,800	6,500	6,000	7,400	6,300
Speed limit (mph)	35	35	35	35	35
Roadway (curb-to-curb) width typ. (ft)	42	42	68	42	42-95
Available right-of-way typ. (ft)	66	66	94	80 to 66	80+
Roadway jurisdiction	Brooklyn Park	Brooklyn Park	Brooklyn Park	Brooklyn Park	Brooklyn Park
State Aid Facility?	Yes - MSAS	Yes - MSAS	Yes - MSAS	Yes - MSAS	Yes - MSAS
Curb & gutter (urban) section?	Yes	Yes	Yes	Yes	Yes
Median present?	No	No	Yes (5ft - 15ft)	No	Yes
On-street parking present?	No	Yes	No	Yes	No
Shoulder present?	No	No	No	Yes	No
Width of shoulder or parking lane	N/A	8	N/A	8	N/A
Width of driving lane(s)	10	12	11, 16	12	13
Center left turn lane?	No	No	Yes	No	Yes
Width of center turn lane	N/A	N/A	11	N/A	12-13
Sidewalk or sidepath present?	Sidewalk on north and south (5ft)	Sidewalk on north and south (5ft)	Sidewalk on north and south (5ft)	Sidewalk on north (5ft) and south (6ft) (east of Humboldt Ave N,) - sidewalk on south (6ft) (between Humboldt Ave N and Newton Ave N) - sidewalk on north (6ft) (west of Newton Ave N)	Sidewalk on north and south (5ft)

Project Description
Description of Segments - Continued

ID: 14
Revision: 08/17/18

Categories	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5
Boulevard or buffer from roadway (typ)	5.5 ft	5 ft	5 ft - 8.5 ft	7 ft	7-10 ft
Approximate length of segment (ft)	775 ft	8,262 ft	1,104 ft	5,522 ft	960 ft
Location of cross section for segment	Near Yates Ave N	Near Regent Ave N	Near Xerxes Ave N	Near Penn Ave N	East of Aldrich Ave N
Transit service along project	722, 723, , 760, 761	722, 723, 761	722, 763	722, 763	722, 763
Transit service across project	None	None	None	None	None
Segment interacts with the 90% plans?	No	No	No	No	No
Recommendation from 90% plans	N/A	N/A	N/A	N/A	N/A
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A	N/A	N/A	N/A	N/A
Do the recommendations conflict or preclude each other?	No	No	No	No	No

GENERAL GUIDELINES AND STANDARDS

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

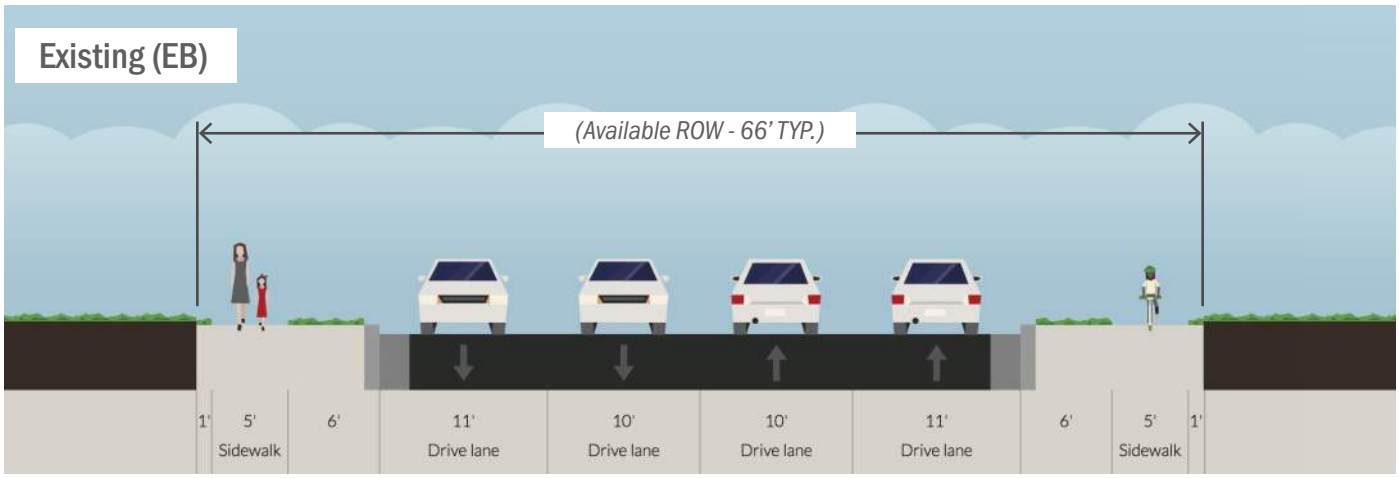
Concept Proposal

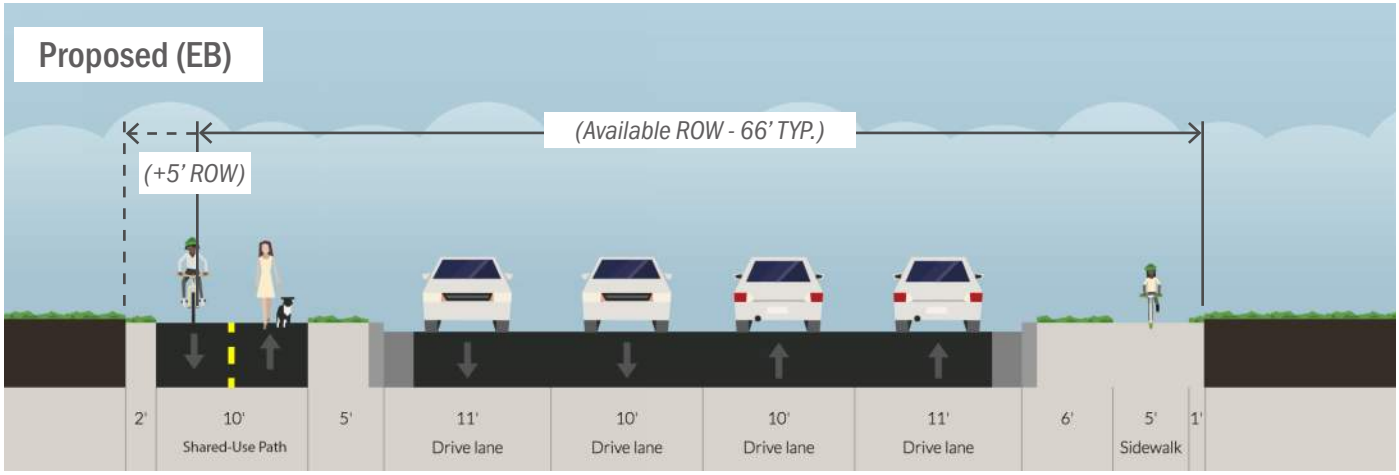
TYPE: Two-way Shared-Use Path / Trail - north side

ID: 14-A

Revision: 08/17/18

Segment 1





GENERAL DESCRIPTION

Bidirectional Shared-use Path / Trail

- Implement a two-way shared-use path / trail along north side of the roadway
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts to signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Reduction of buffer between roadway and trail could reduce ROW impacts.
- Requires 5' acquisition or easement beyond existing ROW on north side

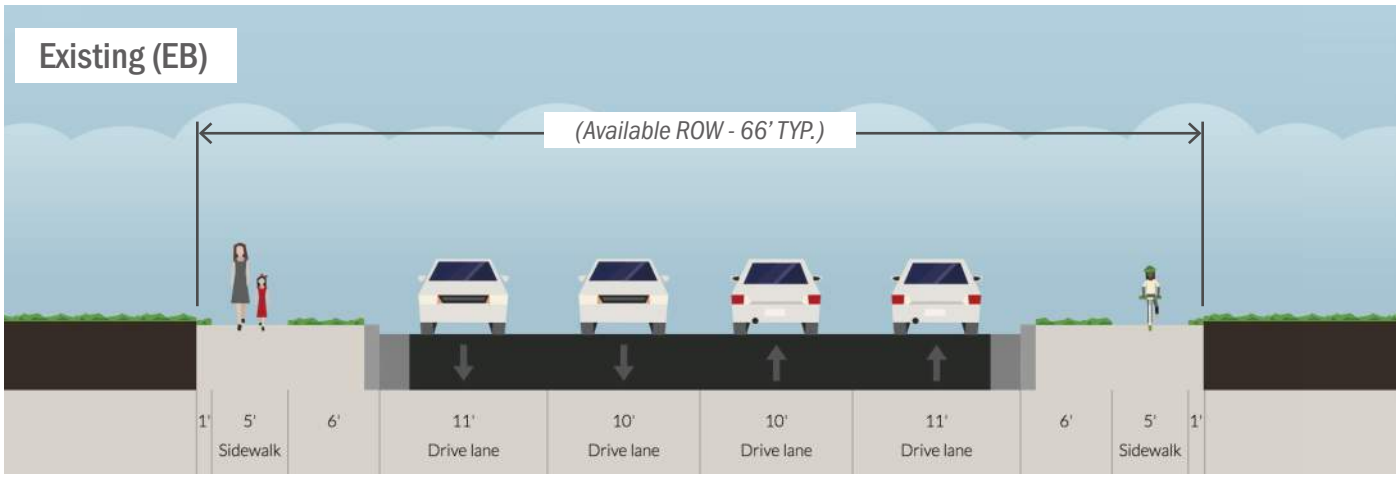
Concept Proposal

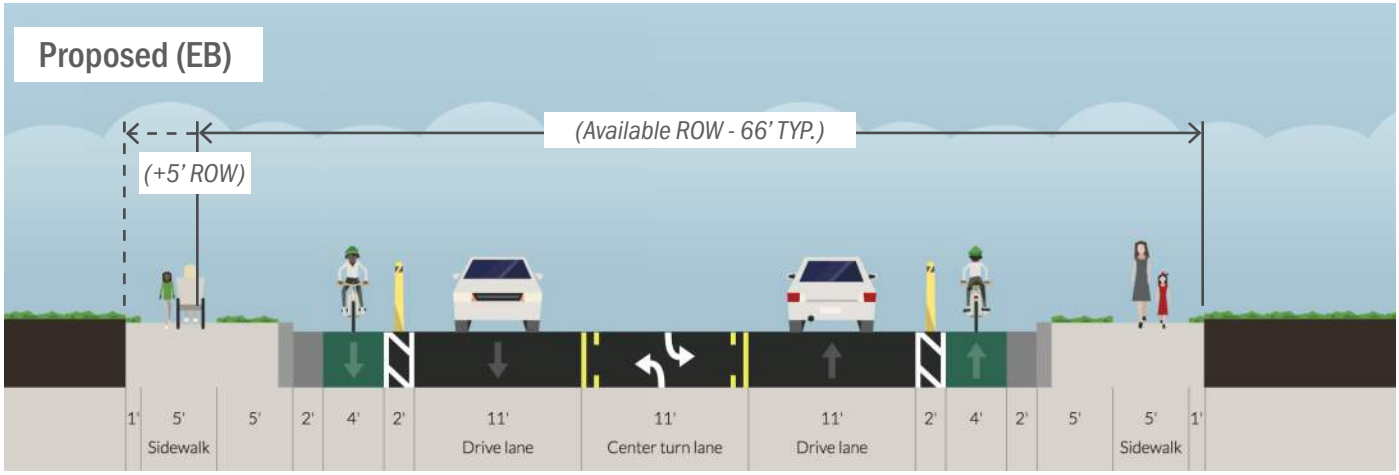
TYPE: Three Lane Conversion and Separated / Protected Bike Lanes - both sides

ID: 14-B

Revision: 08/17/18

Segment 1





GENERAL DESCRIPTION

Three Lane Conversion and Separated / Protected Bicycle Lanes

- Implement a three lane conversion ("Road Diet") for roadway along Segment 1
  - ADT is within range for conversion
  - Conversion frees up space for on-road bicycle facilities
- Implement one-way separated / protected bicycle lanes
- Requires reconstruction and modification to existing roadway cross-section width and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Reduction of buffer between roadway and sidewalk could eliminate ROW impacts
- Reduction in travel lane widths could reduce curb and gutter impacts to one side of street
- Requires 5' acquisition of easement beyond existing ROW on north side.
- Overhead utility impacts on south side

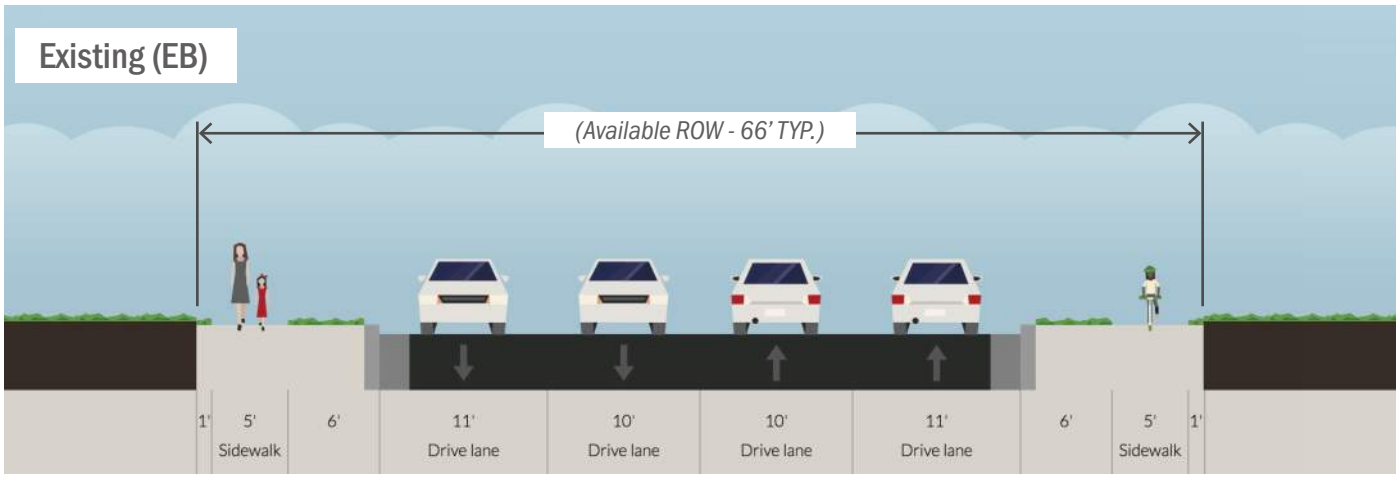
Concept Proposal

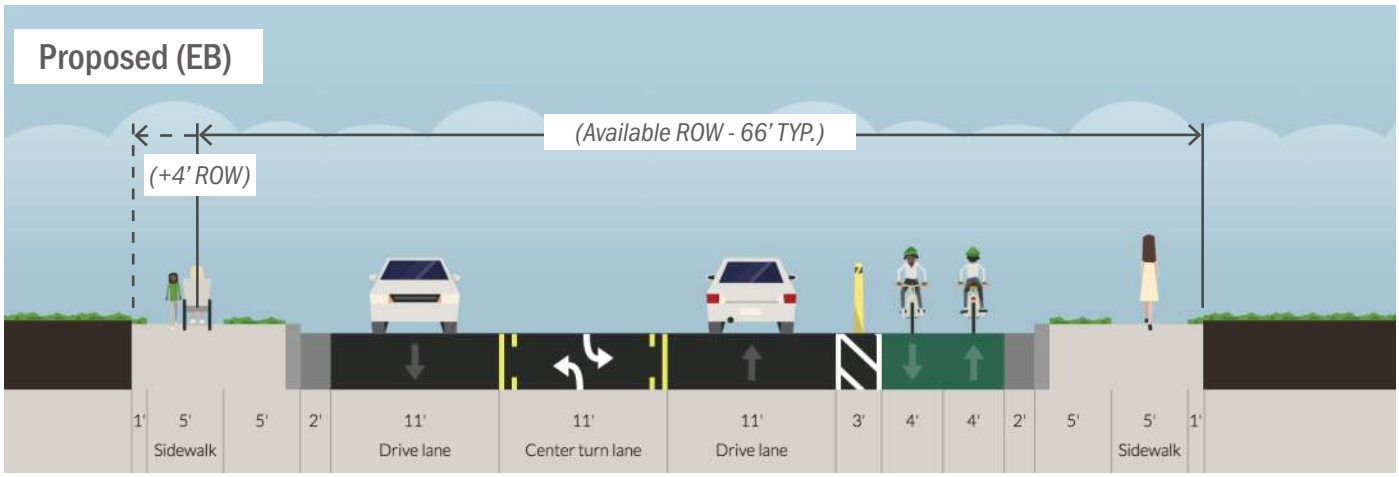
TYPE: Three Lane Conversion and Separated / Protected Bike Lanes - south side

ID: 14-C

Revision: 08/17/18

Segment 1





GENERAL DESCRIPTION

Three Lane Conversion and Separated / Protected Bicycle Lanes

- Implement a three lane conversion ("Road Diet") for roadway along Segment 1
  - ADT is within range for conversion
  - Conversion frees up space for on-road bicycle facilities
- Implement two-way separated / protected bicycle lane
- Requires reconstruction and modification to existing roadway cross-section width and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Reduction of travel lane widths could reduce curb and gutter impacts to one side of the street
- Utility impacts on south side
- Requires 4' acquisition or easement of ROW beyond existing ROW

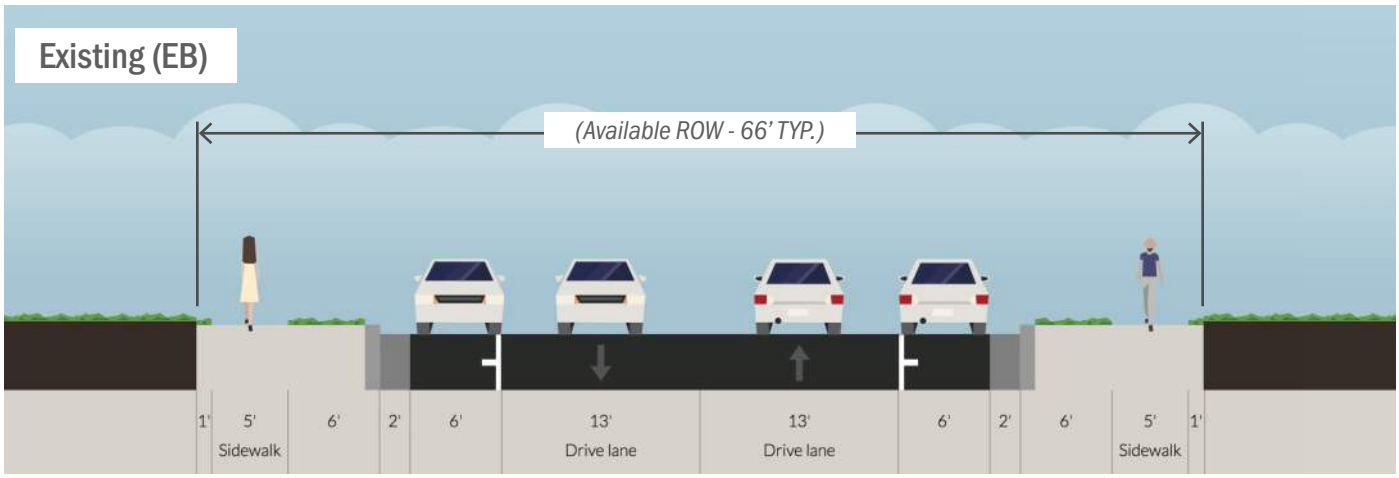
Concept Proposal

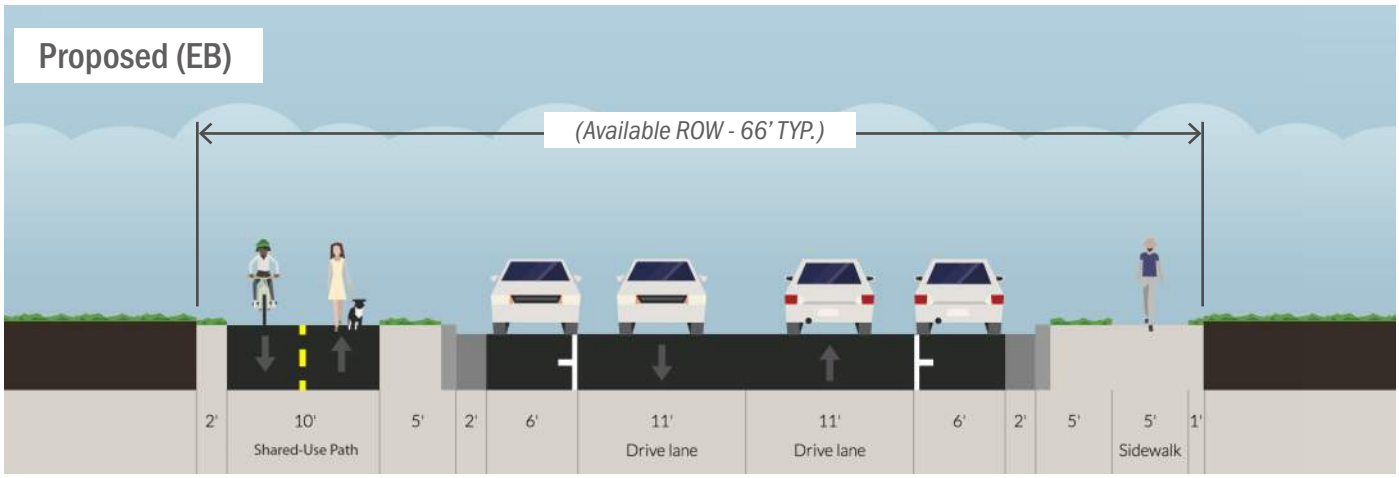
TYPE: Two-way Shared-Use Path / Trail - north side

ID: 14-D

Revision: 08/17/18

Segment 2 & 4





GENERAL DESCRIPTION

Bidirectional Shared-use Path / Trail

- Implement a two-way shared-use path / trail along north side of Segments 2 and 4
- Requires reconstruction and modifications to existing roadway cross-section width and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Reduction of buffer width between trail and parking lane could reduce impacts to one side of street
- Potential overhead utility impacts on north side (Perry Ave to York Ave, Vincent Ave to Colfax Ave)

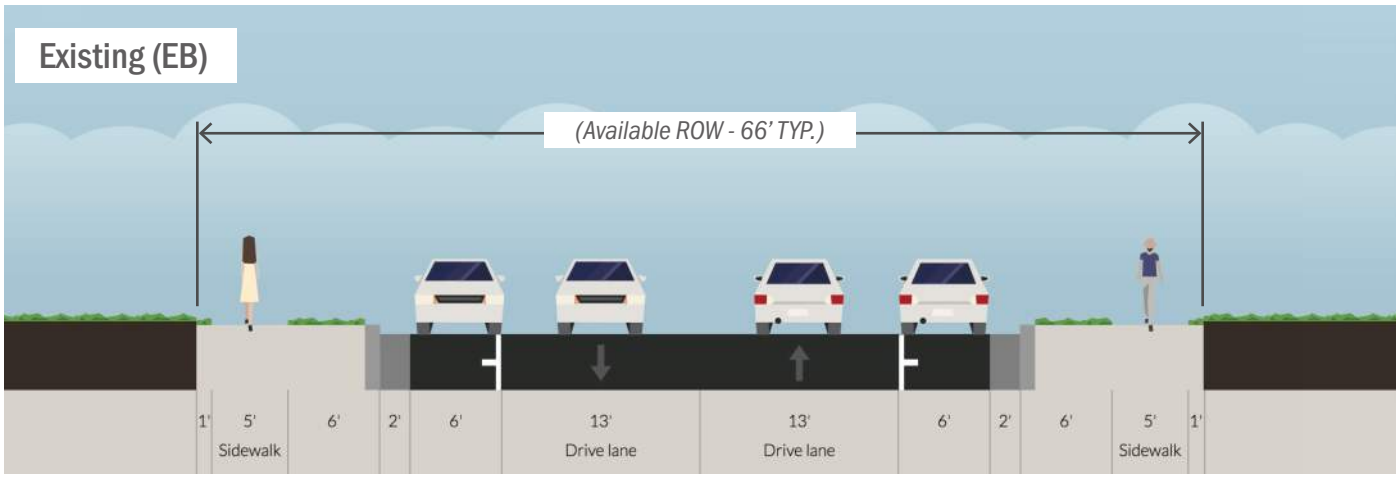
Concept Proposal

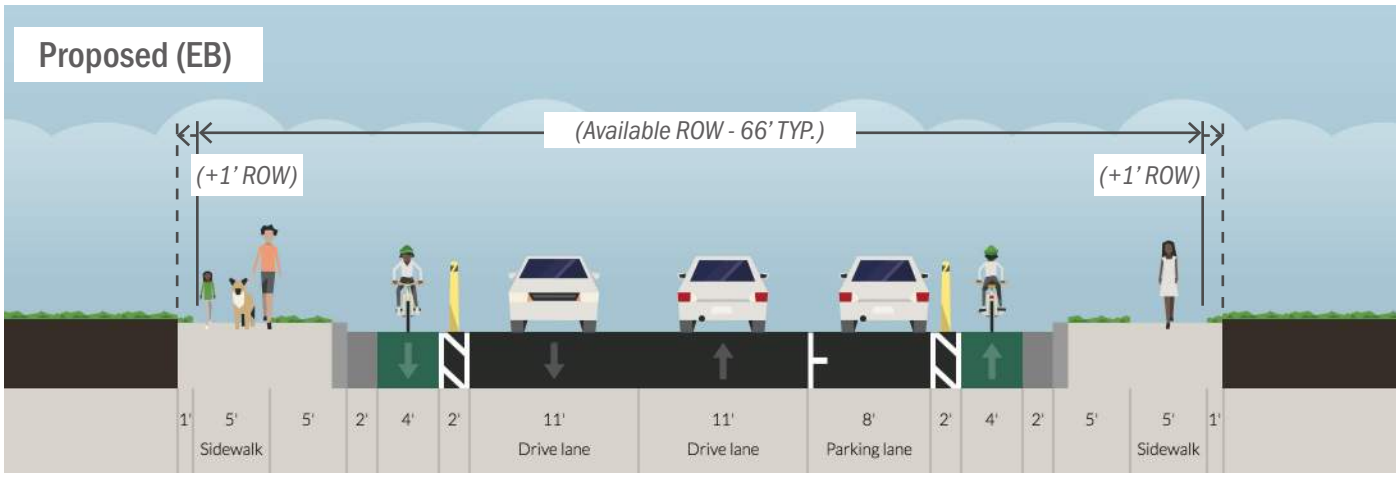
TYPE: One-way Separated / Protected Bicycle Lanes - both sides

ID: 14-E

Revision: 08/17/18

Segment 2 & 4





GENERAL DESCRIPTION

One-way Separated / Protected Bicycle Lanes

- Implement a one-way separated / protected bicycle lane along both sides of the roadway
  - Requires removal of one lane of on-street parking - one of the bicycle lanes is separated by the remaining parking lane
- Requires reconstruction and modifications to existing roadway cross-section width and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - Requires removal of one lane of on-street parking
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage/curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Reduction in buffer width between sidewalk and road on one side of street could reduce curb and gutter impacts to one side of street
- Reduction in buffer width between sidewalk and road on one side of street could eliminate ROW impacts
- Potential overhead utility impacts on north side (Perry Ave to York Ave, Vincent Ave to Colfax)
- Potential overhead utility impacts on south side (Bethany Baptist Church to Newton Ave)
- Requires 2' acquisition or easement beyond existing ROW

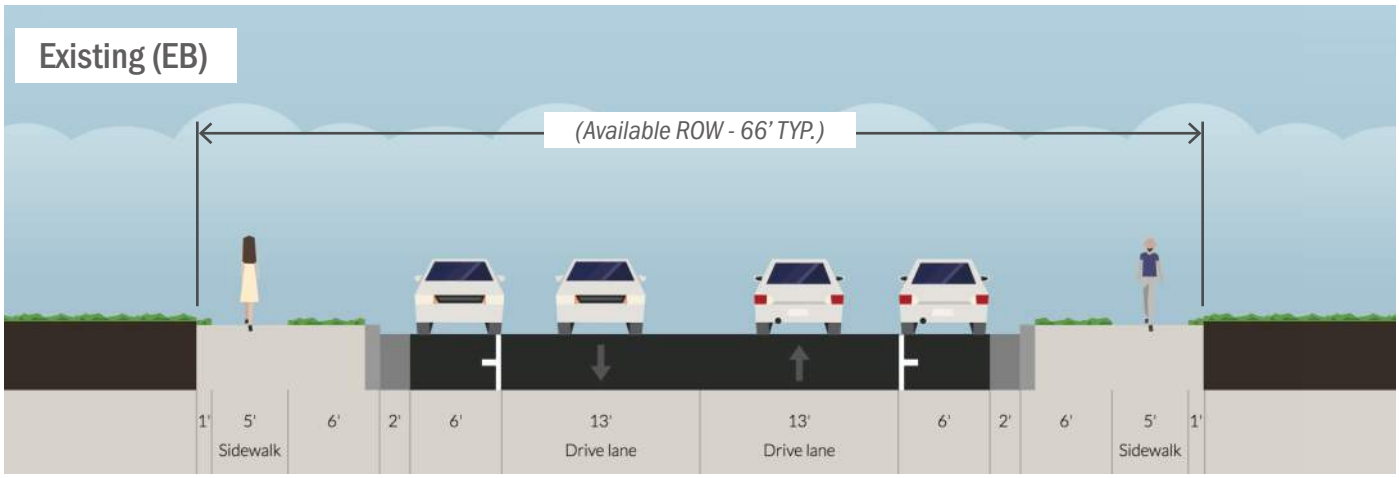
Concept Proposal

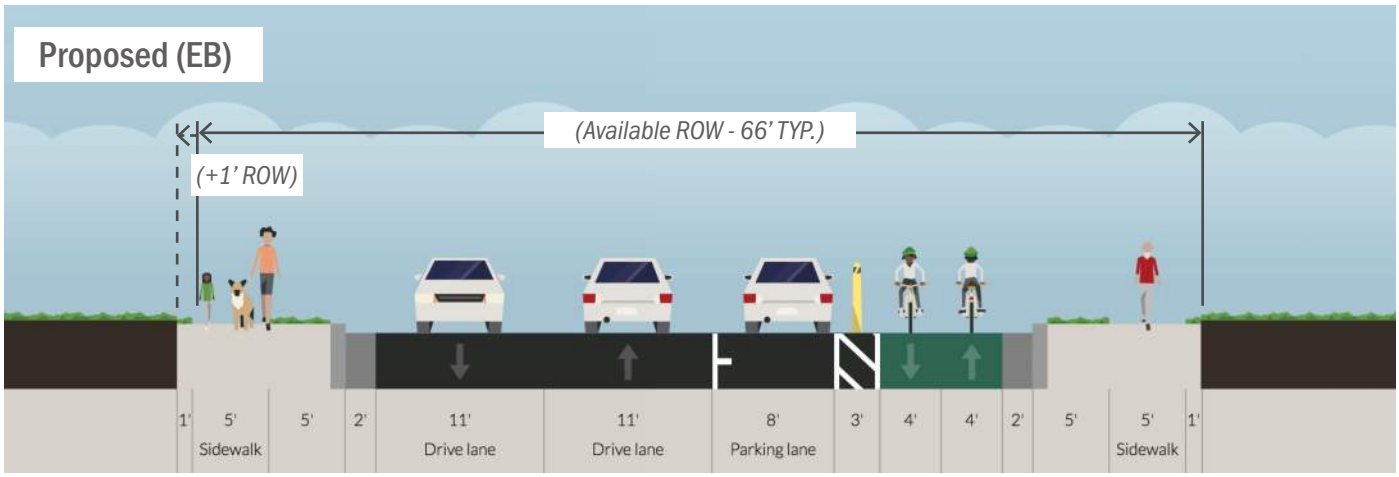
TYPE: Two-way Separated / Protected Bicycle Lane - south side

ID: 14-F

Revision: 08/17/18

Segment 2 & 4





GENERAL DESCRIPTION

Two-way Separated / Protected Bicycle Lanes

- Implement a two-way separated / protected bicycle lane along one side of the roadway
  - Requires removal of one lane of on-street parking - the two-way bicycle lanes are separated by the remaining parking lane
- Requires reconstruction and modification to existing roadway cross-section width and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - Requires removal of one lane of on-street parking
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage/curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Requires 1' acquisition or easement beyond existing ROW.
- Reduction in buffer width between sidewalk and road on one side of street could reduce curb and gutter impacts to one side of street
- Reduction in buffer width between sidewalk and road on one side of street could eliminate ROW impacts
- Potential overhead utility impacts on north side (Perry Ave to York Ave, Vincent Ave to Colfax)
- Potential overhead utility impacts on south side (Bethany Baptist Church to Newton Ave)

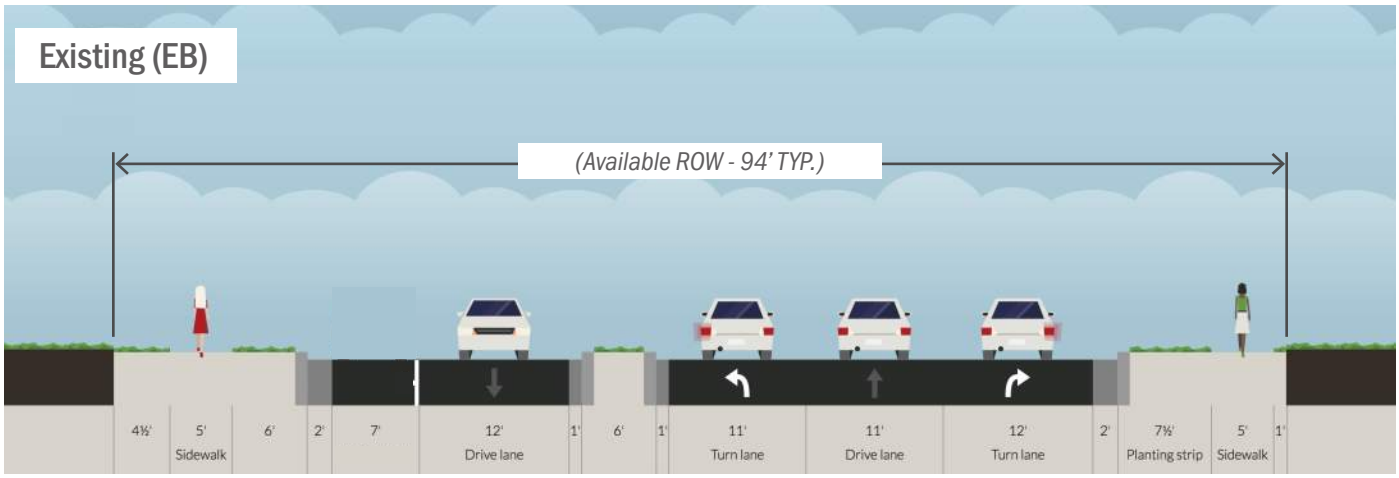
Concept Proposal

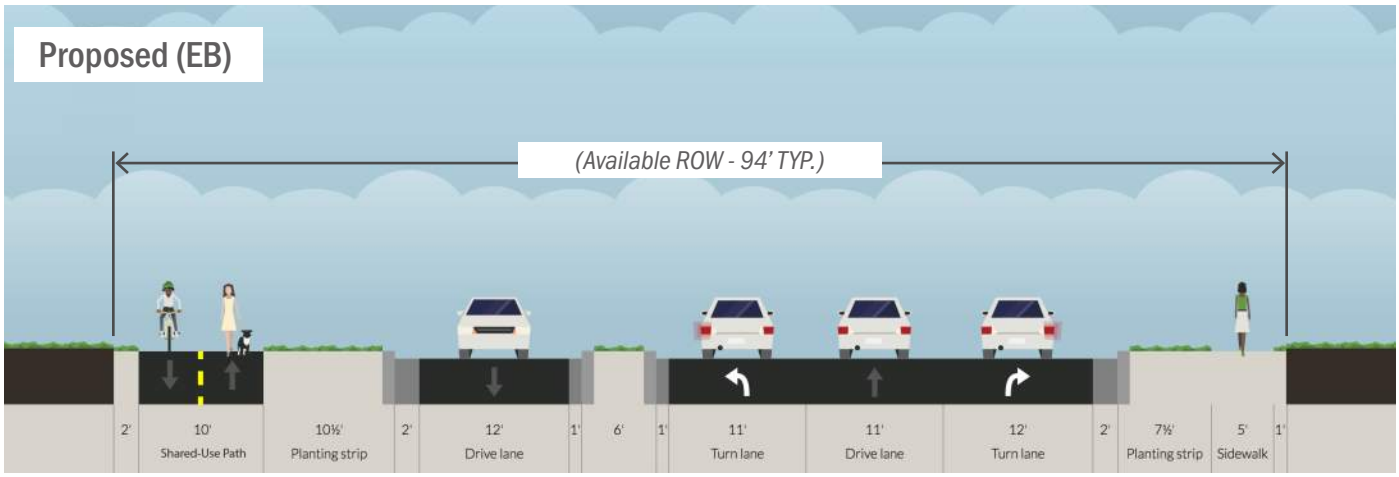
TYPE: Two-way Shared-Use Path / Trail - north side

ID: 14-G

Revision: 08/17/18

Segment 3





GENERAL DESCRIPTION

Bidirectional Shared-use Path / Trail

- Implement two-way shared-use paths / trails on north side of Segment 3
- Requires reconstruction and modification to existing roadway cross-section width and curb line on north side of street

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage/curb and gutter on north side
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

Concept Proposal

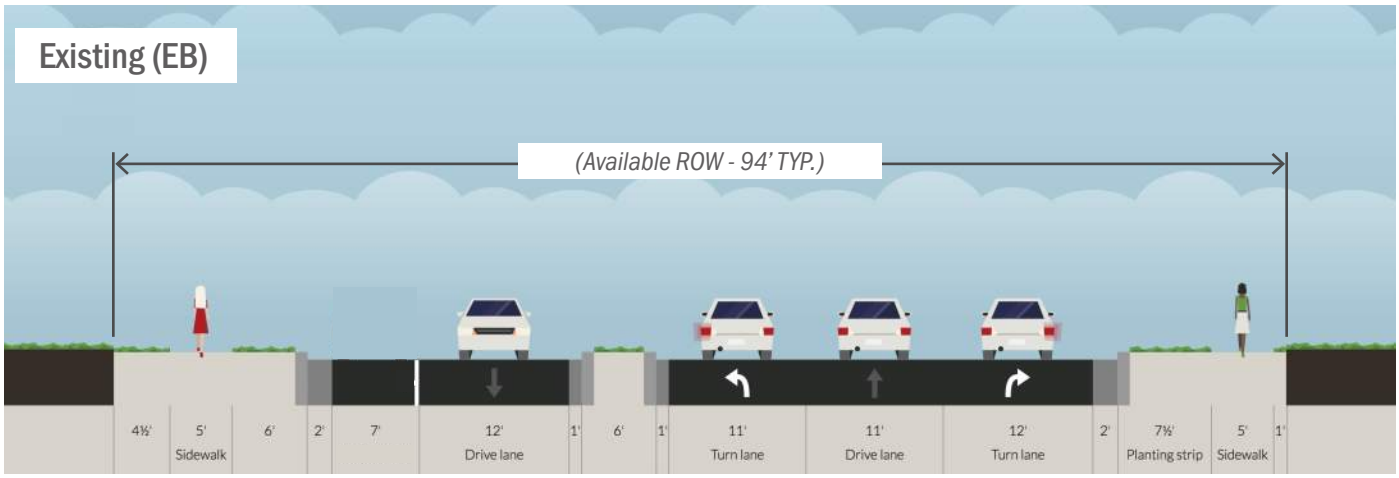
TYPE: One-way Separated / Protected Bicycle Lane - both sides

ID: 14-H

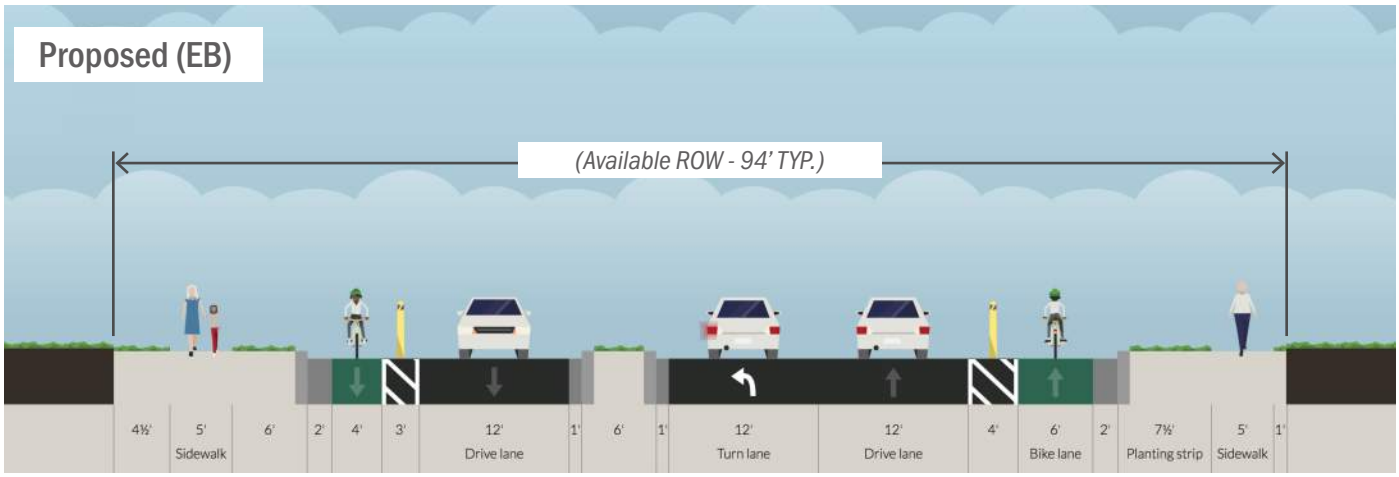
Revision: 08/17/18

Segment 3

Existing (EB)



Proposed (EB)



GENERAL DESCRIPTION

One-way Separated / Protected Bicycle Lanes

- Implement buffered one-way bike lanes on both sides of Segment 3
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - None
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

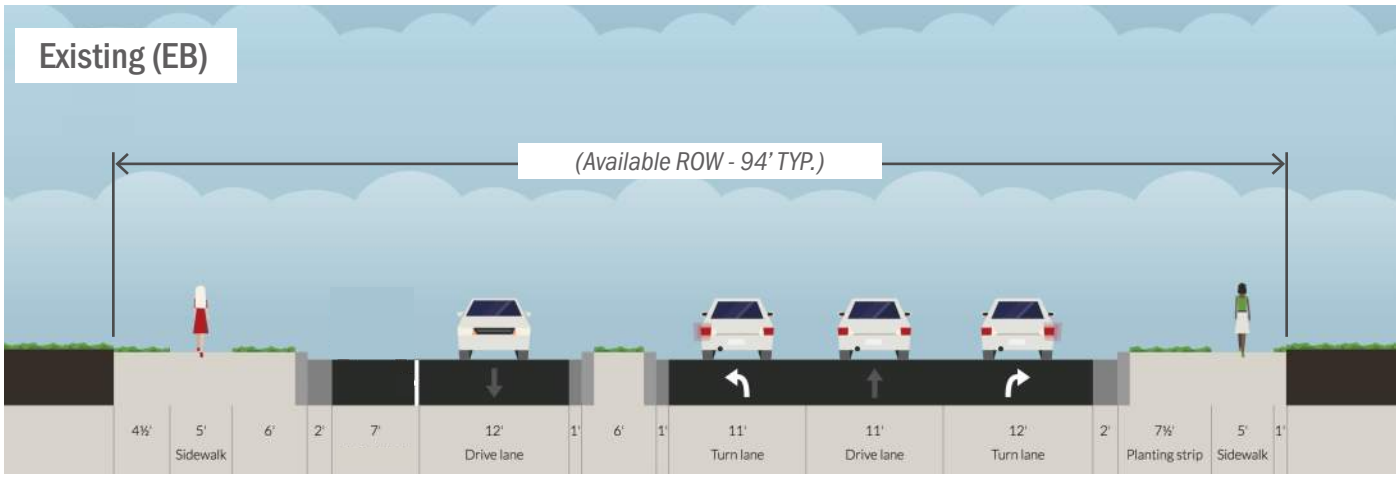
Concept Proposal

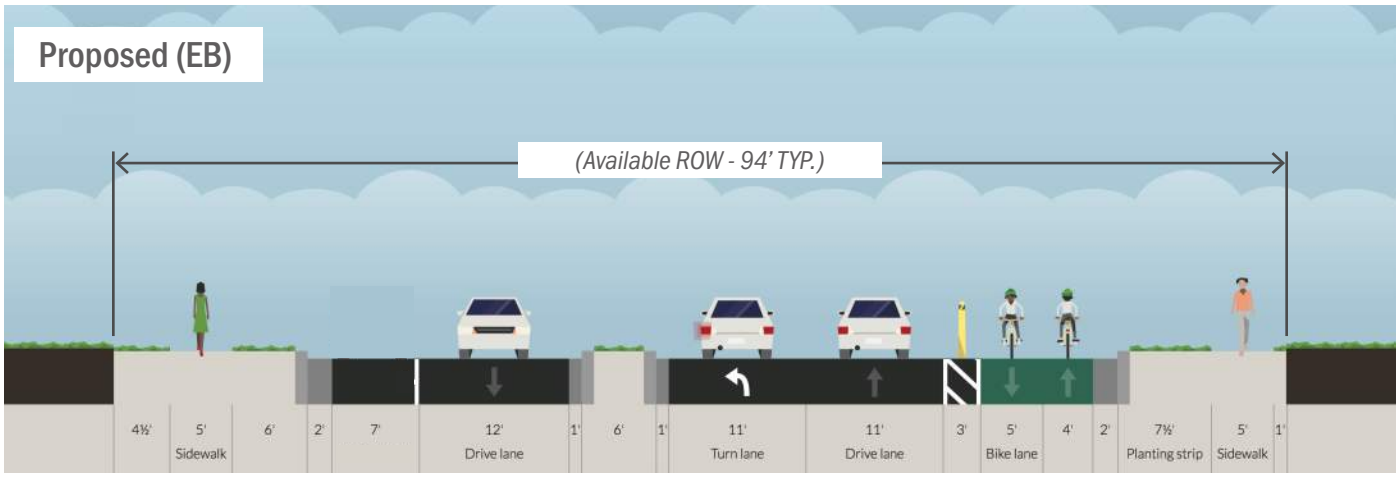
TYPE: Two-way Separated / Protected Bicycle Lane - south side

ID: 14-I

Revision: 08/17/18

Segment 3





GENERAL DESCRIPTION

Two-way Separated / Protected Bicycle Lanes

- Implement two-way protected bike lanes on one side of Segment 3
- Maintains existing roadway cross-section width
  - Maintains existing curb line
  - Removal of turn lane will require traffic analysis

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - None
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

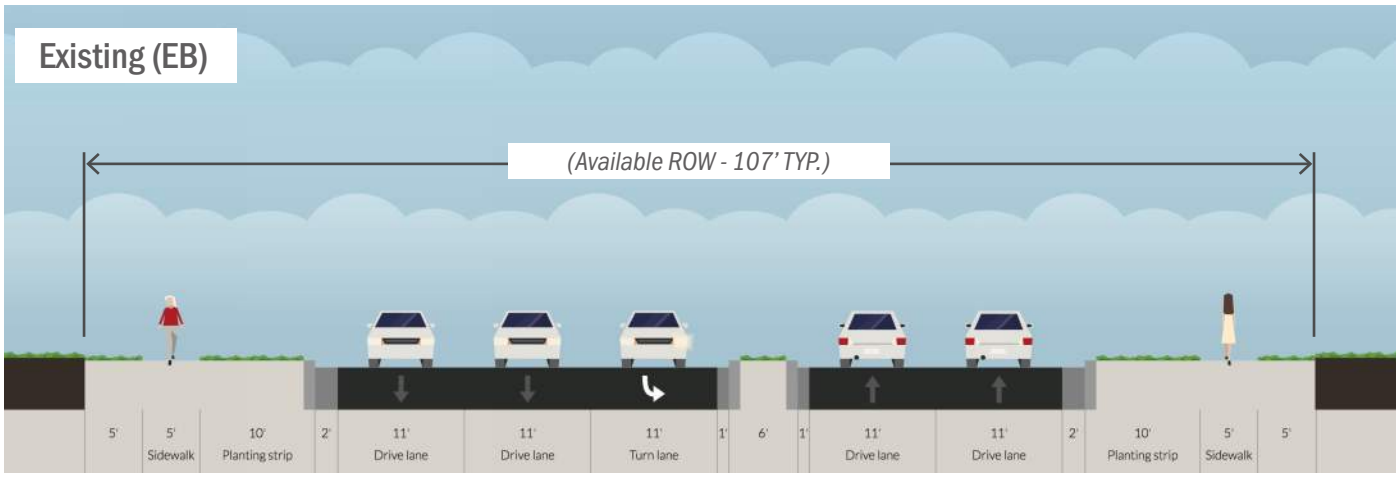
Concept Proposal

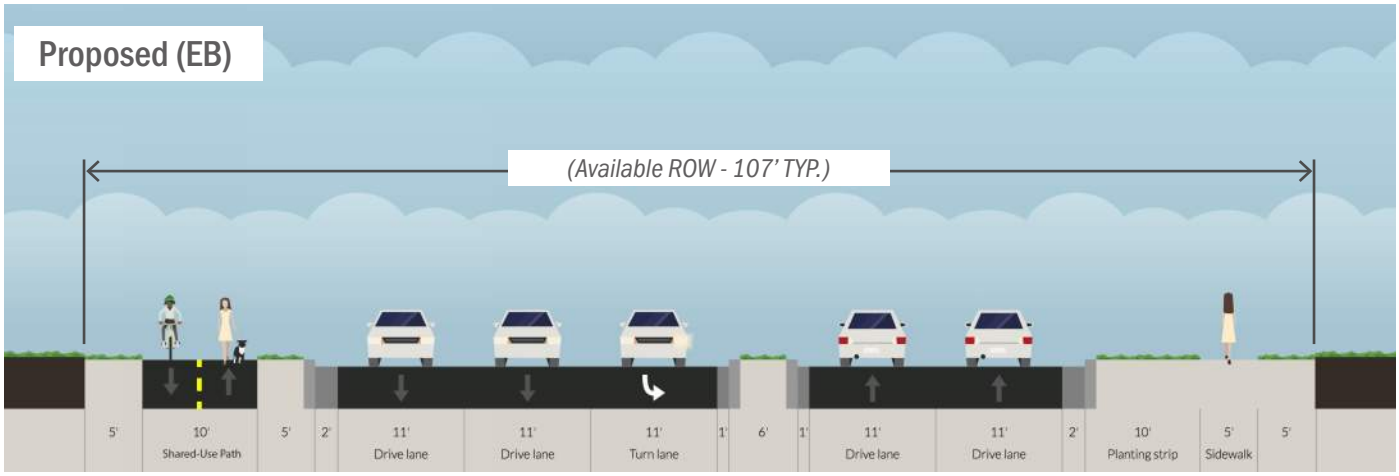
TYPE: Two-way Shared-Use Path/Trail - north side

ID: 14-J

Revision: 08/17/18

Segment 5





GENERAL DESCRIPTION

Two-way Shared-Use Path on North Side

- Implement two-way shared-use path/trail on north side
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Potential overhead utility impacts on north side

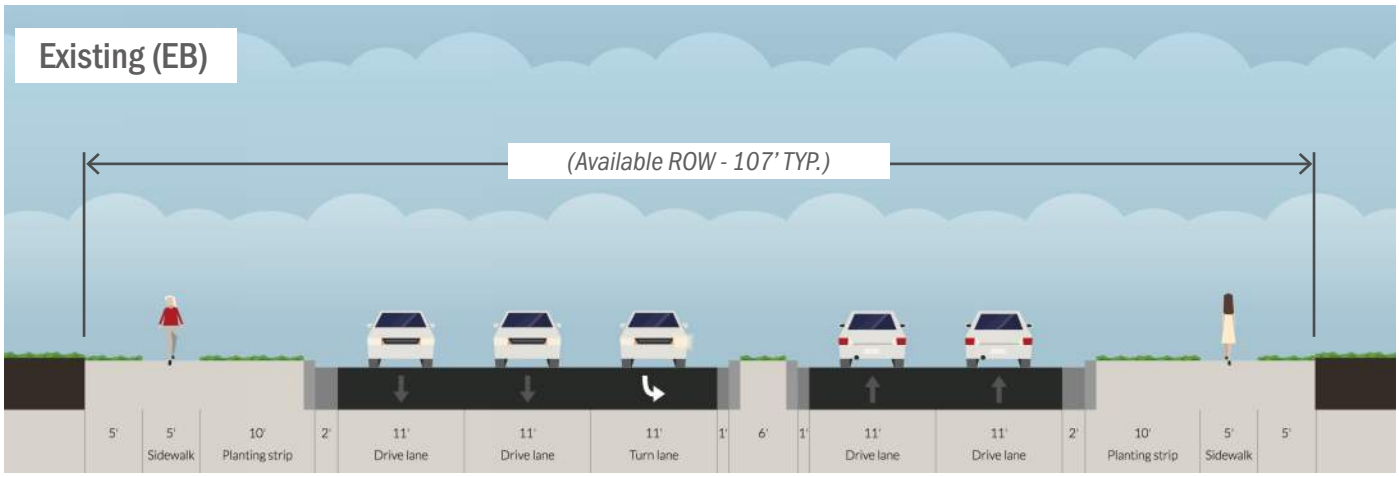
Concept Proposal

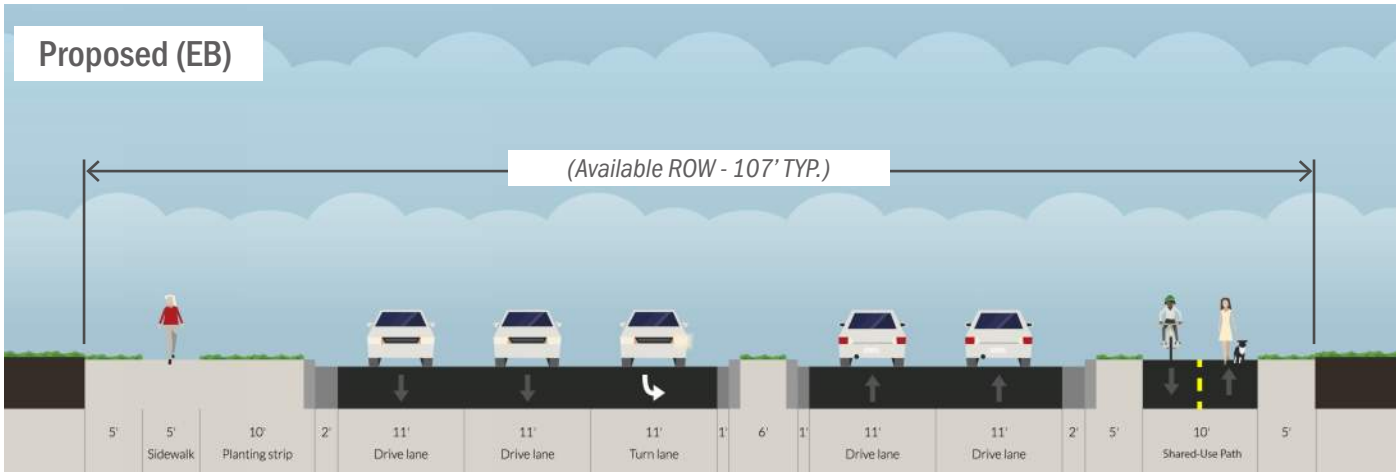
TYPE: Two-way Shared-Use Path/Trail - south side

ID: 14-K

Revision: 08/17/18

Segment 5





GENERAL DESCRIPTION

Two-way Shared-Use Path on South Side

- Implement two-way shared-use path/trail on south side
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 15
Revision: 08/14/18

Project: Brooklyn Blvd - StarLite Shopping Center Connections to Brookly Blvd Stations
City: Brooklyn Park
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.

GENERAL DESCRIPTION

Route for proposed improvement

- Route covers: Parking lot connections between the StarLite Shopping Center and Jolly Lane N to the Brooklyn Bldv station

Relation to other proposed projects

- Adjacent to Project ID 01
- Blue Line station at Brooklyn Boulevard and W Broadway

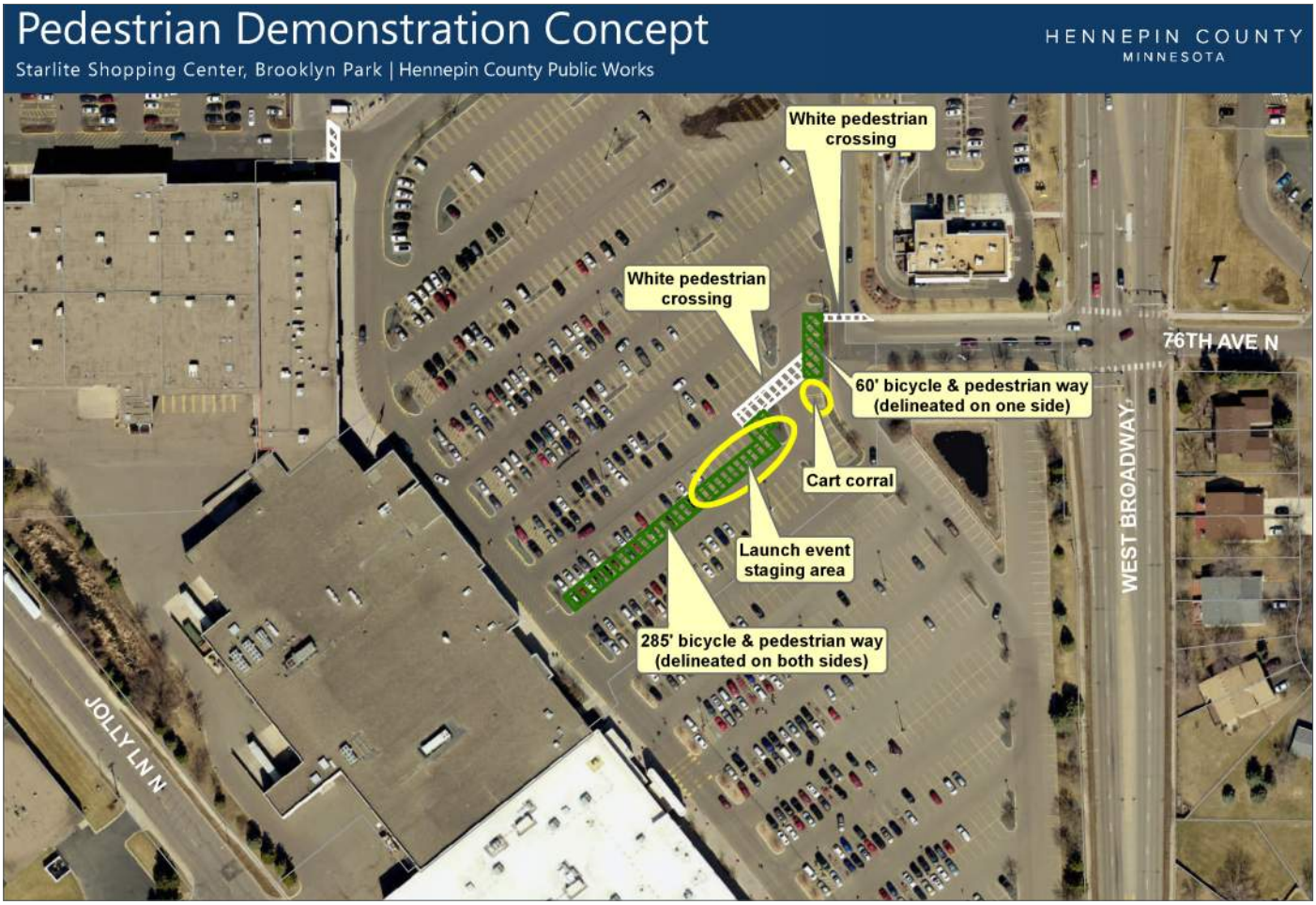
UNIFORMITY / VARIABILITY ALONG ROUTE

Segments and potential links for consideration include:

- Segment 1: Proposed path through parking area
- Segment 2: Existing three lane (one lane in, two out) access into shopping center parking area
- Segment 3: Proposed path through parking area
- Segment 4: Existing two lane, two way road connecting Jolly Ln and W Broadway Ave, and Segment 2

Project Description
Ongoing Demonstration Project

ID: 15
Revision: 08/14/18



Location and elements of ongoing demonstration project. Concept shown is located at Segment 3

Images of the installation

Project Description
Segments to be Considered

ID: 15
Revision: 08/14/18

Project Description
Segments to be Considered - Continued

ID: 15
Revision: 08/14/18

Project Description
Description of Segments

ID: 15
Revision: 08/14/18

Categories	Segment 1	Segment 2	Segment 3	Segment 4
Description of typical roadway section	Planned two way road, one lane westbound, two lanes eastbound, including right turn lane and left/straight lane connecting to two lanes, two way	Two way road, one lane westbound, two lanes eastbound, including right turn lane and left/straight lane	Parking area featuring straight-in parking	Two lanes, two way
Number of through lanes (typ. config.)	3 & 2 (planned)	3	N/A	2
AADT (typ.)	No data currently available	No data currently available	No data currently available	No data currently available
Roadway (curb-to-curb) width typ. (ft)	40	40	24 (Parking stall to parking stall)	28
Available right-of-way typ. (ft)	Unknown	N/A (Privately owned roadways)	N/A (Privately owned roadways)	N/A (Privately owned roadways)
Roadway jurisdiction	Brooklyn Park or Metro Transit	Private owner: Starlite MN LLC	Private owner: Starlite MN LLC	Private owner: Starlite MN LLC
State Aid Facility?	N/A	N/A	N/A	N/A
Curb & gutter (urban) section?	Yes for 75th Ave	Yes	N/A	Yes
Median present?	N/A	No	N/A	No
On-street parking present?	No - 75th Ave Yes - parking lot	No	N/A	No
Shoulder present?	No	No	N/A	No
Width of shoulder or parking lane	N/A	N/A	N/A	N/A
Width of driving lane(s)	11-13	11-13	N/A	14
Center left turn lane?	Yes	Yes	No	No
Width of center turn lane	13	13	N/A	N/A
Sidewalk or sidepath present?	Sidewalk on north (75th Ave)	Sidewalk on north	None	None
Boulevard or buffer from roadway (typ)	Yes	No	N/A	N/A
Approximate length of segment (ft)	300	210	430 ft	1,570 ft
Transit service along project	None	None	None	705, 723, 724
Transit service across project	705, 764	705, 764	None	705, 764

Project Description
Description of Segments - Continued

ID: 15
Revision: 08/14/18

Categories	Segment 1	Segment 2	Segment 3	Segment 4
Segment interacts with the 90% plans?	Yes	Yes	No	No
Recommendation from 90% plans	Extension of 75th Ave to Jolly Lane and partial property acquisition	Sidewalk on north side of road, partial property acquisition.	N/A	N/A
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	Replace sidewalk with shared-use path	Replace sidewalk with shared-use path	N/A	N/A
Do the recommendations conflict or preclude each other?	No	No	No	No

GENERAL GUIDELINES AND STANDARDS

- Driving lanes must be at least 11' wide
- Parking lane minimum of 8'
- 2' gutters required (in addition to min. 11' lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2' clear zone to traffic and from edge of ROW
- 6' shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5' for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

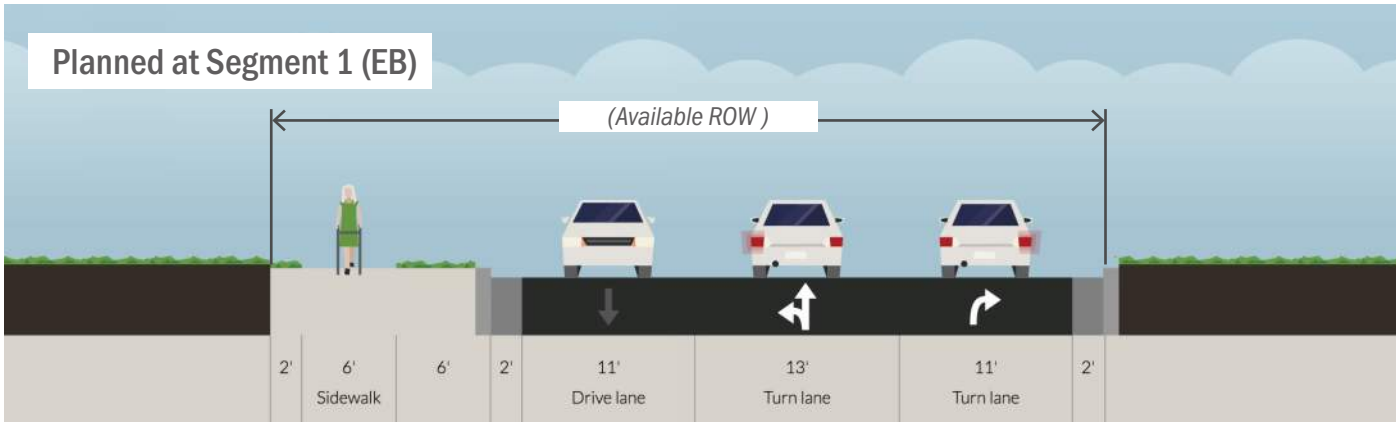
Concept Proposal

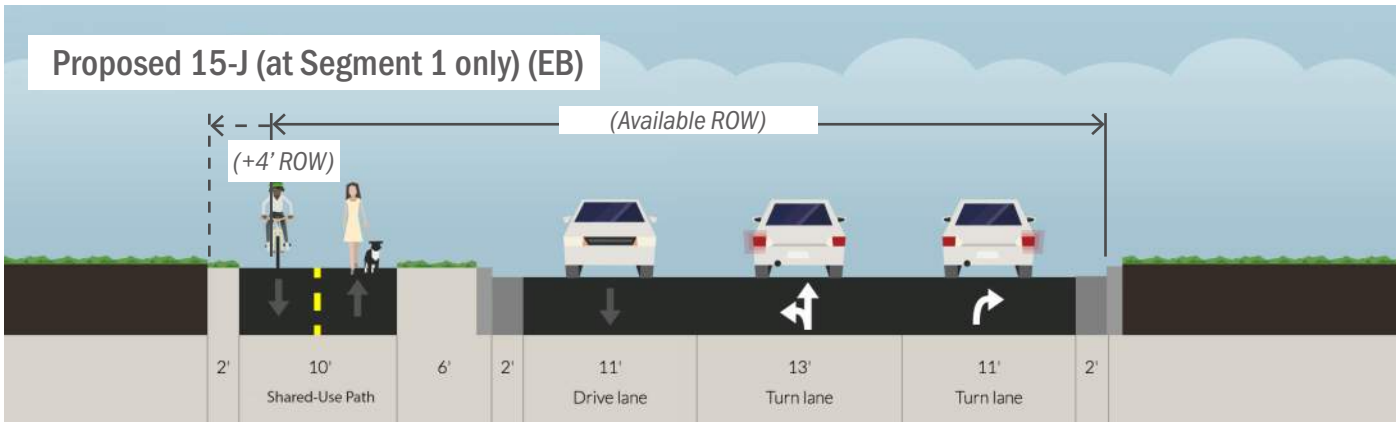
TYPE: Two-way Shared-Use Path / Trail

ID: 15-J

Revision: 08/14/18

Segment 1





GENERAL DESCRIPTION

Two-way Shared-use Path / Trail

- Implement a two-way shared-use path / trail adjacent to planned 75th Ave and parking lot drive aisle
- Requires reconstruction and modification to pavement islands, traffic circulation and curb line in parking lot

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing parking
  - Removes approximately 8-10 parking spaces
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage / curb and gutter
- Impacts to existing transit
  - Not yet determined
- Requires acquisition of approximately 4' beyond planned acquisition.

Concept Proposal

TYPE: Sidewalk and Two-way Separated / Protected Bike Lanes

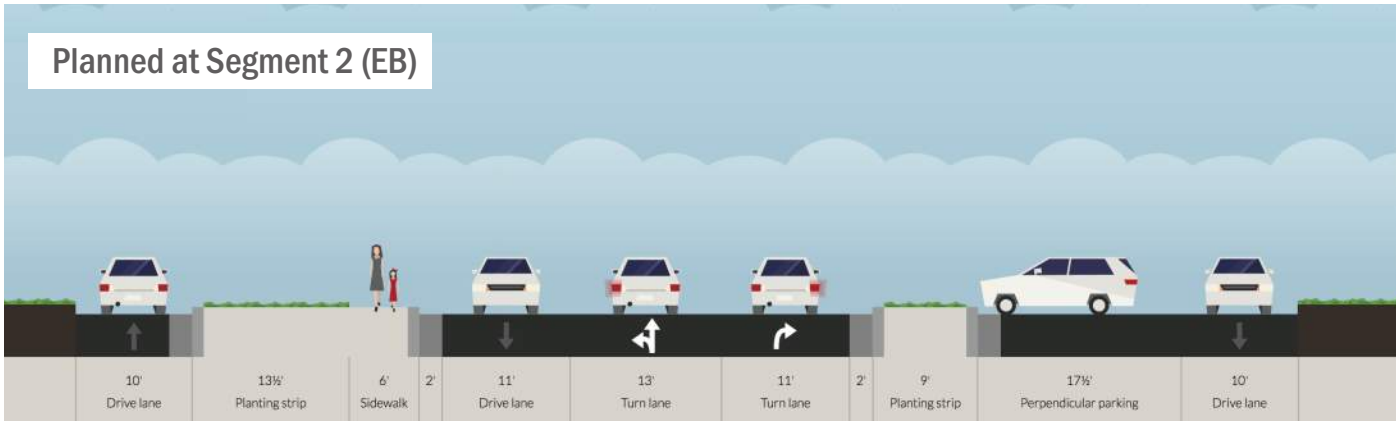
ID: 15-C

Revision: 08/14/18

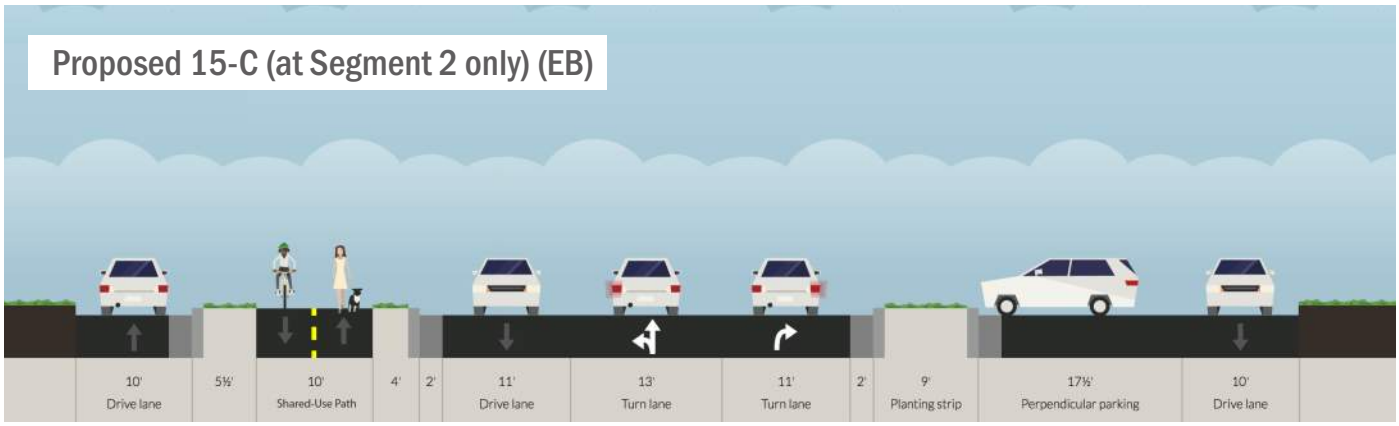
Segment 2

View of Segment 2 (EB)

Planned at Segment 2 (EB)



Proposed 15-C (at Segment 2 only) (EB)



GENERAL DESCRIPTION

Two-way Shared-use Path / Trail

- Implement a two-way shared-use path / trail on north side to facilitate access to Blue Line station
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined

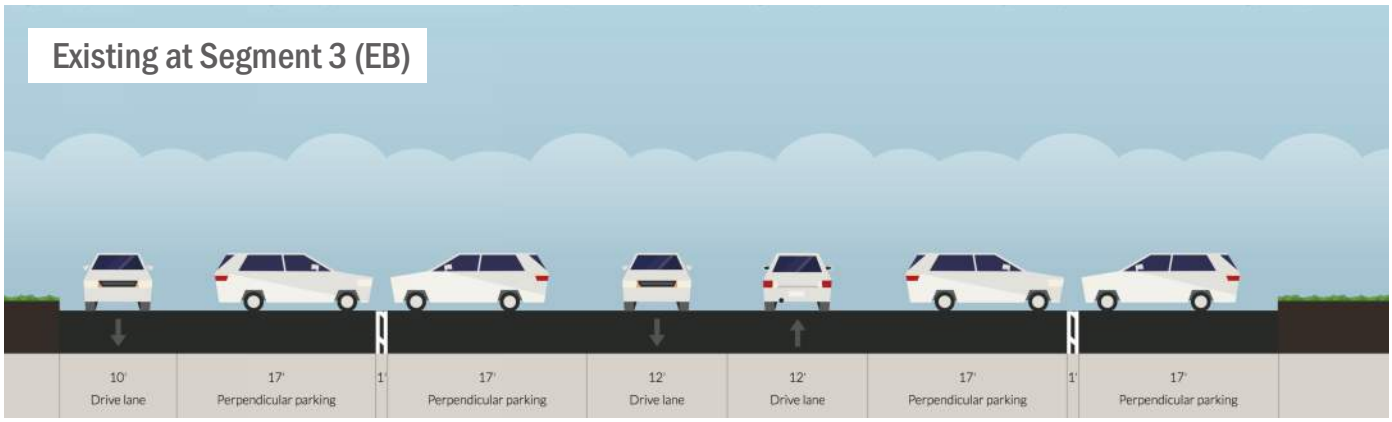
Concept Proposal

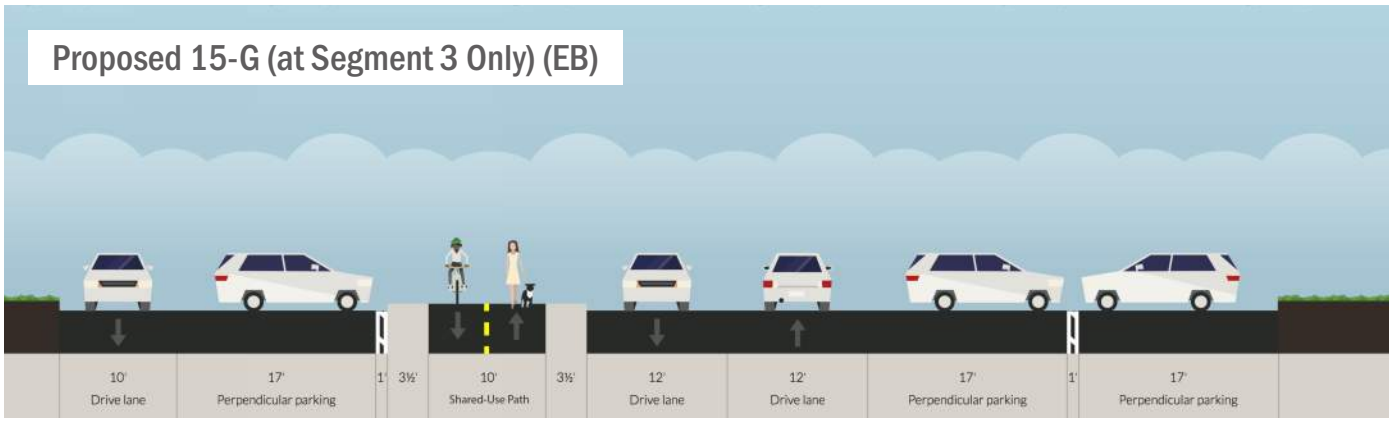
TYPE: Three Lane Conversion and Separated / Protected Bike Lanes - south side

ID: 15-G

Revision: 08/14/18

Segment 3





GENERAL DESCRIPTION

Two-way Shared-use Path / Trail

- Implement a two-way shared-use path / trail along Segment 3 through parking area
  - Requires reconstruction and modification to pavement islands, traffic circulation and mountable curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - Removes approximatly 37 parking spaces
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage / curb and gutter
- Impacts to existing transit
  - Not yet determined

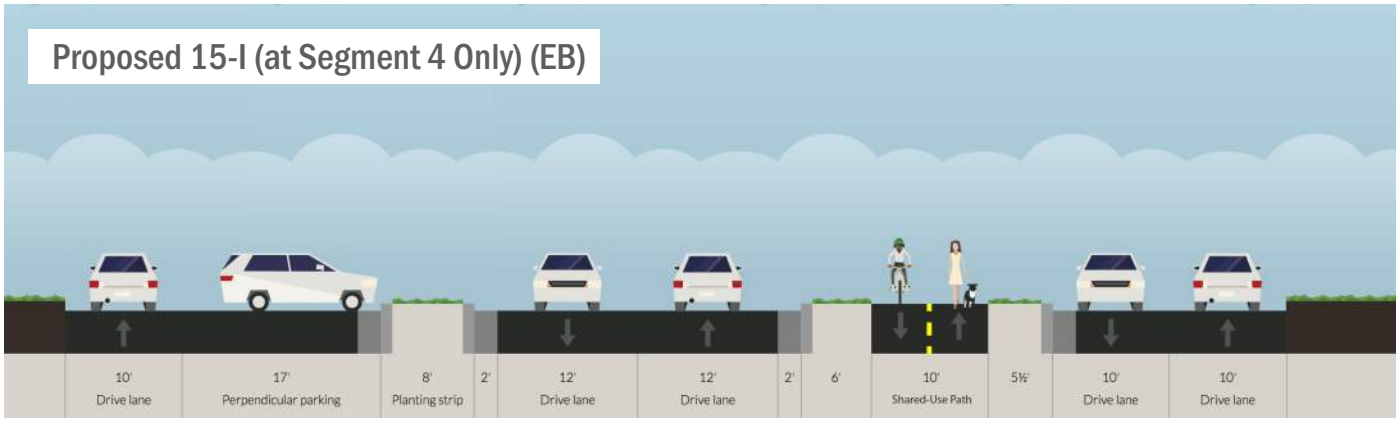
Concept Proposal

TYPE: Two-way Shared-Use Path / Trail - single side and Sidewalk

ID: 15-I

Revision: 08/14/18

Segment 4



GENERAL DESCRIPTION

Two-way Shared-Use Path / Trail

- Implement a two-way shared-use path / trail along one side of the roadway
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - Not yet determined
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Not yet determined

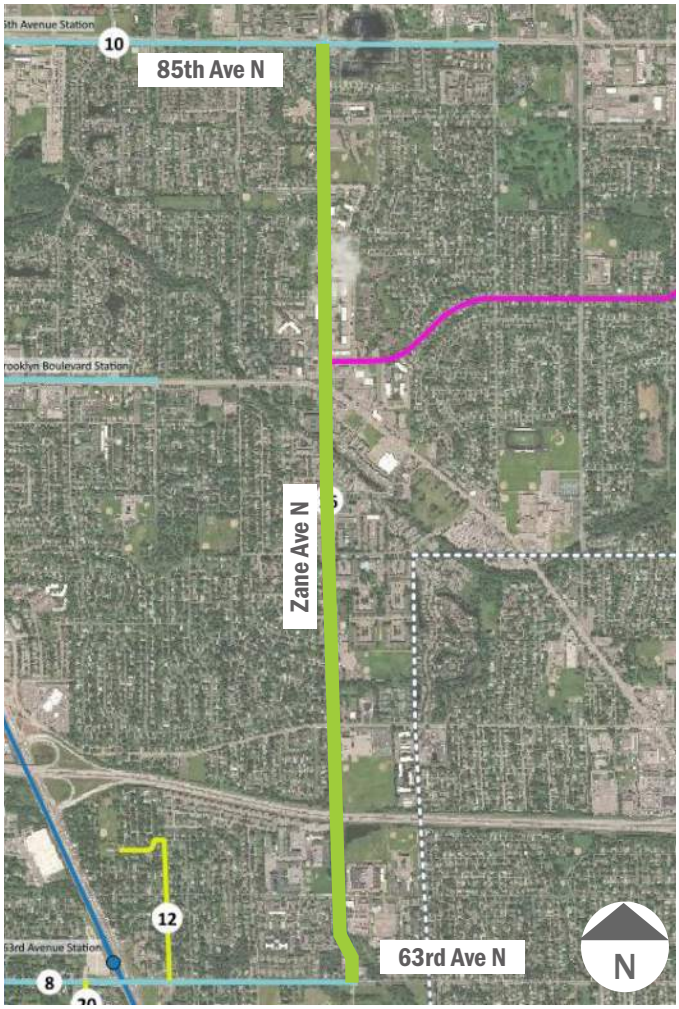
Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

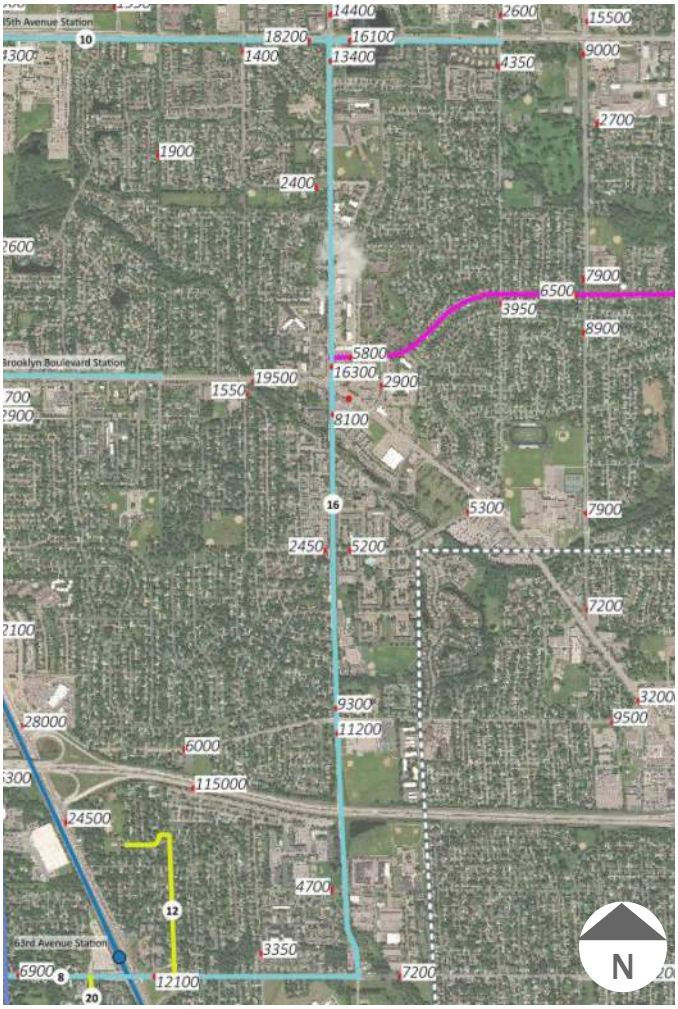
ID: 16
Revision: 08/16/18

Project: Zane Avenue - 63rd Avenue to 85th Avenue
City: Brooklyn Park
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT



General project location.



Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: 63rd Avenue N, in Brooklyn Park
- Route covers: Zane Avenue North
- Route ends: 85th Avenue North

Relation to other proposed projects

- Connects to Project IDs 08, 10, and 14

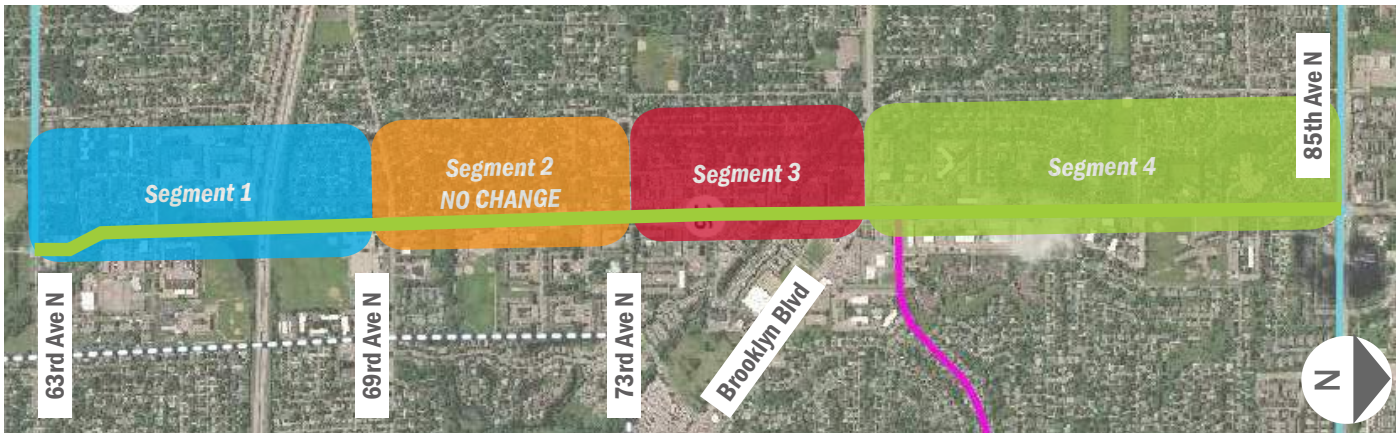
UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route

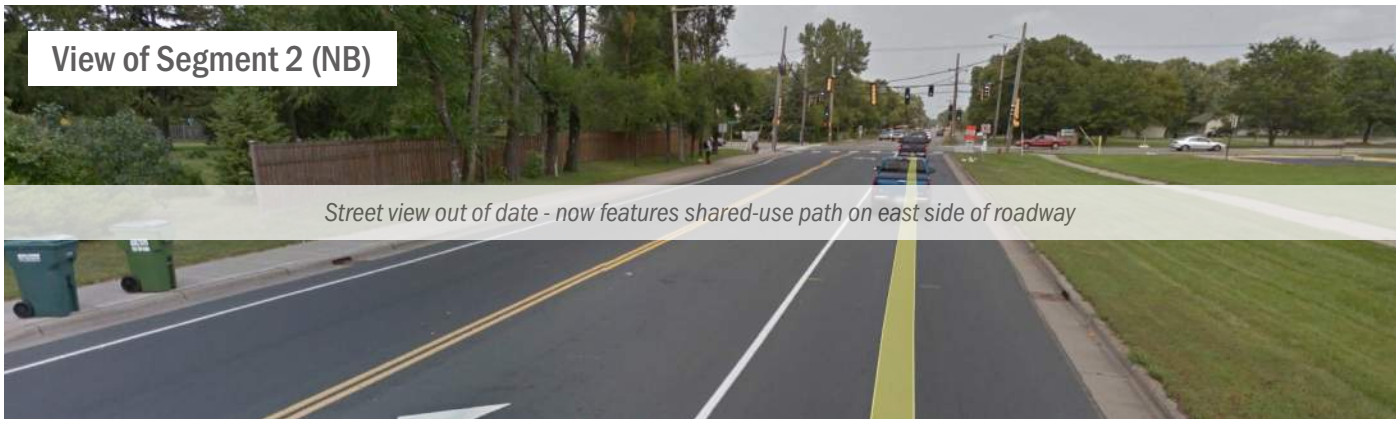
- Segment 1: Two way, two lanes with center turn lane section south of 69th Avenue North
- Segment 2: Two way, two lanes with additional center turn lane between 69th Avenue and 73rd Avenue North
- Segment 3: Four lanes, two way between 73rd Avenue North to Brooklyn Boulevard
- Segment 4: Four lane, two way between Brooklyn Boulevard and ending at 85th Avenue North / Hennepin CSAH 14

Project Description
Segments to be Considered

ID: 16
Revision: 08/16/18



Segments considered and general project location.



Project Description

ID: 16
Revision: 08/16/18

Project Description
Description of Segments

ID: 16
Revision: 08/16/18

Categories	Segment 1	Segment 2	Segment 3	Segment 4
Description of typical roadway section	Two lane, two way with center left turn lane	Two lane, two way with center turn lane	Four lane, two way road with median and center turn lane at intersections	Four lane, two way road
Number of through lanes (typ. config.)	2	2	4	4
AADT (typ.)	9,300 - 11,200	8,100	16,300	13,400
Speed limit (mph)	35	35	35	35
Roadway (curb-to-curb) width typ. (ft)	42	42	66	48
Available right-of-way typ. (ft)	66	66	100	80
Roadway jurisdiction	Brooklyn Park	Brooklyn Park	Brooklyn Park	Hennepin County
State Aid Facility?	Yes - MSAS	Yes - MSAS	Yes - MSAS	Yes - MSAS
Curb & gutter (urban) section?	Yes	Yes	Yes	Yes
Median present?	No	No	Yes (9ft)	No
On-street parking present?	No	No	No	No
Shoulder present?	No	No	No	No
Width of shoulder or parking lane	NA	N/A	N/A	N/A
Width of driving lane(s)	11	12	11	12
Center left turn lane?	Yes	Yes	Yes	No
Width of center turn lane	12	14	11	N/A
Sidewalk or sidepath present?	Yes, sidewalk on east (5 ft)and west (6 ft)	Yes, shared-use path on east (10ft) and west (6.5ft) side of street	Yes, sidewalk on west and east (6ft)	Yes, sidewalk on both sides of street (14 ft on west side, 9.5 ft on east side)
Boulevard or buffer from roadway (typ)	9 ft (south of 65th Ave N)	Yes, west side 3ft buffer	8 on west side, 9 on east side of street	None
Approximate length of segment (ft)	3,970 ft	2,612	2,583	3,900
Transit service along project	716, 724, 760	716, 724, 760	716, 722, 723, 724, 760, 761	722, 723, 760, 761

Project Description
Description of Segments - CONTINUED

ID: 16
Revision: 08/16/18

Categories	Segment 1	Segment 2	Segment 3	Segment 4
Transit service across project	767	N/A	N/A	N/A
Segment interacts with the 90% plans?	No	No	No	No
Recommendation from 90% plans	N/A	N/A	N/A	N/A
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A	N/A	N/A	N/A
Do the recommendations conflict or preclude each other?	No	No	No	No

Project Description
General Guidelines and Standards

ID: 16
Revision: 08/16/18

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

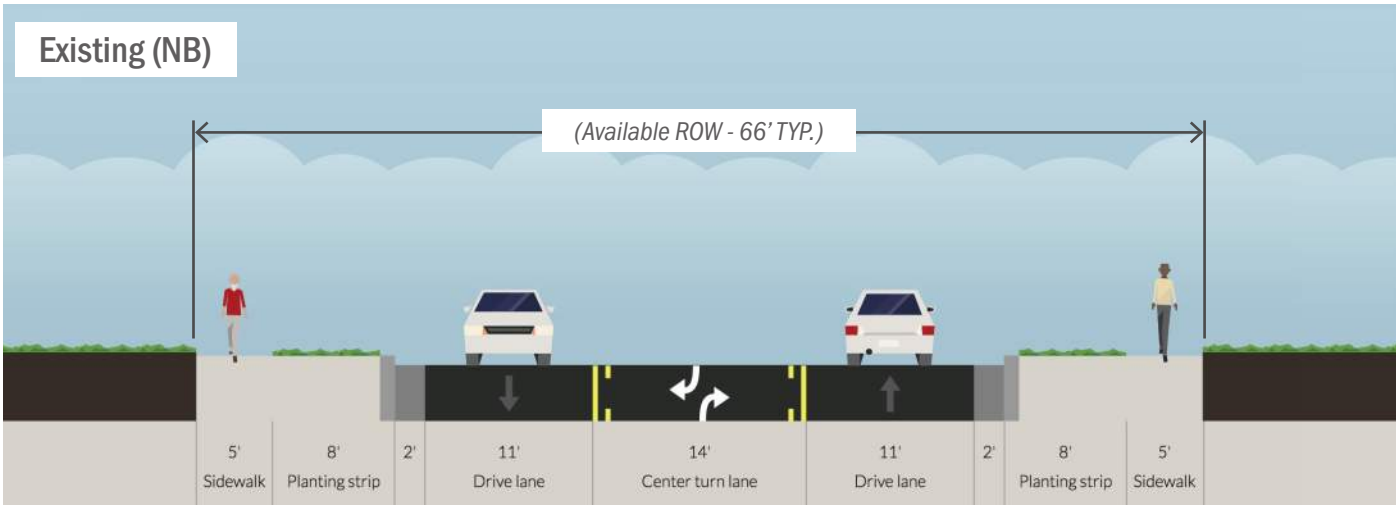
Concept Proposal

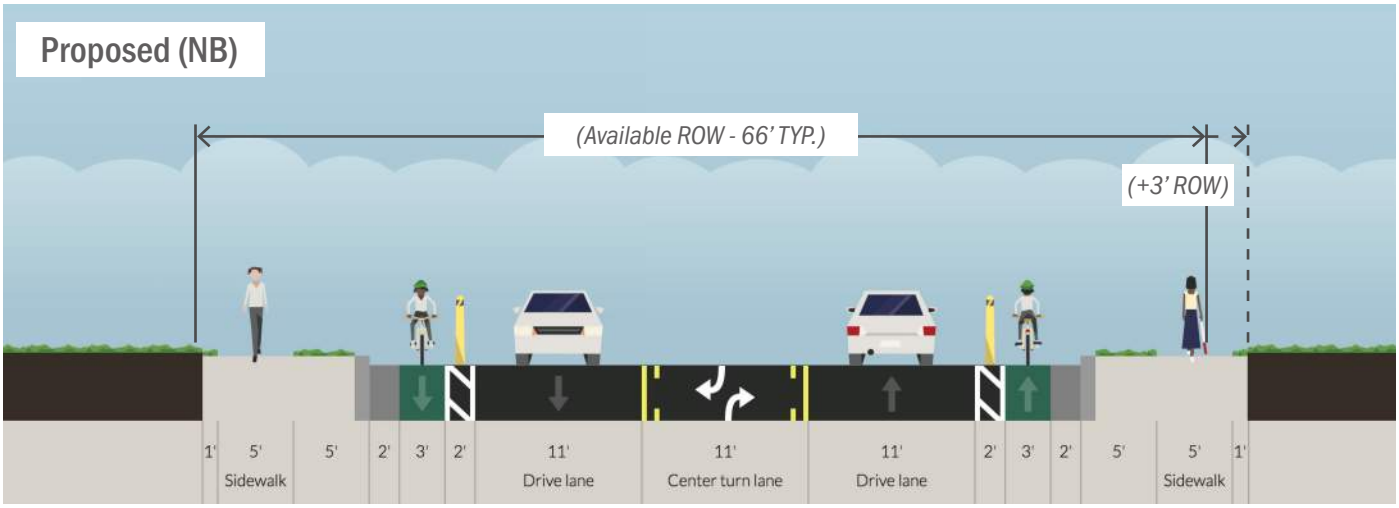
TYPE: One-way Separated / Protected Bicycle Lanes - both sides

ID: 16-A

Revision: 08/16/18

Segment 1





GENERAL DESCRIPTION

Separated / Protected Bicycle Lanes

- Implement one pair of one-way separated / protected bicycle lanes
- Requires reconstruction and modification to existing roadway cross-section width and curb line
  - Reducing buffer between sidewalk and roadway could reduce roadway impacts to south curb line and eliminate right-of-way impacts
  - 3' acquisition or easement beyond existing right-of-way

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
  - Requires bike friendly drainage grates
  - Adding 12' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections

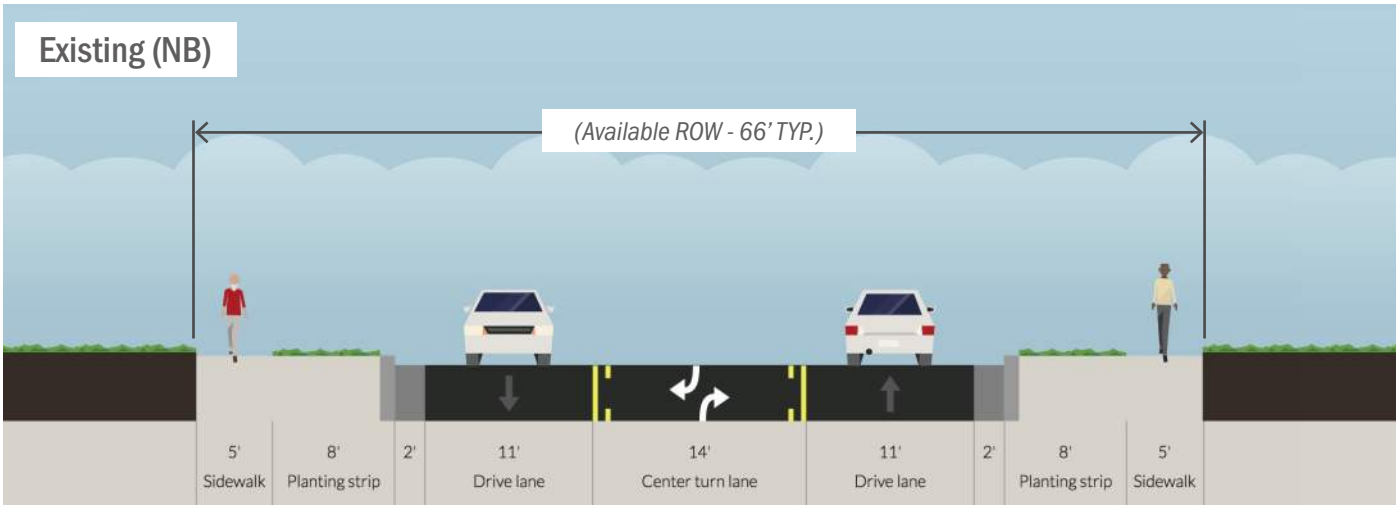
Concept Proposal

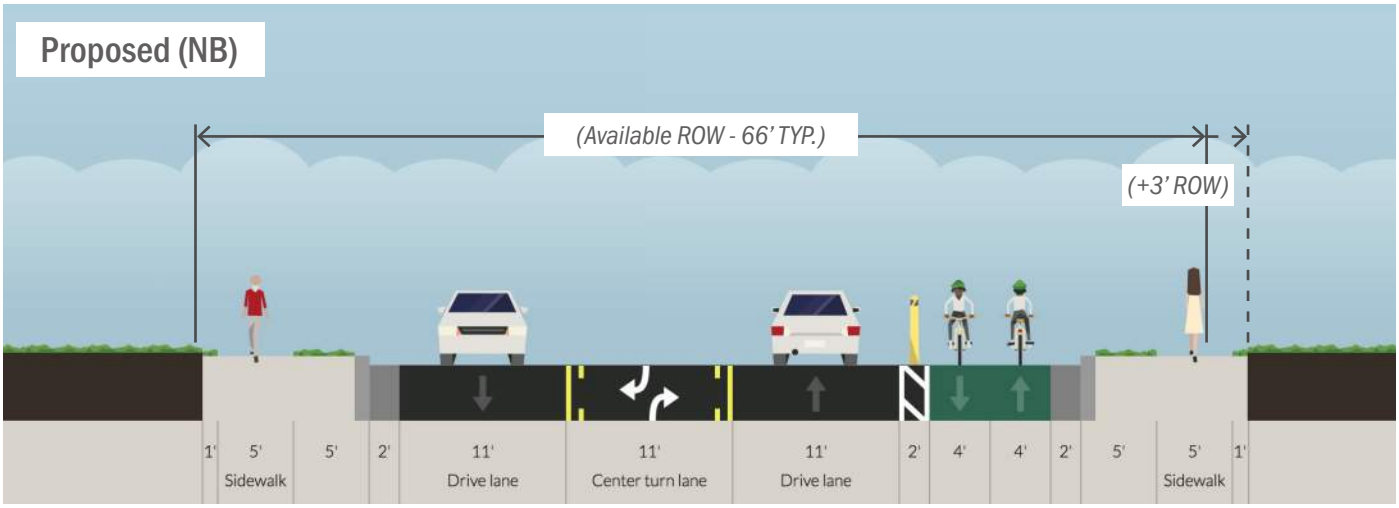
TYPE: Two-way Separated / Protected Bike Lanes - single side

ID: 16-B

Revision: 08/16/18

Segment 1





GENERAL DESCRIPTION

Two-way Separated / Protected Bicycle Lanes

- Implement two-way separated / protected bicycle lane on one side of roadway
- Requires reconstruction and modification to existing roadway cross-section width and curb line
  - Reducing buffer width between sidewalk & roadway could reduce roadway impacts to south curb line and eliminate right-of-way impacts
  - 3' acquisition or easement needed beyond existing right-of-way

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Utility conflicts must be resolved
  - Addition of impervious surface with expanded trail
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Impacts at signalized intersections
  - Potential change to turning radii
  - ADA compliant pedestrian ramps
  - APS implemented
  - New pedestrian signals

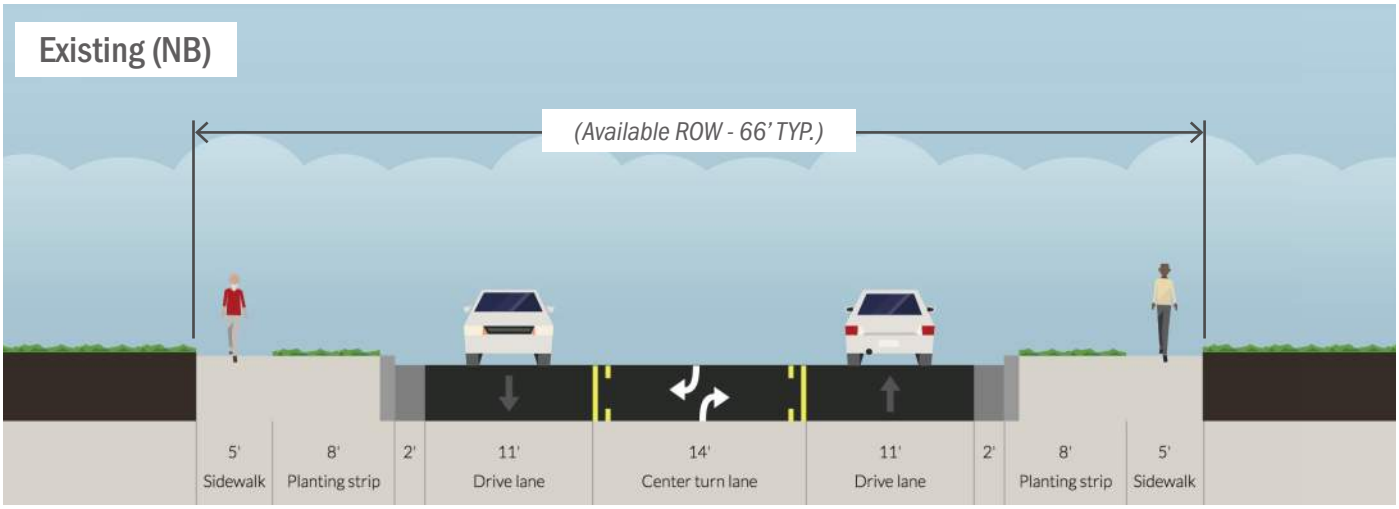
Concept Proposal

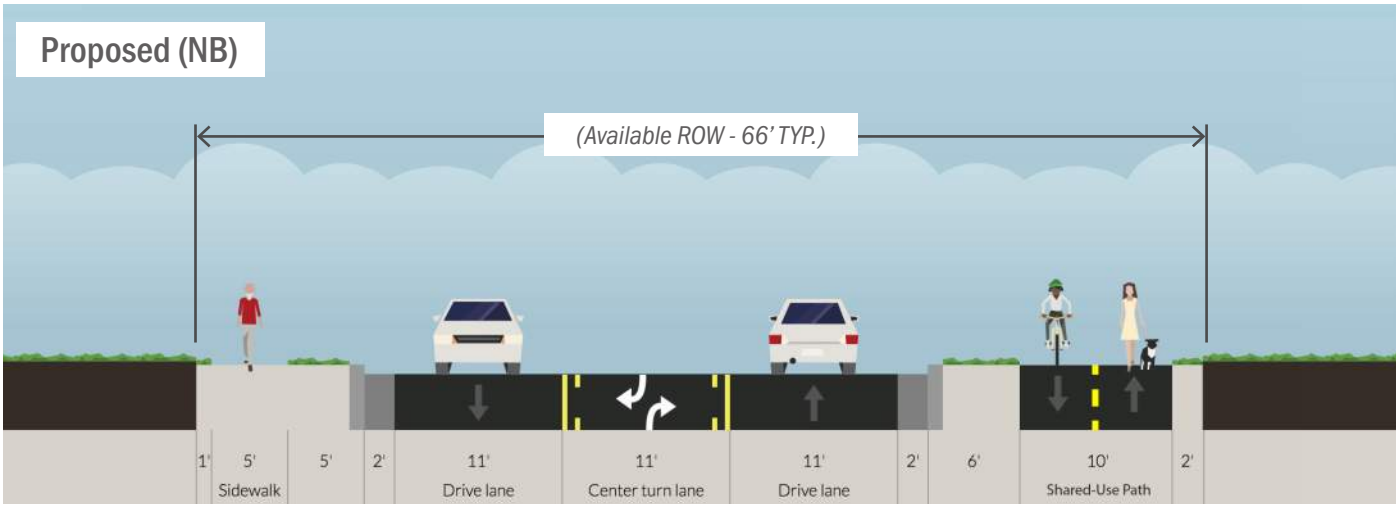
TYPE: Two-way Shared-Use Path / Trail - one or both sides

ID: 16-C

Revision: 08/16/18

Segment 1





GENERAL DESCRIPTION

Two-way Shared-Use Path / Trail - one or both sides

- Implement two-way shared-use path / trail
- Requires reconstruction and modification to existing roadway cross-section width and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Utility conflicts must be resolved
  - Addition of impervious surface with expanded trail
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Potential change to turning radii
  - ADA compliant pedestrian ramps
  - APS implemented

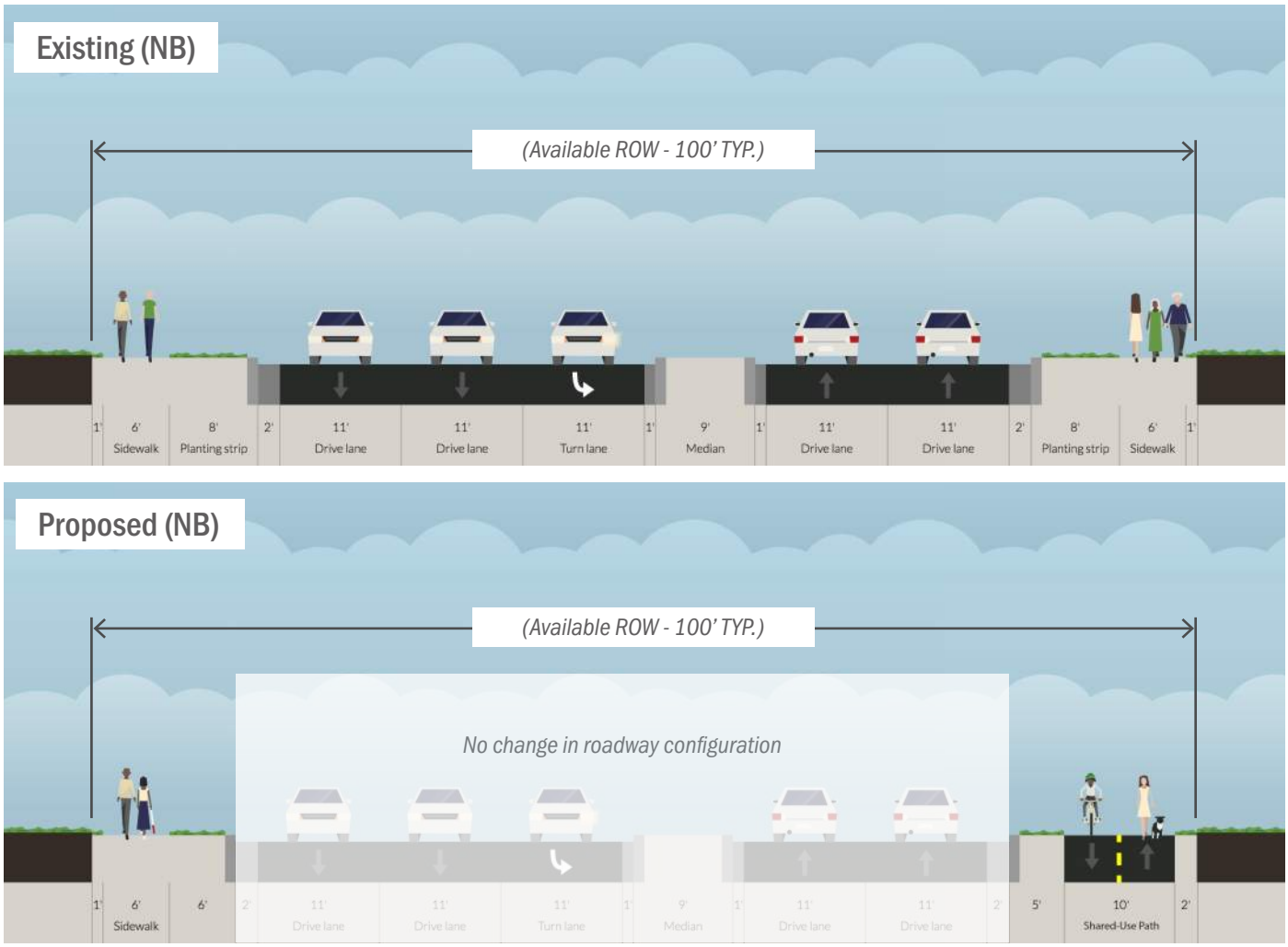
Concept Proposal

TYPE: Two- way Shared-Use Path / Trail - both sides

ID: 16-G

Revision: 08/16/18

Segment 3



GENERAL DESCRIPTION

Two-way Shared-use Path / Trail

- Implement two-way shared-use paths / trails on east side of Segment 3
- Maintains existing roadway cross-section width and roadway components
- Requires reconstruction and modifications to existing roadway cross-section width and curb line
  - Reduction in buffer between trail and roadway or reducing trail width to 8' would eliminate roadway impacts

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
  - Addition of impervious surface with expanded trail
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Potential change to turning radii
  - ADA compliant pedestrian ramps
  - APS implemented

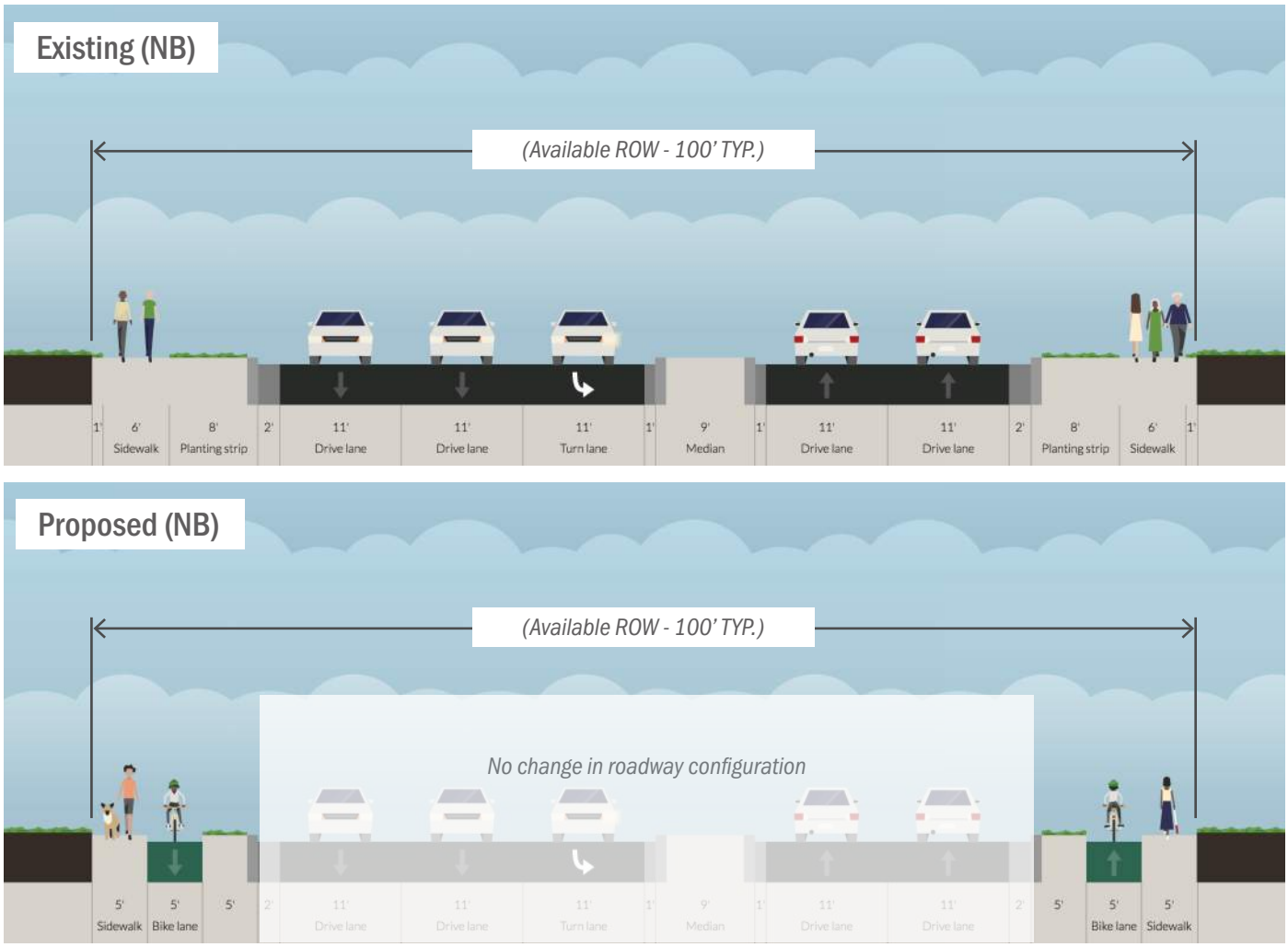
Concept Proposal

TYPE: One-way Separated / Protected Bicycle Lanes - both sides

ID: 16-H

Revision: 08/16/18

Segment 3



GENERAL DESCRIPTION

One-way Separated / Protected Bicycle Lanes

- Implement a one-way separated / protected bicycle lane on both sides of Segment 3
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Addition of impervious surface with expanded trail
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Potential change to turning radii
  - ADA compliant pedestrian ramps
  - APS implemented

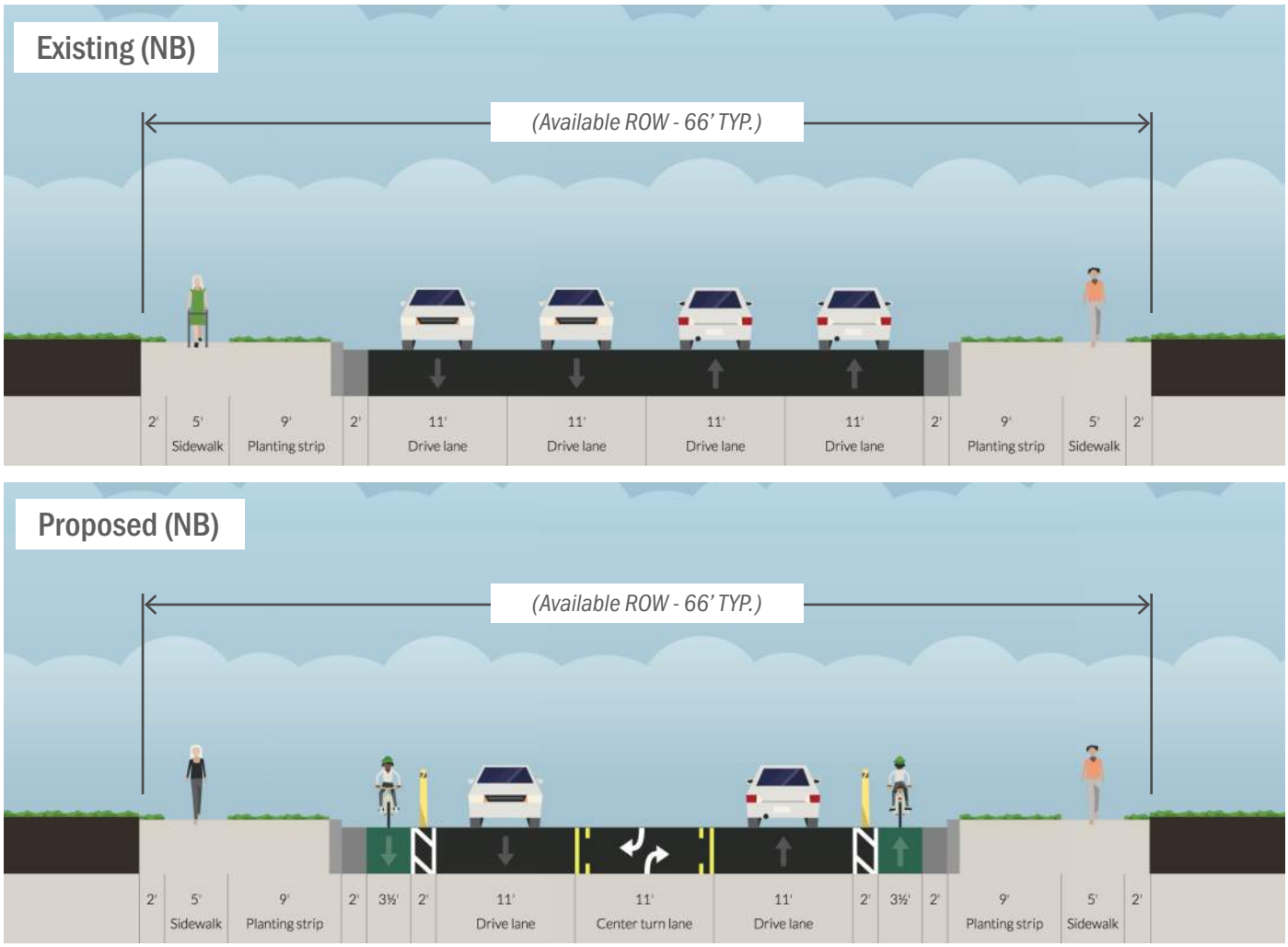
Concept Proposal

TYPE: Three Lane Conversion and One-way Separated / Protected Bicycle Lanes

ID: 16-I

Revision: 08/16/18

Segment 4



GENERAL DESCRIPTION

Three Lane Conversion and Separated / Protected Bicycle Lanes

- Implement a three lane conversion ("Road Diet") for roadway along Segment 4
  - ADT is within range for conversion
  - Conversion frees up space for on-road separated bicycle facilities
- Implement one-way separated / protected bicycle lanes along both sides of roadway
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires bike friendly drainage grates
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections
- Impacts on travel lanes
  - Elimination of driving lane each way, will require traffic analysis

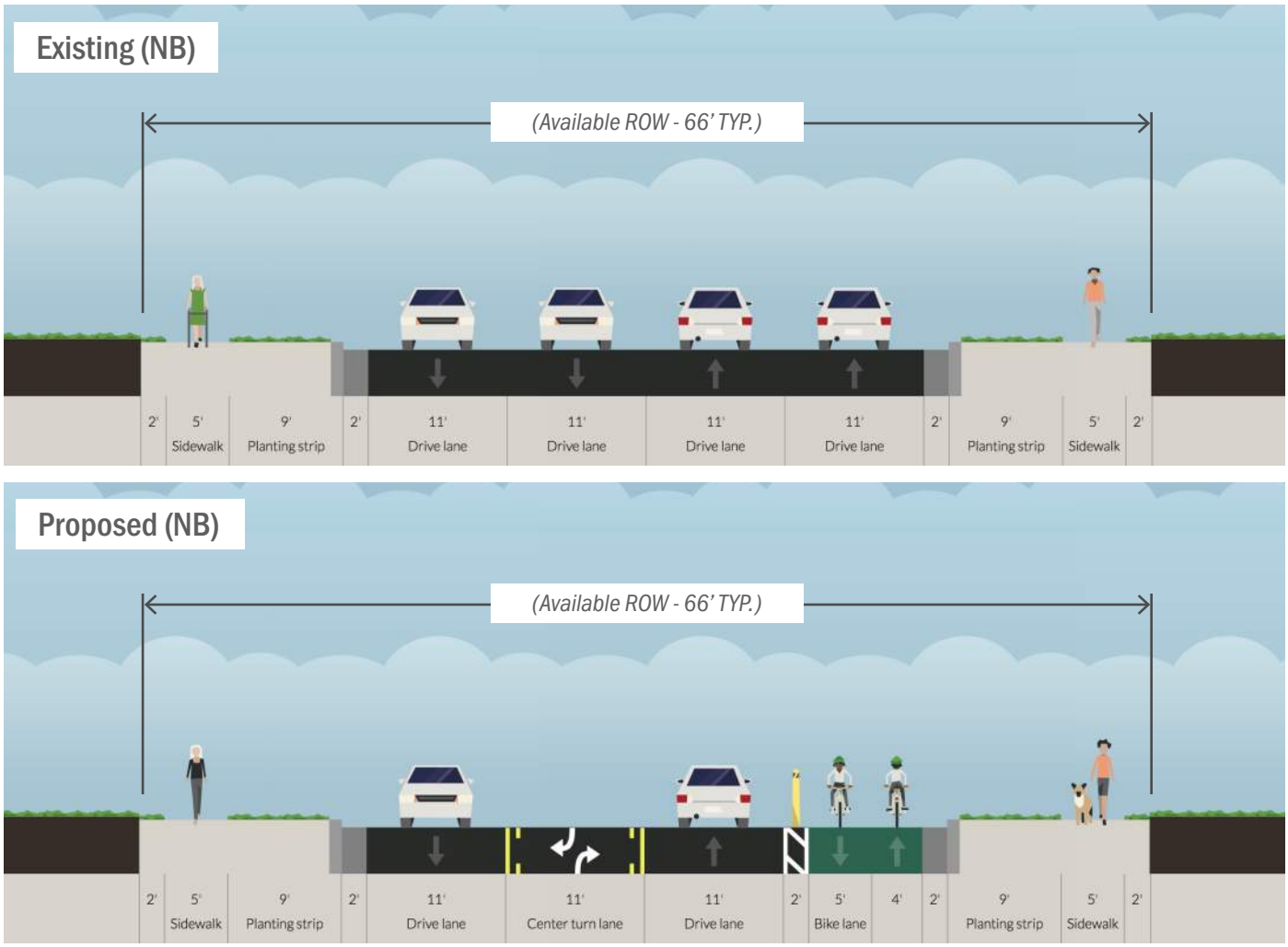
Concept Proposal

TYPE: Three Lane Conversion and Two-way Separated / Protected Bicycle Lane

ID: 16-J

Revision: 08/16/18

Segment 4



GENERAL DESCRIPTION

Three Lane Conversion and Two-way Separated / Protected Bicycle Lanes

- Implement a three lane conversion ("Road Diet") for roadway along Segment 4
  - ADT is within range for conversion
  - Conversion frees up space for on-road separated bicycle facilities
- Implement two-way separated / protected bicycle lanes along one side of roadway
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires bike friendly drainage grates
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections
- Impacts on travel lanes
  - Elimination of driving lane each way, will require traffic analysis

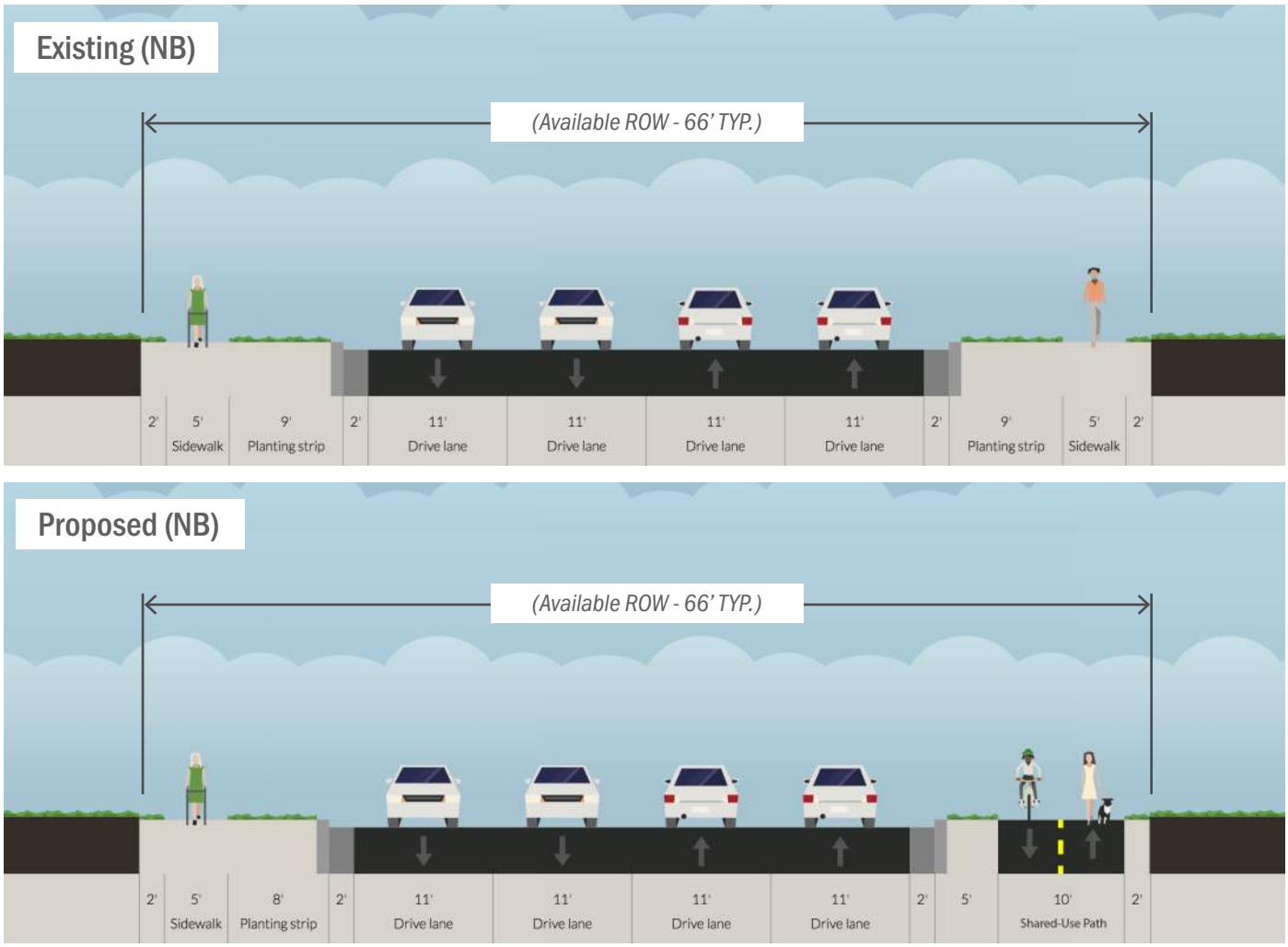
Concept Proposal

TYPE: Two-way Shared-Use Path / Trail - one side

ID: 16-K

Revision: 08/16/18

Segment 4



GENERAL DESCRIPTION

Bidirectional Shared-use Path / Trail

- Implement two-way shared-use path / trail along one side of Segment 4
- Requires reconstruction and modifications to existing roadway cross-section width and curb line
  - Reducing buffer width between trail and roadway could eliminate roadway impacts

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
  - Potential impacts due to additional impervious surface
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 17
Revision: 08/14/18

Project: 36th Avenue N - Douglas Dr to CR 81
City: Robbinsdale
Mode(s): Bicycle Trail

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: 36th Avenue N at Douglas Drive, in Crystal
- Route covers: 36th Avenue N
- Route ends: 36th Avenue N and Bottineau Blvd

Relation to other proposed projects

- Connects to Project ID 06

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route

- Segment 1: Four lane section west of Welcome Ave N
- Segment 2: Freeway ramps, medians, four lane section, and freeway ingress and egress between Welcome Ave N and Quail Ave N
- Segment 3: Three lane section east of Quail Ave N, Grimes to CR81 includes 3-4 travel lanes and turn lanes

Project Description

Segments to be Considered

ID: 17

Revision: 08/14/18

Segments considered and general project location.

Project Description

ID: 17
Revision: 08/14/18

Project Description
Description of Segments

ID: 17
Revision: 08/14/18

Categories	Segment 1	Segment 2	Segment 3
Description of typical roadway section	Four lane, two way	Four lane, two way with freeway access	Three lane (two way with center left turn lane)
Number of through lanes (typ. config.)	4	4	3
AADT (typ.)	15,700	18,300 - 17,500	12,800 - 8,300
Speed limit (mph)	30	30	30
Roadway (curb-to-curb) width typ. (ft)	48	90 - 120	48
Available right-of-way typ. (ft)	66	100 - 120 (112 width at bridge)	66
Roadway jurisdiction	Crystal	Robbinsdale/Crystal	Robbinsdale/Crystal
State Aid Facility?	Yes, MSAS	Yes, MSAS (except between Hwy 100 and Regent Ave N)	Yes, MSAS
Curb & gutter (urban) section?	Yes	Yes	Yes
Median present?	No	Yes (5.5 ft)	No
On-street parking present?	No	No	No
Shoulder present?	No	No	Yes
Width of shoulder or parking lane	N/A	N/A	N/A
Width of driving lane(s)	12	12	12
Center left turn lane?	No	No	Yes
Width of center turn lane	N/A	N/A	14
Sidewalk or sidepath present?	Sidewalk on north(6ft) and south (5.5 ft)	Sidewalk on north (5.5 ft) and south (6ft)	Sidewalk on north (6ft) and south (5.5 ft)
Boulevard or buffer from roadway (typ)	None	None	None
Approximate length of segment (ft)	2,400 ft	2,150 ft	4,240 ft
Transit service along project	14	14	14
Transit service across project	None	None	32

Project Description
Description of Segments - CONTINUED

ID: 17
Revision: 08/14/18

Categories	Segment 1	Segment 2	Segment 3
Segment interacts with the 90% plans?	No	No	Yes
Recommendation from 90% plans	N/A	N/A	Two lane, two way street with center left turn lane between June Ave N and Halifax Ave N on 36th Ave N. No bike lane indicated. Sidewalk on both sides.
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A	N/A	Concepts include trail and separated / protected bike lane options
Do the recommendations conflict or preclude each other?	No	No	Need to coordinate bike facility concepts into 90% plans.

Project Description
General Guidelines and Standards

ID: 17
Revision: 08/14/18

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

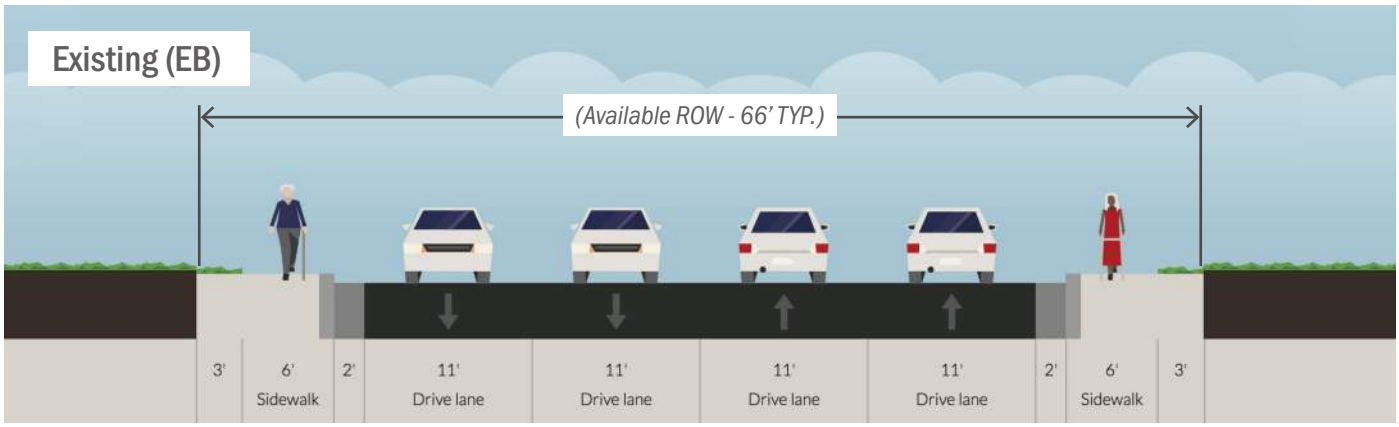
Concept Proposal

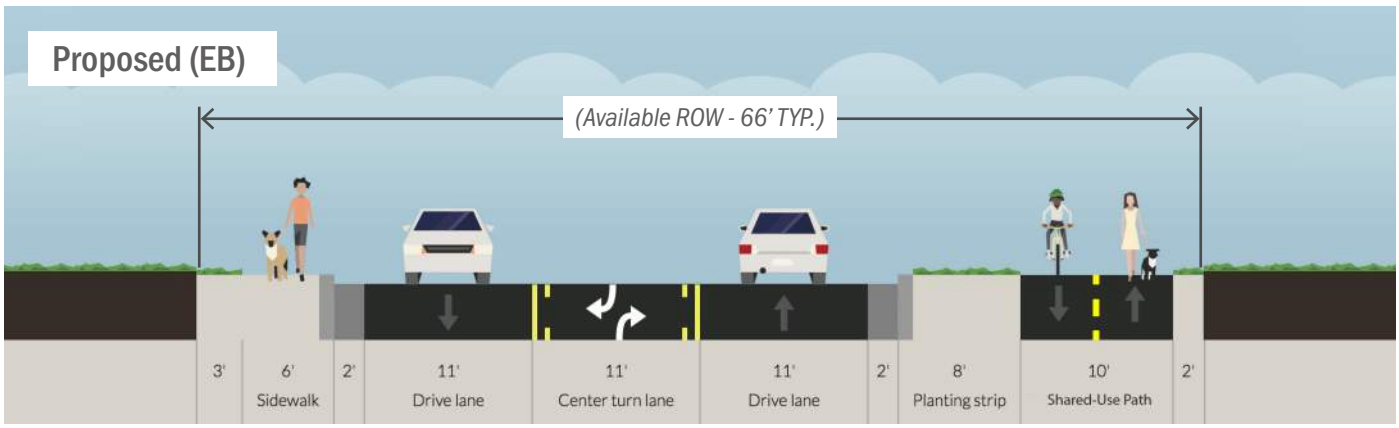
TYPE: Two-way Shared-Use Path / Trail - single side

ID: 17-A

Revision: 08/14/18

Segment 1





GENERAL DESCRIPTION

Three Lane Conversion and Bidirectional Shared-use Path / Trail

- Implement a three lane conversion ("Road Diet") for Segments 1
  - ADT at Segment 1 is within range for conversion.
  - Conversion frees up space for on-road separated bicycle facilities
- Implement a two-way shared-use path / trail along one side of the roadway
  - Maintain existing sidewalk along the other side of roadway
  - Requires reconstruction and modification to existing roadway cross-section width and curb line (on one side only)

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Reconstruct drainage / curb and gutter on south side
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Any removal of turn or travel lanes or travel lanes will require a traffic analysis
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

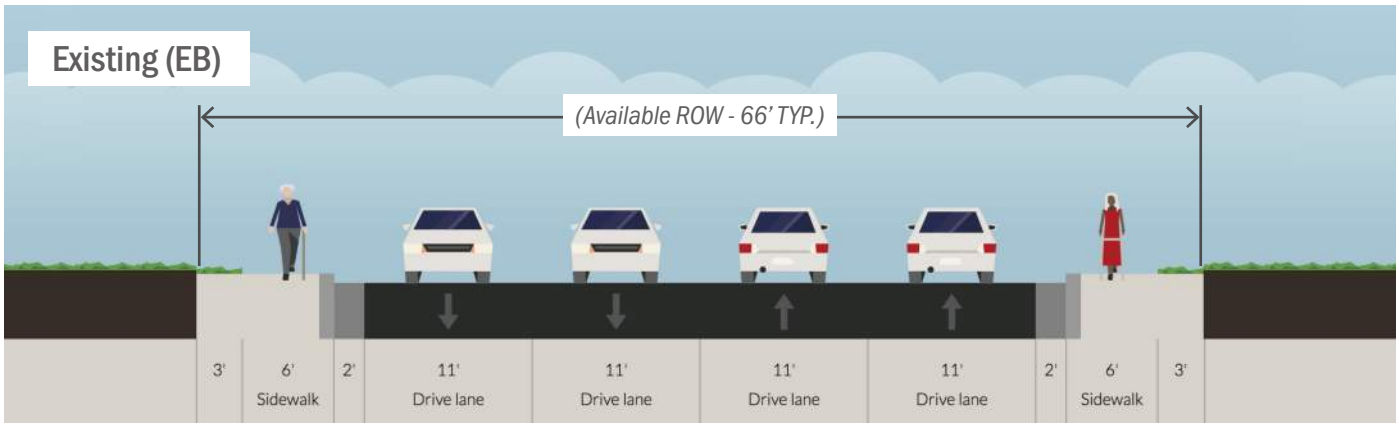
Concept Proposal

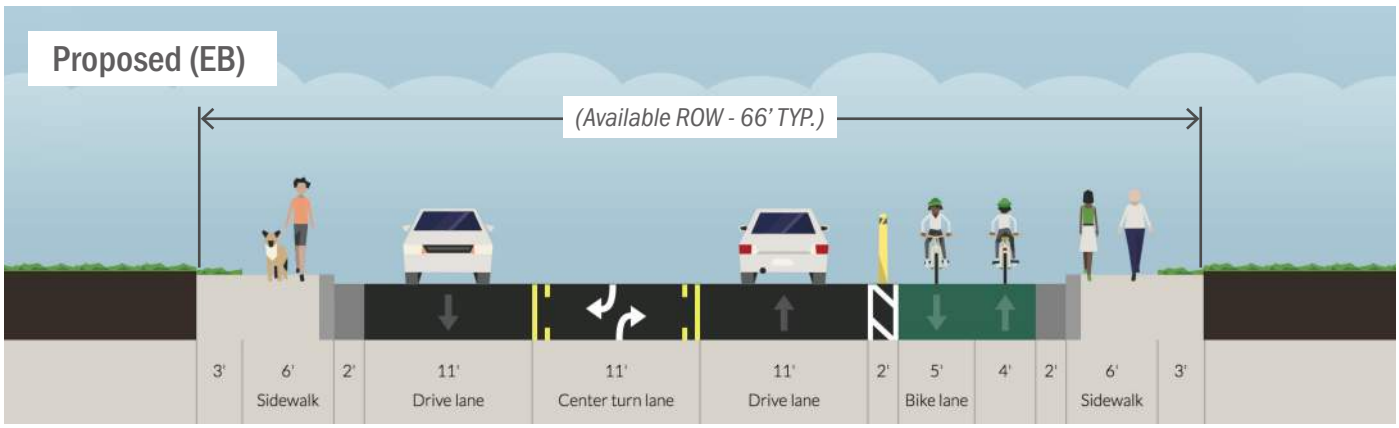
TYPE: Three Lane Conversion and Separated / Protected Bike Lanes - single side

ID: 17-C

Revision: 08/14/18

Segment 1





GENERAL DESCRIPTION

Three Lane Conversion and Separated / Protected Bicycle Lanes

- Implement a three lane conversion ("Road Diet") for roadway along Segment 1
  - ADT is within range for conversion
  - Conversion frees up space for on-road bicycle facilities
- Implement two-way separated / protected bicycle lane
  - Maintain existing sidewalks along the side of roadway
- Maintains existing roadway cross-section width
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires bike friendly drainage grates
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
  - Any removal of turn or travel lanes or travel lanes will require a traffic analysis
- Impacts at signalized intersections
  - Account for adjustments to accommodate two-way bike lane on one side of the roadway
  - ADA compliant pedestrian ramps
  - APS at intersections

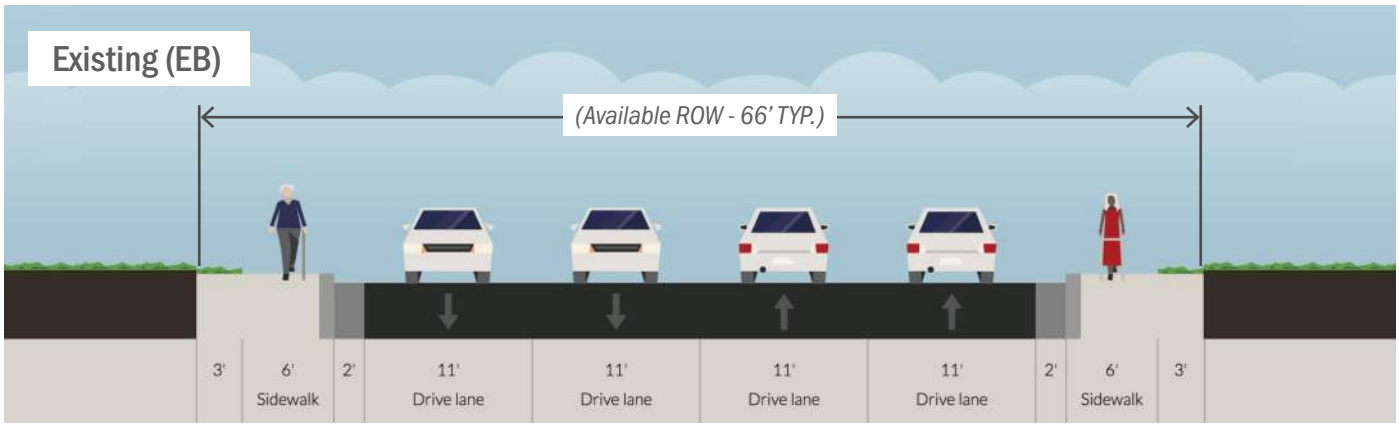
Concept Proposal

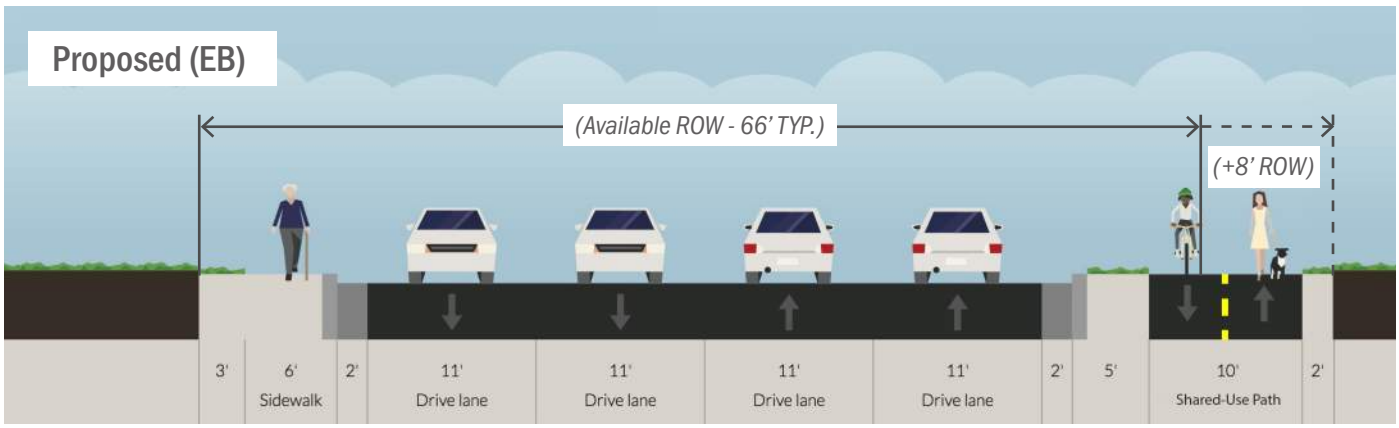
TYPE: Two-way Shared-Use Path / Trail - single side

ID: 17- I

Revision: 08/14/18

Segment 1





GENERAL DESCRIPTION

- Implement a two-way shared-use path / trail along south side of the roadway
  - Maintain existing sidewalk along north side of roadway
  - Maintains existing roadway cross-section width and curb line
- Requires 8' acquisition or easement beyond existing right-of-way

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to increased impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

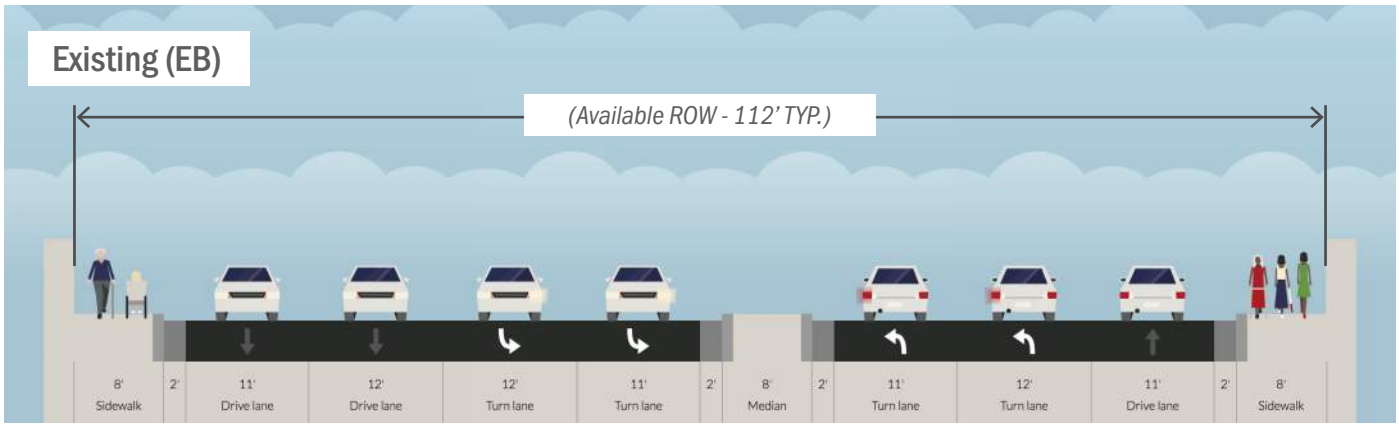
Concept Proposal

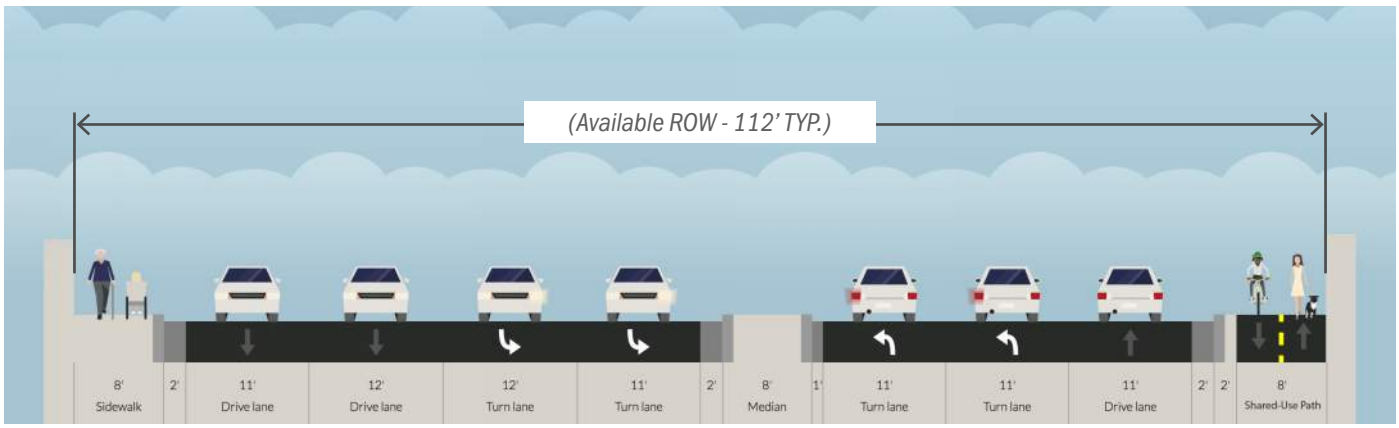
TYPE: Two-way Shared-Use Path / Trail

ID: 17-D

Revision: 08/14/18

Segment 2





GENERAL DESCRIPTION

Two-way Shared-Use Path / Trail

- Implement a two-way shared-use path / trail along the south side of Segment 2, including on bridge over Hwy 100
- Requires reconstruction and modification to the width of existing lanes, and curb line south of median

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter (south side)
- Impacts to existing transit
  - None
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

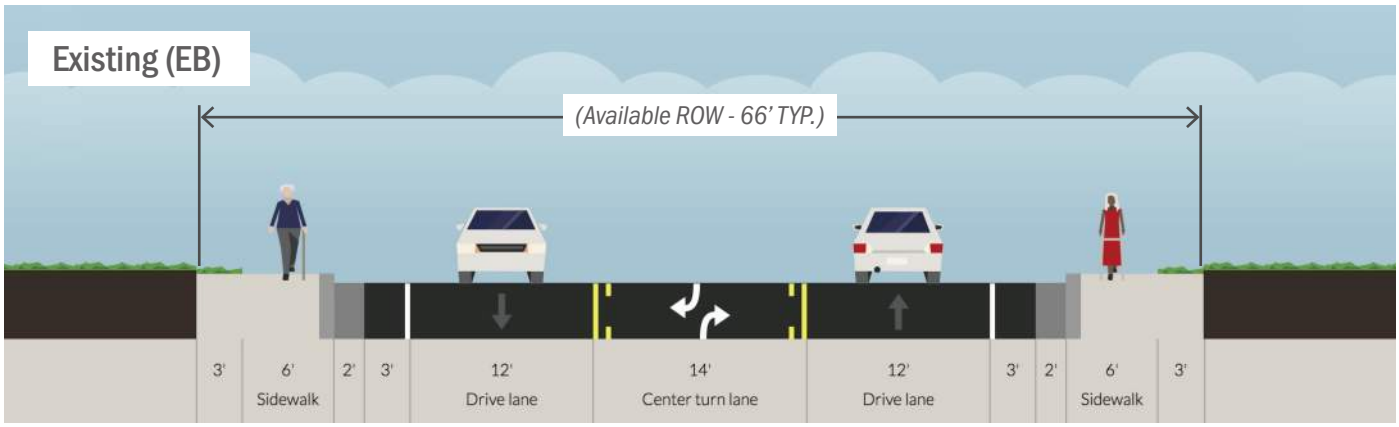
Concept Proposal

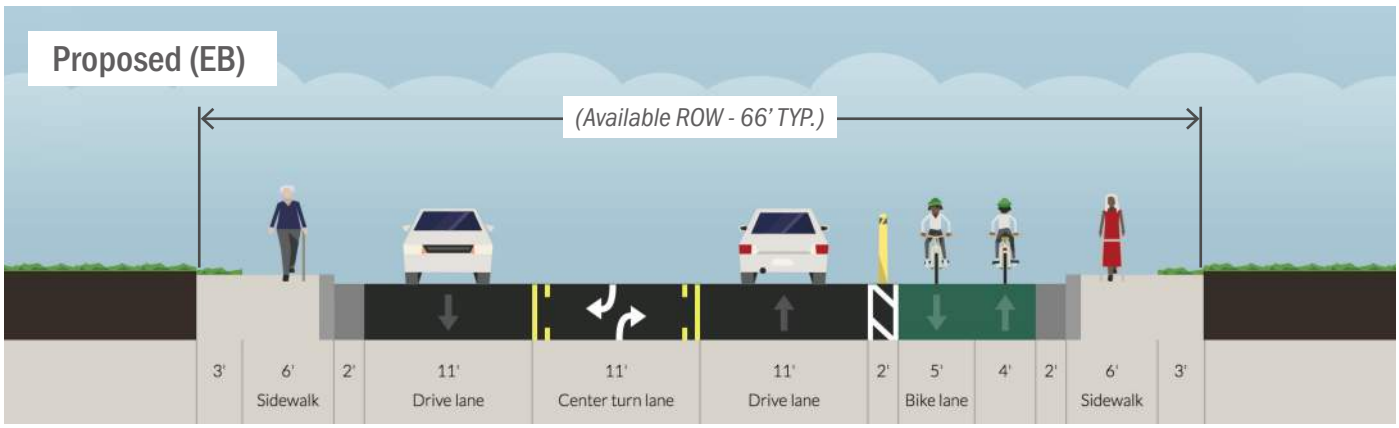
TYPE: Two-way Separated / Protected Bicycle Lane - single side

ID: 17-F

Revision: 08/14/18

Segment 3





GENERAL DESCRIPTION

Bidirectional Separated / Protected Bicycle Lane

- Implement a two-way separated / protected bicycle lane along one side of the roadway
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line both sides of roadway
  - Requires traffic analysis between Grimes Avenue and CR 81

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires bicycle friendly drainage grates
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Impacts at signalized intersections
  - Potential bicycle / pedestrian signal
  - ADA compliant pedestrian ramps
  - APS at intersections
- Potential utility impact between Regent Avenue and Quail Avenue on south side

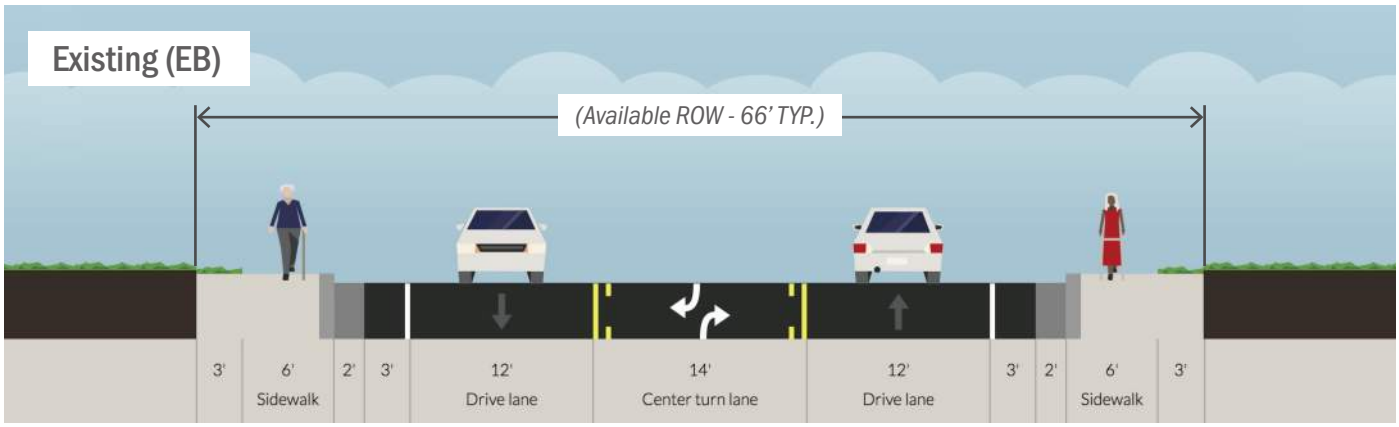
Concept Proposal

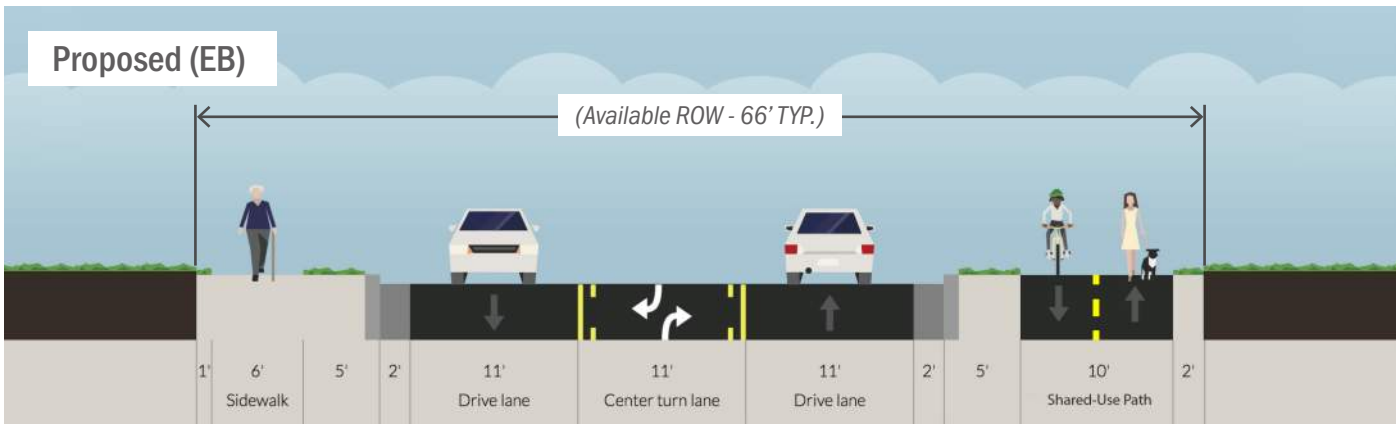
TYPE: Two-way Shared-Use Path / Trail - single side

ID: 17-G

Revision: 08/14/18

Segment 3





GENERAL DESCRIPTION

Bidirectional Shared-use Path / Trail

- Implement two-way shared-use paths / trails on one side of Segment 3
  - Maintain sidewalk along the other side of roadway
- Requires reconstruction and modification to existing roadway cross-section width and curb line
- Requires traffic analysis between Grimes Avenue and CR 81

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
  - Potential impacts due to addition of 3' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Eliminates bus pull-over area
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
  - Potential utility impact south side between Orchard and Noble

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 18
Revision: 08/16/18

Project: Douglas Dr - 48th Avenue to 55th/Sherburne Ave
City: Crystal
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location and traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: 48th Avenue (Crystal Community Center)
- Route covers: Douglas Drive
- Route ends: 55th Avenue / Sherburne Avenue

Relation to other proposed projects

- Connects to Project ID 11
- Upcoming trail improvements at Becker Park

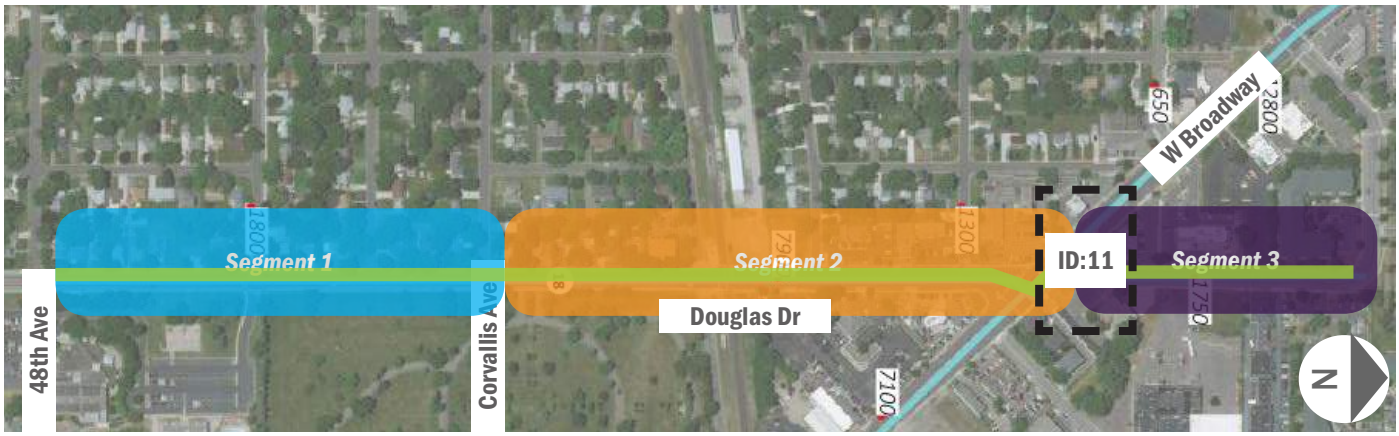
UNIFORMITY / VARIABILITY ALONG ROUTE

Segments and potential links for consideration include:

- Segment 1: Two lane, two-way road with center left turn lane south of Corvallis Ave to 48th Ave
- Segment 2: A four lane, two-way road south of West Broadway to Corvallis Avenue
- Segment 3: Two lane, two-way road on Douglas Drive north of West Broadway

Project Description
Segments to be Considered

ID: 18
Revision: 08/16/18



Segments considered and general project location.

Project Description
Segments to be Considered - Continued

ID: 18
Revision: 08/16/18

View of Segment 2 (NB)

View of Segment 2 (NB)

View of Segment 3 (NB)

Project Description
Description of Segments

ID: 18
Revision: 08/16/18

Categories	Segment 1	Segment 2	Segment 3
Description of typical roadway section	Two lane, two way with center left turn lane	Four lane, two way	Two lane, two way
Number of through lanes (typ. config.)	2	4	2
AADT (typ.)	no data available	7,900	1,750
Speed limit (mph)	35	35	35
Roadway (curb-to-curb) width typ. (ft)	48-55	50	48 - 70
Available right-of-way typ. (ft)	66	66 south of railroad, 80	62 - 80
Roadway jurisdiction	Hennepin County	Hennepin County	Hennepin County
State Aid Facility?	Y - CSAH 102	Y - CSAH 102	Y - MSAS
Curb & gutter (urban) section?	Yes	Yes	Yes
Median present?	No	No	No
On-street parking present?	No	No	No
Shoulder present?	Yes	Yes	Yes
Width of shoulder or parking lane	3-7	N/A	N/A
Width of driving lane(s)	12	12.5	12.5
Center left turn lane?	Yes	No	No
Width of center turn lane	13	N/A	N/A
Sidewalk or sidepath present?	Sidewalk both sides (6 ft)	Sidewalk both sides (6 ft)	Sidewalk both sides (6 ft)
Boulevard or buffer from roadway (typ)	3 ft, both sides	7.5 ft, both sides	3 ft, both sides
Approximate length of segment (ft)	1,310	1,620	850
Transit service along project	716, 758	716, 758	None
Transit service across project	None	None	None

Note: West Broadway (ID:11) connects segments 2 and 3

Project Description
Description of Segments - Continued

ID: 18
Revision: 08/16/18

Categories	Segment 1	Segment 2	Segment 3
Segment interacts with the 90% plans?	No	No	No
Recommendation from 90% plans	N/A	N/A	N/A
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A	N/A	N/A
Do the recommendations conflict or preclude each other?	N/A	N/A	N/A

GENERAL GUIDELINES AND STANDARDS

- Driving lanes must be at least 11' wide
- Parking lane minimum of 8'
- 2' gutters required (in addition to min. 11' lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2' clear zone to traffic and from edge of ROW
- 6' shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5' for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

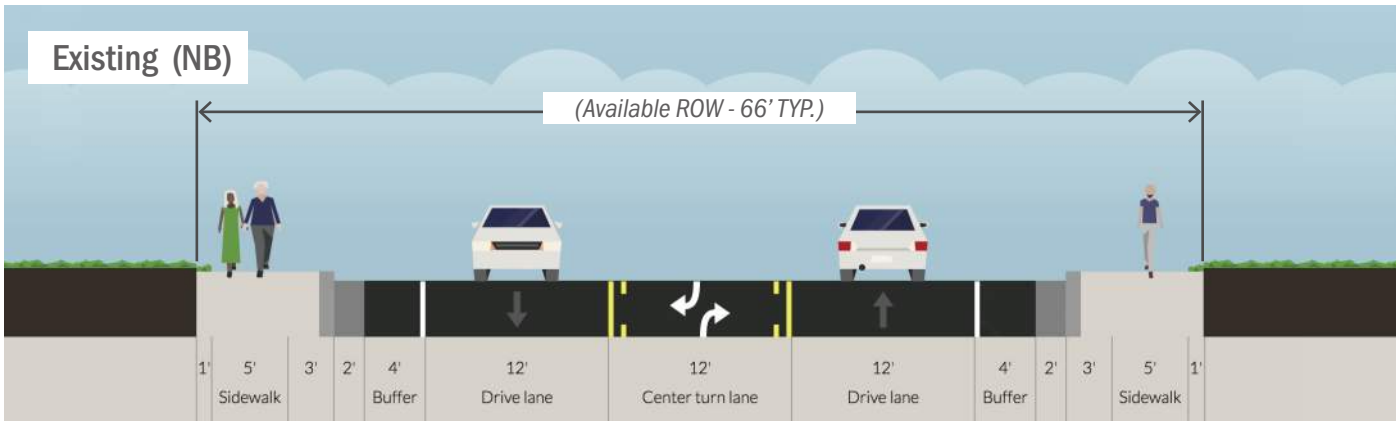
Concept Proposal

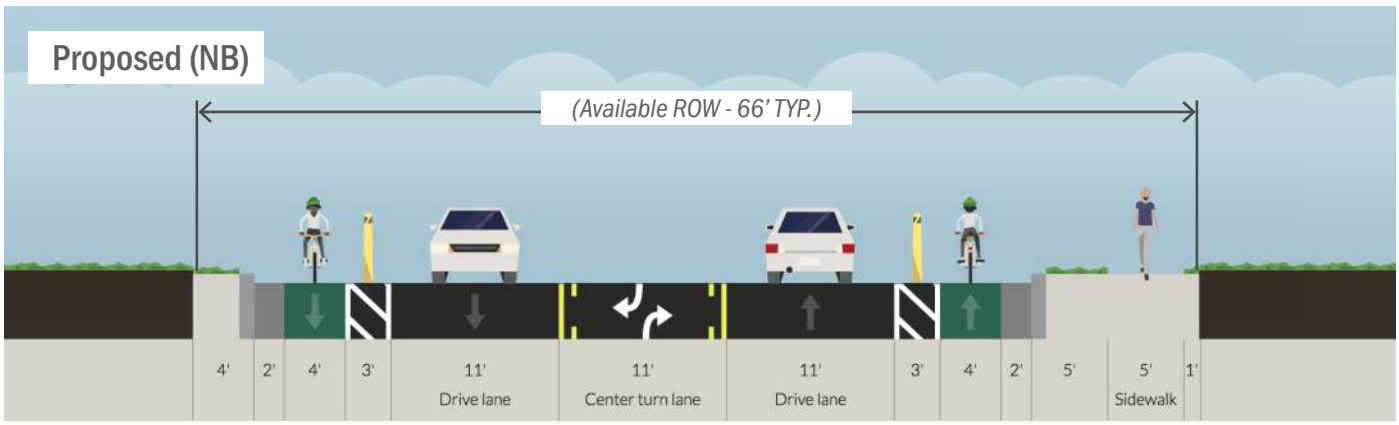
TYPE: One-way Separated / Protected Bicycle Lanes - both sides

ID: 18-A

Revision: 08/16/18

Segment 1





GENERAL DESCRIPTION

One-way Separated / Protected Bicycle Lanes

- Implement a one-way separated / protected bicycle lane along both sides of the roadway
- Requires reconstruction and modification to existing roadway cross section and width
- Eliminates sidewalk on west side of street
- Reduce posted speed limit to 30 mph

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Eliminates bus pull-over area
- May impact overhead utilities on east side of street
- Reduction of buffer width between street and sidewalk on one side could reduce curb and gutter impacts to one side of street
- Impacts at signalized intersections
  - None

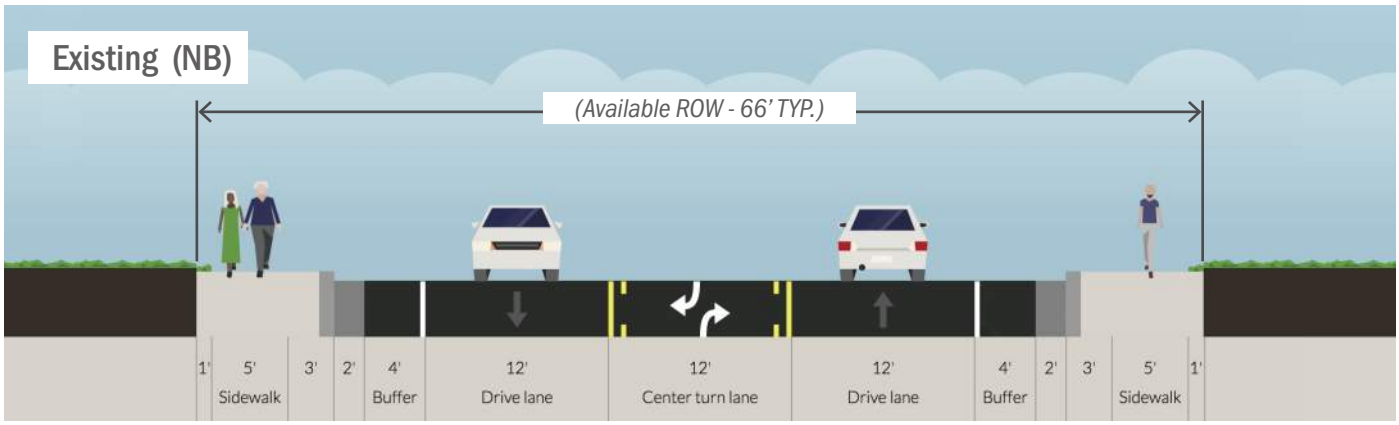
Concept Proposal

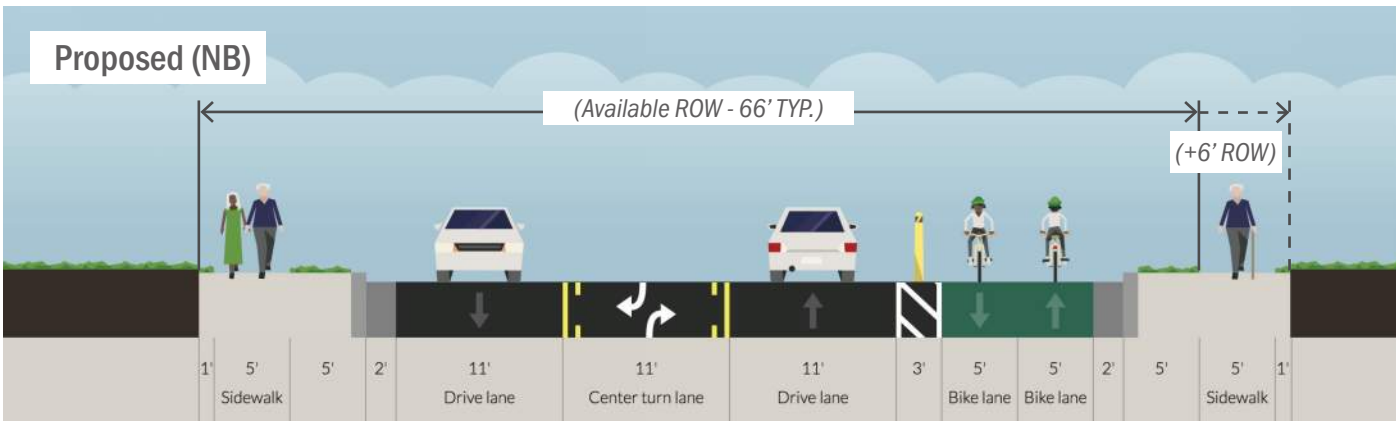
TYPE: Two-way Separated / Protected Bicycle Lane - single side (east)

ID: 18-B

Revision: 08/16/18

Segment 1





GENERAL DESCRIPTION

Two-way Separated / Protected Bicycle Lane

- Implement a two-way separated / protected bicycle lane along east side of the roadway
  - Place on east side to reduce number of intersections and to facilitate access and connection to Community Center and to Becker Park trail and improvements
- Requires reconstruction and modification to existing roadway cross-section width and curb lines

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Eliminates bus pull-over area
  - Bike lanes conflict with bus boarding and alighting
- Overhead utility impacts on east side
- Requires 6' acquisition or easement beyond existing ROW
  - Reduction in buffer width between sidewalk and roadway on west side could reduce curb and gutter impacts on that side of street and reduce ROW impacts
- Impacts at signalized intersections
  - N/A

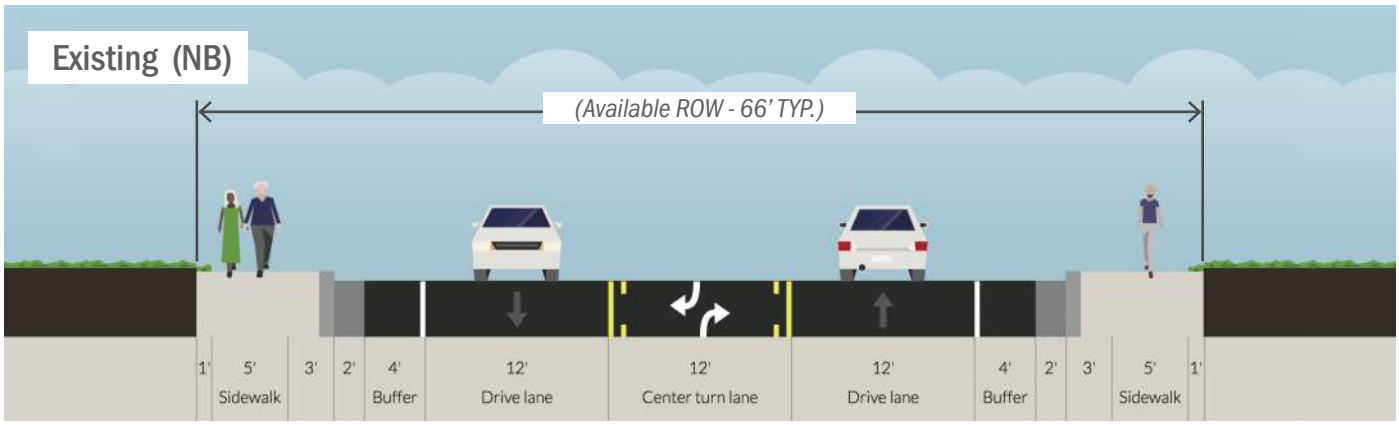
Concept Proposal

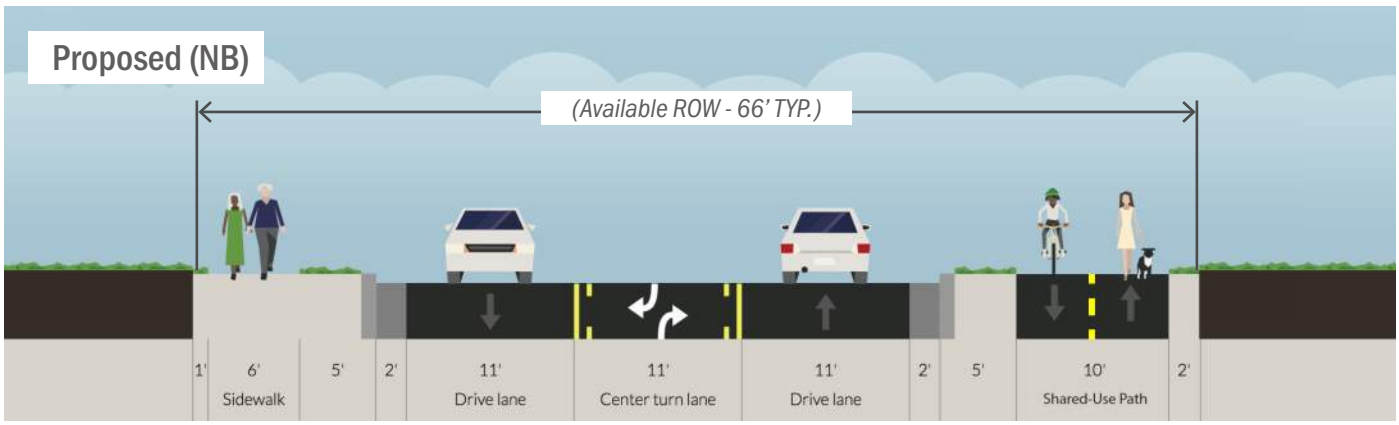
TYPE: Sidewalk on west and Two-way Shared-Use Path / Trail - single side (east)

ID: 18-D

Revision: 08/16/18

Segment 1





GENERAL DESCRIPTION

Sidewalk on west and Two-way Shared-use Path / Trail

- Improve sidewalk on west side of roadway
  - Expand width and provide boulevard / planted median
- Implement a two-way shared-use path / trail along east side of the roadway
  - Place on east side to reduce number of intersections and to facilitate access and connection to Community Center and to Becker Park trail and improvements
- Requires reconstruction and modification to existing roadway cross-section width and curb line
  - Reduction in buffer width between sidewalk and roadway on west side could reduce curb and gutter impacts on west side of street

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Eliminates bus pull-over area
- Potential overhead utility impacts on east side
- Impacts at signalized intersections
  - N/A

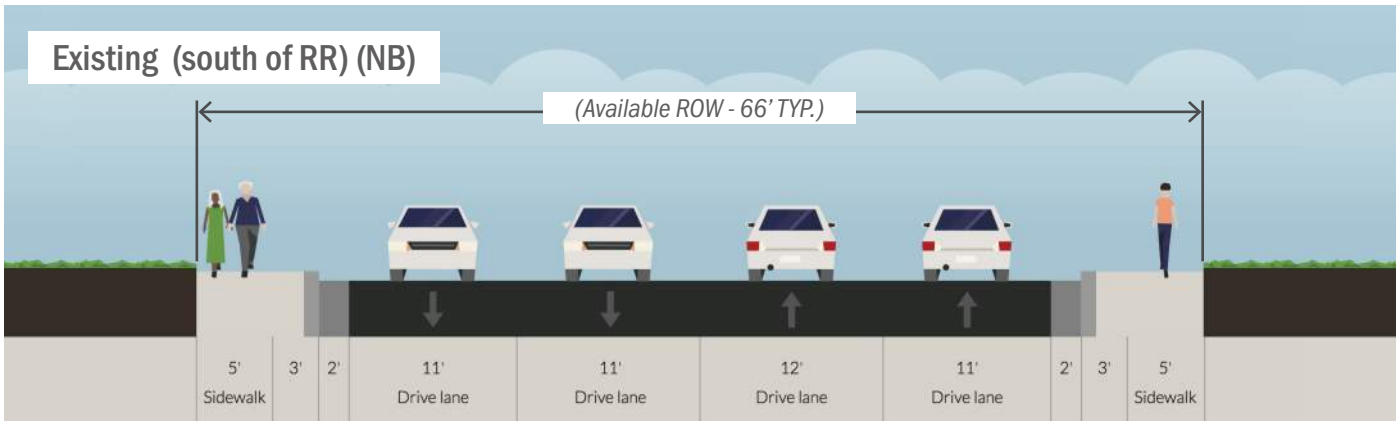
Concept Proposal

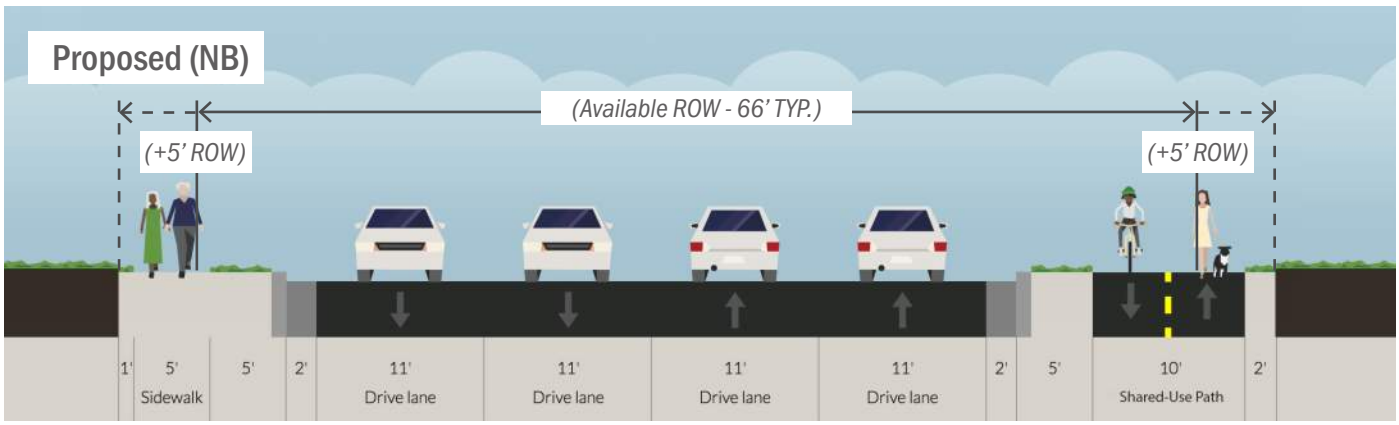
TYPE: Two-way Shared-Use Path / Trail - single side (east)

ID: 18-E

Revision: 08/16/18

Segment 2





GENERAL DESCRIPTION

Two-way Shared-use Path / Trail

- Implement a two-way shared-use path / trail along east side of Segment 2
  - Place on east side to reduce number of intersections and to facilitate access and connection to Community Center and to Becker Park trail and improvements
- Requires reconstruction and modification to existing roadway cross-section width and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
  - Potential impacts due to increased impervious surface
- Impacts to existing transit
  - Not yet determined
- Requires 10' acquisition or easement beyond existing ROW (south of Corralis). No ROW needed north of Corralis
  - Reduction in buffer widths on west side could reduce curb and gutter impacts on that side of street and reduce ROW impacts
- Potential railroad crossing impacts
- Impacts to signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

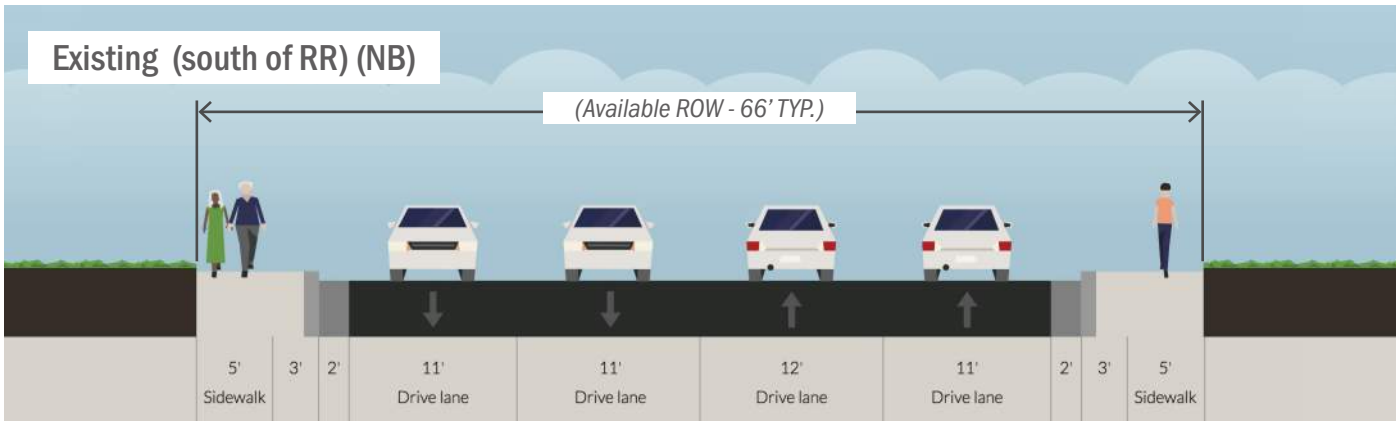
Concept Proposal

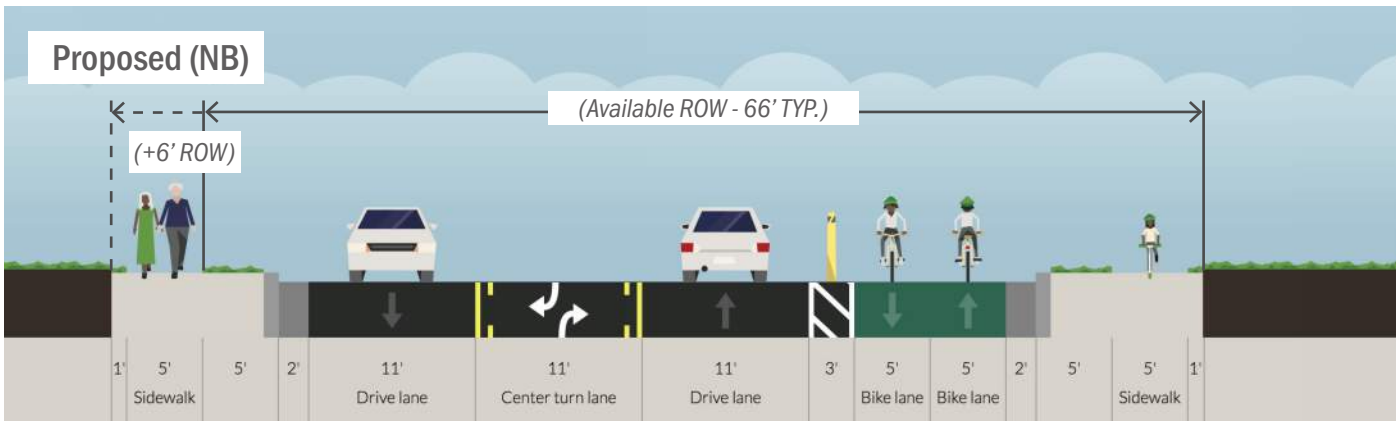
TYPE: Two-way Shared-Use Path / Trail - single side (east)

ID: 18-F

Revision: 08/16/18

Segment 2





GENERAL DESCRIPTION

Three Lane Conversion and Separated / Protected Bicycle Lanes

- Implement a three lane conversion ("Road Diet") for roadway along Segment 2
  - ADT is within range for conversion
  - Requires traffic analysis
  - Conversion frees up space for on-road bicycle facilities
- Implement a two-way separated / protected bicycle lane along east side of the roadway
  - Place on east side to reduce number of intersections and to facilitate access and connection to Community Center and to Becker Park trail and improvements
- Requires reconstruction and modification to existing roadway cross-section width and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
- Requires 6' acquisition or easement beyond existing ROW (south of Corralis). No ROW needed north of Corralis
  - Reduction in buffer widths on west side could reduce curb and gutter impacts on west side of street and reduce ROW impacts
- Impacts to signalized intersections
  - New pedestrian / bicycle signal
  - ADA compliant pedestrian ramps
  - APS at intersections

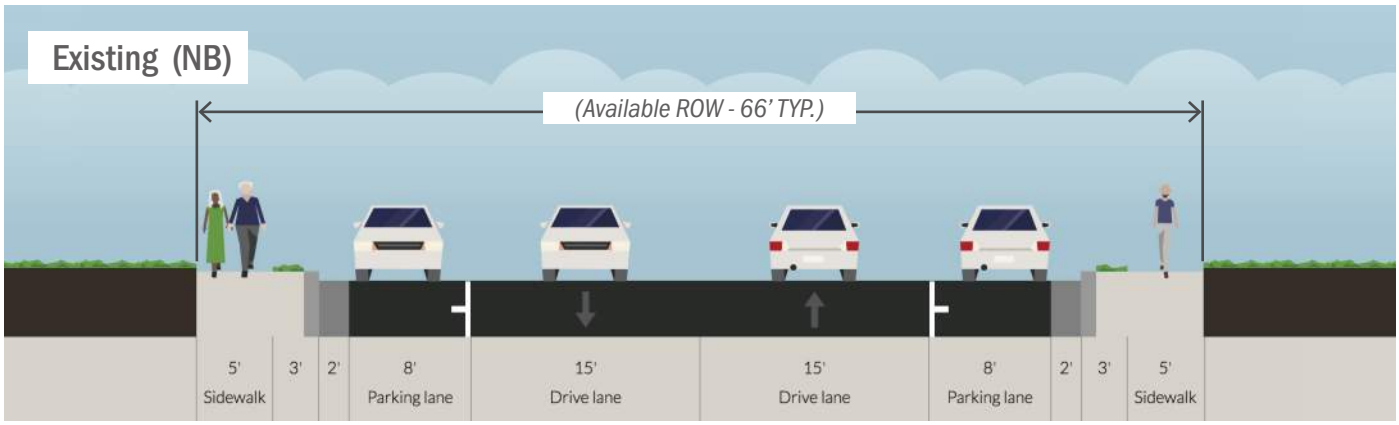
Concept Proposal

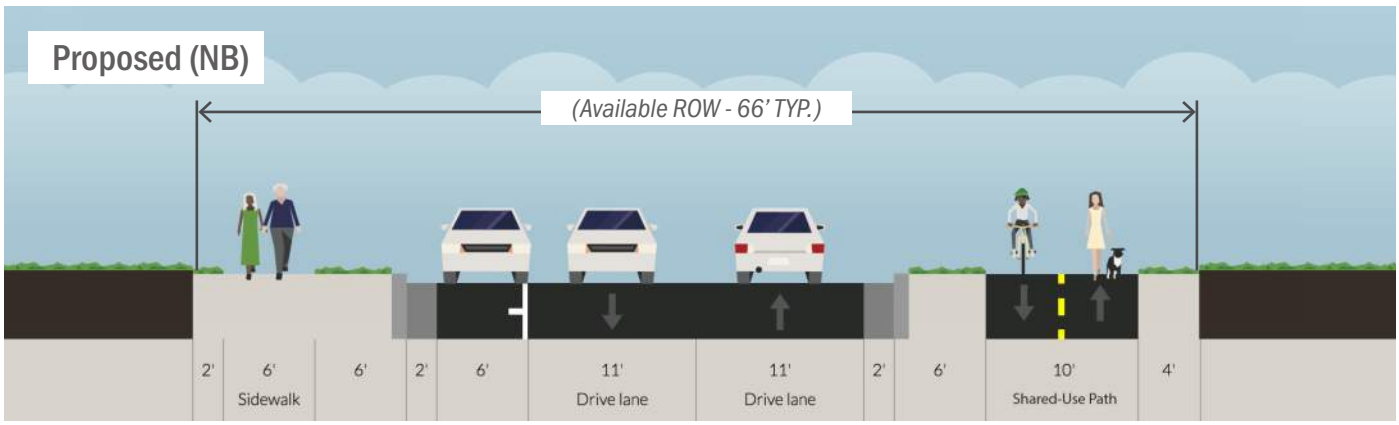
TYPE: Sidewalk (west) and Two-way Shared-use Path / Trail - single side (east)

ID: 18-I

Revision: 08/16/18

Segment 3





GENERAL DESCRIPTION

Two-way Shared-use Path / Trail

- Implement a two-way shared-use path / trail along east side of the roadway
  - Place on east side to reduce number of intersections and to facilitate access and connection to Community Center and to Becker Park trail and improvements
- Improve sidewalk on west side of roadway
  - Provide boulevard / planted median
- Requires reconstruction and modification to existing roadway cross-section width and curb line
  - Reduction in buffer and sidewalk width on west side could reduce curb and gutter and potentially utility impacts

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - Eliminates one lane of on-street parking
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - N/A
- Overhead utility impacts on west side of street
- Impacts to signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

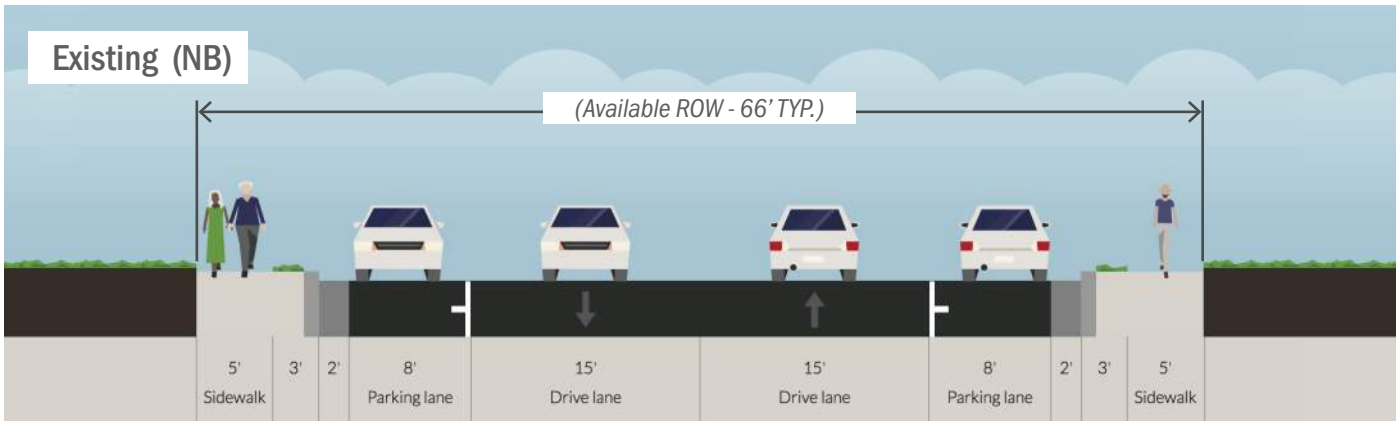
Concept Proposal

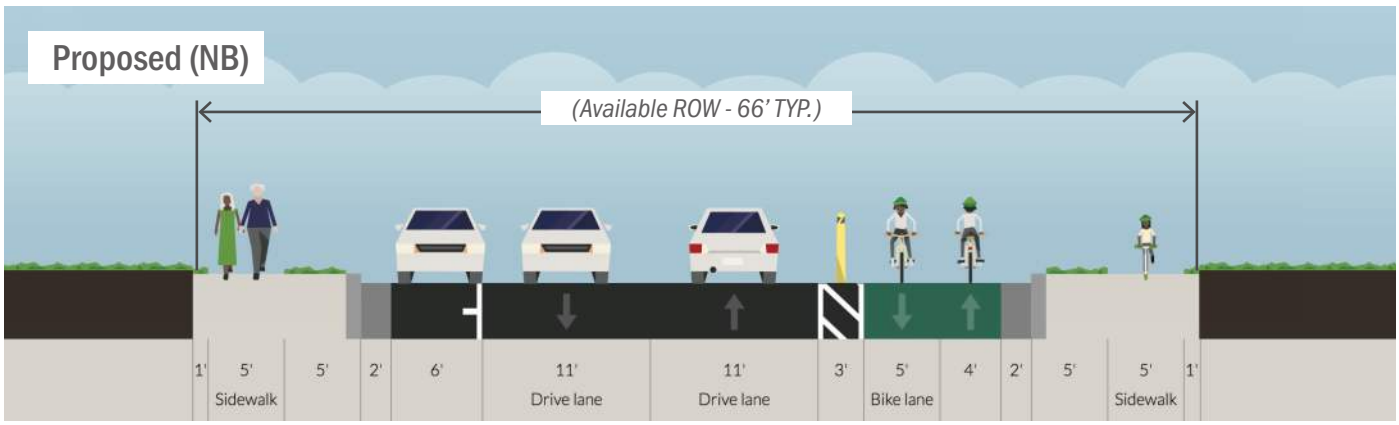
TYPE: Two-way Separated / Protected Bicycle Lane - single side (east)

ID: 18-J

Revision: 08/16/18

Segment 3





GENERAL DESCRIPTION

Two-way Separated / Protected Bicycle Lane

- Implement a two-way separated / protected bicycle lane along east side of the roadway
  - Place on east side to reduce number of intersections and to facilitate access and connection to Community Center and to Becker Park trail and improvements
- Requires reconstruction and modification to existing roadway cross-section width and curb line
  - Reduction in buffer widths on west side of street would reduce curb and gutter impacts and potentially utility impacts

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - Eliminates two lane of on-street parking
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - N/A
- Overhead utility impacts on west side of street
- Impacts to signalized intersections
  - N/A

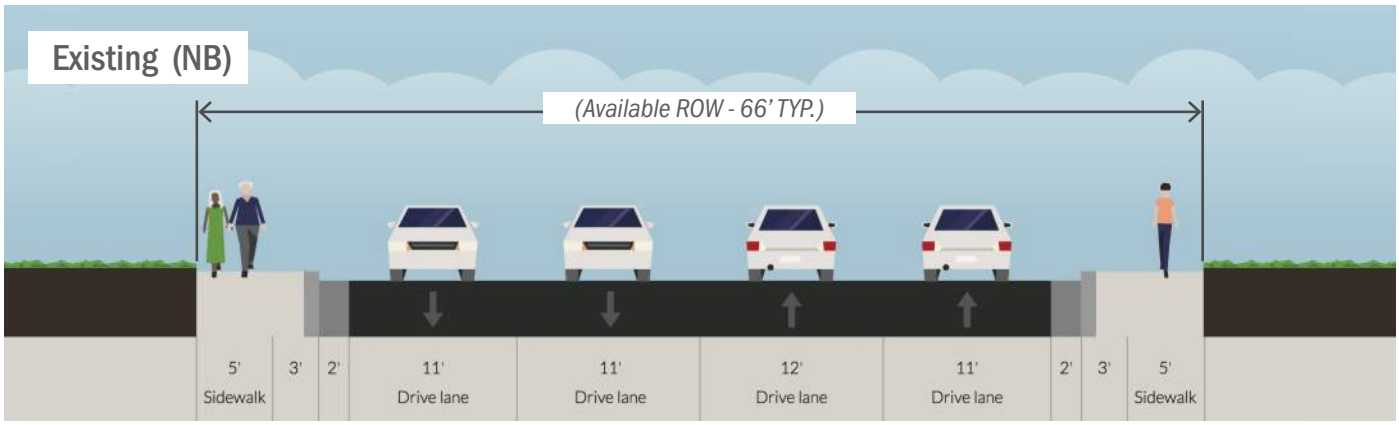
Concept Proposal

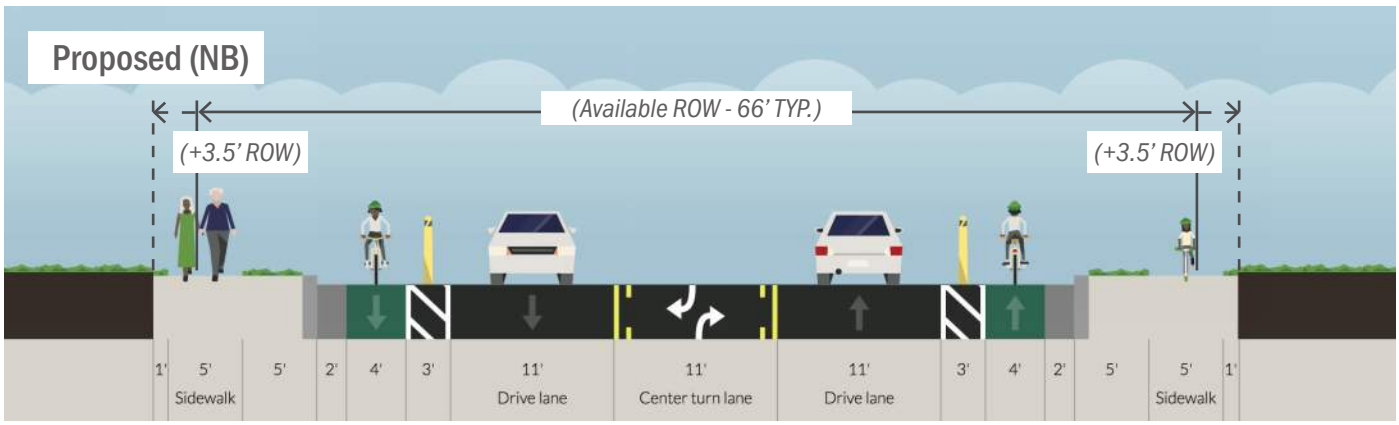
TYPE: Three Lane Conversion and Protected Bicycle Lanes - both sides

ID: 18-K

Revision: 08/16/18

Segment 2





GENERAL DESCRIPTION

Three Lane Conversion and Protected Bicycle Lanes

- Implement a three lane conversion ("Road Diet") for roadway along Segment 2
  - ADT is within range for conversion
  - Requires traffic analysis
  - Conversion frees up space for off-road bicycle facilities
- Implement one-way protected bike lane along both sides of roadway
- Requires reconstruction and modification to existing roadway cross-section width and curb line
- Reduce posted speed limit to 30 mph

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
- Requires 7' acquisition or easement beyond existing ROW (south of Corralis). Adequate ROW exists north of Corralis
- Impacts to signalized intersections
  - Potential pedestrian / bicycle signals
  - ADA compliant pedestrian ramps
  - APS at intersections

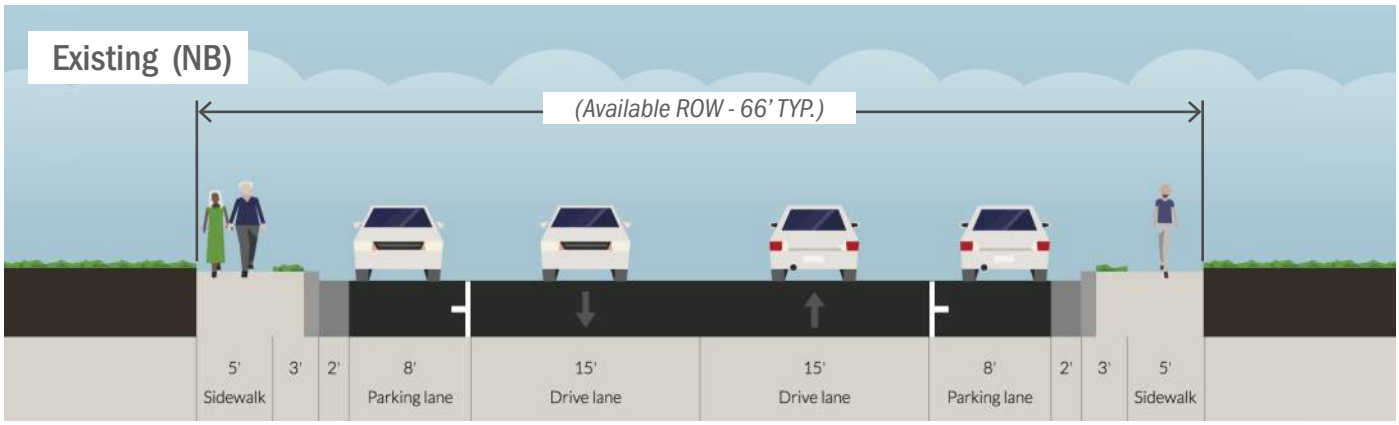
Concept Proposal

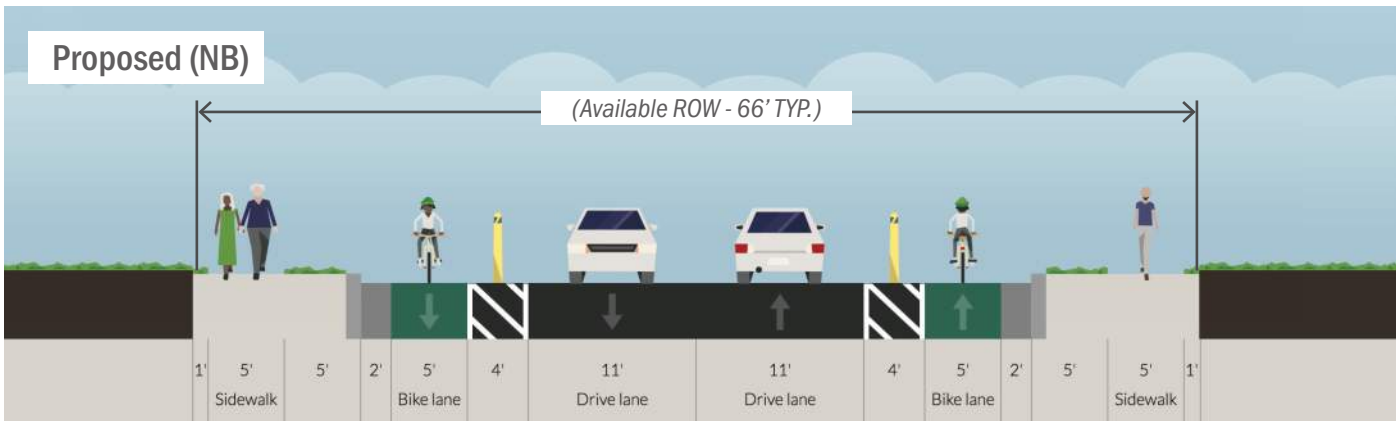
TYPE: One-way Protected Bike Lanes

ID: 18-L

Revision: 08/16/18

Segment 3





GENERAL DESCRIPTION

One-way Protected Bike Lanes

- Implement a one-way protected bike lane along both sides of the roadway
- Requires reconstruction and modification to existing roadway cross-section width and curb line
  - Reduction of buffers on west side of street could reduce curb and gutter impacts on west side and potentially utility impacts

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - Eliminates both lanes of on-street parking
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - N/A
- Overhead utility impacts on west side of street
- Impacts to signalized intersections
  - N/A

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 20
Revision: 08/14/18

Project: Louisiana Ave N - 62nd Ave to 63rd Ave
City: Brooklyn Park
Mode(s): Pedestrian, Bikes

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: 62nd Avenue North
- Route covers: Louisiana Ave N
- Route ends: 63rd Avenue North

Relation to other proposed projects

- Connects to Project ID 08
- Blue Line station at Bottineau Blvd

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration are generally constant along the route

- Segment 1: Two way residential street

Project Description
Segments to be Considered

ID: 20
Revision: 08/14/18

Segments considered and general project location.

Project Description
Description of Segments

ID: 20
Revision: 08/14/18

Categories	Segment 1
Description of typical roadway section	Two way, two lanes
Number of through lanes (typ. config.)	2
AADT (typ.)	No data available
Speed limit (mph)	30
Roadway (curb-to-curb) width typ. (ft)	30
Available right-of-way typ. (ft)	60
Roadway jurisdiction	Brooklyn Park
State Aid Facility?	No
Curb & gutter (urban) section?	Yes
Median present?	No
On-street parking present?	Yes
Shoulder present?	No
Width of shoulder or parking lane	Not marked
Width of driving lane(s)	14
Center left turn lane?	No
Width of center turn lane	N/A
Sidewalk or sidepath present?	No
Boulevard or buffer from roadway (typ)	None
Approximate length of segment (ft)	1,260
Transit service along project	None
Transit service across project	716, 767
Segment interacts with the 90% plans?	No

Project Description
Description of Segments - CONTINUED

ID: 20
Revision: 08/14/18

Categories	Segment 1
Recommendation from 90% plans	N/A
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A
Do the recommendations conflict or preclude each other?	No

Project Description
General Guidelines and Standards

ID: 20
Revision: 08/14/18

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

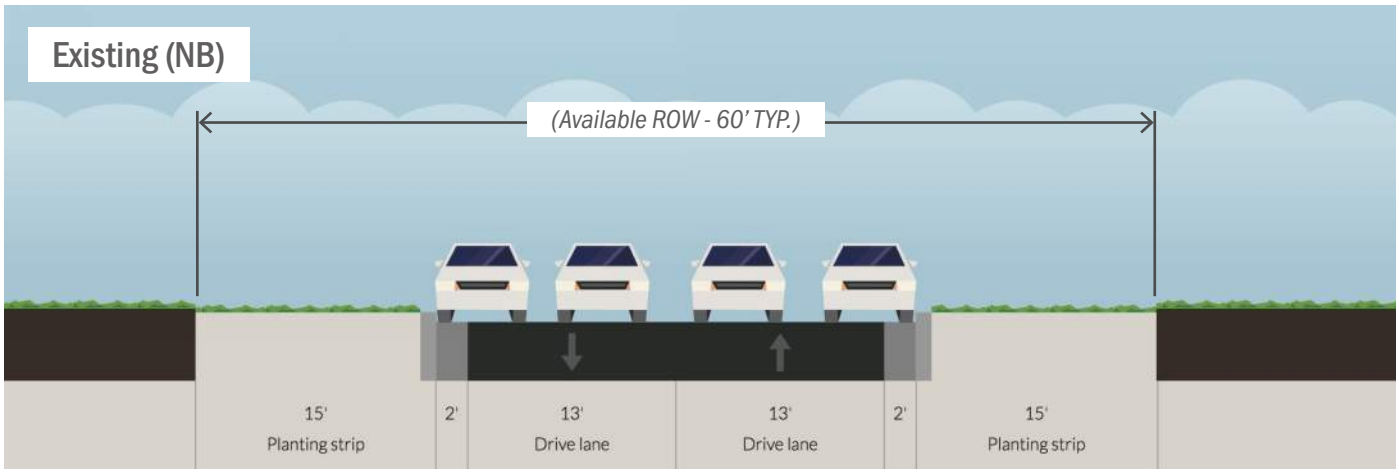
Concept Proposal

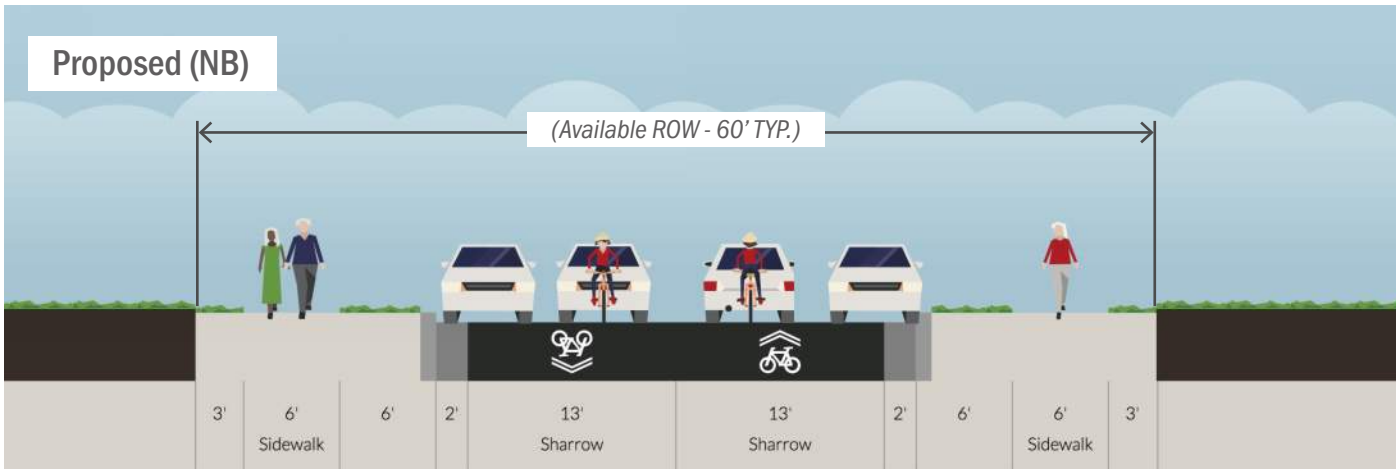
TYPE: Sidewalks on both sides of street

ID: 20-A

Revision: 08/14/18

Segment 1





GENERAL DESCRIPTION

Develop sidewalks along both sides of street

- Maintains existing roadway cross-section width and roadway components

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Addition of 12' impervious surface
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - N/A
- Impacts to driveways
  - Two apartment driveways
  - Four single family driveways
- Impacts to signalized intersections
  - N/A

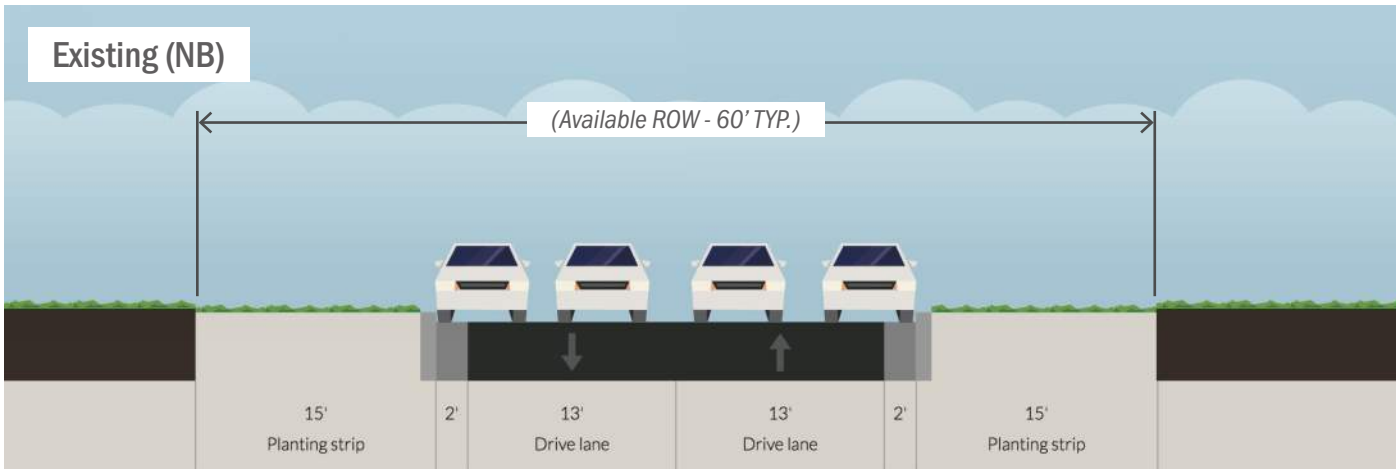
Concept Proposal

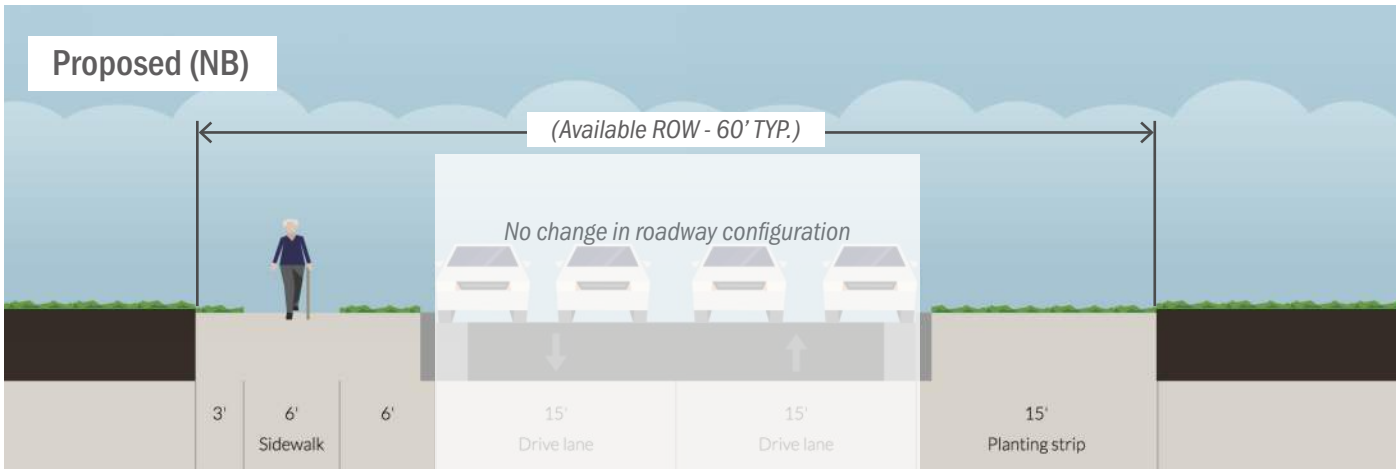
TYPE: Sidewalk on west side of street

ID: 20-B

Revision: 08/14/18

Segment 1





GENERAL DESCRIPTION

Provide sidewalk on west side of street

- Maintains existing roadway cross-section width and roadway components

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Potential impacts due to increased impervious surface
- Impacts to existing transit
  - N/A
- Impacts to driveways
  - 2 apartment driveways
  - 4 single-family driveways
- Impacts to signalized intersections
  - N/A

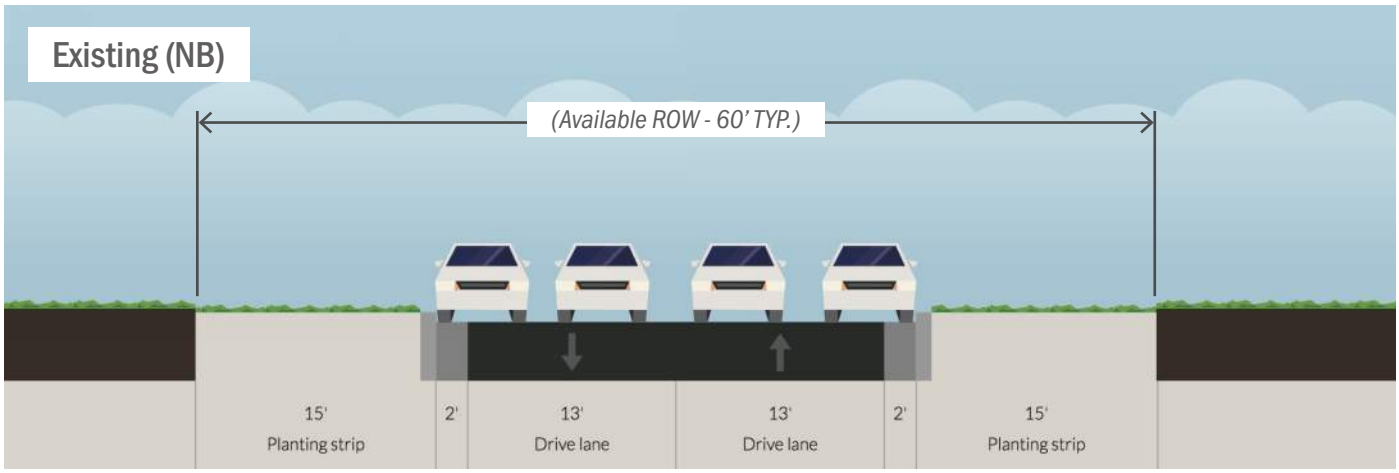
Concept Proposal

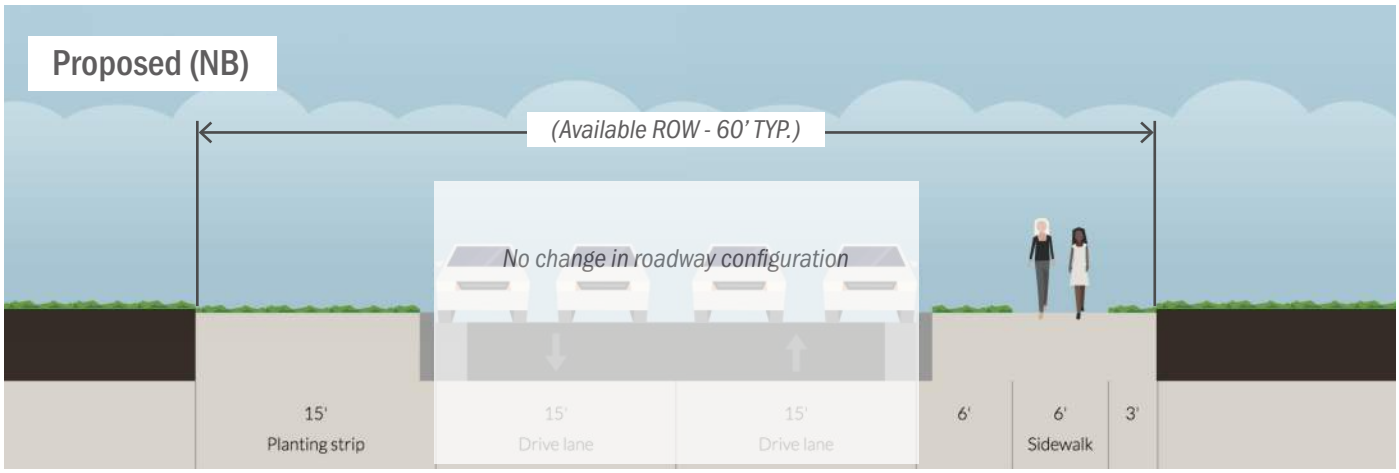
TYPE: Sidewalk on east side of street

ID: 20-C

Revision: 08/14/18

Segment 1





GENERAL DESCRIPTION

Provide sidewalk on east side of street

- Maintains existing roadway cross-section width and roadway components

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Potential impacts due to increased impervious surface
- Impacts to existing transit
  - N/A
- Impacts to driveways
  - 4 single-family driveways
- Impacts to signalized intersections
  - N/A

Appendix C
Phase 2 Scoring

Analysis ID	Project	Concept Group/Description	TOTAL SCORE	RANK	Notes
1.1B	Brooklyn Blvd - Broadway to Hampshire, BROOKLYN PARK	Group 1 - 2C SUP south side	2.7	1	
8.1	63rd Avenue - from Boone Avenue to Zane Avenue, BROOKLYN PARK	Group 1 - 1A 2E SUP+ Sidewalk	2.65	2	
1.2B	Brooklyn Blvd - Broadway to Hampshire, BROOKLYN PARK	Group 2 - 2D SUP both sides	2.55		Same location as #1
16.3B	Zane Avenue - 73rd Ave to 85th Ave, BROOKLYN PARK	Group 3 - 3G 4K SUP east side	2.55	3	
5.1	93rd Avenue North - Jefferson Hwy to Winnetka Ave, BROOKLYN PARK	Group 1 - 1A 2D One-way PBLs + SUP	2.5	4	
2.2	Bass Lake Rd - Broadway to Sherburne and Bottineau to Yates, CRYSTAL	Group 2 - 1B 2F 3D SUP south side, sidewalk north	2.4	5	
16.3	Zane Avenue - 63rd Ave to 85th Ave, BROOKLYN PARK	Group 3 - 1C 2C 3G 4K SUP	2.4		Same location as #3
16.2B	Zane Avenue - 73rd Ave to 85th Ave, BROOKLYN PARK	Group 2 - 3G 4J Two-way PBL	2.4		Same location as #3
5.3	93rd Avenue North - Jefferson Hwy to Winnetka Ave, BROOKLYN PARK	Group 3 - 1C 2D 3E SUP	2.35		Same location as #4
13.3	Bassett Creek Trail - Duluth/Golden Valley Rd to Xerxes Ave N, GOLDEN VALLEY	Group 4 1K 2Ex 3J 4G 5I SUP	2.35	6/7	Tied - Concept G preferred by City/TRPD
13.1	Bassett Creek Trail - Duluth/Golden Valley Rd to Xerxes Ave N, GOLDEN VALLEY	Group 4 1K 2Ex 3J 4E 5I SUP and One-way PBLS	2.35		Same location as #6
13.2	Bassett Creek Trail - Duluth/Golden Valley Rd to Xerxes Ave N, GOLDEN VALLEY	Group 4 1K 2Ex 3J 4F 5I SUP and Two-way PBL	2.35		Same location as #6
15.2	StarLite Shopping Center Connections to Brooklyn Blvd Stations), BROOKLYN PARK	Group 2 - 2C 3G SUP on 76th Ave and across parking area	2.35		Removed after discussion with City
20.3	Louisiana Ave N - 62nd Ave to 63rd Ave, BROOKLYN PARK	Group 3 - 1C Sidewalk on east side of street	2.35	6/7	
12.2	Hampshire Avenue North, BROOKLYN PARK	Group 2 - 1B SUP	2.25	8	
15.3	StarLite Shopping Center Connections to Brooklyn Blvd Stations), BROOKLYN PARK	Group 3 - 3G 4I SUP	2.2		Same location as #7
20.2	Louisiana Ave N - 62nd Ave to 63rd Ave, BROOKLYN PARK	Group 2 - 1B Sidewalk on west side of street	2.2		Same Location as #8
7.1	West Broadway from 42nd Avenue N to 47th Avenue N, ROBBINSDALE	Group 1 - 1B 2D Two-way PBL	2.15		Removed after discussion with City
5.2	93rd Avenue North - Jefferson Hwy to Winnetka Ave, BROOKLYN PARK	Group 2 - 1B 2D 3E Buffered bike lanes + SUP	2.15		Same location as #4
10.1	85th Avenue - CR81 to Regent Ave N, BROOKLYN PARK	Group 1 SUP	2.15		Brooklyn Park is allotted 6 projects · Alternative Project
1.1	Brooklyn Blvd - TH169 to Zealand and Broadway to Hampshire, BROOKLYN PARK	Group 1 - 1A 2C SUP south side	2.1		Same location as #1
2.1	Bass Lake Rd - Broadway to Sherburne and Bottineau to Yates, CRYSTAL	Group 1 - 1A 2C 3D SUP path south side	2.1		Same location as #5
16.1B	Zane Avenue - 73rd Ave to 85th Ave, BROOKLYN PARK	Group 1 - 3H 4I One-way PBL	2.1		Same location as #3
20.1	Louisiana Ave N - 62nd Ave to 63rd Ave, BROOKLYN PARK	Group 1 - 1A Sidewalks on both sides of street	2.05		Same location as #8
7.2	West Broadway from 42nd Avenue N to 47th Avenue N, ROBBINSDALE	Group 2 - 1B 2F Two-way PBL + SUP	2		Same location as #9
12.1	Hampshire Avenue North, BROOKLYN PARK	Group 1 -1ANeighborhood slow street	2		Same location as potential #8
1.2	Brooklyn Blvd - TH169 to Zealand and Broadway to Hampshire, BROOKLYN PARK	Group 2 - 1B 2D SUP both sides	1.95		Same location as #1
6.1	Hubbard Avenue, ROBBINSDALE	Neighborhood slow street	1.95	9	
17.3	36th Avenue N - Douglas Dr to CR81, ROBBINSDALE	Group 3 - 1C 2D 3F Two-way PBL + SUP	1.95	10	
4.1	West Broadway Avenue - 60th Ave N to CR81, BROOKLYN PARK	Group 1 - 1A 2C One-way PBLs	1.95		
4.2	West Broadway Avenue - 60th Ave N to CR81, BROOKLYN PARK	Group 2 - 1A 2B One-way PBLs + SUP	1.95		
15.1	StarLite Shopping Center Connections to Brooklyn Blvd Stations), BROOKLYN PARK	Group 1 - 1J SUP on planned 75th Ave	1.9		

Analysis ID	Project	Concept Group/Description	TOTAL SCORE	RANK	Notes
9.1	Intersection of Lake Drive and County Road 81, ROBBINSDALE	Intersection improvement	1.85		
16.1	Zane Avenue - 63rd Ave to 85th Ave, BROOKLYN PARK	Group 1 - 1A 2A 3H 4I One-way PBL	1.8		
16.2	Zane Avenue - 63rd Ave to 85th Ave, BROOKLYN PARK	Group 2 - 1B 2B 3G 4J Two-way PBL	1.8		
17.1	36th Avenue N - Douglas Dr to CR81, ROBBINSDALE	Group 1 - 1A 2D 3G SUP with road diet	1.8		
17.2	36th Avenue N - Douglas Dr to CR81, ROBBINSDALE	Group 2 - 1I 2D 3G SUP without road diet	1.8		
7.3	West Broadway from 42nd Avenue N to 47th Avenue N, ROBBINSDALE	Group 3 -1C 2E Buffered bike lanes + PBL	1.75		
3.1	42nd Avenue N, ROBBINSDALE	Group 1 - 1A 2D 3A SUP	1.7		
3.3	42nd Avenue N, ROBBINSDALE	Group 3 - 1C 2D 3C Two-way PBL	1.55		
18.3	Douglas Dr - 55th Avenue to Crystal Comm. Center, CRYSTAL	Group 3 - 1D 2E 3Prj 11I, 4I SUP	1.55		
14.1	Brookdale Drive, BROOKLYN PARK	Group 1 - 1B 2E 3H 4E 5K One-way PBL	1.5		
14.2	Brookdale Drive, BROOKLYN PARK	Group 2 - 1C 2F 3I 4F 5K Two-way PBL	1.5		
14.3	Brookdale Drive, BROOKLYN PARK	Group 3 - 1A 2D 3G 4D 5J SUP	1.5		
11.2	West Broadway Avenue - 47th Ave N to 60th Ave N, CRYSTAL	Group 2 - 1B 2G 3I 4M Two-way PBL	1.4		
18.2	Douglas Dr - 55th Avenue to Crystal Comm. Center, CRYSTAL	Group 2 - 1B 2F 3Prj 11J, 4JTwo-way PBL	1.4		
18.1	Douglas Dr - 55th Avenue to Crystal Comm. Center, CRYSTAL	Group 1 - 1A 2K 3Prj 11H, 4L One-way PBL	1.25		
3.2	42nd Avenue N, ROBBINSDALE	Group 2 - 1B 2E 3B One-way PBLs	1.2		
11.1	West Broadway Avenue - 47th Ave N to 60th Ave N, CRYSTAL	Group 1 - 1A 2F 3H 4L Buffered bike lanes + One-way PBL	1.15		
11.3	West Broadway Avenue - 47th Ave N to 60th Ave N, CRYSTAL	Group 3 - 1C 2D 3J 4N SUP	1.1		

Appendix D
Top 10 Concept Sheets

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 01
Revision: 11/19/18

Project: Brooklyn Blvd - 1/2 block east of West Broadway to Hampshire Blvd
City: Brooklyn Park
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: 1/2 block east of West Broadway
- Route ends: Hampshire Avenue

Relation to other proposed projects

- Blue Line station at intersection with West Broadway
- Planned improvements at CR81 and east of Hampshire (10ft trail on south side)

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration are generally constant along the route

- Segment 2: Four lane, two way with medians and center left and right turn lanes east of West Broadway Avenue to Hampshire Avenue

Project Description
Segments to be Considered

ID: 01
Revision: 11/19/18

Note: Segment 1 removed from 60% design. Final project consists of segment 2 only

General project location.

Project Description
Description of Segments

ID: 01
Revision: 11/19/18

Categories	Segment 2
Description of typical roadway section	Four lane, two way with center left turn lanes
Number of through lanes (typ. config.)	4
AADT (typ.)	18,800 to 19,500
Speed limit (mph)	45
Roadway (curb-to-curb) width typ. (ft)	70
Available right-of-way typ. (ft)	100
Roadway jurisdiction	Hennepin County
State Aid Facility?	Yes - CSAH 152
Curb & gutter (urban) section?	Yes
Median present?	Yes - 7 ft
On-street parking present?	No
Shoulder present?	No
Width of shoulder or parking lane	N/A
Width of driving lane(s)	12
Center left turn lane?	Yes
Width of center turn lane	12
Sidewalk or sidepath present?	5 ft sidewalk on north and south
Boulevard or buffer from roadway (typ)	5.5 ft - 9 ft on north and south
Approximate length of segment (ft)	2,030 ft
Transit service along project	724
Transit service across project	705,764
Segment interacts with the 90% plans?	Yes: east from W Broadway Ave

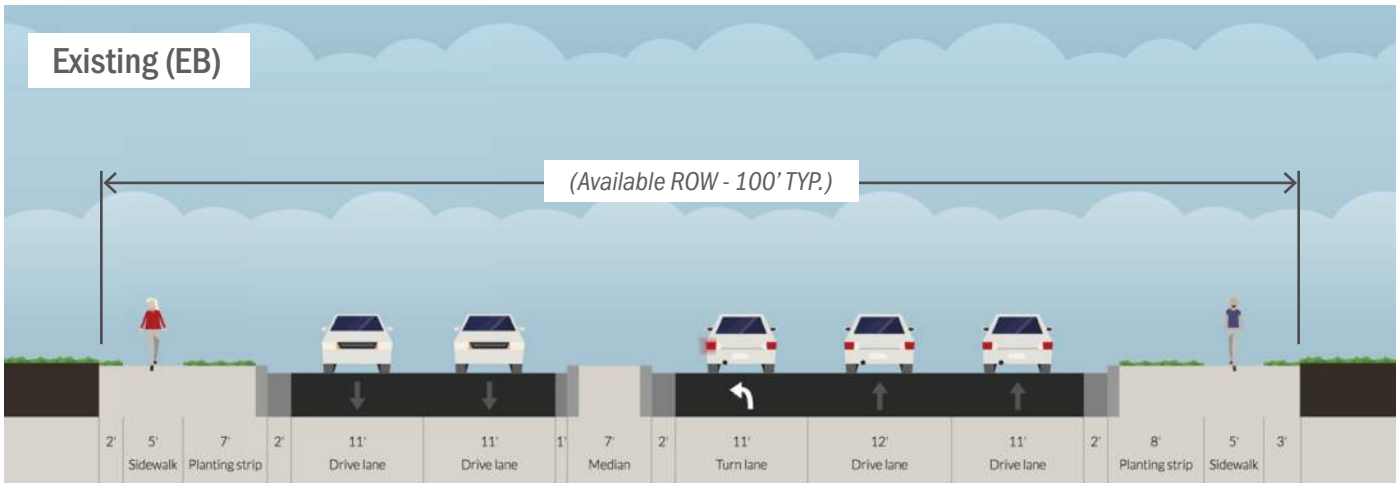
Categories	Segment 2
Recommendation from 90% plans	Trail on north and south side of Brooklyn Blvd between block east and west of station. Two lane, two way traffic on road, with a landscape median, as well as left and right turn lanes at intersections.
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	Trail on one side (south) or both sides
Do the recommendations conflict or preclude each other?	No

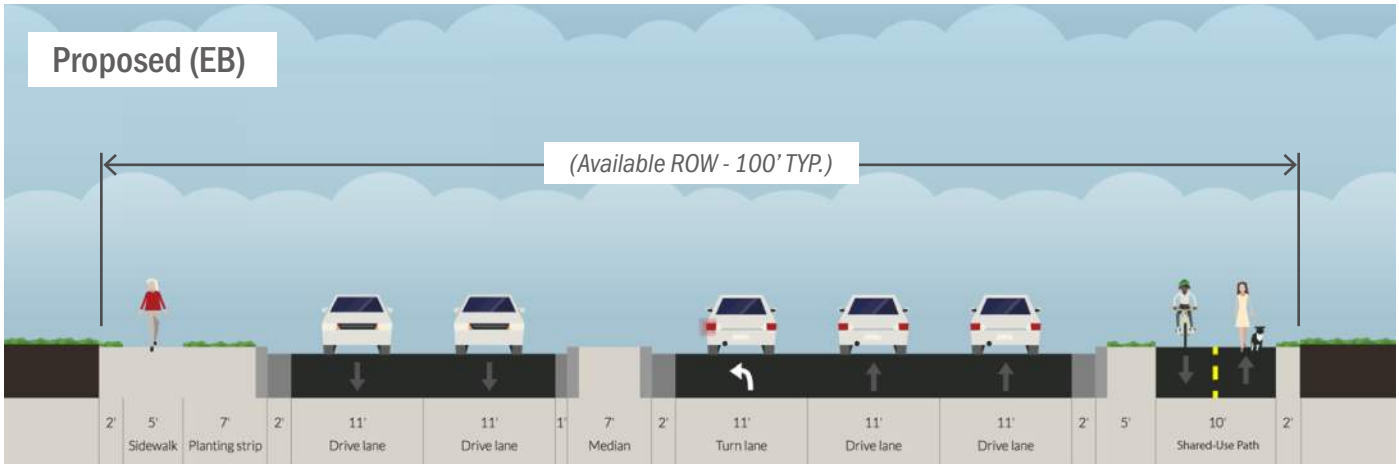
- Driving lanes must be at least 11' wide
- Parking lane minimum of 8'
- 2' gutters required (in addition to min. 11' lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2' clear zone to traffic and from edge of ROW
- 6' shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5' for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

Concept Proposal
TYPE: Shared-Use Path

ID: 01-C
Revision: 11/19/18

Segment 2





GENERAL DESCRIPTION

- Implement one two-way shared-use path / trail along the south side of roadway
  - Brooklyn Park project for Hampshire to Zane will provide trail on south side

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 5' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 02
Revision: 12/07/18

Project: Bass Lake Rd - Bottineau to Yates and Douglas Dr - 55th Ave to West Broadway
City: Crystal
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location and traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: West Broadway
- Route covers: Douglas Drive
- Route ends: 55th Avenue / Sherburne Avenue

Relation to other proposed projects

- Connects to Project ID 11
- Upcoming trail improvements at Becker Park

UNIFORMITY / VARIABILITY ALONG ROUTE

Segments and potential links for consideration include:

- Segment 1: Two lane, two-way road on Douglas Drive north of West Broadway

Concept Development for Walk/Bike Connectivity

Segments to be Considered

ID: 02

Revision: 12/07/18

General project location.

Project Description
Description of Segments

ID: 02
Revision: 12/07/18

Categories	Segment 1
Description of typical roadway section	Two lane, two way
Number of through lanes (typ. config.)	2
AADT (typ.)	1,750
Speed limit (mph)	30
Roadway (curb-to-curb) width typ. (ft)	48
Available right-of-way typ. (ft)	66
Roadway jurisdiction	Hennepin County
State Aid Facility?	Y - MSAS
Curb & gutter (urban) section?	Yes
Median present?	No
On-street parking present?	Yes
Shoulder present?	Yes
Width of shoulder or parking lane	N/A
Width of driving lane(s)	14
Center left turn lane?	No
Width of center turn lane	N/A
Sidewalk or sidepath present?	Sidewalk both sides (5 ft)
Boulevard or buffer from roadway (typ)	2.5 ft, both sides
Approximate length of segment (ft)	850
Transit service along project	None
Transit service across project	None

Categories	Segment 1
Segment interacts with the 90% plans?	No
Recommendation from 90% plans	N/A
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A
Do the recommendations conflict or preclude each other?	N/A

GENERAL GUIDELINES AND STANDARDS

- Driving lanes must be at least 11' wide
- Parking lane minimum of 8'
- 2' gutters required (in addition to min. 11' lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2' clear zone to traffic and from edge of ROW
- 6' shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5' for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

Concept Proposal

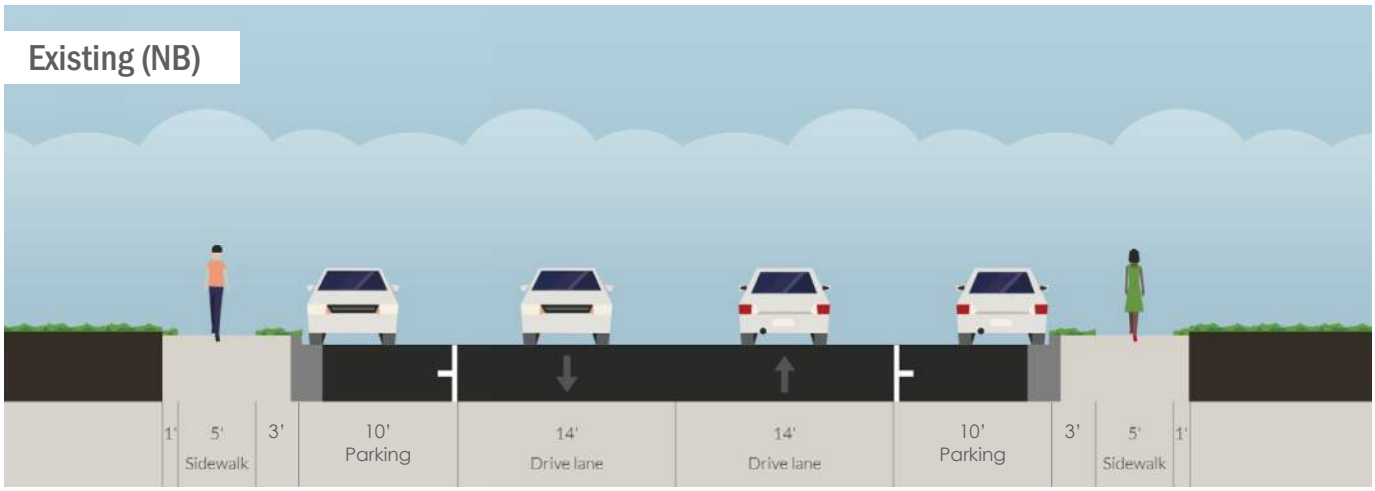
TYPE: One-way Separated / Protected Bicycle Lanes - both sides

ID: 02-A

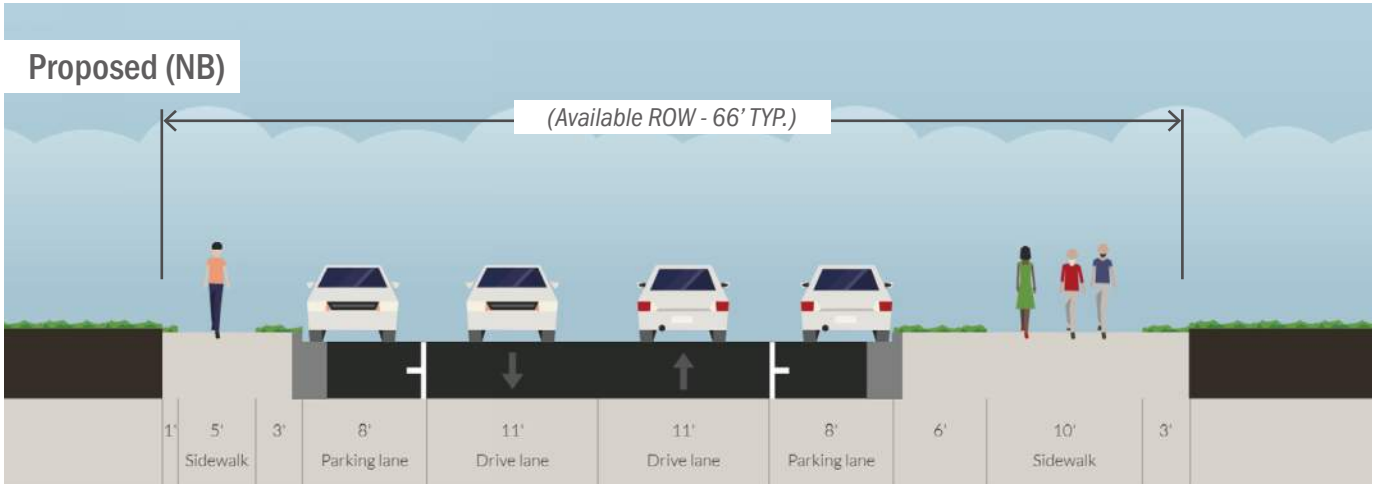
Revision: 12/07/18

Segment 1

Existing (NB)



Proposed (NB)



Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 02
Revision: 12/07/18

Project: Bass Lake Rd - Bottineau to Yates and Douglas Drive - 55th Ave to West Broadway
City: Crystal
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: Bottineau Blvd
- Route covers: Bass Lake Rd
- Route ends: Yates Ave N

Relation to other proposed projects

- Upcoming trail improvements at Becker Park
- Blue Line station just south of intersection with Bottineau Blvd

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along Bass Lake Rd

- Segment 1: See previous section
- Segment 2: Four lane, two way with center left turn lane, and median between Bottineau Blvd and Zane Ave
- Segment 3: Four lane, two way east of Zane Avenue

Project Description
Segments to be Considered

ID: 02
Revision: 12/07/18

General project location.


Intersection with Bottineau Blvd (EB)


View of Segment 2 (EB)


View of Segment 3 (EB)

Project Description
Description of Segments

ID: 02
Revision: 12/07/18

Categories	Segment 2	Segment 3
Description of typical roadway section	At Bottineau: Four lanes, two way, with additional right turn and center-left turn lanes, and median	Four lanes, two way
Number of through lanes (typ. config.)	4	4
AADT (typ.)	11,600	18,800 to 19,500
Speed limit (mph)	30	30
Roadway (curb-to-curb) width typ. (ft)	90	48
Available right-of-way typ. (ft)	115	66
Roadway jurisdiction	Hennepin County	Hennepin County
State Aid Facility?	Yes - CSAH 10	Yes - CSAH 10
Curb & gutter (urban) section?	Yes	Yes
Median present?	Yes	No
On-street parking present?	No	No
Shoulder present?	No	No
Width of shoulder or parking lane	N/A	N/A
Width of driving lane(s)	11.5	11.5
Center left turn lane?	Yes	No
Width of center turn lane	14, 11.5	N/A
Sidewalk or sidepath present?	8 ft sidewalk both sides	5 ft sidewalk on north, 8 ft sidewalk on south
Boulevard or buffer from roadway (typ)	Varied	3 ft on north, none south
Approximate length of segment (ft)	670 ft	340 ft
Transit service along project	721	721
Transit service across project	None	None

Categories	Segment 2	Segment 3
Segment interacts with the 90% plans?	No	No
Recommendation from 90% plans	N/A	N/A
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A	N/A
Do the recommendations conflict or preclude each other?	N/A	N/A

- Driving lanes must be at least 11' wide
- Parking lane minimum of 8'
- 2' gutters required (in addition to min. 11' lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2' clear zone to traffic and from edge of ROW
- 6' shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5' for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

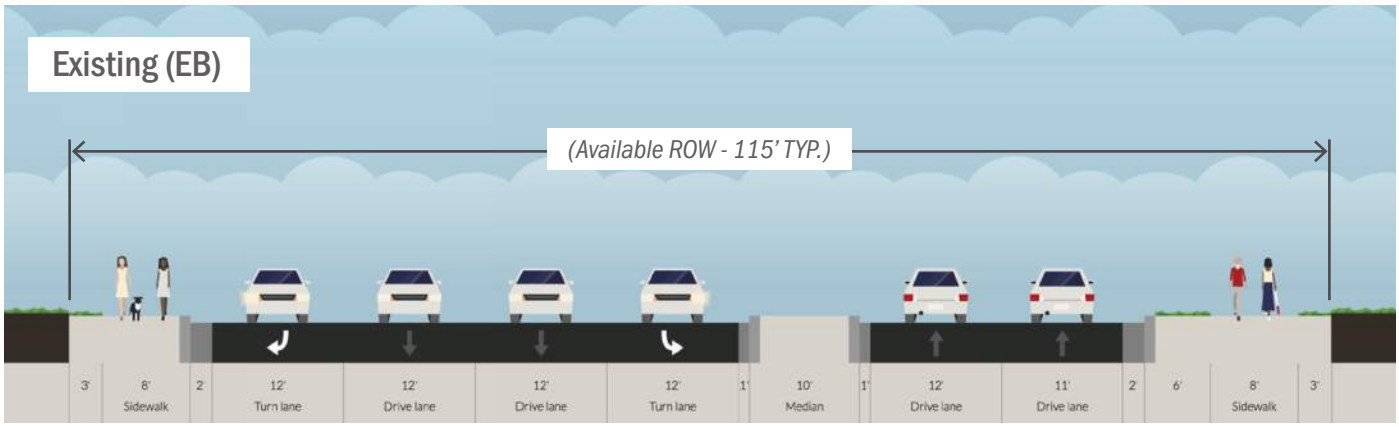
Concept Proposal

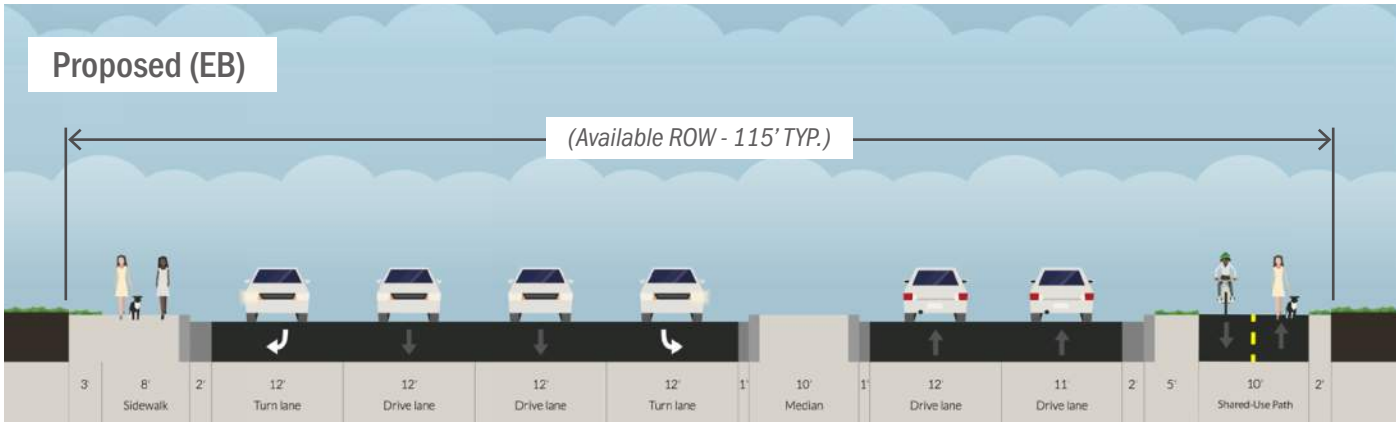
TYPE: Two-way Shared-use Path / Trail - single side (south)

ID: 02-F

Revision: 12/07/18

Segment 2





GENERAL DESCRIPTION

Improve Sidewalk and Single Two-way Shared-use Path / Trail

- Implement one two-way shared-use path / trail along the south side of Bass Lake Rd
- No change to existing roadway cross section width or roadway components

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts to stormwater by adding impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - None
- Any turn lane removal will require traffic analysis
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections

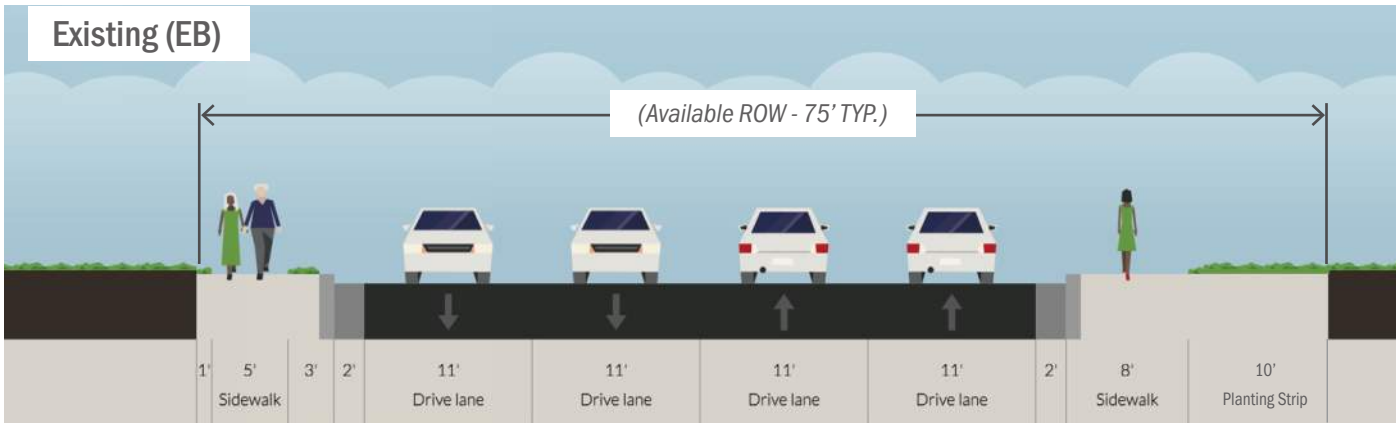
Concept Proposal

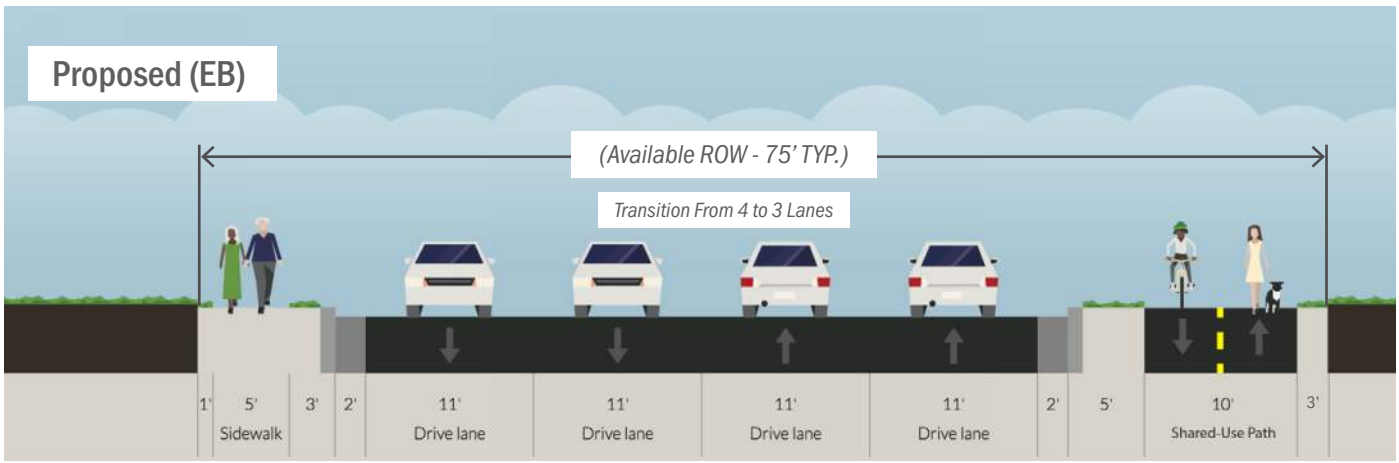
TYPE: Two-way Shared-Use Path / Trail - single side (south)

ID: 02-D

Revision: 12/07/18

Segment 3





GENERAL DESCRIPTION

Single Two-way Shared-use Path / Trail

- Implement one two-way shared-use path / trail along the south side of Bass Lake Rd
- No change to existing roadway cross-section width or roadway components
  - Maintains existing curb line
  - Given current traffic volumes, limited opportunity to implement a three lane conversion
- Requires 8' acquisition or easement beyond existing ROW
  - 8' trail width could reduce ROW impacts

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts to stormwater by adding impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - None
- Any turn lane removal will require traffic analysis
- Transition of SUP to the existing on-street bike lanes east of project limits will require limited restriping of Bass Lake Road to include a three lane section between Zane and Yates, and restriping to include bike lanes full length between Yates and Xenia.

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 05
Revision: 11/01/18

Project: 93rd Avenue North - Jefferson Highway to West Broadway
City: Brooklyn Park
Mode(s): Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: Jefferson Highway North / Central Avenue
- Route covers: 93rd Avenue North / 7th Street North
- Route ends: West Broadway Avenue

Relation to other proposed projects

- Blue Line station just south of West Broadway

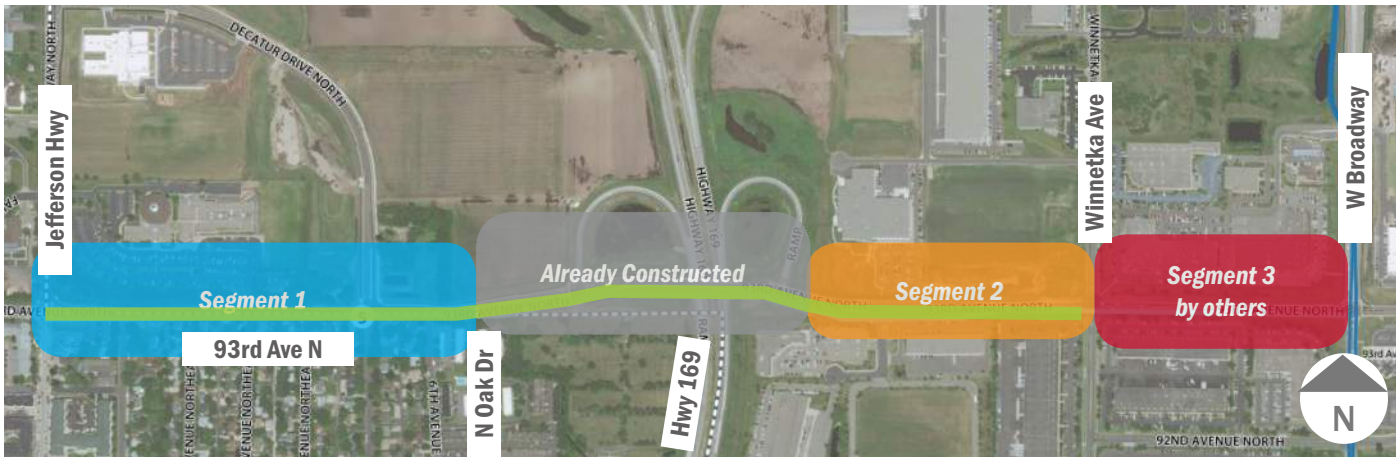
UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route

- Segment 1: Two lane section west of 6th Ave N, with occasional center left and right turn lanes
- Segment 2: Four lane section between Hwy 169 ramp and Winnetka Ave, including center left and right turn lanes.
- Segment 3: Two lane, two way, center left turn east of Winnetka Avenue

Project Description
Segments to be Considered

ID: 05
Revision: 11/01/18



General project location.

Project Description
Segments to be Considered - CONTINUED

ID: 05
Revision: 11/01/18

View of trail over Hwy 169 (EB)


View of Segment 3 (EB)

View of Segment 3 at West Broadway (EB)

Project Description
Description of Segments

ID: 05
Revision: 11/01/18

Categories	Segment 1	Segment 2	Segment 3
Description of typical roadway section	Two lane, two way (occasional center left and right turn lanes)	Four lane, two way (with center left and right turn lanes)	Two lane, two way (with center left turn lane)
Number of through lanes (typ. config.)	2	4	2
AADT (typ.)	no data available	7,600 to 8,600	7,600 to 5,800
Speed limit (mph)	35	40	40
Roadway (curb-to-curb) width typ. (ft)	22-50 (48 typ)	60-82	32
Available right-of-way typ. (ft)	66 ft	100	100
Roadway jurisdiction	Hennepin County	Hennepin County	Hennepin County
State Aid Facility?	Yes - CSAH 30	Yes - CSAH 30	Yes - CSAH 30
Curb & gutter (urban) section?	No	Yes	No
Median present?	No	Yes (8 - 12 ft)	Yes (painted, 8ft)
On-street parking present?	No	No	No
Shoulder present?	Yes	No	Yes (unpaved)
Width of shoulder or parking lane	2 - 5	N/A	2 - 7
Width of driving lane(s)	12	12	11
Center left turn lane?	Yes	Yes	Yes
Width of center turn lane	10.5	11	10
Sidewalk or sidepath present?	Shared use path on north side east of DeCature Drive	8 ft sidepath on north and south (west of 169) - 12 ft sidewalk north and south on bridge over 169 - 8 ft sidepath on south (east of 169)	None
Boulevard or buffer from roadway (typ)	N/A	5.5 ft on north, 7 ft on south (west of 169) - none (east of 169)	N/A
Approximate length of segment (ft)	1,930 ft	2880 ft	1,310 ft
Transit service along project	None	None	724

Project Description
Description of Segments - CONTINUED

ID: 05
Revision: 11/01/18

Categories	Segment 1	Segment 2	Segment 3
Transit service across project	782	None	None
Segment interacts with the 90% plans?	No	No	Yes: Wyoming Ave N to W Broadway Ave
Recommendation from 90% plans	N/A	N/A	Trail on north and south side of 93rd of W Broadway Ave. Two lane, two way traffic on road, w/ a landscape median, and left and right turn lanes at intersections.
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A	N/A	Shared-use path on one or both sides of road
Do the recommendations conflict or preclude each other?	N/A	N/A	No

Project 05 Segment 3 is being designed as a four-lane divided roadway with trails on both sides as part of LRT station plans.

- Driving lanes must be at least 11' wide
- Parking lane minimum of 8'
- 2' gutters required (in addition to min. 11' lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2' clear zone to traffic and from edge of ROW
- 6' shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5' for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

Concept Proposal

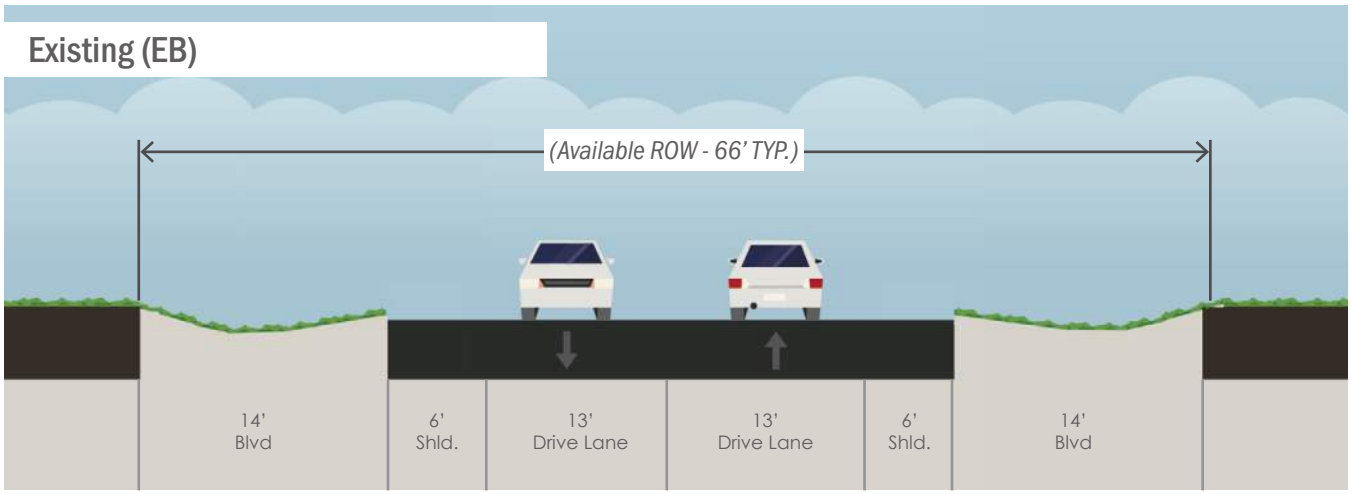
TYPE: Two-way Separated / Protected Bicycle Lane - single side (south)

ID: 05-A

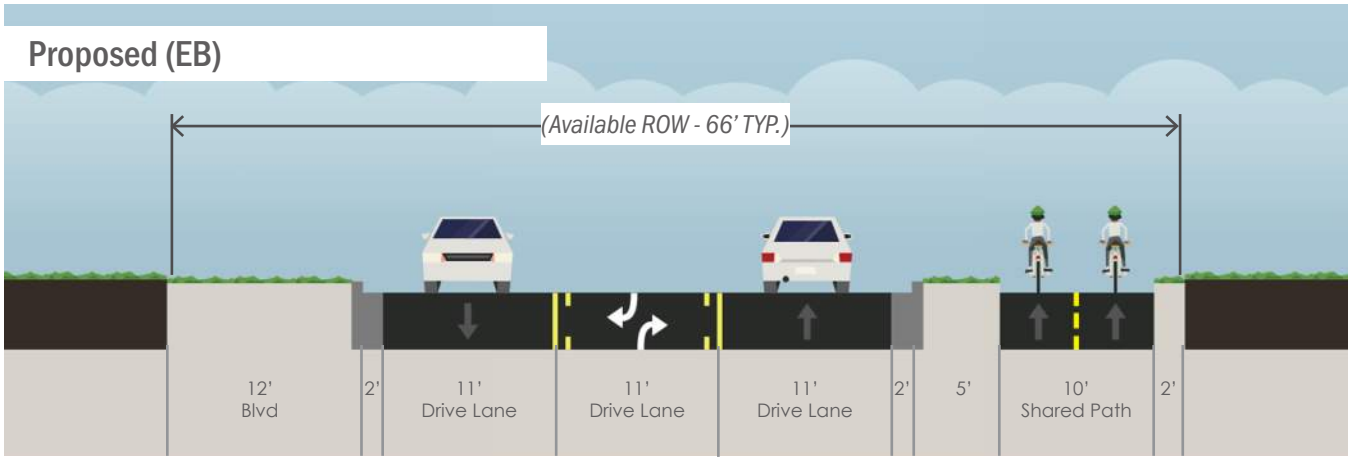
Revision: 11/01/18

Segment 1

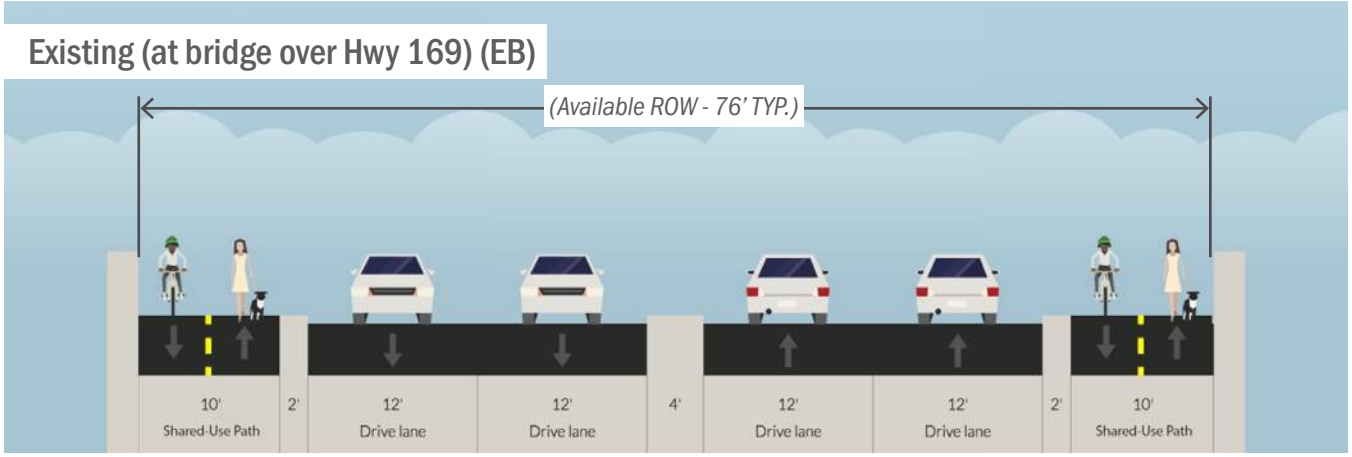
Existing (EB)



Proposed (EB)



Existing (at bridge over Hwy 169) (EB)



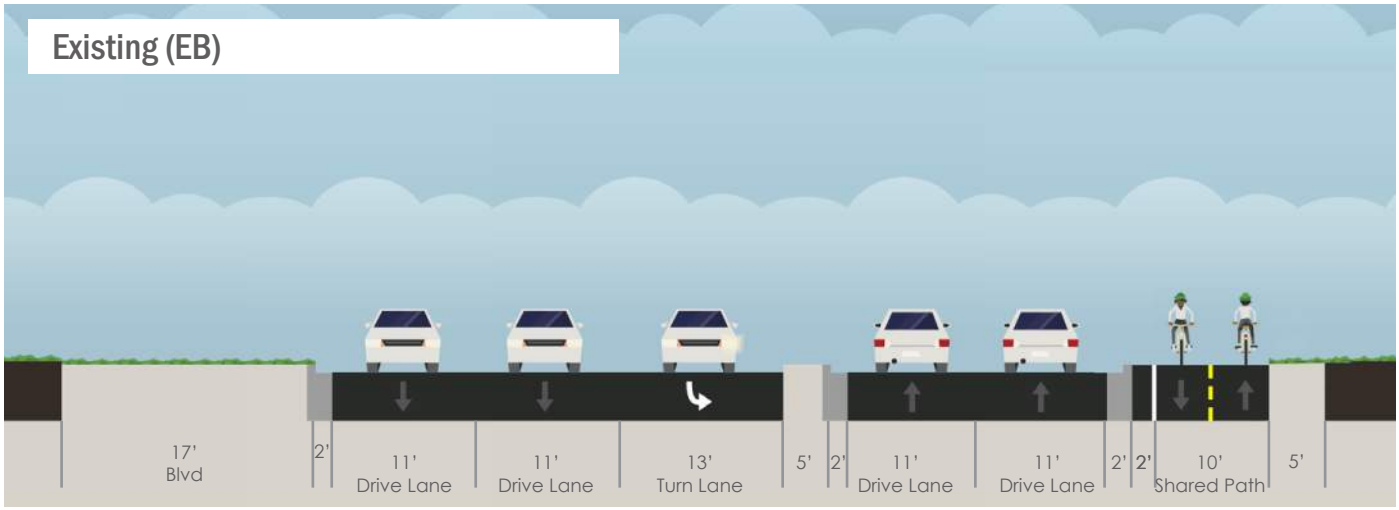
Concept Proposal

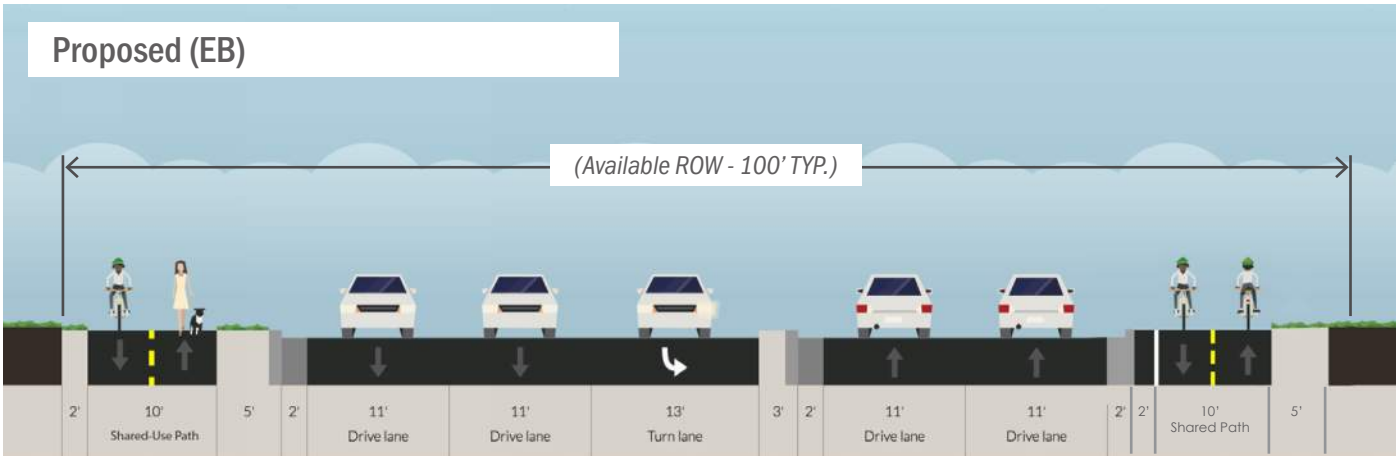
TYPE: Two-way Shared-Use Path / Trail - both sides

ID: 05-D

Revision: 11/01/18

Segment 2





GENERAL DESCRIPTION

Two-way Shared-use Paths / Trails

- Implement two-way shared-use path / trails along north side of the roadway
  - Trails and accommodation are already provided on both sides of west approaches and bridge over Hwy 169

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter between 1st Ave and N. Oak (south side)
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - Potential change to turning radii at intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Potential wetland impacts between 6th Ave and N. Oak on south side

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 06
Revision: 12/06/18

Project: 41st Ave N and Hubbard Avenue
City: Robbinsdale
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location and traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: 41st Avenue N, 1/2 block W of Hubbard Avenue N
- Route covers: Hubbard Avenue N
- Route ends: 36th Avenue N and France Avenue N

Relation to other proposed projects

- Connects to Project ID 17
- Blue Line station nearby, south of 42nd Ave N

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration are generally constant along the route

- Two lane, two way street on 41st Ave
- Two lane, two way residential street on Hubbard
- Plaza/open space between Hubbard Ave and 36th Ave/France Ave Intersection

Project Description
Segments to be Considered

ID: 06
Revision: 12/06/18

General project location.

Project Description
Description of Segments

ID: 06
Revision: 12/06/18

Categories	Segment 1	Segment 2
Description of typical roadway section	Two lane, two way	Two lane, two way
Number of through lanes (typ. config.)	2	2
AADT (typ.)	2,200	740 to 780
Speed limit (mph)	30	30
Roadway (curb-to-curb) width typ. (ft)	44	32
Available right-of-way typ. (ft)	66	60
Roadway jurisdiction	Robbinsdale	Robbinsdale
State Aid Facility?	Unknown	Yes - MSAS
Curb & gutter (urban) section?	Yes	Yes
Median present?	No	No
On-street parking present?	Yes, both sides	Yes, both sides
Shoulder present?	No	No
Width of shoulder or parking lane	10	6 (not marked)
Width of driving lane(s)	12	10 (not marked)
Center left turn lane?	No	No
Width of center turn lane	N/A	N/A
Sidewalk or sidepath present?	Sidewalk located North and South at back of curb	Sidewalk on east and west (north of 38th Ave N) - Sidewalk on east (south of 38th Ave N)
Boulevard or buffer from roadway (typ)	None	6 ft
Approximate length of segment (ft)	150 ft	4,000 ft
Transit service along project	Unknown	None
Transit service across project	N/A	14, 32
Segment interacts with the 90% plans?	Yes	No

Project Description
Description of Segments - CONTINUED

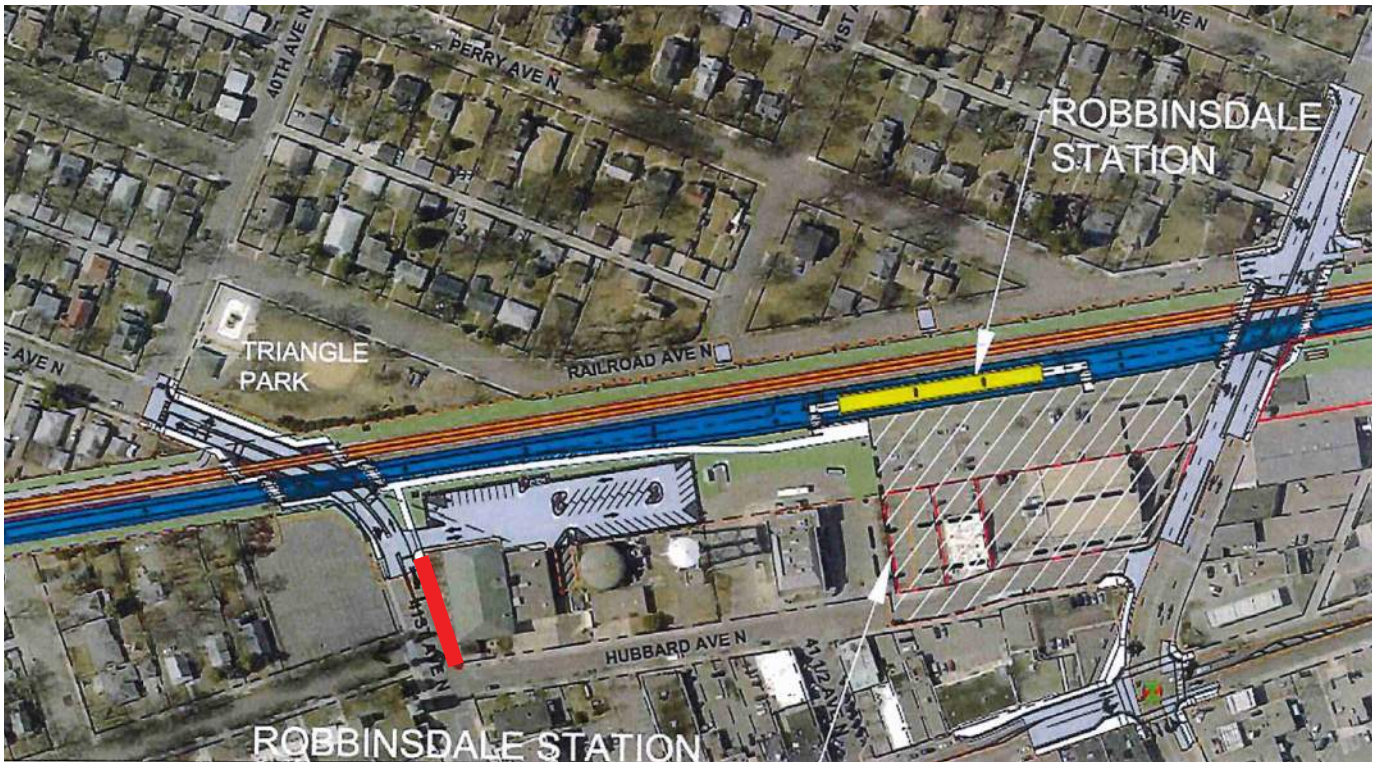
ID: 06
Revision: 12/06/18

Categories	Segment 1	Segment 2
Recommendation from 90% plans	Shared use path on north side of 41st from LRT corridor to parking lot driveway	N/A
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	Shared use path connection from Hubbard to planned shared use path	N/A
Do the recommendations conflict or preclude each other?	No	No

- Driving lanes must be at least 11' wide
- Parking lane minimum of 8'
- 2' gutters required (in addition to min. 11' lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2' clear zone to traffic and from edge of ROW
- 6' shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5' for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

Project Description
General Guidelines and Standards

ID: 06
Revision: 12/06/18
Segment 1

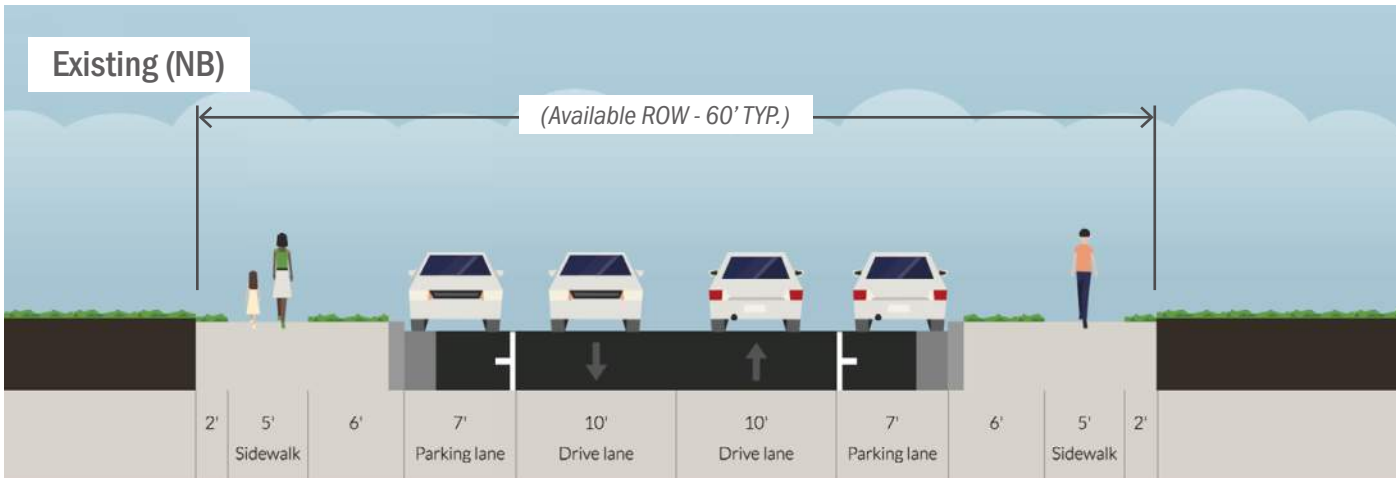


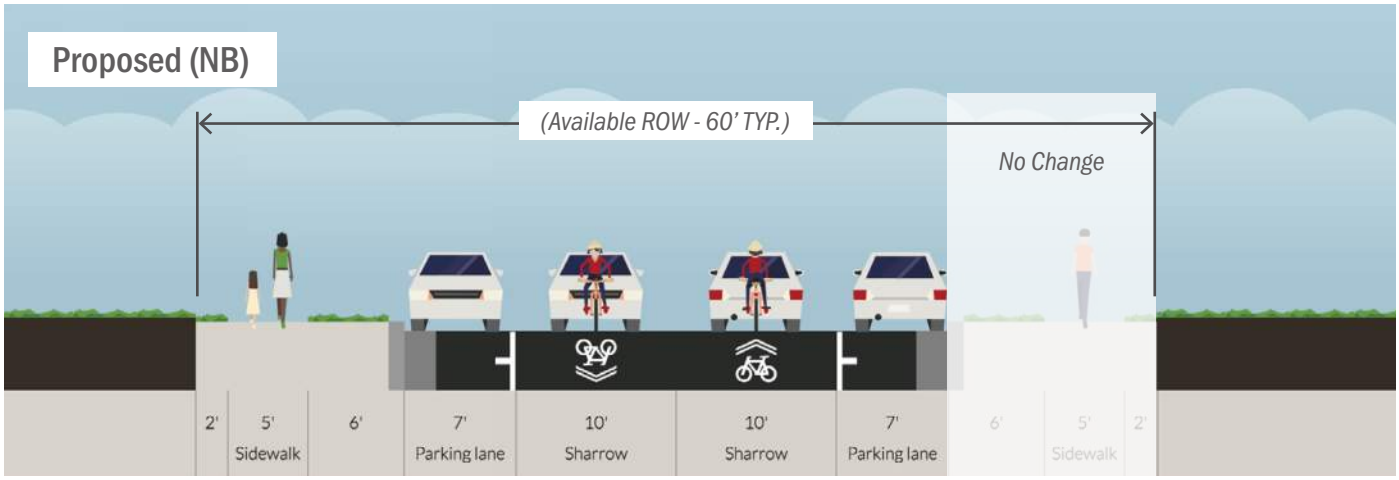
Reconstruct sidewalk into Shared-use path (impacts existing curb & gutter and slighty narrows 41st Ave width)

Concept Proposal
TYPE: Neighborhood Slow Street

ID: 06-B
Revision: 12/06/18

Segment 2





GENERAL DESCRIPTION

Neighborhood Slow Street

- Implement Neighborhood Slow Street (traffic-calmed street)
  - Suitable solution given low volumes of traffic (significantly below 3,000 ADT threshold)
- Introduce traffic calming elements to calm traffic speeds to 25 mph or less:
  - Reorient stop signs to stop cross street / perpendicular traffic
  - Add traffic-calming elements, including traffic circles, bump-outs (curb extensions), medians, diverters or speed tables
  - Add wayfinding markers and route signs
  - Add pavement markings, including oversize sharrow or bike boulevard markings
- Develop sidewalk segments where not currently existing (west side south of 38th Ave N)
- Shared us path between Hubbard Avenue and intersectin of 36th Ave N and France Ave N Avenue North

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - Possibly 41st Ave
- Impacts to existing stormwater infrastructure / gutter
  - Possible on 41st Ave new trail
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - Possibly at intersection of 36th Ave and France Ave

Concept Proposal
TYPE: Neighborhood Slow Street

ID: 06
Revision: 12/06/18

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 08
Revision: 11/19/18

Project: 63rd Avenue - from West Broadway, Forest Ave to Zane Ave
City: Brooklyn Park
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Segment 1 starts: Boone Avenue
- Segment 1 ends: W. Broadway
- Segment 2 starts: Forest Ave
- Segment 2 ends: Zane Ave

Relation to other proposed projects

- Connects to Project IDs 04, 20, 12, and 16
- Blue Line station just north of intersection with Bottineau Blvd

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route

- Segment 1: Two lane, two way road
- Segment 2: Two lane, two way road with center left turn lane

Project Description
Segments to be Considered

ID: 08
Revision: 11/19/18

General project location.

Project Description
Description of Segments

ID: 08
Revision: 11/19/18

Categories	Segment 1	Segment 2
Description of typical roadway section	Two lane, two way	Two lane, two way with center left turn lane
Number of through lanes (typ. config.)	2	2
AADT (typ.)	6,900	7,200 to 12,100
Speed limit (mph)	30	30
Roadway (curb-to-curb) width typ. (ft)	30	50
Available right-of-way typ. (ft)	66	70
Roadway jurisdiction	Brooklyn Park	Brooklyn Park
State Aid Facility?	Yes - MSAS	Yes - MSAS
Curb & gutter (urban) section?	Yes	Yes
Median present?	Yes (painted)	No
On-street parking present?	No	No
Shoulder present?	No	No
Width of shoulder or parking lane	N/A	N/A
Width of driving lane(s)	13	11
Center left turn lane?	Some	Yes
Width of center turn lane	N/A	12
Sidewalk or sidepath present?	5 ft widewalk on north and south	5 ft sidewalk on north only (east of Forest Ave N)
Boulevard or buffer from roadway (typ)	10 ft on north, 12 ft on south (east of Yukon Ave)	6 ft (east of Forest Ave N)
Approximate length of segment (ft)	3,940 ft	2,420 ft
Transit service along project	716, 767	716, 767
Transit service across project	705, 721, 764, 767	724, 760
Segment interacts with the 90% plans?	Yes: at corner of Louisiana Ave N and 63rd Ave N	Yes: at Louisiana Ave N to Lakeland Ave N

Project Description
Description of Segments - CONTINUED

ID: 08
Revision: 11/19/18

Categories	Segment 1	Segment 2
Recommendation from 90% plans	Redesign sidewalk corners at intersection to provide direct crossing from north to south side of 63rd Ave N, as well as east to west on Louisiana Ave N	East of Bottineau Blvd: Sidewalk on north and south side of 63rd Ave N. One lane, two way traffic on road, w/ a median, as well as two left turn lanes and one right turn lane via east from Louisiana Ave N to Bottineau/63rd intersection. A right and left turn lane via west from Bottineau/63rd intersection to Louisiana Ave N. West of Bottineau Blvd: Remains the same.
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	Shared-use path on on one side (north) or on both sides both sides of 63rd Ave N	Shared-use path on both sides of 63rd Ave N
Do the recommendations conflict or preclude each other?	No	No

- Driving lanes must be at least 11' wide
- Parking lane minimum of 8'
- 2' gutters required (in addition to min. 11' lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2' clear zone to traffic and from edge of ROW
- 6' shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5' for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

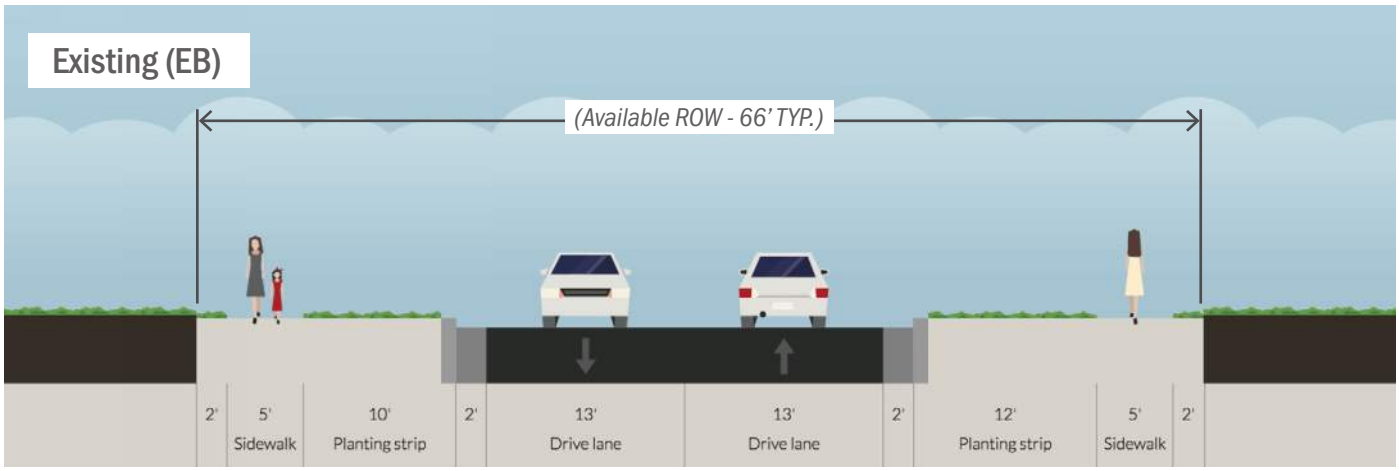
Concept Proposal

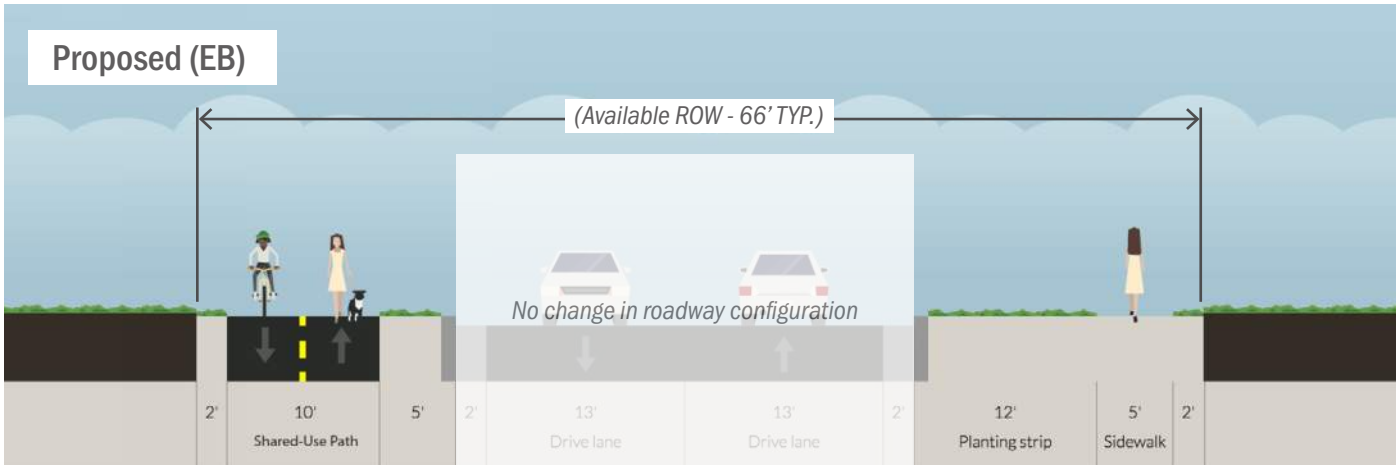
TYPE: Two-way Shared-Use Path / Trail - single side (north)

ID: 08-A

Revision: 11/19/18

Segment 1





GENERAL DESCRIPTION

Single Two-way Shared-use Path / Trail

- Implement one two-way shared-use path / trail along the north side of 63rd Avenue
  - Place on north side to facilitate connection with Blue Line station
- No change to existing roadway cross-section width or roadway components

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 5' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
  - Space constrictions at West Broadway to accommodate turn lanes

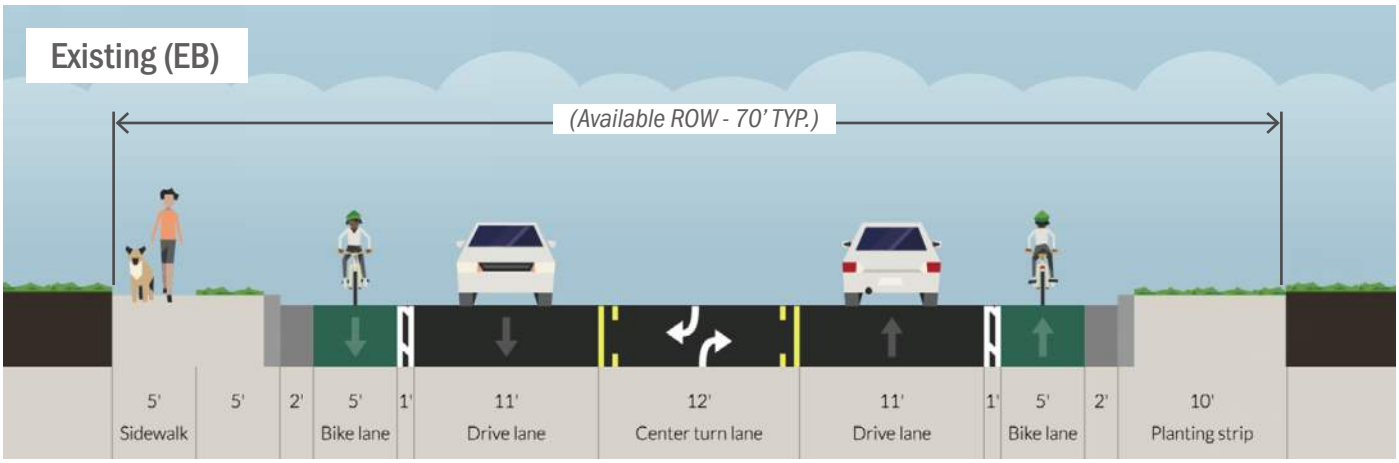
Concept Proposal

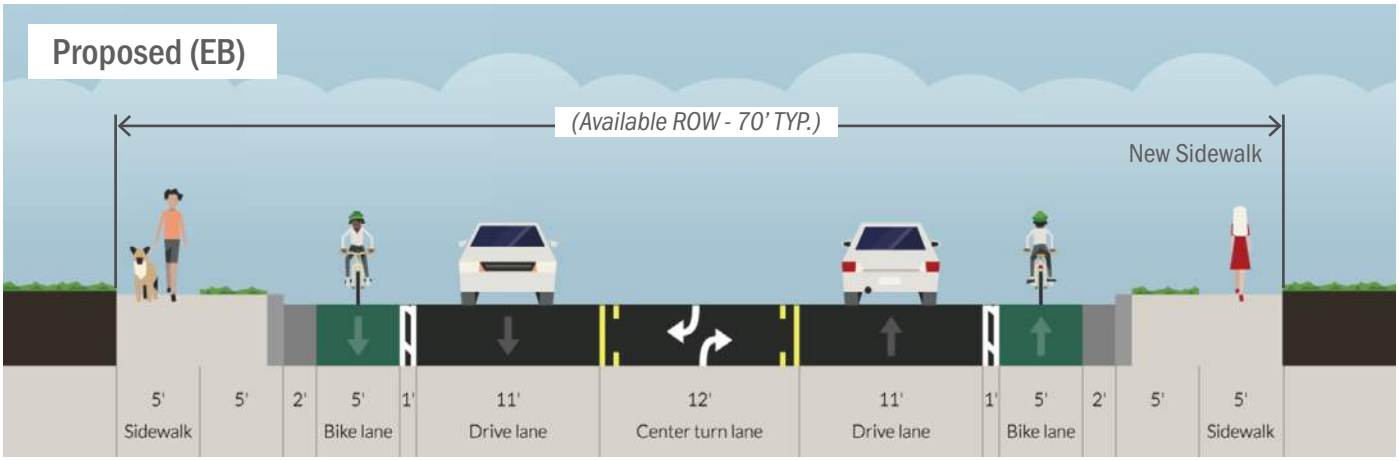
TYPE: Sidewalk- single side (south)

ID: 08-F

Revision: 11/19/18

Segment 2





GENERAL DESCRIPTION

Sidewalk

- Implement sidewalk along south side of roadway.

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 5' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - None
- Impacts at intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 12
Revision: 11/19/18

Project: Hampshire Avenue North and 66th Avenue N
City: Brooklyn Park
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location, traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: 63rd Avenue North
- Route covers: Hampshire Ave N, 66th Ave N
- Route ends: Lakeland Park

Relation to other proposed projects

- Connects to Project ID 08
- Blue Line station at Bottineau Blvd

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration are generally constant along the route

- Segment 1: Two way residential street

Project Description
Segments to be Considered

ID: 12
Revision: 11/19/18

General project location.

Project Description
Description of Segments

ID: 12
Revision: 11/19/18

Categories	Segment 1
Description of typical roadway section	Two way, two lanes
Number of through lanes (typ. config.)	2
AADT (typ.)	No data available
Speed limit (mph)	30
Roadway (curb-to-curb) width typ. (ft)	30 on Hampshire, 28 at 66th
Available right-of-way typ. (ft)	66 on Hampshire, 60 on 66th Ave N
Roadway jurisdiction	Brooklyn Park
State Aid Facility?	No
Curb & gutter (urban) section?	Yes
Median present?	No
On-street parking present?	Yes
Shoulder present?	No
Width of shoulder or parking lane	N/A
Width of driving lane(s)	14 ft
Center left turn lane?	No
Width of center turn lane	N/A
Sidewalk or sidepath present?	None
Boulevard or buffer from roadway (typ)	N/A
Approximate length of segment (ft)	2,910 ft
Transit service along project	716
Transit service across project	767
Segment interacts with the 90% plans?	No

Project Description
Description of Segments - CONTINUED

ID: 12
Revision: 11/19/18

Categories	Segment 1
Recommendation from 90% plans	N/A
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A
Do the recommendations conflict or preclude each other?	N/A

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

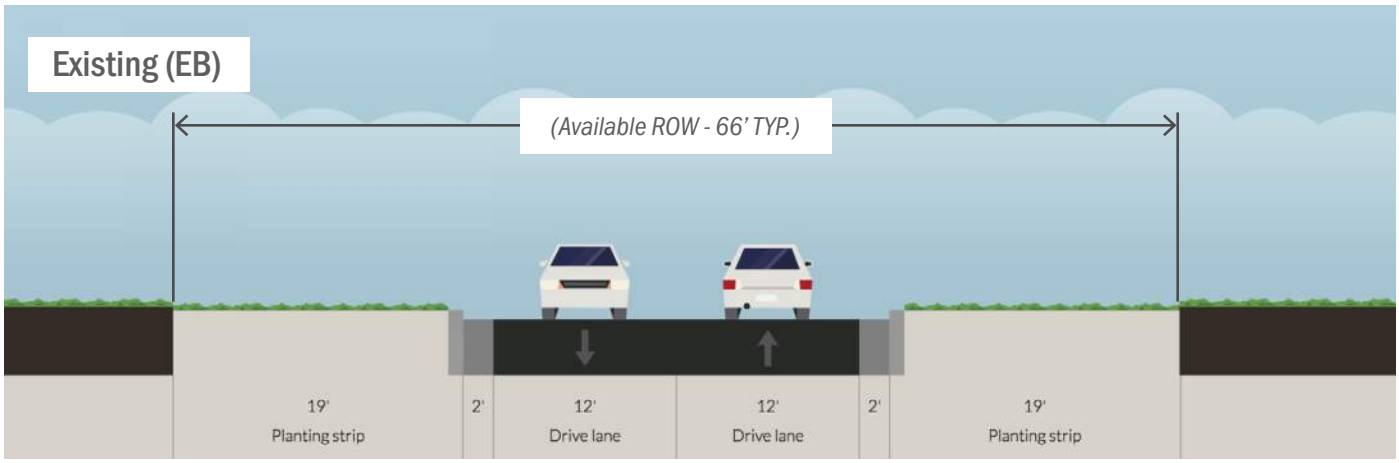
Concept Proposal

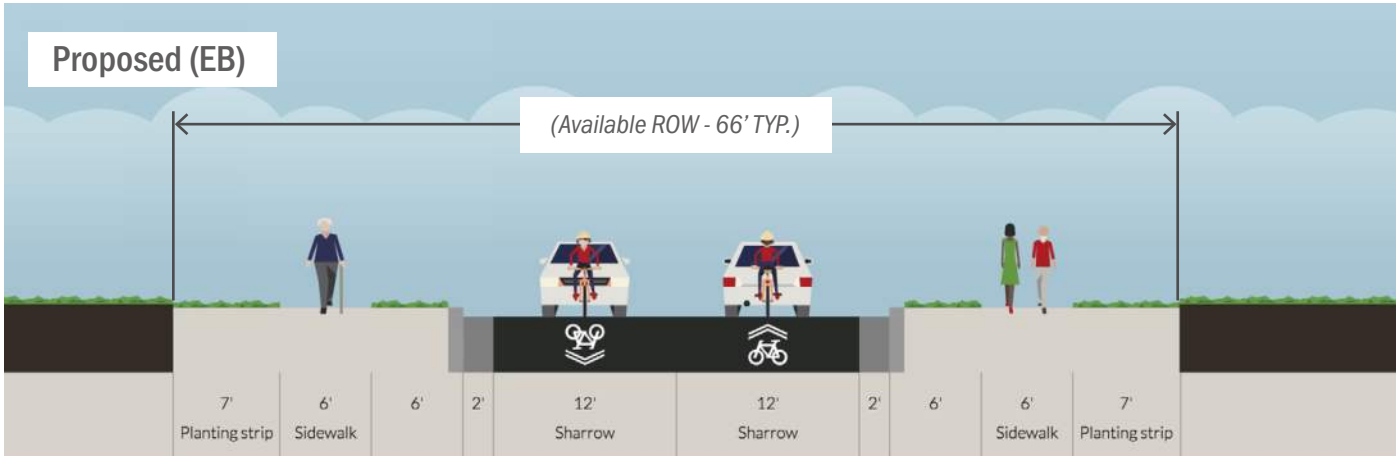
TYPE: Sidewalks and Neighborhood Slow Street

ID: 12-A

Revision: 11/19/18

Segment 1





GENERAL DESCRIPTION

Sidewalks and Neighborhood Slow Street

- Develop sidewalks along both sides of street
- Implement Neighborhood Slow Street (traffic-calmed street, also known as Bicycle Boulevard)
  - Include traffic calming elements, typically in and near inter-sections, including traffic circles, bump-outs or medians, way-finding markers, route signs, and bicycle boulevard markings
- Maintains existing roadway cross-section width and roadway components
  - Maintain existing curb line and on-street parking

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at intersections
  - ADA compliant pedestrian ramps

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 13
Revision: 11/19/18

Project: Bassett Creek Trail - Duluth Street and Golden Valley Road to Xerxes Avenue North
City: Golden Valley
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: Douglas Drive
- Route covers: Duluth Street and Golden Valley Road
- Route ends: Xerxes Avenue

Relation to other proposed projects

- Blue Line station near Theodore Wirth Parkway

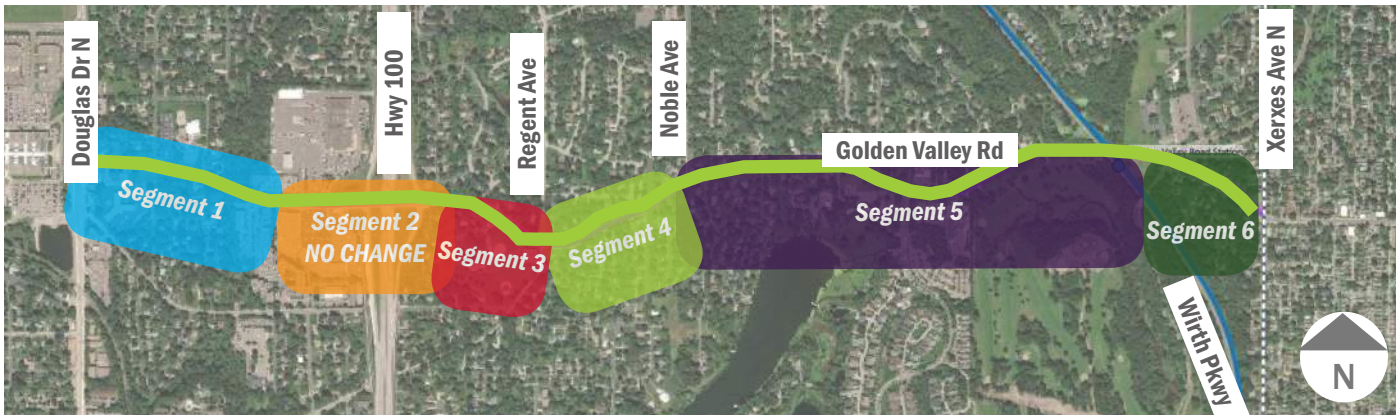
UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route

- Segment 1: Four lane, two way road west of Lilac Drive
- Segment 2: Four lane, two way road and interchange with Hwy 100 between Lilac Dr and Toledo Ave
- Segment 3: Four lane, two way road between Toledo Ave and Regent Ave
- Segment 4: Four lane, two way road between Regent Ave and Noble Ave
- Segment 5: Two lane, two way road between Noble Ave and Theodore Wirth Parkway
- Segment 6: Two lane, two way road

Project Description
Segments to be Considered

ID: 13
Revision: 11/19/18



Segments considered and general project location.

Project Description
Segments to be Considered

ID: 13
Revision: 11/19/18

Project Description
Segments to be Considered

ID: 13
Revision: 11/19/18

Project Description
Description of Segments

ID: 13
Revision: 11/19/18

Categories	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6
Description of typical roadway section	Four lane, two way	Four lane, two way	Four lane, two way	Four lane, two way	Two lane, two way	Two lane, two way
Number of through lanes (typ. config.)	4	4	4	4	2	2
AADT (typ.)	15,000	17,200	17,200	No data available	9,800	No Data
Speed limit (mph)	35	35	35	35	35	Unknown
Roadway (curb-to-curb) width typ. (ft)	65	78 -104	48	48	34	40
Available right-of-way typ. (ft)	66-120	85+	66	66	66	66
Roadway jurisdiction	Hennepin County	Hennepin County	Hennepin County	Hennepin County	Hennepin County	Hennepin County
State Aid Facility?	Yes - CSAH 66	Yes - CSAH 66	Yes - CSAH 66	Yes - CSAH 66	Yes - CSAH 66	Yes - CSAH 66
Curb & gutter (urban) section?	Yes	Yes	Yes	Yes	Yes	Partial
Median present?	Select locations, physical	Yes, physical	None	Select locations, painted	Select locations, painted	None
On-street parking present?	No	No	No	No	No	No
Shoulder present?	No	No	No	No	6 ft bike lane on shoulder	6 ft bike lane on shoulder
Width of shoulder or parking lane	N/A	N/A	N/A	N/A	6 ft	8’
Width of driving lane(s)	12	12	12	11.5	12	12’
Center left turn lane?	No	No	No	No	No	No
Width of center turn lane	N/A	N/A	N/A	N/A	N/A	N/A
Sidewalk or sidepath present?	7 ft sidewalk on north and south	10 ft sidepath on north - 7 ft sidewalk on south, 10 ft sidepath on south (under bridge only)	7 ft sidewalk on south, 10ft sidepath on north (non-conforming condition near pedestrian bridge at Regent Ave N)	6 ft sidewalk on south	5 ft sidewalk north and south (west of Wirth Pkwy)	8 ft sidewalk south only
Boulevard or buffer from roadway (typ)	5 ft grass buffer on both sides (at and west of Brunswick Ave N) - none (east of Brunswick Ave N)	None	None, except near pedestrian bridge at Regent Ave N (varied dimensions)	None	5 ft pavement buffer both sides (west of Wirth Pkwy)	None

Project Description
Description of Segments - CONTINUED

ID: 13
Revision: 11/19/18

Categories	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6
Approximate length of segment (ft)	2,000 ft	1,600 ft	776 ft	1,490 ft	4590 ft	930 ft
Transit service along project	14, 758	14, 758	14, 758	14 and 758	14	14
Transit service across project	705	None	None	None	None	30
Segment interacts with the 90% plans?	No	No	No	No	Yes: Bonnie Lane to Zephyr Place	Yes: Bonnie Lane to Zephyr Place
Recommendation from 90% plans	N/A	N/A	N/A	N/A	Trail on south side of GV road between Bonnie Lane and Station. Two lane, two way traffic on road, w/ center left turn lane at intersections.	On street bike lanes east of Theodore Wirth Pkwy
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A	N/A	N/A	N/A	Separated / protected bike lane on both sides of street and trail on single side	On street bike lanes
Do the recommendations conflict or preclude each other?	No	No	No	No	No	No

- Driving lanes must be at least 11' wide
- Parking lane minimum of 8'
- 2' gutters required (in addition to min. 11' lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2' clear zone to traffic and from edge of ROW
- 6' shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5' for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

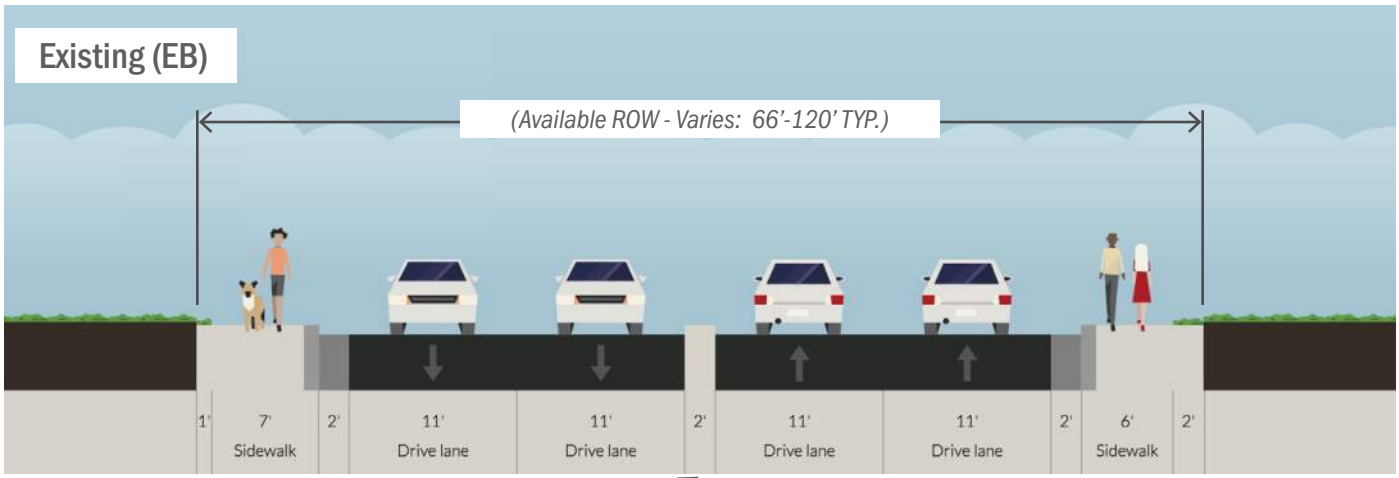
Concept Proposal

TYPE: Shared-Use Path / Trail - one side

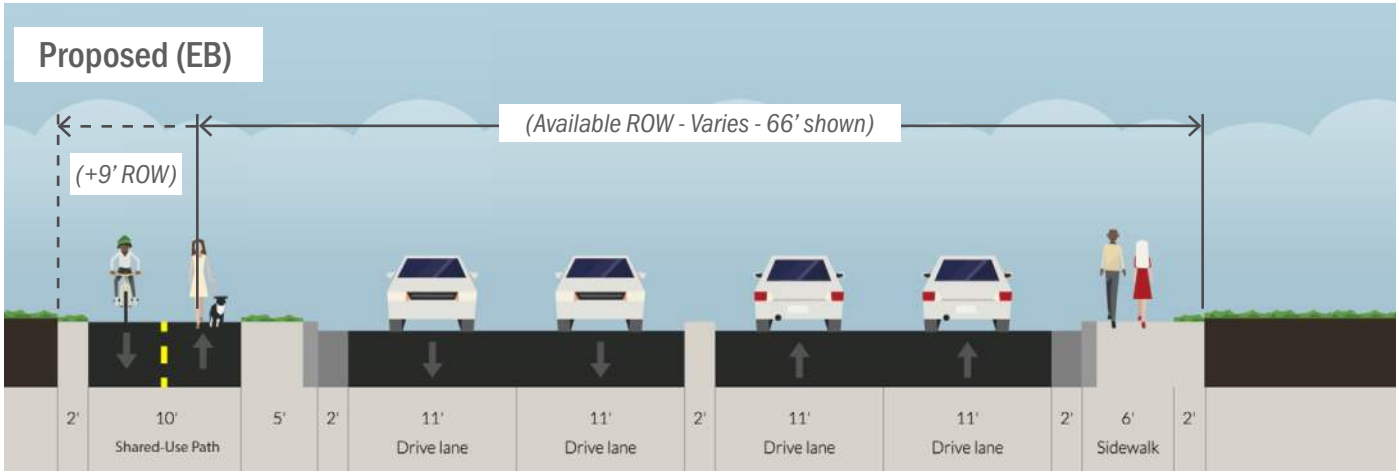
ID: 13-K

Revision: 11/19/18

Segment 1



Varies with turn lanes



Varies with turn lanes

GENERAL DESCRIPTION

Two-way Shared-use Path / Trail

- Implement a two-way shared-use path/trail along north side of the roadway
  - Provide sidewalk along south side of roadway
- Maintains existing roadway cross-section width, components, and curb line.
- Requires up to 9 ft acquisition or easement beyond existing ROW for select parcels

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Potential impacts due to additional impervious surface.
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Requires extension of Bassett Creek culvert

Concept Proposal

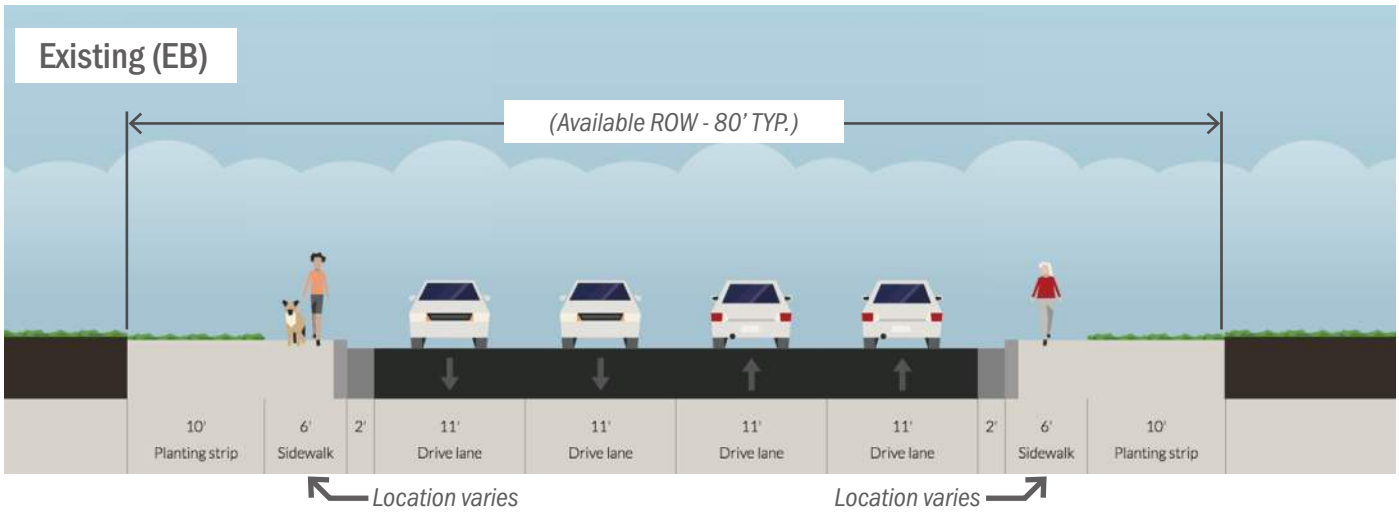
TYPE: Two-way Shared-Use Path / Trail - single side

ID: 13-J

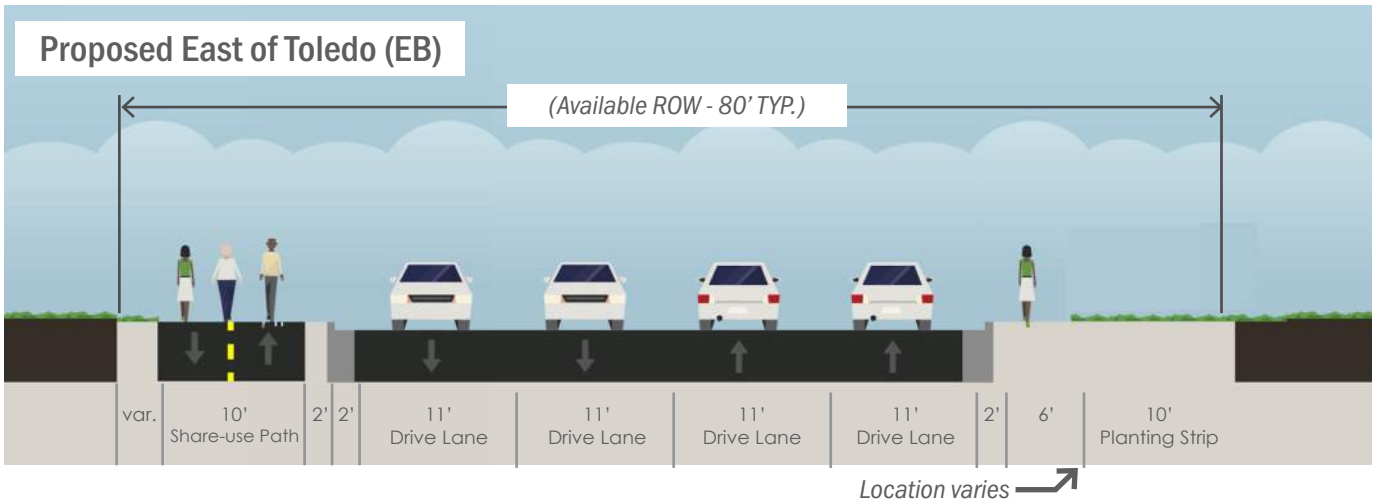
Revision: 11/19/18

Segment 3

Existing (EB)



Proposed East of Toledo (EB)



GENERAL DESCRIPTION

Two-way Shared-use Path / Trail

- Implement a two-way shared-use path/trail along north side of the roadway
  - West of Toledo, trail located at back of curb. No additional ROW required
- Maintains existing roadway cross-section width, components, and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Potential impacts due to additional impervious surface
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

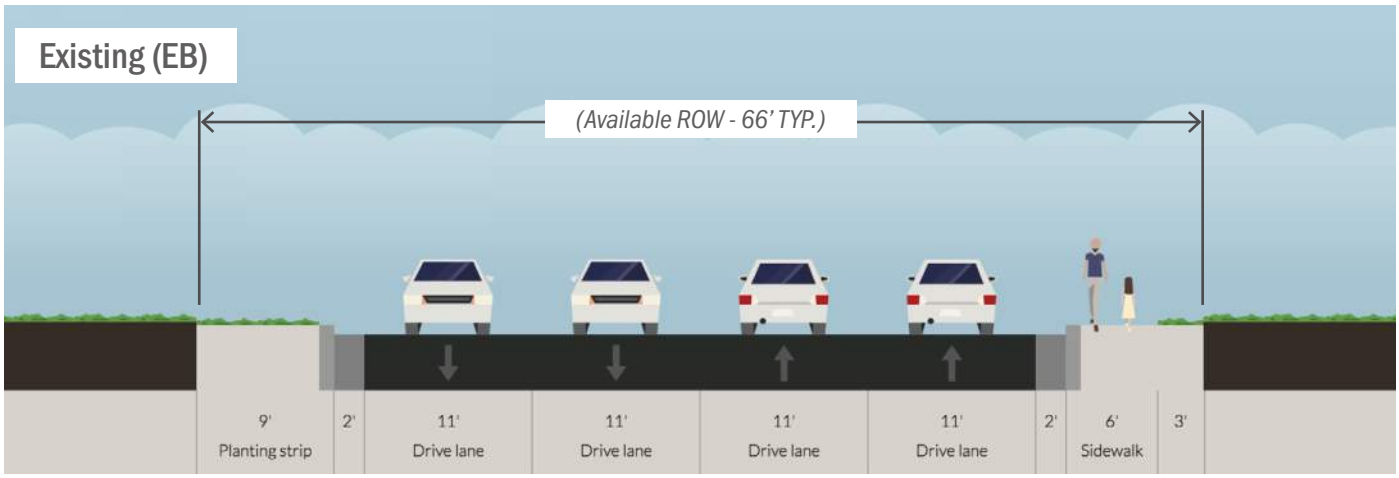
Concept Proposal

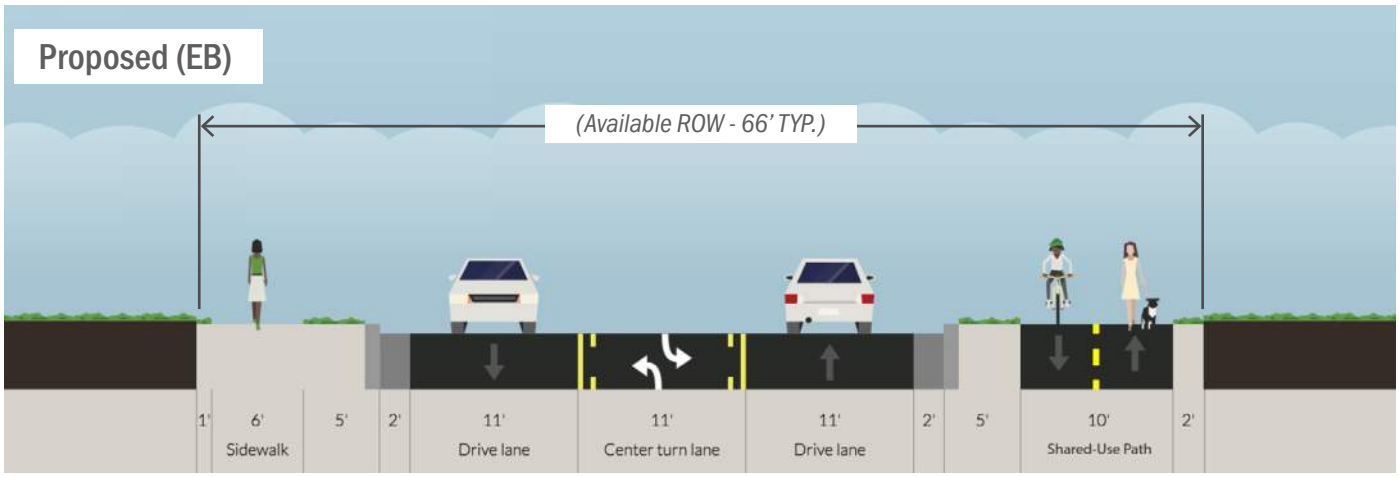
TYPE: Three Lane Conversion and Two-way Shared-Use Path / Trail - one side

ID: 13-G

Revision: 11/19/18

Segment 4





GENERAL DESCRIPTION

Three Lane Conversion and Two-way Shared-Use Path / Trail

- Implement a three lane conversion ("Road Diet") for roadway along Segment 4
  - Follow Bassett Creek Reginal Trail Feasibility Study alignment
- Implement a two-way shared-use path / trail along south side of the roadway
- Requires reconstruction and modification to existing roadway cross-section width, roadway components, and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / gutter
  - Potential impacts due to additional impervious surface
- Impacts to existing transit
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
  - Potential bike / walk signal at intersection
- Impacts on travel lanes
  - Reduction of one traffic lane each way, will require traffic analysis

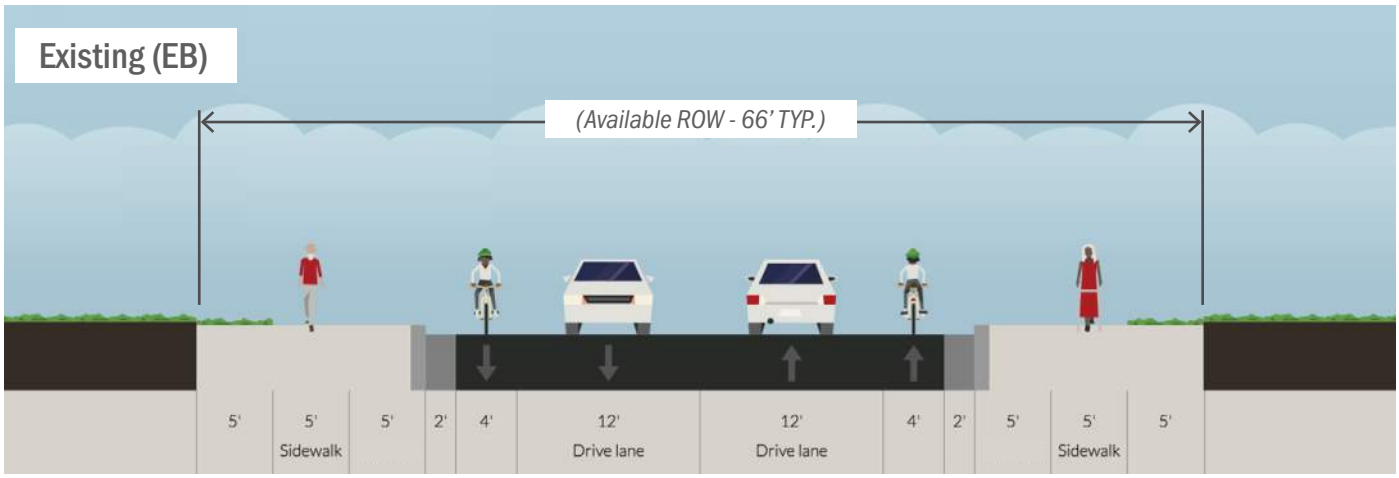
Concept Proposal

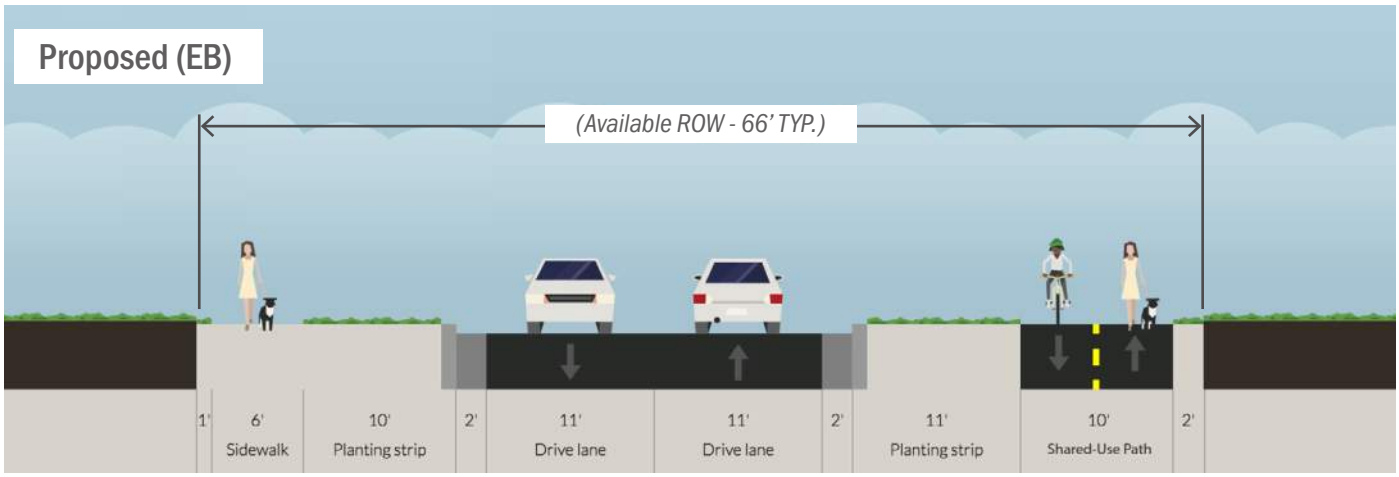
TYPE: Two-way Shared-Use Path / Trail - single side

ID: 13-I

Revision: 11/19/18

Segment 5





GENERAL DESCRIPTION

Two-way Shared-use Path / Trail

- Implement a two-way shared-use path / trail on south side of Segment 5
  - Follow Bassett Creek Reginal Trail Feasibility Study alignment (Noble Avenue to Blue Line Extension Project)
- Requires reconstruction and modification to existing roadway cross-section width, roadway components, and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections

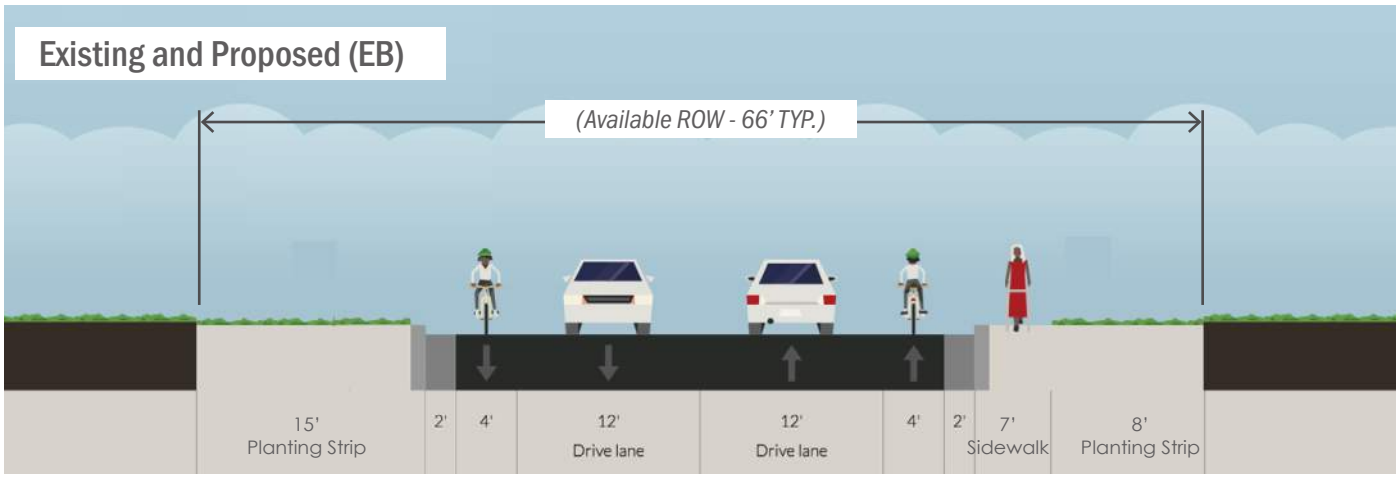
Concept Proposal

TYPE: Two-way Shared-Use Path / Trail - single side

ID: 13-I

Revision: 11/19/18

Segment 6



GENERAL DESCRIPTION

On street bike lanes

- Implement on street bike lanes
  - Match bike lanes in blue line ext plans

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - None
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections

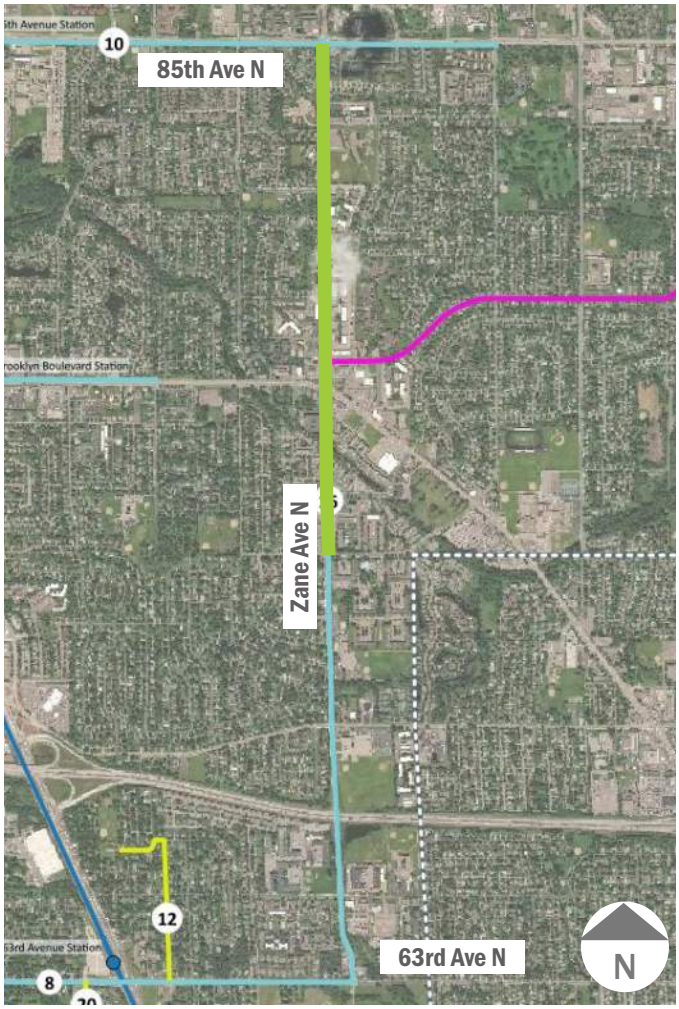
Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

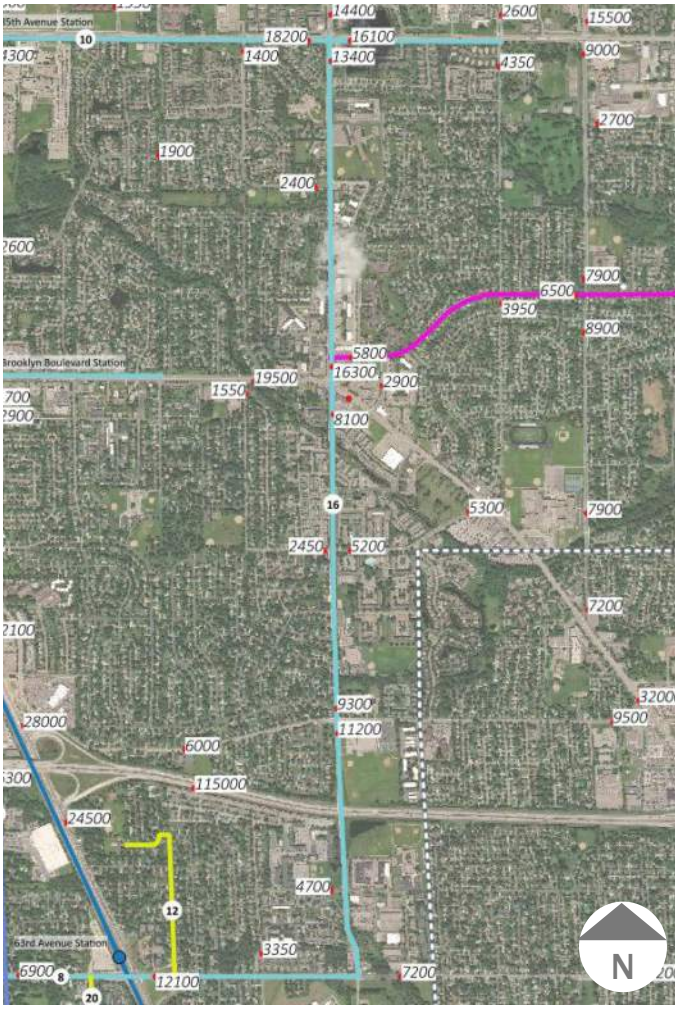
ID: 16
Revision: 11/19/18

Project: Zane Avenue - 73rd Avenue to 85th Avenue
City: Brooklyn Park
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT



General project location.



Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: 73rd Avenue N, in Brooklyn Park
- Route covers: Zane Avenue North
- Route ends: 85th Avenue North

Relation to other proposed projects

- Connects to Project IDs 10, and 14

UNIFORMITY / VARIABILITY ALONG ROUTE

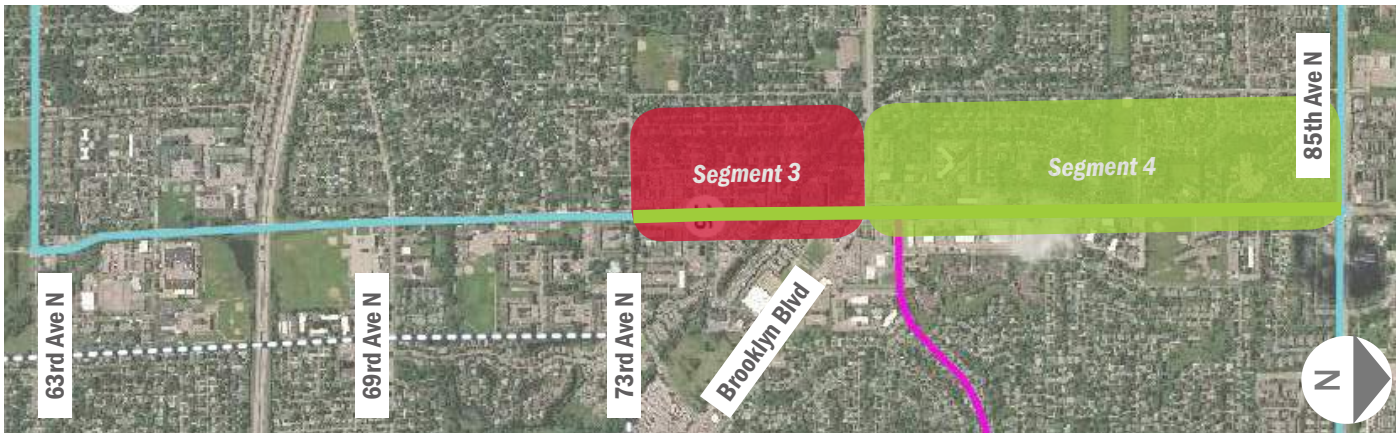
Conditions and configuration vary along the route

- Segment 3: Four lanes, two way between 73rd Avenue North to Brooklyn Boulevard
- Segment 4: Four lane, two way between Brooklyn Boulevard and ending at 85th Avenue North / Hennepin CSAH 14

Project Description
Segments to be Considered

ID: 16
Revision: 11/19/18

Note: Segments 1 & 2 were removed from 60% design. Final project consists of segments 3 & 4 only.



General project location.

Project Description
Description of Segments

ID: 16
Revision: 11/19/18

Categories	Segment 3	Segment 4
Description of typical roadway section	Four lane, two way road with median and center turn lane at intersections	Four lane, two way road
Number of through lanes (typ. config.)	4	4
AADT (typ.)	16,300	13,400
Speed limit (mph)	35	35
Roadway (curb-to-curb) width typ. (ft)	66	48
Available right-of-way typ. (ft)	100	80
Roadway jurisdiction	Brooklyn Park	Hennepin County
State Aid Facility?	Yes - MSAS	Yes - MSAS
Curb & gutter (urban) section?	Yes	Yes
Median present?	Yes (9ft)	No
On-street parking present?	No	No
Shoulder present?	No	No
Width of shoulder or parking lane	N/A	N/A
Width of driving lane(s)	11	12
Center left turn lane?	Yes	No
Width of center turn lane	11	N/A
Sidewalk or sidepath present?	Yes, sidewalk on west and east (6ft)	Yes, sidewalk on both sides of street (14 ft on west side, 9.5 ft on east side)
Boulevard or buffer from roadway (typ)	8 on west side, 9 on east side of street	None
Approximate length of segment (ft)	2,583	3,900
Transit service along project	716, 722, 723, 724, 760, 761	722, 723, 760, 761

Project Description
Description of Segments - CONTINUED

ID: 16
Revision: 11/19/18

Categories	Segment 3	Segment 4
Transit service across project	N/A	N/A
Segment interacts with the 90% plans?	No	No
Recommendation from 90% plans	N/A	N/A
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A	N/A
Do the recommendations conflict or preclude each other?	No	No

- Driving lanes must be at least 11' wide
- Parking lane minimum of 8'
- 2' gutters required (in addition to min. 11' lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2' clear zone to traffic and from edge of ROW
- 6' shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5' for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

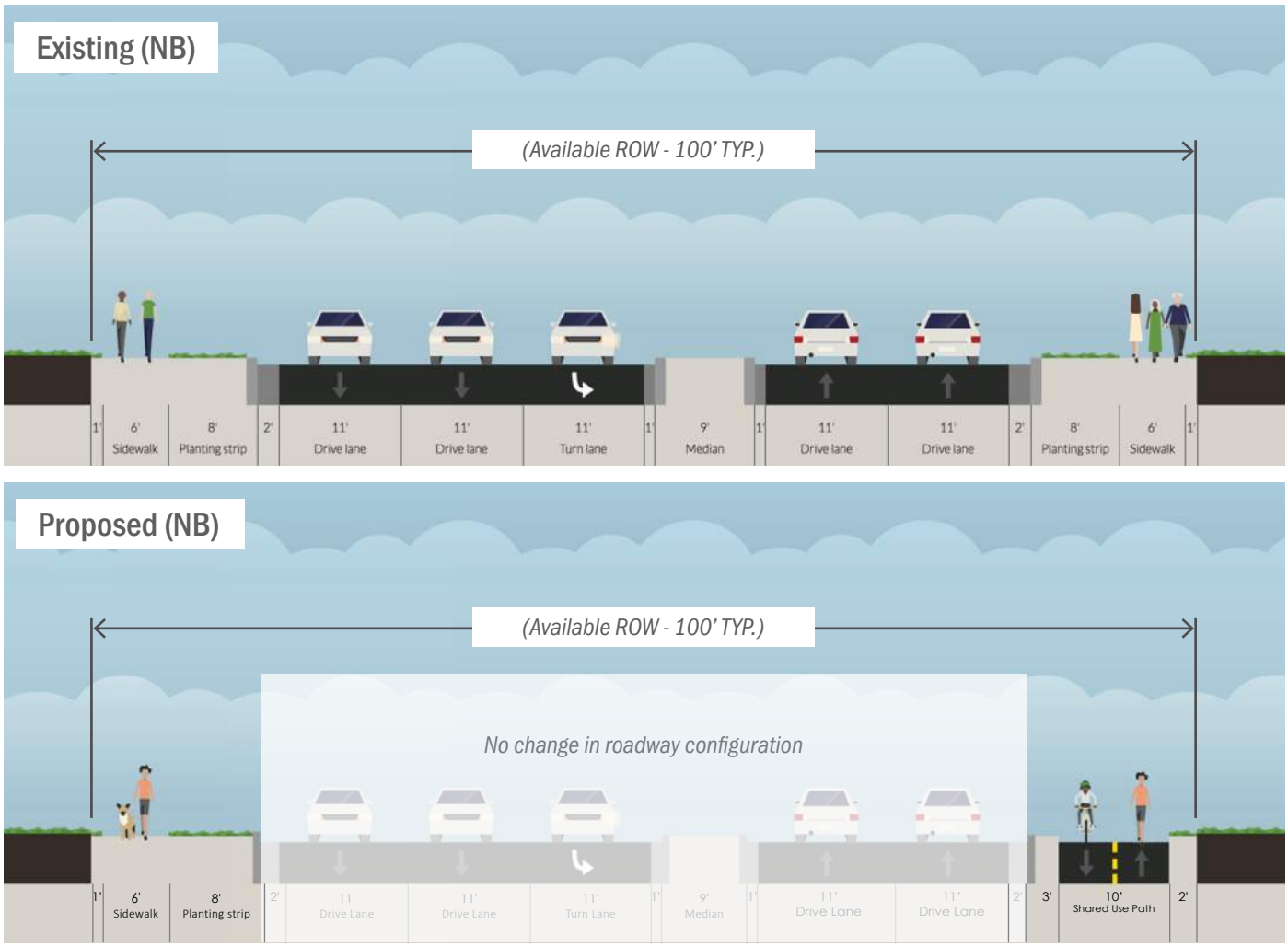
Concept Proposal

TYPE: Two- way Shared-Use Path / Trail - both sides

ID: 16-G

Revision: 11/19/18

Segment 3



GENERAL DESCRIPTION

Two-way Shared-use Path / Trail

- Implement two-way shared-use paths / trails on east side of Segment 3
- Maintains existing roadway cross-section width and roadway components

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Addition of impervious surface with expanded trail
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS implemented

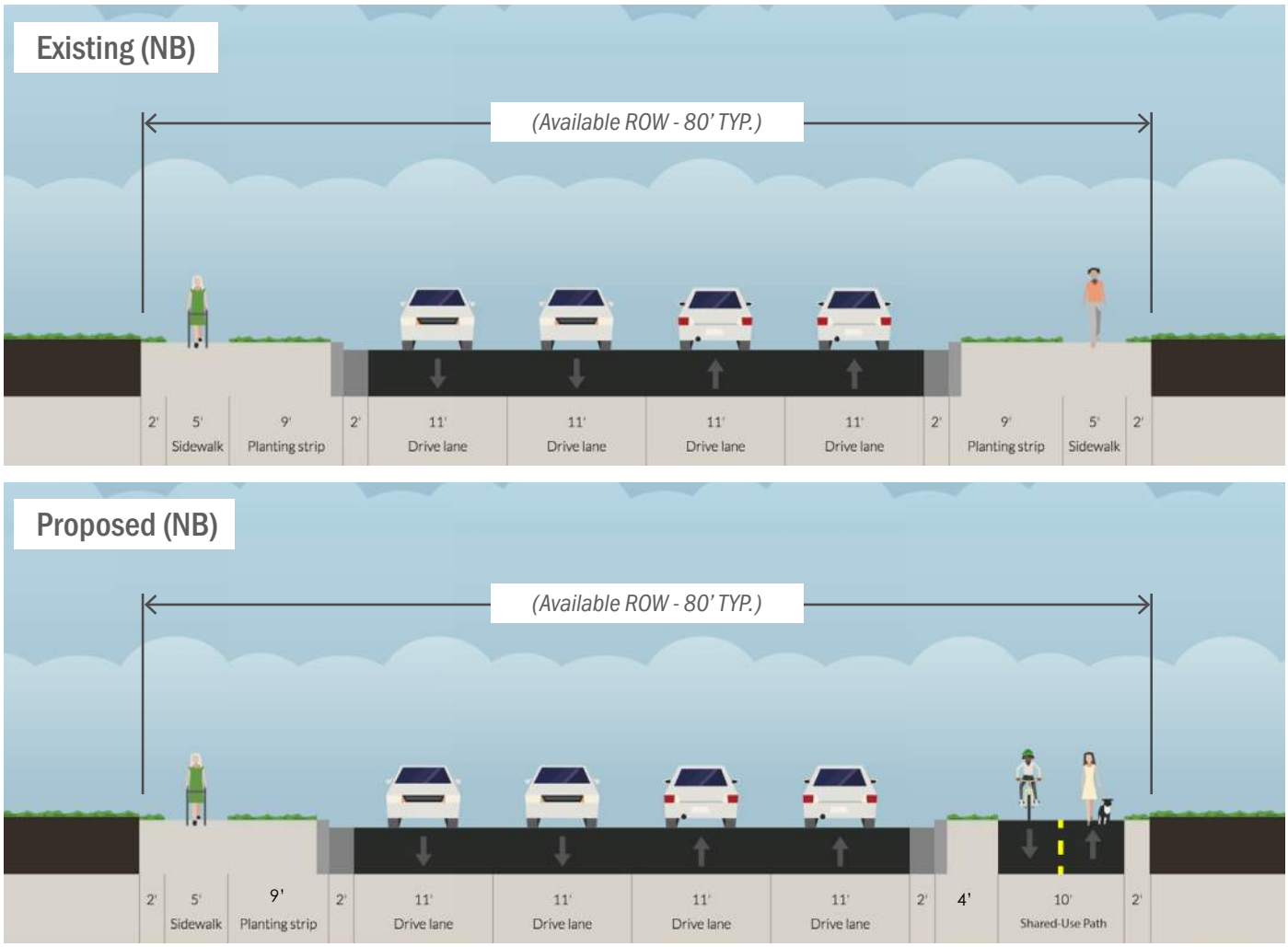
Concept Proposal

TYPE: Two-way Shared-Use Path / Trail - one side

ID: 16-K

Revision: 11/19/18

Segment 4



GENERAL DESCRIPTION

Bidirectional Shared-use Path / Trail

- Implement two-way shared-use path / trail along one side of Segment 4
- Requires reconstruction and modifications to existing roadway cross-section width and curb line
  - Reducing buffer width between trail and roadway could eliminate roadway impacts

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
  - Potential impacts due to additional impervious surface
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 17
Revision: 11/19/18

Project: 36th Avenue N - Halifax Ave to France Ave
City: Robbinsdale
Mode(s): Bicycle Trail

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: 36th Avenue N at Halifax Ave
- Route ends: 36th Avenue N at France Ave

Relation to other proposed projects

- Connects to Project ID 06

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route

- Segment 3: Three lane section Halifax to Grimes, 3-4 travel lanes and turn lanes Grimes to France

Project Description

Segments to be Considered

ID: 17

Revision: 11/19/18

Note: Segments 1 & 2 not carried forward to 60% design. Final project consists of segment 3 only

General project location.

Project Description
Description of Segments

ID: 17
Revision: 11/19/18

Categories	Segment 3
Description of typical roadway section	Three lane (two way with center left turn lane)
Number of through lanes (typ. config.)	3
AADT (typ.)	12,800 - 8,300
Speed limit (mph)	30
Roadway (curb-to-curb) width typ. (ft)	48
Available right-of-way typ. (ft)	66
Roadway jurisdiction	Robbinsdale
State Aid Facility?	Yes, MSAS
Curb & gutter (urban) section?	Yes
Median present?	No
On-street parking present?	No
Shoulder present?	Yes
Width of shoulder or parking lane	N/A
Width of driving lane(s)	12
Center left turn lane?	Yes
Width of center turn lane	14
Sidewalk or sidepath present?	Sidewalk on north (6ft) and south (5.5 ft)
Boulevard or buffer from roadway (typ)	None
Approximate length of segment (ft)	660 ft
Transit service along project	14
Transit service across project	32
Segment interacts with the 90% plans?	Yes

Project Description
Description of Segments - CONTINUED

ID: 17
Revision: 11/19/18

Categories	Segment 3
Recommendation from 90% plans	Two lane, two way street with center left turn lane between June Ave N and Halifax Ave N on 36th Ave N. Sidewalk on north side. Shared use path on south side.
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	Concepts include shared use path on south side.
Do the recommendations conflict or preclude each other?	No

- Driving lanes must be at least 11' wide
- Parking lane minimum of 8'
- 2' gutters required (in addition to min. 11' lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2' clear zone to traffic and from edge of ROW
- 6' shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road desired to be min. 5' for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

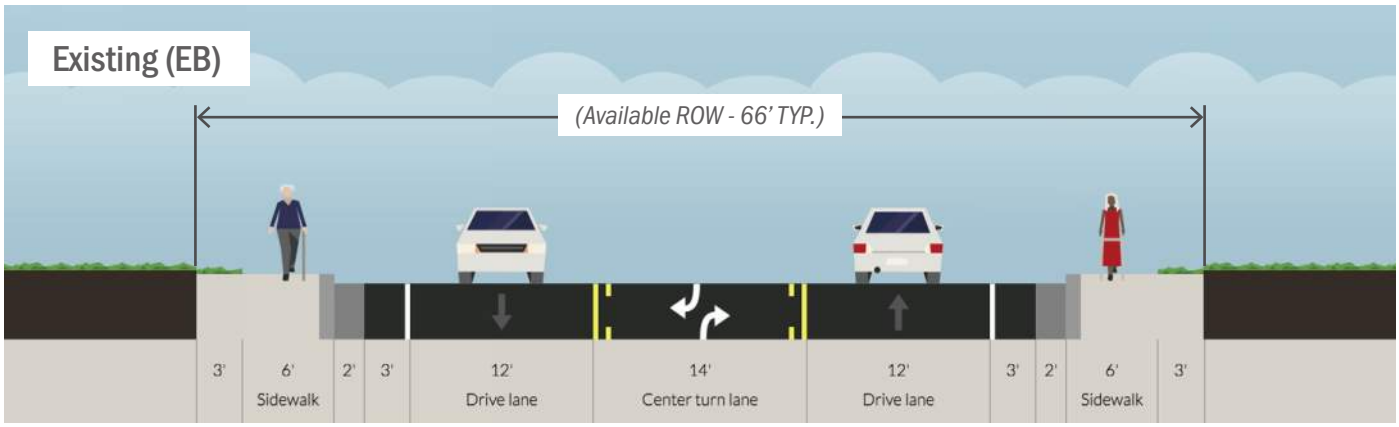
Concept Proposal

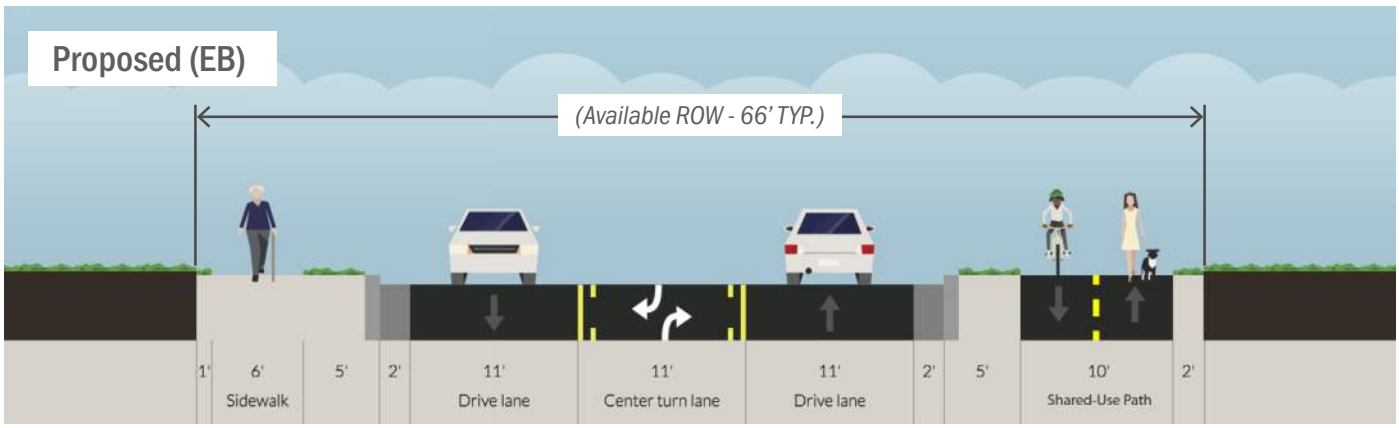
TYPE: Two-way Shared-Use Path / Trail - single side

ID: 17-G

Revision: 11/19/18

Segment 3





GENERAL DESCRIPTION

Bidirectional Shared-use Path / Trail

- Implement two-way shared-use paths / trails on one side of Segment 3
  - Maintain sidewalk along the other side of roadway
- Requires reconstruction and modification to existing roadway cross-section width and curb line
- May require traffic analysis between Grimes and France Ave

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
  - Potential impacts due to addition of 3' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Eliminates bus pull-over area
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections

Concept Development for Walk/Bike Connectivity

Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 20
Revision: 11/19/18

Project: Louisiana Ave N - 62nd Ave to 63rd Ave
City: Brooklyn Park
Mode(s): Pedestrian, Bikes

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: 62nd Avenue North
- Route covers: Louisiana Ave N
- Route ends: 63rd Avenue North

Relation to other proposed projects

- Connects to Project ID 08
- Blue Line station at Bottineau Blvd

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration are generally constant along the route

- Segment 1: Two way residential street

Project Description

Segments to be Considered

ID: 20

Revision: 11/19/18

General project location.

Project Description
Description of Segments

ID: 20
Revision: 11/19/18

Categories	Segment 1
Description of typical roadway section	Two way, two lanes
Number of through lanes (typ. config.)	2
AADT (typ.)	No data available
Speed limit (mph)	30
Roadway (curb-to-curb) width typ. (ft)	30
Available right-of-way typ. (ft)	60
Roadway jurisdiction	Brooklyn Park
State Aid Facility?	No
Curb & gutter (urban) section?	Yes
Median present?	No
On-street parking present?	Yes
Shoulder present?	No
Width of shoulder or parking lane	Not marked
Width of driving lane(s)	14
Center left turn lane?	No
Width of center turn lane	N/A
Sidewalk or sidepath present?	No
Boulevard or buffer from roadway (typ)	None
Approximate length of segment (ft)	1,260
Transit service along project	None
Transit service across project	716, 767
Segment interacts with the 90% plans?	No

Project Description
Description of Segments - CONTINUED

ID: 20
Revision: 11/19/18

Categories	Segment 1
Recommendation from 90% plans	N/A
Recommendations from concepts in this project interacting with 90% plans (several concepts available)	N/A
Do the recommendations conflict or preclude each other?	No

- Driving lanes must be at least 11' wide
- Parking lane minimum of 8'
- 2' gutters required (in addition to min. 11' lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2' clear zone to traffic and from edge of ROW
- 6' shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5' for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible

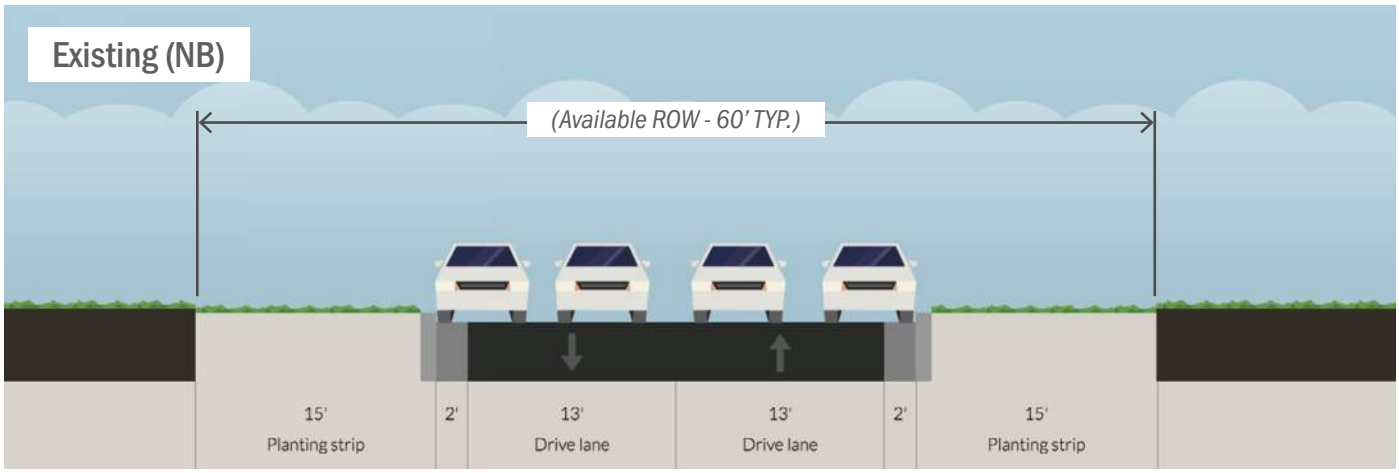
Concept Proposal

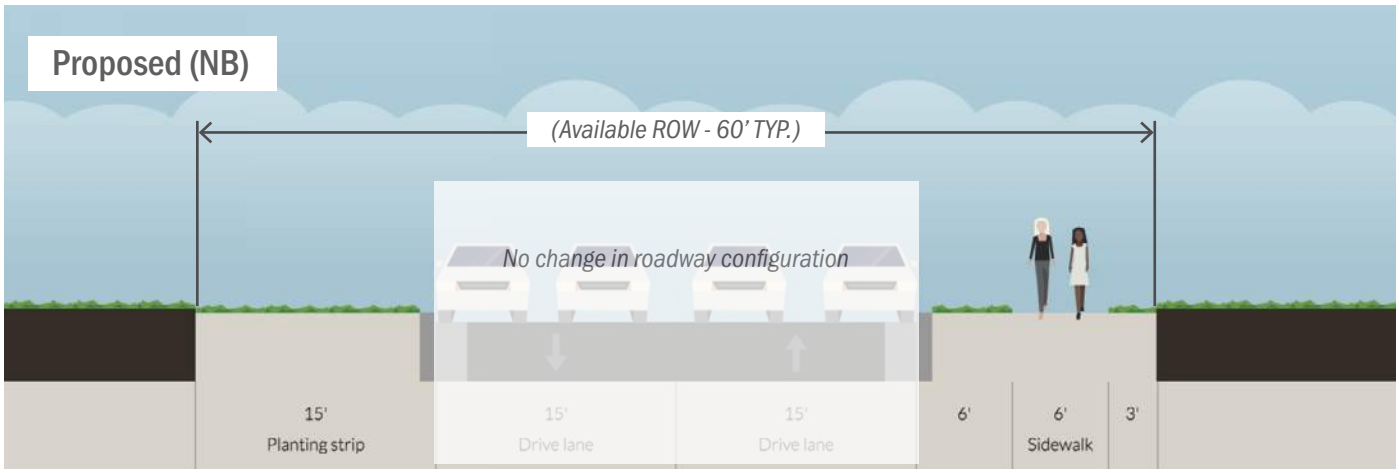
TYPE: Sidewalk on east side of street

ID: 20-C

Revision: 11/19/18

Segment 1





GENERAL DESCRIPTION

Provide sidewalk on east side of street

- Maintains existing roadway cross-section width and roadway components

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Potential impacts due to increased impervious surface
- Impacts to existing transit
  - N/A
- Impacts to driveways
  - 4 single-family driveways
- Impacts to signalized intersections
  - N/A