

**Busse Highway Bicycle Improvements**  
Miner Street to City of Des Plaines Boundary

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## **I. INTRODUCTION**

### **A. Location of Project**

This improvement includes Busse Highway from Miner Street to City of Des Plaines boundary and is located within the City of Des Plaines in Cook County, Illinois. The improvement length is approximately 1.0 mile. See Exhibit A-1 for a project location map.

### **B. Project Background**

Busse Highway is under the maintenance and jurisdiction of the Illinois Department of Transportation (IDOT) located within the City of Des Plaines and City of Park Ridge. Busse Highway is located between Miner Street and Touhy Avenue. The City of Des Plaines has been approached by the Des Plaines Bike and Pedestrian Advisory Committee to solicit the Illinois Department of Transportation from Miner Street to the City of Des Plaines boundary for bicycle improvements. The recommendation to implement a road diet along this section of State Highway is part of the Northwest Highway Corridor Bicycle Facilities Plan of the Northwest Municipal Conference (NWMC). A letter was sent to IDOT requesting to accommodate bicycles in connection with the proposed resurfacing of Busse Highway. IDOT has responded that a Phase I Study should be completed by the spring of 2019 in order for the bicycle accommodation to be implemented prior to the resurfacing project.

## **II. EXISTING CONDITIONS**

### **A. Description of Project Area**

The project location begins on the west end of the roadway at the intersection of Miner Street and Busse Highway. The land use within the project corridor is a mixture of commercial, residential, and forest preserve. There are commercial properties on the west end of the roadway. There are residential properties on both sides of Busse Highway east of Mason Lane until Crabtree Lane. On the north side of the east end of the project limits is the Forest Preserve District of Cook County, which includes Belleau Lake. The forest preserve serves as the municipal boundary between the City of Des Plaines and the City of Park Ridge. On the south side of the roadway, the Union Pacific Northwest Line is located adjacent to Busse Highway. Street lighting is present on the north side of the roadway from Miner Street to Applecreek Lane. On-street parking is not permitted on Busse Highway. Parking on the shoulder is permitted on the south side of the roadway west of Mason Lane. Pace Bus routes 226 and 209 operate eastbound and westbound on Busse Highway.

### **B. Existing Roadway Facilities**

Busse Highway is a four-lane major collector. The roadway cross section consists of two 10-foot through lanes in each direction with a mix of aggregate wedge shoulder, HMA shoulder, and concrete curb and gutter on both sides of the roadway. Aggregate wedge shoulder is most commonly present along each side of the roadway. Concrete curb and

gutter is present on the north side of the roadway from station 21+00 to 24+30 and on the south side of the roadway from station 22+07 to 24+00 and station 30+86 to 51+32. There is HMA shoulder from station 10+83 to station 22+07. The south side curb ends at the Des Plaines city limits. The existing pavement structure consists of a 4.5 inch bituminous concrete surface. The right-of-way width is 80 feet and the existing posted speed limit is 35 miles per hour. See Exhibit A-2 for existing typical section of Busse Highway.

### **C. Existing Traffic Data**

Existing traffic counts were collected on January 8, 2019. Average Daily Traffic (ADT) along Busse Highway between Miner Street and City of Des Plaines boundary is 3,200 vehicles per day. The truck percentage on this section of Busse Highway is 3.2%, and it is not an IDOT designated truck route. See Exhibit A-3 for an ADT Map.

### **D. Wetlands**

The National Wetlands Inventory (NWI) prepared by the U.S. Fish & Wildlife Service and the Cook County Wetland Inventory were utilized to identify wetlands within the study area. Within the project area, there is a creek that runs through Busse Highway but does not affect the existing roadway. No other wetlands are within the project limits. See Exhibit A-4 for more details. No trees will be removed within the project improvement limits and no right-of-way acquisition will be required.

### **E. Historic Resources**

The Illinois Historic Preservation Agency's Historic and Architectural Geographic Information System (HARGIS)'s database was utilized to identify historic sites within the study area. No historic sites are founded within the project limits.

### **F. Structures**

A bridge structure carrying Busse Highway over Prairie-Farmers Creek is located 0.4 miles east of Miner Street. The cast-in-place concrete bridge, Structure Number 016-0239, is 27 feet long with a deck width of 56 feet. This bridge provides two-way traffic along Busse Highway.

### **G. Railroads**

No railroad crossings exist within the project improvement limits.

### **H. Crash Data**

Crash reports were obtained from IDOT for the study area for the period from January 1, 2012 through December 31, 2016. Traffic data for 2017 and 2018 was not available at this time. The study area included the roadway segment along Busse Highway south of the intersection with Miner Street to the City of Des Plaines boundary. A total of 5 crashes occurred within the segment during this period. Crash frequencies and rates were calculated for each location and these values were then compared to Critical Values for

Frequency and Rate furnished by IDOT for similar intersections and segments. Additionally, IDOT compiles crash statistics based upon the severity of injury resulting from a crash. From this information, it is then possible to calculate an Equivalent Property Damage Only (EPDO) value, which weights the quantities of collisions so that fatality and injury collisions are given more importance than property-damage-only collisions. The EPDO value is exclusive of the frequency and rate values.

The roadway segment was not noted as a Five Percent Report location on the final report (September 2012).

A Crash Data Summary Table is contained on Table A-1. Table A-2 presents a summary of the High Accident Location Analysis. Wet Pavement Cluster Site and Lighting Warrant Analysis tables are provided in Tables A-3 and A-4, respectively.

Following is a breakdown of the crashes for the roadway segment by type of collision:

Sideswipe	40%
Other	40%
Off Road Fixed Objects	20%

See Exhibit A-5 for Collision Diagram. This segment has not been identified as a wet pavement cluster site. Also it does not meet the requirements for continuous roadway lighting. This segment is not listed on the most recent IDOT Five Percent Report, a list of locations exhibiting the most safety needs based on crash severity index.

#### Problems

- There were 5 crashes along this segment during the five year period (2012-2016).
- 2 of the 5 (40%) crashes were side swipe collisions.
- 2 of the 5 (40%) crashes were other.
- 1 of the 5 (20%) crashes were off-road collisions with fixed objects.

#### Causes

- Narrow lanes (10-foot) likely contribute to the number of sideswipes collisions along this segment.

#### Potential Countermeasures

- Changing from 10-foot lanes to 11-foot lanes in the northern portion will allow vehicles more space to stay within their lane. Reducing from two lanes in each direction to one lane in each direction should reduce the number of sideswipe collisions because of vehicles not being able to switch lanes.

### **III. PROPOSED IMPROVEMENT**

**A. Purpose and Need**

The primary needs of the project are to provide safe accommodations for bicyclists along Busse Highway. Consistent with the 2012 NWMC Northwest Highway Corridor Bicycle Facilities Plan and the 2019 Des Plaines Comprehensive Plan, bicyclists are utilizing Busse Highway to reach their destinations. Buffered bicycle lanes can increase the safety over the existing roadway design which is lacking any dedicated bicycle facilities. Roadway users will benefit from the proposed cross section with buffered bicycle lanes without having to share the roadway with bicyclists. The proposed cross section with the center bi-directional left turn lane can reduce the amount of turning vehicles from the through lanes. Bicycle usage was evaluated using the Strava heat mapping, a system that tracks bicyclist and pedestrian activity to provide data such as popular routes and origin/destination zones. Heavy bicycle use can be shown as red, moderate bicycle use is dark blue, and light bicycle use is light blue. There is the need to accommodate bicyclists within the project area and restriping of the roadway to provide bicycle lanes as part of the IDOT resurfacing project will fill this need. See Exhibit A-6 for a Strava heat map.

**B. Design Guidelines**

A combination of design guidelines are used on this project, including IDOT Bureau of Design and Environment and AASHTO Bicycle Guide.

**C. Projected Traffic**

Existing Average Daily Traffic (ADT) volumes were submitted to the Chicago Metropolitan Agency for Planning (CMAP) in order to obtain ADTs for the 2050 design year. Year 2050 ADT projections are as follows and shown on Exhibit A-3:

	<u>2019 Existing</u>	<u>2050 Projected</u>
Busse Highway	3,200 vpd	3,800 vpd

**D. Proposed Improvement**

Since Busse Highway is not a truck route, a road diet from two 10-foot through lanes in each direction to one 11-foot through lane in each direction with a center 11-foot two-way left turn lane is proposed along Busse Highway from Miner Street to Mason Lane. The roadway cross section width will remain the same and also provide 5-foot on-street bicycle lanes in each direction, separated from automobile traffic by a 2-foot striped buffer. The proposed improvements from Mason Lane to the City of Des Plaines boundary consist of a 10-foot through lane in each direction with a center 10-foot two-way left turn lane and 5-foot on-street bicycle lanes without a buffer. This cross-section will minimize the likelihood of drivers using the bike lane if another driver is turning left. The typical threshold for a four lane roadway is approximately 14,000 vehicles per day, and given the low ADT (3,800 vpd) on this roadway, Busse Highway will be able to accommodate the existing and projected ADT volumes with one through lane in each direction. Proposed typical cross section can be found in Exhibit A-7a and Exhibit A-7b.

## E. Adjacent Improvements

The City of Park Ridge is also conducting a study for the addition of bicycle lanes on Busse Highway within the City's limits. This study is separate from the study being performed by the City of Des Plaines. In the event that Park Ridge does not complete the study prior to the IDOT letting for the resurfacing of Busse Highway, the proposed improvement has been designed to taper back to a four lane cross section at the City limits of Des Plaines and Park Ridge.

Additionally, there is an upcoming project for the signalization of the Miner Street and Busse Highway intersection as part of the River Road Reconstruction project. The signal has been designed by IDOT and is being constructed by the City of Des Plaines. The project was let in July of 2018, and construction of the signal is anticipated to be completed in early 2020. As is allowed by Des Plaines City Code, bicyclists will have the option to utilize the sidewalk at the intersection to access downtown Des Plaines as well as the Des Plaines River Trail from this location.

## F. Cost Estimate

The City of Des Plaines will be responsible for the cost of the additional pavement marking and signage associated with the proposed bicycle improvements, the costs that would not already have been part of the resurfacing project scope (e.g. 3' buffer, bicycle symbols and arrows, bicycle signage). Below is a breakdown of the estimated City of Des Plaines cost share for bicycle-related striping and signage.

Construction Cost (Striping and Signage)	\$ 52,000
Contingency (20%)	<u>\$ 10,000</u>
Total Project Total	<b>\$ 62,000</b>

See Table A-5 for the Engineer's Preliminary Estimate of Cost.

# **APPENDIX A**

## **EXHIBITS AND TABLES**



## Appendix A – Exhibits and Tables

### Exhibits

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Cost Estimate .....	A-4



Busse Highway  
 Miner Street to City of Des Plaines Boundary

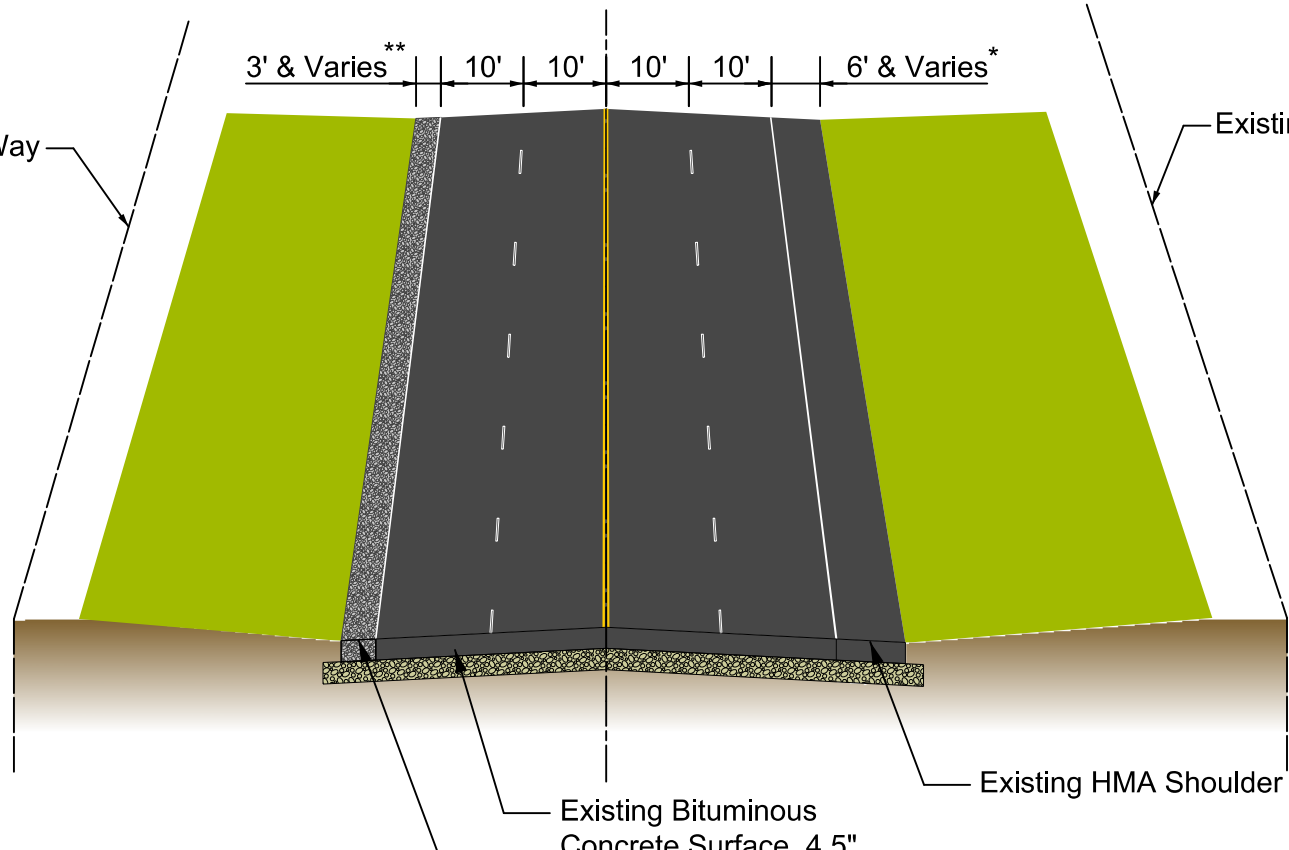


Existing  
 Centerline

3' & Varies\*\* | 10' | 10' | 10' | 10' | 6' & Varies\*

Existing Right-of-Way

Existing Right-of-Way



Existing Bituminous  
 Concrete Surface, 4.5"

Existing HMA Shoulder

Existing Aggregate  
 Wedge Shoulder

- \* HMA Shoulder from STA. 10+83 to STA. 22+07
- Aggregate Shoulder from STA. 16+33 to STA. 16+92
- PCC Combination Curb & Gutter from STA. 22+07 to STA. 24+00  
 and STA. 30+86 to STA. 51+32
- \*\* PCC Combination Curb & Gutter from STA. 21+00 to STA. 24+30

City of Des Plaines  
 Busse Highway Bicycle Improvements  
 Miner Street to City of Des Plaines Boundary

**Existing Typical Section**




Not to Scale






\* Existing Average Daily Traffic Counts were Collected on January 08, 2019

LEGEND	
(X,XXX)	2019 Existing Average Daily Traffic (Vehicles per Day)
(X,XXX)	2050 Projected Average Daily Traffic (Vehicles per Day)
	Existing One-Way Stop

City of Des Plaines

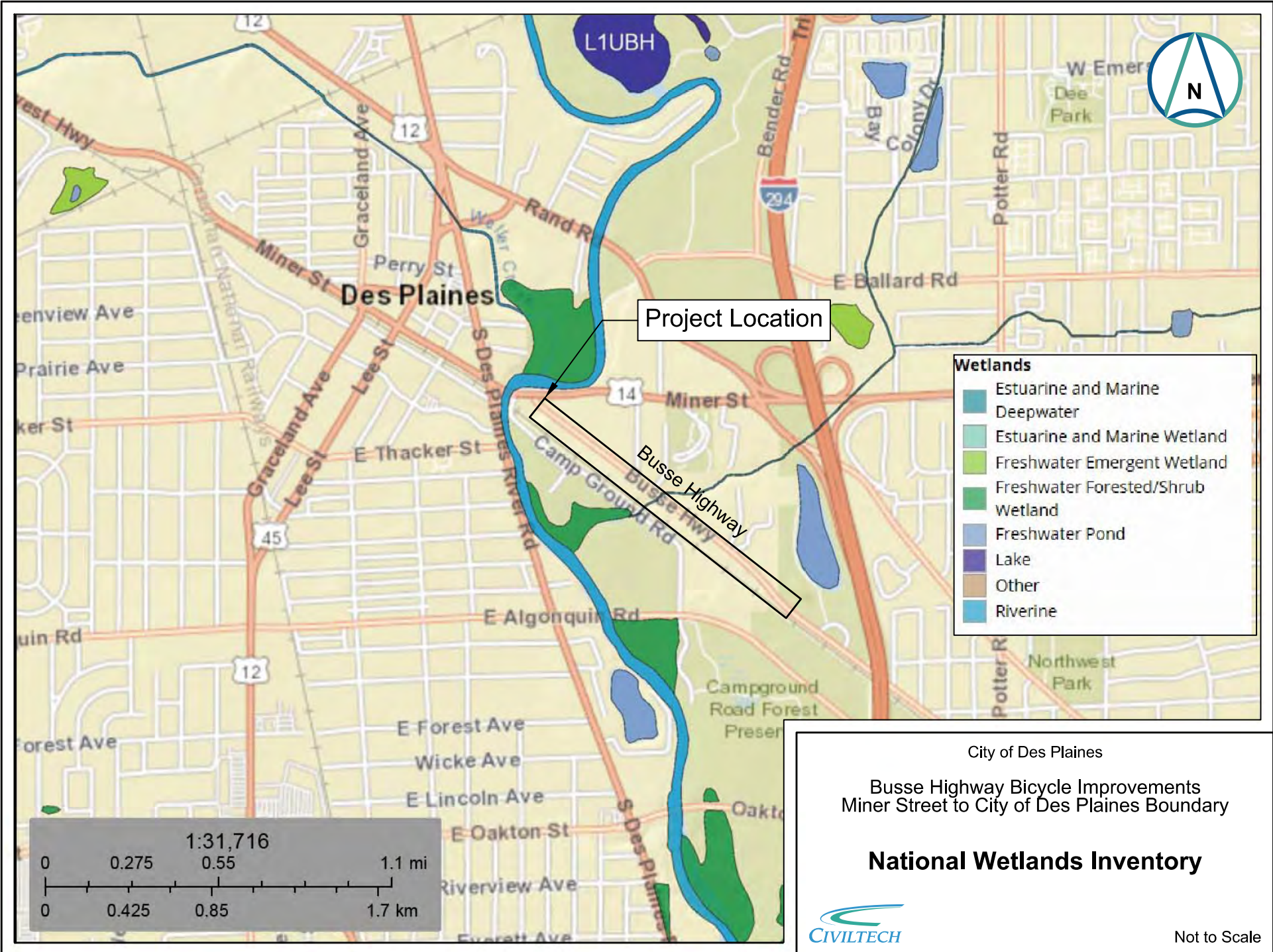
Busse Highway Bicycle Improvements  
Miner Street to City of Des Plaines Boundary

**Average Daily Traffic**



Not to Scale







Miner Street

Mason Lane

Parkview Lane

Applecreek Lane

Crabtree Lane

Belleau Lake

Busse Highway

06/14/12,2P,CD,PDO

07/12/13,9A,CD,PDO

11/14/12,8A,CD,PDO

09/25/14,8A,CD,C

01/18/16,8P,CD,PDO

**Legend**

- Backing Up Motor Vehicle <<<<
- Path of Motor Vehicle →
- Uninvolved Motor Vehicle - - -
- Pedestrian Involvement ⊗
- Collision with Animal → ⊕
- Collision with Bicycle → △
- Rear-End Collision → |→
- Sideswipe Collision → |↗
- Right Angle Collision → |⊥
- Left Turn Collision → |↘
- Head-On Collision → |←
- Out of Control → ~~~~~
- Overtaken Vehicle ↻
- Parked Vehicle □
- Fixed Object □
- Other/Non-Specified ×

Date:  
Month/Day/Year  
Time:  
Hour, A=A.M., P=P.M.  
Weather: C=Clear, R=Rain,  
F=Fog, S=Snow  
Pavement:  
D=Dry,  
W=Wet,  
I=Icy  
Injury: ○  
K=Fatal,  
A=Incapacitated,  
B=Non-Incapacitating,  
C=Not Evident,  
PDO=Property  
Damage Only

Collision Type	K	A	B	C	PDO	Total	Details	
Right Angle	0	0	0	0	0	0		
Left Turn	0	0	0	0	0	0		
Rear End	0	0	0	0	0	0		
Sideswipe	0	0	0	0	2	2	Dry	5
Ped/Bike	0	0	0	0	0	0	Wet	0
Off Rd. Fixed Obj.	0	0	0	1	0	1	Icy	0
Other	0	0	0	0	2	2	Day	4
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>5</b>	Night	1

City of Des Plaines  
Busse Highway Bicycle Improvements  
Miner Street to City of Des Plaines Boundary

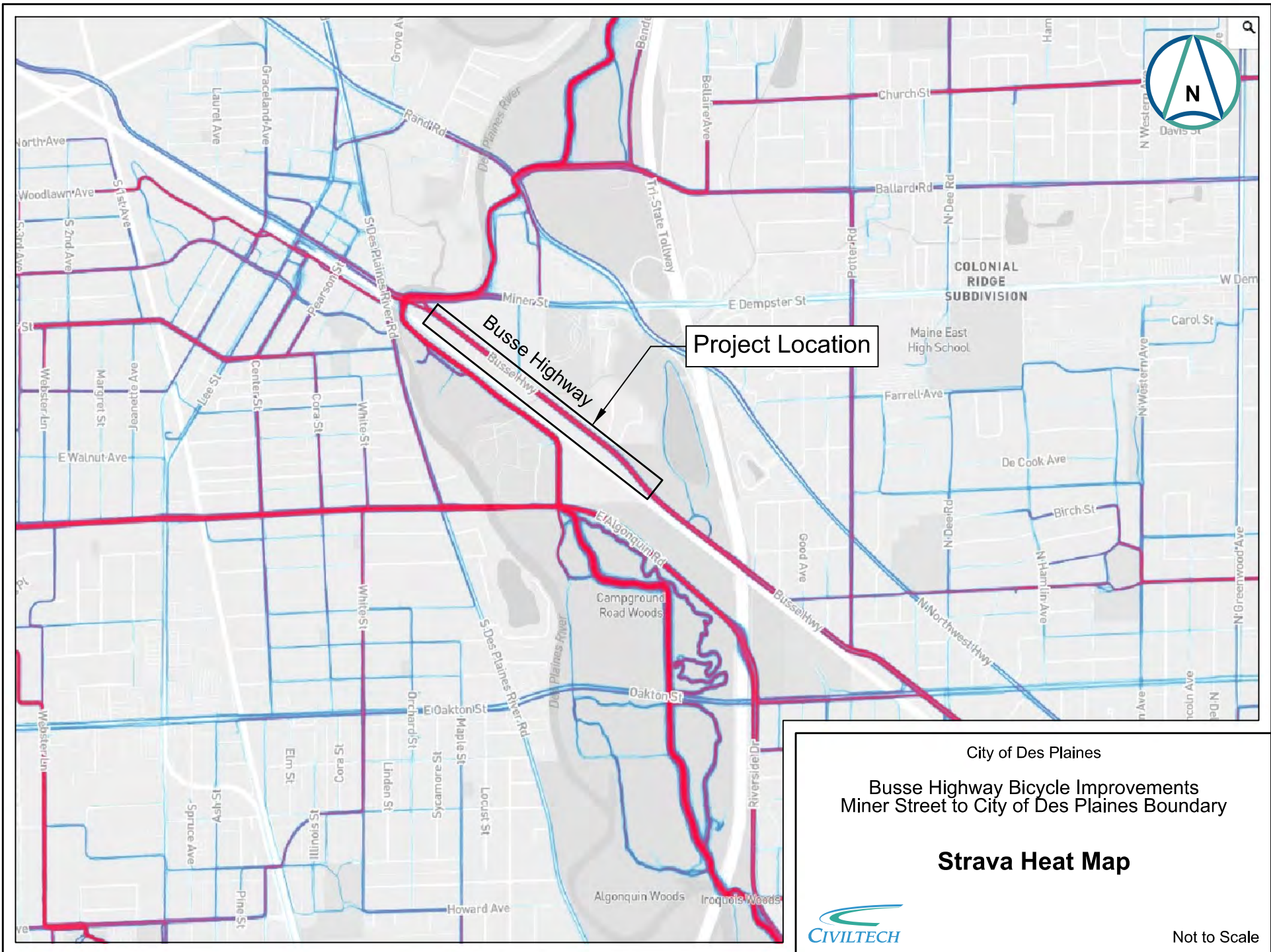
**Collision Diagram (2012-2016)**  
**Miner Street to City of**  
**Des Plaines Boundary**

CIVILTECH

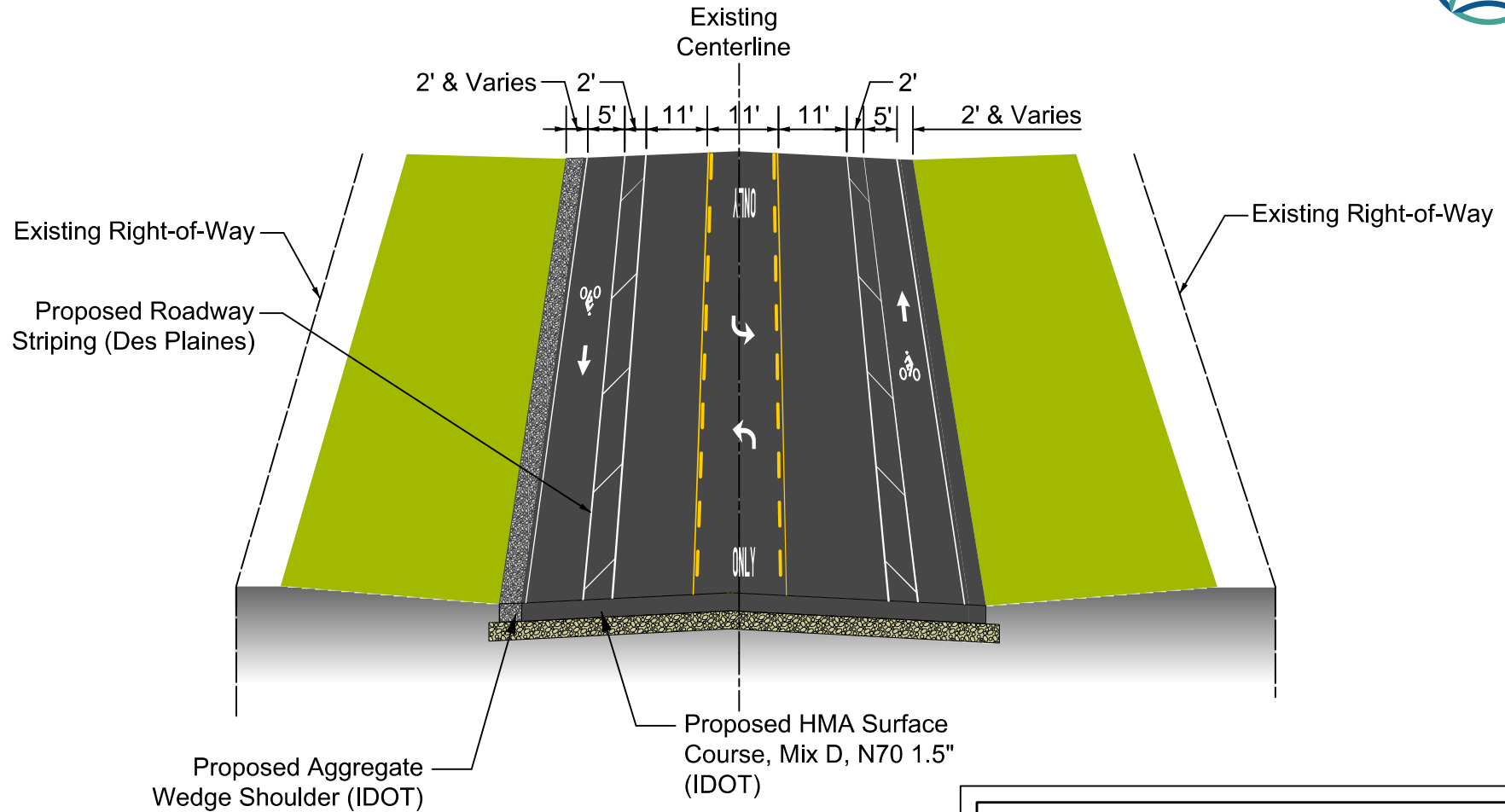
Not to Scale

Completed By: JM





Busse Highway  
Miner Street to Mason Lane



HMA Shoulder from STA. 10+83 to STA. 22+07  
 Aggregate Shoulder from STA. 16+33 to STA. 16+92  
 PCC Combination Curb & Gutter from STA. 22+07 to STA. 24+00  
 and STA. 30+86 to STA. 51+32  
 PCC Combination Curb & Gutter from STA. 21+00 to STA. 24+30

City of Des Plaines  
 Busse Highway Bicycle Improvement  
 Miner Street to City of Des Plaines Boundary

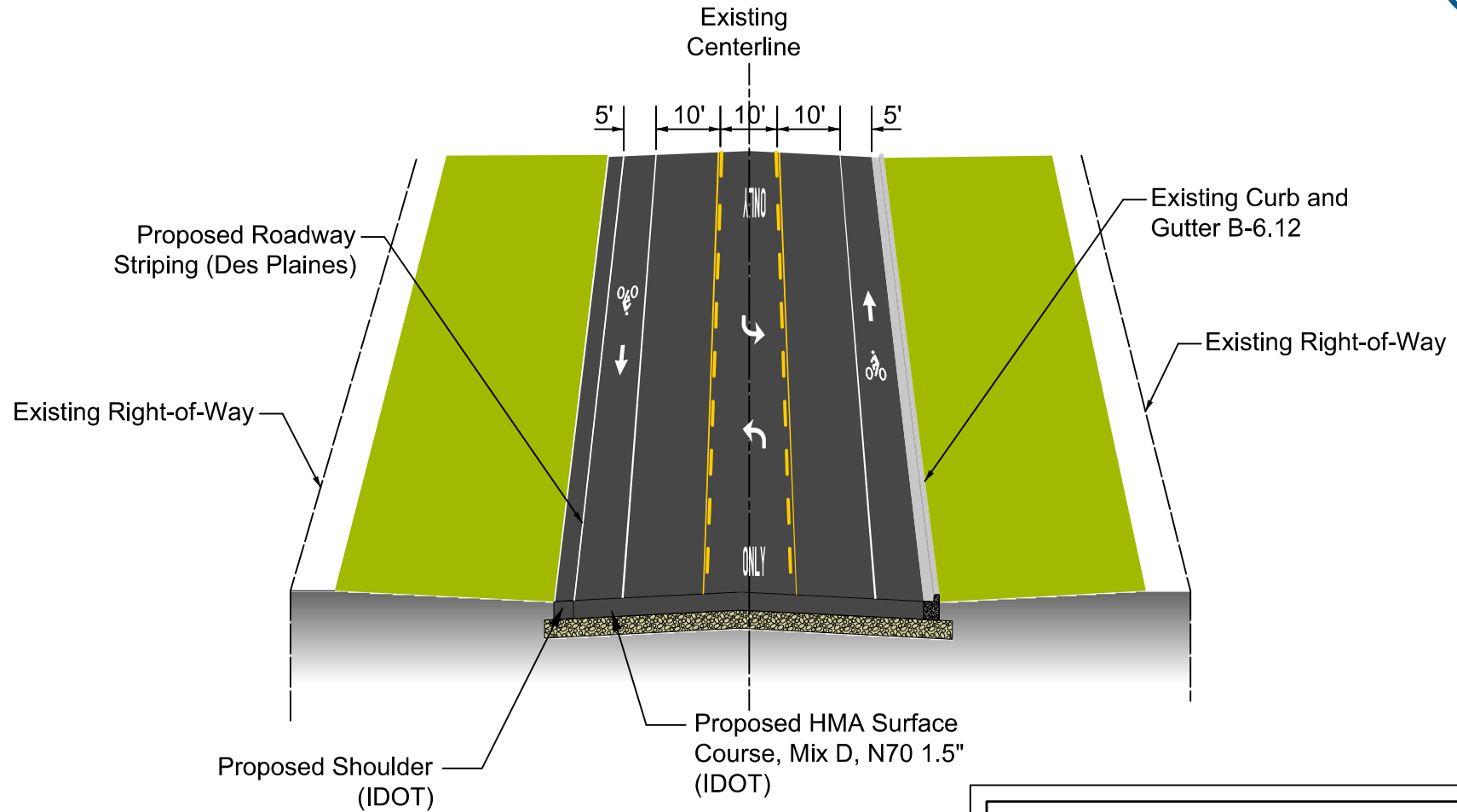
**Proposed Typical Section**



Not to Scale



Busse Highway  
Mason Lane to City of Des Plaines Boundary



City of Des Plaines  
Busse Highway Bicycle Improvement  
Miner Street to City of Des Plaines Boundary

**Proposed Typical Section**



Not to Scale

City of Des Plaines

Busse Highway Bicycle Improvements  
Miner Street to City of Des Plaines Boundary

**CRASH DATA SUMMARY TABLE**

January 1, 2012 to December 31, 2016

INTERSECTION OR SEGMENT	YEAR	COLLISION TYPE								INJURY TYPE *					ROADWAY SURFACE			TIME		TOTAL
		Right Angle	Left Turn	Rear End	Sideswipe	Fixed Object	Ped/Bike	Other	K	A	B	C	PDO	Dry	Wet	Icy	Day	Night		
Busse Highway between Miner Street and City of Des Plaines Boundary	2012	0	0	0	1	0	0	1	0	0	0	0	2	2	0	0	2	0	2	
	2013	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	1	0	1	
	2014	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	1	4	0	1
	2015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2016	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	1
Total	2012	0	0	0	1	0	0	1	0	0	0	0	2	2	0	0	2	0	2	
	2013	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	1	0	1	
	2014	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	1	4	0	1
	2015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2016	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	1

\* K = Most severe injury was a fatality.

A = Most severe injury was a serious or incapacitating injury.

B = Most severe injury was a minor or non-incapacitating injury.

C = Most severe injury was a probable or not apparent injury.

PDO = No injuries - Property Damage Only.

NOTE: This intersection is not a 5% location.

City of Des Plaines

Busse Highway Bicycle Improvements  
Miner Street to City of Des Plaines Boundary

**WET PAVEMENT CLUSTER SITE**

January 1, 2012 to December 31, 2016

Intersection or Segment	No. of Wet Pavement Crashes	ADT	Actual Rate (CR/MVM)	Critical Rate (CR/MVM)	Average Frequency (CR/YR/MI)	Critical Frequency (CR/YR/MI)	Wet Pavement Location
Busse Highway between Miner Street and City of Des Plaines Boundary	0	3,200	0.000	4.242	0.000	17.600	NO
<b>Total</b>	<b>0</b>						<b>0</b>

CR/MVM = Crashes per Million Vehicle-Miles

CR/YE/MI = Crashes per year per mile

Denotes actual value is greater than critical value.

Critical Rate and Critical Frequency data are based on 2001-2003 IDOT Statistics

City of Des Plaines

Busse Highway Bicycle Improvements  
Miner Street to City of Des Plaines Boundary

**LIGHTING WARRANT ANALYSIS**

January 1, 2012 to December 31, 2016

<b>Intersection or Segment</b>	<b>No. of Day Crashes</b>	<b>No. of Night Crashes</b>	<b>Lighting Warranted</b>
Busse Highway between Miner Street and City of Des Plaines Boundary	4	1	NO
<b>Total</b>	<b>4</b>	<b>1</b>	<b>0</b>

Additional roadway lighting is warranted at a critical night-to-day ratio of 2:1.

Busse Highway Bicycle Improvements  
 Miner Street to City of Des Plaines Boundary

**ENGINEER'S PRELIMINARY ESTIMATE OF COST**  
**Roadway Improvements - Striping and Signing**

Item No.	Item	Unit	Unit Price	Total Quantity	Total Quantity	Cost
<b>Construction Costs</b>						
	Thermoplastic Pav't Marking - Letters and Symbols	SQFT	\$4.00	2,700	2,699	\$10,800
	Thermoplastic Pav't Marking - Line 4"	FOOT	\$0.60	61,730	61730	\$37,000
	Telescoping Steel Sign Support	FOOT	\$17.00	135	135	\$2,300
	Sign Panel (Type 1) - Bike Lane	SQFT	\$22.00	30	27	\$700
	Sign Panel (Type 1) - Merge, State Law	SQFT	\$22.00	20	18	\$400
	Sign Panel (Type 1) - Ahead, Ends	SQFT	\$22.00	10	10	\$200
	Sign Panel (Type 1) - No Parking	SQFT	\$22.00	25	25	\$600
	Sign Panel (Type 1) - Use Crosswalk	SQFT	\$22.00	5	2	\$100
	Sign Panel (Type 1) - Bike/Pedestrian	SQFT	\$22.00	10	6	\$200
<b>Subtotal 1 (Construction Subtotal)</b>						<b>\$52,000</b>
Contingency (20% of Subtotal 1)						\$10,000
<b>TOTAL CONSTRUCTION COST</b>						<b>\$62,000</b>

# **APPENDIX B**

## **PROPOSED IMPROVEMENT PLAN**

**Appendix B – Proposed Improvement Plan**

Proposed Improvement Plan for Striping and Signing  
Matching into City of Park Ridge's Cross Section (Station 12+50 to Station 37+32)..... B-1a

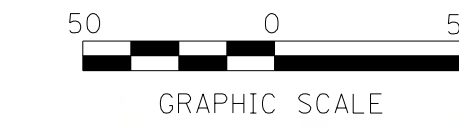
Proposed Improvement Plan for Striping and Signing  
Matching into City of Park Ridge's Cross Section (37+27 to Station 51+32)..... B-1b

Proposed Improvement Plan for Striping and Signing  
Matching into Existing Conditions (Station 12+50 to Station 37+32)..... B-2a

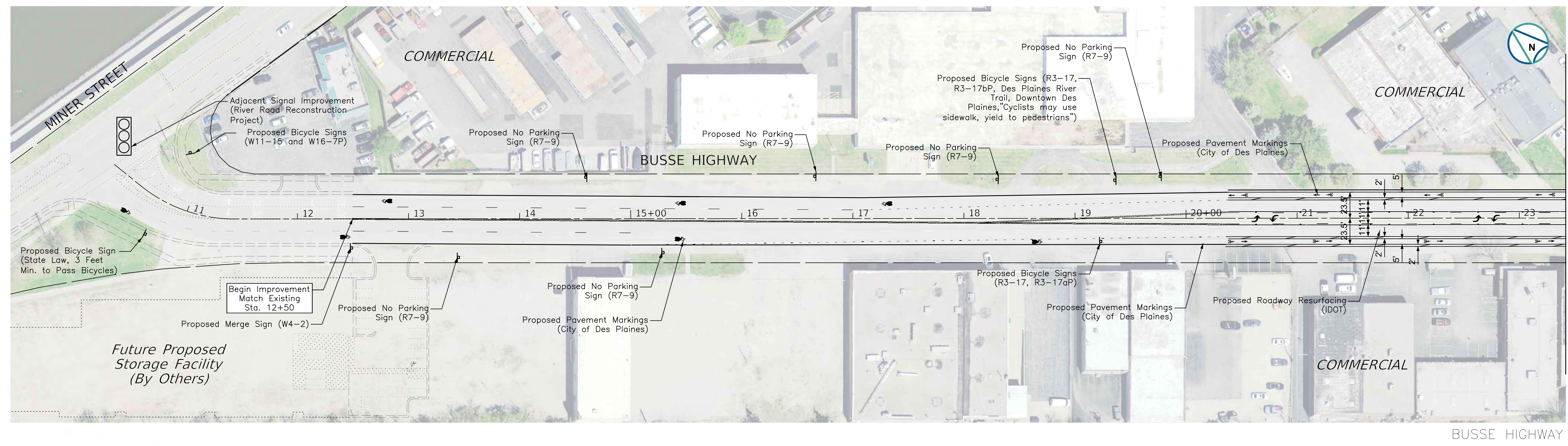
Proposed Improvement Plan for Striping and Signing  
Matching into Existing Conditions (Station 37+27 to Station 51+32)..... B-2b



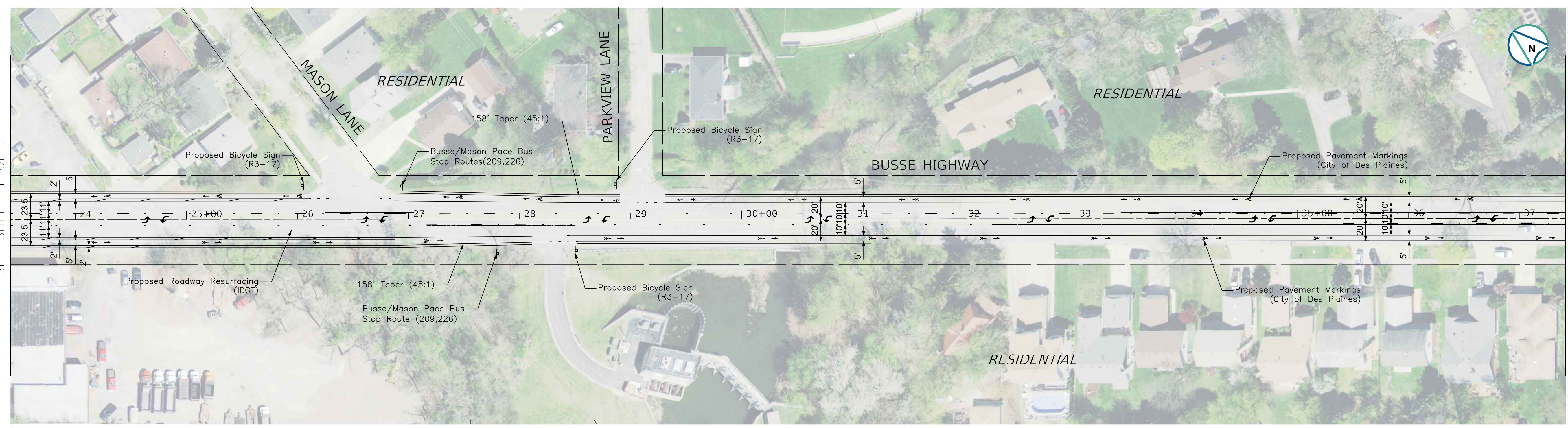
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3512	86Y-RS-4	COOK	2	1
STA.	12+50	TO STA.	51+55	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



Proposed Improvement Plan - Matching Into City of Park Ridge's Cross Section



MATCHLINE STA. 23+41  
SEE SHEET 1 OF 2



MATCHLINE STA. 23+41  
SEE SHEET 1 OF 2

MATCHLINE STA. 37+41  
SEE SHEET 2 OF 2

PLAN

DATE	
BY	
SURVEYED	
ALIGNED	
CHECKED	
RT. OF WAY CHECKED	
NO. CAD FILE NAME	

PROFILE

DATE	
BY	
SURVEYED	
GRADES CHECKED	
NO. B.M. NOTED	
STRUCTURE NOTATIONS	CHKD

PLOT DATE = \$DATE\$  
 FILE NAME = \$FILE\$  
 PLOT SCALE = \$SCALE\$  
 REFERENCE = \$REF\$

REVISIONS	
NAME	DATE

City of Des Plaines  
 Busse Highway Bicycle Improvements  
 Miner Street to City of Des Plaines Boundary  
**Proposed Improvement Plan**  
 Station 12+50 to Station 37+41

SCALE: HORIZ: 1" = 50'  
 VERT: 1" = 5'  
 DATE: 01/31/20

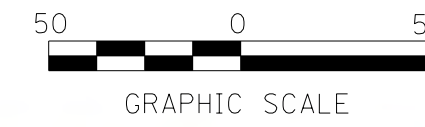
DESIGNED BY: JH  
 DRAWN BY: JH  
 CHECKED BY: JEC



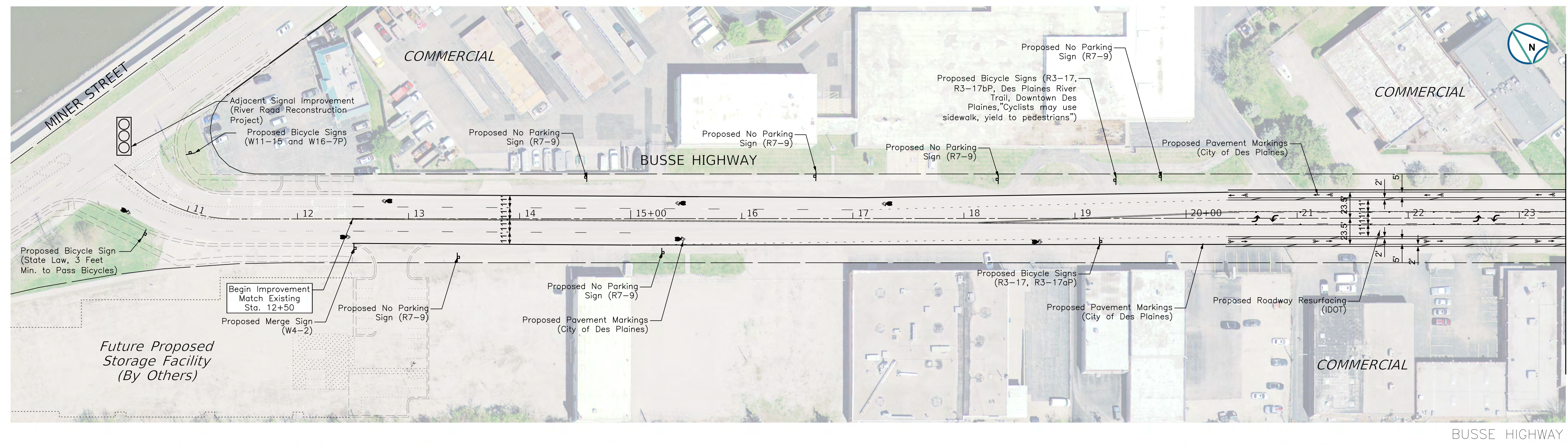




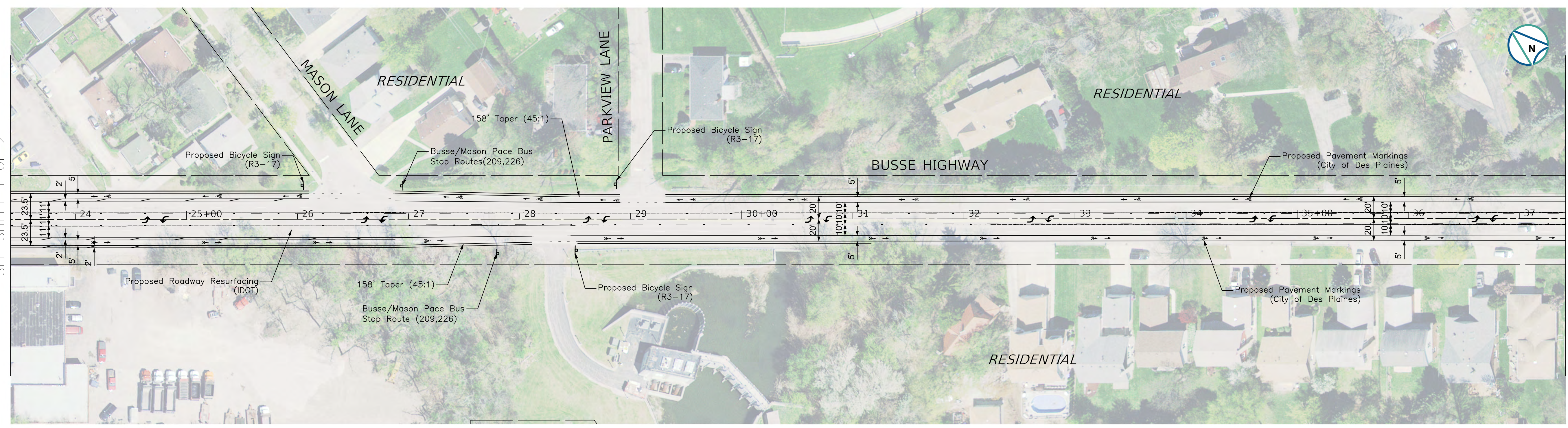
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3512	86Y-R5-4	COOK	2	1
STA.	12+50	TO STA.	51+55	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



Proposed Improvement Plan - Matching Into Existing Conditions



MATCHLINE STA. 23+41  
SEE SHEET 1 OF 2



MATCHLINE STA. 23+41  
SEE SHEET 1 OF 2

MATCHLINE STA. 37+41  
SEE SHEET 2 OF 2

PLAN

DATE	
BY	
SURVEYED	
ALIGNED	
CHECKED	
RT. OF WAY	
CHECKED	
NO.	
CADD FILE NAME	

PROFILE

DATE	
BY	
SURVEYED	
GRADES	
CHECKED	
BLM. NOTED	
STRUCTURE	
NOTATIONS	
CHKD	
NO.	

PLOT DATE = \$DATE\$  
FILE NAME = \$FILE\$  
PLOT SCALE = \$SCALE\$  
REFERENCE = \$REF\$

REVISIONS	
NAME	DATE

City of Des Plaines  
Busse Highway Bicycle Improvements  
Miner Street to City of Des Plaines Boundary  
Proposed Improvement Plan  
Station 12+50 to Station 37+41

SCALE: HORIZ: 1" = 50'  
VERT: 1" = 5'  
DATE: 01/31/20

DESIGNED BY: JH  
DRAWN BY: JH  
CHECKED BY: JEC







# **APPENDIX C**

## **INTRAGENCY COORDINATION**

## **Appendix C – Interagency Coordination**

Road Diet Request Letter with attachments – City of Des Plaines .....	C-1
Road Diet Request Letter – IDOT Response .....	C-2
2050 CMAP Projection Letter .....	C-3



Public Works & Engineering  
1420 Miner Street, Des Plaines, IL 60016  
P: 847.391.5390 | W: desplaines.org

October 31, 2018

Anthony Quigley, P.E.  
Region One Engineer  
201 West Center Court  
Schaumburg, Illinois 60196-1096

Re: Busse Highway, Miner Street to Oakton Street

Dear Mr. Quigley:

The City of Des Plaines has been approached by the Des Plaines Bike and Pedestrian Advisory Committee ([www.dpbpac.org](http://www.dpbpac.org)) to solicit the Illinois Department of Transportation for bicycle and pedestrian accommodations along Busse Highway from Miner Street to Oakton Street. This section of roadway is located within the City of Des Plaines and City of Park Ridge with Belleau Lake dividing our corporate limits.

The recommendation to implement a road diet along this section of state highway is part of the enclosed *Northwest Highway Corridor Bicycle Facilities Plan* of the Northwest Municipal Conference. It is my understanding that the City of Park Ridge is also interested in this improvement.

Given the excess capacity (Average Daily Traffic of 1,550 to 8,600) of this four through-lane cross-section of Busse Highway there is an opportunity to accommodate bicycles and pedestrians in connection with your proposed resurfacing of Busse Highway.

Please feel free to contact me discuss this project further.

Sincerely,

A handwritten signature in black ink that reads 'Timothy P. Oakley'.

Timothy P. Oakley, P.E., CFM  
Director of Public Works and Engineering

Enclosure

Cc: Mark Fowler, NWMC  
Wayne Zingsheim, City of Park Ridge  
Wharton Sinkler, DPBPAC



***Northwest Highway Corridor Bicycle Facilities Plan  
Northwest Municipal Conference***

February 8, 2012





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## Introduction

The Northwest Highway corridor connects the Fox River into the City of Chicago along the Union Pacific-Northwest Metra Line. The corridor spans eleven municipalities and currently provides a direct rail and vehicular connection (US 14) into the City of Chicago for many communities in the north and west portions of the Northwest Municipal Conference (NWMC) area. Adaptation of the corridor as a bike route is a priority for the Conference and is described in the NWMC 2010 Bicycle Plan. This plan acts as a guide for planning and implementing bicycle facilities in the Conference service area.

Currently, only 10% of the proposed bikeway system in this nearly 20-mile long corridor is completed. However, these existing facilities are not contiguous, making convenient bicycle travel in the corridor difficult. These sections are a combination of on-street lanes, off-street bike paths, and signed on-street bike routes.

This plan was funded by a Cook County-administered Communities Putting Prevention to Work (CPPW) grant to the NWMC to identify preliminary preferred and alternate bikeway alignments along the Northwest Highway corridor. The intent is to use both existing and new bicycle facilities to link Metra stations, central business districts and other regional destinations in the corridor. While the 2010 Bike Plan identified the corridor continuing into Lake and McHenry Counties, the grant for this study was funded through Cook County and thus focuses only on the parts of the project within county limits.

Working with members of the NWMC Bicycle and Pedestrian Committee and staff from the NWMC, the plan identifies the barriers that will be faced throughout the corridor by bicyclists, as well as the challenges encountered in downtown areas, including at-grade crossings and pedestrian concerns. Additionally, each of the intersections within the corridor are analyzed for their existing or potential bicycle crossing accommodations.

The plan begins with the identification of preliminary preferred and alternate alignments, building on information collected in the NWMC 2010 Bike Plan, the seven municipalities comprising the NWMC Corridor subcommittee and interested parties. Next, typical corridor segments and intersections are defined with consistent nomenclature to typify segments with similar attributes. Construction concerns and major barriers are shown in table format to refine possible alignment locations.

Typical cross sections are provided for identified segment types and are based upon commonly-accepted standards, such as IDOT's Design and Environmental Manual; the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities, Manual on Uniform Traffic Control Devices (MUTCD) and National Association of City Transportation Officials (NACTO) Cities for Cycling Guide. Cost estimates are provided for engineering and construction of typical segments. Finally, an implementation scheme is provided that suggests good candidates for early construction, based upon previous assessments of barriers that would delay certain segments.

# I Alignment Identification

## Introduction

To determine the alignment alternatives and ultimately the preferred alignment, the team worked closely with NWMC staff and the Northwest Highway Corridor subcommittee, which is a subcommittee of the Bicycle and Pedestrian Committee, and comprised of the seven NWMC member municipalities that are situated along the corridor.

- Barrington
- Palatine
- Rolling Meadows
- Arlington Heights
- Mount Prospect
- Des Plaines
- Park Ridge

Generally, the subcommittee met monthly with the consultant team collecting data from the NWMC staff, Conference members and performing field reviews.

## Alignment Alternatives

Determining the alignment involved compiling and organizing each municipality's vision of how the bikeway corridor would connect through their respective communities. Using a workshop format, representatives of each community began with an examination of existing and programmed routes on an aerial map. This collaborative process resulted in the development of known issues and constraints, the identification of key intersections and potential opportunities along the adjacent Union Pacific Railroad. One such opportunity is Rail-with-Trail which are trails adjacent to, or within an active railroad corridor. The hope is that some bicyclists will ride to a Metra station and continue along a portion of the corridor.

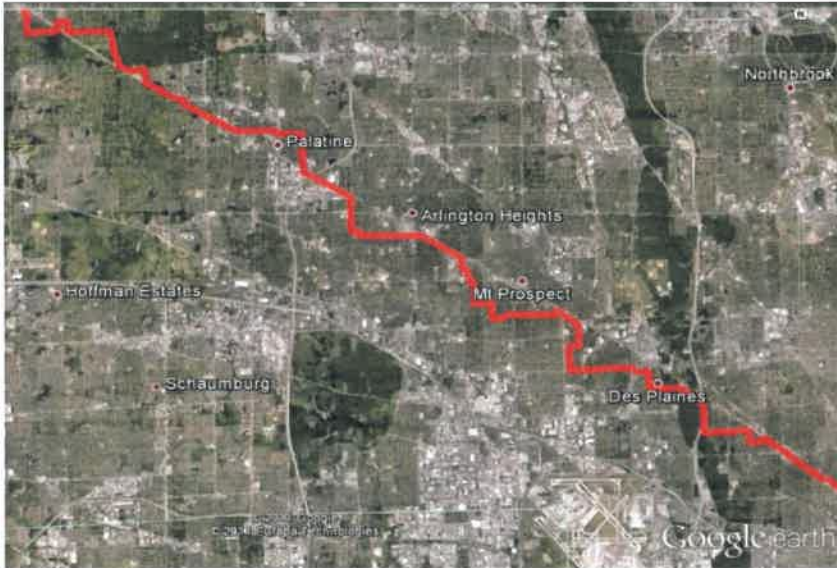
A preliminary short-term and long-term alignment was developed based on field reviews and initial existing conditions. This information was digitized in Google Earth and provided to the NWMC in the form of a Google Earth file (.kml) that allowed participating members to easily zoom to areas of interest. Comments were solicited and several rounds of revisions were made, until a final version of each alignment was agreed upon. The long-term alignment was used in the development of this final report.



Photo of aerial strip map used in the Committee workshop.

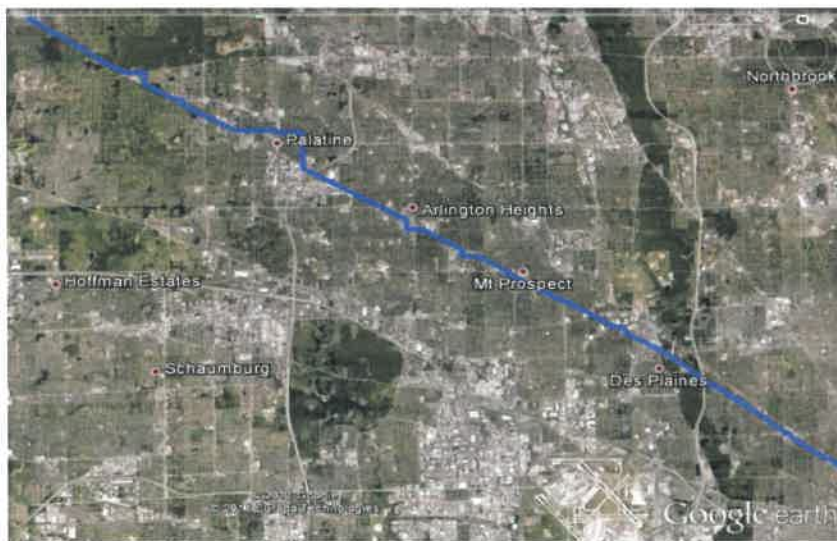
## Short-Term Alignment

The short-term alignment (23.7 miles) is an alternate that can be implemented without major infrastructure modifications. Northwest Highway is classified as a major arterial, and the conditions along the roadway make it generally unfavorable to all but the boldest cyclists. Therefore, the short-term alignment takes advantage of a number of existing parallel bike routes. The exhibit below shows an overview of the short-term alignment in RED.



## Long-Term Alignment

The long-term alignment (23 miles) primarily follows the Northwest Highway alignment. Short-term segments that deviated from the highway are mostly eliminated. Implementation will require a long-term allocation of funds to correct a number of constraints that deter bicycle travel along the arterial. Because of these existing conditions and the length of the corridor, the recommendation is made to implement the corridor in phases. The exhibit below shows an overview of the long-term alignment in BLUE.



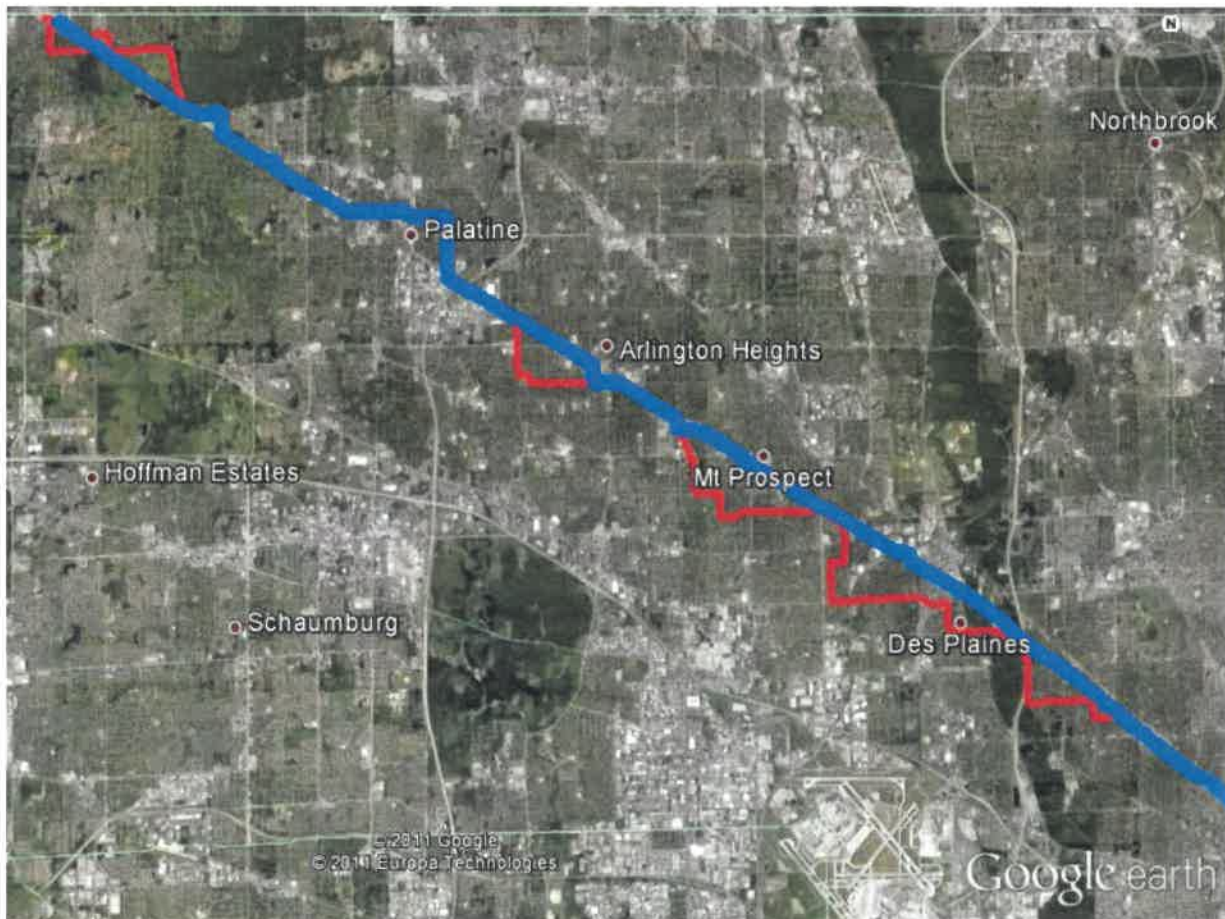


## NWMC Northwest Highway Corridor

Both the short-term and long-term alignments were provided to the NWMC and the subcommittee in the form of a Google Earth file (.kml), as well as color print exhibits zoomed in by corridor segment. In addition, a .kml file was provided that included notations at locations where key issues and opportunities were identified. Comments were solicited and several rounds of revisions were made based on subcommittee input and through an on-going evaluation of characteristics and barriers. More specific alignment information is available from NWMC staff.

## Preferred Alignment

Consensus was reached on the location of both short-term and long-term alignments and a consolidated Google Earth file was created, illustrated below. The preferred alignment extends along the corridor and takes advantage of on-street and off-street facilities including Rail-with-Trail. This alignment was also used to evaluate the feasibility of these facility types. The existing corridor segments and intersections were inventoried and comprehensively cataloged, grouping duplicative sections and intersections in a typical manner. A classification matrix was developed to organize the corridor, breaking it into typical segments and intersections. This matrix is discussed in the next chapter.



## II Catalog of Existing Corridor Conditions

Evaluating the corridor as a series of connected segments facilitates both regional and local scale examination of the corridor. The individual segments linked together show the overall alignment direction and distribution through each community as well as major connections at either end of the corridor. Individual segments illustrate specific on-the-ground conditions that need to be addressed in selecting a specific bikeway treatment for alignment construction.

The process of cataloging existing conditions resulted in a list of attributes that were common to the entire corridor. As a group, these attributes allow the corridor to be evaluated segment by segment in a consistent manner along its entire length. For ease of use, this information is summarized in a matrix for each segment and intersection. Standard corridor segments are in regular font and intersections in bold font. An explanation of each attribute in the matrix is described below:

- Segment – This column assigns an arbitrary name to the segment or intersection. The first letter of the name corresponds to the municipality.
- Municipality – The City or Village in which the segment is located.
- Alignment Description – Explains the alignment of the Northwest Highway Bikeway within that stretch of roadway. For example, the Bikeway will be routed along Northwest Highway in some locations, while in other locations it is along Busse Highway or through a Metra parking lot.
- Station – These two columns list the cross streets that identify that particular segment.
- Approximate Distance – The length of the segment from one station to the next. Length will play an important role in cost estimating as it will be multiplied by unit costs in later Tasks.
- Controlling Jurisdiction – This column lists the agency that owns or controls the right-of-way (ROW) or property of interest. Stakeholders primarily include the Illinois Department of Transportation (IDOT) and the Union Pacific Railroad (UP), as well as Metra, the municipalities, the Forest Preserve and some private owners.
- ROW – There are three ROW columns labeled IDOT, UP and Municipality. The approximate width of ROW is listed for each segment under the appropriate agency.
- Lane Configuration – How the roadway is currently configured for traffic, parking, and bike facilities (if any).
- AADT – IDOT's 2011 published Average Annual Daily Traffic Volume.

The corridor crosses dozens of major arterials, including state and county highways with varying degrees of bicycle accommodations at each intersection. Existing intersection conditions are cataloged in the matrix under “Comments” including current pedestrian and bicycle accommodations and other notes such as angled intersection created by the diagonal nature of the corridor creating unsafe crossing conditions. A sample image of the matrix is shown on the next page. To actively use this multiple page document, the table should be opened in the Appendix of this report or the original digital spreadsheet opened on a large computer screen.

Northwest Highway Classification Matrix

Segment No.	KMI Reference Code	Coding of Existing Conditions										Preferred Classification (Cross Section)	Comments	Issues/Remarks			
		Municipality	Alignment Description	From	To	Approx. Distance	Constituting Jurisdiction	DOT ROW	UP ROW	Main ROW	Lane Configuration				ADOT Source DOT MTR Volume 200		
8	B1	Birmingham	Through Metra Parking Lot	Metra Station	NW HWY 5	450	ALERA	N/A	N/A	N/A	N/A	N/A	N/A	ADOT (11-14-16)	Permit sidewalk through Metra Parking Lot	Requires easement through Metra Parking Lot	
9	B2	Birmingham	Through PRR	Metra Station Plaza	George St	450	PRR	N/A	30'	N/A	N/A	N/A	N/A	ADOT (11-14-16)	Permit sidewalk through PRR	Access through PRR	
10	B3	Birmingham	Through PRR/W HWY ROW	George St	Hillside Ave Eastern Ave	455	PRR	5'	30'	N/A	N/A	N/A	N/A	ADOT (11-14-16)	Permit sidewalk through PRR	Access through PRR	
N/A	B4	Dunwoody	Intersection of NW HWY @ Hillside/Eastern Ave	SW Corner	NE Corner	250	IDOT	0'	N/A	N/A	N/A	N/A	N/A	2380		IDOT Coordination and Approval of Ped/Bike Enhancements	
11	B5	Birmingham	West side NW HWY under Metra's Cell Cup	Hillside Ave Eastern Ave	Ed Rd	615	MDA/City of Auburn	4'	N/A	N/A	N/A	N/A	N/A	2180		Permit Lane and Coordination with Metra's Cell Cup	
N/A	B6	Dunwoody	Intersection of NW HWY at Ed Rd	NW Corner	NE Corner	180	IDOT	12'	N/A	N/A	N/A	N/A	N/A	2380 NW HWY 1180 Ed Rd		IDOT Coordination and Approval of Ped/Bike Enhancements	
12	B7	Birmingham	West side NW HWY Double Road (west of center)	Ed Rd	Per Rd	475	IDOT	10'	N/A	N/A	N/A	N/A	N/A	1830		Join sidewalk w/ (11-14-16) and major interchange	Coordinate with Permit easement through (11-14-16)
N/A	B8	Dunwoody	Intersection of Double Rd & The Road	NE Corner	SE Corner	67	IDOT	40'	N/A	N/A	N/A	N/A	N/A	1830 Double Road		Form Permit application to have ROW to Centerline of Double Road Decrease Signal Warrant and Crossing Option at Intersection	
13	B9	Palmer	Per Road	Palmer Rd	NW HWY 5	150	Palmer	N/A	N/A	6'	N/A	N/A	N/A	N/A			
14	B10	Palmer	Aviation of NW HWY Double Road (west of center)	Per Rd	Commerce St	145	MDA	9'	N/A	N/A	N/A	N/A	N/A	2530			
15	B11	Palmer	NW HWY 5	Commerce St	Shelburne Ave	235	MDA	15'	N/A	N/A	N/A	N/A	N/A	2530			
N/A	B12	Palmer	Intersection of NW HWY @ Shelburne Avenue	NW Corner	SE Corner	185	IDOT	10'	N/A	N/A	N/A	N/A	N/A	2630 NW Hwy		Sidewalk and Crossing have been added recently to intersection	



### III Alignment Feasibility: Barriers & Issues

The corridor segments were evaluated by their location in each community along the corridor. Additionally, the segments are examined with respect to the feasibility of constructing either an on-street or off-street bike facility, including a Rail-with-Trail. These segments and communities are shown in the same matrix used to catalog existing conditions in the previous chapter. The classification method is structured so that similar segment types are named consistently and are shown in the “Preferred Classification” column in the matrix. Each segment type is color coded for easier identification. This initial color scheme is expanded and refined in the following chapter that provides perspective illustrations of each segment along the corridor.

There are many barriers and constraints throughout the corridor, including major arterials with varying degrees of accommodation. The matrix addresses the individual intersections and segments that have major barriers and issues along the corridor; however, a summary of these concerns by community follows:

In **Barrington**, there are eight described alignment segments or intersections along the Northwest Highway corridor. Each of these segments has issues or barriers to implementation. These range from easement acquisition for a number of the segments, to IDOT coordination and approvals. The intersections at Hillside/Eastern Avenue (B4) and at Ela Road (B6) require IDOT coordination and approval of the pedestrian and bikeway enhancements. The intersection of Dundee Road and Doe Road requires a signal warrant determination and crossing options.

In **Palatine**, there are fourteen described alignment segments or intersections. There are no barriers for any of the segments or intersections.

In **Rolling Meadows**, there are two described alignment segments both of which have barriers: Rohlwing Road (RM1) is an angled crossing, and at Commuter Drive (RM2), the Union Pacific Railroad has an equipment depot adjacent to the railroad tracks at Rohlwing.

In **Arlington Heights**, there are twelve described alignment segments or intersections, most of which do not have barriers or concerns. There are Union Pacific Railroad ROW concerns at the Wilke Road intersection (AH2). Also, at the intersection at Euclid Avenue (AH4) the potential path route along the south side of the Northwest Highway may not be feasible with the railroad tracks immediately adjacent to the IDOT ROW.

Through the Union Pacific/Illinois Department of Transportation ROW, on the south side of the Northwest Highway (AH5), there needs to be coordination with Metra for installing the path in and around the existing parking lots. Finally, at Davis Street (AH10) there is a possible extension of side path from Sigwalt to Arthur Avenue.

In **Mount Prospect**, there are ten described alignments or intersections of the corridor, of which 50% have issues or barriers. From Melas Park to Central Avenue (MP3), there are several driveway conditions that need to be addressed. From Central Avenue to Main Street (MP5), there is limited space available between the railroad track and Mount Prospect Road. Existing landscaping and parking may need to be relocated to accommodate a proposed bike lane or bike path.

At the intersection of Prospect Avenue and Main Street (MP6), the path may not be allowed in front of the existing railroad crossing gates. Between Main Street and Emerson Street (MP7) and at the intersection of Prospect Avenue and Emerson (MP8), there is limited space available between the railroad track and Mount

## NWMC Northwest Highway Corridor

Prospect Road. Existing landscaping and parking may need to be relocated to accommodate a proposed bike lane or bike path.

In **Des Plaines**, there are eleven described alignments or intersections of the corridor, most of which have issues or barriers. Between Mount Prospect Road and Wolf Road (DP1), there are driveway conflicts on the north side of the alignment. At the Wolf Road Bridge (DP2), widening may be needed to accommodate the bike path on the north side. Between Wolf Road and the railroad viaduct (DP3), high vehicular speeds and bicyclist visibility issues need to be addressed. The Canadian Northern/Union Pacific viaduct (DP4) is a long-term reconstruction project.

Between Western and Laurel Avenue (DP6), transition to on-street bike lanes and limited ROW are barriers to implementation. Between Laurel Avenue and Des Plaines River Road (DP7), barriers include difficult geometry in the downtown area with a bus drop-off at the Metra Station and insufficient room. Next, there is a difficult crossing at the intersection of Miner Street and Des Plaines River Road (DP8) with a railroad crossing immediately adjacent to the intersection.

Between Des Plaines River Road and Busse Highway (DP9), there is limited ROW on the bridge that crosses the Des Plaines River. Between Miner Street and the city limits (DP11), the ROW needs to be examined to determine if there is sufficient width to accommodate shared lanes. Also, several businesses have parked cars in the ROW just south of Miner Street.

In **Park Ridge**, there are ten described alignments or intersections of the corridor, of which 50% have issues or barriers. Between the Des Plaines city limit and Oakton Street (PR1), the width to accommodate shared lanes needs to be confirmed. Between Oakton Street and Dee Road (PR3), the pavement width is very wide and has a five lane cross-section. Between Busse Highway and Summit Avenue (PR7), the ROW is tight and the arterial supports high traffic volumes. Between Prospect and Washington Avenues (PR9), barriers include perpendicular Metra Parking along the Union Pacific railroad on the south side of Summit Avenue. These same conditions also occur between Washington and Clark Avenues (PR10).

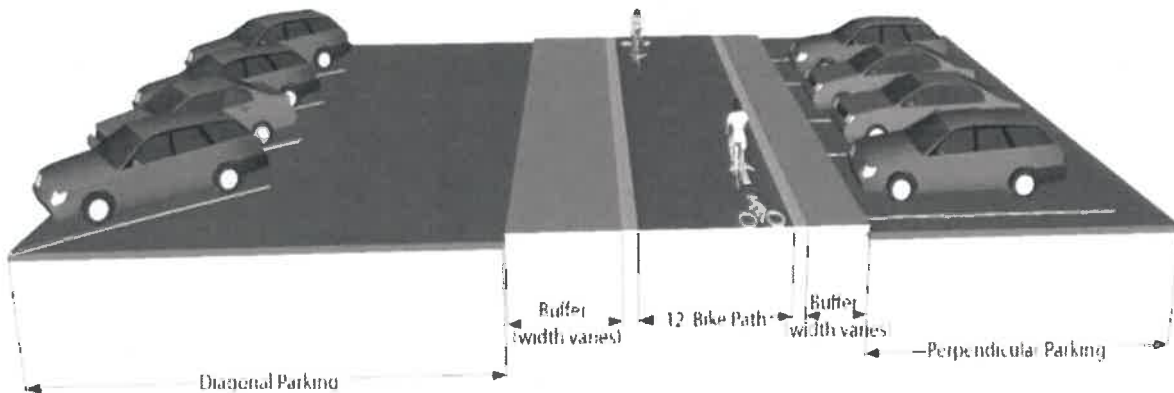
## IV Typical Alignment Cross Sections

There are fifteen typical cross sections along the corridor, that in some cases repeat themselves when conditions are similar. A visual graphic of the cross sections, along with their location on nineteen corridor segments is shown on the pages that follow and are color coded by segment (S) and cross section (C) type for easier viewing. Later in the chapter, the entire corridor is shown on a map that includes the same ordered number of segments and cross sections.

The cross-sections are located to the right of the strip map and are numbered and color coded to match the corresponding segments along the corridor. The sections are illustrated in perspective view to provide a more realistic sense of the conditions on-the-ground. Each section illustrates the location of the bike path in relationship to automobile travel lanes or other related conditions that affect the type of bike treatment to be used. The cross-sections represent typical conditions along a given segment, but not all the sections variations. A description of each segment follows below which is numbered to follow the colored strip map and cross section pages that follow.

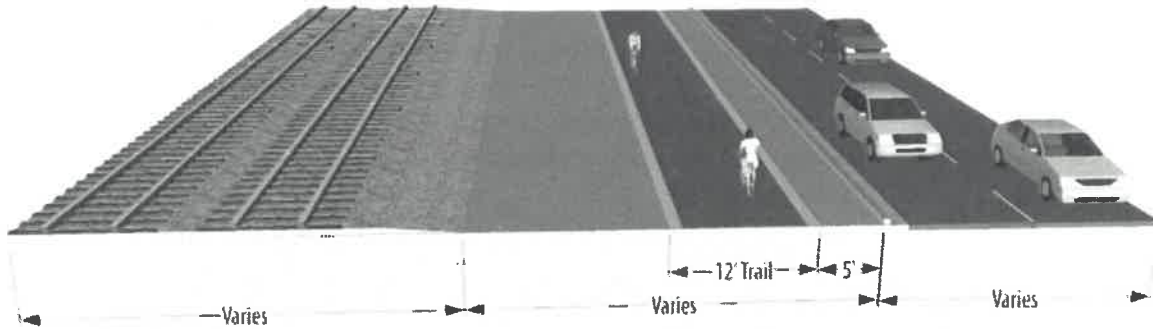
### S1/C1 Side Path-Parking Lot (Barrington)

This condition occurs where the bike path is constructed through the middle of a parking lot. The path is buffered on either side to create a physical barrier between the bicyclist and parked cars. The bike path is 12' wide, striped on the outside edges and has pavement markings to delineate the path. The width of the buffer will vary depending upon local conditions.



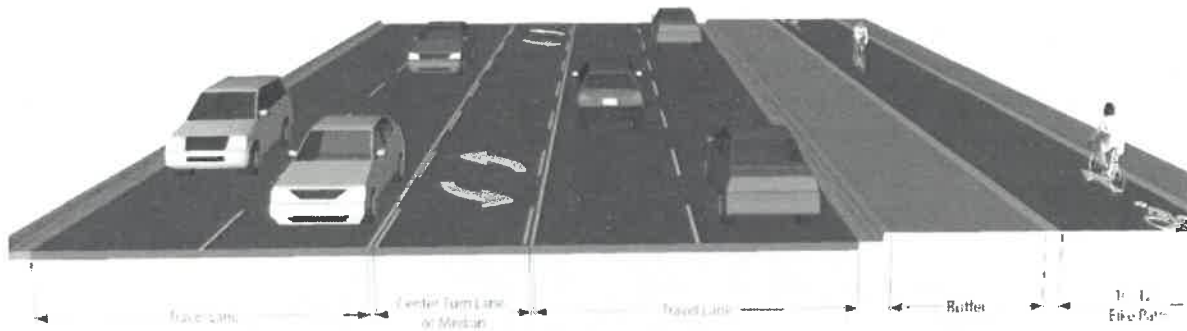
### S2/C2 Rail-with-Trail (Barrington)

This condition occurs where the bike trail is located between automobile travel lanes and railroad tracks. The bike path is 12' wide, striped on the outside edges and is buffered on either side. The buffer is 5' wide where the trail is next to a lane of traffic. The buffer width is variable between the bike trail and rail line depending on the width of the ROW. The bike trail will be located on railroad ROW and requires cooperation of the adjoining railroad.



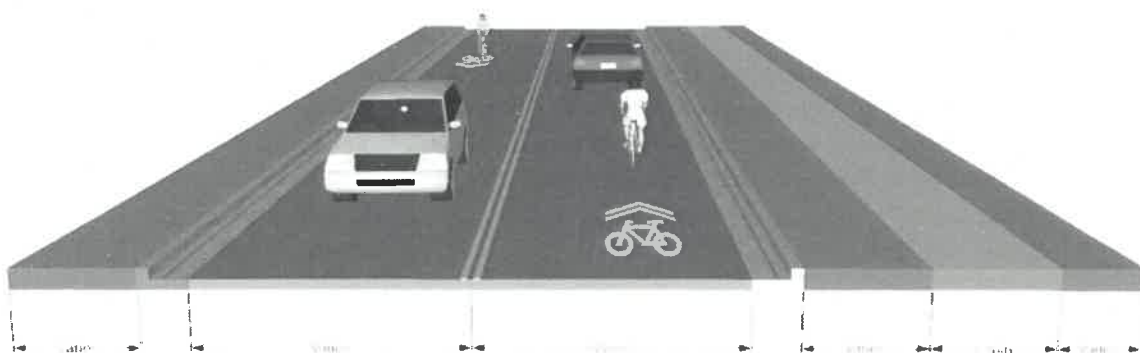
### S3/C3 Side Path–Arterial with Turn Lane (Barrington)

This condition occurs where there are two automobile travel lanes in opposite directions separated by a turn lane or median. The bike path is 12' wide, striped on the outside edges with pavement markings and is buffered on either side. The width of the buffered area varies depending on the local conditions. The buffered area protects the bicyclist from automobile traffic and provides a lane of separation from adjacent land uses.



### S4/C4 Shared Lane (Palatine)

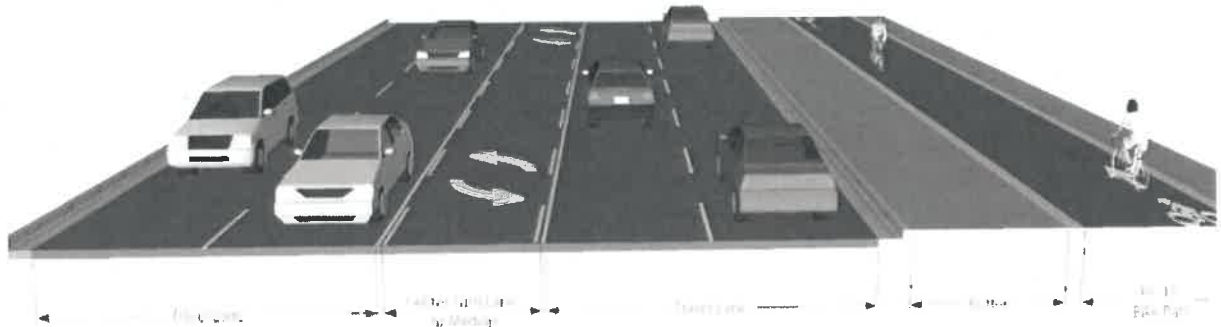
This condition occurs where the bicyclist shares the roadway with automobiles. In some cases, there is existing sidewalk (5' min.) for pedestrians that parallels the shared roadway. The width of Shared Lane varies depending on the local condition. Pavement markings alert cars to the shared use of the roadway.





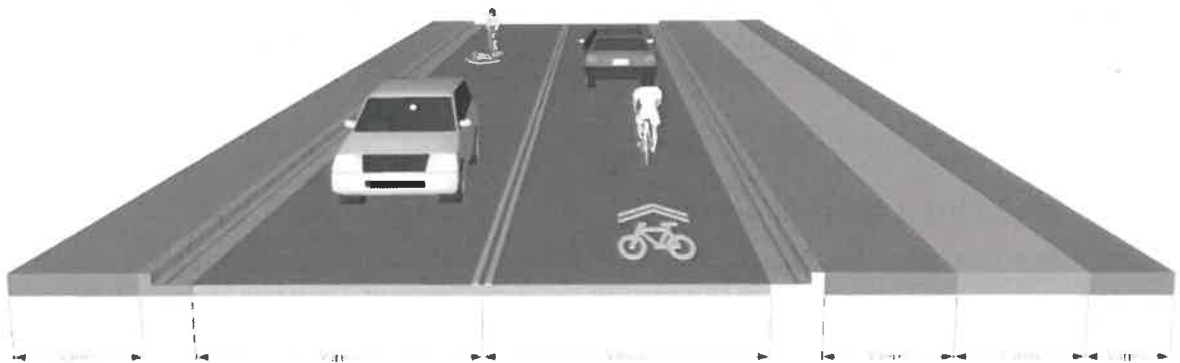
### S5/C3 Side Path–Arterial with Turn Lane (Palatine)

This condition occurs where there are two automobile travel lanes in opposite directions separated by a turn lane or median. The bike path is 12' wide, striped on the outside edges with pavement markings and is buffered on either side. The width of the buffered area varies depending on the local conditions. The buffered area protects the bicyclist from automobile traffic and provides a lane of separation from adjacent land uses.



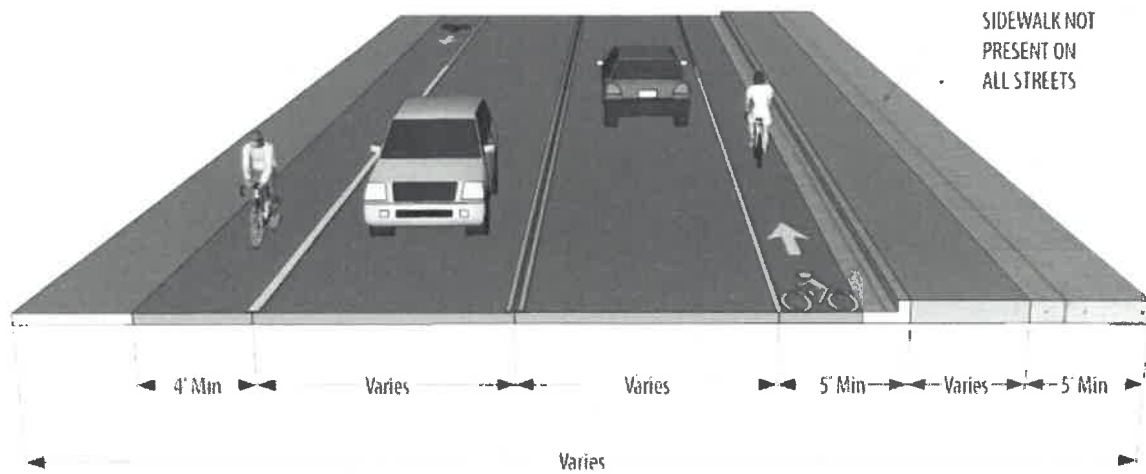
### S6/C4 Shared Lane (Palatine)

This condition occurs where the bicyclist shares the roadway with automobiles. In some cases, there is existing sidewalk (5' min.) for pedestrians that parallels the shared roadway. The width of Shared Lane varies depending on the local condition. Pavement markings alert cars to the shared use of the roadway.



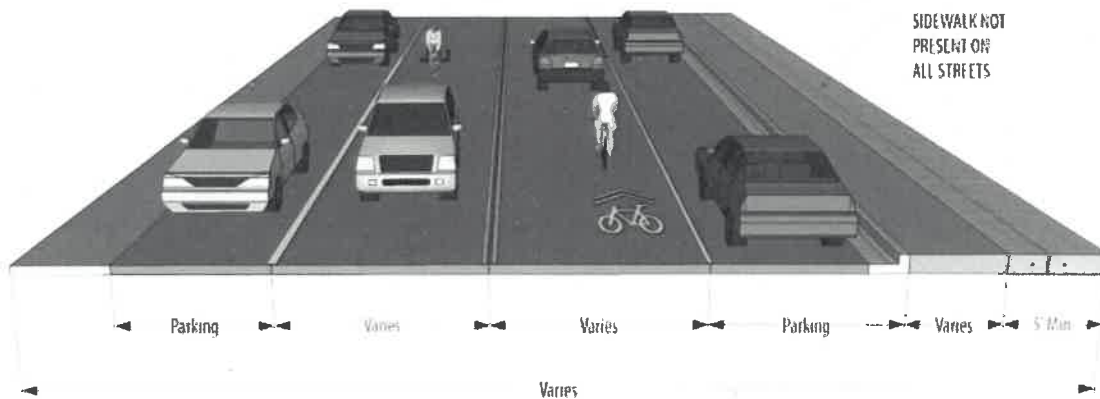
### S7/C5 Bike Lane (Palatine)

This condition occurs where the bicyclist rides along side traffic in a lane that consists of a white stripe to physically separate cars and bicycles. A painted bike symbol with arrows and signs signify the purpose of the lane. Although the width of the automobile traffic lane varies, the minimum width of the bike lane is 4'. A buffered section borders the bike lane which varies with local conditions.



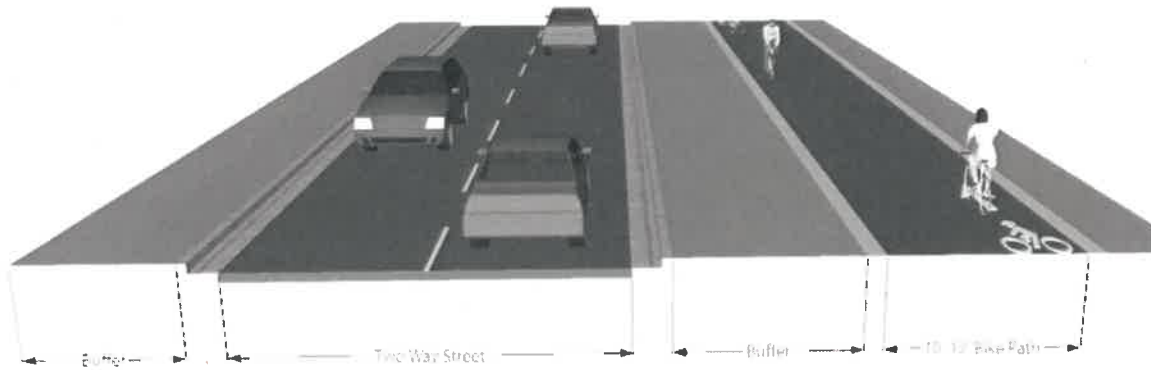
### S8/C6 Shared Lane-with Parking (Palatine)

This condition occurs where the bicyclist shares the roadway with automobiles and parked cars. In some cases, there is existing sidewalk (5' min.) for pedestrians that parallels the shared roadway. The width of shared lane varies depending on the local condition. Pavement markings alert cars to the shared use of the roadway.



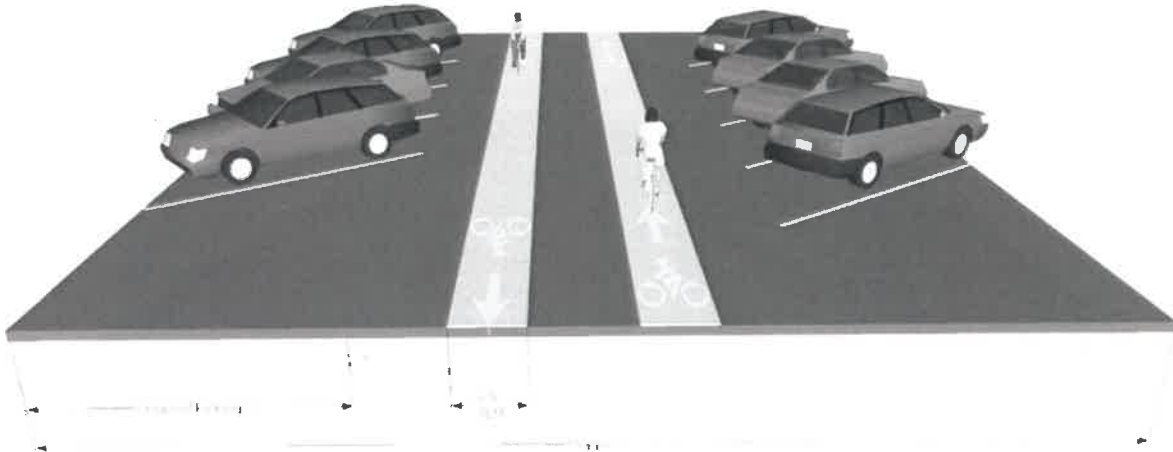
### S9/C7 Side Path-Local (Palatine, Rolling Meadows)

This condition occurs where automobile and bicycle traffic are separated by a buffered zone. The width of the buffer area changes according to local conditions, however, the bike path is 12' wide, striped on its outside edges and has pavement markings.



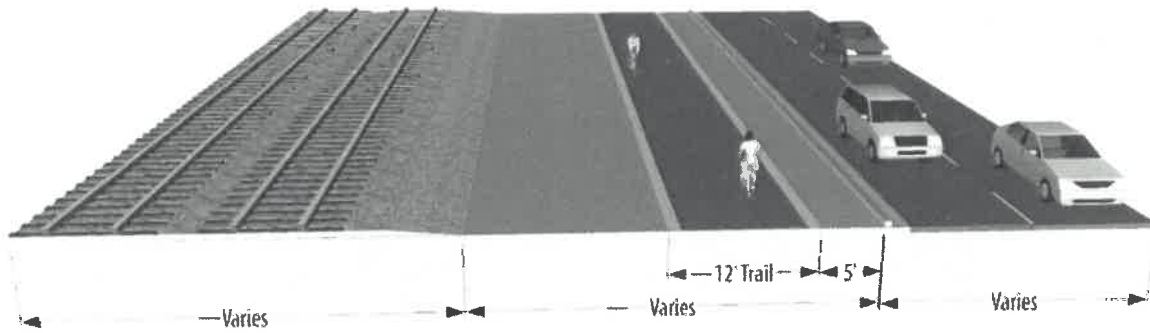
### S10/C8 Shared Lane-in Parking Lot (Arlington Heights)

This condition occurs where the bicycle path is constructed through an existing parking lot. Unlike the previous parking scenario in cross section one, bicycles ride in the center lane between diagonally parked cars. There is no buffered area outside the bike lane. Two single marked pavement lanes 3.5' wide, accommodate bicyclists traveling in opposite directions.



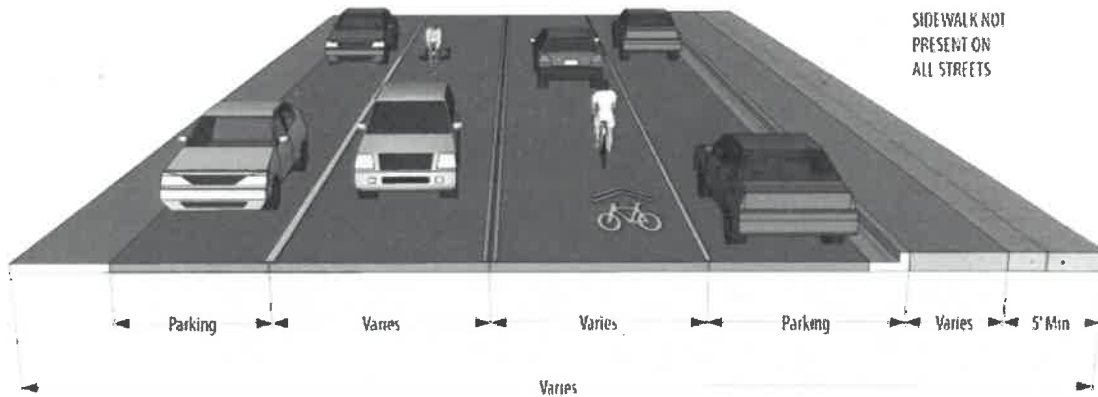
### S11/C2 Rail-With-Trail (Arlington Heights)

This condition occurs where the bike trail is located between automobile travel lanes and railroad tracks. The bike path is 12' wide, striped on the outside edges and is buffered on either side. The buffer is 5' wide where the trail is next to a lane of traffic. The buffer width is variable between the bike trail and rail line depending on the width of the ROW. The bike trail will be located on railroad ROW and requires cooperation of the adjoining railroad.



### S12/C6 Shared Lane-with Parking (Arlington Heights)

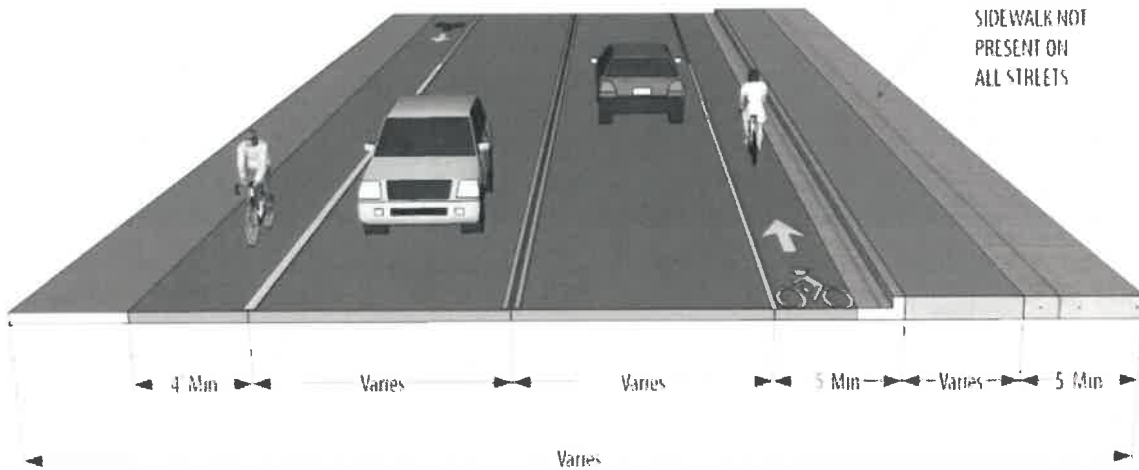
This condition occurs where the bicyclist shares the roadway with automobiles and parked cars. In some cases, there is existing sidewalk (5' min.) for pedestrians that parallels the shared roadway. The width of shared lane varies depending on the local condition. Pavement markings alert cars to the shared use of the roadway.



### S13/C5 Bike Lane (Arlington Heights)

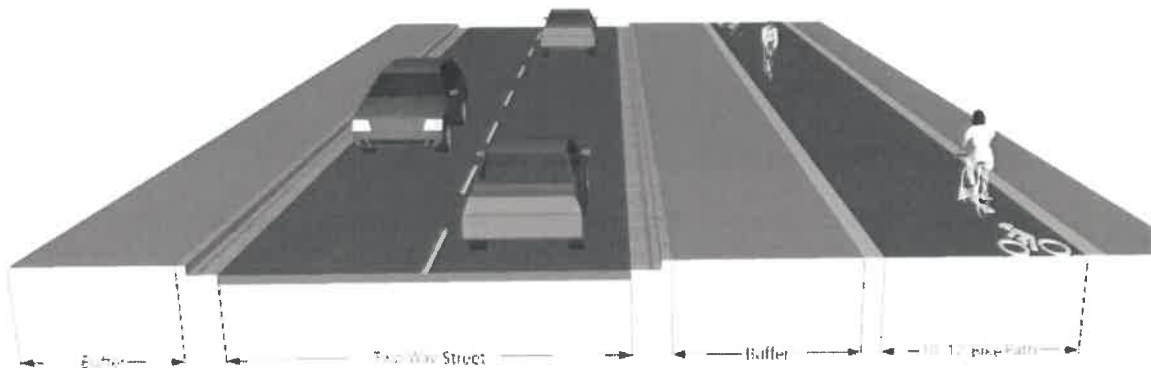
This condition occurs where the bicyclist rides along side traffic in a lane that consists of a white stripe to physically separate cars and bicycles. A painted bike symbol with arrows and signs signify the purpose of the lane. Although the width of the automobile traffic lane varies, the minimum width of the bike lane is 4'. A buffered section borders the bike lane which varies with local conditions.





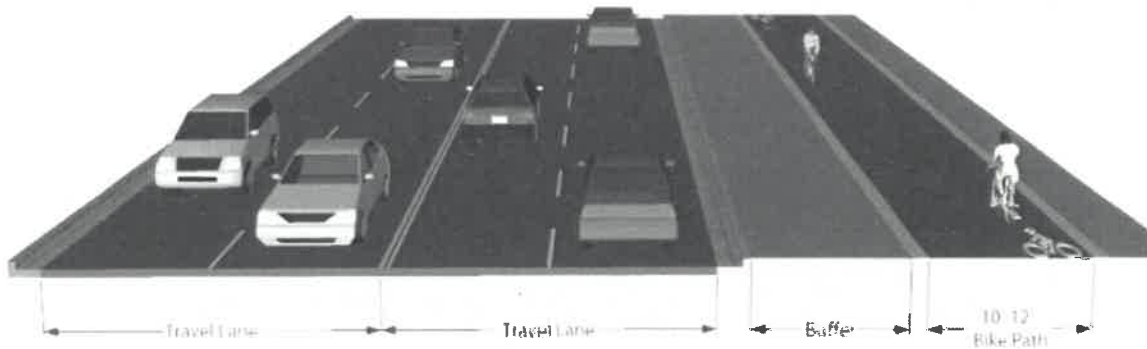
### S14/C7 Side Path-Local (Arlington Heights, Mount Prospect)

This condition occurs where automobile and bicycle traffic are separated by a buffered zone. The width of the buffer area changes according to local conditions, however, the bike path is 12' wide, striped on its outside edges and has pavement markings.



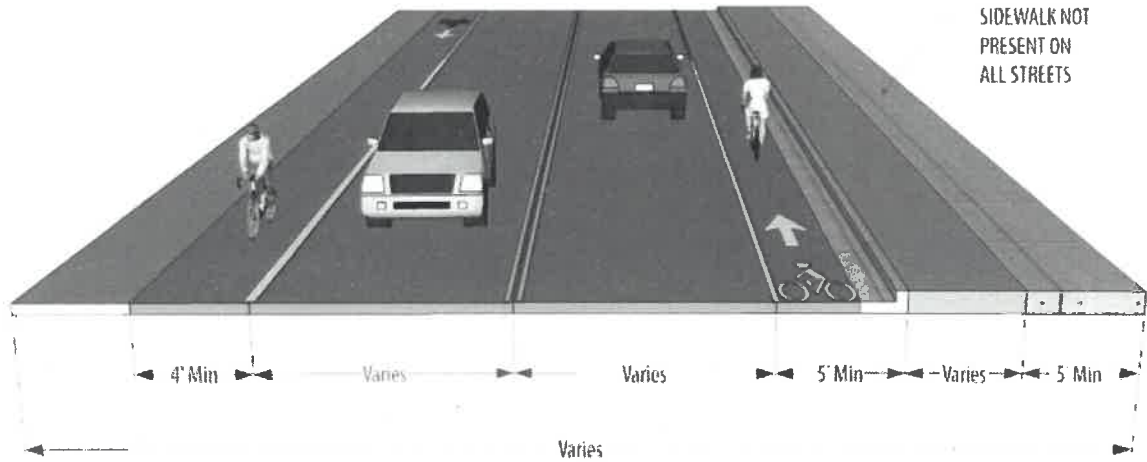
### S15/C12 Side Path-Arterial No Median (Mount Prospect, Des Plaines)

This condition occurs where there is a divided highway with no center median or parking. The bike path is separated from the roadway by a buffered area that would vary in width according to local conditions. The bike path is 12' wide, striped on its outside edges and has pavement markings. There is another buffered area next to the path to separate the bicyclist from adjacent land uses.



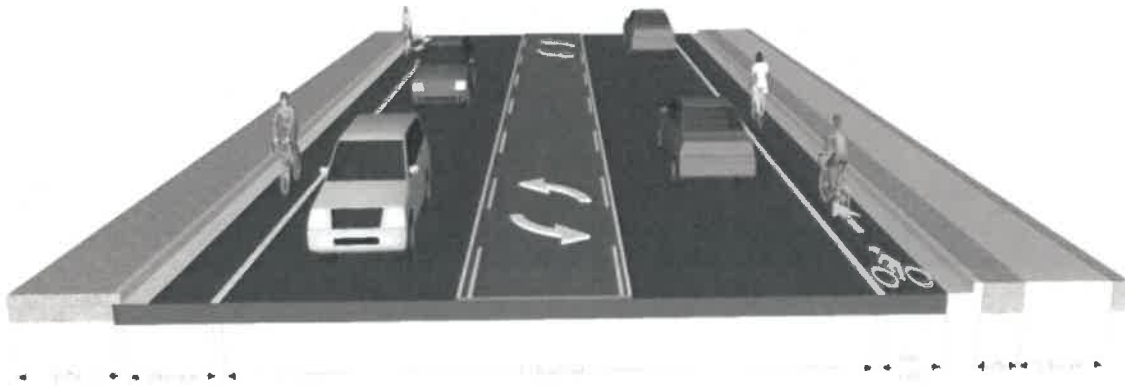
### S16/C5 Bike Lane (Des Plaines)

This condition occurs where the bicyclist rides along side traffic in a lane that consists of a white stripe to physically separate cars and bicycles. A painted bike symbol with arrows and signs signify the purpose of the lane. Although the width of the automobile traffic lane varies, the minimum width of the bike lane is 4'. A buffered section borders the bike lane which varies with local conditions. This section of roadway has four lanes. The implementation of this section of bike lane should be thought of as a long-term project because of ROW concerns.



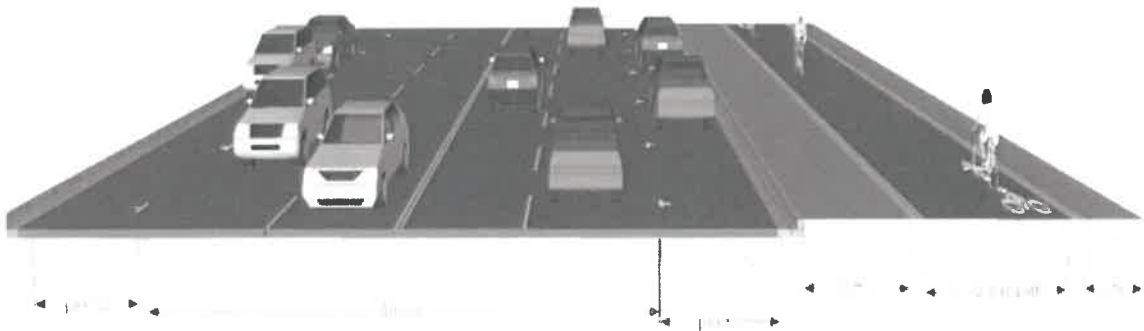
### S17/C13 Bike Lane-Road Diet (Des Plaines, Park Ridge)

This condition occurs where a lane reduction is recommended, removing one travel lane to accommodate bike lane development. The result would be two lanes of opposite directional traffic with a turn lane in the center. Bike lanes would be on either side of the traffic lanes separated by a white line. A buffer area exists between the bike lane and adjacent sidewalk (in some cases) to separate these uses.



### S18/C14 Side Path-Arterial with Parking (Park Ridge)

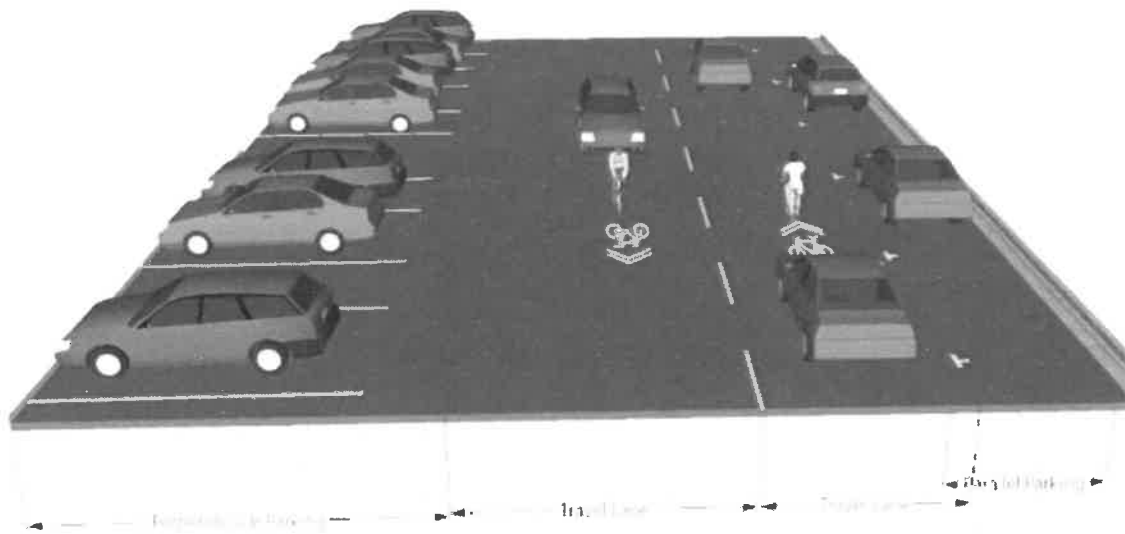
This condition occurs where there is a divided highway with parallel parking on either side. A 12' wide bike path, striped on its outside edges with pavement markings, would be constructed to one side of the roadway between two buffered areas. The width of the buffer area would vary depending on local conditions.



### S19/C15 Shared Lane-with Parking (Park Ridge/Chicago)

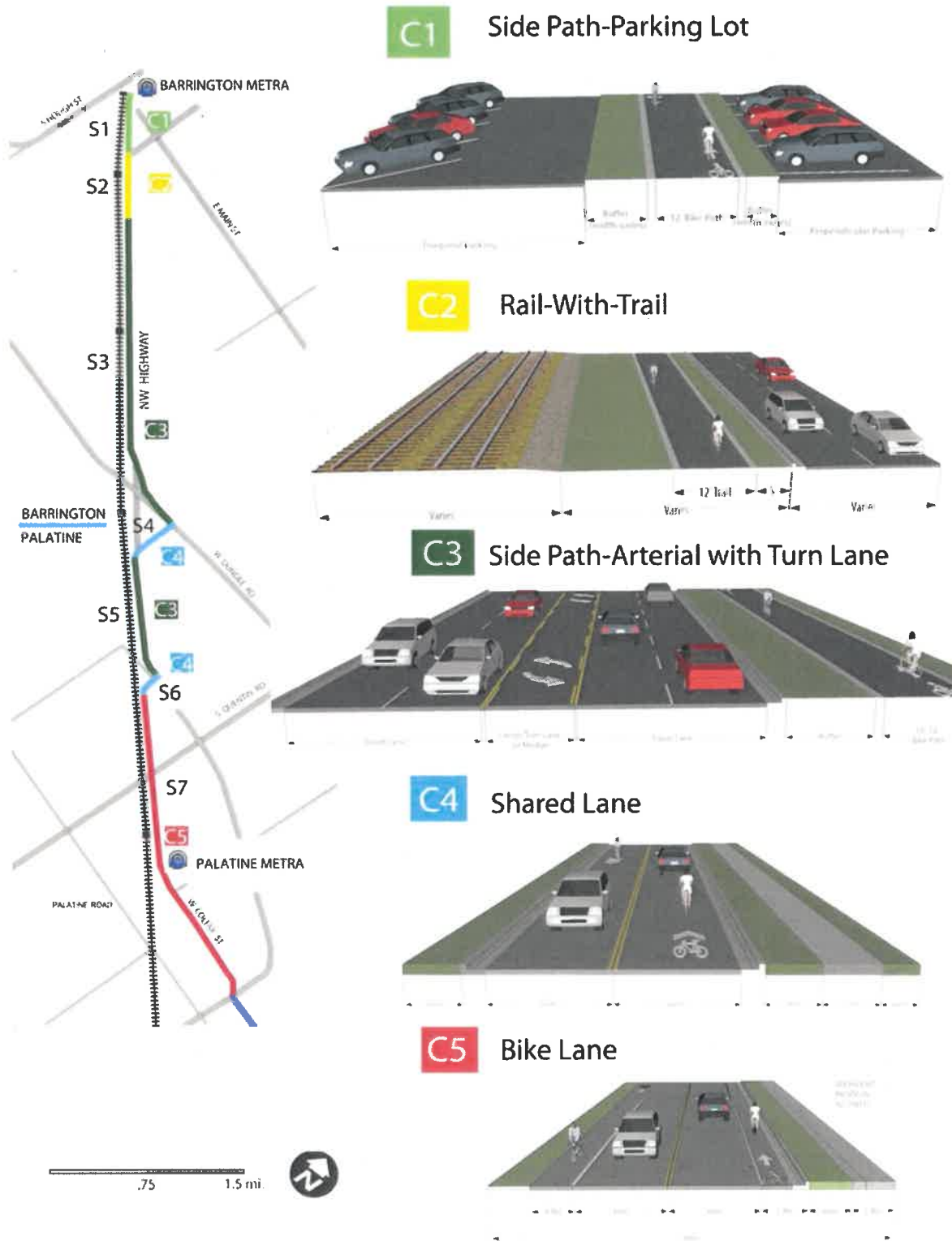
This condition occurs where there is one lane of divided traffic with both parallel and perpendicular parking on either side. Bicyclists would share the traffic lane which would have pavement markings to indicate shared use. Sidewalk adjacent to the roadway exists in some locations which is buffered on either side. The width of the buffer area varies dependent on local conditions.

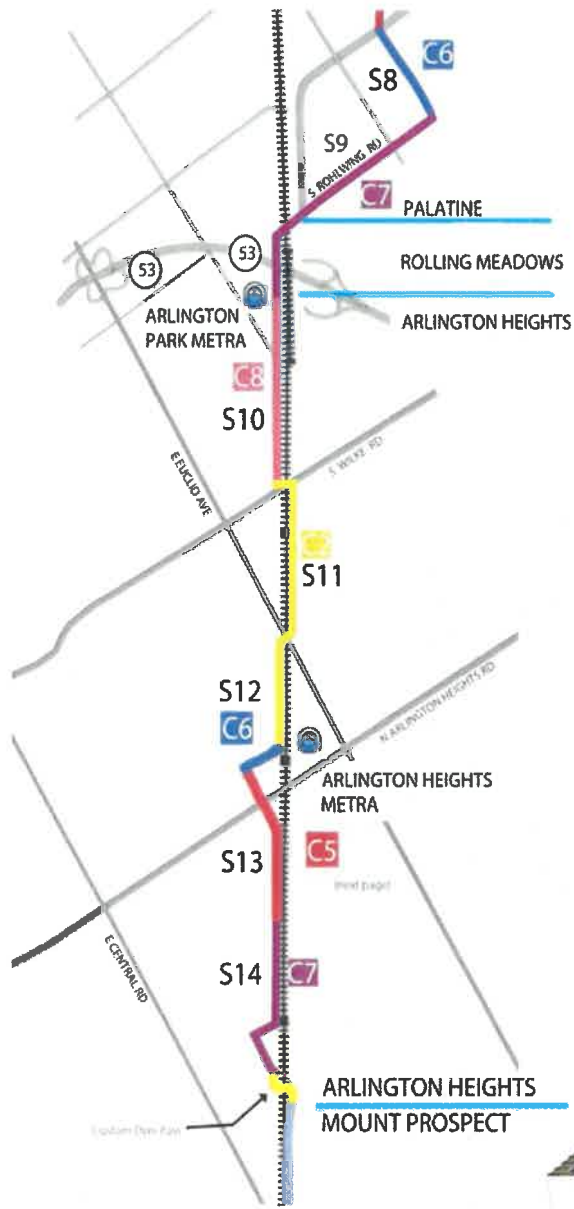
NWMC Northwest Highway Corridor





# Northwest Highway Corridor View





**C6** Shared Lane-Parking



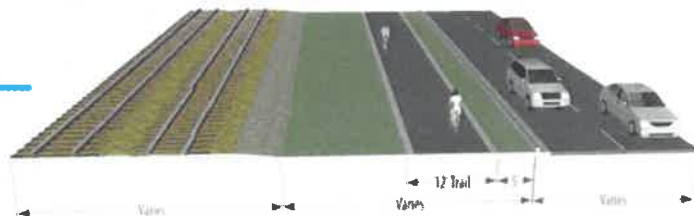
**C7** Side Path-Local



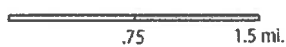
**C8** Shared Lane-in Parking Lot



**C2** Rail-With-Trail



**Custom Condition**



NWMC Northwest Highway Corridor



**C5** Bike Lane



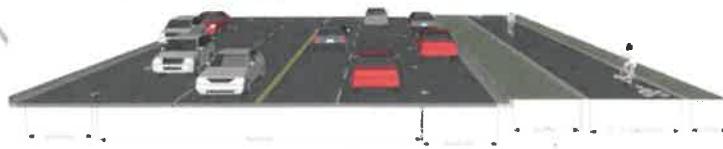
**C12** Side Path-Arterial (no Median)



**C13** Bike Lane-Road Diet



**C14** Side Path-Arterial with Parking



**C15** Shared Lane-with Parking



## V Cost Estimate

### Development of Opinion of Probable Cost

The Opinion of Probable Cost includes preliminary estimates of construction costs based upon the recommended bikeway alignment for the Northwest Highway Corridor. Important assumptions used to arrive at these estimates include:

- All costs are in 2012 dollars (partially based on recent city bids)
- Costs do not include property acquisition, utilities, and custom overpasses/underpasses
- Standard construction methods and materials are used

In developing these cost estimates, we have relied upon our experience with similar bikeway projects to select the construction materials with the best life-cycle cost and performance characteristics. Since these preliminary estimates are based on a planning-level understanding of trail components, rather than on a detailed design, they should be considered as “Order of Magnitude<sup>1</sup>”. This broad range of potential costs is appropriate given the level of uncertainty in the design at this point in the process. Many factors can affect final construction costs, including:

- Final construction phasing
- Selected alignment
- Revisions to the design as required by local, state and federal permitting agencies
- Additional requirements imposed by property owners as a condition of granting property rights (e.g., fencing, vegetated buffers, etc.)
- Fluctuations in commodity prices during the design and permitting processes
- Selected construction materials
- Type and quantity of amenities (e.g., benches, lighting, bike racks, etc.)
- Extent of landscaping desired
- Availability of donated materials and volunteer labor
- Property Acquisition

As the project progresses through preliminary, semi-final and final design phases, these uncertainties begin to diminish. With each round of refinement, a range of expected construction costs will become more accurately known.

### Summary of Costs by Cross Section Type

Due to the preliminary phase of the project, this section provides a breakdown of the average cost per linear foot for each preferred trail classification or treatment (i.e., Rail with Trail, Side Path, Shared Bike Lane, etc.) The average cost per linear foot is derived from costs associated with signage/ striping and hardscape improvements, which are listed on the Master Unit Cost sheet. The average cost per linear foot is to be applied to the approximate distance for each proposed segment in order to develop an Opinion of Probable Cost. A more detailed spreadsheet of information is provided with this plan for more detailed review.

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<sup>1</sup> Cost estimates should be considered as “Order of Magnitude”. American Society for Testing and Materials (ASTM) Standard E2620 defines Order of Magnitude as being accurate to within plus 50% or minus 30%.



**NWMC Northwest Highway Corridor**

**S1/C1 Side Path-Parking Lot**

Signing and Striping Items-Cost per Linear Foot	\$ 1.59
Hardscape Items-Cost per Linear Foot	\$ 128.48
<b>Total</b>	<b>\$ 130.07</b>

**S2, S11/C2 Rail-With-Trail**

Signing and Striping Items-Cost per Linear Foot	\$ 1.59
Hardscape Items-Cost per Linear Foot	\$ 121.68
<b>Total</b>	<b>\$ 123.28</b>

**S3, S5/C3 Side Path-Arterial with Turn Lane**

Signing and Striping Items-Cost per Linear Foot	\$ 1.59
Hardscape Items-Cost per Linear Foot	\$ 121.68
<b>Total</b>	<b>\$ 123.28</b>

**S4, S6/C4 Shared Lane**

Signing and Striping Items-Cost per Linear Foot	\$ 1.07
Hardscape Items-Cost per Linear Foot	\$ ----
<b>Total</b>	<b>\$ 1.07</b>

**S7, S13, S16/C5 Bike Lane**

Signing and Striping Items-Cost per Linear Foot	\$ 6.01
Hardscape Items-Cost per Linear Foot	\$ ----
<b>Total</b>	<b>\$ 6.01</b>

**S8, S12/C6 Shared Lane-Parking**

Signing and Striping Items-Cost per Linear Foot	\$ 1.07
Hardscape Items-Cost per Linear Foot	\$ ----
<b>Total</b>	<b>\$ 1.07</b>

**S9, S14/C7 Side Path-Local**

Signing and Striping Items-Cost per Linear Foot	\$ 1.59
Hardscape Items-Cost per Linear Foot	\$ 121.68
<b>Total</b>	<b>\$ 123.28</b>

**S10/C8 Shared Lane-in Parking Lot**

Signing and Striping Items-Cost per Linear Foot	\$ 1.07
Hardscape Items-Cost per Linear Foot	\$ ----
<b>Total</b>	<b>\$ 1.07</b>

**S15/C12 Side Path-Arterial (No Median)**

Signing and Striping Items-Cost per Linear Foot	\$ 1.59
Hardscape Items-Cost per Linear Foot	\$ 121.68
<b>Total</b>	<b>\$ 123.28</b>

**S17/C13 Bike Lane-Road Diet**

Signing and Striping Items-Cost per Linear Foot	\$ 6.73
Hardscape Items-Cost per Linear Foot	\$ ----
<b>Total</b>	<b>\$ 6.73</b>

**S18/C14 Side Path-Arterial with Parking**

Signing and Striping Items-Cost per Linear Foot	\$ 1.59
Hardscape Items-Cost per Linear Foot	\$ 121.68
<b>Total</b>	<b>\$ 123.28</b>

**S19/C15 Shared Lane-with Parking**

Signing and Striping Items-Cost per Linear Foot	\$ 1.07
Hardscape Items-Cost per Linear Foot	\$ ----
<b>Total</b>	<b>\$ 1.07</b>

The Table 1.0 on the next page, summarizes the total cost for each segment based upon the price per linear foot for striping and hardscape detailed above. Segments are numbered in order, starting in Barrington and ending in Chicago. Cross section types are numbered and are repeated in some segments when conditions are similar. The approximate length in linear feet is provided for each segment as well as cost per linear foot.

Table 1.0 Summary of Total Cost per Segment

Seg No.	Cross Section No.	Community	Length in LF	Cross Section Type	Cost/LFT	Total Cost
S1	C1	Barrington	1,095	Side Path-Parking Lot	\$130.07	\$142,426.65
S2	C2	Barrington	2,420	Rail-With-Trail	\$123.28	\$298,337.60
S3	C3	Barrington	11,100	Side Path - Arterial with Turn Lane	\$123.28	\$1,368,408.00
S4	C4	Palatine	1,550	Shared Lane	\$1.07	\$1,658.50
S5	C3	Palatine	4,700	Side Path-Arterial with Turn Lane	\$123.28	\$579,416.00
S6	C4	Palatine	550	Shared Lane	\$1.07	\$588.50
S7	C5	Palatine	11,120	Bike Lane	\$6.01	\$66,831.20
S8	C6	Palatine	2,750	Shared Lane-Parking	\$1.07	\$2,942.50
S9	C7	Palatine/Rolling Meadows	5,625	Side Path-Local	\$123.28	\$693,450.00
S10	C8	Arlington Heights	4,850	Shared Lane-in Parking Lot	\$1.07	\$5,189.50
S11	C2	Arlington Heights	7,015	Rail-With-Trail	\$123.28	\$864,809.20
S12	C6	Arlington Heights	1,400	Shared Lane-Parking	\$1.07	\$1,498.00
S13	C5	Arlington Heights	4,362	Bike Lane	\$6.01	\$26,215.62
S14	C7	Arlington Heights/Mount Prospect	4,715	Side Path-Local	\$123.28	\$581,265.20
S15	C12	Mount Prospect/Des Plaines	19,345	Side Path-Arterial (no Median)	\$123.28	\$2,384,851.60
S16	C5	Des Plaines	3,210	Bike Lane	6.01	\$19,292.1
S17	C13	Des Plaines/Park Ridge	13,900	Bike Lane-Road Diet	\$6.73	\$93,547.00
S18	C14	Park Ridge	2,750	Side Path-Arterial with Parking	\$123.28	\$339,020.00
S19	C15	Park Ridge/Chicago	3,360	Shared Lane-with Parking	\$1.07	\$3,595.20
					<b>Total</b>	<b>\$7,473,342.37</b>

## VI Implementation Plan

This section incorporates data from sixty-seven identified alignments or intersections (segments) along the Northwest Highway corridor, spread out across seven municipalities. There are several ways to implement large sections of the corridor. The first way is to begin with the segments with the lowest cost throughout the corridor. The second approach is to identify which communities have the largest number of segments with the least amount of barriers or issues to construction. The third approach is to identify segments that cross through two communities that could be worked on together to complete the entire segment leveraging the abilities of both communities. This section discusses all three of these approaches.

Using the data provided in the cross-sections in Chapter V, there are six segments which are estimated to cost less than \$10,000 to implement. These sections range between 550' and 4,850' in length and use shared lane construction methods. The communities with these segments are Palatine, Arlington Heights, and Park Ridge. Next, there are four segments that cost between \$10,000 and \$100,000 to implement and range from 3,210' to 13,900' in length. These segments make use of bike lane, bike lane with road diet and are in the communities of Arlington Heights, Palatine, Des Plaines and Park Ridge.

Between \$100,000 and \$500,000 there are three segments that range from 1,095' to 2,750' in the communities of Park Ridge and Barrington. These segments require side path or rail with trail construction methods. There are four segments with a cost between \$500,000 and 1 million dollars. These segments range in length between 4,700' and 7,015' in the communities of Arlington Heights, Mount Prospect, Palatine and Rolling Meadows. These segments, use side path and rail with trail construction methods.

The most expensive segments to implement are over 1 million dollars. Two segments fall into this category and range in length from 11,110' to 19,345'. These segments develop the corridor along major arterials and are in the communities of Barrington, Mount Prospect and Des Plaines. Since the cost of construction is not correlated to the length of the segment, the areas to implement first would be those with the lowest cost. The table below summarizes and ranks the segments from lowest to highest cost:

Total Cost	Distance in LF	Cost/LF	Community	Cross Section Type	Segment No.
\$588.50	550	\$1.07	Palatine	Shared Lane Parking	S6
\$1,498.00	1,400	\$1.07	Arlington Heights	Shared Lane-Parking	S12
\$1,658.50	1,550	\$1.07	Palatine	Shared Lane	S4
\$2,942.50	2,750	\$1.07	Palatine	Shared Lane- Parking	S8
\$3,595.20	3,360	\$1.07	Park Ridge	Shared Lane with Parking	S19
\$5,189.50	4,850	\$1.07	Arlington Heights	Shared Lane in Parking Lot	S10

**NWMC Northwest Highway Corridor**

\$19,292.10	3,210	\$6.01	Des Plaines	Bike Lane	S16
\$26,215.62	4,362	\$6.01	Arlington Heights	Bike Lane	S13
\$66,831.20	11,120	\$6.01	Palatine	Bike Lane	S7
\$93,547.00	13,900	\$6.73	Des Plaines/Park Ridge	Bike Lane - Road Diet	S17
\$142,426.65	1,095	\$130.07	Barrington	Side Path Parking Lot	S1
\$298,337.60	2,420	\$123.28	Barrington	Rail with Trail	S2
\$339,020.00	2,750	\$123.28	Park Ridge	Side Path- Arterial with Parking	S18
\$579,416.00	4,700	\$123.28	Palatine	Side Path-Arterial with Turn Lane	S5
\$581,265.20	4,715	\$123.28	Arlington Heights/Mount Prospect	Side Path - Local	S14
\$693,450.00	5,625	\$123.28	Palatine/Rolling Meadows	Side Path-Local	S9
\$864,809.20	7,015	\$123.28	Arlington Heights	Rail with Trail	S11
\$1,368,408.00	11,100	\$123.28	Barrington	Arterial with Turn Lane	S3
\$2,384,851.60	19,345	\$123.28	Mount Prospect/Des Plaines	Side Path- Arterial (no Median)	S15
<b>\$7,475,653.57</b>	<b>Total</b>				

The next approach begins by identifying which municipalities have the largest percentage of the corridor segments in their community based upon the matrix presented in Chapter 2. Although this measure does not rank the importance of any one segment over another, the data provides an indication of which municipalities will have the largest number of segments to implement. Implementing these segments as a group will result in large portions of the corridor being completed with other smaller segments to follow.

The number of segments per municipality ranges from 2 to 14. With such a large range, removing the high and low number of segments, results in an average of about 10 segments per community. The municipalities around this average are: **Mount Prospect** and **Park Ridge** with 10 segments of the corridor to implement. **Des Plaines** has 11 segments, **Arlington Heights** has 12 and **Palatine** with the greatest number of segments has 14. The lowest number of segments is 2 in the community of **Rolling Meadows**. The community of **Barrington** has 8 segments. Therefore, the community of **Palatine** has the largest portion of the corridor to construct.



## NWMC Northwest Highway Corridor

The next important measure to consider is the extent of barriers or issues related to the implementation of corridor segments in each community. These concerns need to be addressed before implementation can take place. Starting with **Palatine**, there are no barriers or issues to implementation. **Arlington Heights**, which has the next largest number of segments to implement, has barriers or concerns with 30% of their segments. In **Des Plaines**, the community with the third largest number of segments to implement, has concerns with 82% of its segments. In the middle of the range, **Mount Prospect** and **Park Ridge** have concerns with 50% of their segments. Finally, **Barrington** and **Rolling Meadows** have barriers or concerns with 100% of the segments in their respective communities.

Based on the data to this point, the priority community for segment implementation is **Palatine**, which not only has the largest number of segments, but also has no barriers or issues to implementation. **Arlington Heights**, which has the next highest number of segments to implement (12), has only 30% of the corridor having issues. **Mount Prospect** and **Park Ridge** would rank together, having issues with 50% of their segments.

**Des Plaines**, although having the third largest number of segments to implement, has the second greatest percentage (82%) of barriers and issues to overcome. The lowest ranking communities for short-term implementation would be **Barrington** and **Rolling Meadows**, which have barriers and issues with 100% of their segments. Although this quantitative approach does not weigh the difficulty of overcoming or dealing with each barrier, making significant conclusions would be difficult without knowing the internal process or priority of each municipality to deal with a range of issues.

Taking into consideration the controlling jurisdiction for each segment is an important measure of municipality control and decision making authority. These two factors influence the ability of a municipality to quickly or easily work to implement a given segment of the corridor. The matrix referenced in Chapter IV shows the controlling jurisdiction for each segment by community. Quantifying this measure with the priority communities determined thus far will refine this implementation scheme to the next level.

Comparing **Palatine** with **Arlington Heights**, almost 60% of the segments are in **Palatine's** jurisdiction compared to 50% in **Arlington Heights**. **Mount Prospect** has 50% of the segments in its jurisdiction compared to 30% in **Park Ridge**. **Des Plaines**, **Barrington** and **Rolling Meadows** have none of the corridor segments in their jurisdiction.

In conclusion, the priority for implementation would be in the community of **Palatine**, which has the greatest number of corridor segments, no barriers or issues to construction and has a high percentage of jurisdictional control (60%) over the corridor. **Arlington Heights** would be the next focus for corridor development with the second largest number of segments, some barriers and issues and slightly less jurisdictional control than **Palatine**.

**Mount Prospect** would be the next focus area with 10 segments, 50% barriers and 50% of the corridor in their jurisdiction. **Park Ridge** is very similar in the number of segments and barriers, but has less jurisdictional control than **Mount Prospect**. As a group, **Des Plaines**, **Barrington** and **Rolling Meadows** have many barriers to overcome and have no jurisdictional control, however, **Des Plaines** has a larger number of corridor segments in its community with slightly fewer barrier issues.

The last approach identifies communities that have segments going through two communities. There are four segments that meet this criteria that cost greater than \$10,000 to implement. There is a 11,120' segment that runs between Palatine and Rolling Meadows. Another 17,110' segment goes through the communities of Des Plaines and Park Ridge that requires lane removal to construct this section of the corridor. A 4,714' segment,

at a cost of over \$500,000, runs through the communities of Arlington Heights and Mount Prospect. Finally, there is a 19,345' section of the corridor, at a cost of over 2 million dollars, that crosses through Mount Prospect and Des Plaines.

## VII Funding Opportunities

The Northwest Highway bikeway corridor improvement plan is comprised of a myriad of projects, ranging from striping and signing existing roadways to constructing tunnels under railroads. All of these projects will take financial investments by the individual communities or the region. This section will assist in understanding the various funding sources that could help realize the goal of building the Northwest Highway Bikeway, and be in an excellent position to capture funding as opportunities arise.

### Primary Sources for Bikeway Project Funding

Generally, bikeway project funding comes primarily from either the State of Illinois or federal government sources. In both cases, state agencies are charged with administering those funds. The rules for administering these programs vary largely because of the source of those funds. The largest programs (in terms of funds available) are IDNR's Bike Path Grant Program, and IDOT's ITEP (Illinois Transportation Enhancements) and CMAQ (Congestion Mitigation and Air Quality) Programs.

The following funding programs were considered to be the most likely sources to pursue for the Northwest Highway Bikeway.

- Illinois Transportation Enhancement Program
- Congestion Mitigation and Air Quality Improvement Program (CMAQ)
- Illinois Bike Path Grant Program
- Surface Transportation Program-Urban Program
- Motor Fuel Tax
- Local Capital Improvement Programs
- Sales Tax / Revenue Enhancement Initiatives
- Local Private-Sector Funding

The following pages describe in more detail each of these programs or funding opportunities. Table 2.0 on the next page summarizes these programs. A detailed description of each program with additional information follows.

Table 2.0 Summary of Funding Sources

Program	Administration	Funds Available	Project Size Limit	Who Can Sponsor	URL	Contact
<b>Illinois Transportation Enhancement Program.</b> The goal is to allocate resources to well-planned projects that provide and support alternate modes of transportation enhance the transportation system through preservation of visual and cultural resources and improve the quality of life for members of the community.	Illinois Department of Transportation Office of Planning and Programming	\$25M	None	Local government or state agencies	<a href="http://www.dot.state.il.us/opp/dep.html">http://www.dot.state.il.us/opp/dep.html</a>	Illinois Department of Transportation Office of Planning and Programming 2300 South Dirksen Parkway Room 307 Springfield Illinois 62714 Telephone: 217-783-2910
<b>Congestion Mitigation and Air Quality Improvement Program.</b> The goal of this program is to mitigate vehicular congestion or improve air quality.	Chicago Metropolitan Agency for Planning	\$5.7M	None	Local government or state agencies	<a href="http://www.emap.illinois.gov/miss_detail.aspx">http://www.emap.illinois.gov/miss_detail.aspx</a>	Chicago Metropolitan Agency for Planning 235 South Wacker Drive, Suite 400 Chicago Illinois 60606 Telephone: 312.753.3474
<b>Illinois Blue Path Grant Program.</b> The goal is to provide assistance for the acquisition, construction and rehabilitation of public, non-motorized bicycle path- and related facilities.	Illinois Department of Transportation	\$3.5M	\$2M for development none for land acquisition	Local government, park districts, conservation districts, forest preserve districts and state agencies	<a href="http://dmr.state.il.us/odm/odm.html">http://dmr.state.il.us/odm/odm.html</a>	Recreation Trails Program Illinois Department of Natural Resources Division of Grant Administration One Natural Resources Way Springfield Illinois 62702 1271 Telephone 1217.752.7483 Email: dmgrant@illinois.gov
<b>Surface Transportation Program-Urban Program</b> Allows federal funds to complete a variety of improvements to federal and eligible roads and streets in urban areas. A portion of STP set-aside can pay for bicycle facilities.	Northwest Council of Mayors	\$7.8M	\$3.5M	Local government or state agencies	<a href="http://www.nwmc.org/Transportation/Northwest-Council-of-Mayors.aspx">http://www.nwmc.org/Transportation/Northwest-Council-of-Mayors.aspx</a>	NWMC 1816 East Golf Road Des Plaines Illinois 60018 Phone: 847.246.9230
<b>Motor Fuel Tax.</b> Motor fuel taxes may be used by municipalities for construction and maintenance of bicycle paths, lanes, or bicycle parking facilities within the municipality.	Varies	Varies	Varies	Local governments	N/A	N/A
<b>Local Capital Improvement Programs.</b> Many local government have made great progress in their bikeway trail system with a yearly appropriation for bikeway and trail development in their Capital Improvement Program.	Varies	Varies	Varies	Local Governments	N/A	N/A
<b>Sales Tax/Revenue Enhancement Initiatives.</b> Sales taxes and other use taxes have been used throughout the US for trail & greenway projects.	Example: Metro East Park and Recreation District (MLPRD)	\$4M	N/A	Local governments	<a href="http://www.metrod.org">http://www.metrod.org</a>	Metro East Park and Recreation District 1124 United Drive Collinsville, Illinois 62234
<b>Local Private-Sector Funding.</b> Around the country local industries and private businesses have agreed to provide support for trail and greenway development.	Private business	Varies	Varies	N/A	N/A	N/A

### **Illinois Transportation Enhancements Program (ITEP)**

In 1991, the federal transportation legislation, the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, created a new category for non-traditional transportation improvements called Transportation Enhancements (TE). This program was so popular around the nation that it was renewed under the subsequent bill (the Transportation Equity Act for the 21st Century (TEA-21)), and continued with SAFETEA-LU. Even though SAFETEA-LU expired in September 2009, Congress has implemented several extensions, which have provided additional funding for TE. Illinois has announced a call for projects starting in February 2012:

- February: IDOT will start accepting on-line applications
- February - May: Application process open
- June - August: Application reviews
- September - October 2012: Selection committee review & announce approved projects

### **Administration:**

The Illinois Department of Transportation, Office of Planning and Programming

### **Intent of the Program:**

The stated goal is to allocate resources to well-planned projects that provide and support alternate modes of transportation, enhance the transportation system through preservation of visual and cultural resources and improve the quality of life for members of the communities. The enhancement program allows the scope of transportation projects to expand beyond the traditional accommodations for cars, trucks and transit.

### **Funds Annually Available:**

Approximately \$25 million each year is available for a variety of projects; bikeway projects compete with other eligible projects.

### **Project Size Limit:**

No Limit

### **Funding Split:**

The program will provide reimbursement up to 50 percent for right-of-way and easement acquisition costs and up to 80 percent for preliminary engineering, utility relocations, construction engineering and construction costs.

### **Who Can Sponsor:**

Local government or state agencies

### **Application Due Date:**

Per IDOT in December 2011, funds from SAFETEA-LU have been allocated, but the bill has been extended. Therefore, a call for projects was announced in December 2011. The next transportation bill may not be completed until 2012; it is unknown whether this program will be included in the new authorization.

### **How Projects are Evaluated**

On their ability to provide alternate means of transportation.

### **Implementation Caveats:**

The process is significantly more cumbersome than the IDNR programs, primarily because of rules associated with the use of federal transportation funds.



## NWMC Northwest Highway Corridor

### **Who Pays the Bills:**

Engineering costs are paid by the locals and the state's share of 80% is then reimbursed by IDOT. Because IDOT generally advertises and administers these projects, the state's share of the construction bills are generally paid directly by IDOT and the locals reimburse IDOT for their share

### **URL:**

<http://www.dot.state.il.us/opp/itep.html>

### **Contact:**

Illinois Department of Transportation  
Office of Planning and Programming  
2300 South Dirksen Parkway, Room 307  
Springfield, Illinois 62704  
Telephone: 217 785-2910  
Email: itep@dot.il.gov

### **Notes:**

IDNR Bike Path Grant program funds can be used to pay 50% of the local match. IDNR is much more likely to approve funds for matching if the project has already been designed.

### **Congestion Mitigation and Air Quality Improvement Program (CMAQ)**

The federal transportation bills, ISTEA , TEA-21 and SAFETEA-LU (described above) created a significant set-aside of funds for projects that could mitigate (vehicular) congestion or improve air quality. Individual applications are reviewed and ranked according to technical trip reduction criteria.

### **Administration:**

The Chicago Metropolitan Agency for Planning (CMAP) administers the grant application process. Engineering for projects is coordinated through IDOT, like any other federally-funded project.

### **Intent of the Program:**

CMAQ offers funding for a variety of transportation projects, and specifically includes Bike and Pedestrian Facility Projects that reduce travel by automobile. As such many or most recreational facilities do not make good CMAQ project candidates unless they parallel a major highway. Bike Parking Projects are also candidates if they create or increase the availability of parking facilities for bicycles and promote the use of bicycles, thereby eliminating auto trips.

### **Funds Annually Available:**

In the northeastern Illinois area, the annual allocation for bicycle projects has been \$5-7 million over the past years.

### **Project Size Limit:**

No set funding limits.

### **Funding Split:**

CMAQ funding provides up to 80% of funding for transportation projects.

### **Who Can Sponsor:**

Local government or state agencies.

### **Application Due Date:**

Submittals are generally due to CMAQ in early February of each year.

## **NWMC Northwest Highway Corridor**

### **How Projects are Evaluated:**

On their ability to reduce vehicle emissions or to reduce automobile trips.

### **Implementation Caveats:**

The process is significantly more cumbersome than the IDNR programs, primarily because of rules associated with the use of federal transportation funds.

### **Who Pays the Bills:**

Engineering costs are paid by the locals and the state's share of 80% is then reimbursed by IDOT. Because IDOT generally advertises and administers these projects, the state's share of the construction bills is generally paid directly by IDOT and the locals reimburse IDOT for their share.

### **URL:**

<http://www.cmap.illinois.gov/cmaq/default.aspx>

### **Contact:**

Chicago Metropolitan Agency for Planning  
233 South Wacker Drive, Suite 800  
Chicago, Illinois 60606  
Telephone: 312 793-3474

### **Notes:**

Congestion Mitigation and Air Quality Improvement Program (CMAQ). CMAP fully programmed Federal Fiscal Year (FFY2012) CMAQ funds during the FFY2012 call for projects. Thus, the next anticipated call for projects is for FFY 2013 beginning December 2012 with anticipated approval in November 2013.

## **Illinois Bike Path Grant Program**

Natural Resources. IDNR's Bike Path Grant Program was established in the early '90s by then Secretary of State Jim Edgar, and was supported by (and continues to be) a portion of the tax imposed on the disposal of used tires. Funding from this source would only be appropriate for trail sections, but could possibly be used for trail segments along the railroad.

### **Administration:**

Illinois Department of Transportation.

### **Intent of the Program:**

Provides funding assistance for the acquisition, construction, and rehabilitation of public, non-motorized bicycle paths and related facilities.

### **Funds Annually Available:**

For many years, the program has provided approximately \$3-5 million each year to local agencies for bike path engineering and construction. A similar amount is set aside for IDNR to support path construction and maintenance on IDNR lands, such as the Illinois and Michigan Canal State Trail and the Rock Island State Trail.

### **Project Size Limit:**

The program can provide up to a maximum award of \$200,000 for development projects, but no maximum for land acquisition.

## **NWMC Northwest Highway Corridor**

### **Funding Split:**

The program can provide up to 50% of approved project costs. These funds can be used as partial local match for federally-funded programs.

### **Who Can Sponsor:**

Local government, park districts, conservation districts, forest preserve districts and state agencies.

### **Application Due Date:**

March 1<sup>st</sup> each year.

### **How Projects are Evaluated:**

Projects are evaluated on a competitive basis according to established trail objectives and priorities. These include development of connector paths and trail systems, projects identified in plans, facilities in high demand areas, projects having minimal adverse environmental and social effects, projects offering diverse scenic and recreational experiences, and projects with long term maintenance plans.

Funds are awarded on the basis of a review and prioritization of project applications. The director of the IDNR, in consultation with staff and the Illinois Natural Resources Advisory Board, the Illinois Greenways & Trails Council review and approve grants applications.

### **Implementation Caveats:**

Not more than 15% of related architectural and engineering costs are eligible for reimbursement.

### **Who Pays the Bills:**

Engineering and construction costs are paid by the locals and reimbursed by IDNR.

### **URL:**

<http://dnr.state.il.us/ocd/newbike2.htm>

[dnr.state.il.us/ocd/gaoutnew](http://dnr.state.il.us/ocd/gaoutnew)

### **Contact:**

Recreation Trails Program  
Illinois Department of Natural Resources  
Division of Grant Administration  
One Natural Resources Way  
Springfield, Illinois 62702-1271  
Telephone: (217) 782-7481  
Email: [dnr.grants@illinois.gov](mailto:dnr.grants@illinois.gov)

### **Surface Transportation Program (STP)-Urban Program**

The federal transportation bills, ISTEA, TEA-21 and SAFETEA-LU (described above) allowed urban areas to devote portions of their STP set-asides to pay for bicycle facilities. Communities should work with their Council of Mayors when applying for funding.

### **Administration:**

The Northwest Council of Mayors is responsible for programming STP funds in northwest Cook County. NWMC staffs the Northwest Council of Mayors.

### **Funds Annually Available:**

Funding amount varies annually, but is approximately \$7 to 8 million.

## **NWMC Northwest Highway Corridor**

### **Project Size Limit:**

\$3.5 million in federal funds per phase.

### **Funding Split:**

STP funding provides up to 80% of funding for transportation projects. The match for bicycle and pedestrian projects in the Northwest Council is 80% federal, 20% local.

### **Who Can Sponsor:**

Local government or state agencies.

### **Application Due Date:**

Contact the NWMC.

### **How Projects are Evaluated:**

Projects are evaluated on their ability to improve transportation throughout the urban area.

### **Implementation Caveats:**

The process is significantly more cumbersome than the IDNR programs, primarily because of rules associated with the use of federal transportation funds.

The Illinois Department of Transportation is responsible for processing projects in the region's approved STP Program. IDOT's procedures for processing STP projects and other federally funded projects are described in the manual, Federal-Aid Procedures for Local Highway Improvements. IDOT-Bureau of Local Roads and Streets (BLRS) staff from the District 1 office are assigned to the region to coordinate with municipalities sponsoring STP projects. The Central Office of IDOT in Springfield is responsible for the final review and approval of all components of a STP project before it can be published for contract bidding.

### **Who Pays the Bills:**

Engineering costs are paid by the locals and the state's share of 80% is then reimbursed by IDOT. Because IDOT generally advertises and administers these projects, the state's share of the construction bills is generally paid directly by IDOT and the locals reimburse IDOT for their share.

### **URL:**

<http://www.nwmc-cog.org/Transportation/Northwest-Council-of-Mayors.aspx>

### **Motor Fuel Tax**

Motor fuel taxes may be used by municipalities for 'construction and maintenance of bicycle paths, lanes, or bicycle parking facilities within the municipality.'

(605 ILCS 5/7-202.20) (from Ch. 121, par. 7-202.20) Sec. 7-202.20. Any municipality... In addition, a municipality may use motor fuel tax funds for the construction and maintenance of bicycle paths, lanes, or bicycle parking facilities within the municipality.

(Source: P.A. 88-580, eff. 1-1-95.)

### **Local Capital Improvement Programs**

Many local governments around the country have made great progress in their bikeway/trail system with a yearly appropriation for bikeway and trail development in their Capital Improvements Program.

## NWMC Northwest Highway Corridor

### Hennepin County, MN (Minneapolis area)

#### Bicycle Capital Improvement Program (Hennepin County, MN (Minneapolis area))

The Hennepin County Capital Improvements Program (CIP) has two funding programs for bikeway improvements:

##### Bicycle CIP Fund

The Bicycle CIP Fund was established in the early 1990's to assist communities with bicycle improvements based on a 50 / 50 cost participation. The Bicycle Transportation Plan developed in 1995-96 provided additional guidance through the establishment of a regional county bicycle system toward which these funds were to apply. Twelve projects have been funded using this program to date, and about \$650,000 has been contributed to these projects by Hennepin County.

##### Bicycle GAP Fund

The GAP Fund was established in 2002 in conjunction with the [Bicycle System GAP Study](#). The study was undertaken to place special focus on interconnecting various segments of bikeways where a short "gap" exists. Three projects have been funded through this program with Hennepin County contributing about \$140,000 to date.

### Columbus, Ohio

In Raleigh, North Carolina, greenways continue to be built and maintained, year after year, due to a dedicated source of annual funding (administered through the Parks and Recreation Department). In addition, the City of Raleigh's Real Estate Department has its own line item budget for greenway land acquisition.

City officials announced the proposed capital improvements budget Thursday that includes bikeways, resurfacing, sidewalks and parks and recreation improvements. Mayor Michael Coleman announced the \$130 million budget proposal Thursday on Strawberry Farms Blvd., an area that will be improved by a resurfacing project.

"Our greatness lies in our neighborhoods, and we must continue to invest in them," Mayor Coleman said. "By investing in our streets, parks and bikeways, we will strengthen our infrastructure, increase our quality of life and create jobs in the process."

### **Sales Taxes/Revenue Enhancement Initiatives**

Sales taxes and other use taxes have been used throughout the US for trail & greenway projects. One example is the creation of the Metro East Park and Recreation District (MEPRD). The MEPRD and a one-tenth of one percent Sales Tax were approved by Madison and St. Clair County, Illinois voters in a referendum in November 2000.

(70 ILCS 1605/) Metro-East Park and Recreation District Act.

(70 ILCS 1605/30) Sec. 30. Taxes:

The board shall impose a tax upon all persons engaged in the business of selling tangible personal property, other than personal property titled or registered with an agency of this State's government, at retail in the District on the gross receipts from the sales made in the course of business. This tax shall be imposed only at the rate of one-tenth of one per cent. For FY 2009, this tax generated \$4.0 million for the district.



**URL:**

<http://www.meprd.org>

**Notes:**

Both the creation of the Metro East Park and Recreation District (MEPRD) and a one-tenth of one percent Sales Tax were approved by Madison and St. Clair County, Illinois voters in November 2000. Of these said funds, fifty percent is retained by the MEPRD organizational body and the other half is distributed back to the respective Counties. In Madison County the funds are received by the Madison County Park and Recreation Grant Commission, whereas in St. Clair County the funds are distributed equally between the St. Clair County Park and Recreation Grant Commission and the St. Clair County Property and Recreation Committee.

**Local Private-Sector Funding**

Around the country, local industries and private businesses have agreed to provide support for trail and greenway development through one or more of the following methods:

- Donations of cash to a specific trail segment
- Donations of services by large corporations to reduce the cost of trail implementation, including equipment and labor to construct and install elements of a specific trail
- Reductions in the cost of materials purchased from local businesses that support greenway implementation and can supply essential products for facility development
- Naming rights - perhaps each light standard could be 'sold', with the donor's name or business noted on the fixture by banner, plaque or sign.

**Administration:**

Private businesses.

**Notes:**

One example of a successful endeavor of this type is the Swift Creek Recycled Greenway in Cary, NC. A total of \$40,000 in donated construction materials and labor made this trail an award-winning demonstration project. This method of raising funds requires a great deal of staff coordination.

# Appendix: Supporting Table



# Illinois Department of Transportation

Office of Highways Project Implementation / Region 1 / District 1  
201 West Center Court / Schaumburg, Illinois 60196-1096

November 21, 2018

Mr. Timothy P. Oakley, P.E.  
Director of Public Works and Engineering  
City of Des Plaines  
1420 Miner Street/NW Highway  
Des Plaines, IL 60016

Dear Mr. Oakley:

This is in response to your letter dated October 31, 2018 where the City of Des Plaines (City) requests that the Illinois Department of Transportation (Department) implement a road diet along Busse Highway from Miner Street (US Route 14) to Touhy Avenue in conjunction with our upcoming resurfacing of Busse Highway.

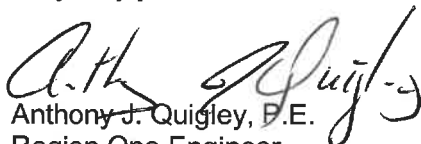
The Department's programmed resurfacing of Busse Highway from Miner Street to Touhy Avenue is currently scheduled to go to letting in March 2019. Consideration for a road diet would require a detailed preliminary environmental and engineering (Phase I) study to be completed prior to its potential implementation. The Phase I study would consider numerous factors including traffic volumes as well as crash experiences, environmental constraints and resources, and ultimately an evaluation of impacts and costs.

Due to the current fiscal constraints, the Department has been required to focus our limited financial resources on safety improvements, pavement preservation and bridge rehabilitation type improvements. As such, the Department does not currently have the financial resources to initiate the aforementioned detailed preliminary engineering study.

The Department would have no objections with the communities initiating a Phase I study for a potential road diet along Busse Highway from Miner Street to Touhy Avenue which is how similar projects have been implemented in the District. If an attempt were to be made to include the recommendations with the upcoming resurfacing, the study would need to be completed by the Spring of 2019. Otherwise the recommendations would be considered for implementation in the future via another project.

If you have any questions or need additional information, please contact me or Steve Schilke, Project & Environmental Studies Section Chief, at (847) 705-4104.

Very truly yours,

  
Anthony J. Quigley, P.E.  
Region One Engineer

RECEIVED

NOV 27 2018

Des Plaines P.W. & Engr. Dept.

Exhibit C-2

Mr. Timothy P. Oakley, P.E.  
November 21, 2018  
page two

cc: Mark Fowler, Northwest Municipal Conference  
Wharton Sinkler, Des Plaines Bike & Pedestrian Advisory Committee  
Wayne Zingsheim, City of Park Ridge

**TRAFFIC FORECAST RECORD**

**Record Number:** ck-09-19

**Type of Report:** Projection

**Year Sought:** 2050

**Analyst:** JAR

**Organization requesting forecast:** Civiltech

**Contact:** Joel E. Christell, P.E.

**Phone number:** (630) 735-3941

**Sponsor:** City of DesPlaines

**Date request was received:** January 16, 2019

**Date that response was mailed or faxed:** January 17, 2019

**Facility Location:** Busse Highway between Miner Street and Belleau Lake

**Municipality:** Des Plaines





# Chicago Metropolitan Agency for Planning

233 South Wacker Drive  
Suite 800  
Chicago, Illinois 60606  
  
312 454 0400  
www.cmap.illinois.gov

January 17, 2019

Hon. Matthew J. Bogusz  
Mayor  
City of Des Plaines  
1420 Miner Street  
Des Plaines, IL 60016

**Subject: *Busse Highway between Miner Street and Belleau Lake***  
City of Des Plaines

Dear Mayor Bogusz:

In response to a request made on your behalf and dated January 16, 2019, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

<b>ROAD SEGMENT</b>	<b>Current ADT</b>	<b>Year 2050 ADT</b>
Busse Highway between Miner Street and Belleau Lake	3,200	3,800

Traffic projections are developed using existing ADT data provided in the request letter and the results from the October 2018 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area.

If you have any questions, please call me at (312) 386-8806.

Sincerely,

Jose Rodriguez, PTP, AICP  
Senior Planner, Research & Analysis

cc: Christell (Civiltech)  
S:\AdminGroups\ResearchAnalysis\2019\_ForecastsTraffic\DesPlaines\ck-09-19\ck-09-19.docx