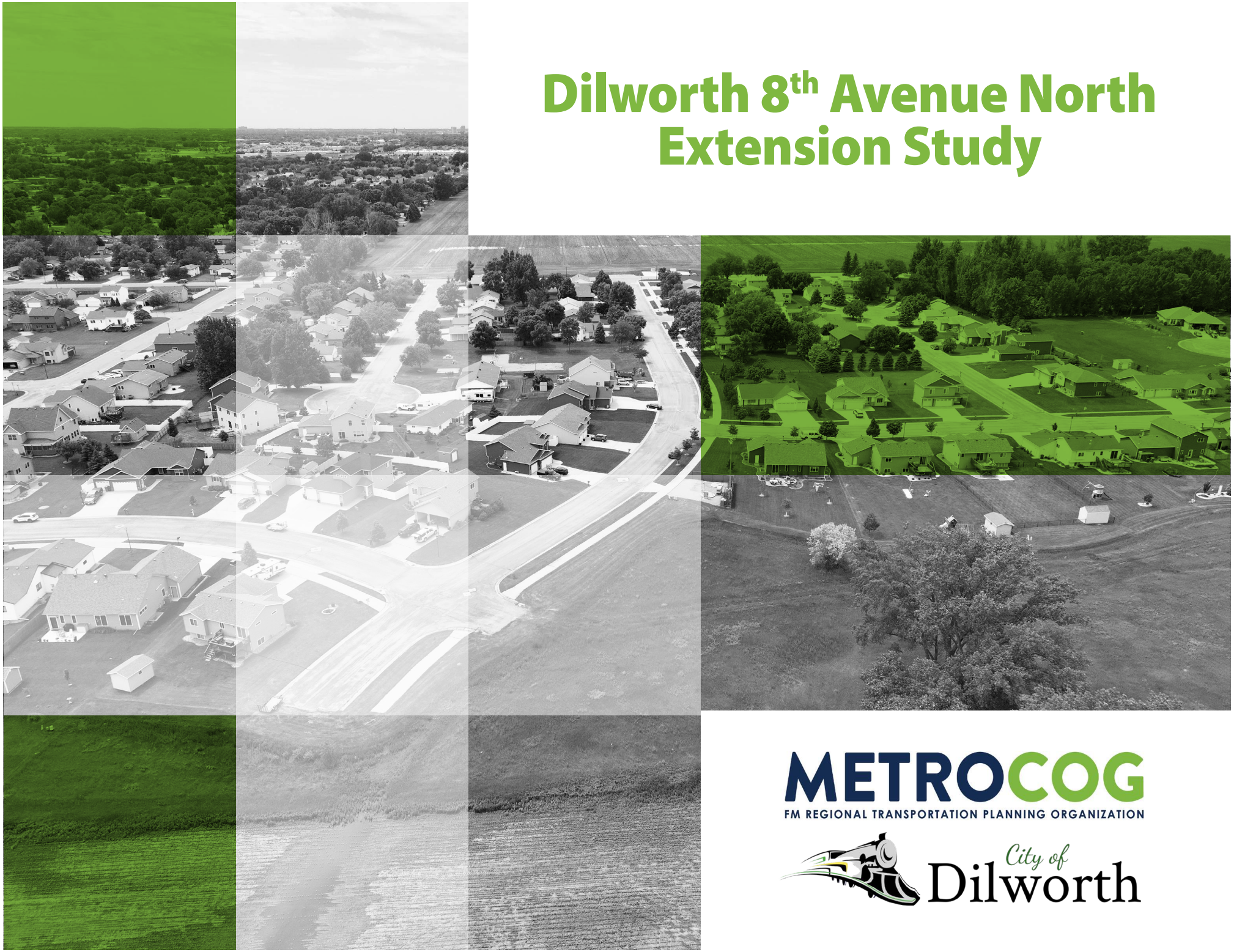
Dilworth 8th Avenue North Extension Study



METROCOG
FM REGIONAL TRANSPORTATION PLANNING ORGANIZATION

City of Dilworth

Final Report

Dilworth 8th Avenue Extension Study

Fargo Moorhead Metro COG and the City of Dilworth

January 2025

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1.0 Introduction

The Fargo-Moorhead Metropolitan Council of Governments (Metro COG) and the City of Dilworth, Minnesota (City) have initiated a corridor extension study of 8th Avenue North through Dilworth from the western city limits at 34th Street North to the eastern city limits at 60th Street North, and the extension of Main Street from 4th Avenue North to 8th Avenue North. This study was completed in the fall of 2024.

Study Location

Dilworth is on the eastern edge of the Fargo-Moorhead metropolitan area. It is the second-largest community in Clay County. According to the Minnesota Demographic Center estimate, the City of Dilworth had a population of 4,804 in 2023. The 8th Avenue corridor creates an opportunity to connect local trips between residential and commercial regions in the City of Dilworth.

Currently, two segments of 8th Avenue North have been constructed. The west segment begins at 34th Street North and goes to 15th Street North, and the east segment starts at 7th Street North which continues to Woodbridge Drive. Extending the corridor will play a pivotal role in providing connection through the community, connecting the commercial shopping opportunities to the residential neighborhoods and parks. This is shown in **Figure 1**.

Figure 1

Purpose and Need

The purpose of the study is to develop a corridor plan for the extension of 8th Avenue North that will promote the growth of the City and meet the needs of the current and future members of the community. The corridor will provide a direct connection between residential and commercial areas within and near Dilworth and reduce local traffic on TH 10 by providing an alternative route.

Goals within the study included:

- Establishing design criteria for a corridor that provides easy, safe, and comfortable transportation options for users of all modes, ages, and abilities
- Identifying desired land use patterns for the study area, including but not limited to new housing and commercial opportunities
- Engaging community leaders, property owners, targeted populations, and the general public

Related Studies

There are several relative studies and planning documents that have been completed which will provide guidance for the future development of the 8th Avenue corridor. These studies were reviewed as part of the initial information-gathering phase of the study to gain an overall sense of direction and relative context provided by these previous planning efforts. Further analysis of these plans can be found in the appendix.

- Dilworth Comprehensive Plan
- Fargo-Moorhead Metropolitan Transportation Plan
- Fargo-Moorhead Regional Housing Needs Analysis and Strategies
- Clay County Comprehensive Plan
- 2022 Fargo-Moorhead Metropolitan Bicycle & Pedestrian Plan
- Highway 10 Corridor Study through Dilworth

2024 Dilworth 15th Avenue North Corridor Study

In addition to the previously completed studies, another study was conducted concurrently in 2024 for the 15th Avenue North corridor on the north side of Dilworth from Clay County Road 9 to Clay County Road 11. The 15th Avenue North corridor as a whole provides regional access as a continuous route through the Metro area. This segment from Clay County Road 9 to Highway 11 is partially paved and partially gravel-surfaced and is governed by multiple jurisdictions. The purpose of the study was to identify roadway/transportation issues, develop future roadway alternatives, and consider jurisdictional ownership for the roadway. Improvements to 15th Avenue North will create a convenient arterial connection for the region while extending 8th Avenue North will provide improved access for local trips. Both corridors will act as alternative routes for vehicles currently using Highway 10 and are critical to supporting the community's vision for the Highway 10 corridor in downtown Dilworth.

2.0 Existing Conditions

2.1 Roadway Features

There are currently two segments of 8th Avenue that have been built between 34th Street North and 60th Street North. The segments of 8th Avenue that have been built do not connect. Also, the existing segments do not align and have very different features and uses.

The future 8th Avenue corridor will intersect six existing roadways that run north and south. The roadways include 34th Street North, County Road 9, Main Street North, 7th Street NE, 14th Street NE, and 60th Street North. Each roadway has a different existing configuration, speed limit, pedestrian and bicycle facilities, access control, and adjacent land use. The existing typical sections found on the corridor are shown below.

8th Avenue – East of 34th Street

Figure 2

The segment of 8th Avenue between 34th Street and 15th Street NW is a divided multi-lane roadway with a raised concrete median, 12' driving lanes, and curb and gutter. There is a 5' wide concrete sidewalk on the south side and a 10' wide concrete shared-use path on the north side.

There is a traffic signal at the 34th Street intersection while other side roads are controlled with stop signs. The speed limit is 30 mph and there is 115' of Right of Way.

The existing roadway was constructed between 2004 and 2007. The bituminous pavement is showing signs of wear and aging. This segment is shown in **Figure 2.**

8th Avenue - East of 7th Street Intersection

Figure 3

The segment of 8th Avenue between 7th Street NE and Woodbridge Drive is an undivided 2-lane roadway with two 12' driving lanes, a 9' parking lane on the north side, and curb and gutter. There is a 10' shared-use path on the north side of the street.

The intersection at 7th Street NE is stop-controlled for westbound traffic. 8th Street NE is yield-controlled for southbound traffic while West Summerwood Trail and Woodbridge Drive are stop-controlled for north and southbound traffic. The speed limit is 30 mph and there is 80' of Right of Way

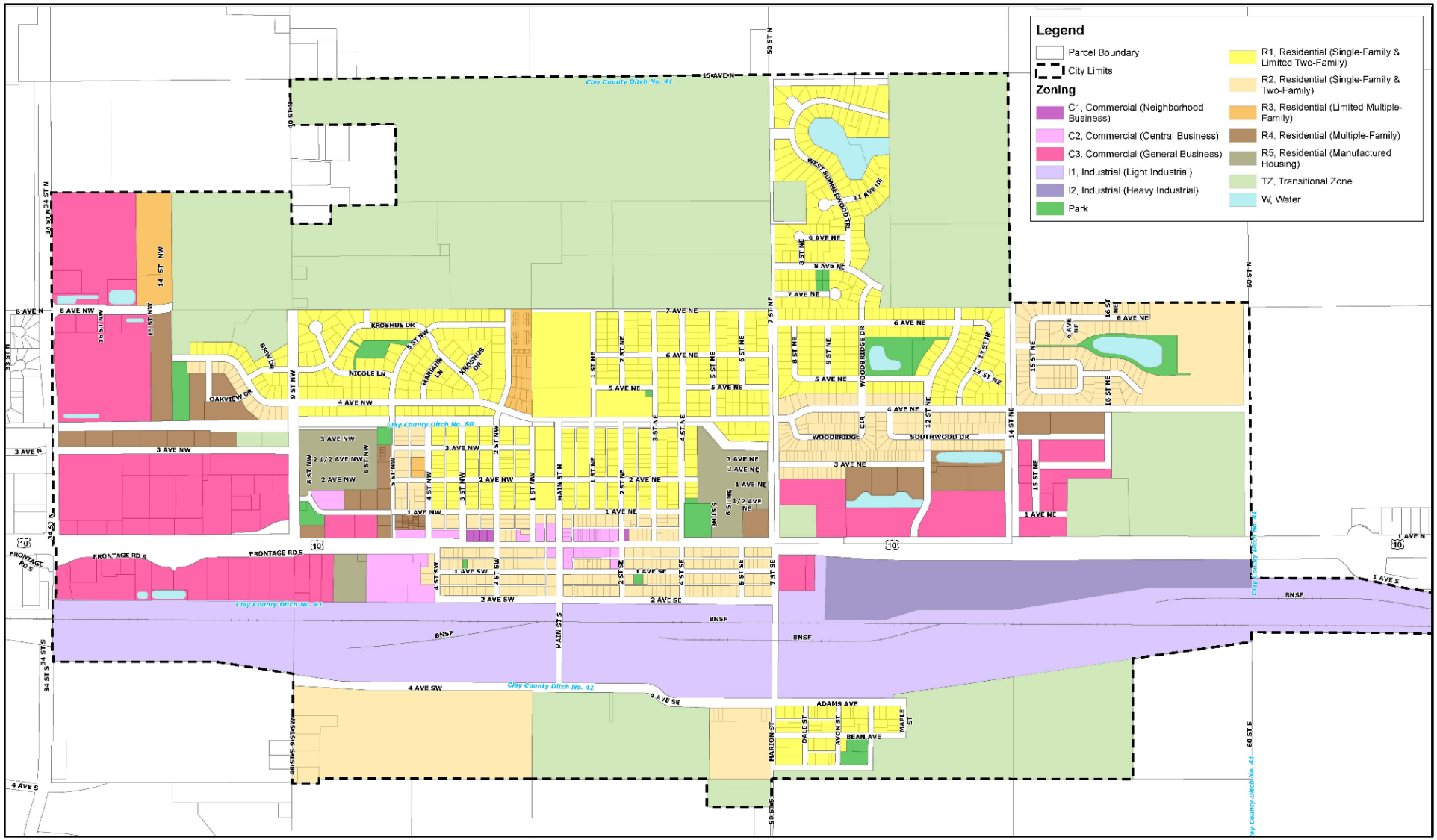
The existing roadway was originally constructed in the late 1980s to early 1990s and extended further east in 2006. The bituminous pavement is showing signs of wear and aging. This segment is shown in **Figure 3.**

2.2 Land Use

The area south of the 8th Avenue corridor primarily consists of residential neighborhoods, with higher-density housing and commercial developments concentrated at the intersection of 34th Street and 8th Avenue. The City's Comprehensive Plan designates this area for mixed uses, including medium- to high-density residential development and small pockets of commercial activity along 34th Street. The City also owns land north of the elementary school, which is under consideration for a future community park.

Currently, undeveloped land in the area (east of 14th Street) is zoned as a "Transitional Zon District." This district reflects areas that are undergoing a transition from, in most cases, agricultural to urban uses. The urban transition is contingent upon development plans, proper timing, availability of public utilities and services and compatibility with the City of Dilworth Comprehensive Land Use Plan. As these conditions for development are met, a more conventional urban zoning district will replace the Transition Zone District. This is shown in **Figure 4.**

Figure 4: Current Land Zoning



2.3 Utilities

Sanitary Sewer

There is existing sanitary sewer infrastructure installed with the existing segments of 8th Avenue as shown in **Figure 6**. There is an existing sanitary sewer forcemain that runs from County Road 9 to Bob Marshall Field and residential properties as shown in **Figure 5**. This sewage ultimately gets pumped west and out of the city. A cost-saving option for future alignments is to put as much of the existing sanitary sewer within the future right of way underneath a proposed roadway.

Figure 5

Watermain

Water infrastructure has been installed with the existing segments of 8th Avenue as shown in **Figure 6**. There is also a water service that runs from Kroshus Dr to the north to the properties along the east side of County Road 9 near 15th Avenue North. For future city growth, water infrastructure will need to be installed and connected to existing water infrastructure.

Storm Sewer

There is existing storm sewer infrastructure installed with the existing segments of 8th Avenue as shown in **Figure**. Any future development on the 8th Avenue corridor will need to have its own storm sewer system. The only area with an existing storm sewer system able to connect in the future is near 7th Street.

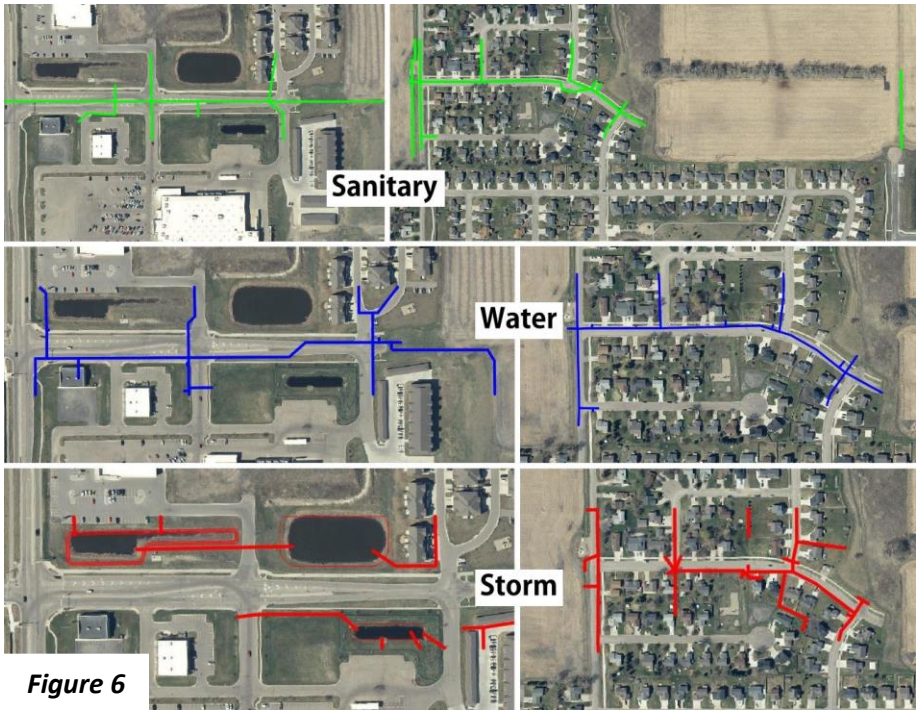


Figure 6

Other Public and Private Utilities

There are various public and private utilities that are located near the proposed 8th Avenue Corridor. There are two utilities that pose a design constraint for future 8th Avenue alignments shown in **Figure 7**. There is currently a sanitary sewer lift station positioned near County Road 9. The position of this lift station limits where a future 8th Avenue and County Road 9 intersection can be implemented. The intersection can be to the north or south of the lift station, leaving enough space for future consideration on maintenance of the lift station facility. Likewise with the Viking Natural Gas Substation, the intersection can only be to the north of the substation. Also keeping in mind, the future access of the facility and needs a substation would have in the future.

Figure 7

2.4 Existing Access Control

Access on the 8th Avenue corridor varies between segments. When looking into the corridor's access control, two main segments to focus on are the portion near 34th Street and the portion near 7th Street.

34th Street N to 15th Street NW – This portion of the corridor has 5 access points. Three of these are used only for business access to ALDI, Dollar Tree, and Walmart. The remaining accesses lead into high-density residential areas including the townhomes and apartments.

7th Street N to Woodbridge Drive – There are 20 points of access on this portion of the corridor as shown in **Figure 8**.. This area has a much higher density of direct residential access to the corridor, with 15 driveways with direct access to 8th Avenue. Three of the access points are intersecting residential streets, this includes 8th Street NE, W Summerwood Trail, and Woodbridge Drive.

Figure 8

2.5 Crash History

A review of historical crash data was completed along the corridor to identify any trends, hotspots, or contributing factors. Ten years of crash history were reviewed within the study area, which included data from January 2014 through September 2024. The crash data was obtained using MnDOT's MnCMAT2 crash mapping tool. The crash data was taken from the two existing segments of 8th Avenue. Most of the reported crashes occurred at the 8th Avenue and 34th Street intersection. Only one (1) crash occurred at the intersection of 8th Avenue and 7th Street.

During the analysis period, 16 reported crashes occurred within the study area, which equates to an average of 1.6 crashes per year. Looking at the data more closely reveals that all but one of the crashes occurred in the past six years, which equates to 2.5 crashes per year during that timeframe. No buses took part in any of the crashes.

All the crashes occurred between 10 a.m. and midnight, with peak crash activity occurring between 2 p.m. and 6 p.m. There is no noticeable increase in reported crashes on any specific day of the week.

Crash types and crash severity were also reviewed as part of the crash history. This data indicates that most reported crashes were either rear-end or angle-type crashes, which are the most common types associated with corridors with similar characteristics. There were no pedestrian-related crashes. From a crash severity perspective, most crashes were property damage only. There were no fatal or serious injury crashes. There were no engineering/geometric-related issues identified that contributed to the crashes. This is shown in **Figure 9 and Figure 10**.

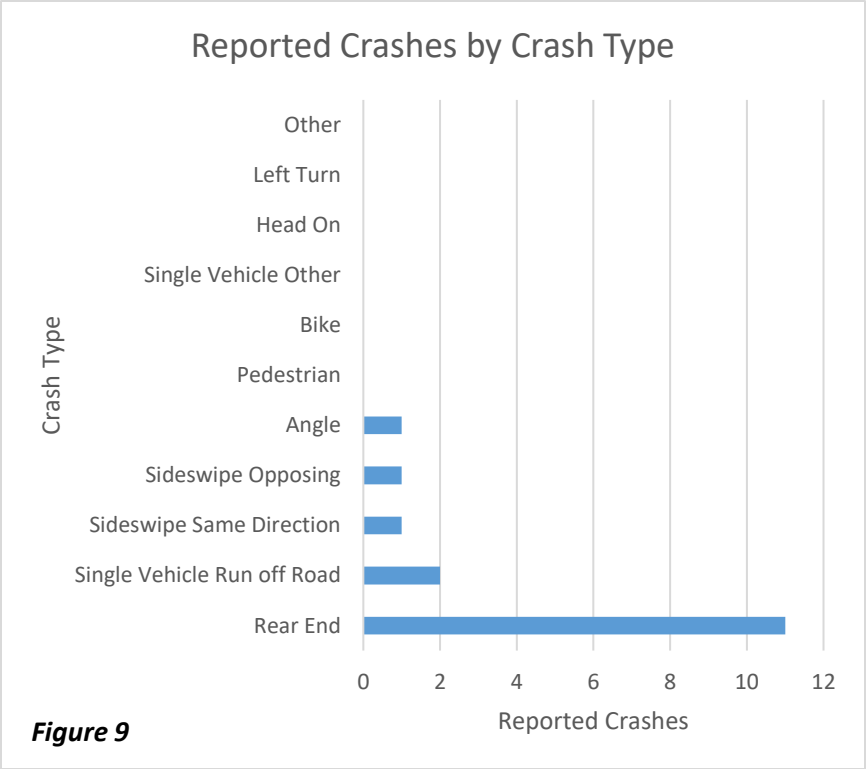


Figure 9

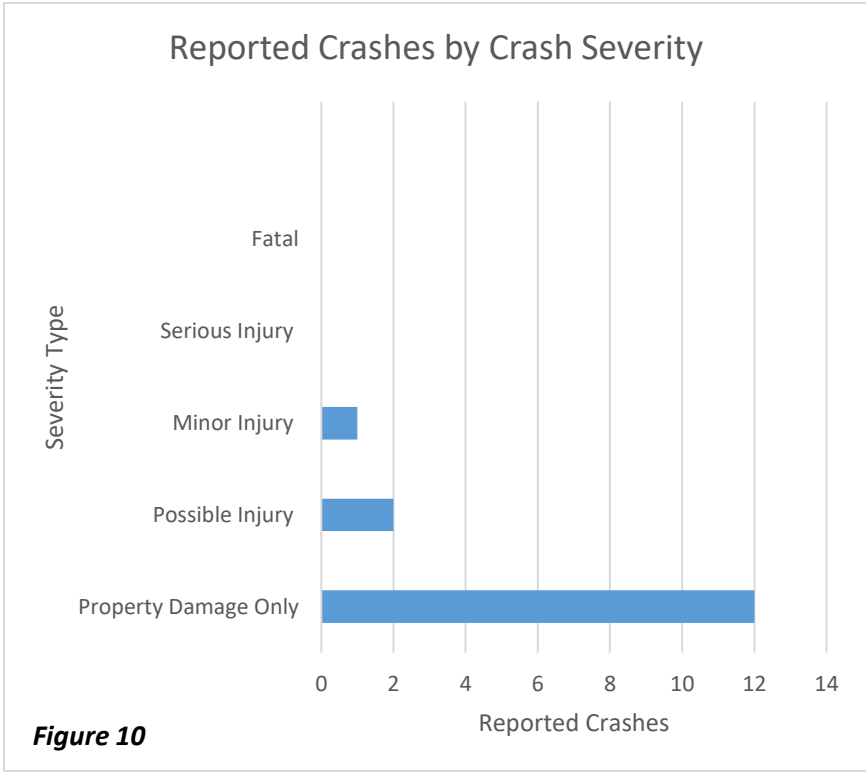


Figure 10

3.0 Traffic Operations

3.1 Existing Traffic Operations

Existing traffic conditions were reviewed within the study area to quantify current operations and identify any existing issues. The evaluation of existing conditions included collecting traffic volumes, observing roadway characteristics, and analyzing crash history and intersection capacity, which are described in the following sections.

Traffic Volumes

The following intersections and/or driveways along 8th Avenue were included as part of the capacity analysis and study process: 34th Street North, Walmart Access, and 7th Street Northeast.

Intersection turning movement and pedestrian/bicyclist counts were collected as noted on Thursday, August 29, 2024. Data was collected for a 13-hour period (i.e., from 6 a.m. to 7 p.m.) at each location to understand how traffic patterns vary throughout the day, as well as to assist with traffic control warrants as part of this study. Shown in **Figure 11**.

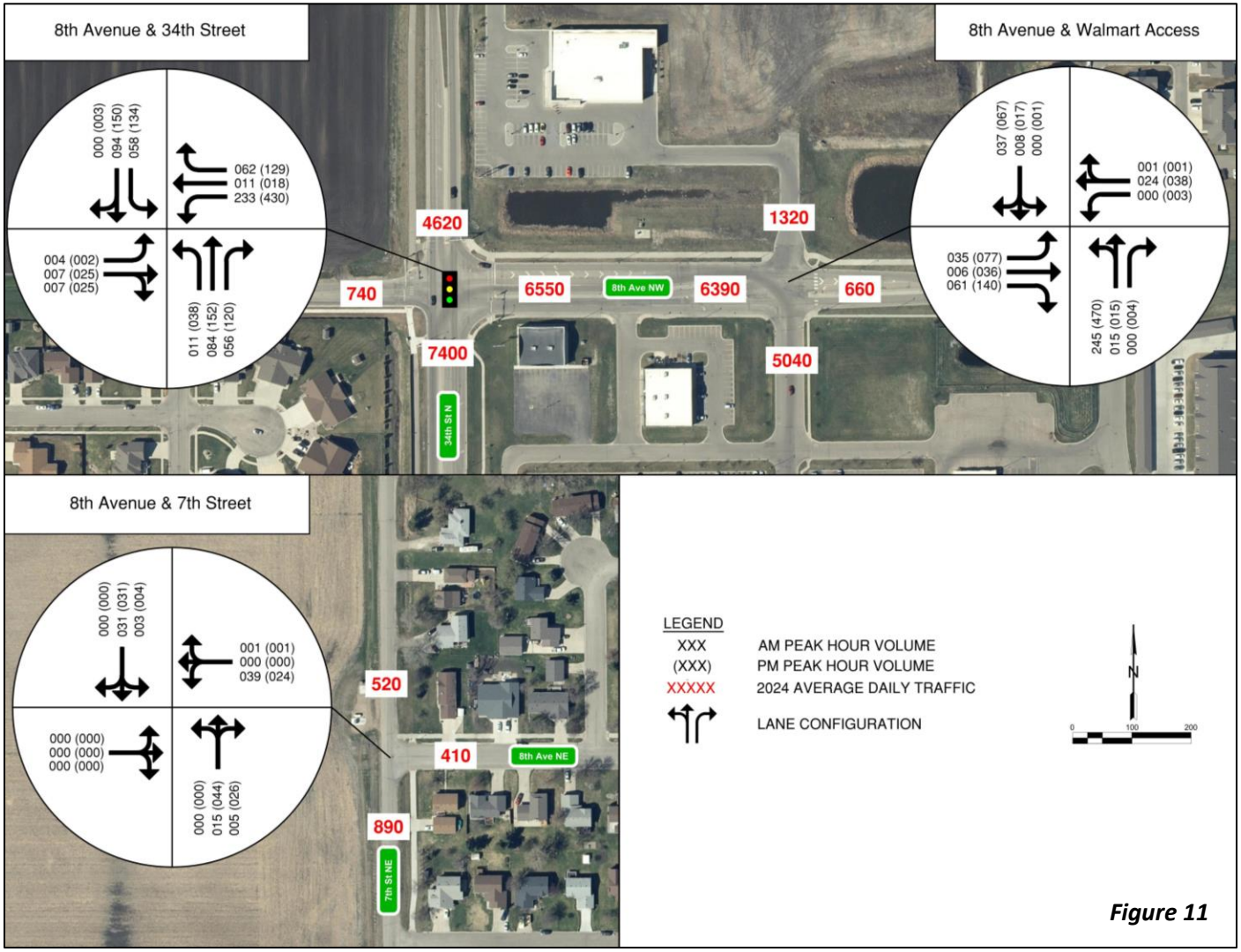


Figure 11

Corridor and Intersection Operations

AADT volumes along 8th Avenue range from approximately 6,550 vehicles per day near 34th Street where the corridor is a multi-lane divided street, to 410 vehicles per day east of 7th Street where the corridor is a two-lane street. These short segments do not connect and only serve those properties with direct access, thus restricting the traffic volumes. The existing traffic volumes are well within the capacity of these configurations.

Although the planning-level capacity can provide a good indication of corridor operations, intersection performance often provides a clearer picture of how the corridor operates. Therefore, a detailed capacity analysis was completed at the study intersections to understand various performance metrics, including Level of Service (LOS) and queueing.

The intersection capacity analysis was completed using Synchro/SimTraffic Software (version 11), which incorporates methods outlined in the Highway Capacity Manual, 6th Edition. The software was used to develop calibrated models that simulate observed traffic operations and identify key metrics such as intersection Level of Service and queues. These models incorporate collected traffic, pedestrian, and bicyclist volumes, traffic controls, and driver behavior factors.

Level of Service quantifies how an intersection is operating. Intersections are graded from LOS A through LOS F, which corresponds to the average delay per vehicle. An overall intersection LOS A though LOS D is generally considered acceptable in the area. LOS A indicates the best traffic operation, while LOS F indicates an intersection where demand exceeds capacity.

Table 1 Intersection Level of Service (LOS)

Level of Service	Average Delay / Vehicle	
	Stop, Yield, and Roundabout Intersections	Signalized Intersections
A	< 10 seconds	< 10 seconds
B	10 to 15 seconds	10 to 20 seconds
C	15 to 25 seconds	20 to 35 seconds
D	25 to 35 seconds	35 to 55 seconds
E	35 to 50 seconds	55 to 80 seconds
F	> 50 seconds	> 80 seconds

For side-street stop-controlled intersections, consideration is given to the overall intersection level of service, which accounts for the total number of vehicles entering the intersection and the capability of the intersection to support the volumes. An emphasis is also placed on providing an estimate for the LOS of the side-street approach. Since the mainline does not have to stop, most delay is attributed to the side-street approaches. It is typical of intersections with higher mainline traffic volumes to experience high-levels of delay (i.e., poor levels of service) on the side-street approaches, but an acceptable overall intersection level of service during peak hour conditions.

The existing intersection capacity analysis shown in the following table indicates that all study intersections currently operate at an overall LOS B or better during the a.m. and p.m. peak hours. However, it is difficult to make left-turn or crossing maneuvers from the side-street approaches at the Walmart Access during the peak hours. This is illustrated by the LOS F operations for the side-street approach during the peak hours. In the table, the first letter represents the overall intersection level of service, while the second letter represents the worst side-street approach if it is an unsignalized intersection. The seconds of delay shown for signalized intersections is for the overall intersection, while for unsignalized intersections, the delay shown is for the worst side-street approach.

Table 2 Existing Intersection Capacity Analysis

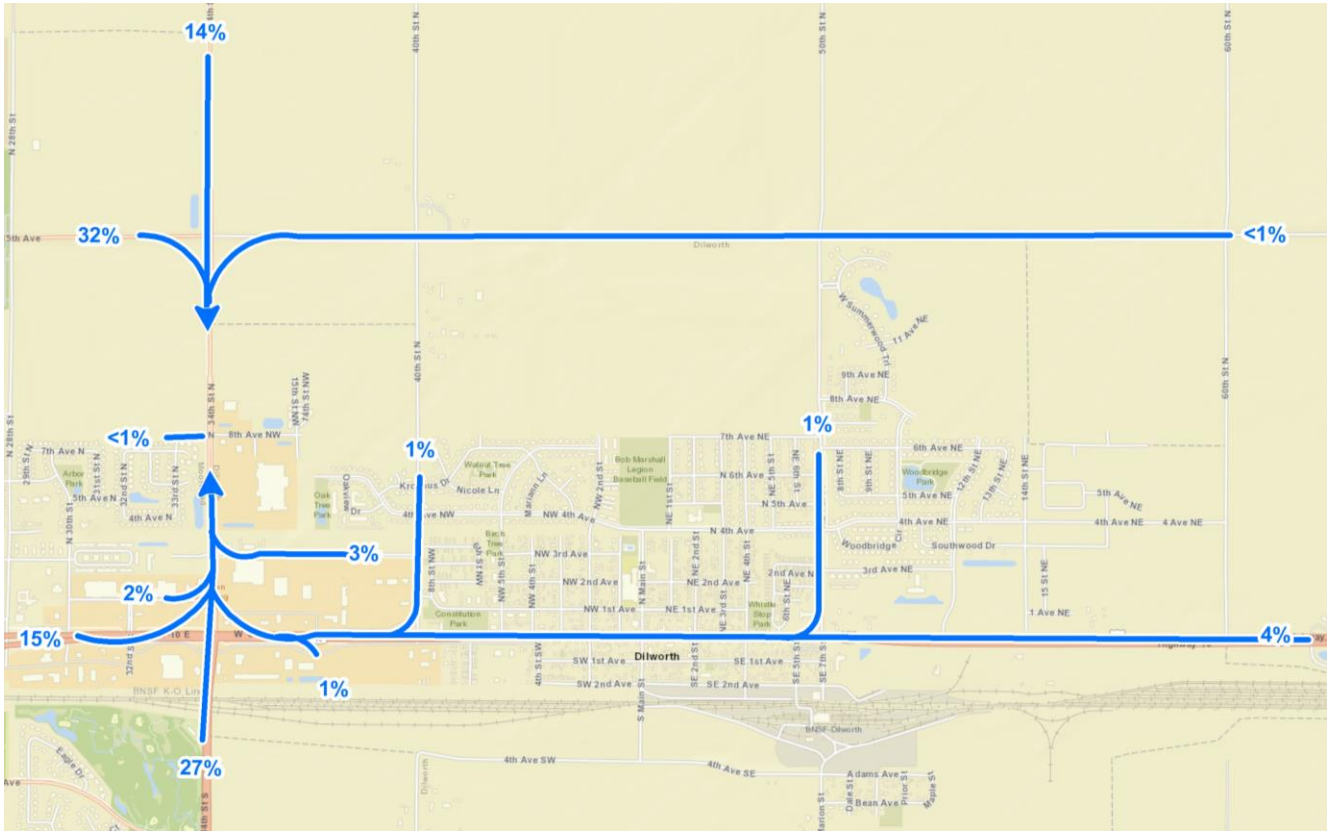
8th Avenue N Intersection	Traffic Control	AM Peak Hour	PM Peak Hour
34th Street N	Signal	A (9 sec)	B (16 sec)
Walmart Access	Side-Street Stop	A / B (12 sec)	A / F (56 sec)
7th Street N	Side-Street Stop	A / A (9 sec)	A / A (9 sec)

3.2 Existing Travel Patterns

StreetLight data, existing turning movement counts, and land use information was analyzed to understand who is using the segment of 8th Avenue near 34th Street. This information indicated the key travel patterns and origin-destination information which provides insight to what traffic could be expected on 8th Avenue if it were extended across Dilworth.

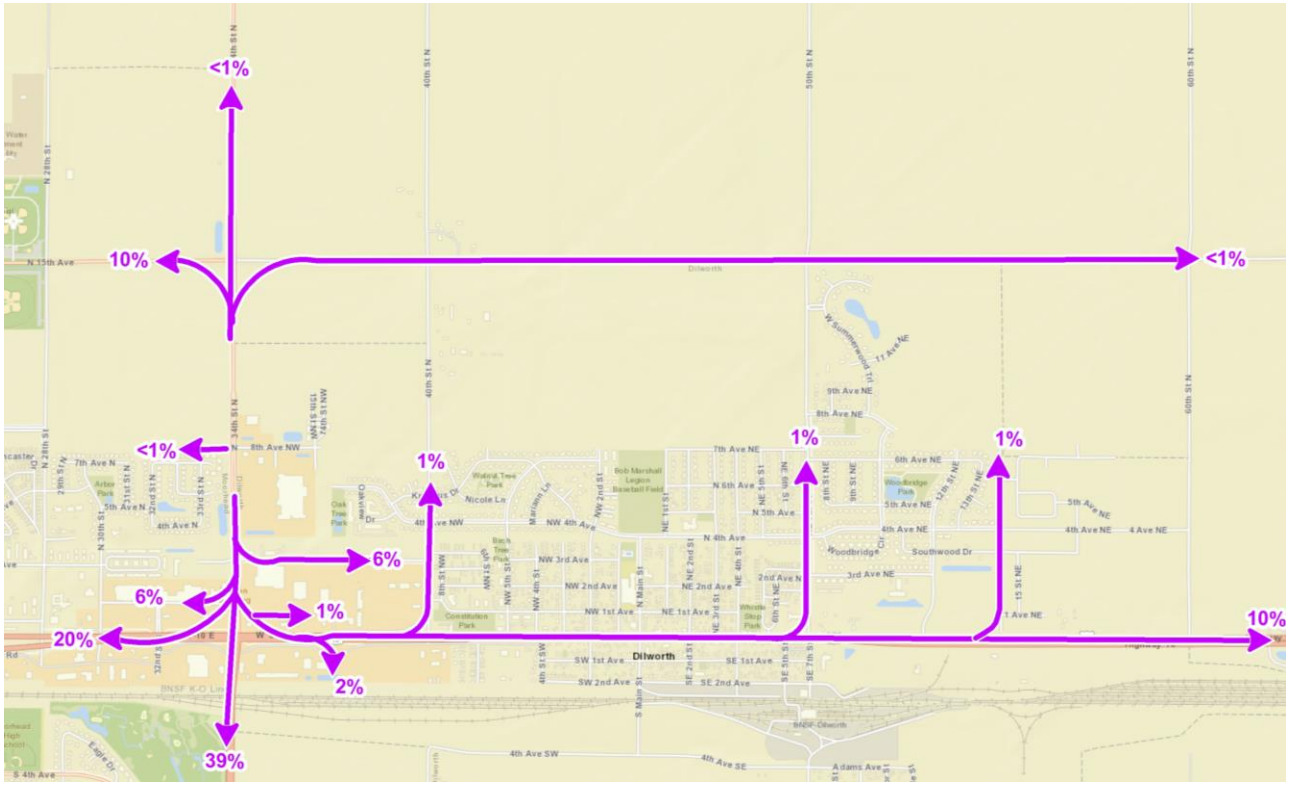
At this segment near Walmart, traffic was coming in relatively even amounts from both north and south on 34th Street. Approximately 5 percent of the traffic was coming from Dilworth north of Highway 10, and another 5 percent was coming from areas east of Dilworth on Highway 10 or 15th Avenue North. Approximately 90 percent of the traffic is coming from the west, north, or south of 8th Avenue near 34th Street. This is shown in **Figure 12**.

Figure 12 Origin Patterns



The travel patterns change when examining the traffic leaving the Walmart area. Approximately 10 percent of the traffic returns to residential areas in Dilworth on the north side of Highway 10 and another 10 percent continues east. The largest volume of traffic continues south of Dilworth on 34th Street. These patterns indicate that some local traffic would benefit from 8th Avenue being extended from Walmart to the residential areas to the east. This would relieve the need for these trips to use Highway 10 or other local streets to access this shopping area. This is shown in **Figure 13**.

Figure 13 Destination Patterns



Pedestrian and bicyclist activity was identified at the time traffic data was collected. There were less than 10 crossings in any direction at the 34th Street intersection and the Walmart access. The highest number of crossings was at 7th Street where there were 60 crossings on the east side of the street. This can be correlated to the new shared-use path that was installed in 2023 and is a strong testament to the desire of the community to use bicycle and pedestrian facilities. This pedestrian activity will likely change as development occurs in north Dilworth and more roadway/bike facilities are constructed.

3.3 Future Traffic Operations

When making infrastructure decisions, understanding future conditions, issues, and needs are important to ensure a fiscally responsible plan is in place in anticipation of future replacement and repairs. Therefore, year 2045 traffic forecasts were developed, with a goal of identifying long-term corridor and intersection capacity needs within the study area. The following information provides an overview of the methodology, assumptions, and traffic forecasts. Shown in **Figure 14**.

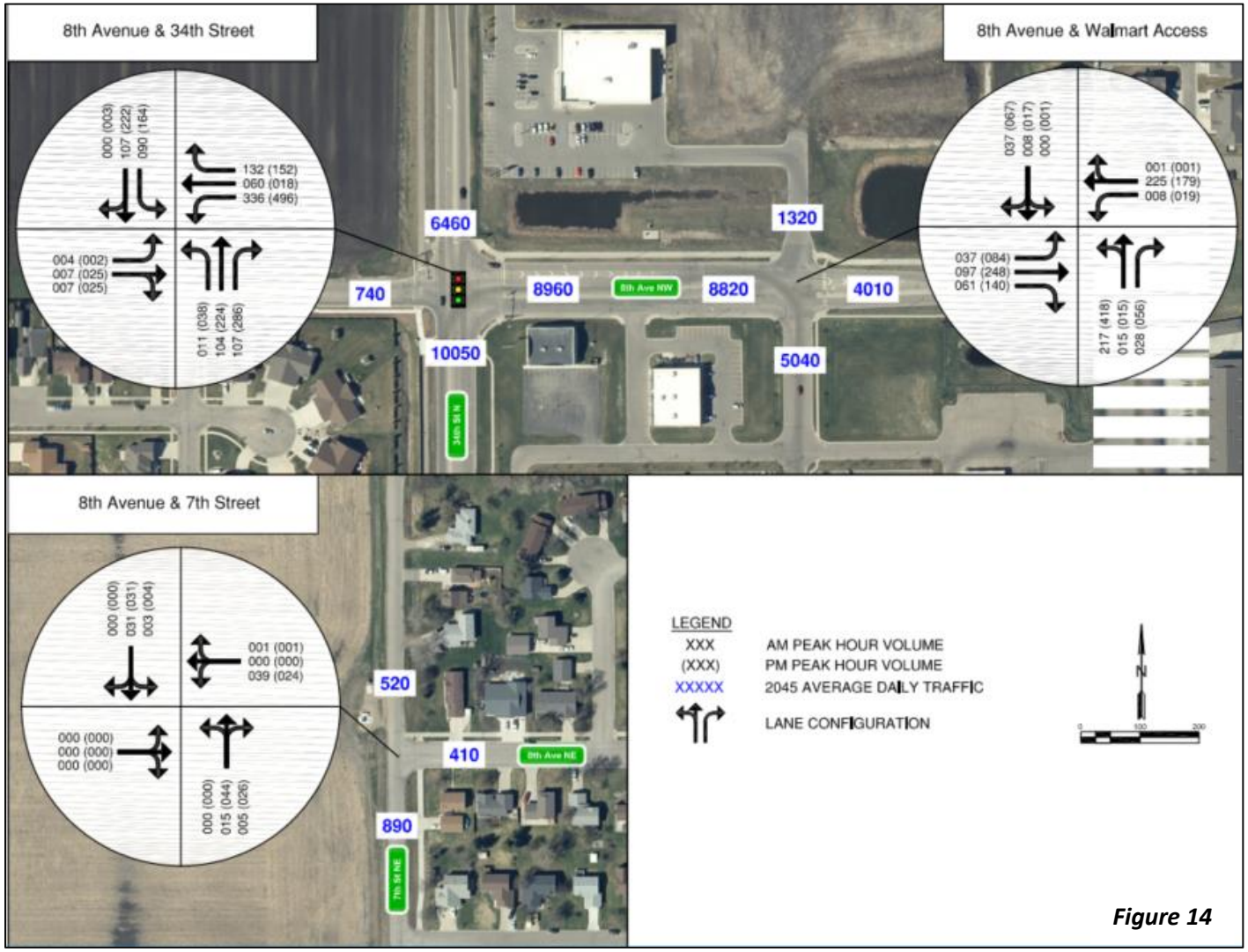


Figure 14

Methodology & Assumptions

To develop year 2045 traffic forecasts, a multi-pronged approach was used. The future traffic was initially forecasted utilizing the ITE Trip Generation Manual, 11th Edition for the planned land uses along the corridor. This provided the projected traffic volume for a full build out of the corridor. This was calibrated by utilizing the forecasted population of Dilworth to adjust the volumes to the partial buildout that would be anticipated by 2045.

Future year 2045 forecasts along the study corridor are expected to range from 8,980 to 420 vehicles per day. The higher volumes are located along the western limits of the study area, near 34th Street where there is predominantly commercial development. Moving east, the volumes incrementally lower with the lowest volumes occurring near 60th Street.

2045 Corridor and Intersection Operations

Future year 2045 ADT volumes along 8th Avenue are expected to range from approximately 840 to 8,980 vehicles per day. The corridor context also varies from a two-lane undivided facility to a two-lane divided arterial with turn lanes. Typical planning level capacity thresholds by facility type are shown in **Table 3**.

Table 3 Planning Level Capacity Thresholds

Facility Type	LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
Primary/Principal Arterial (5-lane)	< 11,400	< 18,200	< 29,100	< 32,600	< 36,300	< 36,300
Primary/Principal Arterial (4-lane)	< 7,600	< 12,100	< 19,400	< 23,300	< 27,600	< 27,600
Primary/Principal Arterial (3-lane)	< 4,900	< 7,900	< 12,700	< 17,000	< 21,100	< 21,100
Primary/Principal Arterial (2-lane)	< 3,100	< 5,000	< 8,000	< 12,000	< 15,900	< 15,900

SOURCE: Mn/DOT and WSB & Associates

Based on this planning-level capacity approach, the 8th Avenue corridor is expected to continue to operate within the LOS A to LOS C range, depending on the segment. A summary of the planning-level capacity analysis by segment is shown in **Table 4**.

Table 4 Planning Level Capacity Analysis

8th Avenue Segment	Facility Type	ADT Volume		Planning-Level LOS	
		Existing	2045 Base	Existing	2045 Base
34th Street to Walmart	3-lane	6,550	8,980	LOS A	LOS C
Walmart to 15th St NW	2-lane	640	4,010	LOS A	LOS B
15th St NW to Co Rd 9	2-lane	0	3,140	-	LOS B
CO Rd 9 to Main St	2-lane	0	2,400	-	LOS B
Main St to 7th St NE	2-lane	0	1,850	-	LOS B
7th St NE to Woodbridge Dr	2-lane	410	1,280	LOS A	LOS B
Woodbridge Dr to 14th St NE	2-lane	0	1,090	-	
14th St NE to 60th St N	2-lane	0	840	-	LOS B

Although the planning-level capacity can provide a good picture of overall corridor operations, intersection operations often provide a clearer indication. Therefore, a detailed intersection capacity analysis was completed at the study intersections along 8th Avenue to understand various performance metrics, including levels of services (LOS), queuing, and travel time. Future year 2045 intersection capacity was evaluated using Synchro/SimTraffic Software (version 11), which incorporates methods outlined in the Highway Capacity Manual, 6th Edition. Note that signal timing was assumed to be optimized, although no changes to phasing occurred. The future year 2045 intersection capacity analysis shown in **Table 5** indicates that all study intersections are expected to operate at an overall LOS D or better during the a.m. and p.m. peak hours. However, making a left-turn or crossing maneuvers from the side-street approaches along the corridor, particularly at the Frontage Road and County Road 9 during the peak hours, is expected to become more challenging. This is illustrated by the LOS F operations for these side-street approaches during the peak hours.

Table 5 Year 2045 Intersection Capacity Analysis

Highway 10 Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Existing	2045	Existing	2045
34th Street	SIGNAL	B (10 sec)	B (12 sec)	B (15 sec)	C (21 sec)
	RAB	-	A (7 sec)	-	B (14 sec)
Walmart Access	SSS	A / B (12 sec)	A / C (21 sec)	A / F (56 sec)	A / F (>180 sec)
	RAB	-	A (6 sec)	-	B (12 sec)
CR 9 / 40th Street W	SSS	-	A / B (12 sec)	-	A / B (13 sec)
	RAB	-	A (4 sec)	-	A (5 sec)
Main Street	SSS	-	A / B (10 sec)	-	A / B (11 sec)
	RAB	-	A (4 sec)	-	A (4 sec)
7th Street E	SSS	A / A (9 sec)	A / B (11 sec)	A / A (7 sec)	A / B (11 sec)
	RAB	-	A (4 sec)	-	A (4 sec)
14th Street E	SSS	-	A / A (9 sec)	-	A / B (10 sec)
	RAB	-	A (4 sec)	-	A (4 sec)
60th Street E	SSS	-	A / A (8 sec)	-	A / A (8 sec)

SSS = Side-Street Stop, RAB = Roundabout

The busiest intersection along the corridor is expected to continue to be 34th Street. The storage length at this intersection is currently sufficient for most of the approaches. The queue length for the westbound left during the PM peak hour fills the storage length. The existing traffic utilizing the Walmart access today experiences high delay with exiting during the PM peak hour. With the additional through traffic that would be utilizing the corridor as further development occurs causes this delay to increase to greater than 180 seconds of delay.

Event Traffic

With the location of the proposed City Park near the elementary school, there is a possibility of a traffic surge due to an event at the school or the park. These traffic surges are difficult to predict especially when the potential amenities/attractions at the park are unknown. The intersections near the park will operate more efficiently with roundabouts than with side-street stop control unless Police and additional traffic control staff are used to direct traffic. When the amenities of the park are known, an additional traffic analysis should be conducted to evaluate the intersection configurations.

4.0 Corridor Alternatives

Alternatives on the 8th Avenue Corridor will need to consider the current needs as well as the future development and growth of Dilworth.

4.1 Alignment Alternatives

Three alignment concepts were developed to explore how future development affects and is affected by the planned roadway extension and a future regional park. The concepts were informed by the City's 2018 Comprehensive Plan, past park concepts, insights from the 2023 Metro COG Housing Needs and Market Analysis, and feedback from property owners and stakeholders.

Each alternative was developed to meet certain needs brought up in the preliminary planning phases. Some address existing infrastructure while others focus on future development. The concepts are named based on the location of the potential 8th Avenue extension: northernmost, central, and southernmost as shown in **Figure 15**. These alignment concepts are further discussed in section 5.1.

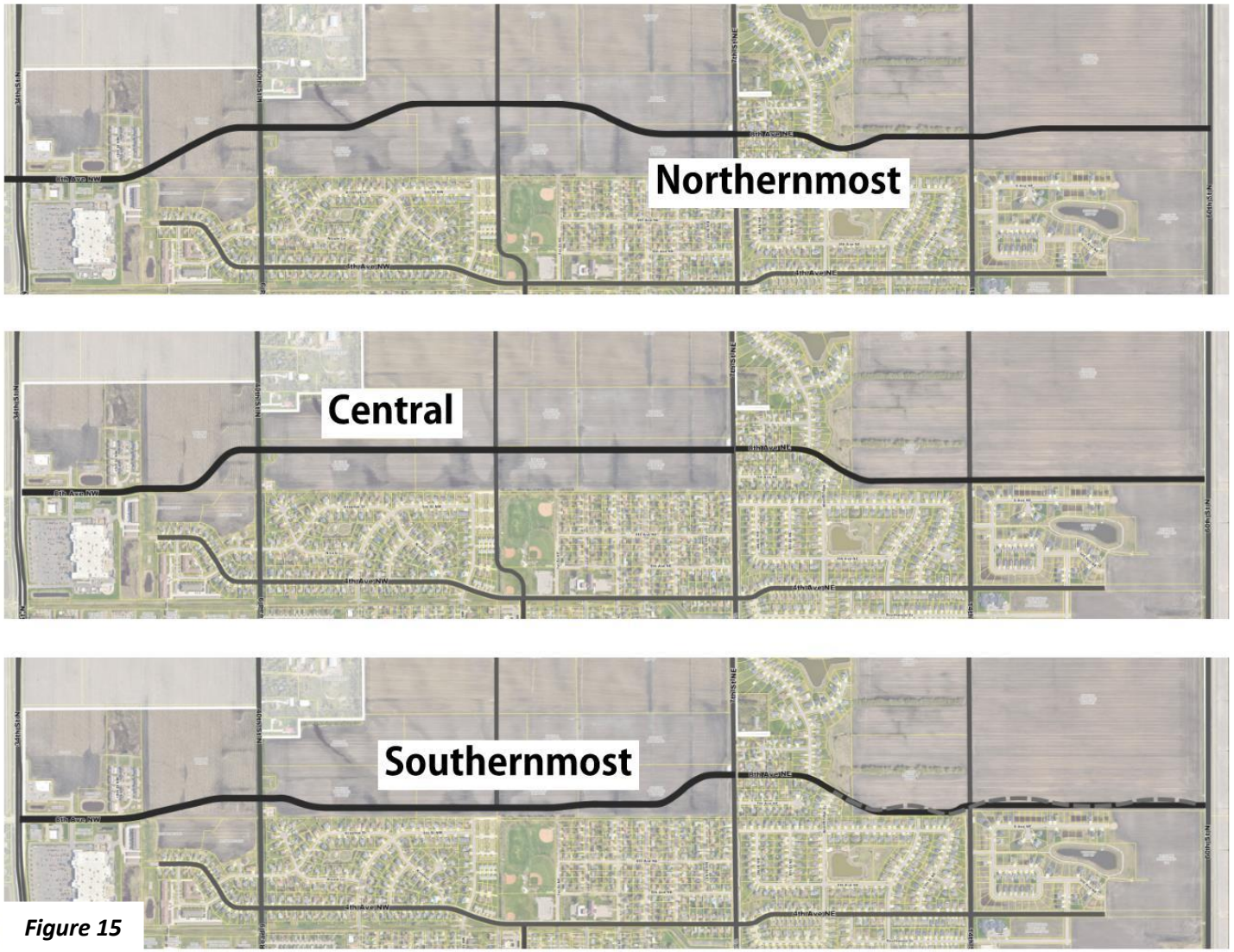


Figure 15

Operational Considerations

Throughout the 8th Avenue corridor, there is a varying degree of roadway needs as you travel from 34th Street to 60th Street. The corridors' goal is to reduce primary and secondary access points. Elimination of access points would provide more of a through roadway and reduce any turning conflicts residential or business accesses would pose. Private property access point management should be a priority along the corridor to increase safety and reduce conflicts. Implementation of conflict reduction methods throughout the corridor could increase roadway safety. These could include medians, three quarter accesses, pedestrian crossing islands and/or roundabouts.

Primary intersections along 8th Avenue will need to be addressed to provide safe and robust intersections that can manage current and future traffic needs. The corridor has an opportunity to transition between a divided roadway with a median and undivided roadway as each area from 34th Street to 60th Street has unique needs. Implementing different roadway sections could help weave between the areas of low density residential to high density to commercial building opportunities throughout the corridor.

4.2 Street Section Alternatives

Two-Lane Undivided Roadway

This concept is similar to the existing configuration of 8th Avenue east of 7th Street. The individual lanes for each direction of traffic can be wider than a standard two-lane roadway to accommodate parking if desired. However, there is potential for higher speeds due to the wider lane widths. The wider lanes can improve safety but the lack of a median still presents a risk for head-on collisions and lane departure crashes. The maintenance aspect of a two-lane undivided is more favorable for local maintenance crews as snow can be directed to the outside edge of the roadway. This is shown in **Figure 16**.

Figure 16

Two-Lane Divided Roadway

A divided roadway has a physical barrier or median separating opposing lanes of traffic. There will be no additional pavement marking needed to separate traffic. The individual lanes for each direction of traffic are closer to the widths of a standard two-lane roadway. Due to the narrowing of the perceived corridor, there is potential for slower and more controlled speeds. The presence of a median reduces the risk of head-on collisions and lane departure crashes. The maintenance aspect of a two-lane divided roadway is less favorable for local public works crews. Aesthetically a divided roadway can be made wide enough to house trees, perennials, and other landscaping amenities to provide a more visually pleasing corridor. There is an additional footprint for the roadway with a large median, requiring additional right of way up to 110 feet. This is shown in **Figure 17**.

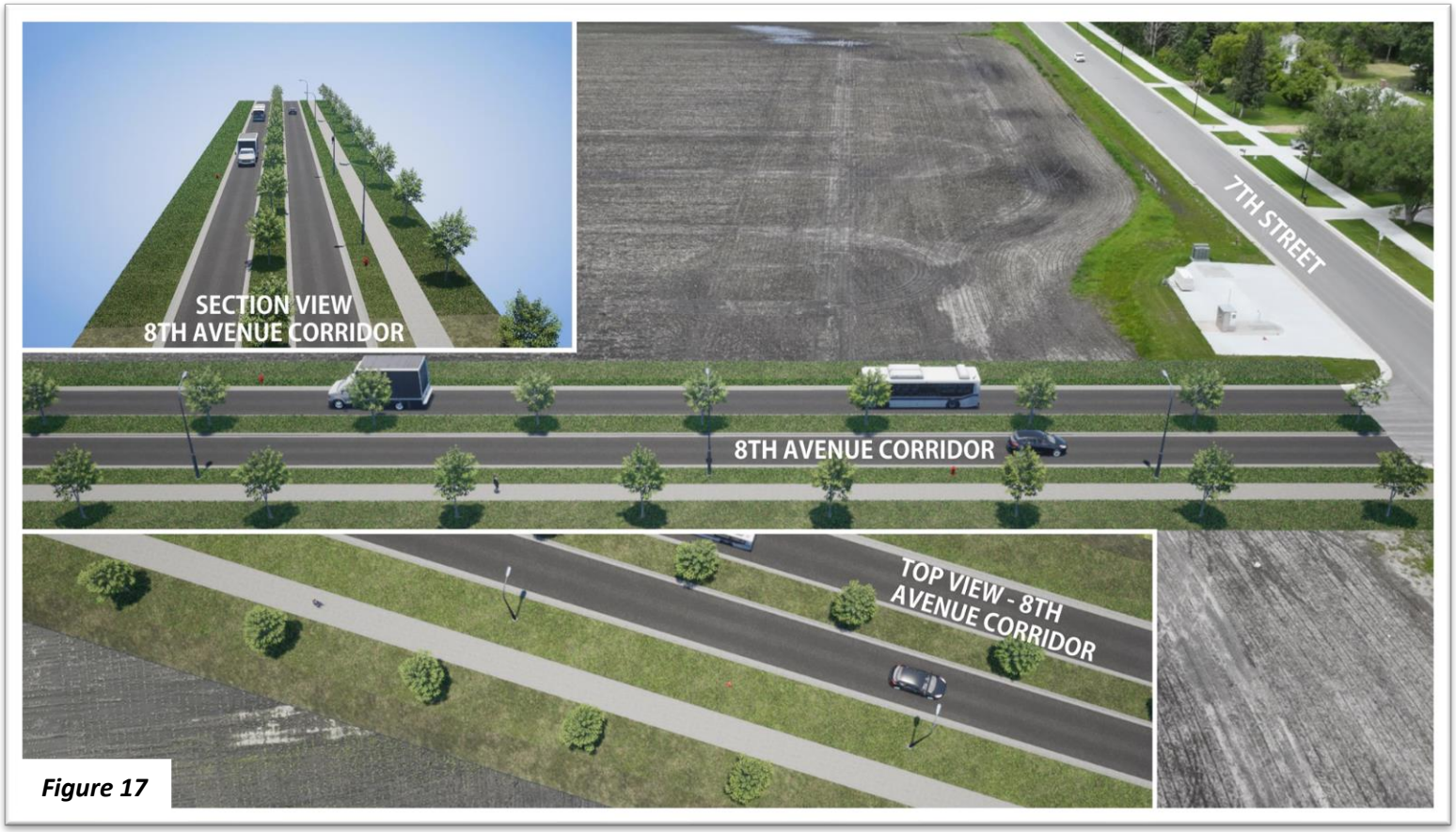


Figure 17

4.3 Intersection Alternatives

The proposed 8th Avenue corridor has five major intersections along the proposed route. Each intersection will need to be evaluated on a case-by-case approach based on future traffic and land use along the corridor.

34th Street Intersection

No Build: A no-build alternative does not address the dominant turning movements and conflicts of Walmart and Aldi.

Geometric Change: A redesign option for the geometric layout of the 34th Street intersection could be a combination of an R-Cut and Roundabout as found in Fridley, MN near the Target parking lot. The geometric change would restrict access with a barrier along 8th Avenue to eliminate left-turning conflicts. Constructing the turnabout to the west allows right-out vehicles to turn on the south side of the median that would return to 34th Street. A similar turnaround for right-in vehicles using accesses on the north side of the median. A change of geometric layout at this intersection would improve safety for vehicular traffic on 8th Avenue. The number of access points and turning movements coming in and out of commercial driveways creates excessive left-turning movements across traffic on 8th Avenue. Another geometric alternative shown below is dual roundabouts. Two consecutive roundabouts help eliminate left-turning conflicts. A large enough roundabout would need to be constructed to facilitate large delivery trucks to and from Walmart. 34th Street & Walmart Intersection cocepts shown in **Figure 18.**

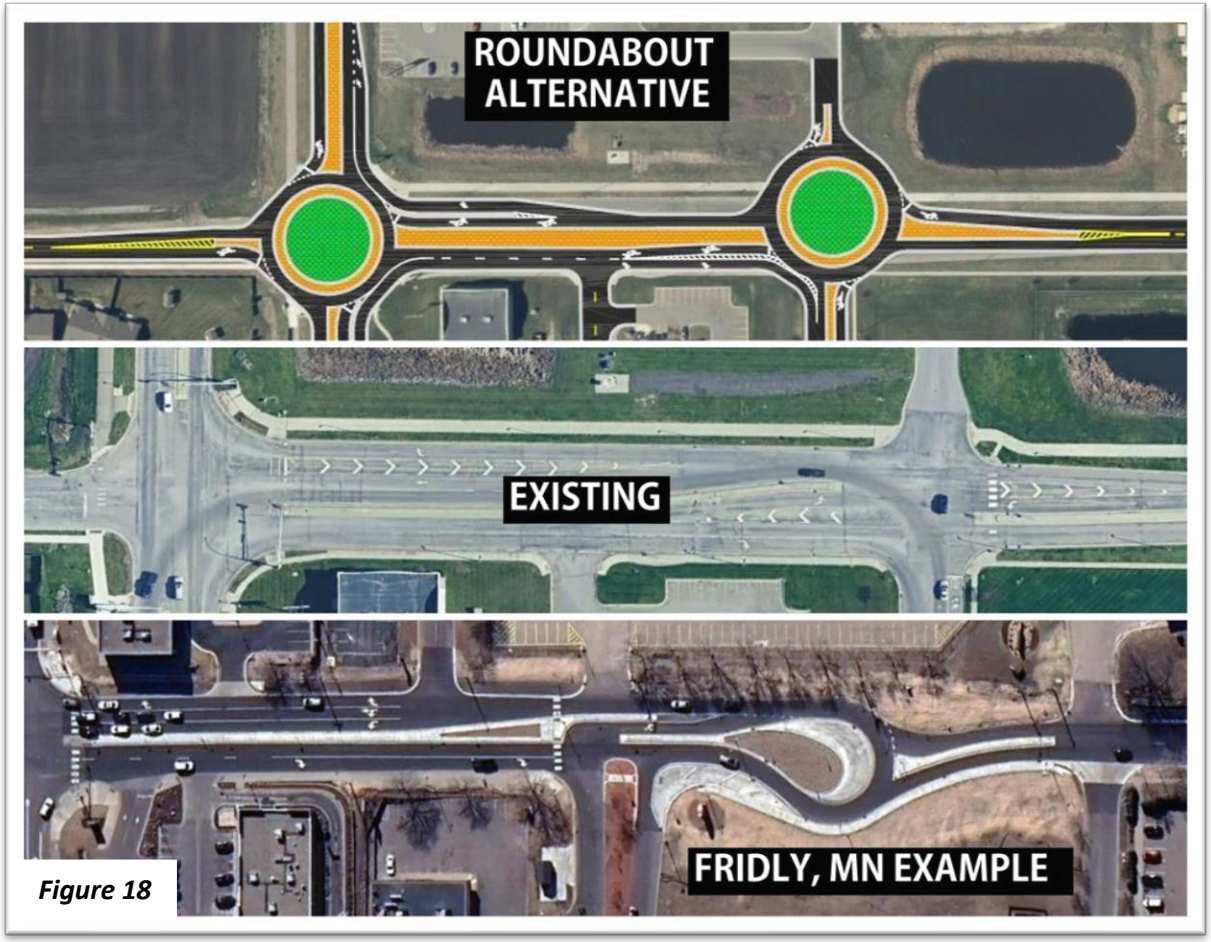


Figure 18

Co Road 9

No Build: A no-build alternative would suffice until the 8th Avenue corridor is built out and connected.

Two-Way / All-Way Stop: A preliminary approach to this intersection could start as a side road two-way stop as development builds around it leaving Co Rd 9 as a no-stop condition. As development progresses in the area and traffic needs to increase for a four-way stop to be implemented.

Roundabout: A larger roundabout could be implemented at this intersection to help facilitate truck traffic on County Road 9. A roundabout would need to be built to the west of the current County Road 9 alignment to avoid utility conflicts in the NE and SE quadrants. Shown in **Figure 19**.

Figure 19

County Road 9 Roundabout Concept

Main Street

No Build: A no-build alternative would suffice until the 8th Avenue corridor is built out and connected.

Two-Way / All-Way Stop: A preliminary approach to this intersection could start as a side road two-way stop as development builds around it leaving 8th Avenue as a no-stop condition. As development progresses in the area and traffic needs increase a four-way stop could be implemented.

Roundabout: A smaller diameter roundabout could be implemented at this intersection to provide a smaller footprint within the proposed park area. Shown in **Figure 20**.

Figure 20

Main Street Roundabout Connection Concep

7th Street Intersection

No Build: A no-build alternative would suffice until the 8th Avenue corridor is built out and connected.

Two-Way / All-Way Stop: A preliminary approach to this intersection could start as a two-way stop on 8th Avenue as development builds around it leaving 7th Street as a no-stop condition as it is today. As development progresses in the area and traffic needs increase a four-way stop could be implemented.

Roundabout: A roundabout could be implemented at this intersection to provide acceptable flow of traffic. The roundabout would need to be positioned to the southwest quadrant of the current 7th Street Intersection alignment to avoid homes and an existing lift station. Shown in **Figure 21**.

Figure 21

7th Street Roundabout Concept

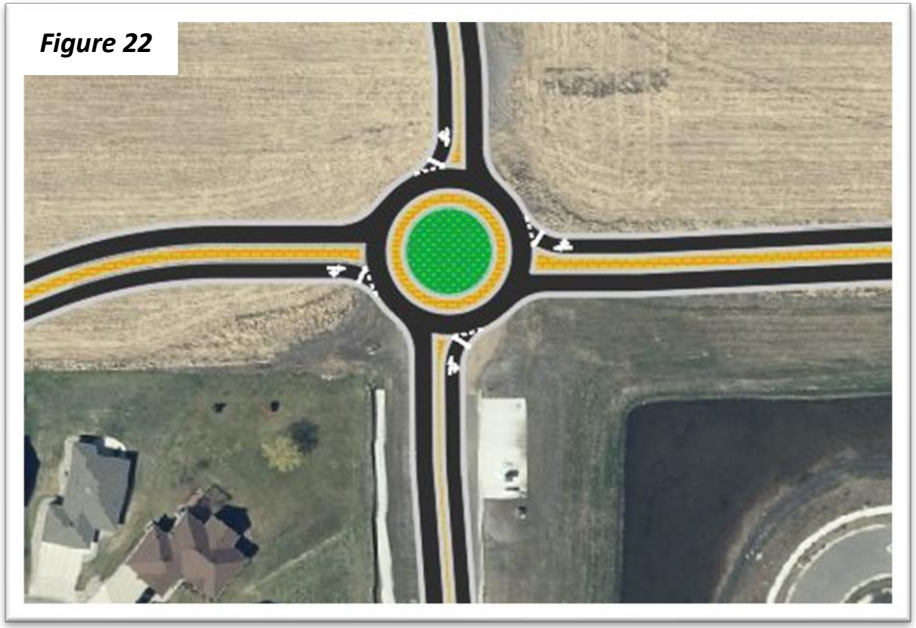
14th Street Intersection

No Build: A no-build alternative would suffice until the 8th Avenue corridor is built out and connected.

Two-Way / All-Way Stop: A preliminary approach to this intersection could start as a side road two-way stop as development builds around it leaving 8th Avenue as a no-stop condition. As development progresses in the area and traffic needs increase a four-way stop could be implemented.

Roundabout: A roundabout could be implemented at this intersection to provide an acceptable flow of traffic. The roundabout could be positioned to avoid utility conflicts and existing private property. Shown in **Figure 22**.

Figure 22



14th Street Roundabout Concept

4.4 Corridor Connectivity

Main Street Extension

An extension of Main Street to the north would intersect the proposed 8th Avenue corridor at the north end of the existing park. A proposed Main Street would need to be located to the east of the current drainage ditch. The Main Street extension would also have to stay far enough away from Bob Marshall Field to preserve the parking lot and any existing infrastructure. The new intersection leg at Main Street and 4th Ave would convert to a four way stop as it is currently a three-way stop. This Main Street extension would provide a direct route from the center of Dilworth to the 8th Avenue corridor. An independent route for Main Street is a preferred alternative as opposed to only extending either 2nd Street or 1st Street. 1st and 2nd Street run through residential areas and are not currently designed as a main through roadway. An independent roadway separates through traffic from residential areas and would increase safety for homeowners on adjacent streets. A dedicated roadway that connects to 8th Avenue without homes along the route will make for a safer roadway connection. The removal of access points that driveways pose would also increase safety of a dedicated through roadway versus using an adjacent existing roadway as the main through street. Main Street extension concept shown in **Figure 23**.

Connection of Dead-End Roadways:

The connection of dead-end residential streets would provide continuous access and exits for residences. An extension of dead-end streets on the south side of the 8th Avenue corridor would help with snow removal, mail route efficiency, alternate exits/access, and overall better community connectivity. A completion of these dead-end roadways would help the circulation of local traffic and create a buffer between the older Dilworth community from the newer development around the 8th Avenue corridor.

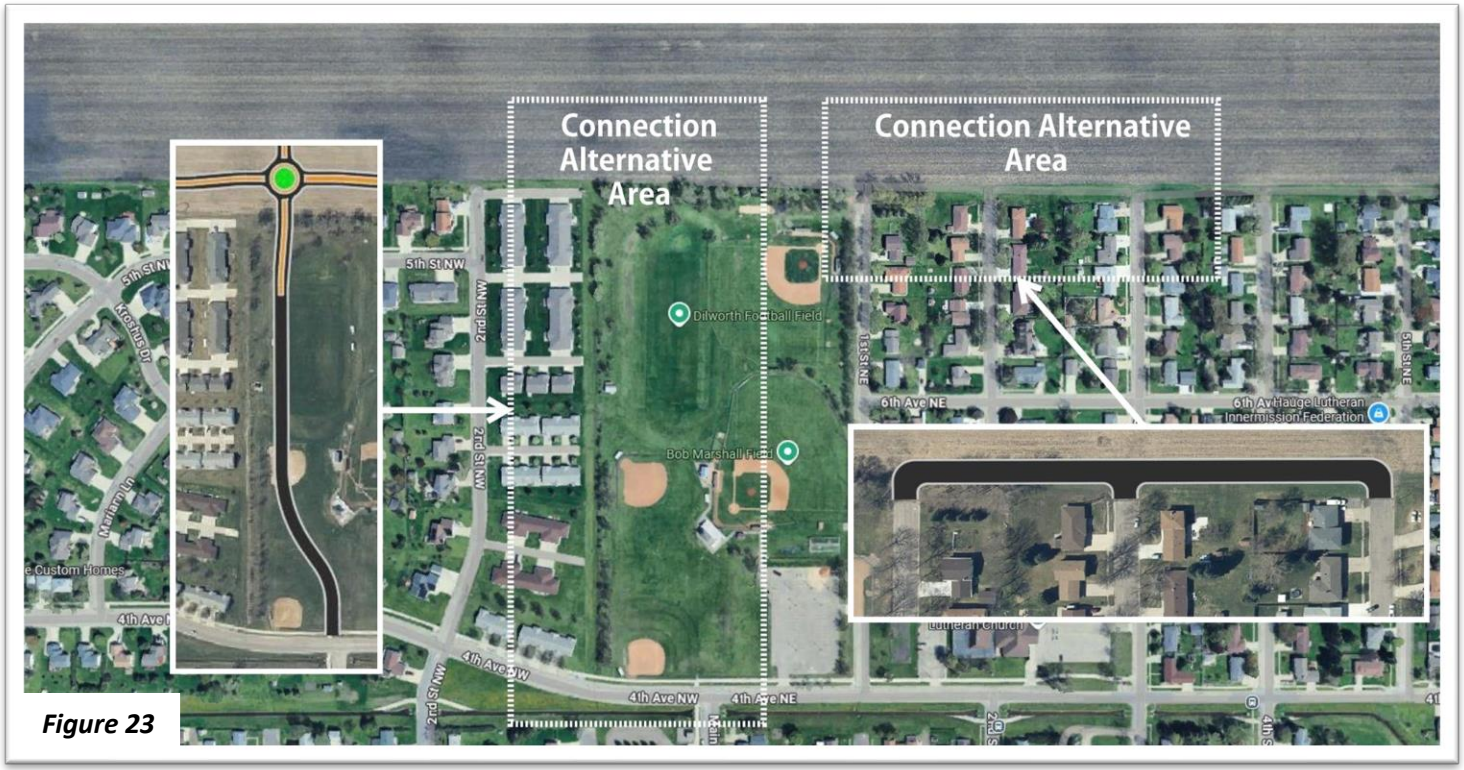


Figure 23

4.5 Corridor Wide Options

Bike and Pedestrian Infrastructure

Through the 8th Avenue corridor, it is important to emphasize the construction of sidewalks and shared used paths as future investment in the Dilworth community. Having a continuous path that connects to existing path infrastructure ensures a walkable environment throughout Dilworth. Future path connections should lead to and from inner city and region wide destinations.

Pedestrian friendly traffic calming elements where 8th Avenue bisects the community park or separates the park and ballfields:

- Narrow the roadway
- Change pavement type
- Direct those crossing to predictable and controlled points
- Consider grade separation via an underpass (tunnel)
- Construct sidewalks and trails to connect neighborhoods to the community park/neighborhood parks
- Integrate sidewalks with other park features including weaving of sidewalk, benches and rest areas

Figure 24

Median Options

Roadway medians are an open slate when it comes to streetscaping alternatives. Medians can be made wide enough to hold grass and smaller trees. A dedicated turn lane can also be added to median areas to accommodate left turns. An all-concrete median can be installed to reduce maintenance, requiring no mowing or landscaping upkeep. Streetlights can also be added to medians to provide a lighted corridor. Shown in **Figure 24**.

School Connections and Accessibility

The DGF Elementary School is located where many ideas are converging together, including a future regional park north of the school and possibly realigning Main Street to connect to the 8th Avenue extension. These community investments are viewed as an opportunity to improve access to the school and expand school activities into the park. However, these improvements need to consider how students will safely cross or access the area on foot or bike. In addition, for the southernmost alignment, careful thought must also be given to whether the road will create a situation where the school becomes landlocked. This could

limit the school's ability to expand or affect the overall flow of traffic in the area. Ultimately, the design must prioritize pedestrian and student safety, accessibility to the park, and school bus operations.

Green Buffers

As the 8th Avenue Extension is designed, attention must be given to the proximity of the road to existing homes. As highlighted in the community engagement summary, there were differing opinions within the community regarding how close the roadway extension should be to existing residences. At the very least, careful consideration must be given to creating an appropriate transition between existing homes and the future roadway, especially along the southernmost alignment. This can be accomplished by incorporating a green buffer.

A well-designed green buffer can enhance privacy, reduce noise, and provide a natural transition between the roadway and residential areas. Features such as native trees, landscaped berms, rain gardens, and vegetated sound walls offer both aesthetic appeal and environmental benefits. These strategies should be prioritized in future roadway designs and development proposals where roadway alignments approach existing homes. The southernmost concepts incorporate a 120-foot separation, intended to function as a green buffer. Green buffer strategies shown in **Figure 25** include:

- Tree Planting and Landscaping**:** Plant native trees and shrubs in staggered rows to create a dense vegetative screen. This will reduce noise, improve air quality, and enhance visual separation.
- Landscaped Berms: Construct landscaped berms along the roadway edge. These provide both visual screening and noise reduction, while also blending with the natural environment.
- Fencing with Vegetation: Combine solid or semi-transparent fencing with climbing vines or hedges to create a dual-layered buffer. This approach is space-efficient and aesthetically pleasing.
- Multi-Use Green Corridor: Establish a green corridor with walking or biking paths surrounded by landscaped buffers, offering recreational opportunities while serving as a transition zone between the roadway and backyard.

Figure 25

A well-designed green space buffer can have benefits for residential and multimodal users alike. A combination of different buffers and further enhance a corridor's aesthetics. The natural buffer options should be encouraged for future development on the 8th Avenue corridor. Due to the naturally aesthetically pleasing nature of a green buffer, there would be support from local residents to add these amenities.

5.0 Corridor and Land Use Concepts

5.1 Concept Development

Concepts were developed to establish a framework that balances the development of a new road with future growth and the community's long-term vision. These concepts supplement the City's Comprehensive Land Use Plan by providing direction for future land uses, connectivity, and park space. The concepts emphasize opportunities for developments that support "missing middle" housing. Missing middle is commonly defined as housing types such as duplexes, triplexes, townhomes, and low-rise apartment buildings that fill the gap between single-family homes and larger apartment complexes. Adding these housing types provides more options for families to find a home that meets their unique needs.

Alignment Concepts

The placement of a new roadway can significantly influence development patterns by shaping accessibility, connectivity, and land use potential. While roadways can create opportunities for growth, they can also make adjacent land harder to develop and fragment parcels. Careful planning is important to ensure the roadway supports balanced, sustainable development while minimizing challenges for property owners and developers. From this perspective, the following roadway alignments offer the following benefits and challenges:

- *Northernmost:* This concept offers greater flexibility in arranging development patterns. With thoughtful development design, it has the most potential for side yards rather than rear yards along the corridor, which would reduce the potential for long stretches of fences along the corridor. **Figure 26**.
- *Central:* This concept presents the greatest challenges for creating development opportunities south of the roadway alignment. Parcels in this area are more fragmented, making it harder to subdivide the land. The limited space south of 8th Avenue may also lead to increased street access and the presence of more rear yards along the corridor, which would increase the potential for long stretches of fences along the corridor. **Figure 27**.
- *Southernmost:* This concept minimizes parcel fragmentation and offers greater flexibility for future development north of the roadway alignment. However, the addition of a green buffer will be required to ensure sufficient separation between existing homes and reduce noise and visual impacts. **Figure 28**.

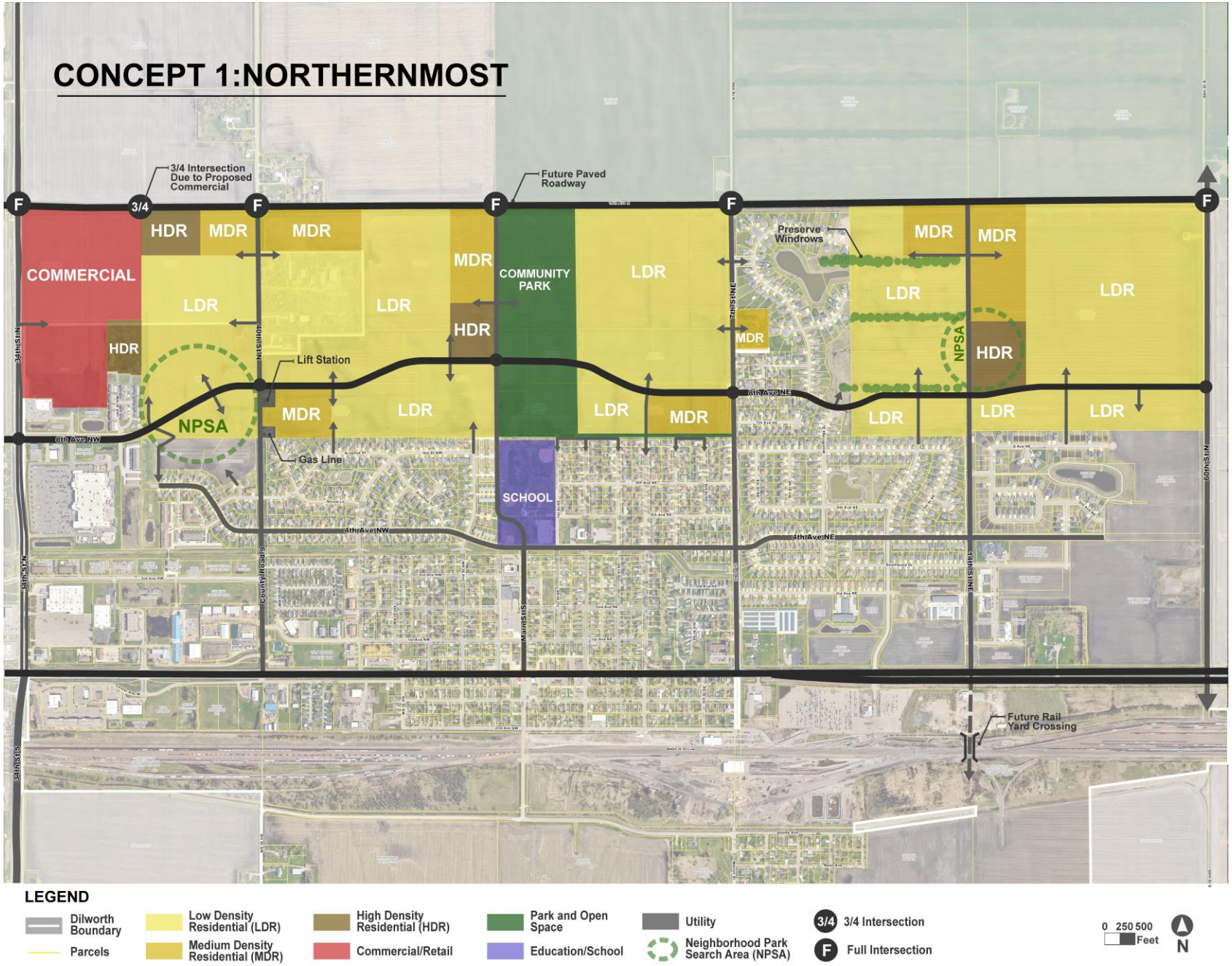

CONCEPT 1:NORTHERNMOST
3/4 Intersection Due to Proposed Commercial
Future Paved Roadway
Preserve Windrows
COMMERCIAL
HDR
MDR
LDR
COMMUNITY PARK
NPSA
Lift Station
Gas Line
SCHOOL
Future Rail Yard Crossing
LEGEND
Dilworth Boundary
Parcels
Low Density Residential (LDR)
Medium Density Residential (MDR)
High Density Residential (HDR)
Commercial/Retail
Park and Open Space
Education/School
Utility
Neighborhood Park Search Area (NPSA)
3/4 Intersection
Full Intersection
0 250 500
Feet
N

Figure 26

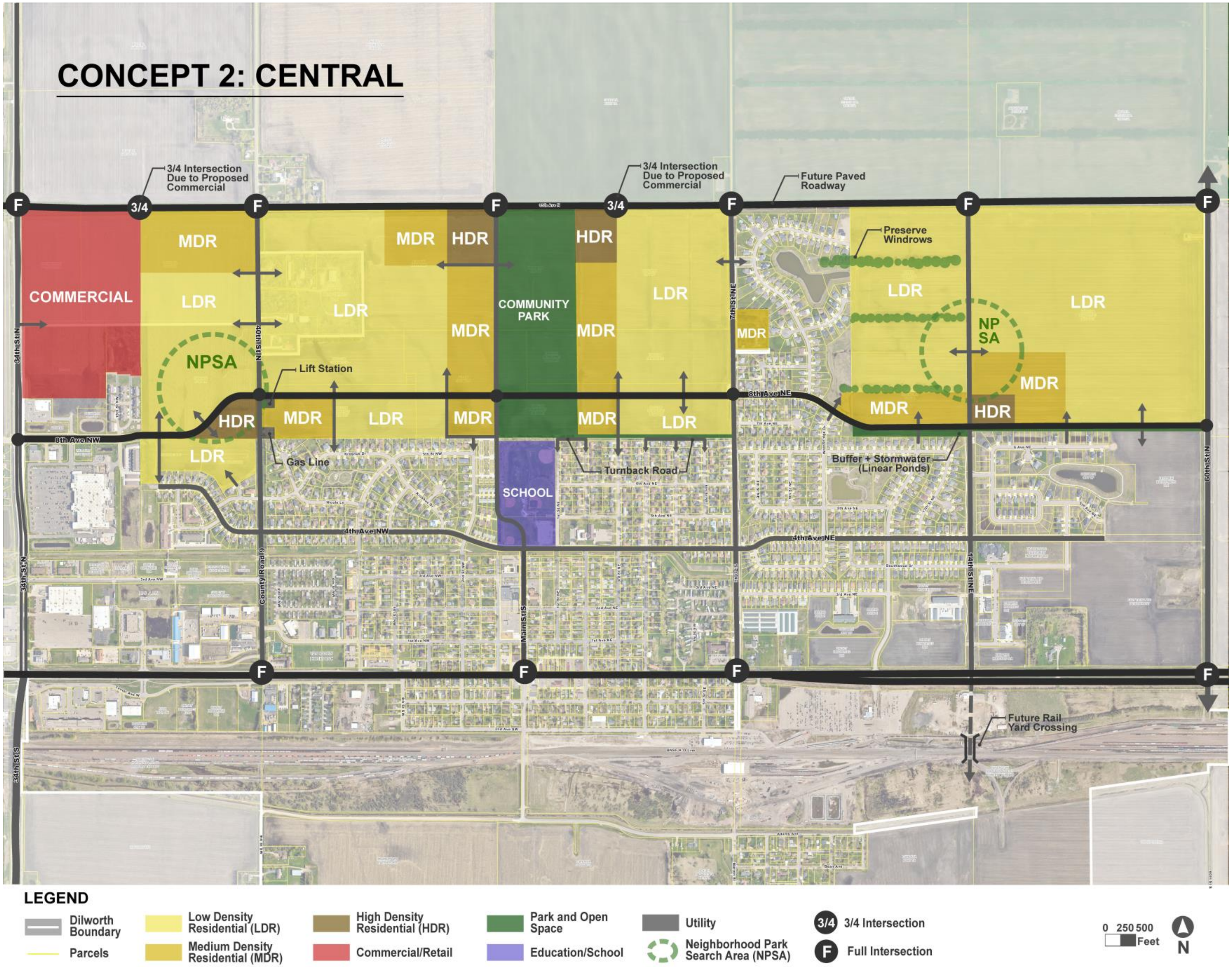

CONCEPT 2: CENTRAL
3/4 Intersection Due to Proposed Commercial
3/4 Intersection Due to Proposed Commercial
Future Paved Roadway
COMMERCIAL
MDR
LDR
NPSA
HDR
COMMUNITY PARK
SCHOOL
Preserve Windrows
NP SA
Lift Station
Gas Line
Turnback Road
Buffer + Stormwater (Linear Ponds)
Future Rail Yard Crossing
8th Ave NW
8th Ave NE
4th Ave NW
4th Ave NE
34th St N
40th St N
County Road 9
Main St S
7th St NE
14th St NE
60th St N
LEGEND
Dilworth Boundary
Parcels
Low Density Residential (LDR)
Medium Density Residential (MDR)
High Density Residential (HDR)
Commercial/Retail
Park and Open Space
Education/School
Utility
Neighborhood Park Search Area (NPSA)
3/4 Intersection
Full Intersection
0 250 500 Feet
N

Figure 27

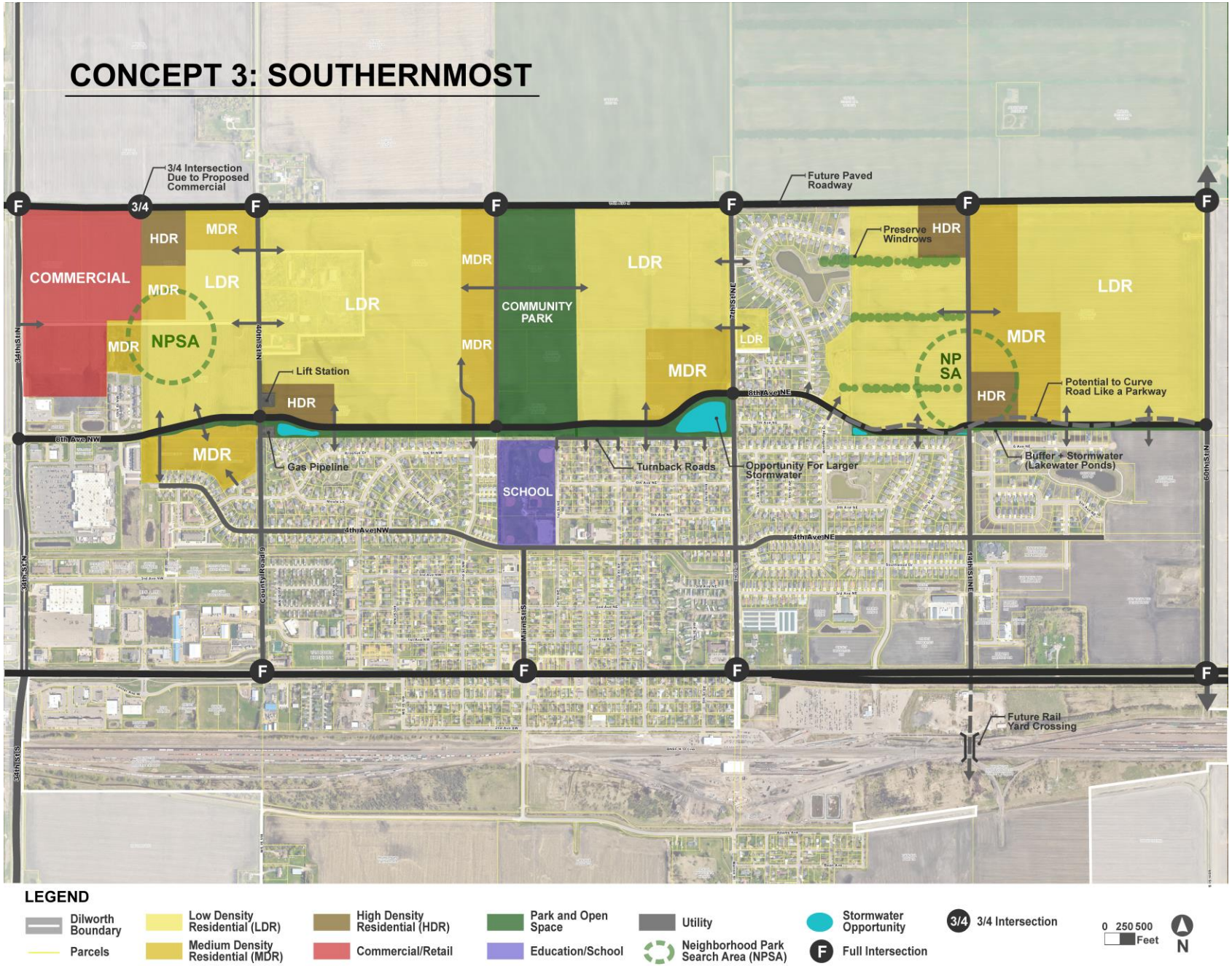

CONCEPT 3: SOUTHERNMOST
3/4 Intersection Due to Proposed Commercial
Future Paved Roadway
COMMERCIAL
HDR
MDR
LDR
NPSA
COMMUNITY PARK
Preserve Windrows
NP SA
Lift Station
Potential to Curve Road Like a Parkway
Gas Pipeline
Turnback Roads
Opportunity For Larger Stormwater
Buffer + Stormwater (Lakewater Ponds)
SCHOOL
Future Rail Yard Crossing
LEGEND
Dilworth Boundary
Parcels
Low Density Residential (LDR)
Medium Density Residential (MDR)
High Density Residential (HDR)
Commercial/Retail
Park and Open Space
Education/School
Utility
Neighborhood Park Search Area (NPSA)
Stormwater Opportunity
Full Intersection
3/4 Intersection
0 250 500 Feet
N

Figure 28

5.2 Future Land Use

The three concepts guide future land use types, with a particular emphasis on expanding the city's housing options. The following land use categories are featured in the three concepts:

- *Low-Density Residential (LDR):* Low-density housing is desirable for many people, particularly those who seek more privacy and space. Examples include small lots and single-family detached housing. Having a mix of all housing types helps people of all ages and incomes have access to affordable housing.
- *Medium-Density Residential (MDR):* Medium-density housing provides more affordable homeownership opportunities while keeping the character of low-density housing. Examples include twin homes/duplexes and townhomes. This style of housing is particularly well-suited for young families or those looking for smaller, more affordable options.
- *High-Density Residential (HDR):* High-density housing helps provide rental opportunities for residents. Examples include apartment buildings of all scales. Providing accessible and affordable rental opportunities is essential to retain young professionals and recent college grads who help to support and grow the economy. Public perception received from the public input period had concerns about this type of housing. They had voiced their concerns of 10+ story apartment complexes and wanted to shy away from what they saw in bigger cities like Fargo. When talked to citizens it was mostly agreed upon that a 3-4 story apartment with storefronts on the first level would be a good alternative for high-density residential housing.
- *Neighborhood Park Search Areas (NPSA):* NPSA identifies strategic locations where future parks are needed to support anticipated developments. Future parks should be conveniently located within walking or biking distance of nearby residents. Future parks should offer a variety of amenities and green spaces that promote active lifestyles, foster social connections, and enhance the overall quality of life for current and future residents.
- *Commercial:* This land use designation aligns with the City's 2018 Comprehensive Plan, supporting commercial uses such as retail centers, professional offices, and other auto-oriented developments.

Missing Middle Housing

The need for more housing was identified in the 2023 Metro COG Housing Study. The study found that new housing production has not kept pace with job growth and that the cost of housing has been steadily increasing since before 2020. These two trends have created a lack of sufficient and affordable housing for residents. The study recommended that the region begin to construct new housing of various types, including housing that is commonly called "missing middle." The need for more and a wider variety of housing types was confirmed in the November 2024 Open House for this study. These smaller units provide housing alternatives for smaller households or those who do not want or cannot afford larger single-unit detached homes.

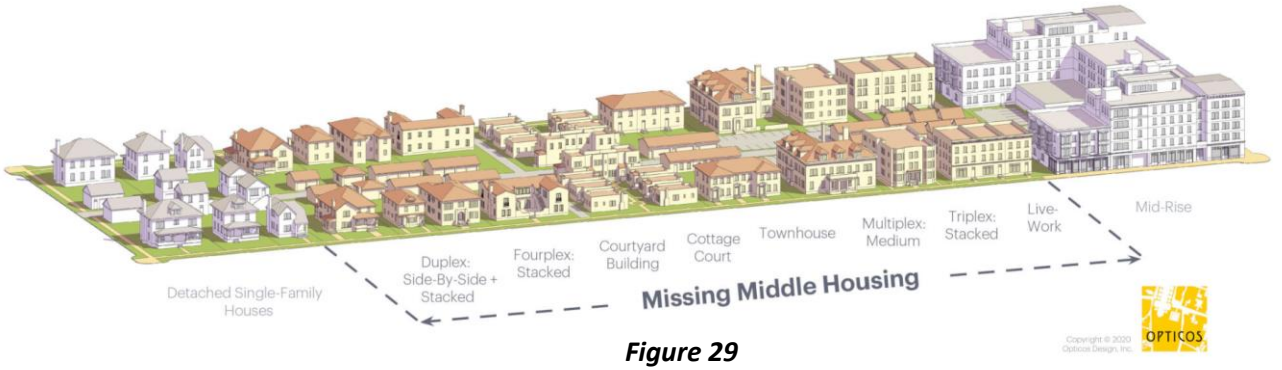


Figure 29

Missing middle housing is housing that is between single-unit detached housing and large apartment buildings in size. This type of housing is called “missing” as it has largely not been built since the middle of the last century. Examples of this type of housing include small-lot detached homes, duplexes, twinhomes, rowhouses, townhouses, and smaller apartment buildings. The scale and form of this housing can be integrated with single-unit detached neighborhoods, especially when care is taken to ensure the structure depth and height are similar to a single-unit detached home. Shown in **Figure 29**.

5.3 Corridor Design Principles

As the final alignment for the 8th Avenue Extension is determined, the design of the corridor, including abutting blocks and lots, must be carefully considered. No matter which alignment is chosen, the size, shape, and orientation of developments will have a significant impact on the look and feel of the corridor. In addition, the placement, orientation, and design of future housing – from single-family to apartment – will shape the experience of those traveling along the roadway in a vehicle, on a bicycle, or on foot. The design principles below are recommended to help integrate the new corridor into the fabric of the City. The design principles have been divided into and design principles by land use patterns and housing types.

Land Use Patterns

The three concepts show a variety of locations for the different types of residential land uses as each land use can be appropriate in a variety of locations. In all three concepts, the general approach is to position medium and high-density residential near community or neighborhood parks to provide access for residents and serve as a buffer to other uses. Medium and high-density residential developments were also recommended near major roads and around larger intersections to focus increased traffic counts on major roadways. Different layouts of Land Use patterns are shown in **Figures 30-33**.

As the alignment for the 8th Avenue Extension is planned, consideration should be given to the distance between the roadway and the northern edge of existing neighborhoods/development. As shown in the graphics, different types of land uses require a different amount of depth to allow sufficient space for the housing units, parking, and yard/landscaping.

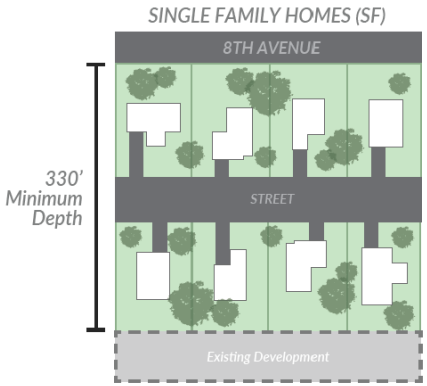


Figure 30

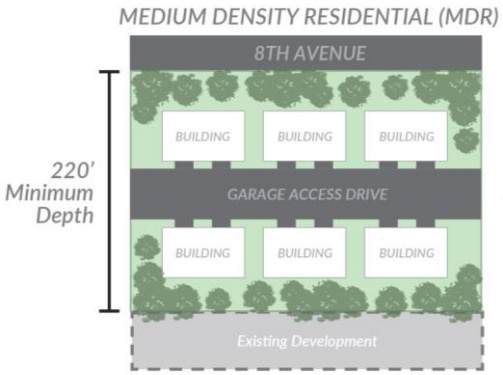


Figure 31

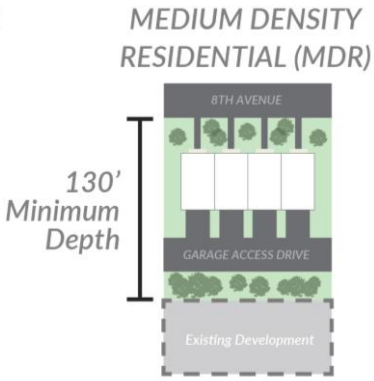


Figure 32

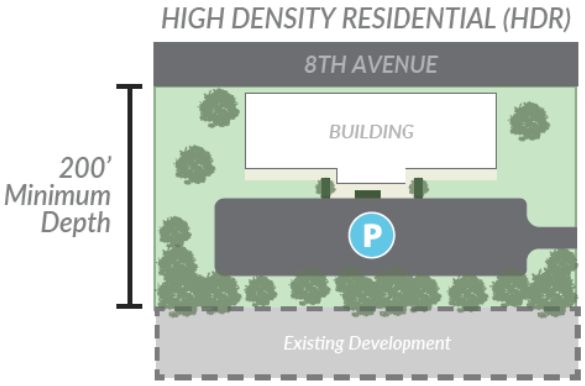


Figure 33

Single-family, Twinhomes, Duplexes

- Lots should be arranged so that the side or rear yards are adjacent to the corridor
- Driveways should not access the corridor, but utilize interior roads – **Figure 34**
- Use back or side yard landscaping to provide screening, a buffer from roadway noise, as well as visual interest for those moving along the corridor – **Figure 35**

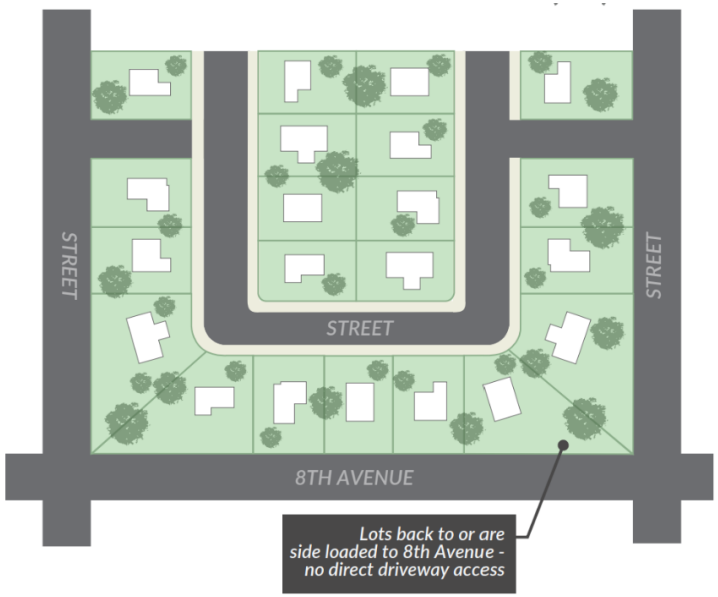


Figure 34

Landscaping and berms along major corridors not only provide screening but create a more attractive corridor for all modes of transportation

Figure 35

Townhomes and Rowhouses

- Buildings should be sited close to the corridor and entrances should face the corridor – **Figure 36**
- Attached garages should have entrances that face away from the corridor (to the rear or side)
- Detached garages should be located away from the corridor if possible; those that are sited between the principal structure and the corridor should be separated from the right-of-way by a buffer
- Activate front yards through the use of front porches, patios, and entries
- Install landscaping to provide a buffer from the corridor for residents, shade, and visual interest for those moving along the roadway – **Figure 37**

Figure 36

Figure 37

Buildings should be located with fronts or sides facing the corridor. Garages should be located behind on local streets or shared driveways.

Apartments

- Entrances to attached parking should not face the corridor
- Detached garages should be located to the rear of the principal structure, away from the corridor - **Figure 38**
- Consider using low fences or walls at the front of the lot to help define private versus public spaces
- Install landscaping to provide a buffer from the corridor for residents, shade, and visual interest for those moving along the roadway
- Long building façades should include stretches that extend outward or are set back to provide visual interest
- Utilize balconies and patios to create outdoor spaces for all units
- Create space for interior courtyards facing away from the corridor

Figure 38

Walls, fences, and landscaping can buffer the street

Internal courtyards should face away from the corridor

Long building facades should be broken up

6.0 Community Engagement

The community engagement process spanned three months, incorporating both targeted and broad outreach strategies. Early in the process, stakeholder interviews were conducted with existing landowners to understand their intentions regarding future development. Other stakeholders engaged included the Dilworth-Glyndon-Felton school district, Fargo Moorhead Metro Area Transit, the City of Moorhead, and Walmart.

Broader community engagement featured a precedent imagery survey, inviting input on roadway features (such as parkways, sidewalks, and bicycle facilities), development patterns (small or large lots), and housing types (detached homes, twin homes, or apartments). 179 people participated in the survey.

The following is a summary of the online survey results shown in **Figures 39-43**.

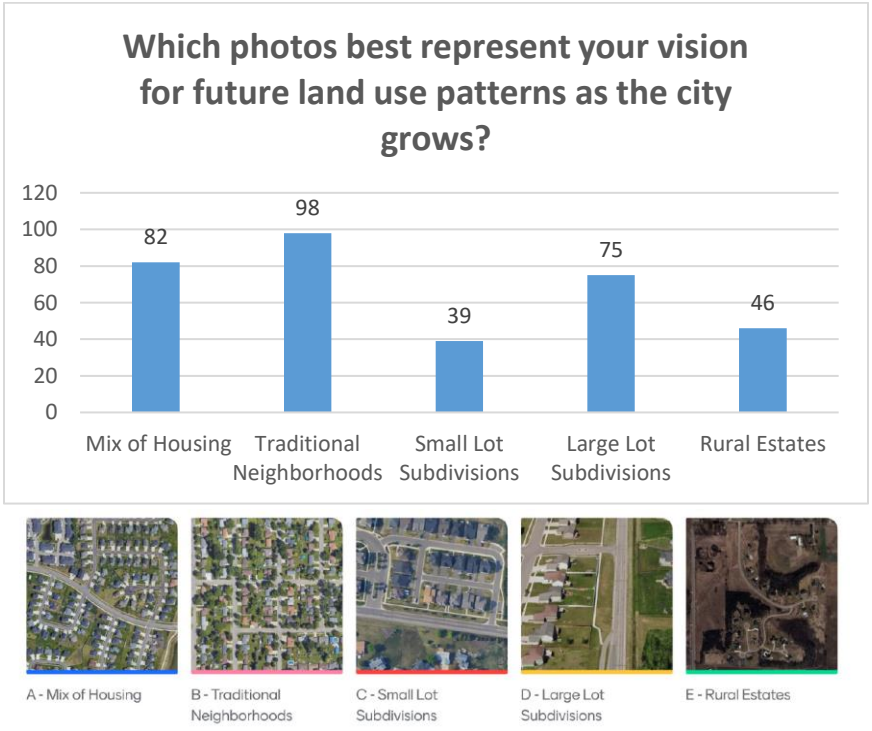


Figure 39

Figure 40

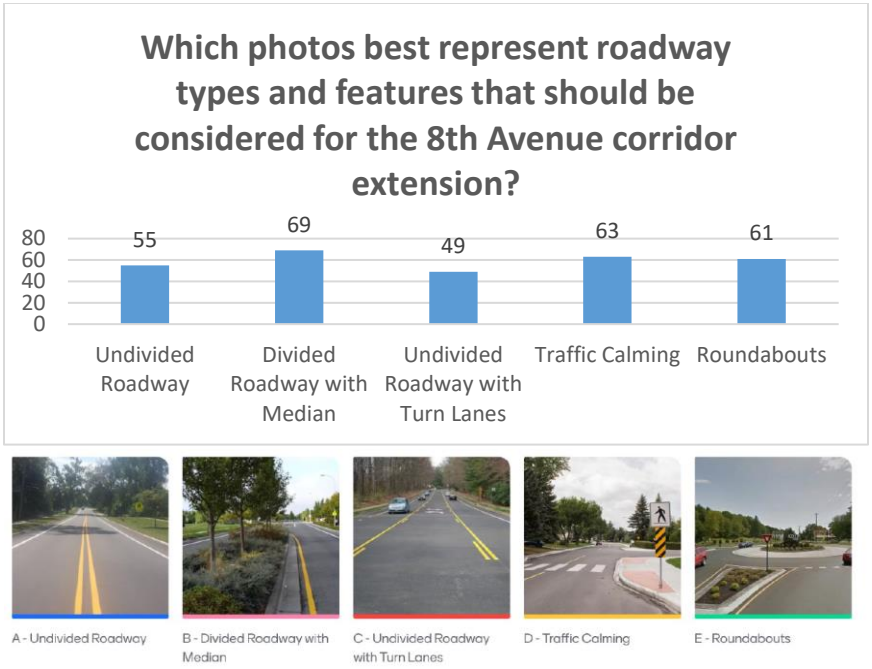


Figure 41

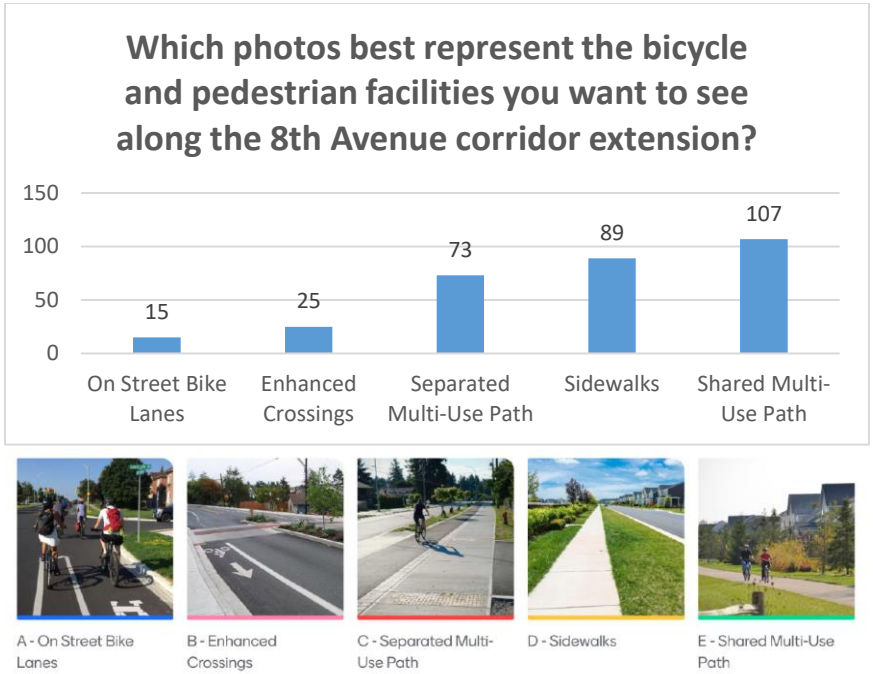


Figure 42

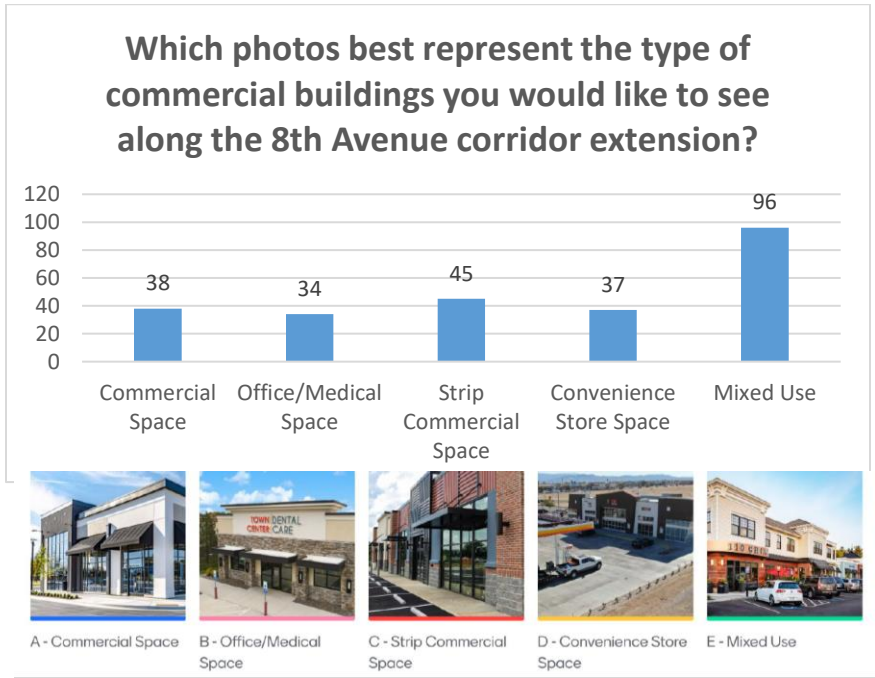


Figure 43

A community open house was held as the planning process neared its conclusion. Approximately 50 community members attended. The project team presented three roadway concepts and their corresponding future land use plans. Before and after the presentation, community members could talk to project staff about the concepts. Attendees were encouraged to provide feedback on their preferences by leaving comments on the proposed concepts, filling out comment cards, and participating in a precedent image voting activity, similar to the online survey. The results of the voting activity can be found in the Appendix.

Key themes emerged from community input throughout the process:

- Roadway Alternatives: Opinions varied on how close the roadway extension should be to existing homes. Some property owners prefer a green buffer, such as a berm, between their homes and the road. Others prefer the roadway extension to be located further north, with future development acting as a buffer between their properties and the road. Property owners directly impacted by the roadway alternatives are also considered on how the alignment will divide their property, making it more challenging for future use or development.

- Access and Connectivity: People generally support a two-lane road and a road with parkway features.

- Roundabouts: While some participants sought more information on the benefits and implementation criteria for roundabouts, there is no strong desire for them at this time. Many felt that a roundabout could improve operations and safety at the Walmart entrance however MATBUS expressed slight concerns about how a roundabout at 34th Street and 8th Avenue could impact their operations to and from the Walmart bus stop.

- Park and School Access: Concerns were raised about a roadway extension dividing the elementary school from a future park, with stronger objections tied to the southernmost alignment. The school expressed similar concerns.

- Missing Middle Housing: There is strong community interest in diversifying housing options, with a particular preference for twin homes, townhomes, condos, and small-lot detached homes.

- Development Patterns: Participants favored small-lot detached housing and traditional neighborhood designs with street grids. There is also a desire for large lots or rural estates.

- Land Use Concepts: The land use concepts were presented at the open house. Discussions focused on what the city can realistically anticipate for new development over the next 10 to 20 years. This led to conversations about phasing, highlighting that only small pockets of development may be needed to meet the housing study's projection of 300 homes over the next decade.

- Stormwater Design: There is interest in incorporating stormwater features as community amenities, such as landscaped areas with natural grasses, rather than typical holding ponds.

- Funding: Residents are eager to know how these improvements will be funded, specifically whether they will be assessed for costs or if other funding sources will cover the project.

7.0 Summary

7.1 Phasing and Implementation

The land use concepts identify ample room to grow and develop as a community. The growth areas are consistent with the 2018 Comprehensive Land Use Plan. It is also important to recognize these areas represent decades of growth potential and can easily accommodate the demand for 300 units over the next ten years, which was identified as a need in the 2023 Metro COG Housing Needs and Market Analysis. Meeting this demand could be accommodated on just a few acres of land. However, it is crucial that development occurs in phases, with careful attention to sustainability and minimizing the costs associated with expanding city infrastructure, such as water and sewer systems. As development approaches, these concepts should guide decisions made by the city, property owners, and developers. The first development proposal will likely set the tone for determining the optimal alignment, which will influence both future development patterns and access points. Shown in **Figure 44**.

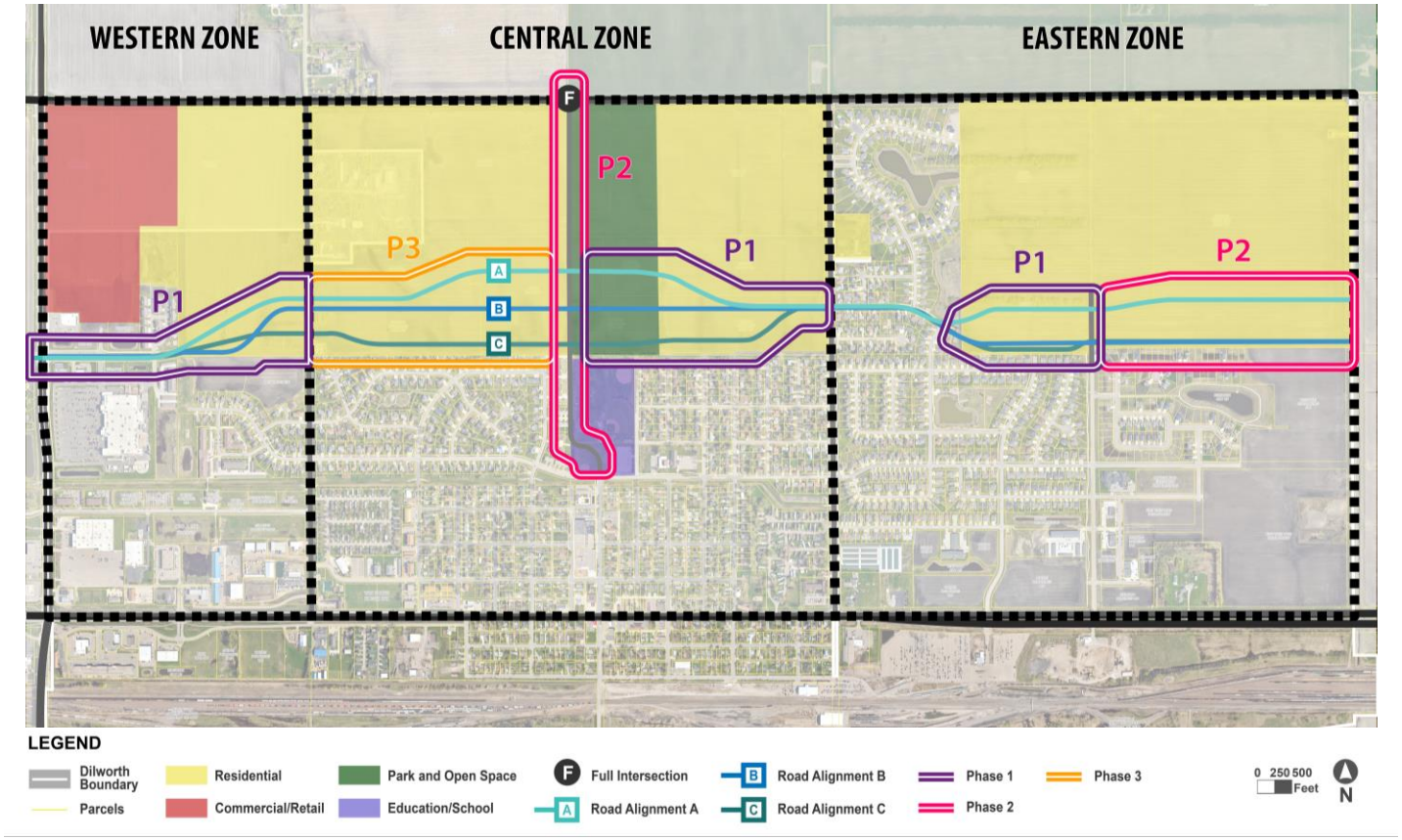


Figure 44

Western Zone

Phase 1: The western zone of the 8th Avenue corridor is partially built out from 34th Street to 15th Street NW. After analyzing the 34th Street intersection, it was noted that intersection improvements should be considered when an 8th Avenue connection is made to County Road 9. The entrances into Aldi and Walmart would also need to be improved to prevent excessive delays for vehicles exiting the Walmart and Aldi access points. Western Zone Phase 1 extends from 34th Street to County Road 9 since any intersection alternative that would be implemented at 34th Street could be done in conjunction with the extension of 8th Avenue. Connecting 8th Avenue to Count Road 9 would provide an alternate access point to 15th Street NW and the shopping areas while improvements are made at 34th Street. This phase would be driven by the City of Dilworth, the City of Moorhead, and private development.

Central Zone

Phase 1: The central zone of the 8th Avenue corridor has no existing roadway infrastructure. Phase 1 of this area would be in the southeast quadrant of the zone. A roadway would be built as the property owner develops the land. The alignment of 8th Avenue and how it interacts with a future city park must be considered during Phase 1. This phase would be developer-driven with City oversight.

Phase 2: This phase includes the construction of Main Street. Connecting Main Street from 4th Avenue and 15th Avenue will be integral to an accessible city park. Coordination between The City of Dilworth and the D-G-F school district will be required to determine how to accommodate the extension of Main Street through the property currently owned by the school district at Bob Marshall Field. This phase would be city-driven as it would be a community connection to the central park of Dilworth.

Phase 3: A roadway connection from County Road 9 to the city park could be built after phases 1 and 2 are completed. This connection would most likely be developer-driven. However, it may be in the City's best interest to accelerate this phase as phase 2 is completed to provide a connection to the park from the west.

Eastern Zone

Phase 1: This extension of 8th Avenue would connect to a new intersection at 14th Street. This area would be developer-driven with City oversight. The alignment of 8th Avenue would need to be chosen before Phase 1 would be completed.

Phase 2: This section would also be a developer-driven area and could be constructed at the same time as Phase 1 if there is enough demand from a development standpoint. This would connect 8th Avenue from 14th Street to 60th Street.

7.2 Corridor Alternatives

Alignment Concepts

Northernmost Alignment (A): This concept creates the opportunity for the County Road 9 intersection to be north of the existing sanitary lift station on County Road 9. Pushing the alignment north creates flexibility in arranging development along the 8th Avenue Corridor. The positioning of a northern corridor alignment promotes more side yard house orientation. A northern alignment also promotes greater opportunities for the city-wide park and what can be achieved with school property on the southern side of the park. The northern alignment enables to roadway to be constructed with a combination of longer and shorter curves to provide traffic calming as well as add character to the corridor.

Central Alignment (B): The central alignment is positioned between the existing gas utility and a sanitary sewer lift station at County Road 9. The alignment runs over an existing sanitary sewer line between County Road 9 and the school district owned property at Bob Marshall Field. The roadway is a straight connection from County Road 9 to 7th Street NE. This concept creates challenges for future development along and near the corridor. The space between the alignment and existing residential houses on the south side is not an ideal length for creating subdivided parcels. The limited space on the south side of the alignment may lead to increased street access needs. This concept creates room for the school property to expand or intermingle with the proposed park.

Southernmost Alignment (C): The southernmost alignment is also positioned between the existing gas utility and a sanitary sewer lift station. This alignment runs along the northern edge of the existing residential developments and Bob Marshall Field. This alignment helps to minimize unusable remnant parcels and offers flexibility for future development north of the roadway section. The south side of the corridor would not be able to accommodate any development concepts to the north as the south would need to be designed as a green buffer/park area. The green buffer provides separation between existing homes, an added noise reduction from traffic on the corridor, and is visually appealing. Comments from existing residents indicated a preference for a green buffer rather than a new neighborhood in their backyard. This alignment would box in the school property to the south and was brought up as a concern by school officials.

Street Section

Two-Lane Undivided: This cross-section consists of one lane in each direction and can be built to accommodate parking. A multi-use path should be included on one side of the roadway. A sidewalk may be desired on the opposite side of the roadway in areas with higher pedestrian activity. This type of roadway is similar to what is already in place on 8th Avenue east of 7th Street. A minimum of 80 feet of Right of Way should be preserved for this alternative. This alternative would be acceptable for the entire corridor, especially the sections from Wal-Mart to County Road 9 and 7th Street to 60th Street.

Two-Lane Divided with Median: This cross-section consists of one lane in each direction with a median separating the two lanes. The median can consist of either concrete or a combination of grass and trees. A multi-use path should be included on one side of the roadway. A sidewalk may be desired on the opposite side of the roadway in areas with higher pedestrian activity. This type of roadway is similar to what has been built on 8th Avenue North in Moorhead between Highway 75 and 28th Street North. A minimum of 100 feet of Right of Way should be preserved for this alternative. This alternative would be acceptable for the entire corridor and would be ideal in the County Road 9 to 7th Street NE section. Medians create a traffic-calming effect and would be a good asset to have near a large city park. Routine maintenance would be more than on an undivided roadway. However, the maintenance for an undivided roadway would be less than what will be required at the new park.

7.3 Funding Opportunities

There are several funding mechanisms and strategies that can be used to fund a local road or a new community park.

1. Development Negotiations: In cases where new development is anticipated in the area, negotiate with developers to either directly fund or contribute to the road infrastructure in exchange for approvals for their development projects. This could be a direct financial contribution, land dedication for the road, or infrastructure improvements.
2. General City Funds: The city can allocate a portion of its general funds to support the construction of a new road or park. This would likely be combined with other funding mechanisms to fully cover the cost.
3. Local Road Improvement Program (LRIP): Minnesota provides funding through the LRIP for local road improvements. The LRIP provides funding for capital construction costs. Cities may request funds through a solicitation process. The 8th Avenue Extension project may qualify for LRIP funding, as it is expected to reduce congestion on a parallel trunk highway, such as Highway 10.
4. Park Dedication Fees: Under Minnesota law, cities are authorized to require developers to dedicate land or pay fees for park development when new residential subdivisions or developments are proposed. These fees can be used for the construction of parks or associated infrastructure, including new roads that connect park areas to the broader community. While park dedication fees are generally intended for parkland acquisition and development, they can sometimes be used for road improvements directly tied to park access or infrastructure. If the new local road is essential for accessing a new park or recreational area, the city could argue that the road is an integral part of the park infrastructure, thus allowing the park dedication fees to help offset some of the costs.
5. Property Assessments: Under Minnesota law, cities can create a Special Assessment District where properties that directly benefit from the new road are assessed a fee based on their property value or frontage. These assessments are paid over several years and help cover the cost of the infrastructure improvements.
6. Public-Private Partnerships (PPP): In certain cases, the city might partner with a private developer or business that will directly benefit from the new road, such as a large commercial development. The private partner could help finance part of the project in exchange for tax incentives or infrastructure access.
7. State or Federal Grants: The city can pursue federal or state grants for road construction projects, especially those that align with regional transportation goals. These could be competitive grants with specific eligibility criteria, such as projects that enhance safety or promote economic development. These opportunities are limited for local roadway connections.
8. Transportation Alternatives (TA): If the road includes elements like bike lanes, sidewalks, or other multimodal features, the city could apply for funding through Metro COG's TA program. This federally funded program helps support alternative transportation infrastructure. Projects can include the creation of bicycle and pedestrian facilities, streetscape improvements, refurbishment of historic transportation facilities and other investments that enhance communities, connections, and access.

7.4 Study Summary

The Fargo-Moorhead Council of Governments (Metro COG) and the City of Dilworth completed a study of the extension of 8th Avenue North in Dilworth. **The purpose of the study was to develop a corridor plan for the extension of 8th Avenue North that will promote the growth of the City and meet the needs of the current and future members of the community. The corridor will provide a direct connection between residential and commercial areas within and near Dilworth and reduce local traffic on TH 10 by providing an alternative route.** Proposed solutions for the corridor were influenced by input from property owners, users, stakeholders, and the public. Overall, there is excitement within the community about the opportunities that the extension of 8th Avenue will provide.

Figure 45

The study provided alternatives for a two-lane roadway with or without a median. For the central zone near the proposed city park, the public favored the concept of a roadway with a landscaped median that would help control access, calm traffic speeds, and provide enhanced bicycle and pedestrian features. Many stakeholders preferred a street without a median, especially for the areas that would be primarily residential, due to reduced upfront costs as well as long-term maintenance. An undivided two-lane street is appropriate for residential areas however a street with a median may be desired near the future park to provide an aesthetic “parkway” corridor.

Alternatives for corridor alignment were also developed for the study. A northern alignment was preferred by stakeholders who desired to have more flexibility to develop the land between the existing neighborhoods and school-owned park and the new roadway while a southern alignment could provide more opportunities for the City to create buffer zones, stormwater management, and other city-owned features.