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25TH STREET CORRIDOR STUDY
Fargo - ND
September 2023

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## EXECUTIVE SUMMARY



## EXECUTIVE SUMMARY

$25^{\text {th }}$ Street Corridor Study, Fargo - ND
September 2023

## Introduction

The $25^{\text {th }}$ Street corridor is an important minor arterial roadway in Fargo's gridded street network. 25th Street, within the project corridor, was originally constructed between the late 1980's and 1990's and was one of the first arterial road corridors in south Fargo. Since that time, Fargo has grown around the corridor. On a daily basis, the corridor serves between 5,000 to 15,000 vehicles between 32 nd Avenue $S$ and 64 th Avenue $S$ and is a key arterial running parallel to I-29. While major intersections at 32 nd Avenue, 40 th Avenue, and 52 nd Avenue are signalized and all intersections have at least four-lane approaches, traffic volumes drop off dramatically at the mid-block points as traffic flows are prioritized to and from I-29. Because of existing travel trends interfacing the $25^{\text {th }}$ Street S corridor with I-29, the corridor should be investigated for possible cross section improvements between these major intersections, with the intent of facilitating safer and smoother traffic flows, improved multimodal crossing opportunities, and increasing safety for vehicular turning movements onto and off of the corridor in future conditions.

## Study Area and Background

## Study Area

The $25^{\text {th }}$ Street Study ares is a three-mile corridor between $32^{\text {nd }}$ Avenue $S$ and $64^{\text {th }}$ Avenue $S$ in Fargo, ND (Figure 1). It runs parallel to $\mathrm{I}-29$ on the west and S University Drive on the east. Key intersections were identified based on existing daily traffic volumes. Intersections that were identified for analysis are listed below.
" 32nd Avenue S
» Kirsten Lane
» $33^{\text {rd }}$ Avenue $S$
》 $35^{\text {th }}$ Avenue $S$
$36^{\text {th }}$ Avenue S
$37^{\text {th }}$ Avenue $S$
" Centennial Elementary School
Access
, Rose Creek Dr
» $52^{\text {nd }}$ Avenue $S$
» Shanley Highschool/
Eaglebrooke Apartment Access
» $53^{\text {rd }}$ Avenue $S$
» $58^{\text {th }}$ Avenue $S$
» Prairie Grove Avenue S » $52^{\text {nd }}$ Avenue and $27^{\text {th }}$ Street $S$
$40^{\text {th }}$ Avenue $S$ intersection

## Previous Studies

There have been several previous planning efforts and studies completed in Fargo along the study segment. These documents provide important background information to support the development of this planning study.
» 25th Street and 64th Avenue S corridor Studies - 2008
» 25th Street Corridor Study - 2009
" Fargo Go2030-2012
» Fargo Transportation Plan (Multimodal Assessment) - 2021


Source: FM COG, NDGIS Hub, ESRI, KLJ, Aerial from 2017

## Existing Conditions Summary

Within the $25^{\text {th }}$ Street study area, there are a variety of existing conditions that will guide and constrain the corridor's improvements and the alternatives which can be considered. Below is a summary of these conditions:

## Roadway Characteristics

» 25th Street S corridor is generally residential, with both single-family and multi-family residential areas. The north end of the corridor has commercial developments as well. More sparse commercial land use shows up between 52nd Ave and 64th Ave.
» Along the entire $25^{\text {th }}$ Street S Corridor, current ROW varies between 100 feet and 160 feet in width.
» The entire section of $25^{\text {th }}$ Street $S$ has a posted speed limit of 35 mph .
" Along the study corridor, there are 28 public access points and 11 private access points.
» Between 32nd Ave $S$ and 52 nd Ave $S$, a multi-use path exists along the west side of the corridor and a sidewalk exists along the east side of the corridor.
» South of $52^{\text {nd }}$ Avenue, a multi-use path exists on both sides of 25 th Street S , providing access to public and institutional land uses as well as the regional trail network.
" There are several crossing points to traverse across $25^{\text {th }}$ Street to get to the many parks, schools, and churches located in this area.
» There are currently no transit routes that travel along the $25^{\text {th }}$ Street S corridor. Route 18 of MATBUS crosses $25^{\text {th }}$ Street $S$ at $32^{\text {nd }}$ Avenue $S$ from north.

## Safety

» There were 244 crashes reported in the study area during the five-year analysis period between 2017 and 2021.
» There were no traffic fatalities reported during the analysis period.
» The only two serious injury crashes were reported in 2020 and 2021. Both the serious injury crashes were experienced at the intersection of $25^{\text {th }}$ Street $S$ with $32^{\text {nd }}$ Avenue $S$.
» There were two crashes involving bicyclist and one crash involving pedestrian reported during the analysis period. All these crashes were experienced at the intersection of $25^{\text {th }}$ Street $S$ with $32^{\text {nd }}$ Avenue $S$.
» The following intersections experienced crash rates greater than the critical rates for similar type of intersections:

- $32^{\text {nd }}$ Avenue $S / 25^{\text {th }}$ Street
- $52^{\text {nd }}$ Avenue S (US 81B) $/ 25^{\text {th }}$ Street
- $58^{\text {th }}$ Avenue $S / 25^{\text {th }}$ Street
- $64^{\text {th }}$ Avenue $S / 25^{\text {th }}$ Street
- $27^{\text {th }}$ Street $/ 52^{\text {nd }}$ Avenue S (US 81B)


## Traffic Volumes

» The $25^{\text {th }}$ Street S corridor carries between 8,000 vehicles daily in the south to 15,150 vehicles daily in the north.
» There is a defined shift at $52^{\text {nd }}$ Avenue $S$, where approximately 5,000 vehicles per day shifts to/from $25^{\text {th }}$ Street (South of $52^{\text {nd }}$ Avenue $S$ ) to $52^{\text {nd }}$ Avenue $S$.
» The AM peak hour along the corridor occurs from 7:30 to 8:30AM, while the PM peak occurs from 4:45 PM to 5:45 PM.
» Traffic is generally higher along NB direction from AM to PM peak between $32^{\text {nd }}$ Avenue and $52^{\text {nd }}$ Avenue.

## Capacity Analysis

» Based on this planning-level capacity approach, the $25^{\text {th }}$ Street S corridor operates between the LOS B or LOS D range, depending on the segment.
» The following intersections experience operational deficiencies during the peak hours:
o Kirsten Lane and $25^{\text {th }}$ Street S

- $53^{\text {rd }}$ Avenue $S /$ Saint Anne Church and $25^{\text {th }}$ Street S
- Prairie Grove Avenue / Shanley High School (North) and $25^{\text {th }}$ Street S
- Eaglebrook Apartments / Shanley High School (South) and $25^{\text {th }}$ Street S
- $27^{\text {th }}$ Street $S$ and $52^{\text {nd }}$ Avenue S (US 81B)
" Queuing issues are experienced at the intersection of $25^{\text {th }}$ Street $S$ with $32^{\text {nd }}$ Avenue $S$ and Kirsten Lane during the peak hours.
" At $40^{\text {th }}$ Avenue $S, E B$ and $W B$ queues along $40^{\text {th }}$ Avenue $S$ extend beyond the adjacent left-turn lanes between 10 and 15 percent of the AM peak hour.
» EB and WB queues along $40^{\text {th }}$ Avenue $S$ extend beyond the adjacent left-turn lanes between 10 and 20 percent of the peak hours.
» Average travel times through the three-mile study corridor are approximately seven minutes and 45-seconds, plus or minus about 10 seconds. The average travel speeds equate to approximately 24 - to $25-\mathrm{mph}$.


## Future Conditions Summary

## Traffic Forecasts

» New interstate access to $1-29$ at $64^{\text {th }}$ Avenue $S$ and/or $76^{\text {th }}$ Avenue $S$ is expected to have influence on $25^{\text {th }}$ Street corridor travel patterns, particularly south of $52^{\text {nd }}$ Avenue $S$.
» Historic ADT volume growth along the $25^{\text {th }}$ Street corridor has varied, depending on the location.
" The $25^{\text {th }}$ Street corridor segment north of $52^{\text {nd }}$ Avenue $S$ has been relatively stable or even declining.
» South of $52^{\text {nd }}$ Avenue $S$, several development opportunities remain, and the corresponding trends can be seen in the higher historical growth rates.
» Cross-street growth has also been relatively stable, except for $52^{\text {nd }}$ Avenue $S$ west of $25^{\text {th }}$ Street.
» The forecasted growth along $25^{\text {th }}$ Street based on the latest Fargo-Moorhead Regional Travel Demand Model is much higher than the historical trends.
" The SRC agreed upon using a $0.25 \%$ annual growth rate for segments north of $52^{\text {nd }}$ Avenue S , and a $1 \%$ annual growth rate for segments south of $52^{\text {nd }}$ Avenue $S$.
" Year 2045 ADT volumes (before any new interchange access) are expected to range from 8,800 to 16,850 vehicles per day.
» Year 2045 ADT volumes (with new I-29 access at $64^{\text {th }}$ Avenue $S$ and $76^{\text {th }}$ Avenue S) along the corridor are expected to range from 8,800 to 16,100 vehicles per day.

## Planning Level Capacity

» The majority of the $25^{\text {th }}$ Street $S$ corridor is expected to operate between the LOS B or LOS D range under year 2045 conditions.
" The segment of $25^{\text {th }}$ Street between $60^{\text {th }}$ Avenue $S$ and $52^{\text {nd }}$ Avenue $S$ is expected to operate near LOS D under year 2045 base conditions. The segment capacity is expected to improve if new I-29 access is provided, however, will continue to operate at LOS D.

## Intersection Capacity

» Most of the study intersections will continue to operate at an overall intersection delay and LOS with no intersection operating worse than LOS D during the 2045 peak hours.
» The following Side Street Stop intersections are expected to operate with unacceptable approach delay and LOS during the 2045 peak hours:

- Kirsten Lane
- $\quad 53^{\text {rd }}$ Avenue S to southern Shanley High School driveway
- $\quad 62^{\text {nd }}$ Avenue S (AM Peak only)
- $\quad 52^{\text {nd }}$ Avenue $S$ and $27^{\text {th }}$ Street $S$ intersection


## Queuing

The following queuing issues were identified in the 2045 AM Peak:
» $32^{\text {nd }}$ Avenue $S$ (for about five percent or 3-5 minutes of the hour)
» Kirsten Lane (for about five percent of the hour or 3-5 minutes of the hour)
» Left turn storage lanes at $40^{\text {th }}$ Avenue $S$ approaches (for about 10-25-percent of the hour or 5-15 minutes of the hour)
» Southbound approach of $40^{\text {th }}$ Avenue $S$ and $25^{\text {th }}$ Street $S$ intersection (for about five percent or 3-5 minutes of the hour) in the PM peak
» $27^{\text {th }}$ street approach to $52^{\text {nd }}$ Avenue $S$ (significant delay and queuing)

## Corridor Travel Times

» Average travel times under year 2045 conditions through the 3-mile study corridor are expected to increase by approximately 10 to 30 seconds, depending on the future condition/direction.
» The average travel speeds equate to approximately 23 - to $25-\mathrm{mph}$, which are relatively like or slightly slower as compared to existing conditions. These are attributed to volumes, roadway conditions, environmental conditions, delays, etc.

## Public \& Stakeholder Input (Phase 1)

The 25th Street Corridor Study public and stakeholder involvement plan was designed to share information with interested parties and to collect input to guide project decision-making. The goals included engaging stakeholders in meaningful and accessible ways and soliciting early and continuous input from stakeholders.

The first phase of engagement was intended to gather input on priorities and concerns regarding the corridor, from stakeholders and members of the public all throughout the study area. This phase included several elements including stakeholder sessions, social media marketing, and virtual engagement through an interactive map and online survey.

Three key themes were identified during this public input phase:

## Key theme \#1: Safety

About forty percent of comments were submitted within the "Traffic Safety" category. Many comments were made about left turns on the corridor being a safety issue, and the need for improving certain intersections and turning ability on the corridor.

## Key theme \#2: Traffic/Congestion

Around twenty two percent of the comments submitted were in the "Traffic/Congestion" category. Issues that were brought up include traffic backups occurring from access to local businesses and organizations. Additionally, left turns were also frequently called out as a concern.

## Key theme \#3: Bike/Ped

There were about fifteen percent of comments made in the bike/pedestrian category. These included concerns over pedestrian crossings and overall comments on bike lanes and facilities throughout the corridor.

## Alternatives Analysis Summary

## Alternatives Analysis Study Area

The corridor was divided into six study areas based on existing roadway geometry，land use，traffic demand，etc．：
＂Study Area $1-25^{\text {th }}$ Street $S$ from $32^{\text {nd }}$ Avenue $S$ to $35^{\text {th }}$ Avenue $S$
》 Study Area $2-25^{\text {th }}$ Street $S$ from $35^{\text {th }}$ Avenue $S$ to $40^{\text {th }}$ Avenue $S$
》 Study Area $3-25^{\text {th }}$ Street $S$ from $40^{\text {th }}$ Avenue $S$ to $52^{\text {nd }}$ Avenue $S$
》 Study Area $4-25^{\text {th }}$ Street $S$ from $52^{\text {nd }}$ Avenue $S$ to Prairie Grove Avenue $S$
» Study Area $5-25^{\text {th }}$ Street $S$ from Prairie Grove Avenue $S$ to $64^{\text {th }}$ Avenue $S$
» Study Area 6 －Intersection of $27^{\text {th }}$ Street $S$ and $52^{\text {nd }}$ Avenue
Figure 2 shows the $25^{\text {th }}$ Street S corridor study area and segment differentiation．
The study team，made up of technical experts from Metro COG，the City of Fargo Engineering，City of Fargo Planning， and KLJ brainstormed alternatives that could be applicable for the context of the study corridor with the potential to mitigate identified deficiencies．The corridor had an abundance of strategies with no clear best fit，requiring a multi－ tiered analysis strategy to differentiate alternatives．Given the varying roadway，travel demand，and development characteristics present within the study area，alternatives were developed for specific intersections and segments to best serve roadway needs in those specific locations．
» Improvements like cross－section revisions，access management，and intersection improvements were identified for the study areas．The typical sections of cross section alternatives analyzed for the various study areas are shown Figure 3.

Figure 2 - Alternatives Analysis Study Area


Source: FM COG, NDGIS Hub, ESRI, KLJ, Aerial from 2017
January 2023

Figure 3 - Typical Sections of Cross Section Alternatives


## Development of Alternatives

Study Area 1 - $25^{\text {th }}$ Street $S$ from $32^{\text {nd }}$ Avenue $S$ to $35^{\text {th }}$ avenue $S$
The following alternatives were discussed and carried forward for further evaluation:
» Five-lane cross-section with no cross-section improvements made north of Kirsten Lane.
» Consolidation of the commercial driveway approaches on the north side of Kirsten Lane.
» Left turn lanes on 25th Street S approaches along the Study Area.

## Study Area 2 - 25th Street S from 35th Avenue S to 40th avenue S

The following alternatives were discussed and carried forward for further evaluation:
» Three-Lane Cross-Section.

- Right trap on the southbound approach of the intersection, and a shared through/right-turn lane on the northbound approach of the intersection at 35th Avenue S.
" Five-Lane Cross-Section.
» Four-Lane Cross-Section
- Two Northbound, Single Southbound, and a TWLTL
- Two Southbound, Single Northbound, and a TWLTL
» Access modifications for the Gethsemane Cathedral and Hope Lutheran Church.
» Pedestrian refuge Island on the south side of 37 th Avenue $\mathrm{S} / 25$ th Street S intersection.


## Study Area 3-25th Street S from 40th Avenue S to 52nd avenue S

The following alternatives were discussed and carried forward for further evaluation:
" Three-Lane Cross-Section including a roundabout alternative at the intersection of $25^{\text {th }}$ Street $S$ and Rose Creek Drive.
» Five-Lane Cross-Section.
» Four-Lane Cross-Section

- Two Northbound, Single Southbound, and a TWLTL
- Two Southbound, Single Northbound, and a TWLTL


## Study Area 4 - 25th Street S from 52nd Avenue S to Prairie Grove avenue S

The following alternatives were discussed and carried forward for further evaluation:
» Three-Lane Cross-Section.
» Five-Lane Cross-Section.

## Study Area 5 - 25th Street S from Prairie Grove Avenue S to 64th avenue S

The following alternatives were discussed and carried forward for further evaluation:
» A push button actuated flashing beacons at major pedestrian movements at the 64th Ave and 58th Ave roundabouts with 25 th Street S.
» Connecting sidewalk at 58th and 64th on the west side of 25 th Street to the existing frontage road.

## Study Area 6-27th Street S/52nd Avenue S Intersection

The following alternatives were discussed and carried forward for further evaluation:

```
» Restricted Crossing U-Turn (RCUT).
» Traffic Signal.
```


## Evaluation of Alternatives

## Study Area 1 - $25^{\text {th }}$ Street $S$ from $32^{\text {nd }}$ Avenue $S$ to $35^{\text {th }}$ avenue $S$

" Under five-lane section and three-lane section alternative, the intersections in this study area experiences traffic operational results like No-Build conditions.

## Study Area 2 - 25th Street S from 35th Avenue S to 40th avenue S

" All cross-section alternatives have similar operational benefits. However, the five-lane alternative is expected to experience higher arterial speeds compared to the other cross-section alternatives.
» While the five-lane alternative had better operations than the other cross-section alternatives, the delay experienced by vehicles was only nominally better.
» The analysis for the alternatives indicates that the five-lane and four-lane alternative have similar operational results to that of the three-lane cross-section alternatives. However, the wider cross section would likely make vehicle and pedestrian crossings more dangerous.

## Study Area 3 - 25th Street S from 40th Avenue S to 52nd avenue S

» All cross-section alternatives have similar operational benefits. However, the five-lane alternative is expected to experience higher arterial speeds compared to the other cross-section alternatives.
» While the five-lane alternative had better operations than the other cross-section alternatives, the delay experienced by vehicles was only nominally better.
» The analysis for the alternatives indicates that the five-lane and four-lane alternative have similar operational results to that of the three-lane cross-section alternatives. However, the wider cross section would likely make vehicle and pedestrian crossings more dangerous.

## Rose Creek Dr.

- The single-lane roundabout at Rose Creek Drive operates slightly better than the signal from a LOS perspective and results in less peak hour queuing than the signal.
- The roundabout at Rose Creek Drive will likely help slow vehicle speeds near the school.
- The roundabout at Rose Creek Drive will result in less severe crashes if they were to occur but may not necessarily reduce the number of crashes.
- Based on the public input $35 \%$ of the participants preferred roundabouts while $65 \%$ preferred traffic signals at the Rose Creek Drive intersection. The roundabout alternative experienced better operational results compared to the existing signal. However, the delay experienced by vehicles was only nominally better.


## Study Area 4 - 25th Street S from 52nd Avenue S to Prairie Grove avenue S

» Both the three-lane and five-lane alternatives have similar operational benefits. However, the five-lane alternative is expected to experience higher arterial speeds compared to the three-lane alternative.
" While the five-lane alternative had better operations than the three-lane, the delay experienced by vehicles was only nominally better.
» The analysis for the alternatives indicates that the five-lane alternative has similar operational results to that of the three-lane alternative. However, the wider cross section would likely make vehicle and pedestrian crossings more dangerous.

Study Area 5 - 25 th Street $S$ from Prairie Grove avenue $S$ to $64^{\text {th }}$ Avenue $S$
» The side street approaches of the intersection of 25 th Street $S$ with Prairie Grove Avenue are expected to operate with unacceptable delay and LOS if no improvements are made. However, the volumes are generally low at the side street approaches.
» The side street approaches of the intersection of 25th Street S with Eaglebrook Apartments/Shanley Highschool south access are expected to operate with unacceptable delay and LOS if no improvements are made. However, the volumes are generally low at the side street approaches.
» All other intersections and their approaches are expected to operate with acceptable delay and LOS in the 2045.
" Majority of the crashes at the roundabouts at 58th Avenue $S$ and 64th Avenue $S$ involved inexperienced/ younger drivers that use the intersections. The roundabouts are expected to see a decrease in crash rate over time as drivers become more familiar with the intersection control.

## Study Area 6-27th Street S/52nd Avenue S Intersection

» Both the RCUT and Traffic Signal alternatives are a viable option and expected to improve the intersection operations to acceptable conditions.
» The RCUT has superior safety and maintenance advantage over a Traffic Signal.

## Public \& Stakeholder Input (Phase 2)

The second phase of public involvement for the 25th Street Corridor Study consisted of a review of alternatives for different segments of the corridor. Visual displays were developed to show cross-section and overhead (plan view) options for the corridor. Two primary methods were used to gather feedback from stakeholders and the public on preferred options: 1) In-person public meeting with voting matrix and 2) online survey.

Overall, 17 people attended the in-person public meeting, and another 55 people taking the online survey.

## Public and Stakeholder Public Meeting:

One meeting was held for both the public and stakeholders to provide input on corridor alternatives. The meeting was held on Thursday, August 3 from 6:30-8:30 p.m. at Centennial Elementary School. The meeting was open house style with no formal presentation. Approximately 17 people attended the meeting.
» People attending the public meeting were able to vote on their preferred alternatives for different segments of the corridor. The results from the in person meeting are shown in Figure 4.

Figure 4 - In-Person Meeting Preferred Alternative Votes


## Online Survey:

An online survey was utilized and accessible from the Story Maps site. The survey was open July 26- August 21 and collected 59 responses.

The online survey questions and responses are listed below:

## Question 1

Do you agree with the proposed improvements between $64^{\text {th }}$ Avenue

South and $52^{\text {nd }}$ Avenue South?


## Question 2

Which alternative do you prefer between $52^{\text {nd }}$ Avenue South and $40^{\text {th }}$ Avenue South?


## Question 3

Which alternative do you prefer between $40^{\text {th }}$ Avenue South and $32^{\text {nd }}$ Avenue South?


## Question 4

Which alternative do you prefer at the intersection of $27^{\text {th }}$ Street South and $52^{\text {nd }}$ Avenue South?


## Question 5

Please provide any additional feedback you have regarding the proposed improvements.
" 22 participants provided additional feedback.
" 37 participants skipped the question.

## Cost Estimate Summary

A preliminary planning level cost estimate for the alternatives were developed and is shown in Table 1. This estimate includes construction cost for removal, grading, pavement, drainage, and other appurtenant work. A 30\% contingency was assumed in the estimate. The cost does not include any potential right-of-way (ROW) costs. The costs reported are in 2023 dollars and does not account for inflation/industry changes in pricing.

Table 1 - Preliminary Planning Level Cost Estimates

| 64th Ave to 52nd Ave |  |  |
| :---: | :---: | :---: |
| Pedestrian Signing, Right Turn Lane, Shared Use Path Connection | \$ | 300,000 |
| 52nd Ave to 40th Ave |  |  |
| 3 Lane | \$ | 19,540,000 |
| 3 Lane w/Roundabout at Rose Creek Dr | \$ | 20,120,000 |
| 2+1 Northbound | \$ | 21,420,000 |
| 2+1 Southbound | \$ | 21,460,000 |
| 5 Lane | \$ | 24,100,000 |
| 40th Ave to 32nd Ave |  |  |
| 3 Lane | \$ | 14,650,000 |
| 2+1 Northbound | \$ | 15,770,000 |
| 2+1 Southbound | \$ | 15,690,000 |
| 5 Lane | \$ | 17,350,000 |
| 27th St Intersection |  |  |
| Restricted Crossing U-Turn (RCUT) | \$ | 1,110,000.00 |
| Signal | \$ | 540,000.00 |

## Summary of Alternatives

A summary of alternatives comparisons for Traffic Operations, Environmental Impacts, Pedestrian Mobility Improvements, and Cost is provided in Table 2.
Table 2 - Summary of Alternatives Comparison

|  | 64th to 52nd |  | 27th St/52nd Ave Intersection |  |  | 52nd to 40th |  |  |  |  |  | 40th to 32nd |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No-Build | Pedestrian Improvements | No-Build | R-CUT | Traffic Signal | No-Build | 3-Lane | 3-Lane w/ Roundabout | 2+1 NB | ${ }^{2+1}$ SB | 5-Lane | No-Build | 3-Lane | 2+1 NB | ${ }^{2+1}$ SB | 5-Lane |
| Traffic Operations (Intersection Delay) | - | - | (1)(1) | (1) ${ }^{1}$ | (1) | (1)30 | (1)30) | (1)(1)(1) | (1)3015 | (1)(1) | (1)O | (1) | (1)(1) | (1)(1)(1) | (1)O | (1) |
| Environmental Impacts (Existing Tree Impacts) | - | - | - | V $V$ | V | - | V | V $V$ | V | V | VVVV | - | V | V | $\nabla$ | $\boldsymbol{\nabla V \nabla V}$ |
| Pedestrian Mobility Improvements | - | - 4 | - | - | - 4 | - | - 4 - | - 4 - | $\triangle$ | $\triangle$ | - 4 - | - | $\triangle$ | $\triangle$ | $\triangle$ | - 4 4 |
| Cost | - | \$ | - | \$\$ | \$ | - | \$ | \$\$ | \$\$\$ | \$\$\$ | \$\$\$\$ | - | \$ | \$\$\$ | \$\$ | \$\$\$\$ |
| (1) | ast Inters ost Inters | ion Delay ion Delay |  |  | $\begin{aligned} & =\text { No Chan } \\ & =\text { Least Exi } \\ & =\text { Most Exis } \end{aligned}$ | ing Tree Re ing Tree Re | novals novals |  | $\Delta \quad=\mathrm{M}$ | Change | Improvem |  | \$ <br> $\$ \$ \$ \$$ | $\begin{aligned} & \text { = No Chang } \\ & \text { = Lowest Im } \\ & =\text { Highest Im } \end{aligned}$ | rovement provemen |  |

## EXISTING CONDITIONS REPORT



## EXISTING CONDITIONS REPORT

$25^{\text {th }}$ Street Corridor Study, Fargo - ND

## Introduction

The $25^{\text {th }}$ Street corridor is an important minor arterial roadway in Fargo's gridded street network. 25th Street, within the project corridor, was originally constructed between the late 1980's and 1990's and was one of the first arterial road corridors in south Fargo. Since that time, Fargo has grown around the corridor. On a daily basis, the corridor serves between 5,000 to 15,000 vehicles between 32 nd Avenue $S$ and 64 th Avenue $S$ and is a key arterial running parallel to I-29. While major intersections at 32 nd Avenue, 40 th Avenue, and 52 nd Avenue are signalized and all intersections have at least four-lane approaches, traffic volumes drop off dramatically at the mid-block points as traffic flows are prioritized to and from I-29. Because of existing travel trends interfacing the $25^{\text {th }}$ Street S corridor with I-29, the corridor should be investigated for possible cross section improvements between these major intersections, with the intent of facilitating safer and smoother traffic flows, improved multimodal crossing opportunities, and increasing safety for vehicular turning movements onto and off of the corridor in future conditions.

## Study Area

The $25^{\text {th }}$ Street Study corridor is a three-mile corridor between $32^{\text {nd }}$ Avenue $S$ and $64^{\text {th }}$ Avenue $S$ in Fargo, ND (Figure 5). It runs parallel to I-29 on the west and S University Drive on the east. Key intersections were identified based on existing daily traffic volumes. Intersections that were identified for analysis are listed below.

```
32nd Avenue S
Kirsten Lane
33 rd Avenue S
35 th Avenue S
36 th Avenue S
37th}Avenue S
40th}\mathrm{ Avenue S
```

» Centennial Elementary School Access
» Rose Creek Dr
" $52^{\text {nd }}$ Avenue $S$
» $53^{\text {rd }}$ Avenue $S$
» Prairie Grove Avenue S » $52^{\text {nd }}$ Avenue and $27^{\text {th }}$ Street $S$
» Shanley Highschool/ Eaglebrooke Apartment Access
》 $58^{\text {th }}$ Avenue $S$
» $64^{\text {th }}$ Avenue $S$ intersection

## Objective

The objective of this report is to evaluate the existing conditions of the $25^{\text {th }}$ Street $S$ Corridor between $32^{\text {nd }}$ Avenue $S$ and $64^{\text {th }}$ Avenue $S$ in Fargo, ND. The issues and opportunities identified in the report will be used to develop potential mitigation to improve the traffic operations and safety deficiencies.

## Previous Studies

There have been several previous planning efforts and studies completed in Fargo along the study segment. These documents provide important background information to support the development of this planning study.

## $25^{\text {TH }}$ STREET AND $64{ }^{\text {TH }}$ AVENUE S CORRIDOR STUDIES - 2008

The City of Fargo initiated a corridor study for the 25 th Street corridor from 52nd to 100th Avenue $S$ and the 64th Avenue S corridor from 57th Street to South University Drive in 2008. The study intersections which overlap with this $25^{\text {th }}$ Street corridor study include $25^{\text {th }}$ Avenue's intersections with $52^{\text {nd }}$ Avenue, $58^{\text {th }}$ Avenue, and $64^{\text {th }}$ Avenue. The study found lower than average crash rates at all the intersections and segments within the study area and acceptable traffic operations for existing conditions. The primary focus of the study involved ensuring proper future capacity for significant growth potential near the corridors.

Figure 5 - Study Area


Source: FM COG, NDGIS Hub, ESRI, KLJ, Aerial from 2017

For the portion of $25^{\text {th }}$ Street relevant to this study, the following recommendations were made:
Between 52 nd Avenue $S$ and just south of 58th Avenue $S$, 25th Street was recommended to have a minimum of 120feet of Right of Way (ROW). The recommendation also called for 5-lane undivided section with two lanes in each direction, a common-left turn lane, and additional turn lanes where appropriate. Between just south of 58th Avenue S and 64th Avenue S, 25th Street was recommended to have a minimum of 140 -feet of (ROW). The recommendation also called for a 5-lane undivided section with two lanes in each direction, a common-left turn lane, and additional turn lanes where appropriate. A frontage road along the west side of 25 th Street was proposed to serve the existing homes between $58^{\text {th }}$ and 64th Avenue $S$.

## $25^{\text {TH }}$ STREET CORRIDOR STUDY - 2009

The City of Fargo studied 25th Street corridor between 17th Avenue $S$ and 32nd Avenue $S$ in 2009. The capacity analysis indicated that $25^{\text {th }}$ Street $S$ between $23^{\text {rd }}$ Avenue $S$ and $32^{\text {nd }}$ Avenue $S$ is expected to have sufficient capacity to achieve the minimum desired level of service through 2030. The intersection of $25^{\text {th }}$ Street $S$ with $32^{\text {nd }}$ Avenue $S$ experienced safety challenges. Most crashes were left-turn types. No single contributing factors were identified for the historic crashes. The following countermeasures were recommended:
" Improving the change intervals
" Increasing the yellow time
» Installing dual left turn lanes
» Increasing the number of lanes

## FARGO GO2030-2012

The Fargo Go2030 document is nearly a decade old and has not been updated to reflect the growth and change across the city, such as the 32nd Avenue S reconstruction. The Fargo Go2030 Comprehensive Plan designated the study corridor as Active Living Street because of the residential land use nature. The document defines Active Living Streets as streets that have infrastructure to support pedestrians, experienced cyclists, recreational cyclists, transit, and automobiles. A network of Active Living Streets will enable Fargo residents to walk or bike to their destinations safely and comfortably.

## FARGO TRANSPORTATION PLAN (MULTIMODAL ASSESSMENT) - 2021

The Fargo Transportation Plan was completed to evaluate each mode of travel along with safety to holistically understand needs and assess the balance of transportation modes provided throughout the network of Fargo. For this study area the $25^{\text {th }}$ Street corridor was given a Pedestrian Level of Service (PLOS) B and a Bicycle Level of Service (BLOS) missing service level. Both the pedestrian and bicycle level of service methodologies incorporated number of traffic lanes, traffic volumes, traffic speeds, percentage of heavy vehicles, and the presence and quality of buffers (road widths, paved shoulders, bike lanes, on-street parking, sidewalk buffers, etc.). The analysis also used many of the same elements incorporated into the Highway Capacity Manual's methodology with more focus on pedestrian and bicyclist comfort. The transit evaluation scored the $25^{\text {th }}$ Street corridor aligning with this study area at a LOS D (average headway between 21 and 30 minutes) north of $35^{\text {th }}$ Avenue, and LOS F to the south (more than 1-hour headways).

## Known Issues

## LACK OF DEDICATED LEFT-TURN LANES

One of the most pressing issues along $25^{\text {th }}$ Street is the fact that there are no dedicated left-turn lanes north of $52^{\text {nd }}$ Avenue, except for the $52^{\text {nd }}$ Avenue and $40^{\text {th }}$ Avenue intersections. During peak hours, there are multiple destinations, including daycares, schools, and high-traffic collector streets that where left-turns occur off $25^{\text {th }}$ Street. These locations cause backups for through traffic and increase potential for collisions due to traffic merging quickly into the outside lane.

## POOR PAVEMENT CONDITIONS

The City of Fargo has identified the roadway segment between $32^{\text {nd }}$ Avenue $S$ and the Rose Creek Dr bridge as having unsatisfactory pavement conditions. A mill and overlay is scheduled for the 2022 construction season for this segment of the corridor.

## INTERSECTION OF $27^{\text {TH }}$ STREET S AND $52^{\text {ND }}$ AVENUE S

A related issue in the vicinity of $25^{\text {th }}$ Street $S$ is the intersection of $52^{\text {nd }}$ Avenue $S$ and $27^{\text {th }}$ Street $S$. This T-intersection has generated operational traffic and safety concerns from the public because of the infill development occurring south of $52^{\text {nd }}$ Avenue $S$, on both sides of $27^{\text {th }}$ Street $S$.

## FARGO SAFE ROUTE TO SCHOOL

## Centennial Elementary School

The Centennial school facility is located at the southwest quadrant of the intersection of $25^{\text {th }}$ Street S and $40^{\text {th }}$ Avenue. Both 25th Street $S$ and 40th Avenue $S$ exhibit high traffic volumes, also with high observed traffic speeds. Both roadways are significant barriers for walking and biking to Centennial Elementary. Currently, Fargo Public School District considers these roadways as barriers to walking and biking to school, so all students who live north and south of these roadways are bussed. At the 40th Avenue $S$ and 25 th Street $S$ intersection, poor driver yielding behavior creates unsafe crossings. Long pedestrian wait times also encourage poor pedestrian and cyclist behavior. The study recommended installing a leading pedestrian interval; reduction of lane widths on $40^{\text {th }}$ Ave S ; and replace damaged truncated domes (SW quadrant).

The 25th Street S entrance to the drop-off loop features a long pedestrian crossing with a double right turn for southbound (SB) 25th Street S traffic. This is a potential safety challenge. Drivers were also observed speeding in the 25th Street S speed zone during school arrival and dismissal observations. The study recommended installing a high visibility crosswalk across the driveway; eliminating the SB right turn from middle lane to remove multiple threat crash potential; and reduce crossing distance of the driveway.

The $25^{\text {th }}$ Street $S$ and Rose Creek Drive intersection also presents a crossing challenge where pedestrians and cyclists experience long delays waiting for a walk signal. The study recommended installing a "no right turn on red" designation during school hours; installing leading pedestrian interval; and replacing faded crosswalk markings.

## Sacred Heart Middle School

The Sacred Heart Middle School campus is located at the southeast quadrant of the intersection of $25^{\text {th }}$ Street S and Prairie Grove Avenue S. 25th Street $S$ and 52nd Avenue $S$ are both medium- and high-volume traffic roadways. School speed zone signage is present on $25^{\text {th }}$ Street $S$ approaching Sacred Heart Middle School's campus. The intersection at 25th Street $S$ and Prairie Grove Avenue does not have any pavement marking or crosswalk signs. The $25^{\text {th }}$ Street S and south driveway access to Sacred Heart Middle has no pedestrian crossing markings but does include ADA compliant receiving ramps. The study recommends improving geometrics to simplify pedestrian crossing such as a median safety island and installing a high visibility crosswalk.

## Planned Improvement

The $32^{\text {nd }}$ Avenue $S$ corridor is to be reconstructed in 2022 and 2023. As part of that project, the intersection of $32^{\text {nd }}$ Avenue $S$ and 25 th Street $S$ will be reconstructed. An HMA mill and overlay is planned for 25 th Street $S$ between the Rose Coulee bridge and $32^{\text {nd }}$ Avenue $S$. A project has also been proposed to construct a shared-use-path connection from the Rose Coulee bridge to the existing shared-use-path along the east side of the Timberline development.

## Existing Conditions

## Roadway Characteristics

## FUNCTIONAL CLASS

Most streets and highways have a predominant function: either to provide the user with access to neighboring land or to allow movement through an area. Functional classification is an important and widely accepted tool in planning highway system development, as well as fiscal planning. The functional classifications of the corridor and the cross streets are shown in Figure 6 below. The 25th Street $S$ corridor is classified as a minor arterial with its primary role being to link cities, larger towns, and other major traffic generators to provide interstate and inter-county travel.

## LAND USE

Land use can have many implications on the demands of adjacent the transportation network. For example, a primarily industrial corridor will have peak traffic flows often associated with shift work and must accommodate heavy truck movements while a primarily residential corridor will have strong peaking and directional characteristics as people go to-and-from work and will also see higher bicycle and pedestrian activity.

The section of 25 th Street $S$ between $33^{\text {rd }}$ Avenue $S$ and $52^{\text {nd }}$ Avenue $S$ is predominantly residential in nature. There are a wide variety of housing types in this segment, including single-family, low density single-family, twin-home/ townhome, as well as high density residential complexes. There are also several public and institutional uses including multiple churches, a public elementary school. More sparse commercial land use is present between $52^{\text {nd }}$ Avenue and $64^{\text {th }}$ Avenue.

South of 32nd Avenue S, the corridor facilitates north/south traffic movement between Fargo's southern residential growth areas to nearby neighborhood retail nodes including grocery stores, retail and dining establishments, and banks. In addition, the corridor serves significant medical facilities, financial institutions, schools, and churches. North of the study area, 25th Street $S$ provides access to I-94 and to employment centers along 13th Avenue $S$.

There are several relevant institutional lands uses throughout the three-mile corridor. These include the following:
» Davies High School is located south of $64^{\text {th }}$ Avenue.
» Shanley High School is just to the north of $58^{\text {th }}$ Avenue.
" Sacred Heart Middle School is just south of $52^{\text {nd }}$ Avenue.
" Centennial Elementary is just south of $40^{\text {th }}$ Avenue.
" Discovery Middle School is just east of the corridor along $40^{\text {th }}$ Avenue.
" Rose Creek Golf Course is located on the east side of the corridor between $40^{\text {th }}$ Avenue and $52^{\text {nd }}$ Avenue.

Figure $\mathbf{7}$ shows the existing land use along the $25^{\text {th }}$ Street corridor.

## RIGHT-OF-WAY (ROW)

Along $25^{\text {th }}$ Street $S$, between $32^{\text {nd }}$ Avenue $S$ and $52^{\text {nd }}$ Avenue $S$, the ROW is $100-$ feet. Between $64^{\text {th }}$ Avenue $S$ and $52^{\text {nd }}$ Avenue S, the ROW varies between 135 -feet and 160 -feet.

Figure 6 - Road Functional Classifications


Source: FM COG, NDGISHub, NDDOT, ESRI, KLJ


Figure 7 - Land Use


## CROSS SECTIONS

The $25^{\text {th }}$ Street $S$ Corridor has varying cross sections throughout the corridor (Figure 8). The northern portion of the 25 th Street Corridor between $32^{\text {nd }}$ Avenue $S$ and $52^{\text {nd }}$ Avenue $S$ is a standard four-lane road, with two lanes in each direction. At the intersections of $32^{\text {nd }}$ Avenue $S, 40^{\text {th }}$ Avenue $S$, and $52^{\text {nd }}$ Avenue $S$, dedicated left turns are present for northbound (NB) and SB traffic. From $52^{\text {nd }}$ Avenue $S$ to Prairie Grove Avenue $S$, there are two SB lanes, a center twoway left turn lane, and a single NB lane. Prairie Grove Avenue $S$ to $64{ }^{\text {th }}$ Avenue $S$ includes one lane in each direction with a center two-way left turn lane. On-street bike lanes are present on both sides of the roadway between $58{ }^{\text {th }}$ Avenue $S$ and $64^{\text {th }}$ Avenue $S$.

Figure 8 - Existing Cross-Section


## SPEED

Since the area around the $25^{\text {th }}$ Street Corridor is mostly residential, the entire section of $25^{\text {th }}$ Street has a posted speed limit of 35 mph . The cross streets of $64^{\text {th }}$ Avenue and $40^{\text {th }}$ Avenue have a speed limit of 30 mph . $52^{\text {nd }}$ Avenue is also known as Business Highway 81. This raises the speed limits along the western approach to 40 mph and the eastern approach to 45 mph . The existing speed limits along the corridor is shown in Figure 9.

## PAVEMENT CONDITIONS

The City of Fargo regularly documents the roadway conditions using ASTM D6433 "Standard Practice for Roads and Parking Lots Pavement Condition Index Survey". This scores the pavement by a Pavement Conditions Index (PCI) which is a numerical value between 0 and 100 used to indicate the general condition of the existing roadway pavement. The latest PCI values were collected in June of 2021. The PCI ratings for $25^{\text {th }}$ Street $S$ within the study limits are shown in Figure 10. An HMA mill and overlay is planned for 25 th Street $S$ between the $32^{\text {nd }}$ Avenue $S$, and Rose Coulee bridge is expected to improve the pavement condition.

## TRAFFIC CONTROLS

At the south end of the $25^{\text {th }}$ Street Corridor the high-volume intersections are roundabout controlled ( $64^{\text {th }}$ Avenue and $58^{\text {th }}$ Avenue). These roundabouts are accompanied by two-way stop-controlled intersections before the first traffic signal on $52^{\text {nd }}$ Avenue. Continuing to the north the corridor becomes signalized at the high-volume intersections of Rose Creek Drive, $40^{\text {th }}$ Avenue, $35^{\text {th }}$ Avenue, and $32^{\text {nd }}$ Avenue. A full detailed image with all intersection control is shown below in Figure 11.

## ACCESS MANAGEMENT

Access management is the process of balancing the competing needs of mobility and land access. Access points introduce conflict and friction into the traffic stream. Allowing dense, uncontrolled access spacing results in safety, operational, and aesthetic deficiencies.

NDDOT's design manual states the minimum desirable spacing of access points in urban areas is 400 to 600 feet, which is approximately 8 to 13 per mile. City of Fargo Ordinance §20-0702 recommends a minimum spacing of 600 feet (or nine accesses per mile) between driveways and intersections. Along the study corridor, there are 28 public access points and 11 private access points. This corresponds to about 13 accesses per mile along the corridor. Figure 12 shows the current access points along the corridor. FHWA indicates that a quarter mile (1,320 feet) to half mile (2,680 feet) signal spacing on arterial roadways provides optimal coordinated traffic flow when platoons can be formed. There are five signalized intersections in the corridor. Except for the spacings between $40^{\text {th }}$ Street $S$ and Rose Creek Drive, the rest of the signal spacing between the intersections are greater than a quarter mile.

## LIGHTING

The lighting warrants used by NDDOT are primarily from American Association of State Highway Transportation Official's (AASHTO's) design guideline. Lighting of at-grade intersections are warranted if the geometric conditions mentioned in the AASHTO Roadway Design Guide exist, or if one or more conditions found in the North Dakota Traffic Engineering Manual exists. Intersection lighting structures are present at all signalized and roundabout intersections along the corridor. Additionally, roadway light poles are present on the east side of the roadway throughout the corridor. There are light poles on the west side of the roadway, except for between $38^{\text {th }}$ Avenue $S$ and $58^{\text {th }}$ Avenue $S$. The corridor is sufficiently illuminated by the presence of streetlight poles on either east, west, or both sides of the roadway.

Figure 9 - Speed Limit


Source: FM COG, Cass County, NDGISHub, NDDOT, ESRI, KLJ, Aerial from 2021
November 2022

Figure 10-2021 Pavement Conditions Index


Figure 11 - Existing Traffic Control


Source: FM COG, NDGISHub, NDDOT, ESRI, KLJ, Aerial from 2017

Figure 12 - Access Locations


Source: FM COG, NDGISHub, NDDOT, ESRI, KLJ, Aerial from 2017


## ENVIRONMENTAL JUSTICE OVERVIEW

The US Environmental Protection Agency's (EPA) Environmental Justice Screening and Mapping tool (i.e., EJSCREEN) was used to review the presence of readily identifiable low-income and minority populations by evaluating their percentages. The Environmental Justice (EJ) study area for this review included the project roadways: 25th Street and 52nd Avenue in Fargo, Cass County, North Dakota, and a 0.25 -mile buffer surrounding the roadways. Data obtained from EJSCREEN and US Census Bureau were used to determine percentages of low-income and minority populations within the EJ study area and Fargo. This limited analysis did not include investigating the presence of community facilities in the EJ study area that serve minority and low-income populations, or businesses in the EJ study area that are owned by, employ, and serve minority and low-income populations.

For purposes of this review, the smallest unit of geography (i.e., city) was used for comparison with the EJ study area. An EJ population is identified when:
i. the minority or low-income population of a study area exceeds 50 percent, or
ii. the minority or low-income population percentage is at least 10 percentage points higher than the city average.

As shown in the Table $\mathbf{3}$ below, the minority and low-income populations in the entire study area do not exceed 50 percent and are not at least 10 percentage points higher than the City of Fargo. Therefore, an EJ population is not present in the EJ study area.

Table 3 - Minority and Low-income Population

| Demographic | Study Area | City of Fargo |
| :---: | :---: | :---: |
| Minority Population | $22 \%$ | $20 \%$ |
| Low-Income Population | $20 \%$ | $13 \%$ |

Figure 13 and Figure 14 shows the minority and low-income population percentages in the vicinity of the study area.

## MULTIMODAL FACILITY

Due to the corridor being comprised of mostly residential land uses, the Fargo Go2030 Comprehensive Plan designated this segment as Active Living Street. Active living streets will have infrastructure to support pedestrians, experienced cyclists, recreational cyclists, transit, and automobiles. A network of active living streets will enable Fargo residents to walk or bike to their destinations safely and comfortably.

Figure 15 shows the pedestrian and bicycle facility along the corridor. Currently, between 32nd Avenue $S$ and 52nd Avenue $S$, a multi-use path exists along the west side of the corridor and a sidewalk exists along the east side of the corridor. Between $52^{\text {nd }}$ Avenue $S$ and $58^{\text {th }}$ Avenue $S$, a multi-use path exists on both sides of 25 th Street $S$, providing access to public and institutional land uses as well as the regional trail network. Between $58^{\text {th }}$ Avenue S and $64^{\text {th }}$ Avenue $S$, on-street bike lanes are present along with a multi-use path along the west side of the road and a sidewalk on the east side of the road. There are several crossing points to traverse across $25^{\text {th }}$ Street to get to the many parks, schools, and churches located in this area. Both sides of the roadway are lined with street trees, which create a welcoming environment for biking and walking. These trees are established but have not grown to the extent of the older trees seen in the older areas of Fargo. MATBUS is the public transportation system serving the communities of Fargo \& West Fargo, North Dakota, and Moorhead \& Dilworth, Minnesota. There are currently no transit routes along the $25^{\text {th }}$ Street $S$ corridor. Route 14 of MATBUS has a route along $32^{\text {nd }}$ Avenue $S$ and crosses $25^{\text {th }}$ Street. Route 18 of MATBUS crosses $25^{\text {th }}$ Street $S$ at $32^{\text {nd }}$ Avenue $S$ from the north.

Figure 13 - Low Income Population in the Study Area


Figure 14 - Minority Population in the Study Area


Figure 15 - Non-Motorized Facility



Non-Motorized Facility (Cont.)




Non-Motorized Facility (Cont.)


Non-Motorized Facility (Cont.)


Non-Motorized Facility (Cont.)


Non-Motorized Facility (Cont.)


## Crash Analysis

Reviewing historic crash information can help identify existing deficiencies that can be addressed through this study. Five years of crash records from January 1, 2017, through December 31, 2021, were requested from NDDOT. There were 244 crashes reported during this period in the study area. This total corresponds to an average of 49 crashes per year with about 15 -crashes per year resulting in an injury, including the serious injury classification. There were no traffic fatalities reported during the analysis period.

Using the 2018 Federal Highway Administration's (FHWA) Crash Costs for Highway Safety Analysis, there was an estimated crash cost of nearly $\$ 2.96$ million per year associated with the $25^{\text {th }}$ Street $S$ corridor. The five-year crash summary is shown in Figure 16. The number of crashes were generally at an increasing trend from 2017 to 2019 and decreasing from 2020 to 2021. However, the two serious injury crashes were reported in 2020 and 2021. Full detail crash reports are included in Appendix A.

Figure 16 - Five-Year Crash Summary (Year 2017-2021)


Table 4 provides a summary of key findings of the analyzed crash data:

Table 4 - High Level Crash Summary (Crashes from 2017-2021)

| Total Crashes | 244 |
| :---: | :---: |
| Total crashes per year | 48.8 |
| Intersection Related | 161 crashes or 66\% |
| $1^{\text {st }}$ Highest \# Crashes | $32^{\text {nd }}$ Avenue S (64-crashes or 26\%) |
| $2^{\text {nd }}$ Highest \# Crashes | $52^{\text {nd }}$ Avenue S (50 crashes or 20.5\%) |
| $3^{\text {rd }}$ Highest \# Crashes | $27^{\text {th }}$ Street S (23 crashes or 9.5\%) |
| Fatal Crashes | None |
| Serious Injury Crashes | Two (Both on $32{ }^{\text {nd }}$ Avenue S) |
| Pedestrian related Crashes | One ( $25^{\text {th }}$ St S \& $32^{\text {nd }}$ Ave S Intersection) |
| Bicycle related Crashes | Two (25 ${ }^{\text {th }}$ St S \& $32^{\text {nd }}$ Ave S Intersection) |
| Rear-End Crashes | 99 crashes or 41\% |
| Angle Crashes | 92 crashes or 38\% |
| Sideswipe Crashes | 23 crashes or 10\% |
| Single Vehicle Related Crashes | 19 crashes or 8\% |
| Head-on Crashes | 10 crashes or 3\% |

The density of crashes along the corridor and the location of crash events are shown in Figure 17. The corridor experiences more crashes in the north and along 52nd Avenue.

Figure 17 - Crash Density


## CRASH TRENDS AND PATTERNS

The trend and pattern of corridor crashes by hour of the day were analyzed for the crash records. The frequency of crashes by the hour of the day is shown in Figure 18. Frequency of crashes are generally prevalent throughout the day. Most crashes occurred at AM peak, PM peak, and 3 PM.

Figure 18-Crashes by Hour of the Day


Figure 19 illustrates a peak in crashes beginning in October and continuing through February, followed by a downward trend thru September. Crash frequencies were generally much higher on weekdays, except for June and October.

Figure 19 - Crashes by Month and Day of the Week


## CRITICAL CRASH LOCATIONS

To identify overrepresented crash locations within the study intersections, the critical crash rate analysis method was used. Critical Crash Rate method is a suitable performance measure identified in the Highway Safety Manual (HSM). The critical crash analysis method uses statistical analysis to help determine if differences between observed crash rates and typical crash rates are statistically significant and likely attributable to roadway design or traffic control.

Critical Crash Rate is calculated using the following equation:

$$
\begin{gathered}
\text { For Intersections: } \\
C R_{C}=C R_{A}+\left[K \times \sqrt{\frac{C R_{A}}{M E V}}\right]+\left[\frac{1}{2 \times M E V}\right] \\
C R_{C}=C R_{A}+\left[K \times \sqrt{\frac{C R_{A}}{M V M}}\right]+\left[\frac{1}{2 \times M V M}\right]
\end{gathered}
$$

Where,
$\mathrm{CR}_{\mathrm{C}} \quad=\quad$ Critical Crash Rate for Intersection
$\mathrm{CR}_{\mathrm{A}}=$ Weighted average crash rate for the reference study
MEV = Million Entering Vehicle. MEV is used as a scaling factor and is calculated by dividing the total number of vehicles per day per year by 1,000,000
$\mathrm{VMT}=$ The measure of exposure is the total number of vehicles traveling on the road segment during the specified time period. This is called vehicle miles of travel (VMT). VMT is usually expressed as Million Vehicle Miles (MVM)
$\mathrm{K} \quad=\quad$ P-value for the corresponding confidence level. A confidence level of 0.995 was used where $\mathrm{K}=$ 2.576

This method calculated crash rates and compared those rates against the average of the crash rates experienced among the study intersections and segments. Intersections and/or segments with crash rates above the critical rate are considered overrepresented and in need for further review because there is a high probability that conditions at the site are contributing to the higher crash rate. Intersections and segments with crash rates under the critical crash rate does not mean that crash trends and issues do not exist. The crash rates by intersection and segments are summarized in Table 5 and Table 6, respectively.

Table 5 - Intersection Crash Summary

| Intersection | Traffic Con- | \# Crash- <br> trol |  |  | MEV | Crash Rate |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Observed | Average | Critical |  |  |  |  |  |  |
| 32nd Avenue S / 25th Street S | Signal | 60.2 | 64 | $\mathbf{1 . 0 6}$ | 0.68 | 0.96 |  |  |  |
| Kristen Lane / 25th Street S | TWSC | 31.2 | 10 | 0.32 | 0.23 | 0.47 |  |  |  |
| 33rd Avenue S / 25th Street S | TWSC | 30.7 | 2 | 0.07 | 0.23 | 0.47 |  |  |  |
| 34th Avenue S / 25th Street S | TWSC | 28.6 | 2 | 0.07 | 0.23 | 0.48 |  |  |  |
| 35th Avenue S / 25th Street S | Signal | 22.9 | 16 | 0.70 | 0.68 | 1.15 |  |  |  |
| 36th Avenue S / 25th Street S | TWSC | 20.7 | 6 | 0.29 | 0.23 | 0.53 |  |  |  |
| 37th Avenue S / 25th Street S | TWSC | 20.5 | 2 | 0.10 | 0.23 | 0.53 |  |  |  |
| 38th Avenue S / 25th Street S | TWSC | 21.5 | 2 | 0.09 | 0.23 | 0.52 |  |  |  |
| 40th Avenue S / 25th Street S | Signal | 30.1 | 5 | 0.17 | 0.23 | 0.47 |  |  |  |
| Rose Creek Dr / 25th Street S | Signal | 19.4 | 4 | 0.21 | 0.68 | 1.19 |  |  |  |
| Rose Creek Pkwy / 25th Street S | TWSC | 16.8 | 1 | 0.06 | 0.23 | 0.56 |  |  |  |
| Rose Creek Blvd / 25th Street S | TWSC | 16.8 | 4 | 0.24 | 0.23 | 0.56 |  |  |  |
| 52nd Avenue S / 25th Street S | Signal | 39.1 | 50 | $\mathbf{1 . 2 8}$ | 0.68 | 1.03 |  |  |  |
| 53rd Avenue S / 25th Street S | TWSC | 26.8 | 1 | 0.04 | 0.23 | 0.49 |  |  |  |
| 58th Avenue S / 25th Street S | Roundabout | 24.6 | 13 | $\mathbf{0 . 5 3}$ | 0.23 | 0.50 |  |  |  |
| 62nd Avenue S / 25th Street S | TWSC | 17.3 | 1 | 0.06 | 0.23 | 0.56 |  |  |  |
| 64th Avenue S / 25th Street S | Roundabout | 18.0 | 10 | $\mathbf{0 . 5 5}$ | 0.23 | 0.55 |  |  |  |
| 27th St / 52nd Avenue S | TWSC | 33.2 | 23 | $\mathbf{0 . 6 9}$ | 0.23 | 0.46 |  |  |  |

Values Highlighted in Red and White represents intersections with crash rates greater than critical rate for similar type of facility.

The following intersections experienced crash rates greater than the critical rates for similar type of intersections:
» $32^{\text {nd }}$ Avenue $S / 25^{\text {th }}$ Street
" $52^{\text {nd }}$ Avenue $S$ (US 81B) / $25^{\text {th }}$ Street
" $58^{\text {th }}$ Avenue $S / 25^{\text {th }}$ Street
" $64^{\text {th }}$ Avenue $S / 25^{\text {th }}$ Street
" $27^{\text {th }}$ Street $/ 52^{\text {nd }}$ Avenue $S$ (US 81B)
Table 6 - Segment Crash Summary

| Segment from | Segment Type | VMT | \# Crashes | Crash Rate |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Observed | Average | Critical |
| 33rd Ave S to 32nd Ave S | 4-Iane Un-Divided | 3.9 | 8 | 2.07 | 0.49 | 1.55 |
| 40th Ave S to 33rd Ave S | 4-lane Un-Divided | 20.7 | 12 | 0.58 | 0.49 | 0.92 |
| Rosecreek Blvd to 40th Ave S | 4-Iane Un-Divided | 13.7 | 2 | 0.15 | 0.49 | 1.02 |
| 53rd Ave S to Rosecreek Blvd | 4-lane Divided | 6.8 | 2 | 0.29 | 0.29 | 0.89 |
| 64th Ave S to 53rd Ave S | 3-lane Undivided | 20.2 | 4 | 0.20 | 0.20 | 0.48 |

Values Highlighted in Red and White represents intersections with crash rates greater than critical rate for similar type of facility.
The segment from $32^{\text {nd }}$ Avenue $S$ to $33^{\text {rd }}$ Avenue $S$ experiences crash rates greater than critical rates for similar types of facilities.

## SERIOUS INJURY CRASHES

There were two serious injury crashes reported during the analysis year. Both the serious injury crashes were experienced at the intersection of $25^{\text {th }}$ Street $S$ with $32^{\text {nd }}$ Avenue $S$. The first incident was reported in November 2020 where the motorist traveling eastbound (EB) making a left turn, failed to yield, and collided with the westbound (WB) approaching vehicle. The second incident was reported in October 2021 where the motorist traveling WB making a left turn failed to yield and collided with the EB approaching vehicle.

## CRASHES INVOLVING PEDESTRIAN/BICYCLIST

There were two crashes involving bicyclists and one crash involving pedestrians reported during the analysis period. These crashes were experienced at the intersection of $25^{\text {th }}$ Street $S$ with $32^{\text {nd }}$ Avenue $S$. The only crash incident involving a pedestrian was reported in June 2019 where a NB traveling vehicle turning right at the intersection failed to yield to the pedestrian crossing from the WB approach. The first crash involving a bicyclist was reported in June 2017. The motorist making a right turn from the WB approach collided with a bicyclist crossing from the NB approach. The bicyclist failed to yield to the WB traveling motorist who had green phase signalization. The second incident involving a bicyclist was reported in August 2018 where the motorist attempted to make a right turn from the EB approach on red signalization and collided with a bicyclist.

## CRASH COLLISION TYPE

Identifying crash types at roadways assists in developing counter measures to mitigate or minimize the crash type. Rear end ( 99 crashes or 41-percent) and angle ( 92 crashes or 34 -percent) crashes were the most typical crash types at the study intersections. Dense access spacing, failing to stop, following too closely, and speeding are a few factors in a substantial proportion of rear end crashes along the corridor. Figure $\mathbf{2 0}$ shows the crashes by crash type at the study intersections during the analysis period. The larger the chart, the more crashes that occurred at that intersection.

## CRASH HOTSPOTS

Using the trends identified earlier, additional analysis and evaluation was completed in the study area for the intersections and segments that experienced crash rates greater than the critical rate. This crash hotspot analysis is used to identify specific combinations of crash type and direction to further understand the specific issues at the intersections and segment of the study corridor.

## 32 ${ }^{\text {nd }}$ Avenue $S$ and $25^{\text {th }}$ Street $S$

There were 64 crashes reported during the analysis period. Rear end crashes were the predominant type of crashes (26 crashes or 41-percent) at the intersection. Most of the rear end crashes were along SB (10 crashes) and WB approaches (nine crashes). The contributing factors for the rear end crashes along the SB direction can be attributed to speeding, careless/reckless driving, and following too close. Angle crashes were the second most prominent type of crashes ( 24 crashes or 39 -percent) at the intersection. This included 17 left turn crashes. Most of the left turn crashes (12) involved the interaction of vehicles traveling from the EB and WB approaches. Reckless driving, failure to yield, and running red lights were among the contributing factors for the high number of left turn crashes at the intersection.

## $52^{\text {nd }}$ Avenue $S$ and $25^{\text {th }}$ Street $S$

There were 50 crashes reported during the analysis period. Twenty-one crashes at the intersection involved inexperienced drivers under the age of 20 . Angle crashes were the predominant type of crashes ( 26 crashes or 52-percent) at the intersection. This included 18 left turn crashes. Most of the left turn crashes (13) involved the interaction of vehicles traveling from the NB and SB approaches. Failure to yield and harsh weather conditions were among the contributing factors for the high number of left turn crashes at the intersection. Rear end crashes were the second most prominent types of crashes ( 15 crashes or 30-percent) at the intersection. The contributing factors for the rear end crashes were mostly attributed to following too close, speeding, and careless/reckless driving.

Figure 20 - Intersection Crashes by Collision Type (Five Year Crashes from 2017-2021)


Source: FM COG, NDGISHub, NDDOT, ESRI, KLJ, Cass County Aerial from 2021
May 2022

## 58th Avenue S and 25th Street S

There were 13 crashes reported during the analysis period. Six crashes at the intersection involved inexperienced drivers under the age of 20. Rear end (Six crashes or 46-percent) and Single vehicle related (Six crashes or 46-percent) were the most prominent types of crashes at the intersection. Most of the rear end crashes (five crashes) were along NB approach. Careless driving and following too close were among the contributing factors for the rear end crashes at the intersection. The contributing factors for the single vehicle crash types at this intersection could be attributed to speeding. Most of the single vehicle related crashes collided with a post or curb.

## 64th Avenue S and 25th Street S

There were 10 crashes reported during the analysis period. All the crashes were rear-ending types of which seven were on the NB approach and three on the SB approach. Davies High School is located south of the intersection at 70th Avenue. All the crashes were observed during the school peak hours between 7AM-9AM, Noon-1PM, and 3PM-5PM. All the crashes at the intersection involved inexperienced drivers under the age of 18.

## 27th Street and 52nd Avenue S

There were 23 crashes reported during the analysis period. Most of the crashes at this intersection were experienced during the morning peak hour from 7AM-8AM (10 crashes or 43-percent). Eleven crashes at the intersection involved inexperienced drivers under the age of 20. Angle crashes were the most prominent crash type (11 crashes or 48-percent) at the intersection. Most of the angle crashes (nine crashes) involved the interaction of vehicles travelling from the NB and EB approaches. Failure to yield were the contributing factor for these angle crashes. Rear end crashes were the second most prominent crash type (six or 26-percent) at the intersection. Following too close and speeding were among the major contributing factors for these rear end crashes.

## $25^{\text {th }}$ Street $S$ between $32^{\text {nd }}$ Avenue S and $33^{\text {rd }}$ Avenue S

There were eight crashes reported during the analysis period. Rear-end crashes were the most prominent crash types (four or 50-percent). All rear end crashes were involved vehicles traveling SB direction colliding with the vehicle slowing down to turn right on Kirsten Lane. The contributing factors for the rear end crashes along the SB direction can be attributed to speeding and following too close.

## Traffic Volumes

The data collection effort for this study looked at many different sources to quantify the traffic volumes on the $25^{\text {th }}$ Street S corridor. The Annual Average Daily Traffic (AADT) was sourced from NDDOT's Transportation Information Interactive Map to classify historic fluctuations. The source of intersection level Turning Movement Counts (TMCs) is shown
in Figure 21. Raw traffic counts are included in Appendix B.

## KLJ

» KLJ collected TMCs on typical weekdays during March 2022.
» Thirteen-hour traffic counts were collected for nine intersections.
» Peak hour counts were collected for two intersections.
» The traffic volumes along busy driveways were observed for peak 15-minutes to identify the traffic patterns.

## City of Fargo

» TMCs for two intersections were sourced from other corridor and/or intersection studied conducted in the past three years.

## Miovision

» TMCs for three intersections were sourced from MPO's Miovision subscription.

Figure 21 - Traffic Count Source


Source: FM COG, NDGISHub, NDDOT, ESRI, KLJ, Cass County Aerial from 2021

## AVERAGE DAILY TRAFFIC

Average Daily Traffic (ADT) volumes along the corridor range from approximately 8,300 Vehicles Per Day (VPD) up to 15,100 VPD (Figure 22). In general, ADT volumes increase from south to north along the corridor, however, there is a defined shift at $52^{\text {nd }}$ Avenue $S$, where approximately 5,000 VPD shifts to/from $25^{\text {th }}$ Street (South of $52^{\text {nd }}$ Avenue $S$ ) to $52^{\text {nd }}$ Avenue $S$. The ADT volumes along $25^{\text {th }}$ Street $S$ to the north and south of $52^{\text {nd }}$ Avenue $S$ are approximately 8,300 VPD and 13,400 VPD, respectively. The existing AM and PM peak hour Turning Movement Counts (TMCs) are presented in Table 7 and Table 8, respectively.

Table 7 - Turning Movement Counts (AM Peak)

| Int. ID ${ }^{1}$ | Control ${ }^{2}$ | Northbound |  |  | Southbound |  |  | Eastbound |  |  | Westbound |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | R | L | T | R | L | T | R | L | T | R |
| 1 | Signal | 195 | 500 | 100 | 160 | 295 | 215 | 215 | 430 | 100 | 95 | 365 | 110 |
| 2 | TWSC | 30 | 725 | 75 | 70 | 370 | 50 | 35 | 5 | 25 | 15 | 5 | 35 |
| 3 | TWSC | 50 | 790 | 5 | 5 | 375 | 30 | 10 | 5 | 15 | 5 | 5 | 30 |
| 4 | Signal | 40 | 670 | 20 | 20 | 340 | 35 | 50 | 30 | 35 | 30 | 25 | 75 |
| 5 | TWSC | 10 | 710 | 5 | 5 | 375 | 25 | 10 | - | 10 | 5 | - | 10 |
| 6 | TWSC | 10 | 705 | - | - | 385 | 5 | 20 | - | 10 | - | - | - |
| 7 | TWSC | - | 640 | 10 | 30 | 365 | - | - | - | - | 10 | - | 75 |
| 8 | TWSC | 5 | 600 | 5 | 5 | 365 | 5 | 30 | - | 25 | 10 | - | 20 |
| 9 | TWSC | 5 | 590 | 10 | 5 | 390 | 5 | 10 | - | 20 | 10 | - | 10 |
| 10 | Signal | 140 | 395 | 110 | 55 | 295 | 70 | 140 | 240 | 55 | 100 | 200 | 70 |
| 11 | TWSC | 100 | 645 | - | - | 315 | 135 | - | - | - | - | - | - |
| 12 | Signal | - | 560 | 15 | 10 | 305 | - | 140 | 5 | 70 | 20 | - | 45 |
| 13 | TWSC | 5 | 545 | 5 | 5 | 385 | 5 | 15 | - | 10 | 5 | - | 15 |
| 14 | TWSC | - | 550 | 5 | 5 | 395 | - | - | - | - | 5 | - | 5 |
| 15 | TWSC | 5 | 530 | 10 | 5 | 390 | 5 | 10 | - | 5 | 5 | - | 15 |
| 16 | TWSC | 5 | 520 | - | - | 390 | 10 | 25 | - | 15 | - | - | - |
| 17 | TWSC | - | 475 | 10 | 15 | 390 | - | - | - | - | 25 | - | 50 |
| 18 | Signal | 470 | 225 | 45 | 45 | 245 | 125 | 185 | 300 | 460 | 55 | 450 | 75 |
| 19 | 3/4 | - | 740 | - | - | 725 | 35 | - | - | 5 | - | - | - |
| 20 | TWSC | 40 | 700 | 5 | 10 | 690 | 30 | 20 | 5 | 10 | 5 | 5 | 20 |
| 21 | TWSC | 10 | 640 | 10 | 110 | 590 | 5 | 5 |  | 10 | 5 | - | 100 |
| 22 | TWSC | 5 | 625 | 35 | 85 | 510 | 10 | 20 | 5 | 15 | 5 | - | 15 |
| 23 | Roundabout | 5 | 510 | 25 | 60 | 460 | 10 | 40 | 10 | 5 | 20 | 5 | 115 |
| 24 | TWSC | - | 490 | 5 | 10 | 475 | - | - | - | - | 5 | - | 50 |
| 25 | TWSC | 5 | 440 | 5 | 10 | 460 | 10 | 15 | 5 | 5 | 5 | 5 | 40 |
| 26 | Roundabout | 10 | 390 | 35 | 10 | 450 | 10 | 25 | 10 | 35 | 25 | 5 | 35 |
| 27 | TWSC | 120 | - | 75 | - | - | - | - | 870 | 95 | 20 | 1025 | - |

> L - Left, T - Through, R - Right

1. Refer to Figure $\mathbf{1 8}$ for Intersection ID
2. TWSC - Two way Stop Control; $3 / 4$ - Three Quarter intersection

Figure 22 - Existing (2022) Daily Traffic Volumes


Table 8 - Turning Movement Counts (PM Peak)

| Int. ID ${ }^{1}$ | Control ${ }^{2}$ | Northbound |  |  | Southbound |  |  | Eastbound |  |  | Westbound |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | R | L | T | R | L | T | R | L | T | R |
| 1 | Signal | 180 | 350 | 70 | 135 | 525 | 220 | 165 | 435 | 165 | 130 | 445 | 130 |
| 2 | TWSC | 15 | 455 | 10 | 20 | 730 | 70 | 50 | 5 | 25 | 35 | 5 | 95 |
| 3 | TWSC | 5 | 455 | 10 | 25 | 755 | 10 | 5 | 5 | 10 | 10 | 5 | 20 |
| 4 | Signal | 15 | 385 | 20 | 65 | 655 | 55 | 40 | 50 | 55 | 35 | 40 | 45 |
| 5 | TWSC | 5 | 405 | 5 | 5 | 725 | 15 | 10 | - | 10 | 5 | - | 5 |
| 6 | TWSC | 20 | 405 | - | - | 715 | 25 | 10 | - | 10 | - | - | - |
| 7 | TWSC | - | 385 | 15 | 65 | 660 | - | - | - | - | 10 | - | 40 |
| 8 | TWSC | 20 | 390 | 10 | 20 | 625 | 25 | 5 | - | 5 | 5 | - | 5 |
| 9 | TWSC | 20 | 410 | 10 | 10 | 615 | 10 | 5 | - | 5 | 5 | - | 5 |
| 10 | Signal | 65 | 250 | 50 | 60 | 395 | 170 | 150 | 240 | 95 | 75 | 260 | 40 |
| 11 | TWSC | 5 | 365 | - | - | 550 | 15 | - | - | - | - | - | - |
| 12 | Signal | - | 330 | 15 | 40 | 510 |  | 15 | 5 | 10 | 15 | - | 25 |
| 13 | TWSC | 5 | 335 | 5 | 15 | 505 | 15 | 5 | - | 5 | 5 | - | 5 |
| 14 | TWSC | - | 340 | 5 | 5 | 510 | - | - | - | - | 5 | - | 5 |
| 15 | TWSC | 5 | 330 | 5 | 15 | 490 | 10 | 5 | - | 5 | 10 | - | 10 |
| 16 | TWSC | 15 | 330 | - | - | 480 | 25 | 10 | - | 5 | - | - | - |
| 17 | TWSC | - | 330 | 25 | 35 | 450 | - | - | - | - | 20 | - | 15 |
| 18 | Signal | 350 | 135 | 40 | 80 | 245 | 145 | 170 | 575 | 445 | 70 | 455 | 50 |
| 19 | 3/4 | - | 525 | - | - | 695 | 65 | - | - | 75 | - | - | - |
| 20 | TWSC | 25 | 460 | 5 | 10 | 735 | 25 | 50 | - | 30 | 5 | 5 | 15 |
| 21 | TWSC | 5 | 440 | 5 | 50 | 710 | 10 | 5 | - | 5 | 10 | - | 45 |
| 22 | TWSC | 5 | 420 | 10 | 10 | 685 | 30 | 15 | - | 5 | - | - | 15 |
| 23 | Roundabout | 5 | 365 | 5 | 95 | 570 | 25 | 15 | 5 | 5 | 10 | 10 | 55 |
| 24 | TWSC | - | 350 | 5 | 70 | 515 | - | - | - | - | 5 | - | 25 |
| 25 | TWSC | 5 | 325 | 5 | 40 | 455 | 25 | 10 | 5 | 5 | 5 | 5 | 20 |
| 26 | Roundabout | 10 | 305 | 10 | 40 | 410 | 15 | 5 | 10 | 20 | 5 | 10 | 25 |
| 27 | TWSC | 85 | - | 50 | - | - | - | - | 1140 | 165 | 15 | 935 | - |

1. Refer to Figure $\mathbf{1 8}$ for Intersection ID
2. TWSC - Two way Stop Control; $3 / 4$ - Three Quarter intersection

## STREETLIGHT DATA

The Fargo-Moorhead MPO's Streetlight data was also utilized to supplement existing traffic data to provide a more thorough understanding of the existing regional trips, and to find daily traffic volumes for side streets that did not have historic or recent traffic data. Streetlight utilizes anonymized location records from smart phones and navigation devices in cars and trucks to analyze regional travel patterns while keeping the anonymity of individual trips.

## TRAFFIC PATTERNS

The existing daily hourly volume profile is shown in Figure 23. The 25th Street $S$ corridor serves between 8,000 to 15,150. Based on the traffic data collected, the AM peak hour along the corridor occurs from 7:30 to 8:30 AM, while the PM peak occurs from 4:45 PM to 5:45 PM. It is important to note that traffic volumes are relatively steady between 4:30 and 6:00 PM within the study area. Traffic is generally higher along NB direction between AM and PM peak between 32nd Ave and $52^{\text {nd }}$ Ave.

Figure 23 - Traffic Hourly Volume Profile
Segment 3: 40th Ave to 32nd Ave


Segment 2: 52nd Ave to 40th Ave


Segment 1: 64th Ave to 52nd Ave


## Capacity Analysis and Demand

The roadway capacity is defined as the maximum number of vehicles a street segment can accommodate. Existing traffic capacity and demands were analyzed along the corridor.

## Planning Level Capacity Analysis

ADT volumes along $25^{\text {th }}$ Street $S$ range from approximately 8,300 to 15,100 vehicles per day. The corridor context generally varies from a three-lane facility with a two-way left-turn lane (TWLTL) south of $53^{\text {rd }}$ Avenue $S$, to a four-lane undivided facility north of $52^{\text {nd }}$ Avenue $S$; there are periodic turn lanes and/or medians at major intersections. Typical planning level capacity thresholds by facility type are shown in Table 9.

Table 9 - 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 $25^{\text {th }}$ Street S corridor operates between the LOS B or LOS D range, depending on the segment. A summary of the planning-level capacity analysis by segment is shown in Table $\mathbf{1 0}$.

Table 10 - Planning Level Capacity Analysis

| $\mathbf{2 5}^{\text {th }}$ Street Segment | Facility Type | ADT Volume | Planning-Level LOS |
| :---: | :---: | :---: | :---: |
| $32^{\text {nd }}$ Avenue S to $33^{\text {rd }}$ Avenue S | 5-lane | 15,100 | LOS B |
| $33^{\text {rd }}$ Avenue S to $52^{\text {nd }}$ Avenue S | 4-lane | 8,300 to 15,100 | LOS B to LOS C |
| $52^{\text {nd }}$ Avenue S to $64^{\text {th }}$ Avenue S | 3-lane | 8,300 to 13,400 | LOS C to LOS D |

## Intersection Capacity Analysis

Although the planning-level capacity can provide a good barometer of corridor operations, intersection operations often provide a clearer indication of corridor operations. Therefore, a detailed intersection capacity analysis was completed at the study intersections along $25^{\text {th }}$ Street $S$, as well as the $52^{\text {nd }}$ Avenue $S$ and $27^{\text {th }}$ Street $S$ intersection, to understand various performance metrics, including levels of services (LOS), queuing, and travel time.

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 metric such as intersection Level of Service (LOS) and queues. These models incorporate collected traffic, pedestrian, and bicyclist volumes, traffic controls, and driver behavior factors. Existing signal timing provided by the cities of Moorhead and Dilworth were incorporated as well.

Level of Service (LOS) quantifies how an intersection is operating. Intersections are graded from LOS A through LOS F, which corresponds to the average delay per vehicle value shown in Table 11. An overall intersection LOS A though LOS D is generally considered acceptable in the Fargo-Moorhead Metropolitan Area. LOS A indicates the best traffic operation, while LOS F indicates an intersection where demand exceeds capacity.

LOS for two-way stop-controlled intersection is undefined by HCM. For two-way stop-controlled intersections the through traffic on the major (uncontrolled) street generally experiences no delay at the intersection. Conversely, vehicles turning left or crossing the major street from the minor street, experience more delay than other movements, and
at times can experience significant delay. Vehicles on the minor street, which are turning right, experience less delay than those turning left from the same approach. Due to these reasons, for side-street stop-controlled intersections, special emphasis is given to providing an estimate for the level of service of the side-street approach. 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.

Table 11 - Intersection Level of Service Thresholds

| Level of <br> Service | Stop, Yield, and Roundabout <br> Intersections | Signalized <br> Intersections |
| :---: | :---: | :---: |
|  | $<10$ seconds | $<10$ seconds |
| A | 10 to 15 seconds | 10 to 20 seconds |
| B | 15 to 25 seconds | 20 to 35 seconds |
| C | 25 to 35 seconds | 35 to 55 seconds |
| D | 35 to 50 seconds | 55 to 80 seconds |
| E | $>50$ seconds | $>80$ seconds |
| F |  |  |

The existing intersection capacity analysis shown in Figure $\mathbf{2 4}$ and Table $\mathbf{1 2}$ indicates that all study intersections currently operate at an overall LOS C or better during the AM and PM peak hours. For full detailed Synchro results, refer to Appendix B. However, it is difficult to make left-turn or crossing maneuvers from multiple side-street approaches along the corridor, particularly at Kirsten Lane, as well as between 53rd Avenue $S$ and the southern Shanley High School driveway during the peak hours. This is illustrated by the LOS E and LOS F operations for these side-street approaches during the peak hours. The NB approach of the 52 nd Avenue $S$ and 27 th Street S intersection also operates poorly during the peak periods.

The operational issue South of $52^{\text {nd }}$ Avenue $S$ are somewhat isolated to motorists bounded by $52^{\text {nd }}$ Avenue $S$ to the north, $25^{\text {th }}$ Street $S$ to the east, and $58^{\text {th }}$ Avenue $S$ to the South. These motorists generally do not have convenient access to a controlled access (i.e., a signal and/or roundabout) to get to either $52^{\text {nd }}$ Avenue S or $25^{\text {th }} \mathrm{Street} \mathrm{S}$. With these two roadways having some of the highest volumes within the study area, improving access for these motorists will be an important consideration as part of the alternative development phase of this Study.

During the AM peak hour, there are some minor queuing issues at $32^{\text {nd }}$ Avenue $S$ and Kirsten Lane, where queues periodically extend beyond the existing turn lane storage provided. However, these queues generally occur for less than five (5) percent of the AM peak hour. At $40^{\text {th }}$ Avenue $S, E B$ and $W B$ queues along $40^{\text {th }}$ Avenue $S$ extend beyond the adjacent left-turn lanes between 10 and 15 percent of the AM peak hour. Queues along most side-street approaches range between one to three vehicles, except for the $27^{\text {th }}$ Street $S$ approach to $52^{\text {nd }}$ Avenue $S$; queuing in this location regularly extended beyond five vehicles during the AM peak hour. No other significant queuing issues were identified during the AM peak hour.

During the PM peak hour, there are again some minor queuing issues at $32^{\text {nd }}$ Avenue $S$ and Kirsten Lane, where queues periodically extend beyond the existing turn lane storage provided or queues from the adjacent thru lane block access to the turn lanes. However, these queues generally occur for less than five (5) percent of the PM peak hour. At 40 Avenue $S$, EB and WB queues along $40^{\text {th }}$ Avenue $S$ extend beyond the adjacent left-turn lanes between 10 and 20 percent of the PM peak hour; SB thru queues occasionally (i.e., less than five percent of the PM peak hour) extend beyond the SB left-turn lane. Queues along most side-street approaches range between two to four vehicles, except for the $27^{\text {th }}$ Street $S$ approach to $52^{\text {nd }}$ Avenue $S$; queuing in this location regularly extended beyond five vehicles during the PM peak hour. No other significant queuing issues were identified during the PM peak hour.

Figure 24 - Existing Intersection Level of Service (LOS)


Source: FM COG, NDGISHub, NDDOT, ESRI, KLJ, Cass County Aerial from 2021

Table 12 - Existing Intersection Capacity Analysis

| 25 ${ }^{\text {th }}$ Street S Intersectio | Traffic Control | AM Peak Hour | PM Peak Hour |
| :---: | :---: | :---: | :---: |
| $32^{\text {nd }}$ Avenue S | SIGNAL | C (27 sec) | C (26 sec) |
| Kirsten Lane | SSS | D (34 sec) | F (54 sec) |
| $33^{\text {rd }}$ Avenue S | SSS | C (22 sec) | C (24 sec) |
| $35^{\text {th }}$ Avenue S | Signal | A (8 sec) | B (10 sec) |
| Casey's / Gethsemane Church Driveways | SSS | C (16 sec) | C (20 sec) |
| $36^{\text {th }}$ Avenue S | SSS | C (16 sec) | C (18 sec) |
| $37^{\text {th }}$ Avenue S | SSS | B (13 sec) | B (13 sec) |
| $38^{\text {th }}$ Avenue S | SSS | C (16 sec) | C (19 sec) |
| $3{ }^{\text {th }}$ Avenue S | SSS | C (17 sec) | C (18 sec) |
| $40^{\text {th }}$ Avenue S | Signal | C (22 sec) | C (21 sec) |
| Centennial Elementary (North) | One-Way | A (3 sec) | A (2 sec) |
| Centennial Elementary / Rose Creek Drive | Signal | A (8 sec) | A ( 5 sec ) |
| $44^{\text {th }}$ Avenue S | SSS | C (15 sec) | C (15 sec) |
| Carrie Rose Lane | SSS | B (14 sec) | B (12 sec) |
| Rose Creek Parkway | SSS | C (16 sec) | C (15 sec) |
| Meadow Creek Drive | SSS | B (14 sec) | C (15 sec) |
| Rose Creek Boulevard | SSS | B (14 sec) | B (14 sec) |
| $52^{\text {nd }}$ Avenue S | Signal | C (23 sec) | C (22 sec) |
| Don's Carwash Driveway | SSS | B (13 sec) | B (13 sec) |
| $53^{\text {rd }}$ Avenue S / Saint Anne Church | SSS | F (78 sec) | F (68 sec) |
| Prairie Grove Avenue / Shanley High School (North) | SSS | E (40 sec) | D (29 sec) |
| Eaglebrook Apartments / Shanley High School (South) | SSS | E (43 sec) | D (31 sec) |
| $58^{\text {th }}$ Avenue S | RAB | A (8 sec) | A (8 sec) |
| $60^{\text {th }}$ Avenue S | SSS | B (13 sec) | B (12 sec) |
| $62^{\text {nd }}$ Avenue S | SSS | C (24 sec) | C (20 sec) |
| $64^{\text {th }}$ Avenue S | RAB | A (7 sec) | A (6 sec) |
| $52^{\text {nd }}$ Avenue Intersection | Traffic Control | AM Peak Hour | PM Peak Hour |
| $27^{\text {th }}$ Street S | SSS | F (120+ sec) | F (120+ sec) |

SSS - Side-Street-Stop RAB-Roundabout
Note: LOS for two-way stop-controlled intersection is undefined by HCM. For Side-Street Stop intersections, the LOS (delay) shown is for the worst side-street approach.

## Corridor Travel Time

Corridor travel times and average arterial speed data was obtained from the calibrated SimTraffic modeling results. As shown in Table 13, average travel times through the 3-mile study corridor are approximately seven (7) minutes and 45 -seconds, plus or minus about 10 seconds. The average travel speeds equate to approximately 24 - to 25 -mph.

Table 13 - Corridor Travel Time and Average Speed

| $\mathbf{2 5}^{\text {th }}$ Street S Direction | AM Peak Hour |  | PM Peak Hour |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Travel Time | Arterial Speed | Travel Time | Arterial Speed |
| Northbound | 7 min .49 sec. | 25 mph | 7 min .40 sec. | 25 mph |
| Southbound | 7 min .45 sec. | 24 mph | 7 min .53 sec. | 24 mph |

## Summary

## Roadway Characteristics

» The $25^{\text {th }}$ Street S corridor is classified as a minor arterial
» 25th Street S corridor is generally residential, with both single-family and multi-family residential areas. The north end of the corridor has commercial developments as well. More sparse commercial land use shows up between 52nd Ave and 64th Ave.
» Along the entire $25^{\text {th }}$ Street S Corridor, current ROW varies between 100 feet and 160 feet in width.
» Between 32nd Avenue $S$ and 52nd Avenue $S$, the corridor is a standard four-lane road, with two lanes going in each direction.
» From 52nd Ave to Prairie Grove Ave there are two SB lanes, a center two-way left turn lane, and a single NB lane.
» Prairie Grove Ave to 64th Ave includes one lane in each direction with a center two-way left turn lane.
" On-street bike lanes are present on both sides of the roadway between 58th Avenue $S$ and 64 th Avenue $S$.
» The entire section of $25^{\text {th }}$ Street $S$ has a posted speed limit of 35 mph .
» Along the study corridor, there are 28 public access points and 11 private access points.
" Except for the spacings between 40th Street $S$ and Rose Creek Drive, the rest of the signal spacing between the intersections meets the requirements for quarter mile spacings.
» The corridor is well illuminated throughout.
» Between 32nd Ave $S$ and 52nd Ave $S$, a multi-use path exists along the west side of the corridor and a sidewalk exists along the east side of the corridor.
» South of $52^{\text {nd }}$ Avenue, a multi-use path exists on both sides of 25 th Street S , providing access to public and institutional land uses as well as the regional trail network.
» There are several crossing points to traverse across $25^{\text {th }}$ Street to get to the many parks, schools, and churches located in this area.
" There are currently no transit routes that travel along the $25^{\text {th }}$ Street $S$ corridor. Route 18 of MATBUS crosses $25^{\text {th }}$ Street $S$ at $32^{\text {nd }}$ Avenue $S$ from north.

## Safety

» There were 244 crashes reported in the study area during the five-year analysis period between 2017 and 2021.
» There were no traffic fatalities reported during the analysis period.
" The only two serious injury crashes were reported in 2020 and 2021. Both the serious injury crashes were experienced at the intersection of $25^{\text {th }}$ Street $S$ with $32^{\text {nd }}$ Avenue $S$.
» There were two crashes involving bicyclist and one crash involving pedestrian reported during the analysis period. All these crashes were experienced at the intersection of $25^{\text {th }}$ Street $S$ with $32^{\text {nd }}$ Avenue $S$.
» Rear end ( 99 crashes or 41-percent) and angle ( 92 crashes or 34 -percent) crashes were the most typical crash types at the study intersections.
» The following intersections experienced crash rates greater than the critical rates for similar type of intersections:

- $32^{\text {nd }}$ Avenue $S / 25^{\text {th }}$ Street
- $52^{\text {nd }}$ Avenue $S$ (US $81 B$ ) $/ 25^{\text {th }}$ Street
- $58^{\text {th }}$ Avenue $S / 25^{\text {th }}$ Street
- $64^{\text {th }}$ Avenue $S / 25^{\text {th }}$ Street
- $27^{\text {th }}$ Street $/ 52^{\text {nd }}$ Avenue S (US 81B)


## Traffic Volumes

» The $25^{\text {th }}$ Street $S$ corridor carries between 8,000 vehicles daily in the south to 15,150 vehicles daily in the north.
» There is a defined shift at $52^{\text {nd }}$ Avenue $S$, where approximately 5,000 vehicles per day shifts to/from $25^{\text {th }}$ Street (South of $52^{\text {nd }}$ Avenue $S$ ) to $52^{\text {nd }}$ Avenue $S$.
" The AM peak hour along the corridor occurs from 7:30 to 8:30AM, while the PM peak occurs from 4:45 PM to 5:45 PM.
" Traffic is generally higher along NB direction from AM to PM peak between $32^{\text {nd }}$ Avenue and $52^{\text {nd }}$ Avenue.

## Capacity Analysis

» Based on this planning-level capacity approach, the $25^{\text {th }}$ Street S corridor operates between the LOS B or LOS D range, depending on the segment.
» The following intersections experience operational deficiencies during the peak hours:

- Kirsten Lane and $25^{\text {th }}$ Street S
- $53^{\text {rd }}$ Avenue $S /$ Saint Anne Church and $25^{\text {th }}$ Street S
- Prairie Grove Avenue / Shanley High School (North) and $25^{\text {th }}$ Street S
- Eaglebrook Apartments / Shanley High School (South) and $25^{\text {th }}$ Street S
- $27^{\text {th }}$ Street $S$ and $52^{\text {nd }}$ Avenue $S$ (US 81B)
» Queuing issues are experienced at the intersection of $25^{\text {th }}$ Street $S$ with $32^{\text {nd }}$ Avenue $S$ and Kirsten Lane during the peak hours.
" At $40^{\text {th }}$ Avenue $S$, EB and WB queues along $40^{\text {th }}$ Avenue $S$ extend beyond the adjacent left-turn lanes between 10 and 15 percent of the AM peak hour.
» EB and WB queues along $40^{\text {th }}$ Avenue $S$ extend beyond the adjacent left-turn lanes between 10 and 20 percent of the peak hours.
» Average travel times through the three-mile study corridor are approximately seven minutes and 45-seconds, plus or minus about 10 seconds. The average travel speeds equate to approximately 24 - to $25-\mathrm{mph}$.


## Next Steps

This report documents the existing conditions in the $25^{\text {th }}$ Street $S$ corridor. The next chapter of the study will develop future 2045 traffic projections and evaluate traffic operations for 2045 conditions.

## FUTURE-2045 CONDITIONS REPORT



## FUTURE-2045 CONDITIONS REPORT

$25^{\text {th }}$ Street Corridor Study, Fargo - ND
August 2022

## Introduction

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.

## Planned Infrastructure Improvements

MATBUS is the public transportation system serving the communities of Fargo \& West Fargo, North Dakota, and Moorhead \& Dilworth, Minnesota. There are currently no transit routes along the 25 th Street S corridor. Route 14 of MATBUS has a route along 32nd Avenue $S$ and crosses 25 th Street. Route 18 of MATBUS crosses 25 th Street S at 32 nd Avenue $S$ from the north. There are no plans to add new routes along the $25^{\text {th }}$ Street study corridor.

## Traffic Forecasts

As Fargo continues to grow and develop, vehicular traffic on $25^{\text {th }}$ Street $S$ corridor will continue to increase. Therefore, year 2045 traffic forecasts were developed, with a goal of the 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.

## Methodology \& Assumptions

To develop year 2045 traffic forecasts, a multi-pronged approach was used. This process included a review of historical average daily traffic (ADT) volumes within the study area as well as various traffic forecasts developed as part of the Veterans Boulevard Extension Corridor Study, completed in 2021. The forecasts previously developed for the Veterans Boulevard Extension Corridor Study project used the latest Fargo-Moorhead Regional Travel Demand Model and included several socio-economic and transportation network scenarios aimed at understanding how key changes influence area travels patterns. Two key transportation improvements investigated included new access to Interstate $29(1-29)$ at $64^{\text {th }}$ Avenue $S$ and $76^{\text {th }}$ Avenue $S$. New interstate access in one or both locations have an influence on $25^{\text {th }}$ Street corridor travel patterns, particularly south of $52^{\text {nd }}$ Avenue $S$.

The Annual Average Daily Traffic (AADT) was sourced from NDDOT's Transportation Information Interactive Map to classify historic fluctuations. ADT volume growth along the $25^{\text {th }}$ Street corridor has varied, depending on the location (Figure 25). In particular, the $25^{\text {th }}$ Street corridor segment north of $52^{\text {nd }}$ Avenue $S$ has been established/developed for several years and ADT volumes have been relatively stable or even declining in this area. While south of $52^{\text {nd }}$ Avenue $S$, several development opportunities remain, and the corresponding trends can be seen in the higher historical growth rates in this area (see Table 14). However, it's important to understand that as these areas continue to develop and area traffic volumes increase, the growth rates are expected to level off when looking out to 2045 conditions. Note that cross-street growth has also been relatively stable, except for $52^{\text {nd }}$ Avenue $S$ west of $25^{\text {th }}$ Street, which corresponds with the growth to the south and the general travel patterns to/from I-29.

Figure 25 - Historical Average Daily Traffic Volume Summary


Table 14 - Historical ADT Volume Growth Rates

| $\mathbf{2 5}^{\text {th }}$ Street Location | Growth Rates <br> (from 2005) | Growth Rates <br> (from 2010) | Growth Rates <br> (from 2015) |
| :--- | :---: | :---: | :---: |
| South of 32nd Avenue | $0.8 \%$ | $0.1 \%$ | $-1.1 \%$ |
| North of 40th Avenue | $2.0 \%$ | $1.4 \%$ | $0.4 \%$ |
| South of 40th Avenue | $2.0 \%$ | $2.9 \%$ | $-0.8 \%$ |
| North of 52nd Avenue | $2.6 \%$ | $4.5 \%$ | $0.2 \%$ |
| South of 52nd Avenue | $9.3 \%$ | $10.3 \%$ | $5.3 \%$ |
| North of 64th Avenue | N/A | $11.3 \%$ | $10.7 \%$ |
| South of 64th Avenue | - | - | $10.7 \%$ |
| Cross-Street Location | (from 2005) | Growth Rates | (from 2010) |
| 32nd Avenue (West of 25th) | $0.1 \%$ | $0.4 \%$ | (from 2015) |
| 32nd Avenue (East of 25th) | $-1.1 \%$ | - | $-1.9 \%$ |
| 40th Avenue (West of 25th) | $1.0 \%$ | $1.4 \%$ | $-3.2 \%$ |
| 40th Avenue (East of 25th) | $1.4 \%$ | - | $-1.8 \%$ |
| 52nd Avenue (West of 25th) | $9.3 \%$ | $-1.6 \%$ |  |
| 52nd Avenue (East of 25th) | $4.5 \%$ | "" |  |

[^0]When comparing the historical growth trends relative to traffic forecasts developed as part of the Veterans Boulevard Corridor Extension Study (see Table 15), the forecasted growth along $25^{\text {th }}$ Street is much higher than the historical trends.

Table 15 - Regional Model Projected ADT Volume Growth Rates

| Location | Average Daily Traffic Volume |  |  |  | Annual Growth Rates |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Existing | $\mathbf{2 0 3 5}$ | $\mathbf{2 0 4 5}$ | Full Build | $\mathbf{2 0 3 5}$ | $\mathbf{2 0 4 5}$ | Full Build |  |
| South of 32nd Avenue | 15,150 | 23,880 | 27,850 | 26,333 | $3.30 \%$ | $2.60 \%$ | $1.60 \%$ |  |
| South of 40th Avenue | 9,250 | 22,840 | 28,950 | 27,100 | $6.70 \%$ | $4.90 \%$ | $3.20 \%$ |  |
| North of 52nd Avenue | 8,300 | 18,580 | 24,850 | 23,533 | $5.90 \%$ | $4.70 \%$ | $3.10 \%$ |  |
| South of 52nd Avenue | 13,350 | 17,440 | 27,150 | 22,200 | $1.90 \%$ | $3.00 \%$ | $1.50 \%$ |  |
| South of 64th Avenue | 9,550 | 16,300 | 24,550 | 16,767 | $3.90 \%$ | $4.00 \%$ | $1.70 \%$ |  |

In discussions with the Study Review Committee (SRC), there was consensus that the regional model forecasts were higher than expected and that an average growth rate that balances historical and projected ADT volume growth rates should be used. Therefore, the SRC agreed upon using a $0.25 \%$ annual growth rate for segments north of $52^{\text {nd }}$ Avenue S, and a $1 \%$ annual growth rate for segments south of $52^{\text {nd }}$ Avenue S . The $0.25 \%$ and one percent growth rates were applied accordingly to the existing peak hour and ADT volumes to develop year 2045 base condition traffic forecasts. Note that these growth rates do not account for travel pattern shifts associated with new I-29 access at $64^{\text {th }}$ Avenue $S$ and $76{ }^{\text {th }}$ Avenue $S$.

To account for travel pattern changes associated with new $I-29$ access at $64^{\text {th }}$ Avenue $S$ and $76^{\text {th }}$ Avenue $S$, the year 2045 base condition volumes were modified. Traffic forecasts developed as part of the Veterans Boulevard Corridor Extension Study indicate that new I-29 access south of $52^{\text {nd }}$ Avenue $S$ is expected to shift approximately 3,000 to 7,500 vehicles per day (vpd) away from $25^{\text {th }}$ Street Corridor (south of $52^{\text {nd }}$ Avenue $S$ ) and the $52^{\text {nd }}$ Avenue $S$ Corridor (west of $25^{\text {th }}$ Street S). New interchange access to $1-29$ is expected to result in minimal changes to traffic volumes along $25^{\text {th }}$ Street north of $52^{\text {nd }}$ Avenue S. Thus, the 2045 base peak hour and ADT volumes were modified to reflect new I-29 access at $64^{\text {th }}$ Avenue $S$ and $76^{\text {th }}$ Avenue $S$. A summary of the existing, 2045 base, and 2045 with new interchange access scenario is summarized in Table 16 and shown in Figure 26.

Table 16 - ADT Comparisons

| $\mathbf{2 5}^{\text {th }}$ Street S Segment | Typical | ADT Volumes |  |
| :---: | :---: | :---: | :---: |
|  | Section | 2045 Base Conditions | $\mathbf{2 0 4 5}$ with New Interchanges |
| $32^{\text {nd }}$ Avenue $S$ to $33^{\text {rd }}$ Avenue $S$ | 5-lane | 16,100 | 16,100 |
| $33^{\text {rd }}$ Avenue $S$ to $35^{\text {th }}$ Avenue $S$ | 4-lane | 11,250 to 16,100 | 11,250 to 16,100 |
| $35^{\text {th }}$ Avenue $S$ to $40^{\text {th }}$ Avenue $S$ | 4-lane | 11,250 | 11,250 |
| $40^{\text {th }}$ Avenue S to $52^{\text {nd }}$ Avenue $S$ | 4-lane | 8,800 to 9,800 | 8,800 to 9,800 |
| $52^{\text {td }}$ Avenue $S$ to $60^{\text {th }}$ Avenue $S$ | 3-lane | 16,850 | 12,875 |
| $60^{\text {th }}$ Avenue $S$ to $64^{\text {th }}$ Avenue $S$ | 3-lane | 10,500 | 8,800 to 9,150 |



FUTURE-2045 CONDITIONS REPORT

Based on the traffic forecasts, year 2045 ADT volumes (before any new interchange access) are expected to range from 8,800 to 16,850 vehicles per day. The 16,850 vehicles per day is located just south of $52^{\text {nd }}$ Avenue $S$. Once new $1-29$ access is provided at $64^{\text {th }}$ Avenue $S$ and/or $76^{\text {th }}$ Avenue $S$, the ADT volume along $25^{\text {th }}$ Street south of $52^{\text {nd }}$ Avenue $S$ is expected to drop to approximately 12,875 vehicles per day (i.e., about 4,000 vehicle per day reduction). The 2045 AM and PM peak hour Turning Movement Counts (TMCs) for base conditions are presented in Table 17 and Table 18, respectively.

Table 17-2045 Turning Movement Counts - Base Scenario (AM Peak)

| Int. | Control ${ }^{2}$ | Northbound |  |  | Southbound |  |  | Eastbound |  |  | Westbound |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ID ${ }^{1}$ |  | L | T | R | L | T | R | L | T | R | L | T | R |
| 1 | Signal | 207 | 530 | 106 | 170 | 314 | 228 | 228 | 456 | 106 | 101 | 387 | 117 |
| 2 | TWSC | 32 | 767 | 80 | 75 | 393 | 53 | 38 | 6 | 28 | 16 | 6 | 38 |
| 3 | TWSC | 53 | 836 | 6 | 6 | 399 | 32 | 11 | 6 | 16 | 6 | 6 | 32 |
| 4 | Signal | 43 | 709 | 22 | 22 | 361 | 38 | 53 | 32 | 38 | 32 | 27 | 80 |
| 5 | TWSC | 11 | 752 | 6 | 6 | 398 | 27 | 11 | - | 11 | 6 | - | 11 |
| 6 | TWSC | 11 | 747 | - | - | 409 | 6 | 22 | - | 11 | - | - | 0 |
| 7 | TWSC | - | 678 | 11 | 32 | 388 | - | - | - | - | 11 | - | 80 |
| 8 | TWSC | 6 | 635 | 6 | 6 | 387 | 6 | 32 | - | 28 | 11 | - | 22 |
| 9 | TWSC | 6 | 625 | 11 | 6 | 414 | 6 | 11 | - | 22 | 11 | - | 11 |
| 10 | Signal | 149 | 418 | 117 | 59 | 313 | 75 | 149 | 255 | 59 | 105 | 212 | 75 |
| 11 | TWSC | 105 | 684 | - | - | 334 | 143 | - | - | - | - | - | - |
| 12 | Signal | - | 592 | 16 | 11 | 323 | - | 149 | 6 | 75 | 22 | - | 48 |
| 13 | TWSC | 6 | 576 | 6 | 6 | 408 | 6 | 16 | - | 11 | 6 | - | 16 |
| 14 | TWSC | - | 582 | 6 | 6 | 419 | - | - | - | - | 6 | - | 6 |
| 15 | TWSC | 6 | 561 | 11 | 6 | 413 | 6 | 11 | - | 6 | 6 | - | 16 |
| 16 | TWSC | 6 | 551 | - | - | 414 | 11 | 27 | - | 16 | - | - | - |
| 17 | TWSC | - | 504 | 11 | 16 | 414 | - | - | - | - | 27 | - | 53 |
| 18 | Signal | 635 | 239 | 57 | 48 | 260 | 133 | 196 | 378 | 627 | 70 | 566 | 80 |
| 19 | 3/4 | - | 931 | - | - | 912 | 45 | - | - | 7 | - | - | - |
| 20 | TWSC | 51 | 880 | 7 | 13 | 868 | 38 | 26 | 7 | 13 | 7 | 7 | 25 |
| 21 | TWSC | 13 | 805 | 13 | 139 | 742 | 7 | 7 | - | 13 | 7 | - | 126 |
| 22 | TWSC | 7 | 786 | 45 | 107 | 642 | 13 | 26 | 7 | 19 | 7 | - | 19 |
| 23 | Roundabout | 7 | 642 | 31 | 76 | 579 | 13 | 51 | 13 | 7 | 25 | 7 | 145 |
| 24 | TWSC | - | 617 | 7 | 13 | 598 | - | - | - | - | 7 | - | 63 |
| 25 | TWSC | 7 | 554 | 7 | 13 | 579 | 13 | 19 | 7 | 7 | 7 | 7 | 51 |
| 26 | Roundabout | 13 | 491 | 45 | 13 | 567 | 13 | 32 | 13 | 45 | 32 | 7 | 45 |
| 27 | TWSC | 151 | - | 95 | - | - | - | - | 1106 | 120 | 26 | 1308 | - |

1. Refer to Figure $\mathbf{2 6}$ for Intersection ID
2. TWSC - Two way Stop Control; $3 / 4$ - Three Quarter intersection

Table 18-2045 Turning Movement Counts - Base Scenario (PM Peak)

| Int. | Control ${ }^{2}$ | Northbound |  |  | Southbound |  |  | Eastbound |  |  | Westbound |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ID ${ }^{1}$ |  | L | T | R | L | T | R | L | T | R | L | T | R |
| 1 | Signal | 191 | 371 | 75 | 143 | 557 | 234 | 175 | 461 | 175 | 138 | 472 | 138 |
| 2 | TWSC | 16 | 483 | 11 | 22 | 773 | 75 | 53 | 6 | 27 | 38 | 6 | 101 |
| 3 | TWSC | 6 | 482 | 11 | 27 | 800 | 11 | 6 | 6 | 11 | 11 | 6 | 22 |
| 4 | Signal | 16 | 408 | 22 | 69 | 694 | 59 | 43 | 53 | 59 | 38 | 43 | 48 |
| 5 | TWSC | 6 | 429 | 6 | 6 | 768 | 17 | 11 | - | 11 | 6 | - | 6 |
| 6 | TWSC | 22 | 430 | - | - | 758 | 27 | 11 | - | 11 | - | - | - |
| 7 | TWSC | - | 409 | 17 | 69 | 700 |  |  | - |  | 11 | - | 43 |
| 8 | TWSC | 22 | 414 | 11 | 22 | 662 | 27 | 6 | - | 6 | 6 | - | 6 |
| 9 | TWSC | 21 | 435 | 11 | 11 | 652 | 11 | 6 | - | 6 | 6 | - | 6 |
| 10 | Signal | 69 | 265 | 53 | 64 | 419 | 181 | 159 | 255 | 100 | 80 | 276 | 43 |
| 11 | TWSC | 6 | 387 | - | - | 583 | 16 | - | - | - | - | - | - |
| 12 | Signal | - | 350 | 17 | 43 | 540 | - | 16 | 6 | 11 | 16 | - | 27 |
| 13 | TWSC | 6 | 355 | 6 | 16 | 535 | 16 | 6 | - | 6 | 6 | - | 6 |
| 14 | TWSC | - | 361 | 6 | 6 | 541 | - | - | - | - | 6 | - | 6 |
| 15 | TWSC | 6 | 350 | 6 | 17 | 519 | 11 | 6 | - | 6 | 11 | - | 11 |
| 16 | TWSC | 16 | 350 | - | - | 509 | 27 | 12 | - | 6 | - | - | - |
| 17 | TWSC | - | 350 | 27 | 38 | 477 | - | - | - | - | 22 | - | 16 |
| 18 | Signal | 467 | 143 | 51 | 85 | 260 | 154 | 181 | 723 | 607 | 89 | 573 | 53 |
| 19 | 3/4 | - | 661 | - | - | 874 | 82 | - | - | 95 | - | - | - |
| 20 | TWSC | 32 | 578 | 7 | 13 | 924 | 32 | 64 | - | 38 | 7 | 7 | 19 |
| 21 | TWSC | 7 | 553 | 7 | 63 | 893 | 13 | 7 | - | 7 | 13 | - | 57 |
| 22 | TWSC | 7 | 529 | 13 | 13 | 862 | 38 | 19 | - | 7 | - | - | 19 |
| 23 | Roundabout | 7 | 459 | 7 | 120 | 717 | 32 | 20 | 7 | 7 | 13 | 13 | 70 |
| 24 | TWSC | - | 441 | 7 | 89 | 648 | - | - | - | - | 7 | - | 32 |
| 25 | TWSC | 7 | 409 | 7 | 51 | 572 | 32 | 13 | 7 | 7 | 7 | 7 | 26 |
| 26 | Roundabout | 13 | 384 | 13 | 51 | 516 | 19 | 7 | 13 | 26 | 7 | 13 | 32 |
| 27 | TWSC | 107 | - | 63 | - | - | - | - | 1448 | 208 | 19 | 1175 | - |

1. Refer to Figure $\mathbf{2 6}$ for Intersection ID
2. TWSC - Two way Stop Control; $3 / 4$ - Three Quarter intersection

The year 2045 ADT volumes (with new I-29 access at $64^{\text {th }}$ Avenue $S$ and $76^{\text {th }}$ Avenue S) along the corridor are expected to range from 8,800 to 16,100 vehicles per day. In general, ADT volumes increase from south to north, with defined decreases just north of cross-streets that have access to $1-29$ (i.e., $64^{\text {th }}$ Avenue $S$ and $52^{\text {nd }}$ Avenue $S$ ). Just north of $64^{\text {th }}$ Avenue $S$ and $52^{\text {nd }}$ Avenue $S$, ADT volumes incrementally increase as you travel to the north along $25^{\text {th }}$ Street. Note that the $25^{\text {th }}$ Street and $52^{\text {nd }}$ Avenue $S$ intersection is a decision point for motorists, as the travel time via $52^{\text {nd }}$ Avenue S and I-29 to get to the I-94/25 th Street interchange is similar or faster than via $25^{\text {th }}$ Street. The 2045 AM and PM peak hour Turning Movement Counts (TMCs) for conditions with new interchange are presented in Table $\mathbf{1 9}$ and Table 20, respectively.

FUTURE-2045 CONDITIONS REPORT

Table 19-2045 Turning Movement Counts - New Interchange Access Scenario (AM Peak)

| Int. ID ${ }^{1}$ | Control ${ }^{2}$ | Northbound |  |  | Southbound |  |  | Eastbound |  |  | Westbound |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | L | T | R | L | T | R | L | T | R | L | T | R |
| 1 | Signal | 207 | 530 | 106 | 170 | 314 | 228 | 228 | 456 | 106 | 101 | 387 | 117 |
| 2 | TWSC | 32 | 767 | 80 | 75 | 393 | 53 | 38 | 6 | 28 | 16 | 6 | 38 |
| 3 | TWSC | 53 | 836 | 6 | 6 | 399 | 32 | 11 | 6 | 16 | 6 | 6 | 32 |
| 4 | Signal | 43 | 709 | 22 | 22 | 361 | 38 | 53 | 32 | 38 | 32 | 27 | 80 |
| 5 | TWSC | 11 | 752 | 6 | 6 | 398 | 27 | 11 | - | 11 | 6 | - | 11 |
| 6 | TWSC | 11 | 747 | - | - | 409 | 6 | 22 | - | 11 | - | - | - |
| 7 | TWSC |  | 678 | 11 | 32 | 388 |  |  | - |  | 11 | - | 80 |
| 8 | TWSC | 6 | 635 | 6 | 6 | 387 | 6 | 32 | - | 28 | 11 | - | 22 |
| 9 | TWSC | 6 | 625 | 11 | 6 | 414 | 6 | 11 | - | 22 | 11 | - | 11 |
| 10 | Signal | 149 | 418 | 117 | 59 | 313 | 75 | 149 | 255 | 59 | 105 | 212 | 75 |
| 11 | TWSC | 105 | 684 | - | - | 334 | 143 | - | - | - | - | - | - |
| 12 | Signal | - | 592 | 16 | 11 | 323 | - | 149 | 6 | 75 | 22 | - | 48 |
| 13 | TWSC | 6 | 576 | 6 | 6 | 408 | 6 | 16 | - | 11 | 6 | - | 16 |
| 14 | TWSC | - | 582 | 6 | 6 | 419 | - | - | - | - | 6 | - | 6 |
| 15 | TWSC | 6 | 561 | 11 | 6 | 413 | 6 | 11 | - | 6 | 6 | - | 16 |
| 16 | TWSC | 6 | 551 | - | - | 414 | 11 | 27 | - | 16 | - | - | - |
| 17 | TWSC | - | 504 | 11 | 16 | 414 | - | - | - | - | 27 | - | 53 |
| 18 | Signal | 435 | 239 | 57 | 48 | 260 | 133 | 196 | 378 | 427 | 70 | 566 | 80 |
| 19 | 3/4 | - | 731 | - | - | 712 | 45 | - | - | 7 | - | - | - |
| 20 | TWSC | 51 | 680 | 7 | 13 | 668 | 38 | 26 | 7 | 13 | 7 | 7 | 25 |
| 21 | TWSC | 13 | 615 | 28 | 124 | 557 | 7 | 7 | - | 13 | 17 | - | 116 |
| 22 | TWSC | 7 | 616 | 60 | 92 | 482 | 13 | 26 | 7 | 19 | 12 | - | 14 |
| 23 | Roundabout | 7 | 532 | 53 | 54 | 449 | 10 | 41 | 13 | 7 | 60 | 7 | 110 |
| 24 | TWSC | - | 544 | 12 | 8 | 508 | - | - | - | - | 22 | - | 48 |
| 25 | TWSC | 7 | 501 | 12 | 8 | 514 | 8 | 14 | 7 | 7 | 17 | 7 | 41 |
| 26 | Roundabout | 103 | 401 | 45 | 8 | 417 | 113 | 84 | 18 | 195 | 32 | 17 | 35 |
| 27 | TWSC | 116 | - | 95 | - | - | - | - | 906 | 85 | 26 | 1108 | - |

1. Refer to Figure $\mathbf{2 6}$ for Intersection ID
2. TWSC - Two way Stop Control; $3 / 4$ - Three Quarter intersection

FUTURE-2045 CONDITIONS REPORT

Table 20-2045 Turning Movement Counts - New Interchange Access Scenario (PM Peak)

| Int. | Control ${ }^{2}$ | Northbound |  |  | Southbound |  |  | Eastbound |  |  | Westbound |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ID ${ }^{1}$ |  | L | T | R | L | T | R | L | T | R | L | T | R |
| 1 | Signal | 191 | 371 | 75 | 143 | 557 | 234 | 175 | 461 | 175 | 138 | 472 | 138 |
| 2 | TWSC | 16 | 483 | 11 | 22 | 773 | 75 | 53 | 6 | 27 | 38 | 6 | 101 |
| 3 | TWSC | 6 | 482 | 11 | 27 | 800 | 11 | 6 | 6 | 11 | 11 | 6 | 22 |
| 4 | Signal | 16 | 408 | 22 | 69 | 694 | 59 | 43 | 53 | 59 | 38 | 43 | 48 |
| 5 | TWSC | 6 | 429 | 6 | 6 | 768 | 17 | 11 | - | 11 | - | - | - |
| 6 | TWSC | 22 | 430 | - |  | 758 | 27 | 11 | - | 11 | - | - | - |
| 7 | TWSC |  | 409 | 17 | 69 | 700 | - | - | - | - | 11 | - | 43 |
| 8 | TWSC | 22 | 414 | 11 | 22 | 662 | 27 | 6 | - | 6 | 6 | - | 6 |
| 9 | TWSC | 21 | 435 | 11 | 11 | 652 | 11 | 6 | - | 6 | 6 | - | 6 |
| 10 | Signal | 69 | 265 | 53 | 64 | 419 | 181 | 159 | 255 | 100 | 80 | 276 | 43 |
| 11 | TWSC | - | 387 |  |  | 583 | 16 | - | - | - | - | - | - |
| 12 | Signal | - | 350 | 17 | 43 | 540 | 0 | 16 | 6 | 11 | 16 | - | 27 |
| 13 | TWSC | - | 355 | 6 | 16 | 535 | 16 | 6 | - | 6 | 6 | - | 6 |
| 14 | TWSC | - | 361 | 6 | 6 | 541 | - | - | - | - | 6 | - | 6 |
| 15 | TWSC | 6 | 350 | 6 | 17 | 519 | 11 | 6 | - | 6 | 11 | - | 11 |
| 16 | TWSC | 16 | 350 | - | - | 509 | 27 | 12 | - | 6 | - | - | - |
| 17 | TWSC | - | 350 | 27 | 38 | 477 | - | - | - | - | 22 | - | 16 |
| 18 | Signal | 267 | 143 | 51 | 85 | 260 | 154 | 181 | 723 | 307 | 89 | 573 | 53 |
| 19 | 3/4 | - | 461 | - | - | 574 | 82 | - | - | 95 | - | - | - |
| 20 | TWSC | 32 | 378 | 7 | 13 | 624 | 32 | 64 | - | 38 | 7 | 7 | 19 |
| 21 | TWSC | 12 | 363 | 27 | 43 | 618 | 8 | 7 | - | 7 | 23 | - | 47 |
| 22 | TWSC | 17 | 369 | 18 | 8 | 612 | 28 | 19 | - | 7 | 5 | - | 14 |
| 23 | Roundabout | 12 | 329 | 37 | 90 | 512 | 22 | 15 | 7 | 12 | 23 | 13 | 60 |
| 24 | TWSC | - | 351 | 32 | 64 | 483 | - | - | - | - | 12 | - | 27 |
| 25 | TWSC | 7 | 349 | 22 | 36 | 437 | 22 | 13 | 7 | 7 | 12 | 7 | 21 |
| 26 | Roundabout | 158 | 239 | 13 | 36 | 366 | 54 | 122 | 28 | 176 | 7 | 28 | 17 |
| 27 | TWSC | 72 | - | 63 | - | - | - | - | 1148 | 158 | 19 | 975 | - |

1. Refer to Figure $\mathbf{2 6}$ for Intersection ID
2. TWSC - Two way Stop Control; $3 / 4$ - Three Quarter intersection

## 2045 Corridor and Intersection Operations

Future 2045 ADT volumes along $25^{\text {th }}$ Street S range from approximately 8,800 to 16,850 vehicles per day, depending on future I-29 access. As noted earlier, the corridor context generally varies from a three-lane facility with a two-way left-turn lane (TWLTL) south of $53^{\text {rd }}$ Avenue $S$ to a four-lane undivided facility north of $52^{\text {nd }}$ Avenue $S$; there are periodic turn lanes and/or medians at major intersections.

## Planning Level Corridor Capacity Analysis

Typical planning level capacity thresholds by facility type are shown in Table 21.
Table 21 - 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) | $<3,100$ | $<5,000$ | $<8,000$ | $<12,000$ | $<15,900$ | $>15,900$ |

Based on this planning-level capacity approach, the majority of the $25^{\text {th }}$ Street S corridor is expected to operate between the Level of Service (LOS) B or LOS D range under year 2045 conditions, depending on the segment. The segment of $25^{\text {th }}$ Street between $60^{\text {th }}$ Avenue $S$ and $52^{\text {nd }}$ Avenue $S$ is expected to operate near LOS D under year 2045 base conditions (i.e., prior to any new access to I-29). This segment capacity improves if new I-29 access is provided, however, will continue to operate at LOS D. A summary of the planning-level capacity analysis by segment is shown in Table 22.

Table 22 - Planning Level Capacity Analysis

| $25^{\text {th }}$ Street S Segment | Typical Section | 2045 Base Conditions |  | 2045 with New Interchanges |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | ADT Volume | Planning-Level LOS | ADT Volume | Planning-Level LOS |
| $32^{\text {nd }}$ Avenue $S$ to $33^{\text {rd }}$ Avenue S | 5-lane | 16,100 | LOS B | 16,100 | LOS B |
| $33^{\text {rd }}$ Avenue $S$ to $35^{\text {th }}$ Avenue $S$ | 4-lane | $\begin{gathered} 11,250 \text { to } \\ 16,100 \end{gathered}$ | LOS B to LOS C | $\begin{gathered} 11,250 \text { to } \\ 16,100 \end{gathered}$ | LOS B to LOS C |
| $35^{\text {th }}$ Avenue $S$ to $40^{\text {th }}$ Avenue S | 4-lane | 11,250 | LOS B | 11,250 | LOS B |
| $40^{\text {th }}$ Avenue $S$ to $52^{\text {nd }}$ Avenue S | 4-lane | 8,800 to 9,800 | LOS B | 8,800 to 9,800 | LOS B |
| $52^{\text {nd }}$ Avenue $S$ to $60^{\text {th }}$ Avenue S | 3-lane | 16,850 | LOS D | 12,875 | LOS D |
| $52^{\text {nd }}$ Avenue $S$ to $64^{\text {th }}$ Avenue S | 3-lane | 10,500 | LOS C | 8,800 to 9,150 | LOS C |

Note - Planning level capacities are highly dependent on assumptions used such as access spacing, peak hour factors, directional distribution, saturation flow rates, etc. Values are used as a guideline and should not be used for operational analysis purposes or final design.

## Intersection Operation Analysis

Although the planning-level capacity can provide a good barometer of corridor operations, intersection operations often provide a clearer indication of corridor operations. Therefore, a detailed intersection capacity analysis was completed at the study intersections along $25^{\text {th }}$ Street $S$, as well as the $52^{\text {nd }}$ Avenue $S$ and $27^{\text {th }}$ Street $S$ intersection, to understand various performance metrics, including levels of services (LOS)LOS, queuing, and travel time. The intersection capacity analysis was completed using Synchro/SimTraffic Software (version 11), which incorporates methods outlined in the Highway Capacity Manual, 6th Edition.

## LEVEL OF SERVICE

The future intersection capacity analysis was completed for both 2045 base conditions (i.e., no new l-29 access) and 2045 with interchange conditions, which is summarized in Figure 27, Figure 28, and Table 23. The detailed Synchro/ SimTraffic results are included in Appendix B.

Figure 27 - Future 2045 Intersection LOS (Base Conditions)


Source: FM COG, NDGISHub, NDDOT, ESRI, KLJ, Cass County Aerial from 2021


Source: FM COG, NDGISHub, NDDOT, ESRI, KLJ, Cass County Aerial from 2021

Table 23 - Existing Intersection Capacity Analysis (Year - 2045)

| 25 ${ }^{\text {th }}$ Street S Intersection | Traffic Control | 2045 AM Peak Hour |  | 2045 PM Peak Hour |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Base <br> Conditions | With New Interchanges | Base <br> Conditions | With New Interchanges |
| $32^{\text {nd }}$ Avenue S | SIGNAL | C (29 sec) | C (29 sec) | C (26 sec) | C (26 sec) |
| Kirsten Lane | SSS | A / E (44 sec) | A / E (44 sec) | A / F (75 sec) | A / F (75 sec) |
| $33^{\text {rd }}$ Avenue S | SSS | A / D (26 sec) | A / D (26 sec) | A / D (28 sec) | A / D (28 sec) |
| $35^{\text {th }}$ Avenue S | Signal | A (9 sec) | A (9 sec) | B (10 sec) | B (10 sec) |
| Casey's / Gethsemane Church Driveways | SSS | A / C (18 sec) | A / C (18 sec) | A / C (22 sec) | A / C (22 sec) |
| $36^{\text {th }}$ Avenue S | SSS | A / C (17 sec) | A / C (17 sec) | A / C (19 sec) | A / C (19 sec) |
| $37^{\text {th }}$ Avenue S | SSS | A / B (14 sec) | A / B (14 sec) | A / B (13 sec) | A / B (13 sec) |
| $38^{\text {th }}$ Avenue S | SSS | A / C (17 sec) | A / C (17 sec) | A / C (20 sec) | A / C (20 sec) |
| $39^{\text {th }}$ Avenue S | SSS | A / C (18 sec) | A / C (18 sec) | A / C (19 sec) | A / C (19 sec) |
| $40^{\text {th }}$ Avenue S | Signal | C (22 sec) | C (22 sec) | C (21 sec) | C (21 sec) |
| Centennial Elementary (North) | $\begin{gathered} \text { One-Way } \\ \text { WB } \end{gathered}$ | A (3 sec) | A (3 sec) | A (2 sec) | A (2 sec) |
| Centennial Elementary / Rose Creek Drive | Signal | A (8 sec) | A (8 sec) | A (6 sec) | A (6 sec) |
| $44^{\text {th }}$ Avenue S | SSS | A / C (16 sec) | A / C (16 sec) | A / C (16 sec) | A / C (16 sec) |
| Carrie Rose Lane | SSS | A / C (15 sec) | A / C (15 sec) | A / B (13 sec) | A / B (13 sec) |
| Rose Creek Parkway | SSS | A / C (16 sec) | A / C (16 sec) | A / C (15 sec) | A / C (15 sec) |
| Meadow Creek Drive | SSS | A / C (15 sec) | A / C (15 sec) | A / C (15 sec) | A / C (15 sec) |
| Rose Creek Boulevard | SSS | A / B (14 sec) | A / B (14 sec) | A / C (15 sec) | A / C (15 sec) |
| $52^{\text {nd }}$ Avenue S | Signal | D (35 sec) | C (29 sec) | C (34 sec) | C (28 sec) |
| Don's Carwash Driveway | SSS | A / B (13 sec) | A / B (13 sec) | A / C (15 sec) | A / B (12 sec) |
| 53 ${ }^{\text {rd }}$ Avenue S / Saint Anne Church | SSS | B / F (120+ sec) | A / F (98 sec) | D / F (120+sec) | A / F ( 52 sec ) |
| Prairie Grove Avenue / Shanley High School (North) | SSS | A / F (120+ sec) | A / E (46 sec) | A / F (56 sec) | A / C (24 sec) |
| Eaglebrook Apartments / Shanley High School (South) | SSS | A / F (120+ sec) | A / E (49 sec) | A / F (56 sec) | A / D (27 sec) |
| $58^{\text {th }}$ Avenue S | RAB | B (11 sec) | A (9 sec) | B (11 sec) | A (8 sec) |
| $60^{\text {th }}$ Avenue S | SSS | A / C (15 sec) | A / B (14 sec) | A / B (13 sec) | A / B (13 sec) |
| $62^{\text {nd }}$ Avenue $S$ | SSS | A / E (38 sec) | A / D (27 sec) | A / D (30 sec) | A / C (21 sec) |
| $64^{\text {th }}$ Avenue $S$ | RAB | A (8 sec) | A (9 sec) | A (7 sec) | A (9 sec) |
| $52^{\text {nd }}$ Avenue Intersection | Traffic Control | AM Peak Hour | AM Peak Hour | PM Peak Hour | PM Peak Hour |
| $27^{\text {th }}$ Street S | SSS | F / F (120+ sec) | C / F (120+ sec) | F / F (120+ sec) | B / F (120+sec) |

SSS - Side-Street-Stop RAB-Roundabout

[^1]The capacity analysis indicates that most ( $77 \%$ to $80 \%$ ) of the study intersections will continue to operate at an overall LOS D or better during the AM and PM peak hours under year 2045 conditions. However, making left-turn or crossing maneuvers from multiple side-street approaches along the corridor, particularly at Kirsten Lane and between 53 ${ }^{\text {rd }}$ Avenue $S$ and the southern Shanley High School driveway will continue to experience unacceptable delay per vehicle. This is illustrated by the LOS E and LOS F operations for these side-street approaches during the peak hours. The $52^{\text {nd }}$ Avenue $S$ and $27^{\text {th }}$ Street $S$ intersection is also expected to continue to operate at unacceptable LOS during the peak periods.

Note that the introduction of new interchange access to I-29 does have a positive benefit to operations, particularly to motorists generally southwest of $52^{\text {nd }}$ Avenue $S$ and $25^{\text {th }}$ Street $S$. That said, motorists in this area are still expected to have trouble making a left-turn or crossing maneuver from this area. Further discussion with area stakeholders should occur to determine potential alternatives to address these issue areas.

## QUEUING

During the AM peak hour, minor queuing issues at $32^{\text {nd }}$ Avenue $S$ and Kirsten Lane will continue, where queues periodically extend beyond the existing turn lane storage provided. However, these queues generally occur for less than five (5) percent of the AM peak hour. At $40^{\text {th }}$ Avenue $S$, eastbound and westbound queues along $40^{\text {th }}$ Avenue $S$ approach extend beyond the adjacent left-turn lanes between 10 and 20 percent of the AM peak hour. Queues along most side-street approaches range between two to four vehicles, except for the $27^{\text {th }}$ Street $S$ approach to $52^{\text {nd }}$ Avenue $S$ which is expected to operate overcapacity and result in long queues. No other significant queuing issues were identified during the AM peak hour.

During the PM peak hour, minor queuing issues at 32 nd Avenue $S$ and Kirsten Lane will continue, where queues periodically extend beyond the existing turn lane storage provided or queues from the adjacent thru lane block access to the turn lanes. However, these queues generally occur for less than five (5) percent of the PM peak hour. At 40th Avenue $S$, eastbound and westbound queues along 40th Avenue $S$ extend beyond the adjacent left-turn lanes between 10 and 25 percent of the PM peak hour; southbound thru queues occasionally (i.e., less than five percent of the PM peak hour) extend beyond the southbound left-turn lane. Queues along most side-street approaches range between two to five vehicles, except for the 27 th Street $S$ approach to 52 nd Avenue $S$ which is expected to operate overcapacity and result in long queues. No other significant queuing issues were identified during the PM peak hour.

## Corridor Travel Times

Corridor travel times and average arterial speed data was obtained from the calibrated SimTraffic modeling results. As shown in Table 24, average travel times under future year 2045 conditions through the 3-mile study corridor are expected to increase by approximately 10 to 30 seconds, depending on the future condition/direction. The average travel speeds equate to approximately 23 - to $25-\mathrm{mph}$, which are relatively like or slightly slower as compared to existing conditions.

Table 24 - Average Corridor Travel Time and Speed per Vehicle

| $25^{\text {th }}$ Street S <br> Direction | AM Peak Hour |  |  | PM Peak Hour |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Existing | 2045 Base | 2045 with Interchanges | Existing | 2045 Base | 2045 with Interchanges |
| Northbound | $\begin{aligned} & 7 \mathrm{~min} .49 \mathrm{sec} . \\ & \text { / } 25 \mathrm{mph} \end{aligned}$ | 8 min. 1 <br> sec. / 24 <br> mph | $\begin{aligned} & 7 \mathrm{~min} .56 \mathrm{sec} . / \\ & 25 \mathrm{mph} \end{aligned}$ | 7 min .40 sec . <br> / 25 mph | ```7min. }5 sec. / 25 mph``` | $\begin{aligned} & 7 \mathrm{~min} .46 \mathrm{sec} . / \\ & 25 \mathrm{mph} \end{aligned}$ |
| Southbound | 7 min .45 sec <br> / 24 mph | 8 min. 6 sec. / 23 mph | $\begin{aligned} & 7 \mathrm{~min} .57 \mathrm{sec} . / \\ & 24 \mathrm{mph} \end{aligned}$ | 7 min .53 sec . <br> $/ 24 \mathrm{mph}$ | ```8min. }2 sec. / }2 mph``` | $\begin{gathered} 8 \mathrm{~min} .3 \mathrm{sec} . / 24 \\ \mathrm{mph} \end{gathered}$ |

## Summary

## Traffic Forecasts

» New interstate access to $1-29$ at $64^{\text {th }}$ Avenue $S$ and $76^{\text {th }}$ Avenue $S$ is expected to have influence on $25^{\text {th }}$ Street corridor travel patterns, particularly south of $52^{\text {nd }}$ Avenue $S$.
» Historic ADT volume growth along the $25^{\text {th }}$ Street corridor has varied, depending on the location.
» The $25^{\text {th }}$ Street corridor segment north of $52^{\text {nd }}$ Avenue $S$ has been relatively stable or even declining.
» South of $52^{\text {nd }}$ Avenue $S$, several development opportunities remain, and the corresponding trends can be seen in the higher historical growth rates.
» Cross-street growth has also been relatively stable, except for $52^{\text {nd }}$ Avenue $S$ west of $25^{\text {th }}$ Street.
» The forecasted growth along $25^{\text {th }}$ Street based on the latest Fargo-Moorhead Regional Travel Demand Model is much higher than the historical trends.
» The SRC agreed upon using a $0.25 \%$ annual growth rate for segments north of $52^{\text {nd }}$ Avenue S , and a $1 \%$ annual growth rate for segments south of $52^{\text {nd }}$ Avenue $S$.
» Year 2045 ADT volumes (before any new interchange access) are expected to range from 8,800 to 16,850 vehicles per day.
» Year 2045 ADT volumes (with new I-29 access at $64^{\text {th }}$ Avenue $S$ and $76^{\text {th }}$ Avenue S) along the corridor are expected to range from 8,800 to 16,100 vehicles per day.

## Planning Level Capacity

» The majority of the $25^{\text {th }}$ Street $S$ corridor is expected to operate between the LOS B or LOS D range under year 2045 conditions.
» The segment of $25^{\text {th }}$ Street between $60^{\text {th }}$ Avenue $S$ and $52^{\text {nd }}$ Avenue $S$ is expected to operate near LOS D under year 2045 base conditions. The segment capacity is expected to improve if new $\mathrm{I}-29$ access is provided, however, will continue to operate at LOS D.

## Intersection Capacity

" Most of the study intersections will continue to operate at an overall intersection delay and LOS with no intersection operating worse than LOS D during the 2045 peak hours.
» The following Side Street Stop intersections are expected to operate with unacceptable approach delay and LOS during the 2045 peak hours:
o Kirsten Lane

- $53^{\text {rd }}$ Avenue $S$ to southern Shanley High School driveway
- $62^{\text {nd }}$ Avenue S (AM Peak only)
- $52^{\text {nd }}$ Avenue $S$ and $27^{\text {th }}$ Street $S$ intersection


## Queuing

The following queuing issues were identified in the 2045 AM Peak:
" $32^{\text {nd }}$ Avenue $S$ (for about five percent or 3-5 minutes of the hour)
» Kirsten Lane (for about five percent of the hour or 3-5 minutes of the hour)
" Left turn storage lanes at $40^{\text {th }}$ Avenue $S$ approaches (for about 10-25-percent of the hour or 5-15 minutes of the hour)
" Southbound approach of $40^{\text {th }}$ Avenue $S$ and $25^{\text {th }}$ Street $S$ intersection (for about five percent or 3-5 minutes of the hour) in the PM peak
» $27^{\text {th }}$ street approach to $52^{\text {nd }}$ Avenue $S$ (significant delay and queuing)

## Corridor Travel Times

" Average travel times under year 2045 conditions through the 3-mile study corridor are expected to increase by approximately 10 to 30 seconds, depending on the future condition/direction.
" The average travel speeds equate to approximately 23 - to $25-\mathrm{mph}$, which are relatively like or slightly slower as compared to existing conditions. These are attributed to volumes, roadway conditions, environmental conditions, delays, etc.

## Next Steps

This report documents the 2045 traffic projections and traffic operations for 2045 conditions. The next chapter of the study will develop sets of alternatives to mitigate traffic operations and safety issues identified in the corridor.

## ALTERNATIVES REPORT



## ALTERNATIVES REPORT

$25^{\text {th }}$ Street Corridor Study, Fargo - ND
July 2023

## Purpose and Need

The Need identified for this Project was evaluated through the review of existing and future conditions on the $25^{\text {th }}$ Street corridor, coordination with City of Fargo, FM MetroCOG, and other local stakeholders. A summary of the information compiled to develop the primary and secondary need statements and additional considerations taken in account are provided below.

## Roadway Deficiencies

Pavement deterioration is the main driver of this project. $25^{\text {th }}$ Street $S$ within the corridor limits was originally constructed between the early 1990s and mid-2010s. South of Rose Coulee, the original pavement has not been overlaid or rehabilitated since the original construction. North of Rose Coulee the roadway has been overlaid several times, with the most recent being in 2022. The overlays are intended to improve ride quality. Based on the pavement conditions gathered in the fall of 2021, the Pavement Conditions Index ( PCl ) Rating within the corridor varies from Poor, generally on the north end of the corridor, to Good, generally on the south end of the corridor.

## Modal Relationships

In addition to addressing pavement deterioration, this project also aims to improve multimodal transportation options. Many people rely on modes of transportation other than driving, such as walking and biking, but often lack safe and convenient options. By incorporating infrastructure for these modes of transportation, it can be easier for people to choose alternative modes and potentially reduce the number of cars on the road. This can lead to a range of benefits, including reduced traffic congestion, improved air quality, and enhanced public health. Based on the Go2030 Comprehensive Plan, $25^{\text {th }}$ Street $S$ within the corridor study boundary is identified as an Active Living Street. Per the Comprehensive Plan, Active living streets will have infrastructure to support pedestrian, experienced cyclists, recreational cyclists, transit, and automobiles. A network of active living streets will enable Fargo residents to walk or bike to their destinations safely and comfortably.

## Safety

Enhancing pedestrian and vehicular safety is another crucial aspect of this project. Based on feedback received through the first round of public input, there is a strong desire to improve safety for pedestrians crossing $25^{\text {th }}$ Street. By improving the design and infrastructure within the corridor, we can reduce the risk of accidents and injuries for all users. By prioritizing safety, we can create a transportation network that is accessible and enjoyable for everyone.

## Introduction

The objective of this alternatives analysis report is to evaluate potential concepts for the $25^{\text {th }}$ Street S corridor in Fargo, ND and provide information that will inform the recommendations for final design and construction of the project. Documents that precede this evaluation in the corridor study include the Existing Conditions and Future Conditions Report. These documents identified existing and future corridor needs.

The corridor was divided into six study areas based on existing roadway geometry, land use, traffic demand, etc.:
» Study Area $1-25^{\text {th }}$ Street $S$ from $32^{\text {nd }}$ Avenue $S$ to $35^{\text {th }}$ Avenue $S$
" Study Area $2-25^{\text {th }}$ Street $S$ from $35^{\text {th }}$ Avenue $S$ to $40^{\text {th }}$ Avenue $S$
》 Study Area $3-25^{\text {th }}$ Street $S$ from $40^{\text {th }}$ Avenue $S$ to $52^{\text {nd }}$ Avenue $S$
" Study Area $4-25^{\text {th }}$ Street $S$ from $52^{\text {nd }}$ Avenue $S$ to Prairie Grove Avenue $S$
» Study Area $5-25^{\text {th }}$ Street $S$ from Prairie Grove Avenue $S$ to $64^{\text {th }}$ Avenue $S$
» Study Area 6 - Intersection of $27^{\text {th }}$ Street $S$ and $52^{\text {nd }}$ Avenue
Figure $\mathbf{2 9}$ shows the $25^{\text {th }}$ Street S corridor study area and segment differentiation.

## Study Area Characteristics

The corridor segment between $32^{\text {nd }}$ Avenue and $33^{\text {rd }}$ Avenue is within the commercial nide. The corridor facilitates north/south traffic movement between Fargo's southern residential growth areas to nearby neighborhood retail nodes including grocery stores, retail and dining establishments, and banks. In addition, the corridor serves medical facilities and financial institutions.

The section of $25^{\text {th }}$ Street $S$ between $33^{\text {rd }}$ Avenue $S$ and $52^{\text {nd }}$ Avenue $S$ is predominantly residential in nature. There are a wide variety of housing types in this segment, including single-family, low density single-family, twin-home/ townhome, as well as high density residential complexes. There are also several public and institutional uses including multiple churches and a public elementary school.

More sparse commercial land use is present between $52^{\text {nd }}$ Avenue $S$ and $64^{\text {th }}$ Avenue $S$.

## Evaluation Approach

To maintain a balance of considering a wide range of options and efficient use of analysis resources, a two-stage approach was taken to evaluate and develop concepts. The first stage of alternatives evaluation involved evaluating cross sections which allowed the design team to understand general space constraints, cost differentials, capacity limitations, and create a framework for intersection concepts. The second stage of alternatives evaluation involved evaluating optimal intersection control, access management and geometric features at key locations. The key intersections were evaluated as singular intersections or by network based on spacing and interaction. By segmenting the key intersection approach, the design team was able to efficiently consider many options.

## Origin-Destination (O-D) Analysis

An origin-destination (O-D) study was performed to investigate how traffic accesses the $25^{\text {th }}$ Street S corridor and understand how study area roadways operate. An origin-destination analysis can be a valuable tool in understanding the nature of trips generated in the area, travel patterns during selected time periods, and in identifying future congestion issues. The $25^{\text {th }}$ Street S corridor was divided into three segments for the O-D analysis (Figure 30):

```
" O-D Segment A: From 32 nd Avenue S to 40 th Avenue S
" O-D Segment B: From 40 th Avenue S to 52 nd Avenue S
# O-D Segment C: From 52 nd Avenue S to 64 th Avenue S
```

Figure 29 - Study Area


Source: FM COG, NDGIS Hub, ESRI, KLJ, Aerial from 2017

Figure 30 - O-D Analysis Map


Source: FM COG, NDGIS Hub, ESRI, KLJ, Aerial from 2017

StreetLight Data was utilized to collect the origin and destination of trips traveling through the study area. StreetLight Data is a data analytics company that collects location-based information from mobile devices and GPS units. The web-based platform integrates millions of data points from these devices to show the aggregated movements on the roadway network. To visualize travel patterns, the platform allows the user to create study area zones to match a specified geography or roadways segment. Zone filters were created on roadways that serve as pass through gates to capture all trips that pass through that roadway segment. This analysis provides information on the origin zone and destination zone of the specific trips passing through the zone filter.

Data output from Streetlight was reviewed to identify the origin-destination zones with the highest frequency of trips traveling from the study area, as well as trips traveling to the study area. Information gathered from this analysis was used to develop origin-destination locations to apply the pass-through location filter.

## O-D Results

Table $\mathbf{2 5}$ provides information on trips traveling from the study area, the trip origin, to zones outside of the study area, the trip destination.

Table 25 - Origin-Destination Analysis Results

|  | To A from | Vol | Movement | To B from | Vol | Movement | To C from | Vol | Movement |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 47\% | SB | 1 | 18\% | SB | 1 | 12\% | SB |
|  | 2 | 9\% | SB | 2 | 2\% | SB | 2 | 2\% | SB |
|  | 3 | 2\% | NB | 3 | 10\% | SB | 3 | 2\% | SB |
|  | 4 | 3\% | NB | 4 | 3\% | NB | 4 | 19\% | SB |
|  | 5 | 0\% | NB | 5 | 0\% | NB | 5 | 2\% | NB |
|  | 6 | 1\% | NB | 6 | 0\% | NB | 6 | 0\% | NB |
|  | 7 | 0\% | NB | 7 | 0\% | NB | 7 | 0\% | NB |
|  | 8 | 8\% | NB | 8 | 27\% | NB | 8 | 57\% | SB |
|  | 9 | 9\% | NB | 9 | 33\% | SB | 9 | 3\% | SB |
|  | 10 | 21\% | SB | 10 | 6\% | SB | 10 | 3\% | SB |
|  | Total | 3,650 |  | Total | 1,150 |  | Total | 2,640 |  |


|  | From A to | Vol | Movement | From B to | Vol | Movement | From C to | Vol | Movement |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 41\% | NB | 1 | 18\% | NB | 1 | 11\% | NB |
|  | 2 | 8\% | NB | 2 | 3\% | NB | 2 | 2\% | NB |
|  | 3 | 2\% | SB | 3 | 9\% | NB | 3 | 1\% | NB |
|  | 4 | 4\% | SB | 4 | 5\% | SB | 4 | 14\% | NB |
|  | 5 | 0\% | SB | 5 | 0\% | SB | 5 | 1\% | SB |
|  | 6 | 0\% | SB | 6 | 0\% | SB | 6 | 2\% | SB |
|  | 7 | 0\% | SB | 7 | 0\% | SB | 7 | 1\% | SB |
|  | 8 | 8\% | SB | 8 | 26\% | SB | 8 | 61\% | NB |
|  | 9 | 8\% | SB | 9 | 31\% | NB | 9 | 3\% | NB |
|  | 10 | 28\% | NB | 10 | 8\% | NB | 10 | 3\% | NB |
|  | Total | 3,650 |  | Total | 1.075 |  | TotaL | 2.525 |  |

For Segment and Zone ID, please refer to Figure 30.

## O-D SEGMENT A: FROM 32ND AVENUE S TO 40TH AVENUE S

The ratio of traffic travelling to northbound and southbound though O-D Segment A is 50:50 (8,735 trips).
The number of daily traffic entering Segment A originating from the ten zones were found to be 3,650 based on streetlight analysis. This corresponds to $77 \%$ daily traffic travelling southbound and $23 \%$ daily traffic travelling northbound into Segment A.

The number of daily traffic originating in Segment A travelling to the ten zones were found to be 3,650 based on streetlight analysis. This corresponds to $77 \%$ daily traffic travelling northbound and $23 \%$ daily traffic travelling southbound from Segment A.

The majority (77\%) of traffic are entering/leaving Segment A is from/to the north. The area north of Zone 1 is high density residential and commercial area. High frequency of traffic enter/leaves Segment A from/to Zone 1. The traffic at Zone 10 is generally traffic entering/leaving from I-29.

## O-D SEGMENT B: FROM 40TH AVENUE S TO 52ND AVENUE S

The ratio of traffic travelling to northbound and southbound through O-D Segment B is 49:51 (4,180 trips).
The number of daily traffic entering Segment B originating from the ten zones were found to be 1,150 based on streetlight analysis. This corresponds to $69 \%$ daily traffic travelling southbound and $31 \%$ daily traffic travelling northbound into Segment B.

The number of daily traffic originating in Segment B to travelling to the ten zones were found to be 1,075 based on streetlight analysis. This corresponds to $31 \%$ daily traffic travelling southbound and $69 \%$ daily traffic travelling northbound from Segment B.

The majority (69\%) of traffic are entering or leaving Segment B is from/to the north. The area north of Zone 1 is high density residential and commercial area. High frequency of traffic enter/leaves Segment B from/to Zone 1. The traffic in Zone 9 and Zone 10 are generally traffic entering/leaving from I-29.

## O-D SEGMENT C: FROM 52ND AVENUE S TO 64TH AVENUE S

The ratio of traffic travelling to northbound and southbound along O-D Segment B is $48: 52$ ( 5,125 trips).
The number of daily traffic entering Segment C originating from the ten zones were found to be 2,640 based on streetlight analysis. This corresponds to $97 \%$ daily traffic travelling southbound and $3 \%$ daily traffic travelling northbound to Segment C.

The number of daily traffic originating in Segment C travelling to the ten zones were found to be 2,525 based on streetlight analysis. The trips originating in Segment C corresponds to 95\% daily traffic travelling northbound and 5\% daily traffic travelling southbound from Segment B.

The majority ( $95 \%+$ ) of traffic are entering or leaving Segment C is from/to the north. The area north of Zone 1 is high density residential and commercial area. High frequency of traffic enter/leaves Segment C from/to Zone 1. The traffic in Zone 8 and Zone 9 are generally traffic entering/leaving to/from I-29. The traffic in Zone 4 is generally traffic crossing the Red River.

## Development of Alternatives

The study team, made up of technical experts from Metro COG, the City of Fargo Engineering, City of Fargo Planning, and KLJ brainstormed alternatives that could be applicable for the context of the study corridor with the potential to mitigate identified deficiencies. The corridor had an abundance of strategies with no clear best fit, requiring a multitiered analysis strategy to differentiate alternatives. Given the varying roadway, travel demand, and development
characteristics present within the study area, alternatives were developed for specific intersections and segments to best serve roadway needs in those specific locations.
» Improvements like cross-section revisions, access management, and intersection improvements were identified for the study areas. The concept designs for various alternatives discussed and considered for further evaluation is included in Appendix C. The typical sections of cross section alternatives analyzed for the various study areas are shown Figure 31.

Figure 31 - Typical Sections of Cross Section Alternatives



The cross sections discussed and/or evaluated for further considerations by study area are discussed in detail below.

### 1.0. Study Area 1-32nd Avenue S to 35th Avenue S

### 1.1. CROSS-SECTION

The study area is expected to experience acceptable operations through 2045 if no geometric improvements are made in this area. However, improvements may be beneficial for improving safety and improving accessibility in this study area like consolidation of access, limiting the turning movements, etc.

The following cross-section alternatives was considered and carried forward for further evaluation:

### 1.1A Five-Lane Section

This alternative considers a five-lane section between Kirsten Ln and $35^{\text {th }}$ Avenue S . No cross-section improvements are made north of Kirsten Lane. Currently there are no northbound left turn lane at the intersection of $25^{\text {th }}$ Street $S$ with Kirsten Lane. The presence of retail, fast-food services, etc. at the northwest quadrant of the intersection generates high ingress and egress traffic to/from Kirsten Lane approach. This creates significant delays and queuing at the approaches of the intersection. The cross section will include dedicated left-turn lanes along $25^{\text {th }}$ Street S approach at Kirsten Lane which is expected to improve traffic operations and safety at the intersection. The five-lane alternative will require removal of all trees from the boulevards on both sides of the roadway between Kirsten Lane and $35^{\text {th }}$ Avenue S. For concept level details, see Appendix C.

### 1.2. ACCESS MANAGEMENT

The following access management alternatives were considered and carried forward for further evaluation:

### 1.2A Consolidate the Commercial Driveway Approaches on the north side of Kirsten Lane

Queuing issues are experienced along Kirsten Lane because of the access to the commercial strip located east of Ruth Drive on the northwest quadrant of the intersection of Kirsten Lane and $25^{\text {th }}$ Street S . These queues have operational impacts on the intersection of Kirsten Lane with $25^{\text {th }}$ Street S. Closing the commercial strip driveway (Figure 47) and consolidating the driveways to the north approach of Kirsten Lane at Ruth Drive $S$ intersection is expected to relieve the operational issues at the intersection. For concept

Figure 47 - Access Closure at Kirsten Lane
 level details, see Appendix C.

The following access management alternative were discussed but not carried forward for further evaluation:

### 1.2B Relocate the Ramsey National Bank Access

There are currently numerous access points in this segment, some of which would result in conflicting left turns between $33^{\text {rd }}$ Avenue $S$ and Kirsten Lane. Consideration was made to restrict the access to Ramsey National Bank if a three-quarter intersection with median is considered at the intersection of Kirsten Lane with $25^{\text {th }}$ Street S as there is an additional access point on 33 rd Avenue $S$.

### 1.2C Realign Sanford Clinic Driveway with Kirsten Lane

The existing driveway of Sanford Clinic along $25^{\text {th }}$ Street $S$ is offset north of Kirsten Lane. This alternative considers realigning the driveway with Kirsten Lane approach.

### 1.3. INTERSECTION

The following intersection alternative was considered and carried forward for further evaluation:

### 1.3A Dedicated Left turn lanes on $25^{\text {th }}$ Street S Approaches along the Study Area

The side-street stop-controlled intersections are expected to experience operational issues if no improvements are made. The conversion of the study area to a three-lane or five-lane section includes the installation of two-way-left-turn-lane (TWLTL) in the center which is expected to improve the traffic operations. For concept level details, see Appendix C.

The following intersection alternative was discussed but not carried forward for further evaluation.

### 1.3B Three-Quarter Intersection at Kirsten Ln/25th Street S

The intersection of Kirsten Lane with $25^{\text {th }}$ Street $S$ experiences poor operations and crash trends. There are concerns over the traffic movements along Kirsten Lane with vehicles entering/leaving the shopping complex and the bank. There were eight rear-end crashes experienced between 2017 and 2021, four of which were crashes involving vehicles traveling southbound direction colliding with the vehicle slowing down to turn right on Kirsten Lane. This alternative considered the conversion of the intersection into a three-quarter access. This will shift some of the traffic volumes to $33^{\text {rd }}$ Avenue $S$ which is relatively low (i.e., 10 to 15 vehicles) and would not result in volumes meeting any warrant thresholds.

The Intersection of $27^{\text {th }}$ Street $S$ and $32^{\text {nd }}$ Avenue $S$ is planned to be converted into a three-quarter access in 2023. The conversion of Kirsten Lane $/ 25^{\text {th }}$ Street $S$ to a three-quarter access may force drivers to use $33^{\text {rd }}$ Avenue and thereby will improve traffic operations and safety at the intersection. However, its impacts are expected to be experienced at the 33rd Avenue $S$ intersection where the side-street approaches are expected to operate with unacceptable delay and LOS in the AM and PM peaks. Although the operations at $33^{\text {rd }}$ Avenue $S$ degrade with the access limitations at Kirsten Lane, the impact to the number of vehicles is small relative to the safety benefits at Kirsten Lane. For these reasons, this alternative was not carried forward for further evaluation.

### 1.4. OTHER INFRASTRUCTURE

No infrastructure improvement alternatives were considered in this study area.

### 2.0. Study Area 2 - 35th Avenue S to 40th Avenue S

### 2.1. CROSS-SECTION

The following cross-section alternatives were considered and carried forward for further evaluation:

### 2.1A Three-Lane Section

This alternative considers a three-lane section including a TWLTL in the center between $35^{\text {th }}$ Avenue $S$ and $40^{\text {th }}$ Avenue S. The three-lane alternative will preserve the majority of existing boulevard trees. This alternative will include a shared-use path on the west side of the road and a sidewalk on the east side of the roadway as shown in Figure $\mathbf{3 2}$. For concept level details, see Appendix C.


### 2.1B Five-Lane Section

This alternative considers a five-lane section including a TWLTL in the center between $35^{\text {th }}$ Avenue $S$ and $40^{\text {th }}$ Avenue $S$. The five-lane alternative will require removal of most of the existing trees from the boulevards on both sides of the roadway between $35^{\text {th }}$ Avenue $S$ and $40^{\text {th }}$ Avenue $S$. This alternative, as shown in Figure $\mathbf{3 3}$ will expand the existing sidewalk on the east side of the roadway to a shared-use path. For concept level details, see Appendix C.


### 2.1N Two plus One Section - Two Northbound and One Southbound Thru Lane

This alternative considers two thru lanes in the northbound direction, a single thru lane in the southbound direction, and TWLTL between $35^{\text {th }}$ Avenue $S$ and $40^{\text {th }}$ Avenue $S$ (Figure 34 ). This alternative will preserve most existing boulevard trees, the shared-use path on the west side of the road and the sidewalk on the east side of the roadway. For concept level details, see Appendix C.


### 2.1S Two plus One Section - Two Southbound and One Northbound Thru Lane

This alternative considers two thru lanes in the southbound direction, a single thru lane in the northbound direction, and TWLTL between $35^{\text {th }}$ Avenue $S$ and $40^{\text {th }}$ Avenue $S$ (Figure 35). This alternative will preserve most existing boulevard trees, the shared-use path on the west side of the road and the sidewalk on the east side of the roadway. For concept level details, see Appendix C.


### 2.2. ACCESS MANAGEMENT

There are currently numerous access points, some of which would result in conflicting left turns between $35^{\text {th }}$ Avenue $S$ and $37^{\text {th }}$ Avenue $S$. The following access management alternatives were considered and carried forward for further evaluation:

### 2.2A Consolidate south access of Gethsemane Cathedral and north access of Hope Lutheran Church

This alternative considers consolidating the south access of the Gethsemane Cathedral and north access of Hope Lutheran Church and aligning it with the Casey's access directly to the west. Consolidating the driveways will eliminate conflicting left turns, improve safety, and improve mainline traffic travel time. For concept level details, see Appendix C.

### 2.2B Relocate middle access of Hope Lutheran Church

This alternative considers relocating the middle access of Hope Lutheran Church and aligning it with $36^{\text {th }}$ Avenue $S$. Relocating the driveway will eliminate conflicting left turns, improve safety, and improve mainline traffic travel time. For concept level details, see Appendix C.

### 2.2C Convert Stonebridge Park access from curb return to driveway

This alternative considers converting the existing access to Stonebridge Park, across from $37^{\text {th }}$ Ave S , from a curb return to a driveway. This will enhance safety for pedestrians by reducing the crossing distance. For concept level details, see Appendix C.

### 2.3. INTERSECTION

The following intersection alternatives were considered and carried forward for further evaluation:

### 2.3A $35^{\text {th }}$ Avenue $S / 25^{\text {th }}$ Street $S$

### 2.3A(1) Left-turn Lanes

There have been notable challenges for northbound and southbound left turning vehicles at the $35^{\text {th }}$ Avenue $S$ intersection. The alternative considers adding dedicated left-turn lane on the $25^{\text {th }}$ Street S approaches to mitigate the issue. For concept level details, see Appendix C.

### 2.3A(2) Right-turn Trap on Southbound Approach for Three-Iane Cross-section

The three-lane cross-section alternative considers a right trap on the southbound approach of the intersection, and a shared through/right-turn lane on the northbound approach of the intersection. For concept level details, see

## Appendix C.

### 2.3B Pedestrian Refuge Island on $37^{\text {th }}$ Avenue $S / 25^{\text {th }}$ Street $S$

A raised median with a pedestrian refuge on the south side of the intersection, as shown in Figure $\mathbf{3 6}$ was considered. This is expected to improve pedestrian crossing on $25^{\text {th }}$ Street $S$ to access the Stonebridge Park. For concept level details, see Appendix C.


The following access management alternatives were discussed but not carried forward for further evaluation:

### 2.3C Realignment of South Access point of Stonebridge Apartment with $37^{\text {th }}$ Avenue $S$

The south Access point of Stonebridge Apartment was considered for realignment through the Park District property to align with $37^{\text {th }}$ Avenue $S$.

### 2.3D Revision of Century Estate Townhome Access

The driveway at the intersection to the apartments east of $38^{\text {th }}$ Avenue $S$ was considered for revision to shift the sidewalk away from the fencing for visibility. However, this will create challenges with turning movements.

### 2.4. OTHER INFRASTRUCTURE

No other infrastructure improvement alternatives were considered in this study area.

### 3.0. Study Area 3 - 40th Avenue S to 52nd Avenue S

### 3.1. CROSS-SECTION

The following cross-section alternatives were considered and carried forward for further evaluation:

### 3.1A Three-Lane Section

This alternative considers a three-lane section including a TWLTL in the center between $40^{\text {th }}$ Avenue S and $52^{\text {nd }}$ Avenue $S$ (Figure 37). The segment is expected to experience acceptable operations through 2045 under a three-lane section in this area. Additional lanes may be required between Rose Creek Drive and $40^{\text {th }}$ Avenue $S$ to accommodate Centennial Elementary pick up/drop off traffic based on anecdotal evidence. The three-lane alternative will maintain a shared-use
path on the west side of the roadway and an $8^{\prime}$ shared-use path on the east side of the roadway. For concept level details, see Appendix C.

Figure 37 - Three-Iane section in Study Area 3


### 3.1B Five-Lane Section

This alternative considers a five-lane section including the TWLTL in the center between $40^{\text {th }}$ Avenue $S$ and $52^{\text {nd }}$ Avenue $S$ (Figure 38). The segment is expected to experience acceptable operations through 2045 under a five-lane section in this area. The five-lane alternative will require removal of all trees from the boulevards on both sides of the roadway in the study area. This alternative will maintain a shared-use path on the west side of the roadway and expand the existing sidewalk on the east side of the roadway to a shared-use path. For concept level details, see Appendix C.

Figure 38 - Five-Iane section in Study Area 3


### 3.1N Two plus One Section - Two Northbound and One Southbound Thru Lane

This alternative considers two thru lanes in the northbound direction, a single thru lane in the southbound direction, and TWLTL between $40^{\text {th }}$ Avenue $S$ and $52^{\text {nd }}$ Avenue $S$ (Figure 39). This alternative will preserve the majority of existing boulevard trees, the shared-use path on the west side of the road and the sidewalk on the east side of the roadway. For concept level details, see Appendix C.

Figure 39-2NB + 1SB Thru Lane in Study Area 3


### 3.1S Two plus One Section - Two Southbound and One Northbound Thru Lane

This alternative considers two thru lanes in the southbound direction, a single thru lane in the northbound direction, and TWLTL between $40^{\text {th }}$ Avenue $S$ and $52^{\text {nd }}$ Avenue $S$ (Figure 40 ). This alternative will preserve the majority of existing boulevard trees, the shared-use path on the west side of the road and the sidewalk on the east side of the roadway. For concept level details, see Appendix C.

Figure 40 - 2SB + 1NB Thru Lane in Study Area 3


### 3.2. ACCESS MANAGEMENT

There are nine accesses in this one-mile study area. City of Fargo Ordinance §20-0702 recommends a minimum spacing of 600 feet (or nine accesses per mile) between driveways and intersections. The access spacing in this study area is within the access spacing guidelines. The following access management alternative was considered and carried forward for further evaluation.

### 3.2A Relocate the driveway to the northwestern Parking lot of Centennial Elementary School

This alternative considers closing and moving the driveway of the Centennial Elementary School northwestern parking lot along $25^{\text {th }}$ Street to further north (Figure 41).


The following access management alternative was discussed but not carried forward for further evaluation:

### 3.2B Relocate the Centennial Elementary School Bus Access along 40 ${ }^{\text {th }}$ Avenue $S$

The existing bus drop-off/pick up access for Centennial Elementary school is located along $40^{\text {th }}$ Avenue $S$, west of $25^{\text {th }}$ Street $S$. The intersection of $40^{\text {th }}$ Avenue $S$ with $25^{\text {th }}$ Street $S$ is expected to operate with acceptable delay and Level of Service (LOS) through 2045 if no intersection improvements are made. The anecdotal assessment and traffic modeling results indicate that the eastbound left turn queues (EB to NB) experienced at the intersection block the access for the busses to enter or exit. An alternative to relocate the access to the west outside of the functional limits of the $40^{\text {th }}$ Avenue $S$ intersection to mitigate the issue was developed. The property in which the relocated access would be located on is owned and maintained by the Fargo Park District. KLJ discussed this alternative with Centennial Elementary School and the Fargo Park District. Centennial Elementary was in favor of the alternative if it was acceptable to the park district. Due to increased usage of the property and programmed events, the park district was not in favor of the alternative.

### 3.3. INTERSECTION

The following intersection alternatives were considered and carried forward for further evaluation:

### 3.3A $\quad 40^{\text {th }}$ Avenue $S / 25^{\text {th }}$ Street $S$

The addition of dedicated right-turn lanes on the $40^{\text {th }}$ Avenue $S$ approaches are an option which is expected to improve operations at the intersection. The existing trees will need to be removed to construct the right-turn lanes. For concept level details, see Appendix C.

### 3.3B Rose Creek Dr/25 ${ }^{\text {th }}$ Street $S$

The intersection presents a crossing challenge where pedestrians and cyclists experience long delays waiting for a walk signal based on the Metro COG's 2020 Safe Route to School study. A single-lane roundabout was discussed at the intersection.

### 3.4. OTHER INFRASTRUCTURE

The following infrastructure improvement alternatives were discussed:

### 3.4A Oak Creek Path Connection

Connecting the existing path located around River Coulee Bridge with the Oak Creek Drive S of Oak Creek development were discussed. This path connection will be completed by the City of Fargo under a separate project.

### 3.4C Rose Coulee Bridge Replacement

The bridge structure (FRGO33) crossing Rose Coulee creek on $25^{\text {th }}$ Street $S$ has a fair condition rating as per 2021 inspection. Due to the proposed FM Diversion, the bridge will have to be replaced at some point to allow for a larger hydraulic opening. All build alternatives assume the bridge will be replaced. Even if the corridor is not improved in the future, the bridge will have to be replaced.

### 4.0. Study Area 4-52nd Avenue S to Prairie Grove Avenue S

### 4.1. CROSS-SECTION

The following cross-section alternatives were evaluated for traffic operations but not carried forward for concept level exhibit:

### 4.1A Three-Lane Section

This alternative considers a single southbound lane from $52^{\text {nd }}$ Avenue $S$ to Prairie Grove Avenue $S$ and single northbound lane from Prairie Grove Avenue S 53 ${ }^{\text {rd }}$ Avenue S.

### 4.1B Five-Lane Section

This alternative considers five-lane section from $52^{\text {nd }}$ Avenue $S$ to Prairie Grove Avenue $S$.

### 4.2. ACCESS MANAGEMENT

No access management alternatives were considered in this study area.

### 4.3. INTERSECTION

The following intersection alternative was evaluated for traffic operations but not carried forward for concept level exhibit:

### 4.3A Southbound Right-turn Lanes along $\mathbf{2 5}^{\text {th }}$ Street $S$

For the three-lane cross section alternative, the consideration was made to convert the shared thru/right turn lane on the $25^{\text {th }}$ Street S approaches to right-turn lanes.

The following intersection alternatives was discussed but not carried forward for further evaluation:

### 4.3B $\quad 53^{\text {rd }}$ Avenue $S / 25^{\text {th }}$ Street $S$

The $53^{\text {rd }}$ Avenue $S$ approaches of the intersection experience unacceptable delay and LOS today. The intersection is expected to operate with unacceptable delay and LOS if no intersection improvements are undertaken.

### 4.3C(2) Traffic Signal Control

The existing and projected traffic volumes does not warrant the installation of traffic signal at the intersection.

### 4.3C(2) Roundabout

The intersection is about 500-feet south of the intersection of $52^{\text {nd }}$ Avenue $S$ and $25^{\text {th }}$ Street $S$ that is signal controlled. It is generally undesirable to have a roundabout located near a signalized intersection.

### 4.4. OTHER INFRASTRUCTURE

No other infrastructure improvement alternatives were considered in this study area.

### 5.0. Study Area 5 - Prairie Grove Avenue S to 64th Avenue S

### 5.1. CROSS-SECTION

The study area under the existing three-lane cross-section is expected to experience acceptable operations through 2045 if no improvements are made in this area. No changes to the existing cross-section were considered in this study area.

### 5.2. ACCESS MANAGEMENT

There are six accesses in this 0.7-mile study area. City of Fargo Ordinance §20-0702 recommends a minimum spacing of 600 feet (or nine accesses per mile) between driveways and intersections. The access spacing in this study area is within the access spacing guidelines. For these reasons, no access management alternatives were considered along $25^{\text {th }}$ Street $S$ roadway in this study area.

### 5.3. INTERSECTION

The following intersection alternatives were discussed but not carried forward for further evaluation:

### 5.3A Prairie Grove Avenue $S / 25^{\text {th }}$ Street $S$

The Prairie Grove Avenue $S$ approaches of the intersection experience unacceptable delay and LOS today. The intersection is expected to operate with unacceptable delay and LOS if no intersection improvements are undertaken.

### 5.3A(1) Traffic Signal Control

The existing and projected traffic volumes does not warrant the installation of traffic signal at the intersection.

### 5.3A(2) Roundabout

The intersection is about 1,200 -feet south of the intersection of $52^{\text {nd }}$ Avenue $S$ and $25^{\text {th }}$ Street $S$ that is signal controlled. It is generally undesirable to have a roundabout located near a signalized intersection.

### 5.3B Northbound Right-turn Lane at Shanley Highschool South Access/Eaglebrook Apartment Access and $25^{\text {th }}$ Street $S$

The Shanley Highschool/Eaglebrook Apartment access intersection with $25^{\text {th }}$ Street S operates with unacceptable delay and LOS under existing geometry. The approaches are expected to operate with unacceptable delay and LOS if no improvements are made. The addition of dedicated northbound right-turn lanes on the Shanley Highschool/ Eaglebrook Apartment access approach was discussed.

### 5.4. OTHER INFRASTRUCTURE

The following alternatives were considered and carried forward for further evaluation:

### 5.4A Pedestrian Crossing Improvements at Roundabouts

The concerns about the pedestrian crossings at roundabouts were discussed. The pedestrian crossings meet the guidance outlined in NCHRP Report 672 which recommends 20 -feet between the pedestrian crossing and the end of the splitter island. A push button actuated flashing beacons at major pedestrian movements at the 64th Ave and 58th Ave roundabouts with $25^{\text {th }}$ Street $S$ are expected to enhance pedestrian visibility. For details, see Appendix C.

### 5.4B Shared-Use Connection Path

The City of Fargo plans to construct a shared use path south of $64^{\text {th }}$ Avenue $S$ on the west side of $25^{\text {th }}$ Street $S$ in the future. The current shared use path on the west side of $25^{\text {th }}$ Street $S$ ends at $58^{\text {th }}$ Avenue $S$, which will create a gap in the future path system. To eliminate this gap, a pedestrian route wider than a sidewalk is desired between $58^{\text {th }}$ Avenue $S$ and $64^{\text {th }}$ Avenue $S$ on the west side of $25^{\text {th }}$ Street $S$. To reduce tree impacts and maintain a reasonable boulevard with for snow storage a concept was developed to connect the pedestrian system to the west frontage road of $25^{\text {th }}$ Street S. For details, see Appendix C.

### 6.0. Study Area 6 - 27 th Street $S / 52$ nd Avenue S Intersection

### 6.1. CROSS-SECTION

No changes to the existing cross-section were considered in this study area.

### 6.2. ACCESS MANAGEMENT

No access management alternatives were considered in this study area.

### 6.3. INTERSECTION

The $27^{\text {th }}$ Street $S$ and $52^{\text {nd }}$ Avenue $S$ intersection operates with unacceptable delays and LOS along the $27^{\text {th }}$ Street $S$ approach. The approach is expected to continue to operate with unacceptable LOS during the peak periods in 2045.

The following intersection alternatives were considered and carried forward for further evaluation:

### 6.3A Restricted Crossing U-Turn (RCUT)

This alternative considers geometric improvements and converting the existing intersection into an RCUT (Figure 42). For concept level details, see Appendix C. The RCUT configuration will require a change in how motorists turn onto the $25^{\text {th }}$ Street $S$ from the northbound approach by preventing left-turn movements. Northbound left-turning vehicles from $27^{\text {th }}$ Street $S$ will be required to turn right onto the $25^{\text {th }}$ Street $S$ and then make a U-turn at $52^{\text {nd }}$ Avenue $S$ between $27^{\text {th }}$ Street $S$ and $25^{\text {th }}$ Street $S$ intersection. This configuration is expected to reduce potential conflict points and enhance safety.

Figure 42 - 27th St \& 52nd Ave Intersection - RCUT Alternative


### 6.3B Traffic Signal Control

A traffic signal control at the intersection is expected to improve the traffic operations (Figure 43). For concept level details, see Appendix C.

Figure 43 - 27th St \& 52nd Ave Intersection - Signal Alternative


The following intersection alternatives were discussed but not carried forward for further evaluation:

### 6.3C Continuous-T Intersection

A Continuous-T alternative includes free flow of traffic on $25^{\text {th }}$ Street S . The Left-turning vehicles from the $27^{\text {th }}$ Street $S$ will use a channelized receiving lane on the $25^{\text {th }}$ Street $S$ to merge onto the $25^{\text {th }}$ Street S . A Continuous-T is applicable for intersections with three approaches. The Continuous-T alternative is expected to reduce delay and improve operations compared to the existing traffic control configuration; however, it is expected to still experience unacceptable delay and LOS. The alternative was not carried forward because the full access at Prosperity Way will most likely conflict with the required NB to WB acceleration lane.

### 6.4. OTHER INFRASTRUCTURE

No other infrastructure improvement alternatives were considered in this study area.

## Evaluation of Alternatives

The alternatives were evaluated for traffic operations and safety. The alternatives that were considered for further evaluation were modeled in Synchro/SimTraffic software for 2045 traffic operation analysis and were compared with the 2045 operation results under No-Build conditions. The 2045 base peak hour and ADT volumes were modified to reflect new $1-29$ access at $64^{\text {th }}$ Avenue $S$ and $76^{\text {th }}$ Avenue $S$.

### 1.0. Study Area 1 - 32nd Avenue S to 35th Avenue S

A five-lane cross section with TWLTL in the center alternative was modeled and evaluated for traffic operations:

### 1.0. TRAFFIC OPERATIONS

The traffic operation results are summarized in Table 26. The detailed SimTraffic results are included in Appendix B.
Table 26 - Study Area 1 Level of Service

| Intersection of <br> 25th St S with | No-Build | Five-lane <br> X-Section |
| :---: | :---: | :---: |
| 32nd Ave | C | C |
| Kirsten Ln | A / E | A / E |
| 33rd Ave | A / D | A / C |
| PM Peak |  |  |
| 32nd Ave | C | C |
| Kirsten Ln | A / F | A / F |
| 33rd Ave | A / D | A / D |

The first letter represents the overall intersection level of service, while the second letter represents the worst side-street approach. For signalized intersections, the delay shown is for the overall intersection, while for unsignalized intersections, the delay shown is for the worst side-street approach.

The intersections at 32 nd Avenue $S$ under five-lane cross section alternative is expected to operate with similar LOS under No-Build conditions.

### 2.0. Study Area 2 - 35th Avenue S to 40th Avenue S

The following alternatives were modeled and evaluated for traffic operations:
I. Three-lane cross section including TWLTL in the center.

This considers right-turn traps on the southbound approach of the intersections of $25^{\text {th }}$ Street S at $35^{\text {th }}$
Avenue $S$ and $40^{\text {th }}$ Avenue $S$, and a single shared through/right-turn lane on the northbound approaches of the intersection. Flashing-Yellow-Arrow (FYA) left turn phasing was added for $25^{\text {th }}$ Street S approaches at the intersection with $35^{\text {th }}$ Avenue $S$.
II. Five-lane cross section including TWLTL in the center.
III. $2+1$ cross section including TWLTL.

IIIN. Two NB thru-lanes, single SB thru-lane, and TWLTL
IIIS. Two SB thru-lanes, single NB thru-lane, and TWLTL

### 2.0. TRAFFIC OPERATIONS

The traffic operation results are summarized in Table 27. The detailed SimTraffic results are included in Appendix B.
Table 27 - Study Area 2 Level of Service

| Intersection of 25th St S with | No-Build | Alternatives |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | I. Three-lane X-Section | II. Five-lane X-Section | $\begin{gathered} \text { IIIN. } 2+1 \\ \text { X-section } \\ \text { (2NB+1SB) } \end{gathered}$ | $\begin{gathered} \text { IIIS. 2+1 } \\ \text { X-section } \\ \text { (2SB+1NB) } \end{gathered}$ |
| AM Peak |  |  |  |  |  |
| 35th Ave | A | B $\downarrow$ | A | B $\downarrow$ | B $\downarrow$ |
| Casey's Driveway | A / C | A / C | A / C | A / C | A / D $\downarrow$ |
| 36th Ave | A / C | A / C | A / B 个 | A / $\mathrm{B}^{\text {个 }}$ | A / C |
| 37th Ave | A / B | A / B | A / B | A / B | A / C $\downarrow$ |
| 38th Ave | A / C | A / D $\downarrow$ | A / C | A / C | A / D $\downarrow$ |
| 39th Ave | A / C | A / C | A / C | A / C | A / C |
| PM Peak |  |  |  |  |  |
| 35th Ave | B | B | A $\uparrow$ | B | B |
| Casey's Driveway | A / C | A / D $\downarrow$ | A / C | A / D $\downarrow$ | A / D $\downarrow$ |
| 36th Ave | A / C | A / C | A / C | A / C | A / C |
| 37th Ave | A / B | A / B | A / B | A / B | A / B |
| 38th Ave | A / C | A / D $\downarrow$ | A / C | A / C | A / C |
| 39th Ave | A / C | A / C | A / C | A / C | A / C |

The first letter represents the overall intersection level of service, while the second letter represents the worst side-street approach. For signalized intersections, the delay shown is for the overall intersection, while for unsignalized intersections, the delay shown is for the worst side-street approach.
» All the intersections in Study Area 2 are expected to operate with acceptable delay and LOS under three-lane, five-lane, and four-lane cross section alternatives.
» A drop in LOS grade is expected at the intersection with 35th Avenue $S$ under three-lane and four-lane cross section alternatives in the AM Peak.
» A bump in LOS grade is expected at the intersection with 35 th Avenue $S$ under five-lane cross section alternative in the PM Peak.
» A drop in side-street approach LOS grade is expected at the intersection of Casey's Driveway in the AM peak under Alternative IIIS.
» Except for the five-lane cross section alternative, all other alternatives are expected to experience a drop in side-street approach delay in the PM peak at Casey's Driveway.
» A bump in side-street approach LOS grade is expected at the intersections of 36th Avenue $S$ in the AM peak under five-lane and Alternative IIIN cross section alternatives.
» A drop in side-street approach LOS grade is expected at the intersection of $37^{\text {th }}$ Avenue $S$ in the $A M$ peak under Alternative IIIS.
" A drop in side-street approach LOS grade is expected at the intersections of 38th Avenue $S$ under five-lane alternative in both peaks and under Alternative IIIS cross section alternative in the AM peak.
» All the alternatives have similar operational benefits. However, the five-lane alternative is expected to experience higher arterial speeds compared to the three-lane alternative.
» While the five-lane cross section alternative had better operations than the other alternative, the delay experienced by vehicles was only nominally better.

### 2.0. SAFETY

» The analysis for the alternative indicates that the five-lane cross section alternative have similar operational results to that of the three-lane cross section alternative. However, the wider cross section would likely make vehicle and pedestrian crossings more dangerous.
" The three-lane cross section alternative is expected to reduce the number of lanes for motorized and nonmotorized users to cross and reduce left-turn conflicts.
» The two-way left-turn lane (TWLTL) is expected to reduce head-on crashes by dividing opposing traffic and reduce rear-end crashes by providing left-turning vehicles their own lane.

### 3.0. Study Area 3 - 40th Avenue S to 52nd Avenue S

The following alternatives were modeled and evaluated for traffic operations:
I. Three-lane cross section including TWLTL in the center.

IA. No change in traffic control (Signal) at Rose Creek Drive.
IB. Roundabout at Rose Creek Drive.
The following global considerations were made:

- Right-turn traps on the southbound approach of the intersection at $40^{\text {th }}$ Avenue $S$, and a single shared through/right-turn lane on the northbound approach of the intersection.
- Reduction of the cycle length at the $40^{\text {th }}$ Avenue $S$ intersection to 90-seconds.
- Right-turn trap at the north Centennial Elementary School parents pick up/drop-off access for southbound approach.
II. Five-lane cross section including TWLTL in the center.

This alternative considers converting the existing through/right-turn lane to through lane at the southbound approach of the north Centennial Elementary School parents pick up/drop-off access. The southbound rightturn lane at the access will be retained.
III. $2+1$ cross section including TWLTL.

IIIA. Two NB thru-lanes, single SB thru-lane, and TWLTL
IIIB. Two SB thru-lanes, single NB thru-lane, and TWLTL

## 3．0．TRAFFIC OPERATIONS

The traffic operation results are summarized in Table 28．The detailed SimTraffic results are included in Appendix B．
Table 28 －Study Area 3 Level of Service

| Intersection of 25th St S with | No－Build | Alternatives |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | IA．Three－ lane X－Section | IB．Three－ lane X－Section | II．Five－lane X－Section | $\begin{gathered} \text { IIIN. } 2+1 \\ \text { X-section } \\ \text { (2NB+1SB) } \end{gathered}$ | $\begin{gathered} \text { IIIS. 2+1 } \\ \text { X-section } \\ \text { (2SB+1NB) } \end{gathered}$ |
| AM Peak |  |  |  |  |  |  |
| 40th Ave S | C | C | C | C | C | C |
| Centennial Elem N | A | A | A | A | A | A |
| Rose Creek Dr | A | B $\downarrow$ | A | A | A | B $\downarrow$ |
| 44th Ave S | A／C | A／C | A／C | A／C | A／C | A／C |
| Carrie Rose Ln | A／C | A／B 个 | A／B 个 | A／B 个 | A／B 个 | A／B 个 |
| Rose Creek Pkwy | A／C | A／C | A／C | A／C | A／C | A／C |
| Meadow Creek Dr | A／C | A／C | A／C | A／B 个 | A／B 个 | A／B 个 |
| Rose Creek Blvd | A／B | A／C $\downarrow$ | A／C $\downarrow$ | A／B | A／C $\downarrow$ | A／C $\downarrow$ |
| PM Peak |  |  |  |  |  |  |
| 40th Ave S | C | C | C | C | C | C |
| Centennial Elem N | A | A | A | A | A | A |
| Rose Creek Dr | A | A | A | A | A | A |
| 44th Ave S | A／C | A／C | A／C | A／C | A／C | A／C |
| Carrie Rose Ln | A／B | A／B | A／B | A／B | A／B | A／B |
| Rose Creek Pkwy | A／C | A／C | A／C | A／C | A／C | A／C |
| Meadow Creek Dr | A／C | A／B 个 | A／B 个 | A／B $\uparrow$ | A／B 个 | A／B 个 |
| Rose Creek Blvd | A／C | A／C | A／C | A／B 个 | A／C | A／C |

The first letter represents the overall intersection level of service，while the second letter represents the worst side－street approach．For signalized intersections，the delay shown is for the overall intersection，while for unsignalized intersections，the delay shown is for the worst side－street approach．
» All the intersections in Study Area 3 are expected to operate with acceptable delay and LOS under Three－lane， five－lane，and four－lane section．
» The LOS grade is expected to drop from LOS A to LOS B at the intersection of Rose Creek Drive $S$ and $25^{\text {th }}$ Street $S$ in the AM peak under Alternative IA and Alternative IIIS．
» The side－street approach LOS grades are expected to improve from LOS C to LOS B at the intersection of Carrie Rose Lane and $25^{\text {th }}$ Street S in the AM peak under all three cross－section alternatives．
» The side－street approach LOS grades are expected to improve from LOS C to LOS B at the intersection of Rose Creek Pkwy and $25^{\text {th }}$ Street S in the AM peak under five－lane and four－lane cross－section alternatives．
» The side－street approach LOS grades are expected to improve from LOS C to LOS B at the intersection of Rose Creek Pkwy and $25^{\text {th }}$ Street S in the PM peak under all cross－section alternatives．
» The side－street approach LOS grades are expected to improve from LOS C to LOS B at the intersection of Meadow Creek $\operatorname{Dr}$ and $25^{\text {th }}$ Street S in the AM peak under five－lane and four－lane cross－section alternatives．
» The side－street approach LOS grades are expected to improve from LOS C to LOS B at the intersection of Meadow Creek Dr and $25^{\text {th }}$ Street S in the PM peak under all the cross－section alternatives．
» The LOS grade is expected to drop from LOS B to LOS C at the intersection of Rose Creek Blvd and $25^{\text {th }}$ Street S in the AM peak under three－lane and four－lane cross－section alternatives．
» The side－street approach LOS grades are expected to improve from LOS C to LOS B at the intersection of Rose Creek Blvd and $25^{\text {th }}$ Street S in the PM peak under five－lane cross－section alternative．
» All three alternatives have similar operational benefits．However，the five－lane cross section alternative is expected to experience higher arterial speeds compared to the other alternatives．
» While the five-lane cross section alternative had better operations than the three-lane, the delay experienced by vehicles was only nominally better.
» Based on the public input 35\% of the participants preferred roundabouts while $65 \%$ preferred traffic signals at the Rose Creek Drive intersection. The roundabout alternative experienced better operational results compared to the existing signal. However, the delay experienced by vehicles was only nominally better.

### 3.0. SAFETY

» The analysis for the alternative indicates that the five-lane cross section alternative have similar operational results to that of the three-lane alternative. However, the wider cross section would likely make vehicle and pedestrian crossings more dangerous.
» The three-lane alternative is expected to reduce the number of lanes for motorized and non-motorized users to cross and reduce left-turn conflicts.
" The two-way left-turn lane (TWLTL) is expected to reduce head-on crashes by dividing opposing traffic and reduce rear-end crashes by providing left-turning vehicles their own lane.
» The roundabout at Rose Creek Drive will likely help slow vehicle speeds near the school and will result in less severe crashes if they were to occur but may not necessarily reduce the total number of crashes.

### 4.0. Study Area 4 - 52nd Avenue S to Prairie Grove Avenue S

The following alternatives were modeled and evaluated for traffic operations:
I. Three-lane cross section including TWLTL in the center.
II. Five-lane cross section including TWLTL in the center.

### 4.0. STUDY AREA 4 - TRAFFIC OPERATIONS

The alternatives were completed using the projected traffic volumes under base conditions only. The traffic operation results are summarized in Table 29. The detailed SimTraffic results are included in Appendix B.

Table 29 - Study Area 4 Level of Service

| Intersection of 25th St S with | No-Build | Alternatives |  |
| :---: | :---: | :---: | :---: |
|  |  | I. Three-lane X-Section | II. Five-lane X-Section |
| AM Peak |  |  |  |
| 52nd Ave | C | C | C |
| Don's Carwash | A / B | A/C $\downarrow$ | A/B |
| 53rd Ave | A/F | A/F | A/E个 |
| PM Peak |  |  |  |
| 52nd Ave | C | c | C |
| Don's Carwash | A/B | A / ¢ $\downarrow$ | A/B |
| 53rd Ave | A/F | A/E $\uparrow$ | A / D $\uparrow$ |

The first letter represents the overall intersection level of service, while the second letter represents the worst side-street approach. For signalized intersections, the delay shown is for the overall intersection, while for unsignalized intersections, the delay shown is for the worst side-street approach.
» The side-street approach LOS grade is expected to drop from LOS B to LOS C at the intersection of Don's Carwash and $25^{\text {th }}$ Street S in the AM peak and PM Peak under three-lane cross section alternative.
» The side-street approach LOS grade is expected to improve from LOS C to LOS B at the intersection of Don's Carwash and $25^{\text {th }}$ Street S in the PM peak under five-lane cross section alternative.
» The side-street approach LOS grade is expected to improve from LOS F to LOS E at the intersection of $53^{\text {rd }}$ Avenue $S$ and $25^{\text {th }}$ Street $S$ in the PM peak under three-lane cross section alternative. However, LOS E is considered unacceptable operations.
» The side-street approach LOS grade is expected to improve from LOS F to LOS E at the intersection of $53^{\text {rd }}$ Avenue $S$ and $25^{\text {th }}$ Street $S$ in the AM peak under five-lane cross section alternative. However, LOS E is considered unacceptable operations.
» The side-street approach LOS grade is expected to improve from LOS F to LOS D at the intersection of $53^{\text {rd }}$ Avenue $S$ and $25^{\text {th }}$ Street $S$ in the PM peak under five-lane cross section alternative.
» Both the alternatives have similar operational benefits. However, the five-lane cross section alternative will experience higher arterial speeds compared to three-lane cross section alternative.
» While the five-lane cross section alternative experiences better operations than the three-lane cross section alternative, the delay experienced by vehicles was only nominally better.

### 4.0. STUDY AREA 4 - SAFETY

" The analysis for the alternative indicates that the five-lane alternative have similar operational results to that of the three-lane alternative. However, the wider cross section would likely make vehicle and pedestrian crossings more dangerous.
» The three-lane alternative is expected to reduce the number of lanes for motorized and non-motorized users to cross and reduce left-turn conflicts.
» The two-way left-turn lane (TWLTL) is expected to reduce head-on crashes by dividing opposing traffic and reduce rear-end crashes by providing left-turning vehicles their own lane.

### 5.0. Study Area 5 - Prairie Grove Avenue S to 64th Avenue S

The study area under the existing cross-section is expected to experience acceptable operations through 2045 if no improvements are made in this area. No changes to the existing cross-section were considered in this study area.

### 5.0. STUDY AREA 5 - TRAFFIC OPERATIONS

The traffic operation results for Study Area 5 are summarized in Table 30. The detailed SimTraffic results are included in Appendix B.

Table 30 - Study Area 5 Level of Service

| Intersection of 25th St S with | No-Build |
| :---: | :---: |
| AM Peak |  |
| Prairie Grove Avenue S | A / E |
| Eaglebrook Apartments / Shanley HS (South) | A/E |
| $58^{\text {th }}$ Avenue S | A |
| $60^{\text {th }}$ Avenue $S$ | A / B |
| $62^{\text {nd }}$ Avenue S | A / D |
| $64^{\text {th }}$ Avenue $S$ | A |
| PM Peak |  |
| Prairie Grove Avenue S | A / C |
| Eaglebrook Apartments / Shanley HS (South) | A / D |
| $58^{\text {th }}$ Avenue S | A |
| $60^{\text {th }}$ Avenue S | A / B |
| $62^{\text {nd }}$ Avenue S | A / C |
| $64^{\text {th }}$ Avenue S | A |

The first letter represents the overall intersection level of service, while the second letter represents the worst side-street approach. For signalized intersections, the delay shown is for the overall intersection, while for unsignalized intersections, the delay shown is for the worst side-street approach.
» The side-street approach is expected to operate with unacceptable delay and LOS at the intersections of $25^{\text {th }}$ Street $S$ with Prairie Grove Avenue $S$ and Eaglebrook Apartments / Shanley HS south access in the AM peak. However, the side street volumes are generally low in the AM peaks and majority of the traffic are turning right that have sufficient gaps to turn.
» All other intersections and their approaches are expected to operate with acceptable delay and LOS in 2045 if no improvements are made.

### 5.0. STUDY AREA 5 - SAFETY

" There were 13 and 10 crashes reported at the intersections of $58^{\text {th }}$ Avenue $S$ and $64^{\text {th }}$ Avenue $S$, respectively between January 1, 2016 and December 31, 2020. Most of the crashes involved inexperienced/younger drivers that use the intersections. The roundabouts near a school zone are a form of traffic calming since vehicles are forced to slow down and yield to traffic. All the crashes reported at the intersections during the analysis period were non-severe injury related or non-fatal. Removal of roundabouts can increase the potential for severe injury related or fatal crashes at the intersections. The roundabouts are expected to see a decrease in crash rate over time as drivers become more familiar with the intersection control.

### 6.0. Study Area 6 - 27th Street S/52nd Avenue S Intersection

The intersection of $27^{\text {th }}$ Street $S$ and $52^{\text {nd }}$ Avenue is expected to operate with unacceptable side street delay and LOS through 2045 if no improvements are made. The following alternatives were modeled and evaluated for traffic operations:
I. Reduced Crossing U-Turn (RCUT)

The RCUT assumes a U-turn on $52^{\text {nd }}$ Avenue $S$ between $27^{\text {th }}$ Street $S$ and $25^{\text {th }}$ Street $S$
II. Traffic Signal

### 6.0. TRAFFIC OPERATIONS

The traffic operation results for Study Area 6 are summarized in Table 31. The detailed SimTraffic reports are included in Appendix B.

Table 31 - Study Area 6 Level of Service

| No-Build | Alt I - RCUT | Alt II - Signal |
| :---: | :---: | :---: |
|  | AM Peak |  |  |
| F / F | A / A $\uparrow$ | A $\uparrow$ |
| PM Peak |  |  |
| F / F | A / A $\uparrow$ | A $\uparrow$ |

The first letter represents the overall intersection level of service, while the second letter represents the worst side-street approach. For signalized intersections, the delay shown is for the overall intersection, while for unsignalized intersections, the delay shown is for the worst side-street approach.
» Both the alternatives are expected to improve the intersection operations to acceptable conditions.
» Alt I-RCUT will create indirect minor street movements, which have the potential to increase travel time and distance for minor street movements.
» Alt I - RCUT will create indirect movements that may increase time needed to access local businesses or create the perception of increased access time.

### 6.0. SAFETY

» Alt I-RCUT will reduce the potential vehicle-vehicle conflict points from nine to seven (for three-approach intersections) and enhances safety by reducing turning and angle crashes at the intersection by allowing drivers to navigate through one lane of highway traffic at a time.
" If vehicles are involved in a crash, they will be generally less severe than those at a conventional intersection.
» RCUT intersections have superior safety benefits compared to signal-controlled intersection.

### 6.0. OTHER

» Alt I - RCUT will be a higher cost improvement compared to a signal at the intersection.
» Snow removal for an RCUT intersection is accomplished like a conventional intersection. Snow removal for the U-turn crossover is like a conventional left turn lane. These are typically plowed after the through lanes, and snow is pushed through the crossover to the opposite side of the street.

## Corridor Wide Alternative SPEED CONTROL

Speeding has been an issue along the $25^{\text {th }}$ Street $S$ corridor based on feedback from the public and the Fargo Police Department. The frequency of speeding and merging combined with higher than posted speed limit can create unsafe operating conditions. Implementation of traffic calming measures can reduce traffic speed, reduce motor-vehicle collisions, and improve safety for pedestrians and cyclists in the corridor. The following traffic calming measures may be implemented to mitigate speeding issues in the study corridor:

## Road Diets

Road Diets are a proven traffic calming countermeasure. Road diets can reduce the vehicle speed differential and vehicle interactions, which can reduce the number and severity of vehicle-to-vehicle crashes. Reducing operating speed decreases crash severity when crashes do occur.

## Dynamic Speed Display Signs (DSDS)

Dynamic speed display signs (DSDS), devices that detect and display a vehicle's current speed back to the driver, have been shown to have a significant speedreducing effect. Research have shown that motorists traveling faster than the posted speed did appear to reduce their speed more significantly in response to the DSDS than did motorists traveling at or below the posted speed limit. DSDS can be effective at reducing speeds in permanent applications if appropriate site conditions apply. Figure 44 shows an example of a DSDS used to display the speed limit and the driving speed to the oncoming motorists.

## Raised medians with Plantings

Raised medians with plantings alter drivers' perception of lane width and therefore reduce driving speeds by way of a psychological effect. Trees may not be the right design solution for every site considering traffic-calming measures. However, they are an extremely effective and low-cost tool with potential applications across many urban settings. Unlike other traffic-calming devices, trees are multi-functional - in addition to helping make roads safer, they also increase property values, save energy, reduce flooding, and generally make our surroundings more comfortable and pleasant. Figure 45 shows an example of a roadway with a raised median and landscaping that is implemented for traffic calming.

Figure 44 - Example of Dynamic
Speed Display Signs (DSDS)


Figure 45 - Example of Raised Median with Landscaping


## Mini Roundabouts

Mini roundabouts are an ideal treatment for unsignalized intersections. They have been shown to increase safety at intersections, reducing vehicle speeds and minimizing the points of conflict. Installing mini roundabouts using simple markings or raised islands and apply them in conjunction with plantings or small trees can enhance the traffic calming effect and beautify the street. Mini roundabouts generally have an inscribed circular diameter of 45 to 80 feet, with traversable center or splitter islands (Figure 46). They are generally applicable where the existing speed limit is 25 mph or less and in urban, suburban and smaller municipal environments. They are generally not suited for high-volume use (15,000 or greater average daily traffic).

Figure 46 - Mini Roundabout Example


## Planning Level Costs of the Alternatives

A preliminary planning level cost estimate for the alternatives were developed and is shown in Table 32. This estimate includes construction cost for removal, grading, pavement, drainage, and other appurtenant work. A 30\% contingency was assumed in the estimate. The cost does not include any potential right-of-way (ROW) costs. The costs reported are in 2023 dollars and does not account for inflation/industry changes in pricing.

Table 32 - Planning Level Cost Estimate

| 64th Ave to 52nd Ave |  |  |
| :---: | :---: | :---: |
| Pedestrian Signing, Right Turn Lane, Shared Use Path Connection | \$ | 300,000 |
| 52nd Ave to 40th Ave |  |  |
| 3 Lane | \$ | 19,540,000 |
| 3 Lane w/Roundabout at Rose Creek Dr | \$ | 20,120,000 |
| 2+1 Northbound | \$ | 21,420,000 |
| 2+1 Southbound | \$ | 21,460,000 |
| 5 Lane | \$ | 24,100,000 |
| 40th Ave to 32nd Ave |  |  |
| 3 Lane | \$ | 14,650,000 |
| 2+1 Northbound | \$ | 15,770,000 |
| 2+1 Southbound | \$ | 15,690,000 |
| 5 Lane | \$ | 17,350,000 |
| 27th St Intersection |  |  |
| Restricted Crossing U-Turn (RCUT) | \$ | 1,110,000.00 |
| Signal | \$ | 540,000.00 |

## Summary

The purpose of this report is to inform recommendations for final design and construction of the $25^{\text {th }}$ Street project in Fargo, ND.

## Study Area

The corridor was divided into six study areas based on existing roadway geometry, land use, traffic demand, etc.:
» Study Area $1-25^{\text {th }}$ Street $S$ from $32^{\text {nd }}$ Avenue $S$ to $35^{\text {th }}$ Avenue $S$
» Study Area $2-25^{\text {th }}$ Street $S$ from $35^{\text {th }}$ Avenue $S$ to $40^{\text {th }}$ Avenue $S$
» Study Area $3-25^{\text {th }}$ Street $S$ from $40^{\text {th }}$ Avenue $S$ to $52^{\text {nd }}$ Avenue $S$
» Study Area $4-25^{\text {th }}$ Street $S$ from $52^{\text {nd }}$ Avenue $S$ to Prairie Grove Avenue $S$
» Study Area $5-25^{\text {th }}$ Street $S$ from Prairie Grove Avenue $S$ to $64^{\text {th }}$ Avenue $S$
" Study Area 6 - Intersection of $27^{\text {th }}$ Street $S$ and $52^{\text {nd }}$ Avenue

## Origin-Destination Analysis (O-D)

» The 25th Street $S$ corridor was divided into three segments for the O-D analysis:

- O-D Segment A: From 32nd Avenue S to 40th Avenue S
- O-D Segment B: From 40th Avenue $S$ to 52nd Avenue S
- O-D Segment C: From $52^{\text {nd }}$ Avenue $S$ to $64^{\text {th }}$ Avenue $S$
» The ratio of traffic travelling to northbound and southbound along the corridor are closely divided.
» The majority ( $77 \%$ ) of traffic are entering/leaving Segment A is from/to the north.
" The majority (69\%) of traffic are entering or leaving Segment B is from/to the north.
» The majority (95\%+) of traffic are entering or leaving Segment C is from/to the north.


## Development of Alternatives

### 1.0. STUDY AREA 1 - 25TH STREET S FROM 32ND AVENUE S TO 35TH AVENUE S

The following alternatives were discussed and carried forward for further evaluation:
» Five-lane cross-section with no cross-section improvements made north of Kirsten Lane.
» Consolidation of the commercial driveway approaches on the north side of Kirsten Lane.
» Left turn lanes on 25th Street S approaches along the Study Area.

### 2.0. STUDY AREA 2 - 25TH STREET S FROM 35TH AVENUE S TO 40TH AVENUE S

The following alternatives were discussed and carried forward for further evaluation:
» Three-Lane Cross-Section.
Right trap on the southbound approach of the intersection, and a shared through/right-turn lane on the northbound approach of the intersection at $35^{\text {th }}$ Avenue S.
» Five-Lane Cross-Section.
» Four-Lane Cross-Section

- Two Northbound, Single Southbound, and a TWLTL
- Two Southbound, Single Northbound, and a TWLTL
» Access modifications for the Gethsemane Cathedral and Hope Lutheran Church.
" Pedestrian refuge Island on the south side of 37th Avenue $\mathrm{S} / 25$ th Street S intersection.


### 3.0. STUDY AREA 3 - 25TH STREET S FROM 40TH AVENUE S TO 52ND AVENUE S

The following alternatives were discussed and carried forward for further evaluation:
" Three-Lane Cross-Section including a roundabout alternative at the intersection of $25^{\text {th }}$ Street S and Rose Creek Drive.
» Five-Lane Cross-Section.
» Four-Lane Cross-Section

- Two Northbound, Single Southbound, and a TWLTL
- Two Southbound, Single Northbound, and a TWLTL


### 4.0. STUDY AREA 4 - 25TH STREET S FROM 52ND AVENUE S TO PRAIRIE GROVE AVENUE S

The following alternatives were discussed and carried forward for further evaluation:
» Three-Lane Cross-Section.
» Five-Lane Cross-Section.

### 5.0. STUDY AREA 5 - 25TH STREET S FROM PRAIRIE GROVE AVENUE S TO 64TH AVENUE S

The following alternatives were discussed and carried forward for further evaluation:
» A push button actuated flashing beacons at major pedestrian movements at the 64th Ave and 58th Ave roundabouts with 25th Street $S$.
" Connecting sidewalk at 58th and 64th on the west side of 25 th Street to the existing frontage road.

### 6.0. STUDY AREA 6 - 27TH STREET S/52ND AVENUE S INTERSECTION

The following alternatives were discussed and carried forward for further evaluation:
» Restricted Crossing U-Turn (RCUT).
" Traffic Signal.

## Evaluation of Alternatives

### 1.0. STUDY AREA 1 - 25TH STREET S FROM 32ND AVENUE S TO 35TH AVENUE S

» Under five-lane section and three-lane section alternative, the intersections in this study area experiences traffic operational results like No-Build conditions.

### 2.0. STUDY AREA 2 - 25TH STREET S FROM 35TH AVENUE S TO 40TH AVENUE S

» All cross-section alternatives have similar operational benefits. However, the five-lane alternative is expected to experience higher arterial speeds compared to the other cross-section alternatives.
» While the five-lane alternative had better operations than the other cross-section alternatives, the delay experienced by vehicles was only nominally better.
» The analysis for the alternatives indicates that the five-lane and four-lane alternative have similar operational results to that of the three-lane cross-section alternatives. However, the wider cross section would likely make vehicle and pedestrian crossings more dangerous.

### 3.0. STUDY AREA 3 - 25TH STREET S FROM 40TH AVENUE S TO 52ND AVENUE S

» All cross-section alternatives have similar operational benefits. However, the five-lane alternative is expected to experience higher arterial speeds compared to the other cross-section alternatives.
» While the five-lane alternative had better operations than the other cross-section alternatives, the delay experienced by vehicles was only nominally better.
» The analysis for the alternatives indicates that the five-lane and four-lane alternative have similar operational results to that of the three-lane cross-section alternatives. However, the wider cross section would likely make vehicle and pedestrian crossings more dangerous.

## Rose Creek Dr.

- The single-lane roundabout at Rose Creek Drive operates slightly better than the signal from a LOS perspective and results in less peak hour queuing than the signal.
- The roundabout at Rose Creek Drive will likely help slow vehicle speeds near the school.
- The roundabout at Rose Creek Drive will result in less severe crashes if they were to occur but may not necessarily reduce the number of crashes.
- Based on the public input 35\% of the participants preferred roundabouts while $65 \%$ preferred traffic signals at the Rose Creek Drive intersection. The roundabout alternative experienced better operational results compared to the existing signal. However, the delay experienced by vehicles was only nominally better.


### 4.0. STUDY AREA 4-25TH STREET S FROM 52ND AVENUE S TO PRAIRIE GROVE AVENUE S

» Both the three-lane and five-lane alternatives have similar operational benefits. However, the five-lane alternative is expected to experience higher arterial speeds compared to the three-lane alternative.
» While the five-lane alternative had better operations than the three-lane, the delay experienced by vehicles was only nominally better.
» The analysis for the alternatives indicates that the five-lane alternative has similar operational results to that of the three-lane alternative. However, the wider cross section would likely make vehicle and pedestrian crossings more dangerous.

### 5.0. STUDY AREA 5-25TH STREET S FROM PRAIRIE GROVE AVENUE S TO 64TH AVENUE S

" The side street approaches of the intersection of 25 th Street $S$ with Prairie Grove Avenue are expected to operate with unacceptable delay and LOS if no improvements are made. However, the volumes are generally low at the side street approaches.
" The side street approaches of the intersection of 25th Street S with Eaglebrook Apartments/Shanley Highschool south access are expected to operate with unacceptable delay and LOS if no improvements are made. However, the volumes are generally low at the side street approaches.
» All other intersections and their approaches are expected to operate with acceptable delay and LOS in the 2045.
» Majority of the crashes at the roundabouts at 58th Avenue $S$ and 64th Avenue $S$ involved inexperienced/ younger drivers that use the intersections. The roundabouts are expected to see a decrease in crash rate over time as drivers become more familiar with the intersection control.

### 6.0. STUDY AREA 6 - 27TH STREET S/52ND AVENUE S INTERSECTION

» Both the RCUT and Traffic Signal alternatives are a viable option and expected to improve the intersection operations to acceptable conditions.
» The RCUT has superior safety and maintenance advantage over a Traffic Signal.

## Next Steps

The SRC will evaluate the analysis completed in this phase of the study and presented in this report. The alternatives evaluated and carried forward will be presented to the public for their review and comment.

## Summary of Alternatives

A summary of alternatives comparisons for Traffic Operations, Environmental Impacts, Pedestrian Mobility Improvements, and Cost is provided in Table 33.
Table 33 - Summary of Alternatives Comparison

|  | 64th to 52nd |  | 27th St/52nd Ave Intersection |  |  | 52nd to 40th |  |  |  |  |  | 40th to 32nd |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No-Build | Pedestrian Improvements | No-Build | R-CUT | Traffic Signal | No-Build | 3-Lane | 3-Lane w/ Roundabout | 2+1 NB | ${ }^{2+1}$ SB | 5-Lane | No-Build | 3-Lane | 2+1 NB | $2+1$ SB | 5-Lane |
| Traffic Operations (Intersection Delay) | - | - | (1)003 | (1)(1) | (1) | (1)(1)(1) | (1)(1)(1) | (1)(1)(1) | (1)(1)(1) | (1)(1) | (1)(1)(1) | (1)(1) | (1)(1)(1) | (1)(1)(1) | (1)(1) | (1)(1) |
| Environmental Impacts (Existing Tree Impacts) | - | - | - | V V | V | - | V | V V | V | V | - V V V | - | V | V | V | $\boldsymbol{\nabla V \nabla V}$ |
| Pedestrian Mobility Improvements | - | - 4 | - | - | - 4 | - | - 4 - | - 4 ¢ | - | - | - 4 ¢ | - | - | - | - | - 4 4 |
| Cost | - | \$ | - | \$\$ | \$ | - | \$ | \$\$ | \$\$\$ | \$\$\$ | \$\$\$\$ | - | \$ | \$\$\$ | \$\$ | \$\$\$\$ |


| (1) | = Least Intersection Delay |
| :--- | :--- |
| (1)(B) | $=$ Most Intersection Delay |


| - | = No Change <br> = Least Existing Tree Removals <br>  <br> $\nabla$ |
| :--- | :--- |
|  |  |



| - | $=$ No Change |
| :--- | :--- |
| = Lowest Improvement Costs |  |
| \$\$\$\$\$ | $=$ Highest Improvement Costs |

## PUBLIC INPUT PHASE 1 SUMMARY



# PUBLIC INPUT PHASE 1 SUMMARY 

$25^{\text {th }}$ Street Corridor Study, Fargo - ND
July 2022

## Overall Engagement Summary

The 25th Street Corridor Study public and stakeholder involvement plan was designed to share information with interested parties and to collect input to guide project decision-making. The goals included engaging stakeholders in meaningful and accessible ways and soliciting early and continuous input from stakeholders.

The first phase of engagement was intended to gather input on priorities and concerns regarding the corridor, from stakeholders and members of the public all throughout the study area. Collecting this input was critical to guiding the current study process, and will inform identification of primary needs, secondary needs, and additional considerations.

This phase included several elements including stakeholder sessions, social media marketing, and virtual engagement through an interactive map and online survey. These elements are described below:
" Stakeholder sessions: Two stakeholder sessions were hosted in an open house format with the ability for attendees to drop in as desired. These occurred on June 2, 2022, and were held at Northview Church in Fargo. Project team members were available for questions and provided maps for comments. Invitees included stakeholders such as: Fargo Park District, Fargo Public School District, Centennial Elementary School, local neighborhood associations, businesses along the corridor, and Communities of Faith.

Key themes shared by these stakeholders included:

- Centennial Elementary School - the $40^{\text {th }}$ Ave $S$ crossing is the largest safety concern. Most walking/ biking students come across at this point. There has been a recent boundary update to the school that will likely increase left turns at parent drop-off times.
- Many stakeholders identified that a signal or other measure at the $27^{\text {th }} \mathrm{St}$. S and $52^{\text {nd }}$ Ave S . should be considered.
- A center left-turn lane throughout the corridor was brought up by many individuals.
- Multiple stakeholders mentioned a need for an improved pedestrian crossing at the $25^{\text {th }}$ St. S. and $37^{\text {th }}$ Ave S . intersection.
- Concerns about roundabouts were raised - in terms of pedestrian safety, larger trucks utilizing them, and winter snow removal.
" Social media: The project team marketed the opportunity to give input through several channels. Paid Facebook ads were utilized from 5/17/22-6/17/22. Metro COG posted about the opportunity to their Facebook page. The project team coordinated with the City of Fargo to post to their Twitter account and NextDoor account.
» Online survey: An online survey was hosted on the Social Pinpoint project page. The survey was open from May 16, 2022 through June 17, 2022. The survey consisted of questions asking stakeholders to describe their use of the corridor and give input on safety and operations on the corridor. There were multiple choice questions and an open-ended question. 204 individuals filled out and submitted the project survey.
» Interactive map tool: This tool was hosted on the Social Pinpoint project page. The map gave participants the option to explore the highlighted study area, add specific comments under different themes (Traffic Safety, Bike/Pedestrian, Transit, Traffic/Congestion, Access, Other), and view and discuss comments left by others. Participants could also react to comments by upvoting or downvoting them. A total of 58 comments were submitted, with 110 upvotes and downvotes left.


## Digital Engagement Results

## ONLINE SURVEY

The survey questions are listed below:

1. How frequently do you use the corridor?
2. Do you live within a half mile of the corridor?
3. How do you use $25^{\text {th }}$ St.?
4. What are your trips for?
5. Please prioritize each issue with respect to the $25^{\text {th }}$ St. corridor
6. Traffic congestion in the corridor is acceptable (rate).
7. $25^{\text {th }}$ St. feels like a safe place to drive (rate).
8. When walking, I feel safe walking along or crossing $25^{\text {th }}$ St. (rate).
9. When biking, I feel safe biking along or crossing $25^{\text {th }}$ St. (rate).
10. Have you ever been involved in a traffic crash, or near miss, while driving on $25^{\text {th }} \mathrm{St}$.?
11. What type of traffic control at roadway intersections do you prefer?
12. Are there any additional issues concerning the $25^{\text {th }}$ St. corridor that should be considered in this study?

A summary of responses to each question is included below:

## Question 1 Summary

How frequently do you use the corridor?


## Question 2 Summary

Do you live within a half mile of the corridor?


Question 3 Summary
How do you use $25^{\text {th }}$ St.?


## Question 4 Summary

What are your trips for?


Question 5 Summary
Please prioritize each issue with respect to the $25^{\text {th }}$ St. corridor


Question 6 Summary
Traffic congestion in the corridor is acceptable (rate).

| Traffic congestion in the corridor is acceptable. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $50 \%$ | $15 \%$ | $30 \%$ | $24 \%$ | $23 \%$ |  |  |  |
|  | 1 (Do not agree) | 2 | 3 | 4 |  |  |  |

## Question 7 Summary

$25^{\text {th }}$ St. feels like a safe place to drive (rate).


## Question 8 Summary

When walking, I feel safe walking along or crossing $25^{\text {th }}$ St. (rate).


## Question 9 Summary

When biking, I feel safe biking along or crossing $25^{\text {th }}$ St. (rate).


## Question 10 Summary

Have you ever been involved in a traffic crash, or near miss, while driving on $25^{\text {th }}$ St.?
$\left.\begin{array}{cc}\text { Have you ever been involved in a traffic crash, or near miss, while driving on 25th St.? } & \begin{array}{c}\text { Yes, } \\ \text { while } \\ \text { turning } \\ \text { onto the } \\ \text { corridor } \\ 10 \%\end{array} \\ \text { turning off the } \\ \text { corridor } \\ 8 \%\end{array}\right]$

## Question 11 Summary

What type of traffic control at roadway intersections do you prefer?


## Question 12 Summary

Are there any additional issues concerning the $25^{\text {th }}$ St. corridor that should be considered in this study?
Themes from this open-ended question are summarized below:
» Sidewalk improvements and pedestrian crosswalks are critical for pedestrians
» No bike lanes - there are already dedicated sidewalks and paths, auto traffic should be prioritized
» Make corridor more bike friendly and safe for cyclists
» There is congestion outside school areas during drop-off and pick-up times, this needs to improve
" Center turn lane should be considered to help backups
" 32nd Ave intersection was specifically called out as being a consistent area with safety concerns and traffic backups
" Lack of traffic stops between 40th and 52nd causes increased speeding in the area, dangerous driving
» Mixed feelings around roundabouts already existing in the corridor - keeping them single lane seems to be better received
» Potholes were raised as a major concern causing issues for cars, bikes, and peds in the corridor

## ONLINE INTERACTIVE MAPPING TOOL

The mapping tool allowed participants to explore the study area, add location-specific comments, and react to comments left by others. A total of 58 comments were submitted. Additionally, participants left 16 downvotes and 94 upvotes to comments left by others. Each comment had a category selected. Figure 48 shows the share of comments by category.

Figure 48 - Interactive Map Comments by Category


As seen in Figure 48, participants most frequently submitted comments within the categories of Traffic Safety, Traffic Congestion, and Bike/Ped.

Below in Figure 49 are two maps showing where the comments fell within the corridor. The comments are also color coded by category, which can be seen in the key. Specific comment information can be referenced in Attachment A on page 117, which includes a full listing of the comments, with each one assigned a unique ID.

Figure 49 - Interactive Map Comments by Location


## Key theme \#1: Safety

About forty percent of comments were submitted within the "Traffic Safety" category. As shown in Table 34, there were several key themes in this category. Many comments were made about left turns on the corridor being a safety issue, and the need for improving certain intersections and turning ability on the corridor. Table $\mathbf{3 4}$ also shows the amount of associated upvotes and downvotes in each category. Each comment ID corresponds to a comment in

## Attachment A on page 117.

Table 34 - Key Themes from "Traffic Safety" Response Category

| Theme | Comment IDs | Upvotes | Downvotes | Total Votes |
| :--- | :--- | :--- | :--- | :--- |
| Intersection | $11,12,14,16$, | 33 | 5 | 38 |
| improvements and | $20,21,22,31$, |  |  |  |
| reconstruction of | $34,41,46,47$, |  |  |  |
| corridor | $48,52,55,56,57$ |  |  |  |
| Pedestrian and bike | $35,38,42,43$, | 7 | 4 | 11 |
| safety | 50,54 |  |  |  |

## Key theme \#2: Traffic/Congestion

Around twenty two percent of the comments submitted were in the "Traffic/Congestion" category. There were several themes around these comments, as seen below in Table 35. Issues that were brought up include traffic backups occurring from access to local businesses and organizations. Additionally, left turns were also frequently called out as a concern. Each comment ID corresponds to a comment in Attachment A on page 117.

Table 35 - Key Themes from "Traffic/Congestion" Response Category

| Theme | Comment IDs | Upvotes | Downvotes | Total Votes |
| :--- | :--- | :--- | :--- | :--- |
| Operations <br> improvements | $1,4,8,23,24$, <br> 32,49 | 11 | 1 | 12 |
| Backups from accessing <br> local businesses/orgs | $9,15,36,51,53$, <br> 58 | 11 | 0 | 11 |

## Key theme \#3: Bike/Ped

There were about fifteen percent of comments made in the bike/pedestrian category. These included concerns over pedestrian crossings, and overall comments on bike lanes and facilities throughout the corridor. These key themes are seen below in Table 36. Each comment ID corresponds to a comment in Attachment A on page 117.

Table 36 - Key Themes from "Bike/Ped" Response Category

| Theme | Comment IDs | Upvotes | Downvotes | Total Votes |
| :--- | :--- | :--- | :--- | :--- |
| Bike/ped facilities along <br> corridor | $6,13,19,30,33$, <br> 39 | 10 | 3 | 13 |
| Need for improved <br> pedestrian crossings | $2,18,44$ | 6 | 1 | 7 |

## Attachment A. Interactive Map Comments

| Unique ID | Category | Comment | Up Votes | Down <br> Votes |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Traffic/Congestion | This is a dangerous intersection. Drivers often take extreme chances when entering traffic. During the busiest times of the day, morning commute and evening rush hour, it's difficult to impossible to cross traffic and enter the roadway, especially heading westbound. There have been many accidents here, it's a matter of time before this takes someone's life. The reduced speed limit has helped slightly but a traffic light would all but eliminate this hazzard. | 3 | 0 |
| 2 | Bike/Pedestrian | It would be nice to add a Hawkeye type signal here for crossing pedestrian/bike traffic to cross 25th st to get to the park and/or bike path. | 3 | 1 |
| 3 | Access | Would be nice to add a left turn only median WB to SB. Many times vehicles take this dangerously from 27th St S to WB 52nd Ave. | 2 | 0 |
| 4 | Traffic/Congestion | Traffic Backup on 52nd Ave during peak travel time in Evening commute. This problem occurs 52nd Ave WB going NB on 25th St. | 3 | 0 |
| 5 | Access | Same issue as 27th St. A turn lane left only median would take care of this issue of people darting in front of traffic. | 0 | 0 |
| 6 | Bike/Pedestrian | The lack of connection of the pedestrian trail at 25th street to the trails to the west is very frustrating. This disconnection feels like a barrier to creating a trail that can truly be used for biking for transportation rather than just a recreational trail. | 7 | 1 |
| 7 | Other | With how wide this boulevard is, there seems to be a lot of empty space that could be utilized with additional street trees. There appears to be ample space for the addition of hundreds of street trees along this section. | 4 | 1 |
| 8 | Traffic/Congestion | Agreed to first comment. See this all the time here where cars are "jetting" across and at times cut off other traffic. | 0 | 0 |


| 9 | Traffic/Congestion | All along 25 in this vicinity, tend to see traffic back ups and "near misses" occur where cars are NB on 25th but trying to take a left to get into their neighborhood or Hope Lutheran. While the NB driver is waiting to take a safe left, cars queue behind them and sometimes unsafely cut into the other NB lane to avoid the queue. The wait of said car can seem quite long while waiting for SB car traffic to subside safely. | 7 | 0 |
| :---: | :---: | :---: | :---: | :---: |
| 10 | Access | When coming WB on 37th, and attempting to turn left and NB on 25th can be outright dangerous. Need to wait for traffic in both directions to subside enough to go, but more times than not another driver will pull beside you to turn right NB on 25th blocking your view of NB traffic. (likewise problem when taking the right to go NB). That and sudden car pulling out of Casey's, HOPE, or apartments has caused multiple near misses. | 4 | 1 |
| 11 | Traffic Safety | Between people trying to get into the stripmall on the West side and into Sanford on the East, this intersection gets wild. Same in reverse as trying to go NB on 25th coming out of Sanford is a gamble in itself with speeding cars coming off 32 nd to go NB, another car coming from Starbucks trying to get onto 25th either direction, cars backing up waiting to go WB on 32nd, and trying to shoot a gap between all of this. | 10 | 0 |
| 12 | Traffic Safety | When going NB and trying to take a left onto 37th, this can get dicey as cars coming out of apartments some times compound backed up traffic waiting to take a left into HOPE or 37th while waiting for SB traffic to open enough to make the turn. | 5 | 0 |
| 13 | Bike/Pedestrian | Cars drive at least 5 mph over the speed limit and a lot blow through the red lights. This is an area where walking or biking on the sidewalk of 25th is uncomfortable due to the speed and at times aggressiveness of vehicles. The street is so close to the sidewalk. Noise is another issue. It's disturbing for kids and pets. Why can't we have quieter neighborhoods? There needs to be a limit on truck and motorcycle loudness. We can never sleep with our windows open due to this. | 1 | 2 |


| 14 | Traffic Safety | The cars that race at night enjoy the lift they get from going over the Rose Creek bridge when coming from 52nd. I think a speed table would be beneficial. Most cars don't slow down until they approach Centennial Elementary when coming from the South. Since two high schools are located off 25th Street, you can imagine the inexperienced and often speeding drivers that use the road. Lower the speed limit and enforce it! | 3 | 4 |
| :---: | :---: | :---: | :---: | :---: |
| 15 | Traffic/Congestion | School year traffic makes this corner very difficult to turn north. The school zone isn't posted for a half a block south from this corner. Cars traveling north are going fast while cars traveling north are going slow, making it difficult to turn. | 2 | 0 |
| 16 | Traffic Safety | Making a left onto 52nd here is a challenge. | 3 | 0 |
| 17 | Other | Do Middle and High Schools typically require a school zone speed limit? This is not the case for public schools in the area. | 1 | 0 |
| 18 | Bike/Pedestrian | As a pedestrian who uses the paths here daily, I worry about crossing at the roundabouts. As a driver I know you often can't see the person until you are around the curve leaving little time to stop. | 3 | 0 |
| 19 | Bike/Pedestrian | Cars turning left off 52nd are trying to make quick turns with short gaps in traffic and do not look for pedestrians at this intersection. I saw a near miss accident here with a car and a bike. | 1 | 0 |
| 20 | Traffic Safety | The entrances to Sanford and the avenue behind the strip mall should get shut down. These spots if nothing else need dedicated left and right turn lanes. | 3 | 0 |
| 21 | Traffic Safety | Need turn lanes at street light. | 4 | 0 |
| 22 | Traffic Safety | Need turns lanes left and right for Casey's and Hope church. | 1 | 1 |
| 23 | Traffic/Congestion | Why do we have extra left turn lanes here and other places around town if we aren't going to use them? The streets will be replaced before you open them up to traffic. | 1 | 0 |


| 24 | Traffic/Congestion | Create a wider road to create better flow of traffic. | 4 | 1 |
| :---: | :---: | :---: | :---: | :---: |
| 25 | Access | There is a Caribou Coffee at this location now, and when I go to this shop, I make sure I leave the site via 30th Ave S so I can use the traffic signal at 30th Ave and 25th St to make a left turn to go north. | 1 | 0 |
| 26 | Access | I don't care for this crazy right turn ingress so close to 32 nd Ave S. I think it encourages people to change lanes too suddenly after making the eastbound to northbound right turn. There is another access just north of this location. | 1 | 0 |
| 27 | Access | It is very unclear as to whether or not southbound left turns are allowed into this access point. It feels like a "no man's land". | 2 | 0 |
| 28 | Access | Off-set driveways at these two sites- so dysfunctional, especially for left turn egress. These should be aligned. | 0 | 0 |
| 29 | Access | Seems crazy that these driveways were allowed to be offset from each other. | 0 | 0 |
| 30 | Bike/Pedestrian | Having decorative things in the roundabout makes it look nice, but for safety reasons it is better to not have anything obstructing a drivers view | 1 | 0 |
| 31 | Traffic Safety | Denying the left turn out onto 52nd Ave would make a lot of sense | 1 | 0 |
| 32 | Traffic/Congestion | Agree. Denying the left turn would help a lot | 0 | 0 |
| 33 | Bike/Pedestrian | A connection to the Timberline trails would be ideal. Like the commenter said, it would make bike transportation north and south much easier instead of having to go across on 40th Ave from Timberline trails to/from the Old Milwaukee trail | 0 | 0 |
| 34 | Traffic Safety | And people are driving super fast on 25th St at the point, either trying to make the light southbound or speeding out quickly after the light northbound | 0 | 0 |
| 35 | Traffic Safety | These roundabouts look nice with the vegetation on them, but the vegetation blocks the view of drivers making for sudden adjustments when they encounter bikes and pedestrians | 6 | 0 |


| 36 | Traffic/Congestion | Backed up on 25th at Shanley/Sacred Heart due to parents/children waiting for breaks in traffic to allow a left hand turn for 8am start time. | 0 | 0 |
| :---: | :---: | :---: | :---: | :---: |
| 37 | Other | School year traffic makes this corner very difficult to turn south. Also, very difficult for students/parents to make a left hand turn into the school off of 25th. | 0 | 0 |
| 38 | Traffic Safety | With no stop lights and the blocked view with roundabouts, I am really weary of letting my 12 year old ride her bike going north bound on 25th from 70th to 52nd. | 0 | 0 |
| 39 | Bike/Pedestrian | Agreed. This section of 25th Street needs a protected commuter bike lane. | 0 | 0 |
| 40 | Other | Alternatively, a PROTECTED commuter bike lane suitable for students going to school would be appropriate here. | 1 | 0 |
| 41 | Traffic Safety | Agreed. Xeriscaping these areas with LOW plant cover would increase safety. | 0 | 0 |
| 42 | Traffic Safety | I think most of this corridor could benefit from bein g a 3 lane road rather than a 4 lane. One lane each direction and a center turn lane. I don't feel as if the road has enough traffic most times to justify 2 lanes in each direction. Doing this would allow dedicated turn lanes for almost every location, and the extra space created could be used for better trails or bike lanes. | 0 | 4 |
| 43 | Traffic Safety | Definitely agree. It's very dangerous for children especially to be riding bikes across the roundabouts because the oncoming vehicles cannot see them. Something much shorter can still look nice, but allow for more safety. | 0 | 0 |
| 44 | Bike/Pedestrian | Yes, it is dangerous for bikers and walkers to cross at the roundabouts because oncoming vehicles cannot see through to the other side. Much lower plants or landscaping would still look nice, but allow for more safety. | 0 | 0 |
| 45 | Other | Good question- I have wondered this as well. You are right, we don't see it at other schools beyond elementary schools. | 0 | 0 |


| 46 | Traffic Safety | People pull out halfway on 52nd and then wait in the median when making a left turn. This is very dangerous. If the left turn here is eliminated, traffic would have to go out to 25th to make a left turn. It's probably not quite as busybut I imagine will only get busier. | 0 | 0 |
| :---: | :---: | :---: | :---: | :---: |
| 47 | Traffic Safety | 35th and 25th need a turn lane. Traffic get so backed up if someone is trying to turn left onto 35th. | 2 | 0 |
| 48 | Traffic Safety | As a Sanford employee, I go out of my way and leave on 22nd St because it's nearly impossible to left turn South out of the parking lot. | 0 | 0 |
| 49 | Traffic/Congestion | Totally agree with this, Two plane's going north and south plus a middle turn lane would be perfect. The congestion is pretty bad in the afternoon and creates an unsafe environment for pedestrians and bikers. It may not be $100 \%$ needed yet but it will at some point in the next two or so years | 0 | 0 |
| 50 | Traffic Safety | The roundabouts have become EXTREMELY dangerous for pedestrians and cyclists. We have had many encounters of almost being hit by oncoming cars not watching. | 0 | 0 |
| 51 | Traffic/Congestion | Many new homes by Davies and others being built in an area where there are multiple schools and there is only one way in and out of the area (25th st) -way too congested for one lane north and one lane south. | 2 | 0 |
| 52 | Traffic Safety | The round-about does not allow travel to cross over or exit onto 25th street many times during the day between 52nd and the round-about. Traffic continues to flow without a break. | 0 | 0 |
| 53 | Traffic/Congestion | There is lots of traffic flowing from Davies and Shanley during school hours and after sporting events coinciding at the same time many times. | 0 | 0 |
| 54 | Traffic Safety | Traffic is always speeding between the 35th and 40th Ave lights. Trying to cross 25 th between the pedestrian sidewalk on the east (to the bike trail) and the park to the west is very dangerous for adults and impossible for youth, even on bikes. This intersection needs a stoplight to slow traffic, or a pedestrian crossing light at the very least. | 1 | 0 |


| 55 | Traffic Safety | This is one of the most dangerous intersections in town if <br> you are turning left off of 25th Street. Since there are no <br> turn lanes, traffic backs up behind those waiting to turn <br> left. If the oncoming lane also has someone waiting to turn <br> left it becomes a crap shoot to turn because you cannot <br> see what is coming in the far oncoming lane. I have almost <br> been T Boned many times by the oncoming lane. This <br> intersection needs left turn lanes and arrows on the lights <br> in all 4 directions badly! | 0 |  |
| :--- | :--- | :--- | :--- | :--- |
| 56 | Traffic Safety | I disagree. This section needs all 4 lanes plus a 5th left turn <br> lane at 35th Ave. There is already a ton of traffic congesting <br> the 4 lanes during rush hours and has become extremely <br> dangerous for those making a left turn. | 1 | 0 |
| 57 | Traffic Safety | This is one of the most dangerous intersections in town if <br> you are turning left off of 25th Street. Since there are no <br> turn lanes, traffic backs up behind those waiting to turn <br> left. If the oncoming lane also has someone waiting to turn <br> left it becomes a crap shoot to turn because you cannot <br> see what is coming in the far oncoming lane. I have almost <br> been T Boned many times by the oncoming lane. This <br> intersection needs left turn lanes and arrows on the lights <br> in all 4 directions badly! | 0 | 0 |
| 58 | Traffic/Congestion | Both accesses to 25th (left and right) should be removed <br> for traffic/safety. There are so many accesses to 25th that <br> it makes it dangerous with no dedicated turn lanes. Cars <br> slow sharply, making both left and right turns, so it is never <br> consistent which lane to be in to avoid turners. Both of <br> these locations have alternative accesses: apartments <br> have access from 36th just to the north, while the church <br> parking has three other points, one very close off 37 th. | 0 | 0 |

## Attachment B. Survey Open Response

## General Theme $\quad$ Are there any additional issues concerning the 25th St. corridor that

 should be considered in this study?| 1 | Bike Lanes | Corridor is working fine so far. Good bike and pedestrian access. Not a lot of traffic. South of 52nd works great but could do with on street bike land rather than on the foot paths. |
| :---: | :---: | :---: |
| 2 | Bike Lanes | You need more bicycle visibility signage and road lanes, not only in this area but throughout most of Fargo. |
| 3 | Bike Lanes | More bike friendly |
| 4 | Bike Lanes | Absolutely NO bike lanes should be considered. There are already dedicated paths/ sidewalks on the side of the road. Automobile traffic is of primary importance for this main corridor, not bicyclists or pedestrians. |
| 5 | Bike Lanes | Bike lanes and bicycle safety should be considered!!!!! |
| 6 | Bike Lanes | STOP trying to impose this "walkable neighborhood" nonsense in South Fargo. The city is going to screw up 32nd Avenue tremendously by narrowing the drive lanes. Don't make the same mistake on 25th Street. |
| 7 | Bike Lanes | Increased bike lanes on roadway |
| 8 | Bike Lanes | I personally ride bike along this corridor only in the summer months. On occasion, the person I share ride with drives along this corridor when there is construction on 32nd Avenue in order to get to/from work. We have not used this corridor this year as yet, but will likely do so in the future. My answers are based on last year's usage. |
| 9 | Bike Lanes | Please don't put in bike lanes. They only make things worse. Don't make the traffic lanes any narrower than they are. Some of the older intersections closer to 32nd might benefit from turning lanes. |
| 10 | Bike Lanes | There should be a bike like there is farther south on 25th. And if you have a bike lane you need to keep it swept. |
| 11 | Bike Lanes | The bike path from 70 to 52 nd needs to be kept. I use it daily and see many use it including kids. It provides a safe path away from busy 25th for them! |
| 12 | Bike Lanes | Bike lanes do not belong on the street. This is unsafe for bicyclists and for vehicle traffic. |


| 13 | Bike Lanes, Driver Safety | Enforce turning into nearest lane only when turning on or off of 25th st., this would increase safety and traffic flow. Dont add bike lanes to the street surface |
| :---: | :---: | :---: |
| 14 | Bike Lanes, Pedestrian Safety/Improvements | create better bicycling trails along 25th street or widen sidewalks on both sides of street from 32nd to 64th avenues so bicyclists have a safe place to be and pedestrians have room on sidewalks to share it with bicyclists. |
| 15 | Bike Lanes, Roundabouts | The bike lanes on the road are always dirty and filled with gravel and are not safe. also as much as I prefer the roundabouts to stoplights two lanes going each way south of 52nd St. is a must at some point given the congestion especially in the afternoon. |
| 16 | Business/Local Organization Access | Business access during reconstruction. |
| 17 | Business/Local Organization Access | Block East Gateway Circle S. where it intersects 17th Ave. S. so that no one can use East Gateway Circle S. for a cut-through to 13th Ave. S. and/or nearby businesses. This comments pertains to both shoppers and people who work in businesses west of 25th St. S. and between 17th and 13th Avenues S. |
| 18 | Congestion/Traffic | Traffic congestion with usually having to stop at every light. Another is the speeding up to 10 over the limit. I usually end up taking the 25 th St. through 35 th ave. corridor to drive the frontage road by Frontier neighborhood to avoid the traffic. |
| 19 | Congestion/Traffic | It's all in the timing. I feel $100 \%$ satisfied $90 \%$ of the time, but avoid it very much during morning and evening rush hour. |
| 20 | Congestion/Traffic | Would like to see 25th St have 4 lanes for driving (2 Northbound and 2 Southbound) |
| 21 | Congestion/Traffic | Widen the road with increased traffic. |


| 22 | Congestion/Traffic | Traffic light timings are atrocious and do not account for actual traffic volumes and flow. |
| :---: | :---: | :---: |
| 23 | Congestion/Traffic | Additional lanes especially south of 52nd Ave |
| 24 | Congestion/Traffic, Turn Lanes | A center turn lane is needed due to many vehicles turning left and stopping 1 off the lanes of traffic |
| 25 | Driver Safety | Widening it \& more stoplights to slow down the traffic |
| 26 | Driver Safety | I take different routes to avoid making a left turn onto 25th. it is always very difficult, time consuming, and dangerous. |
| 27 | Driver Safety, Congestion/Traffic | SB Left turn at 25th and 52nd Ave going EB has bad sight distance if there are cars in the WB left turn lane on NB 25th. Heavy traffic that backs up on 52nd Ave EB in the Rt turn lane going SB. Could use a longer turn lane. |
| 28 | Driver Safety, Pedestrian Safety/ Improvements | I think the best thing to improve for both drivers \& pedestrians is to improve visibility for everyone using the street. When I ride bike \& use the 32nd ave \& 25th st I feel like not many cars notice I am there \& I have to be a little more carful using that intersection. |
| 29 | Driver Safety, Turn Lanes | You need to add a turn lane in the middle of the street. It gets extremely dangerous when you have cars using the left lane waiting to make a turn and it causes major congestion. You also need to fix the intersection of 32nd Ave and 25th St. It's dangerous how rough that intersection is. |
| 30 | Other | I travel 25th st daily to work from 74th ave s That's 20 blocks I have to travel several times a day to get to an access to interstate it I believe it would be best to have access to the interstate on say 76th st s or nearer to 64th st s if that over pass they are building to Horace had ramp access to interstate that'd be extremely beneficial |
| 31 | Other | It is fine and I have no concerns. I don't feel anything needs to change. |
| 32 | Other | Need bus route |

PUBLIC INPUT PHASE 1 SUMMARY

| 33 | Other | Build it big enough for the future. Since I have lived in Fargo it has been rebuilt a half <br> dozen times. Plan for future growth so it isn't torn up every 5-10 yrs |
| :--- | :--- | :--- |
| 34 | Pedestrian Safety/ <br> Improvements | Drivers do not often seem aware of or yield to pedestrians. |
| 35 | Pedestrian Safety/ <br> Improvements | Over or under passes for pedestrians and bikes. On 37th Ave (by the Hope Lutheran) <br> to get to Stonebridge Park on the bike/walking path there needs to be a crosswalk or <br> something on 37th Ave... this is very DANGEROUS. And it is not safe to cross 25th <br> Street and 40th Ave by Centennial School as the traffic flow is crazy. |
| 36 | Pedestrian Safety/ <br> Improvements | Pedestrian trail crossing at the existing roundabout at 64 Ave is hazardous due to <br> Improvements <br> short distance from the circle, and cars don't see a walker/biker right away. |
| 38 | Pedestrian Safety/ <br> Improvements | Adding a pedestrian crossing signal at stonebridge park would be very beneficial for <br> pedestrian safety. People use that to go both ways since there is access to the bike <br> path to the east of there. |
| 37 | Pedestrian Safety/ <br> Improvements <br> Improvements | Safe crossings- road diet |


| 41 | Pedestrian Safety/ Improvements | Crossing 25th St from 37th Ave to the park to the west. |
| :---: | :---: | :---: |
| 42 | Pedestrian Safety/ Improvements | Pedestrian safety should definitely be a big priority since this is near many schools and walking/bike paths. It's not safe as-is. |
| 43 | Potholes | The pot holes are seeming to get bigger every year which could potentially cause major damage to my car. The street flooding is also and issue since the last rainstorm where the water was knee high even to 32nd Ave and on 31st ave on the one corner of 31st ave the water pools fast and drains very slowly vs. the other side of the block clearing up within minutes after the rainstorm. |
| 44 | Potholes | Correct potholes. |
| 45 | Potholes | Getting potholes resolved in a timely manner. |
| 46 | Potholes | Besides the recent patchwork this intersection is horrible. When going north-south you could get air from the bumps. The holes are a danger to vehicles, pedestrians and bikes. For being a major thoroughfare for traffic the conditions of this road are a joke and make this city look ridiculous. |
| 47 | Potholes | 25th st and 32nd ave need to be repaved. 32nd st from Essentia to University Dr is in terrible shape and far more dangerous than 25th st. Focus on 32nd ave before fixing up 25th street |
| 48 | Potholes, Other | Road surface resistant to put holes, no multi lane roundabouts please, More trees and landscaping along the corridor |
| 49 | Potholes, Turn Lanes | Fix the damn potholes NOW. Especially southbound between 32nd and 40th. Right turn lanes needed on 40th and 52nd |
| 50 | Roundabouts | Removal of the roundabouts would improve traffic flow since people in Fargo don't know how to use them. |
| 51 | Roundabouts | Roundabouts are the best solution to preventing accidents and keeping traffic flowing. |
| 52 | Roundabouts | Roundabouts aren't well suited to our climate. |


| 53 | Roundabouts | The roundabouts south of 52nd Ave are really beautiful and I prefer them to signals |
| :--- | :--- | :--- |
| 54 | Roundabouts | 1. Please consider public transportation routes and access further south along the <br> 25th street corridor. <br> 2. In addition to being unsafe turning off 25th street, it can be dangerous and difficult <br> to turn on to 25th street. The roundabouts provide no break in traffic flow! |
| 55 | Roundabouts | People don't signal when they exit roundabouts because they're American idiots. |
| 56 | Roundabouts | Do not put in a roundabout! |
| 57 | Roundabouts | Please, no more roundabouts. They suck, and too many people do not know how to <br> use them correctly. I'd be more concerned with what you are going to do about the <br> street racing. That is such a huge issue, yet you and Fargo PD refuse to do anything <br> about it. |
| 58 | Roundabouts | Roundabouts are terrible. Very few actually know how to use them properly. They ice <br> over in winter and are difficult for plow crews to maintain. |
| 59 | Roundabouts | Roundabouts <br> Roundabouts are great as long as you keep them single lane. Once you add another <br> lane it gets dangerous due to elderly or inexperienced drivers. I've experienced them <br> in some Minnesota cities. |
| 60 | roundabouts are not effective when people are entering or exiting a busy corridor. <br> They are effective to keep traffic flowing while controlling speed somewhat. |  |


| 62 | Roundabouts, Congestion/Traffic | I like roundabouts for roads when it's about traffic flow, but if there are spots of optimal pedestrian crossing, I like stoplights- so my answer is BOTH to that. I personally wouldn't have a problem if traffic is slowed on 25th St as it does go plenty fast at 35 MPH considering the amount of cars and once you get past around 35th Ave-40th Ave, it seems like people speed up to $40-45 \mathrm{MPH}$. If you develop any commercial pockets closer to Davies, then I can see it making sense to keep that traffic slower and allow for more ped-crossings. <br> I noticed comments online about concerns of eliminating right turn lanes at 32nd Av \& 25th St- I have NO concerns with that. <br> Aesthetics is important but I hope it doesn't go too far into costs since us in the neighborhood will pay will specials. Especially if not necessary. I think of the sidewalk replacement along 32 Ave several years ago that basically took a straight sidewalk and made it curved- which seemed like we could have saved specials cost there. <br> I'm sure the MetroCOG is already wondering about congestion at 25th \& 40th once that private school opens- with having Centennial on that corner and Discovery a couple blocks away. I know this is something that's giving us thought to moving out of Stoneridge (FYI we don't have school age kids anymore). |
| :---: | :---: | :---: |
| 63 | School Zone | School zone around Centennial Elementary |
| 64 | School Zone | Traffic light needed near shanley to allow for better student crossings and traffic movement into and out of the school |
| 65 | School Zone, Business/ Local Organization Access | Keep in mind school access and ease of turning left from a business/school/church driveway. Adding divided roadways will not make your residents any safer or happier as we will probably start doing unsafe u-turns. <br> Also, there is a new school (Capstone Academy) with 2 locations located directly between two other schools and between two churches. As a parent bringing my children there, I am not looking forward to the left (West from South) turn onto 35th Ave with no left turn light or extended yield for the northbound lane. |
| 66 | School Zone, Congestion/Traffic | Congestion outside of Shanley/Sacred Heart schools is terrible at drop off and pick up times. We need a way to get better gaps in Northbound traffic at those times to allow vehicles to turn into or out of the parking lot for that school with ease. 2 lanes for each direction rather than one or a traffic light south of the school or at one of the school access points would be beneficial. It would also help our young high school drivers at that school and Davies to drive safely. |


| 67 | School Zone, Congestion/Traffic | With two high schools, it is nearly impossible to get out of Silverleaf sub on school mornings. We have three options and none are good or work. Turning left onto 52nd Ave from 27th St $S$ without a light, left at 62 nd Ave without a light, or the round about at 58th Ave. regardless when the traffic is going to and from the schools we are stuck. Also, all of the traffic from the south side is using 25 th to get to I-29. Construction vehicles, etc. It is a ridiculous amount of traffic. I so hope the bridge across the interstate at 64th Ave to 45th St helps give traffic another alternative. |
| :---: | :---: | :---: |
| 68 | School Zone, Congestion/Traffic | Traffic from 52nd and beyond has been difficult. Shanley and Davies traffic is constant 15 minutes before school. It is almost impossible to take a left hand turn out of Shanley to go south from 7:45-8:00a. Students/parents are backed up on both inlets on 25th to take a left hand turn into Shanley. One we drop off we then we struggle to get out of the school. I usually have to use the East exit or go north and turn around to head back South. <br> It is my hope that the study will run during the school months as a lot of the morning traffic heading south is parents/children heading to school. <br> Thank you for all your efforts and what you do to make this city an amazing place to live. |
| 69 | School Zones, Congestion/Traffic | School zones create traffic back ups and sudden, unwarranted stops. Access in and out of schools needs to improve so as to have less impact on through traffic flow. |
| 70 | Speeding | Speed limit...25th Street has become a "drag-strip" between 40th Ave S and 52nd Ave $S$ due to no traffic control and no limited enforcement. Attempting to cross the street either walking or biking is hazardous. |
| 71 | Speeding | The noise, the speed limit should be reduced, a speed table would help between 40th and 52nd avenues. |
| 72 | Speeding | Recommend frequent stop signs, speed bumps from 32nd ave thru 52nd ave... ridiculously dangerous ......speed bumps that actually will damage " racing" vehicles... |
| 73 | Speeding | Traffic speeds are too fast |
| 74 | Speeding | Speed limit is too high for a school and residential area. Racing occurs at night |


| 75 | Speeding | Too many low-speed access points for the road to be considered a major artery. On <br> the other hand, there are too few stoplights, which encourages speeding, hampers <br> pedestrian/bike ability to cross East/West, and limits safety for cars entering 25th <br> from side streets. |
| :--- | :--- | :--- |
| 76 | Speeding | There are no designated left turn lanes at controlled intersections. This, combined <br> with high speeds because the road is too wide, leads to dangerous driving conditions, <br> especially during peak driving times. I would like to see 25th street narrowed to <br> reduce speeds and restricting left turns to intersections with designated turning lanes <br> and left turn signals. |
| 77 | Turn Lanes | Turn Lanes The lack of turning lanes <br> 79 Turn Lanes <br> 80 Turn Lanes <br> 82 Turn Lanes Lanes <br> Sheeded have been concrete, it's a major arterial road. Also a center turning lane is  |
| Tuake it 2 lanes each way with right turn lanes. |  |  |


| 84 | Turn Lanes | It would be much so safer to turn this into only one lane in each direction with a <br> middle turn lane. The problem is turning traffic. People switch lanes unsafely to avoid <br> each other and we should remove that temptation. Throughout Fargo, we should <br> add traffic calming (narrow the road significantly at crosswalks and remove right <br> turn lanes). Peoples lives should not be put at risk so that drivers can get places 3 <br> minutes quicker. The worst thing you could do is add lanes. That would make it worse, <br> unless you're going to build it up like university. 25th St is a Stroad (google it). I use <br> university to get to the interstate btw. 25th should not be a main corridor. Also, the <br> actual pavement is crumbling. The more pavement you add, the more expensive to <br> maintain. One more argument for taking away lanes. Please tame this street. Thank <br> you! |
| :--- | :--- | :--- |
| 85 | Turn Lanes, Business/ <br> Local Organization <br> Access | Turning lane the entire length, would be very helpful for flow and safety. I would be <br> concerned that it would take too many round abouts to address the sheer number <br> of entrances to businesses/churches/schools, neighborhoods and cross streets fed <br> from 25th St. Continued upgrades to make traffic signals more intelligent and provide <br> feedback would also be welcome. It is very difficult to make a left turn out of most <br> neighborhoods and businesses onto the street. Especially near 32nd Ave, there is <br> simply too many and too much volume of traffic most days. |
| 86 | Turn Lanes, Potholes <br> Roundabouts | A turn lane in the median could be helpful south of 32 nd Ave as it backs up traffic if <br> someone stops suddenly to turn and could cause an accident. <br> The pot holes have been really bad this year at 25th St and 32nd Ave, even with <br> frequent filling. |

## PUBLIC INPUT PHASE 2 SUMMARY



# PUBLIC INPUT PHASE 2 SUMMARY 

$25^{\text {th }}$ Street Corridor Study, Fargo - ND

## Overall Engagement Summary

The second phase of public involvement for the 25 th Street Corridor Study consisted of a review of alternatives for different segments of the corridor. Visual displays were developed to show cross-section and overhead (plan view) options for the corridor. Two primary methods were used to gather feedback from stakeholders and the public on preferred options: 1) In-person public meeting with voting matrix and 2 ) online survey.

Overall, 17 people were in attendance at the in-person public meeting, and another 55 people taking the online survey.
» Public and Stakeholder public meeting: One meeting was held for both the public and stakeholders to provide input on corridor alternatives. The meeting was held on Thursday, August 3 from 6:30-8:30 p.m. at Centennial Elementary School. The meeting was open house style with no formal presentation. Approximately 17 people attended the meeting (see Attachment A on page 139).
» Social media: Two paid social media ads were developed to inform people of the meeting and to direct them to the survey. Ads were placed and targeted to the Fargo metro area and zip codes 58103 and 58104. Ads ran from July 27-August 18.
" Website: A website was developed using ArcGIS Story Map to show the range of alternatives. 94 visits were made to the site.
» Online survey: An online survey was utilized and accessible from the Story Maps site. The survey was open July 26-August 21 and collected 59 responses.

## Engagement Results

## INPERSON VOTING MATRIX

People attending the public meeting were able to vote on their preferred alternatives for different segments of the corridor. The results from the in person meeting are as follows:


Additional written comments collected in Attachment B on page 146.

## ONLINE SURVEY

The online survey questions and responses are listed below:

## Question 1

Do you agree with the proposed improvements between $64^{\text {th }}$ Avenue South and $52^{\text {nd }}$ Avenue South?


- YES
- NO
- DID NOT
RESPOND


## Question 3

Which alternative do you prefer between $40^{\text {th }}$ Avenue South and $32^{\text {nd }}$

Avenue South?


## Question 2

Which alternative do you prefer between $52^{\text {nd }}$ Avenue South and $40^{\text {th }}$ Avenue South?

-5-LANE

- DO NOTHING
- 3-LANE W/ TRAFFIC SIGNAL
- 3-LANE W/ ROUNBABOUT
- $2+1$ NORTHBOUND
- $2+1$ SSOUTHBOUND - DID NOT RESPOND


## Question 4

Which alternative do you prefer at the intersection of $27^{\text {th }}$ Street South and $52^{\text {nd }}$ Avenue South?


## Question 5

Please provide any additional feedback you have regarding the proposed improvements. (See Attachment B on page 146.)

## Engagement Results Summary

Between the in-person meeting and the online survey the results have been summarized below:

| Do you agree with the proposed improvements south of 52nd Avenue? |  | What is your preferred alternative at the 52nd Avenue and 27th Street intersection? |  |  | What is your preferred alternative between 52nd Avenue and 40th Avenue? |  |  |  |  |  | What is your preferred alternative between 40th Avenue and 32nd Avenue? |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Yes | No | No Changes | R-CUT | Traffic Signal | No Changes | 3-Lane w/ RAB | 3-Lane w/ <br> Signal | $\begin{gathered} \mathbf{2 + 1} \\ \text { NB } \end{gathered}$ | $\begin{gathered} 2+1 \\ \text { SB } \end{gathered}$ | 5-Lane | No Changes | 3-Lane | $\begin{aligned} & \mathbf{2 + 1} \\ & \text { NB } \end{aligned}$ | $\begin{gathered} 2+1 \\ \text { SB } \end{gathered}$ | 5-Lane |  |
| 34 | 16 | 13 | 10 | 31 | 25 | 1 | 4 | 0 | 0 | 27 | 25 | 4 | 0 | 0 | 29 | Online Results |
| 6 | 0 | 0 | 3 | 2 | 1 | 1 | 4 | 1 | 1 | 0 | 3 | 5 | 0 | 0 | 0 |  |
| 40 | 16 | 13 | 13 | 33 | 26 | 2 | 8 | 1 | 1 | 27 | 28 | 9 | 0 | 0 | 29 | Total |

## Attachment A. In-Person Public Meeting Attendance and Comment Cards

SIGN-IN SHEET
North Dakota Department of Transportation, Civil Rights SFN 59531 (5-2018)
SFN 59531 ( $5-2018$ )

| Meeting Location <br> Centennial Elementary | Meeting Type <br> Open House | Meeting Date <br> B/3/23 |
| :--- | :--- | :--- |
| Project Number | PCN |  |

Project Description
25th Street Corridor Study

| Name (Please print) <br> Rick \& Lisa Soggie | Title/Representing <br> Address City |  | State |
| :--- | :--- | :--- | :--- |
| Email Address <br> lasoggie1@yahoo.com Code |  |  |  |


| Name (Please print) <br> Jaron Capps | Title/Representing <br> FM Metro Cog |  |  |
| :--- | :--- | :--- | :--- |
| Address | City | State | ZIP Code |
| Email Address <br> Capps@ffmmetrocog.org | Telephone Number |  |  |


| Name (Please print) <br> Darian Colgrove |  |  |  |
| :--- | :--- | :--- | :--- |
| Title/Representing |  |  |  |
| Address | City | State | ZIP Code |
| Email Address <br> dariancolgrove@gmail.com | Telephone Number |  |  |


| Name (Please print) <br> Eric Willams | Title/Representing <br> Address City |  | State |
| :--- | :--- | :--- | :--- |
| Email Address <br> eric.villiams0409@gmail.com | Code |  |  |


| Name (Please print) <br> Blain \& Able Christanson | Title/Representing |  |  |
| :--- | :--- | :--- | :--- |
| Address | City | State | ZIP Code |
| Email Address | Telephone Number |  |  |


| Name (Please print) <br> Glen Kirk |  |  |  |
| :--- | :--- | :--- | :--- |
| Titte/Representing |  |  |  |
| Address | City | State | ZIP Code |
| Email Address | Telephone Number |  |  |


| Name (Please print) <br> Cody Christianson | Title/Representing <br> Boiten \& Menk |  |  |
| :--- | :--- | :--- | :--- |
| Address | City | State | ZIP Code |
| Email Address <br> cody.christianson@boiten-mank.com | Telephone Number |  |  |

SIGN-IN SHEET
North Dakota Department of Transportation, Civil Rights SFN 59531 (5-2018)

Page $\qquad$ of $\qquad$

|  | Division/District/Consultant <br> KLJ Engineering |  |
| :--- | :--- | :--- |
| Meeting Location <br> Centennial Elementary | Meeting Type | Meeting Date <br> $8 / 3 / 23$ |
| Project Number |  | PCN |
| Project Description <br> 25th Street Corridor Study |  |  |

25th Street Corridor Study

| Name (Please print) <br> Geoffrey Childress |  |  |
| :--- | :--- | :--- | :--- |
| Address | Citle/Representing |  |
| Email Address <br> geoffrey.childress@gmail.com | State | ZlP Code |


| Name (Please print) <br> Michael Maddox | Title/Representing <br> FM Metro $\operatorname{cog}$ |  |  |
| :--- | :--- | :--- | :--- |
| Address | City | State | ZIP Code |
| Email Address | Telephone Number |  |  |


| Name (Please print) <br> Scott \& Allyson Simonson | Title/Representing |  |  |
| :--- | :--- | :--- | :--- |
| Address | City | State | ZIP Code |
| 3301 20th St S |  | Telephone Number |  |
| Email Address |  |  |  |


| Name (Please print) <br> Todd Hummel | Title/Representing <br> KLJ |  |  |
| :--- | :--- | :--- | :--- |
| Address | City | State | ZIP Code |
| Email Address |  | Telephone Number |  |


| Name (Please print) <br> Jamie Olson | Title/Representing <br> KLJ |  |  |
| :--- | :--- | :--- | :--- |
| Address | City | State | ZIP Code |
| Email Address | Telephone Number |  |  |


| Name (Please print) <br> Gary Vandrover | Title/Representing |  |  |
| :--- | :--- | :--- | :--- |
| Address <br> 3310 18th St. S | City | State | ZIP Code |
| Email Address | Telephone Number |  |  |


| Name (Please print) <br> Scott Middaugh | Titte/Representing <br> KLJ |  |  |
| :--- | :--- | :--- | :--- |
| Address | City | State | ZIP Code |
| Email Address |  | Telephone Number |  |

## COMMENTS

Thursday, August 3, 2023

FM REGIONAL TRANSPORTAIION PLANNING ORGANIZATION
Fargo, ND

## $25^{\text {th }}$ Street Corridor Study

Please Print
NAME (OPTIONAL)
ADDRESS (OPTIONAL)
Please use the space below to provide comments regarding the $\mathbf{2 5}^{\text {th }}$ Street Corridor Study.

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Please leave comments with meeting conductors or mail comments by August 15, 2023

Scott Middaugh, Kப Project Manager
300 23rd Ave E, Ste 100
West Fargo, ND 58078-7820

PHONE
EMAIL Scott.Middaugh@kljeng.com
USE EMAIL $25^{\text {th }}$ Street Corridor Study

## PROJECT WEBSITE FMmetrocog.org/25thStreet

## COMMENTS

Thursday, August 3, 2023
FM REGIONAL TRANSPORTATION PLANNING ORGANIZATION
Fargo, ND

## 25 ${ }^{\text {th }}$ Street Corridor Study

Please Print
NAME (OPTIONAL)
ADDRESS (OPTIONAL) $\quad$ I5 h Ave.
Please use the space below to provide comments regarding the $\mathbf{2 5}^{\text {th }}$ Street Corridor Study.

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Please leave comments with meeting conductors or mail comments by
August 15, 2023

| Scott Middaugh, KLI Project Manager | PHONE | 701-271-4871 |
| :--- | :--- | :--- |
| 300 23rd Ave E, Ste 100 | EMAIL | Scott.Middaugh@kljeng.com |
| West Fargo, ND 58078-7820 | USE EMAIL | $25^{\text {th }}$ Street Corridor Study |
|  | SUBJECT |  |

## PROJECT WEBSITE FMmetrocog.org/25thStreet

## COMMENTS

Thursday, August 3, 2023
Fargo, ND

## $25^{\text {th }}$ Street Corridor Study

Please Print
NAME (OPTIONAL)
ADDRESS (OPTIONAL)
Please use the space below to provide comments regarding the $\mathbf{2 5}^{\text {th }}$ Street Corridor Study.

There needs to be a turn lane added for the 32 nd Are to $40^{\mathrm{H}}$ stretch. Tao many left tums causing accidents and backups and near misses.

But going to 5 lanes would make it almost impossible to cross $25^{H} \mathrm{St}$ or to make a left onto the road way without a traffic light. 3 lanes or $2+1$ are the way to 90. $\qquad$
$\qquad$
$\qquad$
$\qquad$

Please leave comments with meeting conductors or mail comments by
August 15, 2023

| Scott Middaugh, KL Project Manager | PHONE | 701-271-4871 |
| :--- | :--- | :--- |
| 30023 rd Ave E, Ste 100 | EMAIL | Scott.Middaugh@kljeng.com |
| West Fargo, ND 58078-7820 | USE EMAIL <br> SUBJECT | $25^{\text {th }}$ Street Corridor Study |

PROJECT WEBSITE FMmetrocog.org/25thStreet

## COMMENTS

Thursday, August 3, 2023

FM REGIONAL TRANSPORTATION PLANNING ORGANIZATION
Fargo, ND

## 25 ${ }^{\text {th }}$ Street Corridor Study

## Please Print <br> NAME (OPTIONAL) fouron Laps

ADDRESS (OPTIONAL)
Please use the space below to provide comments regarding the $\mathbf{2 5}{ }^{\text {th }}$ Street Corridor Study.
Between $40^{\text {th }}$ क $52^{\text {red }}$ Ave 5 , 1 feel lime an alternating $2+1$ NB and $S B$ should be implimentel. WI $40^{\text {th }}-52^{\text {nd }}$ and beyond, 1 feel like this could be tiu best for traffic flow $\#$ ped safety for future cexditions
$\qquad$
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$\square$

Please leave comments with meeting conductors or mail comments by
August 15, 2023

| Scott Middaugh, KL Project Manager | PHONE | 701-271-4871 |
| :--- | :--- | :--- |
| 300 23rd Ave E, Ste 100 | EMAIL | Scott.Middaugh@kljeng.com |
| West Fargo, ND 58078-7820 | USE EMAIL <br> SUBJECT | 25 th Street Corridor Study |

## PROJECT WEBSITE FMmetrocog.org/25thStreet

| From: | Loren Dehnert |
| :--- | :--- |
| To: | 25th Street |
| Subject: | Hello from Loren Dehnert |
| Date: | Wednesday, August 2,2023 10:23:30 AM |

You don't often get email from dehnertloren@hotmail.com. Learn why this is important
CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

I am now living in the Whispering Creek Apartment Building on the south side of $53^{\text {rd }}$ Ave. South and on the west side of $25^{\text {th }}$ Street South. On Monday 31 July 2023, I tried to cross $25^{\text {th }}$ St. South near Prairie Grove Ave. South, and there were a lot of cars driving both directions on $25^{\text {th }}$ Street. Therefore, I had to walk east to the middle area, and then I tried to wait for a few cars going north, and walk as quickly as possible to the east sidewalk area (near the RECYCLING CENTER. I go VERY FEARFUL since one vehicle seemed to be going very fast (and I was a bit stiff that day-71 years old now). He almost collided with me, and then slowed down his speed to BLOW HIS HORN AT ME and also SHAKE HIS FIST at me. Since both of us pay taxes, neither of us was "perfect", and I am sorry to report that I also shook my fist at the male driver. Needless to say, pedestrians crossing $25^{\text {th }}$ Street South near the Recycling Area may be in danger. Many drivers (and I) try to "give and take" doing this, but the male driver seemed to think that he was "king of the road", and "that I had no rights to be walking in front of his car".

Can we try to reduce the "danger" of people crossing $25^{\text {th }}$ Street near a large middle and high school facility and near one of the Fargo Recycling Areas. I freely admit that both the male drive two days ago and I were NOT PERFECT, but I am a retired Army Pharmacist, and I think improvement is definitely needed. Maybe the city could post signs near this area warning both the drivers and the pedestrians to be courteous to one another. From what I could tell on 31 July, that male driver most likely needed to slam on his brakes for a red light at $52^{\text {nd }}$ Avenue South. Also, the male driver may have had a "very bad day" then, and he was a bit angry. Life went on for me.

Thank God that we did not collide with one another!

## Loren Dehnert

## Attachment B. Survey Open Response

## Alternatives Survey

25th Street does not need additional lanes, what it needs is dedicated left turn lanes which the 3-lane alternative provides. We should not be making pedestrian crossings of 25 th Street even longer and more dangerous, especially with all of the schools and residential areas in the neighborhood.

Please consider adding a pedestrian crossing light at the 37th Ave intersection to the park. There is a mixed use path leading to a very long pedestrian trail to the east which has no east access across 25 th St. and traffic regularly speeds excessively between 35th and 40th Avenues making pedestrian crossings almost impossible today. The proposed crosswalk might help, especially if the 3lane plan is adopted. But without traffic speeds kept to 35 mph , pedestrians will be risking a lot to cross without a light.
The only issue on 25th St S currently is that some potholes and cracks in the pavement are so big that it is hard to stay in the your lane. Some people drive ridiculously slow through these areas, so it is convenient to have a second lane in both directions. If people don't like taking a left onto 25th St at 2-way stop intersections, they should just learn to go to the intersections with signals.
Please put bike trails on both sides of the street. Right now there is no bike trail on the east side from 40-52 ave. I have found roundabouts are very hard to cross on a bike

We need to slow traffic down on 25th and not make it easier for people to drive faster with more lanes. There's obviously a lot of children in the neighborhood and with Centennial Grade School. Roundabouts would be better.
Put speed traps and temporary speed bumps on 25 th Street to curb street racing. Mark the roads for the sake of safety. The police chief and Mayor are at fault for not acting on this issue.
Not interested in roundabouts from 32nd to 52nd Ave S. A turn lane would be appreciated.
School bus routes run through 27th street turning onto 52 ave. Traffic signal would allow buses to turn left there still.
I don't think much of round abouts!! They are pain!! It's a lazy way to move traffic for the engineers !!
It looks, like there is an additional bike path from the Rose Creek Coulee going toward Timberline. I like that. We walk the area every day and that would be a great addition to the multi use path. As we live in Rose Creek we would like to see improvements to slow traffic and racers on Both University Dr. and 25th. A Round about farther S on 25th, then Rose Creek Dr would make sense. Rose Creek Dr is so close to the intersection of 40th and 25th. Seems redundant to place it there.
These projects don't add any value, just an increase in assessments for the local residents. Instead, add on/off ramps on the interstate for the new bridge at 64th.

During more busy times of the days, we maybe could use one pedestrian crossing in between 52nd Avenue South and 58th Avenue South. This is near a Fargo Recycling Center and also the Middle and High School area. People living near this area could sometimes walk to various activities for the two schools. Thanks.
Any options other than the 5-lane alternative or leave it as is on 25 th from 32 nd to 52 nd would create traffic nightmares during the morning school and work rush. Adding a roundabout in the 52nd Ave S to 40th Ave S: 3 Lane Alternative at Rose Creek Drive vs a traffic signal, would add significant risk to children crossing to go to school.
You cannot even think about doing any of the three lane alternatives between 40th and 52nd unless it's on the south side of the bridge over the creek. With Centennial there it would be nightmare and the traffic circle would seriously put the children coming from Rose Creek to Centennial at risk. Terrible option.

Respectfully, it is NOT EASY for me to walk across 25th Street South of 52nd Avenue South to use the Recycling Area or to attend School Events near the two Catholic Schools. I almost got hit by a vehicle earlier this week. I hope you consider helping pedestrians near this area in the future. Maybe a pedestrian crossing is needed about halfway between 52nd and 58th Avenues South on 25th Street South. Thanks

25th street needs to be maintained as a 4 lane road as currently exists as this road works just fine as is. Reducing lanes would lead to congestion. Also as a homeowner in Rose Creek and as a board member of the Rose Creek Association the traffic light on Rose Creek Dr and 25 th needs to continue to exist. We fought hard to have that light added and paid through assessments for the safety of the Centennial students. Roundabouts may be helpful in certain areas but at this intersection would not be a good decision. We don't want to put the lives of these young students in danger. If you have watched how people drive through roundabouts you know that people don't signal when entering or leaving roundabouts and pedestrians are not something that drivers are watching out for.

So please leave the stop light at this intersection. Thank You.
Brian McClellan
2320 Victoria Rose Lane S
Fargo ND 58104 701-793-4387 bpmcc1954@gmail.com
Plant shade trees on the drain 52 bike/walking path. Continue to develop biking/walking paths with less frequent street crossings.
These areas work fine just as they are. This is a highly established residential area and I don't want to disrupt these quiet neighborhoods. Also with Centennial Elementary as a stop light at Rose Creek should remain as is with the amount of children crossing the street after school each day. I would be highly opposed to a roundabout outside of this neighborhood entrance
I cycle on 25 th street between 52 nd Ave $S$ and north to the paths along the golf course. I don't mind that it's multiuse, but the sidewalk/path needs to be much wider like the other paths in the area are. Thanks!
From 52nd to 32 nd usually flows fairly well. The 27th u-turn lane encroaches too far into the northbound left turn lane and may cause more congestion but would discourage the use of 27 th as an alternative route to get on 52 nd (by northbound 25th traffic) if the left turn lanes look extremely full. I am more concerned about road changes south of 52nd than north of $52^{\text {nd }}$.
Change the speed limit to 40 , so those guys that speed along at 50 mph will only be 10 miles over the limit.
Might be time to add a 5 lane alternative to 64th Ave $S$ to 52 nd Ave $S$ as well, but that's another survey.

## APPENDIX A - CRASH REPORT

## 25TH STREET CORRIDOR STUDY




| Rural Segment Crash Summary Sheets |  |  |  |  |  |  | 1 Contributing Factor Appendix - Fxisting Conditions Report |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Crashes: <br> City: <br> Location: <br> Start - End Date: | 64 (Sorted by Date) Fargo 32nd Ave S \& 25th St 1/1/2017-12/31/2021 (5 Years) |  | C § 409 Documents Reserves All Objections |  |  | LEGEND <br> Fatal <br> Incapacitating Injury <br> -Non-Incapacitating Injury <br> $\triangle$ Possible Injury <br> - Wet surface <br> *Snow, Ice, Slush, Frost <br> $\triangle$ Crash related to work zone <br> (1) Unit number | 1. Contributing Factor <br> * = alcohol or drugs involved <br> 2. Most Harmful Event <br> For single vehicle crashes, the most harmful event is shown in parentheses in the "Type of Collision" column |  |  |
| Crash No. | Crash Severity Date, Day Surface Conditions, weather Lighting, Time Road Geometrics, Relation to Jct |  | Type of Collision | (1) AGE SEX CITY STATE Unit Configuration Movement (traffic control) Contributing Factor ${ }^{1}$ Most Harmful Event ${ }^{2}$ |  |  | Shortened Narrative | Name of Intersection | Diagram |
| $\begin{array}{\|ll} \hline 11 & 1037483 \quad D \end{array}$ | Possible Injury <br> 07/28/17 Friday <br> Dry Clear <br> Dusk 8:03 PM <br> Straight (on Level) Intersection |  | Rear End | (1) 65M FARGO ND <br> Pickup - Van - Utility EB Slowing/Stopping Careless/Reckless Driving | (2) 44F FARGO ND Passenger Car EB Stopped |  |  |  | $\rightarrow \rightarrow$ |
| $\begin{array}{\|ll\|} \hline 12 & 1038008 ~ \triangleright \end{array}$ | Possible Injury <br> 08/07/17 Monday <br> Dry Clear <br> Dark(L) 11:10 PM <br> Straight (on Level) Intersection |  | Left Turn | (1) 23F FARGO ND <br> Passenger Car EB Going Straight (Signal) | (2) 25 F FARGO ND <br> Passenger Car <br> WB Turning Left (Signal) <br> Failed to Yield |  |  |  | $\rightarrow \leftarrow$ |
| 131038166 | PDO <br> 08/10/17 Thursday <br> Dry Clear <br> Daylight 7:25 PM <br> Straight (on Level) Intersection |  | Rear End | (1) 17M HILLSBORO ND <br> Pickup - Van - Utility WB Going Straight (Signal) Other | (2) 34F FARGO ND Pickup - Van - Utility WB Stopped (Signal) |  |  |  | $\leftarrow \leftarrow$ |
| 141043035 D | Possible Injury <br> 11/04/17 Saturday <br> Wet Rain <br> Dark(L) 6:27 PM <br> Straight (on Level) Non-junction | - | Rear End | (1) 17M FARGO ND <br> Pickup - Van - Utility SB Slowing/Stopping Speed | (2) 67F FARGO ND Pickup - Van - Utility SB Stopped |  |  |  | $\downarrow$ |
| 151043405 | PDO <br> 11/09/17 Thursday <br> Wet Clear <br> Daylight 8:40 AM <br> Straight (on Level) Non-junction | - | Backing | (1) 27F FARGO ND <br> Pickup - Van - Utility SB Backing | (2) 20M FARGO ND Passenger Car NB Backing |  |  |  | $\begin{gathered} \downarrow \\ \uparrow \end{gathered}$ |
| 161046050 | PDO <br> 12/21/17 Thursday <br> Snow Clear <br> Daylight 10:38 AM <br> Straight (on Level) Intersection | * | Left Turn | (1) 29F FARGO ND <br> Passenger Car <br> WB Going Straight (Signal) | (2) 34 F FARGO ND Pickup - Van - Utility EB Turning Left (Signal) |  |  |  | $\rightarrow \leftarrow$ |
| 171048562 | PDO <br> 01/20/18 Saturday <br> Wet Clear <br> Dark(L) 7:05 AM <br> Straight (on Level) Intersection | - | Other | (1) 60F FARGO ND <br> Passenger Car WB Turning Right (Signal) Failed to Yield | (2) 74M FARGO ND <br> Pickup - Van - Utility EB Turning Left (Signal) Fail Keep in Proper Lane |  | D1 made a WB to NB right turn on red and hit V2 (making EB to NB left turn on green arrow). D2 turned into the furthest available lane rather than the nearest available lane. |  | $\rightarrow \leftarrow$ |
| 181048961 | PDO <br> 01/29/18 Monday <br> Dry Clear <br> Daylight 7:25 AM <br> Straight (on Level) Non-junction |  | Sideswipe (Same Dir.) | (1) 46F CAYUGA ND <br> Passenger Car SB Going Straight | (2) 34 F FARGO ND Passenger Car SB Going Straight |  |  |  | $\downarrow \downarrow$ |
| $\begin{array}{\|ll\|} \hline 19 & 1053607 \quad \triangleright \\ \hline \end{array}$ | Possible Injury 04/08/18 Sunday Ice / Snow Snow <br> Dark(L) 11:10 PM <br> Straight (on Level) Intersection | * | Left Turn | (1) 28M FARGO ND <br> Pickup - Van - Utility NB Turning Left (Signal) Weather* | (2) 19 M FARGO ND <br> Passenger Car <br> SB Going Straight (Signal) <br> Weather |  |  |  | $\downarrow$ |
| 201054611 | PDO <br> 04/27/18 Friday <br> Dry Clear <br> Daylight 4:30 PM <br> Straight (on Level) Non-junction |  | Rear End | (1) 28 M FARGO ND <br> Pickup - Van - Utility WB Going Straight (Signal) Other | (2) 21F WEST FARGO ND Passenger Car WB Going Straight (Signal) | (3) 41M FARGO ND <br> Pickup - Van - Utility WB Going Straight (Signal) |  |  | $\leftarrow \leftarrow$ |


| Rural Segment Crash Summary Sheets |  |  |  |  |  | Appendix - Existing Conditions Report |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Crashes: <br> City: <br> Location: <br> Start - End Date: | 64 (Sorted by Date) <br> Fargo <br> 32nd Ave S \& 25th St <br> 1/1/2017-12/31/2021 (5 Years) | 23 USC § 409 Documents NDDOT Reserves All Objections |  |  | LEGEND <br> Fatal <br> -Incapacitating Injury <br> Non-Incapacitating Injury <br> $\triangleright$ Possible Injury <br> - Wet surface <br> *Snow, Ice, Slush, Frost <br> $\triangle$ Crash related to work zone <br> (1) Unit number | 1. Contributing Factor <br> * $=$ alcohol or drugs involved <br> 2. Most Harmful Event <br> For single vehicle crashes, the most harmful event is shown in parentheses in the "Type of Collision" column |  |  |
| Crash No. | Crash Severity <br> Date, Day <br> Surface Conditions, Weather <br> Lighting, Time <br> Road Geometrics, Relation to Jct | Type of Collision | (1) AGE SEX CITY STATE Unit Configuration Movement (traffic control) Contributing Factor ${ }^{1}$ Most Harmful Event ${ }^{2}$ |  |  | Shortened Narrative | Name of intersection | Diagram |
| $21 \quad 1054779$ | PDO <br> 05/03/18 Thursday <br> Dry Clear <br> Daylight 5:23 PM <br> Straight (on Level) Intersection | Rear End | (1) 21M DILWORTH MN <br> Passenger Car SB Going Straight Careless/Reckless Driving | (2) 23F FARGO ND Passenger Car SB Stopped |  |  |  | $\downarrow$ |
| 221057795 | Non-incapacitating injury 06/30/18 Saturday <br> Dry Clear <br> Daylight 3:23 PM <br> Straight (on Level) Intersection | Left Turn | (1) 20F FARGO ND Passenger Car WB Turning Left (Signal) | (2) 33F NPA ND <br> Passenger Car <br> EB Going Straight (Signal) <br> No Insurance |  |  |  | $\rightarrow \leftarrow$ |
| 231058105 | PDO <br> 07/06/18 Friday <br> Dry Clear <br> Daylight 3:50 PM <br> Straight (on Level) Intersection | Rear End | (1) 68M FARGO ND <br> Pickup - Van - Utility SB Going Straight (Signal) Other | (2) 52F FARGO ND Pickup - Van - Utility SB Stopped (Signal) |  |  |  | $\downarrow$ |
| $24 \quad 1060418$ | Non-incapacitating injury 08/21/18 Tuesday <br> Dry Cloudy <br> Daylight 5:12 PM <br> Straight (on Level) Intersection | Ped / Bike | (1) 47M WEST FARGO ND <br> Pickup - Van - Utility EB Turning Right (Signal) Failed to Yield | (2) 45 M FARGO ND <br> Pedalcycle <br> NB Not on Raodway (Signal) <br> Pedalcycle |  | D1 attempted to make an EB to SB right turn on red and hit bicyclist (NB in west leg crosswalk). |  | $\rightarrow_{\uparrow}$ |
| 251060980 | PDO <br> 08/30/18 Thursday <br> Dry Clear <br> Daylight 8:00 AM <br> Straight (on Level) Intersection | Left Turn | (1) 28 F FARGO ND Passenger Car WB Going Straight (Signal) | (2) 64 M FARGO ND Pickup - Van - Utility EB Turning Left (Signal) |  |  |  | $\rightarrow \leftarrow$ |
| 261062381 | PDO <br> 09/26/18 Wednesday <br> Dry Clear <br> Daylight 10:37 AM <br> Straight (on Level) Intersection | Rear End | (1) 28M FARGO ND <br> Passenger Car WB Going Straight (Signal) Following too Close | (2) 39 M F ND <br> Passenger Car WB Stopped (Signal) | (3) 65 M FARGO ND Motorcycle WB Stopped (Signal) |  |  | $\leftarrow \leftarrow$ |
| $\begin{array}{\|ll} \hline 27 & 1063245 \end{array}$ | PDO <br> 10/10/18 Wednesday <br> Slush Snow <br> Dark(L) 8:01 PM <br> Straight (on Level) Intersection | * Left Turn | (1) 16M FARGO ND <br> Passenger Car SB Turning Left (Signal) Failed to Yield | (2) 39F FARGO ND <br> Pickup - Van - Utility NB Going Straight (Signal) Weather |  |  |  | $\downarrow$ |
| $\begin{array}{\|l\|l\|} \hline 28 & 1066815 \quad D \end{array}$ | Possible Injury 11/30/18 Friday Dry Cloudy Dark(L) 8:09 PM Straight (on Level) Intersection | Left Turn | (1) 17F FARGO ND Passenger Car SB Turning Left (Signal) | (2) 52F FARGO ND <br> Pickup - Van - Utility NB Going Straight (Signal) |  |  |  | $\begin{aligned} & \downarrow \\ & \uparrow \end{aligned}$ |
| $29 \quad 1067565$ | PDO <br> 12/13/18 Thursday <br> Wet Cloudy <br> Daylight 7:45 AM <br> Straight (on Level) Intersection | - Left Turn | (1) 36M FARGO ND Pickup - Van - Utility WB Going Straight | (2) 35 M FARGO ND <br> Pickup - Van - Utility <br> EB Turning Left (Signal) <br> Failed to Yield |  |  |  | $\rightarrow \leftarrow$ |
| 301068584 | PDO <br> 12/28/18 Friday <br> Snow Clear <br> Dark(L) 8:15 PM <br> Straight (on Level) Intersection | 桼 Rear End | (1) 24 M FARGO ND <br> Pickup - Van - Utility SB Going Straight (Signal) Weather | (2) 45M WEST FARGO ND <br> Pickup - Van - Utility <br> SB Going Straight (Signal) |  |  |  | $\downarrow$ |


| Rural Segment Crash Summary Sheets |  |  |  |  |  |  | Appendix－Fxisting Conditions Report |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Crashes： <br> City： <br> Location： <br> Start－End Date： | 64 （Sorted by Date） Fargo 32nd Ave S \＆25th St 1／1／2017－12／31／2021（5 Years） |  | C § 409 Documents Reserves All Objections |  |  | LEGEND <br> Fatal <br> Incapacitating Injury <br> －Non－Incapacitating Injury <br> $\triangle$ Possible Injury <br> －Wet surface <br> ＊Snow，Ice，Slush，Frost <br> －Crash related to work zone <br> （1）Unit number | 1．Contributing Factor <br> ＊$=$ alcohol or drugs involved <br> 2．Most Harmful Event <br> For single vehicle crashes，the most harmful event is shown in parentheses in the＂Type of Collision＂ column |  |  |
| Crash No． | Crash Severity Date，Day Surface Conditions，weather Lighting，Time Road Geometrics，Relation to Jct |  | Type of Collision | （1）AGE SEX CITY STATE Unit Configuration Movement（traffic control） Contributing Factor ${ }^{1}$ Most Harmful Event ${ }^{2}$ |  |  | Shortened Narrative | Name of Intersection | Diagram |
| $\begin{array}{ll} 31 & 1068640 \quad \triangleright \end{array}$ | Possible Injury 12／31／18 Monday Ice／Snow Clear <br> Daylight 3：35 PM <br> Straight（on Level）Intersection | 沗 | Rear End | （1）44M HORACE ND <br> Pickup－Van－Utility EB Turning Left（Signal） Weather | （2） 69 M FARGO ND <br> Pickup－Van－Utility EB Turning Left（Signal） Weather | （3） 42 F FARGO ND <br> Passenger Car <br> EB Turning Left（Signal） <br> Weather |  |  | $\rightarrow \rightarrow$ |
| 321069050 | PDO <br> 01／05／19 Saturday <br> Dry Clear <br> Dark（L）7：12 PM <br> Straight（on Level）Intersection |  | Sideswipe（Same Dir．） | （1）U <br> Hit and Run NB Turning Left（Signal） | （2）45F FARGO ND Passenger Car NB Turning Left（Signal） |  |  |  | $\uparrow \uparrow$ |
| 331069475 | PDO <br> 01／14／19 Monday <br> Wet Cloudy <br> Dark（L）8：10 PM <br> Straight（on Level）Intersection | － | Rear End | （1）17F FARGO ND <br> Pickup－Van－Utility <br> SB Going Straight（Signal） <br> Following | （2）37M FARGO ND Pickup－Van－Utility SB Stopped（Signal） |  |  |  | $\begin{aligned} & \downarrow \\ & \downarrow \end{aligned}$ |
| 341070912 － | Possible Injury 02／01／19 Friday <br> Ice／Snow Clear <br> Daylight 4：10 PM <br> Straight（on Level）Intersection | 事 | Rear End | （1）19F FARGO ND <br> Pickup－Van－Utility WB Going Straight（Signal） Following too Close | （2）47F MOORHEAD MN Pickup－Van－Utility WB Stopped（Signal） | （3）52M VALLEY CITY ND Pickup－Van－Utility WB Stopped（Signal） |  |  | $\leftarrow \leftarrow$ |
| 351071191 | PDO <br> 02／05／19 Tuesday <br> Ice／Snow Cloudy <br> Daylight 9：00 AM <br> Straight（on Level）Intersection | 事 | Rear End | （1）49F FARGO ND <br> Pickup－Van－Utility NB Going Straight（Signal） Following too Close | （2） 75 F FARGO ND <br> Pickup－Van－Utility <br> NB Going Straight（Signal） |  |  |  | $\uparrow \uparrow$ |
| 361071194 | PDO <br> 02／05／19 Tuesday <br> Ice／Snow Cloudy <br> Daylight 9：35 AM <br> Straight（on Level）Intersection | ＊ | Rear End | （1）62F FARGO ND <br> Pickup－Van－Utility <br> NB Going Straight（Signal） <br> Following too Close | （2） 36 M HAWLEY MN <br> Pickup－Van－Utility NB Going Straight（Signal） Weather |  |  |  | $\uparrow \uparrow$ |
| $\begin{array}{\|ll\|} \hline 37 & 1071947 \quad \triangleright \end{array}$ | Possible Injury 02／08／19 Friday Ice／Snow Clear <br> Dark（L）7：00 PM <br> Straight（on Level）Intersection | ＊ | Rear End | （1）52M FARGO ND <br> Pickup－Van－Utility WB Turning Left（Signal） Weather | （2）41F FARGO ND <br> Pickup－Van－Utility WB Turning Left（Signal） Weather |  |  |  | $\leftarrow \leftarrow$ |
| 381072963 | PDO 02／20／19 Wednesday Ice／Snow Snow Daylight 10：55 AM Straight（on Level）Intersection | 事 | Angle | （1）38F MOORHEAD MN <br> Pickup－Van－Utility WB Going Straight（Signal） Over Correct／Steering | （2） 35 F FARGO ND <br> Passenger Car SB Stopped（Signal） |  |  |  | $\begin{aligned} & \downarrow \\ & \leftarrow \end{aligned}$ |
| 391073866 | PDO <br> 02／24／19 Sunday <br> Snow Clear <br> Daylight 6：30 AM <br> Straight（on Level）Intersection | 承 | Rear End | （1）29M HILLSBORO ND <br> Pickup－Van－Utility SB Going Straight（Signal） | （2）57M FARGO ND Pickup－Van－Utility SB Stopped（Signal） |  |  |  | $\downarrow$ $\downarrow$ |
| 401074288 | Non－incapacitating injury <br> 03／05／19 Tuesday <br> Dry Clear <br> Daylight 10：30 AM <br> Straight（on Level）Intersection |  | Left Turn | （1）26F FARGO ND <br> Pickup－Van－Utility WB Going Straight（Signal） | （2）80M DETROIT LAKES MN Passenger Car EB Turning Left（Signal） |  |  |  | $\rightarrow \leftarrow$ |


| Rural Segment Crash Summary Sheets |  |  |  |  |  |  | Appendix - Fxisting Conditions Report |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Crashes: <br> City: <br> Location: <br> Start - End Date: | 64 (Sorted by Date) Fargo 32nd Ave S \& 25th St 1/1/2017-12/31/2021 (5 Years) |  | C § 409 Documents Reserves All Objections |  |  | LEGEND <br> -Fatal <br> -Incapacitating Injury <br> - Non-Incapacitating Injury <br> $\triangleright$ Possible Injury <br> - Wet surface <br> *Snow, Ice, Slush, Frost <br> $\triangle$ Crash related to work zone <br> (1) Unit number | 1. Contributing Factor <br> * $=$ alcohol or drugs involved <br> 2. Most Harmful Event <br> For single vehicle crashes, the most harmful even shown in parentheses in the "Type of Collision column |  |  |
| Crash No. | Crash Severity <br> Date, Day <br> Surface Conditions, Weather <br> Lighting, Time <br> Road Geometrics, Relation to Jct |  | Type of Collision | (1) AGE SEX CITY STATE Unit Configuration Movement (traffic control) Contributing Factor ${ }^{1}$ Most Harmful Event ${ }^{2}$ |  |  | Shortened Narrative | Name of Intersection | Diagram |
| $41 \quad 1074361$ | Non-incapacitating injury <br> 03/05/19 Tuesday <br> Snow Clear <br> Dark(L) 10:55 PM <br> Straight (on Level) Non-junction | * | Rear End | (1) 39 F M MN <br> Passenger Car WB Going Straight Careless/Reckless Driving | (2) 28 M FARGO ND Passenger Car WB Stopped (Signal) |  |  |  | $\leftarrow \leftarrow$ |
| $42 \quad 1076466$ | PDO <br> 04/11/19 Thursday <br> Snow Blowing Snow <br> Daylight 4:15 PM <br> Straight (on Level) Non-junction | 事 | Rear End | (1) 36M FARGO ND <br> Pickup - Van - Utility WB Going Straight Following too Close* | (2) $30 F$ FARGO DC <br> Passenger Car <br> WB Stopped <br> Weather | (3) 61M FARGO ND <br> Pickup - Van - Utility WB Stopped Weather |  |  | $\leftarrow \leftarrow$ |
| 431077137 | PDO <br> 04/26/19 Friday <br> Dry Clear <br> Dawn 6:00 AM <br> Straight (on Level) Intersection |  | Rear End | (1) 57F FARGO ND <br> Pickup - Van - Utility NB Going Straight (Signal) Following too Close | (2) 22F FARGO ND Pickup - Van - Utility NB Going Straight (Signal) |  |  |  | $\begin{aligned} & \uparrow \\ & \uparrow \end{aligned}$ |
| $44 \quad 1078396$ | PDO <br> 05/23/19 Thursday <br> Dry Cloudy <br> Daylight 12:05 PM <br> Straight (on Level) Non-junction |  | Sideswipe (Same Dir.) | (1) 72M PLAZA ND <br> Pickup - Van - Utility <br> SB Changing Lanes (Signal) Other | (2) $15 F$ FARGO ND Passenger Car SB Going Straight (Signal) |  |  |  | $\downarrow \downarrow$ |
| $45 \quad 1079035$ | PDO <br> 06/05/19 Wednesday <br> Dry Clear <br> Daylight 6:40 AM <br> Straight (on Level) Intersection |  | Left Turn | (1) 19M MONTEVIDEO MN <br> Passenger Car <br> WB Going Straight (Signal) <br> Ran Red Light | (2) 47F FARGO ND Passenger Car EB Turning Left (Signal) |  |  |  | $\rightarrow \leftarrow$ |
| $\begin{array}{\|ll\|} \hline 46 & 1079355 \quad D \end{array}$ | Possible Injury <br> 06/12/19 Wednesday <br> Dry Clear <br> Daylight 12:54 PM <br> Straight (on Level) Intersection |  | Ped / Bike | (1) 98M FARGO ND <br> Passenger Car NB Turning Right (Signal) Failed to Yield Pedestrian | (2) 17M FARGO ND <br> Pedestrian <br> SB Crossing (Signal) <br> Pedestrian |  | D1 made a NB to EB right turn and hit skateboarder (SB in east leg crosswalk). |  | $\begin{aligned} & \downarrow \\ & \uparrow \end{aligned}$ |
| $47 \quad 1079906$ | Non-incapacitating injury <br> 06/24/19 Monday <br> Dry Cloudy <br> Daylight 3:31 PM <br> Straight (on Level) Intersection |  | Left Turn | (1) 21F FARGO ND <br> Passenger Car <br> SB Going Straight (Signal) <br> Careless/Reckless Driving | (2) 33F FARGO ND <br> Passenger Car NB Turning Left (Signal) Careless/Reckless Driving |  |  |  | $\stackrel{\downarrow}{\uparrow}$ |
| $48 \quad 1080944$ | PDO <br> 07/15/19 Monday <br> Dry Clear <br> Daylight 7:54 AM <br> Straight (on Level) Intersection |  | Angle | (1) 42F MOORHEAD MN <br> Pickup - Van - Utility WB Going Straight (Signal) Ran Red Light | (2) 27F FARGO ND <br> Passenger Car SB Going Straight (Signal) |  |  |  | $\begin{aligned} & \downarrow \\ & \leftarrow \end{aligned}$ |
| $49 \quad 1081691$ | PDO <br> 07/26/19 Friday <br> Dry Clear <br> Daylight 12:24 PM <br> Straight (on Level) Intersection |  | Rear End | (1) 17F WEST FARGO ND <br> Passenger Car <br> SB Going Straight (Signal) Careless/Reckless Driving | (2) 44 F MOORHEAD MN Passenger Car SB Stopped (Signal) |  |  |  | $\begin{aligned} & \downarrow \\ & \downarrow \end{aligned}$ |
| $50 \quad 1085043$ | Possible Injury 10/11/19 Friday Wet Cloudy Daylight 3:58 PM Straight (on Level) Intersection | - | Angle | (1) 42M FARGO ND <br> Pickup - Van - Utility <br> EB Going Straight (Signal) <br> Ran Red Light | (2) 30F FARGO ND <br> Passenger Car <br> NB Turning Right (Signal) <br> Weather |  |  |  | $\rightarrow_{\uparrow}$ |



| Rural Segment Crash Summary Sheets |  |  |  |  |  |  | 1 Contributina Factor Appendix - Fxisting Conditions Report |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Crashes: <br> City: <br> Location: <br> Start - End Date: | 64 (Sorted by Date) Fargo 32nd Ave S \& 25th St 1/1/2017-12/31/2021 (5 Years) |  | C § 409 Documents Reserves All Objections |  |  | LEGEND <br> -Fatal <br> -Incapacitating Injury <br> - Non-Incapacitating Injury <br> $\triangleright$ Possible Injury <br> -Wet surface <br> * Snow, Ice, Slush, Frost <br> $\triangle$ Crash related to work zone <br> (1) Unit number |  |  |  |
| Crash No. | Crash Severity <br> Date, Day <br> Surface Conditions, Weather <br> Lighting, Time <br> Road Geometrics, Relation to Jct |  | Type of Collision | (1) AGE SEX CITY STATE Unit Configuration Movement (traffic control) Contributing Factor ${ }^{1}$ Most Harmful Event ${ }^{2}$ |  |  | Shortened Narrative | Name of Intersection | Diagram |
| $61 \quad 1113571$ | Incapacitating Injury <br> 10/14/21 Thursday <br> Dry Clear <br> Dark(L) 8:17 PM <br> Straight (on Level) Intersection |  | Left Turn | (1) 18M HARWOOD ND Pickup - Van - Utility EB Going Straight (Signal) | (2) 33 M FARGO ND <br> Pickup - Van - Utility WB Turning Left (Signal) Failed to Yield* |  | D2 (DUI) attempted to make a WB to SB left turn and was hit by V1 (EB). |  | $\rightarrow \leftarrow$ |
| $\begin{array}{\|l\|} \hline 62 \\ \hline \end{array} 1114848$ | Non-incapacitating injury <br> 11/14/21 Sunday <br> Wet Clear <br> Daylight 4:00 PM <br> Straight (on Level) Non-junction |  | Sideswipe (Same Dir.) | (1) 37M FARGO ND <br> Pickup - Van - Utility SB Merging/Diverging Careless/Reckless Driving* | (2) 55 M FARGO ND Pickup - Van - Utility SB Going Straight |  |  |  | $\downarrow \downarrow$ |
| 63 1116157 | PDO <br> 12/14/21 Tuesday <br> Dry Cloudy <br> Daylight 1:50 PM <br> Straight (on Level) Intersection |  | Rear End | (1) 37M FARGO ND <br> Passenger Car EB Going Straight (Signal) Following too Close | (2) 53M FARGO ND <br> Pickup - Van - Utility <br> EB Going Straight (Signal) |  |  |  | $\rightarrow \rightarrow$ |
| $\begin{array}{\|cc\|} \hline 64 & 1116569 \quad \triangleright \end{array}$ | Possible Injury 12/21/21 Tuesday Ice / Snow Clear Dark(L) 5:35 PM Straight (on Level) Intersection | 事 | Left Turn | (1) 57M FARGO ND Passenger Car SB Going Straight (Signal) | (2) 57F FARGO ND <br> Pickup - Van - Utility NB Turning Left (Signal) Failed to Yield |  |  |  | $\stackrel{\downarrow}{\downarrow}$ |
| 65 |  |  |  |  |  |  |  |  |  |
| 66 |  |  |  |  |  |  |  |  |  |
| 67 |  |  |  |  |  |  |  |  |  |
| 68 |  |  |  |  |  |  |  |  |  |
| 69 |  |  |  |  |  |  |  |  |  |
| 70 |  |  |  |  |  |  |  |  |  |





| Total Crashes： <br> City： <br> Location： <br> Start－End Date： | 10 （Sorted by Date）Fargo25th St \＆Kristen Ln1／1／2017－12／31／2021（5 Years） | Rural Segment Crash Summary Sheets |  |  |  |  | Appendix－Fxisting Conditions Report |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 09 Documents ves All Objections |  |  | LEGEND <br> －Fatal <br> －Incapacitating Injury <br> －Non－Incapacitating Injury <br> $\triangleright$ Possible Injury <br> －Wet surface <br> ＊Snow，Ice，Slush，Frost <br> $\triangle$ Crash related to work zone <br> （1）Unit number | 1．Contributing Factor <br> ＊alcohol or drugs involved <br> 2．Most Harmful Event <br> For single vehicle crashes，the most harmful event is shown in parentheses in the＂Type of Collision＂ column |  |  |
| Crash No． | Crash Severity <br> Date，Day <br> Surface Conditions，Weather <br> Lighting，Time <br> Road Geometrics，Relation to Jct |  | Type of Collision | （1）AGE SEX CITY STATE Unit Configuration Movement（traffic control） Contributing Factor ${ }^{1}$ Most Harmful Event ${ }^{2}$ |  |  | Shortened Narrative | Name of intersection | Diagram |
| 1028579 | PDO <br> 02／07／17 Tuesday <br> Snow Blowing Snow <br> Daylight 8：39 AM <br> Straight（on Level）Intersection | 沗 | Angle | （1）27F SIOUX FALLS SD <br> Passenger Car <br> SB Going Straight <br> Weather | （2） 26 F GRAND FORKS ND <br> Pickup－Van－Utility EB Turning Right（Stop） Ran Red Light |  |  |  | $\xrightarrow[\rightarrow]{\downarrow}$ |
| 1031040 | PDO <br> 03／20／17 Monday <br> Dry Clear <br> Daylight 1：30 PM <br> Straight（on Level）Intersection |  | Angle | $\begin{aligned} & \text { (1) 21M FARGO ND } \\ & \text { Passenger Car } \\ & \text { SB Going Straight } \end{aligned}$ | （2） 18 F FARGO ND <br> Pickup－Van－Utility WB Going Straight Failed to Yield |  |  |  | $\begin{aligned} & \downarrow \\ & \leftarrow \end{aligned}$ |
| 1041876 | Non－incapacitating injury 10／17／17 Tuesday <br> Dry Clear <br> Daylight 5：14 PM <br> Straight（on Level）Intersection |  | Left Turn | （1）41M FARGO NDY Motorcycle SB Going Straight Speed | （2）38F WEST FARGO ND <br> Pickup－Van－Utility NB Turning Left（Stop） |  |  |  | $\stackrel{\downarrow}{\uparrow}$ |
| 41046488 | PDO <br> 12／27／17 Wednesday <br> Ice／Snow Clear <br> Daylight 8：28 AM <br> Straight（on Level）Intersection | 賈 | Left Turn | ```(1) 31F FARGO ND Passenger Car EB Turning Left (Stop) Failed to Yield``` | （2）35F WEST FARGO ND Pickup－Van－Utility WB Going Straight（Stop） |  |  |  | $\rightarrow \leftarrow$ |
| 1065641 | PDO <br> 11／15／18 Thursday <br> Snow Snow <br> Dusk 6：30 PM <br> Straight（on Level）Non－junction | 事 | Angle | （1） 68 M FARGO ND Pickup－Van－Utility SB Going Straight Weather | （2）19F WILLMAR ND <br> Pickup－Van－Utility EB Turning Right（Stop） Weather |  |  |  | $\rightarrow$ |
| 61068258 | PDO <br> 12／26／18 Wednesday <br> Snow Snow <br> Daylight 1：00 PM <br> Straight（on Level）Intersection | ＊ | Angle | （1） 25 M CROOKSTON MN <br> Pickup－Van－Utility EB Turning Left（Stop） Failed to Yield | （2） 58 M FARGO ND <br> Pickup－Van－Utility <br> SB Going Straight Weather |  |  |  | $\rightarrow$ |
| 1072952 | PDO <br> 02／20／19 Wednesday <br> Snow Cloudy <br> Daylight 3：04 PM <br> Straight（on Level）Intersection | 氷 | Angle | （1）39F FARGO ND <br> Passenger Car SB Going Straight Weather | （2）57F WEST FARGO ND <br> Pickup－Van－Utility EB Merging／Diverging（Stop） Failed to Yield |  |  |  | $\xrightarrow{\downarrow}$ |
| 81074444 | PDO 03／06／19 Wednesday <br> Snow Clear <br> Dusk 5：25 PM <br> Straight（on Level）Intersection | 束 | Angle | （1）62F KINDRED ND <br> Passenger Car SB Going Straight Vision Obstructed | （2） 30 M FARGO ND <br> Pickup－Van－Utility EB Turning Left（Stop） Failed to Yield |  |  |  | $\xrightarrow{\downarrow}$ |
| 91091753 | PDO <br> 02／15／20 Saturday <br> Dry Clear <br> Daylight 10：05 AM <br> Straight（on Level）Intersection |  | Angle | （1）33F MOORHEAD MN <br> Pickup－Van－Utility EB Turning Left（Stop） Failed to Yield | （2）70M FARGO ND Passenger Car SB Going Straight |  |  |  | $\rightarrow$ |
| 101095019 | PDO <br> 06／04／20 Thursday <br> Dry Clear <br> Daylight 2：15 PM <br> Straight（on Level）Intersection |  | Angle | （1） 26 F FARGO ND Passenger Car EB Turning Left（Stop） Failed to Yield | （2）77F FARGO ND Pickup－Van－Utility SB Going Straight |  |  |  | $\xrightarrow{\downarrow}$ |





|  |  | Rural Segment Crash Summary Sheets |  |  |  | Appendix - Fxisting Conditions Report |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Crashes: City: Location: Start - End Date: | 2 (Sorted by Date) <br> Fargo <br> 25th St \& 33rd Ave S <br> 1/1/2017-12/31/2021 (5 Years) | 23 USC § 409 Documents <br> NDDOT Reserves All Objections |  |  | LEGEND <br> Incapacitating Injury <br> Non-Incapacitating Injury <br> $\triangle$ Possible Injury <br> -Wet surface <br> Snow, Ice, Slush, Frost <br> Crash related to work zone <br> (1) Unit number | Most Harmful Event <br> For single vehicle crashes, the most harmful event is <br> shown in parentheses in the "Type of Collision" <br> column |  |  |
| Crash No. | Crash Severity Date, Day Surace Conditions, weather Lighting, Time Road Geometrics, Relation to Jct | Type of Collision |  |  |  | Shortened Narative | Name of Intersection | Diagram |
| 11103339 | PDO <br> 01/16/21 Saturday <br> Wet Cloudy <br> Daylight 12:43 PM <br> Straight (on Level) Intersection | - Angle | $\begin{aligned} & \text { (1) } 54 \mathrm{M} \text { FARGO ND } \\ & \text { Passenger Car } \\ & \text { WB Slowing/Stopping (Stop) } \\ & \text { Careless/Reckless Driving } \end{aligned}$ | (2) 44F MOORHEAD MN Pickup - Van - Utility NB Going Straight |  |  |  | $\uparrow$ |
| $1066378>$ | Possible Injury <br> 11/23/18 Friday <br> Wet Cloudy <br> Daylight 10:20 AM <br> Straight (on Level) Intersection | - $\quad$ Sideswipe (Same Dir.) | $\begin{aligned} & \text { (1) 54F ST.CLOUD MN } \\ & \text { Pickup - Van - Utility } \\ & \text { NB Turning Right } \\ & \text { Improper Turn } \end{aligned}$ | (2) 31F FARGO ND Pickup - Van - Utility NB Going Straight Other |  |  |  | $\uparrow \uparrow$ |
| 3 |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |







Statistics for Total Crashes


| Rural Segment Crash Summary Sheets |  |  |  |  |  |  | Appendix－Fxisting Conditions Report |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Crashes： <br> City： <br> Location： <br> Start－End Date： | ```16 (Sorted by Date) Fargo 25th St & 35th Ave S 1/1/2017-12/31/2021 (5 Years)``` |  | C § 409 Documents Reserves All Objections |  |  | LEGEND <br> Fatal <br> Incapacitating Injury <br> －Non－Incapacitating Injury <br> $\triangle$ Possible Injury <br> －Wet surface <br> ＊Snow，Ice，Slush，Frost <br> ACrash related to work zone <br> （1）Unit number | 1．Contributing Factor <br> ＊$=$ alcohol or drugs involved <br> 2．Most Harmful Event <br> For single vehicle crashes，the most harmful event is shown in parentheses in the＂Type of Collision＂ column |  |  |
| Crash No． | Crash Severity <br> Date，Day <br> Surface Conditions，Weather <br> Lighting，Time <br> Road Geometrics，Relation to Jct |  | Type of Collision | （1）AGE SEX CITY STATE Unit Configuration Movement（traffic control） Contributing Factor ${ }^{1}$ Most Harmful Event ${ }^{2}$ |  |  | Shortened Narrative | Name of Intersection | Diagram |
| 11032880 | PDO <br> 04／26／17 Wednesday <br> Snow Cloudy <br> Daylight 8：25 AM <br> Straight（on Level）Non－junction | 湶 | Rear End | （1）30F MAPLETON ND <br> Pickup－Van－Utility <br> NB Going Straight <br> Following too Close | （2）42M WEST FARGO ND <br> Pickup－Van－Utility <br> NB Stopped |  |  |  | $\uparrow \uparrow$ |
| $1033330 \quad D$ | Possible Injury <br> 05／08／17 Monday <br> Dry Cloudy <br> Daylight 12：55 PM <br> Straight（on Level）Non－junction |  | Rear End | （1）79F FARGO ND <br> Pickup－Van－Utility NB Going Straight（Signal） Following too Close | （2） 28 F FARGO ND <br> Pickup－Van－Utility <br> NB Going Straight（Signal） <br> Following too Close |  |  |  | $\uparrow \uparrow$ |
| 1040903 | PDO <br> 09／29／17 Friday <br> Dry Clear <br> Daylight 12：12 PM <br> Straight（on Level）Intersection |  | Left Turn | （1）41M FARGO ND Passenger Car NB Going Straight（Signal） | （2）49M HORACE ND <br> Pickup－Van－Utility <br> SB Turning Left（Signal） <br> Failed to Yield |  |  |  | $\downarrow$ |
| 1043197 | PDO <br> 11／06／17 Monday <br> Snow Sleet／Hail／Freezing Rain <br> Dark（L）6：20 PM <br> Straight（on Level）Intersection | 事 | Left Turn | （1）17F FARGO ND <br> Passenger Car <br> NB Going Straight（Signal） Weather | （2）25F WEST FARGO ND <br> Passenger Car SB Turning Left（Signal） Failed to Yield |  |  |  | $\downarrow$ |
| 1052278 | PDO <br> 03／19／18 Monday <br> Wet Rain <br> Daylight 2：45 PM <br> Straight（on Level）Intersection |  | Sideswipe（Opp．Dir．） | （1）17F FARGO ND Passenger Car NB Going Straight | （2） 83 M FARGO ND Passenger Car SB Going Straight |  |  |  | $\begin{aligned} & \downarrow \\ & \uparrow \end{aligned}$ |
| 1055267 | PDO <br> 05／11／18 Friday <br> Dry Clear <br> Daylight 3：05 PM <br> Straight（on Level）Intersection |  | Rear End | （1）17F FARGO ND <br> Passenger Car <br> NB Going Straight（Signal） <br> Following too Close | （2）36F FARGO ND Pickup－Van－Utility NB Stopped（Signal） |  |  |  | $\uparrow \uparrow$ |
| $1056683$ | Non－incapacitating injury 06／10／18 Sunday <br> Dry Clear <br> Daylight 9：37 AM <br> Straight（on Level）Intersection |  | Angle | （1）60F FARGO ND Pickup－Van－Utility SB Going Straight（Signal） | （2） $69 F$ FARGO ND <br> Pickup－Van－Utility WB Going Straight（Signal） Ran Red Light |  |  |  | $\begin{aligned} & \downarrow \\ & \leftarrow \end{aligned}$ |
| $1061499 \text { D }$ | Possible Injury <br> 09／10／18 Monday <br> Dry Clear <br> Daylight 10：25 AM <br> Straight（on Level）Non－junction |  | Rear End | （1）61M ALICE ND <br> Pickup－Van－Utility SB Going Straight | （2） 35 F FARGO ND Passenger Car SB Going Straight |  |  |  | $\begin{aligned} & \downarrow \\ & \downarrow \end{aligned}$ |
| 1065297 | PDO <br> 11／06／18 Tuesday <br> Snow Snow <br> Dusk 6：30 PM <br> Straight（on Level）Intersection | ＊ | Rear End | （1）19M FARGO ND <br> Passenger Car NB Going Straight（Signal） Following too Close | （2） 58 F FARGO ND <br> Pickup－Van－Utility <br> NB Going Straight（Signal） <br> Weather |  |  |  | $\begin{aligned} & \uparrow \\ & \uparrow \end{aligned}$ |
| $\begin{array}{\|l\|l\|} \hline 10 & 1065714 ~ \\ \hline \end{array}$ | Possible Injury 11／15／18 Thursday Snow Snow Dark（L）6：14 PM Straight（on Level）Intersection | 沗 | Rear End | （1）48M WEST FARGO ND <br> Pickup－Van－Utility WB Going Straight Weather＊ | （2）37F MOORHEAD MN Pickup－Van－Utility WB Stopped |  |  |  | $\leftarrow \leftarrow$ |






Statistics for Total Crashes






Statistics for Total Crashes

| Crash Severity | Letter <br> Code | No. of <br> Crashes |
| :---: | :---: | :---: |
| Fatal | K | 0 |
| Incapacitating Injury | A | 0 |
| Non-incapacitating Injury | B | 0 |
| Possible Injury | C | 0 |
| Property Damage Only | O | 2 |


| Manner of Collision |  |  | Breakdown by Severity |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Angle | K | A | B | C | 0 |  |  |
| Rear End | 0 | $0 \%$ | 0 | 0 | 0 | 0 | 0 |
| Left Turn | 2 | $100 \%$ | 0 | 0 | 0 | 0 | 2 |
| Sideswipe (same dir.) | 0 | $0 \%$ | 0 | 0 | 0 | 0 | 0 |
| Sideswipe (opp dir.) | 0 | $0 \%$ | 0 | 0 | 0 | 0 | 0 |
| Single Vehicle | 0 | $0 \%$ | 0 | 0 | 0 | 0 | 0 |
| Ped/Bike | 0 | $0 \%$ | 0 | 0 | 0 | 0 |  |
| Head On | 0 | $0 \%$ | 0 | 0 | 0 | 0 |  |
| Backing | 0 | $0 \%$ | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | $0 \%$ | 0 | 0 | 0 | 0 | 0 |
|  | 2 | $100 \%$ | 0 | 0 | 0 | 0 | 2 |







Statistics for Total Crashes




Statistics for Total Crashes



| Intersection and/or Urban Crash Summary Sheets |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Total Crashes: | 4 (Sorted by Date) |  |  |  |
| City: | Fargo | Notes: Non-injury animal crashes were | 23 USC § 409 Documents | $V 1510 \mathrm{~N}$ |
| Location: | 25th St \& Rose Creek Dr | not included. | NDDOT Reserves All Objections |  |
| Start - End Date: | 1/1/2017-12/31/2021 (5 Years) |  |  |  |

Statistics for Total Crashes










Statistics for Total Crashes






| Total Crashes: <br> City: <br> Location: <br> Start - End Date: | Rural Segment Crash Summary Sheets |  |  |  |  |  | Appendix - Fxisting Conditions Report |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 50 (Sorted by Date) Fargo 52 nd Ave S \& 25 th St 1/1/2017-12/31/2021 (5 Years) |  | C § 409 Documents Reserves All Objections |  |  | LEGEND <br> -Fatal <br> -Incapacitating Injury <br> - Non-Incapacitating Injury <br> $\triangleright$ Possible Injury <br> - Wet surface <br> , Snow, Ice, Slush, Frost <br> $\triangle$ Crash related to work zone <br> (1) Unit number | 1. Contributing Factor <br> * $=$ alcohol or drugs involved <br> 2. Most Harmful Event <br> For single vehicle crashes, the most harmful event is shown in parentheses in the "Type of Collision" column |  |  |
| Crash No. | Crash Severity Date, Day Surface Conditions, weather Lighting, Time Road Geometrics, Relation to Jct |  | Type of Collision | (1) AGE SEX CITY STATE Unit Configuration Movement (traffic control) Contributing Factor ${ }^{1}$ Most Harmful Event ${ }^{2}$ |  |  | Shortened Narrative | Name of intersection | Diagram |
| 1 1025344 <br>  81 <br>  921.07 | PDO <br> 01/02/17 Monday <br> Wet Snow <br> Dark(L) 5:53 PM <br> Straight (on Level) Intersection | - | Left Turn | (1) 21M BEULAH ND <br> Passenger Car <br> NB Turning Left (Signal) <br> Weather | (2) 17F FARGO ND <br> Passenger Car <br> SB Going Straight (Signal) <br> Weather |  |  |  | $\downarrow$ |
| 2 $1026265 \quad \triangleright$ <br>  81 <br>  921.1 | Possible Injury <br> 01/09/17 Monday <br> Snow Cloudy <br> Daylight 1:25 PM <br> Straight (on Level) Intersection | 嗄 | Left Turn | (1) 61F FARGO ND <br> Passenger Car EB Going Straight (Signal) | (2) 28 F FARGO ND <br> Passenger Car WB Turning Left (Signal) | (3) 63F WOLVERTON MN Pickup - Van - Utility NB Stopped (Signal) |  |  | $\rightarrow \leftarrow$ |
| 3 1028869 <br>  81 <br>  921.1 | PDO <br> 02/09/17 Thursday <br> Dry Clear <br> Daylight 9:51 AM <br> Straight (on Level) Intersection |  | Other | (1) 34F MOORHEAD MN Passenger Car WB Turning Left (Signal) | (2) $15 F$ FARGO ND <br> Pickup - Van - Utility EB Turning Right (Signal) Failed to Yield |  | D1 made a WB to SB left turn on green arrow and hit V2 (making EB to SB right turn on red and turned into furthest available lane rather than nearest available lane). |  | $\rightarrow \leftarrow$ |
| 4 1029244 <br>  81 <br>  921.09 | PDO <br> 02/15/17 Wednesday <br> Dry Clear <br> Daylight 9:08 AM <br> Straight (on Level) Non-junction |  | Rear End | (1) 46M FARGO ND <br> Pickup - Van - Utility WB Going Straight (Signal) Other | (2) 30M MOORHEAD MN <br> Passenger Car WB Stopped (Signal) |  |  |  | $\leftarrow \leftarrow$ |
| 5 1029697 <br>  81 <br>  921.1 | PDO <br> 02/23/17 Thursday <br> Ice / Snow Clear <br> Dawn 7:05 AM <br> Straight (on Level) Intersection | 事 | Left Turn | (1) 21M FARGO ND <br> Pickup - Van - Utility WB Turning Left (Signal) Weather | (2) 56F WEST FARGO ND <br> Passenger Car <br> EB Going Straight (Signal) <br> Weather |  |  |  | $\rightarrow \leftarrow$ |
| 6 $1033730 \quad$ <br>  81 <br>  921.1 | Possible Injury <br> 05/15/17 Monday <br> Dry Cloudy <br> Daylight 11:40 AM <br> Straight (on Level) Non-junction |  | Rear End | (1) 60M FARGO ND <br> Passenger Car <br> WB Going Straight (Signal) <br> Careless/Reckless Driving* | (2) 38 M HAWLEY MN Pickup - Van - Utility WB Stopped (Signal) |  |  |  | $\leftarrow \leftarrow$ |
| $1034153 \triangleright$ | Possible Injury <br> 05/24/17 Wednesday <br> Dry Cloudy <br> Daylight 1:55 PM <br> Straight (on Level) Intersection |  | Angle | (1) 18F FARGO ND <br> Passenger Car NB Turning Left (Beacon) | (2) 50F HORACE ND <br> Pickup - Van - Utility EB Going Straight (Signal) Ran Red Light |  |  |  | $\rightarrow_{\uparrow}$ |
| 8 1034556 <br>  81 <br>  921.1 | PDO <br> 06/01/17 Thursday <br> Dry Clear <br> Daylight 1:55 PM <br> Straight (on Level) Intersection |  | Sideswipe (Same Dir.) | (1) 76M MOTT ND <br> Pickup - Van - Utility NB Turning Left (Signal) | (2) 22 F BEULAH ND Pickup - Van - Utility NB Turning Left (Signal) |  |  |  | $\uparrow \uparrow$ |
| 91035049 | PDO <br> 06/11/17 Sunday <br> Dry Clear <br> Dark(L) 2:35 AM <br> Straight (on Level) Intersection |  | Left Turn | (1) 19F HORACE ND <br> Passenger Car EB Turning Left (Signal) Failed to Yield* | (2) 29 M MILNOR ND <br> Passenger Car WB Going Straight (Signal) |  |  |  | $\rightarrow \leftarrow$ |
| 101036577 | PDO <br> 07/11/17 Tuesday <br> Dry Clear <br> Daylight 2:15 PM <br> Straight (on Level) Non-junction |  | Rear End | (1) 18F FARGO ND <br> Passenger Car <br> NB Going Straight (Signal) <br> Following too Close | (2) 36F WEST FARGO ND <br> Pickup - Van - Utility NB Going Straight (Signal) Following too Close |  |  |  | $\begin{aligned} & \uparrow \\ & \uparrow \end{aligned}$ |


| Rural Segment Crash Summary Sheets |  |  |  |  |  |  | Appendix - Fxisting Conditions Report |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Crashes: <br> City: <br> Location: <br> Start - End Date: | 50 (Sorted by Date) Fargo 52 nd Ave S \& 25th St 1/1/2017-12/31/2021 (5 Years) |  | C § 409 Documents Reserves All Objections |  |  | LEGEND <br> Fatal <br> -Incapacitating Injury <br> -Non-Incapacitating Injury <br> $\triangleright$ Possible Injury <br> -Wet surface <br> *Snow, Ice, Slush, Frost <br> $\triangle$ Crash related to work zone <br> (1) Unit number | 1. Contributing Factor <br> * $=$ alcohol or drugs involved <br> 2. Most Harmful Event <br> For single vehicle crashes, the most harmful event is shown in parentheses in the "Type of Collision" column |  |  |
| Crash No. | Crash Severity <br> Date, Day <br> Surface Conditions, Weather <br> Lighting, Time <br> Road Geometrics, Relation to Jct |  | Type of Collision | (1) AGE SEX CITY STATE Unit Configuration Movement (traffic control) Contributing Factor ${ }^{1}$ Most Harmful Event ${ }^{2}$ |  |  | Shortened Narrative | Name of Intersection | Diagram |
| $\begin{array}{\|lll} \hline 11 & 1045879 \\ & 81 \\ & 921.09 & \triangleright \\ & \end{array}$ | Possible Injury <br> 12/11/17 Monday <br> Dry Clear <br> Daylight 2:45 PM <br> Straight (on Level) Intersection |  | Rear End | (1) 63M WEST FARGO ND <br> Pickup - Van - Utility EB Going Straight (Signal) Following too Close | (2) 62F FARGO ND Pickup - Van - Utility EB Stopped (Signal) |  |  |  | $\rightarrow \rightarrow$ |
| 12 1045960 <br>  81 <br>  921.06 | PDO <br> 12/20/17 Wednesday <br> Snow Cloudy <br> Dark(L) 6:20 PM <br> Straight (on Level) Intersection | * | Left Turn | (1) 18M FARGO ND Passenger Car SB Going Straight (Signal) | (2) $16 F$ FARGO ND <br> Pickup - Van - Utility NB Turning Left (Signal) Failed to Yield |  |  |  | $\downarrow$ |
| 13 1048231 <br>  81 <br>  921.06 | PDO <br> 01/14/18 Sunday <br> Snow Clear <br> Daylight 3:50 PM <br> Straight (on Level) Intersection | * | Single Veh. (Traffic Signal Pole) | (1) 37F MOORHEAD MN <br> Pickup - Van - Utility WB Going Straight (Signal) Traffic Signal Pole | (2) 38 M FARGO ND <br> Pickup - Van - Utility SB Going Straight (Signal) Careless/Reckless Driving |  |  |  | $\mathrm{X} \leftarrow$ |
| $\begin{array}{\|ll} \hline 14 & 1048187 \\ & 81 \\ & 921.09 \end{array}$ | PDO <br> 01/15/18 Monday <br> Snow Cloudy <br> Daylight 3:15 PM <br> Straight (on Level) Intersection | 瀚 | Angle | (1) 18F FARGO ND <br> Passenger Car <br> SB Going Straight (Signal) <br> Weather | (2) 35 M FARGO ND <br> Pickup - Van - Utility <br> EB Going Straight (Signal) <br> Weather |  |  |  | $\xrightarrow{\downarrow}$ |
| $\begin{array}{\|ll\|} \hline 15 & 1049415 \\ & 81 \\ & 921.1 \end{array}$ | PDO <br> 02/05/18 Monday <br> Dry Clear <br> Daylight 3:38 PM <br> Straight (on Level) Intersection |  | Left Turn | $\begin{aligned} & \text { (1) } 38 \text { F FARGO ND } \\ & \text { Pickup - Van - Utility } \\ & \text { WB Going Straight (Signal) } \end{aligned}$ | (2) 58 M FARGO ND <br> Pickup - Van - Utility <br> EB Turning Left Improper Turn |  |  |  | $\rightarrow \leftarrow$ |
| $\begin{array}{\|rl\|} \hline 16 & 1054671 \\ & 81 \\ & 921.1 \end{array}$ | PDO <br> 05/01/18 Tuesday <br> Dry Cloudy <br> Daylight 8:45 AM <br> Straight (on Level) Intersection |  | Angle | (1) 17F FARGO ND <br> Passenger Car <br> SB Going Straight (Signal) | (2) 18 F FARGO ND <br> Passenger Car <br> EB Turning Right (Signal) |  |  |  | $\xrightarrow{\downarrow}$ |
| $\begin{array}{\|rl} \hline 17 & 1059036 \\ & 81 \\ & 921.1 \end{array}$ | PDO <br> 07/20/18 Friday <br> Dry Clear <br> Daylight 4:15 PM <br> Straight (on Level) Intersection |  | Sideswipe (Same Dir.) | (1) 29F FARGO ND Passenger Car NB Turning Left (Signal) | (2) U <br> Hit and Run <br> NB Turning Left (Signal) |  |  |  | $\uparrow \uparrow$ |
| $\begin{array}{\|ll\|} \hline 18 & 1059943 \\ & 81 \\ & 921.07 \end{array}$ | PDO <br> 08/12/18 Sunday <br> Dry Clear <br> Daylight 4:45 PM <br> Straight (on Level) Intersection |  | Sideswipe (Same Dir.) | (1) 55F WEST FARGO ND <br> Pickup - Van - Utility WB Turning Left (Signal) Improper Turn | (2) 32 M PERHAM MN <br> Pickup - Van - Utility WB Turning Left (Signal) |  |  |  | $\leftarrow$ |
| $\begin{array}{\|lll} \hline 19 & 1062911 \quad \triangleright \\ & 81 \\ & 921.07 & \\ \hline \end{array}$ | Possible Injury <br> 10/05/18 Friday <br> Wet Cloudy <br> Daylight 8:38 AM <br> Straight (on Level) Intersection | - | Angle | (1) 32F FARGO ND <br> Pickup - Van - Utility <br> NB Going Straight (Signal) <br> Ran Red Light | (2) 74 F FARGO ND <br> Pickup - Van - Utility WB Going Straight (Signal) |  |  |  | $\uparrow$ |
| $\begin{array}{\|rl\|} \hline 20 & 1062934 \\ & 81 \\ & 921.06 \end{array}$ | PDO <br> 10/05/18 Friday <br> Wet Rain <br> Daylight 5:50 PM <br> Straight (on Level) Intersection | - | Left Turn | (1) 38M FARGO ND Passenger Car SB Going Straight (Signal) | (2) 17F FARGO ND <br> Pickup - Van - Utility NB Turning Left (Signal) Failed to Yield |  |  |  | $\stackrel{\downarrow}{\uparrow}$ |


| Total Crashes： <br> City： <br> Location： <br> Start－End Date： | Rural Segment Crash Summary Sheets |  |  |  |  |  | Appendix－Fxisting Conditions Report |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 50 （Sorted by Date） Fargo 52nd Ave S \＆ 25 th St $1 / 1 / 2017-12 / 31 / 2021$（5 Years） |  | 409 Documents rves All Objections |  |  | LEGEND <br> －Fatal <br> －Incapacitating Injury <br> －Non－Incapacitating Injury <br> $\triangleright$ Possible Injury <br> －Wet surface <br> ＊Snow，Ice，Slush，Frost <br> $\triangle$ Crash related to work zone <br> （1）Unit number | 1．Contributing Factor <br> ＊alcohol or drugs involved <br> 2．Most Harmful Event <br> For single vehicle crashes，the most harmful event is shown in parentheses in the＂Type of Collision＂ column |  |  |
| Crash No． | Crash Severity <br> Date，Day <br> Surface Conditions，Weather <br> Lighting，Time <br> Road Geometrics，Relation to Jct |  | Type of Collision | （1）AGE SEX CITY STATE Unit Configuration Movement（traffic control） Contributing Factor ${ }^{1}$ Most Harmful Event ${ }^{2}$ |  |  | Shortened Narrative | Name of intersection | Diagram |
| 21 1068855 <br>  81 <br>  921.1 | Non－incapacitating injury 01／02／19 Wednesday Ice／Snow Cloudy Daylight 10：18 AM Straight（on Level）Intersection | 賈 | Left Turn | （1）21F FARGO ND <br> Pickup－Van－Utility NB Turning Left（Signal） Weather | （2）72M FARGO ND School Bus SB Going Straight（Signal） |  |  |  | $\downarrow$ |
| 22 1071474 <br>  81 <br>  921.09 | PDO <br> 02／05／19 Tuesday <br> Ice／Snow Cloudy <br> Daylight 11：09 AM <br> Straight（on Level）Intersection | 嗄 | Rear End | （1）39F FARGO ND <br> Passenger Car <br> EB Going Straight（Signal） <br> To Fast for Conditions | （2）73F FARGO ND Pickup－Van－Utility EB Stopped（Signal） |  |  |  | $\rightarrow \rightarrow$ |
| 23 1071255 <br>  81 <br>  921.07 | PDO <br> 02／05／19 Tuesday <br> Snow Clear <br> Daylight 4：00 PM <br> Straight（on Level）Intersection | 事 | Left Turn | （1）16F FARGO ND <br> Pickup－Van－Utility NB Turning Left（Signal） | （2） 16 F FARGO ND <br> Passenger Car <br> SB Going Straight（Signal） <br> Failed to Yield |  |  |  | $\stackrel{\downarrow}{\uparrow}$ |
| $\begin{array}{\|cl\|} \hline 24 & 1071283 \\ & 81 \\ & 921.1 \end{array}$ | PDO <br> 02／05／19 Tuesday <br> Snow Clear <br> Daylight 7：28 PM <br> Straight（on Level）Intersection | 賈 | Rear End | （1）U <br> Hit and Run WB Going Straight（Signal） | （2） 28 M FARGO ND Passenger Car WB Turning Left（Signal） |  |  |  | $\leftarrow \leftarrow$ |
| $\begin{array}{\|rl} \hline 25 & 1072125 \\ & 81 \\ & 921.1 \end{array}$ | PDO <br> 02／12／19 Tuesday <br> Snow Cloudy <br> Daylight 11：45 AM <br> Straight（on Level）Intersection | 事 | Rear End | $\begin{aligned} & \text { (1) 40F FARGO ND } \\ & \text { Pickup - Van - Utility } \\ & \text { EB Going Straight (Signal) } \end{aligned}$ | （2）37F FARGO ND <br> Pickup－Van－Utility <br> EB Going Straight（Signal） |  |  |  | $\rightarrow \rightarrow$ |
| $\begin{array}{\|rl\|} \hline 26 & 1072928 \\ & 81 \\ & 921.1 \end{array}$ | PDO <br> 02／12／19 Tuesday <br> Ice／Snow Cloudy <br> Daylight 3：05 PM <br> Straight（on Level）Intersection | ＊ | Left Turn | （1）17M FARGO ND <br> Passenger Car <br> NB Going Straight（Signal） Weather | （2）71F FARGO ND <br> Passenger Car SB Turning Left（Signal） Failed to Yield |  |  |  | $\downarrow$ |
| 27 1075918 <br>  81 <br>  921.1 | PDO <br> 03／27／19 Wednesday <br> Dry Clear <br> Daylight 6：55 AM <br> Straight（on Level）Intersection |  | Left Turn | $\begin{aligned} & \text { (1) 46F FARGO ND } \\ & \text { Pickup - Van - Utility } \\ & \text { SB Going Straight (Signal) } \end{aligned}$ | （2）30M FARGO ND <br> Passenger Car NB Turning Left（Signal） Failed to Yield |  |  |  | $\stackrel{\downarrow}{\uparrow}$ |
| $\begin{array}{\|rl} \hline 28 & 1078460 \\ & 81 \\ & 921.07 \end{array}$ | PDO <br> 05／24／19 Friday <br> Wet Cloudy <br> Daylight 1：10 PM <br> Straight（on Level）Intersection | － | Left Turn | $\begin{aligned} & \text { (1) 38M MOORHEAD MN } \\ & \text { Passenger Car } \\ & \text { WB Going Straight (Signal) } \end{aligned}$ | （2） 28 M FARGO ND <br> Pickup－Van－Utility EB Turning Left（Signal） Failed to Yield |  |  |  | $\rightarrow \leftarrow$ |
| 291083752 | PDO <br> 09／15／19 Sunday <br> Dry Clear <br> Daylight 7：34 PM <br> Straight（on Level）Non－junction |  | Rear End | （1）51M FARGO ND <br> Passenger Car WB Going Straight（Signal） Following too Close＊ | （2） 24 M FARGO ND Passenger Car WB Stopped（Signal） |  |  |  | $\leftarrow \leftarrow$ |
| 301085136 | PDO <br> 10／12／19 Saturday <br> Wet Clear <br> Dark（L）11：06 PM <br> Straight（on Level）Non－junction | － | Rear End | （1）15F FARGO ND <br> Pickup－Van－Utility NB Going Straight Following too Close | （2）32F MOORHEAD MN Pickup－Van－Utility NB Going Straight |  |  |  | $\uparrow$ |



| Rural Segment Crash Summary Sheets |  |  |  |  |  | Appendix - Fxisting Conditions Report |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Crashes: <br> City: <br> Location: <br> Start - End Date: | 50 (Sorted by Date) <br> Fargo <br> 52nd Ave S \& 25th St <br> 1/1/2017-12/31/2021 (5 Years) | 23 USC § 409 Documents NDDOT Reserves All Objections |  |  | LEGEND <br> Fatal <br> -Incapacitating Injury <br> Non-Incapacitating Injury <br> $\triangleright$ Possible Injury <br> - Wet surface <br> *Snow, Ice, Slush, Frost <br> $\triangle$ Crash related to work zone <br> (1) Unit number | 1. Contributing Factor <br> * $=$ alcohol or drugs involved <br> 2. Most Harmful Event <br> For single vehicle crashes, the most harmful event is shown in parentheses in the "Type of Collision" column |  |  |
| Crash No. | Crash Severity <br> Date, Day <br> Surface Conditions, Weather <br> Lighting, Time <br> Road Geometrics, Relation to Jct | Type of Collision | (1) AGE SEX CITY STATE Unit Configuration Movement (traffic control) Contributing Factor ${ }^{1}$ Most Harmful Event ${ }^{2}$ |  |  | Shortened Narrative | Name of Intersection | Diagram |
| $41 \quad 1103565$ | PDO <br> 01/22/21 Friday <br> Dry Clear <br> Daylight 8:30 AM <br> Straight (on Level) Intersection | Angle | (1) 16M FARGO ND <br> Pickup - Van - Utility EB Turning Right (Signal) Failed to Yield | (2) 36 F FARGO ND Pickup - Van - Utility SB Going Straight (Signal) |  |  |  | $\xrightarrow[\rightarrow]{\downarrow}$ |
| $\begin{array}{\|lll} \hline 42 & 1105412 & \square \\ & 81 & \\ & 921.1 & \\ \hline \end{array}$ | Possible Injury 03/12/21 Friday Dry Clear Daylight 5:57 PM Straight (on Level) Intersection | Rear End | (1) 50M FARGO ND <br> Pickup - Van - Utility EB Going Straight (Signal) Following too Close* | (2) 26 F FARGO ND <br> Passenger Car <br> EB Going Straight (Signal) |  |  |  | $\rightarrow \rightarrow$ |
| 43 1106658 <br>  81 <br>  921.1 | PDO <br> 04/17/21 Saturday <br> Dry Clear <br> Daylight 3:40 PM <br> Straight (on Level) Intersection | Angle | (1) 65F FARGO ND <br> Pickup - Van - Utility <br> NB Going Straight (Signal) Ran Red Light | (2) 30M FARGO ND <br> Passenger Car <br> EB Going Straight (Signal) | (3) 41F FARGO ND Pickup - Van - Utility EB Going Straight (Signal) |  |  | $\rightarrow_{\uparrow}$ |
| 44 1108053 <br>  81 <br>  921.07 | PDO <br> 05/27/21 Thursday <br> Dry Clear <br> Daylight 8:50 AM <br> Straight (on Level) Intersection | Sideswipe (Same Dir.) | (1) 58 M MOORHEAD MN <br> Single Unit Truck NB Turning Left (Signal) Fail Keep in Proper Lane | (2) $40 F$ FARGO ND Pickup - Van - Utility NB Turning Left (Signal) |  |  |  | $\uparrow \uparrow$ |
| 45 1108386  <br>  81  <br>  921.02  <br>    <br>    | Non-incapacitating injury 06/05/21 Saturday <br> Dry Clear <br> Daylight 12:30 PM <br> Straight (on Level) Non-junction | Rear End | (1) 17F MOORHEAD MN <br> Pickup - Van - Utility EB Going Straight Following too Close | (2) 56 M FARGO ND <br> Pickup - Van - Utility <br> EB Going Straight |  |  |  | $\rightarrow \rightarrow$ |
| $\begin{array}{\|l\|l\|} \hline 46 & 1108707 \end{array}$ | Possible Injury 06/12/21 Saturday Dry Clear Dark(L) 10:25 PM Straight (on Level) Non-junction | Left Turn | (1) 64F FARGO ND Pickup - Van - Utility SB Going Straight (Signal) | (2) 30M FARGO ND <br> Pickup - Van - Utility NB Turning Left (Signal) Failed to Yield |  |  |  | $\downarrow$ |
| $\begin{array}{\|l\|} \hline 47 \\ \hline \end{array} 1109662$ | PDO <br> 07/01/21 Thursday <br> Dry Clear <br> Dark(L) 10:13 PM <br> Straight (on Level) Intersection | Other | (1) 51F MCVILLE ND <br> Passenger Car EB Turning Right (Signal) Improper Turn | (2) 21 F FARGO ND <br> Passenger Car WB Turning Left (Signal) |  | D1 made an EB to SB right turn, turned into the furthest available lane (rather than nearest available lane), and hit V2 (making WB to SB left turn. |  | $\rightarrow \leftarrow$ |
| $\begin{array}{\|ll\|} \hline 48 & 1109902 \\ \hline \end{array}$ | Non-incapacitating injury <br> 07/13/21 Tuesday <br> Dry Clear <br> Daylight 5:30 PM <br> Straight (on Level) Intersection | Left Turn | (1) 36M FARGO ND <br> Pickup - Van - Utility NB Going Straight (Signal) | (2) 76 F MOORHEAD MN <br> Pickup - Van - Utility SB Turning Left (Signal) Failed to Yield |  |  |  | $\begin{aligned} & \downarrow \\ & \uparrow \end{aligned}$ |
| 49 1112041 <br>  81 <br>  921.06 | PDO <br> 09/07/21 Tuesday <br> Dry Clear <br> Daylight 4:55 PM <br> Straight (on Level) Intersection | Sideswipe (Same Dir.) | (1) 54 M WILLISTON ND 3+ Axle WB Turning Left (Signal) Fail Keep in Proper Lane | (2) $29 F$ FARGO ND Pickup - Van - Utility WB Turning Left (Signal) |  |  |  | $\leftarrow$ |
| $\begin{array}{\|rl} \hline 50 & 1117073 \\ & 81 \\ & 921.07 \end{array}$ | PDO <br> 12/30/21 Thursday <br> Snow Clear <br> Dark(L) 7:20 AM <br> Straight (on Level) Intersection | 粯 Left Turn | (1) 26F FARGO ND <br> Passenger Car <br> SB Going Straight (Signal) | (2) 27M FARGO ND <br> Passenger Car <br> NB Turning Left (Signal) |  |  |  | $\stackrel{\downarrow}{\uparrow}$ |



|  |  | Rural Segment Crash Summary Sheets |  |  |  | Appendix - Fxisting Conditions Report |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Crashes: <br> City: <br> Location: <br> Start - End Date: | ```23 (Sorted by Date) Fargo 52nd Ave S & 27th St 1/1/2017-12/31/2021 (5 Years)``` | 23 USC § 409 Documents NDDOT Reserves All Objections |  |  | LEGEND <br> -Fatal <br> -Incapacitating Injury <br> - Non-Incapacitating Injury <br> $\square$ Possible Injury <br> -Wet surface <br> *Snow, Ice, Slush, Frost <br> $\triangle$ Crash related to work zone <br> (1) Unit number | 1. Contributing Factor <br> * $=$ alcohol or drugs involved <br> 2. Most Harmful Event <br> For single vehicle crashes, the most harmful event is shown in parentheses in the "Type of Collision" column |  |  |
| Crash No. | Crash Severity <br> Date, Day <br> Surface Conditions, Weather <br> Lighting, Time <br> Road Geometrics, Relation to Jct | Type of Collision | (1) AGE SEX CITY STATE Unit Configuration Movement (traffic control) Contributing Factor ${ }^{1}$ Most Harmful Event ${ }^{2}$ |  |  | Shortened Narrative | Name of Intersection | Diagram |
| 1 1032221 <br>  81 <br>  920.91 | PDO <br> 03/31/17 Friday <br> Dry Clear <br> Daylight 7:12 PM <br> Straight (on Level) Intersection | Single Veh. (MV in Transport) | (1) 40M FARGO NDY <br> Motorcycle <br> WB Going Straight | (2) 44 F FARGO ND <br> Pickup - Van - Utility SB Going Straight (Stop) Other |  |  |  | $\mathrm{X} \leftarrow$ |
| 2 1041688 <br>  81 <br>  920.91 | PDO <br> 10/14/17 Saturday <br> Wet Cloudy <br> Dawn 7:20 AM <br> Straight (on Level) Intersection | Angle | (1) 18F FARGO ND Pickup - Van - Utility EB Going Straight | (2) 35 M FARGO ND <br> Pickup - Van - Utility NB Stopped (Stop) |  |  |  | $\rightarrow_{\uparrow}$ |
| 3 1044354 <br>  81 <br>  920.88 | PDO <br> 11/28/17 Tuesday <br> Dry Clear <br> Daylight 7:35 AM <br> Straight (on Level) Non-junction | Rear End | (1) 17M FARGO ND Passenger Car EB Going Straight Following too Close | (2) 35F WEST FARGO ND <br> Passenger Car <br> EB Going Straight | (3) 44 M FARGO ND Passenger Car EB Going Straight |  |  | $\rightarrow \rightarrow$ |
| 4 1047261 <br>  81 <br>  920.9 | PDO <br> 01/04/18 Thursday <br> Snow Cloudy <br> Daylight 7:50 AM <br> Straight (on Level) Intersection | * Rear End | (1) 17M FARGO ND <br> Passenger Car EB Going Straight (Signal) To Fast for Conditions | (2) 15M FARGO ND Passenger Car EB Going Straight (Signal) |  |  |  | $\rightarrow \rightarrow$ |
| $5 \quad 1048427$ | PDO <br> 01/18/18 Thursday <br> Wet Clear <br> Dark(L) 7:05 PM <br> Straight (on Level) Intersection | Rear End | (1) 31F FARGO ND <br> Pickup - Van - Utility NB Turning Left Following too Close | (2) 67M WAHPETON ND <br> Pickup - Van - Utility NB Turning Left |  |  |  | $\begin{aligned} & \uparrow \\ & \uparrow \end{aligned}$ |
| $\begin{array}{\|ll\|} \hline 6 & 1055078 \\ & 81 \\ & 920.87 \end{array}$ | Non-incapacitating injury 05/09/18 Wednesday <br> Dry Cloudy <br> Daylight 3:10 PM <br> Straight (on Level) Non-junction | Rear End | (1) 17M FARGO ND Passenger Car WB Going Straight Following too Close | (2) 15F WEST FARGO ND <br> Passenger Car WB Going Straight | (3) $16 F$ FARGO ND Pickup - Van - Utility WB Going Straight |  |  | $\leftarrow \leftarrow$ |
| 7 1056942 <br>  81 <br>  920.91 | PDO <br> 06/15/18 Friday <br> Dry Clear <br> Daylight 7:30 AM <br> Straight (on Level) Intersection | Angle | ```(1) 26M FARGO ND Pickup - Van - Utility EB Going Straight``` | (2) 35M GRAND FORKS ND <br> Pickup - Van - Utility <br> NB Turning Left (Stop) <br> Failed to Yield |  |  |  | $\rightarrow_{\uparrow}$ |
| $\begin{array}{\|lll\|} \hline 8 & 1064317 \\ & 81 & \\ & 920.91 & \\ \hline \end{array}$ | Possible Injury 10/27/18 Saturday Wet Cloudy Daylight 2:24 PM Straight (on Level) Intersection | Angle | (1) 17F FARGO ND Passenger Car EB Going Straight | (2) 39F WEST FARGO ND <br> Passenger Car <br> NB Merging/Diverging (Stop) <br> Failed to Yield |  |  |  | $\rightarrow_{\uparrow}$ |
| $\begin{array}{\|ll} \hline 9 & 1064770 \\ & 81 \\ & 920.91 \end{array}$ | PDO <br> 11/05/18 Monday <br> Dry Cloudy <br> Daylight 7:45 AM <br> Straight (on Level) Non-junction | Rear End | (1) 25F FARGO ND <br> Pickup - Van - Utility <br> EB Going Straight <br> Following too Close | (2) 16 M FARGO ND <br> Pickup - Van - Utility <br> EB Going Straight | (3) 42M MOORHEAD MN <br> Pickup - Van - Utility EB Going Straight Following too Close |  |  | $\rightarrow \rightarrow$ |
| $\begin{array}{\|lll} \hline 10 & 1067021 & \triangleright \\ & 81 \\ & 920.91 & \\ & \\ \hline \end{array}$ | Possible Injury <br> 12/04/18 Tuesday <br> Dry Cloudy <br> Daylight 7:50 AM <br> Straight (on Level) Intersection | Angle | (1) 30M FARGO ND Pickup - Van - Utility EB Going Straight | (2) 50 M FARGO ND <br> Pickup - Van - Utility <br> NB Turning Left (Stop) <br> Failed to Yield |  |  |  | $\rightarrow_{\uparrow}$ |


| Total Crashes： <br> City： <br> Location： <br> Start－End Date： | Rural Segment Crash Summary Sheets |  |  |  |  |  | Appendix－Fxisting Conditions Report |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 23 （Sorted by Date） <br> Fargo <br> 52nd Ave S \＆27th St <br> 1／1／2017－12／31／2021（5 Years） |  | C § 409 Documents Reserves All Objections |  |  | LEGEND <br> －Fatal <br> －Incapacitating Injury <br> －Non－Incapacitating Injury <br> $\triangleright$ Possible Injury <br> －Wet surface <br> ，Snow，Ice，Slush，Frost <br> $\triangle$ Crash related to work zone <br> （1）Unit number | 1．Contributing Factor <br> ＊$=$ alcohol or drugs involved <br> 2．Most Harmful Event <br> For single vehicle crashes，the most harmful event is shown in parentheses in the＂Type of Collision＂ column |  |  |
| Crash No． | Crash Severity Date，Day Surface Conditions，weather Lighting，Time Road Geometrics，Relation to Jct |  | Type of Collision | （1）AGE SEX CITY STATE Unit Configuration Movement（traffic control） Contributing Factor ${ }^{1}$ Most Harmful Event ${ }^{2}$ |  |  | Shortened Narrative | Name of Intersection | Diagram |
| $\begin{array}{\|lll} \hline 11 & 1068746 \quad \triangleright \\ & 81 \\ & 920.91 \end{array}$ | Possible Injury 01／01／19 Tuesday <br> Ice／Snow Clear <br> Dusk 4：45 PM <br> Straight（on Level）Intersection | 賈 | Other | （1）42F FARGO ND <br> Pickup－Van－Utility EB Turning Right To Fast for Conditions | （2） $59 F$ FARGO ND <br> Pickup－Van－Utility <br> NB Stopped（Stop） <br> Weather |  | D1 intended to make an EB to SB right turn，lost control on icy road while turning，and slid into V2 （stopped facing NB at stop sign）． |  | $\rightarrow_{\uparrow}$ |
| 121069489 | PDO <br> 01／12／19 Saturday <br> Ice／Snow Cloudy <br> Daylight 10：20 AM <br> Straight（on Level）Intersection | 事 | Other | （1）37M FARGO ND <br> Passenger Car EB Turning Right To Fast for Conditions | （2）26F FARGO ND Pickup－Van－Utility NB Stopped（Stop） |  | D1 intended to make an EB to SB right turn，lost control on icy road while turning，and slid into V2 （stopped facing NB at stop sign）． |  | $\rightarrow_{\uparrow}$ |
| 131069456 | PDO <br> 01／12／19 Saturday <br> Ice／Snow Cloudy <br> Daylight 10：45 AM <br> Straight（on Level）Intersection | 事 | Other | （1）U <br> Hit and Run EB Turning Right Weather | （2）48F FARGO ND <br> Passenger Car <br> NB Stopped（Stop） <br> Weather |  | D1 intended to make an EB to SB right turn，lost control on icy road while turning，and slid into V2 （stopped facing NB at stop sign）． |  | $\rightarrow_{\uparrow}$ |
| 141070792 | PDO <br> 01／31／19 Thursday <br> Ice／Snow Cloudy <br> Daylight 1：55 PM <br> Straight（on Level）Intersection | 賈 | Angle | （1）28F FARGO ND <br> Passenger Car <br> NB Turning Left（Stop） <br> Failed to Yield | （2）77M FARGO ND Passenger Car EB Going Straight |  |  |  | $\rightarrow_{\uparrow}$ |
| 151071577 | PDO <br> 02／05／19 Tuesday <br> Ice／Snow Cloudy <br> Daylight 10：29 AM <br> Straight（on Level）Intersection | ＊ | Other | （1）17F WEST FARGO ND <br> Pickup－Van－Utility EB Turning Right To Fast for Conditions | （2） $18 F$ FARGO ND Passenger Car NB Stopped（Stop） |  | D1 intended to make an EB to SB right turn，lost control on icy road while turning，and slid into V2 （stopped facing NB at stop sign）． |  | $\rightarrow_{\uparrow}$ |
| $\begin{array}{\|rll} \hline 16 & 1072914 \\ & 81 \\ & 920.92 & \\ & \\ & & \end{array}$ | Possible Injury 02／12／19 Tuesday Ice／Snow Cloudy <br> Daylight 7：42 AM <br> Straight（on Level）Non－junction |  | Sideswipe（Same Dir．） | （1）16F FARGO ND <br> Pickup－Van－Utility EB Going Straight To Fast for Conditions | （2） $40 F$ FARGO ND Passenger Car EB Going Straight | （3）48F WEST FARGO ND <br> Passenger Car <br> EB Going Straight |  |  | $\rightarrow$ |
| $\begin{array}{\|rl\|} \hline 17 & 1077779 \\ & 81 \\ & 920.91 \end{array}$ | PDO <br> 05／09／19 Thursday <br> Dry Clear <br> Daylight 7：45 AM <br> Straight（on Level）Intersection |  | Angle | （1）74F FARGO ND <br> Pickup－Van－Utility NB Turning Left（Stop） Failed to Yield | （2） 62 M FARGO ND <br> Pickup－Van－Utility <br> EB Going Straight |  |  |  | $\rightarrow_{\uparrow}$ |
| $\begin{array}{\|cl\|} \hline 18 & 1095315 \\ & 81 \\ & 920.91 \end{array}$ | Non－incapacitating injury 06／05／20 Friday <br> Dry Clear <br> Daylight 10：40 AM <br> Straight（on Level）Non－junction |  | Angle | （1）27M FARGO ND <br> Passenger Car EB Going Straight | （2）72M FARGO ND <br> Pickup－Van－Utility NB Turning Left（Stop） Failed to Yield |  |  |  | $\rightarrow_{\uparrow}$ |
| 191099018 | PDO <br> 09／24／20 Thursday <br> Dry Clear <br> Daylight 1：10 PM <br> Straight（on Level）Intersection |  | Angle | （1）18F FARGO ND <br> Passenger Car NB Turning Left（Stop） Failed to Yield | （2）47M MOORHEAD MN Pickup－Van－Utility EB Going Straight |  |  |  | $\rightarrow_{\uparrow}$ |
| $\begin{array}{rl} \hline 20 & 1100525 \\ & 81 \\ & 920.88 \end{array}$ | PDO <br> 10／28／20 Wednesday <br> Dry Clear <br> Daylight 5：38 PM <br> Straight（on Level）Non－junction |  | Angle | （1）19F WIMBLEDON ND <br> Passenger Car <br> NB Turning Left（Stop） <br> Ran Red Light | （2）24M WEST FARGO ND Pickup－Van－Utility WB Going Straight |  |  |  | $\uparrow$ |






Statistics for Total Crashes






Statistics for Total Crashes









Statistics for Total Crashes






Statistics for Total Crashes


|  |  | Rural Segment Crash Summary Sheets |  |  |  | Appendix - Fxisting Conditions Report |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Crashes: <br> City: <br> Location: <br> Start - End Date: | 10 (Sorted by Date) <br> Fargo <br> 25th St \& 64th Ave S <br> 1/1/2017-12/31/2021 (5 Years) | 23 USC § 409 Documents NDDOT Reserves All Objections |  |  | LEGEND <br> Fatal <br> -Incapacitating Injury <br> -Non-Incapacitating Injury <br> $\triangleright$ Possible Injury <br> -Wet surface <br> *Snow, Ice, Slush, Frost <br> $\triangle$ Crash related to work zone <br> (1) Unit number | 1. Contributing Factor <br> * $=$ alcohol or drugs involved <br> 2. Most Harmful Event <br> For single vehicle crashes, the most harmful event is shown in parentheses in the "Type of Collision" column |  |  |
| Crash No. | Crash Severity <br> Date, Day <br> Surface Conditions, Weather <br> Lighting, Time <br> Road Geometrics, Relation to Jct | Type of Collision | (1) AGE SEX CITY STATE Unit Configuration Movement (traffic control) Contributing Factor ${ }^{1}$ Most Harmful Event ${ }^{2}$ |  |  | Shortened Narrative | Name of Intersection | Diagram |
| 1041129 | PDO <br> 10/03/17 Tuesday <br> Dry Clear <br> Daylight 3:55 PM <br> Straight (on Level) Non-junction | Rear End | (1) 36 F FARGO ND <br> Pickup - Van - Utility NB Going Straight Careless/Reckless Driving | (2) 17M FARGO ND Passenger Car NB Stopped |  |  |  | $\uparrow$ |
| 1054079 | PDO <br> 04/17/18 Tuesday <br> Dry Clear <br> Daylight 3:00 PM <br> Straight (on Level) Non-junction | Rear End | (1) 16M FARGO ND Passenger Car NB Going Straight | (2) 18 M FARGO ND Passenger Car NB Going Straight | (3) 18 M FARGO ND Passenger Car NB Going Straight |  |  | $\begin{aligned} & \uparrow \\ & \uparrow \end{aligned}$ |
| 31065611 | PDO <br> 11/14/18 Wednesday <br> Dry Clear <br> Daylight 4:00 PM <br> Straight (on Level) Intersection | Rear End | (1) 16 M FARGO ND <br> Pickup - Van - Utility <br> NB Going Straight <br> Following too Close | (2) 18 M FARGO ND Passenger Car NB Going Straight |  |  |  | $\uparrow$ |
| 41078605 | PDO <br> 05/28/19 Tuesday <br> Dry Clear <br> Daylight 12:10 PM <br> Straight (on Level) Non-junction | Rear End | (1) 15 M FARGO ND <br> Passenger Car NB Going Straight Careless/Reckless Driving | (2) 15 F FARGO ND Passenger Car NB Stopped |  |  |  | $\uparrow$ |
| 51078711 | PDO <br> 05/29/19 Wednesday <br> Dry Clear <br> Daylight 7:40 AM <br> Straight (on Level) Non-junction | Rear End | (1) 23F JAMESTOWN ND <br> Pickup - Van - Utility SB Going Straight Other | (2) 17F FARGO ND <br> Pickup - Van - Utility <br> SB Going Straight | (3) 18 F FARGO ND Passenger Car SB Going Straight |  |  | $\downarrow$ $\downarrow$ |
| 1082727 | PDO <br> 08/23/19 Friday <br> Dry Clear <br> Daylight 7:40 AM <br> Straight (on Level) Non-junction | Rear End | (1) 18M FARGO ND Passenger Car SB Going Straight | (2) 16 F FARGO ND <br> Pickup - Van - Utility SB Going Straight |  |  |  | $\downarrow$ |
| $\begin{array}{\|ll\|} \hline 7 & 1085618 \\ \hline \end{array}$ | Possible Injury <br> 10/23/19 Wednesday <br> Dry Clear <br> Daylight 3:20 PM <br> Straight (on Level) Non-junction | Rear End | (1) 17M FARGO ND <br> Passenger Car NB Slowing/Stopping Following too Close | (2) 16 M FARGO ND <br> Passenger Car NB Slowing/Stopping Following too Close | (3) 16 M FARGO ND Passenger Car NB Slowing/Stopping |  |  | $\begin{aligned} & \uparrow \\ & \uparrow \end{aligned}$ |
| $8 \quad 1113373$ D | Possible Injury <br> 10/08/21 Friday <br> Dry Clear <br> Daylight 3:50 PM <br> Straight (on Level) Non-junction | Rear End | (1) 24F WEST FARGO ND Passenger Car NB Going Straight | (2) $15 F$ FARGO ND Pickup - Van - Utility NB Going Straight | (3) 41F FARGO ND Passenger Car NB Going Straight |  |  | $\uparrow \uparrow$ |
| $9 \quad 1113522$ | Possible Injury <br> 10/14/21 Thursday <br> Dry Cloudy <br> Daylight 3:05 PM <br> Straight (on Level) Non-junction | Rear End | (1) 16 F FARGO ND Passenger Car NB Going Straight | (2) 63 M FARGO ND <br> Pickup - Van - Utility NB Stopped |  |  |  | $\begin{aligned} & \uparrow \\ & \uparrow \end{aligned}$ |
| $10 \quad 1114024$ | PDO <br> 10/28/21 Thursday <br> Wet Cloudy <br> Daylight 8:45 AM <br> Straight (on Level) Non-junction | - Rear End | (1) 15M FARGO ND Passenger Car SB Going Straight | (2) 16 M FARGO ND Passenger Car SB Going Straight |  |  |  | $\downarrow$ $\downarrow$ |

## Traffic Volumes

| Time | Peds | SB Right | $\begin{gathered} \text { SB } \\ \text { Thru } \end{gathered}$ | $\begin{aligned} & \text { SB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { SB } \\ & \text { UTrn } \end{aligned}$ | Peds | WB Right | WB Thru | WB Left | WB <br> Utrn | Peds | NB Right | $\begin{gathered} \text { NB } \\ \text { Thru } \end{gathered}$ | $\begin{aligned} & \text { NB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { NB } \\ & \text { UTrn } \end{aligned}$ | Peds | EB Right | $\begin{gathered} \text { EB } \\ \text { Thru } \end{gathered}$ | $\begin{aligned} & \text { EB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { EB } \\ & \text { UTrn } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 00:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 01:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 02:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 03:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 04:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 05:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 06:00 | 0 | 0 | 34 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 77 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |  |
| 07:00 | 0 | 1 | 421 | 117 | 0 | 0 | 98 | 1 | 2 | 0 | 0 | 9 | 660 | 5 | 0 | 0 | 5 | 0 | 1 | 0 |  |
| 08:00 | 0 | 1 | 574 | 4 | 0 | 3 | 10 | 0 | 1 | 0 | 0 | 7 | 481 | 2 | 0 | 0 | 2 | 1 | 1 | 0 |  |
| 09:00 | 0 | 1 | 208 | 7 | 0 | 0 | 13 | 0 | 1 | 0 | 0 | 0 | 252 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |  |
| 10:00 | 0 | 1 | 172 | 6 | 0 | 0 | 19 | 0 | 1 | 0 | 0 | 1 | 249 | 0 | 0 | 0 | 0 | 0 | 4 | 0 |  |
| 11:00 | 0 | 1 | 262 | 9 | 0 | 1 | 18 | 1 | 0 | 0 | 0 | 2 | 282 | 0 | 0 | 1 | 2 | 1 | 4 | 0 |  |
| 12:00 | 0 | 1 | 319 | 13 | 0 | 1 | 16 | 1 | 6 | 0 | 0 | 5 | 291 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 13:00 | 0 | 1 | 282 | 11 | 0 | 0 | 10 | 1 | 2 | 0 | 0 | 3 | 273 | 2 | 0 | 0 | 1 | 2 | 1 | 0 |  |
| 14:00 | 0 | 3 | 313 | 10 | 0 | 3 | 24 | 1 | 1 | 0 | 0 | 3 | 364 | 2 | 0 | 0 | 1 | 1 | 6 | 0 |  |
| 15:00 | 0 | 3 | 474 | 57 | 0 | 0 | 137 | 1 | 3 | 0 | 0 | 7 | 590 | 0 | 0 | 1 | 5 | 1 | 1 | 0 |  |
| 16:00 | 0 | 4 | 497 | 56 | 0 | 2 | 54 | 1 | 4 | 0 | 0 | 6 | 500 | 1 | 0 | 3 | 2 | 0 | 6 | 0 |  |
| 17:00 | 0 | 7 | 739 | 42 | 0 | 3 | 36 | 0 | 4 | 0 | 0 | 3 | 468 | 3 | 0 | 3 | 6 | 0 | 5 | 0 |  |
| 18:00 | 0 | 1 | 465 | 17 | 0 | 1 | 57 | 2 | 5 | 0 | 0 | 1 | 362 | 2 | 0 | 0 | 3 | 0 | 0 | 0 |  |
| 19:00 | 0 | 2 | 276 | 11 | 1 | 2 | 11 | 0 | 0 | 0 | 0 | 2 | 152 | 0 | 0 | 2 | 1 | 0 | 1 | 0 |  |
|  | Peds | $\begin{gathered} \hline \text { SB } \\ \text { Left } \end{gathered}$ | $\begin{gathered} \hline \text { SB } \\ \text { Thru } \\ \hline \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { SB } \\ \text { Right } \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline \text { SB } \\ \text { UTrn } \\ \hline \end{array}$ | Peds | $\begin{aligned} & \hline \text { WB } \\ & \text { Left } \end{aligned}$ | $\begin{array}{\|c} \hline \text { WB } \\ \text { Thru } \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline \text { WB } \\ \text { Right } \\ \hline \end{array}$ | $\begin{aligned} & \hline \text { WB } \\ & \text { Utrn } \end{aligned}$ | Peds | $\begin{gathered} \hline \text { NB } \\ \text { Left } \end{gathered}$ | $\begin{gathered} \hline \text { NB } \\ \text { Thru } \\ \hline \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { NB } \\ \text { Right } \\ \hline \end{array}$ | $\begin{gathered} \hline \text { NB } \\ \text { UTrn } \\ \hline \end{gathered}$ | Peds | $\begin{aligned} & \hline \text { EB } \\ & \text { Left } \\ & \hline \end{aligned}$ | $\begin{gathered} \hline \text { EB } \\ \text { Thru } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { EB } \\ \text { Right } \\ \hline \end{gathered}$ | $\begin{gathered} \text { EB } \\ \text { UTrn } \\ \hline \end{gathered}$ | Peak Start |
| AM Peak | 0 | 1 | 600 | 111 | 0 | 2 | 97 | 0 | 2 | 0 | 0 | 12 | 662 | 7 | 0 | 0 | 7 | 1 |  | 0 | 07:30 |
| MD Peak | 0 | 1 | 319 | 13 | 0 | 1 | 16 | 1 | 6 | 0 | 0 | 5 | 291 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 |
| PM Peak | 0 | 7 | 739 | 42 | 0 | 3 | 36 | 0 | 4 | 0 | 0 | 3 | 468 | 3 | 0 | 3 | 6 | 0 | 5 | 0 | 17:00 |

File Name : Fargo_sta_2011_25th_ST_\&_52nd_AVE_877008_09-22-2021
Site Code : 2011
Start Date : 9/22/2021
Page No : 1

Groups Printed- Motorcycles - Cars - Light Goods Vehicles - Buses - Unit Trucks - Articulated Trucks

|  | 25th ST <br> From North |  |  |  |  | 52nd AVE From East |  |  |  |  | 25th ST From South |  |  |  |  | 52nd AVE <br> From West |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Int. Total |
| 09:00 AM | 16 | 29 | 3 | 0 | 48 | 17 | 58 | 11 | 0 | 86 | 5 | 21 | 60 | 0 | 86 | 34 | 62 | 16 | 0 | 112 | 332 |
| 09:15 AM | 15 | 19 | 5 | 0 | 39 | 7 | 60 | 1 | 0 | 68 | 7 | 11 | 52 | 0 | 70 | 36 | 54 | 12 | 0 | 102 | 279 |
| 09:30 AM | 22 | 22 | 3 | 0 | 47 | 11 | 57 | 9 | 0 | 77 | 4 | 23 | 51 | 0 | 78 | 38 | 48 | 13 | 0 | 99 | 301 |
| 09:45 AM | 13 | 18 | 12 | 0 | 43 | 12 | 69 | 11 | 0 | 92 | 9 | 21 | 50 | 0 | 80 | 32 | 53 | 23 | 0 | 108 | 323 |
| Total | 66 | 88 | 23 | 0 | 177 | 47 | 244 | 32 | 0 | 323 | 25 | 76 | 213 | 0 | 314 | 140 | 217 | 64 | 0 | 421 | 1235 |
| 10:00 AM | 16 | 27 | 5 | 0 | 48 | 8 | 64 | 7 | 0 | 79 | 4 | 21 | 59 | 0 | 84 | 34 | 42 | 18 | 0 | 94 | 305 |
| 10:15 AM | 22 | 15 | 6 | 0 | 43 | 11 | 55 | 5 | 0 | 71 | 8 | 13 | 47 | 0 | 68 | 28 | 50 | 24 | 0 | 102 | 284 |
| 10:30 AM | 16 | 15 | 13 | 0 | 44 | 9 | 58 | 8 | 0 | 75 | 5 | 21 | 50 | 0 | 76 | 32 | 49 | 18 | 0 | 99 | 294 |
| 10:45 AM | 30 | 22 | 9 | 0 | 61 | 14 | 77 | 5 | 0 | 96 | 2 | 25 | 53 | 0 | 80 | 43 | 49 | 19 | 1 | 112 | 349 |
| Total | 84 | 79 | 33 | 0 | 196 | 42 | 254 | 25 | 0 | 321 | 19 | 80 | 209 | 0 | 308 | 137 | 190 | 79 | 1 | 407 | 1232 |
| 11:00 AM | 18 | 22 | 8 | 0 | 48 | 12 | 49 | 11 | 0 | 72 | 5 | 30 | 56 | 0 | 91 | 49 | 55 | 20 | 0 | 124 | 335 |
| 11:15 AM | 29 | 29 | 10 | 0 | 68 | 15 | 61 | 10 | 0 | 86 | 5 | 36 | 68 | 0 | 109 | 39 | 56 | 30 | 0 | 125 | 388 |
| 11:30 AM | 17 | 24 | 3 | 0 | 44 | 8 | 63 | 6 | 0 | 77 | 2 | 37 | 47 | 0 | 86 | 57 | 72 | 27 | 0 | 156 | 363 |
| 11:45 AM | 31 | 32 | 19 | 0 | 82 | 8 | 70 | 11 | 0 | 89 | 8 | 32 | 43 | 1 | 84 | 53 | 54 | 27 | 0 | 134 | 389 |
| Total | 95 | 107 | 40 | 0 | 242 | 43 | 243 | 38 | 0 | 324 | 20 | 135 | 214 | 1 | 370 | 198 | 237 | 104 | 0 | 539 | 1475 |
| 12:00 PM | 28 | 37 | 13 | 0 | 78 | 18 | 54 | 7 | 0 | 79 | 5 | 31 | 71 | 0 | 107 | 62 | 63 | 35 | 0 | 160 | 424 |
| 12:15 PM | 28 | 30 | 13 | 0 | 71 | 8 | 63 | 7 | 0 | 78 | 8 | 27 | 60 | 0 | 95 | 81 | 70 | 26 | 0 | 177 | 421 |
| 12:30 PM | 25 | 33 | 7 | 1 | 66 | 9 | 55 | 6 | 0 | 70 | 10 | 25 | 69 | 0 | 104 | 65 | 68 | 30 | 0 | 163 | 403 |
| 12:45 PM | 34 | 29 | 14 | 0 | 77 | 13 | 63 | 12 | 0 | 88 | 4 | 38 | 70 | 0 | 112 | 69 | 73 | 26 | 0 | 168 | 445 |
| Total | 115 | 129 | 47 | 1 | 292 | 48 | 235 | 32 | 0 | 315 | 27 | 121 | 270 | 0 | 418 | 277 | 274 | 117 | 0 | 668 | 1693 |
| 01:00 PM | 28 | 32 | 6 | 0 | 66 | 8 | 59 | 8 | 0 | 75 | 2 | 25 | 69 | 0 | 96 | 51 | 57 | 23 | 1 | 132 | 369 |
| 01:15 PM | 22 | 25 | 12 | 0 | 59 | 10 | 72 | 7 | 0 | 89 | 7 | 25 | 68 | 0 | 100 | 55 | 66 | 27 | 0 | 148 | 396 |
| 01:30 PM | 22 | 32 | 6 | 0 | 60 | 11 | 54 | 4 | 0 | 69 | 9 | 21 | 51 | 0 | 81 | 48 | 63 | 23 | 0 | 134 | 344 |
| 01:45 PM | 17 | 24 | 16 | 0 | 57 | 11 | 62 | 8 | 0 | 81 | 3 | 24 | 55 | 0 | 82 | 49 | 71 | 16 | 0 | 136 | 356 |
| Total | 89 | 113 | 40 | 0 | 242 | 40 | 247 | 27 | 0 | 314 | 21 | 95 | 243 | 0 | 359 | 203 | 257 | 89 | 1 | 550 | 1465 |
| 02:00 PM | 26 | 17 | 13 | 0 | 56 | 12 | 60 | 12 | 0 | 84 | 6 | 28 | 48 | 1 | 83 | 72 | 64 | 27 | 0 | 163 | 386 |
| 02:15 PM | 17 | 37 | 11 | 0 | 65 | 12 | 58 | 10 | 0 | 80 | 9 | 39 | 96 | 1 | 145 | 56 | 72 | 39 | 1 | 168 | 458 |
| 02:30 PM | 49 | 55 | 16 | 0 | 120 | 18 | 71 | 15 | 0 | 104 | 10 | 26 | 64 | 0 | 100 | 60 | 71 | 21 | 0 | 152 | 476 |
| 02:45 PM | 29 | 43 | 12 | 1 | 85 | 16 | 87 | 22 | 0 | 125 | 6 | 52 | 142 | 0 | 200 | 102 | 87 | 33 | 1 | 223 | 633 |
| Total | 121 | 152 | 52 | 1 | 326 | 58 | 276 | 59 | 0 | 393 | 31 | 145 | 350 | 2 | 528 | 290 | 294 | 120 | 2 | 706 | 1953 |
| 03:00 PM | 26 | 33 | 9 | 0 | 68 | 15 | 66 | 10 | 0 | 91 | 7 | 73 | 135 | 0 | 215 | 72 | 74 | 30 | 0 | 176 | 550 |
| 03:15 PM | 35 | 28 | 12 | 0 | 75 | 22 | 69 | 10 | 0 | 101 | 5 | 31 | 73 | 0 | 109 | 87 | 71 | 46 | 0 | 204 | 489 |
|  | Fargo - | th St | ridor S | tudy |  |  |  |  | xisting Co | nditions Re | ort App | dix B2 |  |  |  |  |  |  |  |  |  |

File Name : Fargo_sta_2011_25th_ST_\&_52nd_AVE_877008_09-22-2021
Site Code : 2011
Start Date : 9/22/2021
Page No : 2
Groups Printed- Motorcycles - Cars - Light Goods Vehicles - Buses - Unit Trucks - Articulated Trucks

|  | 25th ST <br> From North |  |  |  |  | 52nd AVE From East |  |  |  |  | 25th ST From South |  |  |  |  | 52nd AVE From West |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Int. Total |
| 03:30 PM | 33 | 75 | 16 | 0 | 124 | 11 | 64 | 21 | 0 | 96 | 10 | 21 | 79 | 0 | 110 | 86 | 86 | 26 | 1 | 199 | 529 |
| 03:45 PM | 35 | 72 | 15 | 1 | 123 | 13 | 61 | 21 | 0 | 95 | 11 | 52 | 107 | 0 | 170 | 114 | 95 | 46 | 0 | 255 | 643 |
| Total | 129 | 208 | 52 | 1 | 390 | 61 | 260 | 62 | 0 | 383 | 33 | 177 | 394 | 0 | 604 | 359 | 326 | 148 | 1 | 834 | 2211 |
| 04:00 PM | 29 | 50 | 12 | 0 | 91 | 16 | 94 | 11 | 0 | 121 | 7 | 72 | 143 | 0 | 222 | 93 | 111 | 23 | 0 | 227 | 661 |
| 04:15 PM | 39 | 37 | 14 | 0 | 90 | 12 | 88 | 17 | 0 | 117 | 5 | 32 | 93 | 0 | 130 | 99 | 94 | 38 | 1 | 232 | 569 |
| 04:30 PM | 39 | 34 | 9 | 0 | 82 | 8 | 101 | 10 | 0 | 119 | 14 | 34 | 79 | 0 | 127 | 98 | 114 | 31 | 1 | 244 | 572 |
| 04:45 PM | 42 | 41 | 22 | 0 | 105 | 16 | 105 | 20 | 0 | 141 | 7 | 30 | 84 | 0 | 121 | 92 | 127 | 35 | 1 | 255 | 622 |
| Total | 149 | 162 | 57 | 0 | 368 | 52 | 388 | 58 | 0 | 498 | 33 | 168 | 399 | 0 | 600 | 382 | 446 | 127 | 3 | 958 | 2424 |
| 05:00 PM | 43 | 45 | 21 | 0 | 109 | 11 | 108 | 17 | 0 | 136 | 14 | 43 | 102 | 0 | 159 | 104 | 153 | 47 | 0 | 304 | 708 |
| 05:15 PM | 38 | 63 | 25 | 0 | 126 | 15 | 123 | 16 | 0 | 154 | 7 | 48 | 111 | 0 | 166 | 131 | 174 | 53 | 3 | 361 | 807 |
| 05:30 PM | 42 | 75 | 21 | 0 | 138 | 14 | 91 | 9 | 0 | 114 | 19 | 43 | 120 | 0 | 182 | 102 | 134 | 44 | 0 | 280 | 714 |
| 05:45 PM | 37 | 40 | 17 | 0 | 94 | 13 | 118 | 20 | 0 | 151 | 11 | 39 | 101 | 0 | 151 | 115 | 124 | 59 | 0 | 298 | 694 |
| Total | 160 | 223 | 84 | 0 | 467 | 53 | 440 | 62 | 0 | 555 | 51 | 173 | 434 | 0 | 658 | 452 | 585 | 203 | 3 | 1243 | 2923 |
| 06:00 PM | 35 | 64 | 15 | 0 | 114 | 9 | 66 | 10 | 0 | 85 | 13 | 65 | 140 | 0 | 218 | 102 | 111 | 34 | 0 | 247 | 664 |
| 06:15 PM | 20 | 48 | 14 | 0 | 82 | 10 | 76 | 21 | 0 | 107 | 10 | 52 | 147 | 0 | 209 | 125 | 138 | 38 | 1 | 302 | 700 |
| 06:30 PM | 26 | 21 | 10 | 0 | 57 | 10 | 84 | 4 | 0 | 98 | 6 | 38 | 82 | 0 | 126 | 67 | 110 | 48 | 0 | 225 | 506 |
| 06:45 PM | 25 | 26 | 7 | 0 | 58 | 11 | 70 | 10 | 0 | 91 | 8 | 34 | 53 | 0 | 95 | 80 | 104 | 52 | 0 | 236 | 480 |
| Total | 106 | 159 | 46 | 0 | 311 | 40 | 296 | 45 | 0 | 381 | 37 | 189 | 422 | 0 | 648 | 374 | 463 | 172 | 1 | 1010 | 2350 |
| 07:00 PM | 51 | 62 | 11 | 0 | 124 | 10 | 60 | 12 | 0 | 82 | 8 | 17 | 48 | 0 | 73 | 56 | 86 | 51 | 0 | 193 | 472 |
| 07:15 PM | 35 | 28 | 15 | 0 | 78 | 12 | 62 | 11 | 0 | 85 | 3 | 28 | 69 | 0 | 100 | 97 | 100 | 31 | 0 | 228 | 491 |
| 07:30 PM | 21 | 32 | 10 | 0 | 63 | 10 | 59 | 12 | 0 | 81 | 11 | 27 | 63 | 0 | 101 | 79 | 63 | 32 | 0 | 174 | 419 |
| 07:45 PM | 23 | 24 | 9 | 0 | 56 | 16 | 59 | 7 | 0 | 82 | 5 | 38 | 75 | 0 | 118 | 49 | 88 | 25 | 0 | 162 | 418 |
| Total | 130 | 146 | 45 | 0 | 321 | 48 | 240 | 42 | 0 | 330 | 27 | 110 | 255 | 0 | 392 | 281 | 337 | 139 | 0 | 757 | 1800 |
| 08:00 PM | 30 | 25 | 16 | 0 | 71 | 14 | 89 | 8 | 0 | 111 | 6 | 18 | 38 | 0 | 62 | 62 | 67 | 33 | 0 | 162 | 406 |
| 08:15 PM | 43 | 35 | 17 | 0 | 95 | 9 | 54 | 6 | 0 | 69 | 5 | 12 | 27 | 0 | 44 | 57 | 41 | 14 | 0 | 112 | 320 |
| 08:30 PM | 12 | 24 | 8 | 0 | 44 | 5 | 24 | 11 | 0 | 40 | 5 | 8 | 35 | 0 | 48 | 35 | 48 | 18 | 0 | 101 | 233 |
| 08:45 PM | 11 | 11 | 5 | 0 | 27 | 7 | 45 | 4 | 0 | 56 | 3 | 7 | 32 | 0 | 42 | 49 | 55 | 19 | 0 | 123 | 248 |
| Total | 96 | 95 | 46 | 0 | 237 | 35 | 212 | 29 | 0 | 276 | 19 | 45 | 132 | 0 | 196 | 203 | 211 | 84 | 0 | 498 | 1207 |
| 09:00 PM | 13 | 13 | 9 | 0 | 35 | 3 | 24 | 6 | 0 | 33 | 4 | 13 | 19 | 0 | 36 | 33 | 33 | 17 | 0 | 83 | 187 |
| 09:15 PM | 9 | 7 | 5 | 0 | 21 | 4 | 26 | 3 | 0 | 33 | 1 | 8 | 13 | 0 | 22 | 33 | 23 | 12 | 0 | 68 | 144 |
| 09:30 PM | 9 | 10 | 4 | 0 | 23 | 2 | 30 | 3 | 0 | 35 | 1 | 7 | 13 | 0 | 21 | 28 | 31 | 8 | 0 | 67 | 146 |
| 09:45 PM | 14 | 13 | 2 | 0 | 29 | 2 | 22 | 6 | 0 | 30 | 2 | 7 | 16 | 0 | 25 | 29 | 33 | 6 | 1 | 69 | 153 |
| Total | 45 | 43 | 20 | 0 | 108 | 11 | 102 | 18 | 0 | 131 | 8 | 35 | 61 | 0 | 104 | 123 | 120 | 43 | 1 | 287 | 630 |
| 10:00 PM | 3 | 7 | 0 | 0 | 10 | 3 | 20 | 2 | 0 | 25 | 1 | 5 | 10 | 0 | 16 | 16 | 30 | 6 | 0 | 52 | 103 |
| 10:15 PM | 5 | 8 | 1 | 0 | 14 | 0 | 24 | 2 | 0 | 26 | 3 | 2 | 5 | 0 | 10 | 13 | 14 | 2 | 0 | 29 | 79 |
|  | Fargo - | th St | ridor S | tudy |  |  |  |  | xisting Co | nditions Re | ort Appe | dix B3 |  |  |  |  |  |  |  |  |  |

File Name : Fargo_sta_2011_25th_ST_\&_52nd_AVE_877008_09-22-2021
Site Code : 2011
Start Date: 9/22/2021
Page No : 3
Groups Printed- Motorcycles - Cars - Light Goods Vehicles - Buses - Unit Trucks - Articulated Trucks

|  | 25th ST From North |  |  |  |  | 52nd AVE From East |  |  |  |  | 25th ST From South |  |  |  |  | 52nd AVE From West |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Int. Total |
| 10:30 PM | 2 | 4 | 5 | 0 | 11 | 1 | 9 | 0 | 0 | 10 | 1 | 1 | 5 | 0 | 7 | 14 | 30 | 3 | 0 | 47 | 75 |
| 10:45 PM | 3 | 2 | 1 | 0 | 6 | 1 | 10 | 0 | 0 | 11 | 1 | 3 | 7 | 0 | 11 | 18 | 13 | 3 | 0 | 34 | 62 |
| Total | 13 | 21 | 7 | 0 | 41 | 5 | 63 | 4 | 0 | 72 | 6 | 11 | 27 | 0 | 44 | 61 | 87 | 14 | 0 | 162 | 319 |
| 11:00 PM | 2 | 8 | 2 | 0 | 12 | 1 | 14 | 1 | 0 | 16 | 2 | 3 | 5 | 0 | 10 | 5 | 10 | 3 | 0 | 18 | 56 |
| 11:15 PM | 1 | 3 | 1 | 0 | 5 | 0 | 11 | 2 | 0 | 13 | 1 | 2 | 2 | 0 | 5 | 11 | 10 | 3 | 0 | 24 | 47 |
| 11:30 PM | 1 | 2 | 0 | 0 | 3 | 1 | 6 | 0 | 0 | 7 | 0 | 2 | 1 | 0 | 3 | 5 | 8 | 1 | 0 | 14 | 27 |
| 11:45 PM | 3 | 0 | 0 | 0 | 3 | 1 | 2 | 3 | 0 | 6 | 0 | 0 | 1 | 0 | 1 | 10 | 9 | 2 | 0 | 21 | 31 |
| Total | 7 | 13 | 3 | 0 | 23 | 3 | 33 | 6 | 0 | 42 | 3 | 7 | 9 | 0 | 19 | 31 | 37 | 9 | 0 | 77 | 161 |
| 12:00 AM | 0 | 1 | 0 | 0 | 1 | 0 | 8 | 0 | 0 | 8 | 0 | 2 | 4 | 0 | 6 | 4 | 11 | 0 | 0 | 15 | 30 |
| 12:15 AM | 2 | 2 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 2 | 0 | 1 | 2 | 0 | 3 | 4 | 6 | 2 | 0 | 12 | 21 |
| 12:30 AM | 1 | 2 | 0 | 0 | 3 | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 2 | 0 | 3 | 3 | 6 | 0 | 0 | 9 | 17 |
| 12:45 AM | 1 | 1 | 1 | 0 | 3 | 0 | 2 | 0 | 0 | 2 | 1 | 0 | 1 | 0 | 2 | 2 | 4 | 1 | 0 | 7 | 14 |
| Total | 4 | 6 | 1 | 0 | 11 | 1 | 12 | 1 | 0 | 14 | 1 | 4 | 9 | 0 | 14 | 13 | 27 | 3 | 0 | 43 | 82 |
| 01:00 AM | 0 | 1 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 4 | 0 | 0 | 2 | 0 | 2 | 2 | 2 | 1 | 0 | 5 | 12 |
| 01:15 AM | 0 | 0 | 3 | 0 | 3 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 1 | 3 | 2 | 0 | 6 | 12 |
| 01:30 AM | 0 | 1 | 1 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 3 | 4 | 0 | 0 | 7 | 11 |
| 01:45 AM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 5 | 5 | 3 | 0 | 0 | 8 | 14 |
| Total | 0 | 3 | 4 | 0 | 7 | 1 | 6 | 0 | 0 | 7 | 1 | 0 | 8 | 0 | 9 | 11 | 12 | 3 | 0 | 26 | 49 |
| 02:00 AM | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 1 | 0 | 4 | 0 | 0 | 1 | 0 | 1 | 4 | 2 | 1 | 0 | 7 | 13 |
| 02:15 AM | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 5 | 1 | 1 | 0 | 7 | 11 |
| 02:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 3 | 2 | 2 | 0 | 0 | 4 | 8 |
| 02:45 AM | 0 | 1 | 0 | 0 | 1 | 1 | 7 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 2 | 12 |
| Total | 2 | 1 | 1 | 0 | 4 | 1 | 12 | 1 | 0 | 14 | 1 | 1 | 4 | 0 | 6 | 12 | 6 | 2 | 0 | 20 | 44 |
| 03:00 AM | 0 | 2 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 6 | 0 | 6 | 4 | 1 | 1 | 0 | 6 | 17 |
| 03:15 AM | 1 | 0 | 3 | 0 | 4 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 10 |
| 03:30 AM | 1 | 0 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 4 | 0 | 1 | 2 | 0 | 3 | 0 | 1 | 1 | 0 | 2 | 10 |
| 03:45 AM | 0 | 2 | 0 | 0 | 2 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 3 | 0 | 3 | 1 | 2 | 0 | 0 | 3 | 13 |
| Total | 2 | 4 | 3 | 0 | 9 | 1 | 13 | 0 | 0 | 14 | 0 | 1 | 13 | 0 | 14 | 7 | 4 | 2 | 0 | 13 | 50 |
| 04:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 1 | 2 | 6 | 0 | 9 | 0 | 1 | 1 | 0 | 2 | 15 |
| 04:15 AM | 2 | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 4 | 0 | 0 | 12 | 0 | 12 | 1 | 1 | 1 | 0 | 3 | 21 |
| 04:30 AM | 4 | 0 | 0 | 0 | 4 | 1 | 2 | 0 | 0 | 3 | 0 | 0 | 13 | 0 | 13 | 3 | 2 | 1 | 0 | 6 | 26 |
| 04:45 AM | 2 | 1 | 0 | 0 | 3 | 0 | 10 | 0 | 0 | 10 | 1 | 2 | 10 | 0 | 13 | 3 | 4 | 1 | 0 | 8 | 34 |
| Total | 8 | 1 | 0 | 0 | 9 | 3 | 18 | 0 | 0 | 21 | 2 | 4 | 41 | 0 | 47 | 7 | 8 | 4 | 0 | 19 | 96 |
| 05:00 AM | 3 | 0 | 0 | 0 | 3 | 2 | 12 | 1 | 0 | 15 | 0 | 4 | 17 | 0 | 21 | 3 | 4 | 1 | 0 | 8 | 47 |
| 05:15 AM | 6 | 1 | 0 | 0 | 7 | 1 | 20 | 1 | 0 | 22 | 0 | 2 | 20 | 0 | 22 | 1 | 3 | 1 | 0 | 5 | 56 |
|  | Fargo - | 5th St | ridor S | tudy |  |  |  |  | xisting Co | nditions Re | ort Appe | dix B4 |  |  |  |  |  |  |  |  |  |

File Name : Fargo_sta_2011_25th_ST_\&_52nd_AVE_877008_09-22-2021
Site Code : 2011
Start Date : 9/22/2021
Page No : 4
Groups Printed- Motorcycles - Cars - Light Goods Vehicles - Buses - Unit Trucks - Articulated Trucks

|  | 25th ST <br> From North |  |  |  |  | 52nd AVE <br> From East |  |  |  |  | $\begin{aligned} & 25 \text { th ST } \\ & \text { From South } \end{aligned}$ |  |  |  |  | 52nd AVE <br> From West |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Int. Total |
| 05:30 AM | 5 | 2 | 0 | 0 | 7 | 2 | 21 | 0 | 0 | 23 | 1 | 5 | 26 | 0 | 32 | 4 | 11 | 0 | 0 | 15 | 77 |
| 05:45 AM | 6 | 7 | 0 | 0 | 13 | 2 | 21 | 0 | 0 | 23 | 3 | 5 | 19 | 0 | 27 | 5 | 13 | 3 | 0 | 21 | 84 |
| Total | 20 | 10 | 0 | 0 | 30 | 7 | 74 | 2 | 0 | 83 | 4 | 16 | 82 | 0 | 102 | 13 | 31 | 5 | 0 | 49 | 264 |
| 06:00 AM | 6 | 2 | 1 | 0 | 9 | 1 | 26 | 2 | 0 | 29 | 4 | 6 | 24 | 0 | 34 | 6 | 17 | 1 | 0 | 24 | 96 |
| 06:15 AM | 11 | 8 | 3 | 0 | 22 | 7 | 50 | 3 | 0 | 60 | 2 | 13 | 38 | 0 | 53 | 20 | 15 | 6 | 0 | 41 | 176 |
| 06:30 AM | 10 | 8 | 6 | 0 | 24 | 5 | 57 | 3 | 0 | 65 | 4 | 15 | 56 | 1 | 76 | 31 | 39 | 9 | 0 | 79 | 244 |
| 06:45 AM | 11 | 28 | 6 | 0 | 45 | 11 | 76 | 11 | 0 | 98 | 8 | 18 | 69 | 0 | 95 | 60 | 37 | 8 | 0 | 105 | 343 |
| Total | 38 | 46 | 16 | 0 | 100 | 24 | 209 | 19 | 0 | 252 | 18 | 52 | 187 | 1 | 258 | 117 | 108 | 24 | 0 | 249 | 859 |
| 07:00 AM | 20 | 28 | 8 | 0 | 56 | 13 | 94 | 8 | 0 | 115 | 10 | 25 | 78 | 0 | 113 | 55 | 48 | 16 | 0 | 119 | 403 |
| 07:15 AM | 20 | 38 | 6 | 0 | 64 | 24 | 91 | 10 | 0 | 125 | 20 | 46 | 104 | 0 | 170 | 65 | 75 | 26 | 0 | 166 | 525 |
| 07:30 AM | 40 | 45 | 9 | 0 | 94 | 20 | 119 | 11 | 0 | 150 | 8 | 56 | 128 | 0 | 192 | 125 | 92 | 35 | 1 | 253 | 689 |
| 07:45 AM | 34 | 70 | 17 | 0 | 121 | 23 | 133 | 19 | 0 | 175 | 14 | 71 | 153 | 0 | 238 | 157 | 105 | 62 | 2 | 326 | 860 |
| Total | 114 | 181 | 40 | 0 | 335 | 80 | 437 | 48 | 0 | 565 | 52 | 198 | 463 | 0 | 713 | 402 | 320 | 139 | 3 | 864 | 2477 |
| 08:00 AM | 49 | 75 | 12 | 0 | 136 | 18 | 98 | 9 | 0 | 125 | 8 | 51 | 110 | 0 | 169 | 85 | 53 | 57 | 0 | 195 | 625 |
| 08:15 AM | 28 | 81 | 14 | 0 | 123 | 11 | 74 | 14 | 0 | 99 | 11 | 45 | 77 | 0 | 133 | 89 | 64 | 28 | 0 | 181 | 536 |
| 08:30 AM | 27 | 62 | 7 | 0 | 96 | 8 | 60 | 11 | 0 | 79 | 10 | 39 | 90 | 0 | 139 | 91 | 63 | 26 | 1 | 181 | 495 |
| 08:45 AM | 29 | 22 | 6 | 0 | 57 | 14 | 59 | 7 | 0 | 80 | 5 | 30 | 85 | 0 | 120 | 31 | 35 | 12 | 0 | 78 | 335 |
| Total | 133 | 240 | 39 | 0 | 412 | 51 | 291 | 41 | 0 | 383 | 34 | 165 | 362 | 0 | 561 | 296 | 215 | 123 | 1 | 635 | 1991 |
| Grand Total | 1726 | 2230 | 699 | 3 | 4658 | 755 | 4605 | 651 | 0 | 6011 | 473 | 2008 | 4801 | 4 | 7286 | 4389 | 4812 | 1817 | 17 | 11035 | 28990 |
| Apprch \% | 37.1 | 47.9 | 15 | 0.1 |  | 12.6 | 76.6 | 10.8 | 0 |  | 6.5 | 27.6 | 65.9 | 0.1 |  | 39.8 | 43.6 | 16.5 | 0.2 |  |  |
| Total \% | 6 | 7.7 | 2.4 | 0 | 16.1 | 2.6 | 15.9 | 2.2 | 0 | 20.7 | 1.6 | 6.9 | 16.6 | 0 | 25.1 | 15.1 | 16.6 | 6.3 | 0.1 | 38.1 |  |
| Motorcycles | 10 | 7 | 3 | 0 | 20 | 3 | 45 | 3 | 0 | 51 | 0 | 6 | 13 | 0 | 19 | 10 | 28 | 11 | 0 | 49 | 139 |
| \% Motorcycles | 0.6 | 0.3 | 0.4 | 0 | 0.4 | 0.4 | 1 | 0.5 | 0 | 0.8 | 0 | 0.3 | 0.3 | 0 | 0.3 | 0.2 | 0.6 | 0.6 | 0 | 0.4 | 0.5 |
| Cars | 1486 | 1817 | 548 | 3 | 3854 | 584 | 3444 | 513 | 0 | 4541 | 417 | 1623 | 3604 | 3 | 5647 | 3204 | 3603 | 1458 | 17 | 8282 | 22324 |
| \% Cars | 86.1 | 81.5 | 78.4 | 100 | 82.7 | 77.4 | 74.8 | 78.8 | 0 | 75.5 | 88.2 | 80.8 | 75.1 | 75 | 77.5 | 73 | 74.9 | 80.2 | 100 | 75.1 | 77 |
| Light Goods Vehicles | 205 | 351 | 126 | 0 | 682 | 154 | 1014 | 116 | 0 | 1284 | 47 | 310 | 1053 | 1 | 1411 | 1027 | 1038 | 319 | 0 | 2384 | 5761 |
| \% Light Goods Vehicles | 11.9 | 15.7 | 18 | 0 | 14.6 | 20.4 | 22 | 17.8 | 0 | 21.4 | 9.9 | 15.4 | 21.9 | 25 | 19.4 | 23.4 | 21.6 | 17.6 | 0 | 21.6 | 19.9 |
| Buses | 4 | 25 | 10 | 0 | 39 | 2 | 4 | 3 | 0 | 9 | 1 | 26 | 25 | 0 | 52 | 17 | 1 | 4 | 0 | 22 | 122 |
| \% Buses | 0.2 | 1.1 | 1.4 | 0 | 0.8 | 0.3 | 0.1 | 0.5 | 0 | 0.1 | 0.2 | 1.3 | 0.5 | 0 | 0.7 | 0.4 | 0 | 0.2 | 0 | 0.2 | 0.4 |
| Single-Unit Trucks | 18 | 25 | 11 | 0 | 54 | 11 | 78 | 13 | 0 | 102 | 6 | 37 | 91 | 0 | 134 | 114 | 115 | 24 | 0 | 253 | 543 |
| \% Single-Unit Trucks | 1 | 1.1 | 1.6 | 0 | 1.2 | 1.5 | 1.7 | 2 | 0 | 1.7 | 1.3 | 1.8 | 1.9 | 0 | 1.8 | 2.6 | 2.4 | 1.3 | 0 | 2.3 | 1.9 |
| Articulated Trucks | 3 | 5 | 1 | 0 | 9 | 1 | 20 | 3 | 0 | 24 | 2 | 6 | 15 | 0 | 23 | 17 | 27 | 1 | 0 | 45 | 101 |
| \% Articulated Trucks | 0.2 | 0.2 | 0.1 | 0 | 0.2 | 0.1 | 0.4 | 0.5 | 0 | 0.4 | 0.4 | 0.3 | 0.3 | 0 | 0.3 | 0.4 | 0.6 | 0.1 | 0 | 0.4 | 0.3 |
|  | Fargo - 25th St Corridor Study |  |  |  |  |  |  | Existing Conditions Report Appendix B5 |  |  |  |  |  |  |  |  |  |  |  |  |  |

File Name : Fargo_sta_2011_25th_ST_\&_52nd_AVE_877008_09-22-2021
Site Code : 2011
Start Date : 9/22/2021
Page No : 5


Fargo Moorhead

File Name : Fargo_sta_2011_25th_ST_\&_52nd_AVE_877008_09-22-2021
Site Code : 2011
Start Date: 9/22/2021
Page No : 6

|  | 25th ST From North |  |  |  |  | 52nd AVE From East |  |  |  |  | 25th ST From South |  |  |  |  | 52nd AVE From West |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Int. Total |
| Peak Hour Analysis From 09:00 AM to 08:45 AM - Peak 1 of 1 Peak Hour for Entire Intersection Begins at 05:00 PM |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 05:00 PM | 43 | 45 | 21 | 0 | 109 | 11 | 108 | 17 | 0 | 136 | 14 | 43 | 102 | 0 | 159 | 104 | 153 | 47 | 0 | 304 | 708 |
| 05:15 PM | 38 | 63 | 25 | 0 | 126 | 15 | 123 | 16 | 0 | 154 | 7 | 48 | 111 | 0 | 166 | 131 | 174 | 53 | 3 | 361 | 807 |
| 05:30 PM | 42 | 75 | 21 | 0 | 138 | 14 | 91 | 9 | 0 | 114 | 19 | 43 | 120 | 0 | 182 | 102 | 134 | 44 | 0 | 280 | 714 |
| 05:45 PM | 37 | 40 | 17 | 0 | 94 | 13 | 118 | 20 | 0 | 151 | 11 | 39 | 101 | 0 | 151 | 115 | 124 | 59 | 0 | 298 | 694 |
| Total Volume | 160 | 223 | 84 | 0 | 467 | 53 | 440 | 62 | 0 | 555 | 51 | 173 | 434 | 0 | 658 | 452 | 585 | 203 | 3 | 1243 | 2923 |
| \% App. Total | 34.3 | 47.8 | 18 | 0 |  | 9.5 | 79.3 | 11.2 | 0 |  | 7.8 | 26.3 | 66 | 0 |  | 36.4 | 47.1 | 16.3 | 0.2 |  |  |
| PHF | . 930 | . 743 | . 840 | . 000 | . 846 | . 883 | . 894 | . 775 | . 000 | . 901 | . 671 | . 901 | . 904 | . 000 | . 904 | . 863 | . 841 | . 860 | . 250 | . 861 | . 906 |

25th St \& 52nd Ave
Fargo Moorhead

File Name : Fargo_sta_2011_25th_ST_\&_52nd_AVE_877008_09-22-2021 Site Code : 2011
Start Date: 9/22/2021
Page No : 7


File Name : Fargo_sta_2011_25th_ST_\&_52nd_AVE_877008_09-22-2021
Site Code : 2011
Start Date: 9/22/2021
Page No : 8

|  | 25th ST From North |  |  |  |  | 52nd AVE From East |  |  |  |  | 25th ST From South |  |  |  |  | 52nd AVE From West |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Int. Total |
| Peak Hour Analys <br> Peak Hour for Eac | is From 0 Approa | $\begin{aligned} & : 00 \mathrm{AM} \\ & \mathrm{~h} \text { Begir } \end{aligned}$ | $\begin{aligned} & 08: 45 \\ & \text { at: } \end{aligned}$ | $\mathrm{AM}-\mathrm{Pe}$ | ak 1 of 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 04:45 PM |  |  |  |  | 07:15 AM |  |  |  |  | 07:15 AM |  |  |  |  | 05:00 PM |  |  |  |  |  |
| +0 mins. | 42 | 41 | 22 | 0 | 105 | 24 | 91 | 10 | 0 | 125 | 20 | 46 | 104 | 0 | 170 | 104 | 153 | 47 | 0 | 304 |  |
| +15 mins. | 43 | 45 | 21 | 0 | 109 | 20 | 119 | 11 | 0 | 150 | 8 | 56 | 128 | 0 | 192 | 131 | 174 | 53 | 3 | 361 |  |
| +30 mins. | 38 | 63 | 25 | 0 | 126 | 23 | 133 | 19 | 0 | 175 | 14 | 71 | 153 | 0 | 238 | 102 | 134 | 44 | 0 | 280 |  |
| +45 mins. | 42 | 75 | 21 | 0 | 138 | 18 | 98 | 9 | 0 | 125 | 8 | 51 | 110 | 0 | 169 | 115 | 124 | 59 | 0 | 298 |  |
| Total Volume | 165 | 224 | 89 | 0 | 478 | 85 | 441 | 49 | 0 | 575 | 50 | 224 | 495 | 0 | 769 | 452 | 585 | 203 | 3 | 1243 |  |
| \% App. Total | 34.5 | 46.9 | 18.6 | 0 |  | 14.8 | 76.7 | 8.5 | 0 |  | 6.5 | 29.1 | 64.4 | 0 |  | 36.4 | 47.1 | 16.3 | 0.2 |  |  |
| PHF | . 959 | . 747 | . 890 | . 000 | . 866 | . 885 | . 829 | . 645 | . 000 | . 821 | . 625 | . 789 | . 809 | . 000 | . 808 | . 863 | . 841 | . 860 | . 250 | . 861 |  |

25th St \& 52nd Ave
Fargo Moorhead

File Name : Fargo_sta_2011_25th_ST_\&_52nd_AVE_877008_09-22-2021 Site Code : 2011
Start Date : 9/22/2021
Page No : 9


| Time | Peds | SB Right | $\begin{gathered} \text { SB } \\ \text { Thru } \end{gathered}$ | $\begin{aligned} & \text { SB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { SB } \\ & \text { UTrn } \end{aligned}$ | Peds | WB Right | WB <br> Thru | WB Left | WB <br> Utrn | Peds | NB Right | NB Thru | $\begin{aligned} & \text { NB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { NB } \\ & \text { UTrn } \end{aligned}$ | Peds | EB Right | $\begin{aligned} & \text { EB } \\ & \text { Thru } \end{aligned}$ | $\begin{aligned} & \text { EB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { EB } \\ & \text { UTrn } \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 06:00 | 0 | 38 | 46 | 16 | 0 | 0 | 24 | 209 | 19 | 0 | 0 | 18 | 52 | 187 | 1 | 0 | 117 | 108 | 24 | 0 |  |  |
| 07:00 | 0 | 114 | 181 | 40 | 0 | 0 | 80 | 437 | 48 | 0 | 0 | 52 | 198 | 463 | 0 | 0 | 402 | 320 | 139 | 3 |  |  |
| 08:00 | 0 | 133 | 240 | 39 | 0 | 0 | 51 | 291 | 41 | 0 | 0 | 34 | 165 | 362 | 0 | 0 | 296 | 215 | 123 | 1 |  |  |
| 09:00 | 0 | 66 | 88 | 23 | 0 | 0 | 47 | 244 | 32 | 0 | 0 | 25 | 76 | 213 | 0 | 0 | 140 | 217 | 64 | 0 |  |  |
| 10:00 | 0 | 84 | 79 | 33 | 0 | 0 | 42 | 254 | 25 | 0 | 0 | 19 | 80 | 209 | 0 | 0 | 137 | 190 | 79 | 1 |  |  |
| 11:00 | 0 | 95 | 107 | 40 | 0 | 0 | 43 | 243 | 38 | 0 | 0 | 20 | 135 | 214 | 1 | 0 | 198 | 237 | 104 | 0 |  |  |
| 12:00 | 0 | 115 | 129 | 47 | 1 | 0 | 48 | 235 | 32 | 0 | 0 | 27 | 121 | 270 | 0 | 0 | 277 | 274 | 117 | 0 |  |  |
| 13:00 | 0 | 89 | 113 | 40 | 0 | 0 | 40 | 247 | 27 | 0 | 0 | 21 | 95 | 243 | 0 | 0 | 203 | 257 | 89 | 1 |  |  |
| 14:00 | 0 | 121 | 152 | 52 | 1 | 0 | 58 | 276 | 59 | 0 | 0 | 31 | 145 | 350 | 2 | 0 | 290 | 294 | 120 | 2 |  |  |
| 15:00 | 0 | 129 | 208 | 52 | 1 | 0 | 61 | 260 | 62 | 0 | 0 | 33 | 177 | 394 | 0 | 0 | 359 | 326 | 148 | 1 |  |  |
| 16:00 | 0 | 149 | 162 | 57 | 0 | 0 | 52 | 388 | 58 | 0 | 0 | 33 | 168 | 399 | 0 | 0 | 382 | 446 | 127 | 3 |  |  |
| 17:00 | 0 | 160 | 223 | 84 | 0 | 0 | 53 | 440 | 62 | 0 | 0 | 51 | 173 | 434 | 0 | 0 | 452 | 585 | 203 | 3 |  |  |
| 18:00 | 0 | 106 | 159 | 46 | 0 | 0 | 40 | 296 | 45 | 0 | 0 | 37 | 189 | 422 | 0 | 0 | 374 | 463 | 172 | 1 |  |  |
| 19:00 | 0 | 130 | 146 | 45 | 0 | 0 | 48 | 240 | 42 | 0 | 0 | 27 | 110 | 255 | 0 | 0 | 281 | 337 | 139 | 0 |  |  |
|  | Peds | $\begin{gathered} \hline \text { SB } \\ \text { Left } \end{gathered}$ | $\begin{gathered} \hline \text { SB } \\ \text { Thru } \\ \hline \end{gathered}$ | $\begin{array}{c\|} \hline \text { SB } \\ \text { Right } \\ \hline \end{array}$ | $\begin{gathered} \hline \text { SB } \\ \text { UTrn } \\ \hline \end{gathered}$ | Peds | $\begin{aligned} & \hline \text { WB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \hline \text { WB } \\ & \text { Thru } \end{aligned}$ | WB Right | $\begin{aligned} & \hline \text { WB } \\ & \text { Utrn } \\ & \hline \end{aligned}$ | Peds | $\begin{gathered} \hline \text { NB } \\ \text { Left } \end{gathered}$ | $\begin{gathered} \hline \text { NB } \\ \text { Thru } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { NB } \\ \text { Right } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { NB } \\ \text { UTrn } \\ \hline \end{gathered}$ | Peds | $\begin{aligned} & \hline \text { EB } \\ & \text { Left } \end{aligned}$ | $\begin{gathered} \hline \text { EB } \\ \text { Thru } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { EB } \\ \text { Right } \\ \hline \end{gathered}$ | $\begin{gathered} \text { EB } \\ \text { UTrn } \\ \hline \end{gathered}$ | $\begin{aligned} & \hline \text { Peak } \\ & \text { Start } \end{aligned}$ | PHF |
| AM Peak | 0 | 151 | 271 | 52 | 0 | 0 | 72 | 424 | 53 | 0 | 0 | 41 | 223 | 468 | 0 | 0 | 456 | 314 | 182 | 3 | 07:30 | 0.79 |
| MD Peak | 0 | 115 | 129 | 47 | 1 | 0 | 48 | 235 | 32 | 0 | 0 | 27 | 121 | 270 | 0 | 0 | 277 | 274 | 117 | 0 | 12:00 | 0.95 |
| PM Peak | 0 | 160 | 223 | 84 | 0 | 0 | 53 | 440 | 62 | 0 | 0 | 51 | 173 | 434 | 0 | 0 | 452 | 585 | 203 | 3 | 17:00 | 0.91 |


| Time | Peds | SB Right | $\begin{gathered} \text { SB } \\ \text { Thru } \end{gathered}$ | $\begin{aligned} & \text { SB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { SB } \\ & \text { UTrn } \end{aligned}$ | Peds | WB Right | WB <br> Thru | WB Left | WB <br> Utrn | Peds | NB Right | $\begin{gathered} \text { NB } \\ \text { Thru } \end{gathered}$ | NB Left | $\begin{aligned} & \text { NB } \\ & \text { UTrn } \end{aligned}$ | Peds | EB Right | $\begin{aligned} & \text { EB } \\ & \text { Thru } \end{aligned}$ | $\begin{aligned} & \text { EB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { EB } \\ & \text { UTrn } \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 06:00 | 0 | 0 | 30 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 1 | 0 | 3 | 0 |  |  |
| 07:00 | 0 | 0 | 197 | 5 | 0 | 0 | 44 | 0 | 13 | 0 | 4 | 6 | 452 | 0 | 0 | 0 | 34 | 3 | 71 | 0 |  |  |
| 08:00 | 0 | 0 | 332 | 17 | 0 | 0 | 22 | 0 | 10 | 0 | 3 | 9 | 378 | 0 | 0 | 2 | 49 | 4 | 87 | 0 |  |  |
| 09:00 | 0 | 1 | 148 | 5 | 0 | 0 | 16 | 0 | 3 | 0 | 0 | 3 | 166 | 0 | 0 | 1 | 0 | 0 | 3 | 0 |  |  |
| 10:00 | 0 | 0 | 162 | 7 | 0 | 0 | 14 | 0 | 2 | 0 | 0 | 6 | 165 | 0 | 0 | 1 | 1 | 0 | 3 | 0 |  |  |
| 11:00 | 0 | 0 | 214 | 17 | 0 | 1 | 13 | 0 | 5 | 0 | 1 | 1 | 201 | 0 | 0 | 2 | 3 | 0 | 2 | 0 |  |  |
| 12:00 | 0 | 0 | 249 | 15 | 0 | 0 | 18 | 0 | 2 | 0 | 0 | 4 | 235 | 0 | 0 | 1 | 0 | 1 | 4 | 0 |  |  |
| 13:00 | 0 | 0 | 231 | 8 | 0 | 0 | 14 | 0 | 4 | 0 | 0 | 5 | 232 | 0 | 0 | 0 | 1 | 0 | 6 | 0 |  |  |
| 14:00 | 2 | 0 | 262 | 13 | 0 | 1 | 16 | 0 | 7 | 0 | 2 | 8 | 287 | 0 | 0 | 2 | 41 | 0 | 58 | 0 |  |  |
| 15:00 | 2 | 0 | 351 | 16 | 0 | 3 | 21 | 0 | 7 | 0 | 0 | 8 | 368 | 0 | 0 | 6 | 6 | 0 | 19 | 0 |  |  |
| 16:00 | 0 | 1 | 379 | 28 | 0 | 2 | 22 | 0 | 9 | 0 | 0 | 12 | 324 | 0 | 0 | 1 | 15 | 0 | 14 | 0 |  |  |
| 17:00 | 1 | 0 | 506 | 34 | 0 | 4 | 19 | 0 | 8 | 0 | 1 | 13 | 316 | 0 | 0 | 2 | 7 | 3 | 14 | 0 |  |  |
| 18:00 | 0 | 0 | 330 | 31 | 0 | 2 | 30 | 0 | 8 | 0 | 0 | 11 | 266 | 0 | 0 | 3 | 9 | 0 | 21 | 0 |  |  |
| 19:00 | 0 | 0 | 160 | 17 | 0 | 0 | 9 | 0 | 3 | 0 | 0 | 5 | 106 | 0 | 0 | 5 | 1 | 0 | 11 | 0 |  | $\downarrow$ |
|  | Peds | $\begin{aligned} & \hline \text { SB } \\ & \text { Left } \end{aligned}$ | $\begin{gathered} \hline \text { SB } \\ \text { Thru } \end{gathered}$ | SB Right | $\begin{aligned} & \hline \text { SB } \\ & \text { UTrn } \end{aligned}$ | Peds | $\begin{aligned} & \hline \text { WB } \\ & \text { Left } \end{aligned}$ | WB <br> Thru | WB Right | WB Utrn | Peds | $\begin{gathered} \hline \text { NB } \\ \text { Left } \end{gathered}$ | $\begin{gathered} \hline \text { NB } \\ \text { Thru } \end{gathered}$ | NB Right | $\begin{gathered} \hline \text { NB } \\ \text { UTrn } \end{gathered}$ | Peds | $\begin{aligned} & \hline \text { EB } \\ & \text { Left } \\ & \hline \end{aligned}$ | $\begin{gathered} \hline \text { EB } \\ \text { Thru } \end{gathered}$ | EB <br> Right | $\begin{gathered} \hline \text { EB } \\ \text { UTrn } \end{gathered}$ | Peak Start | PHF |
| AM Peak | 0 | 0 | 320 | 11 | 0 | 0 | 43 | 0 | 19 | 0 | 7 | 11 | 551 | 0 | 0 | 0 | 67 | 6 | 138 | 0 | 07:30 | 0.73 |
| MD Peak | 2 | 0 | 239 | 14 | 0 | 1 | 16 | 0 | 4 | 0 | 1 | 6 | 285 | 0 | 0 | 2 | 40 | 0 | 53 | 0 | 13:45 | 0.68 |
| PM Peak | 1 | 1 | 510 | 39 | 0 | 5 | 23 | 0 | 12 | 0 | 1 | 15 | 329 | 0 | 0 | 2 | 10 | 1 | 14 | 0 | 16:45 | 0.87 |

Fargo Moorhead

File Name : Fargo_sta_2010_25th_ST_\&_40 th_AVE_876976_09-22-2021
Site Code : 2010
Start Date : 9/22/2021
Page No : 1

|  | 25th ST <br> From North |  |  |  | 40th AVE From East |  |  |  | 25th ST <br> From South |  |  |  | 40th AVE From West |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | U-Turn | Right | Thru | Left | U-Turn | Right | Thru | Left | U-Turn | Right | Thru | Left | U-Turn | Int. Total |
| 09:30 AM | 13 | 36 | 6 | 0 | 2 | 21 | 2 | 0 | 3 | 39 | 8 | 0 | 5 | 25 | 18 | 0 | 178 |
| 09:45 AM | 18 | 36 | 6 | 0 | 2 | 31 | 7 | 0 | 3 | 46 | 10 | 0 | 6 | 20 | 20 | 0 | 205 |
| Total | 31 | 72 | 12 | 0 | 4 | 52 | 9 | 0 | 6 | 85 | 18 | 0 | 11 | 45 | 38 | 0 | 383 |
| 10:00 AM | 21 | 43 | 5 | 0 | 8 | 30 | 7 | 0 | 5 | 43 | 12 | 0 | 9 | 15 | 14 | 0 | 212 |
| 10:15 AM | 23 | 41 | 4 | 0 | 3 | 22 | 2 | 0 | 4 | 34 | 10 | 0 | 9 | 22 | 19 | 0 | 193 |
| 10:30 AM | 16 | 30 | 9 | 0 | 6 | 28 | 5 | 0 | 2 | 47 | 13 | 0 | 5 | 19 | 14 | 0 | 194 |
| 10:45 AM | 40 | 68 | 5 | 0 | 5 | 20 | 6 | 0 | 3 | 46 | 6 | 0 | 9 | 20 | 22 | 0 | 250 |
| Total | 100 | 182 | 23 | 0 | 22 | 100 | 20 | 0 | 14 | 170 | 41 | 0 | 32 | 76 | 69 | 0 | 849 |
| 11:00 AM | 17 | 43 | 5 | 0 | 2 | 18 | 4 | 0 | 0 | 58 | 11 | 0 | 9 | 25 | 22 | 0 | 214 |
| 11:15 AM | 34 | 59 | 1 | 0 | 5 | 17 | 5 | 0 | 3 | 77 | 11 | 0 | 5 | 19 | 15 | 0 | 251 |
| 11:30 AM | 19 | 52 | 6 | 0 | 3 | 24 | 3 | 0 | 5 | 62 | 13 | 0 | 13 | 34 | 20 | 0 | 254 |
| 11:45 AM | 24 | 79 | 4 | 0 | 5 | 25 | 12 | 0 | 4 | 55 | 8 | 0 | 8 | 24 | 30 | 0 | 278 |
| Total | 94 | 233 | 16 | 0 | 15 | 84 | 24 | 0 | 12 | 252 | 43 | 0 | 35 | 102 | 87 | 0 | 997 |
| 12:00 PM | 23 | 58 | 6 | 0 | 6 | 32 | 9 | 0 | 11 | 65 | 4 | 0 | 15 | 28 | 30 | 0 | 287 |
| 12:15 PM | 21 | 58 | 6 | 0 | 4 | 33 | 9 | 0 | 8 | 57 | 8 | 0 | 12 | 21 | 16 | 0 | 253 |
| 12:30 PM | 31 | 63 | 12 | 0 | 6 | 31 | 5 | 0 | 4 | 67 | 11 | 0 | 10 | 19 | 22 | 0 | 281 |
| 12:45 PM | 18 | 56 | 3 | 0 | 4 | 33 | 9 | 0 | 8 | 55 | 15 | 0 | 7 | 33 | 16 | 0 | 257 |
| Total | 93 | 235 | 27 | 0 | 20 | 129 | 32 | 0 | 31 | 244 | 38 | 0 | 44 | 101 | 84 | 0 | 1078 |
| 01:00 PM | 25 | 58 | 3 | 0 | 7 | 17 | 4 | 0 | 3 | 53 | 9 | 0 | 10 | 30 | 20 | 0 | 239 |
| 01:15 PM | 33 | 54 | 8 | 0 | 4 | 20 | 2 | 0 | 3 | 58 | 15 | 0 | 13 | 27 | 31 | 0 | 268 |
| 01:30 PM | 32 | 56 | 4 | 0 | 3 | 23 | 7 | 0 | 5 | 51 | 12 | 0 | 12 | 23 | 17 | 0 | 245 |
| 01:45 PM | 20 | 62 | 4 | 0 | 4 | 29 | 2 | 0 | 8 | 51 | 5 | 0 | 6 | 26 | 22 | 0 | 239 |
| Total | 110 | 230 | 19 | 0 | 18 | 89 | 15 | 0 | 19 | 213 | 41 | 0 | 41 | 106 | 90 | 0 | 991 |
| 02:00 PM | 24 | 50 | 2 | 0 | 4 | 19 | 6 | 0 | 6 | 55 | 9 | 0 | 18 | 18 | 14 | 0 | 225 |
| 02:15 PM | 25 | 82 | 5 | 0 | 7 | 19 | 11 | 0 | 3 | 69 | 11 | 0 | 16 | 24 | 19 | 0 | 291 |
| 02:30 PM | 24 | 84 | 6 | 0 | 10 | 24 | 12 | 0 | 9 | 72 | 25 | 0 | 21 | 26 | 22 | 0 | 335 |
| 02:45 PM | 23 | 62 | 14 | 0 | 8 | 35 | 7 | 0 | 7 | 83 | 20 | 0 | 17 | 38 | 29 | 0 | 343 |
| Total | 96 | 278 | 27 | 0 | 29 | 97 | 36 | 0 | 25 | 279 | 65 | 0 | 72 | 106 | 84 | 0 | 1194 |
| 03:00 PM | 20 | 54 | 10 | 0 | 5 | 36 | 7 | $0 \mid$ | 14 | 94 | 21 | 0 | 9 | 40 | 29 | 0 | 339 |

File Name : Fargo_sta_2010_25th_ST_\&_40 th_AVE_876976_09-22-2021
Site Code : 2010
Start Date : 9/22/2021
Page No : 2
Groups Printed- Motorcycles - Cars - Light Goods Vehicles - Buses - Unit Trucks - Articulated Trucks

|  | 25th ST <br> From North |  |  |  | 40th AVE <br> From East |  |  |  | 25th ST From South |  |  |  | 40th AVE From West |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | U-Turn | Right | Thru | Left | U-Turn | Right | Thru | Left | U-Turn | Right | Thru | Left | U-Turn | Int. Total |
| 03:15 PM | 22 | 58 | 19 | 0 | 4 | 31 | 11 | 0 | 20 | 69 | 17 | 0 | 10 | 33 | 24 | 0 | 318 |
| 03:30 PM | 27 | 85 | 10 | 0 | 26 | 66 | 51 | 0 | 8 | 60 | 10 | 0 | 13 | 45 | 39 | 0 | 440 |
| 03:45 PM | 36 | 75 | 15 | 0 | 7 | 46 | 18 | 0 | 12 | 69 | 13 | 0 | 12 | 33 | 26 | 0 | 362 |
| Total | 105 | 272 | 54 | 0 | 42 | 179 | 87 | 0 | 54 | 292 | 61 | 0 | 44 | 151 | 118 | 0 | 1459 |
| 04:00 PM | 31 | 72 | 3 | 0 | 13 | 49 | 6 | 0 | 10 | 91 | 28 | 0 | 22 | 39 | 31 | 0 | 395 |
| 04:15 PM | 46 | 82 | 9 | 0 | 11 | 49 | 11 | 0 | 8 | 59 | 16 | 0 | 16 | 40 | 28 | 0 | 375 |
| 04:30 PM | 31 | 72 | 14 | 0 | 4 | 56 | 6 | 0 | 10 | 77 | 10 | 0 | 8 | 31 | 31 | 0 | 350 |
| 04:45 PM | 46 | 87 | 12 | 0 | 10 | 54 | 15 | 0 | 6 | 63 | 16 | 0 | 19 | 47 | 46 | 0 | 421 |
| Total | 154 | 313 | 38 | 0 | 38 | 208 | 38 | 0 | 34 | 290 | 70 | 0 | 65 | 157 | 136 | 0 | 1541 |
| 05:00 PM | 42 | 115 | 15 | 0 | 5 | 56 | 12 | 0 | 15 | 70 | 18 | 0 | 17 | 67 | 37 | 0 | 469 |
| 05:15 PM | 39 | 107 | 15 | 0 | 12 | 72 | 26 | 0 | 18 | 89 | 15 | 0 | 21 | 66 | 40 | 0 | 520 |
| 05:30 PM | 42 | 93 | 15 | 0 | 20 | 76 | 17 | 0 | 8 | 89 | 15 | 0 | 30 | 57 | 47 | 0 | 509 |
| 05:45 PM | 33 | 80 | 8 | 0 | 9 | 27 | 14 | 0 | 6 | 104 | 17 | 0 | 22 | 31 | 66 | 0 | 417 |
| Total | 156 | 395 | 53 | 0 | 46 | 231 | 69 | 0 | 47 | 352 | 65 | 0 | 90 | 221 | 190 | 0 | 1915 |
| 06:00 PM | 27 | 92 | 4 | 0 | 6 | 32 | 8 | 0 | 12 | 92 | 9 | 0 | 19 | 38 | 24 | 0 | 363 |
| 06:15 PM | 22 | 64 | 13 | 0 | 2 | 25 | 9 | 0 | 11 | 64 | 17 | 0 | 18 | 34 | 28 | 0 | 307 |
| 06:30 PM | 19 | 45 | 7 | 0 | 5 | 26 | 7 | 0 | 9 | 69 | 10 | 0 | 16 | 20 | 27 | 0 | 260 |
| 06:45 PM | 33 | 42 | 3 | 0 | 11 | 31 | 12 | 0 | 3 | 69 | 9 | 0 | 11 | 25 | 35 | 0 | 284 |
| Total | 101 | 243 | 27 | 0 | 24 | 114 | 36 | 0 | 35 | 294 | 45 | 0 | 64 | 117 | 114 | 0 | 1214 |
| 07:00 PM | 66 | 110 | 5 | 0 | 11 | 49 | 23 | 0 | 4 | 78 | 12 | 0 | 7 | 16 | 68 | 0 | 449 |
| 07:15 PM | 16 | 73 | 2 | 0 | 5 | 29 | 5 | 0 | 3 | 46 | 8 | 0 | 14 | 10 | 25 | 0 | 236 |
| 07:30 PM | 16 | 36 | 1 | 0 | 0 | 28 | 4 | 0 | 3 | 59 | 7 | 0 | 12 | 20 | 28 | 0 | 214 |
| 07:45 PM | 22 | 56 | 3 | 0 | 3 | 26 | 5 | 0 | 5 | 59 | 12 | 0 | 9 | 22 | 34 | 0 | 256 |
| Total | 120 | 275 | 11 | 0 | 19 | 132 | 37 | 0 | 15 | 242 | 39 | 0 | 42 | 68 | 155 | 0 | 1155 |
| 08:00 PM | 45 | 63 | 6 | 0 | 6 | 23 | 9 | 0 | 6 | 60 | 12 | 0 | 11 | 11 | 42 | 0 | 294 |
| 08:15 PM | 53 | 85 | 6 | 0 | 4 | 32 | 13 | 0 | 0 | 25 | 7 | 0 | 8 | 16 | 18 | 0 | 267 |
| 08:30 PM | 11 | 34 | 1 | 0 | 2 | 19 | 2 | 0 | 3 | 19 | 10 | 0 | 5 | 8 | 10 | 0 | 124 |
| 08:45 PM | 20 | 26 | 0 | 0 | 1 | 16 | 6 | 0 | 3 | 23 | 4 | 0 | 9 | 5 | 6 | 0 | 119 |
| Total | 129 | 208 | 13 | 0 | 13 | 90 | 30 | 0 | 12 | 127 | 33 | 0 | 33 | 40 | 76 | 0 | 804 |


| 09:00 PM | 7 | 27 | 1 | 0 | 2 | 16 | 1 | 0 | 2 | 19 | 6 | 0 | 4 | 6 | 8 | 0 | 99 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 09:15 PM | 14 | 21 | 5 | 0 | 1 | 11 | 0 | 0 | 0 | 21 | 7 | 0 | 2 | 3 | 1 | 0 | 86 |
| 09:30 PM | 11 | 22 | 0 | 0 | 0 | 9 | 3 | 0 | 0 | 11 | 1 | 0 | 7 | 6 | 2 | 0 | 72 |

## 25th St \& 40th Ave <br> Fargo Moorhead

File Name : Fargo_sta_2010_25th_ST_\&_40 th_AVE_876976_09-22-2021
Site Code : 2010
Start Date : 9/22/2021
Page No : 3
Groups Printed- Motorcycles - Cars - Light Goods Vehicles - Buses - Unit Trucks - Articulated Trucks

|  | 25th ST <br> From North |  |  |  | 40th AVE From East |  |  |  | 25th ST <br> From South |  |  |  | 40th AVE From West |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | U-Turn | Right | Thru | Left | U-Turn | Right | Thru | Left | U-Turn | Right | Thru | Left | U-Turn | Int. Total |
| 09:45 PM | 13 | 19 | 0 | 0 | 1 | 5 | 2 | 0 | 1 | 11 | 2 | 0 | 4 | 5 | 3 | 0 | 66 |
| Total | 45 | 89 | 6 | 0 | 4 | 41 | 6 | 0 | 3 | 62 | 16 | 0 | 17 | 20 | 14 | 0 | 323 |
| 10:00 PM | 14 | 10 | 0 | 0 | 1 | 5 | 0 | 0 | 1 | 12 | 0 | 0 | 3 | 3 | 6 | 0 | 55 |
| 10:15 PM | 9 | 13 | 0 | 0 | 1 | 6 | 2 | 0 | 2 | 3 | 0 | 0 | 1 | 5 | 4 | 0 | 46 |
| 10:30 PM | 9 | 11 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 4 | 0 | 0 | 3 | 3 | 2 | 0 | 39 |
| 10:45 PM | 2 | 8 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 3 | 1 | 0 | 0 | 4 | 2 | 0 | 24 |
| Total | 34 | 42 | 2 | 0 | 3 | 18 | 2 | 0 | 4 | 22 | 1 | 0 | 7 | 15 | 14 | 0 | 164 |
| 11:00 PM | 2 | 12 | 0 | 0 | 0 | 3 | 0 | 0 | 2 | 6 | 0 | 0 | 0 | 2 | 2 | 0 | 29 |
| 11:15 PM | 2 | 5 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 6 | 0 | 0 | 1 | 1 | 2 | 0 | 21 |
| 11:30 PM | 2 | 3 | 1 | 0 | 0 | 2 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 14 |
| 11:45 PM | 1 | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 0 | 11 |
| Total | 7 | 22 | 2 | 0 | 1 | 9 | 1 | 0 | 3 | 16 | 2 | 0 | 1 | 3 | 8 | 0 | 75 |
| 12:00 AM | 2 | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 1 | 0 | 1 | 0 | 3 | 0 | 14 |
| 12:15 AM | 0 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 1 | 2 | 0 | 13 |
| 12:30 AM | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 4 | 1 | 0 | 0 | 10 |
| 12:45 AM | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 7 |
| Total | 3 | 8 | 0 | 0 | 2 | 6 | 0 | 0 | 0 | 9 | 2 | 0 | 5 | 3 | 6 | 0 | 44 |
| 01:00 AM | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 7 |
| 01:15 AM | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 2 | 0 | 10 |
| 01:30 AM | 2 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 01:45 AM | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 6 |
| Total | 5 | 6 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 4 | 1 | 0 | 2 | 2 | 6 | 0 | 29 |
| 02:00 AM | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 7 |
| 02:15 AM | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 6 |
| 02:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 4 |
| 02:45 AM | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 |
| Total | 1 | 5 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 4 | 4 | 0 | 22 |
| 03:00 AM | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 7 |
| 03:15 AM | 0 | 4 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 7 |
| 03:30 AM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 7 |
| 03:45 AM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 4 |
| Total | 1 | 9 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 3 | 3 | 0 | 25 |

File Name : Fargo_sta_2010_25th_ST_\&_40 th_AVE_876976_09-22-2021
Site Code : 2010
Start Date : 9/22/2021
Page No : 4
Groups Printed- Motorcycles - Cars - Light Goods Vehicles - Buses - Unit Trucks - Articulated Trucks

|  | 25th ST From North |  |  |  | 40th AVE From East |  |  |  | $25 \text { th ST }$ <br> From South |  |  |  | 40th AVE From West |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | U-Turn | Right | Thru | Left | U-Turn | Right | Thru | Left | U-Turn | Right | Thru | Left | U-Turn | Int. Total |
| 04:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 2 | 0 | 0 | 6 |
| 04:15 AM | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 3 | 0 | 10 |
| 04:30 AM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 5 |
| 04:45 AM | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 3 | 1 | 0 | 0 | 3 | 0 | 0 | 10 |
| Total | 0 | 4 | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 10 | 3 | 0 | 0 | 6 | 3 | 0 | 31 |
| 05:00 AM | 0 | 4 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 9 | 2 | 0 | 0 | 4 | 2 | 0 | 24 |
| 05:15 AM | 2 | 3 | 1 | 0 | 0 | 1 | 1 | 0 | 3 | 4 | 1 | 0 | 0 | 5 | 2 | 0 | 23 |
| 05:30 AM | 2 | 1 | 1 | 0 | 0 | 5 | 2 | 0 | 0 | 6 | 2 | 0 | 1 | 6 | 3 | 0 | 29 |
| 05:45 AM | 5 | 8 | 3 | 0 | 0 | 7 | 1 | 0 | 1 | 9 | 1 | 0 | 2 | 3 | 2 | 0 | 42 |
| Total | 9 | 16 | 5 | 0 | 0 | 15 | 4 | 0 | 5 | 28 | 6 | 0 | 3 | 18 | 9 | 0 | 118 |
| 06:00 AM | 3 | 6 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 13 | 3 | 0 | 1 | 8 | 1 | 0 | 40 |
| 06:15 AM | 9 | 10 | 0 | 0 | 3 | 10 | 3 | 0 | 2 | 21 | 0 | 0 | 2 | 18 | 11 | 0 | 89 |
| 06:30 AM | 14 | 17 | 4 | 0 | 4 | 17 | 3 | 0 | 2 | 32 | 5 | 0 | 4 | 15 | 13 | 0 | 130 |
| 06:45 AM | 17 | 41 | 2 | 0 | 3 | 25 | 5 | 0 | 1 | 38 | 14 | 0 | 3 | 18 | 13 | 0 | 180 |
| Total | 43 | 74 | 6 | 0 | 11 | 54 | 13 | 0 | 5 | 104 | 22 | 0 | 10 | 59 | 38 | 0 | 439 |
| 07:00 AM | 11 | 31 | 7 | 0 | 3 | 14 | 7 | 0 | 5 | 50 | 9 | 0 | 6 | 21 | 12 | 0 | 176 |
| 07:15 AM | 22 | 47 | 6 | 0 | 2 | 25 | 8 | 0 | 5 | 83 | 21 | 0 | 16 | 44 | 28 | 0 | 307 |
| 07:30 AM | 20 | 64 | 17 | 0 | 14 | 35 | 21 | 0 | 19 | 84 | 28 | 0 | 9 | 59 | 37 | 0 | 407 |
| 07:45 AM | 30 | 102 | 19 | 0 | 10 | 54 | 17 | 0 | 17 | 117 | 33 | 0 | 21 | 70 | 39 | 0 | 529 |
| Total | 83 | 244 | 49 | 0 | 29 | 128 | 53 | 0 | 46 | 334 | 91 | 0 | 52 | 194 | 116 | 0 | 1419 |
| 08:00 AM | 23 | 79 | 21 | 0 | 21 | 52 | 33 | 0 | 46 | 115 | 42 | 0 | 14 | 43 | 34 | 0 | 523 |
| 08:15 AM | 19 | 82 | 24 | 0 | 25 | 56 | 30 | 0 | 24 | 75 | 21 | 0 | 12 | 67 | 28 | 0 | 463 |
| 08:30 AM | 13 | 58 | 16 | 0 | 24 | 58 | 29 | 0 | 21 | 55 | 12 | 0 | 9 | 39 | 31 | 0 | 365 |
| 08:45 AM | 16 | 45 | 5 | 0 | 6 | 25 | 6 | 0 | 6 | 51 | 20 | 0 | 9 | 22 | 17 | 0 | 228 |
| Total | 71 | 264 | 66 | 0 | 76 | 191 | 98 | 0 | 97 | 296 | 95 | 0 | 44 | 171 | 110 | 0 | 1579 |
| 09:00 AM | 10 | 32 | 2 | 0 | 5 | 22 | 5 | 0 | 4 | 42 | 3 | 0 | 5 | 17 | 18 | 0 | 165 |
| 09:15 AM | 17 | 42 | 5 | 0 | 4 | 16 | 3 | 0 | 2 | 52 | 13 | 0 | 8 | 24 | 24 | 0 | 210 |
| Grand Total | 1618 | 3793 | 465 | 0 | 427 | 2015 | 620 | 0 | 473 | 3827 | 814 | 0 | 728 | 1829 | 1614 | 0 | 18223 |
| Apprch \% | 27.5 | 64.6 | 7.9 | 0 | 13.9 | 65.8 | 20.2 | 0 | 9.2 | 74.8 | 15.9 | 0 | 17.5 | 43.9 | 38.7 | 0 |  |
| Total \% | 8.9 | 20.8 | 2.6 | 0 | 2.3 | 11.1 | 3.4 | 0 | 2.6 | 21 | 4.5 | 0 | 4 | 10 | 8.9 | 0 |  |
| Motorcycles | 7 | 19 | 3 | 0 | 0 | 11 | 0 | 0 | 1 | 17 | 2 | 0 | 1 | 8 | 3 | 0 | 72 |
| \% Motorcycles | 0.4 | 0.5 | 0.6 | 0 | 0 | 0.5 | 0 | 0 | 0.2 | 0.4 | 0.2 | 0 | 0.1 | 0.4 | 0.2 | 0 | 0.4 |
| Cars | 1321 | 3016 | 373 | 0 | 346 | 1601 | 524 | 0 | 400 | 3043 | 656 | 0 | 583 | 1475 | 1320 | 0 | 14658 |
| \% Cars | 81.6 | 79.5 | 80.2 | 0 | 81 | 79.5 | 84.5 | 0 | 84.6 | 79.5 | 80.6 | 0 | 80.1 | 80.6 | 81.8 | 0 | 80.4 |
| Light Goods Vehicles | 273 | 676 | 70 | 0 | 68 | 370 | 75 | 0 | 58 | 673 | 142 | 0 | 133 | 323 | 261 | 0 | 3122 |
| \% Light Goods Vehicles Fargo | $\text { 25th }{ }^{16.9} \mathrm{St}^{-}$ | $\begin{gathered} 17.8 \\ \text { Ior Study } \end{gathered}$ | 15.1 | 0 | 15.9 | 18.4 | 12.1 | ions Rep | 12.3 Append | 17.6 | 17.4 | 0 | 18.3 | 17.7 | 16.2 | 0 | 17.1 |

## 25th St \& 40th Ave <br> Fargo Moorhead

File Name : Fargo sta 2010 25th ST \& 40 th AVE 876976 09-22-2021
Site Code : 2010
Start Date : 9/22/2021
Page No : 5
Groups Printed- Motorcycles - Cars - Light Goods Vehicles - Buses - Unit Trucks - Articulated Trucks

|  | 25th ST <br> From North |  |  |  | 40th AVE From East |  |  |  | 25th ST <br> From South |  |  |  | 40th AVE From West |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Right | Thru | Left | U-Turn | Right | Thru | Left | U-Turn | Right | Thru | Left | U-Turn | Right | Thru | Left | U-Turn | Int. Total |
| Buses | 2 | 25 | 14 | 0 | 10 | 10 | 16 | 0 | 7 | 27 | 1 | 0 | 1 | 12 | 6 | 0 | 131 |
| \% Buses | 0.1 | 0.7 | 3 | 0 | 2.3 | 0.5 | 2.6 | 0 | 1.5 | 0.7 | 0.1 | 0 | 0.1 | 0.7 | 0.4 | 0 | 0.7 |
| Single-Unit Trucks | 14 | 50 | 4 | 0 | 1 | 22 | 5 | 0 | 6 | 61 | 11 | 0 | 9 | 11 | 21 | 0 | 215 |
| \% Single-Unit Trucks | 0.9 | 1.3 | 0.9 | 0 | 0.2 | 1.1 | 0.8 | 0 | 1.3 | 1.6 | 1.4 | 0 | 1.2 | 0.6 | 1.3 | 0 | 1.2 |
| Articulated Trucks | 1 | 7 | 1 | 0 | 2 | 1 | 0 | 0 | 1 | 6 | 2 | 0 | 1 | 0 | 3 | 0 | 25 |
| \% Articulated Trucks | 0.1 | 0.2 | 0.2 | 0 | 0.5 | 0 | 0 | 0 | 0.2 | 0.2 | 0.2 | 0 | 0.1 | 0 | 0.2 | 0 | 0.1 |

File Name : Fargo_sta_2010_25th_ST_\&_40 th_AVE_876976_09-22-2021
Site Code : 2010
Start Date : 9/22/2021
Page No : 6


## 25th St \& 40th Ave <br> Fargo Moorhead

File Name : Fargo_sta_2010_25th_ST_\&_40 th_AVE_876976_09-22-2021 Site Code : 2010
Start Date : 9/22/2021
Page No : 7

|  | 25th ST <br> From North |  |  |  |  | 40th AVE <br> From East |  |  |  |  | $\begin{aligned} & \text { 25th ST } \\ & \text { From South } \end{aligned}$ |  |  |  |  | 40th AVE From West |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Int. Total |
| Peak Hour Analysis From 09:30 AM to 09:15 AM - Peak 1 of 1 Peak Hour for Entire Intersection Begins at 07:30 AM |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 07:30 AM | 20 | 64 | 17 | 0 | 101 | 14 | 35 | 21 | 0 | 70 | 19 | 84 | 28 | 0 | 131 | 9 | 59 | 37 | 0 | 105 | 407 |
| 07:45 AM | 30 | 102 | 19 | 0 | 151 | 10 | 54 | 17 | 0 | 81 | 17 | 117 | 33 | 0 | 167 | 21 | 70 | 39 | 0 | 130 | 529 |
| 08:00 AM | 23 | 79 | 21 | 0 | 123 | 21 | 52 | 33 | 0 | 106 | 46 | 115 | 42 | 0 | 203 | 14 | 43 | 34 | 0 | 91 | 523 |
| 08:15 AM | 19 | 82 | 24 | 0 | 125 | 25 | 56 | 30 | 0 | 111 | 24 | 75 | 21 | 0 | 120 | 12 | 67 | 28 | 0 | 107 | 463 |
| Total Volume | 92 | 327 | 81 | 0 | 500 | 70 | 197 | 101 | 0 | 368 | 106 | 391 | 124 | 0 | 621 | 56 | 239 | 138 | 0 | 433 | 1922 |
| \% App. Total | 18.4 | 65.4 | 16.2 | 0 |  | 19 | 53.5 | 27.4 | 0 |  | 17.1 | 63 | 20 | 0 |  | 12.9 | 55.2 | 31.9 | 0 |  |  |
| PHF | . 767 | . 801 | . 844 | . 000 | . 828 | 700 | . 879 | . 765 | . 000 | . 829 | . 576 | . 835 | 738 | . 000 | . 765 | . 667 | . 854 | . 885 | . 000 | . 833 | . 908 |

25th St \& 40th Ave
Fargo Moorhead

File Name : Fargo_sta_2010_25th_ST_\&_40 th_AVE_876976_09-22-2021 Site Code : 2010
Start Date : 9/22/2021
Page No : 8


25th St \& 40th Ave Fargo Moorhead

File Name : Fargo_sta_2010_25th_ST_\&_40 th_AVE_876976_09-22-2021 Site Code : 2010 Start Date : 9/22/2021 Page No : 9


```
25th St \& 40th Ave
Fargo Moorhead
```

File Name : Fargo_sta_2010_25th_ST_\&_40 th_AVE_876976_09-22-2021 Site Code : 2010
Start Date : 9/22/2021
Page No : 10

|  | 25th ST From North |  |  |  |  | 40th AVE From East |  |  |  |  | 25th ST <br> From South |  |  |  |  | 40th AVE From West |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Int. Total |
| Peak Hour Analysis From 09:30 AM to 09:15 AM - Peak 1 of 1 Peak Hour for Each Approach Begins at: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 04:45 PM |  |  |  |  | 07:45 AM |  |  |  |  | 07:30 AM |  |  |  |  | 05:00 PM |  |  |  |  |  |
| +0 mins. | 46 | 87 | 12 | 0 | 145 | 10 | 54 | 17 | 0 | 81 | 19 | 84 | 28 | 0 | 131 | 17 | 67 | 37 | 0 | 121 |  |
| +15 mins. | 42 | 115 | 15 | 0 | 172 | 21 | 52 | 33 | 0 | 106 | 17 | 117 | 33 | 0 | 167 | 21 | 66 | 40 | 0 | 127 |  |
| +30 mins. | 39 | 107 | 15 | 0 | 161 | 25 | 56 | 30 | 0 | 111 | 46 | 115 | 42 | 0 | 203 | 30 | 57 | 47 | 0 | 134 |  |
| +45 mins. | 42 | 93 | 15 | 0 | 150 | 24 | 58 | 29 | 0 | 111 | 24 | 75 | 21 | 0 | 120 | 22 | 31 | 66 | 0 | 119 |  |
| Total Volume | 169 | 402 | 57 | 0 | 628 | 80 | 220 | 109 | 0 | 409 | 106 | 391 | 124 | 0 | 621 | 90 | 221 | 190 | 0 | 501 |  |
| \% App. Total | 26.9 | 64 | 9.1 | 0 |  | 19.6 | 53.8 | 26.7 | 0 |  | 17.1 | 63 | 20 | 0 |  | 18 | 44.1 | 37.9 | 0 |  |  |
| PHF | . 918 | . 874 | . 950 | . 000 | . 913 | . 800 | . 948 | . 826 | . 000 | . 921 | . 576 | . 835 | . 738 | . 000 | . 765 | . 750 | . 825 | . 720 | . 000 | . 935 |  |

25th St \& 40th Ave Fargo Moorhead

File Name : Fargo_sta_2010_25th_ST_\&_40 th_AVE_876976_09-22-2021 Site Code : 2010
Start Date : 9/22/2021
Page No : 11


25th St \& 40th Ave
Fargo Moorhead

File Name : Fargo_sta_2010_25th_ST_\&_40 th_AVE_876976_09-22-2021 Site Code : 2010 Start Date : 9/22/2021 Page No : 12


| Time | Peds | SB Right | $\underset{\text { SB }}{\text { Thru }}$ | $\begin{aligned} & \text { SB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { SB } \\ & \text { UTrn } \end{aligned}$ | Peds | WB Right | WB Thru | $\begin{aligned} & \text { WB } \\ & \text { Left } \end{aligned}$ | WB Utrn | Peds | NB Right | $\begin{aligned} & \text { NB } \\ & \text { Thru } \end{aligned}$ | $\begin{aligned} & \text { NB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { NB } \\ & \text { UTrn } \end{aligned}$ | Peds | EB Right | $\begin{gathered} \text { EB } \\ \text { Thru } \end{gathered}$ | $\begin{aligned} & \text { EB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { EB } \\ & \text { UTrn } \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 06:00 | 0 | 43 | 74 | 6 | 0 | 0 | 11 | 54 | 13 | 0 | 0 | 5 | 104 | 22 | 0 | 0 | 10 | 59 | 38 | 0 |  |  |
| 07:00 | 0 | 83 | 244 | 49 | 0 | 0 | 29 | 128 | 53 | 0 | 0 | 46 | 334 | 91 | 0 | 0 | 52 | 194 | 116 | 0 |  |  |
| 08:00 | 0 | 71 | 264 | 66 | 0 | 0 | 76 | 191 | 98 | 0 | 0 | 97 | 296 | 95 | 0 | 0 | 44 | 171 | 110 | 0 |  |  |
| 09:00 | 0 | 58 | 146 | 19 | 0 | 0 | 13 | 90 | 17 | 0 | 0 | 12 | 179 | 34 | 0 | 0 | 24 | 86 | 80 | 0 |  |  |
| 10:00 | 0 | 100 | 182 | 23 | 0 | 0 | 22 | 100 | 20 | 0 | 0 | 14 | 170 | 41 | 0 | 0 | 32 | 76 | 69 | 0 |  |  |
| 11:00 | 0 | 94 | 233 | 16 | 0 | 0 | 15 | 84 | 24 | 0 | 0 | 12 | 252 | 43 | 0 | 0 | 35 | 102 | 87 | 0 |  |  |
| 12:00 | 0 | 93 | 235 | 27 | 0 | 0 | 20 | 129 | 32 | 0 | 0 | 31 | 244 | 38 | 0 | 0 | 44 | 101 | 84 | 0 |  |  |
| 13:00 | 0 | 110 | 230 | 19 | 0 | 0 | 18 | 89 | 15 | 0 | 0 | 19 | 213 | 41 | 0 | 0 | 41 | 106 | 90 | 0 |  |  |
| 14:00 | 0 | 96 | 278 | 27 | 0 | 0 | 29 | 97 | 36 | 0 | 0 | 25 | 279 | 65 | 0 | 0 | 72 | 106 | 84 | 0 |  |  |
| 15:00 | 0 | 105 | 272 | 54 | 0 | 0 | 42 | 179 | 87 | 0 | 0 | 54 | 292 | 61 | 0 | 0 | 44 | 151 | 118 | 0 |  |  |
| 16:00 | 0 | 154 | 313 | 38 | 0 | 0 | 38 | 208 | 38 | 0 | 0 | 34 | 290 | 70 | 0 | 0 | 65 | 157 | 136 | 0 |  |  |
| 17:00 | 0 | 156 | 395 | 53 | 0 | 0 | 46 | 231 | 69 | 0 | 0 | 47 | 352 | 65 | 0 | 0 | 90 | 221 | 190 | 0 |  |  |
| 18:00 | 0 | 101 | 243 | 27 | 0 | 0 | 24 | 114 | 36 | 0 | 0 | 35 | 294 | 45 | 0 | 0 | 64 | 117 | 114 | 0 |  |  |
| 19:00 | 0 | 120 | 275 | 11 | 0 | 0 | 19 | 132 | 37 | 0 | 0 | 15 | 242 | 39 | 0 | 0 | 42 | 68 | 155 | 0 |  |  |
|  | Peds | $\begin{gathered} \hline \text { SB } \\ \text { Left } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { SB } \\ \text { Thru } \\ \hline \end{gathered}$ | $\begin{array}{\|c} \hline \text { SB } \\ \text { Right } \\ \hline \end{array}$ | $\begin{gathered} \hline \text { SB } \\ \text { UTrn } \\ \hline \end{gathered}$ | Peds | $\begin{aligned} & \hline \text { WB } \\ & \text { Left } \end{aligned}$ | WB <br> Thru | WB <br> Right | WB Utrn | Peds | $\begin{gathered} \hline \text { NB } \\ \text { Left } \end{gathered}$ | NB <br> Thru | NB <br> Right | $\begin{gathered} \hline \text { NB } \\ \text { UTrn } \end{gathered}$ | Peds | $\begin{aligned} & \hline \text { EB } \\ & \text { Left } \end{aligned}$ | $\begin{gathered} \hline \text { EB } \\ \text { Thru } \\ \hline \end{gathered}$ | EB <br> Right | $\begin{gathered} \hline \text { EB } \\ \text { UTrn } \\ \hline \end{gathered}$ | Peak Start | PHF |
| AM Peak | 0 | 92 | 327 | 81 | 0 | 0 | 70 | 197 | 101 | 0 | 0 | 106 | 391 | 124 | 0 | 0 | 56 | 239 | 138 | 0 | 07:30 | 0.91 |
| MD Peak | 0 | 99 | 258 | 28 | 0 | 0 | 21 | 121 | 35 | 0 | 0 | 27 | 244 | 31 | 0 | 0 | 45 | 92 | 98 | 0 | 11:45 | 0.96 |
| PM Peak | 0 | 169 | 402 | 57 | 0 | 0 | 47 | 258 | 70 | 0 | 0 | 47 | 311 | 64 | 0 | 0 | 87 | 237 | 170 | 0 | 16:45 | 0.92 |


| Time | Peds | SB Right | $\begin{gathered} \text { SB } \\ \text { Thru } \end{gathered}$ | $\begin{aligned} & \text { SB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { SB } \\ & \text { UTrn } \end{aligned}$ | Peds | WB Right | WB Thru | $\begin{aligned} & \text { WB } \\ & \text { Left } \end{aligned}$ | WB <br> Utrn | Peds | NB Right | $\begin{aligned} & \text { NB } \\ & \text { Thru } \end{aligned}$ | $\begin{aligned} & \text { NB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { NB } \\ & \text { UTrn } \end{aligned}$ | Peds | $\begin{gathered} \text { EB } \\ \text { Right } \end{gathered}$ | $\begin{gathered} \text { EB } \\ \text { Thru } \end{gathered}$ | $\begin{aligned} & \text { EB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { EB } \\ & \text { UTrn } \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 06:00 | 0 | 0 | 36 | 2 | 0 | 0 | 11 | 0 | 1 | 0 | 0 | 1 | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
| 07:00 | 0 | 0 | 288 | 12 | 0 | 0 | 63 | 0 | 6 | 0 | 0 | 6 | 495 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
| 08:00 | 0 | 0 | 322 | 38 | 0 | 1 | 57 | 0 | 9 | 0 | 1 | 6 | 487 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
| 09:00 | 0 | 0 | 192 | 10 | 0 | 0 | 27 | 0 | 10 | 0 | 0 | 3 | 210 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
| 10:00 | 0 | 0 | 209 | 17 | 0 | 1 | 17 | 0 | 4 | 0 | 0 | 4 | 223 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
| 11:00 | 0 | 0 | 275 | 33 | 0 | 1 | 26 | 0 | 7 | 0 | 0 | 7 | 278 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
| 12:00 | 2 | 0 | 315 | 30 | 0 | 1 | 31 | 0 | 4 | 0 | 0 | 9 | 302 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
| 13:00 | 1 | 0 | 290 | 19 | 0 | 0 | 32 | 0 | 8 | 0 | 0 | 4 | 301 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
| 14:00 | 1 | 0 | 371 | 17 | 0 | 1 | 18 | 0 | 6 | 0 | 1 | 8 | 331 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
| 15:00 | 0 | 0 | 404 | 32 | 0 | 0 | 36 | 0 | 10 | 0 | 0 | 17 | 416 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
| 16:00 | 0 | 0 | 521 | 65 | 0 | 0 | 46 | 0 | 8 | 0 | 0 | 11 | 381 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
| 17:00 | 0 | 0 | 641 | 60 | 0 | 2 | 41 | 0 | 9 | 0 | 0 | 13 | 379 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
| 18:00 | 1 | 0 | 361 | 48 | 0 | 0 | 32 | 0 | 9 | 0 | 0 | 12 | 360 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
| 19:00 | 0 | 0 | 199 | 17 | 0 | 0 | 17 | 0 | 5 | 0 | 0 | 3 | 145 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | $\downarrow$ |
|  | Peds | $\begin{aligned} & \hline \text { SB } \\ & \text { Left } \end{aligned}$ | $\begin{gathered} \hline \text { SB } \\ \text { Thru } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { SB } \\ \text { Right } \end{gathered}$ | $\begin{aligned} & \hline \text { SB } \\ & \text { UTrn } \\ & \hline \end{aligned}$ | Peds | $\begin{aligned} & \text { WB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \hline \text { WB } \\ & \text { Thru } \end{aligned}$ | WB Right | $\begin{aligned} & \hline \text { WB } \\ & \text { Utrn } \end{aligned}$ | Peds | $\begin{aligned} & \hline \text { NB } \\ & \text { Left } \end{aligned}$ | $\begin{array}{\|c\|} \hline \text { NB } \\ \text { Thru } \end{array}$ | NB Right | $\begin{gathered} \hline \text { NB } \\ \text { UTrn } \\ \hline \end{gathered}$ | Peds | $\begin{aligned} & \text { EB } \\ & \text { Left } \end{aligned}$ | $\begin{gathered} \hline \text { EB } \\ \text { Thru } \end{gathered}$ | $\begin{gathered} \hline \text { EB } \\ \text { Right } \end{gathered}$ | $\begin{gathered} \hline \text { EB } \\ \text { UTrn } \\ \hline \end{gathered}$ | Peak Start | PHF |
| AM Peak | 0 | 0 | 394 | 36 | 0 | 1 | 71 | 0 | 9 | 0 | 1 | 6 | 641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 07:30 | 0.92 |
| MD Peak | 0 | 0 | 345 | 15 | 0 | 1 | 14 | 0 | 5 | 0 | 0 | 8 | 324 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 0.90 |
| PM Peak | 0 | 0 | 657 | 66 | 0 | 2 | 40 | 0 | 10 | 0 | 0 | 12 | 383 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 0.95 |


| Time | Peds | SB Right | $\begin{gathered} \text { SB } \\ \text { Thru } \end{gathered}$ | $\begin{aligned} & \text { SB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { SB } \\ & \text { UTrn } \end{aligned}$ | Peds | WB Right | WB Thru | WB Left | WB Utrn | Peds | NB Right | NB Thru | $\begin{aligned} & \text { NB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { NB } \\ & \text { UTrn } \end{aligned}$ | Peds | $\begin{gathered} \text { EB } \\ \text { Right } \end{gathered}$ | $\begin{aligned} & \text { EB } \\ & \text { Thru } \end{aligned}$ | $\begin{aligned} & \text { EB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { EB } \\ & \text { UTrn } \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 06:00 | 0 | 6 | 35 | 1 | 0 | 0 | 13 | 4 | 2 | 0 | 0 | 2 | 69 | 3 | 0 | 0 | 3 | 1 | 7 | 0 |  |  |
| 07:00 | 0 | 26 | 244 | 12 | 0 | 0 | 71 | 19 | 22 | 0 | 0 | 11 | 531 | 26 | 0 | 1 | 19 | 15 | 53 | 0 |  |  |
| 08:00 | 0 | 30 | 299 | 14 | 0 | 0 | 57 | 23 | 18 | 0 | 1 | 18 | 521 | 26 | 0 | 3 | 28 | 21 | 33 | 0 |  |  |
| 09:00 | 0 | 18 | 202 | 11 | 0 | 0 | 31 | 11 | 7 | 0 | 0 | 15 | 238 | 4 | 0 | 1 | 12 | 14 | 25 | 0 |  |  |
| 10:00 | 0 | 31 | 239 | 11 | 0 | 1 | 23 | 11 | 9 | 0 | 0 | 9 | 235 | 9 | 0 | 0 | 14 | 10 | 31 | 0 |  |  |
| 11:00 | 1 | 28 | 283 | 26 | 0 | 2 | 45 | 20 | 17 | 0 | 0 | 10 | 323 | 17 | 0 | 2 | 15 | 8 | 36 | 0 |  |  |
| 12:00 | 0 | 23 | 341 | 16 | 0 | 2 | 36 | 30 | 13 | 1 | 0 | 15 | 347 | 10 | 0 | 1 | 19 | 19 | 31 | 0 |  |  |
| 13:00 | 0 | 32 | 307 | 27 | 0 | 0 | 39 | 16 | 15 | 0 | 0 | 15 | 343 | 8 | 0 | 0 | 19 | 18 | 27 | 0 |  |  |
| 14:00 | 0 | 25 | 367 | 31 | 0 | 2 | 34 | 22 | 14 | 0 | 0 | 12 | 328 | 16 | 0 | 1 | 24 | 18 | 30 | 0 |  |  |
| 15:00 | 0 | 41 | 426 | 39 | 0 | 0 | 35 | 17 | 27 | 0 | 0 | 23 | 423 | 14 | 0 | 2 | 29 | 20 | 21 | 0 |  |  |
| 16:00 | 1 | 50 | 566 | 58 | 0 | 0 | 46 | 23 | 25 | 0 | 1 | 24 | 414 | 13 | 0 | 1 | 39 | 39 | 43 | 0 |  |  |
| 17:00 | 3 | 50 | 674 | 63 | 0 | 2 | 51 | 36 | 35 | 0 | 0 | 15 | 414 | 12 | 0 | 2 | 52 | 49 | 35 | 0 |  |  |
| 18:00 | 0 | 36 | 396 | 43 | 0 | 1 | 44 | 14 | 26 | 0 | 0 | 17 | 366 | 15 | 0 | 1 | 15 | 21 | 23 | 0 |  |  |
| 19:00 | 0 | 20 | 233 | 19 | 0 | 0 | 24 | 10 | 8 | 0 | 0 | 8 | 158 | 5 | 0 | 3 | 5 | 13 | 12 | 0 |  | $\downarrow$ |
|  | Peds | $\begin{gathered} \hline \text { SB } \\ \text { Left } \end{gathered}$ | $\begin{gathered} \hline \text { SB } \\ \text { Thru } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { SB } \\ \text { Right } \end{gathered}$ | $\begin{gathered} \hline \text { SB } \\ \text { UTrn } \\ \hline \end{gathered}$ | Peds | $\begin{aligned} & \hline \text { WB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \hline \text { WB } \\ & \text { Thru } \end{aligned}$ | WB Right | $\begin{aligned} & \hline \text { WB } \\ & \text { Utrn } \\ & \hline \end{aligned}$ | Peds | $\begin{aligned} & \hline \text { NB } \\ & \text { Left } \end{aligned}$ | $\begin{array}{\|c\|} \hline \text { NB } \\ \text { Thru } \end{array}$ | NB Right | $\begin{gathered} \hline \text { NB } \\ \text { UTrn } \\ \hline \end{gathered}$ | Peds | $\begin{aligned} & \hline \text { EB } \\ & \text { Left } \end{aligned}$ | $\begin{gathered} \hline \text { EB } \\ \text { Thru } \\ \hline \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { EB } \\ \text { Right } \\ \hline \end{array}$ | $\begin{gathered} \text { EB } \\ \text { UTrn } \\ \hline \end{gathered}$ | Peak Start | PHF |
| AM Peak | 0 | 29 | 341 | 17 | 0 | 0 | 73 | 23 | 27 | 0 | 1 | 21 | 669 | 38 | 0 | 0 | 32 | 28 | 48 | 0 | 07:30 | 0.92 |
| MD Peak | 0 | 23 | 341 | 16 | 0 | 2 | 36 | 30 | 13 | 1 | 0 | 15 | 347 | 10 | 0 | 1 | 19 | 19 | 31 | 0 | 12:00 | 0.95 |
| PM Peak | 1 | 67 | 700 | 62 | 0 | 1 | 53 | 35 | 37 | 0 | 0 | 16 | 412 | 9 | 0 | 2 | 57 | 52 | 48 | 0 | 16:30 | 0.94 |

City of Fargo

Fargo, ND 58102

File Name : 25th \& 33rd Ave S 11-17-21 peak hours Site Code :
Start Date : 11/17/2021
Page No : 1

|  | 25th St S From North |  |  |  |  | 33rd Ave S From East |  |  |  |  | 25th St S From South |  |  |  |  | 33rd Ave S From West |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 07:00 AM | 0 | 51 | 0 | 0 | 51 | 1 | 1 | 2 | 0 | 4 | 1 | 89 | 0 | 0 | 90 | 0 | 0 | 0 | 0 | 0 | 145 |
| 07:15 AM | 0 | 63 | 0 | 0 | 63 | 3 | 1 | 5 | 0 | 9 | 0 | 122 | 0 | 0 | 122 | 0 | 0 | 1 | 0 | 1 | 195 |
| 07:30 AM | 6 | 85 | 1 | 0 | 92 | 13 | 1 | 1 | 0 | 15 | 0 | 182 | 5 | 0 | 187 | 2 | 1 | 1 | 0 | 4 | 298 |
| 07:45 AM | 10 | 100 | 1 | 1 | 112 | 8 | 0 | 3 | 0 | 11 | 1 | 176 | 17 | 0 | 194 | 5 | 0 | 2 | 0 | 7 | 324 |
| Total | 16 | 299 | 2 | 1 | 318 | 25 | 3 | 11 | 0 | 39 | 2 | 569 | 22 | 0 | 593 | 7 | 1 | 4 | 0 | 12 | 962 |
| 08:00 AM | 11 | 108 | 2 | 0 | 121 | 5 | 0 | 1 | 0 | 6 | 4 | 172 | 19 | 0 | 195 | 6 | 0 | 3 | 0 | 9 | 331 |
| 08:15 AM | 2 | 92 | 2 | 0 | 96 | 2 | 2 | 1 | 0 | 5 | 1 | 136 | 8 | 0 | 145 | 7 | 0 | 3 | 0 | 10 | 256 |
| 08:30 AM | 1 | 97 | 0 | 0 | 98 | 12 | 0 | 0 | 0 | 12 | 2 | 140 | 1 | 0 | 143 | 2 | 0 | 0 | 0 | 2 | 255 |
| 08:45 AM | 1 | 125 | 2 | 0 | 128 | 5 | 2 | 0 | 0 | 7 | 1 | 101 | 0 | 0 | 102 | 1 | 0 | 1 | 0 | 2 | 239 |
| Total | 15 | 422 | 6 | 0 | 443 | 24 | 4 | 2 | 0 | 30 | 8 | 549 | 28 | 0 | 585 | 16 | 0 | 7 | 0 | 23 | 1081 |


| 11:00 AM | 0 | 45 | 5 | 0 | 50 | 3 | 0 | 1 | 0 | 4 | 0 | 55 | 1 | 0 | 56 | 2 | 0 | 3 | 0 | 5 | 115 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11:15 AM | 0 | 108 | 1 | 0 | 109 | 1 | 0 | 2 | 0 | 3 | 0 | 128 | 1 | 0 | 129 | 2 | 0 | 0 | 0 | 2 | 243 |
| 11:30 AM | 1 | 70 | 5 | 0 | 76 | 3 | 0 | 1 | 0 | 4 | 1 | 121 | 0 | 0 | 122 | 3 | 0 | 1 | 0 | 4 | 206 |
| 11:45 AM | 0 | 109 | 1 | 0 | 110 | 5 | 0 | 1 | 0 | 6 | 0 | 106 | 1 | 0 | 107 | 3 | 0 | 3 | 0 | 6 | 229 |
| Total | 1 | 332 | 12 | 0 | 345 | 12 | 0 | 5 | 0 | 17 | 1 | 410 | 3 | 0 | 414 | 10 | 0 | 7 | 0 | 17 | 793 |
| 12:00 PM | 0 | 117 | 5 | 0 | 122 | 7 | 2 | 0 | 0 | 9 | 0 | 94 | 1 | 0 | 95 | 1 | 0 | 0 | 0 | 1 | 227 |
| 12:15 PM | 0 | 97 | 3 | 0 | 100 | 6 | 0 | 2 | 0 | 8 | 0 | 101 | 0 | 0 | 101 | 1 | 0 | 0 | 0 | 1 | 210 |
| 12:30 PM | 2 | 95 | 3 | 0 | 100 | 8 | 1 | 2 | 0 | 11 | 1 | 115 | 2 | 0 | 118 | 2 | 0 | 2 | 0 | 4 | 233 |
| 12:45 PM | 2 | 89 | 0 | 0 | 91 | 5 | 2 | 1 | 0 | 8 | 2 | 117 | 1 | 0 | 120 | 1 | 0 | 1 | 0 | 2 | 221 |
| Total | 4 | 398 | 11 | 0 | 413 | 26 | 5 | 5 | 0 | 36 | 3 | 427 | 4 | 0 | 434 | 5 | 0 | 3 | 0 | 8 | 891 |



File Name : 25th \& 33rd Ave S 11-17-21 peak hours Site Code :
Start Date : 11/17/2021
Page No : 2

|  | 25th St S <br> From North |  |  |  |  | 33rd Ave S From East |  |  |  |  | 25th St S From South |  |  |  |  | 33rd Ave S From West |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 05:45 PM | 1 | 187 | 5 | 0 | 193 | 3 | 0 | 1 | 0 | 4 | 3 | 119 | 0 | 0 | 122 | 2 | 4 | 0 | 0 | 6 | 325 |
| Total | 9 | 736 | 26 | 0 | 771 | 22 | 2 | 8 | 0 | 32 | 8 | 475 | 1 | 0 | 484 | 10 | 6 | 2 | 0 | 18 | 1305 |
| Grand Total | 82 | 3216 | 92 | 1 | 3391 | 159 | 22 | 42 | 0 | 223 | 34 | 3377 | 75 | 0 | 3486 | 77 | 16 | 28 | 0 | 121 | 7221 |
| Apprch \% | 2.4 | 94.8 | 2.7 | 0 |  | 71.3 | 9.9 | 18.8 | 0 |  | 1 | 96.9 | 2.2 | 0 |  | 63.6 | 13.2 | 23.1 | 0 |  |  |
| Total \% | 1.1 | 44.5 | 1.3 | 0 | 47 | 2.2 | 0.3 | 0.6 | 0 | 3.1 | 0.5 | 46.8 | 1 | 0 | 48.3 | 1.1 | 0.2 | 0.4 | 0 | 1.7 |  |
| Cars + | 82 | 3216 | 92 | 1 | 3391 | 159 | 22 | 42 | 0 | 223 | 34 | 3377 | 75 | 0 | 3486 | 77 | 16 | 28 | 0 | 121 | 7221 |
| \% Cars + | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 0 | 100 | 100 | 100 | 100 | 0 | 100 | 100 | 100 | 100 | 0 | 100 | 100 |
| Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| \% Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

City of Fargo

File Name : 25th \& 33rd Ave S 11-17-21 peak hours
Site Code :
Start Date : 11/17/2021
Page No : 3


Fargo

File Name : 25th \& Kirsten Ln S 11-17-21 peak hours Site Code
Start Date : 11/17/2021
Page No : 1

|  | 25th St S From North |  |  |  |  | Sanford From East |  |  |  |  | 25th St S From South |  |  |  |  | Kirsten Ln From West |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 07:00 AM | 6 | 53 | 6 | 0 | 65 | 4 | 1 | 1 | 0 | 6 | 8 | 89 | 3 | 0 | 100 | 2 | 0 | 5 | 0 | 7 | 178 |
| 07:15 AM | 11 | 63 | 8 | 1 | 83 | 2 | 0 | 1 | 0 | 3 | 6 | 123 | 5 | 0 | 134 | 1 | 1 | 5 | 0 | 7 | 227 |
| 07:30 AM | 12 | 85 | 18 | 0 | 115 | 7 | 0 | 0 | 0 | 7 | 15 | 183 | 6 | 0 | 204 | 6 | 0 | 5 | 0 | 11 | 337 |
| 07:45 AM | 13 | 100 | 17 | 0 | 130 | 6 | 0 | 3 | 0 | 9 | 27 | 177 | 7 | 0 | 211 | 9 | 3 | 8 | 0 | 20 | 370 |
| Total | 42 | 301 | 49 | 1 | 393 | 19 | 1 | 5 | 0 | 25 | 56 | 572 | 21 | 0 | 649 | 18 | 4 | 23 | 0 | 45 | 1112 |
| 08:00 AM | 11 | 109 | 15 | 0 | 135 | 16 | 0 | 5 | 0 | 21 | 18 | 172 | 12 | 0 | 202 | 6 | 2 | 13 | 0 | 21 | 379 |
| 08:15 AM | 7 | 94 | 20 | 0 | 121 | 7 | 1 | 5 | 0 | 13 | 12 | 137 | 2 | 0 | 151 | 10 | 1 | 8 | 0 | 19 | 304 |
| 08:30 AM | 11 | 97 | 10 | 0 | 118 | 15 | 1 | 4 | 0 | 20 | 8 | 141 | 2 | 0 | 151 | 8 | 0 | 8 | 0 | 16 | 305 |
| 08:45 AM | 6 | 125 | 13 | 0 | 144 | 12 | 3 | 3 | 0 | 18 | 6 | 102 | 5 | 0 | 113 | 4 | 0 | 6 | 0 | 10 | 285 |
| Total | 35 | 425 | 58 | 0 | 518 | 50 | 5 | 17 | 0 | 72 | 44 | 552 | 21 | 0 | 617 | 28 | 3 | 35 | 0 | 66 | 1273 |
| 11:00 AM | 6 | 45 | 6 | 0 | 57 | 10 | 0 | 5 | 0 | 15 | 3 | 55 | 3 | 0 | 61 | 5 | 0 | 7 | 0 | 12 | 145 |
| 11:15 AM | 20 | 109 | 12 | 0 | 141 | 28 | 3 | 9 | 0 | 40 | 3 | 129 | 4 | 0 | 136 | 8 | 2 | 11 | 0 | 21 | 338 |
| 11:30 AM | 19 | 70 | 6 | 0 | 95 | 24 | 1 | 7 | 0 | 32 | 6 | 123 | 2 | 0 | 131 | 5 | 1 | 8 | 0 | 14 | 272 |
| 11:45 AM | 18 | 109 | 12 | 0 | 139 | 24 | 2 | 3 | 0 | 29 | 8 | 107 | 7 | 0 | 122 | 6 | 3 | 12 | 0 | 21 | 311 |
| Total | 63 | 333 | 36 | 0 | 432 | 86 | 6 | 24 | 0 | 116 | 20 | 414 | 16 | 0 | 450 | 24 | 6 | 38 | 0 | 68 | 1066 |
| 12:00 PM | 20 | 117 | 6 | 0 | 143 | 36 | 2 | 4 | 0 | 42 | 1 | 94 | 10 | 0 | 105 | 5 | 1 | 12 | 0 | 18 | 308 |
| 12:15 PM | 19 | 98 | 13 | 0 | 130 | 12 | 2 | 1 | 0 | 15 | 5 | 104 | 8 | 0 | 117 | 7 | 1 | 15 | 0 | 23 | 285 |
| 12:30 PM | 16 | 95 | 13 | 0 | 124 | 22 | 1 | 2 | 0 | 25 | 4 | 115 | 8 | 0 | 127 | 7 | 2 | 18 | 0 | 27 | 303 |
| 12:45 PM | 19 | 89 | 12 | 0 | 120 | 16 | 1 | 2 | 0 | 19 | 10 | 117 | 5 | 0 | 132 | 6 | 0 | 15 | 0 | 21 | 292 |
| Total | 74 | 399 | 44 | 0 | 517 | 86 | 6 | 9 | 0 | 101 | 20 | 430 | 31 | 0 | 481 | 25 | 4 | 60 | 0 | 89 | 1188 |
| 03:00 PM | 10 | 43 | 7 | 0 | 60 | 12 | 1 | 1 | 0 | 14 | 1 | 46 | 1 | 0 | 48 | 1 | 0 | 7 | 0 | 8 | 130 |
| 03:15 PM | 27 | 173 | 11 | 0 | 211 | 25 | 2 | 5 | 0 | 32 | 9 | 166 | 7 | 0 | 182 | 30 | 1 | 18 | 0 | 49 | 474 |
| 03:30 PM | 19 | 102 | 10 | 0 | 131 | 21 | 2 | 2 | 0 | 25 | 6 | 118 | 4 | 0 | 128 | 1 | 0 | 9 | 0 | 10 | 294 |
| 03:45 PM | 17 | 121 | 8 | 0 | 146 | 19 | 1 | 5 | 0 | 25 | 1 | 104 | 5 | 0 | 110 | 6 | 0 | 12 | 0 | 18 | 299 |
| Total | 73 | 439 | 36 | 0 | 548 | 77 | 6 | 13 | 0 | 96 | 17 | 434 | 17 | 0 | 468 | 38 | 1 | 46 | 0 | 85 | 1197 |
| 04:00 PM | 12 | 131 | 6 | 0 | 149 | 34 | 0 | 8 | 0 | 42 | 4 | 138 | 4 | 0 | 146 | 8 | 1 | 10 | 0 | 19 | 356 |
| 04:15 PM | 11 | 148 | 3 | 0 | 162 | 15 | 0 | 7 | 0 | 22 | 4 | 142 | 1 | 0 | 147 | 4 | 2 | 5 | 0 | 11 | 342 |
| 04:30 PM | 24 | 150 | 8 | 0 | 182 | 35 | 0 | 13 | 0 | 48 | 2 | 124 | 6 | 0 | 132 | 8 | 0 | 8 | 0 | 16 | 378 |
| 04:45 PM | 21 | 161 | 7 | 0 | 189 | 24 | 1 | 8 | 0 | 33 | 3 | 109 | 3 | 0 | 115 | 4 | 0 | 18 | 0 | 22 | 359 |
| Total | 68 | 590 | 24 | 0 | 682 | 108 | 1 | 36 | 0 | 145 | 13 | 513 | 14 | 0 | 540 | 24 | 3 | 41 | 0 | 68 | 1435 |
| 05:00 PM | 13 | 189 | 2 | 0 | 204 | 27 | 0 | 6 | 0 | 33 | 3 | 130 | 4 | 0 | 137 | 9 | 0 | 12 | 0 | 21 | 395 |
| 05:15 PM | 18 | 190 | 1 | 0 | 209 | 13 | 1 | 8 | 0 | 22 | 2 | 101 | 1 | 0 | 104 | 3 | 0 | 15 | 0 | 18 | 353 |
|  | - -25t | St Cor | r Stud |  |  |  |  | Exis | ing Con | ditions Rep | rt Appe | dix B31 |  |  |  |  |  |  |  |  |  |

File Name : 25th \& Kirsten Ln S 11-17-21 peak hours
Site Code
Start Date : 11/17/2021
Page No : 2
Groups Printed- Cars + - Trucks

|  | 25th St S From North |  |  |  |  | Sanford From East |  |  |  |  | 25th St S From South |  |  |  |  | Kirsten Ln From West |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 05:30 PM | 10 | 171 | 3 | 0 | 184 | 15 | 1 | 4 | 0 | 20 | 1 | 125 | 3 | 0 | 129 | 6 | 0 | 7 | 0 | 13 | 346 |
| 05:45 PM | 12 | 187 | 0 | 0 | 199 | 4 | 0 | 2 | 0 | 6 | 0 | 119 | 6 | 0 | 125 | 7 | 0 | 9 | 0 | 16 | 346 |
| Total | 53 | 737 | 6 | 0 | 796 | 59 | 2 | 20 | 0 | 81 | 6 | 475 | 14 | 0 | 495 | 25 | 0 | 43 | 0 | 68 | 1440 |
| Grand Total | 408 | 3224 | 253 | 1 | 3886 | 485 | 27 | 124 | 0 | 636 | 176 | 3390 | 134 | 0 | 3700 | 182 | 21 | 286 | 0 | 489 | 8711 |
| Apprch \% | 10.5 | 83 | 6.5 | 0 |  | 76.3 | 4.2 | 19.5 | 0 |  | 4.8 | 91.6 | 3.6 | 0 |  | 37.2 | 4.3 | 58.5 | 0 |  |  |
| Total \% | 4.7 | 37 | 2.9 | 0 | 44.6 | 5.6 | 0.3 | 1.4 | 0 | 7.3 | 2 | 38.9 | 1.5 | 0 | 42.5 | 2.1 | 0.2 | 3.3 | 0 | 5.6 |  |
| Cars + | 408 | 3216 | 253 | 1 | 3878 | 485 | 27 | 123 | 0 | 635 | 176 | 3377 | 133 | 0 | 3686 | 182 | 21 | 285 | 0 | 488 | 8687 |
| \% Cars + | 100 | 99.8 | 100 | 100 | 99.8 | 100 | 100 | 99.2 | 0 | 99.8 | 100 | 99.6 | 99.3 | 0 | 99.6 | 100 | 100 | 99.7 | 0 | 99.8 | 99.7 |
| Trucks | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 1 | 0 | 1 | 0 | 13 | 1 | 0 | 14 | 0 | 0 | 1 | 0 | 1 | 24 |
| \% Trucks | 0 | 0.2 | 0 | 0 | 0.2 | 0 | 0 | 0.8 | 0 | 0.2 | 0 | 0.4 | 0.7 | 0 | 0.4 | 0 | 0 | 0.3 | 0 | 0.2 | 0.3 |

City of Fargo

File Name : 25th \& Kirsten Ln S 11-17-21 peak hours Site Code :
Start Date: 11/17/2021
Page No : 3


# 25th Street Carridar Study 

25th St \& 32nd Ave
Fargo Moorhead

File Name : Fargo_sta_2009_25th_ST_\&_32nd_AVE_876968_09-22-2021 Site Code : 2009
Start Date: 9/22/2021
Page No : 1

Groups Printed- Motorcycles - Cars - Light Goods Vehicles - Buses


# 25th Street Carridar Study 

25th St \& 32nd Ave
Fargo Moorhead

File Name : Fargo_sta_2009_25th_ST_\&_32nd_AVE_876968_09-22-2021 Site Code : 2009
Start Date : 9/22/2021
Page No : 2
Groups Printed- Motorcycles - Cars - Light Goods Vehicles - Buses

|  | 25th ST <br> From North |  |  |  |  | 32nd AVE From East |  |  |  |  | 25th ST <br> From South |  |  |  |  | $\begin{aligned} & \text { 25th ST } \\ & \text { From West } \end{aligned}$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Int. Total |
| 04:30 PM | 44 | 117 | 38 | 0 | 199 | 46 | 121 | 29 | 0 | 196 | 28 | 84 | 51 | 0 | 163 | 28 | 108 | 46 | 0 | 182 | 740 |
| 04:45 PM | 49 | 157 | 30 | 0 | 236 | 40 | 130 | 34 | 0 | 204 | 21 | 89 | 40 | 0 | 150 | 33 | 129 | 58 | 0 | 220 | 810 |
| Total | 180 | 530 | 154 | 0 | 864 | 167 | 483 | 113 | 0 | 763 | 99 | 383 | 192 | 0 | 674 | 116 | 422 | 214 | 0 | 752 | 3053 |
| 05:00 PM | 53 | 139 | 49 | 0 | 241 | 34 | 142 | 33 | 0 | 209 | 22 | 98 | 48 | 0 | 168 | 50 | 118 | 63 | 0 | 231 | 849 |
| 05:15 PM | 78 | 143 | 35 | 0 | 256 | 41 | 129 | 34 | 0 | 204 | 16 | 107 | 59 | 0 | 182 | 52 | 145 | 40 | 0 | 237 | 879 |
| 05:30 PM | 47 | 169 | 43 | 0 | 259 | 31 | 116 | 39 | 0 | 186 | 16 | 99 | 54 | 0 | 169 | 44 | 130 | 52 | 0 | 226 | 840 |
| 05:45 PM | 50 | 168 | 34 | 0 | 252 | 33 | 88 | 25 | 0 | 146 | 18 | 80 | 36 | 0 | 134 | 45 | 80 | 45 | 0 | 170 | 702 |
| Total | 228 | 619 | 161 | 0 | 1008 | 139 | 475 | 131 | 0 | 745 | 72 | 384 | 197 | 0 | 653 | 191 | 473 | 200 | 0 | 864 | 3270 |
| 06:00 PM | 37 | 103 | 25 | 0 | 165 | 16 | 103 | 24 | 0 | 143 | 2 | 88 | 39 | 0 | 129 | 17 | 64 | 35 | 0 | 116 | 553 |
| 06:15 PM | 41 | 98 | 27 | 0 | 166 | 20 | 100 | 24 | 0 | 144 | 6 | 80 | 31 | 0 | 117 | 19 | 70 | 34 | 0 | 123 | 550 |
| 06:30 PM | 38 | 95 | 24 | 0 | 157 | 20 | 65 | 17 | 0 | 102 | 11 | 73 | 33 | 0 | 117 | 23 | 63 | 28 | 0 | 114 | 490 |
| 06:45 PM | 44 | 73 | 24 | 0 | 141 | 11 | 72 | 20 | 1 | 104 | 9 | 80 | 19 | 0 | 108 | 32 | 66 | 32 | 0 | 130 | 483 |
| Total | 160 | 369 | 100 | 0 | 629 | 67 | 340 | 85 | 1 | 493 | 28 | 321 | 122 | 0 | 471 | 91 | 263 | 129 | 0 | 483 | 2076 |
| 07:00 PM | 30 | 100 | 25 | 0 | 155 | 19 | 61 | 25 | 0 | 105 | 27 | 126 | 75 | 0 | 228 | 27 | 56 | 29 | 0 | 112 | 600 |
| 07:15 PM | 30 | 80 | 23 | 0 | 133 | 19 | 43 | 15 | 0 | 77 | 19 | 74 | 31 | 0 | 124 | 20 | 54 | 21 | 0 | 95 | 429 |
| 07:30 PM | 25 | 78 | 18 | 0 | 121 | 16 | 59 | 8 | 0 | 83 | 5 | 45 | 10 | 0 | 60 | 17 | 35 | 37 | 0 | 89 | 353 |
| 07:45 PM | 24 | 78 | 19 | 0 | 121 | 11 | 56 | 15 | 0 | 82 | 15 | 57 | 16 | 0 | 88 | 36 | 43 | 22 | 0 | 101 | 392 |
| Total | 109 | 336 | 85 | 0 | 530 | 65 | 219 | 63 | 0 | 347 | 66 | 302 | 132 | 0 | 500 | 100 | 188 | 109 | 0 | 397 | 1774 |
| 08:00 PM | 27 | 72 | 20 | 0 | 119 | 12 | 54 | 12 | 0 | 78 | 12 | 71 | 25 | 0 | 108 | 30 | 46 | 19 | 0 | 95 | 400 |
| 08:15 PM | 24 | 79 | 15 | 0 | 118 | 7 | 27 | 5 | 0 | 39 | 18 | 81 | 34 | 0 | 133 | 15 | 46 | 17 | 0 | 78 | 368 |
| 08:30 PM | 19 | 60 | 13 | 0 | 92 | 10 | 38 | 7 | 0 | 55 | 6 | 35 | 14 | 0 | 55 | 9 | 22 | 22 | 0 | 53 | 255 |
| 08:45 PM | 17 | 42 | 10 | 0 | 69 | 10 | 34 | 8 | 0 | 52 | 5 | 31 | 13 | 0 | 49 | 14 | 31 | 10 | 0 | 55 | 225 |
| Total | 87 | 253 | 58 | 0 | 398 | 39 | 153 | 32 | 0 | 224 | 41 | 218 | 86 | 0 | 345 | 68 | 145 | 68 | 0 | 281 | 1248 |
| 09:00 PM | 22 | 37 | 12 | 0 | 71 | 12 | 24 | 7 | 0 | 43 | 6 | 17 | 9 | 0 | 32 | 8 | 28 | 15 | 0 | 51 | 197 |
| 09:15 PM | 14 | 22 | 10 | 0 | 46 | 11 | 23 | 6 | 0 | 40 | 9 | 15 | 9 | 0 | 33 | 10 | 19 | 13 | 0 | 42 | 161 |
| 09:30 PM | 6 | 22 | 10 | 0 | 38 | 7 | 32 | 4 | 0 | 43 | 4 | 15 | 9 | 0 | 28 | 7 | 18 | 11 | 0 | 36 | 145 |
| 09:45 PM | 8 | 21 | 7 | 0 | 36 | 4 | 21 | 4 | 0 | 29 | 4 | 17 | 4 | 0 | 25 | 3 | 28 | 7 | 0 | 38 | 128 |
| Total | 50 | 102 | 39 | 0 | 191 | 34 | 100 | 21 | 0 | 155 | 23 | 64 | 31 | 0 | 118 | 28 | 93 | 46 | 0 | 167 | 631 |
| 10:00 PM | 11 | 22 | 1 | 0 | 34 | 4 | 21 | 3 | 0 | 28 | 1 | 14 | 5 | 0 | 20 | 6 | 28 | 4 | 0 | 38 | 120 |
| 10:15 PM | 7 | 19 | 8 | 0 | 34 | 4 | 22 | 4 | 0 | 30 | 2 | 8 | 5 | 0 | 15 | 2 | 19 | 11 | 0 | 32 | 111 |
| 10:30 PM | 9 | 16 | 3 | 0 | 28 | 2 | 24 | 0 | 0 | 26 | 4 | 8 | 5 | 0 | 17 | 4 | 16 | 6 | 0 | 26 | 97 |
| 10:45 PM | 6 | 11 | 2 | 0 | 19 | 1 | 10 | 7 | 0 | 18 | 4 | 8 | 2 | 0 | 14 | 4 | 9 | 4 | 0 | 17 | 68 |
| Total | 33 | 68 | 14 | 0 | 115 | 11 | 77 | 14 | 0 | 102 | 11 | 38 | 17 | 0 | 66 | 16 | 72 | 25 | 0 | 113 | 396 |
| 11:00 PM | 4 | 13 | 6 | 0 | 23 | 0 | 17 | 4 | 0 | 21 | 2 | 4 | 4 | 0 | 10 | 2 | 16 | 6 | 0 | 24 | 78 |
| 11:15 PM | 8 | 11 | 3 | 0 | 22 | 2 | 9 | 3 | 0 | 14 | 2 | 8 | 4 | 0 | 14 | 3 | 7 | 4 | 0 | 14 | 64 |

Fargo - 25th St Corridor Study

# 25th Street Carridar Study 

25th St \& 32nd Ave
Fargo Moorhead

File Name : Fargo_sta_2009_25th_ST_\&_32nd_AVE_876968_09-22-2021 Site Code : 2009
Start Date : 9/22/2021
Page No : 3
Groups Printed- Motorcycles - Cars - Light Goods Vehicles - Buses


# 25th Street Carridar Study 

25th St \& 32nd Ave
Fargo Moorhead

File Name : Fargo_sta_2009_25th_ST_\&_32nd_AVE_876968_09-22-2021 Site Code : 2009
Start Date : 9/22/2021
Page No : 4
Groups Printed- Motorcycles - Cars - Light Goods Vehicles - Buses

|  | $\begin{aligned} & \text { 25th ST } \\ & \text { From North } \end{aligned}$ |  |  |  |  | 32nd AVE <br> From East |  |  |  |  | 25th ST From South |  |  |  |  | $\begin{aligned} & \text { 25th ST } \\ & \text { From West } \end{aligned}$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Right | Thru | Left | U-Turn | App. Total | Int. Total |
| 06:30 AM | 26 | 31 | 5 | 0 | 62 | 6 | 49 | 5 | 0 | 60 | 5 | 63 | 25 | 0 | 93 | 8 | 25 | 18 | 0 | 51 | 266 |
| 06:45 AM | 42 | 49 | 8 | 0 | 99 | 12 | 51 | 11 | 0 | 74 | 7 | 58 | 17 | 0 | 82 | 7 | 55 | 19 | 0 | 81 | 336 |
| Total | 112 | 104 | 17 | 0 | 233 | 32 | 148 | 22 | 0 | 202 | 16 | 182 | 66 | 0 | 264 | 22 | 119 | 58 | 0 | 199 | 898 |
| 07:00 AM | 20 | 37 | 24 | 0 | 81 | 12 | 30 | 13 | 0 | 55 | 8 | 67 | 21 | 0 | 96 | 13 | 47 | 23 | 0 | 83 | 315 |
| 07:15 AM | 45 | 39 | 18 | 0 | 102 | 16 | 77 | 12 | 0 | 105 | 17 | 84 | 33 | 0 | 134 | 16 | 74 | 33 | 0 | 123 | 464 |
| 07:30 AM | 58 | 90 | 42 | 0 | 190 | 25 | 78 | 27 | 0 | 130 | 22 | 142 | 46 | 0 | 210 | 23 | 69 | 38 | 0 | 130 | 660 |
| 07:45 AM | 66 | 86 | 48 | 0 | 200 | 29 | 125 | 29 | 0 | 183 | 21 | 132 | 49 | 0 | 202 | 23 | 153 | 61 | 0 | 237 | 822 |
| Total | 189 | 252 | 132 | 0 | 573 | 82 | 310 | 81 | 0 | 473 | 68 | 425 | 149 | 0 | 642 | 75 | 343 | 155 | 0 | 573 | 2261 |
| 08:00 AM | 51 | 79 | 33 | 0 | 163 | 26 | 67 | 23 | 0 | 116 | 27 | 128 | 52 | 0 | 207 | 32 | 96 | 59 | 0 | 187 | 673 |
| 08:15 AM | 41 | 50 | 35 | 0 | 126 | 27 | 93 | 22 | 0 | 142 | 30 | 97 | 47 | 0 | 174 | 28 | 110 | 55 | 0 | 193 | 635 |
| 08:30 AM | 43 | 72 | 36 | 0 | 151 | 32 | 76 | 11 | 0 | 119 | 11 | 110 | 45 | 0 | 166 | 18 | 71 | 25 | 0 | 114 | 550 |
| 08:45 AM | 45 | 49 | 32 | 0 | 126 | 26 | 95 | 21 | 0 | 142 | 16 | 79 | 37 | 0 | 132 | 28 | 65 | 45 | 0 | 138 | 538 |
| Total | 180 | 250 | 136 | 0 | 566 | 111 | 331 | 77 | 0 | 519 | 84 | 414 | 181 | 0 | 679 | 106 | 342 | 184 | 0 | 632 | 2396 |
| 09:00 AM | 36 | 51 | 38 | 0 | 125 | 17 | 58 | 17 | 0 | 92 | 10 | 61 | 33 | 0 | 104 | 18 | 59 | 26 | 0 | 103 | 424 |
| 09:15 AM | 40 | 54 | 25 | 0 | 119 | 24 | 68 | 11 | 0 | 103 | 16 | 75 | 25 | 0 | 116 | 14 | 69 | 39 | 0 | 122 | 460 |
| 09:30 AM | 33 | 63 | 27 | 0 | 123 | 16 | 70 | 21 | 0 | 107 | 15 | 75 | 32 | 0 | 122 | 24 | 57 | 33 | 0 | 114 | 466 |
| 09:45 AM | 28 | 52 | 37 | 0 | 117 | 31 | 72 | 13 | 0 | 116 | 20 | 73 | 26 | 0 | 119 | 26 | 72 | 29 | 0 | 127 | 479 |
| Total | 137 | 220 | 127 | 0 | 484 | 88 | 268 | 62 | 0 | 418 | 61 | 284 | 116 | 0 | 461 | 82 | 257 | 127 | 0 | 466 | 1829 |
| Grand Total | 2741 | 5214 | 1999 | 0 | 9954 | 1696 | 5428 | 1195 | 4 | 8323 | 1063 | 5253 | 2242 | 0 | 8558 | 1526 | 5079 | 2544 | 2 | 9151 | 35986 |
| Apprch \% | 27.5 | 52.4 | 20.1 | 0 |  | 20.4 | 65.2 | 14.4 | 0 |  | 12.4 | 61.4 | 26.2 | 0 |  | 16.7 | 55.5 | 27.8 | 0 |  |  |
| Total \% | 7.6 | 14.5 | 5.6 | 0 | 27.7 | 4.7 | 15.1 | 3.3 | 0 | 23.1 | 3 | 14.6 | 6.2 | 0 | 23.8 | 4.2 | 14.1 | 7.1 | 0 | 25.4 |  |
| Motorcycles | 5 | 25 | 8 | 0 | 38 | 3 | 25 | 4 | 0 | 32 | 4 | 19 | 6 | 0 | 29 | 3 | 11 | 11 | 0 | 25 | 124 |
| \% Motorcycles | 0.2 | 0.5 | 0.4 | 0 | 0.4 | 0.2 | 0.5 | 0.3 | 0 | 0.4 | 0.4 | 0.4 | 0.3 | 0 | 0.3 | 0.2 | 0.2 | 0.4 | 0 | 0.3 | 0.3 |
| Cars | 2500 | 4289 | 1675 | 0 | 8464 | 1431 | 4595 | 1044 | 3 | 7073 | 963 | 4257 | 1871 | 0 | 7091 | 1265 | 4307 | 2072 | 2 | 7646 | 30274 |
| \% Cars | 91.2 | 82.3 | 83.8 | 0 | 85 | 84.4 | 84.7 | 87.4 | 75 | 85 | 90.6 | 81 | 83.5 | 0 | 82.9 | 82.9 | 84.8 | 81.4 | 100 | 83.6 | 84.1 |
| Light Goods Vehicles | 209 | 870 | 308 | 0 | 1387 | 252 | 767 | 142 | 1 | 1162 | 94 | 941 | 357 | 0 | 1392 | 241 | 723 | 436 | 0 | 1400 | 5341 |
| \% Light Goods Vehicles | 7.6 | 16.7 | 15.4 | 0 | 13.9 | 14.9 | 14.1 | 11.9 | 25 | 14 | 8.8 | 17.9 | 15.9 | 0 | 16.3 | 15.8 | 14.2 | 17.1 | 0 | 15.3 | 14.8 |
| Buses | 27 | 30 | 8 | 0 | 65 | 10 | 41 | 5 | 0 | 56 | 2 | 36 | 8 | 0 | 46 | 17 | 38 | 25 | 0 | 80 | 247 |
| \% Buses | 1 | 0.6 | 0.4 | 0 | 0.7 | 0.6 | 0.8 | 0.4 | 0 | 0.7 | 0.2 | 0.7 | 0.4 | 0 | 0.5 | 1.1 | 0.7 | 1 | 0 | 0.9 | 0.7 |

File Name : Fargo_sta_2009_25th_ST_\&_32nd_AVE_876968_09-22-2021 Site Code : 2009
Start Date : 9/22/2021
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File Name : Fargo_sta_2009_25th_ST_\&_32nd_AVE_876968_09-22-2021 Site Code : 2009 Start Date : 9/22/2021 Page No : 6


| Time | Peds | SB Right | $\begin{gathered} \text { SB } \\ \text { Thru } \end{gathered}$ | $\begin{aligned} & \text { SB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { SB } \\ & \text { UTrn } \end{aligned}$ | Peds | WB Right | WB <br> Thru | $\begin{aligned} & \text { WB } \\ & \text { Left } \end{aligned}$ | WB Utrn | Peds | NB Right | NB Thru | $\begin{aligned} & \text { NB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { NB } \\ & \text { UTrn } \end{aligned}$ | Peds | EB Right | $\begin{gathered} \text { EB } \\ \text { Thru } \end{gathered}$ | $\begin{aligned} & \text { EB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { EB } \\ & \text { UTrn } \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 06:00 | 0 | 103 | 76 | 13 | 0 | 0 | 23 | 125 | 20 | 0 | 0 | 17 | 133 | 48 | 0 | 0 | 19 | 104 | 52 | 0 |  |  |
| 07:00 | 0 | 160 | 214 | 116 | 0 | 0 | 62 | 243 | 70 | 0 | 0 | 63 | 333 | 112 | 0 | 0 | 64 | 286 | 128 | 0 |  |  |
| 08:00 | 0 | 170 | 212 | 117 | 0 | 0 | 90 | 288 | 71 | 0 | 0 | 73 | 335 | 144 | 0 | 0 | 89 | 291 | 145 | 0 |  |  |
| 09:00 | 0 | 125 | 180 | 107 | 0 | 0 | 75 | 231 | 53 | 0 | 0 | 59 | 245 | 106 | 0 | 0 | 75 | 216 | 104 | 0 |  |  |
| 10:00 | 0 | 166 | 216 | 104 | 0 | 0 | 101 | 298 | 61 | 0 | 0 | 66 | 319 | 147 | 0 | 0 | 78 | 234 | 118 | 0 |  |  |
| 11:00 | 0 | 142 | 225 | 122 | 0 | 0 | 119 | 307 | 69 | 0 | 0 | 80 | 272 | 156 | 0 | 0 | 84 | 309 | 135 | 0 |  |  |
| 12:00 | 0 | 194 | 330 | 155 | 0 | 0 | 116 | 367 | 78 | 0 | 0 | 68 | 266 | 110 | 0 | 0 | 75 | 318 | 181 | 1 |  |  |
| 13:00 | 0 | 202 | 257 | 134 | 0 | 0 | 117 | 308 | 65 | 0 | 0 | 62 | 267 | 113 | 0 | 0 | 94 | 357 | 173 | 0 |  |  |
| 14:00 | 0 | 200 | 293 | 142 | 0 | 0 | 110 | 352 | 69 | 2 | 0 | 77 | 299 | 122 | 0 | 0 | 87 | 334 | 168 | 0 |  |  |
| 15:00 | 0 | 185 | 340 | 145 | 0 | 0 | 159 | 389 | 76 | 0 | 0 | 80 | 316 | 131 | 0 | 0 | 95 | 389 | 178 | 0 |  |  |
| 16:00 | 0 | 168 | 432 | 126 | 0 | 0 | 149 | 420 | 104 | 0 | 0 | 98 | 321 | 171 | 0 | 0 | 101 | 365 | 183 | 0 |  |  |
| 17:00 | 0 | 221 | 520 | 135 | 0 | 0 | 121 | 414 | 112 | 0 | 0 | 63 | 324 | 168 | 0 | 0 | 156 | 388 | 151 | 0 |  |  |
| 18:00 | 0 | 147 | 320 | 86 | 0 | 0 | 59 | 287 | 76 | 1 | 0 | 27 | 285 | 108 | 0 | 0 | 67 | 232 | 117 | 0 |  |  |
| 19:00 | 0 | 106 | 289 | 71 | 0 | 0 | 54 | 191 | 58 | 0 | 0 | 52 | 243 | 102 | 0 | 0 | 84 | 159 | 90 | 0 |  |  |
|  | Peds | $\begin{gathered} \hline \text { SB } \\ \text { Left } \end{gathered}$ | $\begin{gathered} \hline \text { SB } \\ \text { Thru } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { SB } \\ \text { Right } \end{gathered}$ | $\begin{gathered} \text { SB } \\ \text { UTrn } \\ \hline \end{gathered}$ | Peds | $\begin{aligned} & \hline \text { WB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \hline \text { WB } \\ & \text { Thru } \\ & \hline \end{aligned}$ | WB Right | $\begin{aligned} & \hline \text { WB } \\ & \text { Utrn } \\ & \hline \end{aligned}$ | Peds | $\begin{aligned} & \hline \text { NB } \\ & \text { Left } \end{aligned}$ | $\begin{array}{\|c\|} \hline \text { NB } \\ \text { Thru } \end{array}$ | $\begin{gathered} \quad \text { NB } \\ \text { Right } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { NB } \\ \text { UTrn } \\ \hline \end{gathered}$ | Peds | $\begin{gathered} \hline \text { EB } \\ \text { Left } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { EB } \\ \text { Thru } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { EB } \\ \text { Riaht } \end{gathered}$ | $\begin{gathered} \text { EB } \\ \text { UTrn } \\ \hline \end{gathered}$ | Peak Start | PHF |
| AM Peak | 0 | 191 | 269 | 141 | 0 | 0 | 87 | 312 | 92 | 0 | 0 | 87 | 405 | 148 | 0 | 0 | 94 | 365 | 178 | 0 | 07:30 | 0.85 |
| MD Peak | 0 | 216 | 318 | 132 | 0 | 0 | 118 | 353 | 78 | 0 | 0 | 72 | 258 | 114 | 0 | 0 | 99 | 346 | 181 | 1 | 12:30 | 0.95 |
| PM Peak | 0 | 221 | 504 | 134 | 0 | 0 | 130 | 442 | 120 | 0 | 0 | 65 | 334 | 175 | 0 | 0 | 147 | 433 | 166 | 0 | 16:45 | 0.95 |


| Time | Peds | SB Right | $\begin{gathered} \text { SB } \\ \text { Thru } \end{gathered}$ | $\begin{aligned} & \text { SB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { SB } \\ & \text { UTrn } \end{aligned}$ | Peds | WB Right | WB Thru | WB Left | WB Utrn | Peds | NB Right | NB Thru | $\begin{aligned} & \text { NB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { NB } \\ & \text { UTrn } \end{aligned}$ | Peds | EB Right | $\begin{aligned} & \text { EB } \\ & \text { Thru } \end{aligned}$ | $\begin{aligned} & \text { EB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \text { EB } \\ & \text { UTrn } \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 06:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 140 | 1 | 0 | 0 | 1 | 0 | 14 | 0 | 0 | 7 | 79 | 0 | 0 |  |  |
| 07:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1043 | 7 | 0 | 0 | 73 | 0 | 130 | 0 | 0 | 72 | 758 | 0 | 0 |  |  |
| 08:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 741 | 21 | 0 | 0 | 36 | 0 | 77 | 0 | 0 | 80 | 595 | 0 | 0 |  |  |
| 09:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 460 | 9 | 1 | 0 | 16 | 0 | 52 | 0 | 0 | 41 | 350 | 0 | 0 |  |  |
| 10:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 424 | 7 | 0 | 0 | 10 | 0 | 64 | 0 | 0 | 40 | 319 | 0 | 0 |  |  |
| 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 477 | 17 | 0 | 0 | 23 | 0 | 75 | 0 | 0 | 76 | 494 | 0 | 0 |  |  |
| 12:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 591 | 9 | 0 | 0 | 32 | 0 | 74 | 0 | 2 | 84 | 519 | 0 | 0 |  |  |
| 13:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 512 | 12 | 0 | 0 | 17 | 0 | 73 | 0 | 0 | 70 | 466 | 0 | 0 |  |  |
| 14:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 603 | 13 | 0 | 0 | 23 | 0 | 53 | 0 | 0 | 77 | 532 | 0 | 0 |  |  |
| 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 820 | 13 | 1 | 0 | 39 | 0 | 85 | 0 | 0 | 97 | 703 | 0 | 0 |  |  |
| 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 842 | 18 | 1 | 0 | 31 | 0 | 89 | 0 | 0 | 136 | 882 | 0 | 0 |  |  |
| 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 966 | 13 | 2 | 0 | 50 | 0 | 84 | 0 | 1 | 163 | 1144 | 0 | 1 |  |  |
| 18:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 545 | 6 | 0 | 0 | 21 | 0 | 75 | 0 | 0 | 100 | 726 | 0 | 0 |  |  |
| 19:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 277 | 11 | 0 | 0 | 5 | 0 | 52 | 0 | 0 | 45 | 396 | 0 | 0 |  | $\downarrow$ |
|  | Peds | $\begin{array}{\|c\|} \hline \text { SB } \\ \text { Right } \\ \hline \end{array}$ | $\begin{gathered} \text { SB } \\ \text { Thru } \end{gathered}$ | $\begin{gathered} \hline \text { SB } \\ \text { Left } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { SB } \\ \text { UTrn } \\ \hline \end{gathered}$ | Peds | $\begin{aligned} & \hline \text { WB } \\ & \text { Left } \end{aligned}$ | $\begin{aligned} & \hline \text { WB } \\ & \text { Thru } \end{aligned}$ | WB Right | $\begin{aligned} & \hline \text { WB } \\ & \text { Utrn } \\ & \hline \end{aligned}$ | Peds | $\begin{aligned} & \hline \text { NB } \\ & \text { Left } \end{aligned}$ | $\begin{array}{\|c\|} \hline \text { NB } \\ \text { Thru } \end{array}$ | NB Right | $\begin{gathered} \hline \text { NB } \\ \text { UTrn } \\ \hline \end{gathered}$ | Peds | $\begin{aligned} & \hline \text { EB } \\ & \text { Left } \\ & \hline \end{aligned}$ | $\begin{gathered} \hline \text { EB } \\ \text { Thru } \\ \hline \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { EB } \\ \text { Right } \\ \hline \end{array}$ | $\begin{gathered} \text { EB } \\ \text { UTrn } \\ \hline \end{gathered}$ | Peak Start | PHF |
| AM Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1074 | 18 | 0 | 0 | 68 | 0 | 119 | 0 | 0 | 96 | 844 | 0 | 0 | 07:30 | 0.78 |
| MD Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 591 | 9 | 0 | 0 | 32 | 0 | 74 | 0 | 2 | 84 | 519 | 0 | 0 | 12:00 | 0.91 |
| PM Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 966 | 13 | 2 | 0 | 50 | 0 | 84 | 0 | 1 | 163 | 1144 | 0 | 1 | 17:00 | 0.92 |

## SYNCHRO REPORT

## SimTraffic Performance Report

Existing AM Peak Hour
5: 25th St \& 32nd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 1.4 | 1.2 | 0.0 | 1.9 | 1.1 |
| Total Del/Veh (s) | 31.2 | 31.7 | 24.5 | 18.1 | 26.3 |

10: 25th St \& Kirsten Ln Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.2 | 2.8 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 13.7 | 10.8 | 1.4 | 3.0 | 2.8 |

15: 25th St \& 33rd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 8.8 | 8.9 | 2.7 | 0.8 | 2.4 |

20: 25th St \& 35th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.2 | 1.1 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 14.7 | 10.5 | 7.4 | 6.3 | 8.0 |

23: 25th St \& Casey's Driveway Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 7.0 | 6.8 | 0.5 | 1.7 | 1.1 |

25: 25th St \& 36th Ave Performance by approach

| Approach | EB | NB | SB | All |
| :--- | :--- | :--- | :--- | :--- |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 7.6 | 0.7 | 0.4 | 0.8 |

30: 25th St \& 37th Ave Performance by approach

| Approach | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 3.6 | 0.0 | 0.0 | 0.3 |
| Total Del/Veh (s) | 5.9 | 0.7 | 0.9 | 1.2 |

35: 25th St \& 38th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 7.6 | 7.8 | 0.7 | 0.7 | 1.3 |

SimTraffic Performance Report
Existing AM Peak Hour
37: 25th St \& 39th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 6.1 | 7.9 | 1.9 | 0.7 | 1.7 |

40: 25th St \& 40th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 1.5 | 1.3 | 0.0 | 0.0 | 0.6 |
| Total Del/Veh (s) | 22.0 | 23.2 | 19.6 | 23.7 | 21.8 |

42: 25th St \& Centennial Elementary (North) Performance by approach

| Approach | NB | SB | All |
| :--- | :--- | :--- | :--- |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 2.8 | 2.2 | 2.6 |

43: 25th St \& Centennial Elementary (South)/Rose Creek Dr Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 2.5 | 1.4 | 0.0 | 0.0 | 0.5 |
| Total Del/Veh (s) | 10.7 | 8.0 | 7.4 | 7.0 | 7.9 |

44: 25th St \& 44th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 8.4 | 5.3 | 0.5 | 1.6 | 1.2 |

45: 25th St \& Carrie Rose Ln Performance by approach

| Approach | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 6.6 | 0.9 | 0.4 | 0.8 |

50: 25th St \& Rose Creek Pkwy Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh $(s)$ | 4.1 | 0.1 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh $(\mathrm{s})$ | 6.2 | 5.1 | 0.5 | 0.9 | 0.8 |

52: 25th St \& Meadow Creek Dr Performance by approach

| Approach | EB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 7.5 | 0.7 | 0.4 | 0.8 |

SimTraffic Performance Report
Existing AM Peak Hour
54: 25th St \& Rose Creek Blvd Performance by approach

| Approach | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 6.6 | 1.8 | 0.8 | 1.7 |

55: 25th St \& 52nd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.9 | 0.0 | 0.0 | 0.2 |
| Total Del/Veh (s) | 15.4 | 24.2 | 26.3 | 29.3 | 22.5 |

56: 25th St \& Don's Carwash Performance by approach

| Approach | EB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 2.9 | 0.8 | 1.9 | 1.4 |

57: 25th St \& 53rd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 31.6 | 13.7 | 1.8 | 0.7 | 2.2 |

60: 25th St \& Prairie Grove Ave/Shanley HS (North) Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 13.5 | 9.6 | 1.0 | 1.9 | 2.2 |

65: 25th St \& Eaglebrook Apts/Shanley HS (South) Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 15.6 | 8.3 | 1.7 | 1.4 | 2.0 |

70: 25th St \& 58th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 4.4 | 4.7 | 6.5 | 6.1 | 6.0 |

75: 25th St \& 60th Ave Performance by approach

| Approach | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 3.8 | 0.0 | 0.0 | 0.2 |
| Total Del/Veh (s) | 5.8 | 0.9 | 0.7 | 1.1 |

## SimTraffic Performance Report

Existing AM Peak Hour
80: 25th St \& 62nd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 1.1 | 3.4 | 0.0 | 0.0 | 0.2 |
| Total Del/Veh (s) | 9.7 | 6.7 | 0.9 | 0.9 | 1.4 |

85: 25th St \& 64th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.3 | 0.0 | 0.2 |
| Total Del/Veh (s) | 4.0 | 4.1 | 5.5 | 5.9 | 5.5 |

## 100: 27th St \& 52nd Ave Performance by approach

| Approach | EB | WB | NB | All |
| :--- | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.7 | 0.0 | 40.7 | 4.0 |
| Total Del/Veh (s) | 0.8 | 2.6 | 142.6 | 14.7 |

## Total Network Performance

|  |  |
| :--- | ---: |
| Denied Del/Veh (s) | 2.2 |
| Total Del/Veh (s) | 40.1 |

Arterial Level of Service
Existing AM Peak Hour

## Arterial Level of Service: NB 25th St

| Cross Street | Node | Delay (s/veh) | Travel time (s) | Dist <br> (mi) | Arterial Speed |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 64th Ave | 85 | 5.7 | 29.8 | 0.3 | 31 |
| 62nd Ave | 80 | 0.8 | 27.0 | 0.2 | 23 |
| 60th Ave | 75 | 0.9 | 14.8 | 0.1 | 33 |
| 58th Ave | 70 | 6.6 | 20.0 | 0.1 | 26 |
| Shanley HS (South) | 65 | 1.5 | 27.5 | 0.2 | 23 |
|  | 61 | 0.5 | 6.3 | 0.1 | 32 |
| Shanley HS (North) | 60 | 1.0 | 8.1 | 0.1 | 31 |
| 53rd Ave | 57 | 1.6 | 14.0 | 0.1 | 31 |
| Don's Carwash | 56 | 0.7 | 6.0 | 0.0 | 30 |
| 52nd Ave | 55 | 23.7 | 30.5 | 0.1 | 9 |
| Rose Creek Blvd | 54 | 2.7 | 19.3 | 0.2 | 29 |
| Meadow Creek Dr | 52 | 0.7 | 17.0 | 0.2 | 33 |
| Rose Creek Pkwy | 50 | 0.5 | 7.7 | 0.1 | 34 |
| Carrie Rose Ln | 45 | 0.9 | 25.4 | 0.2 | 33 |
| 44th Ave | 44 | 0.4 | 8.5 | 0.1 | 33 |
| Rose Creek Dr | 43 | 7.5 | 20.5 | 0.1 | 22 |
| Centennial Elementar | 42 | 2.7 | 12.4 | 0.1 | 26 |
| 40th Ave | 40 | 20.2 | 29.0 | 0.1 | 11 |
| 39th Ave | 37 | 2.6 | 10.0 | 0.1 | 26 |
| 38th Ave | 35 | 0.6 | 13.1 | 0.1 | 33 |
| 37th Ave | 30 | 0.7 | 13.4 | 0.1 | 33 |
| 36th Ave | 25 | 0.7 | 13.4 | 0.1 | 32 |
| Casey's Driveway | 23 | 0.5 | 7.6 | 0.1 | 33 |
| 35th Ave | 20 | 7.2 | 23.1 | 0.2 | 24 |
| 33rd Ave | 15 | 2.7 | 23.3 | 0.2 | 32 |
| Kirsten Ln | 10 | 1.3 | 7.2 | 0.1 | 28 |
| 32nd Ave | 5 | 26.8 | 34.2 | 0.1 | 8 |
| Total |  | 121.8 | 469.0 | 3.3 | 25 |

Arterial Level of Service
Existing AM Peak Hour

## Arterial Level of Service: SB 25th St

| Cross Street | Node | Delay (s/veh) | Travel time (s) | Dist <br> (mi) | Arterial Speed |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 32nd Ave | 5 | 24.4 | 39.7 | 0.2 | 14 |
| Kirsten Ln | 10 | 2.9 | 11.3 | 0.1 | 25 |
| 33rd Ave | 15 | 0.8 | 6.7 | 0.1 | 31 |
| 35th Ave | 20 | 6.2 | 27.5 | 0.2 | 27 |
| Casey's Driveway | 23 | 1.8 | 17.9 | 0.2 | 31 |
| 36th Ave | 25 | 0.4 | 7.5 | 0.1 | 34 |
| 37th Ave | 30 | 0.6 | 13.1 | 0.1 | 33 |
| 38th Ave | 35 | 0.6 | 13.4 | 0.1 | 33 |
| 39th Ave | 37 | 0.6 | 13.1 | 0.1 | 33 |
| 40th Ave | 40 | 25.3 | 32.7 | 0.1 | 8 |
| Centennial Elementar | 42 | 3.0 | 12.1 | 0.1 | 27 |
| Centennial Elementar | 43 | 7.0 | 16.5 | 0.1 | 20 |
| 44th Ave | 44 | 1.8 | 14.6 | 0.1 | 31 |
| Carrie Rose Ln | 45 | 0.4 | 8.7 | 0.1 | 32 |
| Rose Creek Pkwy | 50 | 0.8 | 24.9 | 0.2 | 34 |
| Meadow Creek Dr | 52 | 0.4 | 7.9 | 0.1 | 33 |
| Rose Creek Blvd | 54 | 0.7 | 16.8 | 0.2 | 33 |
| 52nd Ave | 55 | 36.0 | 51.5 | 0.2 | 11 |
| Don's Carwash | 56 | 4.4 | 12.6 | 0.1 | 21 |
| 53rd Ave | 57 | 0.6 | 5.7 | 0.0 | 31 |
| Prairie Grove Ave | 60 | 1.0 | 13.3 | 0.1 | 33 |
|  | 61 | 0.5 | 7.7 | 0.1 | 32 |
| Eaglebrook Apts | 65 | 0.7 | 6.5 | 0.1 | 31 |
| 58th Ave | 70 | 6.3 | 22.5 | 0.2 | 28 |
| 60th Ave | 75 | 0.7 | 23.4 | 0.1 | 22 |
| 62nd Ave | 80 | 0.9 | 14.8 | 0.1 | 33 |
| 64th Ave | 85 | 6.0 | 22.5 | 0.2 | 28 |
| Total |  | 134.8 | 464.9 | 3.2 | 24 |

Queuing and Blocking Report
Existing AM Peak Hour
Intersection: 5: 25th St \& 32nd Ave

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | SB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Directions Served | L | T | T | R | L | T | T | R | L | T | TR | L |
| Maximum Queue (ft) | 218 | 239 | 217 | 55 | 127 | 233 | 190 | 112 | 194 | 254 | 267 | 165 |
| Average Queue (ft) | 109 | 139 | 107 | 22 | 56 | 146 | 112 | 40 | 82 | 130 | 150 | 66 |
| 95th Queue (ft) | 182 | 214 | 191 | 43 | 105 | 211 | 184 | 74 | 161 | 225 | 245 | 124 |
| Link Distance (ft) |  | 843 | 843 |  |  | 904 | 904 |  |  | 307 | 307 |  |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  | 0 |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |  |  | 0 |  |
| Storage Bay Dist (ft) | 350 |  |  | 200 | 250 |  |  | 200 | 150 |  |  | 225 |
| Storage BIk Time (\%) |  |  | 0 |  |  | 0 | 0 |  | 1 | 5 |  | 0 |
| Queuing Penalty (veh) |  |  | 1 |  |  | 0 | 0 |  | 2 | 10 |  | 0 |

Intersection: 5: 25th St \& 32nd Ave

| Movement | SB | SB | SB |
| :--- | ---: | ---: | ---: |
| Directions Served | T | T | R |
| Maximum Queue (ft) | 157 | 136 | 113 |
| Average Queue (ft) | 77 | 56 | 37 |
| 95th Queue (ft) | 135 | 118 | 80 |
| Link Distance (ft) | 771 | 771 |  |
| Upstream Blk Time (\%) |  |  |  |
| Queuing Penalty (veh) |  |  |  |
| Storage Bay Dist (ft) |  |  |  |
| Storage Blk Time (\%) |  |  |  |
| Queuing Penalty (veh) |  |  |  |

Intersection: 10: 25th St \& Kirsten Ln

| Movement | EB | WB | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LT | R | LT | TR | L | T | TR |
| Maximum Queue (ft) | 86 | 49 | 57 | 88 | 85 | 69 | 50 | 34 |
| Average Queue (ft) | 36 | 16 | 22 | 13 | 8 | 24 | 2 | 2 |
| 95th Queue (ft) | 69 | 43 | 49 | 54 | 40 | 54 | 20 | 18 |
| Link Distance (ft) | 584 | 475 |  | 242 | 242 |  | 307 | 307 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  | 50 |  |  | 50 |  |  |
| Storage Blk Time (\%) |  | 0 | 0 |  |  | 2 | 0 |  |
| Queuing Penalty (veh) |  | 0 | 0 |  |  | 3 | 0 |  |

Queuing and Blocking Report
Existing AM Peak Hour
Intersection: 15: 25th St \& 33rd Ave

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LT | TR | LT | TR |
| Maximum Queue (ft) | 42 | 70 | 90 | 61 | 35 | 42 |
| Average Queue (ft) | 22 | 25 | 18 | 3 | 3 | 3 |
| 95th Queue (ft) | 44 | 55 | 57 | 24 | 21 | 21 |
| Link Distance (ft) | 591 | 466 | 1023 | 1023 | 242 | 242 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |

Intersection: 20: 25th St \& 35th Ave

| Movement | EB | WB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | L | TR | LT | TR | LT | TR |
| Maximum Queue (ft) | 99 | 59 | 79 | 141 | 144 | 96 | 120 |
| Average Queue (ft) | 48 | 16 | 36 | 70 | 74 | 39 | 45 |
| 95th Queue (ft) | 85 | 46 | 67 | 124 | 128 | 79 | 92 |
| Link Distance (ft) | 578 |  | 481 | 754 | 754 | 1023 | 1023 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 100 |  |  |  |  |  |
| Storage Blk Time (\%) |  |  | 0 |  |  |  |  |
| Queuing Penalty (veh) |  |  | 0 |  |  |  |  |

Intersection: 23: 25th St \& Casey's Driveway

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LT | TR | LT | TR |
| Maximum Queue (ft) | 43 | 39 | 40 | 49 | 35 | 36 |
| Average Queue (ft) | 15 | 13 | 5 | 3 | 4 | 2 |
| 95th Queue (ft) | 41 | 38 | 25 | 21 | 21 | 19 |
| Link Distance (ft) | 623 | 341 | 306 | 306 | 754 | 754 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |

Queuing and Blocking Report Existing AM Peak Hour

Intersection: 25: 25th St \& 36th Ave

| Movement | EB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LR | LT | T | T | TR |
| Maximum Queue (ft) | 48 | 48 | 46 | 34 | 47 |
| Average Queue (ft) | 20 | 6 | 2 | 1 | 3 |
| 95th Queue (ft) | 47 | 31 | 19 | 15 | 22 |
| Link Distance (ft) | 696 | 582 | 582 | 306 | 306 |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |

Intersection: 30: 25th St \& 37th Ave

| Movement | WB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | R | T | TR | LT | T |
| Maximum Queue (ft) | 34 | 70 | 39 | 39 | 67 | 31 |
| Average Queue (ft) | 9 | 32 | 2 | 2 | 13 | 2 |
| 95th Queue (ft) | 31 | 55 | 15 | 16 | 46 | 18 |
| Link Distance (ft) | 445 |  | 578 | 578 | 582 | 582 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 100 |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |

Intersection: 35: 25th St \& 38th Ave

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LT | TR | LT | TR |
| Maximum Queue (ft) | 61 | 54 | 24 | 14 | 36 | 36 |
| Average Queue (ft) | 31 | 22 | 2 | 1 | 3 | 3 |
| 95th Queue (ft) | 55 | 49 | 12 | 7 | 17 | 22 |
| Link Distance (ft) | 454 | 434 | 560 | 560 | 578 | 578 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |

Queuing and Blocking Report
Existing AM Peak Hour
Intersection: 37: 25th St \& 39th Ave

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LT | TR | LT | TR |
| Maximum Queue (ft) | 49 | 52 | 71 | 36 | 30 | 33 |
| Average Queue (ft) | 20 | 19 | 4 | 2 | 3 | 1 |
| 95th Queue (ft) | 46 | 45 | 26 | 19 | 17 | 14 |
| Link Distance (ft) | 509 | 451 | 307 | 307 | 560 | 560 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |

Intersection: 40: 25th St \& 40th Ave

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | TR | L | TR | L | T | TR | L | T | TR |
| Maximum Queue ( ft$)$ | 197 | 252 | 189 | 255 | 168 | 175 | 195 | 82 | 164 | 203 |
| Average Queue (ft) | 75 | 131 | 56 | 119 | 71 | 87 | 109 | 32 | 73 | 111 |
| 95th Queue (ft) | 146 | 218 | 118 | 205 | 128 | 152 | 179 | 67 | 138 | 180 |
| Link Distance (ft) |  | 975 |  | 893 |  | 396 | 396 |  | 307 | 307 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  | 150 |  |  |
| Storage Bay Dist ( ft$)$ | 125 |  | 100 |  | 300 |  |  | 0 |  |  |
| Storage Blk Time (\%) | 1 | 8 | 1 | 17 |  |  |  |  | 0 |  |
| Queuing Penalty (veh) | 3 | 11 | 3 | 17 |  |  |  |  |  |  |

## Intersection: 42: 25th St \& Centennial Elementary (North)

| Movement | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LT | T | T | TR | R |
| Maximum Queue (ft) | 121 | 64 | 24 | 42 | 24 |
| Average Queue (ft) | 40 | 4 | 1 | 4 | 1 |
| 95th Queue (ft) | 90 | 28 | 12 | 23 | 11 |
| Link Distance (ft) | 421 | 421 | 396 | 396 |  |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |

Queuing and Blocking Report Existing AM Peak Hour

Intersection: 43: 25th St \& Centennial Elementary (South)/Rose Creek Dr

| Movement | EB | EB | EB | WB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | T | R | L | R | T | TR | LT | T |
| Maximum Queue (ft) | 132 | 29 | 67 | 53 | 65 | 135 | 132 | 99 | 101 |
| Average Queue (ft) | 61 | 2 | 27 | 14 | 24 | 59 | 59 | 35 | 35 |
| 95th Queue (ft) | 109 | 15 | 53 | 40 | 53 | 112 | 106 | 74 | 78 |
| Link Distance (ft) |  | 403 | 403 |  | 555 | 582 | 582 | 421 | 421 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) | 150 |  |  | 50 |  |  |  |  |  |
| Storage Blk Time (\%) | 0 |  |  | 1 | 1 |  |  |  |  |
| Queuing Penalty (veh) | 0 |  |  | 0 | 0 |  |  |  |  |

Intersection: 44: 25th St \& 44th Ave

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LT | TR | LT | TR |
| Maximum Queue (ft) | 48 | 44 | 24 | 17 | 29 | 32 |
| Average Queue (ft) | 19 | 16 | 2 | 1 | 2 | 1 |
| 95th Queue (ft) | 46 | 43 | 15 | 9 | 14 | 14 |
| Link Distance (ft) | 491 | 460 | 353 | 353 | 582 | 582 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |

Intersection: 45: 25th St \& Carrie Rose Ln

| Movement | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LR | T | TR | LT | T |
| Maximum Queue (ft) | 31 | 42 | 17 | 36 | 47 |
| Average Queue (ft) | 10 | 1 | 1 | 3 | 2 |
| 95th Queue (ft) | 33 | 17 | 11 | 19 | 18 |
| Link Distance (ft) | 489 | 1173 | 1173 | 353 | 353 |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |

Queuing and Blocking Report Existing AM Peak Hour

## Intersection: 50: 25th St \& Rose Creek Pkwy

| Movement | EB | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | R | LTR | LT | TR | LT | TR |
| Maximum Queue (ft) | 31 | 32 | 44 | 29 | 31 | 35 | 30 |
| Average Queue (ft) | 8 | 9 | 16 | 2 | 2 | 2 | 1 |
| 95th Queue (ft) | 30 | 32 | 43 | 15 | 14 | 16 | 7 |
| Link Distance (ft) |  |  | 648 | 301 | 301 | 1173 | 1173 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) | 75 | 25 |  |  |  |  |  |
| Storage Blk Time (\%) |  | 1 |  |  |  |  |  |
| Queuing Penalty (veh) |  | 0 |  |  |  |  |  |

## Intersection: 52: 25th St \& Meadow Creek Dr

| Movement | EB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LR | LT | T | T | TR |
| Maximum Queue ( ft$)$ | 56 | 33 | 33 | 12 | 39 |
| Average Queue $(\mathrm{ft})$ | 23 | 3 | 2 | 0 | 2 |
| 95th Queue (ft) | 49 | 20 | 15 | 7 | 14 |
| Link Distance (ft) | 482 | 758 | 758 | 301 | 301 |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |

Intersection: 54: 25th St \& Rose Creek Blvd

| Movement | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LR | T | TR | LT | T |
| Maximum Queue (ft) | 68 | 12 | 33 | 48 | 44 |
| Average Queue (ft) | 32 | 0 | 1 | 7 | 2 |
| 95th Queue (ft) | 56 | 6 | 14 | 31 | 19 |
| Link Distance (ft) | 588 | 720 | 720 | 758 | 758 |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |

Queuing and Blocking Report
Existing AM Peak Hour
05/31/2022
Intersection: 55: 25th St \& 52nd Ave

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | NB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | T | T | R | L | T | T | R | L | L | T | TR |
| Maximum Queue (ft) | 182 | 136 | 135 | 231 | 72 | 225 | 201 | 58 | 198 | 211 | 138 | 148 |
| Average Queue ( ft ) | 89 | 77 | 65 | 99 | 33 | 127 | 98 | 24 | 98 | 115 | 51 | 59 |
| 95th Queue (ft) | 158 | 124 | 121 | 175 | 67 | 198 | 182 | 48 | 166 | 182 | 101 | 120 |
| Link Distance (ft) |  | 891 | 891 |  |  | 1174 | 1174 |  |  | 290 | 290 | 290 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  | 325 | 225 |  |  |
| Storage Bay Dist (ft) | 400 |  |  | 325 |  |  |  | 0 | 0 |  |  |  |
| Storage Blk Time (\%) |  |  |  | 0 |  |  |  |  | 0 | 0 |  |  |

Intersection: 55: 25th St \& 52nd Ave

| Movement | SB | SB | SB |
| :--- | ---: | ---: | ---: |
| Directions Served | L | T | TR |
| Maximum Queue (ft) | 74 | 194 | 205 |
| Average Queue (ft) | 27 | 98 | 99 |
| 95th Queue (ft) | 62 | 169 | 177 |
| Link Distance (ft) |  | 720 | 720 |
| Upstream Blk Time (\%) |  |  |  |
| Queuing Penalty (veh) |  |  |  |
| Storage Bay Dist (ft) | 200 | 0 |  |
| Storage Blk Time (\%) |  | 0 |  |

Intersection: 56: 25th St \& Don's Carwash

| Movement | EB | NB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | R | T | T | T | T | TR |
| Maximum Queue (ft) | 31 | 42 | 30 | 19 | 70 | 30 |
| Average Queue (ft) | 5 | 3 | 2 | 1 | 7 | 1 |
| 95th Queue (ft) | 23 | 21 | 14 | 8 | 38 | 10 |
| Link Distance (ft) | 462 |  | 200 |  | 290 | 290 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 25 |  | 100 |  |  |
| Storage Blk Time (\%) |  | 0 | 0 |  |  |  |
| Queuing Penalty (veh) |  | 2 | 1 |  |  |  |

Queuing and Blocking Report Existing AM Peak Hour

Intersection: 57: 25th St \& 53rd Ave

| Movement | EB | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | T | TR |
| Maximum Queue (ft) | 74 | 52 | 58 | 69 | 29 | 54 | 10 |
| Average Queue (ft) | 28 | 21 | 16 | 7 | 5 | 5 | 0 |
| 95th Queue (ft) | 64 | 49 | 43 | 37 | 22 | 29 | 4 |
| Link Distance (ft) | 490 | 456 |  | 568 |  | 200 | 200 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  | 125 |  | 150 |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |  |

Intersection: 60: 25th St \& Prairie Grove Ave/Shanley HS (North)

| Movement | EB | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | T | TR |
| Maximum Queue (ft) | 40 | 97 | 24 | 53 | 90 | 45 | 4 |
| Average Queue (ft) | 12 | 44 | 3 | 4 | 31 | 3 | 0 |
| 95th Queue (ft) | 37 | 77 | 17 | 25 | 66 | 20 | 3 |
| Link Distance (ft) | 451 | 516 |  | 296 |  | 568 | 568 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  | 150 |  | 150 |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |

## Intersection: 65: 25th St \& Eaglebrook Apts/Shanley HS (South)

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | TR |
| Maximum Queue (ft) | 66 | 40 | 23 | 44 | 73 | 48 |
| Average Queue (ft) | 28 | 15 | 2 | 3 | 29 | 4 |
| 95th Queue (ft) | 57 | 41 | 14 | 22 | 59 | 26 |
| Link Distance (ft) | 539 | 555 |  | 776 |  | 243 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  | 150 |  | 150 |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |

Queuing and Blocking Report Existing AM Peak Hour

Intersection: 70: 25th St \& 58th Ave

| Movement | EB | WB | NB | SB |
| :--- | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 53 | 84 | 114 | 94 |
| Average Queue (ft) | 19 | 32 | 36 | 19 |
| 95th Queue (ft) | 46 | 66 | 87 | 66 |
| Link Distance (ft) | 525 | 502 | 619 | 776 |
| Upstream Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |

Intersection: 75: 25th St \& 60th Ave

| Movement | WB | WB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | R | TR | L | T |
| Maximum Queue (ft) | 31 | 68 | 17 | 31 | 52 |
| Average Queue (ft) | 4 | 31 | 1 | 3 | 2 |
| 95th Queue (ft) | 20 | 57 | 10 | 18 | 22 |
| Link Distance (ft) | 473 |  | 636 |  | 619 |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 50 |  | 150 |  |
| Storage Blk Time (\%) | 0 | 1 |  |  |  |
| Queuing Penalty (veh) | 0 | 0 |  |  |  |

Intersection: 80: 25th St \& 62nd Ave

| Movement | EB | EB | WB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LT | R | LT | R | L | TR | L | TR |
| Maximum Queue (ft) | 51 | 35 | 44 | 66 | 15 | 18 | 27 | 20 |
| Average Queue (ft) | 15 | 6 | 9 | 26 | 1 | 1 | 3 | 1 |
| 95th Queue (ft) | 43 | 26 | 32 | 53 | 10 | 9 | 16 | 8 |
| Link Distance (ft) | 518 |  | 496 |  |  | 779 |  | 636 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |
| Storage Bay Dist ( ft$)$ |  | 50 |  | 150 | 150 |  | 150 |  |
| Storage Blk Time (\%) | 0 | 0 |  |  |  |  |  |  |
| Queuing Penalty (veh) | 0 | 0 |  |  |  |  |  |  |

Queuing and Blocking Report
Existing AM Peak Hour
Intersection: 85: 25th St \& 64th Ave

| Movement | EB | WB | NB | SB |
| :--- | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 45 | 51 | 75 | 72 |
| Average Queue (ft) | 17 | 16 | 15 | 17 |
| 95th Queue (ft) | 44 | 44 | 53 | 55 |
| Link Distance (ft) | 751 | 723 | 1219 | 779 |
| Upstream Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |

Intersection: 100: 27th St \& 52nd Ave

| Movement | EB | EB | EB | WB | WB | WB | NB | NB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | T | T | R | L | T | T | L | R |
| Maximum Queue (ft) | 49 | 56 | 34 | 43 | 45 | 62 | 160 | 381 |
| Average Queue (ft) | 3 | 4 | 2 | 15 | 3 | 4 | 125 | 185 |
| 95th Queue ( ft ) | 21 | 26 | 13 | 41 | 19 | 27 | 193 | 446 |
| Link Distance (ft) | 703 | 703 |  |  | 891 | 891 |  | 361 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  | 25 |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  | 300 |  |  | 100 | 0 |
| Storage Blk Time (\%) |  |  |  |  |  | 58 | 0 |  |
| Queuing Penalty (veh) |  |  |  |  |  |  | 44 | 0 |
|  |  |  |  |  |  |  |  |  |
| Network Summary |  |  |  |  |  |  |  |  |

Network wide Queuing Penalty: 99

HCM 6th TWSC
10: 25th St \& Kirsten Ln





HCM 6th TWSC
23: 25th St \& Casey's Driveway

| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 0.6 |  |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |  |
| Lane Configurations |  | \& |  |  | $\uparrow$ |  |  | * $\uparrow$ |  |  | * $\uparrow$ |  |  |
| Traffic Vol, veh/h | 10 | 0 | 10 | 5 | 0 | 10 | 10 | 710 | 5 | 5 | 375 | 25 |  |
| Future Vol, veh/h | 10 | 0 | 10 | 5 | 0 | 10 | 10 | 710 | 5 | 5 | 375 | 25 |  |
| Conflicting Peds, \#/hr | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 |  |
| Sign Control Stor | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |  |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |  |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |  |
| Veh in Median Storage, \# | \# | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |  |
| Grade, \% | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |  |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |  |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |  |
| Mvmt Flow | 11 | 0 | 11 | 5 | 0 | 11 | 11 | 772 | 5 | 5 | 408 | 27 |  |









| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 0.8 |  |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |  |
| Lane Configurations |  | \& |  |  | $\uparrow$ |  |  | * $\uparrow$ |  |  | * $\uparrow$ |  |  |
| Traffic Vol, veh/h | 10 | 0 | 20 | 10 | 0 | 10 | 5 | 590 | 10 | 5 | 390 | 5 |  |
| Future Vol, veh/h | 10 | 0 | 20 | 10 | 0 | 10 | 5 | 590 | 10 | 5 | 390 | 5 |  |
| Conflicting Peds, \#/hr | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 |  |
| Sign Control Stor | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |  |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |  |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |  |
| Veh in Median Storage, \# | \# | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |  |
| Grade, \% | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |  |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |  |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |  |
| Mvmt Flow | 11 | 0 | 22 | 11 | 0 | 11 | 5 | 641 | 11 | 5 | 424 | 5 |  |



HCM 6th TWSC
44: 25th St \& 44th Ave

| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 0.7 |  |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |  |
| Lane Configurations |  | \& |  |  | $\uparrow$ |  |  | * $\uparrow$ |  |  | * $\uparrow$ |  |  |
| Traffic Vol, veh/h | 15 | 0 | 10 | 5 | 0 | 15 | 5 | 545 | 5 | 5 | 385 | 5 |  |
| Future Vol, veh/h | 15 | 0 | 10 | 5 | 0 | 15 | 5 | 545 | 5 | 5 | 385 | 5 |  |
| Conflicting Peds, \#/hr | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 |  |
| Sign Control Stor | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |  |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |  |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |  |
| Veh in Median Storage, \# | \# | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |  |
| Grade, \% | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |  |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |  |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |  |
| Mvmt Flow | 16 | 0 | 11 | 5 | 0 | 16 | 5 | 592 | 5 | 5 | 418 | 5 |  |



HCM 6th TWSC
45: 25th St \& Carrie Rose Ln

| Intersection |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 0.2 |  |  |  |  |  |
| Movement W | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | * |  | 性 |  |  | ¢4 |
| Traffic Vol, veh/h | 5 | 5 | 550 | 5 | 5 | 395 |
| Future Vol, veh/h | 5 | 5 | 550 | 5 | 5 | 395 |
| Conflicting Peds, \#/hr | 5 | 5 | 0 | 5 | 5 | 0 |
| Sign Control Stor | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, \# | \# 0 | - | 0 | - | - | 0 |
| Grade, \% | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 5 | 598 | 5 | 5 | 429 |



HCM 6th TWSC
50: 25th St \& Rose Creek Pkwy



| Minor Lane/Major Mvmt | NBL | NBT | NBR EBLn1 EBLn2 EBLn3WBLn1 | SBL | SBT | SBR |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Capacity (veh/h) | 1117 | - | -289 | - | 771 | 485 | 975 | - | - |
| HCM Lane V/C Ratio | 0.005 | - | -0.038 | -0.007 | 0.045 | 0.006 | - | - |  |
| HCM Control Delay (s) | 8.2 | 0 | - | 17.9 | 0 | 9.7 | 12.8 | 8.7 | 0 |

HCM 6th TWSC
52: 25th St \& Meadow Creek Dr
05/31/2022


| Major/Minor | Minor2 | Major1 |  | Major2 |  |  |
| :--- | ---: | ---: | ---: | :--- | :--- | :--- |
| Conflicting Flow All | 733 | 228 | 440 | 0 | - | 0 |
| $\quad$ Stage 1 | 435 | - | - | - | - | - |
| $\quad$ Stage 2 | 298 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | 4.14 | - | - | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | 2.22 | - | - | - |
| Pot Cap-1 Maneuver | 356 | 775 | 1116 | - | - | - |
| $\quad$ Stage 1 | 620 | - | - | - | - | - |
| $\quad$ Stage 2 | 727 | - | - | - | - | - |
| Platoon blocked, \% |  |  |  | - | - | - |
| Mov Cap-1 Maneuver | 350 | 768 | 1111 | - | - | - |
| Mov Cap-2 Maneuver | 350 | - | - | - | - | - |
| Stage 1 | 613 | - | - | - | - | - |
| Stage 2 | 723 | - | - | - | - | - |
|  |  |  |  |  |  |  |


| Approach | EB | NB | SB |
| :--- | ---: | ---: | ---: |
| HCM Control Delay, s | 14.1 | 0.1 | 0 |


| Minor Lane/Major Mvmt | NBL | NBT EBLn1 | SBT | SBR |
| :--- | ---: | ---: | ---: | ---: |
| Capacity (veh/h) | 1111 | - | 440 | - |

Existing AM Peak Hour Existing AM Peak Hour 6:01 pm 05/27/2022 Existing AM Peak Hour TC2

HCM 6th TWSC
54: 25th St \& Rose Creek Blvd
05/31/2022



Existing AM Peak Hour Existing AM Peak Hour 6:01 pm 05/27/2022 Existing AM Peak Hour
TC2



HCMLOS B

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
| :--- | ---: | ---: | ---: |
| Capacity (veh/h) | -573 | - | - |
| HCM Lane V/C Ratio | -0.009 | - | - |
| HCM Control Delay (s) | -11.3 | - | - |
| HCM Lane LOS | - | $B$ | - |
| HCM 95th \%tile Q(veh) | - | 0 | - |




HCM 6th TWSC
60: 25th St \& Prairie Grove Ave/Shanley HS (North)



HCM 6th TWSC
65: 25th St \& Eaglebrook Apts/Shanley HS (South)



HCM 6th Roundabout
70: 25th St \& 58th Ave

| Intersection |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Intersection Delay, s/veh | 7.6 |  |  |  |  |  |  |  |
| Intersection LOS | A |  |  |  |  |  |  |  |
| Approach |  | EB |  | WB |  | NB |  | SB |
| Entry Lanes |  | 1 |  | 1 |  | 1 |  | 1 |
| Conflicting Circle Lanes |  | 1 |  | 1 |  | 1 |  | 1 |
| Adj Approach Flow, veh/h |  | 59 |  | 152 |  | 586 |  | 576 |
| Demand Flow Rate, veh/h |  | 60 |  | 155 |  | 598 |  | 587 |
| Vehicles Circulating, veh/h |  | 598 |  | 614 |  | 121 |  | 32 |
| Vehicles Exiting, veh/h |  | 21 |  | 105 |  | 537 |  | 736 |
| Ped Vol Crossing Leg, \#/h |  | 5 |  | 5 |  | 5 |  | 5 |
| Ped Cap Adj |  | 0.999 |  | 0.999 |  | 0.999 |  | 0.999 |
| Approach Delay, s/veh |  | 5.7 |  | 7.4 |  | 8.3 |  | 7.1 |
| Approach LOS |  | A |  | A |  | A |  | A |
| Lane | Left |  | Left |  | Left |  | Left |  |
| Designated Moves | LTR |  | LTR |  | LTR |  | LTR |  |
| Assumed Moves | LTR |  | LTR |  | LTR |  | LTR |  |
| RT Channelized |  |  |  |  |  |  |  |  |
| Lane Util | 1.000 |  | 1.000 |  | 1.000 |  | 1.000 |  |
| Follow-Up Headway, s | 2.609 |  | 2.609 |  | 2.609 |  | 2.609 |  |
| Critical Headway, s | 4.976 |  | 4.976 |  | 4.976 |  | 4.976 |  |
| Entry Flow, veh/h | 60 |  | 155 |  | 598 |  | 587 |  |
| Cap Entry Lane, veh/h | 750 |  | 738 |  | 1220 |  | 1336 |  |
| Entry HV Adj Factor | 0.980 |  | 0.980 |  | 0.980 |  | 0.981 |  |
| Flow Entry, veh/h | 59 |  | 152 |  | 586 |  | 576 |  |
| Cap Entry, veh/h | 734 |  | 722 |  | 1194 |  | 1310 |  |
| V/C Ratio | 0.080 |  | 0.210 |  | 0.491 |  | 0.440 |  |
| Control Delay, s/veh | 5.7 |  | 7.4 |  | 8.3 |  | 7.1 |  |
| LOS | A |  | A |  | A |  | A |  |
| 95th \%tile Queue, veh | 0 |  | 1 |  | 3 |  | 2 |  |


| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |





HCM 6th Roundabout
85: 25th St \& 64th Ave

| Intersection |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Intersection Delay, s/veh | 6.3 |  |  |  |
| Intersection LOS | A |  |  |  |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 76 | 70 | 473 | 511 |
| Demand Flow Rate, veh/h | 78 | 72 | 482 | 521 |
| Vehicles Circulating, veh/h | 538 | 471 | 50 | 44 |
| Vehicles Exiting, veh/h | 27 | 61 | 566 | 499 |
| Ped Vol Crossing Leg, \#/h | 5 | 5 | 5 | 5 |
| Ped Cap Adj | 0.999 | 0.999 | 0.999 | 0.999 |
| Approach Delay, s/veh | 5.6 | 5.2 | 6.3 | 6.6 |
| Approach LOS | A | A | A | A |


| Lane | Left | Left | Left | Left |
| :--- | :---: | :---: | :---: | :---: |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR |  |
| RT Channelized |  |  | 1.000 | 1.000 |
| Lane Util | 1.000 | 1.000 | 2.609 | 4.976 |
| Follow-Up Headway, s | 2.609 | 2.609 | 4.976 | 521 |
| Critical Headway, s | 4.976 | 4.976 | 482 | 1319 |
| Entry Flow, veh/h | 78 | 72 | 1311 | 0.981 |
| Cap Entry Lane, veh/h | 797 | 854 | 0.980 | 511 |
| Entry HV Adj Factor | 0.972 | 0.971 | 1294 |  |
| Flow Entry, veh/h | 76 | 70 | 473 | 0.395 |
| Cap Entry, veh/h | 774 | 828 | 1285 | 6.6 |
| V/C Ratio | 0.098 | 0.084 | 0.368 | A |
| Control Delay, s/veh | 5.6 | 5.2 | 6.3 | 2 |
| LOS | A | 0 | 2 |  |

HCM 6th TWSC
100: 27th St \& 52nd Ave

| Intersection |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 15.9 |  |  |  |  |  |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | 44 | F | ${ }^{7}$ | 44 | ${ }^{7}$ | 「 |
| Traffic Vol, veh/h | 870 | 95 | 20 | 1025 | 120 | 75 |
| Future Vol, veh/h | 870 | 95 | 20 | 1025 | 120 | 75 |
| Conflicting Peds, \#/hr | 0 | 5 | 5 | 0 | 5 | 5 |
| Sign Control F | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 175 | 300 | - | 100 | 0 |
| Veh in Median Storage, \# | \# 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 946 | 103 | 22 | 1114 | 130 | 82 |



HCMLOS F

| Minor Lane/Major Mvmt | NBLn1 NBLn2 | EBT | EBR | WBL | WBT |  |
| :--- | ---: | ---: | ---: | ---: | ---: | :--- |
| Capacity (veh/h) | 98 | 525 | - | -653 | - |  |
| HCM Lane V/C Ratio | 1.331 | 0.155 | - | -0.033 | - |  |
| HCM Control Delay (s) | 282.2 | 13.1 | - | - | 10.7 | - |
| HCM Lane LOS | F | B | - | - | B | - |
| HCM 95th \%tile Q(veh) | 9.3 | 0.5 | - | - | 0.1 | - |

## Notes

$\sim$ : Volume exceeds capacity $\$$ : Delay exceeds 300s $\quad+$ : Computation Not Defined $\quad$ : All major volume in platoon

Existing AM Peak Hour Existing AM Peak Hour 6:01 pm 05/27/2022 Existing AM Peak Hour

## SimTraffic Performance Report

Existing PM Peak Hour
5: 25th St \& 32nd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 1.4 | 1.2 | 0.0 | 1.4 | 1.1 |
| Total Del/Veh (s) | 26.4 | 28.4 | 25.7 | 23.1 | 25.7 |

10: 25th St \& Kirsten Ln Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.2 | 3.0 | 0.0 | 0.0 | 0.3 |
| Total Del/Veh (s) | 16.3 | 8.8 | 1.0 | 3.1 | 3.6 |

15: 25th St \& 33rd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 9.0 | 9.0 | 2.0 | 1.1 | 1.7 |

20: 25th St \& 35th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.2 | 1.3 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 15.5 | 13.6 | 6.8 | 9.4 | 9.7 |

23: 25th St \& Casey's Driveway Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 7.9 | 7.0 | 0.4 | 2.4 | 1.9 |

25: 25th St \& 36th Ave Performance by approach

| Approach | EB | NB | SB | All |
| :--- | :--- | :--- | :--- | :--- |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 8.5 | 1.0 | 0.8 | 1.0 |

30: 25th St \& 37th Ave Performance by approach

| Approach | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 3.5 | 0.0 | 0.0 | 0.2 |
| Total Del/Veh (s) | 4.8 | 0.7 | 1.5 | 1.3 |

35: 25th St \& 38th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 10.1 | 8.9 | 0.9 | 1.2 | 1.3 |

SimTraffic Performance Report
Existing PM Peak Hour
37: 25th St \& 39th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 10.5 | 7.4 | 2.0 | 1.1 | 1.6 |

40: 25th St \& 40th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 1.5 | 1.1 | 0.0 | 0.0 | 0.6 |
| Total Del/Veh (s) | 20.1 | 25.0 | 19.1 | 20.3 | 21.0 |

42: 25th St \& Centennial Elementary (North) Performance by approach

| Approach | NB | SB | All |
| :--- | :--- | :--- | :--- |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 1.1 | 2.1 | 1.7 |

43: 25th St \& Centennial Elementary (South)/Rose Creek Dr Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | ---: |
| Denied Del/Veh (s) | 1.9 | 1.7 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 7.6 | 6.6 | 3.8 | 5.2 | 4.8 |

44: 25th St \& 44th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 5.1 | 5.7 | 0.4 | 1.7 | 1.3 |

45: 25th St \& Carrie Rose Ln Performance by approach

| Approach | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 5.2 | 0.7 | 0.5 | 0.6 |

50: 25th St \& Rose Creek Pkwy Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 4.4 | 0.1 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 5.9 | 7.0 | 0.4 | 1.2 | 1.1 |

52: 25th St \& Meadow Creek Dr Performance by approach

| Approach | EB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 6.0 | 0.8 | 0.6 | 0.8 |

SimTraffic Performance Report
Existing PM Peak Hour
54: 25th St \& Rose Creek Blvd Performance by approach

| Approach | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 7.0 | 1.8 | 1.1 | 1.6 |

55: 25th St \& 52nd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.8 | 0.0 | 0.0 | 0.2 |
| Total Del/Veh (s) | 16.8 | 22.9 | 25.4 | 27.3 | 21.5 |

56: 25th St \& Don's Carwash Performance by approach

| Approach | EB | NB | SB | All |
| :--- | :--- | :--- | :--- | :--- |
| Denied Del/Veh (s) | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 3.7 | 0.7 | 1.9 | 1.5 |

57: 25th St \& 53rd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 21.9 | 12.0 | 1.4 | 0.9 | 2.4 |

60: 25th St \& Prairie Grove Ave/Shanley HS (North) Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 10.8 | 7.8 | 0.6 | 1.4 | 1.5 |

65: 25th St \& Eaglebrook Apts/Shanley HS (South) Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 14.0 | 5.1 | 1.1 | 1.0 | 1.3 |

70: 25th St \& 58th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 4.7 | 3.0 | 5.5 | 7.5 | 6.5 |

75: 25th St \& 60th Ave Performance by approach

| Approach | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 3.4 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 5.5 | 0.8 | 1.1 | 1.1 |

## SimTraffic Performance Report

Existing PM Peak Hour
80: 25th St \& 62nd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 1.5 | 2.7 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 10.2 | 6.9 | 0.7 | 1.2 | 1.4 |

85: 25th St \& 64th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.3 | 0.0 | 0.1 |
| Total Del/Veh (s) | 4.4 | 3.5 | 5.2 | 5.6 | 5.3 |

100: 27th St \& 52nd Ave Performance by approach

| Approach | EB | WB | NB | All |
| :--- | :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.7 | 0.0 | 30.9 | 2.2 |
| Total Del/Veh (s) | 1.0 | 2.7 | 207.0 | 13.4 |

Total Network Performance

|  |  |
| :--- | ---: |
| Denied Del/Veh (s) | 1.6 |
| Total Del/Veh (s) | 39.3 |

Arterial Level of Service
Existing PM Peak Hour

## Arterial Level of Service: NB 25th St

| Cross Street | Node | Delay (s/veh) | Travel time (s) | Dist <br> (mi) | Arterial Speed |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 64th Ave | 85 | 5.3 | 29.3 | 0.3 | 31 |
| 62nd Ave | 80 | 0.7 | 26.7 | 0.2 | 24 |
| 60th Ave | 75 | 0.8 | 14.6 | 0.1 | 33 |
| 58th Ave | 70 | 5.6 | 19.0 | 0.1 | 27 |
| Shanley HS (South) | 65 | 1.0 | 26.9 | 0.2 | 23 |
|  | 61 | 0.3 | 6.1 | 0.1 | 33 |
| Shanley HS (North) | 60 | 0.6 | 7.7 | 0.1 | 32 |
| 53rd Ave | 57 | 1.1 | 13.5 | 0.1 | 32 |
| Don's Carwash | 56 | 0.6 | 5.8 | 0.0 | 31 |
| 52nd Ave | 55 | 26.3 | 33.1 | 0.1 | 8 |
| Rose Creek Blvd | 54 | 2.8 | 19.0 | 0.2 | 30 |
| Meadow Creek Dr | 52 | 0.6 | 16.8 | 0.2 | 33 |
| Rose Creek Pkwy | 50 | 0.4 | 7.6 | 0.1 | 35 |
| Carrie Rose Ln | 45 | 0.7 | 25.0 | 0.2 | 34 |
| 44th Ave | 44 | 0.3 | 8.4 | 0.1 | 34 |
| Rose Creek Dr | 43 | 3.8 | 16.7 | 0.1 | 27 |
| Centennial Elementar | 42 | 1.1 | 10.8 | 0.1 | 30 |
| 40th Ave | 40 | 19.9 | 28.7 | 0.1 | 11 |
| 39th Ave | 37 | 2.6 | 10.1 | 0.1 | 26 |
| 38th Ave | 35 | 0.7 | 13.1 | 0.1 | 33 |
| 37th Ave | 30 | 0.7 | 13.3 | 0.1 | 33 |
| 36th Ave | 25 | 0.8 | 13.4 | 0.1 | 32 |
| Casey's Driveway | 23 | 0.4 | 7.5 | 0.1 | 34 |
| 35th Ave | 20 | 6.7 | 22.6 | 0.2 | 25 |
| 33rd Ave | 15 | 2.1 | 23.4 | 0.2 | 32 |
| Kirsten Ln | 10 | 0.8 | 6.6 | 0.1 | 31 |
| 32nd Ave | 5 | 27.4 | 34.8 | 0.1 | 8 |
| Total |  | 114.0 | 460.6 | 3.3 | 25 |

Arterial Level of Service
Existing PM Peak Hour

## Arterial Level of Service: SB 25th St

| Cross Street | Node | Delay (s/veh) | Travel time (s) | Dist <br> (mi) | Arterial Speed |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 32nd Ave | 5 | 30.0 | 45.5 | 0.2 | 13 |
| Kirsten Ln | 10 | 4.1 | 12.5 | 0.1 | 22 |
| 33rd Ave | 15 | 1.1 | 7.0 | 0.1 | 29 |
| 35th Ave | 20 | 9.3 | 30.4 | 0.2 | 24 |
| Casey's Driveway | 23 | 2.6 | 18.7 | 0.2 | 30 |
| 36th Ave | 25 | 0.8 | 7.9 | 0.1 | 32 |
| 37th Ave | 30 | 1.2 | 13.8 | 0.1 | 32 |
| 38th Ave | 35 | 1.1 | 13.9 | 0.1 | 32 |
| 39th Ave | 37 | 1.1 | 13.6 | 0.1 | 32 |
| 40th Ave | 40 | 22.1 | 29.5 | 0.1 | 9 |
| Centennial Elementar | 42 | 2.6 | 11.8 | 0.1 | 27 |
| Centennial Elementar | 43 | 5.0 | 14.5 | 0.1 | 22 |
| 44th Ave | 44 | 1.7 | 14.5 | 0.1 | 31 |
| Carrie Rose Ln | 45 | 0.5 | 8.8 | 0.1 | 32 |
| Rose Creek Pkwy | 50 | 1.2 | 25.1 | 0.2 | 34 |
| Meadow Creek Dr | 52 | 0.6 | 8.0 | 0.1 | 33 |
| Rose Creek Blvd | 54 | 0.9 | 17.0 | 0.2 | 33 |
| 52nd Ave | 55 | 34.1 | 49.7 | 0.2 | 11 |
| Don's Carwash | 56 | 4.1 | 12.4 | 0.1 | 21 |
| 53rd Ave | 57 | 0.8 | 5.9 | 0.0 | 30 |
| Prairie Grove Ave | 60 | 1.2 | 13.5 | 0.1 | 32 |
|  | 61 | 0.6 | 7.8 | 0.1 | 31 |
| Eaglebrook Apts | 65 | 1.0 | 6.8 | 0.1 | 30 |
| 58th Ave | 70 | 7.8 | 24.0 | 0.2 | 26 |
| 60th Ave | 75 | 0.7 | 23.5 | 0.1 | 22 |
| 62nd Ave | 80 | 1.0 | 15.0 | 0.1 | 32 |
| 64th Ave | 85 | 5.8 | 22.3 | 0.2 | 28 |
| Total |  | 143.1 | 473.4 | 3.2 | 24 |

Queuing and Blocking Report
Existing PM Peak Hour
Intersection: 5: 25th St \& 32nd Ave

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | SB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Directions Served | L | T | T | R | L | T | T | R | L | T | TR | L |
| Maximum Queue (ft) | 152 | 239 | 186 | 97 | 146 | 228 | 204 | 96 | 180 | 218 | 218 | 144 |
| Average Queue (ft) | 77 | 142 | 107 | 38 | 67 | 147 | 116 | 41 | 82 | 86 | 113 | 67 |
| 95th Queue (ft) | 131 | 213 | 178 | 80 | 117 | 210 | 186 | 72 | 144 | 161 | 183 | 124 |
| Link Distance (ft) |  | 843 | 843 |  |  | 904 | 904 |  |  | 307 | 307 |  |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) | 350 |  |  | 200 | 250 |  |  | 200 | 150 |  |  | 225 |
| Storage BIk Time (\%) |  |  | 0 |  |  | 0 | 0 |  | 1 | 1 |  |  |
| Queuing Penalty (veh) |  |  | 0 |  |  | 0 | 0 |  | 2 | 1 |  |  |

Intersection: 5: 25th St \& 32nd Ave

| Movement | SB | SB | SB |
| :--- | ---: | ---: | ---: |
| Directions Served | T | T | R |
| Maximum Queue (ft) | 260 | 209 | 132 |
| Average Queue (ft) | 149 | 119 | 48 |
| 95th Queue (ft) | 223 | 197 | 95 |
| Link Distance (ft) | 771 | 771 |  |
| Upstream Blk Time (\%) |  |  |  |
| Queuing Penalty (veh) |  |  |  |
| Storage Bay Dist (ft) | 1 | 0 |  |
| Storage Blk Time (\%) | 1 | 1 |  |

Intersection: 10: 25th St \& Kirsten Ln

| Movement | EB | WB | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LT | R | LT | TR | L | T | TR |
| Maximum Queue (ft) | 112 | 87 | 71 | 57 | 39 | 43 | 73 | 66 |
| Average Queue (ft) | 43 | 27 | 39 | 10 | 2 | 8 | 5 | 4 |
| 95th Queue (ft) | 85 | 64 | 65 | 40 | 17 | 29 | 33 | 27 |
| Link Distance (ft) | 584 | 475 |  | 242 | 242 |  | 307 | 307 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  | 50 |  |  | 50 |  |  |
| Storage Blk Time (\%) |  | 2 | 2 |  |  | 0 | 0 |  |
| Queuing Penalty (veh) |  | 2 | 1 |  |  | 0 | 0 |  |

Queuing and Blocking Report
Existing PM Peak Hour
Intersection: 15: 25th St \& 33rd Ave

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LT | TR | LT | TR |
| Maximum Queue (ft) | 39 | 66 | 48 | 40 | 82 | 56 |
| Average Queue (ft) | 15 | 24 | 5 | 3 | 13 | 5 |
| 95th Queue (ft) | 40 | 53 | 26 | 21 | 54 | 39 |
| Link Distance (ft) | 591 | 466 | 1023 | 1023 | 242 | 242 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |

Intersection: 20: 25th St \& 35th Ave

| Movement | EB | WB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | L | TR | LT | TR | LT | TR |
| Maximum Queue (ft) | 141 | 65 | 86 | 118 | 109 | 200 | 208 |
| Average Queue (ft) | 62 | 25 | 37 | 46 | 45 | 86 | 89 |
| 95th Queue (ft) | 111 | 57 | 69 | 93 | 90 | 163 | 169 |
| Link Distance (ft) | 578 |  | 481 | 754 | 754 | 1023 | 1023 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 100 |  |  |  |  |  |
| Storage Blk Time (\%) |  |  | 0 |  |  |  |  |
| Queuing Penalty (veh) |  |  | 0 |  |  |  |  |

Intersection: 23: 25th St \& Casey's Driveway

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LT | TR | LT | TR |
| Maximum Queue (ft) | 44 | 40 | 39 | 17 | 52 | 48 |
| Average Queue (ft) | 13 | 10 | 4 | 1 | 4 | 4 |
| 95th Queue (ft) | 40 | 35 | 24 | 9 | 25 | 25 |
| Link Distance (ft) | 623 | 341 | 306 | 306 | 754 | 754 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |

Queuing and Blocking Report Existing PM Peak Hour

Intersection: 25: 25th St \& 36th Ave

| Movement | EB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LR | LT | T | T | TR |
| Maximum Queue (ft) | 44 | 92 | 37 | 27 | 43 |
| Average Queue (ft) | 14 | 13 | 1 | 2 | 3 |
| 95th Queue (ft) | 41 | 54 | 16 | 16 | 22 |
| Link Distance (ft) | 696 | 582 | 582 | 306 | 306 |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |

Intersection: 30: 25th St \& 37th Ave

| Movement | WB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | R | T | TR | LT | T |
| Maximum Queue (ft) | 39 | 43 | 17 | 35 | 69 | 54 |
| Average Queue (ft) | 10 | 25 | 1 | 2 | 19 | 3 |
| 95th Queue (ft) | 34 | 45 | 10 | 15 | 57 | 26 |
| Link Distance (ft) | 445 |  | 578 | 578 | 582 | 582 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 100 |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |

Intersection: 35: 25th St \& 38th Ave

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LT | TR | LT | TR |
| Maximum Queue (ft) | 43 | 39 | 47 | 13 | 44 | 31 |
| Average Queue (ft) | 11 | 9 | 10 | 1 | 6 | 3 |
| 95th Queue (ft) | 37 | 33 | 35 | 10 | 28 | 21 |
| Link Distance (ft) | 454 | 434 | 560 | 560 | 578 | 578 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |

Queuing and Blocking Report
Existing PM Peak Hour
Intersection: 37: 25th St \& 39th Ave

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LT | TR | LT | TR |
| Maximum Queue (ft) | 36 | 34 | 52 | 33 | 60 | 50 |
| Average Queue (ft) | 10 | 8 | 10 | 2 | 3 | 3 |
| 95th Queue (ft) | 34 | 30 | 36 | 17 | 25 | 23 |
| Link Distance (ft) | 509 | 451 | 307 | 307 | 560 | 560 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |

Intersection: 40: 25th St \& 40th Ave

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | TR | L | TR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 188 | 303 | 190 | 273 | 79 | 113 | 143 | 168 | 210 | 234 |
| Average Queue (ft) | 70 | 130 | 50 | 142 | 37 | 58 | 72 | 39 | 104 | 141 |
| 95th Queue (ft) | 134 | 235 | 125 | 242 | 75 | 100 | 122 | 97 | 183 | 223 |
| Link Distance (ft) |  | 975 |  | 89 |  | 396 | 39 |  | 307 | 307 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  | 150 |  |  |
| Storage Bay Dist (ft) | 125 |  | 100 |  | 300 |  |  | 2 | 1 |  |
| Storage Blk Time (\%) | 0 | 9 | 0 | 21 |  |  |  |  |  |  |

## Intersection: 42: 25th St \& Centennial Elementary (North)

| Movement | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: |
| Directions Served | LT | T | T | TR |
| Maximum Queue (ft) | 44 | 6 | 46 | 32 |
| Average Queue (ft) | 2 | 0 | 2 | 3 |
| 95th Queue (ft) | 18 | 5 | 20 | 19 |
| Link Distance (ft) | 421 | 421 | 396 | 396 |
| Upstream Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |

Queuing and Blocking Report Existing PM Peak Hour

Intersection: 43: 25th St \& Centennial Elementary (South)/Rose Creek Dr

| Movement | EB | EB | EB | WB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | T | R | L | R | T | TR | LT | T |
| Maximum Queue (ft) | 39 | 34 | 28 | 33 | 40 | 84 | 94 | 161 | 145 |
| Average Queue (ft) | 11 | 4 | 6 | 11 | 16 | 26 | 27 | 44 | 40 |
| 95th Queue (ft) | 35 | 21 | 26 | 34 | 40 | 64 | 68 | 108 | 106 |
| Link Distance (ft) |  | 403 | 403 |  | 555 | 582 | 582 | 421 | 421 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  | 50 |  |  |  |  |  |
| Storage Bay Dist (ft) | 150 |  |  | 0 | 0 |  |  |  |  |
| Storage Blk Time (\%) |  |  |  | 0 | 0 |  |  |  |  |

Intersection: 44: 25th St \& 44th Ave

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LT | TR | LT | TR |
| Maximum Queue (ft) | 30 | 31 | 37 | 17 | 46 | 46 |
| Average Queue (ft) | 10 | 8 | 3 | 1 | 6 | 2 |
| 95th Queue (ft) | 33 | 30 | 18 | 8 | 29 | 19 |
| Link Distance (ft) | 491 | 460 | 353 | 353 | 582 | 582 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |

Intersection: 45: 25th St \& Carrie Rose Ln

| Movement | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LR | T | TR | LT | T |
| Maximum Queue (ft) | 31 | 22 | 22 | 24 | 18 |
| Average Queue (ft) | 9 | 0 | 1 | 2 | 1 |
| 95th Queue (ft) | 32 | 7 | 9 | 13 | 8 |
| Link Distance (ft) | 489 | 1173 | 1173 | 353 | 353 |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |

Queuing and Blocking Report Existing PM Peak Hour

## Intersection: 50: 25th St \& Rose Creek Pkwy

| Movement | EB | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | R | LTR | LT | TR | LT | TR |
| Maximum Queue (ft) | 31 | 31 | 50 | 25 | 23 | 47 | 30 |
| Average Queue (ft) | 4 | 6 | 16 | 2 | 1 | 4 | 1 |
| 95th Queue (ft) | 20 | 25 | 44 | 14 | 12 | 24 | 14 |
| Link Distance (ft) |  |  | 648 | 301 | 301 | 1173 | 1173 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) | 75 | 25 |  |  |  |  |  |
| Storage Blk Time (\%) |  | 1 |  |  |  |  |  |
| Queuing Penalty (veh) |  | 0 |  |  |  |  |  |

## Intersection: 52: 25th St \& Meadow Creek Dr

| Movement | EB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LR | LT | T | T | TR |
| Maximum Queue (ft) | 48 | 53 | 17 | 34 | 35 |
| Average Queue (ft) | 13 | 7 | 1 | 1 | 2 |
| 95th Queue (ft) | 39 | 32 | 9 | 13 | 13 |
| Link Distance (ft) | 482 | 758 | 758 | 301 | 301 |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |

Intersection: 54: 25th St \& Rose Creek Blvd

| Movement | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LR | T | TR | LT | T |
| Maximum Queue (ft) | 61 | 24 | 27 | 61 | 32 |
| Average Queue (ft) | 23 | 1 | 2 | 12 | 1 |
| 95th Queue (ft) | 52 | 10 | 13 | 42 | 14 |
| Link Distance (ft) | 588 | 720 | 720 | 758 | 758 |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |

Queuing and Blocking Report Existing PM Peak Hour

## Intersection: 55: 25th St \& 52nd Ave

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | NB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | T | T | R | L | T | T | R | L | L | T | TR |
| Maximum Queue (ft) | 167 | 226 | 216 | 219 | 109 | 214 | 182 | 50 | 141 | 164 | 85 | 118 |
| Average Queue ( ft$)$ | 77 | 128 | 118 | 88 | 39 | 124 | 89 | 19 | 69 | 91 | 35 | 43 |
| 95th Queue (ft) | 139 | 197 | 189 | 161 | 84 | 184 | 164 | 41 | 125 | 147 | 72 | 89 |
| Link Distance (ft) |  | 891 | 891 |  |  | 1174 | 1174 |  |  | 290 | 290 | 290 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  | 325 | 225 |  |  |
| Storage Bay Dist (ft) | 400 |  |  | 325 |  |  | 325 |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |  |  |  |  |

Intersection: 55: 25th St \& 52nd Ave

| Movement | SB | SB | SB |
| :--- | ---: | ---: | ---: |
| Directions Served | L | T | TR |
| Maximum Queue (ft) | 136 | 170 | 219 |
| Average Queue (ft) | 48 | 90 | 95 |
| 95th Queue (ft) | 99 | 154 | 174 |
| Link Distance (ft) |  | 720 | 720 |
| Upstream Blk Time (\%) |  |  |  |
| Queuing Penalty (veh) |  |  |  |
| Storage Bay Dist (ft) | 200 | 0 |  |
| Storage Blk Time (\%) |  | 0 |  |

Intersection: 56: 25th St \& Don's Carwash

| Movement | EB | NB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | R | T | T | T | T | TR |
| Maximum Queue (ft) | 77 | 54 | 17 | 8 | 77 | 20 |
| Average Queue (ft) | 33 | 4 | 1 | 0 | 6 | 1 |
| 95th Queue (ft) | 59 | 27 | 9 | 5 | 37 | 12 |
| Link Distance (ft) | 462 |  | 200 |  | 290 | 290 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 25 |  | 100 |  |  |
| Storage Blk Time (\%) |  | 0 | 0 |  |  |  |
| Queuing Penalty (veh) |  | 2 | 0 |  |  |  |

Queuing and Blocking Report Existing PM Peak Hour

Intersection: 57: 25th St \& 53rd Ave

| Movement | EB | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | T | TR |
| Maximum Queue (ft) | 99 | 53 | 34 | 50 | 29 | 83 | 45 |
| Average Queue ( ft$)$ | 41 | 20 | 11 | 5 | 3 | 5 | 1 |
| 95th Queue (ft) | 79 | 48 | 34 | 27 | 18 | 31 | 18 |
| Link Distance (ft) | 490 | 456 |  | 568 |  | 200 | 200 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  | 125 |  | 150 |  |  |
| Storage Blk Time (\%) |  |  |  |  |  | 0 |  |
| Queuing Penalty (veh) |  |  |  |  |  | 0 |  |

## Intersection: 60: 25th St \& Prairie Grove Ave/Shanley HS (North)

| Movement | EB | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | T | TR |
| Maximum Queue (ft) | 40 | 72 | 23 | 55 | 44 | 56 | 32 |
| Average Queue (ft) | 10 | 31 | 1 | 3 | 14 | 4 | 1 |
| 95th Queue (ft) | 34 | 60 | 10 | 23 | 38 | 26 | 11 |
| Link Distance (ft) | 451 | 516 |  | 296 |  | 568 | 568 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  | 150 |  | 150 |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |

## Intersection: 65: 25th St \& Eaglebrook Apts/Shanley HS (South)

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | TR |
| Maximum Queue (ft) | 53 | 36 | 30 | 34 | 31 | 70 |
| Average Queue (ft) | 21 | 13 | 3 | 2 | 4 | 7 |
| 95th Queue ( ft ) | 49 | 39 | 18 | 16 | 21 | 39 |
| Link Distance (ft) | 539 | 555 |  | 776 |  | 243 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  | 150 |  | 150 |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |

Queuing and Blocking Report Existing PM Peak Hour

Intersection: 70: 25th St \& 58th Ave

| Movement | EB | WB | NB | SB |
| :--- | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 49 | 55 | 74 | 177 |
| Average Queue (tt) | 10 | 14 | 25 | 29 |
| 95th Queue (ft) | 35 | 43 | 63 | 105 |
| Link Distance (ft) | 525 | 502 | 619 | 776 |
| Upstream Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |
| Storage Bay Dist (tt) |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |

Intersection: 75: 25th St \& 60th Ave

| Movement | WB | WB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | R | TR | L | T |
| Maximum Queue (ft) | 31 | 31 | 39 | 48 | 39 |
| Average Queue (ft) | 5 | 19 | 2 | 19 | 2 |
| 95th Queue (ft) | 24 | 44 | 19 | 45 | 16 |
| Link Distance (ft) | 473 |  | 636 |  | 619 |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 50 |  |  |  |
| Storage Blk Time (\%) | 0 | 0 |  |  |  |
| Queuing Penalty (veh) | 0 | 0 |  |  |  |

Intersection: 80: 25th St \& 62nd Ave

| Movement | EB | EB | WB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LT | R | LT | R | L | TR | L | TR |
| Maximum Queue ( ft$)$ | 44 | 31 | 31 | 44 | 19 | 26 | 29 | 43 |
| Average Queue ft$)$ | 12 | 6 | 10 | 17 | 1 | 2 | 9 | 2 |
| 95th Queue (ft) | 37 | 26 | 34 | 44 | 10 | 13 | 28 | 23 |
| Link Distance (ft) | 518 |  | 496 |  |  | 779 |  | 636 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |
| Storage Bay Dist ( ft$)$ |  | 50 |  | 150 | 150 |  | 150 | 0 |
| Storage Blk Time (\%) | 0 | 0 |  |  |  |  |  | 0 |

Intersection: 85: 25th St \& 64th Ave

| Movement | EB | WB | NB | SB |
| :--- | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 48 | 35 | 62 | 79 |
| Average Queue (ft) | 14 | 9 | 15 | 14 |
| 95th Queue (ft) | 42 | 32 | 48 | 53 |
| Link Distance (ft) | 751 | 723 | 1219 | 779 |
| Upstream Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |

Intersection: 100: 27th St \& 52nd Ave

| Movement | EB | EB | EB | WB | WB | WB | NB | NB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | T | T | R | L | T | T | L | R |
| Maximum Queue (ft) | 61 | 68 | 32 | 44 | 43 | 65 | 160 | 383 |
| Average Queue (ft) | 5 | 4 | 2 | 12 | 4 | 6 | 126 | 167 |
| 95th Queue ( ft ) | 29 | 25 | 15 | 37 | 24 | 31 | 197 | 418 |
| Link Distance (ft) | 703 | 703 |  |  | 891 | 891 |  | 361 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  | 18 |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  | 300 |  |  | 100 | 0 |
| Storage Blk Time (\%) |  |  |  |  |  | 64 | 0 |  |
| Queuing Penalty (veh) |  |  |  |  |  |  | 32 | 0 |
|  |  |  |  |  |  |  |  |  |
| Network Summary |  |  |  |  |  |  |  |  |

## Network wide Queuing Penalty: 76

HCM 6th TWSC
10: 25th St \& Kirsten Ln



| Minor Lane/Major Mvmt | NBL | NBT | NBR EBLn1WBLn1WBLn2 | SBL | SBT | SBR |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | :--- |
| Capacity (veh/h) | 764 | - | - | 157 | 167 | 728 | 1045 | - |




HCM 6th TWSC
23: 25th St \& Casey's Driveway



HCMLOS C C

| Minor Lane/Major Mvmt | NBL | NBT | NBR EBLn1WBLn1 | SBL | SBT | SBR |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | :--- |
| Capacity (veh/h) | 808 | - | - | 273 | 362 | 1102 | - |










| Minor Lane/Major Mvmt | NBL | NBT | NBR EBLn1WBLn1 | SBL | SBT | SBR |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Capacity (veh/h) | 901 | - | -300 | 360 | 1090 | - | - |
| HCM Lane V/C Ratio | 0.024 | - | -0.036 | 0.03 | 0.01 | - | - |
| HCM Control Delay (s) | 9.1 | 0.1 | - | 17.5 | 15.3 | 8.3 | 0.1 |
| HCM Lane LOS | A | A | - | C | C | A | A |
| HCM 95th \%tile Q(veh) | 0.1 | - | - | 0.1 | 0.1 | 0 | - |
| Hen |  | - |  |  |  |  |  |

HCM 6th TWSC
44: 25th St \& 44th Ave



HCM 6th TWSC
45: 25th St \& Carrie Rose Ln



HCM 6th TWSC
50: 25th St \& Rose Creek Pkwy



TC2

HCM 6th TWSC
52: 25th St \& Meadow Creek Dr
05/31/2022



TC2

HCM 6th TWSC
54: 25th St \& Rose Creek Blvd
05/31/2022



TC2

| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay，s／veh | 0.7 |  |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |  |
| Lane Configurations |  |  | 「 |  |  |  |  | 帆个 |  |  | 中t |  |  |
| Traffic Vol，veh／h | 0 | 0 | 75 | 0 | 0 | 0 | 0 | 525 | 0 | 0 | 695 | 65 |  |
| Future Vol，veh／h | 0 | 0 | 75 | 0 | 0 | 0 | 0 | 525 | 0 | 0 | 695 | 65 |  |
| Conflicting Peds，\＃／hr | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 |  |
| Sign Control S | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |  |
| RT Channelized |  |  | None | － |  | None | － | － | None |  | － | None |  |
| Storage Length |  | － | 0 | － | － | － | 25 | － | 100 | － | － |  |  |
| Veh in Median Storage，\＃ |  | 0 | － |  | 0 | － | － | 0 | － | － | 0 |  |  |
| Grade，\％ |  | 0 | － | － | 0 | － | － | 0 | － | － | 0 | － |  |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |  |
| Heavy Vehicles，\％ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |  |
| Mvmt Flow | 0 | 0 | 82 | 0 | 0 | 0 | 0 | 571 | 0 | 0 | 755 | 71 |  |



HCM 6th TWSC
57: 25th St \& 53rd Ave



HCM 6th TWSC
60: 25th St \& Prairie Grove Ave/Shanley HS (North)



HCM 6th TWSC
65: 25th St \& Eaglebrook Apts/Shanley HS (South)



HCM 6th Roundabout
70: 25th St \& 58th Ave

| Intersection |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Intersection Delay, s/veh | 7.9 |  |  |  |
| Intersection LOS | A |  |  |  |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 26 | 82 | 407 | 750 |
| Demand Flow Rate, veh/h | 26 | 83 | 415 | 765 |
| Vehicles Circulating, veh/h | 748 | 426 | 126 | 27 |
| Vehicles Exiting, veh/h | 44 | 115 | 648 | 482 |
| Ped Vol Crossing Leg, \#/h | 5 | 5 | 5 | 5 |
| Ped Cap Adj | 0.999 | 0.999 | 0.999 | 0.999 |
| Approach Delay, s/veh | 6.1 | 5.0 | 6.3 | 9.2 |
| Approach LOS | A | A | A | A |


| Lane | Left | Left | Left | Left |
| :--- | :---: | ---: | :---: | :---: |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR |  |
| RT Channelized |  |  |  |  |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 4.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 765 |
| Entry Flow, veh/h | 26 | 83 | 415 | 1342 |
| Cap Entry Lane, veh/h | 643 | 894 | 1213 | 0.980 |
| Entry HV Adj Factor | 0.996 | 0.985 | 750 |  |
| Flow Entry, veh/h | 26 | 82 | 1314 |  |
| Cap Entry, veh/h | 641 | 880 | 407 | 0.570 |
| V/C Ratio | 0.040 | 5.0 | 1189 | 9.2 |
| Control Delay, s/veh | 6.1 | A | 0.342 | A |
| LOS | A | 0 | A | 4 |
| 95th \%tile Queue, veh | 0 |  | 2 | 4 |


| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |





HCM 6th Roundabout
85: 25th St \& 64th Ave

| Intersection |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Intersection Delay, s/veh | 5.8 |  |  |  |
| Intersection LOS | A |  |  |  |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 38 | 43 | 354 | 505 |
| Demand Flow Rate, veh/h | 38 | 44 | 361 | 515 |
| Vehicles Circulating, veh/h | 504 | 355 | 60 | 27 |
| Vehicles Exiting, veh/h | 38 | 66 | 482 | 372 |
| Ped Vol Crossing Leg, \#/h | 5 | 5 | 5 | 5 |
| Ped Cap Adj | 0.999 | 0.999 | 0.999 | 0.999 |
| Approach Delay, s/veh | 4.8 | 4.3 | 5.3 | 6.4 |
| Approach LOS | A | A | A | A |


| Lane | Left | Left | Left | Left |
| :--- | :---: | :---: | :---: | :---: |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR |  |
| RT Channelized |  |  | 1.000 | 1.000 |
| Lane Util | 1.000 | 1.000 | 2.609 | 4.976 |
| Follow-Up Headway, s | 2.609 | 2.609 | 4.976 | 515 |
| Critical Headway, s | 4.976 | 4.976 | 361 | 1342 |
| Entry Flow, veh/h | 38 | 44 | 1298 | 0.981 |
| Cap Entry Lane, veh/h | 825 | 961 | 0.982 | 505 |
| Entry HV Adj Factor | 0.994 | 0.972 | 354 | 1316 |
| Flow Entry, veh/h | 38 | 43 | 1273 | 0.384 |
| Cap Entry, veh/h | 820 | 934 | 0.278 | 6.4 |
| V/C Ratio | 0.046 | 0.046 | 5.3 | A |
| Control Delay, s/veh | 4.8 | 4.3 | A | 2 |
| LOS | A | 0 | 1 |  |

HCM 6th TWSC
100: 27th St \& 52nd Ave

| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 12 |  |  |  |  |  |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | 4. | $\mathbf{7}$ | 1 | $\mathbf{4}$ | $\mathbf{1}$ | $\mathbf{7}$ |
| Traffic Vol, veh/h | 1140 | 165 | 15 | 935 | 85 | 50 |
| Future Vol, veh/h | 1140 | 165 | 15 | 935 | 85 | 50 |
| Conflicting Peds, \#/hr | 0 | 5 | 5 | 0 | 5 | 5 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 175 | 300 | - | 100 | 0 |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 1239 | 179 | 16 | 1016 | 92 | 54 |



HCM LOS F

| Minor Lane/Major Mvmt | NBLn1 NBLn2 | EBT | EBR | WBL | WBT |  |
| :--- | ---: | ---: | ---: | ---: | ---: | :--- |
| Capacity (veh/h) | 69 | 420 | - | -472 | - |  |
| HCM Lane V/C Ratio | 1.339 | 0.129 | - | -0.035 | - |  |
| HCM Control Delay (s) | $\$ 326.5$ | 14.8 | - | - | 12.9 | - |
| HCM Lane LOS | F | B | - | - | B | - |
| HCM 95th \%tile Q(veh) | 7.5 | 0.4 | - | - | 0.1 | - |

Notes
$\sim$ : Volume exceeds capacity $\$$ : Delay exceeds $300 s \quad+$ : Computation Not Defined $\quad$ : All major volume in platoon

## APPENDIX B - SYNCHRO / SIMTRAFFIC REPORTS

## 25TH STREET CORRIDOR STUDY

SimTraffic Performance Report 2045 AM Peak Hour - 3-Lane

## 5: 25th St \& 32nd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 1.4 | 1.2 | 0.0 | 1.8 | 1.1 |
| Total Del/Veh (s) | 32.9 | 31.8 | 26.7 | 20.1 | 27.8 |

10: 25th St \& Kirsten Ln Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.2 | 2.8 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 23.0 | 13.1 | 1.2 | 3.9 | 3.5 |

15: 25th St \& 33rd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 |
| Total Del/Veh (s) | 12.2 | 13.2 | 4.1 | 1.2 | 3.7 |

20: 25th St \& 35th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 1.7 | 1.1 | 0.0 | 0.0 | 0.2 |
| Total Del/Veh (s) | 17.0 | 16.0 | 12.4 | 9.7 | 12.4 |

23: 25th St \& Casey's Driveway Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 10.4 | 10.8 | 1.1 | 2.8 | 2.0 |

25: 25th St \& 36th Ave Performance by approach

| Approach | EB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 12.3 | 1.4 | 0.8 | 1.4 |

30: 25th St \& 37th Ave Performance by approach

| Approach | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 3.6 | 0.0 | 0.0 | 0.3 |
| Total Del/Veh (s) | 9.0 | 1.6 | 1.3 | 2.1 |

35: 25th St \& 38th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 12.3 | 10.2 | 1.3 | 1.1 | 2.1 |

SimTraffic Performance Report
2045 AM Peak Hour - 3-Lane

## 37: 25th St \& 39th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 10.6 | 13.1 | 2.5 | 1.4 | 2.5 |

40: 25th St \& 40th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 1.6 | 1.4 | 0.0 | 0.0 | 0.6 |
| Total Del/Veh (s) | 21.3 | 25.0 | 18.2 | 20.8 | 20.9 |

42: 25th St \& Centennial Elementary (North) Performance by approach

| Approach | NB | SB | All |
| :--- | :--- | :--- | :--- |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 3.0 | 2.2 | 2.7 |

43: 25th St \& Centennial Elementary (South)/Rose Creek Dr Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 2.4 | 1.5 | 0.0 | 0.0 | 0.5 |
| Total Del/Veh (s) | 13.9 | 11.3 | 11.5 | 7.6 | 10.9 |

44: 25th St \& 44th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 11.7 | 8.5 | 1.1 | 2.0 | 1.9 |

45: 25th St \& Carrie Rose Ln Performance by approach

| Approach | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 7.2 | 2.0 | 0.6 | 1.5 |

50: 25th St \& Rose Creek Pkwy Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh $(s)$ | 4.1 | 0.1 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh $(\mathrm{s})$ | 8.0 | 7.7 | 0.9 | 1.8 | 1.6 |

52: 25th St \& Meadow Creek Dr Performance by approach

| Approach | EB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 9.6 | 1.3 | 0.9 | 1.5 |

SimTraffic Performance Report

54: 25th St \& Rose Creek Blvd Performance by approach

| Approach | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 10.0 | 2.4 | 1.4 | 2.6 |

55: 25th St \& 52nd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.7 | 0.0 | 0.0 | 0.2 |
| Total Del/Veh (s) | 24.0 | 29.6 | 33.0 | 33.1 | 29.1 |

56: 25th St \& Don's Carwash Performance by approach

| Approach | EB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 7.3 | 0.7 | 1.8 | 1.3 |

57: 25th St \& 53rd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 25.1 | 17.2 | 1.8 | 0.7 | 2.5 |

60: 25th St \& Prairie Grove Ave/Shanley HS (North) Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 12.0 | 15.8 | 1.3 | 2.1 | 3.1 |

65: 25th St \& Eaglebrook Apts/Shanley HS (South) Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 17.4 | 11.7 | 2.0 | 1.5 | 2.6 |

70: 25th St \& 58th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 4.0 | 5.2 | 6.8 | 6.1 | 6.2 |

75: 25th St \& 60th Ave Performance by approach

| Approach | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 2.8 | 0.0 | 0.0 | 0.2 |
| Total Del/Veh (s) | 9.0 | 1.1 | 0.9 | 1.5 |

## 80: 25th St \& 62nd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/veh (s) | 1.5 | 2.9 | 0.0 | 0.0 | 0.2 |
| Total Del/Veh (s) | 14.5 | 9.0 | 1.3 | 1.0 | 2.0 |

85: 25th St \& 64th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.3 | 0.1 | 0.5 | 0.0 | 0.2 |
| Total Del/Veh (s) | 5.9 | 5.1 | 6.8 | 7.2 | 6.7 |

## 100: 27th St \& 52nd Ave Performance by approach

| Approach | EB | WB | NB | All |
| :--- | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.6 | 0.0 | 2.4 | 0.5 |
| Total Del/Veh (s) | 6.5 | 9.2 | 16.1 | 8.7 |

## Total Network Performance

|  |  |
| :--- | ---: |
| Denied $\operatorname{Del} /$ Veh (s) | 1.1 |
| Total Del/Veh (s) | 42.4 |

## Arterial Level of Service

2045 AM Peak Hour - 3-Lane

## Arterial Level of Service: NB 25th St

| Cross Street | Node | Delay (s/veh) | Travel time (s) | Dist <br> (mi) | Arterial Speed |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 64th Ave | 85 | 7.3 | 31.6 | 0.3 | 29 |
| 62nd Ave | 80 | 1.2 | 27.3 | 0.2 | 23 |
| 60th Ave | 75 | 1.1 | 14.9 | 0.1 | 32 |
| 58th Ave | 70 | 7.0 | 20.4 | 0.1 | 25 |
| Shanley HS (South) | 65 | 2.0 | 27.9 | 0.2 | 22 |
|  | 61 | 0.6 | 6.4 | 0.1 | 32 |
| Shanley HS (North) | 60 | 1.3 | 8.3 | 0.1 | 30 |
| 53rd Ave | 57 | 1.5 | 13.9 | 0.1 | 31 |
| Don's Carwash | 56 | 0.7 | 6.0 | 0.1 | 30 |
| 52nd Ave | 55 | 24.8 | 31.6 | 0.1 | 8 |
| Rose Creek Blvd | 54 | 3.3 | 19.7 | 0.2 | 29 |
| Meadow Creek Dr | 52 | 1.3 | 17.6 | 0.2 | 32 |
| Rose Creek Pkwy | 50 | 0.9 | 8.1 | 0.1 | 32 |
| Carrie Rose Ln | 45 | 2.0 | 26.5 | 0.2 | 32 |
| 44th Ave | 44 | 1.1 | 9.1 | 0.1 | 31 |
| Rose Creek Dr | 43 | 11.6 | 24.5 | 0.1 | 18 |
| Centennial Elementar | 42 | 2.9 | 12.7 | 0.1 | 26 |
| 40th Ave | 40 | 20.8 | 29.6 | 0.1 | 11 |
| 39th Ave | 37 | 3.2 | 10.8 | 0.1 | 24 |
| 38th Ave | 35 | 1.3 | 13.9 | 0.1 | 31 |
| 37th Ave | 30 | 1.6 | 14.3 | 0.1 | 31 |
| 36th Ave | 25 | 1.4 | 14.1 | 0.1 | 31 |
| Casey's Driveway | 23 | 1.0 | 8.1 | 0.1 | 31 |
| 35th Ave | 20 | 12.6 | 28.4 | 0.2 | 20 |
| 33rd Ave | 15 | 4.2 | 24.8 | 0.2 | 30 |
| Kirsten Ln | 10 | 1.1 | 7.0 | 0.1 | 29 |
| 32nd Ave | 5 | 29.0 | 36.4 | 0.1 | 8 |
| Total |  | 146.8 | 494.0 | 3.3 | 24 |

Arterial Level of Service
2045 AM Peak Hour - 3-Lane
10/04/2022

## Arterial Level of Service: SB 25th St

| Cross Street | Node | Delay (s/veh) | Travel time (s) | Dist <br> (mi) | Arterial Speed |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 32nd Ave | 5 | 26.9 | 42.3 | 0.2 | 14 |
| Kirsten Ln | 10 | 3.8 | 12.2 | 0.1 | 23 |
| 33rd Ave | 15 | 1.2 | 7.1 | 0.1 | 29 |
| 35th Ave | 20 | 9.6 | 30.7 | 0.2 | 24 |
| Casey's Driveway | 23 | 3.1 | 19.2 | 0.2 | 29 |
| 36th Ave | 25 | 0.8 | 7.9 | 0.1 | 32 |
| 37th Ave | 30 | 0.9 | 13.3 | 0.1 | 33 |
| 38th Ave | 35 | 1.0 | 13.6 | 0.1 | 33 |
| 39th Ave | 37 | 1.4 | 13.8 | 0.1 | 32 |
| 40th Ave | 40 | 24.1 | 31.5 | 0.1 | 8 |
| Centennial Elementar | 42 | 2.8 | 12.1 | 0.1 | 27 |
| Centennial Elementar | 43 | 7.3 | 16.4 | 0.1 | 20 |
| 44th Ave | 44 | 2.3 | 15.2 | 0.1 | 30 |
| Carrie Rose Ln | 45 | 0.6 | 9.0 | 0.1 | 31 |
| Rose Creek Pkwy | 50 | 1.8 | 25.8 | 0.2 | 33 |
| Meadow Creek Dr | 52 | 0.9 | 8.4 | 0.1 | 31 |
| Rose Creek Blvd | 54 | 1.2 | 17.3 | 0.2 | 32 |
| 52nd Ave | 55 | 40.1 | 55.7 | 0.2 | 10 |
| Don's Carwash | 56 | 3.3 | 11.6 | 0.1 | 23 |
| 53rd Ave | 57 | 0.7 | 5.8 | 0.1 | 31 |
| Prairie Grove Ave | 60 | 1.1 | 13.3 | 0.1 | 32 |
|  | 61 | 0.5 | 7.7 | 0.1 | 32 |
| Eaglebrook Apts | 65 | 0.6 | 6.5 | 0.1 | 31 |
| 58th Ave | 70 | 6.3 | 22.6 | 0.2 | 27 |
| 60th Ave | 75 | 0.8 | 23.6 | 0.1 | 22 |
| 62nd Ave | 80 | 0.9 | 14.9 | 0.1 | 33 |
| 64th Ave | 85 | 7.6 | 24.2 | 0.2 | 26 |
| Total |  | 151.7 | 481.9 | 3.2 | 24 |

Queuing and Blocking Report
2045 AM Peak Hour - 3-Lane
10/04/2022
Intersection: 5: 25th St \& 32nd Ave

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | SB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Directions Served | L | T | T | R | L | T | T | R | L | T | TR | L |
| Maximum Queue (ft) | 267 | 244 | 238 | 55 | 160 | 229 | 207 | 82 | 194 | 275 | 281 | 162 |
| Average Queue (ft) | 128 | 144 | 119 | 22 | 62 | 149 | 116 | 39 | 90 | 154 | 176 | 73 |
| 95th Queue (ft) | 229 | 216 | 200 | 45 | 117 | 214 | 190 | 69 | 175 | 248 | 266 | 136 |
| Link Distance (ft) |  | 843 | 843 |  |  | 904 | 904 |  |  | 307 | 307 |  |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  | 0 | 0 |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |  | 0 | 1 |  |
| Storage Bay Dist (ft) | 350 |  |  | 200 | 250 |  |  | 200 | 150 |  |  | 225 |
| Storage Blk Time (\%) |  |  | 0 |  |  | 0 | 0 |  | 1 | 7 |  | 0 |
| Queuing Penalty (veh) |  |  | 1 |  |  | 0 | 0 |  | 3 | 15 |  | 0 |

Intersection: 5: 25th St \& 32nd Ave

| Movement | SB | SB | SB |
| :--- | ---: | ---: | ---: |
| Directions Served | T | T | R |
| Maximum Queue (ft) | 186 | 163 | 96 |
| Average Queue (ft) | 103 | 65 | 40 |
| 95th Queue (ft) | 170 | 142 | 77 |
| Link Distance (ft) | 771 | 771 |  |
| Upstream Blk Time (\%) |  |  |  |
| Queuing Penalty (veh) |  |  |  |
| Storage Bay Dist (ft) |  |  |  |
| Storage Blk Time (\%) |  |  |  |
| Queuing Penalty (veh) |  |  |  |

Intersection: 10: 25th St \& Kirsten Ln

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue ( ft$)$ | 97 | 53 | 67 | 44 | 40 | 54 | 82 | 36 | 25 |
| Average Queue ft$)$ | 39 | 16 | 28 | 11 | 4 | 8 | 30 | 1 | 1 |
| 95th Queue (ft) | 79 | 45 | 58 | 37 | 24 | 34 | 63 | 14 | 11 |
| Link Distance (ft) | 584 | 474 |  |  | 242 | 242 |  | 307 | 307 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  | 50 |  |  |
| Storage Bay Dist ( ft$)$ |  |  | 50 | 75 |  |  | 3 | 0 |  |
| Storage Blk Time (\%) |  | 1 | 1 | 0 |  |  | 6 | 0 |  |

Queuing and Blocking Report
2045 AM Peak Hour - 3-Lane
Intersection: 15: 25th St \& 33rd Ave

| Movement | EB | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | T | R |
| Maximum Queue (ft) | 53 | 66 | 48 | 73 | 30 | 79 | 9 |
| Average Queue (tt) | 18 | 28 | 17 | 7 | 3 | 5 | 0 |
| 95th Queue (ft) | 41 | 57 | 45 | 40 | 18 | 36 | 5 |
| Link Distance (ft) | 584 | 460 |  | 1022 |  | 242 | 242 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  | 150 |  | 75 |  |
| Storage Bay Dist (ft) |  |  |  |  |  | 0 |  |
| Storage Blk Time (\%) |  |  |  |  |  | 0 |  |

Intersection: 20: 25th St \& 35th Ave

| Movement | EB | EB | WB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | TR | L | TR | L | TR | L | TR |
| Maximum Queue (ft) | 72 | 90 | 68 | 103 | 168 | 373 | 48 | 215 |
| Average Queue (tt) | 31 | 35 | 24 | 49 | 24 | 168 | 17 | 91 |
| 95th Queue (ft) | 65 | 71 | 58 | 86 | 84 | 297 | 43 | 177 |
| Link Distance (ft) |  | 584 |  | 487 |  | 754 |  | 1022 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |
| Storage Bay Dist (tt) | 100 |  | 100 |  | 150 |  | 150 |  |
| Storage Blk Time (\%) | 0 | 0 | 0 | 0 |  | 8 |  | 2 |
| Queuing Penalty (veh) | 0 | 0 | 0 | 0 |  | 3 |  | 0 |

Intersection: 23: 25th St \& Casey's Driveway

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | TR |
| Maximum Queue (ft) | 48 | 48 | 30 | 84 | 30 | 53 |
| Average Queue (tt) | 17 | 13 | 3 | 8 | 3 | 4 |
| 95th Queue (tt) | 43 | 40 | 18 | 41 | 16 | 26 |
| Link Distance (ft) | 629 | 347 |  | 306 |  | 754 |

Queuing and Blocking Report
2045 AM Peak Hour - 3-Lane

## Intersection: 25: 25th St \& 36th Ave

| Movement | EB | NB | NB | SB |
| :--- | ---: | ---: | ---: | ---: |
| Directions Served | LR | L | T | TR |
| Maximum Queue (ft) | 48 | 24 | 70 | 40 |
| Average Queue (tt) | 22 | 2 | 5 | 1 |
| 95th Queue (ft) | 49 | 13 | 34 | 15 |
| Link Distance (ft) | 702 |  | 581 | 306 |
| Upstream Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |
| Storage Bay Dist (tt) |  |  |  |  |
| Storage Blk Time (\%) |  | 0 |  |  |
| Queuing Penalty (veh) |  |  | 0 |  |

Intersection: 30: 25th St \& 37th Ave

| Movement | WB | WB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | R | TR | L | T |
| Maximum Queue (ft) | 35 | 88 | 58 | 47 | 52 |
| Average Queue (ft) | 12 | 36 | 5 | 15 | 2 |
| 95th Queue (ft) | 36 | 63 | 36 | 41 | 21 |
| Link Distance (ft) | 451 |  | 578 |  | 581 |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  | 100 |  | 150 |  |
| Storage Bay Dist (ft) |  | 0 |  |  |  |
| Storage Blk Time (\%) |  | 0 |  |  |  |

Intersection: 35: 25th St \& 38th Ave

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | TR |
| Maximum Queue (ft) | 89 | 49 | 21 | 32 | 26 | 40 |
| Average Queue (ft) | 33 | 23 | 2 | 2 | 5 | 2 |
| 95th Queue (ft) | 65 | 51 | 12 | 18 | 20 | 18 |
| Link Distance (ft) | 460 | 440 |  | 559 |  | 578 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  | 150 |  | 150 |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |

Queuing and Blocking Report
2045 AM Peak Hour - 3-Lane
Intersection: 37: 25th St \& 39th Ave

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | TR |
| Maximum Queue (ft) | 52 | 49 | 26 | 64 | 25 | 55 |
| Average Queue (ft) | 23 | 19 | 2 | 4 | 2 | 4 |
| 95th Queue (ft) | 49 | 46 | 15 | 27 | 14 | 26 |
| Link Distance (ft) | 515 | 459 |  | 306 |  | 559 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  | 75 |  | 150 |  |
| Storage Blk Time (\%) |  |  |  | 0 |  |  |
| Queuing Penalty (veh) |  |  |  | 0 |  |  |

Intersection: 40: 25th St \& 40th Ave

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | TR | L | TR | L | T | R | L | T | R |
| Maximum Queue (ft) | 182 | 230 | 158 | 277 | 130 | 314 | 141 | 139 | 282 | 120 |
| Average Queue (ft) | 64 | 108 | 59 | 121 | 67 | 158 | 40 | 40 | 142 | 32 |
| 95th Queue ( ft ) | 121 | 191 | 116 | 221 | 111 | 262 | 97 | 101 | 235 | 90 |
| Link Distance (ft) |  | 973 |  | 895 |  | 408 |  |  | 306 |  |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  | 0 |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  | 0 |  |
| Storage Bay Dist (ft) | 125 |  | 100 |  | 300 |  | 300 | 150 |  | 150 |
| Storage Blk Time (\%) | 0 | 7 | 1 | 15 |  | 0 |  |  | 9 |  |
| Queuing Penalty (veh) | 1 | 10 | 3 | 16 |  | 1 |  |  | 9 |  |

Intersection: 42: 25th St \& Centennial Elementary (North)

| Movement | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: |
| Directions Served | L | T | T | R |
| Maximum Queue (ft) | 67 | 46 | 41 | 50 |
| Average Queue (ft) | 27 | 3 | 2 | 3 |
| 95th Queue (ft) | 58 | 24 | 18 | 21 |
| Link Distance (ft) |  | 421 | 408 |  |
| Upstream Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |
| Storage Bay Dist (ft) | 160 |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |

Queuing and Blocking Report
2045 AM Peak Hour - 3-Lane

## Intersection: 43: 25th St \& Centennial Elementary (South)/Rose Creek Dr

| Movement | EB | EB | EB | WB | WB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | T | R | L | R | TR | L | TR |
| Maximum Queue (ft) | 141 | 33 | 64 | 50 | 63 | 325 | 38 | 174 |
| Average Queue (ft) | 69 | 5 | 30 | 15 | 23 | 136 | 7 | 74 |
| 95th Queue (ft) | 117 | 22 | 59 | 42 | 52 | 252 | 28 | 142 |
| Link Distance (ft) |  | 409 | 409 |  | 561 | 582 |  | 421 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  | 100 |  |
| Storage Bay Dist (ft) | 150 |  |  | 50 |  |  | 3 |  |

Intersection: 44: 25th St \& 44th Ave

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | TR |
| Maximum Queue (ft) | 52 | 49 | 29 | 61 | 33 | 42 |
| Average Queue (ft) | 20 | 17 | 2 | 4 | 2 | 3 |
| 95th Queue (ft) | 47 | 46 | 15 | 28 | 15 | 23 |
| Link Distance (ft) | 497 | 466 |  | 353 |  | 582 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  | 100 |  | 100 |  |
| Storage Blk Time (\%) |  |  |  | 0 |  |  |
| Queuing Penalty (veh) |  |  |  | 0 |  |  |

Intersection: 45: 25th St \& Carrie Rose Ln

| Movement | WB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: |
| Directions Served | LR | TR | L | T |
| Maximum Queue (ft) | 36 | 61 | 29 | 37 |
| Average Queue (ft) | 11 | 3 | 2 | 1 |
| 95th Queue (ft) | 36 | 23 | 14 | 15 |
| Link Distance (ft) | 495 | 1173 |  | 353 |
| Upstream Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |

Queuing and Blocking Report
2045 AM Peak Hour - 3-Lane

## Intersection: 50: 25th St \& Rose Creek Pkwy

| Movement | EB | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | R | LTR | L | TR | L | TR |
| Maximum Queue (ft) | 39 | 31 | 49 | 21 | 44 | 28 | 49 |
| Average Queue (ft) | 9 | 7 | 17 | 1 | 2 | 2 | 4 |
| 95th Queue (ft) | 32 | 28 | 45 | 11 | 23 | 15 | 27 |
| Link Distance (ft) |  |  | 654 |  | 300 |  | 1173 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) | 75 | 25 |  | 150 |  | 150 |  |
| Storage Blk Time (\%) |  | 1 |  |  |  |  |  |
| Queuing Penalty (veh) |  | 0 |  |  |  |  |  |

Intersection: 52: 25th St \& Meadow Creek Dr

| Movement | EB | NB | NB | SB |
| :--- | ---: | ---: | ---: | ---: |
| Directions Served | LR | L | T | TR |
| Maximum Queue (ft) | 67 | 24 | 40 | 32 |
| Average Queue (ft) | 27 | 2 | 2 | 2 |
| 95th Queue (ft) | 56 | 15 | 21 | 18 |
| Link Distance (ft) | 488 |  | 758 | 300 |
| Upstream Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |
| Storage Bay Dist (ft) |  | 150 |  |  |
| Storage Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |

Intersection: 54: 25th St \& Rose Creek Blvd

| Movement | WB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: |
| Directions Served | LR | TR | L | T |
| Maximum Queue (ft) | 90 | 38 | 31 | 34 |
| Average Queue (ft) | 38 | 2 | 9 | 2 |
| 95th Queue (ft) | 65 | 16 | 31 | 16 |
| Link Distance (ft) | 594 | 719 |  | 758 |
| Upstream Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |

Queuing and Blocking Report
2045 AM Peak Hour - 3-Lane
10/04/2022

## Intersection: 55: 25th St \& 52nd Ave

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | NB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Directions Served | L | T | T | R | L | T | T | R | L | L | T | R |
| Maximum Queue (ft) | 207 | 160 | 150 | 271 | 85 | 253 | 221 | 54 | 215 | 220 | 226 | 44 |
| Average Queue (ft) | 104 | 85 | 82 | 119 | 35 | 162 | 135 | 19 | 128 | 146 | 107 | 14 |
| 95th Queue (ft) | 178 | 142 | 143 | 226 | 71 | 234 | 213 | 43 | 200 | 208 | 188 | 34 |
| Link Distance (ft) |  | 891 | 891 |  |  | 1174 | 1174 |  |  | 290 | 290 | 290 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  | 0 |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |  |  | 0 |  |
| Storage Bay Dist (ft) | 400 |  |  | 325 | 325 |  |  | 325 | 225 |  |  |  |
| Storage Blk Time (\%) |  |  |  | 0 |  |  |  |  | 0 | 0 |  |  |
| Queuing Penalty (veh) |  |  |  | 0 |  |  |  |  | 0 | 1 |  |  |

Intersection: 55: 25th St \& 52nd Ave

| Movement | SB | SB | SB |
| :--- | ---: | ---: | ---: |
| Directions Served | L | T | R |
| Maximum Queue (ft) | 102 | 277 | 109 |
| Average Queue (ft) | 40 | 149 | 50 |
| 95th Queue (ft) | 83 | 241 | 93 |
| Link Distance (ft) |  | 719 |  |
| Upstream Blk Time (\%) |  |  |  |
| Queuing Penalty (veh) |  |  |  |
| Storage Bay Dist (ft) | 200 | 4 |  |
| Storage Blk Time (\%) |  | 7 |  |

Intersection: 56: 25th St \& Don's Carwash

| Movement | EB | NB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | R | T | T | T | T | R |
| Maximum Queue (ft) | 24 | 33 | 26 | 4 | 72 | 12 |
| Average Queue (ft) | 5 | 2 | 2 | 0 | 4 | 0 |
| 95th Queue (ft) | 21 | 19 | 14 | 3 | 27 | 6 |
| Link Distance (ft) | 462 |  | 205 |  | 290 |  |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 25 |  | 100 |  | 150 |
| Storage Blk Time (\%) |  | 0 | 0 |  | 0 |  |
| Queuing Penalty (veh) |  | 1 | 1 |  | 0 |  |

Queuing and Blocking Report
2045 AM Peak Hour - 3-Lane
Intersection: 57: 25th St \& 53rd Ave

| Movement | EB | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | T | R |
| Maximum Queue (ft) | 88 | 73 | 69 | 42 | 29 | 81 | 9 |
| Average Queue (ft) | 29 | 29 | 21 | 2 | 5 | 7 | 0 |
| 95th Queue (ft) | 57 | 60 | 52 | 18 | 23 | 44 | 5 |
| Link Distance (ft) | 491 | 457 |  | 563 |  | 205 |  |
| Upstream Blk Time (\%) |  |  |  |  |  | 0 |  |
| Queuing Penalty (veh) |  |  |  |  |  | 0 |  |
| Storage Bay Dist (ft) |  |  | 125 |  | 125 |  | 100 |
| Storage Blk Time (\%) |  |  | 0 |  |  | 0 |  |
| Queuing Penalty (veh) |  |  | 0 |  |  | 0 |  |

## Intersection: 60: 25th St \& Prairie Grove Ave/Shanley HS (North)

| Movement | EB | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | T | R |
| Maximum Queue (ft) | 30 | 124 | 26 | 52 | 69 | 73 | 6 |
| Average Queue (ft) | 11 | 59 | 4 | 3 | 31 | 4 | 0 |
| 95th Queue (ft) | 30 | 102 | 18 | 21 | 58 | 27 | 4 |
| Link Distance (ft) | 451 | 517 |  | 295 |  | 563 |  |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  | 150 |  | 150 |  | 150 |
| Storage Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |

## Intersection: 65: 25th St \& Eaglebrook Apts/Shanley HS (South)

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | TR |
| Maximum Queue (ft) | 82 | 57 | 30 | 40 | 65 | 40 |
| Average Queue (ft) | 33 | 20 | 3 | 3 | 30 | 3 |
| 95th Queue ( ft ) | 68 | 49 | 19 | 18 | 59 | 20 |
| Link Distance (ft) | 539 | 555 |  | 776 |  | 243 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  | 150 |  | 150 |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |

Queuing and Blocking Report
2045 AM Peak Hour - 3-Lane

## Intersection: 70: 25th St \& 58th Ave

| Movement | EB | WB | NB | SB |
| :--- | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 58 | 106 | 125 | 105 |
| Average Queue (ft) | 16 | 40 | 45 | 30 |
| 95th Queue (ft) | 45 | 79 | 98 | 78 |
| Link Distance (ft) | 525 | 502 | 619 | 776 |
| Upstream Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |

Intersection: 75: 25th St \& 60th Ave

| Movement | WB | WB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | R | TR | L | T |
| Maximum Queue (ft) | 52 | 77 | 38 | 31 | 44 |
| Average Queue (ft) | 21 | 27 | 3 | 3 | 3 |
| 95th Queue (ft) | 48 | 55 | 21 | 19 | 23 |
| Link Distance (ft) | 473 |  | 636 |  | 619 |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 50 |  | 150 |  |
| Storage Blk Time (\%) | 1 | 1 |  |  |  |
| Queuing Penalty (veh) | 0 | 0 |  |  |  |

Intersection: 80: 25th St \& 62nd Ave

| Movement | EB | EB | WB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LT | R | LT | R | L | TR | L | TR |
| Maximum Queue (ft) | 48 | 31 | 53 | 58 | 25 | 47 | 24 | 43 |
| Average Queue (ft) | 17 | 9 | 16 | 26 | 3 | 3 | 2 | 3 |
| 95th Queue (ft) | 45 | 31 | 45 | 52 | 15 | 20 | 14 | 23 |
| Link Distance (ft) | 518 |  | 496 |  |  | 779 |  | 636 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 50 |  | 150 | 150 |  | 150 |  |
| Storage Blk Time (\%) | 1 | 0 |  |  |  |  |  |  |

Queuing and Blocking Report
2045 AM Peak Hour - 3-Lane
Intersection: 85: 25th St \& 64th Ave

| Movement | EB | WB | NB | SB |
| :--- | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 111 | 62 | 121 | 142 |
| Average Queue (tt) | 53 | 26 | 44 | 53 |
| 95th Queue (ft) | 94 | 55 | 99 | 112 |
| Link Distance (tt) | 751 | 723 | 1219 | 779 |
| Upstream Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |
| Storage Bay Dist (tt) |  |  |  |  |

Intersection: 100: 27th St \& 52nd Ave

| Movement | EB | EB | EB | WB | WB | WB | NB | NB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Directions Served | T | T | R | L | T | T | L | R |
| Maximum Queue (tt) | 186 | 176 | 53 | 60 | 228 | 243 | 118 | 88 |
| Average Queue (t) | 85 | 86 | 22 | 19 | 91 | 116 | 59 | 31 |
| 95th Queue (t) | 157 | 155 | 50 | 49 | 191 | 217 | 105 | 65 |
| Link Distance (tt) | 703 | 703 |  |  | 891 | 891 |  | 361 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |
| Storage Bay Dist (tt) |  |  | 175 | 300 |  |  | 100 |  |
| Storage BIk Time (\%) |  | 0 |  |  |  |  | 1 | 0 |
| Queuing Penalty (veh) |  | 0 |  |  |  |  | 1 | 0 |
| Network Summa |  |  |  |  |  |  |  |  |

## Network wide Queuing Penalty: 86

HCM 6th TWSC
10：25th St \＆Kirsten Ln

| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay，s／veh | 3.8 |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  | \＄ |  |  | $\uparrow$ | 「 | ${ }^{1}$ | 中 ${ }^{\text {F }}$ |  | ${ }^{7}$ | 中 ${ }^{\text {P }}$ |  |
| Traffic Vol，veh／h | 38 | 6 | 28 | 16 | 6 | 38 | 32 | 767 | 80 | 75 | 393 | 53 |
| Future Vol，veh／h | 38 | 6 | 28 | 16 | 6 | 38 | 32 | 767 | 80 | 75 | 393 | 53 |
| Conflicting Peds，\＃／hr | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | － | － | None | － | － | None | － | － | None | － | － | None |
| Storage Length | － | － | － | － | － | 50 | 75 | － | － | 50 | － | － |
| Veh in Median Storage，\＃ | \＃ | 0 | － | － | 0 | － | － | 0 | － | － | 0 | － |
| Grade，\％ | － | 0 | － | － | 0 | － | － | 0 | － | － | 0 | － |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles，\％ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 41 | 7 | 30 | 17 | 7 | 41 | 35 | 834 | 87 | 82 | 427 | 58 |





HCM 6th TWSC
23: 25th St \& Casey's Driveway

| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 0.8 |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  | * |  |  | $\leftrightarrow$ |  | ${ }^{1 /}$ | $\hat{\dagger}$ |  | ${ }^{1 /}$ | $\uparrow$ |  |
| Traffic Vol, veh/h | 11 | 0 | 11 | 6 | 0 | 11 | 11 | 752 | 6 | 6 | 398 | 27 |
| Future Vol, veh/h | 11 | 0 | 11 | 6 | 0 | 11 | 11 | 752 | 6 | 6 | 398 | 27 |
| Conflicting Peds, \#/hr | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 150 | - | - | 150 | - | - |
| Veh in Median Storage, \# | \# | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, \% | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 12 | 0 | 12 | 7 | 0 | 12 | 12 | 817 | 7 | 7 | 433 | 29 |





| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 1.5 |  |  |  |  |  |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | F | $\mathbf{7}$ | $\mathbf{7}$ |  | $\mathbf{1}$ | 个 |
| Traffic Vol, veh/h | 11 | 80 | 678 | 11 | 32 | 388 |
| Future Vol, veh/h | 11 | 80 | 678 | 11 | 32 | 388 |
| Conflicting Peds, \#/hr | 5 | 5 | 0 | 5 | 5 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 100 | - | - | 150 | - |
| Veh in Median Storage, \# | 0 | - | 0 | - | - | 0 |
| Grade, \% | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 12 | 87 | 737 | 12 | 35 | 422 |



HCM 6th TWSC
35: 25th St \& 38th Ave





HCM 6th TWSC
44: 25th St \& 44th Ave



HCM 6th TWSC
45: 25th St \& Carrie Rose Ln

| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0.2 |  |  |  |  |  |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | M |  | 1 |  | a | 个 |
| Traffic Vol, veh/h | 6 | 6 | 582 | 6 | 6 | 419 |
| Future Vol, veh/h | 6 | 6 | 582 | 6 | 6 | 419 |
| Conflicting Peds, \#/hr | 5 | 5 | 0 | 5 | 5 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 100 | - |
| Veh in Median Storage, \# | 0 | - | 0 | - | - | 0 |
| Grade, \% | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 7 | 7 | 633 | 7 | 7 | 455 |



HCM 6th TWSC
50: 25th St \& Rose Creek Pkwy



HCM 6th TWSC
52: 25th St \& Meadow Creek Dr
10/04/2022

| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0.7 |  |  |  |  |  |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | M |  |  | 个 | $\mathbf{7}$ |  |
| Traffic Vol, veh/h | 27 | 16 | 6 | 551 | 414 | 11 |
| Future Vol, veh/h | 27 | 16 | 6 | 551 | 414 | 11 |
| Conflicting Peds, \#/hr | 5 | 5 | 5 | 0 | 0 | 5 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 150 | - | - | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 29 | 17 | 7 | 599 | 450 | 12 |



HCM 6th TWSC
54: 25th St \& Rose Creek Blvd

| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 1.5 |  |  |  |  |  |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | M |  | 1 |  | a | 个 |
| Traffic Vol, veh/h | 27 | 53 | 504 | 11 | 16 | 414 |
| Future Vol, veh/h | 27 | 53 | 504 | 11 | 16 | 414 |
| Conflicting Peds, \#/hr | 5 | 5 | 0 | 5 | 5 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 150 | - |
| Veh in Median Storage, \# | 0 | - | 0 | - | - | 0 |
| Grade, \% | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 29 | 58 | 548 | 12 | 17 | 450 |


| Major/Minor | Minor1 |  | Major1 |  | Major2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 1048 | 564 | 0 | 0 | 565 | 0 |
| Stage 1 | 559 | - | - | - | - | - |
| Stage 2 | 489 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 252 | 525 | - | - | 1007 | - |
| Stage 1 | 572 | - | - | - | - | - |
| Stage 2 | 616 | - | - | - | - | - |
| Platoon blocked, \% |  |  | - | - |  | - |
| Mov Cap-1 Maneuver | 245 | 520 | - | - | 1002 | - |
| Mov Cap-2 Maneuver | 245 | - | - | - | - | - |
| Stage 1 | 569 | - | - | - | - | - |
| Stage 2 | 602 | - | - | - | - | - |
|  |  |  |  |  |  |  |
| Approach | WB |  | NB |  | SB |  |
| HCM Control Delay, s | 17.4 |  | 0 |  | 0.3 |  |
| HCM LOS | C |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | NBT | NBRWBLn1 |  | SBL | SBT |
| Capacity (veh/h) |  | - | - | 377 | 1002 | - |
| HCM Lane V/C Ratio |  | - | - | 0.231 | 0.017 | - |
| HCM Control Delay (s) |  | - | - | 17.4 | 8.7 | - |
| HCM Lane LOS |  | - | - | C | A | - |
| HCM 95th \%tile Q(veh) |  | - | - | 0.9 | 0.1 | - |

HCM 6th TWSC
56: 25th St \& Don's Carwash


Stage 2 - 0

| Approach | EB | NB | SB |
| :--- | ---: | ---: | ---: |
| HCM Control Delay, s | 14.5 | 0 | 0 |

HCMLOS B

| Minor Lane/Major Mvmt | NBT EBLn1 | SBT | SBR |
| :--- | ---: | ---: | ---: |
| Capacity (veh/h) | - | 388 | - |

HCM 6th TWSC
57: 25th St \& 53rd Ave



HCM 6th TWSC
60: 25th St \& Prairie Grove Ave/Shanley HS (North)



HCM 6th TWSC
65: 25th St \& Eaglebrook Apts/Shanley HS (South)



HCM 6th Roundabout
70: 25th St \& 58th Ave
10/04/2022

| Intersection |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Intersection Delay, s/veh | 8.3 |  |  |  |
| Intersection LOS | A |  |  |  |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 67 | 193 | 644 | 558 |
| Demand Flow Rate, veh/h | 68 | 196 | 657 | 569 |
| Vehicles Circulating, veh/h | 624 | 644 | 120 | 82 |
| Vehicles Exiting, veh/h | 27 | 133 | 572 | 758 |
| Ped Vol Crossing Leg, \#/h | 5 | 5 | 5 | 5 |
| Ped Cap Adj | 0.999 | 0.999 | 0.999 | 0.999 |
| Approach Delay, s/veh | 6.0 | 8.4 | 9.2 | 7.5 |
| Approach LOS | A | A | A | A |


| Lane | Left | Left | Left | Left |
| :--- | :---: | :---: | :---: | :---: |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR |  |
| RT Channelized |  |  |  | 1.000 |
| Lane Util | 1.000 | 1.000 | 1.000 | 2.609 |
| Follow-Up Headway, s | 2.609 | 2.609 | 4.609 | 4.976 |
| Critical Headway, s | 4.976 | 4.976 | 669 |  |
| Entry Flow, veh/h | 68 | 196 | 657 | 1269 |
| Cap Entry Lane, veh/h | 730 | 715 | 1221 | 0.981 |
| Entry HV Adj Factor | 0.981 | 0.984 | 0.981 | 558 |
| Flow Entry, veh/h | 67 | 193 | 644 | 1244 |
| Cap Entry, veh/h | 716 | 703 | 1197 | 0.449 |
| V/C Ratio | 0.093 | 0.274 | 7.5 |  |
| Control Delay, s/veh | 6.0 | 8.4 | 9.2 | A |
| LOS | A | 1 | 3 | 2 |






HCM 6th Roundabout
85: 25th St \& 64th Ave

| Intersection |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Intersection Delay, s/veh | 8.8 |  |  |  |
| Intersection LOS | A |  |  |  |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 323 | 91 | 597 | 585 |
| Demand Flow Rate, veh/h | 329 | 93 | 609 | 596 |
| Vehicles Circulating, veh/h | 507 | 652 | 122 | 168 |
| Vehicles Exiting, veh/h | 257 | 79 | 714 | 577 |
| Ped Vol Crossing Leg, \#h | 5 | 5 | 5 | 5 |
| Ped Cap Adj | 0.999 | 0.999 | 0.999 | 0.999 |
| Approach Delay, s/veh | 9.4 | 6.6 | 8.5 | 9.0 |
| Approach LOS | A | A | A | A |


| Lane | Left | Left | Left | Left |
| :--- | :---: | :---: | :---: | :---: |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized |  |  |  |  |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 4.976 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 596 |
| Entry Flow, veh/h | 329 | 93 | 609 | 1163 |
| Cap Entry Lane, veh/h | 823 | 710 | 1218 | 0.981 |
| Entry HV Adj Factor | 0.981 | 0.975 | 585 |  |
| Flow Entry, veh/h | 323 | 91 | 597 | 1140 |
| Cap Entry, veh/h | 806 | 691 | 1194 | 0.513 |
| V/C Ratio | 0.400 | 0.131 | 0.500 | 9.0 |
| Control Delay, s/veh | 9.4 | A | 8.5 | A |
| LOS | A | 0 | A | 3 |

SimTraffic Performance Report
2045 PM Peak Hour - 3-Lane
5: 25th St \& 32nd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 1.5 | 1.2 | 0.0 | 1.4 | 1.1 |
| Total Del/Veh (s) | 24.6 | 27.6 | 27.1 | 25.5 | 26.1 |

10: 25th St \& Kirsten Ln Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.2 | 2.8 | 0.0 | 0.0 | 0.3 |
| Total Del/Veh (s) | 20.4 | 11.6 | 1.1 | 4.1 | 4.6 |

15: 25th St \& 33rd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 18.4 | 16.6 | 3.1 | 2.8 | 3.7 |

20: 25th St \& 35th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 1.4 | 1.5 | 0.0 | 0.0 | 0.3 |
| Total Del/Veh (s) | 18.5 | 16.9 | 10.4 | 14.1 | 13.7 |

23: 25th St \& Casey's Driveway Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 13.2 | 12.1 | 0.8 | 3.8 | 3.0 |

25: 25th St \& 36th Ave Performance by approach

| Approach | EB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 13.3 | 1.4 | 1.5 | 1.6 |

30: 25th St \& 37th Ave Performance by approach

| Approach | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 3.6 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 6.3 | 1.2 | 1.7 | 1.7 |

35: 25th St \& 38th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 15.6 | 10.3 | 1.3 | 1.7 | 1.8 |

SimTraffic Performance Report
2045 PM Peak Hour - 3-Lane
37: 25th St \& 39th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 10.6 | 11.1 | 2.4 | 2.2 | 2.4 |

40: 25th St \& 40th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 1.5 | 1.1 | 0.0 | 0.0 | 0.6 |
| Total Del/Veh (s) | 22.6 | 26.4 | 17.3 | 18.5 | 20.9 |

42: 25th St \& Centennial Elementary (North) Performance by approach

| Approach | NB | SB | All |
| :--- | :--- | :--- | :--- |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 1.8 | 2.5 | 2.2 |

43: 25th St \& Centennial Elementary (South)/Rose Creek Dr Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 2.1 | 1.6 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 12.0 | 8.1 | 6.7 | 7.1 | 7.1 |

44: 25th St \& 44th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 8.8 | 7.7 | 0.8 | 2.7 | 2.1 |

45: 25th St \& Carrie Rose Ln Performance by approach

| Approach | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 6.8 | 1.5 | 1.0 | 1.3 |

50: 25th St \& Rose Creek Pkwy Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 4.3 | 0.1 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 8.5 | 9.8 | 0.7 | 2.6 | 2.1 |

52: 25th St \& Meadow Creek Dr Performance by approach

| Approach | EB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 9.1 | 1.2 | 1.4 | 1.4 |

SimTraffic Performance Report

54: 25th St \& Rose Creek Blvd Performance by approach

| Approach | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 10.5 | 2.3 | 1.7 | 2.4 |

55: 25th St \& 52nd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.7 | 0.0 | 0.0 | 0.2 |
| Total Del/Veh (s) | 24.8 | 28.3 | 33.8 | 30.5 | 28.1 |

56: 25th St \& Don's Carwash Performance by approach

| Approach | EB | NB | SB | All |
| :--- | :--- | :--- | :--- | :--- |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 6.9 | 0.5 | 2.1 | 1.9 |

57: 25th St \& 53rd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 21.1 | 12.0 | 1.4 | 0.9 | 2.9 |

60: 25th St \& Prairie Grove Ave/Shanley HS (North) Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 12.1 | 8.8 | 0.8 | 1.1 | 1.6 |

65: 25th St \& Eaglebrook Apts/Shanley HS (South) Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 10.6 | 7.3 | 1.1 | 0.9 | 1.3 |

70: 25th St \& 58th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 4.1 | 3.3 | 5.3 | 7.0 | 6.0 |

75: 25th St \& 60th Ave Performance by approach

| Approach | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 3.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 6.8 | 1.0 | 1.1 | 1.3 |

## 80: 25th St \& 62nd Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 1.5 | 2.1 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 9.6 | 7.8 | 1.2 | 1.1 | 1.7 |

85: 25th St \& 64th Ave Performance by approach

| Approach | EB | WB | NB | SB | All |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 0.3 | 0.1 | 0.3 | 0.0 | 0.2 |
| Total Del/Veh (s) | 6.2 | 4.4 | 5.7 | 7.5 | 6.4 |

100: 27th St \& 52nd Ave Performance by approach

| Approach | EB | WB | NB | All |
| :--- | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.7 | 0.0 | 2.1 | 0.5 |
| Total Del/Veh (s) | 6.6 | 8.2 | 16.2 | 7.8 |

## Total Network Performance

|  |  |
| :--- | ---: |
| Denied $\operatorname{Del} /$ Veh (s) | 1.0 |
| Total Del/Veh (s) | 40.6 |

Arterial Level of Service
2045 PM Peak Hour - 3-Lane

## Arterial Level of Service: NB 25th St

| Cross Street | Node | Delay (s/veh) | Travel time (s) | Dist <br> (mi) | Arterial Speed |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 64th Ave | 85 | 6.3 | 30.6 | 0.3 | 30 |
| 62nd Ave | 80 | 1.0 | 27.0 | 0.2 | 23 |
| 60th Ave | 75 | 1.0 | 14.9 | 0.1 | 33 |
| 58th Ave | 70 | 5.5 | 18.9 | 0.1 | 27 |
| Shanley HS (South) | 65 | 0.9 | 26.9 | 0.2 | 23 |
|  | 61 | 0.3 | 6.1 | 0.1 | 33 |
| Shanley HS (North) | 60 | 0.7 | 7.7 | 0.1 | 32 |
| 53rd Ave | 57 | 1.0 | 13.4 | 0.1 | 32 |
| Don's Carwash | 56 | 0.4 | 5.8 | 0.1 | 31 |
| 52nd Ave | 55 | 25.3 | 32.1 | 0.1 | 8 |
| Rose Creek Blvd | 54 | 3.3 | 19.8 | 0.2 | 29 |
| Meadow Creek Dr | 52 | 1.0 | 17.4 | 0.2 | 32 |
| Rose Creek Pkwy | 50 | 0.6 | 7.9 | 0.1 | 33 |
| Carrie Rose Ln | 45 | 1.6 | 26.1 | 0.2 | 33 |
| 44th Ave | 44 | 0.7 | 8.8 | 0.1 | 32 |
| Rose Creek Dr | 43 | 6.8 | 19.8 | 0.1 | 23 |
| Centennial Elementar | 42 | 1.8 | 11.6 | 0.1 | 28 |
| 40th Ave | 40 | 19.0 | 27.9 | 0.1 | 12 |
| 39th Ave | 37 | 2.9 | 10.4 | 0.1 | 25 |
| 38th Ave | 35 | 0.9 | 13.4 | 0.1 | 32 |
| 37th Ave | 30 | 1.2 | 13.9 | 0.1 | 32 |
| 36th Ave | 25 | 1.0 | 13.7 | 0.1 | 32 |
| Casey's Driveway | 23 | 0.7 | 7.8 | 0.1 | 32 |
| 35th Ave | 20 | 10.4 | 26.3 | 0.2 | 21 |
| 33rd Ave | 15 | 3.4 | 24.6 | 0.2 | 30 |
| Kirsten Ln | 10 | 0.7 | 6.6 | 0.1 | 31 |
| 32nd Ave | 5 | 28.1 | 35.5 | 0.1 | 8 |
| Total |  | 126.9 | 474.8 | 3.3 | 25 |

Arterial Level of Service
2045 PM Peak Hour - 3-Lane
10/05/2022

## Arterial Level of Service: SB 25th St

| Cross Street | Node | Delay (s/veh) | Travel time (s) | Dist <br> (mi) | Arterial Speed |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 32nd Ave | 5 | 33.6 | 49.0 | 0.2 | 12 |
| Kirsten Ln | 10 | 5.6 | 14.0 | 0.1 | 20 |
| 33rd Ave | 15 | 2.9 | 8.8 | 0.1 | 23 |
| 35th Ave | 20 | 14.3 | 35.2 | 0.2 | 21 |
| Casey's Driveway | 23 | 4.1 | 20.3 | 0.2 | 28 |
| 36th Ave | 25 | 1.5 | 8.6 | 0.1 | 29 |
| 37th Ave | 30 | 1.4 | 13.9 | 0.1 | 31 |
| 38th Ave | 35 | 1.7 | 14.4 | 0.1 | 31 |
| 39th Ave | 37 | 2.2 | 14.7 | 0.1 | 30 |
| 40th Ave | 40 | 22.4 | 29.9 | 0.1 | 9 |
| Centennial Elementar | 42 | 3.3 | 12.6 | 0.1 | 25 |
| Centennial Elementar | 43 | 6.8 | 15.9 | 0.1 | 20 |
| 44th Ave | 44 | 2.7 | 15.7 | 0.1 | 29 |
| Carrie Rose Ln | 45 | 1.0 | 9.3 | 0.1 | 30 |
| Rose Creek Pkwy | 50 | 2.6 | 26.6 | 0.2 | 32 |
| Meadow Creek Dr | 52 | 1.4 | 8.9 | 0.1 | 30 |
| Rose Creek Blvd | 54 | 1.5 | 17.6 | 0.2 | 32 |
| 52nd Ave | 55 | 35.8 | 51.3 | 0.2 | 11 |
| Don's Carwash | 56 | 3.7 | 12.0 | 0.1 | 22 |
| 53rd Ave | 57 | 0.8 | 5.9 | 0.1 | 30 |
| Prairie Grove Ave | 60 | 0.9 | 13.1 | 0.1 | 33 |
|  | 61 | 0.5 | 7.7 | 0.1 | 32 |
| Eaglebrook Apts | 65 | 0.9 | 6.8 | 0.1 | 30 |
| 58th Ave | 70 | 7.2 | 23.4 | 0.2 | 26 |
| 60th Ave | 75 | 0.7 | 23.4 | 0.1 | 22 |
| 62nd Ave | 80 | 0.9 | 14.9 | 0.1 | 33 |
| 64th Ave | 85 | 7.8 | 24.3 | 0.2 | 26 |
| Total |  | 168.1 | 498.2 | 3.2 | 23 |

Queuing and Blocking Report
2045 PM Peak Hour - 3-Lane
10/05/2022
Intersection: 5: 25th St \& 32nd Ave

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | SB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Directions Served | L | T | T | R | L | T | T | R | L | T | TR | L |
| Maximum Queue (ft) | 182 | 205 | 195 | 109 | 137 | 241 | 221 | 89 | 184 | 204 | 192 | 189 |
| Average Queue (ft) | 82 | 129 | 100 | 37 | 71 | 148 | 123 | 42 | 89 | 94 | 114 | 71 |
| 95th Queue (ft) | 145 | 194 | 174 | 78 | 123 | 218 | 202 | 71 | 150 | 167 | 184 | 133 |
| Link Distance (ft) |  | 843 | 843 |  |  | 904 | 904 |  |  | 307 | 307 |  |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) | 350 |  |  | 200 | 250 |  |  | 200 | 150 |  |  | 225 |
| Storage Blk Time (\%) |  |  | 0 |  |  | 0 | 1 |  | 2 | 1 |  |  |
| Queuing Penalty (veh) |  |  | 0 |  |  | 0 | 1 |  | 3 | 2 |  |  |

Intersection: 5: 25th St \& 32nd Ave

| Movement | SB | SB | SB |
| :--- | ---: | ---: | ---: |
| Directions Served | T | T | R |
| Maximum Queue (ft) | 285 | 243 | 102 |
| Average Queue (ft) | 163 | 132 | 44 |
| 95th Queue (ft) | 239 | 216 | 81 |
| Link Distance (ft) | 771 | 771 |  |
| Upstream Blk Time (\%) |  |  |  |
| Queuing Penalty (veh) |  |  |  |
| Storage Bay Dist (ft) |  |  | 200 |
| Storage Blk Time (\%) | 1 | 1 |  |
| Queuing Penalty (veh) | 2 | 2 |  |

Intersection: 10: 25th St \& Kirsten Ln

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue ( ft$)$ | 109 | 102 | 75 | 51 | 31 | 38 | 35 | 70 | 76 |
| Average Queue ft$)$ | 45 | 34 | 40 | 9 | 2 | 1 | 6 | 9 | 4 |
| 95th Queue (ft) | 83 | 75 | 70 | 34 | 13 | 15 | 26 | 51 | 38 |
| Link Distance (ft) | 584 | 474 |  |  | 242 | 242 |  | 307 | 307 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  | 50 |  |  |
| Storage Bay Dist ( ft$)$ |  |  | 50 | 75 |  |  | 0 | 0 |  |
| Storage Blk Time (\%) |  | 5 | 2 | 0 |  |  | 0 | 0 |  |

Queuing and Blocking Report
2045 PM Peak Hour - 3-Lane
Intersection: 15: 25th St \& 33rd Ave

| Movement | EB | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | T | R |
| Maximum Queue (ft) | 48 | 71 | 24 | 65 | 39 | 200 | 25 |
| Average Queue (ft) | 15 | 26 | 4 | 3 | 8 | 17 | 1 |
| 95th Queue (ft) | 37 | 56 | 19 | 31 | 30 | 104 | 13 |
| Link Distance (ft) | 584 | 460 |  | 1022 |  | 242 | 242 |
| Upstream Blk Time (\%) |  |  |  |  |  | 0 |  |
| Queuing Penalty (veh) |  |  |  |  |  | 0 |  |
| Storage Bay Dist (ft) |  |  | 150 |  | 75 |  |  |
| Storage Blk Time (\%) |  |  |  | 0 |  | 0 |  |
| Queuing Penalty (veh) |  |  |  | 0 |  | 0 |  |

Intersection: 20: 25th St \& 35th Ave

| Movement | EB | EB | WB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | TR | L | TR | L | TR | L | TR |
| Maximum Queue (ft) | 70 | 114 | 86 | 103 | 90 | 236 | 204 | 378 |
| Average Queue (ft) | 30 | 48 | 30 | 39 | 14 | 103 | 40 | 176 |
| 95th Queue (ft) | 62 | 91 | 68 | 79 | 55 | 191 | 127 | 318 |
| Link Distance (ft) |  | 584 |  | 487 |  | 754 |  | 1022 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) | 100 |  | 100 |  | 150 |  | 150 |  |
| Storage Blk Time (\%) |  | 1 | 0 | 1 |  | 2 |  | 8 |
| Queuing Penalty (veh) |  | 0 | 0 | 0 |  | 0 |  | 6 |

Intersection: 23: 25th St \& Casey's Driveway

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | TR |
| Maximum Queue (ft) | 48 | 35 | 35 | 60 | 24 | 73 |
| Average Queue (ft) | 17 | 11 | 3 | 4 | 2 | 7 |
| 95th Queue ( ft ) | 44 | 36 | 18 | 28 | 14 | 44 |
| Link Distance (ft) | 629 | 347 |  | 306 |  | 754 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  | 150 |  | 150 |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |

Queuing and Blocking Report
2045 PM Peak Hour - 3-Lane
Intersection: 25: 25th St \& 36th Ave

| Movement | EB | NB | NB | SB |
| :--- | :---: | ---: | ---: | ---: |
| Directions Served | LR | L | T | TR |
| Maximum Queue (ft) | 48 | 45 | 54 | 72 |
| Average Queue (tt) | 16 | 13 | 2 | 5 |
| 95th Queue (ft) | 43 | 40 | 23 | 35 |
| Link Distance (ft) | 702 |  | 581 | 306 |
| Upstream Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |
| Storage Bay Dist (tt) |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |

Intersection: 30: 25th St \& 37th Ave

| Movement | WB | WB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | R | TR | L | T |
| Maximum Queue (ft) | 36 | 59 | 38 | 58 | 74 |
| Average Queue (ft) | 6 | 27 | 2 | 19 | 2 |
| 95th Queue (ft) | 27 | 50 | 15 | 48 | 20 |
| Link Distance (ft) | 451 |  | 578 |  | 581 |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  | 150 |  |
| Storage Bay Dist (ft) |  | 100 |  |  | 0 |
| Storage Blk Time (\%) |  |  |  |  | 0 |

Intersection: 35: 25th St \& 38th Ave

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | TR |
| Maximum Queue (ft) | 36 | 35 | 40 | 19 | 26 | 97 |
| Average Queue (ft) | 11 | 12 | 13 | 1 | 5 | 7 |
| 95th Queue (ft) | 35 | 36 | 36 | 10 | 22 | 49 |
| Link Distance (ft) | 460 | 440 |  | 559 |  | 578 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  | 150 |  | 150 | 0 |
| Storage Blk Time (\%) |  |  |  |  |  | 0 |

Queuing and Blocking Report
2045 PM Peak Hour - 3-Lane
Intersection: 37: 25th St \& 39th Ave

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | TR |
| Maximum Queue (ft) | 30 | 31 | 38 | 36 | 25 | 90 |
| Average Queue (ft) | 8 | 11 | 8 | 2 | 4 | 10 |
| 95th Queue (ft) | 29 | 35 | 29 | 19 | 19 | 52 |
| Link Distance (ft) | 515 | 459 |  | 306 |  | 559 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  | 75 |  | 150 |  |
| Storage Blk Time (\%) |  |  |  | 0 |  |  |
| Queuing Penalty (veh) |  |  |  | 0 |  |  |

Intersection: 40: 25th St \& 40th Ave

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | TR | L | TR | L | T | R | L | T | R |
| Maximum Queue (ft) | 206 | 311 | 189 | 298 | 91 | 226 | 69 | 198 | 311 | 225 |
| Average Queue (ft) | 69 | 137 | 53 | 143 | 41 | 113 | 25 | 41 | 173 | 81 |
| 95th Queue ( ft$)$ | 145 | 244 | 137 | 248 | 78 | 190 | 56 | 114 | 280 | 189 |
| Link Distance (ft) |  | 973 |  | 895 |  | 408 |  |  | 306 |  |
| Upstream BIk Time (\%) |  |  |  |  |  |  |  |  | 1 |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  | 3 |  |
| Storage Bay Dist (ft) | 125 |  | 100 |  | 300 |  | 300 | 150 |  | 150 |
| Storage Blk Time (\%) | 1 | 11 | 0 | 19 |  |  |  |  | 10 | 0 |
| Queuing Penalty (veh) | 4 | 17 | 1 | 15 |  |  |  |  | 25 | 0 |

Intersection: 42: 25th St \& Centennial Elementary (North)

| Movement | NB | NB | SB |
| :--- | ---: | ---: | ---: |
| Directions Served | L | T | T |
| Maximum Queue (ft) | 28 | 62 | 57 |
| Average Queue (ft) | 2 | 4 | 6 |
| 95th Queue (ft) | 15 | 27 | 30 |
| Link Distance (ft) |  | 421 | 408 |
| Upstream Blk Time (\%) |  |  |  |
| Queuing Penalty (veh) |  |  |  |
| Storage Bay Dist (ft) | 160 |  |  |
| Storage Blk Time (\%) |  |  |  |
| Queuing Penalty (veh) |  |  |  |

Queuing and Blocking Report
2045 PM Peak Hour - 3-Lane

## Intersection: 43: 25th St \& Centennial Elementary (South)/Rose Creek Dr

| Movement | EB | EB | EB | WB | WB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | T | R | L | R | TR | L | TR |
| Maximum Queue (ft) | 38 | 29 | 42 | 41 | 64 | 178 | 114 | 268 |
| Average Queue (ft) | 12 | 5 | 9 | 12 | 18 | 66 | 22 | 99 |
| 95th Queue (ft) | 37 | 22 | 33 | 36 | 48 | 144 | 68 | 217 |
| Link Distance (ft) |  | 409 | 409 |  | 561 | 582 |  | 421 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  | 50 |  |  | 100 |  |
| Storage Bay Dist (ft) | 150 |  |  | 0 | 0 |  |  | 5 |
| Storage Blk Time (\%) |  |  |  | 0 | 0 |  |  | 2 |

Intersection: 44: 25th St \& 44th Ave

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | TR |
| Maximum Queue (ft) | 30 | 40 | 29 | 15 | 33 | 48 |
| Average Queue (ft) | 13 | 10 | 3 | 1 | 4 | 4 |
| 95th Queue (ft) | 37 | 35 | 17 | 7 | 22 | 25 |
| Link Distance (ft) | 497 | 466 |  | 353 |  | 582 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  | 100 |  | 100 |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |

Intersection: 45: 25th St \& Carrie Rose Ln

| Movement | WB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: |
| Directions Served | LR | TR | L | T |
| Maximum Queue (ft) | 36 | 47 | 34 | 38 |
| Average Queue (ft) | 12 | 2 | 2 | 2 |
| 95th Queue (ft) | 37 | 16 | 17 | 18 |
| Link Distance (ft) | 495 | 1173 |  | 353 |
| Upstream Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |

Queuing and Blocking Report
2045 PM Peak Hour - 3-Lane

## Intersection: 50: 25th St \& Rose Creek Pkwy

| Movement | EB | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | R | LTR | L | TR | L | TR |
| Maximum Queue (ft) | 35 | 35 | 45 | 26 | 32 | 34 | 89 |
| Average Queue (ft) | 5 | 7 | 17 | 2 | 3 | 4 | 7 |
| 95th Queue (ft) | 23 | 29 | 44 | 12 | 20 | 21 | 41 |
| ink Distance (ft) |  |  | 654 |  | 300 |  | 1173 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) | 75 | 25 |  | 150 |  | 150 |  |
| Storage Blk Time (\%) |  | 2 |  |  |  |  |  |
| Queuing Penalty (veh) |  | 0 |  |  |  |  |  |

Intersection: 52: 25th St \& Meadow Creek Dr

| Movement | EB | NB | NB | SB |
| :--- | ---: | ---: | ---: | ---: |
| Directions Served | LR | L | T | TR |
| Maximum Queue (ft) | 39 | 36 | 34 | 34 |
| Average Queue (ft) | 15 | 7 | 2 | 2 |
| 95th Queue (ft) | 41 | 29 | 17 | 16 |
| Link Distance (ft) | 488 |  | 758 | 300 |
| Upstream Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |
| Storage Bay Dist (ft) |  | 150 |  |  |
| Storage Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |

Intersection: 54: 25th St \& Rose Creek Blvd

| Movement | WB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: |
| Directions Served | LR | TR | L | T |
| Maximum Queue (ft) | 65 | 45 | 49 | 29 |
| Average Queue (ft) | 28 | 2 | 12 | 1 |
| 95th Queue (ft) | 56 | 18 | 39 | 12 |
| Link Distance (ft) | 594 | 719 |  | 758 |
| Upstream Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |

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## Intersection: 55: 25th St \& 52nd Ave

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | NB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | T | T | R | L | T | T | R | L | L | T | R |
| Maximum Queue ( $(\mathrm{tt})$ | 190 | 284 | 290 | 195 | 122 | 242 | 213 | 59 | 140 | 158 | 171 | 54 |
| Average Queue (t) | 87 | 165 | 165 | 76 | 47 | 152 | 127 | 13 | 77 | 98 | 67 | 13 |
| 95th Queue (ft) | 153 | 255 | 258 | 144 | 93 | 223 | 204 | 37 | 128 | 145 | 132 | 35 |
| Link Distance (ft) |  | 891 | 891 |  |  | 1174 | 1174 |  |  | 290 | 290 | 290 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  | 305 | 325 |  |  | 325 | 225 |  |  |  |
| Storage Bay Dist (tt) | 400 |  | 0 |  |  |  |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  | 0 |  |  |  |  |  |  |  |  |  |

Intersection: 55: 25th St \& 52nd Ave

| Movement | SB | SB | SB |
| :--- | ---: | ---: | ---: |
| Directions Served | L | T | R |
| Maximum Queue (ft) | 148 | 274 | 97 |
| Average Queue (tt) | 69 | 148 | 47 |
| 95th Queue (ft) | 129 | 239 | 85 |
| Link Distance (ft) |  | 719 |  |
| Upstream Blk Time (\%) |  |  |  |
| Queuing Penalty (veh) |  |  |  |
| Storage Bay Dist (tt) | 200 | 300 |  |
| Storage Blk Time (\%) | 0 | 3 |  |
| Queuing Penalty (veh) | 1 | 7 |  |

Intersection: 56: 25th St \& Don's Carwash

| Movement | EB | NB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | R | T | T | T | T | R |
| Maximum Queue (ft) | 75 | 22 | 13 | 4 | 92 | 12 |
| Average Queue (ft) | 33 | 1 | 0 | 0 | 8 | 0 |
| 95th Queue (ft) | 60 | 11 | 6 | 0 | 47 | 6 |
| Link Distance (ft) | 462 |  | 205 |  | 290 |  |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist ( ft$)$ |  | 0 | 0 |  |  |  |
| Storage Blk Time (\%) |  | 0 | 0 |  |  |  |

Queuing and Blocking Report
2045 PM Peak Hour - 3-Lane

## Intersection: 57: 25th St \& 53rd Ave

| Movement | EB | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | T | R |
| Maximum Queue (ft) | 118 | 49 | 50 | 47 | 29 | 49 | 9 |
| Average Queue (ft) | 45 | 23 | 16 | 2 | 4 | 5 | 0 |
| 95th Queue (ft) | 90 | 50 | 44 | 17 | 19 | 32 | 5 |
| Link Distance (ft) | 491 | 457 |  | 563 |  | 205 |  |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  | 125 |  | 125 |  | 100 |
| Storage Blk Time (\%) |  |  |  |  |  | 0 |  |
| Queuing Penalty (veh) |  |  |  |  |  | 0 |  |

## Intersection: 60: 25th St \& Prairie Grove Ave/Shanley HS (North)

| Movement | EB | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | T | R |
| Maximum Queue (ft) | 34 | 73 | 30 | 43 | 38 | 30 | 4 |
| Average Queue (ft) | 11 | 33 | 5 | 2 | 11 | 3 | 0 |
| 95th Queue (ft) | 32 | 61 | 23 | 18 | 32 | 24 | 3 |
| Link Distance (ft) | 451 | 517 |  | 295 |  | 563 |  |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  | 150 |  | 150 |  | 150 |
| Storage Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |

## Intersection: 65: 25th St \& Eaglebrook Apts/Shanley HS (South)

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | TR | L | TR |
| Maximum Queue (ft) | 54 | 36 | 31 | 52 | 30 | 43 |
| Average Queue (ft) | 20 | 15 | 7 | 3 | 3 | 4 |
| 95th Queue (ft) | 48 | 41 | 28 | 22 | 16 | 22 |
| Link Distance (ft) | 539 | 555 |  | 776 |  | 243 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  | 150 |  | 150 |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |

Queuing and Blocking Report
2045 PM Peak Hour - 3-Lane

## Intersection: 70: 25th St \& 58th Ave

| Movement | EB | WB | NB | SB |
| :--- | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 41 | 54 | 80 | 140 |
| Average Queue (tt) | 13 | 19 | 26 | 32 |
| 95th Queue (ft) | 39 | 51 | 65 | 97 |
| Link Distance (ft) | 525 | 502 | 619 | 776 |
| Upstream Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |
| Storage Bay Dist (tt) |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |

Intersection: 75: 25th St \& 60th Ave

| Movement | WB | WB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | R | TR | L | T |
| Maximum Queue (ft) | 40 | 59 | 37 | 45 | 24 |
| Average Queue (ft) | 9 | 21 | 3 | 16 | 2 |
| 95th Queue (ft) | 32 | 50 | 20 | 44 | 12 |
| Link Distance (ft) | 473 |  | 636 |  | 619 |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 50 |  | 150 |  |
| Storage Blk Time (\%) | 0 | 0 |  |  |  |
| Queuing Penalty (veh) | 0 | 0 |  |  |  |

Intersection: 80: 25th St \& 62nd Ave

| Movement | EB | EB | WB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LT | R | LT | R | L | TR | L | TR |
| Maximum Queue ( ft$)$ | 44 | 31 | 40 | 36 | 25 | 30 | 40 | 18 |
| Average Queue ft$)$ | 15 | 9 | 17 | 17 | 3 | 1 | 8 | 1 |
| 95th Queue (ft) | 43 | 32 | 44 | 42 | 15 | 12 | 29 | 10 |
| Link Distance (ft) | 518 |  | 496 |  |  | 779 |  | 636 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |
| Storage Bay Dist ( ft$)$ |  | 50 |  | 150 | 150 |  | 150 |  |
| Storage Blk Time (\%) | 0 | 0 |  |  |  |  |  |  |

Queuing and Blocking Report
2045 PM Peak Hour - 3-Lane
Intersection: 85: 25th St \& 64th Ave

| Movement | EB | WB | NB | SB |
| :--- | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 137 | 46 | 91 | 142 |
| Average Queue (tt) | 53 | 15 | 35 | 57 |
| 95th Queue (tt) | 102 | 43 | 78 | 111 |
| Link Distance (tt) | 751 | 723 | 1219 | 779 |
| Upstream Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |
| Storage Bay Dist (tt) |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |

Intersection: 100: 27th St \& 52nd Ave

| Movement | EB | EB | EB | WB | WB | WB | NB | NB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | T | T | R | L | T | T | L | R |
| Maximum Queue (ft) | 233 | 197 | 65 | 65 | 194 | 206 | 101 | 85 |
| Average Queue (ft) | 108 | 88 | 29 | 15 | 67 | 85 | 36 | 29 |
| 95th Queue ( ft ) | 191 | 164 | 57 | 46 | 146 | 159 | 78 | 62 |
| Link Distance (ft) | 703 | 703 |  |  | 891 | 891 |  | 361 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  | 100 |  |
| Storage Bay Dist (ft) |  | 0 | 175 | 300 |  | 0 | 0 |  |
| Storage Blk Time (\%) |  | 0 |  |  |  |  | 0 | 0 |
| Queuing Penalty (veh) |  | 1 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Network Summary |  |  |  |  |  |  |  |  |

Network wide Queuing Penalty: 101

HCM 6th TWSC
10: 25th St \& Kirsten Ln

| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 5.9 |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  | \$ |  |  | $\uparrow$ | T | ${ }^{1}$ | 性 |  | ${ }^{1}$ | 中 ${ }^{\text {P }}$ |  |
| Traffic Vol, veh/h | 53 | 6 | 27 | 38 | 6 | 101 | 16 | 483 | 11 | 22 | 773 | 75 |
| Future Vol, veh/h | 53 | 6 | 27 | 38 | 6 | 101 | 16 | 483 | 11 | 22 | 773 | 75 |
| Conflicting Peds, \#/hr | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | 50 | 75 | - | - | 50 | - | - |
| Veh in Median Storage, \# | \# | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, \% | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 58 | 7 | 29 | 41 | 7 | 110 | 17 | 525 | 12 | 24 | 840 | 82 |





HCM 6th TWSC
23: 25th St \& Casey's Driveway

| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 0.8 |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  | * |  |  | $\uparrow$ |  | ${ }^{1 /}$ | $\uparrow$ |  | ${ }^{1 /}$ | $\uparrow$ |  |
| Traffic Vol, veh/h | 11 | 0 | 11 | 6 | 0 | 6 | 6 | 429 | 6 | 6 | 768 | 17 |
| Future Vol, veh/h | 11 | 0 | 11 | 6 | 0 | 6 | 6 | 429 | 6 | 6 | 768 | 17 |
| Conflicting Peds, \#/hr | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 150 | - | - | 150 | - | - |
| Veh in Median Storage, \# | \# | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, \% | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 12 | 0 | 12 | 7 | 0 | 7 | 7 | 466 | 7 | 7 | 835 | 18 |







HCM 6th TWSC
35: 25th St \& 38th Ave



HCM 6th TWSC
37: 25th St \& 39th Ave



HCM 6th TWSC
44: 25th St \& 44th Ave



| Minor Lane/Major Mvmt | NBL | NBT | NBR EBLn1WBLn1 | SBL | SBT | SBR |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Capacity (veh/h) | 969 | - | -286 | 305 | 1155 | - | - |
| HCM Lane V/C Ratio | 0.007 | - | -0.046 | 0.043 | 0.015 | - | - |
| HCM Control Delay (s) | 8.7 | - | - | 18.2 | 17.3 | 8.2 | - |
| HCM Lane LOS | A | - | - | C | C | A | - |
| HCM 95th \%tile Q(veh) | 0 | - | - | 0.1 | 0.1 | 0 | - |

HCM 6th TWSC
45: 25th St \& Carrie Rose Ln
10/05/2022

| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0.2 |  |  |  |  |  |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | Mr |  | F |  | 1 | 4 |
| Traffic Vol, veh/h | 6 | 6 | 361 | 6 | 6 | 541 |
| Future Vol, veh/h | 6 | 6 | 361 | 6 | 6 | 541 |
| Conflicting Peds, \#/hr | 5 | 5 | 0 | 5 | 5 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 100 | - |
| Veh in Median Storage, \# | 0 | - | 0 | - | - | 0 |
| Grade, \% | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, $\%$ | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 7 | 7 | 392 | 7 | 7 | 588 |


| Major/Minor M | Minor1 |  | Major1 |  | Major2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 1008 | 406 | 0 | 0 | 404 | 0 |
| Stage 1 | 401 | - | - | - | - | - |
| Stage 2 | 607 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 267 | 645 | - | - | 1155 | - |
| Stage 1 | 676 | - | - | - | - | - |
| Stage 2 | 544 | - | - | - | - | - |
| Platoon blocked, \% |  |  | - | - |  | - |
| Mov Cap-1 Maneuver | 263 | 639 | - | - | 1150 | - |
| Mov Cap-2 Maneuver | 390 | - | - | - | - | - |
| Stage 1 | 673 | - | - | - | - | - |
| Stage 2 | 538 | - | - | - | - | - |
|  |  |  |  |  |  |  |
| Approach | WB |  | NB |  | SB |  |
| HCM Control Delay, s | 12.6 |  | 0 |  | 0.1 |  |
| HCM LOS | B |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | NBT | NBRWBLn1 |  | SBL | SBT |
| Capacity (veh/h) |  | - |  | 484 | 1150 | - |
| HCM Lane V/C Ratio |  | - | - | 0.027 | 0.006 | - |
| HCM Control Delay (s) |  | - | - | 12.6 | 8.1 | - |
| HCM Lane LOS |  | - | - | B | A | - |
| HCM 95th \%tile Q(veh) |  | - | - | 0.1 | 0 | - |

HCM 6th TWSC
50: 25th St \& Rose Creek Pkwy



HCM 6th TWSC
52: 25th St \& Meadow Creek Dr
10/05/2022

| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0.4 |  |  |  |  |  |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | M |  |  | 个 | $\mathbf{7}$ |  |
| Traffic Vol, veh/h | 12 | 6 | 16 | 350 | 509 | 27 |
| Future Vol, veh/h | 12 | 6 | 16 | 350 | 509 | 27 |
| Conflicting Peds, \#/hr | 5 | 5 | 5 | 0 | 0 | 5 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 150 | - | - | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 13 | 7 | 17 | 380 | 553 | 29 |



HCM 6th TWSC
54: 25th St \& Rose Creek Blvd
10/05/2022


| Major/Minor M | Minor1 |  | Major1 |  | Major2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 1005 | 405 | 0 | 0 | 414 | 0 |
| Stage 1 | 400 | - | - | - | - | - |
| Stage 2 | 605 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 268 | 646 | - | - | 1145 | - |
| Stage 1 | 677 | - | - | - | - | - |
| Stage 2 | 545 | - | - | - | - | - |
| Platoon blocked, \% |  |  | - | - |  | - |
| Mov Cap-1 Maneuver | 256 | 640 | - | - | 1140 | - |
| Mov Cap-2 Maneuver | 256 | - | - | - | - | - |
| Stage 1 | 674 | - | - | - | - | - |
| Stage 2 | 523 | - | - | - | - | - |
|  |  |  |  |  |  |  |
| Approach | WB |  | NB |  | SB |  |
| HCM Control Delay, s | 16.9 |  | 0 |  | 0.6 |  |
| HCM LOS | C |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | NBT | NBRWBLn1 |  | SBL | SBT |
| Capacity (veh/h) |  | - | - | 343 | 1140 | - |
| HCM Lane V/C Ratio |  | - | - | 0.12 | 0.036 | - |
| HCM Control Delay (s) |  | - | - | 16.9 | 8.3 | - |
| HCM Lane LOS |  | - | - | C | A | - |
| HCM 95th \%tile Q(veh) |  | - | - | 0.4 | 0.1 | - |

HCM 6th TWSC
56: 25th St \& Don's Carwash



HCM 6th TWSC
57: 25th St \& 53rd Ave



HCM 6th TWSC
60: 25th St \& Prairie Grove Ave/Shanley HS (North)



HCM 6th TWSC
65: 25th St \& Eaglebrook Apts/Shanley HS (South)



HCM 6th Roundabout
70: 25th St \& 58th Ave
10/05/2022

| Intersection |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Intersection Delay, s/veh | 7.4 |  |  |  |
| Intersection LOS | A |  | WB | NB |
| Approach | EB | 1 | 1 | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 104 | 411 | 679 |
| Adj Approach Flow, veh/h | 37 | 106 | 419 | 692 |
| Demand Flow Rate, veh/h | 37 | 394 | 124 | 52 |
| Vehicles Circulating, veh/h | 693 | 149 | 606 | 447 |
| Vehicles Exiting, veh/h | 51 | 5 | 5 | 5 |
| Ped Vol Crossing Leg, \#/h | 5 | 0.999 | 0.999 | 8.6 |
| Ped Cap Adj | 0.999 | 5.1 | 6.3 | A |
| Approach Delay, s/veh | 5.9 | A | A |  |
| Approach LOS | A |  |  |  |


| Lane | Left | Left | Left | Left |
| :--- | :---: | :---: | :---: | :---: |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR |  |
| RT Channelized |  |  |  |  |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 4.909 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 692 |
| Entry Flow, veh/h | 37 | 106 | 419 | 1309 |
| Cap Entry Lane, veh/h | 681 | 923 | 1216 | 0.981 |
| Entry HV Adj Factor | 0.996 | 0.979 | 679 |  |
| Flow Entry, veh/h | 37 | 104 | 1283 |  |
| Cap Entry, veh/h | 677 | 903 | 411 | 0.529 |
| V/C Ratio | 0.054 | 0.115 | 8.9191 | 8.6 |
| Control Delay, s/veh | 5.9 | A | 0.345 | A |
| LOS | 0 | 6.3 | A | 3 |


| Intersection |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh 1.1 |  |  |  |  |  |  |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | ${ }_{1}$ | F | 个 |  | ${ }^{7}$ | 4 |
| Traffic Vol, veh/h | 12 | 27 | 351 | 32 | 64 | 483 |
| Future Vol, veh/h | 12 | 27 | 351 | 32 | 64 | 483 |
| Conflicting Peds, \#/hr | 5 | 5 | 0 | 5 | 5 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 50 | - | - | 150 | - |
| Veh in Median Storage, \# | \# 0 | - | 0 | - | - | 0 |
| Grade, \% | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 13 | 29 | 382 | 35 | 70 | 525 |



| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay，s／veh | 1.7 |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  | ${ }_{1} 1$ | 「゙ |  | $\uparrow$ | 「 | ${ }^{*}$ | 个 |  | ${ }^{1}$ | $\uparrow$ |  |
| Traffic Vol，veh／h | 13 | 7 | 7 | 12 | 7 | 21 | 7 | 349 | 22 | 36 | 437 | 22 |
| Future Vol，veh／h | 13 | 7 | 7 | 12 | 7 | 21 | 7 | 349 | 22 | 36 | 437 | 22 |
| Conflicting Peds，\＃／hr | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | － | － | None | － | － | None | － | － | None | － | － | None |
| Storage Length | － | － | 50 | － | － | 150 | 150 | － | － | 150 | － | － |
| Veh in Median Storage，\＃ | \＃ | 0 | － | － | 0 | － | － | 0 | － | － | 0 | － |
| Grade，\％ | － | 0 | － | － | 0 | － | － | 0 | － | － | 0 | － |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles，\％ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 14 | 8 | 8 | 13 | 8 | 23 | 8 | 379 | 24 | 39 | 475 | 24 |



HCM 6th Roundabout
85: 25th St \& 64th Ave
10/05/2022

| Intersection |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Intersection Delay, s/veh | 8.2 |  |  |  |
| Intersection LOS | A |  |  |  |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 354 | 56 | 446 | 496 |
| Demand Flow Rate, veh/h | 362 | 57 | 454 | 506 |
| Vehicles Circulating, veh/h | 454 | 576 | 207 | 214 |
| Vehicles Exiting, veh/h | 266 | 85 | 609 | 419 |
| Ped Vol Crossing Leg, \#/h | 5 | 5 | 5 | 5 |
| Ped Cap Adj | 0.999 | 0.999 | 0.999 | 0.999 |
| Approach Delay, s/veh | 9.3 | 5.5 | 7.5 | 8.3 |
| Approach LOS | A | A | A | A |


| Lane | Left | Left | Left | Left |
| :--- | :---: | :---: | :---: | :---: |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR |  |
| RT Channelized |  |  |  |  |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 4.976 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 506 |
| Entry Flow, veh/h | 362 | 57 | 454 | 1109 |
| Cap Entry Lane, veh/h | 868 | 767 | 1117 | 0.980 |
| Entry HV Adj Factor | 0.979 | 0.989 | 0.982 | 496 |
| Flow Entry, veh/h | 354 | 56 | 446 | 1087 |
| Cap Entry, veh/h | 850 | 758 | 1096 | 0.456 |
| V/C Ratio | 0.417 | 0.074 | 0.407 | 8.3 |
| Control Delay, s/veh | 9.3 | 5.5 | 7.5 | A |
| LOS | A | 0 | 2 | 2 |

## 5: 25th St \& 32nd Ave Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| SBR |  |  |  |  |  |  |  |  |  |  |  |
| Denied Del/Veh (s) | 3.0 | 0.3 | 2.8 | 3.1 | 0.2 | 3.1 | 0.0 | 0.0 | 0.0 | 3.1 | 0.4 |
| Total Del/Veh (s) | 36.0 | 36.2 | 5.6 | 31.1 | 41.2 | 7.6 | 21.3 | 27.6 | 23.1 | 24.4 | 26.5 |

5: 25th St \& 32nd Ave Performance by movement

| Movement All |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Denied Del/Veh (s) | 1.1 |  |  |  |  |  |  |  |  |  |  |  |
| Total Del/Veh (s) | 27.5 |  |  |  |  |  |  |  |  |  |  |  |
| 10: 25th St \& Kirsten Ln Performance by movement |  |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Denied Del/Veh (s) | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 4.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 23.6 | 25.3 | 10.3 | 21.5 | 25.6 | 7.6 | 3.5 | 1.3 | 0.8 | 11.1 | 2.5 | 1.7 |

## 10: 25th St \& Kirsten Ln Performance by movement

| Movement | All |
| :--- | :---: |
| Denied Del/Veh (s) | 0.1 |
| Total Del/Veh (s) | 3.3 |

15: 25th St \& 33rd Ave Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| SBR |  |  |  |  |  |  |  |  |  |  |  |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 11.7 | 14.6 | 4.7 | 15.4 | 24.9 | 7.1 | 5.5 | 2.4 | 2.3 | 6.5 | 0.7 |

15: 25th St \& 33rd Ave Performance by movement

| Movement | All |
| :--- | :---: |
| Denied Del/Veh (s) | 0.0 |
| Total Del/Veh (s) | 2.4 |

20: 25th St \& 35th Ave Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 4.0 | 0.3 | 0.2 | 4.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 20.4 | 15.3 | 5.8 | 21.8 | 18.2 | 7.9 | 9.7 | 7.9 | 4.7 | 12.1 | 7.2 | 4.2 |

20: 25th St \& 35th Ave Performance by movement

| Movement | All |
| :--- | :---: |
| Denied Del/Veh (s) | 0.3 |
| Total Del/Veh (s) | 8.7 |

SimTraffic Performance Report
2045 AM Peak Hour - 5-Lane
10/18/2022
23: 25th St \& Casey's Driveway Performance by movement

| Movement | EBL | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | :---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 10.4 | 3.7 | 14.8 | 5.4 | 4.3 | 0.6 | 0.4 | 5.4 | 1.9 | 1.8 | 1.3 |

25: 25th St \& 36th Ave Performance by movement

| Movement | EBL | EBR | NBL | NBT | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 11.6 | 5.1 | 3.6 | 0.7 | 0.4 | 0.8 | 0.9 |

30: 25th St \& 37th Ave Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.4 | 3.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 |
| Total Del/Veh (s) | 12.7 | 4.6 | 0.8 | 0.5 | 5.9 | 0.5 | 1.2 |

35: 25th St \& 38th Ave Performance by movement

| Movement | EBL | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 11.9 | 5.4 | 13.1 | 6.0 | 2.6 | 0.7 | 0.7 | 3.6 | 0.7 | 0.2 | 1.4 |

37: 25th St \& 39th Ave Performance by movement

| Movement | EBL | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 9.6 | 4.6 | 14.6 | 5.5 | 4.9 | 1.9 | 1.4 | 3.4 | 0.7 | 0.4 | 1.8 |

40: 25th St \& 40th Ave Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| SBR |  |  |  |  |  |  |  |  |  |  |  |
| Denied Del/Veh (s) | 3.4 | 0.7 | 0.7 | 3.6 | 0.5 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 19.6 | 22.0 | 15.4 | 20.8 | 27.6 | 19.5 | 18.9 | 17.5 | 12.3 | 16.0 | 20.8 |

40: 25th St \& 40th Ave Performance by movement

| Movement | All |
| :--- | ---: |
| Denied Del/Veh $(\mathrm{s})$ | 0.6 |
| Total Del/Veh $(\mathrm{s})$ | 19.6 |

42: 25th St \& Centennial Elementary (North) Performance by movement

| Movement | NBL | NBT | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 6.2 | 1.7 | 1.9 | 2.6 | 2.2 |

SimTraffic Performance Report
2045 AM Peak Hour - 5-Lane
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43: 25th St \& Centennial Elementary (South)/Rose Creek Dr Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBR | NBT | NBR | SBL | SBT | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 3.8 | 0.6 | 0.2 | 4.1 | 0.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.6 |
| Total Del/Veh (s) | 15.6 | 8.7 | 3.4 | 13.2 | 4.8 | 7.7 | 3.9 | 16.0 | 6.4 | 8.1 |

44: 25th St \& 44th Ave Performance by movement

| Movement | EBL | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 10.5 | 4.5 | 10.7 | 4.4 | 3.2 | 0.6 | 0.2 | 5.6 | 1.5 | 1.7 | 1.3 |

45: 25th St \& Carrie Rose Ln Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 10.6 | 5.0 | 1.1 | 0.7 | 2.8 | 0.3 | 0.9 |

50: 25th St \& Rose Creek Pkwy Performance by movement

| Movement | EBL | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | :---: |
| Denied Del/Veh (s) | 4.4 | 3.8 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 9.5 | 4.6 | 16.0 | 5.3 | 2.1 | 0.6 | 0.1 | 4.8 | 0.9 | 0.4 | 1.0 |

52: 25th St \& Meadow Creek Dr Performance by movement

| Movement | EBL | EBR | NBL | NBT | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 8.5 | 3.4 | 3.7 | 0.7 | 0.4 | 0.3 | 0.8 |

54: 25th St \& Rose Creek Blvd Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 12.0 | 6.0 | 1.8 | 2.0 | 5.6 | 0.6 | 1.8 |

55: 25th St \& 52nd Ave Performance by movement

|  | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | SBR

55: 25th St \& 52nd Ave Performance by movement

| Movement | All |
| :--- | ---: |
| Denied Del/Veh (s) | 0.2 |
| Total Del/Veh (s) | 28.7 |

56: 25th St \& Don's Carwash Performance by movement

| Movement | EBR | NBT | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 4.2 | 0.7 | 1.8 | 1.6 | 1.2 |

57: 25th St \& 53rd Ave Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| SBR |  |  |  |  |  |  |  |  |  |  |  |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 21.3 | 25.2 | 6.9 | 20.1 | 23.7 | 6.6 | 4.9 | 0.9 | 0.6 | 4.6 | 0.5 |

57: 25th St \& 53rd Ave Performance by movement

| Movement | All |
| :--- | :---: |
| Denied Del/Veh (s) | 0.0 |
| Total Del/Veh (s) | 1.6 |

60: 25th St \& Prairie Grove Ave/Shanley HS (North) Performance by movement

| Movement | EBL | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 21.1 | 5.2 | 18.3 | 7.8 | 5.2 | 0.7 | 0.3 | 6.2 | 0.6 | 0.7 | 2.1 |

65: 25th St \& Eaglebrook Apts/Shanley HS (South) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | All

70: 25th St \& 58th Ave Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| SBR |  |  |  |  |  |  |  |  |  |  |  |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 3.8 | 4.7 | 3.0 | 4.5 | 5.9 | 3.3 | 4.1 | 4.9 | 3.1 | 2.9 | 4.8 |

70: 25th St \& 58th Ave Performance by movement

| Movement | All |
| :--- | :--- |
| Denied Del/Veh (s) | 0.0 |
| Total Del/Veh (s) | 4.5 |

75: 25th St \& 60th Ave Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.2 | 4.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 |
| Total Del/Veh (s) | 12.9 | 4.2 | 0.5 | 0.2 | 3.6 | 0.5 | 0.8 |

80: 25th St \& 62nd Ave Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| SBR |  |  |  |  |  |  |  |  |  |  |  |
| Denied Del/Veh (s) | 0.1 | 0.1 | 4.1 | 0.2 | 0.2 | 4.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 13.3 | 16.9 | 4.4 | 12.9 | 14.6 | 4.6 | 3.4 | 0.8 | 0.4 | 4.4 | 0.5 |

80: 25th St \& 62nd Ave Performance by movement

| Movement | All |
| :--- | :--- |
| Denied Del/Veh (s) | 0.2 |
| Total Del/Veh (s) | 1.3 |

85: 25th St \& 64th Ave Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| SBR |  |  |  |  |  |  |  |  |  |  |  |
| Denied Del/Veh (s) | 0.3 | 0.2 | 0.3 | 0.2 | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 0.0 | 0.0 |
| Total Del/Veh (s) | 5.0 | 5.8 | 4.4 | 4.6 | 5.3 | 3.0 | 4.1 | 5.2 | 3.3 | 4.1 | 4.8 |

85: 25th St \& 64th Ave Performance by movement

| Movement | All |
| :--- | :--- |
| Denied Del/Veh (s) | 0.1 |
| Total DelVeh (s) | 4.7 |

100: 27th St \& 52nd Ave Performance by movement

| Movement | EBT | EBR | WBL | WBT | NBL | NBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.4 | 2.8 | 0.0 | 0.0 | 3.8 | 0.5 | 0.5 |
| Total Del/Veh (s) | 6.5 | 2.4 | 15.4 | 8.7 | 22.2 | 7.2 | 8.3 |

Total Network Performance

|  |  |
| :--- | ---: |
| Denied Del/Veh (s) | 1.1 |
| Total Del/Veh $(\mathrm{s})$ | 38.0 |

## Arterial Level of Service

2045 AM Peak Hour - 5-Lane

## Arterial Level of Service: NB 25th St

| Cross Street | Node | Delay <br> $(\mathrm{s} / \mathrm{veh})$ | Travel <br> time $(\mathrm{s})$ | Dist <br> $(\mathrm{mi})$ | Arterial <br> Speed |
| :--- | ---: | ---: | ---: | ---: | ---: |
| 64th Ave | 85 | 5.2 | 29.2 | 0.3 | 31 |
| 62nd Ave | 80 | 0.7 | 26.2 | 0.2 | 24 |
| 60th Ave | 75 | 0.5 | 14.4 | 0.1 | 34 |
| 58th Ave | 70 | 4.8 | 18.3 | 0.1 | 28 |
| Shanley HS (South) | 65 | 1.0 | 26.4 | 0.2 | 23 |
|  | 61 | 0.3 | 6.1 | 0.1 | 33 |
| Shanley HS (North) | 60 | 0.7 | 7.7 | 0.1 | 32 |
| 53rd Ave | 57 | 0.9 | 13.3 | 0.1 | 32 |
| Don's Carwash | 56 | 0.7 | 6.0 | 0.1 | 30 |
| 52nd Ave | 55 | 21.2 | 28.0 | 0.1 | 9 |
| Rose Creek Blvd | 54 | 2.7 | 19.2 | 0.2 | 30 |
| Meadow Creek Dr | 52 | 0.7 | 17.1 | 0.2 | 33 |
| Rose Creek Pkwy | 50 | 0.5 | 7.8 | 0.1 | 34 |
| Carrie Rose Ln | 45 | 1.1 | 25.6 | 0.2 | 33 |
| 44th Ave | 44 | 0.5 | 8.6 | 0.1 | 33 |
| Rose Creek Dr | 43 | 7.7 | 20.7 | 0.1 | 22 |
| Centennial Elementar | 42 | 2.0 | 11.8 | 0.1 | 28 |
| 40th Ave | 40 | 17.5 | 26.4 | 0.1 | 12 |
| 39th Ave | 37 | 2.5 | 10.0 | 0.1 | 26 |
| 38th Ave | 35 | 0.7 | 13.2 | 0.1 | 33 |
| 37th Ave | 30 | 0.8 | 13.5 | 0.1 | 33 |
| 36th Ave | 25 | 0.7 | 13.4 | 0.1 | 32 |
| Casey's Driveway | 23 | 0.5 | 7.7 | 0.1 | 33 |
| 35th Ave | 20 | 7.9 | 23.8 | 0.2 | 23 |
| 33rd Ave | 15 | 2.7 | 23.2 | 0.2 | 32 |
| Kirsten Ln | 10 | 1.3 | 7.2 | 0.1 | 28 |
| 32nd Ave | 5 | 27.1 | 34.5 | 0.1 | 8 |
| Total |  | 112.8 | 459.4 | 3.3 | 25 |

Arterial Level of Service
2045 AM Peak Hour - 5-Lane

## Arterial Level of Service: SB 25th St

| Cross Street | Node | Delay (s/veh) | Travel time (s) | Dist <br> (mi) | Arterial Speed |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 32nd Ave | 5 | 26.5 | 42.0 | 0.2 | 14 |
| Kirsten Ln | 10 | 3.4 | 11.7 | 0.1 | 24 |
| 33rd Ave | 15 | 0.7 | 6.6 | 0.1 | 31 |
| 35th Ave | 20 | 7.2 | 28.3 | 0.2 | 26 |
| Casey's Driveway | 23 | 2.1 | 18.1 | 0.2 | 31 |
| 36th Ave | 25 | 0.4 | 7.6 | 0.1 | 33 |
| 37th Ave | 30 | 0.5 | 12.9 | 0.1 | 34 |
| 38th Ave | 35 | 0.7 | 13.4 | 0.1 | 33 |
| 39th Ave | 37 | 0.7 | 13.1 | 0.1 | 33 |
| 40th Ave | 40 | 20.7 | 28.1 | 0.1 | 9 |
| Centennial Elementar | 42 | 2.4 | 11.7 | 0.1 | 27 |
| Centennial Elementar | 43 | 6.4 | 15.5 | 0.1 | 21 |
| 44th Ave | 44 | 1.7 | 14.7 | 0.1 | 31 |
| Carrie Rose Ln | 45 | 0.3 | 8.7 | 0.1 | 32 |
| Rose Creek Pkwy | 50 | 0.9 | 24.9 | 0.2 | 34 |
| Meadow Creek Dr | 52 | 0.4 | 7.9 | 0.1 | 33 |
| Rose Creek Blvd | 54 | 0.6 | 16.7 | 0.2 | 33 |
| 52nd Ave | 55 | 37.2 | 52.8 | 0.2 | 11 |
| Don's Carwash | 56 | 3.3 | 11.5 | 0.1 | 23 |
| 53rd Ave | 57 | 0.5 | 5.7 | 0.1 | 32 |
| Prairie Grove Ave | 60 | 0.6 | 12.8 | 0.1 | 34 |
|  | 61 | 0.2 | 7.5 | 0.1 | 33 |
| Eaglebrook Apts | 65 | 0.4 | 6.2 | 0.1 | 33 |
| 58th Ave | 70 | 4.8 | 21.1 | 0.2 | 29 |
| 60th Ave | 75 | 0.4 | 22.5 | 0.1 | 23 |
| 62nd Ave | 80 | 0.5 | 14.5 | 0.1 | 34 |
| 64th Ave | 85 | 4.8 | 21.4 | 0.2 | 29 |
| Total |  | 128.3 | 458.0 | 3.2 | 25 |

Queuing and Blocking Report
2045 AM Peak Hour - 5-Lane
10/18/2022
Intersection: 5: 25th St \& 32nd Ave

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| SB |  |  |  |  |  |  |  |  |  |  |  |
| Directions Served | L | T | T | R | L | T | T | R | L | T | TR |
| Maximum Queue (ft) | 251 | 231 | 216 | 82 | 132 | 236 | 211 | 92 | 206 | 279 | 289 |
| Average Queue (ft) | 113 | 144 | 118 | 24 | 60 | 155 | 120 | 40 | 92 | 141 | 167 |
| 95th Queue (ft) | 201 | 211 | 190 | 54 | 107 | 218 | 196 | 72 | 168 | 227 | 249 |
| Link Distance (ft) |  | 843 | 843 |  |  | 904 | 904 |  | 134 |  |  |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  | 307 | 307 |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |  | 0 | 0 |
| Storage Bay Dist (ft) | 350 |  |  | 200 | 250 |  |  | 200 | 150 |  | 0 |
| Storage Blk Time (\%) |  |  | 0 |  |  | 0 | 0 |  | 1 | 6 | 225 |
| Queuing Penalty (veh) |  |  | 0 |  |  | 0 | 0 |  | 3 | 12 | 0 |

Intersection: 5: 25th St \& 32nd Ave

| Movement | SB | SB | SB |
| :--- | ---: | ---: | ---: |
| Directions Served | T | T | R |
| Maximum Queue (ft) | 174 | 135 | 110 |
| Average Queue (ft) | 91 | 58 | 44 |
| 95th Queue (ft) | 158 | 117 | 82 |
| Link Distance (ft) | 771 | 771 |  |
| Upstream Blk Time (\%) |  |  |  |
| Queuing Penalty (veh) |  |  |  |
| Storage Bay Dist (ft) |  | 200 |  |
| Storage Blk Time (\%) | 0 |  |  |
| Queuing Penalty (veh) | 0 |  |  |

Intersection: 10: 25th St \& Kirsten Ln

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue ( ft$)$ | 99 | 54 | 60 | 34 | 52 | 68 | 87 | 82 | 50 |
| Average Queue ft$)$ | 40 | 18 | 24 | 8 | 3 | 6 | 30 | 6 | 4 |
| 95th Queue (ft) | 78 | 48 | 53 | 30 | 23 | 34 | 69 | 39 | 23 |
| Link Distance (ft) | 584 | 474 |  |  | 242 | 242 |  | 307 | 307 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |  |
| Storage Bay Dist ( ft$)$ |  |  | 50 | 75 |  |  | 50 |  |  |
| Storage Blk Time (\%) |  | 0 | 1 |  | 0 |  | 3 | 0 |  |
| Queuing Penalty (veh) |  | 0 | 0 |  | 0 |  | 6 | 0 |  |

Queuing and Blocking Report
2045 AM Peak Hour - 5-Lane
Intersection: 15: 25th St \& 33rd Ave

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 56 | 53 | 40 | 39 | 57 | 30 | 32 | 42 |
| Average Queue (tt) | 22 | 26 | 12 | 3 | 5 | 2 | 2 | 2 |
| 95th Queue (ft) | 50 | 53 | 38 | 22 | 33 | 15 | 16 | 18 |
| Link Distance (ft) | 586 | 460 |  | 1021 | 1021 |  | 242 | 242 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  | 150 |  |  | 75 |  |  |
| Storage Bay Dist (tt) |  |  |  |  |  |  | 0 |  |
| Storage Blk Time (\%) |  |  |  |  |  |  | 0 |  |

Intersection: 20: 25th St \& 35th Ave

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Directions Served | L | TR | L | TR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 69 | 85 | 68 | 109 | 55 | 178 | 167 | 59 | 106 | 114 |
| Average Queue (ft) | 32 | 30 | 24 | 45 | 18 | 74 | 79 | 13 | 43 | 53 |
| 95th Queue (ft) | 64 | 66 | 59 | 83 | 45 | 138 | 137 | 40 | 83 | 99 |
| Link Distance (ft) |  | 572 |  | 475 |  | 754 | 754 |  | 1021 | 1021 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) | 100 |  | 100 |  | 150 |  |  | 150 |  |  |
| Storage Blk Time (\%) | 0 | 0 |  | 1 |  | 0 |  |  | 0 |  |
| Queuing Penalty (veh) | 0 | 0 |  | 0 |  | 0 |  |  | 0 |  |

Intersection: 23: 25th St \& Casey's Driveway

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 44 | 39 | 33 | 43 | 60 | 24 | 39 | 52 |
| Average Queue (ft) | 17 | 13 | 4 | 4 | 5 | 3 | 2 | 3 |
| 95th Queue ( ft ) | 44 | 38 | 20 | 22 | 28 | 17 | 15 | 21 |
| Link Distance (ft) | 616 | 335 |  | 305 | 305 |  | 754 | 754 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  | 150 |  |  | 150 |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |  |  |

Queuing and Blocking Report
2045 AM Peak Hour - 5-Lane
Intersection: 25: 25th St \& 36th Ave

| Movement | EB | NB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LR | L | T | T | T | TR |
| Maximum Queue (ft) | 56 | 30 | 32 | 33 | 29 | 34 |
| Average Queue (ft) | 22 | 3 | 2 | 2 | 1 | 2 |
| 95th Queue (ft) | 50 | 19 | 16 | 19 | 12 | 17 |
| Link Distance (ft) | 690 |  | 582 | 582 | 305 | 305 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 150 |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |

Intersection: 30: 25th St \& 37th Ave

| Movement | WB | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | R | T | TR | L | T | T |
| Maximum Queue ( ft$)$ | 31 | 61 | 33 | 28 | 53 | 12 | 29 |
| Average Queue $(\mathrm{ft})$ | 9 | 33 | 2 | 2 | 13 | 1 | 2 |
| 95th Queue (ft) | 31 | 53 | 22 | 18 | 43 | 8 | 14 |
| Link Distance (ft) | 439 |  | 578 | 578 |  | 582 | 582 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  | 150 |  |  |
| Storage Bay Dist (ft) |  | 100 |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |  |

Intersection: 35: 25th St \& 38th Ave

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue ( ft$)$ | 74 | 56 | 20 | 29 | 41 | 24 | 10 | 59 |
| Average Queue ft$)$ | 33 | 24 | 1 | 2 | 3 | 2 | 1 | 2 |
| 95th Queue (ft) | 63 | 52 | 6 | 16 | 19 | 11 | 10 | 24 |
| Link Distance (ft) | 448 | 428 |  | 560 | 560 |  | 578 | 578 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  | 150 |  |
| Storage Bay Dist ( ft$)$ |  |  |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |  |  |

Queuing and Blocking Report
2045 AM Peak Hour - 5-Lane
Intersection: 37: 25th St \& 39th Ave

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 56 | 52 | 30 | 41 | 46 | 24 | 26 | 42 |
| Average Queue (tt) | 23 | 17 | 2 | 3 | 3 | 2 | 1 | 2 |
| 95th Queue (ft) | 50 | 46 | 15 | 20 | 20 | 12 | 9 | 16 |
| Link Distance (ft) | 503 | 447 |  | 307 | 307 |  | 560 | 560 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  | 75 |  |  | 150 |  |  |
| Storage Bay Dist (ft) |  |  |  | 0 |  |  |  |  |
| Storage Blk Time (\%) |  |  |  | 0 |  |  |  |  |

Intersection: 40: 25th St \& 40th Ave

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | TR | L | TR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 201 | 252 | 179 | 295 | 152 | 162 | 182 | 86 | 125 | 211 |
| Average Queue (ft) | 68 | 121 | 57 | 131 | 66 | 86 | 105 | 34 | 62 | 104 |
| 95th Queue (ft) | 131 | 208 | 125 | 225 | 122 | 138 | 160 | 70 | 111 | 171 |
| Link Distance (ft) |  | 975 |  | 893 |  | 409 | 409 |  | 307 | 307 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  | 0 |
| Queuing Penalty (veh) |  |  |  |  |  |  |  | 150 |  | 0 |
| Storage Bay Dist (ft) | 125 |  | 100 |  | 300 |  |  |  | 0 |  |
| Storage Blk Time (\%) | 1 | 7 | 1 | 20 |  |  |  |  | 0 |  |

Intersection: 42: 25th St \& Centennial Elementary (North)

| Movement | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | T | T | T | T | R |
| Maximum Queue (ft) | 72 | 52 | 61 | 35 | 29 | 46 |
| Average Queue (ft) | 27 | 4 | 5 | 2 | 1 | 3 |
| 95th Queue (ft) | 60 | 27 | 31 | 14 | 13 | 21 |
| Link Distance (ft) |  | 421 | 421 | 409 | 409 |  |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) | 160 |  |  |  |  |  |

Queuing and Blocking Report
2045 AM Peak Hour - 5-Lane

## Intersection: 43: 25th St \& Centennial Elementary (South)/Rose Creek Dr

| Movement | EB | EB | EB | WB | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | T | R | L | R | T | TR | L | T | TR |
| Maximum Queue (ft) | 142 | 29 | 66 | 47 | 60 | 128 | 126 | 43 | 90 | 107 |
| Average Queue (ft) | 68 | 4 | 26 | 14 | 23 | 60 | 60 | 9 | 37 | 41 |
| 95th Queue (ft) | 117 | 21 | 51 | 40 | 50 | 106 | 106 | 32 | 78 | 83 |
| Link Distance (ft) |  | 397 | 397 |  | 549 | 582 | 582 |  | 421 | 421 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  | 100 |  |  |
| Storage Bay Dist (ft) | 150 |  |  | 50 |  |  |  | 0 | 0 |  |
| Storage Blk Time (\%) | 0 |  |  | 0 | 0 |  |  |  | 0 |  |

Intersection: 44: 25th St \& 44th Ave

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 43 | 31 | 29 | 43 | 46 | 28 | 23 | 22 |
| Average Queue (ft) | 19 | 19 | 2 | 3 | 3 | 3 | 1 | 2 |
| 95th Queue ( ft$)$ | 43 | 43 | 15 | 19 | 21 | 15 | 10 | 14 |
| Link Distance (ft) | 485 | 454 |  | 354 | 354 |  | 582 | 582 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  | 100 |  |  | 100 |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |  |  |

Intersection: 45: 25th St \& Carrie Rose Ln

| Movement | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LR | T | TR | L | T | T |
| Maximum Queue (ft) | 35 | 39 | 38 | 24 | 18 | 22 |
| Average Queue (ft) | 12 | 2 | 2 | 2 | 1 | 1 |
| 95th Queue (ft) | 37 | 18 | 14 | 14 | 9 | 10 |
| Link Distance (ft) | 483 | 1173 | 1173 |  | 354 | 354 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |

Queuing and Blocking Report
2045 AM Peak Hour - 5-Lane

## Intersection: 50: 25th St \& Rose Creek Pkwy

| Movement | EB | EB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | R | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 35 | 31 | 45 | 15 | 24 | 32 | 24 | 42 | 31 |
| Average Queue ( ft$)$ | 9 | 5 | 17 | 1 | 2 | 3 | 3 | 3 | 2 |
| 95th Queue (ft) | 32 | 24 | 43 | 8 | 15 | 20 | 17 | 22 | 16 |
| Link Distance (ft) |  |  | 642 |  | 300 | 300 |  | 1173 | 1173 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) | 75 | 25 |  | 150 |  |  | 150 |  |  |
| Storage Blk Time (\%) |  | 1 |  |  |  |  |  |  |  |

Intersection: 52: 25th St \& Meadow Creek Dr

| Movement | EB | NB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LR | L | T | T | T | TR |
| Maximum Queue (ft) | 53 | 24 | 29 | 36 | 36 | 18 |
| Average Queue (ft) | 24 | 3 | 2 | 2 | 2 | 1 |
| 95th Queue (ft) | 51 | 16 | 14 | 17 | 17 | 9 |
| Link Distance (ft) | 476 |  | 759 | 759 | 300 | 300 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 150 |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |

Intersection: 54: 25th St \& Rose Creek Blvd

| Movement | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LR | T | TR | L | T |
| Maximum Queue (ft) | 79 | 32 | 46 | 39 | 22 |
| Average Queue (ft) | 38 | 2 | 3 | 9 | 1 |
| 95th Queue (ft) | 64 | 16 | 20 | 32 | 10 |
| Link Distance (ft) | 582 | 720 | 720 |  | 759 |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |

Queuing and Blocking Report
2045 AM Peak Hour - 5-Lane
10/18/2022

## Intersection: 55: 25th St \& 52nd Ave

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | NB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | T | T | R | L | T | T | R | L | L | T | TR |
| Maximum Queue (ft) | 209 | 172 | 171 | 217 | 90 | 277 | 239 | 72 | 218 | 229 | 112 | 136 |
| Average Queue ( ft ) | 106 | 98 | 91 | 100 | 33 | 164 | 141 | 27 | 125 | 147 | 48 | 71 |
| 95th Queue (ft) | 181 | 161 | 156 | 170 | 68 | 238 | 215 | 56 | 193 | 215 | 97 | 124 |
| Link Distance (ft) |  | 891 | 891 |  |  | 1174 | 1174 |  |  | 290 | 290 | 290 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) | 400 |  |  | 325 |  |  | 325 | 225 |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  | 0 |  |  | 0 | 0 |  |  |
| Queuing Penalty (veh) |  |  |  |  |  | 0 |  |  | 0 | 1 |  |  |

Intersection: 55: 25th St \& 52nd Ave

| Movement | SB | SB | SB |
| :--- | ---: | ---: | ---: |
| Directions Served | L | T | TR |
| Maximum Queue (ft) | 116 | 184 | 224 |
| Average Queue (ft) | 44 | 91 | 123 |
| 95th Queue (ft) | 91 | 155 | 196 |
| Link Distance (ft) |  | 720 | 720 |
| Upstream Blk Time (\%) |  |  |  |
| Queuing Penalty (veh) |  |  |  |
| Storage Bay Dist (ft) | 200 | 0 |  |
| Storage Blk Time (\%) |  | 0 |  |
| Queuing Penalty (veh) |  | 0 |  |

Intersection: 56: 25th St \& Don's Carwash

| Movement | EB | NB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | R | T | T | T | T | TR |
| Maximum Queue (ft) | 40 | 57 | 12 | 28 | 59 | 49 |
| Average Queue (ft) | 6 | 5 | 1 | 2 | 4 | 6 |
| 95th Queue (ft) | 27 | 31 | 6 | 14 | 29 | 30 |
| Link Distance (ft) | 461 |  | 204 | 204 | 290 | 290 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 25 |  |  |  |  |
| Storage Blk Time (\%) |  | 1 | 0 |  |  |  |
| Queuing Penalty (veh) |  | 1 | 0 |  |  |  |

Queuing and Blocking Report
2045 AM Peak Hour - 5-Lane
Intersection: 57: 25th St \& 53rd Ave

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 70 | 68 | 50 | 47 | 36 | 32 | 22 | 20 |
| Average Queue (ft) | 30 | 26 | 18 | 3 | 2 | 6 | 1 | 1 |
| 95th Queue (ft) | 59 | 56 | 45 | 23 | 17 | 24 | 10 | 12 |
| Link Distance (ft) | 490 | 445 |  | 563 | 563 |  | 204 | 204 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  | 125 |  |  | 125 |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |  |  |

## Intersection: 60: 25th St \& Prairie Grove Ave/Shanley HS (North)

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue ( ft$)$ | 50 | 105 | 34 | 35 | 37 | 87 | 22 | 45 |
| Average Queue $(\mathrm{ft})$ | 16 | 49 | 6 | 3 | 2 | 34 | 2 | 3 |
| 95th Queue (ft) | 43 | 86 | 23 | 18 | 18 | 64 | 13 | 22 |
| Link Distance (ft) | 451 | 505 |  | 296 | 296 |  | 563 | 563 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  | 150 |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |  |  |

## Intersection: 65: 25th St \& Eaglebrook Apts/Shanley HS (South)

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue ( ft$)$ | 82 | 53 | 29 | 40 | 38 | 68 | 32 | 43 |
| Average Queue ft$)$ | 30 | 21 | 3 | 3 | 4 | 29 | 2 | 3 |
| 95th Queue (ft) | 61 | 48 | 16 | 20 | 20 | 59 | 14 | 21 |
| Link Distance (ft) | 527 | 543 |  | 779 | 779 |  | 243 | 243 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |
| Storage Bay Dist ( ft$)$ |  |  | 150 |  |  | 150 |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |  |  |

Queuing and Blocking Report
2045 AM Peak Hour - 5-Lane
Intersection: 70: 25th St \& 58th Ave

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LT | TR | LT | TR |
| Maximum Queue (ft) | 48 | 83 | 64 | 58 | 53 | 21 |
| Average Queue (ft) | 18 | 33 | 24 | 4 | 11 | 1 |
| 95th Queue (ft) | 45 | 68 | 58 | 26 | 38 | 13 |
| Link Distance (ft) | 525 | 502 | 622 | 622 | 779 | 779 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |

Intersection: 75: 25th St \& 60th Ave

| Movement | WB | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | R | T | TR | L | T | T |
| Maximum Queue (ft) | 40 | 59 | 27 | 28 | 25 | 19 | 39 |
| Average Queue (ft) | 13 | 27 | 1 | 2 | 3 | 2 | 2 |
| 95th Queue (ft) | 40 | 50 | 13 | 16 | 17 | 12 | 16 |
| Link Distance (ft) | 461 |  | 636 | 636 |  | 622 | 622 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 50 |  |  |  |  |  |
| Storage Blk Time (\%) | 0 | 0 |  |  |  |  |  |
| Queuing Penalty (veh) | 0 | 0 |  |  |  |  |  |

Intersection: 80: 25th St \& 62nd Ave

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LT | R | LT | R | L | T | TR | L | T | TR |
| Maximum Queue ( ft$)$ | 45 | 31 | 40 | 61 | 25 | 19 | 27 | 24 | 13 | 28 |
| Average Queue ft$)$ | 15 | 7 | 16 | 26 | 2 | 1 | 1 | 3 | 1 | 2 |
| 95th Queue (ft) | 42 | 28 | 42 | 51 | 13 | 11 | 14 | 16 | 6 | 15 |
| Link Distance (ft) | 506 |  | 483 |  |  | 783 | 783 |  | 636 | 636 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |  |  |
| Storage Bay Dist ( ft$)$ |  | 50 |  | 150 | 150 |  |  | 150 |  |  |
| Storage Blk Time (\%) | 1 | 0 |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) | 0 | 0 |  |  |  |  |  |  |  |  |

Intersection: 85: 25th St \& 64th Ave

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LT | TR | LT | TR |
| Maximum Queue (ft) | 94 | 61 | 81 | 41 | 61 | 54 |
| Average Queue (ft) | 41 | 18 | 24 | 2 | 19 | 9 |
| 95th Queue (ft) | 77 | 49 | 62 | 16 | 50 | 37 |
| Link Distance (ft) | 751 | 723 | 1222 | 1222 | 783 | 783 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |

Intersection: 100: 27th St \& 52nd Ave

| Movement | EB | EB | EB | WB | WB | WB | NB | NB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | T | T | R | L | T | T | L | R |
| Maximum Queue (ft) | 164 | 253 | 50 | 48 | 237 | 242 | 100 | 76 |
| Average Queue (ft) | 78 | 84 | 18 | 14 | 86 | 106 | 55 | 30 |
| 95th Queue ( ft ) | 143 | 169 | 46 | 40 | 190 | 208 | 95 | 57 |
| Link Distance (ft) | 703 | 703 |  |  | 891 | 891 |  | 361 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  | 100 |  |
| Storage Bay Dist (ft) |  |  | 175 | 300 |  | 0 | 0 |  |
| Storage Blk Time (\%) |  | 1 |  |  | 0 |  | 0 | 0 |
| Queuing Penalty (veh) | 0 |  |  | 0 |  | 0 |  |  |
|  |  |  |  |  |  |  |  |  |
| Network Summary |  |  |  |  |  |  |  |  |

## Network wide Queuing Penalty: 66

HCM 6th TWSC
10: 25th St \& Kirsten Ln





HCM 6th TWSC
23: 25th St \& Casey's Driveway



| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0.4 |  |  |  |  |  |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | Mr |  | 1 | 4 | 个 |  |
| Traffic Vol, veh/h | 22 | 11 | 11 | 747 | 409 | 6 |
| Future Vol, veh/h | 22 | 11 | 11 | 747 | 409 | 6 |
| Conflicting Peds, \#/hr | 5 | 5 | 5 | 0 | 0 | 5 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 150 | - | - | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 24 | 12 | 12 | 812 | 445 | 7 |



| Intersection |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 1.2 |  |  |  |  |  |
| Movement | WBL | WBR | NBT | NBR | SBL |  |
| Lane Configurations | ${ }_{1}$ | Tr | 中\% |  | \% | 44 |
| Traffic Vol, veh/h | 11 | 80 | 678 | 11 | 32 | 388 |
| Future Vol, veh/h | 11 | 80 | 678 | 11 | 32 | 388 |
| Conflicting Peds, \#/hr | 5 | 5 | 0 | 5 | 5 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 100 | - | - | 150 | - |
| Veh in Median Storage, \# | \# 0 | - | 0 | - | - | 0 |
| Grade, \% | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 12 | 87 | 737 | 12 | 35 | 422 |



HCM 6th TWSC
35: 25th St \& 38th Ave



| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 0.8 |  |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |  |
| Lane Configurations |  | \$ |  |  | $\uparrow$ |  | \% | 个t |  | 7 | 虾 |  |  |
| Traffic Vol, veh/h | 11 | 0 | 22 | 11 | 0 | 11 | 6 | 625 | 11 |  | 414 |  |  |
| Future Vol, veh/h | 11 | 0 | 22 | 11 | 0 | 11 | 6 | 625 | 11 | 6 | 414 | 6 |  |
| Conflicting Peds, \#/hr | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 |  |
| Sign Control S | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |  |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |  |
| Storage Length | - | - | - | - | - | - | 75 | - | - | 150 | - | - |  |
| Veh in Median Storage, \# | \# | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |  |
| Grade, \% | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |  |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |  |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |  |
| Mvmt Flow | 12 | 0 | 24 | 12 | 0 | 12 | 7 | 679 | 12 | 7 | 450 | 7 |  |



HCM 6th TWSC
44: 25th St \& 44th Ave



HCM 6th TWSC
45: 25th St \& Carrie Rose Ln
10/18/2022

| Intersection |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 0.2 |  |  |  |  |  |
| Movement W | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | * |  | 中 $\uparrow$ |  | ${ }^{1}$ | 中4 |
| Traffic Vol, veh/h | 6 | 6 | 582 | 6 | 6 | 419 |
| Future Vol, veh/h | 6 | 6 | 582 | 6 | 6 | 419 |
| Conflicting Peds, \#/hr | 5 | 5 | 0 | 5 | 5 | 0 |
| Sign Control Star | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 100 | - |
| Veh in Median Storage, \# | \# 0 | - | 0 | - | - | 0 |
| Grade, \% | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 7 | 7 | 633 | 7 | 7 | 455 |



HCM 6th TWSC
50：25th St \＆Rose Creek Pkwy

| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay，s／veh | 0.6 |  |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |  |
| Lane Configurations | ${ }^{7}$ | $\uparrow$ | 「 |  | $\uparrow$ |  | 7 | 蛒 |  | \％ | 颜 |  |  |
| Traffic Vol，veh／h | 11 | 0 | 6 | 6 | 0 | 16 | 6 | 561 | 11 | 6 | 413 | 6 |  |
| Future Vol，veh／h | 11 | 0 | 6 | 6 | 0 | 16 | 6 | 561 | 11 | 6 | 413 | 6 |  |
| Conflicting Peds，\＃／hr | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 |  |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |  |
| RT Channelized | － | － | None | － | － | None | － |  | None | － |  | None |  |
| Storage Length | 75 | － | 25 | － | － | － | 150 | － | － | 150 | － | － |  |
| Veh in Median Storage，\＃ | \＃ | 0 | － | － | 0 | － | － | 0 | － | － | 0 | － |  |
| Grade，\％ | － | 0 | － | － | 0 | － | － | 0 | － | － | 0 | － |  |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |  |
| Heavy Vehicles，\％ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |  |
| Mvmt Flow | 12 | 0 | 7 | 7 | 0 | 17 | 7 | 610 | 12 | 7 | 449 | 7 |  |


HCM LOS C B

| Minor Lane／Major Mvmt | NBL | NBT | NBR EBLn1 EBLn2 EBLn3WBLn1 | SBL | SBT | SBR |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Capacity（veh／h） | 1091 | - | - | 265 | - | 756 | 445 | 946 | - |

HCM 6th TWSC
52: 25th St \& Meadow Creek Dr
10/18/2022

| Intersection |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 0.6 |  |  |  |  |  |
| Movement | EBL | EBR | NBL | NBT | SBT |  |
| Lane Configurations | * |  | ${ }^{7}$ | 44 | 中 ${ }^{\text {a }}$ |  |
| Traffic Vol, veh/h | 27 | 16 | 6 | 551 | 414 | 11 |
| Future Vol, veh/h | 27 | 16 | 6 | 551 | 414 | 11 |
| Conflicting Peds, \#/hr | 5 | 5 | 5 | 0 | 0 | 5 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 150 | - | - | - |
| Veh in Median Storage, \# | \# 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 29 | 17 | 7 | 599 | 450 | 12 |



HCM 6th TWSC
54: 25th St \& Rose Creek Blvd
10/18/2022

| Intersection |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 1.2 |  |  |  |  |  |
| Movement | WBL | WBR | NBT | NBR | SBL |  |
| Lane Configurations | * |  | 中\% |  | $\cdots$ | 44 |
| Traffic Vol, veh/h | 27 | 53 | 504 | 11 | 16 | 414 |
| Future Vol, veh/h | 27 | 53 | 504 | 11 | 16 | 414 |
| Conflicting Peds, \#/hr | 5 | 5 | 0 | 5 | 5 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 150 | - |
| Veh in Median Storage, \# | \# 0 | - | 0 | - | - | 0 |
| Grade, \% | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 29 | 58 | 548 | 12 | 17 | 450 |


| Major/Minor M | Minor1 |  | Major1 |  | Major2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 823 | 290 | 0 | 0 | 565 | 0 |
| Stage 1 | 559 | - | - | - | - | - |
| Stage 2 | 264 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | 312 | 707 | - | - | 1003 | - |
| Stage 1 | 536 | - | - | - | - | - |
| Stage 2 | 756 | - | - | - | - | - |
| Platoon blocked, \% |  |  | - | - |  | - |
| Mov Cap-1 Maneuver | 304 | 700 | - | - | 998 | - |
| Mov Cap-2 Maneuver | 304 | - | - | - | - | - |
| Stage 1 | 533 | - | - | - | - | - |
| Stage 2 | 739 | - | - | - | - | - |
|  |  |  |  |  |  |  |
| Approach | WB |  | NB |  | SB |  |
| HCM Control Delay, s | 14 |  | 0 |  | 0.3 |  |
| HCM LOS | B |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | NBT | NBRWBLn1 |  | SBL | SBT |
| Capacity (veh/h) |  | - | - | 486 | 998 | - |
| HCM Lane V/C Ratio |  | - | - | 0.179 | 0.017 | - |
| HCM Control Delay (s) |  | - | - | 14 | 8.7 | - |
| HCM Lane LOS |  | - | - | B | A | - |
| HCM 95th \%tile Q(veh) |  | - |  | 0.6 | 0.1 | - |

HCM 6th TWSC
56: 25th St \& Don's Carwash



HCM 6th TWSC
57: 25th St \& 53rd Ave



HCM 6th TWSC
60: 25th St \& Prairie Grove Ave/Shanley HS (North)



HCM 6th TWSC
65: 25th St \& Eaglebrook Apts/Shanley HS (South)



HCM 6th Roundabout
70: 25th St \& 58th Ave
10/18/2022

| Intersection |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Intersection Delay, s/veh | 5.4 |  |  |  |  |  |  |  |
| Intersection LOS | A |  |  |  |  |  |  |  |
| Approach |  | EB |  | WB |  | NB |  | SB |
| Entry Lanes |  | 1 |  | 1 |  | 2 |  | 2 |
| Conflicting Circle Lanes |  | 2 |  | 2 |  | 2 |  | 2 |
| Adj Approach Flow, veh/h |  | 67 |  | 193 |  | 644 |  | 558 |
| Demand Flow Rate, veh/h |  | 68 |  | 196 |  | 657 |  | 569 |
| Vehicles Circulating, veh/h |  | 624 |  | 644 |  | 120 |  | 82 |
| Vehicles Exiting, veh/h |  | 27 |  | 133 |  | 572 |  | 758 |
| Ped Vol Crossing Leg, \#/h |  | 5 |  | 5 |  | 5 |  | 5 |
| Ped Cap Adj |  | 0.999 |  | 0.999 |  | 0.995 |  | 0.995 |
| Approach Delay, s/veh |  | 5.2 |  | 7.0 |  | 5.4 |  | 4.8 |
| Approach LOS |  | A |  | A |  | A |  | A |
| Lane | Left |  | Left |  | Left | Right | Left | Right |
| Designated Moves | LTR |  | LTR |  | LT | TR | LT | TR |
| Assumed Moves | LTR |  | LTR |  | LT | TR | LT | TR |
| RT Channelized |  |  |  |  |  |  |  |  |
| Lane Util | 1.000 |  | 1.000 |  | 0.470 | 0.530 | 0.469 | 0.531 |
| Follow-Up Headway, s | 2.535 |  | 2.535 |  | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s | 4.328 |  | 4.328 |  | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h | 68 |  | 196 |  | 309 | 348 | 267 | 302 |
| Cap Entry Lane, veh/h | 835 |  | 821 |  | 1209 | 1282 | 1252 | 1324 |
| Entry HV Adj Factor | 0.981 |  | 0.984 |  | 0.980 | 0.981 | 0.983 | 0.980 |
| Flow Entry, veh/h | 67 |  | 193 |  | 303 | 342 | 262 | 296 |
| Cap Entry, veh/h | 819 |  | 808 |  | 1179 | 1252 | 1223 | 1291 |
| V/C Ratio | 0.081 |  | 0.239 |  | 0.257 | 0.273 | 0.214 | 0.229 |
| Control Delay, s/veh | 5.2 |  | 7.0 |  | 5.4 | 5.3 | 4.8 | 4.8 |
| LOS | A |  | A |  | A | A | A | A |
| 95th \%tile Queue, veh | 0 |  | 1 |  | 1 | 1 | 1 | 1 |


| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0.8 |  |  |  |  |  |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | $\mathbf{T}$ | $\mathbf{7}$ | $\mathbf{4} \boldsymbol{F}$ |  | $\mathbf{1}$ | 个4 |
| Traffic Vol, veh/h | 22 | 48 | 544 | 12 | 8 | 508 |
| Future Vol, veh/h | 22 | 48 | 544 | 12 | 8 | 508 |
| Conflicting Peds, \#/hr | 5 | 5 | 0 | 5 | 5 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 50 | - | - | 150 | - |
| Veh in Median Storage, \# | 0 | - | 0 | - | - | 0 |
| Grade, \% | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 24 | 52 | 591 | 13 | 9 | 552 |





| Minor Lane/Major Mvmt | NBL | NBT | NBR EBLn1 EBLn2WBLn1WBLn2 | SBL | SBT | SBR |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Capacity (veh/h) | 991 | - | -203 | 695 | 213 | 701 | 1000 | - | - |
| HCM Lane V/C Ratio | 0.008 | - | -0.112 | 0.011 | 0.122 | 0.064 | 0.009 | - | - |
| HCM Control Delay (s) | 8.7 | - | - | 25 | 10.2 | 24.2 | 10.5 | 8.6 | - |
| HCM Lane LOS | A | - | - | D | B | C | B | A | - |
| HCM 95th \%tile Q(veh) | 0 | - | - | 0.4 | 0 | 0.4 | 0.2 | 0 | - |

HCM 6th Roundabout
85: 25th St \& 64th Ave
10/18/2022

| Intersection |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Intersection Delay, s/veh | 5.8 |  |  |  |  |  |  |  |
| Intersection LOS | A |  |  |  |  |  |  |  |
| Approach |  | EB |  | WB |  | NB |  | SB |
| Entry Lanes |  | 1 |  | 1 |  | 2 |  | 2 |
| Conflicting Circle Lanes |  | 2 |  | 2 |  | 2 |  | 2 |
| Adj Approach Flow, veh/h |  | 323 |  | 91 |  | 597 |  | 585 |
| Demand Flow Rate, veh/h |  | 329 |  | 93 |  | 609 |  | 596 |
| Vehicles Circulating, veh/h |  | 507 |  | 652 |  | 122 |  | 168 |
| Vehicles Exiting, veh/h |  | 257 |  | 79 |  | 714 |  | 577 |
| Ped Vol Crossing Leg, \#/h |  | 5 |  | 5 |  | 5 |  | 5 |
| Ped Cap Adj |  | 0.999 |  | 0.999 |  | 0.995 |  | 0.995 |
| Approach Delay, s/veh |  | 8.0 |  | 5.7 |  | 5.2 |  | 5.4 |
| Approach LOS |  | A |  | A |  | A |  | A |
| Lane | Left |  | Left |  | Left | Right | Left | Right |
| Designated Moves | LTR |  | LTR |  | LT | TR | LT | TR |
| Assumed Moves | LTR |  | LTR |  | LT | TR | LT | TR |
| RT Channelized |  |  |  |  |  |  |  |  |
| Lane Util | 1.000 |  | 1.000 |  | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s | 2.535 |  | 2.535 |  | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s | 4.328 |  | 4.328 |  | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h | 329 |  | 93 |  | 286 | 323 | 280 | 316 |
| Cap Entry Lane, veh/h | 923 |  | 816 |  | 1207 | 1280 | 1157 | 1231 |
| Entry HV Adj Factor | 0.981 |  | 0.975 |  | 0.982 | 0.980 | 0.982 | 0.981 |
| Flow Entry, veh/h | 323 |  | 91 |  | 281 | 317 | 275 | 310 |
| Cap Entry, veh/h | 904 |  | 795 |  | 1178 | 1248 | 1130 | 1202 |
| V/C Ratio | 0.357 |  | 0.114 |  | 0.238 | 0.254 | 0.243 | 0.258 |
| Control Delay, s/veh | 8.0 |  | 5.7 |  | 5.2 | 5.1 | 5.4 | 5.3 |
| LOS | A |  | A |  | A | A | A | A |
| 95th \%tile Queue, veh | 2 |  | 0 |  | 1 | 1 | 1 | 1 |

## 5: 25th St \& 32nd Ave Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| SBR |  |  |  |  |  |  |  |  |  |  |  |
| Denied Del/Veh (s) | 2.8 | 0.3 | 2.9 | 2.9 | 0.2 | 2.9 | 0.0 | 0.0 | 0.0 | 2.8 | 0.4 |
| Total Del/Veh (s) | 26.9 | 32.8 | 7.8 | 25.8 | 34.3 | 6.8 | 26.8 | 28.0 | 22.9 | 23.8 | 31.5 |
| 8.4 |  |  |  |  |  |  |  |  |  |  |  |

5: 25th St \& 32nd Ave Performance by movement

| Movement | All |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 1.1 |  |  |  |  |  |  |  |
| Total Del/Veh (s) | 26.1 |  |  |  |  |  |  |  |
| 10: 25 th St \& Kirsten Ln Performance by movement |  |  |  |  |  |  |  |  |

## 10: 25th St \& Kirsten Ln Performance by movement

| Movement | All |
| :--- | :--- |
| Denied Del/Veh (s) | 0.3 |
| Total DelVeh (s) | 3.7 |

15: 25th St \& 33rd Ave Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| SBR |  |  |  |  |  |  |  |  |  |  |  |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.3 | 0.1 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 12.9 | 13.2 | 4.6 | 11.3 | 16.5 | 5.3 | 6.7 | 2.0 | 2.1 | 3.7 | 0.9 |

15: 25th St \& 33rd Ave Performance by movement

| Movement | All |
| :--- | :--- |
| Denied Del/Veh (s) | 0.0 |
| Total Del/Veh $(\mathrm{s})$ | 1.7 |

20: 25th St \& 35th Ave Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| SBR |  |  |  |  |  |  |  |  |  |  |  |
| Denied Del/Veh (s) | 3.7 | 0.4 | 0.3 | 3.9 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 22.5 | 17.7 | 9.1 | 21.1 | 16.7 | 6.3 | 11.9 | 7.7 | 4.0 | 9.7 | 7.7 |

20: 25th St \& 35th Ave Performance by movement

| Movement | All |
| :--- | :---: |
| Denied Del/Veh (s) | 0.2 |
| Total Del/Veh (s) | 9.1 |

SimTraffic Performance Report
2045 PM Peak Hour - 5-Lane
10/18/2022
23: 25th St \& Casey's Driveway Performance by movement

| Movement | EBL | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 12.1 | 5.3 | 14.9 | 4.3 | 4.8 | 0.3 | 0.1 | 3.9 | 2.1 | 2.5 | 1.7 |

25: 25th St \& 36th Ave Performance by movement

| Movement | EBL | EBR | NBL | NBT | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 14.8 | 6.1 | 5.6 | 0.5 | 0.8 | 0.6 | 1.0 |

30: 25th St \& 37th Ave Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.2 | 4.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 11.8 | 3.6 | 0.5 | 0.4 | 4.2 | 0.8 | 1.1 |

35: 25th St \& 38th Ave Performance by movement

| Movement | EBL | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 11.9 | 4.0 | 9.3 | 3.7 | 4.3 | 0.5 | 0.3 | 3.3 | 1.0 | 0.6 | 1.0 |

37: 25th St \& 39th Ave Performance by movement

| Movement | EBL | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 9.7 | 5.4 | 11.0 | 4.7 | 7.6 | 1.6 | 1.5 | 4.3 | 1.0 | 0.8 | 1.5 |

40: 25th St \& 40th Ave Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| SBR |  |  |  |  |  |  |  |  |  |  |  |
| Denied Del/Veh (s) | 3.4 | 0.7 | 0.7 | 3.5 | 0.6 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 20.5 | 24.3 | 17.5 | 20.3 | 26.9 | 19.1 | 17.2 | 17.0 | 11.7 | 14.4 | 18.8 |

40: 25th St \& 40th Ave Performance by movement

| Movement | All |
| :--- | ---: |
| Denied Del/Veh (s) | 0.6 |
| Total Del/Veh (s) | 19.7 |

42: 25th St \& Centennial Elementary (North) Performance by movement

| Movement | NBL | NBT | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 5.2 | 1.1 | 1.9 | 1.9 | 1.6 |

SimTraffic Performance Report

43: 25th St \& Centennial Elementary (South)/Rose Creek Dr Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBR | NBT | NBR | SBL | SBT | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 4.2 | 0.2 | 0.1 | 4.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 10.3 | 4.7 | 4.2 | 14.2 | 3.9 | 4.5 | 2.3 | 9.6 | 5.3 | 5.3 |

44: 25th St \& 44th Ave Performance by movement

| Movement | EBL | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 10.0 | 5.8 | 8.1 | 3.6 | 4.9 | 0.3 | 0.1 | 4.1 | 1.6 | 1.5 | 1.3 |

45: 25th St \& Carrie Rose Ln Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 11.3 | 3.5 | 0.7 | 0.4 | 2.9 | 0.5 | 0.7 |

50: 25th St \& Rose Creek Pkwy Performance by movement

| Movement | EBL | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | :---: |
| Denied Del/Veh (s) | 4.2 | 4.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 12.0 | 4.7 | 12.9 | 3.9 | 5.7 | 0.4 | 0.6 | 3.7 | 1.1 | 1.2 | 1.2 |

52: 25th St \& Meadow Creek Dr Performance by movement

| Movement | EBL | EBR | NBL | NBT | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 10.0 | 3.4 | 5.1 | 0.5 | 0.7 | 0.5 | 0.8 |

54: 25th St \& Rose Creek Blvd Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 11.8 | 3.9 | 1.7 | 1.6 | 4.1 | 0.8 | 1.7 |

55: 25th St \& 52nd Ave Performance by movement

|  | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | SBR

55: 25th St \& 52nd Ave Performance by movement

| Movement | All |
| :--- | ---: |
| Denied Del/Veh (s) | 0.2 |
| Total Del/Veh (s) | 27.7 |

56: 25th St \& Don's Carwash Performance by movement

| Movement | EBR | NBT | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 5.2 | 0.5 | 1.9 | 1.8 | 1.6 |

57: 25th St \& 53rd Ave Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 20.0 | 8.9 | 15.4 | 14.0 | 5.5 | 5.0 | 0.6 | 0.4 | 2.6 | 0.7 | 0.3 | 2.3 |

60: 25th St \& Prairie Grove Ave/Shanley HS (North) Performance by movement

| Movement | EBL | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 18.5 | 5.1 | 14.6 | 5.2 | 5.2 | 0.4 | 0.2 | 3.4 | 0.6 | 0.3 | 1.3 |

65: 25th St \& Eaglebrook Apts/Shanley HS (South) Performance by movement

| Movement | EBL | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 12.8 | 5.9 | 10.1 | 3.6 | 5.2 | 0.7 | 0.3 | 3.4 | 0.4 | 0.1 | 0.9 |

70: 25th St \& 58th Ave Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| SBR |  |  |  |  |  |  |  |  |  |  |  |
| Denied Del/Veh (s) | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 4.1 | 5.0 | 2.8 | 3.1 | 3.9 | 2.4 | 3.3 | 4.5 | 2.7 | 3.8 | 5.0 |

70: 25th St \& 58th Ave Performance by movement

| Movement | All |
| :--- | :---: |
| Denied Del/Veh (s) | 0.0 |
| Total Del/Veh (s) | 4.4 |

75: 25th St \& 60th Ave Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.3 | 4.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 13.8 | 3.4 | 0.5 | 0.4 | 3.8 | 0.5 | 0.9 |

80: 25th St \& 62nd Ave Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| SBR |  |  |  |  |  |  |  |  |  |  |  |
| Denied Del/Veh (s) | 0.2 | 0.2 | 4.0 | 0.1 | 0.1 | 4.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 10.4 | 11.1 | 4.3 | 11.3 | 12.3 | 3.6 | 4.0 | 0.8 | 0.9 | 2.8 | 0.6 |

80: 25th St \& 62nd Ave Performance by movement

| Movement | All |
| :--- | :--- |
| Denied Del/Veh (s) | 0.2 |
| Total Del/Veh (s) | 1.4 |

85: 25th St \& 64th Ave Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| SBR |  |  |  |  |  |  |  |  |  |  |  |
| Denied Del/Veh (s) | 0.3 | 0.3 | 0.3 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 |
| Total Del/Veh (s) | 5.8 | 6.2 | 4.8 | 3.7 | 4.8 | 2.6 | 4.4 | 5.1 | 2.5 | 3.4 | 4.8 |

85: 25th St \& 64th Ave Performance by movement

| Movement | All |
| :--- | :--- |
| Denied Del/Veh (s) | 0.1 |
| Total DelVeh (s) | 4.8 |

100: 27th St \& 52nd Ave Performance by movement

| Movement | EBT | EBR | WBL | WBT | NBL | NBR | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.5 | 2.5 | 0.0 | 0.0 | 3.9 | 0.3 | 0.5 |
| Total Del/Veh (s) | 6.5 | 2.8 | 17.9 | 7.9 | 20.0 | 7.9 | 7.3 |

Total Network Performance

|  |  |
| :--- | ---: |
| Denied Del/Veh (s) | 1.0 |
| Total Del/Veh $(\mathrm{s})$ | 36.0 |

## Arterial Level of Service

2045 PM Peak Hour - 5-Lane

## Arterial Level of Service: NB 25th St

| Cross Street | Node | Delay (s/veh) | Travel time (s) | Dist <br> (mi) | Arterial Speed |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 64th Ave | 85 | 5.1 | 29.1 | 0.3 | 31 |
| 62nd Ave | 80 | 0.6 | 26.2 | 0.2 | 24 |
| 60th Ave | 75 | 0.5 | 14.3 | 0.1 | 34 |
| 58th Ave | 70 | 4.5 | 17.9 | 0.1 | 29 |
| Shanley HS (South) | 65 | 0.7 | 26.1 | 0.2 | 24 |
|  | 61 | 0.1 | 6.0 | 0.1 | 34 |
| Shanley HS (North) | 60 | 0.4 | 7.4 | 0.1 | 33 |
| 53rd Ave | 57 | 0.5 | 12.9 | 0.1 | 33 |
| Don's Carwash | 56 | 0.4 | 5.7 | 0.1 | 32 |
| 52nd Ave | 55 | 25.9 | 32.6 | 0.1 | 8 |
| Rose Creek Blvd | 54 | 2.6 | 19.0 | 0.2 | 30 |
| Meadow Creek Dr | 52 | 0.5 | 16.8 | 0.2 | 33 |
| Rose Creek Pkwy | 50 | 0.3 | 7.6 | 0.1 | 35 |
| Carrie Rose Ln | 45 | 0.7 | 24.9 | 0.2 | 34 |
| 44th Ave | 44 | 0.3 | 8.4 | 0.1 | 34 |
| Rose Creek Dr | 43 | 4.6 | 17.4 | 0.1 | 26 |
| Centennial Elementar | 42 | 1.1 | 10.8 | 0.1 | 30 |
| 40th Ave | 40 | 17.0 | 25.8 | 0.1 | 12 |
| 39th Ave | 37 | 2.3 | 9.7 | 0.1 | 27 |
| 38th Ave | 35 | 0.5 | 13.0 | 0.1 | 34 |
| 37th Ave | 30 | 0.5 | 13.2 | 0.1 | 34 |
| 36th Ave | 25 | 0.5 | 13.2 | 0.1 | 33 |
| Casey's Driveway | 23 | 0.3 | 7.4 | 0.1 | 34 |
| 35th Ave | 20 | 7.8 | 23.6 | 0.2 | 24 |
| 33rd Ave | 15 | 2.2 | 23.5 | 0.2 | 32 |
| Kirsten Ln | 10 | 0.7 | 6.6 | 0.1 | 31 |
| 32nd Ave | 5 | 27.5 | 34.9 | 0.1 | 8 |
| Total |  | 108.2 | 454.1 | 3.3 | 26 |

Arterial Level of Service
2045 PM Peak Hour - 5-Lane

## Arterial Level of Service: SB 25th St

| Cross Street | Node | Delay (s/veh) | Travel time (s) | Dist <br> (mi) | Arterial Speed |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 32nd Ave | 5 | 31.5 | 47.0 | 0.2 | 12 |
| Kirsten Ln | 10 | 4.2 | 12.6 | 0.1 | 22 |
| 33rd Ave | 15 | 0.8 | 6.8 | 0.1 | 30 |
| 35th Ave | 20 | 7.8 | 28.8 | 0.2 | 26 |
| Casey's Driveway | 23 | 2.3 | 18.5 | 0.2 | 30 |
| 36th Ave | 25 | 0.8 | 7.9 | 0.1 | 32 |
| 37th Ave | 30 | 0.8 | 13.3 | 0.1 | 33 |
| 38th Ave | 35 | 1.0 | 13.7 | 0.1 | 32 |
| 39th Ave | 37 | 1.0 | 13.6 | 0.1 | 32 |
| 40th Ave | 40 | 18.8 | 26.3 | 0.1 | 10 |
| Centennial Elementar | 42 | 2.4 | 11.8 | 0.1 | 27 |
| Centennial Elementar | 43 | 5.3 | 14.4 | 0.1 | 23 |
| 44th Ave | 44 | 1.7 | 14.7 | 0.1 | 31 |
| Carrie Rose Ln | 45 | 0.5 | 8.9 | 0.1 | 32 |
| Rose Creek Pkwy | 50 | 1.1 | 25.1 | 0.2 | 34 |
| Meadow Creek Dr | 52 | 0.6 | 8.1 | 0.1 | 32 |
| Rose Creek Blvd | 54 | 0.8 | 17.0 | 0.2 | 33 |
| 52nd Ave | 55 | 32.4 | 47.9 | 0.2 | 12 |
| Don's Carwash | 56 | 3.2 | 11.5 | 0.1 | 23 |
| 53rd Ave | 57 | 0.7 | 5.9 | 0.1 | 31 |
| Prairie Grove Ave | 60 | 0.6 | 12.8 | 0.1 | 34 |
|  | 61 | 0.3 | 7.5 | 0.1 | 33 |
| Eaglebrook Apts | 65 | 0.4 | 6.2 | 0.1 | 33 |
| 58th Ave | 70 | 5.0 | 21.3 | 0.2 | 29 |
| 60th Ave | 75 | 0.4 | 22.7 | 0.1 | 23 |
| 62nd Ave | 80 | 0.5 | 14.6 | 0.1 | 33 |
| 64th Ave | 85 | 4.8 | 21.4 | 0.2 | 29 |
| Total |  | 129.7 | 460.2 | 3.2 | 25 |

Queuing and Blocking Report
2045 PM Peak Hour - 5-Lane
10/18/2022
Intersection: 5: 25th St \& 32nd Ave

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | SB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Directions Served | L | T | T | R | L | T | T | R | L | T | TR | L |
| Maximum Queue (ft) | 197 | 236 | 200 | 100 | 143 | 232 | 198 | 87 | 178 | 201 | 203 | 183 |
| Average Queue (ft) | 81 | 136 | 106 | 40 | 71 | 154 | 125 | 42 | 86 | 89 | 116 | 69 |
| 95th Queue (ft) | 145 | 206 | 180 | 80 | 120 | 218 | 191 | 72 | 152 | 166 | 186 | 137 |
| Link Distance (ft) |  | 843 | 843 |  |  | 904 | 904 |  |  | 307 | 307 |  |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) | 350 |  |  | 200 | 250 |  |  | 200 | 150 |  |  | 225 |
| Storage Blk Time (\%) |  |  | 0 |  |  | 0 | 0 |  | 1 | 1 |  | 0 |
| Queuing Penalty (veh) |  |  | 0 |  |  | 0 | 0 |  | 3 | 1 |  | 0 |

Intersection: 5: 25th St \& 32nd Ave

| Movement | SB | SB | SB |
| :--- | ---: | ---: | ---: |
| Directions Served | T | T | R |
| Maximum Queue (ft) | 254 | 240 | 146 |
| Average Queue (ft) | 155 | 125 | 52 |
| 95th Queue (ft) | 237 | 213 | 103 |
| Link Distance (ft) | 771 | 771 |  |
| Upstream Blk Time (\%) |  |  |  |
| Queuing Penalty (veh) |  |  |  |
| Storage Bay Dist (ft) |  |  | 200 |
| Storage Blk Time (\%) | 1 | 1 |  |
| Queuing Penalty (veh) | 2 | 2 |  |

Intersection: 10: 25th St \& Kirsten Ln

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue ( ft$)$ | 99 | 76 | 72 | 49 | 34 | 35 | 36 | 50 | 56 |
| Average Queue ft$)$ | 44 | 28 | 40 | 8 | 3 | 2 | 6 | 2 | 4 |
| 95th Queue (ft) | 81 | 63 | 65 | 31 | 21 | 18 | 24 | 15 | 24 |
| Link Distance (ft) | 584 | 474 |  |  | 242 | 242 |  | 307 | 307 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |  |
| Storage Bay Dist ( ft$)$ |  |  | 50 | 75 |  |  | 50 |  |  |
| Storage Blk Time (\%) |  | 2 | 2 |  | 0 |  | 0 | 0 |  |
| Queuing Penalty (veh) |  | 2 | 1 |  | 0 |  | 0 | 0 |  |

Queuing and Blocking Report
2045 PM Peak Hour - 5-Lane
Intersection: 15: 25th St \& 33rd Ave

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 43 | 54 | 29 | 34 | 42 | 40 | 52 | 49 |
| Average Queue (tt) | 18 | 22 | 2 | 2 | 3 | 9 | 5 | 5 |
| 95th Queue (ft) | 44 | 49 | 13 | 16 | 21 | 32 | 27 | 28 |
| Link Distance (ft) | 586 | 460 |  | 1021 | 1021 |  | 242 | 242 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  | 150 |  |  | 75 |  |  |
| Storage Bay Dist (tt) |  |  |  |  |  |  | 0 | 0 |

Intersection: 20: 25th St \& 35th Ave

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | TR | L | TR | L | T | TR | L | T | TR |
| Maximum Queue (tt) | 90 | 101 | 75 | 87 | 41 | 113 | 123 | 82 | 178 | 180 |
| Average Queue (ft) | 26 | 51 | 27 | 41 | 12 | 45 | 54 | 31 | 69 | 85 |
| 95th Queue (ft) | 64 | 90 | 60 | 73 | 37 | 86 | 98 | 60 | 138 | 156 |
| Link Distance (ft) |  | 572 |  | 475 |  | 754 | 754 |  | 1021 | 1021 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  | 150 |  |  |
| Storage Bay Dist (ft) | 100 |  | 100 |  | 150 |  |  |  | 0 |  |
| Storage Blk Time (\%) | 0 | 0 | 0 | 0 |  | 0 |  |  | 0 |  |

Intersection: 23: 25th St \& Casey's Driveway

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 51 | 41 | 30 | 23 | 28 | 15 | 23 | 46 |
| Average Queue (ft) | 16 | 11 | 3 | 1 | 1 | 1 | 1 | 3 |
| 95th Queue ( ft ) | 43 | 36 | 16 | 10 | 16 | 11 | 9 | 21 |
| Link Distance (ft) | 616 | 335 |  | 305 | 305 |  | 754 | 754 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  | 150 |  |  | 150 |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |  |  |

Queuing and Blocking Report
2045 PM Peak Hour - 5-Lane
Intersection: 25: 25th St \& 36th Ave

| Movement | EB | NB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LR | L | T | T | T | TR |
| Maximum Queue (ft) | 59 | 37 | 21 | 20 | 43 | 72 |
| Average Queue (tt) | 20 | 9 | 1 | 1 | 2 | 4 |
| 95th Queue (ft) | 48 | 33 | 13 | 11 | 18 | 30 |
| Link Distance (ft) | 690 |  | 582 | 582 | 305 | 305 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  | 150 |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |

Intersection: 30: 25th St \& 37th Ave

| Movement | WB | WB | NB | NB | SB | SB | SB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Directions Served | L | R | T | TR | L | T | T |
| Maximum Queue (ft) | 36 | 51 | 16 | 34 | 71 | 28 | 34 |
| Average Queue (ft) | 9 | 24 | 1 | 1 | 18 | 2 | 2 |
| 95th Queue (ft) | 32 | 49 | 11 | 13 | 51 | 14 | 17 |
| Link Distance (ft) | 439 |  | 578 | 578 |  | 582 | 582 |
| Upstream BIk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 100 |  |  | 150 |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |

Intersection: 35: 25th St \& 38th Ave

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue ( ft$)$ | 31 | 47 | 33 | 23 | 11 | 32 | 14 | 61 |
| Average Queue ft$)$ | 9 | 10 | 7 | 1 | 1 | 5 | 1 | 5 |
| 95th Queue (ft) | 32 | 36 | 26 | 10 | 7 | 22 | 8 | 32 |
| Link Distance (ft) | 448 | 428 |  | 560 | 560 |  | 578 | 578 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |
| Storage Bay Dist ( ft$)$ |  |  | 150 |  |  | 150 |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |  |  |

Queuing and Blocking Report
2045 PM Peak Hour - 5-Lane
Intersection: 37: 25th St \& 39th Ave

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue ( ft$)$ | 36 | 36 | 26 | 18 | 23 | 25 | 26 | 56 |
| Average Queue $(\mathrm{ft})$ | 10 | 11 | 9 | 1 | 1 | 4 | 2 | 4 |
| 95th Queue (ft) | 34 | 36 | 28 | 10 | 11 | 19 | 16 | 24 |
| Link Distance (ft) | 503 | 447 |  | 307 | 307 |  | 560 | 560 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  | 75 |  |  | 150 |  |  |
| Storage Bay Dist ( ft$)$ |  |  |  |  |  |  |  |  |

Intersection: 40: 25th St \& 40th Ave

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | TR | L | TR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 203 | 276 | 189 | 354 | 79 | 126 | 134 | 82 | 162 | 221 |
| Average Queue (ft) | 73 | 139 | 52 | 141 | 37 | 54 | 72 | 28 | 92 | 126 |
| 95th Queue (ft) | 142 | 242 | 122 | 253 | 73 | 100 | 119 | 62 | 155 | 204 |
| Link Distance (ft) |  | 975 |  | 89 |  | 409 | 409 |  | 307 | 307 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  | 150 |  |  |
| Storage Bay Dist (ft) | 125 |  | 100 |  | 300 |  |  | 1 |  |  |
| Storage Blk Time (\%) | 1 | 12 | 1 | 22 |  |  |  |  | 0 |  |

Intersection: 42: 25th St \& Centennial Elementary (North)

| Movement | NB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | T | T | T | T |
| Maximum Queue (ft) | 23 | 8 | 15 | 21 | 39 |
| Average Queue (ft) | 2 | 0 | 1 | 1 | 2 |
| 95th Queue ( ft ) | 15 | 5 | 7 | 13 | 20 |
| Link Distance (ft) |  | 421 | 421 | 409 | 409 |
| Upstream Blk Time (\%) |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |
| Storage Bay Dist (ft) | 160 |  |  |  |  |

Queuing and Blocking Report
2045 PM Peak Hour - 5-Lane

## Intersection: 43: 25th St \& Centennial Elementary (South)/Rose Creek Dr

| Movement | EB | EB | EB | WB | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | T | R | L | R | T | TR | L | T | TR |
| Maximum Queue (ft) | 36 | 29 | 38 | 50 | 56 | 80 | 94 | 57 | 133 | 154 |
| Average Queue (ft) | 9 | 4 | 8 | 12 | 18 | 29 | 30 | 19 | 47 | 55 |
| 95th Queue (ft) | 32 | 21 | 30 | 40 | 47 | 65 | 72 | 50 | 112 | 126 |
| Link Distance (ft) |  | 397 | 397 |  | 549 | 582 | 582 |  | 421 | 421 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  | 50 |  |  |  | 100 |  |  |
| Storage Bay Dist (ft) | 150 |  |  | 1 | 0 |  |  |  | 1 | 1 |

Intersection: 44: 25th St \& 44th Ave

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 40 | 31 | 30 | 14 | 15 | 28 | 41 | 62 |
| Average Queue (ft) | 12 | 10 | 2 | 1 | 1 | 4 | 2 | 4 |
| 95th Queue ( ft$)$ | 37 | 33 | 15 | 8 | 7 | 20 | 15 | 26 |
| Link Distance (ft) | 485 | 454 |  | 354 | 354 |  | 582 | 582 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  | 100 |  |  | 100 |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |  |  |

Intersection: 45: 25th St \& Carrie Rose Ln

| Movement | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LR | T | TR | L | T | T |
| Maximum Queue (ft) | 36 | 23 | 27 | 30 | 20 | 22 |
| Average Queue (ft) | 9 | 1 | 1 | 3 | 1 | 1 |
| 95th Queue (ft) | 33 | 9 | 14 | 17 | 14 | 12 |
| Link Distance (ft) | 483 | 1173 | 1173 |  | 354 | 354 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |

Queuing and Blocking Report
2045 PM Peak Hour - 5-Lane

## Intersection: 50: 25th St \& Rose Creek Pkwy

| Movement | EB | EB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | R | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 35 | 32 | 42 | 25 | 12 | 23 | 41 | 34 | 19 |
| Average Queue ( ft$)$ | 7 | 7 | 17 | 2 | 1 | 1 | 5 | 1 | 1 |
| 95th Queue (ft) | 29 | 27 | 43 | 13 | 7 | 10 | 23 | 12 | 10 |
| Link Distance (ft) |  |  | 642 |  | 300 | 300 |  | 1173 | 1173 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) | 75 | 25 |  | 150 |  |  | 150 |  |  |
| Storage Blk Time (\%) |  | 1 |  |  |  |  |  |  |  |

Intersection: 52: 25th St \& Meadow Creek Dr

| Movement | EB | NB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LR | L | T | T | T | TR |
| Maximum Queue ( ft$)$ | 52 | 37 | 30 | 31 | 23 | 54 |
| Average Queue $(\mathrm{ft})$ | 15 | 8 | 1 | 1 | 1 | 4 |
| 95th Queue (ft) | 43 | 31 | 11 | 12 | 11 | 24 |
| Link Distance (ft) | 476 |  | 759 | 759 | 300 | 300 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 150 |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |

Intersection: 54: 25th St \& Rose Creek Blvd

| Movement | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LR | T | TR | L | T | T |
| Maximum Queue (ft) | 59 | 30 | 32 | 56 | 31 | 51 |
| Average Queue (ft) | 25 | 2 | 2 | 12 | 2 | 3 |
| 95th Queue (ft) | 50 | 13 | 16 | 39 | 15 | 22 |
| Link Distance (ft) | 582 | 720 | 720 |  | 759 | 759 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist ( ft$)$ |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |

Queuing and Blocking Report
2045 PM Peak Hour - 5-Lane
10/18/2022

## Intersection: 55: 25th St \& 52nd Ave

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | NB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | T | T | R | L | T | T | R | L | L | T | TR |
| Maximum Queue ( $(\mathrm{tt})$ | 171 | 289 | 287 | 168 | 97 | 249 | 231 | 57 | 159 | 174 | 82 | 125 |
| Average Queue (t) | 89 | 167 | 165 | 75 | 47 | 156 | 128 | 19 | 81 | 98 | 28 | 51 |
| 95th Queue (ft) | 149 | 252 | 250 | 136 | 85 | 225 | 209 | 41 | 139 | 156 | 65 | 99 |
| Link Distance (ft) |  | 891 | 891 |  |  | 1174 | 1174 |  |  | 290 | 290 | 290 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  | 305 | 325 |  |  | 325 | 225 |  |  |  |
| Storage Bay Dist (tt) | 400 |  | 0 |  |  |  |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  | 0 |  |  |  |  |  |  |  |  |  |

Intersection: 55: 25th St \& 52nd Ave

| Movement | SB | SB | SB |
| :--- | ---: | ---: | ---: |
| Directions Served | L | T | TR |
| Maximum Queue (ft) | 134 | 156 | 212 |
| Average Queue (ft) | 64 | 75 | 124 |
| 95th Queue (ft) | 122 | 135 | 202 |
| Link Distance (ft) |  | 720 | 720 |
| Upstream Blk Time (\%) |  |  |  |
| Queuing Penalty (veh) |  |  |  |
| Storage Bay Dist (ft) | 200 |  |  |
| Storage Blk Time (\%) |  |  |  |
| Queuing Penalty (veh) |  |  |  |

Intersection: 56: 25th St \& Don's Carwash

| Movement | EB | NB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | R | T | T | T | T | TR |
| Maximum Queue (ft) | 76 | 28 | 5 | 19 | 32 | 61 |
| Average Queue (ft) | 37 | 1 | 0 | 1 | 1 | 4 |
| 95th Queue (ft) | 59 | 13 | 3 | 6 | 15 | 24 |
| Link Distance (ft) | 461 |  | 204 | 204 | 290 | 290 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 25 |  |  |  |  |
| Storage Blk Time (\%) |  | 0 | 0 |  |  |  |
| Queuing Penalty (veh) |  | 0 | 0 |  |  |  |

Queuing and Blocking Report
2045 PM Peak Hour - 5-Lane
Intersection: 57: 25th St \& 53rd Ave

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 116 | 53 | 35 | 34 | 21 | 28 | 42 | 48 |
| Average Queue (ft) | 49 | 20 | 12 | 2 | 1 | 3 | 4 | 4 |
| 95th Queue (ft) | 92 | 48 | 35 | 15 | 8 | 17 | 23 | 25 |
| Link Distance (ft) | 490 | 445 |  | 563 | 563 |  | 204 | 204 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  | 125 |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |  |  |

## Intersection: 60: 25th St \& Prairie Grove Ave/Shanley HS (North)

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue ( ft$)$ | 37 | 86 | 26 | 11 | 7 | 44 | 19 | 33 |
| Average Queue $(\mathrm{ft})$ | 11 | 36 | 5 | 1 | 0 | 11 | 2 | 2 |
| 95th Queue (ft) | 37 | 64 | 20 | 9 | 5 | 35 | 15 | 18 |
| Link Distance (ft) | 451 | 505 |  | 296 | 296 |  | 563 | 563 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  | 150 |  |  | 150 |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |  |  |

## Intersection: 65: 25th St \& Eaglebrook Apts/Shanley HS (South)

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue ( ft$)$ | 48 | 31 | 31 | 35 | 6 | 29 | 32 | 38 |
| Average Queue ft$)$ | 19 | 15 | 8 | 1 | 0 | 3 | 2 | 1 |
| 95th Queue (ft) | 47 | 41 | 29 | 13 | 4 | 16 | 13 | 17 |
| Link Distance (ft) | 527 | 543 |  | 779 | 779 |  | 243 | 243 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |
| Storage Bay Dist ( ft$)$ |  |  |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |  |  |

Queuing and Blocking Report
2045 PM Peak Hour - 5-Lane
Intersection: 70: 25th St \& 58th Ave

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LT | TR | LT | TR |
| Maximum Queue (ft) | 43 | 49 | 67 | 15 | 74 | 49 |
| Average Queue (ft) | 11 | 15 | 18 | 1 | 17 | 5 |
| 95th Queue (ft) | 37 | 44 | 49 | 7 | 54 | 27 |
| Link Distance (ft) | 525 | 502 | 622 | 622 | 779 | 779 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |

Intersection: 75: 25th St \& 60th Ave

| Movement | WB | WB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | L | R | T | TR | L | T | T |
| Maximum Queue (ft) | 42 | 55 | 21 | 21 | 47 | 23 | 34 |
| Average Queue (ft) | 12 | 20 | 1 | 2 | 17 | 1 | 2 |
| 95th Queue (ft) | 38 | 46 | 11 | 14 | 44 | 9 | 15 |
| Link Distance (ft) | 461 |  | 636 | 636 |  | 622 | 622 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |
| Storage Bay Dist (ft) |  | 50 |  |  | 150 |  |  |
| Storage Blk Time (\%) | 0 | 0 |  |  |  |  |  |
| Queuing Penalty (veh) | 0 | 0 |  |  |  |  |  |

Intersection: 80: 25th St \& 62nd Ave

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LT | R | LT | R | L | T | TR | L | T | TR |
| Maximum Queue ( ft$)$ | 46 | 31 | 53 | 32 | 25 | 22 | 27 | 36 | 21 | 24 |
| Average Queue ft$)$ | 16 | 8 | 20 | 19 | 3 | 1 | 2 | 7 | 1 | 2 |
| 95th Queue (ft) | 42 | 30 | 47 | 44 | 16 | 11 | 13 | 26 | 10 | 12 |
| Link Distance (ft) | 506 |  | 483 |  |  | 783 | 783 |  | 636 | 636 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |  |  |  |  |
| Storage Bay Dist ( ft$)$ |  | 50 |  | 150 | 150 |  |  | 150 |  |  |
| Storage Blk Time (\%) | 0 | 0 |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) | 0 | 0 |  |  |  |  |  |  |  |  |

Queuing and Blocking Report
2045 PM Peak Hour - 5-Lane
Intersection: 85: 25th St \& 64th Ave

| Movement | EB | WB | NB | NB | SB | SB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | LTR | LTR | LT | TR | LT | TR |
| Maximum Queue (ft) | 115 | 51 | 88 | 6 | 59 | 64 |
| Average Queue (tt) | 49 | 14 | 30 | 0 | 20 | 5 |
| 95th Queue (tt) | 94 | 42 | 69 | 4 | 53 | 30 |
| Link Distance (tt) | 751 | 723 | 1222 | 1222 | 783 | 783 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |
| Storage Bay Dist (tt) |  |  |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  |

Intersection: 100: 27th St \& 52nd Ave

| Movement | EB | EB | EB | WB | WB | WB | NB | NB |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Directions Served | T | T | R | L | T | T | L | R |
| Maximum Queue (ft) | 207 | 171 | 66 | 46 | 179 | 186 | 97 | 60 |
| Average Queue (ft) | 98 | 73 | 31 | 14 | 70 | 89 | 36 | 24 |
| 95th Queue (ft) | 163 | 138 | 63 | 39 | 146 | 171 | 76 | 52 |
| Link Distance (ft) | 703 | 703 |  |  | 891 | 891 |  | 361 |
| Upstream Blk Time (\%) |  |  |  |  |  |  |  |  |
| Queuing Penalty (veh) |  |  |  |  |  |  | 100 |  |
| Storage Bay Dist (ft) |  |  | 175 | 300 |  |  | 0 | 0 |
| Storage Blk Time (\%) |  | 0 |  |  |  |  | 0 | 0 |
| Queuing Penalty (veh) |  | 0 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Network Summary |  |  |  |  |  |  |  |  |

## Network wide Queuing Penalty: 57

HCM 6th TWSC
10: 25th St \& Kirsten Ln

| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 5.9 |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  | \$ |  |  | $\uparrow$ | T | ${ }^{1}$ | 性 |  | ${ }^{1}$ | 中 ${ }^{\text {P }}$ |  |
| Traffic Vol, veh/h | 53 | 6 | 27 | 38 | 6 | 101 | 16 | 483 | 11 | 22 | 773 | 75 |
| Future Vol, veh/h | 53 | 6 | 27 | 38 | 6 | 101 | 16 | 483 | 11 | 22 | 773 | 75 |
| Conflicting Peds, \#/hr | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | 50 | 75 | - | - | 50 | - | - |
| Veh in Median Storage, \# | \# | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, \% | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 58 | 7 | 29 | 41 | 7 | 110 | 17 | 525 | 12 | 24 | 840 | 82 |





HCM 6th TWSC
23: 25th St \& Casey's Driveway





| Intersection |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh |  |  |  |  |  |  |
| Movement W | NBL | WBR | NBT | NBR | SBL |  |
| Lane Configurations | ${ }^{*}$ | 「 | 中\% |  | ${ }^{7}$ | 44 |
| Traffic Vol, veh/h | 11 | 43 | 409 | 17 | 69 | 700 |
| Future Vol, veh/h | 11 | 43 | 409 | 17 | 69 | 700 |
| Conflicting Peds, \#/hr | 5 | 5 | 0 | 5 | 5 | 0 |
| Sign Control Stop | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 100 | - | - | 150 | - |
| Veh in Median Storage, \# | \# 0 | - | 0 | - | - | 0 |
| Grade, \% | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 12 | 47 | 445 | 18 | 75 | 761 |



HCM 6th TWSC
35: 25th St \& 38th Ave





HCM 6th TWSC
44: 25th St \& 44th Ave



HCM 6th TWSC
45: 25th St \& Carrie Rose Ln
10/18/2022


| Major/Minor M | Minor1 |  | Major1 |  | Major2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 714 | 210 | 0 | 0 | 404 | 0 |
| Stage 1 | 401 | - | - | - | - | - |
| Stage 2 | 313 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | 366 | 796 | - | - | 1151 | - |
| Stage 1 | 645 | - | - | - | - | - |
| Stage 2 | 715 | - | - | - | - | - |
| Platoon blocked, \% |  |  | - | - |  | - |
| Mov Cap-1 Maneuver | 360 | 788 | - | - | 1146 | - |
| Mov Cap-2 Maneuver | 471 | - | - | - | - | - |
| Stage 1 | 642 | - | - | - | - | - |
| Stage 2 | 707 | - | - | - | - | - |
|  |  |  |  |  |  |  |
| Approach | WB |  | NB |  | SB |  |
| HCM Control Delay, s | 11.2 |  | 0 |  | 0.1 |  |
| HCM LOS | B |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | NBT | NBRWBLn1 |  | SBL | SBT |
| Capacity (veh/h) |  | - | - | 590 | 1146 | - |
| HCM Lane V/C Ratio |  | - | - | 0.022 | 0.006 | - |
| HCM Control Delay (s) |  | - | - | 11.2 | 8.2 | - |
| HCM Lane LOS |  | - | - | B | A | - |
| HCM 95th \%tile Q(veh) |  | - | - | 0.1 | 0 | - |

HCM 6th TWSC
50：25th St \＆Rose Creek Pkwy

| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay，s／veh | 0.7 |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{1}$ | 4 | 「 |  | $\uparrow$ |  | ${ }^{1 /}$ | 中 ${ }^{\text {a }}$ |  | ${ }^{1 /}$ | 中 ${ }^{\text {a }}$ |  |
| Traffic Vol，veh／h | 6 | 0 | 6 | 11 | 0 | 11 | 6 | 350 | 6 | 17 | 519 | 11 |
| Future Vol，veh／h | 6 | 0 | 6 | 11 | 0 | 11 | 6 | 350 | 6 | 17 | 519 | 11 |
| Conflicting Peds，\＃／hr | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 | 5 | 0 | 5 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | － | － | None | － | － | None | － | － | None | － | － | None |
| Storage Length | 75 | － | 25 | － | － | － | 150 | － | － | 150 | － | － |
| Veh in Median Storage，\＃ | \＃ | 0 | － | － | 0 | － | － | 0 | － | － | 0 | － |
| Grade，\％ | － | 0 | － | － | 0 | － | － | 0 | － | － | 0 | － |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles，\％ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 7 | 0 | 7 | 12 | 0 | 12 | 7 | 380 | 7 | 18 | 564 | 12 |



HCM 6th TWSC
52: 25th St \& Meadow Creek Dr
10/18/2022



HCM 6th TWSC
54: 25th St \& Rose Creek Blvd
10/18/2022

| Intersection |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 0.9 |  |  |  |  |  |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | * |  | 中\% |  | ${ }_{1}$ | 44 |
| Traffic Vol, veh/h | 22 | 16 | 350 | 27 | 38 | 477 |
| Future Vol, veh/h | 22 | 16 | 350 | 27 | 38 | 477 |
| Conflicting Peds, \#/hr | 5 | 5 | 0 | 5 | 5 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 150 | - |
| Veh in Median Storage, \# | \# 0 | - | 0 | - | - | 0 |
| Grade, \% | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 24 | 17 | 380 | 29 | 41 | 518 |



HCM 6th TWSC
56: 25th St \& Don's Carwash



HCM 6th TWSC
57: 25th St \& 53rd Ave



HCM 6th TWSC
60: 25th St \& Prairie Grove Ave/Shanley HS (North)



HCM 6th TWSC
65: 25th St \& Eaglebrook Apts/Shanley HS (South)



HCM 6th Roundabout
70: 25th St \& 58th Ave
10/18/2022

| Intersection |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Intersection Delay, s/veh | 4.8 |  |  |  |  |  |  |  |
| Intersection LOS | A |  |  |  |  |  |  |  |
| Approach |  | EB |  | WB |  | NB |  | SB |
| Entry Lanes |  | 1 |  | 1 |  | 2 |  | 2 |
| Conflicting Circle Lanes |  | 2 |  | 2 |  | 2 |  | 2 |
| Adj Approach Flow, veh/h |  | 37 |  | 104 |  | 411 |  | 679 |
| Demand Flow Rate, veh/h |  | 37 |  | 106 |  | 419 |  | 692 |
| Vehicles Circulating, veh/h |  | 693 |  | 394 |  | 124 |  | 52 |
| Vehicles Exiting, veh/h |  | 51 |  | 149 |  | 606 |  | 447 |
| Ped Vol Crossing Leg, \#/h |  | 5 |  | 5 |  | 5 |  | 5 |
| Ped Cap Adj |  | 0.999 |  | 0.999 |  | 0.995 |  | 0.995 |
| Approach Delay, s/veh |  | 5.1 |  | 4.6 |  | 4.4 |  | 5.1 |
| Approach LOS |  | A |  | A |  | A |  | A |
| Lane | Left |  | Left |  | Left | Right | Left | Right |
| Designated Moves | LTR |  | LTR |  | LT | TR | LT | TR |
| Assumed Moves | LTR |  | LTR |  | LT | TR | LT | TR |
| RT Channelized |  |  |  |  |  |  |  |  |
| Lane Util | 1.000 |  | 1.000 |  | 0.470 | 0.530 | 0.470 | 0.530 |
| Follow-Up Headway, s | 2.535 |  | 2.535 |  | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s | 4.328 |  | 4.328 |  | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h | 37 |  | 106 |  | 197 | 222 | 325 | 367 |
| Cap Entry Lane, veh/h | 788 |  | 1016 |  | 1204 | 1278 | 1287 | 1359 |
| Entry HV Adj Factor | 0.996 |  | 0.979 |  | 0.980 | 0.981 | 0.982 | 0.980 |
| Flow Entry, veh/h | 37 |  | 104 |  | 193 | 218 | 319 | 360 |
| Cap Entry, veh/h | 784 |  | 993 |  | 1174 | 1247 | 1256 | 1325 |
| V/C Ratio | 0.047 |  | 0.104 |  | 0.164 | 0.175 | 0.254 | 0.272 |
| Control Delay, s/veh | 5.1 |  | 4.6 |  | 4.5 | 4.4 | 5.1 | 5.1 |
| LOS | A |  | A |  | A | A | A | A |
| 95th \%tile Queue, veh | 0 |  | 0 |  | 1 | 1 | 1 | 1 |






HCM 6th Roundabout
85: 25th St \& 64th Ave
10/18/2022

| Intersection |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Intersection Delay, s/veh | 5.8 |  |  |  |  |  |  |  |
| Intersection LOS | A |  |  |  |  |  |  |  |
| Approach |  | EB |  | WB |  | NB |  | SB |
| Entry Lanes |  | 1 |  | 1 |  | 2 |  | 2 |
| Conflicting Circle Lanes |  | 2 |  | 2 |  | 2 |  | 2 |
| Adj Approach Flow, veh/h |  | 354 |  | 56 |  | 446 |  | 496 |
| Demand Flow Rate, veh/h |  | 362 |  | 57 |  | 454 |  | 506 |
| Vehicles Circulating, veh/h |  | 454 |  | 576 |  | 207 |  | 214 |
| Vehicles Exiting, veh/h |  | 266 |  | 85 |  | 609 |  | 419 |
| Ped Vol Crossing Leg, \#/h |  | 5 |  | 5 |  | 5 |  | 5 |
| Ped Cap Adj |  | 0.999 |  | 0.999 |  | 0.995 |  | 0.995 |
| Approach Delay, s/veh |  | 8.0 |  | 4.8 |  | 5.0 |  | 5.2 |
| Approach LOS |  | A |  | A |  | A |  | A |
| Lane | Left |  | Left |  | Left | Right | Left | Right |
| Designated Moves | LTR |  | LTR |  | LT | TR | LT | TR |
| Assumed Moves | LTR |  | LTR |  | LT | TR | LT | TR |
| RT Channelized |  |  |  |  |  |  |  |  |
| Lane Util | 1.000 |  | 1.000 |  | 0.469 | 0.531 | 0.470 | 0.530 |
| Follow-Up Headway, s | 2.535 |  | 2.535 |  | 2.667 | 2.535 | 2.667 | 2.535 |
| Critical Headway, s | 4.328 |  | 4.328 |  | 4.645 | 4.328 | 4.645 | 4.328 |
| Entry Flow, veh/h | 362 |  | 57 |  | 213 | 241 | 238 | 268 |
| Cap Entry Lane, veh/h | 965 |  | 870 |  | 1116 | 1191 | 1109 | 1184 |
| Entry HV Adj Factor | 0.979 |  | 0.989 |  | 0.984 | 0.980 | 0.980 | 0.981 |
| Flow Entry, veh/h | 354 |  | 56 |  | 210 | 236 | 233 | 263 |
| Cap Entry, veh/h | 944 |  | 860 |  | 1092 | 1162 | 1081 | 1156 |
| V/C Ratio | 0.375 |  | 0.066 |  | 0.192 | 0.203 | 0.216 | 0.227 |
| Control Delay, s/veh | 8.0 |  | 4.8 |  | 5.0 | 4.9 | 5.3 | 5.2 |
| LOS | A |  | A |  | A | A | A | A |
| 95th \%tile Queue, veh | 2 |  | 0 |  | 1 | 1 | 1 | 1 |

FM REGIONAL TRANSPORTATION PLANNING ORGANIZATION

APPENDIX C - CONCEPT DESIGNS

## 25TH STREET CORRIDOR STUDY























[^0]:    "-" indicates that data is unavailable at the moment

[^1]:    The first letter represents the overall intersection level of service, while the second letter represents the worst side-street approach. For signalized intersections, the delay shown is for the overall intersection, while for unsignalized intersections, the delay shown is for the worst side-street approach.

