

**SAUGATUCK  
TOWNSHIP**

**Tri-Community Non-Motorized Trail Study Committee Agenda  
June 25, 2021 at 2:00 pm**

- 1. Call to Order**
- 2. Roll Call**
- 3. Approval of Minutes:**
  - A. Regular Meeting Minutes of May 7, 2021 (ROLL CALL)**
- 4. Agenda Changes (Additions/Deletions) (ROLL CALL)**
- 5. Guest Speakers:**
- 6. Public Comments (3 minutes)**
- 7. Unfinished Business**
- 8. New Business:**
  - A. Potential Traffic Study in Coordination with Allegan County Road Commission**
  - B. Blue Star Highway and Lake Street Traffic Signal**
  - C. Recap Of Emergency Services Input**
  - D. Trail Site Inspection Review**
  - E. Recap Of Funding Agency Contact Discussions & Directions**
  - F. Review Of Previous/Future Traffic Study & Signal Recommendations**
- 9. Public Comments (3 minutes)**
- 10. Communications:**
- 11. Committee Comments**
- 12. Adjourn (ROLL CALL)**

**NOTICE:**

This public meeting will be held using **Zoom** video/audio conference technology due to the COVID-19 restrictions currently in place.

Join online by visiting:

<https://us02web.zoom.us/j/2698572603>

Join by phone by dialing:

**(312) 626-6799**

-or-


**(646) 518-9805**

Then enter "Meeting ID":

**2698572603**

Please send questions or comments regarding meeting agenda items prior to meeting to:  
[hleo@saugatuckcity.com](mailto:hleo@saugatuckcity.com)


# LEGEND

 EXISTING BLUE STAR TRAIL:

**(A)** Connecting Saugatuck City to Saugatuck Twp. and the Beeline Trail to Holland

**(B)** North St. to Old Allegan Rd.

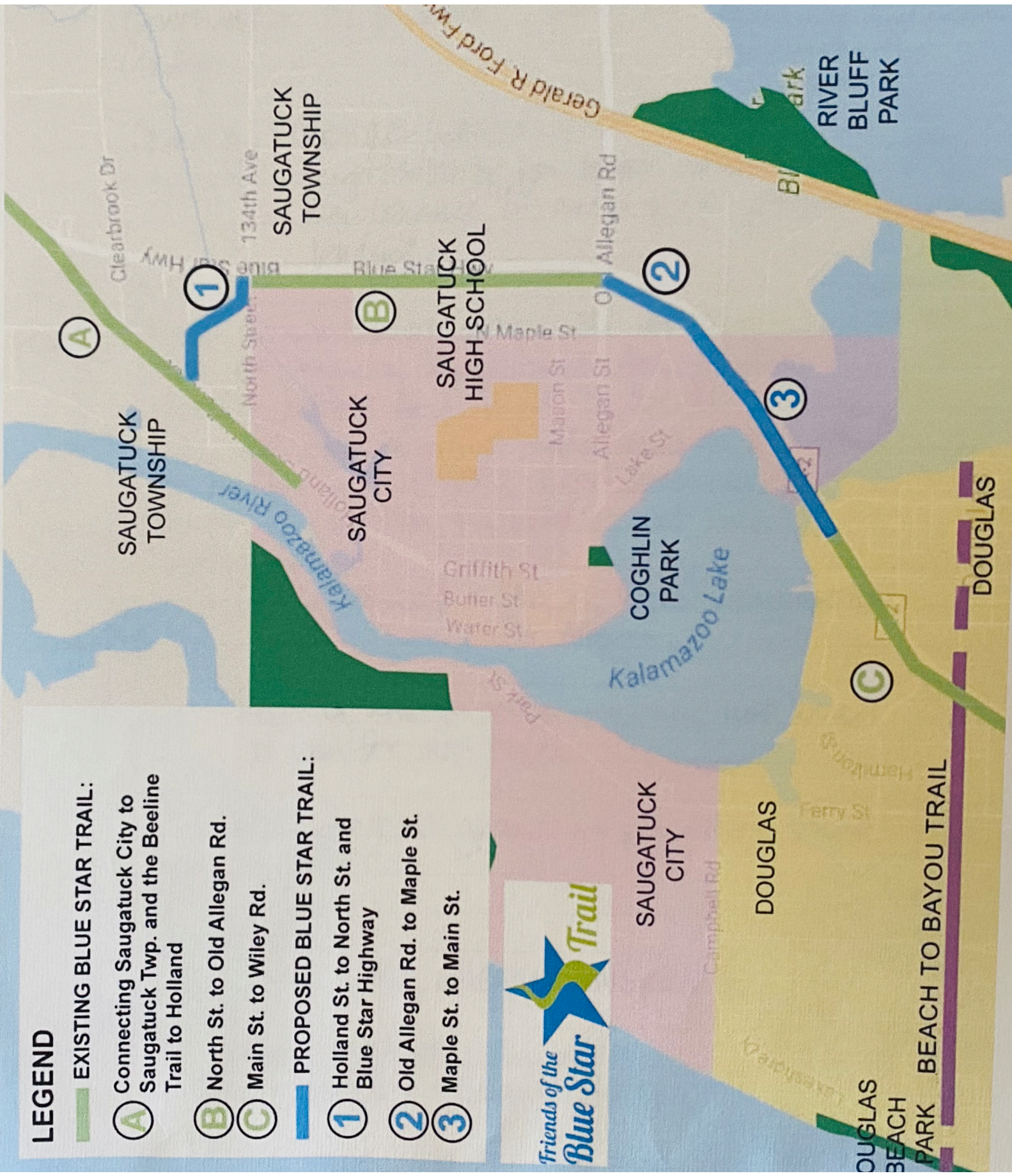
**(C)** Main St. to Wiley Rd.

 PROPOSED BLUE STAR TRAIL:

**1** Holland St. to North St. and Blue Star Highway

**2** Old Allegan Rd. to Maple St.

**3** Maple St. to Main St.



# Tri-Community Trail Committee (TCC)

**Minutes: May 7, 2021 Meeting**

Meeting commenced at 2:01 PM.

**Present:** Brenda Marcy, Cindy Osman , Kathy Mooradian, Holly Leo, John Adams, Richard Donovan. **Also attending:** Ryan Heis, Joe Frey and Nick Wikar attending in place of Rich Labombard, Douglas City Manager and Craig Atwood of Allegan Road commission. **Missing:** Ken Trester, Jerry Donovan

Motion to approve agenda made by Osman, seconded by R. Donovan. Motion passed.

Motion to approve minutes from previous meeting made by Mooradian, seconded by Adams.

**Public comments.** None

**No Unfinished business.**

## **New Business:**

Leo introduced Larry Fox , Managing Principle at C2AE, the chosen engineering firm, to share a presentation of the project and it's timeline/ expected outcomes.

Fox introduced other team members that were on the zoom then spoke of what he would be presenting, specifically the Project Management plan for phase one, a summary of what engineering has been done to date by others, and that he would share how his team would communicate with the TCC team and the public. In addition, we would see the firm's view of the timeline for the project.

Fox proceeded then to go through his slide presentation, taking questions and comments along the way from the committee. *Note: the presentation presented can be found in the packet that came with the meeting.*

**Highlights:** Scope of the project with goals and objectives reviewed. R. Donovan requested that grant applications, being a key to success, be added specifically to the goals and objectives section. They are in the schematic design piece now where they are gathering existing data. IE. They are looking into whether any endangered species issues or historic situations exist. They will plat out the most relevant site drawings.

They will give TCC a written report monthly and Fox hopes to attend TCC meetings to give a verbal updates as well so that all three communities get update reports to their councils from the TCC representatives. There will be resolutions to approve along the way by each municipality.

Grants were named. TAP and Trust Fund grants are available. Still working on who goes for them, our three communities, Allegan county etc. Important to please MDOT in the process. It was discussed how important it is in winning grants that we work together and establish a strong platform for the public comment which C2AE has planned for.

Fox asked that he get all the traffic studies ASAP. Heis will get all he has to him.

Fox shared his ideas for stakeholders. The committee added some: Lt. Brett Ensfield, Allegan county Sheriff, Steve Kent, Chief of Police in Douglas. Dr. Tim Travis , Superintendent of SD schools, and Scott Keerzek, Head of Community Rec.

Fox will translate timeline to a project plan bar graph to better outline the schedule.

A Project Site walkabout is scheduled for May 17 at 9 AM . Ryan Heis will send the workshop invitation to TCC and post it for the public to join if they would like.

**Public Comments:** None

**Committee comments:** None

Marcy made a motion to adjourn, Mooradian seconded. Meeting ended about 330.

CITY OF SAUGATUCK  
BLUE STAR HIGHWAY AND LAKE STREET  
TRAFFIC COUNT SUMMARY

Day	Date	Lake Street	Blue Star Highway	
Thursday	22-Jul-10	5,982	8,121	Count began at 11:00 am
Friday	23-Jul-10	8,989	11,354	
Saturday	24-Jul-10	9,767	10,265	
Sunday	25-Jul-10	9,900	11,712	
Monday	26-Jul-10		10,988	Lake Street hit by Street Sweeper 6:00 am
Tuesday	27-Jul-10		10,806	
Wednesday	28-Jul-10		10,536	
Thursday	29-Jul-10		11,680	Through midnight

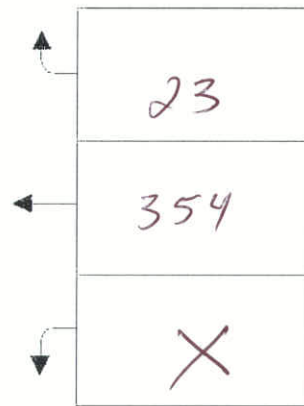
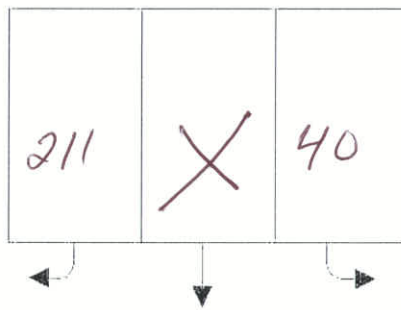
# City of Saugatuck Turning Movement Summary

Date: 8/5/10

Time Period (15 Minute): 1:42 pm to 2:42 pm

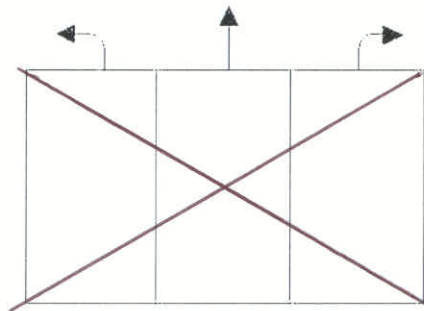
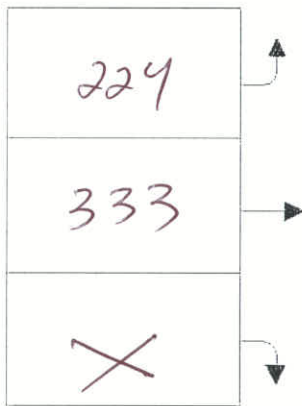
Intersection: Lake & Blue Star

Street Name: Lake



Street Name: Blue Star

Street Name: Blue Star

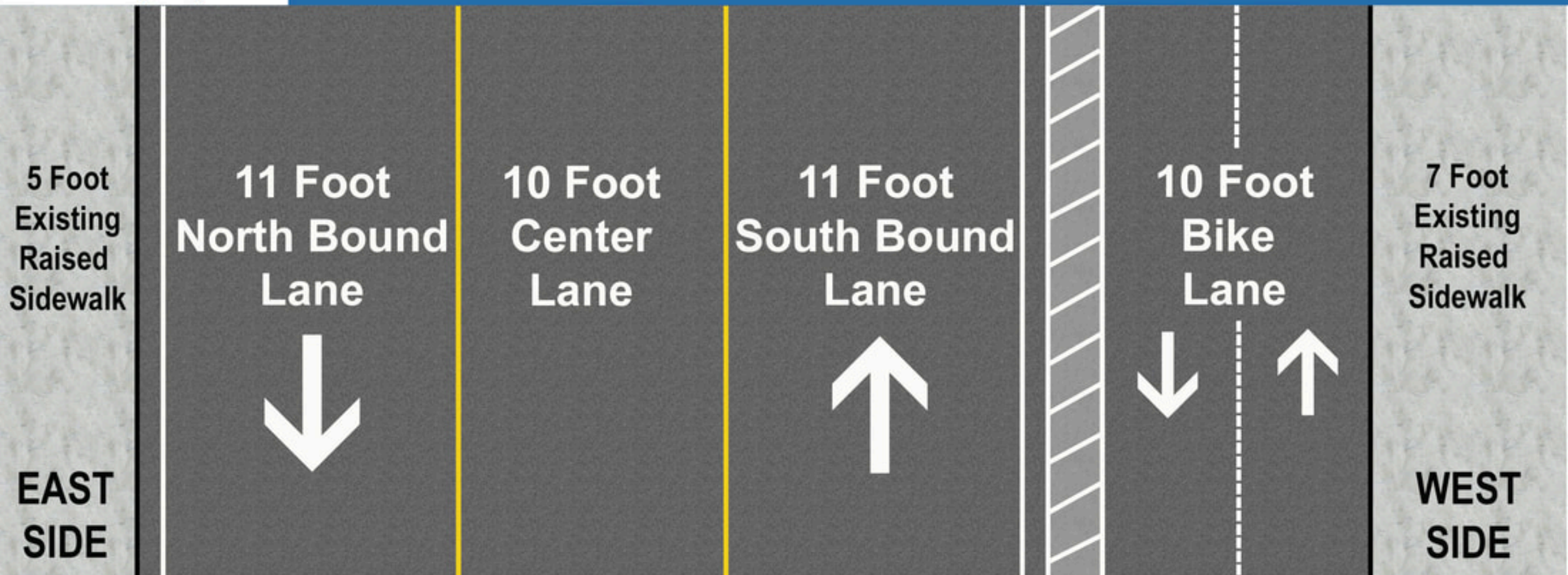


Street Name: \_\_\_\_\_



City of Saugatuck  
Proposed Blue Star Pavement Markings

# Going South on Blue Star Highway over Bridge

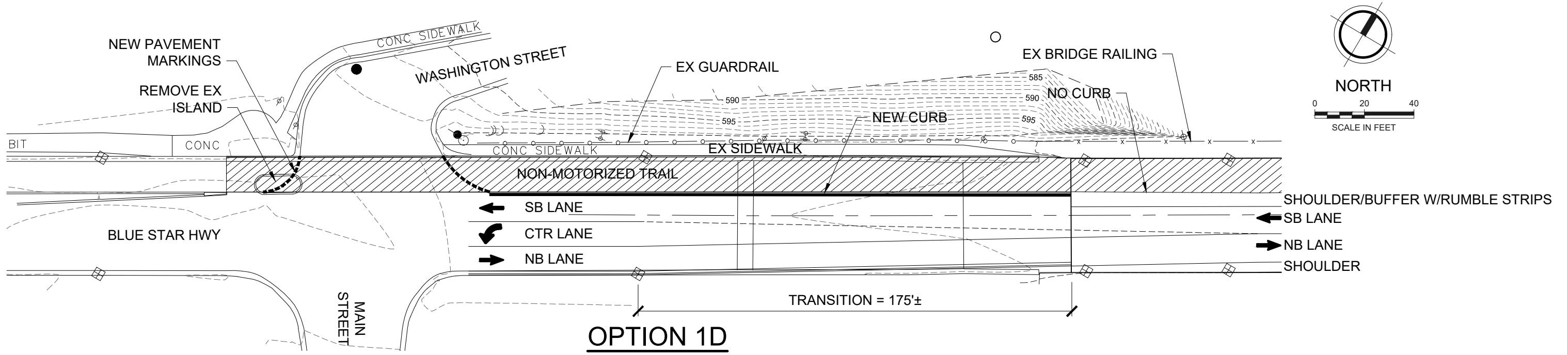


1 Foot Roadway Buffer

1 Foot Roadway Buffer

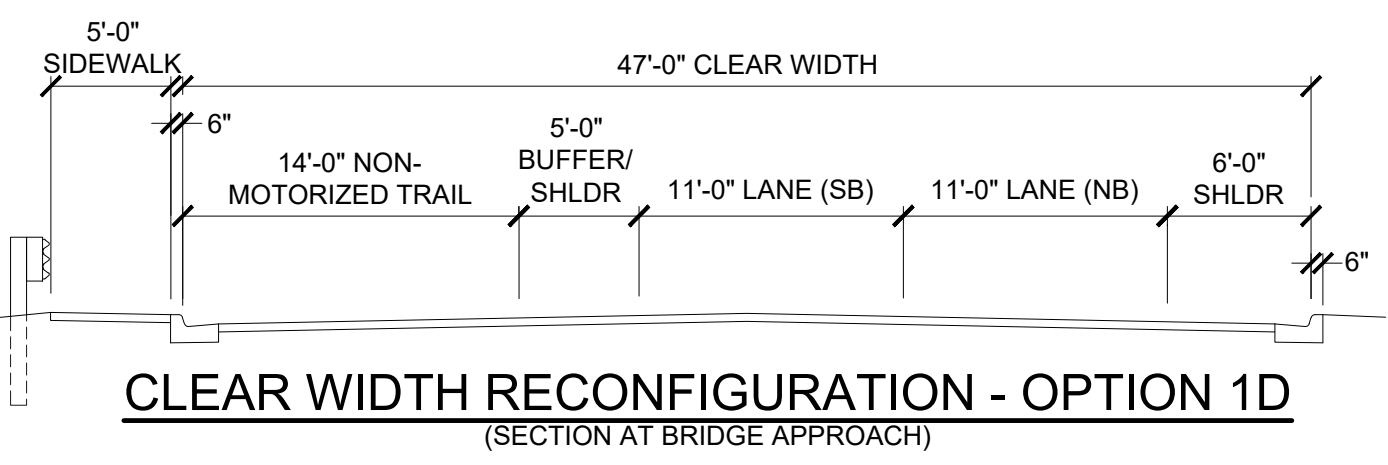
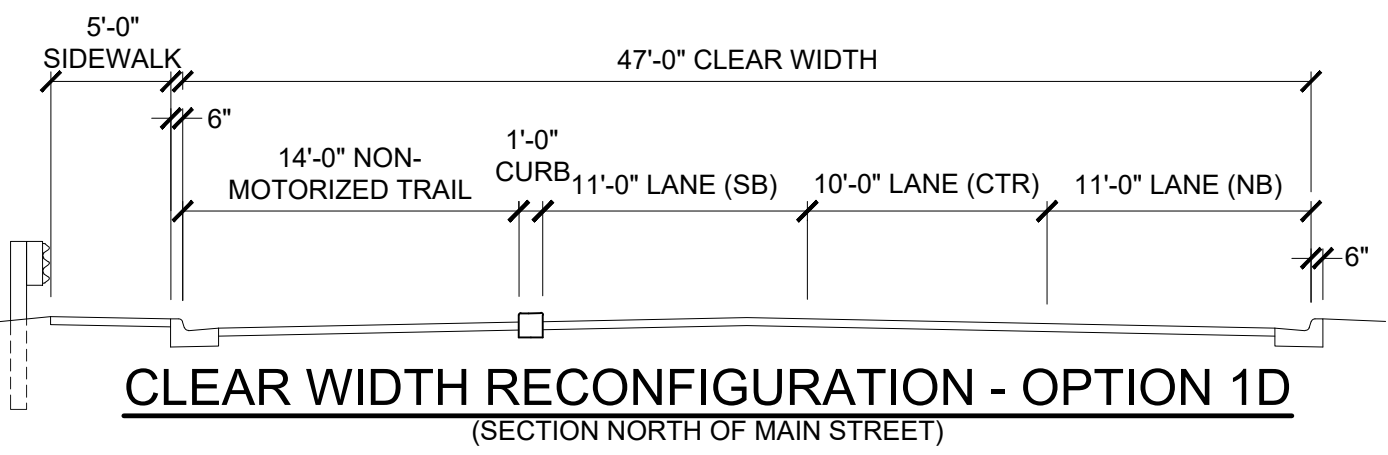
2 Foot Buffer with Vertical Separation





**OPTION 1D**

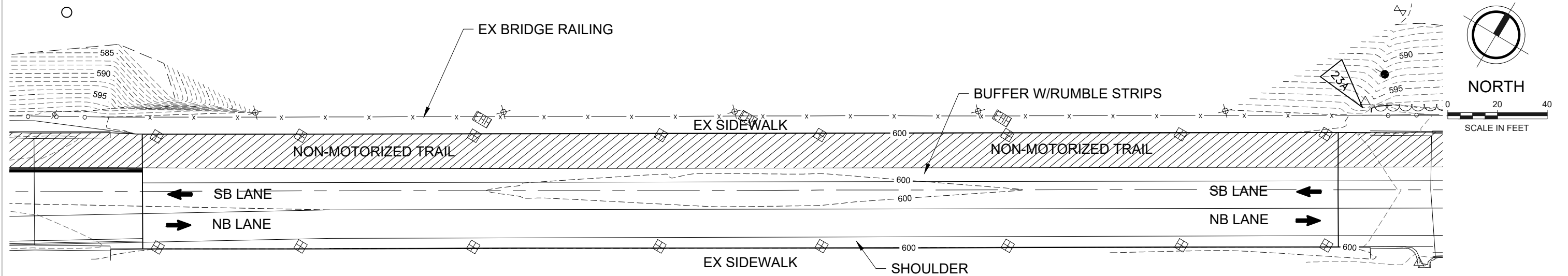
OPTION 1D - NON-MOTORIZED TRAIL IN EXISTING ROADWAY, WEST SIDE, TWO LANE PLUS BUFFER SECTION DESCRIPTION: UNDER THIS OPTION, THE NORTHWESTERN 14 FEET OF EXISTING PAVEMENT WOULD BE CONVERTED TO THE NON-MOTORIZED TRAIL. SEPARATION BETWEEN THE SOUTHBOUND LANE AND NON-MOTORIZED TRAIL WOULD BE ACHIEVED BY A 5-FOOT BUFFER WIDTH. THE EXISTING WIDE 3-LANE PLUS BIKE LANE/SHOULDER CONFIGURATION WOULD BE CONVERTED TO A 2-LANE SECTION WITH BUFFER/SHOULDER, WITH TRANSITION FOR THE LEFT TURN LANE AT MAIN STREET. A CONCRETE CURB WOULD BE USED IN THE TRANSITION WHERE THE 5-FOOT BUFFER CAN'T BE PROVIDED.



**BLUE STAR TRAIL IMPROVEMENTS**  
 CITY OF SAUGATUCK, MI  
 EXISTING TRAIL TO KALAMAZOO RIVER BRIDGE  
**PART 1 - OPTION 1D**

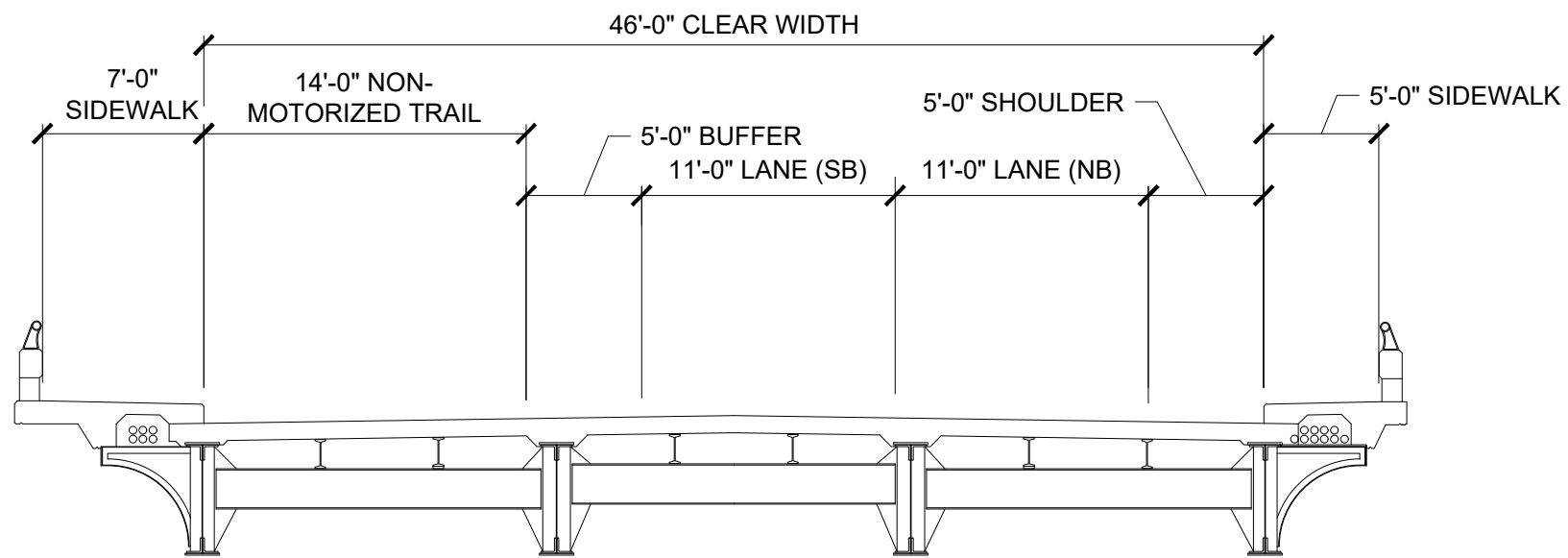


tonyp/M: \\Proj837001-839000\837010 BlueStar Trail\Cad\Fig\837010\_Exhibits.dwg



**OPTION 1D**

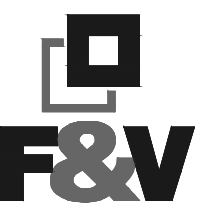
OPTION 1D - NON-MOTORIZED TRAIL IN EXISTING ROADWAY, TWO LANE PLUS BUFFER/SHOULDER SECTION  
 DESCRIPTION: UNDER THIS OPTION, THE NORTHWESTERN 14 FEET OF EXISTING BRIDGE SURFACE WOULD BE CONVERTED TO THE NON-MOTORIZED TRAIL. SEPARATION BETWEEN THE SOUTHBOUND LANE AND NON-MOTORIZED TRAIL WOULD BE ACHIEVED BY A 5-FOOT BUFFER. THE EXISTING WIDE 3-LANE PLUS BIKE LANE/SHOULDER CONFIGURATION WOULD BE CONVERTED TO A 2-LANE SECTION WITH A BUFFER ON THE WEST SIDE AND SHOULDER ON THE EAST SIDE.

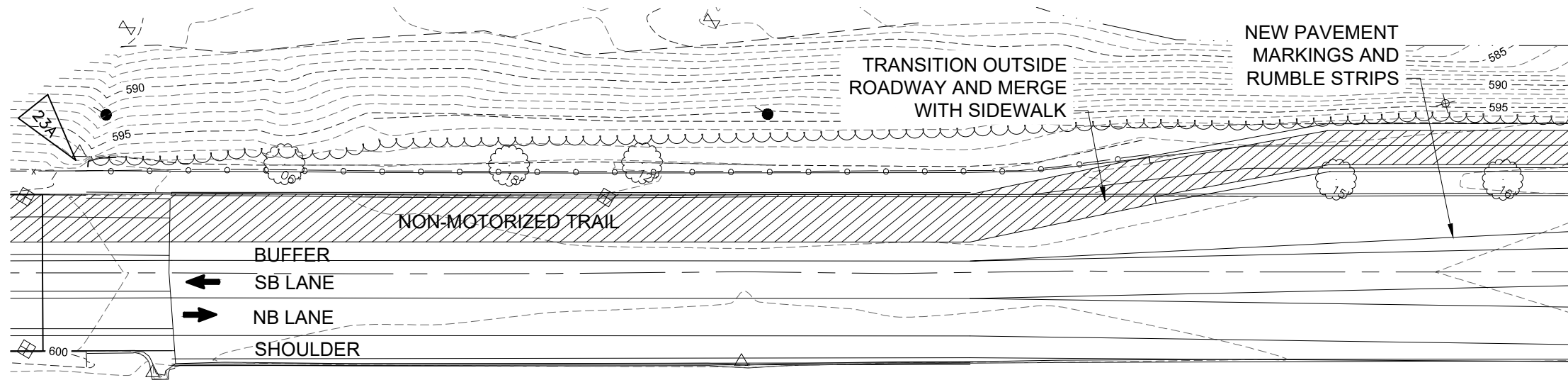


**CLEAR WIDTH RECONFIGURATION - OPTION 1D**

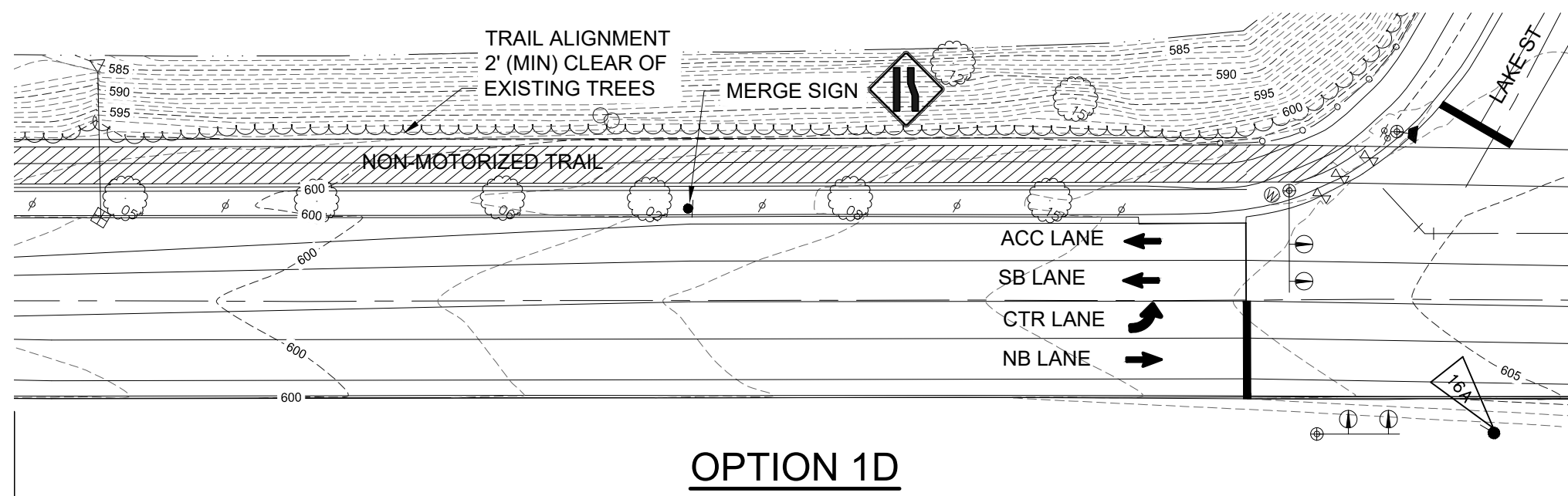
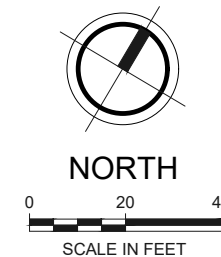
**BLUE STAR TRAIL IMPROVEMENTS**  
 CITY OF SAUGATUCK, MI  
 KALAMAZOO RIVER BRIDGE  
 PART 2 - OPTION 1D

F&V PROJECT NO. 837010

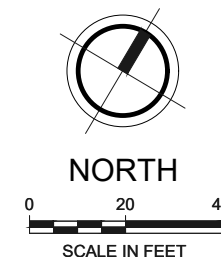




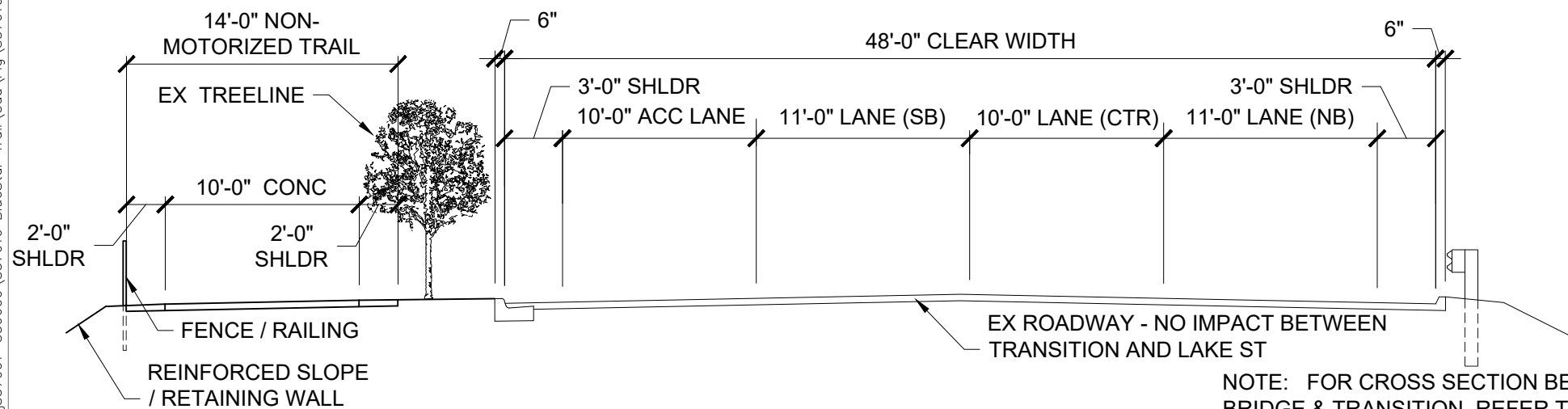
**OPTION 1D**



**OPTION 1D**



tonyp/M: \Proj\837001-839000\837010 BlueStar Trail\Cad\Fig\837010\_Exhibits.dwg



**CLEAR WIDTH RECONFIGURATION - OPTION 1D**  
(SECTION AT NORTH OF TRANSITION)

OPTION 1D - NON-MOTORIZED TRAIL IN EXISTING ROADWAY, TWO LANE PLUS BUFFER/SHOULDER SECTION, TRANSITION OUTSIDE ROADWAY

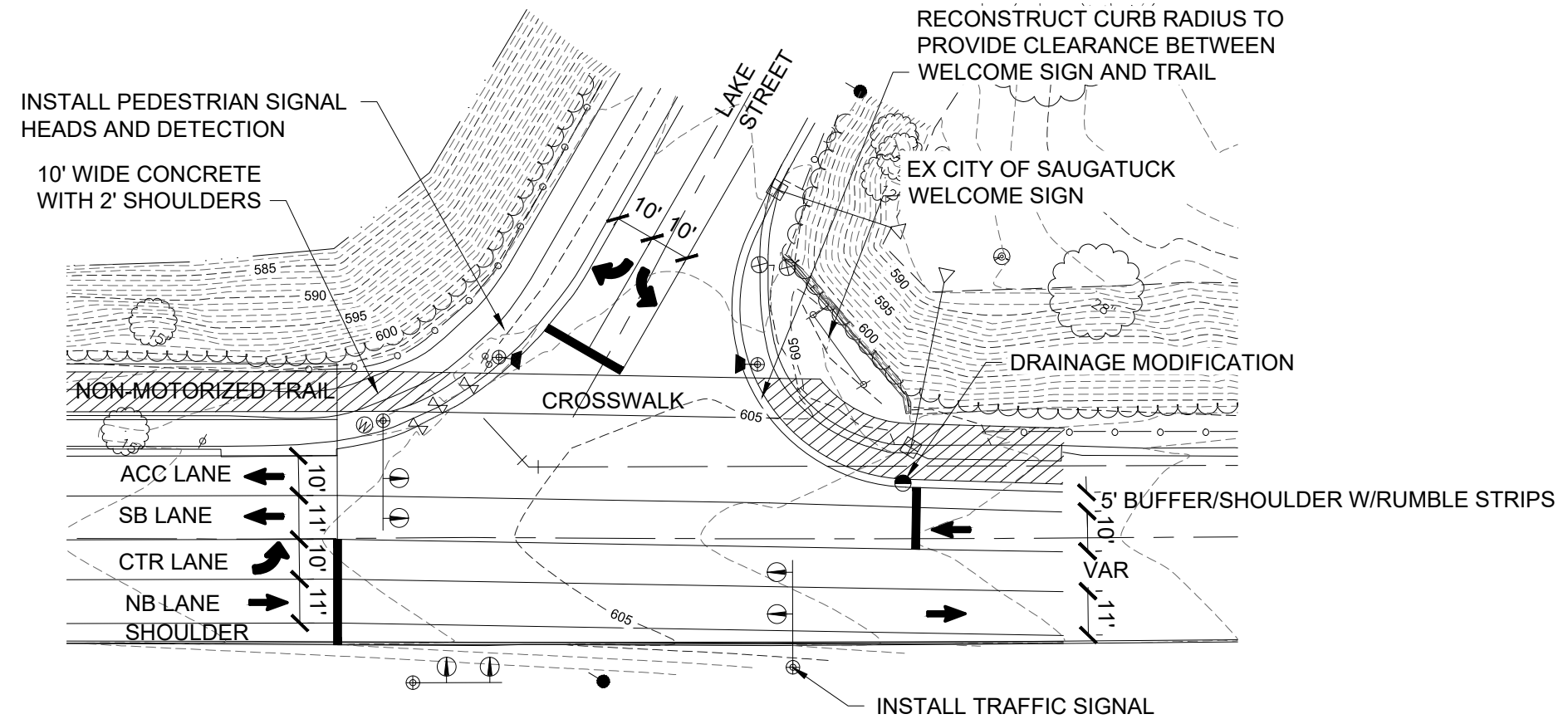
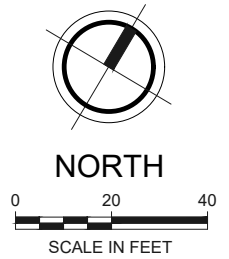
DESCRIPTION: UNDER THIS OPTION, THE NORTHWESTERN 14 FEET OF EXISTING PAVEMENT WOULD BE CONVERTED TO THE NON-MOTORIZED TRAIL. SEPARATION BETWEEN THE SOUTHBOUND LANE AND NON-MOTORIZED TRAIL WOULD BE ACHIEVED BY A 5-FOOT BUFFER WIDTH. THE EXISTING WIDE 3-LANE PLUS BIKE LANE/SHOULDER CONFIGURATION WOULD BE CONVERTED TO A 2-LANE SECTION WITH SHOULDERS. TRANSITION WOULD BE MADE BEHIND THE CURB AWAY FROM THE BRIDGE.

**BLUE STAR TRAIL IMPROVEMENTS**  
CITY OF SAUGATUCK, MI  
KALAMAZOO RIVER BRIDGE TO LAKE STREET

**PART 3 - OPTION 1D**

837010  
F&V PROJECT NO.



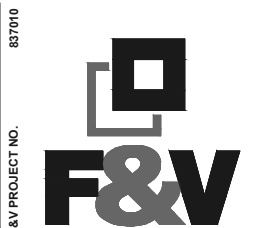


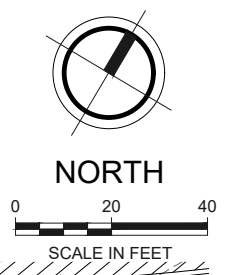
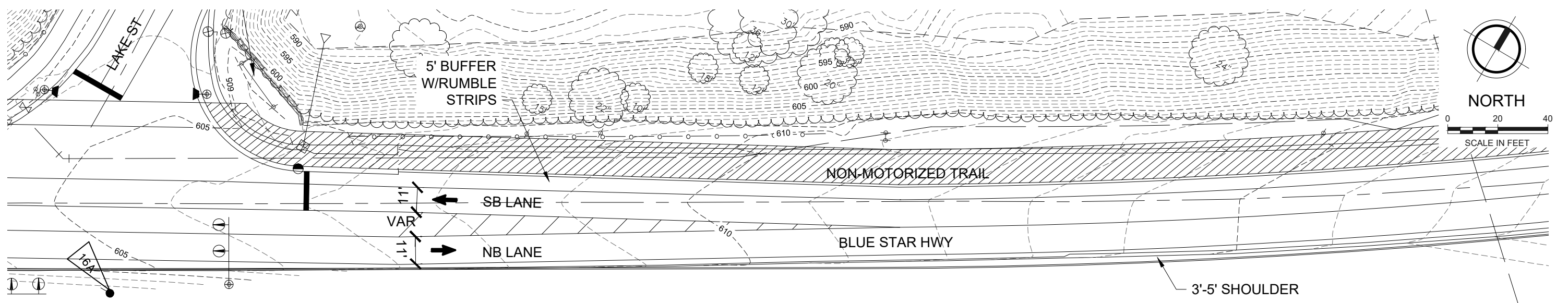
**TRAIL FRONT OF WELCOME SIGN**  
**SIGNALIZED - OPTION 1D**

OPTION 1D - SIGNALIZED WITH COMBINED NON-MOTORIZED TRAIL AND SIDEWALK  
 DESCRIPTION: UNDER THIS OPTION THE INTERSECTION WOULD BE CONVERTED FROM MINOR STREET STOP CONTROLLED TO TRAFFIC SIGNAL CONTROLLED. THE EXISTING SIDEWALK SOUTH OF THE INTERSECTION WOULD BE REPLACED WITH A 10-FOOT TRAIL WITH 2-FOOT SHOULDERS. A NON-MOTORIZED TRAIL CROSSING WOULD BE PROVIDED TO CROSS LAKE STREET. ON THE NORTH SIDE OF THE INTERSECTION, THE NON-MOTORIZED TRAIL WOULD BE CONSTRUCTED IN FRONT OF THE EXISTING CITY OF SAUGATUCK WELCOME SIGN.

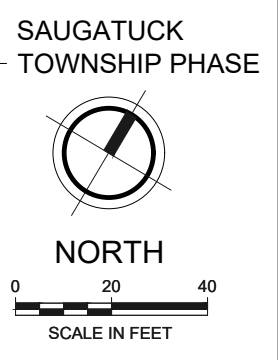
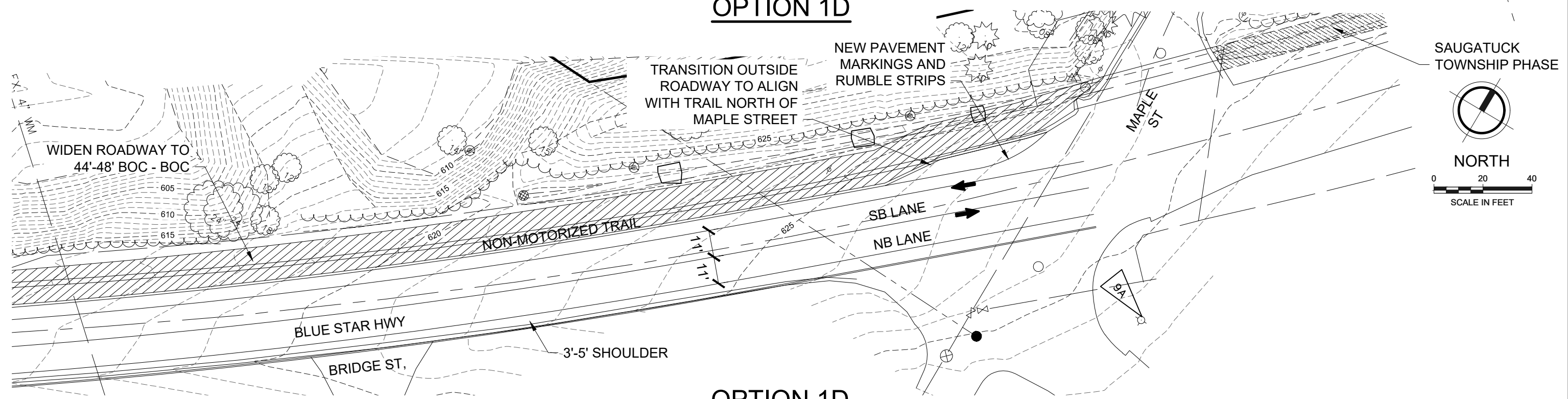
tonyp/M: \Proj837001-839000\837010 BlueStar Trail\Cad\Fig\837010\_Exhibits.dwg

**BLUE STAR TRAIL IMPROVEMENTS**  
 CITY OF SAUGATUCK, MI  
 LAKE STREET INTERSECTION  
**PART 4 - OPTION 1D**

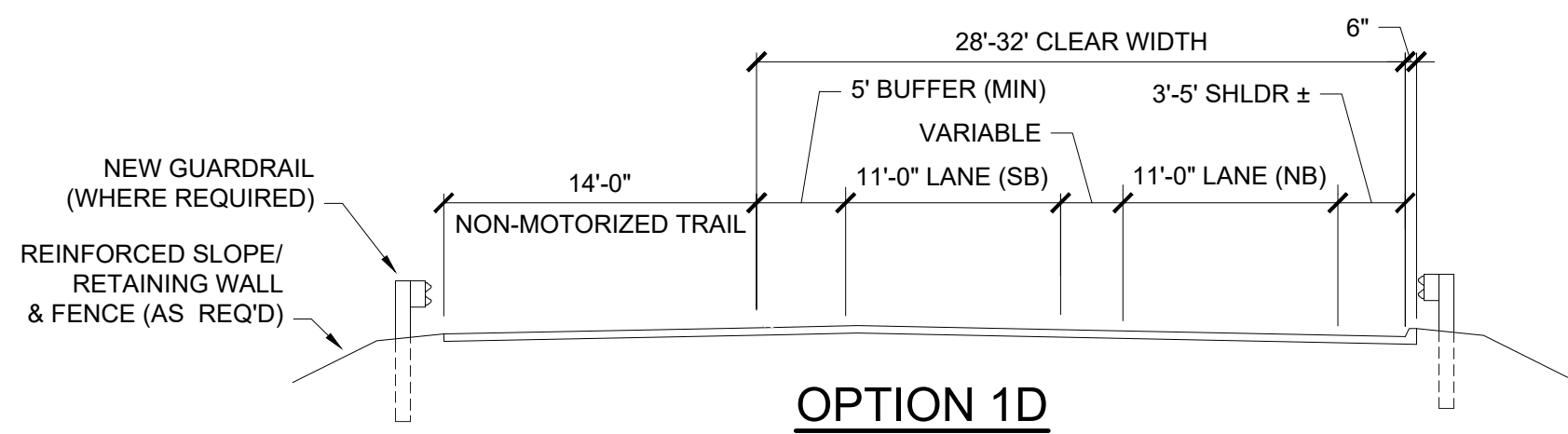




**OPTION 1D**



**OPTION 1D**



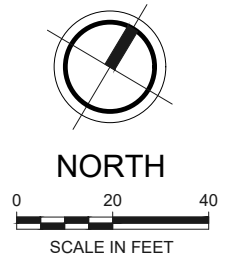
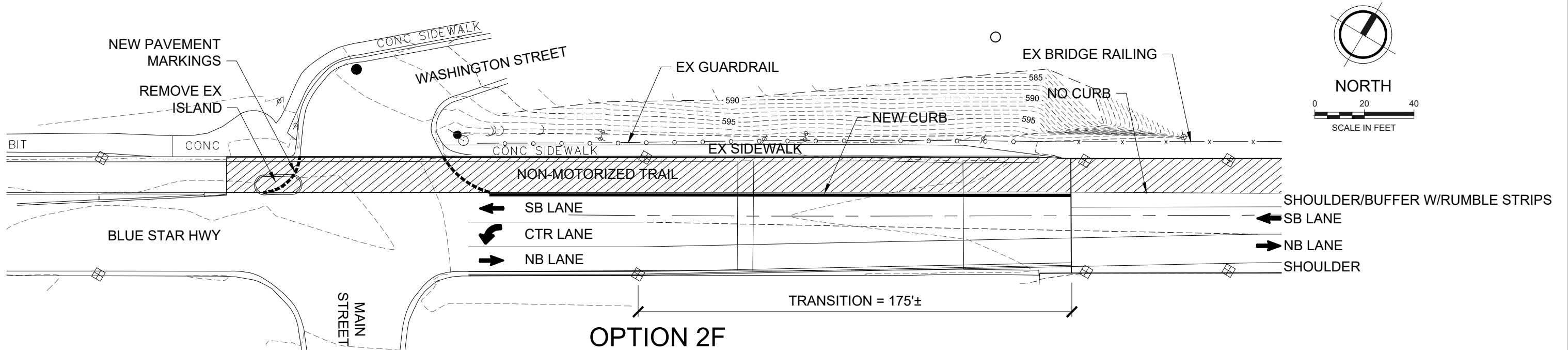
**OPTION 1D**

OPTION 1D - NON-MOTORIZED TRAIL IN EXISTING ROADWAY, TWO LANE PLUS BUFFER/SHOULDER SECTION DESCRIPTION: UNDER THIS OPTION, THE ROAD WOULD BE WIDENED, AND THE NORTHWESTERN 14 FEET OF EXISTING PAVEMENT WOULD BE CONVERTED TO THE NON-MOTORIZED TRAIL. SEPARATION BETWEEN THE SOUTHBOUND LANE AND NON-MOTORIZED TRAIL WOULD BE ACHIEVED BY A 5-FOOT BUFFER WIDTH. TRANSITION WOULD BE MADE TO MAINTAIN THE LEFT TURN LANE AT LAKE STREET.

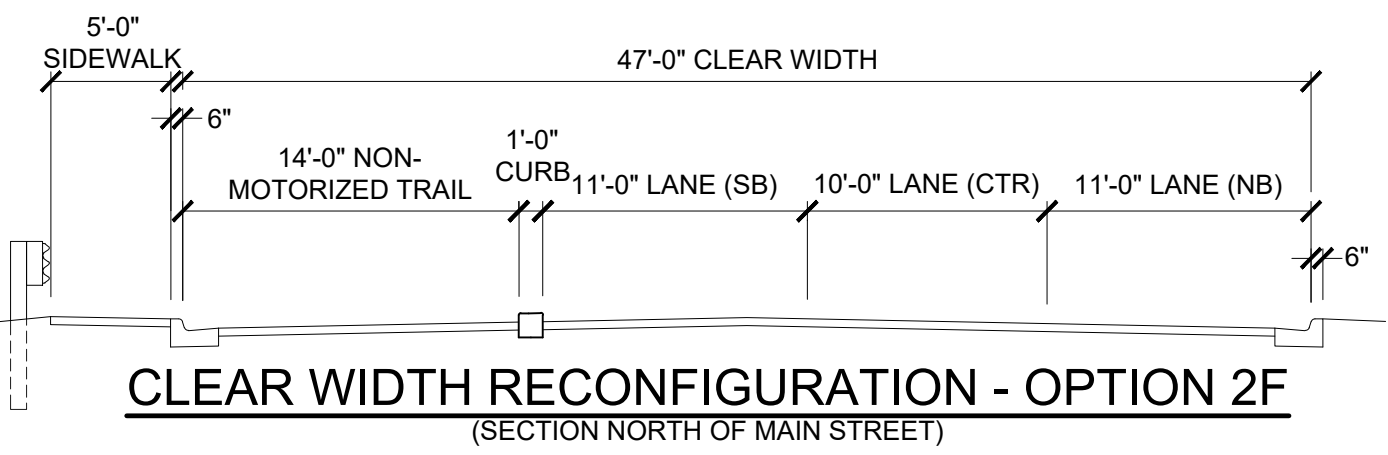
**BLUE STAR TRAIL IMPROVEMENTS**  
 CITY OF SAUGATUCK, MI  
 LAKE STREET TO MAPLE STREET  
 PART 5 - OPTION 1D



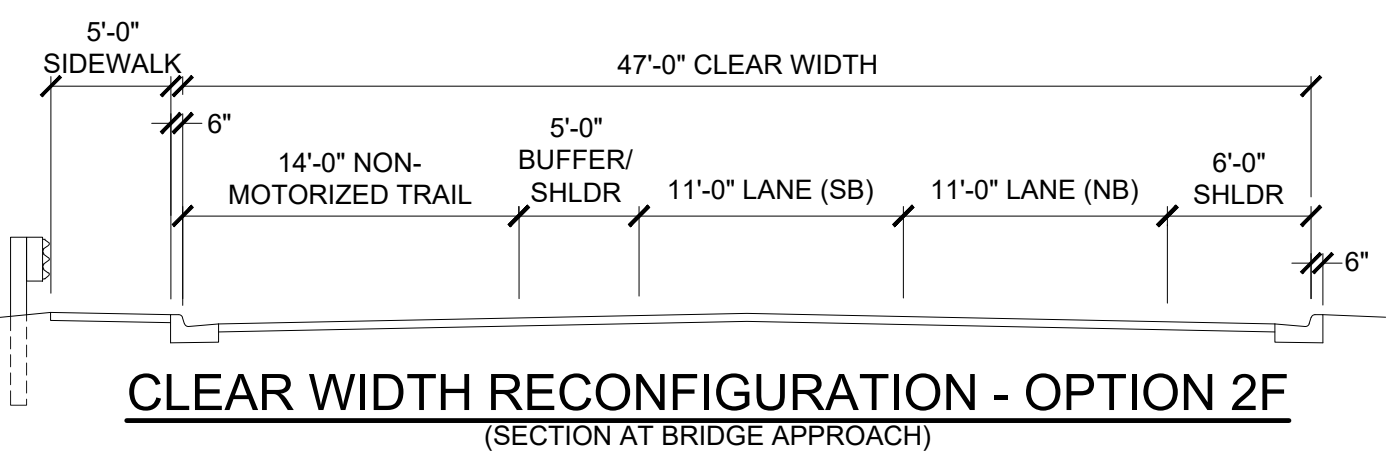
tonyp/M: \Proj\837001-839000\837010 BlueStar Trail\Cad\Fig\837010\_Exhibits.dwg



**OPTION 2F**



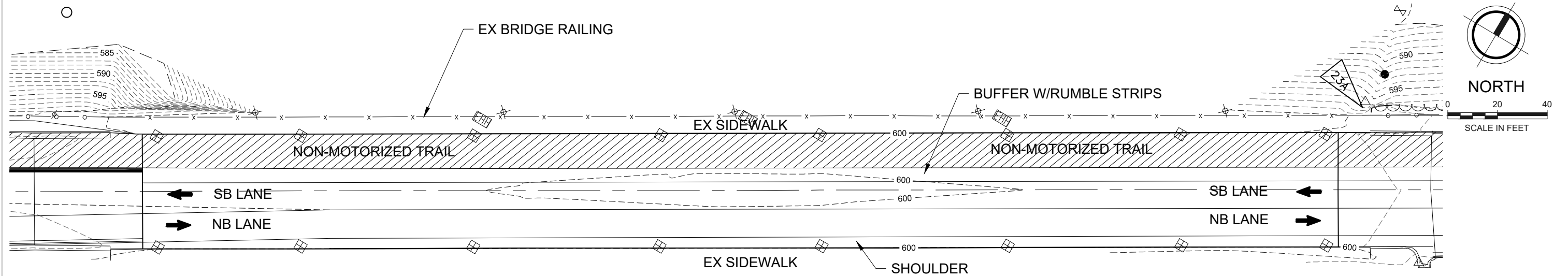
OPTION 2F - NON-MOTORIZED TRAIL IN EXISTING ROADWAY, WEST SIDE, TWO LANE PLUS BUFFER SECTION DESCRIPTION: UNDER THIS OPTION, THE NORTHWESTERN 14 FEET OF EXISTING PAVEMENT WOULD BE CONVERTED TO THE NON-MOTORIZED TRAIL. SEPARATION BETWEEN THE SOUTHBOUND LANE AND NON-MOTORIZED TRAIL WOULD BE ACHIEVED BY A 5-FOOT BUFFER WIDTH. THE EXISTING WIDE 3-LANE PLUS BIKE LANE/SHOULDER CONFIGURATION WOULD BE CONVERTED TO A 2-LANE SECTION WITH BUFFER/SHOULDER, WITH TRANSITION FOR THE LEFT TURN LANE AT MAIN STREET. A CONCRETE CURB WOULD BE USED IN THE TRANSITION WHERE THE 5-FOOT BUFFER CAN'T BE PROVIDED.



**BLUE STAR TRAIL IMPROVEMENTS**  
CITY OF SAUGATUCK, MI  
EXISTING TRAIL TO KALAMAZOO RIVER BRIDGE  
**PART 1 - OPTION 2F**

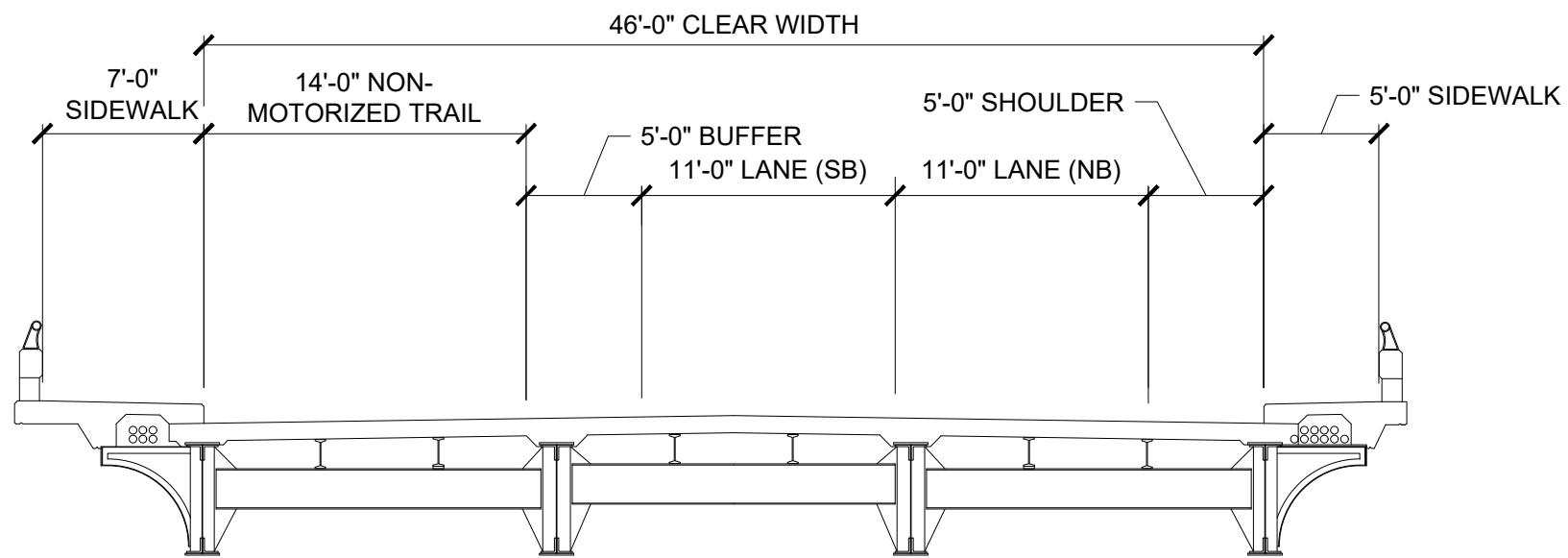


tonyp/M: \Proj\837001-839000\837010 BlueStar Trail\Cad\Fig\837010\_Exhibits.dwg



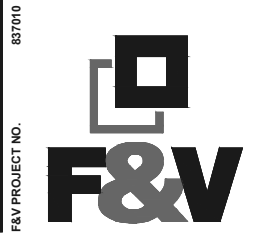
**OPTION 2F**

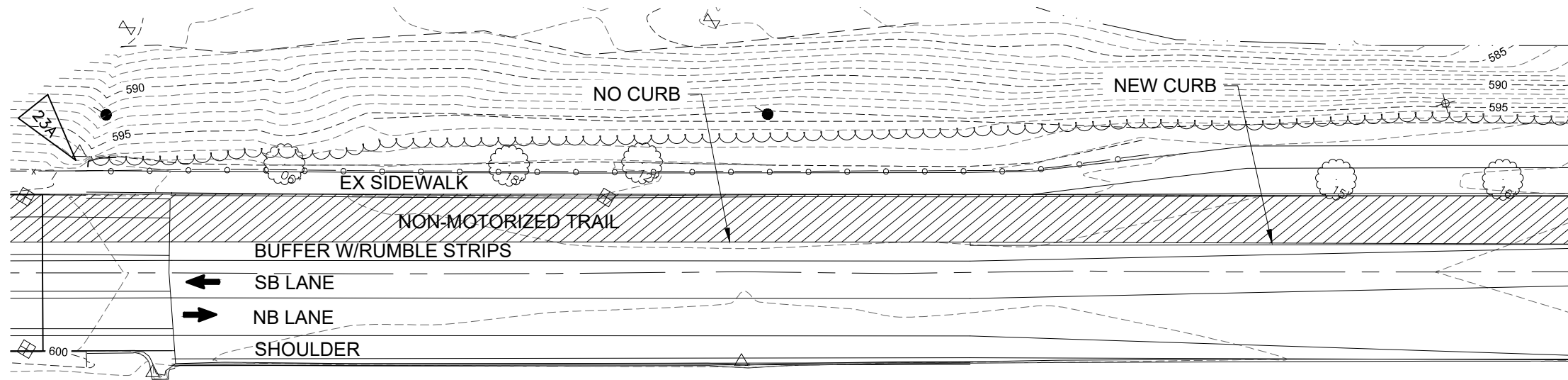
OPTION 2F - NON-MOTORIZED TRAIL IN EXISTING ROADWAY, TWO LANE PLUS BUFFER/SHOULDER SECTION  
 DESCRIPTION: UNDER THIS OPTION, THE NORTHWESTERN 14 FEET OF EXISTING BRIDGE SURFACE WOULD BE CONVERTED TO THE NON-MOTORIZED TRAIL. SEPARATION BETWEEN THE SOUTHBOUND LANE AND NON-MOTORIZED TRAIL WOULD BE ACHIEVED BY A 5-FOOT BUFFER. THE EXISTING WIDE 3-LANE PLUS BIKE LANE/SHOULDER CONFIGURATION WOULD BE CONVERTED TO A 2-LANE SECTION WITH A BUFFER ON THE WEST SIDE AND SHOULDER ON THE EAST SIDE.



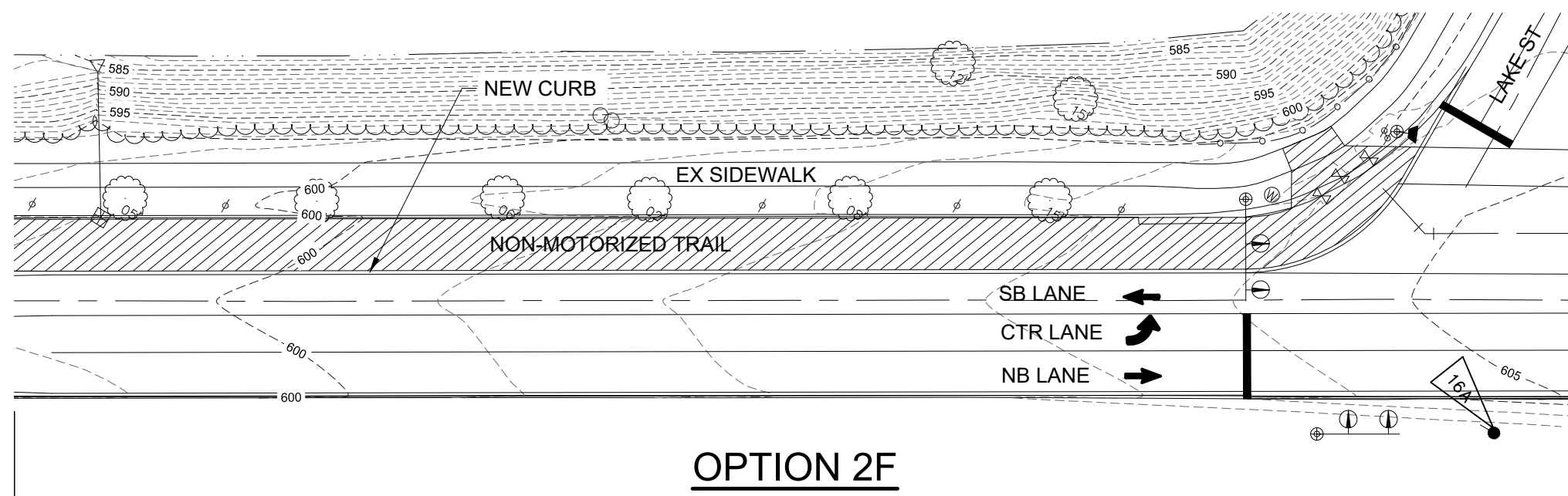
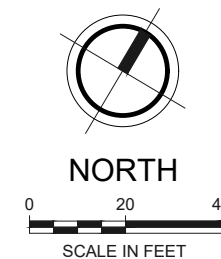
**CLEAR WIDTH RECONFIGURATION - OPTION 2F**

**BLUE STAR TRAIL IMPROVEMENTS**  
 CITY OF SAUGATUCK, MI  
 KALAMAZOO RIVER BRIDGE  
 PART 2 - OPTION 2F

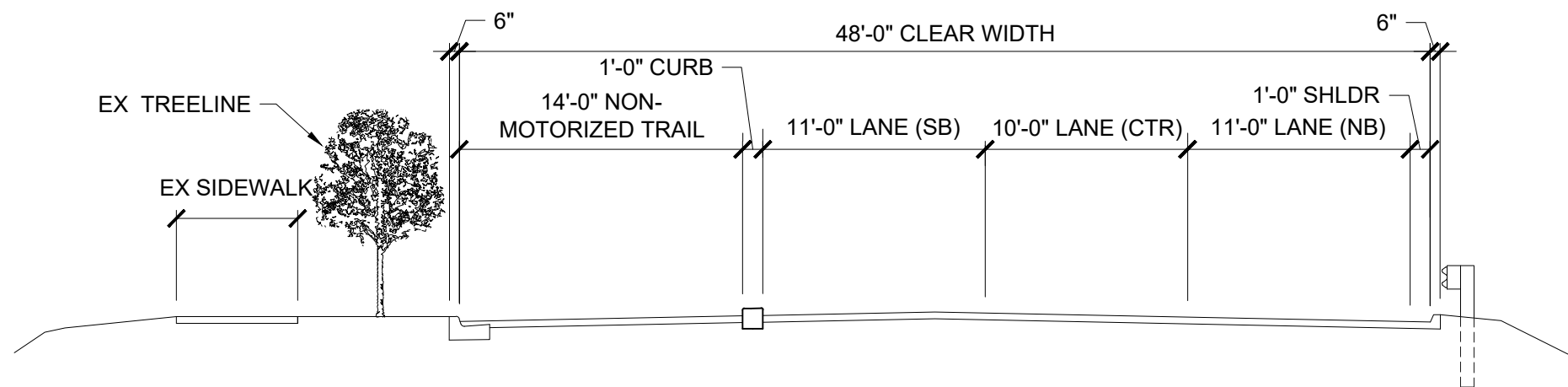
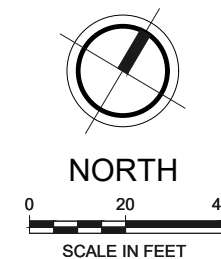




**OPTION 2F**



**OPTION 2F**



**CLEAR WIDTH RECONFIGURATION - OPTION 2F**  
(SECTION AT NORTH OF TRANSITION)

NOTE: FOR CROSS SECTION WITH BUFFER, REFER TO PART 1.

OPTION 2F - NON-MOTORIZED TRAIL IN EXISTING ROADWAY, TWO LANE PLUS BUFFER/SHOULDER OR CURB SECTION.

DESCRIPTION: UNDER THIS OPTION, THE NORTHWESTERN 14 FEET OF EXISTING PAVEMENT WOULD BE CONVERTED TO THE NON-MOTORIZED TRAIL. SEPARATION BETWEEN THE SOUTHBOUND LANE AND NON-MOTORIZED TRAIL WOULD BE ACHIEVED BY A 5-FOOT BUFFER WIDTH. A CONCRETE CURB WOULD BE USED IN THE TRANSITION WHERE THE 5-FT BUFFER CAN'T BE PROVIDED. THE EXISTING WIDE 3-LANE PLUS BIKE LANE/SHOULDER CONFIGURATION WOULD BE CONVERTED TO A 2-LANE SECTION WITH SHOULDERS.

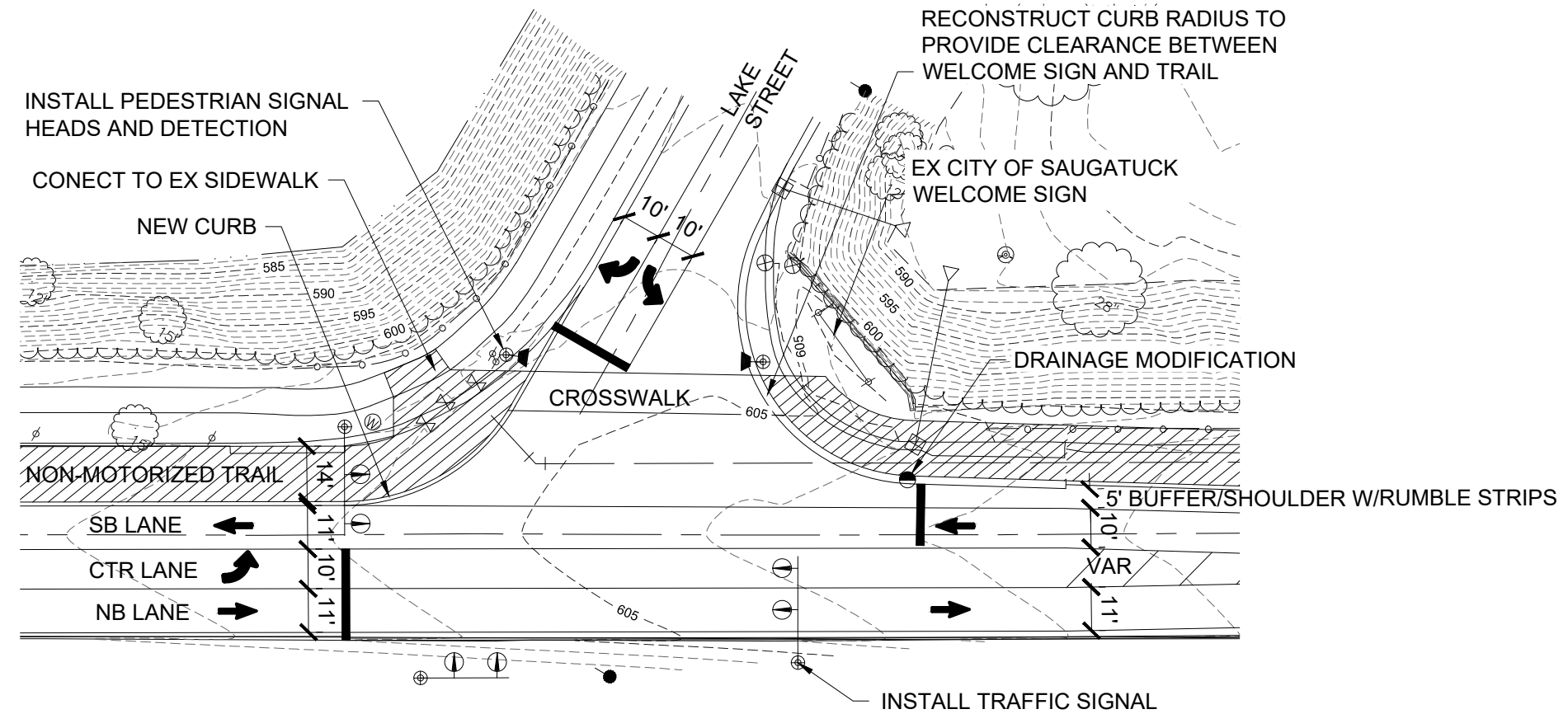
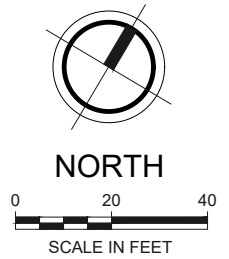
**BLUE STAR TRAIL IMPROVEMENTS**  
CITY OF SAUGATUCK, MI  
KALAMAZOO RIVER BRIDGE TO LAKE STREET

**PART 3 - OPTION 2F**

F&V PROJECT NO. 837010







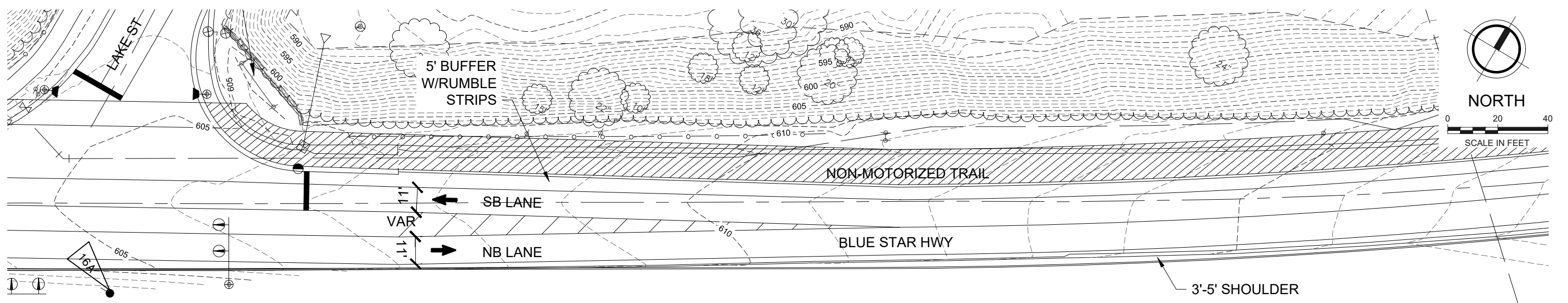
**TRAIL FRONT OF WELCOME SIGN**  
**SIGNALIZED - OPTION 2F**

OPTION 2F - SIGNALIZED WITH NON-MOTORIZED TRAIL IN EX ROADWAY AND SIDEWALK  
 DESCRIPTION: UNDER THIS OPTION THE INTERSECTION WOULD BE CONVERTED FROM MINOR STREET STOP CONTROLLED TO TRAFFIC SIGNAL CONTROLLED. THE NORTHWESTERN 14 FEET OF PAVEMENT WOULD BE CONVERTED TO THE NON-MOTORIZED TRAIL. SEPARATION BETWEEN THE SOUTHBOUND LANE AND THE NON-MOTORIZED TRAIL WOULD BE A CONCRETE CURB. A NON-MOTORIZED TRAIL CROSSING WOULD BE PROVIDED TO CROSS LAKE STREET. ON THE SOUTH SIDE OF THE INTERSECTION, A CONNECTION WOULD BE PROVIDED BETWEEN EXISTING SIDEWALK AND THE NON-MOTORIZED TRAIL. ON THE NORTH SIDE OF THE INTERSECTION, THE NON-MOTORIZED TRAIL WOULD BE CONSTRUCTED IN FRONT OF THE EXISTING CITY OF SAUGATUCK WELCOME SIGN. THE LANE CONFIGURATION AT THE INTERSECTION WOULD REMAIN THE SAME WITH THE EXCEPTION OF THE REMOVAL OF THE SOUTHBOUND ACCELERATION LANE.

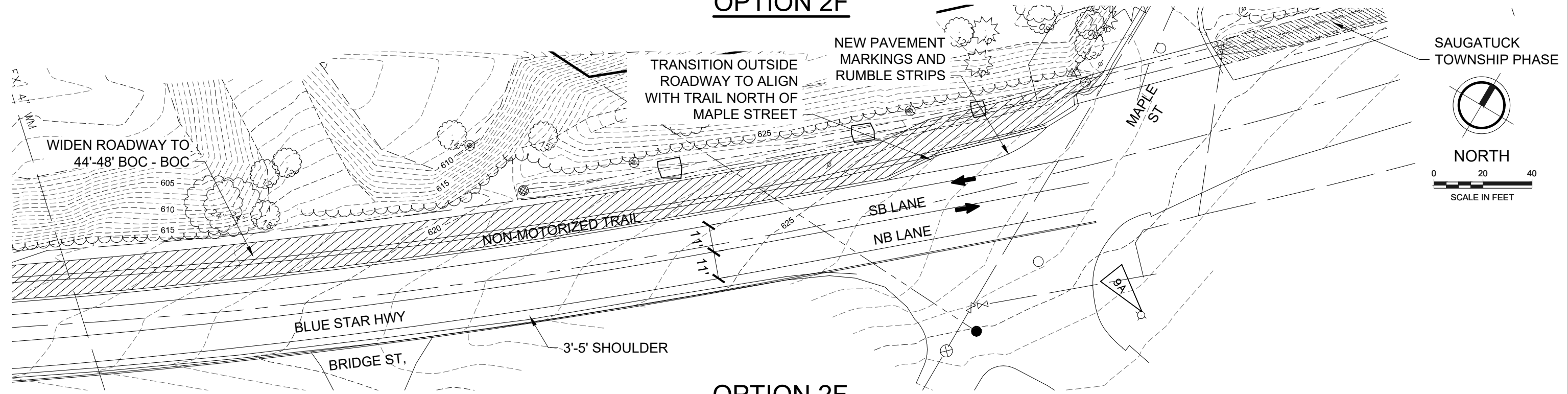
tonyp/M: \Proj837001-839000\837010 BlueStar Trail\Cad\Fig\837010\_Exhibits.dwg

**BLUE STAR TRAIL IMPROVEMENTS**  
 CITY OF SAUGATUCK, MI  
 LAKE STREET INTERSECTION  
**PART 4 - OPTION 2F**

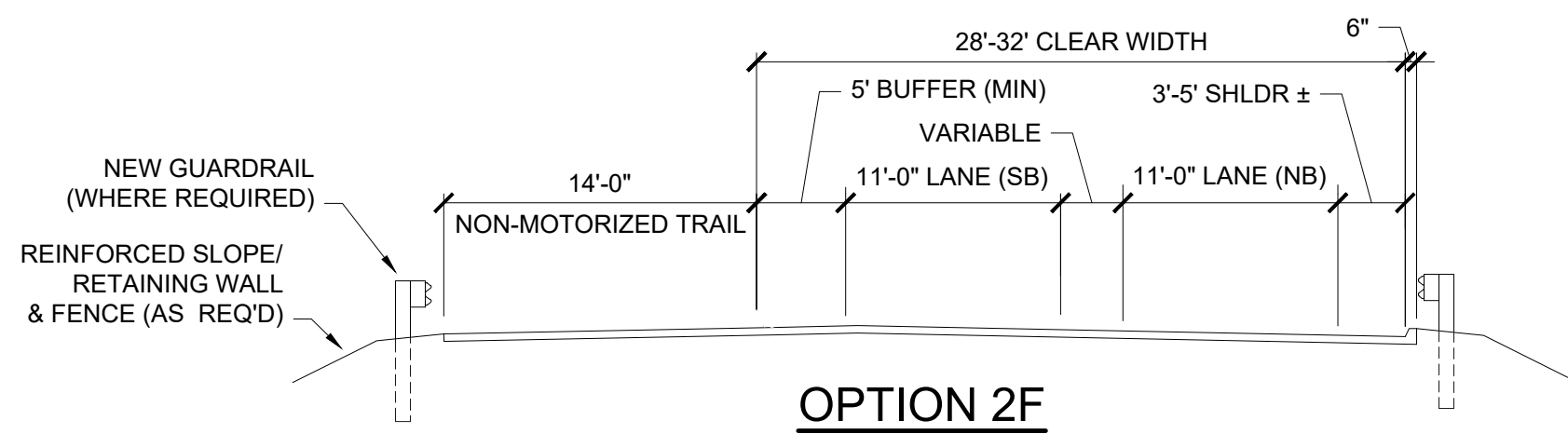




**OPTION 2F**



**OPTION 2F**



**OPTION 2F**

OPTION 2F - NON-MOTORIZED TRAIL IN EXISTING ROADWAY, TWO LANE PLUS BUFFER/SHOULDER SECTION DESCRIPTION: UNDER THIS OPTION, THE ROAD WOULD BE WIDENED, AND THE NORTHWESTERN 14 FEET OF EXISTING PAVEMENT WOULD BE CONVERTED TO THE NON-MOTORIZED TRAIL. SEPARATION BETWEEN THE SOUTHBOUND LANE AND NON-MOTORIZED TRAIL WOULD BE ACHIEVED BY A 5-FOOT BUFFER WIDTH. TRANSITION WOULD BE MADE TO MAINTAIN THE LEFT TURN LANE AT LAKE STREET.

**BLUE STAR TRAIL IMPROVEMENTS**  
 CITY OF SAUGATUCK, MI  
 LAKE STREET TO MAPLE STREET  
 PART 5 - OPTION 2F



tonyp/M: \Proj\837001-839000\837010 BlueStar Trail\Cad\Fig\837010\_Exhibits.dwg

# Memo

**To:** Kirk Harrier, City of Saugatuck  
**From:** Paul Galdes, P. E.  
**Date:** November 19, 2010  
**Re:** Blue Star Highway & Lake Street Traffic Signal

We have completed our review of the traffic counts collected on Lake Street and Blue Star Highway from July 22, 2010 to July 28, 2010. The counter on Lake Street was hit by the street sweeper and was down for part of the count period, but we have enough data to evaluate the need for a traffic signal.

In order to install a traffic signal, it is important that Warrants are met as outlined in the Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways. Other conditions also need to be considered such as accident history, pedestrian volume and sight distance.

Traffic volumes for the days recorded do appear to meet Warrant 1 of the MUTCD, which requires a minimum of 600 vehicles per hour for eight (8) hours on the major street (Blue Star Highway) and 200 vehicles per hour for the same eight (8) hours in one direction on the minor street (Lake Street). On a week day, between the hours of 12:00 p.m. to 7:00 p.m., we recorded two-way volumes of 700 to 850 vehicles per hour on Blue Star Highway and one direction volumes of 240 to 320 vehicles per hour on Lake Street. A summary of the counts is attached.

Roads and intersections are analyzed by traffic engineers in terms of Level of Service (LOS). These are qualitative measures that characterize the operational conditions of the road. LOS A is the highest, which represents free flow, and LOS F is the lowest, which represents forced flow. Cost, environmental impact, terrain, right-of-way availability and other factors all affect the LOS that can be achieved. Typically we try to design for the highest LOS achievable and a LOS C (stable flow) or better is acceptable.

The counts collected can be considered to be average summer time weekday volumes. Weekend volumes appear to be around 10% higher. Off season volumes are considerably less. We also collected turning movement counts for the intersection. Based on these counts, the intersection is operating between a Level of Service A (free flow) and Level of Service B (reasonably free flow) during average summer time flows.

We also measured actual delay times for the three (3) turning movements at the intersection which are: right turns from Lake Street to Blue Star Highway; left turns from Lake Street to Blue Star Highway; and left turns from Blue Star Highway to Lake Street. We did this measurement during the normal high traffic times of day based on the total traffic counts collected.

The left turn wait time from Lake Street to Blue Star Highway was the longest and measured at 37 seconds with a range of five (5) seconds to 37 seconds and an average wait of 19 seconds. The right turn maximum wait time from Lake Street to Blue Star Highway was 24 seconds with an average of seven (7) seconds. The left turn maximum wait time from Blue Star Highway to Lake Street was 27 seconds with an average of three (3) seconds. These actual delay times coincide with the calculated LOS for the intersection, except for the left turn from Lake Street to Blue Star Highway, which falls into a LOS C. A summary of the turning movements is attached. One interesting aspect noticed of the turning movements is that 40 left turns from Lake Street to Blue Star Highway took place during peak hour. This is lower than we expected, but desirable since the left turn movement is difficult at this location due to Blue Star Highway traffic volume and limited sight distance to the northeast.

We also observed pedestrian and bicycle movements during 2 ½ hours of peak hours while counting turning movements and delay times. There were no pedestrians that crossed the intersection during this time and one cyclist that traveled northbound on Blue Star Highway and made a left turn onto Lake Street.

We also reviewed the accident history of the intersection. The data from the last five (5) years includes a total of 21 reported accidents; all but four (4) of the accidents occurred in the months of June, July or August. All but three (3) of the accidents involved two (2) vehicles turning right from Lake Street onto Blue Star Highway with the rear vehicle hitting the forward vehicle after it stopped at the stop sign then moved forward slowly or stopped again. This is due in combination to limited sight distance to the north on Blue Star Highway and the widening of Blue Star Highway from two (2) to four (4) lanes at Lake Street. This widening allows southbound vehicles to shift to the outer lane as they proceed through the intersection.

All of these right turn accidents caused little or no damage to the vehicles involved and no injuries. Of the other three (3) accidents, one involved a trailer becoming unhitched in the vicinity of the intersection. Another occurred during snowy/slushy conditions when a vehicle lost control on Blue Star Highway near the intersection. The third involved a vehicle turning left onto Blue Star Highway from Lake Street and getting struck by a southbound Blue Star Highway vehicle. There were no injuries in this accident.

## **Recommendations**

Although warrants for a signal appear to be met for average summertime flow, it is important to consider that this flow exists regularly for only three (3) months per year plus some additional weekends. As discussed, the majority of the accidents that occurred in the last five (5) years involved the right turn movement from Lake Street to Blue Star Highway. A signal would reduce these to a degree while the Lake Street signal is green. During the red phase on Blue Star Highway, the right turn accidents would still happen unless we prohibit right turns on red, which will further increase the delay times at the intersection.

Since the accident history is minor, the reason to install a signal would be to reduce wait times. The longest wait time, which is the left turning movement from Lake Street to Blue Star Highway, averages 19 seconds during peak hour flow in peak seasonal months. Installing a signal will increase that delay time as this traffic will generally have to wait the length of one (1) full signal which on average is likely to be over a minute.

The other factor affecting this intersection is site distance from Lake Street to the northeast due to the curve in the road and guardrail, but could be improved by keeping all plantings and brush cleared from the street side of the guardrail and to an extent, behind the guardrail. The City could consider prohibiting left turns here, but may instead want to first incorporate some wayfinding signage in the downtown area directing vehicles down Maple Street and Holland Street to North Street to make the left from North Street instead.

Another possible improvement to the intersection would be to prohibit southbound Blue Star Highway traffic from changing lanes at Lake Street where the second southbound lane picks up. This would allow Lake Street right turn traffic to have exclusive use of the right lane. This could be done with pavement markings in the intersection.

There has also been interest in Douglas in reducing the laneage between the Blue Star Bridge and Center Street to three (3) lanes. This would create an opportunity to eliminate the southbound Blue Star Highway lane between Lake Street and the bridge. This would allow us to move the curb and sidewalk at the intersection which would move the stop bar forward, beyond the guardrail, allowing better visibility.

At this time, we do not recommend the installation of a signal at the intersection. We think the City would be better served by the following:

1. Wayfinding signage to encourage left turns onto Blue Star Highway at North Street rather than Lake Street.
2. Keeping all vegetation cleared from the street side of the guardrail on Blue Star Highway at Lake Street. Some tree trimming and vegetation clearing behind the guardrail inside the right of way will also be beneficial for improving sight distance along Blue Star to the northeast of Lake Street.
- 3a. Pavement markings to prohibit westbound Blue Star Highway traffic from moving to the outer lane at Lake Street.

OR

- 3b. Elimination of the westbound outer lane on Blue Star Highway between Lake Street and the bridge and moving the sidewalk and stop bar forward to improve visibility.