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Mankato/North Mankato Area Planning Organization (MAPO)

Balcerzak Drive Pedestrian Crossing Study Final Report

Mankato, Minnesota
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Introduction

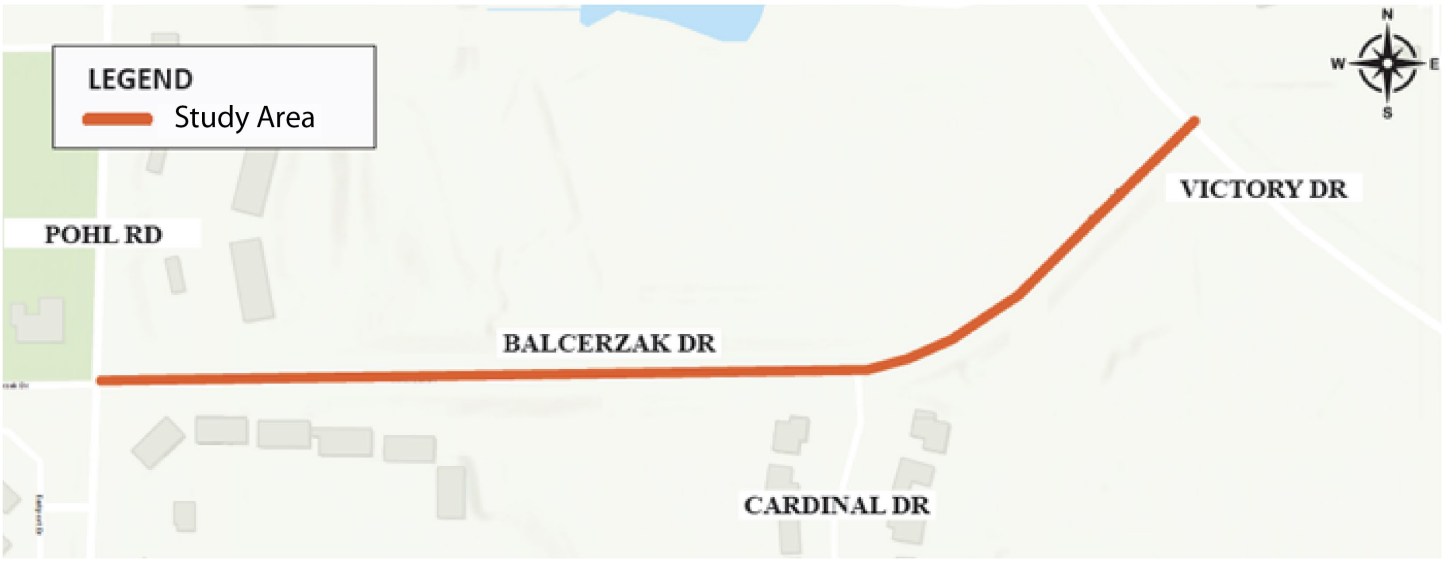
The Mankato/North Mankato Area Planning Organization (MAPO) is reviewing options to promote walkability, accessibility, and Americans with Disabilities Act (ADA) compliance along Balcerzak Drive between Pohl Road and Victory Drive. This linkage will provide people with active and accessible transportation options, creating safer opportunities for biking and walking to school, jobs, other destinations, as well as for health and recreation. The purpose of this report is to:

- Develop a complete understanding of the corridor, including its history, evolution, traffic demands, and safety issues.
- Analyze current and forecasted traffic demands.
- Consider existing and planned land use to inform recommendations.
- Identify environmental resources/complete an environmental screening.
- Develop a purpose and need statement with stakeholder support.
- Generate a vision and goals statement for the corridor with full stakeholder support.
- Develop context-sensitive alternatives meeting the purpose and need statement goals.
- Develop an evaluation approach to aid the selection of a recommended alternative.
- Engage the public and key stakeholders throughout the study, seeking input and collaboration.

Study Area

Within the study area, Balcerzak Drive is a 4-lane undivided roadway with a signed 40 mph speed limit. It is classified as a minor arterial with an Annual Average Daily Traffic (AADT) of 9,494. There is a hardened centerline at the intersection of Balcerzak Drive and Cardinal Drive which prevents westbound traffic on Balcerzak Drive from turning left onto Cardinal Drive, limiting access between Balcerzak Drive and Cardinal Drive to right-in-right-out (RIRO) operations. The study area is depicted in Figure 1.

Figure 1. Study Area



The current roadway configuration, speeds, and volume present a barrier to crossing Balcerzak Drive at Cardinal Drive, limiting the accessibility between the neighborhoods on the south and the shared-use path on the north. The sidewalk on Cardinal Drive is disconnected from the pedestrian network along Balcerzak Drive, so pedestrians are forced to walk in the roadway or cross Balcerzak Drive to get to the path along the north side of the roadway. This study will focus on linking several neighborhoods without direct connections to the pedestrian network on Balcerzak.

Study Partners

The Balcerzak Drive Pedestrian Crossing Study was a joint effort between:

- MAPO
- City of Mankato
- Blue Earth County
- Mankato Transit
- Bolton & Menk, Inc.

These agencies served as the project management team (PMT) and met throughout the study process to review project materials, discuss study progress, and develop technical deliverables.

Existing Conditions

Existing conditions were documented for the study area with a focus on previous studies, land use, traffic operations, safety, access, pedestrian and bicycle accommodations, and environmental resources. This information served as the basis for developing improvement goals for Balcerzak Drive and the technical study analysis.

Plan Review

Several short- and long-range documents have been completed which provide planning directions for future transportation system needs within and near the study area. The key points in each document relevant to the study are summarized below by plan title.

MAPO 2045 Long Range Transportation Plan Update (2020)

The most recent update to the MAPO 2045 Long Range Transportation Plan (LRTP) was published in November 2020. It provides the following analysis and planning guidance on Balcerzak Drive and the study area intersections:

- Bicycle and pedestrian network improvements are planned for Balcerzak Drive west of the project study area.
- The functional classification of Balcerzak Drive is predicted to remain as a Minor Arterial through 2045.
- Major rehabilitation of Balcerzak Drive is planned in the mid-term time frame of 2031-2035.

CSAH 82 (Victory Drive) Feasibility Report (2020)

A Preliminary Engineering Report was completed for the reconstruction of Victory Drive in 2020, which included the reconstruction of the Victory Drive and Balcerzak Drive intersection and the addition of a shared-use path on the west side of Victory Drive south of Balcerzak Drive. Conducted by Bolton & Menk, this report proposed improvements at three intersections on Victory Drive, including at Balcerzak Drive, and assessed the feasibility, cost-effectiveness, and necessity of such improvements. The Preliminary Engineering Report provided the following findings about the intersection:

- Three signalization options were analyzed for the intersection with Balcerzak Drive: retain southbound free right turn, remove southbound free right turn, and remove southbound free right turn and add an overlap with the eastbound left turn phase. A single lane roundabout was also analyzed.
    - Removal of the free right-hand turn maintains acceptable delay and creates safer conditions for pedestrians crossing Balcerzak Drive.
    - The roundabout option operated at a worse Level of Service (LOS) than all signalization options and would not provide enough capacity for peak hour traffic at this intersection.

ADA Transition Plan & Inventory for Public Rights of Way (2019)

The last update to the MAPO area ADA transition plan was published in May 2019. It provides an inventory of infrastructure, practices, and policies for each MAPO partner agency and provides the following guidance on Balcerzak Drive and the study area:

- Pedestrian ramps and sidewalks within the project study area are all compliant with ADA standards.

MAPO Intersection Control Evaluation: Balcerzak Drive at Pohl Road (2016)

An Intersection Control Evaluation (ICE) was completed for the intersection of Balcerzak Drive and Pohl Road in 2016. Conducted by SRF, this analysis considered three different intersection control alternatives for the intersection using 2016 and projected 2036 traffic volumes: All-way stop control, roundabout control, and traffic signal control. The ICE provided the following findings about the intersection:

- All-way stop warrants were met for both 2016 and 2036 traffic volumes. Balcerzak Drive, under a 3-lane configuration, would not meet acceptable LOS thresholds during PM peak.
- The intersection did not meet signal warrants in 2016 but is projected to meet signal warrants in 2036 based upon future traffic projections.
- With a roundabout, the LOS would be acceptable during all points of the day with both 2016 and 2036 traffic volumes. This intersection alternative would also have the fewest crashes due to less conflict points and lower operating speeds.
- The recommendation was that the intersection remain under all-way stop control and crashes be monitored for a couple of years. If crash issues persist, it was recommended that Balcerzak Drive be converted into a three-lane roadway in the short term to improve safety, despite this alternative not meeting acceptable LOS during PM peak.

City of Mankato Complete Streets Plan and Policy (2015)

The City of Mankato Complete Streets Plan and Policy was published in 2015 and is intended to ensure Mankato streets and sidewalks are designed and constructed to serve everyone – pedestrians, bicyclists, and drivers – and they take into account the transportation needs of all people, including children, older adults, and people with disabilities or impaired mobility. The following recommendations and findings from the Complete Streets Plan apply to the study area:

- Crosswalks are preferred to be installed at intersections over mid-block crossings, but there are instances where mid-block crossings are warranted, including in areas of heavy pedestrian traffic, near a major pedestrian destination, or if the nearest crossing is more than 500’ away.
- The plan shows a proposed sidewalk on the south side of Balcerzak Drive between Pohl Road and Victory Drive.
- No bike facilities were planned in the study area, however the plan proposed two bike facilities directly adjacent to the project study area:

- **Balcerzak Drive between Warren Street and Pohl Road - Proposed:** This on-street bike facility will connect Pohl Road to the Minnesota State University, Mankato campus. Proposed roadway conditions will include a 4-to-3 lane conversion with two 11.5' travel lanes, an 11' center two-way left turn lane, and 5' bike lanes on both sides of the road. As of 2023, this is still a proposed improvement.
- **Pohl Road between Cottage Path and Glenwood Avenue - Completed**: This completed project is broken up into two sections. The first is a 3-lane road with 11' lanes, one in each direction and a center, two-way left turn lane and 5.5' bicycle lanes along the curbs between Cottage Path and Jaycee Court. The second is a "share the road" section with 13.5' to 14' wide lanes meant to accommodate both vehicles and bikes between Jaycee Court and Glenwood Avenue.

Land Use and Infrastructure

Existing Land Use

The project team reviewed the surrounding land use for the project area, based on the 2008 City of Mankato Land Use Plan. The adjacent area to the south is primarily residential land uses. The area to the north is a mixture of existing high-density residential and undeveloped wetlands owned by the City of Mankato. Minnesota State University, Mankato is located approximately one mile to the west, along with more residential housing developments. Victory Drive to the east acts as the commercial and industrial spine of the area, supporting a variety of uses along the north-south roadway.

This study did not examine future land use, as the area surrounding the study area is not expected to change substantially in the future.

Roadway Design, Functional Classification and Jurisdiction

Within the study area, Balcerzak Drive is a 4-lane undivided roadway with a signed 40 mph speed limit. At Cardinal Drive the roadway curves slightly to the northeast, and at this intersection there is a mountable concrete median with plastic bollards attached. Balcerzak Drive is functionally classified as a Minor Arterial. There is no on-street parking along Balcerzak Drive in the study area, and there are no shoulders on the roadway. Within the study area Balcerzak Drive has three intersections:

- Pohl Road
- Cardinal Drive
- Victory Drive

Pohl Road

The intersection with Pohl Road is an intersection of the 4-lane, 40 mph Balcerzak Drive and the 3-lane, 30 mph Pohl Road. This intersection is all-way stop controlled. There is a shared-use path on the northside of Balcerzak Drive, a sidewalk on the south side of Balcerzak Drive west of Pohl Road, and a sidewalk along the west side of Pohl Road. Pohl Road has on street bike lanes in both north and south directions. Crosswalks are located on the north and west legs of the intersection, lining up with the locations of the sidewalks and path. *Figure 2* shows the lane configurations for the intersection.

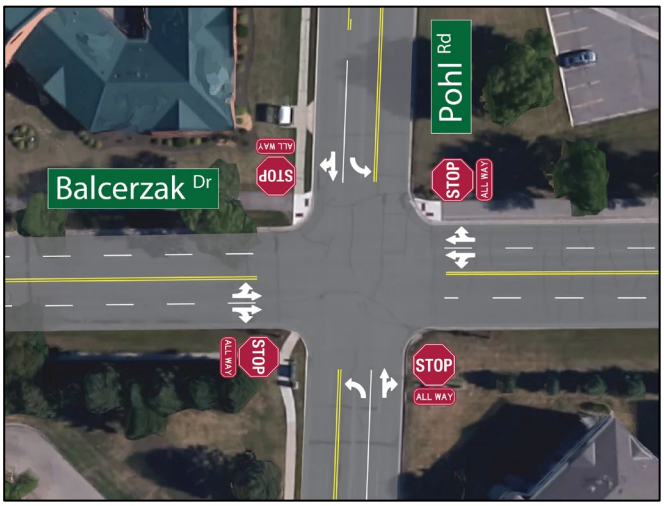


Figure 2. Pohl Road Intersection Lane Configuration

Cardinal Drive

The intersection of Cardinal Drive and Balcerzak Drive is a T-intersection with limited access. The only stop control at this intersection is a stop sign for the northbound leg of Cardinal Drive. Functionally classified as a local road, Cardinal Drive it winds through the residential area to the south of Balcerzak Drive. There is a sidewalk on the west side of Cardinal Drive, but there is no existing connection to the shared-use path on the north side of Balcerzak Drive. Due to the concrete median on Balcerzak Drive at the intersection, Cardinal Drive is a right-in-right-out intersection that has no access to/from westbound Balcerzak Drive. Turns were restricted to RIRO to prevent drivers from cutting through on Cardinal to take a left on Balcerzak during peak times when the all-way stop at Pohl and Balcerzak would back up. *Figure 3* shows the lane configurations for the intersection.

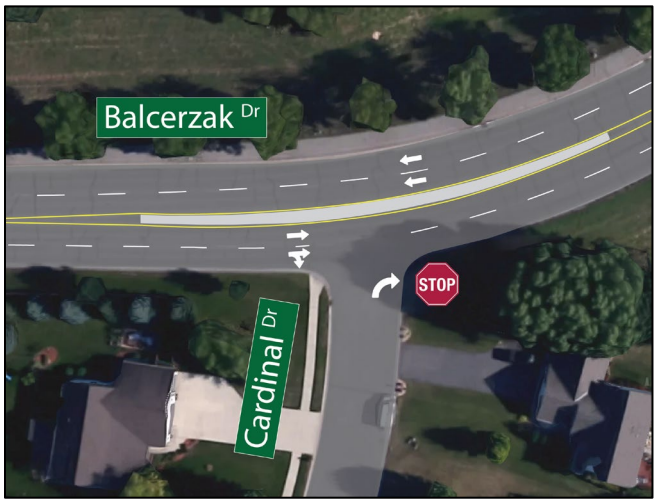


Figure 3. Cardinal Road Intersection Lane Configuration

Victory Drive

The intersection of Victory Drive and Balcerzak Drive is a T-intersection, with the western terminus of Balcerzak Drive abutting Victory Drive. This intersection is signalized, with Balcerzak Drive having both left and right turn lanes. There are shared-use paths on the west side of Victory Drive and the north side of Balcerzak Drive. Crosswalks are located on the western and southern legs of the intersection, however the southern crossing does not have a receiving ramp or facilities to connect to on the northeast side of Victory Drive. *Figure 4* below shows the lane configurations for the intersection.

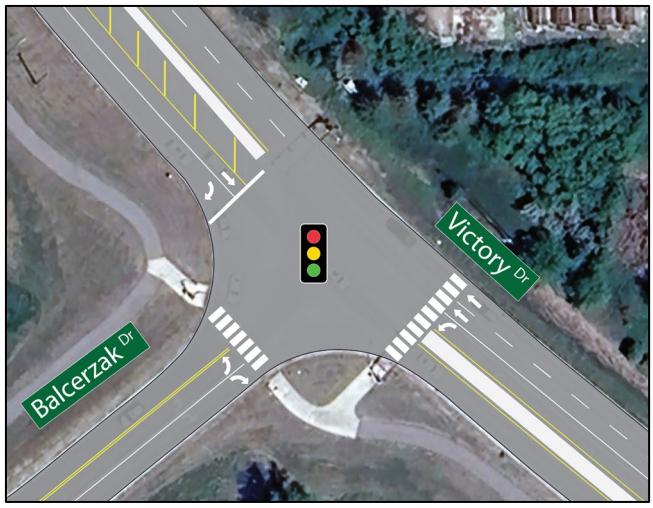


Figure 4. Victory Drive Intersection Lane Configuration

Functional Classification

The functional classification system is used to create a roadway network that efficiently collects and distributes traffic from neighborhoods to the state highway system. A successful system coordinates and manages mobility, roadway design, and route alignment as well as seeks to match current and future access and land use with the adjacent roadway's purpose, speeds, and spacing. The functional classification system is comprised of principal arterials, minor arterials, major and minor collectors, and local roadways.

Balcerzak Drive serves as a minor arterial roadway between Victory Drive and Pohl Road. It serves a diverse mix of personal vehicles, freight, transit, bicycle, and pedestrian traffic throughout the southeastern Mankato area, and has an AADT of 9,494. Balcerzak Drive is not a through route, with the entirety of the road running for just 1.2 miles between Warren Street and Victory Drive. Connections to other major regional roadways can be made from Victory Drive, including US Highway 14/ Minnesota State Highway 60 and Minnesota State Highway 22.

The City of Mankato has jurisdiction over Balcerzak Drive.

Pedestrian and Bicycle Facilities

There is a path on the north side of Balcerzak Drive within the study area, and no pedestrian or bike facility on the south side. The path on the north side of the street is 8 feet wide, bituminous, directly behind the curb for most of the study area and runs the length of Balcerzak Drive from Victory Drive in the east to Warren Street in the west. At the east end of the study area, the path connects to the shared-use path along Victory Drive. The path also connects to on-street bike facilities and the sidewalks along Pohl Road at the west end. Cardinal Drive has a sidewalk along the west side of the street, however there is no current connection to the shared-use path on the north side of Balcerzak Drive. The recommendation of the City of Mankato Complete Streets Plan & Policy is to install a sidewalk on the south side of Balcerzak Drive.

Mankato Transit

Mankato Transit System operates within the study area. Provided by a partnership of the City of Mankato, the City of North Mankato, MnDOT, and the Minnesota State University, Mankato Student Association/Senate and Transportation and Parking Program, the transit system has eight bus routes than run in Mankato and North Mankato. Three bus routes, 6, 10, and 11, operate on Balcerzak Drive through the study area. Route 6 runs Monday through Friday, route 10 runs on Saturday and Sunday, and route 11 runs exclusively on Saturdays. There are no stops within the study area, with the closest stop located at the northwest corner of Balcerzak Drive and Pohl Road, in front of the Fire Station. As of 2023, each route picks up once every hour, and route 6 runs in both directions, route 10 runs in a clockwise loop and route 11 runs in a counterclockwise loop. The cost of a ride on the bus is $1.50, however, being a student, a senior citizen, a person with disabilities, or having a Medicare or Veteran ID card reduces the price of taking the bus. Mankato Transit System also provides Kato Flex, a dial-a-ride service, and paratransit options. These services need to be reserved in advance of use and do not have fixed routes.

Environmental Considerations

The existing environmental conditions, or affected environment, are the baseline conditions in any given area. The affected environment consists of baseline resources that could constrain alternatives development or be impacted by a project. Owing to the size and scope of this project, there is likely little need for any National Environmental Policy Act (NEPA) documentation as part of the implementation of any recommendation from this study. However, environmental considerations can substantially increase project costs, either through additional coordination, mitigation, or delays.

This section contains an overview of the current environmental conditions along Balcerzak Drive between Pohl Road and Victory Drive. This desktop assessment of the corridor was completed using a variety of federal, state, and local resources to identify potential environmental constraints and impacts that projects along the corridor could encounter. As project alternatives are developed and refined, this assessment of impacts will also become more refined. *Table 1* summarizes the Social, Economic, or Environmental (SEE) topics and potential considerations for existing and planned conditions regarding the Balcerzak Drive Pedestrian Crossing Study. Future improvements along Balcerzak Drive should consider the findings of this review.

Table 1. Summary of Balcerzak Drive Social, Economic, or Environmental (SEE) Topics

SEE Topic	Considerations	Existing/Planned Condition
Social And Community	• Access and compatibility considerations • Hospitals, schools, libraries, churches, government buildings	Outside of construction, project outcomes are not anticipated to have any adverse long-term impacts to community mobility or incompatibilities with social or community features.
Environmental Justice	• Avoid/mitigate disproportionate impacts to low income and minority populations • Federal funding triggers review and potential mitigation requirements	Low income and/or minority populations are present in the study area, and Environmental Justice is anticipated to be a consideration regarding roadway planning and design. MAPO and the city should follow common best practice regarding engagement with low income/minority populations to aid in alternative development and ensure those populations are effectively notified and accommodated through the public process.

Section 4(f) / 6(f) Resources	• Require special evaluation, coordination, and documentation:
	  • Parks and trails
	  • Wildlife & waterfowl refuges
	  • School playgrounds
	  • Public golf courses
		There are nearby 4(f) properties, such as Jaycee Park and Lion's Park, but no nearby 6(f) properties. Project alternatives are anticipated to be entirely contained in the existing right-of-way and have negligible potential to impact nearby 4(f) properties.

Traffic Noise	• Identify noise receptors • Comply with federal and state regulatory requirements • Potential mitigation (walls or other measures)	This project is not expected to significantly alter the right-of-way or increase roadway capacity. As such, no noise analysis is anticipated.
Farmland	• Farmland conservation policies	There is no farmland in the project area. As such, there is no anticipated farmland impacts.
Historic / Archaeological	• Require special evaluation, coordination, and documentation • Avoid impacts per state, federal, and local regulations and guidelines	Project alternatives are anticipated to be entirely contained in the existing right-of-way, and as such, have negligible potential to impact any known or unknown archeological sites.
Soils / Erosion	• Compatibility with construction/drainage design	Project alternatives are anticipated to be entirely contained in the existing right-of-way, and as such, have negligible potential to impact soils or erosion.
Utilities	• Conflicts with utilities may increase schedule/cost requirements.	There are no overhead power transmission lines crossing the corridor in the study area. Any underground utilities in the corridor would need to be accounted for in planning and preliminary design activities. A review of US DOT's National Pipeline Mapping System indicates that there are no regional gas pipelines under or crossing Balcerzak Drive in the study area.

SEE Topic	Considerations	Existing/Planned Condition
WATER RESOURCES	• Impacts need to be avoided/limited per regulatory requirements	**Watershed** The study area falls within the Mankato Watershed of the Minnesota River Basin. **Wetlands** National Wetland Inventory (NWI) wetland areas as defined by the US Fish and Wildlife are depicted in the attached SEE Resources figure. While any improvement project or projects in the study corridor would need to have field wetland delineations performed, NWI mapping is a desktop exercise that indicates the scale of wetland impacts which could be encountered. The NWI information shows some wetland resources in the study area. **Floodplain** FEMA 100- and 500-year floodplain information was assessed through the MnDNR's Lake and Flood Elevations map. There are no 100- or 500 -year floodplains along Balcerzak Drive in the study area.
DRAINAGE	• Existing drainage systems • Sensitive waters	The corridor is served by curb and gutter design between Pohl Road and Victory Drive. There are no impaired waterways near the study corridor, but the nearby Minnesota River is an impaired waterway.
CONTAMINATED PROPERTIES	• Potential construction delays/costs • Potential cleanup liability	The Minnesota Pollution Control Agency's (MPCA's) "What's In My Neighborhood" (WIMN) database is a useful tool for preliminary screening and planning purposes. WIMN data was reviewed as part of this screening in anticipation of a more detailed review as part of preliminary and final design for future improvement projects. Contaminated properties are not expected to be a substantial consideration relative to preliminary planning/conceptual design activities.
FISHERIES	• Trout streams • Fish migrations • Spawning runs • Unique habitat conditions	There are no trout streams within a mile of the project corridor nor known unique fisheries considerations.
VEGETATION	• Native plant communities • Landscape vegetation • Functional vegetation • High value vegetation • Hazard trees	MnDNR Native Plant Community GIS data shows no instances in the vicinity of the corridor. Further review for functional/high value vegetation and hazard trees will need to be considered in future environmental review.

SEE Topic	CONSIDERATIONS	EXISTING/PLANNED CONDITION
PROTECTED SPECIES	• Federal and state designations • Coordination and review requirements	Based on online US Fish and Wildlife Service (USFWS) information, there are only two federally protected species (endangered or threatened) known to be in Nicollet County: • Northern long-eared bat • Rusty-patched bumble bee Future improvement projects would involve review and potential mitigation using USFWS guidance. The MnDNR's Natural Heritage Information System (NHIS) database was reviewed as part of this environmental screening. There are known occurrences of endangered or threatened species near the project corridor, mostly associated with the Minnesota River.

Safety

Intersection Crash Data and Trends

A crash review was completed for the two intersections in the study area for the previous five years (2018-2022). Bicycle and pedestrian crash data was also reviewed, using a 10-year time period (2013-2022). Crash data was provided through the Minnesota Crash Mapping Application Tool Version 2 (MnCMAT 2). A crash review was not conducted at Victory Drive, as the intersection was reconstructed in 2021, so the previous five-year crash history does not apply to the new design.

During this period, there were 15 crashes at the intersection of Balcerzak Drive and Pohl Road. The crash trends at this intersection are as follows:

- Twelve of the 15 (80 percent) were angle or "other" crashes.
- The remaining three crashes included a left turn crash, a pedestrian crash, and a bike crash. The latter two are explained in further detail in the *Pedestrian and Bicycle Crashes* section.
- Nine crashes resulted in property damage only, one in possible injury, and five in minor injury.

At the intersection of Balcerzak Drive and Cardinal Drive there were five crashes between 2018 and 2022. Crash trends at this intersection include:

- Three of the five crashes were single vehicle run-off-road crashes. All three crashes were on mainline Balcerzak Drive and were traversing the curve at or near Cardinal Drive. Two of the crashes resulted in property damage only, and the third resulted in minor injury.
- The remaining two crashes were same direction sideswipe crashes. One resulted in property damage only and the other resulted in minor injury.

MnDOT uses a comparison of the crash rate and the critical rate when determining if there is a critical safety issue at an intersection. The crash rate is the number of crashes per million entering vehicles (MEV). The critical rate is a statistical comparison based on similar intersections statewide. An observed crash rate greater than the critical rate indicates that the intersection operates outside of the expected, normal range. The critical index reports the magnitude of this difference between

crash rate and critical crash rate. A critical index of 1.0 or less indicates that the intersection is operating within the normal range. A critical index of greater than 1.0 indicates that the intersection is operating outside the normal range, there is likely an existing safety concern, and that the crash history might be a result of roadway design.

Crash rate and critical crash rate for study area intersections is shown in *Table 2*.

Table 2. Intersection Crash Analysis (2018-2022)

Intersection	Total Crashes	Severe Crashes (K And A) (1)	Crash Rate (2)	Average Crash Rate (3)	Critical Crash Rate	Critical Index
Balcerzak Dr & Pohl Rd	15	0	0.633	0.267	0.560	**1.13**
Balcerzak Dr & Cardinal Dr	5	0	0.309	0.128	0.560	0.79

Notes: (1) Severe crashes include Fatal (K) and Incapacitating Injury (A) Crashes
(2) Crash rate is expressed in Per Million Entering Vehicles.
(3) Average crash rates were obtained from MnDOT's statewide crash data.

The intersection of Balcerzak Drive and Pohl Road has a critical index of 1.13, indicating that the intersection is operating outside of the normal range compared to similar intersections statewide, and that the design of the intersection is likely contributing to the prevalence of crashes.

The intersection of Balcerzak Drive and Cardinal Drive has a critical index of 0.79, below the critical crash rate for similar intersections. The intersection is operating within the normal range of similar intersections statewide, even though the crash rate seen here is higher than the statewide average for similar intersections.

Pedestrian and Bicycle Crashes

In the last 10 years (2013-2022), there have been 2 pedestrian crashes and 1 bicycle crash within the study area. Two crashes, one bicycle crash and one pedestrian crash, resulted in minor injuries (Injury B), while the third crash resulted in possible injuries (Injury C). Both pedestrian crashes were hit-and-runs. These three collisions all occurred in the crosswalk that crosses the western leg of the intersection of Balcerzak Drive and Pohl Road. This study includes an analysis of short form crash detail reports to determine common features of these crashes. All vehicles involved in the crashes were reported to have stopped at the crosswalk before the collisions. All the reported crashes happened after sunset, with streetlights on at the intersection.

Traffic

Data Collection

The study team collected 13-hour (6:00 AM to 7:00 PM) intersection turning movement data on Tuesday, April 25th, 2023. Thirteen-hour counts are an accepted industry standard to estimate 85 percent of daily traffic for an average day. Count data was collected at the intersections of Balcerzak Drive with Pohl Road and Cardinal Drive. By extrapolating the data collected on April 25th, the following average daily traffic (ADT) counts were tabulated and compared to historical traffic counts data from the MnDOT Traffic Mapping Application for the corresponding segments of Balcerzak Drive and Pohl Road (*Table 3*). This analysis found that historic traffic counts and the estimated ADT from the April 25th counts were generally comparable. It is notable that for the location on Balcerzak Drive east of Pohl Road, the data provided by the MnDOT Traffic Mapping Application is 0.5 miles east of Pohl Road, near All Seasons Arena, but is the closest analogue to the project corridor in lieu of official count at that exact location.

Table 3. Balcerzak Drive 13-Hour Count ADT Comparison

Intersection Leg	April 2023 Count	MnDOT Traffic Mapping Application (Year)
Balcerzak Dr, East of Pohl Rd	8,600	8,700 (2017)
Balcerzak Dr, West of Pohl Rd	6,650	8,700 (2017)
Pohl Rd, North of Balcerzak Dr	4,200	4,605 (2021)
Pohl Rd, South of Balcerzak Dr	6,500	4,878 (2021)
Balcerzak Dr, East of Cardinal Dr	8,700	8,700 (2017)
Balcerzak Dr, West of Cardinal Dr	8,600	8,700 (2017)
Cardinal Dr, South of Balcerzak Dr	400	Not Available

All-Way Stop Control Warrant Analysis

All-way stop control can be useful as a safety measure at intersections if safety concerns exist because of high traffic volumes in multiple directions or if there is an insufficient sight distance available to see conflicting traffic on an approach to an intersection. The Minnesota Manual on Uniform Traffic Control Devices (MN MUTCD) states that the need for an all-way stop control shall be considered if one of the following conditions is met:

- Criteria A: Where traffic control signals are justified, an all-way stop can be installed as an interim measure.
- Criteria B: Five or more crashes are reported in a 12-month period that are susceptible to correction by an all-way stop installation.
- Criteria C: Where:
    1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and
    2. Where the combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but,
    3. If the 85th-percentile approach speed of the major street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.

- Criteria D: Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

The intersection of Balcerzak Drive and Pohl Road meets Criteria B, as there were five crashes from April 2019 to April 2020 (3 angle crashes, a left-turn crash, and a pedestrian crash), in addition to meeting the minimum volume requirements of C1. Therefore, this intersection meets the requirements for its current all-way stop controlled condition. However, due to the continued high volume of crashes at the intersection, alternative intersection layouts should be explored.

Public Involvement

Public involvement was an integral part of the Balcerzak Drive Pedestrian Connectivity Study. Input from property owners, interested citizens, elected officials and other corridor users was critical to understanding issues and needs and to vet improvement concepts and priorities. A technical memo that provides a detailed summary of public involvement undertaken for this study is included as **Appendix A** for reference.

The following methods were used to promote public involvement during the study:

1. *City Council Updates* – Study staff provided formal and informal updates throughout the study process. A planned formal update and presentation to the city staff was given by project staff on August 28th, 2023. Council members were provided with a notated presentation which documented study progress up to date and included a range of alternatives that would be shared at the September 19th Open House.
2. *Public Informational Meeting* – A public informational meeting was held on September 19th, 2023. This meeting presented three alternatives for multimodal improvements for traveling across or along Balcerzak Drive, and gathered input from stakeholders on issues, needs, and opportunities based on these alternatives. The summary of this public meeting is included in **Appendix A.**
3. *MAPO Updates* – Study staff provided formal updates on project development to the MAPO Technical Advisory Committee (TAC) on October 19th, 2023, and the Policy Board on November 3rd, 2023.

Key Transportation Issues

An important element of the study was the identification of key transportation issues along the corridor. The following information provides a summary of issues identified by the existing conditions analysis and public input. This analysis also serves as the study's needs assessment within the Purpose and Need statement.

Primary and secondary issues were identified. Primary issues are vital to the success of a potential project making the required improvements. Secondary issues are also important but were not considered to set the framework for potential improvements. They may relate to items that can be addressed regardless of the alternative selected from this study.

Primary Issues

Walkability and Bikeability

The study area intersections connect the residential area along Cardinal Drive to nearby community, shopping, and employment destinations like Jaycee Park, All Seasons Arena, Minnesota State University, Mankato, and places along Victory Drive and Monks Avenue. Connectivity for pedestrian and bicycle movements is a need within the study area. There are no on-street facilities in the project area for cyclists, and the only non-motorized facility is a shared biking and walking path on the north side of Balcerzak

Drive. For people biking and walking to or from Cardinal Drive, there is no dedicated path along the south side of Balcerzak Drive to access nearby facilities, and no marked crossing at Cardinal Drive.

Road User Safety

Safety for people who walk and bike, as well as vehicles, is a primary need throughout the study area. A safety assessment was completed to determine if there were any "hot spots" along Balcerzak Drive. The safety analysis included a review of historical crash data at intersections and along the Balcerzak Drive corridor segment. As detailed in the safety analysis section, the intersection of Pohl Road and Balcerzak Drive has a critical index above 1.0, indicating that there are statistically significant issues at the intersection, and the roadway design might be a contributing factor to the high rate of crashes.

Secondary Issues

Corridor Operations

Balcerzak Drive is an urban 4-lane undivided minor arterial roadway with approximately 8,700 daily trips. The number of existing daily trips and forecast volumes along the corridor is suitable for a minor arterial and is within the capacity for a 4-lane undivided roadway.

Intersection Operations (Pohl Road & Balcerzak Drive)

An All-Way Stop Control Warrant Analysis was completed using intersection safety data and intersection hourly turn movement counts for the intersection of Pohl Road and Balcerzak Drive. All-way stop control can address safety and operational concerns at an intersection that are caused by high traffic volumes in multiple directions, or if there is an insufficient sight distance available to see conflicting traffic on an approach to an intersection. The All-Way Stop Control Warrant Analysis followed guidance from the MN MUTCD.

Study Goals and Objectives

Following the identification of issues and needs for the study area through both a technical and public process, the study team developed the following goals with assistance from study partners:

- Improve pedestrian and bicycle access.
- Safely accommodate all users (vehicles, pedestrians, bicycles, and transit).
- Provide infrastructure improvements compatible with the historic and natural environment.
- Develop a financially responsible implementation plan.

These goals were used to develop screening criteria and evaluate the trade-offs between improvement options. Each goal is comprised of specific objectives and performance/screening measures.

Identification and Evaluation of Alternatives

Alternatives for the study area focused on improving mobility across or along Balcerzak Drive for people walking and biking to and from Cardinal Drive. Multiple improvement alternatives were identified and evaluated based on the existing conditions analysis and issues and needs identified through public, agency, and stakeholder involvement. Full copies of the concept alternatives identified were presented to the public during the September 19th Public Informational Meeting, the October 19th meeting of the MAPO TAC, and the November 2nd meeting of the MAPO Policy Board.

An evaluation matrix was used that used measures and identified the degree to which the measure was met by an alternative when compared to the study's goals. However, this evaluation matrix was only used as a technical document. Alternatives shared with the public were presented using pros/cons versus scoring of technical metrics. This evaluation matrix can be seen in **Appendix B –Project Concept Evaluation Matrix.**

Concept Development

Concept development for the Balcerzak Drive Pedestrian Crossing Study focused on providing three distinct visions for biking and walking mobility along the corridor. During the development of concepts, the project team determined that crossing Balcerzak Drive from Cardinal Drive could be met through either improvement to the intersection with Cardinal Drive, or through new walking or biking facilities along the south side of the corridor. The concepts seek to improve mobility along and across Balcerzak Drive from Cardinal Drive by either:

- Improving the safety of crossing at Cardinal Drive.
- Improving walking and/or biking access to nearby signalized and all-way stop controlled intersections.

The study team focused on the intersection of Balcerzak Drive with Cardinal Drive and did not put forward any recommendations that would substantially impact the nearby intersections of Balcerzak Drive with Pohl Road or Victory Drive. However, all concept alternatives put forward as part of this study did include considerations for compatibility with long-term planned improvements to Pohl Road that were determined as part of the Pohl Road Intersection Control Evaluation Study in 2016.

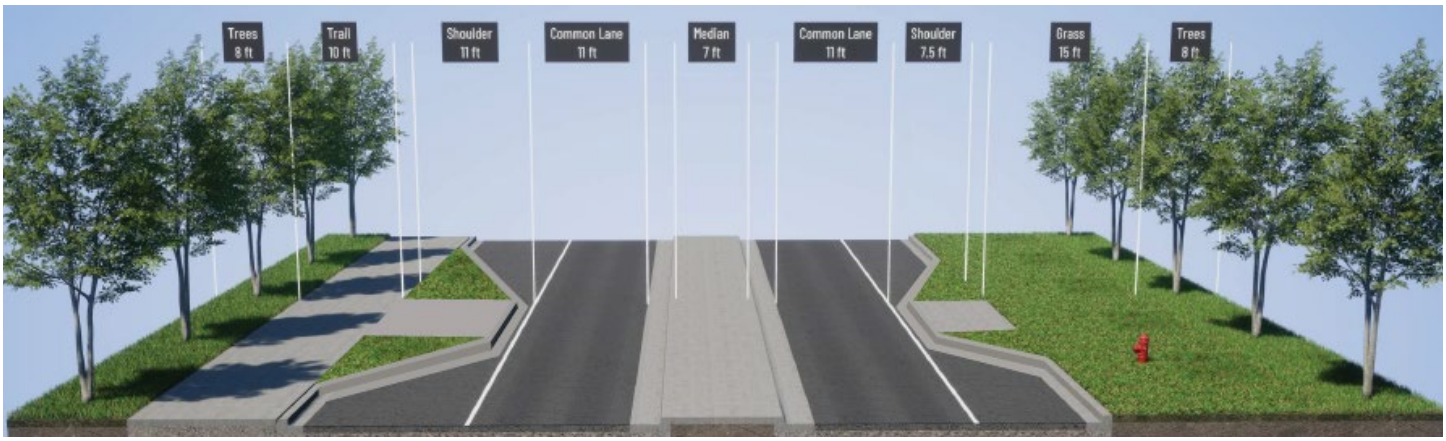
The following sections detail the project alternatives as they were presented at the project Public Informational Meeting:

Alternative 1 – Raised Median at Cardinal Drive

This alternative would reduce the number of lanes along Balcerzak Drive between Victory Drive and Cardinal Drive to two lanes and install a 7-foot-wide raised median with refuge and curb extensions (i.e., bulb-outs) at the intersection of Cardinal Drive. West of the intersection, the roadway would return to a four-lane roadway. The alternative layout and typical sections are shown in *Figure 6* and *Figure 7,* respectively.

Figure 5. Alternative 1 Layout

Figure 6. Alternative 1 Typical Section (Facing East)



Alternative 1 – Pros

- Lane reduction and bulb-outs calm traffic speeds, reduce crossing distance for people walking or biking, improve visibility of people crossing, and eliminate dual threats during crossings.
- Pedestrian refuge allows people walking or biking to cross one direction of traffic at a time.

Alternative 1 – Cons

- No non-motorized facility along the south side of Balcerzak Drive.
- Requires crossing at an uncontrolled intersection.

Alternative 2a – Rectangular Rapid Flashing Beacon & South Side Sidewalk

This alternative would keep Balcerzak Drive as a four-lane roadway between Pohl Road and Victory Drive and install a Rectangular Rapid Flashing Beacon (RRFB) at the Cardinal Drive intersection and construct a south side sidewalk between Pohl Road and Victory Drive. The south side sidewalk would connect with the sidewalk at Pohl Road and the existing shared-use path that runs along the west side of Victory Drive. The alternative layout and typical sections are shown in *Figure 8* and *Figure 9* respectively.

Figure 7. Alternative 2a Layout

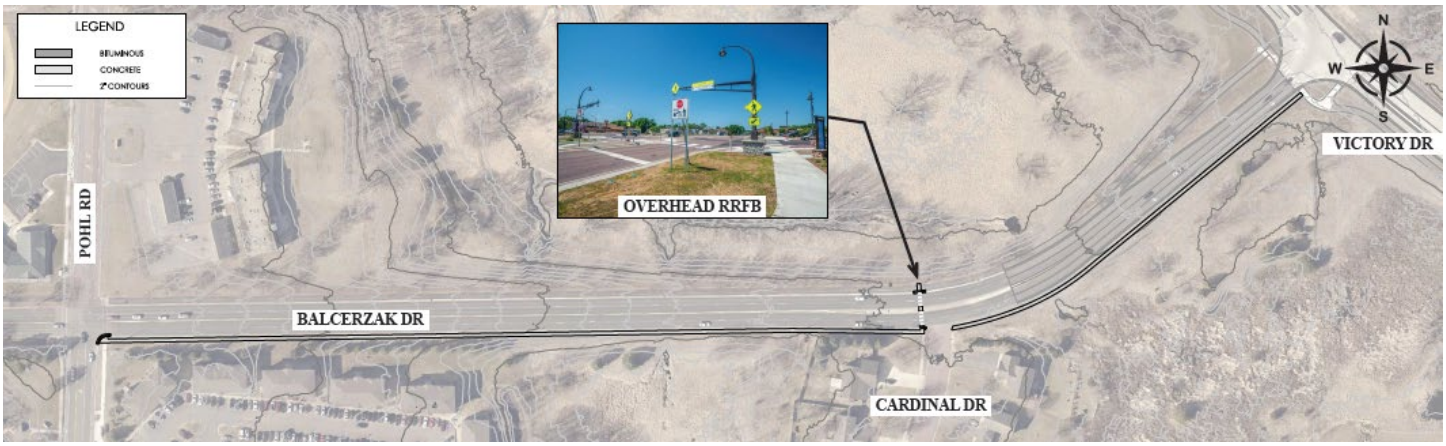
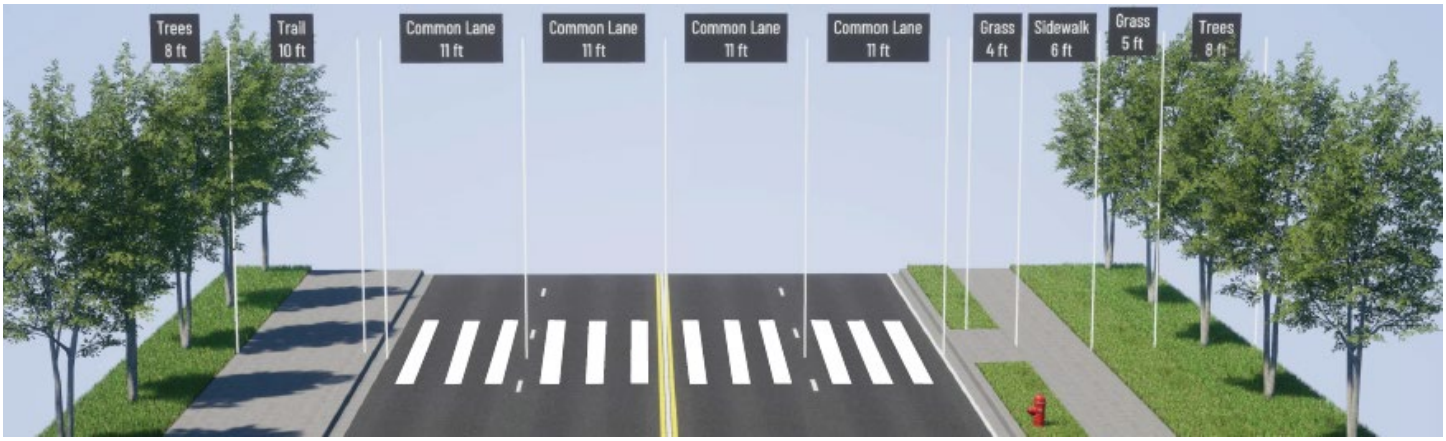


Figure 8. Alternative 2a Typical Section (Facing East)



Alternative 2a – Pros

- The overhead RRFB could improve crossing at Cardinal Drive.
- Minimal impacts to Balcerzak Drive. No changes to the roadway configuration.
- Provides pedestrian facilities along both sides of Balcerzak Drive, allowing people to cross Balcerzak Drive at the nearby controlled intersections.

Alternative 2a – Cons

- Cardinal Drive currently does not meet warrants for an RRFB.
- A new sidewalk would require additional coordination for snow clearing and snow storage.

Alternative 2b – South Side Sidewalk

This alternative would keep Balcerzak Drive as a four-lane roadway between Pohl Road and Victory Drive and construct a south side sidewalk between Pohl Road and Victory Drive. The new south side sidewalk would connect with the sidewalk at Pohl Road and the existing shared-use path that runs along the west side of Victory Drive. Non-motorized crossings to and from Cardinal Drive would be directed to the nearby controlled intersections of Pohl Road or Victory Drive. The alternative layout and typical sections are shown in *Figure 10* and *Figure 11*, respectively.

Figure 9. Alternative 2b Layout

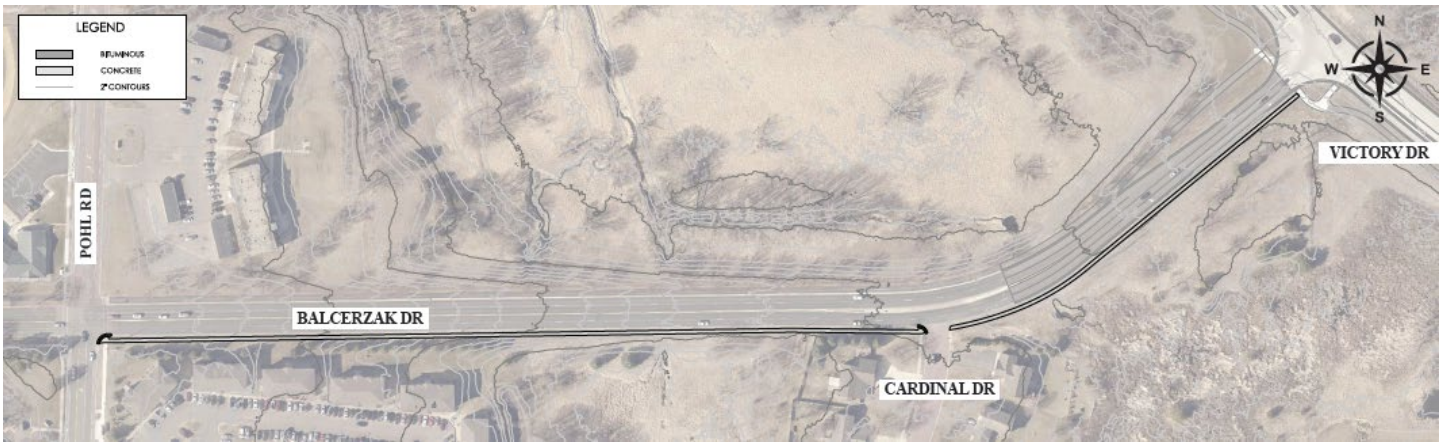
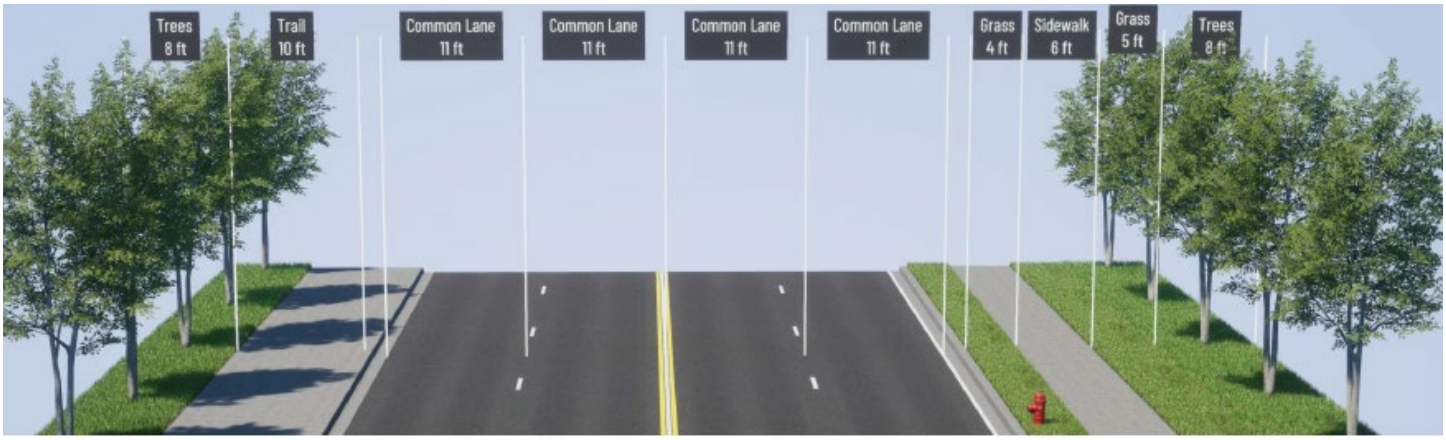


Figure 10. Alternative 2b Typical Section (Facing East)



Alternative 2b – Pros

- Minimal impacts to Balcerzak Drive. No changes to the roadway configuration.
- Provides pedestrian facilities along both sides of Balcerzak Drive, allowing people to cross Balcerzak Drive at the nearby controlled intersections.

Alternative 2b – Cons

- Does not support crossing at Cardinal Drive.
- New sidewalk would require additional coordination for snow clearing and snow storage.

Recommended Alternative

The PMT, TAC, Mankato City Council and Policy Board considered the results of the technical analysis as well as public feedback when working towards identifying a locally preferred alternative. Feedback from the public, the PMT, MAPO TAC, MAPO Policy Board, Mankato City Council, as well as the findings of the concept evaluation matrix led the PMT to select Alternative 2b. This alternative would keep Balcerzak Drive as a four-lane roadway between Pohl Road and Victory Drive and construct a south side sidewalk between Pohl Road and Victory Drive, as the retained alternative for further design and consideration. The alternative layout and typical sections are shown in *Figure 12* and *Figure 13*, respectively.

Figure 11. Recommended Alternative Layout—2b

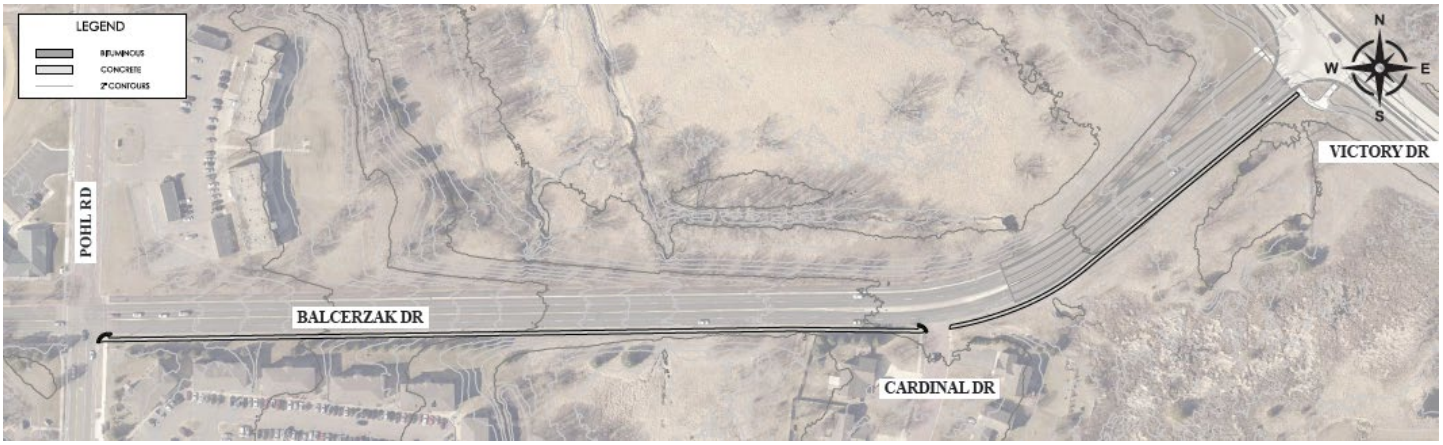
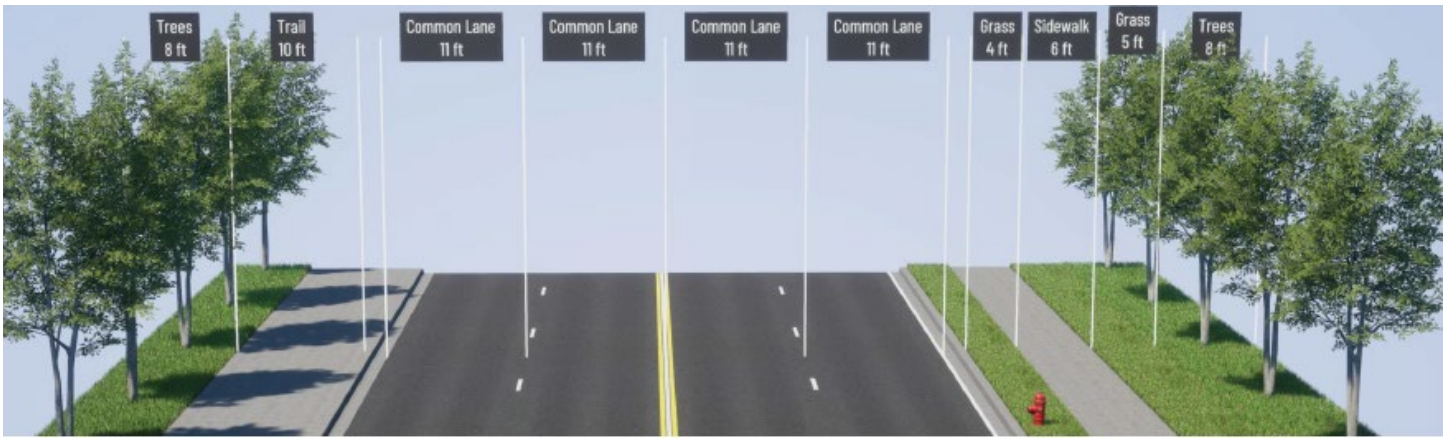


Figure 12. Recommended Alternative Typical Section (Facing East)—2b



Next Steps

The purpose of the Balcerzak Drive Pedestrian Crossing Study was to develop a long-term plan for improvements to Balcerzak Drive between Pohl Road and Victory Drive. Planning-level alternatives developed as part of this study are high-level recommendations and will need additional refinement through preliminary and final design. Environmental review and permitting will be required based on the scope of the project and the funding source. The implementation of any project improvements selected as part of the Balcerzak Drive Pedestrian Crossing Study should be considered with regard to the eventual reconstruction of the intersection of Pohl Road and Balcerzak Drive.

The conceptual alternatives identified within this study and the projects prioritized as part of the implementation plan will help MAPO and the City of Mankato to maintain a functioning, safe multimodal network.

Study partners must continue to work together to further plan, fund, design, and implement the recommended alternative. All partners have an active role in implementing these improvements. All funding sources should be considered. Agencies should update their comprehensive and transportation plans to include these findings to better leverage funding opportunities and success.

Appendix A – Project Engagement Summary Memo

BOLTON & MENK
Real People. Real Solutions.

1960 Premier Drive
Mankato, MN 56001-5900

Ph: (507) 625-4171
Fax: (507) 625-4177
Bolton-Menk.com

BALCERZAK DRIVE PEDESTRIAN CONNECTIVITY STUDY
OPEN HOUSE SUMMARY
SEPTEMBER 19, 2023 – 5:00 TO 7:00 PM
MANKATO PUBLIC WORKS CENTER

I. Purpose

The City of Mankato and the Mankato/North Mankato Area Planning Organization (MAPO) are reviewing options to improve crossing safety, eliminate accessibility barriers, and ensure Americans with Disabilities Act (ADA) compliance for the intersection of Cardinal and Balcerzak Drives in Mankato. Improving mobility at this intersection promises to provide people with greater access to active and accessible transportation options, creating safer opportunities for biking and walking to nearby resources such as schools, recreation, jobs, other destinations. The project team, after conducting a review of the existing plans, policies, and conditions of the Balcerzak Drive corridor between Victory Drive and Pohl Road, created three alternatives and presented them to members of the community during a public open house on September 19th, 2023.

II. Attendees

Three people signed into the meeting. The following agencies were also in attendance: City of Mankato and Mankato Area Planning Organization. In addition to the open house, the boards were left in a break room used by operators for the Mankato Transit System for one week, along with a supply of comment cards. Operators were encouraged to provide feedback on the alternatives.

III. Materials Presented

The open house gave attendees the opportunity to view materials and speak with project staff at their leisure. No formalized presentation on the project was given. The following information was available for public review and input:

- Study Purpose, Process, Timeline, and Goals
- Three alternative cross sections with potential pros and cons per option
- Matching alternative layouts to contextualize the option along the corridor

The three alternatives correspond to the following changes to the intersection of Balcerzak Drive and Cardinal Drive as well as select portions of the right-of-way. Typical sections and project layouts are included in **Attachment A – Open House Materials**.

A. Alternative A – Raised Median at Cardinal Drive

This alternative would narrow Balcerzak Drive down to two lanes between Victory Drive and Cardinal Drive and install a raised median and curb extensions (i.e., bump-outs) at the intersection of Balcerzak and Cardinal Drives. This would allow pedestrians to cross Balcerzak Drive one direction of traffic at a time and eliminate dual threats while crossing. This lane configuration would align with Intersection Control Evaluation (ICE) recommendations at Pohl Road.

B. Alternative B – Overhead Rectangular Rapid Flashing Beacon at Cardinal Drive with South Side Sidewalk between Victory Drive and Pohl Road

This alternative would keep Balcerzak Drive as a four-lane roadway between Victory Drive and Pohl Road. The alternative would install an overhead Rectangular Rapid Flashing Beacon (RRFB) at the intersection of Balcerzak and Cardinal Drives in addition to construction a sidewalk along the south side of Balcerzak Drive between Victory Drive and Pohl Road. The overhead RRFB would improve non-motorized crossing safety at Balcerzak Drive, and the continuous sidewalk between Victory Drive and Pohl Road would allow pedestrians to cross at the controlled intersections located at Victory Drive or Pohl Road. This configuration would not preclude ICE recommendations at Pohl Road.

C. Alternative C – South Side Sidewalk between Victory Drive and Pohl Road

This alternative would keep Balcerzak Drive as a four-lane roadway between Victory Drive and Pohl Road. The alternative would construct a sidewalk along the south side of Balcerzak Drive between Victory Drive and Pohl Road. The continuous sidewalk between Victory Drive and Pohl Road would allow pedestrians to cross at the controlled intersections located at Victory Drive or Pohl Road. This configuration would not preclude ICE recommendations at Pohl Road.

IV. Comments Received

Public input was collected throughout the duration of the open house through discussions with staff and written comments. Comment cards collected names and addresses, and asked attendees to identify how they traveled along Balcerzak Drive (i.e., drive, bike, walk, or other). Comment cards asked attendees to identify what alternative they support most and why, in addition to identifying the alternative they supported least and why. In addition to the open house, the boards were left in a break room used by transit operators at Mankato Transit System for one week after the open house, where the alternatives garnered an additional four comments.

The following summarizes public comments collected:

A. **Summary of Written Comments for Alternative Most Supported (Comment Forms)**

The two comments collected from the open house expressed support for Alternative A and Alternative C. There were four comments left on the posters during their time displayed in the Mankato Transit System transit operators' break room. Three of the comments expressed support for Alternative B, and one expressed support for Alternative C. Common themes from the feedback are as follows:

1. Alternative A – Raised Median at Cardinal Drive

One comment expressed support for reduced lanes, which would reduce speed, and how the construction would synergize well with a potential Pohl Road roundabout.

2. Alternative B – Overhead RRFB at Cardinal Drive

Three comments expressed support for this alternative, the most of any alternative. All three comments came from Mankato Transit System transit operators. The comments expressed support for the alternative since it would improve pedestrian safety and provide a continuous route along the south side of Balcerzak Drive while not impacting vehicular traffic and its ability to move along the corridor.

3. Alternative C – South Side Sidewalk

Two comments expressed support for the south side sidewalk alternative, the second most of any alternative. Logic behind this support mirrored the reasoning behind supporting Alternative B: providing continuous pedestrian facilities along Balcerzak Drive and encouraging pedestrian crossings at signalized intersections was perceived as being safer than a midblock crossing.

B. Written Comments for Alternative Least Support (Comment Forms)

Comment cards also asked for feedback on which alternative was least supported, and what elements were responsible. Only one comment from the public open house identified a least-supported alternative, identifying Alternative B as their least supported alternative. The Mankato Transit System transit operators also provided four pieces of feedback during their review period, all of which identified Alternative A as the alternative they supported the least. Common themes from the feedback are as follows:

1. Alternative A – Raised Median at Cardinal Drive

The four comments from transit operators all expressed opposition to bump-outs along Balcerzak Drive. Three of the four comments expressed concerns about increased congestion resulting from the bump-outs, and the final comment was a succinct declaration of “no bump-outs!”

2. Alternative B – Overhead RRFB at Cardinal Drive

One comment from the open house identified Alternative B as their least supported alternative. The comment expressed a concern that the overhead RRFB would be “accident prone for drivers and pedestrians”.

3. Alternative C – South Side Sidewalk

No comments collected listed Alternative C as their least supported alternative.

C. Miscellaneous Written Comments (Comment Forms)

One comment card came with additional feedback written in the margins. This asked if there would be a consideration for converting the intersection of Cardinal Drive from right-in/right-out (RIRO) to a 3/4 access, which would permit left-turns into Cardinal Drive from westbound Balcerzak Drive, but not allow left-turns out of Cardinal Drive.

D. Meeting Discussion

Most of the feedback gathered during the meeting was in through discussion of the provided options between project staff, city staff, MAPO staff, and City of Mankato residents. Meeting attendees expressed support for constructing sidewalks along the south side of the roadway.

E. Digital Correspondence (email)

Additional feedback was received via three emails sent to Chris Talamantez, a MAPO Transportation Planner, from residents living near the project area who were unable to attend the open house. The following summarizes the public comments gathered via these emails:

1. Alternative A – Raised Median at Cardinal Drive

Two resident emails expressed a desire for a pedestrian crossing. One email stated instead that there would be no value in bump-outs if a south side sidewalk was constructed, and worried about how removing a travel lane would cause congestion and potential issues turning onto Cardinal Drive.

2. Alternative B –Rectangular Rapid Flashing Beacon

While the project emails all supported adding a south side sidewalk, most felt that the sidewalk would largely eliminate the need for a crossing at Cardinal Drive. However, two respondents stated that there should be some sort of crossing at the intersection, even if it doesn't include an RRFB. One email mentioned that including a curb cut (but not RRFB) should be considered to allow access the trail across from Cardinal Drive for cyclists crossing over the median. This pedestrian/cyclist ramp along the trail would allow cyclists and people who rely on mobility aids to ride up onto the trail without having to dismount. This sentiment was mirrored by another email specifically called for a crosswalk and RRFB to support school aged children and residents of Cardinal Drive who have limited mobility.

3. Alternative C –South Side Sidewalk

All emails expressed support for alternative C, which would install a sidewalk along the south side of Balcerzak Drive between Victory Drive and Pohl Road. All emails highlighted that a south side sidewalk would remove the need to cross Balcerzak multiple times for southbound biking and walking trips using the trail along the west side of Victory Drive.

4. Miscellaneous Comments from Email

One comment addressed the potential for a roundabout at Balcerzak Drive and Pohl Road, stating that should include design elements to support biking and walking trips, as the intersection already serves a significant number of non-motorized trips.

Another email expressed a desire to reconfigure the intersection to allow left-hand turns onto Cardinal Drive from Balcerzak Drive (i.e., the 3/4 access scenario also expressed in Section IV.C – Miscellaneous Written Comments).

V. Attachment A – Open House Materials

BALCERZAK DRIVE PEDESTRIAN CROSSING STUDY

MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION

City of Mankato
Leading the way...

ABOUT THE PROJECT

The Balcerzak Drive Pedestrian Connectivity Study is designed to identify improvements and provide recommendations for improving pedestrian crossing conditions along Balcerzak Drive between Pohl Road and Victory Drive, through either intersection improvements or new non-motorized facilities. The study will evaluate existing issues and present alternatives to help improve conditions for crossing Balcerzak Drive.

This study is a shared effort between the City of Mankato and the Mankato/North Mankato Area Planning Organization (MAPO).

ABOUT THE PROJECT

Define the issues and potential opportunities along the corridor

Establish the corridor vision and goals

Develop and evaluate potential multimodal infrastructure improvement alternatives

Develop a short-term implementation plan in preparation for the future street reconstruction

PROJECT LOCATION

JULY - AUGUST	SEPTEMBER - OCTOBER	OCTOBER - NOVEMBER
GATHER EXISTING CONDITIONS	EVALUATE ALTERNATIVES	PROVIDE RECOMMENDATIONS

CONTACTS

Transportation Planner:
Christopher Talamantez
ctalamantez@mankatomn.gov
507-387-8389
10 Civic Center Plaza,
Mankato, MN 56001

WE NEED YOUR INPUT!

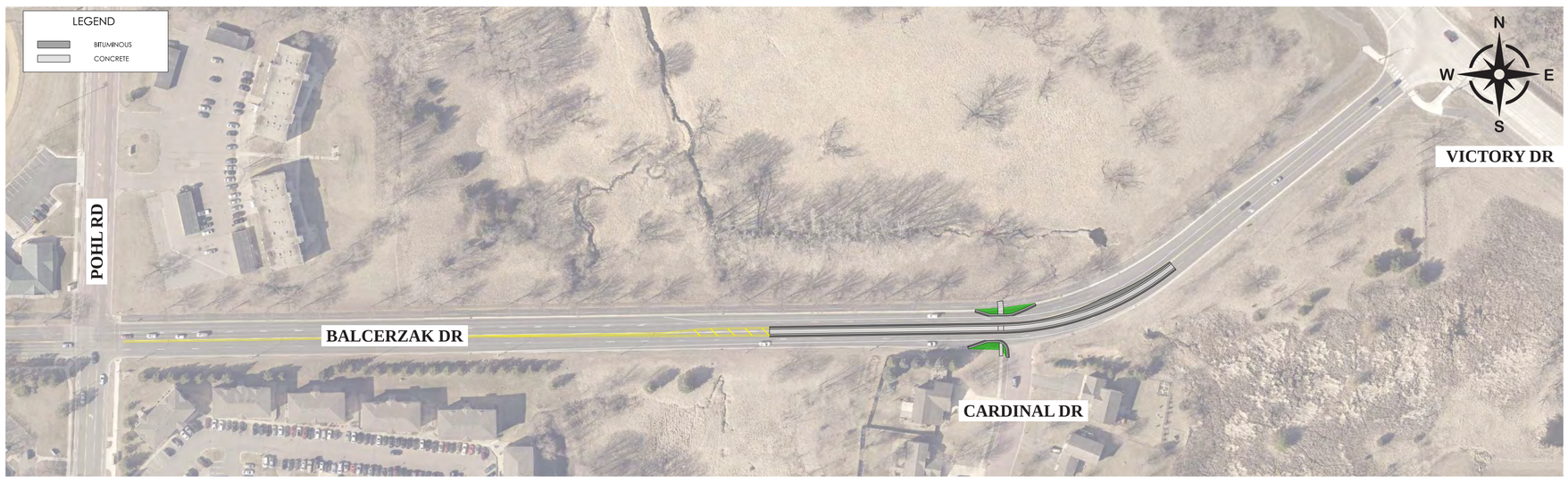
Project staff are looking for input on issues you encounter, ideas you have, and opportunities you see on the corridor to inform our study. To provide your comments...

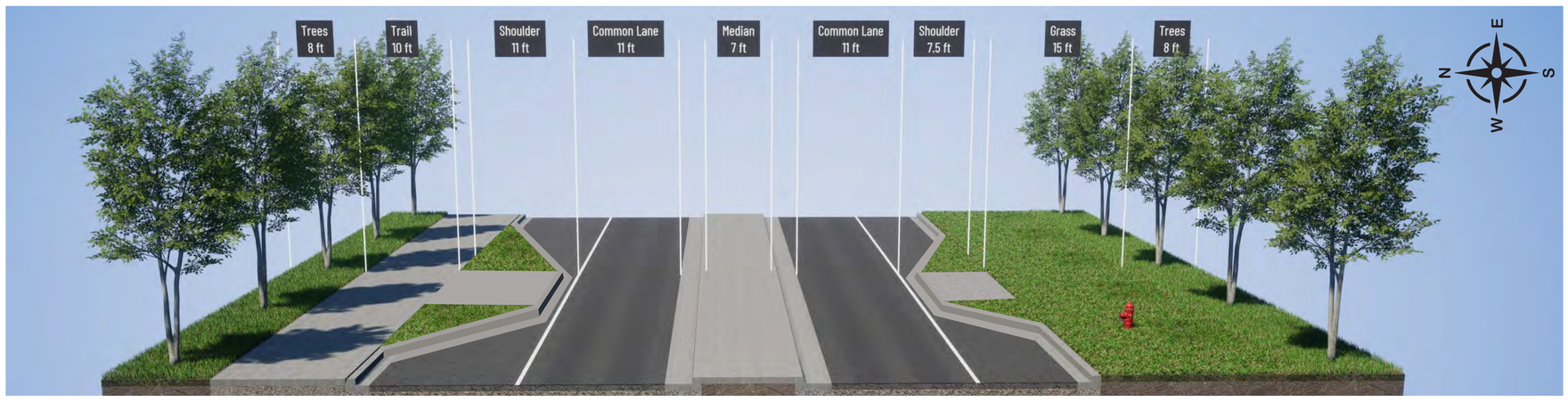
1. Visit with project staff at this event & discuss the project.
2. Fill out a comment form and submit at this event.
3. After this event, call or email Chris Talamantez for additional feedback, questions, or concerns.

BALCERZAK DRIVE IMPROVEMENTS

MAPO MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION

CONCEPT A: RAISED MEDIAN AT CARDINAL DRIVE



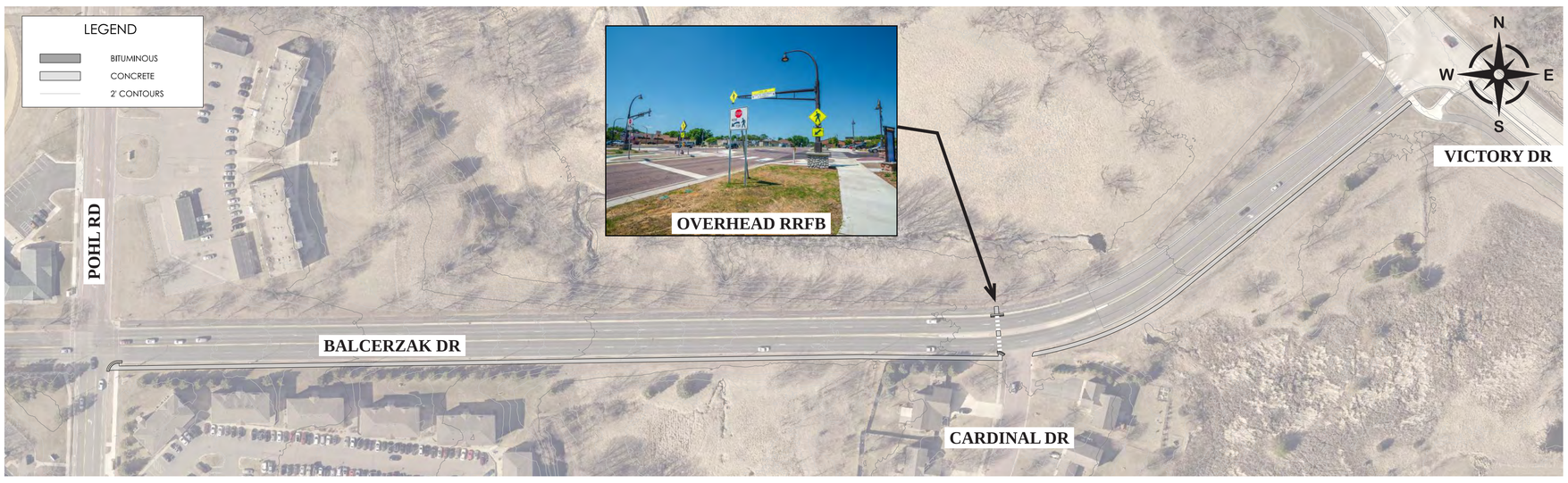


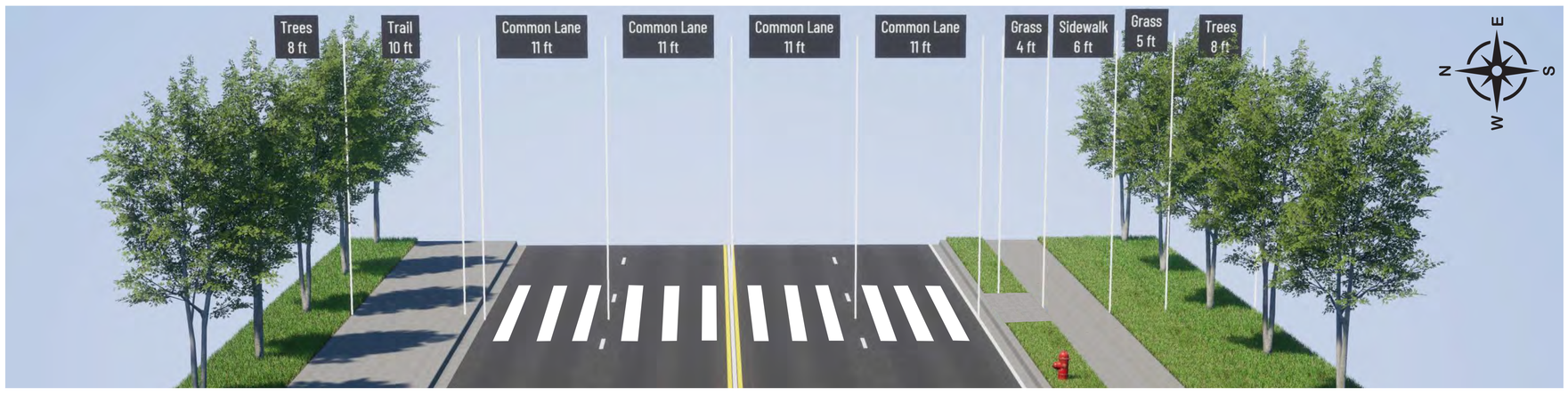
Key Elements
- Two-lane roadway from Victory Drive to Cardinal Drive
- Raised median at Cardinal Drive with curb extensions (i.e., bump-outs) and median refuge
- Lane configuration aligns with Intersection Control Evaluation recommendations at Pohl Road

Pros
- Pedestrian refuge allows pedestrians to cross one direction of traffic at a time
- Lane reduction and bump outs increase pedestrian visibility and eliminates dual threat.

Cons
- Only provides non-motorized access to one side of street
- Requires crossing at an uncontrolled intersection

CONCEPT B: RRFB AT CARDINAL DRIVE



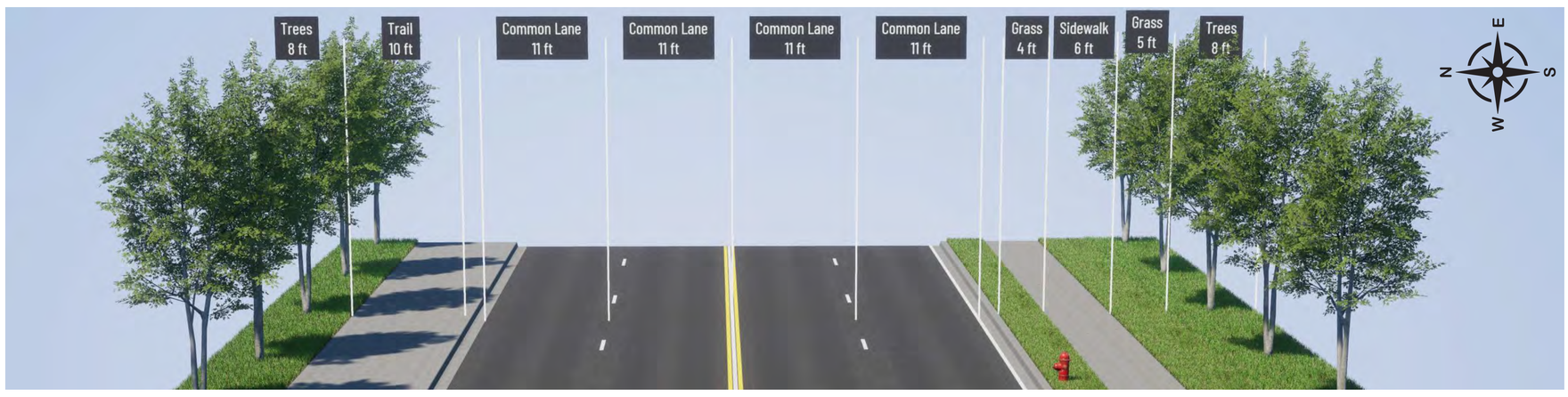


Key Elements
- Four-lane roadway with north side shared use path and south side sidewalk
- Overhead Rapid Rectangular Flashing Beacon (RRFB) at Cardinal Drive Lane
- Configuration would not preclude Intersection Control Evaluation recommendations at Pohl Road

Pros
- Overhead RRFB could improve crossing safety at Cardinal Drive
- Limited impacts to Balcerzak Drive
- Continues pedestrian facilities along both sides of Balcerzak Drive

Cons
- Cardinal Drive does not meet warrants for RRFB at this time
- Snow clearing and storage needs for new sidewalk

CONCEPT C: SOUTH SIDE SIDEWALK



Key Elements
- Four-lane roadway with north side shared use path and south side sidewalk
- Routes non-motorized crossing traffic to controlled intersections at Pohl Road and Victory Drive
- Lane configuration would not preclude Intersection Control Evaluation recommendations at Pohl Road

Pros
- Continues pedestrian facilities along both sides of Balcerzak Drive
- No impacts to Balcerzak Drive roadway

Cons
- Does not support pedestrian crossing at Cardinal Drive
- Snow clearing and storage needs for new sidewalk

BALCERZAK DRIVE IMPROVEMENTS COMMENT CARD

Name: _____ **Address:** _____

How do you use Balcerzak Drive? (circle all that apply)

Drive Bike Walk Other: _____

What concept do you support the most and why? _____

_____

_____

What concept do you support the least and why? _____

_____

_____

BALCERZAK DRIVE IMPROVEMENTS COMMENT CARD

Name: _____ **Address:** _____

How do you use Balcerzak Drive? (circle all that apply)

Drive Bike Walk Other: _____

What concept do you support the most and why? _____

_____

_____

What concept do you support the least and why? _____

_____

_____

Help Improve Balcerzak Drive!

Provide Feedback at Upcoming Open House

The Mankato Area Planning Organization (MAPO) and the City of Mankato are collecting community input on Balcerzak Drive concepts to help improve walkability, connectivity and accessibility along Balcerzak Drive (from Pohl Road to Victory Drive). A goal is to select improvements to support users of all ages, abilities and transportation modes in crossing and traveling along Balcerzak Drive.

Tuesday, September 19

5 p.m. to 7 p.m.

Public Works Center,
501 South Victory Drive

Join us to share your feedback or contact Christopher Talamantez, Transportation Planner, at 507-387-8389 or ctalamantez@mankatomn.gov.

MANKATO
Leading the way

MAPO
MANKATO/NORTH MANKATO
AREA PLANNING ORGANIZATION

10 Civic Center Plaza
Mankato, MN 56002

Balcerzak Drive Pedestrian Crossing Study
OPEN HOUSE @ the City of Mankato
Public Works Center
September 19th, 5 p.m. to 7 p.m.

Appendix B – Project Concept Evaluation Matrix

Balcerzak Drive Pedestrian Crossing Study

Alternative Matrix

Concept Layout Overview

October 2023

Criteria		Alternative 1 Road Diet & Pedestrian Refuge	Alternative 2a Overhead RRFB	Alternative 2b South Sidewalk	Alternative 3 No Build
Evaluation Matrix Goals	Safely accommodate all system users	+	0	+	-
	Provide environmentally compatible network	+	+	0	+
	Develop a financially responsible plan	+	+	+	N/A
	Provide infrastructure improvements compatible with social and economic resources	0	0	+	-

Legend			
-	0	+	++
Does Not Meet Measure	Minimally Meets Measure	Meets Measure	Exceeds Measure

Pedestrian Connectivity Evaluation

Rank 1-4 (1=low/worst, 4=high/best)

Goals	Measures	Measure Definitions	Alternatives			
			Alternative 1	Alternative 2a	Alternative 2b	Alternative 3
			Road Diet & Pedestrian Refuge	Overhead RRFB	South Sidewalk	No Build
Safety	Trail connectivity/consistency	Increases length of contiguous sidewalk/trail network	0	0	+	-
	Separation from vehicle traffic	Distance between bicyclists/pedestrians and motor vehicle traffic	0	0	+	0
	Reduced crossing distance	Cumulative exposure time measured in number of traffic crossings at Cardinal Drive	+	+	+	-
	Visibility of pedestrians to drivers	Sight line review, stopping sight distance, decision sight distance, pedestrian sight distance	++	+	+	-
Safety Summary			+	0	+	-
Environment	Limits impacts to green space	Alternative minimizes or avoids impacts to vegetation, tree canopy, or other aspects of green space	+	+	0	0
	Limits impacts to drainage infrastructure	Alternative minimizes impacts to existing ditches	+	+	0	+
Environmental Summary			+	+	0	+
Cost	Concept Level Construction Estimate	high level cost estimate	0	+	+	N/A
	Operations and Maintenance Cost	high level cost estimate for ongoing maintenance, including snow removal/winter maintenance	+	0	0	0
	Potential for ROW Impacts/acquisition	ROW acquisition or easements needed to support alternative	++	++	+	+
Cost Summary			+	+	+	0
Community	Provides connection for Cardinal Drive residents		+	+	+	-
	Provides crossing at a controlled intersection		-	-	+	-
Community Summary			0	0	+	-

Legend			
-	0	+	++
Does Not Meet Measure	Minimally Meets Measure	Meets Measure	Exceeds Measure