



600 E Front Street, Suite 104, PO Box 506
Traverse City MI 49685-0506
(231) 929-5000 • 1-800-692-7774 • FAX (231) 929-5012
traversetransportation.org



A program of
**Networks
Northwest**
Talent / Business / Community

The mission of the Traverse Transportation Coordinating Initiative (TTCI) is to provide coordinated leadership and direction for the development and conduct of the continuing, cooperative & comprehensive transportation planning process for the Traverse City urban area.

TTCI Technical Committee Meeting Agenda
Thursday August 17, 1:30pm
Acme Township Hall
6042 Acme Road., Williamsburg, MI

- 1) Roll Call
- 2) Approval of Agenda/Meeting Minutes
- 3) Old Business
 - a) Regional Model data review (MDOT) update (R. Maffeo)
- 4) New Business
 - a) FY 2018 proposed MDOT Work Program (R. Maffeo)
 - b) FY 2017 Access Management Assessment
 - c) Future meeting locations
- 5) Member Comments/Discussion of future agenda items
- 6) Adjourn



600 E Front Street, Suite 104, PO Box 506
Traverse City MI 49685-0506
(231) 929-5000 • 1-800-692-7774 • FAX (231) 929-5012
traversetransportation.org



A program of
**Networks
Northwest**
Talent / Business / Community

The mission of the Traverse Transportation Coordinating Initiative (TTCI) is to provide coordinated leadership and direction for the development and conduct of the continuing, cooperative & comprehensive transportation planning process for the Traverse City urban area.

TTCI Technical Committee Meeting Minutes
Thursday June 15, 1:30pm
Elmwood Township Hall
10090 E Lincoln Rd., Traverse City, Michigan

- 1) Roll Call
 - meeting called to order by Chair, Tim Lodge at 1:32pm
- 2) Approval of Agenda
 - Motion: Shawn Winters; Support: Sarah Kopriva
- 3) Old Business
 - a) Regional Model data review (MDOT) update discussion (R. Maffeo)
 - i) Employment Data (new)
 - Large employers ≥ 10 will be filtered in the employment sheet and re-distributed to the Tech Committee
 - Tech Comm members agreed to QA/QC list with phone calls to individual businesses and request employment numbers.
 - Will review sectors of economy as well – US Census bureau pattern info.
 - ii) TAZ Development Patterns
 - Staff will put together maps for municipalities for the QA/QC effort
 - Recommended to look at GTC building permit data
- 4) New Business
 - a) FY 2017 Local Work Program
 - i) Access Management
 - ii) Regional Safety Plan
 - TC has existing safety audits on segments and intersections
 - Recommended to combine AM alternatives available and Safety Plan to have the Board endorse
 - Factor in crashes and highlight near Transit stops
 - iii) Non-motorized Grid network
 - Look at Grand Vision recommendations for length of walking and biking preferences
 - TC is putting together a SRTS application and will have non-motorized data available
 - Focus on major employments centers and recreation areas for non-moto activity
 - b) Future meeting locations
 - 1:30pm, 8/17 at Acme Twp. hall
- 5) Member Comments/Discussion of future agenda items
 - NA
- 6) Adjourn
 - 3:39pm

TTCI Tech Committee meeting 6-15-17

<u>Name</u>	<u>Agency / Representing</u>
JOHN SYCH	GT COUNTY PLANNING
Sara Kopriva	Elmwood.
Shawn Winter	Acme
TOM MARK	GT
Jim Caruthers	TC
Jim JOHNSON	GTCC
TIM Lodge	TC

Traverse Transportation Coordinating Initiative (TTCI)



FY 2018

Unified Work Program

Michigan Department of Transportation

Networks Northwest/Northwest Michigan Council of Governments

P.O. Box 506

Traverse City, MI 49685

Phone: (231)929-5075

TABLE OF CONTENTS

	PAGE
DISCLAIMER_____	1
INTRODUCTION_____	1
TRANSPORTATION ISSUES FACING THE TRAVERSE CITY METROPOLITAN AREA_____	2
PROGRAM STAFFING AND FUNDING_____	2
DETAILS OF WORK ITEMS_____	2
Work Item 1.0 Administration/Organization/Coordination_____	2
Work Item 2.0 Unified Work Program (UWP)_____	4
Work Item 3.0 Monitor FY 2017-2020 Transportation Improvement Program (TIP) _____	5
Work Item 4.0 Title VI Plan_____	6
Work Item 5.0 Review and approve forecast year socio economic data/system deficiency____	7
TTCI FY 2018 Budget Summary_____	8

DISCLAIMER

This document is designed to assist staff and committee members of the Traverse Transportation Coordinating initiative (TTCI) as they transition to an anticipated Metropolitan Planning Organization (MPO) designation in 2020. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation Rules and Guidelines of the Metropolitan Planning Program, Section 104(f) of Title 23, U.S. Code. The document should be viewed as a practical “hands on exercise” in preparation of their anticipated MPO designation in 2020.

INTRODUCTION

Transportation affects everyone and thus a safe, accessible, affordable and reliable transportation system is vital to everyone. In 2015, the Fixing America’s Surface Transportation Act (FAST Act) was signed into law, it provides the resources for the continuation and improvement of current programs with new initiatives to meet future transportation challenges. These challenges are addressed through efficient, flexible, performance-based transportation plans and programs. These challenges are evident within the urbanized area of Traverse City.

Though not a designated MPO, it is anticipated that the current Traverse City urban area will meet the minimum MPO population and threshold requirements after the 2020 US Census. As a part of the Fiscal year 2018 transition work plan, MDOT will continue to provide MPO training to Networks Northwest, the TTCI governing Board and Technical Committee members, and MDOT-North Region and the Traverse City Transportation Service Center staff. This training is designed to familiarize staff and committee members with the products produced by an MPO and their roles and responsibilities as part of the planning process.

The transportation planning UWP describes work and coordination efforts to be performed by TTCI for the Traverse City urban area, and is a critical document to utilize in preparation for the Traverse City urban area becoming a MPO after the 2020 US Census. The 2018 UWP describes the transportation planning tasks scheduled for the period beginning on October 1 2016 to September 30, 2018. These planning activities are supported by federal State Planning and Research (SPR) funds, administered through the Michigan Department of Transportation (MDOT).

The UWP covers transportation planning activities within the TTCI area which includes the following: Acme Township, Charter Township of East Bay, Charter Township of Elmwood, Charter Township of Garfield, the City of Traverse City, and the Bay Area Transit Authority.

FAST Act planning regulations require the development of an annual UWP that identifies transportation issues and problems facing the urban area. Also included in the UWP is information relevant to MDOT’s funding of TTCI by requiring this organization to complete tasks relevant to those required by Title 23. Section 104(f). Invoices and Progress reports reflecting these work tasks will be submitted to MDOT on a quarterly basis.

TRANSPORTATION ISSUES FACING THE TRAVERSE CITY METROPOLITAN AREA

See Vision 2035 (Long Range Planning Practical Exercise) Completed in 2014

PROGRAM STAFFING AND FUNDING

Staffing of TTCI will be the responsibility of Networks Northwest or a 3rd party and the TTCI governing board. Funding for this fiscal year's UWP is provided through federal SPR dollars administered by MDOT, and by local agency membership dues. The dues will be collected from each agency based on criteria developed and approved by the TTCI board in May of 2016.

WORK ITEMS

Work Item 1.0 Administration/Organization/Coordination

Purpose and Methodology:

There are many organizational and administrative tasks required by TTCI in order to meet standards set forth by FHWA for a small MPO. Traverse City does not currently meet the minimum requirements for a small MPO, though it is projected that this status will be acquired after the 2020 US Census. Accordingly, the TTCI board coordinates policy and decision making between local agencies in the Traverse City urbanized area. The development and adoption of various committee structures, policies, and documents are intended to guide TTCI in its daily work activities. In addition, TTCI will continue to update information and activities to the general public via the World Wide Web and media releases.

Public participation is a proactive process which guarantees timely notice, full access to key decisions, and an opportunity for early and continued involvement in the development of key documents such as the Public Participation Plan, Vision 2035 Document, Illustrative Transportation Improvement Program (TIP), and Unified Work Program (UWP). TTCI will reach out to the affected population and will work to engage them in discussion and input.

TTCI will also develop a list of agencies that it will reach out to for consultation purposes including other state departments such as the Department of Natural Resources (DNR), the Department of Environmental Quality (DEQ), the State Historic Preservation Office (SHPO), and tribal governments including the Grand Traverse Band of Ottawa and Chippewa Indians.

General Administration/Coordination of TTCI: This includes the preparation and distribution of TTCI Board and Technical Committees meeting agendas, minutes, resolutions and other relevant reports (for each meeting). In addition, TTCI will review transportation projects within the TTCI planning area, review federal and state legislation, and continue the development and preservation of professional contact with various governmental agencies. Another administrative activity is the performance of all duties associated with the financial administration of TTCI, including submission of progress reports, financial acceptance reports and monthly billings; as well as assistance to outside auditors in an annual financial and compliance audit by providing accurate and timely information. Another administrative activity is contact with various public interest groups to keep the public informed of transportation related issues.

TTCI will publish notices of its meetings in the local newspaper(s) and will distribute meeting announcements and media releases to all interested parties. All of the activities listed are reflective of what current MPOs utilize for general administration purposes within their organizational structure and provides a model in preparation of the Traverse City urban area becoming a small MPO in 2020.

Work Item 1.0 Deliverables for administering a small MPO:

1. Coordination of planning activities with State and Local Agencies.
2. Preparation of quarterly progress reports and invoices for payment to MDOT as per project authorization.
3. Preparation of final Acceptance Report on Work Program elements.
4. Maintain a record keeping system of all federal regulations (23 CFR), publications, reports, correspondence and documentation of meetings attended and public notices soliciting public involvement.
5. Website Maintenance and/or Newsletter files for public review. Preparation of meeting agendas, notices and minutes.

TTCI General Administration Funding	
Source	MDOT/SPR
Amount	\$7,000
Staff Time (hours)	TBD

Schedule to complete these Tasks: Quarterly beginning October 1, 2017 to September 30, 2018

Work Item 2.0 Unified Work Program (UWP)

Purpose and Methodology:

In order for TTCI to align with the Federal fiscal year, the FY 2019 UWP will be developed and will include the MDOT directed work plan for the federal SPR funds within this fiscal year, prior to August 4, 2018.

A draft FY 2019 UWP will be submitted for approval to the TTCI Technical Committee, TTCI Board, and MDOT. This method is determined to best replicate how current MPOs submit and receive approval of their documentation. It also serves as a primary tool in developing more detailed UWPs in preparation of the Traverse City urban area becoming an MPO in 2020. This document will describe the transportation planning tasks scheduled for the period from October 1, 2018 to September 30, 2019. TTCI will review and revise the FY 2019 UWP based on comments from reviewing agencies, addressing any deficiencies to maintain certification of the planning process. TTCI will then complete the draft FY 2019 UWP to include costs, funding responsibilities, estimated staff requirements, and products of work efforts. The finalized FY 2019 UWP will be submitted to the TTCI Technical and Board for endorsement, and final approval. TTCI will conduct periodic review of the work program to ensure its timely completion.

Products:

1. Monitor final UWP for FY 2018 (amendments, billing reconciliation, etc.).
2. Draft Unified Work Program for FY 2019.
3. Adopt final UWP for FY 2019 (amendments, admin changes, billing reconciliation).

UWP Development Funding	
Source	MDOT/SPR
Amount	\$3,000
Staff Time (hours)	TBD

Schedule to complete this Task: Due at the beginning of the 4th Quarter FY 18.

Work Item 3.0 Illustrative FY 2017-2020 Transportation Improvement Program (TIP)

Purpose and Methodology:

TTCI will maintain and adjust as necessary the Illustrative FY 2017-2020 Transportation Improvement Program (TIP) in FY 2017 as well as develop and adopt a process for approving Illustrative TIP amendments, which will mimic a process used by current standing MPOs for developing, approving, and adopting TIPs. These measures will allow TTCI to familiarize itself with the TIP development and implementation process in anticipation of meeting the minimum requirements for the MPO designation in 2020. The Illustrative FY 2017-2020 TIP shall include all transportation projects, or identified phases of a project within the Traverse City urban area funded under local, state, federal, and Title 23 and Federal Transit Acts. The Illustrative TIP shall cover a period of four years and shall be financially constrained.

All transportation projects, or identified phases of a project, (including pedestrian facilities, bicycle transportation facilities, transportation alternatives program projects, para-transit plans and those projects that implement the plans, shall include descriptive material to identify the project or phase, estimated total cost, proposed source of federal and non-federal funds, identification of the recipient/sub-recipient, and state and local agencies responsible for carrying out the project.

As part of the consultation process, TTCI will inform eligible governmental implementing agencies of the TIP process, including time schedules and review processes. TTCI will request project lists from all implementing agencies, including MDOT, City of Traverse City, Grand Traverse County Road Commission, Leelanau County Road Commission, the local transit operator and non-motorized representative organizations within the planning area. TTCI will determine the project relationship to locally adopted plans as well as goals and objectives. It will maintain the Illustrative TIP as a priority list of projects including a financial plan.

The TTCI Illustrative TIP development process is as follows: TTCI will analyze all project submittals and provide recommendations to the TTCI Technical Committee for review and further recommendations to the Board. TTCI will prepare a draft Illustrative FY 2017-2020 TIP. It will then revise the draft Illustrative FY 2017-2020 TIP based on Technical Committee comments, as well as comments from Federal, state, and local agencies, addressing any deficiencies in order to maintain certification of the planning process, as part of MPO requirements. TTCI will finalize the project list and Illustrative FY 2017-2020 TIP including costs and funding responsibilities. The final Illustrative TIP will be submitted to the TTCI Technical Committee and Board for approval. This process is similar to what current MPOs identify, disseminate, distribute, and implement with their respective TIPs. This process will also allow TTCI to analyze, review, and organize itself in adherence to FHWA and FAST Act standards in preparation for Traverse City's MPO status in 2020 and developing an official TIP document.

Products:

1. Monitor TIP projects and manage changes.
2. Update Committees on the status of Obligated Projects.

TTCI FY 2017-2020 TIP Monitoring	
Source	MDOT/SPR
Amount	\$5,000
Staff Time (days)	TBD

Schedule to complete this task: Beginning of the 4th Quarter FY 18

Work Item 4.0 Prepare a Title VI Plan

Purpose and Methodology:

TTCI will develop a federally-mandated Title VI plan in FY 2018 that contains the regulations and procedures to assure that programs and activities of TTCI are conducted and administered fairly, without regard to race, color, national origin, sex, age, disability, or limited English proficiency. The goal of this document will be to assign roles, responsibilities, and procedures for ensuring compliance with Title VI of the Civil Rights Act of 1964 and related regulations and directives Update Committees on the status of Obligated Projects; establish procedures for identifying impacts in any program, service, or activity that may create illegal adverse discrimination on any person; set forth procedures for filing and processing complaints by persons who believe they have been subjected to illegal discrimination under Title VI in the TTCI's services, programs, or activities and ensure Limited English Proficiency processes and Environmental Justice principles are integrated into procedures and programs.

Products:

1. Ensure that all aspects of the planning process comply with Title VI and Environmental Justice
2. Serve as a resource helping to ensure participation of a cross section of people including various and diverse social, economic and ethnic interest groups are represented in the planning process.
3. Process Title VI complaints received by TTCI
4. Compile and collect, as needed, statistical data (race, color, religion, sex, and national origin) of participants in, and beneficiaries of TTCI plans and programs.
5. Conduct reviews of Title VI program areas as necessary to determine the effectiveness of the program at all levels.
6. Review internal policies and, where applicable, incorporate procedures to ensure compliance with Title VI.
7. Submit sub-recipient annual certification form to MDOT

Attend training on Title VI, as made available TTCI FY 2018-2020 TIP Monitoring	
Source	MDOT/SPR
Amount	\$3,000
Staff Time (days)	TBD

Schedule to complete this task: Beginning of the 4th Quarter FY 18

Work Item 5.0 Data Collection, Travel Demand Model, Management and Analysis

Purpose and Methodology:

Data Base Collection, Coding, Analysis, Monitoring and Management: TTCI will continue to be responsible for coordinating, developing, and distributing a local traffic count program for the TTCI planning area, determining traffic data needs, conducting traffic counts, and collecting all recent traffic counts from local jurisdictions, MDOT, and others. The location and number of counts will be set up to fulfill Highway Performance Monitoring System (HPMS) efforts as well as maintain sufficient traffic counts for calibration of the travel demand model (housed and operated by MDOT).

Networks Northwest currently provides asset management services within the TTCI planning area and will continue to be responsible for them in FY 2018. TTCI will work closely with Networks Northwest in order to obtain and disseminate the condition of federal-aid eligible roads in the TTCI area.

Multi-Modal Infrastructure and Facilities: As part of the development of a long range plan, TTCI will perform an analysis of the existing transportation system needs. Part of this analysis would include an inventory of the existing transportation system including pavement and bridge conditions, transit and rail systems, airports, waterways/ports, non-motorized facilities, and commercial freight.

TTCI Travel Demand Model: TTCI will continue to participate with the MDOT Statewide and Urban Travel Analyses Section to develop and maintain the TTCI Travel Demand Model. This involves collecting roadway data on sample segments for the Highway Performance Monitoring System (HPMS) in the Traverse City urban area as required and requested by MDOT/FHWA/others. TTCI will approve input data from MDOT for the Travel Demand Model as necessary. This process is reflective of small MPO's procedures in preparation for development of their Long Range Plans. A travel demand model prepared for the Traverse City urban area before the projected 2020 MPO designation will require an update to the model and provides for a better foundation for the anticipated designation, as opposed to constructing a new travel demand model after the anticipated designation has been assigned.

TTCI Board approved projects: In order to help foster, encourage, and procure regional cooperation the TTCI must be able to demonstrate to their constituents actual products regarding the complex transportation issues facing the region. Most notably, this includes studying all projects, real or

potential, that affect East/West travel in the Traverse City Urbanized Area, which includes the most heavily travelled corridor, US-31.

Products:

1. Inventory multi-modal infrastructure and facilities
2. Continuation of compilation and evaluation of data regarding socio-economic/environmental justice characteristics within TTCI planning area.
3. Continue reviewing Base Year modeling input data, including: the Model Network, Traffic Analysis Zone (TAZ) structure and placement, socioeconomic (SE) data, traffic count data, employment data, and other such information. Draft copies of this information will be provided to TTCI staff and committees by MDOT.
4. Approval and distribution of other model components as deemed necessary by FHWA regulations, MDOT, and TTCI.
5. Build in-house capacity for traffic modeling through one-on-one training from MDOT personnel

TTCI Data Collection & Travel Demand Model Funding	
Source	MDOT/SPR
Amount	\$5,000
Staff Time (hours)	TBD

Schedule to complete this task: 4th Quarter FY 18

TTCI FY 2018 Budget Summary

Work Item	Estimated FY 2018 Cost
1.0 PPP and General Administration	\$7,000.00
2.0 FY 2018 UWP	\$3,000.00
3.0 Manage FY 2017-2020 TIP	\$5,000.00
4.0 Title VI Plan	\$3,000.00
5.0 Data Collection and TDM	\$5,000.00
TOTAL FY 2018 SPR Funding	\$23,000.00

TTCI Access Management: An Assessment DRAFT



DRAFT

TTCI Access Management Assessment

TABLE OF CONTENTS

Executive Summary.....	
I. Introduction	
II. Existing Conditions.....	
- Roadway Characteristics	
- Crash Histories	
- Access Conditions	
III. Land Use Characteristics.....	
- Community Summary.....	
IV. Access Management Assessment.....	
- Bayshore Corridor.....	
- South Airport Rd.	
V. Regional Implementation Options	
- Overlay Zone – Model Ordinance	

THIS PAGE LEFT INTENTIONALLY BLANK

Executive Summary

The Traverse Transportation Coordinating Initiative (TTCI) is the coordinating body for representatives from communities and implementing agencies within the census designated Traverse City urbanized area to discuss future transportation projects, real and potential, under a Metropolitan planning organization (MPO) format. This includes studying various challenges associated with east/west travel throughout the region by assessing potential new connections and studying access/travel demand management issues along dense corridors such as the Bayshore Corridor (US-31/M-72/M-22) and South Airport Rd.

Due in part to the Traverse City area's steady permanent and seasonal population growth, and in order to seek an optimal balance of mobility, economic development and character, TTCI's Board of Directors have identified Access Management as an important issue that contributes to these challenges – especially that of East/West mobility throughout the region.

In 2016, the TTCI commissioned a statistically significant transportation mobility perception survey focused on perceived east/west mobility through the urbanized area. The results of the survey will assist the TTCI Board and other transportation entities in prioritizing corridors to study, analyze, and ultimately in the preparation of strategies and alternatives based on effectiveness, efficiency, funding, value, community desire and other agency goals. The research secured quantitative information from residents as stakeholders in this initiative, providing information to aid the Board in evaluating transportation improvement strategies. Among some of the findings include:

- A total of 413 surveys completed, proportionate to the Urbanized Area, for an approximate +/- 4.81% margin of error and a 95% confidence level for the area as a whole.
- The vast majority of respondents (95%) reported they are a Year-Round Resident, residing in the area 10 – 12 months out of the year.
- The single largest group of respondents (35%) indicated they most frequently travel along the Bayshore Corridor (M-72/US-31/M-22), while an equal number (22%) cited 8th Street and South Airport and 19% cited Hammond/Keystone/Beitner.

The TTCI Access Management assessment highlights two (2) of the region's most travelled east/west corridors - Bayshore Corridor (M-72/US-31/M-22) and South Airport Rd. The assessment includes an analysis of driveway spacing, crash locations and local zoning ordinances.

A formal Access Management planning process is recommended to address specific implementation and mitigation techniques that coincide with regional land use goals in these corridors.

I. Introduction

Access Management is a set of proven techniques that can help reduce traffic congestion, preserve the flow of traffic, improve traffic safety, prevent crashes, preserve existing highway capacity and preserve investment in highways by managing the location, design, and type of access to property.

Access management extends the function of a roadway while still assuring safe reasonable access to adjacent land uses. Poor access management is most obvious along major arterials that are lined with many narrow lots with driveways located close together. These often have relatively high traffic volumes and higher crash rates. Neither the land development nor the traffic problems on these roadways occurred overnight. But over time, the traffic problems grow and create a need for very expensive remedial improvements, that may only mitigate, rather than solve, the growth problems. Access management can not only help where remediation is the only option, but is most effective in preventing future problems where intensive land development is planned along arterial roads.

Access management focuses on the number, location and design of driveways as they relate to the following elements within the road right-of-way: travel lanes, medians, by-pass lanes, dedicated turn lanes and signal operations. On the land use side of the road right-of-way, driveway location considerations can include: internal site design and circulation, shared driveways, connected parking areas, frontage and/or rear access roads, building setback, and sign design and placement. Special consideration must also be given to meeting the needs of pedestrians, bicyclists, the handicapped and bus riders as well.

Successful access management requires cooperation between property owners, local land use authorities, and local, county and state transportation agencies in order to provide safe access to private property and protect the public's investment in roads.

A planning process that links access management principles with land use and corridor planning is the best way to look at the big picture and ensure appropriate relationships between present and future needs. Access management is implemented through review of development proposals under local zoning and subdivision regulations, as well as during the driveway permit process administered by local, county or state road authorities. It is also implemented through improvements to roadway design and specific capital improvement projects on targeted corridors with adopted access management or corridor improvement plans.¹

Benefits:

Access management can provide several benefits to motorists, pedestrians, bicyclists, and land uses along corridors including:

- Access point control
- Access/connection type
- Enhanced overall mobility and reduced congestion
- Expanded travel mode choices
- Corridor planning for land use and transportation
- Preservation of the integrity of the corridor

II. Existing Conditions – Bayshore Corridor (M-72/US-31/M-22)

This section of the Access Management Assessment defines the existing conditions along the length of the Bayshore Corridor by municipality, including roadway characteristics, crash history from 2011-2016 and access conditions.

***Need updated BATA facilities info.**

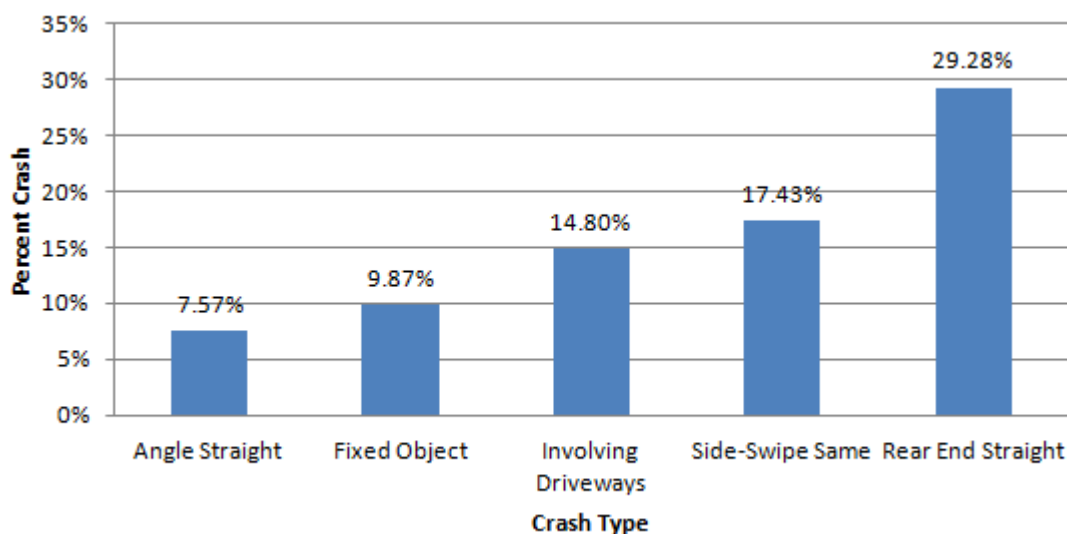
Acme Township (2.76 miles)

Roadway Characteristics

The eastern terminus of the Bayshore Corridor in the Census designated Traverse City Urbanized Area (TTCI region) begins just west of Lautner Rd. According to MDOT, daily traffic counts on the section of M-72 from Lautner to US-31 are just over 15,500, with a 55mph speed limit. Approximately 30,000 vehicles travel the section of the corridor between the M-72/US-31 intersection and Holiday Rd. daily. The speed limit is 45mph.

Crash History

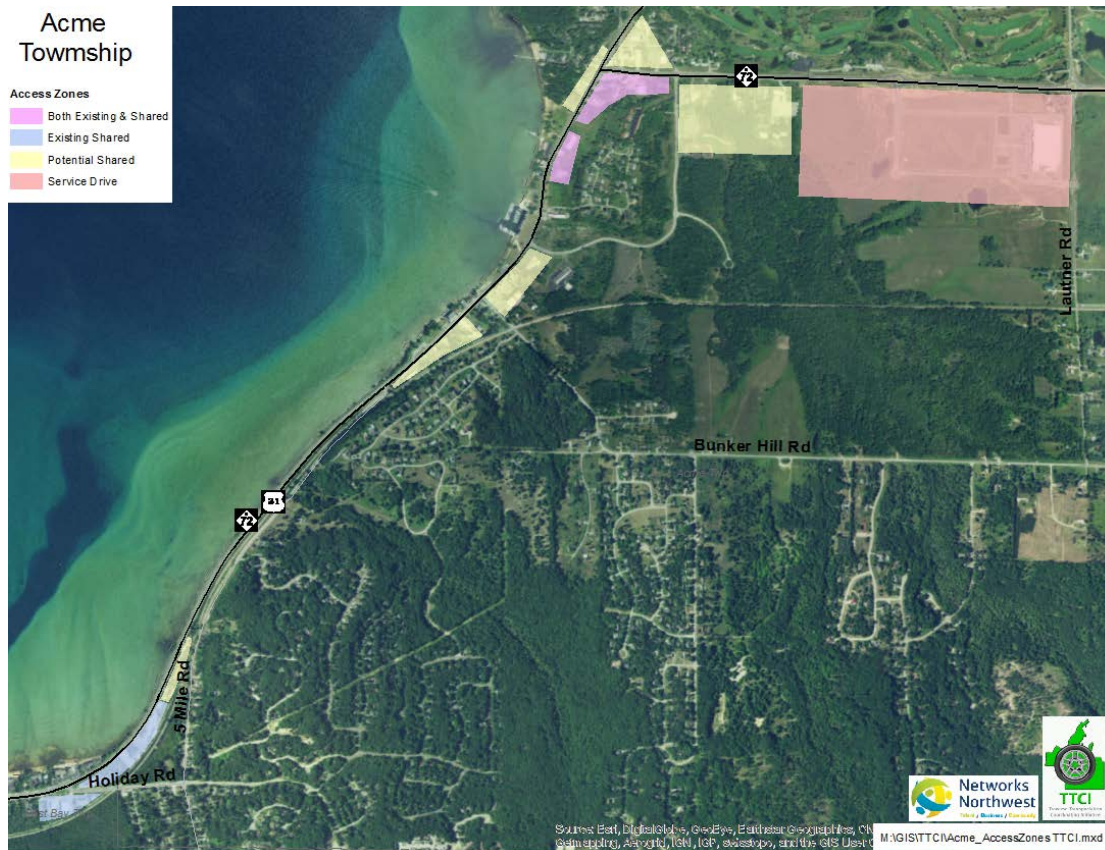
Crash data from *Roadsoft* was used to identify the traffic crash histories for the entire 2.6 mile section of the Bayshore Corridor in Acme Township. According to the the five year study period, there were approximately 300 crashes that occurred on the 2.6 mile stretch of Bayshore Corridor in Acme Township. The top five crash types are indicated in the graph below. Nearly 30% were rear end crashes while over 17% involved a side swipe action. Close to 15% of crashes directly involved movement in and out of driveways along the corridor. All three crash types are consistent with access management issues.



Access Conditions

The distance between driveways were measured in GIS using aerial photos for the 2.6 mile study area for Acme Township. Referring to MDOT access spacing requirements, based on the posted speed of the corridor, approximately 86% of non-residential driveways on the Bayshore Corridor are spaced too close to adjacent

driveways and/or intersections. Below is an example of measured driveway spacing at the US-31/M-72 intersection.



The map below locates the potential for shared access or service drive implementation measures based on existing physical conditions only.



**East Bay Township
Traverse City
Elmwood Township**

III. Land Use Conditions – Bayshore Corridor (M-72/US-31/M-22)

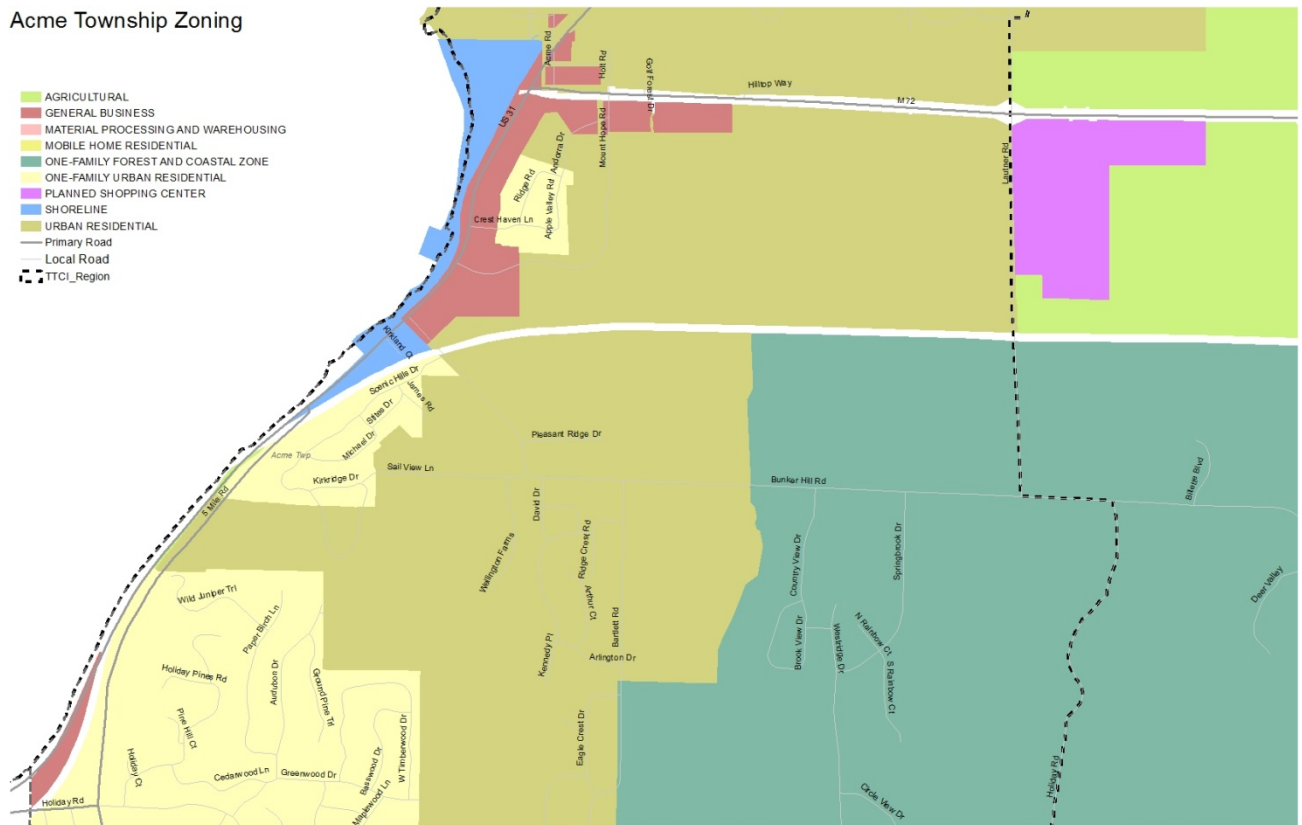
Traffic operations along the Bayshore corridor are influenced by a variety of factors such as traffic volumes, number of lanes, speed limits, traffic control devices and number of access points. This section provides a brief overview of the existing and planned land uses along the corridor and the importance of how land use should be considered as part managing the corridor.

The Bayshore Corridor provides access to a variety of land uses including agriculture, single family homes on various lot sizes, public uses and institutions and most notably, a high prevalence of retail/commercial use. Each type of land use creates traffic that adds to the existing traffic along the highway. For example, a typical single family home may generate approximately ten vehicle trips per day, where a commercial use located on a similarly sized lot may generate as many as fifty or more trips in an hour.¹

The following is an assessment of the corridor's land use characteristics.

Acme Township (2.76 miles)

The eastern terminus of the Urbanized Area begins on M-72 west of Lautner Rd. and contains a regional shopping center and anticipates a large commercial “town center” type development in the future. The intersection of M-72/US-31 is developed and may experience high intensity traffic throughout the day. Moving westward, the corridor is a mix between adjacent commercial/retail use and then a large swath of undevelopable land from 5 mile Rd. to just east of Holiday Rd.



IV. Overall Assessment

Each Township/Corridor

- Percentage of recommended driveway distance compliance
- Current zoning language
- Programmed projects

V. Regional Implementation

Model Ordinance language

DRAFT