



Appendix A: Historical Information

History of Transportation Planning Past and Present

Beginning in 1961 with the establishment of the Kent County Planning Commission, comprehensive planning in the Grand Rapids area was done by the Kent County Planning Department. In the mid-1960's, this agency began a comprehensive land use/transportation planning program encompassing the entire sphere of planning related activities in the Grand Rapids area. This program was designed to fulfill requirements of the Federal Aid Highway Act of 1962 as well as other federal, state and local planning requirements.

In 1964, the Grand Rapids and Environs Transportation Study (GRETTS) Technical and Policy Committees were established. GRETTS was formed to guide and direct the planning and development of the transportation infrastructure in the metropolitan area. Membership in GRETTS originally included Grand Rapids, Wyoming, Walker, East Grand Rapids, Grandville, Kent County, Ottawa County, Kent County Road Commission, Ottawa County Road Commission, Michigan Department of State Highways, and the Federal Highway Administration. In 1967, the City of Kentwood was admitted. In 1974, the City of Rockford was added to the list of participants. Other participants included the Grand Rapids Area Transit Authority (now the The Rapid), the Grand Rapids Chamber of Commerce, and the Kent County Department of Aeronautics.

In 1966, the Kent-Ottawa Regional Planning Commission was formed because of a requirement by the Department of Housing and Urban Development that an agency be in existence to undertake comprehensive planning for the region. From 1966 to 1972, the Kent County Planning Commission and the Kent-Ottawa Regional Planning Commission (generally utilizing staff from the Kent County Planning Department) worked together within the broad conceptual framework provided by the comprehensive development plan for the region. Through an agreement with the GRETTS Policy Committee, the Kent-Ottawa Planning Commission served as staff for the Metropolitan Planning Organization (MPO), carrying out all transportation related planning activities for the designated study area.

The Kent-Ottawa Regional Planning Commission became the official, independent, metropolitan planning agency responsible for coordinating all planning activities, in 1972, for the Kent-Ottawa Region, and was the coordinating agency for all transportation planning activities within the GRETTS Study Area.

In 1974, the Kent-Ottawa Regional Planning Commission was dissolved, and a new nine county region was formed by executive order of the Governor of the State of Michigan. The West Michigan Regional Planning Commission (WMRPC) was created and given the responsibility for coordinating the GRETTS Transportation Program. This relationship lasted until July 1990, when the state of Michigan, in conjunction with the GRETTS Policy Committee, withdrew the MPO designation from the WMRPC. In October 1990, the GRETTS Policy Committee recommended the Grand Valley Metropolitan Council as the MPO for the Grand Rapids Metropolitan Area.

For a historical look back at Urban Transportation Planning on a national scale go to: <http://ntl.bts.gov/DOCS/UTP.html>.

History of the Gerald R. Ford International Airport

In the late 1950s, due to urban encroachment of development and the advent of heavier turbojet aircraft, local officials commissioned a study to identify a new location for the airport. The study revealed that the Kent County Airport should be relocated from the existing site located north of 44th Street between Jefferson and Eastern Avenues to a new location in Cascade Township east of Patterson Avenue off 44th Street. With financial backing of a taxpayer approved millage and bond issue, the new Kent County Airport was constructed on the 1,800 acre site and opened in late 1963.

This “new” airport provided a 6,600 foot east-west air carrier Runway 8R/26L, complete with an Instrument Landing System (ILS), and a 3,400 foot north-south general aviation Runway 18/36. The 1970’s saw construction of a 4,000 parallel east-west general aviation Runway 8L/26R. Two subsequent runway extensions brought the primary use Runway 8R/26L to a length of 10,000 feet. At 10,000 feet long the primary Runway 8R/26L can handle all aircraft except the recently produced Airbus 380 double-decker aircraft. In 1997 the Airport finished construction of a new \$70 million north-south air carrier Runway 17/35. In the year 1999 the Airport saw construction of the new Air Cargo and Trade Center located on the Airport’s east side. Also in 1999, the Kent County Board of Commissioners acted to rename the Kent County International Airport the Gerald R. Ford International Airport. This was done in honor of Grand Rapids resident, longtime airport supporter, and the 36th President of the United States, Gerald R. Ford.

In the year 2000 and 2001, the Airport completed a \$50 million major renovation of the passenger terminal building and a \$32 million reconstruction of the primary east-west Runway 8R/26L. In 2002 the Airport expanded the parking facilities by adding a 100-space express shuttle parking lot preparation for the construction of a future parking structure. Also in 2002 the Airport became the first airport in the nation to screen 100% of checked baggage or explosives using new technology explosive detection machines. In 2003 the Airport marked the 40th anniversary at the current Cascade location. In 2004 the Airport recognized its importance as the “Gateway to West Michigan” with the construction of significant landscape improvements to the John J. Oostema Boulevard entrance drive to the Airport. Also in 2004, the Airport set a record for the passengers served in one year exceeding the two million passenger mark (2,150,125). In the mid 2000’s the Airport completed many infrastructure projects which included several perimeter security roads, taxiway reconstruction projects, and the expansion of parking facilities.

In 2009 the Airport completed the largest construction project in airport history (over \$120,000,000). The award-winning project is known as the Terminal Area and Parking Improvement Program, which included road and utility infrastructure improvements, a 5,000-space parking structure, a canopy over the Terminal Drive between the parking structure and the terminal building, and enclosed pedestrian crosswalks connecting the terminal building to the parking structure.



Appendix B: Acronyms and Glossary of Terms

Acronyms:

AAAE: American Association of Airport Executives
AAM: Advanced Air Mobility
ADA: Americans with Disabilities Act
AIP: Airport Improvement Program
BIL: Bipartisan Infrastructure Law
BRT: Bus Rapid Transit
CAAA: Clean Air Act of 1990 and Amendments
CL: City Limits or County Line
CMAQ: Congestion Mitigation and Air Quality Improvement Program
CO: Carbon Monoxide
CMP: Congestion Management Process
CNG: Compressed Natural Gas
CRP: Carbon Reduction Program
CTF: Comprehensive Transportation Fund
DBFO: Design/Build/Finance/Operate
DOD: Department of Defense
EIS: Environmental Impact Statement
EJ: Environmental Justice
EPA: Environmental Protection Agency
EV: Electric Vehicle
eVTOL: Electric Vertical Takeoff and Landing
FAA: Federal Aviation Administration
FAST Act: Fixing America's Surface Transportation Act
FHWA: Federal Highway Administration
FRA: Federal Railroad Administration
FTA: Federal Transit Administration
FWG: Financial Work Group
FY: Fiscal Year
GFIA: Gerald R. Ford International Airport
GFIAA: Gerald R. Ford International Airport Authority
GIS: Geographic Information System
GRETS: Grand Rapids and Environs Transportation Study
GVMC: Grand Valley Metropolitan Council
GTSAC: Governor's Traffic Safety Advisory Commission
HPMS: Highway Performance Monitoring System
HTF: Highway Trust Fund
IAWG: Inter-Agency Work Group
IJA: Infrastructure Investment and Jobs Act
ITP: Interurban Transit Partnership
ITS: Intelligent Transportation System

JARC: Job Access Reverse Commute
LOS: Level of Service
MAP-21: Moving Ahead for Progress
MARP: Michigan Association of Railroad Passengers
MDEGLE: Michigan Department of Environment, Great Lakes, and Energy
MDOT: Michigan Department of Transportation
MIPRC: Midwest Interstate Passenger Rail Commission
MPO: Metropolitan Planning Organization
MSA: Metropolitan Statistical Area
MTF: Michigan Transportation Fund
MTPA: Michigan Transportation Planning Association
MWRRS: Midwest Regional Rail System
MWRRI: Midwest Regional Rail Initiative
MUTCD: Manual on Uniform Traffic Control Devices
NAAQS: National Ambient Air Quality Standards
NAS: National Airspace System
NFC: National Function Classification System (NFC)
NHFN: National Highway Freight Network
NHS: National Highway System
NOX: Oxides of Nitrogen
PMS or PaMS: Pavement Management System
PPP: Public Participation Plan
PRIAA: Passenger Rail and Improvement Act of 2008
RNG: Renewable Natural Gas
SIB: State Infrastructure Bank
SLRP: State Long-Range Plan
SOV: Single Occupancy Vehicle
SS4A: Safe Streets and Roads for All
STIP: State Transportation Improvement Program
STPU: Surface Transportation Program-Urban
STPR: Surface Transportation Program-Rural
STRAHNET: Strategic Highway Network
TAZ: Traffic Analysis Zone
TDM: Transportation Demand Management
TEDF: Transportation Economic Development Funds
TIFIA: Transportation Infrastructure Finance and Innovation Act
TIP: Transportation Improvement Program
TMA: Transportation Management Area
TMP: Transit Master Plan
TSM: Transportation System Management
USDOT: United States Department of Transportation
VOC: Volatile Organic Compounds
VMT: Vehicle Miles Traveled
WMCAC: West Michigan Clean Air Coalition
WMEAC: West Michigan Environmental Action Council
WMX: West Michigan Express
YOE: Year of Expenditure

Glossary of Terms:

ACCESS - The ability to enter or leave a residence, business, or parcel of land from a roadway by way of a connecting driveway. Alternatively, it means the opportunity to reach a given point within a certain time frame, or without being impeded by physical, social, or economic barriers.

ACCESS MANAGEMENT - Limiting the ability of traffic to enter, leave, or cross thoroughfares; regulating the spacing and design of driveways, medians, intersections, and traffic signals to promote the efficient flow of through traffic.

ACCESSIBILITY - The ability to reach destinations, activities, and services.

ADA: Americans with Disabilities Act - A set of guidelines passed in 1990 to assure a minimum level of accessibility to buildings and facilities for individuals with disabilities; Title III of the legislation deals with public accommodations.

ALLOCATION - An administrative distribution of funds among States which do not have statutory distribution formulas

APPORTIONMENT – A division or assignment of funds based on prescribed formulas in the law and consisting of divided authorized obligation authority for a specific program among the States.

ARTERIAL - A controlled access highway designed for through traffic (longer trips, higher volume and speed); arterials are typically on a continuous route and are often divided; the right-of-way is usually 120 feet.

AUTONOMOUS VEHICLES - A vehicle that has features that allow the vehicle to guide itself without human interaction. Examples include cruise control, self-parking, and lane centering. Autonomous vehicles may also be referred to as a driverless vehicle.

BASE YEAR - The year which serves as a starting point of data used in a study.

BICYCLE LANE - Portion of the street designated by striping, signing, or pavement markings for preferential or exclusive use by bicyclists. Bike lanes are established with appropriate pavement markings and signing to delineate the right of way assigned to bicyclists and motorists, and to provide more predictable movements by each. Bike lanes are usually paired one-way facilities located on both sides of streets with moderate to heavy traffic volumes. Steeply sloped streets can have bike lanes on one side for climbing, while it may not be necessary to stripe lanes on the downhill side because bicycle speeds approach motor vehicles on these sections. The minimum width of a bike lane is 4 feet in most areas, or 5 feet when adjacent to on-street parking or if measured from the curb face. Bicycle lane design at intersections must be treated carefully to minimize conflicts between bicycle and auto movements. |

BIL: BIPARTISAN INFRASTRUCTURE LAW – The current federal transportation bill, also referred to as the IIJA.

BOULEVARD - A wide street, usually with a median or promenade, lined with trees.

BRIDGE - A structure that stands 20 feet or greater in length.

BRT: Bus Rapid Transit - A transportation system that, through improvements to infrastructure, vehicles and scheduling, uses buses to provide a service that is of similar quality to light-rail systems.

BUFFER - Portion of the roadway between the curb or edge of the pavement and the sidewalk; used to separate pedestrians and vehicles. Buffers often include landscaping, trees, or utility poles.

CAAA: Clean Air Act of 1990 and Amendments - Federal legislation that sets standards for air quality levels.

CL: City Limits or County Line – City Limits or alternatively County Line, depending on what is the most logical project limit.

CMAQ: Congestion Mitigation and Air Quality Improvement Program - Program which directs funding to projects that contribute to meeting national air quality standards.

CNG: Compressed Natural Gas – A fuel gas mainly composed of methane (CH₄), compressed to less than 1% of the volume it occupies at standard atmospheric pressure.

CO: Carbon Monoxide - A colorless, odorless, tasteless, gas that impedes the oxygenation of blood. CO is formed, in large part, by incomplete combustion of fuel.

COLLECTOR - A two- to four-lane roadway providing mobility and access. Collector streets can be found in residential neighborhoods, commercial and industrial areas, and central business districts. Collectors usually have minimal access control, and the right-of-way is typically 80 feet. Collectors are designed to move traffic from local roads to secondary arterials.

CONFORMITY - Compliance of any transportation plan with air quality control plans.

CONGESTION MANAGEMENT PROCESS (CMP) - One of six management systems originally required by ISTEA and subsequent transportation legislation. Future highway projects that significantly increase capacity for single occupant vehicles (SOV) should be part of a CMP or those projects may be ineligible for federal funding.

CONNECTED VEHICLE - A vehicle or a device that communicates with other vehicles and/or other devices alongside the roadway. Examples include in-vehicle navigation and sending/receiving road condition information.

CORRIDOR - Transportation pathway allowing movement between activity centers; a corridor may encompass single or multiple transportation routes and facilities, adjacent land uses, and the connecting street network.

CROSSWALK - Marked portion of the street designated for pedestrian crossing, either mid-block or at an intersection. The most common markings are double parallel lines, ladder, and zebra stripes.

CRP: CARBON REDUCTION PROGRAM – Established by the IJIA/BIL, the Carbon Reduction Program (CRP) provides funds for projects designed to reduce transportation emissions, defined as carbon dioxide (CO₂) emissions from on-road highway sources.

DEMAND RESPONSIVE - Transit services that can be variably routed and timed to meet the changing needs of the user on an as-needed basis.

DENSITY - The number of dwelling units, buildings, or persons per unit of land, usually per acre (expressed as du/ac).

EGLE: Michigan Department of Environment, Great Lakes, and Energy - State agency dedicated to environmental improvements and policies that impact public health and natural resources such as air quality, water quality, and waste management.

EMISSIONS BUDGET - The part of the State Implementation Plan that identifies allowable emissions levels, mandated by the National Ambient Air Quality Standards, for certain pollutants.

ENVIRONMENTAL IMPACT STATEMENT (EIS) - Reports which details any adverse economic, social, environmental effects of a proposed transportation project that the federal government funds.

ENVIRONMENTAL JUSTICE (EJ) - Refers to Executive Order 12898 which seeks to address disproportionately high and adverse human health or environmental effects in Federal programs or policies on minority and low income populations.

EPA: Environmental Protection Agency - Federal source agency of environmental and air quality regulations affecting transportation.

EXPENDITURES - Disbursement of funds for repayment of obligations occurred.

FHWA: Federal Highway Administration - Federal agency within the United States Department of Transportation that deals with roadway and highway issues.

FREEWAY - A divided highway for through traffic with full access control and interchanges at selected public roads.

FTA: Federal Transit Administration - Federal agency within the United States Department of Transportation that deals with transit issues.

FUNCTIONAL CLASSIFICATION - A system for classifying streets and highways based on the nature of service they are intended to provide.

FY: Fiscal Year - Year in which public and private agencies use for conducting business; it usually differs from the calendar year. Most State and Federal agencies use an October 1 through September 30 fiscal year.

GIS: Geographic Information System - Computer mapping capabilities used to provide information.

GRETS: Grand Rapids and Environs Transportation Study - Previous designation of the Grand Rapids Metropolitan Planning Organization (MPO).

GREENWAY - A protected open-space area following a natural or man-made linear feature; greenways are often used for recreation, transportation, conservation, and to link amenities.

GVMC: Grand Valley Metropolitan Council - Agency that serves as the Metropolitan Planning Organization (MPO) for the Grand Rapids area. The Council is made up of members, all local units of government, that want to work cooperatively on issues that have a multi-jurisdictional or regional scope. Those issues include transportation, the environment, economics, and those with social impact.

HIGHWAY PERFORMANCE MONITORING SYSTEM (HPMS) - A federal database of roadway characteristics and traffic information for pre-selected roadway segments throughout the entire MPO Study Area.

IAWG: Inter-Agency Work Group - Group consisting of Federal, State, and MPO staffs that meet periodically to discuss transportation project development and its relationship to air quality on both a short and long-range basis.

IIJA – Infrastructure Investment and Jobs Act – Current federal transportation bill, also known as BIL, or the Bipartisan Infrastructure Law

INFRASTRUCTURE - The built facilities required to serve a community's development and operational needs, e.g. roads, water, and sewer systems.

INTERMODAL - Refers to connections between modes of transportation.

INTERSECTION - The area where two or more roadways join or cross including the roadway and roadside facilities.

INTERSTATE SYSTEM - The system of highways that connects the principal metropolitan areas, cities, and industrial centers of the United States. The Interstate System also connects the U.S. to internationally significant routes in the Mexico and Canada.

ITP: Interurban Transit Partnership - Agency responsible for providing public transportation and transit service in the Grand Rapids area, also known as The Rapid.

ITS: Intelligent Transportation System - Technologies that focus on monitoring, guiding, or operating motorized vehicles.

LAND USE - The way in which a parcel of land is used or occupied, i.e. the types of buildings or activities, and/or the purpose for which it is designed, arranged, intended, or maintained.

LOS: Level of Service - A qualitative rating system used to describe the adequacy of the road network at a specific intersection or street segment, based on factors including travel time, freedom to maneuver, driver comfort, and interruptions; LOS A is used to describe the best traffic conditions while LOS F denotes gridlock. LOS can also be used to describe transit and bicycle/pedestrian networks.

MAP-21: Moving Ahead for Progress –MAP-21 created a streamlined, performance-based, and multimodal program to address the many challenges facing the U.S. transportation system. These challenges included improving safety, maintaining infrastructure condition, reducing traffic congestion, improving efficiency of the system and freight movement, protecting the environment, and reducing delays in project delivery

MDOT: Michigan Department of Transportation - State agency responsible for monitoring and improving the transportation system in Michigan.

MOBILITY - Movement of people or goods within the transportation system.

MODE - Form of transportation, such as automobile, transit, bicycle, and walking.

MODEL - A mathematical and geometric projection of activity and interactions in the transportation system of an area.

MPO: Metropolitan Planning Organization - A federally required planning entity responsible for transportation planning and project selection in its region; every urbanized area with a population over 50,000 should have an MPO, designated by the governor. The Grand Valley Metropolitan Council (GVMC) is the MPO for the Grand Rapids area.

MSA: Metropolitan Statistical Area - U.S. Census determination which delineates the boundaries of the Metropolitan area.

MULTIMODAL - A system or corridor providing a range of transportation options including walking, bicycling, driving, and transit.

MUTCD: Manual on Uniform Traffic Control Devices - The MUTCD defines the standards used for the installation and maintenance of traffic control devices (signs, signals, and pavement markings) nationwide; the manual is published by the Federal Highway Administration.

NAAQS: National Ambient Air Quality Standards - Standards set forth through the Clean Air Act which monitor air quality.

NETWORK - A graphic and/or mathematical representation of multimodal paths in a transportation system.

NATIONAL FUNCTION CLASSIFICATION SYSTEM (NFC): FHWA developed the NFC method for all public roads to delineate higher facility functions that emphasize mobility and moving traffic, from roads that have lower functions that might access residential properties, for example. The values are listed from the highest class to the lowest, which include: Interstate, Other Freeways, Other Principal Arterials, Minor Arterials, Major Collectors, Minor Collectors, and Local. Roads classified as local are not on the NFC Federal-aid system. The NFC system is intended to group roadways with similar characteristics and travel patterns, such as mobility on the system, access points to and from the system, as well as the function of the roadway itself (local trips, intercity and regional trips, freight, etc.).

NATIONAL HIGHWAY SYSTEM (NHS): Included in the NHS are public roads defined by the NFC as Interstate, Other Freeways, and Other Principal Arterials (both state and local facilities). FHWA defines this system as important to the nation's economy, defense, and mobility. All NHS roads must comply with applicable Federal regulations, including: design standards, contract administration, State-FHWA oversight procedures, Highway Performance Monitoring System (HPMS) reporting, National Bridge Inventory reporting, national performance measure targets and data collection, and outdoor advertisement/junkyard control. Not all NFC roads are classed as part of NHS.

NON-RECURRING CONGESTION - Unexpected or unusual congestion caused by unpredictable or transient events, such as accidents, inclement weather, or construction.

ON-STREET PARKING - Space for parking cars within the street right-of-way; on-street parking can improve access to nearby land uses, create a buffer between pedestrians and vehicles, and help reduce traffic speeds by narrowing the perceived right-of-way.

OXIDES OF NITROGEN (NOX) - A byproduct of processes employing a high temperature combustion. Power plants, industrial boilers, and motor vehicles are all principle sources of NoX.

PARATRANSIT - Services which serve the special needs of persons that standard mass transit services would serve with difficulty, or not at all.

PARTICULATE MATTER - Particulate Matter less than or equal to 10 microns. Consists of matter suspended in the atmosphere such as dust, chemicals, etc.

PEAK HOUR - The 60-minute period in the morning and evening in which the largest volume of travel is experienced.

PERSON-TRIP - A trip made by one person from one origin to one destination

PMS or PaMS: Pavement Management System - A system used to monitor and evaluate pavement conditions on the road network.

PPP: Public Participation Plan - Plan developed by GVMC that dictates how public involvement will be incorporated into the transportation planning process.

PROVIDER - An agency that causes clients to be transported, as opposed to an agency whose role is limited to funding programs.

RECONSTRUCTION - When a distressed road requires a subgrade fix, a complete reconstruction is required. This type of project brings the roadway back to dirt temporarily in order to add a new road base. Reconstruction projects can last several months or longer and may involve significant delays to the traveling public. Reconstruction projects also cost more than a standard rehabilitation or preservation project. However, the fix life of a reconstruction project is much longer than rehabilitation or preservation maintenance projects.

RECURRING CONGESTION - The relatively predictable congestion caused by routine traffic volumes operating in a typical environment.

REGION - An entire metropolitan area including designated urban and rural subregions.

REGIONALLY SIGNIFICANT - A project that is on a facility which serves regional transportation needs and would normally be included in the modeling of a metropolitan area's transportation network. Said project also offers an alternative to regional highway travel.

RESURFACING - Restoring pavement by addressing surface issues and adding a fresh layer of asphalt. For concrete surfaces, this can be in the form of joint replacements, diamond grinding, inlay or other rehabilitation fixes. Resurfacing projects are also known as overlay projects. Resurfacing projects, as well as other rehabilitation or capital preventative maintenance projects, such as crack sealing, are short term, cost less than reconstruction, and have less impact on travel delays."

REVERSE COMMUTE - Commuting against the main direction of traffic or a commute from the central city to the suburbs.

RNG: Renewable Natural Gas - A term used to describe biogas that has been upgraded for use in place of fossil natural gas. The biogas used to produce RNG comes from a variety of sources, including municipal solid waste landfills and digesters.

ROAD DIET - Narrowing a roadway by reducing the number of lanes or lane width; a traffic calming strategy used to reduce vehicle speeds. Road diets are often conversions of four-lane undivided roads into three lanes (two through lanes and a center two-way left turn lane (TWLTL). The ROW of the fourth lane may be used for bicycle lanes, sidewalks, and/or on-street parking.

ROADWAY - A thoroughfare at least twenty feet in width that has been dedicated to the public for transportation use; a section of the right-of-way that has been designed, improved, surfaced, or is typically used for motor vehicle travel.

ROUNDBOUT - A traffic calming device in which vehicles follow a circular path around a central island; upon approaching the roundabout, vehicles are expected to yield to traffic already in the circle.

ROW: Rights-of-Way - Public strip of land on which streets, sidewalks, alleys, transit and railroad lines, and public utilities are built.

SHARED LANE - A wide outside/curb or shared lane (WCL) is the lane nearest the curb and is wider than a standard (12-foot) lane, providing additional space so that the lane may be shared more comfortably by motor vehicles and bicycles. These lanes should be about 14 feet wide, as lanes wider than 15 feet can encourage the operation of two motor vehicles side by side. If lanes become too wide, some motorists may also assume parallel parking is allowed, constricting the travel lane for bikes.

SHARED USE PATH - A path physically separated from motorized vehicular traffic by an open space or barrier located

either within the highway right-of-way or within an independent right-of-way. Shared use paths may be used by pedestrians, bicyclists, skaters, wheelchair users, runners, and other nonmotorized users.

SHOULDER - The portion of the roadway to the right of the rightmost travel lane, excluding curbs, buffers, and sidewalks; shoulders can be paved, gravel, dirt, or grass, and serve a number of different purposes, (bicycle and pedestrian travel, structural roadway support, space for emergency vehicles to pass, stopped/disabled vehicle pull-off, space for vehicles to slow and turn right) typically dictated by their width and composition.

SHUTTLE - Usually a service provided with a vehicle seating twenty or more passengers that connects major trip destinations and origins on a fixed-route or route-deviation basis.

SIDEPATH - A type of multi-use path running adjacent and parallel to a roadway, like an extra wide sidewalk. Sidepaths have special design challenges, as motor vehicles may not expect bikes to be entering an intersection from outside the travel lanes. AASHTO discourages two-way paths located immediately adjacent to roadways due to the operational and safety issues that can occur. Sidepaths should not be considered a substitute for street improvements even when the path is located adjacent to a highway, as many bicyclists find these paths less convenient than on-street facilities, particularly for utilitarian trips.

SIDEWALK - A paved pathway paralleling a highway, road, or street that is intended for pedestrians. Most sidewalks are separated from the curb by trees, grass, landscaping, lights, or other streetscape elements and are most common in areas of higher land use densities.

SIP: State Implementation Plan - Required documents prepared by States and submitted to EPA for approval. SIPs identify state actions and programs to implement designated responsibilities under the Clean Air Act and subsequent amendments.

SOV: Single Occupancy Vehicle - The use of vehicle to get one person to a destination.

STIP: State Transportation Improvement Program - The compilation of Transportation Improvement Programs (TIPs) from around the State.

STPU: Surface Transportation Program-Urban - Federal funding category geared specifically to urbanized areas.

STPR: Surface Transportation Program-Rural - Federal funding category geared specifically to rural areas.

STRAHNET - The Strategic Highway Network (STRAHNET) is critical to the Department of Defense's (DoD's) domestic operations. The STRAHNET is a 62,791-mile system of roads deemed necessary for emergency mobilization and peacetime movement of heavy armor, fuel, ammunition, repair parts, food, and other commodities to support U.S. military operations. Even though DoD primarily deploys heavy equipment by rail, highways play a critical role.

TAZ: Traffic Analysis Zone - The smallest geographically designated area for analysis of transportation activity.

TDM: Transportation Demand Management - Process used to monitor and evaluate the need of the transportation network relative to the number of users, and the total amount of usage the transportation network will receive.

TEDF: Transportation Economic Development Funds - This program has different lettered categories A through F that provide competitive statewide funding for roadways of different types that serve economic development purposes.

TIP: Transportation Improvement Program - A short-term, three-year program of transportation projects which are

expected to be federally funded; these projects are drawn from and should be consistent with the Long Range Transportation Plan.

TMA: Transportation Management Area - An MPO with over 200,000 population. All transportation plans for these areas must be based on a continuing and comprehensive planning process carried out by the MPO in cooperation with the States and transit operators.

TMP: Transit Master Plan – The Rapid’s long-range transportation plan. It is a comprehensive, 20-year plan that will guide future development of The Rapid’s current service area of East Grand Rapids, Grand Rapids, Grandville, Kentwood, Walker, and Wyoming.

TOD: Transit Oriented Development - Development in which land uses are designed and sited to maximize transit ridership and the use of alternative forms of transportation; TOD’s are typically also mixed-use developments.

TRAFFIC COLLISION - A vehicle colliding into another vehicle, pedestrian, animal, road debris, or other geographical or architectural obstacle. Traffic collisions can result in injury, property damage, and death.

TRANSIT - Passenger transportation service provided to the general public along established routes with fixed or variable schedules at published fares.

TRAVEL TIME - Customarily calculated as the time it takes to travel from A door-to-door.

TSM: Transportation System Management - The element of a TIP that proposes non-capital-intensive steps toward the improvement of a transportation system.

URBANIZED AREA - An area which contains a city of 50,000 or more in population plus adjacent surrounding areas having a density of at least 1,000 people per square mile as determined by the U.S. Census.

USDOT: United States Department of Transportation - The principal direct federal funding and regulating agency for transportation facilities and programs.

VOC: Volatile Organic Compounds - Chemicals that are generated through the combustion of fossil fuels, industrial processes, and vegetation. VOCs are an ingredient in ground level ozone and smog.

VMT: Vehicle Miles Traveled - The number of vehicle miles traveled within a specified geographic area during a given period of time; one vehicle traveling one mile constitutes one vehicle mile, regardless of its size or the number of passengers.

WMCAC: West Michigan Clean Air Coalition - A partnership of business, academia, government, industry, and the non-profit sector in Kent, Ottawa, and Muskegon counties working together to achieve cleaner air in the region.

WMEAC: West Michigan Environmental Action Council - A non-profit environmental advocacy and education organization founded in 1968.

YOE: Year of Expenditure - Project costs in the LRTP Project list must be inflated to the year or range of years that the project will be constructed.

ZONING - Classification system based on permitted and prohibited land uses, densities, and intensities used to promote land use compatibility.



Appendix C: Corresponding Planning Documents

[Ada Township – Draft Master Plan \(2023\)](#)
[Algoma Township – Master Plan Update \(2018\)](#)
[Algoma Township – Parks and Rec Plan \(2019-2023\)](#)
[Allendale Charter Township Master Plan \(2023\)](#)
[Alpine Township Master Plan Update \(2015\)](#)
[Byron Township Parks and Recreation Master Plan \(2018\)](#)
[Byron Township Master Plan \(2023\)](#)
[Caledonia Charter Township Master Plan \(2018\)](#)
[Cannon Township Master Plan Update \(2015\)](#)
[City of East Grand Rapids Master Plan \(2018\)](#)
[City of Grand Rapids Bicycle Action Plan \(2019\)](#)
[City of Grand Rapids Community Master Plan: Chapter 6 Balanced Transportation \(2002\)](#)
[City of Grandville Master Plan \(2008\)](#)
[City of Hudsonville Master Plan \(2015\)](#)
[City of Kentwood Nonmotorized Plan \(2017\)](#)
[City of Kentwood Master Plan Update \(2020\)](#)
[City of Lowell Master Plan \(2007\)](#)
[City of Rockford Master Plan \(2023\)](#)
[City of Walker Citywide 2040 Vision](#)
[City of Wyoming Wyoming \[Re\]imagined Master Plan \(2021\)](#)
[Courtland Township Master Plan \(2007\)](#)
[Courtland Township Parks and Rec Master Plan \(2022\)](#)
[Gaines Township Master Plan \(2023\)](#)
[Georgetown Township Master Plan \(2021\)](#)
[Grand Rapids Charter Township Comprehensive Plan \(2007\)](#)
[Grattan Township Master Plan \(2018\)](#)
[Jamestown Charter Township 2019-2024 Community Recreation Plan](#)
[Jamestown Charter Township Master Plan \(2019\)](#)
[Lowell Charter Township Master Plan \(2022\)](#)
[MDOT Grand Region Regional Nonmotorized Plan \(2017\)](#)
[MDOT Strategic Highway Safety Plan](#)
[Plainfield Charter Township Master Plan Update Supplement \(2017\)](#)
[Solon Township Master Plan \(2018\)](#)
[Tallmadge Charter Township Master Plan \(2020\)](#)
[Vergennes Township Master Plan \(2018\)](#)
[Village of Caledonia General Development Plan Draft \(2021\)](#)
[Village and Charter Township of Caledonia Five-Year Parks and Recreation Plan \(2019-2023\)](#)
[Village of Kent City Master Land Use Plan \(2015\)](#)
[Village of Sparta Master Plan \(2023\)](#)



Appendix D: Committee Members

Ada Township

Policy Committee Representative: Julius Suchy
(jsuchy@adatownshipmi.com)
Technical Committee Representative: John Said
(jsaid@adatownshipmi.com)
7330 Thornapple River Dr.—PO Box 370
Ada, Michigan 49301
Phone (616) 676-9191

Algoma Township

Policy Committee Representative: Kevin Green
(supervisor@algotatwp.org)
Technical Committee Representative: Kevin Green
10531 Algoma NE
Rockford, Michigan 49341
Phone (616) 866 -1583

Allendale Charter Township

Policy Committee Representative: Zachary Fields
(ZacharyFields@allendale-twp.org)
Technical Committee Representative: Zachary Fields
6676 Lake Michigan Drive, PO Box 539
Allendale, Michigan 49401
Phone (616) 895-6295

Alpine Township

Policy Committee Representative: Greg Madura
(g.madura@alpinetwp.org)
Technical Committee Representative: Sue Becker
(s.becker@alpinetwp.org)
5255 Alpine Ave NW
Comstock Park, Michigan 49341
Phone (616) 784-1262

Byron Township

Policy Committee Representative: Amos “Don” Tillema
(Amos@byrontownship.org)
Technical Committee Representative: Don Tillema
8085 Byron Center SW
Byron Center, Michigan 49315
Phone (616) 878-1222

Caledonia Charter Township

Policy Committee Representative: Bryan Harrison
(bharrison@caledoniatownship.org)
Tim Bradshaw - alternate
Technical Committee Representative: Tim Bradshaw
(tim.bradshaw@kentcountymt.gov)
8196 Broadmoor Ave SE
Caledonia, Michigan 49316
Phone (616) 891-0070

Caledonia, Village of

Policy Committee Representative: Jeff Thornton
(manager@villageofcaledonia.org)
Technical Committee Representative: Jeff Thornton
250 S. Maple
Caledonia, MI 49316-9434
Phone 616-891-9384

Cannon Township

Policy Committee Representative: Terry Brod
(tbrod@cannontwp.org)
Technical Committee Representative: Terry Brod
6878 Belding Rd.
Rockford, Michigan 49341
Phone (616) 874-6966

Cascade Charter Township

Policy Committee Representative: Jade Smith
(Jsmith@cascadetwp.com)
Technical Committee Representative: Jade Smith
(Jsmith@cascadetwp.com)
5920 Tahoe Dr. SE
Grand Rapids, MI 49546
Phone (616) 949-1500

Cedar Springs, City of

Policy Committee Representative: Member Awaiting Appointment
Bill LaRose-alternate
Technical Committee Representative: Bill LaRose
(dpw@cityofcedarsprings.org)
66 S. Main St.—PO Box 310
Cedar Springs, Michigan 49319
Phone (616) 696-1330

Courtland Township

Policy Committee Representative: Matt McConnon
(mattmcconnon@gmail.com)
Technical Committee Representative: Matt McConnon
7450 14 Mile Rd.
Rockford, Michigan 49341
Phone (616) 866-0622

East Grand Rapids, City of

Policy Committee Representative: Doug LaFave
(dlafave@eastgr.org)
Technical Committee Representative: Doug LaFave
750 Lakeside Dr. SE
East Grand Rapids, Michigan 49506
Phone (616) 940-4817

Gaines Charter Township

Policy Committee Representative: Rod Weersing
(rod.weersing@gainestownship.org)
Technical Committee Representative: Tim Haagsma
(thaagsma@kentcountyrads.net)
8555 Kalamazoo Ave
Caledonia, Michigan 49316
Phone (616) 698-6640

Georgetown Charter Township

Policy Committee Representative: Justin Stadt
(jstadt@georgetown-mi.gov)
Technical Committee Representative: Justin Stadt
1515 Baldwin St. PO Box 769
Jenison, Michigan 49429
Phone (616) 457-2340

Gerald R. Ford International Airport

Policy Committee Representative: Casey Ries
(cries@grr.org)
Brian Hilbrands – alternate
Technical Committee Representative: Brian Hilbrands
(bhilbrands@grr.org)
Casey Ries - alternate
5500 - 44th St. SE
Grand Rapids, Michigan 49512
Phone (616) 233-6000

Grand Rapids, City of

Policy Committee Representative: Karyn Ferrick
(kferrick@grcity.us)
Ariana Jeske (ajeske@grand-rapids.mi.us)
Tim Burkman (tburkman@grand-rapids.mi.us)
Technical Committee Representative: Kristin Bennett
(krbennett@grcity.us)
Rick DeVries (rdevries@grcity.us)
300 Monroe Ave. NW
Grand Rapids, Michigan 49503
Phone (616) 456-3060

Grand Rapids Charter Township

Policy Committee Representative: Mike DeVries
(mdevries@grandrapidschw.org)
Wayne Harrall – alternate
(wharrall@kentcountyrads.net)
Technical Committee Representative: Mike DeVries
Wayne Harrall – alternate
(wharrall@kentcountyrads.net)
Steve Waalkes – alternate (swaalkes@miconcrete.net)
1836 E. Beltline Ave. NE
Grand Rapids, Michigan 49505
Phone (616) 361-7391

Grandville, City of

Policy Committee Representative: Ken Krombeen
(krombeenk@cityofgrandville.com)
Technical Committee Representative: Charles Sundblad
(sundbladc@cityofgrandville.com)
3195 Wilson Ave. SW
Grandville, Michigan 49418
Phone (616) 531-3030

Hudsonville, City of

Policy Committee Representative: Dan Strikwerda
(dstrikwe@hudsonville.org)
Technical Committee Representative: Robert Miller
(rmiller@hudsonville.org)
3275 Central Blvd.
Hudsonville, Michigan 49426
Phone (616) 669-0200

Interurban Transit Partnership - The Rapid

Policy Committee Representative: Kevin Wisselink
(kwisselink@ridetherapid.org)
Technical Committee Representative: Kevin Wisselink
Liz Schelling – alternate (lschelling@ridetherapid.org)
300 Ellsworth
Grand Rapids, Michigan 49503
Phone (616) 456-7514

Jamestown Charter Township

Policy Committee Representative: Dean Smith
(bigcheez52@aol.com)
Laurie Van Haitsma - Alternate
(supervisor@twp.jamestown.mi.us)
Technical Committee Representative: Dean Smith
(bigcheez52@aol.com)
Laurie Van Haitsma - Alternate
2380 Riley St.
Hudsonville, MI 49426
Phone (616) 896-8376

Kent County Board of Commissioners

Policy Committee Representative: Kris Pachla
(kristofer.pachla@kentcountymi.gov)
Technical Committee Representative: Wayne Harrall
(wharrall@kentcountyroads.net)
Rick Sprague – alternate (rsprague@kentcountyroads.net)
300 Monroe Ave. NW
Grand Rapids, Michigan 49503
Phone (616) 336-3550

Kent County Road Commission

Policy Committee Representative: Jerry Byrne
(jbyrne@kentcountyroads.net)
Rick Sprague – alternate (rsprague@kentcountyroads.net)
Technical Committee Representative: Rick Sprague
1900 4 Mile Rd NW
Grand Rapids, Michigan 49544
Phone (616) 242-6960

Kentwood, City of

Policy Committee Representative: Terry Schweitzer
(SchweitzerT@kentwood.us)
Lisa Golder (golderl@kentwood.us)
Shay Gallagher – alternate
Jim Kirkwood - alternate
Technical Committee Representative: Jim Kirkwood
(kirkwoodj@kentwood.us)
Shay Gallagher (gallaghers@kentwood.us)
Lisa Golder - alternate
Terry Schweitzer - alternate
4900 Breton
Kentwood, Michigan 49518
Phone (616) 554-0770

Lowell, City of

Policy Committee Representative: Mike Burns
(mburns@ci.lowell.mi.us)
Dennis Kent-alternate (kentd@michigan.gov)
Technical Committee Representative: Mike Burns
Dennis Kent-alternate
301 E. Main St.
Lowell, Michigan 49331
Phone (616) 897-8457

Lowell Charter Township

Policy Committee Representative: Jerry Hale
(supervisor@twp.lowell.mi.us)
Technical Committee Representative: Jerry Hale
2910 Alden Nash Ave SE
Lowell, MI 49331
Phone (616) 897-7600

Michigan Department of Transportation

Policy Committee Representative: Heather Bowden
(bowdenh@michigan.gov)
Technical Committee Representative: Luke Walters
(WaltersL3@michigan.gov)
Van Wagoner Building
425 W. Ottawa—PO Box 30050
Lansing, MI 48909
Phone (517)-241-2400

Nelson Township

Policy Committee Representative: Tom Noreen
(supervisor@nelsontownship.org)
Technical Committee Representative: Tom Noreen
2 Maple Street— PO Box 109
Sand Lake, MI 49343
Phone (616) 636-5332

Ottawa County Board of Commissioners

Policy Committee Representative: Member Awaiting
Appointment
Technical Committee Representative: Member Awaiting
Appointment
12220 Fillmore Street, Room 310
West Olive, Michigan 49460
Phone (616) 738-4000

Ottawa County Road Commission

Policy Committee Representative: Francisco Garcia
(fgarcia@ottawacorc.com)
Betty Gajewski - alternate (betty@gajewski.us)
Brett Laughlin – alternate
Technical Committee Representative: Brett Laughlin
(BALaughlin@ottawacorc.com)
14110 Lakeshore Drive P.O. Box 739
Grand Haven, MI 49417
Phone (616) 842-5400

Plainfield Charter Township

Policy Committee Representative: Cameron Van
Wyngarden (vanwyngardenc@plainfieldmi.org)
Technical Committee Representative: Rick Solle
(soller@plainfieldmi.org)
6161 Belmont Ave. NE
Belmont, Michigan 49306
Phone (616) 364-8466

Rockford, City of

Policy Committee Representative: Thad Beard
(tbeard@rockford.mi.us)
Dan Apkarian – alternate (dapkarian@rockford.mi.us)
Technical Committee Representative: Phil Vincent
(pvincent@rockford.mi.us)
7 S. Monroe St. PO Box 561
Rockford, Michigan 49341
Phone (616) 866-1537

Sand Lake, Village of

Policy Committee Representative: Member Awaiting
Appointment
Technical Committee Representative: Member Awaiting
Appointment
2 East Maple St.
Post Office Box 139
Sand Lake, Michigan 49343
Phone (616) 636-8854

Sparta, Village of

Policy Committee Representative: Blaine Wing
(villagemanager@spartami.org)
Technical Committee Representative: Blaine Wing
160 E. Division Street
Sparta, Michigan 49345
Phone: (616) 887-8251

Tallmadge Township

Policy Committee Representative: Mark Bennett
(mbennett@tallmadge.com)
Technical Committee Representative: Mark Bennett
0-1451 Leonard St. NW
Grand Rapids, Michigan 49534
Phone (616) 677-1248

Walker, City of

Policy Committee Representative: Darrel
Schmalzel(dschmalzel@walker.city)
Technical Committee Representative: Scott Conners
(sconners@walker.city)
4243 Remembrance Road NW
Walker, Michigan 49534
Phone (616) 453-6311

Wyoming, City of

Policy Committee Representatives: Robert Arnoys
(Robert.Arnoys@wyomingmi.gov)
Rob Postema (RDP@rpaae.com)
Technical Committee Representative: Russ Henckel
(HenckelR@wyomingmi.gov)
Nicole Hofert (hofertn@wyomingmi.gov)
1155 28th Street – PO Box 905
Grand Rapids, Michigan 49509
Phone (616) 530-7226



Appendix E: Goal and Objectives Matrices

The table below shows how the goals and objectives for the 2050 MTP support IJJA planning factors.

IJJA Planning Factors	Related MTP Goals	MTP Incorporation of IJJA Planning Factors
1.) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency	Goal 1 Goal 2 Goal 3 Goal 4 Goal 6 Goal 7	The projects contained in this plan preserve and enhance access (by all modes) to major employment centers.
2.) Increase the safety of the transportation system for motorized and nonmotorized users	Goal 3	In support of federal performance measures, safety improvements for all modes of transportation and all system users are encouraged in this plan
3.) Increase the security of the transportation system for motorized and nonmotorized users	Goal 3	GVMC employs ITS strategies and collaborates with MDOT to increase the security of the transportation system.
4.) Increase the accessibility and mobility of people and freight	Goal 1 Goal 2 Goal 3 Goal 4 Goal 6 Goal 7	Mobility options for nonmotorized, transit, and roadway users are increased under this plan. Accessibility is improved, but it is also recognized that additional activities should be considered to increase the accessibility of the transportation system for all users.
5.) Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns	Goal 1 Goal 2 Goal 3 Goal 4 Goal 5 Goal 6 Goal 7	The MTP seeks to minimize any negative environmental impacts because of programs/projects. The implementation of the programs/projects contained in this plan will reduce gaps in the system and a reduction in the number of congested miles. Consistency is achieved by developing the MTP in conjunction with GVMC members, road agencies, ITP/The Rapid, and MDOT, and by increasing the accuracy of socio-economic data input into the Transportation Model.
6.) Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight	Goal 1 Goal 2 Goal 4 Goal 6	The programs/projects in the plan seek to enhance connectivity and integration between modes, for example transit and nonmotorized.

7.) Promote efficient system management and operation	Goal 1 Goal 2 Goal 3 Goal 4 Goal 6	The programs/projects in this plan were developed with GVMC members, state and local transportation providers, and the public. This input helps ensure the system is efficiently managed and operated and the projects support the continuation of this system.
8.) Emphasize the preservation of the existing transportation system	Goal 2	The MTP considered preservation of the existing transportation system through the financial analysis; maintaining the system in a state of good repair is a federal performance measure and a high priority for our members.
9.) Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation	Goal 1 Goal 2 Goal 7	System reliability is a federal performance measure and therefore a high priority. GVMC strives to reduce congestion through our congestion management process, and the projects in this plan must be congestion-deficient to be eligible for federal funding. We also consider environmental resources through our consultation and environmental mitigation processes.
10.) Enhance travel and tourism	Goal 1 Goal 2 Goal 3 Goal 4 Goal 6 Goal 7	Enhancing and preserving the system, including our environmental resources, leads to a much more appealing travel destination. Strengthening land use and transportation decisions with the economy and tourism in mind can increase the desirability of our area as a must visit location, and increasing access ensures that our area provides transportation options for all.

The following table shows how the mode- and deficiency-based needs identified in Chapter 5 support the goals and objectives of this plan:

Goals and Objectives	Active Transportation	Air	Freight	Passenger Rail	Transit	Congestion	Bridge Condition	Pavement Condition	Safety	Environment	Resiliency	New Technology	Travel/Tourism
Goal 1: Further Develop an Efficient Multimodal System													
Objective 1a: Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight	✓	✓	✓	✓	✓	✓	✓						
Objective 1b: Promote a balanced transportation system that stimulates and supports long-term economic vitality, travel and tourism, global competitiveness, productivity, and efficiency through directed investments across modes	✓	✓	✓	✓	✓		✓	✓			✓		✓
Objective 1c: Target investments to keep the region's supply chains moving smoothly and address urban truck bottlenecks		✓					✓						
Objective 1d: Implement strategies to promote efficient system management and operations that result in the safe and reliable movement of people and freight		✓	✓	✓		✓			✓		✓		
Objective 1e: Prepare for new and emerging operation and propulsion technology in support of the goals and objectives of the Metropolitan Transportation Plan		✓		✓								✓	
Objective 1f: Advance data sharing practices that allow for efficient use of resources and improved policy and decision making at the state, regional, and local levels						✓		✓	✓				
Goal 2: Preserve Infrastructure and Manage System Operations													
Objective 2a: Apply transportation asset management principles and techniques to identify, assess, and maintain existing transportation infrastructure in support of federal performance measures	✓	✓	✓		✓		✓	✓			✓		

Goals and Objectives	Active Transportation	Air	Freight	Passenger Rail	Transit	Congestion	Bridge Condition	Pavement Condition	Safety	Environment	Resiliency	New Technology	Travel/Tourism
Objective 2b: Support the State of Good Repair federal performance measures and the priorities established in the ITP Transit Master Plan					✓								
Objective 2c: Identify strategies and recommend investments that preserve and enhance regional transit systems		✓			✓						✓		
Objective 2d: Reduce the reliance on Single Occupancy Vehicles (SOVs) by developing policies that encourage the use or development of active and low-impact modes of transportation and promoting services, such as Rideshare, that increase vehicle occupancy rates	✓	✓			✓	✓							
Objective 2e: Employ the Congestion Management Process to systematically monitor, measure, diagnose, and recommend travel management alternatives and system improvements for current and future congestion on our region's multi-modal transportation system		✓	✓			✓							
Objective 2f: Promote and advance travel demand management (TDM) practices and strategies to manage future traffic growth, improve system efficiency, mitigate congestion, and spread the travel demand evenly throughout the day, where feasible, in line with the GVMC Regional TDM Plan		✓	✓		✓	✓							
Objective 2g: Support the use of Intelligent Transportation Systems (ITS) and incident management to reduce the potential for secondary traffic incidents and non-recurring congestion, and promote sharing ITS data between agencies to streamline and improve incident management response			✓			✓							
Objective 2h: Improve the travel time reliability of the system in support of federal performance measures to create a consistent experience for all road users			✓										
Goal 3: Enhance Transportation Safety and Security													

Goals and Objectives	Active Transportation	Air	Freight	Passenger Rail	Transit	Congestion	Bridge Condition	Pavement Condition	Safety	Environment	Resiliency	New Technology	Travel/Tourism
Objective 3a: Improve safety of the transportation system for motorized, nonmotorized and vulnerable road users in support of federal performance measures by identifying and prioritizing projects that will reduce the likelihood or severity of crashes, promoting complete streets, and incorporating safety improvements with all transportation projects where feasible and practical	✓		✓		✓	✓			✓		✓		
Objective 3b: Continue to promote GVMC's safety education and outreach program to inform our members, stakeholders, and the public about safe walking, riding, and driving practices and expand the program to include additional safety messaging about driver impairment, distracted driving, and other behaviors that can lead to crashes	✓								✓				
Objective 3c: Support initiatives and policies that increase safety and security for traveling passengers		✓		✓					✓				
Objective 3d: Increase security of the transportation system by incorporating applicable emergency relief and disaster preparedness plans, strategies and policies that support homeland security, as appropriate, to safeguard the security of all motorized and nonmotorized users		✓		✓							✓		
Goal 4: Strengthen Land Use and Transportation Policies													
Objective 4a: Encourage the coordination and linkage of transportation and land uses to improve equitable access to the entire system for all users and reduce number and length of trips when possible			✓	✓						✓			
Objective 4b: Develop transportation plan data and projections using up-to-date local land use data and regional population and employment forecasts						✓							

Goals and Objectives	Active Transportation	Air	Freight	Passenger Rail	Transit	Congestion	Bridge Condition	Pavement Condition	Safety	Environment	Resiliency	New Technology	Travel/Tourism
Goal 5: Educate and Engage Members, Stakeholders, and the Public													
Objective 5a: Provide continual and transparent opportunities for our members, stakeholders, and the public to actively participate in the transportation decision making process and learn about transportation issues through comprehensive education and outreach, including in-person events, meetings, and open houses; lunch and learns; social media and other virtual public involvement tools in line with our Public Participation Plan													
Objective 5b: Continue to build partnerships with organizations that can help us expand our educational and engagement reach										✓			
Objective 5c: Ensure that the public involvement process is equitable by using a variety of outreach strategies that reach and engage stakeholders and the public, with special consideration given to ensuring the inclusion of people traditionally underserved by the transportation planning process and those without internet access													
Goal 6: Ensure Equity, Access and Mobility													
Objective 6a: Implement improvements for all transportation system users that foster increased accessibility (to employment, education, day care, medical facilities, housing, services, neighborhoods, recreation and fresh food), economic development and vitality, and improved quality of life for all people, regardless of race, age, ability, or economic status	✓	✓		✓									
Objective 6b: Foster environmental justice through the maintenance of a planning process that does not unfairly affect any one segment of our community and supports economic opportunity	✓		✓	✓									

Goals and Objectives	Active Transportation	Air	Freight	Passenger Rail	Transit	Congestion	Bridge Condition	Pavement Condition	Safety	Environment	Resiliency	New Technology	Travel/Tourism
in disadvantaged communities that have been historically marginalized and overburdened by pollution and underinvestment in housing, transportation, water and wastewater infrastructure, recreation, and healthcare													
Objective 6c: Support the Federal Justice 40 initiative by ensuring MPO plans and programs advance Federal investments to disadvantaged communities				✓			✓						
Goal 7: Protect and Enhance the Environment and Public Health													
Objective 7a: Promote clean energy, electric and alternative fueled vehicles, and energy conservation to help achieve national greenhouse gas reduction goals and improve public health	✓	✓		✓	✓					✓	✓	✓	
Objective 7b: Increase access to and encourage the use of active modes of transportation that reduce emissions and improve quality of life and public health	✓	✓			✓					✓			
Objective 7c: Evaluate opportunities to reduce personal and freight vehicle travel and associated air pollution in communities near high-volume corridors to protect public health	✓				✓								
Objective 7d: Encourage the reduction and mitigation of stormwater and other environmental impacts of surface transportation projects		✓									✓		
Objective 7e: Increase transportation system resilience to extreme weather events and other disasters by determining vulnerabilities to climate change impacts and evaluating potential solutions for implementation		✓		✓							✓		



Appendix F: Population Projections and TAZ Map

The table below shows population growth in every jurisdiction within GVMC's planning area between 2020 and 2050.

Jurisdiction	County	Census	MDOT	MDOT	MDOT	MDOT	Change	%Change
		POP20	POP25	POP30	POP40	POP50	20-50	20-50 Δ
Ada Twp	Kent	14,388	14,861	15,354	15,736	15,973	1,585	11.0%
Algoma Twp	Kent	12,055	12,519	13,002	13,456	13,784	1,729	14.3%
Allendale Twp	Ottawa	26,582	29,062	31,435	35,202	37,176	10,594	39.9%
Alpine Twp	Kent	14,079	14,607	15,157	15,660	16,017	1,938	13.8%
Blendon Twp	Ottawa	7,081	7,211	7,293	7,210	6,796	-285	-4.0%
Bowne Twp	Kent	3,289	3,379	3,473	3,525	3,545	256	7.8%
Byron Twp	Kent	26,927	27,827	28,765	29,506	29,977	3,050	11.3%
Caledonia Twp	Kent	15,811	17,123	18,480	20,472	22,235	6,424	40.6%
Cannon Twp	Kent	14,379	14,838	15,316	15,670	15,880	1,501	10.4%
Cascade Twp	Kent	19,667	20,583	21,534	22,591	23,426	3,759	19.1%
Cedar Springs City	Kent	3,627	3,753	3,884	3,993	4,065	438	12.1%
Chester Twp	Ottawa	2,096	2,133	2,157	2,130	2,006	-90	-4.3%
Coopersville City	Ottawa	4,828	4,917	4,974	4,919	4,638	-190	-3.9%
Courtland Twp	Kent	9,005	9,160	9,323	9,280	9,160	155	1.7%
East Grand Rapids City	Kent	11,371	11,671	11,985	12,140	12,188	817	7.2%
Gaines Twp	Kent	28,812	29,839	30,907	31,828	32,453	3,641	12.6%
Georgetown Twp	Ottawa	54,091	56,310	58,209	60,088	59,100	5,009	9.3%
Grand Rapids Ch Twp	Kent	18,905	19,417	19,951	20,233	20,336	1,431	7.6%
Grand Rapids City	Kent	198,917	204,841	211,019	215,056	217,160	18,243	9.2%
Grandville City	Kent	16,083	16,454	16,842	16,953	16,918	835	5.2%
Grattan Twp	Kent	3,809	3,933	4,063	4,162	4,223	414	10.9%
Hudsonville City	Ottawa	7,629	7,813	7,947	7,947	7,579	-50	-0.7%
Jamestown Twp	Ottawa	9,630	10,254	10,830	11,634	11,864	2,234	23.2%
Kentwood City	Kent	54,304	55,834	57,430	58,359	58,767	4,463	8.2%
Lowell City	Kent	4,142	4,174	4,209	4,112	3,982	-160	-3.9%
Lowell Twp	Kent	6,276	6,558	6,850	7,166	7,412	1,136	18.1%
Nelson Twp	Kent	4,895	5,052	5,215	5,336	5,408	513	10.5%
Oakfield Twp	Kent	6,107	6,279	6,458	6,561	6,606	499	8.2%
Plainfield Twp	Kent	33,535	35,035	36,593	38,271	39,577	6,042	18.0%
Polkton Twp	Ottawa	2,565	2,612	2,641	2,610	2,459	-106	-4.1%
Rockford City	Kent	6,142	6,379	6,625	6,856	7,023	881	14.3%
Solon Twp	Kent	6,496	6,688	6,888	7,017	7,082	586	9.0%
Sparta Twp	Kent	5,151	5,299	5,454	5,549	5,593	442	8.6%
Sparta village	Kent	4,244	4,373	4,508	4,601	4,652	408	9.6%

		Census	MDOT	MDOT	MDOT	MDOT	Change	%Change
Jurisdiction	County	POP20	POP25	POP30	POP40	POP50	20-50	20-50 Δ
Spencer Twp	Kent	4,163	4,276	4,394	4,457	4,480	317	7.6%
Tallmadge Twp	Ottawa	8,802	9,267	9,684	10,203	10,227	1,425	16.2%
Tyrone Twp	Kent	5,021	5,147	5,278	5,333	5,342	321	6.4%
Vergennes Twp	Kent	4,741	4,837	4,938	4,945	4,910	169	3.6%
Walker City	Kent	25,132	26,094	27,094	28,028	28,699	3,567	14.2%
Wright Twp	Ottawa	3,190	3,247	3,283	3,244	3,056	-134	-4.2%
Wyoming City	Kent	76,501	78,977	81,557	83,504	84,689	8,188	10.7%
GVMC Planning Area Totals		784,468	812,634	841,002	865,542	876,464	91,996	11.7%



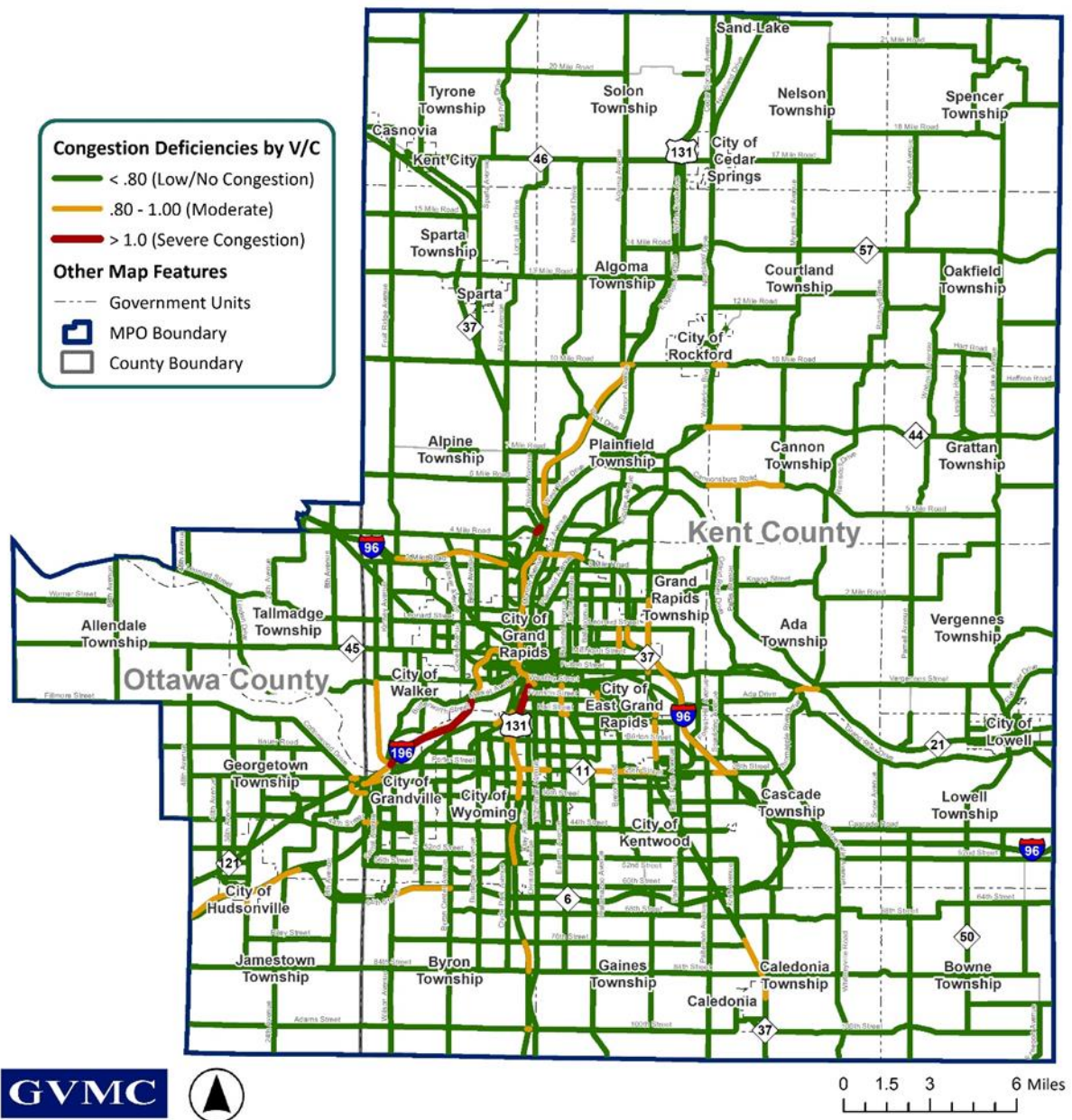
Appendix G: List and Maps of Congestion Deficient Facilities

List of capacity deficient facilities.

Road Name	From	To	Length (Mile)	Jurisdiction
68th Street	US-131 SB Ramps	US-131 NB Ramps	0.07	Byron Township
84th Street	Division Avenue	US-131	0.73	Byron Township
68th Street	Clyde Park Avenue	US-131 SB Ramps	0.24	Byron Township
Patterson Avenue	M-37	52nd Street	0.59	Cascade Township
John J Oostema Blvd EB	Patterson Avenue	GRR Airport Terminal	0.59	Cascade Township
Fulton Street	Division Avenue	West of Monroe	0.34	City of Grand Rapids
Leonard Street	Turner Avenue	Scribner Avenue	0.06	City of Grand Rapids
Burton Street	Towner Avenue	Century Avenue	0.26	City of Grand Rapids
Plainfield Avenue	I-96	3 Mile Road	0.60	City of Grand Rapids
Leonard Street	Walker Avenue	Seward Avenue	1.24	City of Grand Rapids
Wealthy Street	Lafayette Avenue	Eastern Avenue	0.63	City of Grand Rapids
Wealthy Street	Division Avenue	Jefferson Avenue	0.18	City of Grand Rapids
Wealthy Street	Jefferson Avenue	Lafayette Avenue	0.11	City of Grand Rapids
Hall Street	Steele Avenue	US-131 SB Ramps	0.19	City of Grand Rapids
Pearl Street	Division Avenue	Monroe Avenue	0.21	City of Grand Rapids
Burton Street	Division Avenue	Towner Avenue	0.59	City of Grand Rapids
Pearl Street	Monroe Avenue	US-131	0.30	City of Grand Rapids
Wealthy Street	US-131	Division Avenue	0.18	City of Grand Rapids
Burton Street	US-131 SB Ramps	Clyde Park Avenue	0.15	City of Grand Rapids
Franklin Street	US-131 NB Ramps	US-131 SB Ramps	0.05	City of Grand Rapids
Hall Street	US-131 SB Ramps	Grandville Avenue	0.16	City of Grand Rapids
Michigan Street	Lafayette Avenue	Monroe Avenue	0.53	City of Grand Rapids
I-196 BL (Franklin St)	US-131 SB Ramps	Grandville Avenue	0.17	City of Grand Rapids
Leonard Street	I-96 WB Ramps	East Beltline	0.63	City of Grand Rapids
Leonard Street	Seward Avenue	Turner Avenue	0.28	City of Grand Rapids
Market Avenue	Wealthy Street	RR Bridge	0.50	City of Grand Rapids
Market Avenue	Fulton Street	Wealthy Street	0.59	City of Grand Rapids
Market Avenue	RR Bridge	West of Freeman Ave.	0.38	City of Grand Rapids
Franklin Street	Madison Avenue	Jefferson Avenue	0.25	City of Grand Rapids
Franklin Street	Jefferson Avenue	Division Avenue	0.18	City of Grand Rapids
Division Avenue	Cherry St SE	Wealthy Street	0.26	City of Grand Rapids
Monroe Avenue	Pearl Street	Fulton Street	0.23	City of Grand Rapids
Leonard Street	Scribner Avenue	Monroe Avenue	0.46	City of Grand Rapids
M-21 (Fulton St)	Robinson Road	Cascade Road	0.67	City of Grand Rapids
44th Street	I-196 EB Ramps	Canal Avenue	0.15	City of Grandville
Wilson Avenue	Chicago Drive	M-11 (28th St)	0.28	City of Grandville
32nd Avenue	I-196 EB Ramps	I-196 WB Ramps	0.27	City of Hudsonville
3 Mile Road	Fruit Ridge Avenue	Wilson Avenue	0.75	City of Walker
44th Street	US-131 SB Ramps	US -131 NB Ramps	0.07	City of Wyoming
54th Street	Clyde Park Avenue	Clay Avenue	0.42	City of Wyoming
44th Street	Byron Center Avenue	Burlingame Avenue	0.96	City of Wyoming
44th Street	RR Xing	Buchanan Avenue	0.25	City of Wyoming

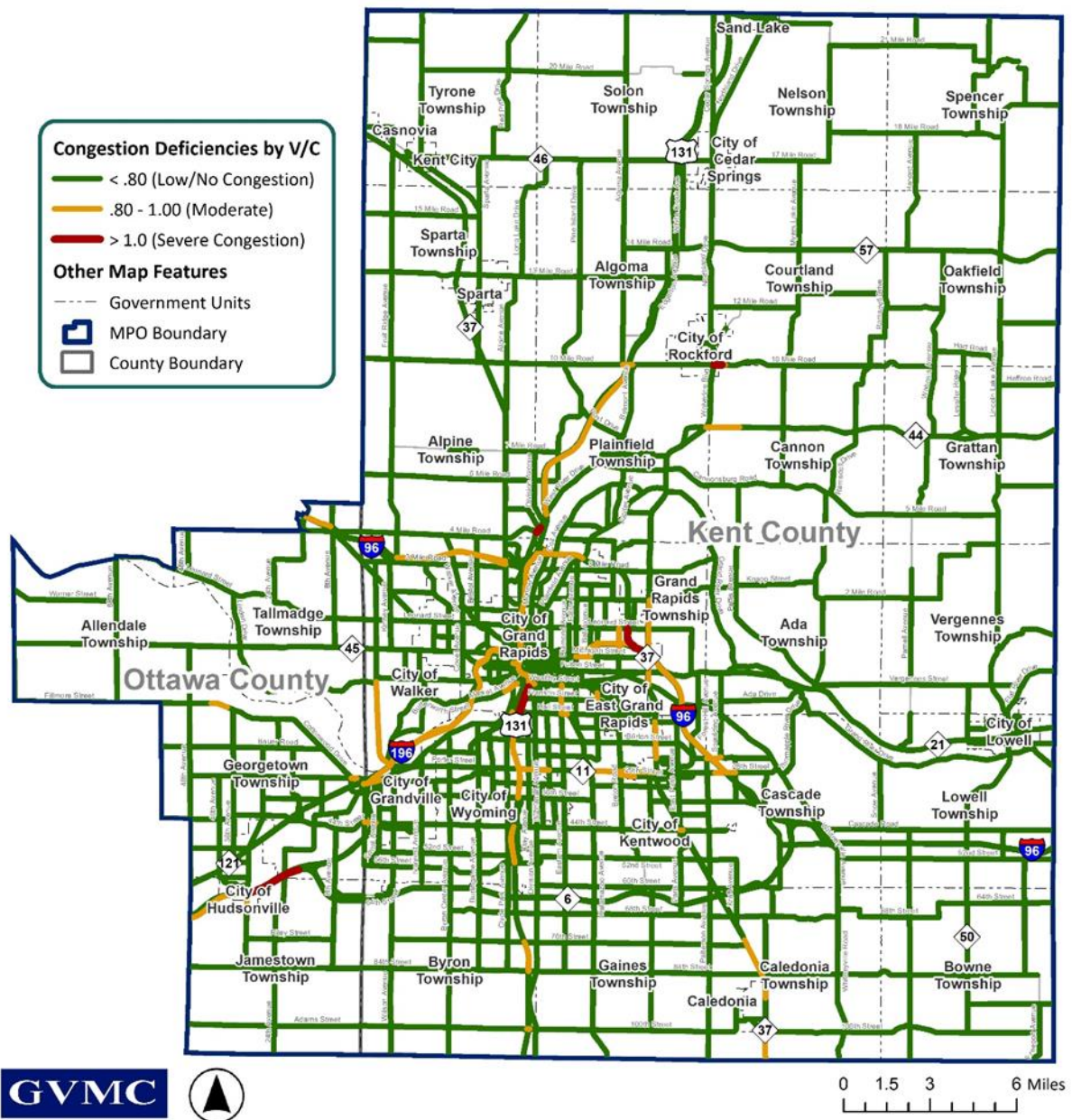
Road Name	From	To	Length (Mile)	Jurisdiction
44th Street	Buchanan Avenue	Division Avenue	0.26	City of Wyoming
44th Street	Clay Ave SW	RR Xing	0.17	City of Wyoming
44th Street	US-131 NB Ramps	Clay Avenue	0.10	City of Wyoming
Kalamazoo Avenue	68th Street	Eastport Drive	0.61	Gaines Township
M-37 (East Beltline Ave) NB	Cascade Road	Michigan Street	0.87	MDOT
US-131 NB	Burton Street	Hall Street	0.98	MDOT
M-37 (East Beltline Ave)	Michigan Street	South of Bradford Street	0.42	MDOT
US-131 NB	28th Street	Burton Street	1.04	MDOT
28th Street	Wilson Ave SW	Ivanrest Ave SW	0.97	MDOT
Wilson Ave SW	E I 196/28th RAMP	28th/E I 196 RAMP	0.12	MDOT
US-131 NB	Hall Street	Wealthy Street	0.92	MDOT
Wilson Ave SW	Indian Mounds Dr SW	Bridge 4814	0.17	MDOT
Wilson Ave NW	Fennessy St NW	Lake Michigan Dr NW	1.15	MDOT
I-96 (WB)	Cascade Road	M-21 (Fulton St)	1.33	MDOT
M-37 (Broadmoor Ave)	Blvd Section	M-11 (28th Street)	0.53	MDOT
28th Street	US-131	S Division Ave	0.59	MDOT
28th Street	E Beltline Ave SE	Lake Eastbrook Blvd SE	0.42	MDOT
M-21 (Fulton St)	M-37	Robinson Road	0.26	MDOT

2019 AM Congestion by Volume/Capacity (V/C)



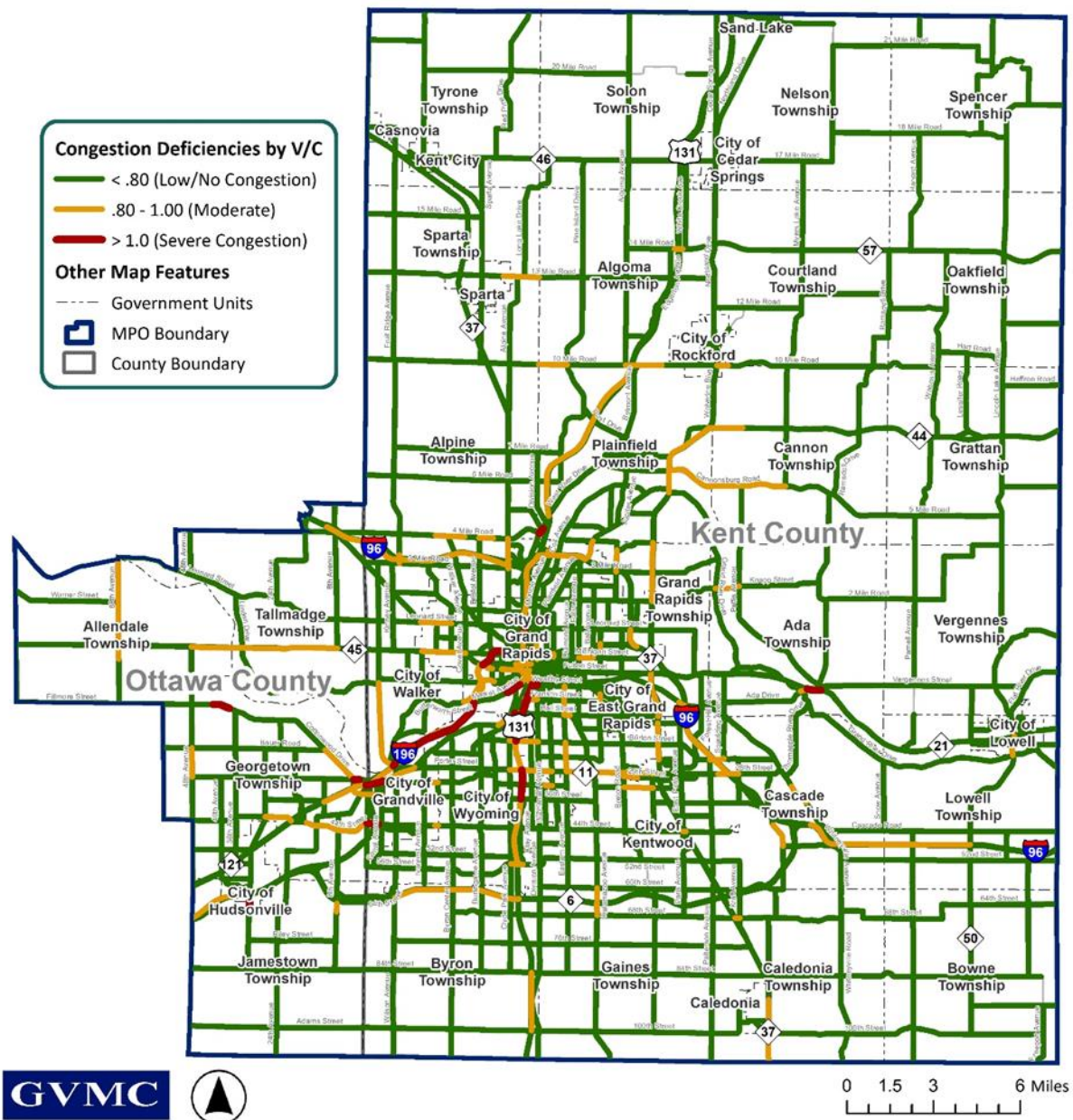
Map 19: 2019 AM Congestion by Volume/Capacity (V/C)

2019 PM Congestion by Volume/Capacity (V/C)



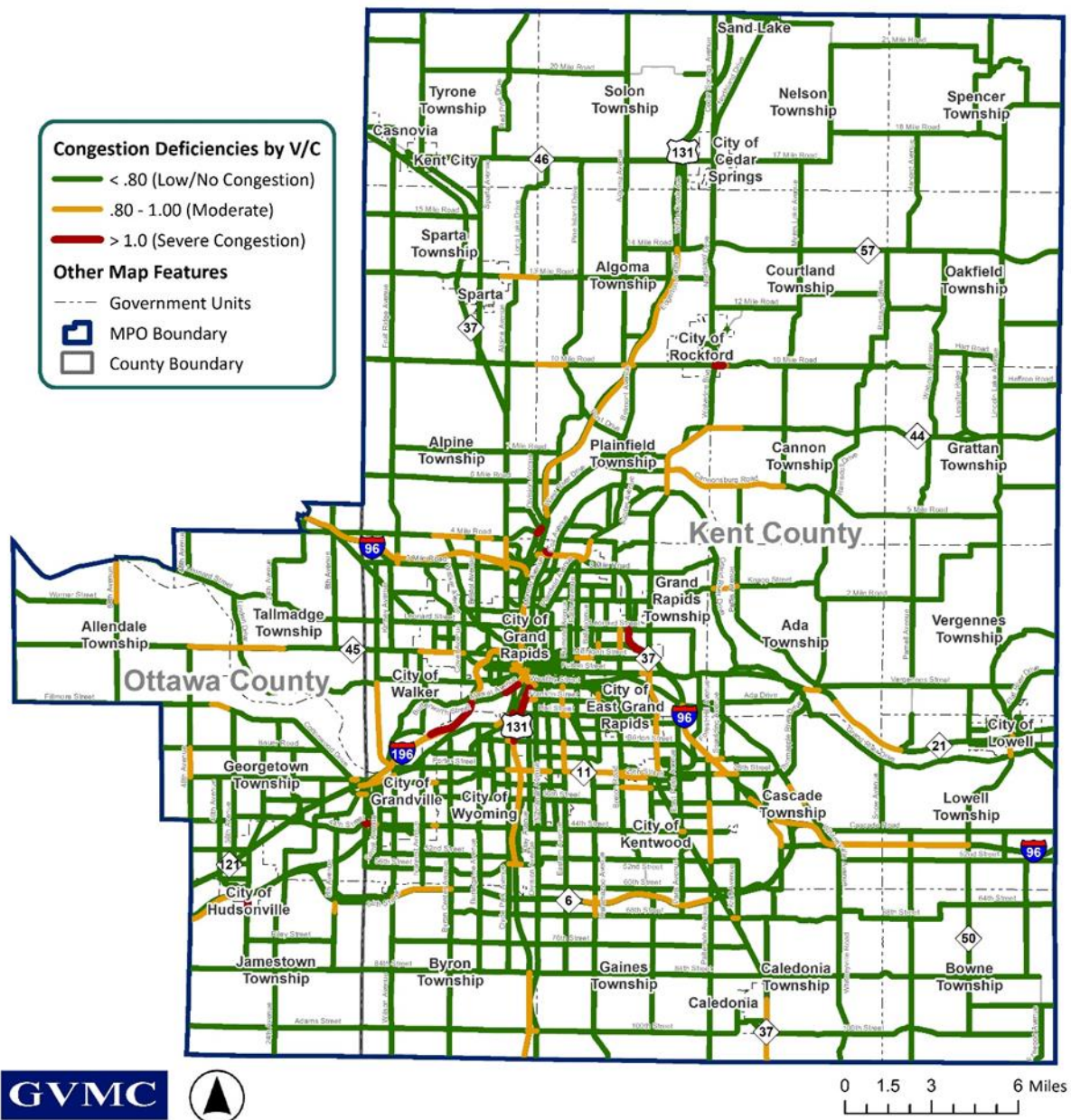
Map 20: 2019 PM Congestion by Volume/Capacity (V/C)

2050 AM Congestion by Volume/Capacity (V/C)



Map 21: 2050 AM Congestion by Volume/Capacity (V/C)

2050 PM Congestion by Volume/Capacity (V/C)



Map 22: 2050 PM Congestion by Volume/Capacity (V/C)



Appendix H: Top Fatality/Serious Injury Intersections and Segments

This Appendix includes the tables below and concludes with a list of traffic crash interventions.

- (1) Top 20 Pedestrian-Involved Crash Intersections from 2018-2022
- (2) Top 20 Pedestrian-Involved Crash Segments from 2018-2022
- (3) Top 20 bicyclist-Involved Crash Intersections from 2018-2022
- (4) Top 20 Crash Intersections Ranked by Number of Fatal (K) and Serious Injury (A) Crash from 2018-2022
- (5) Top 20 Crash Intersections Ranked by Rate of Fatal (K) and Serious Injury Crash (A) from 2018-2022
- (6) Top 20 Crash Segments Ranked by Number of Fatal (K) and Serious Injury (A) Crash from 2018-2022
- (7) Top 20 Crash Segments Ranked by Rate of Fatal (K) and Serious Injury Crash (A) from 2018-2022

Top 20 Pedestrian-Involved Crashes Intersections (2018-2022)

Rank	Intersection	Number of Pedestrian - Involved Crashes
1	S Division Ave & 28 th St SE	13
2	S Division Ave & Wealthy St SE	11
3	S Division Ave & 54 th ST SW	8
4	S Division Ave & Burton St SE	7
5	S Division Ave & Franklin St SE	6
6	S Division Ave & 44 th St SE	6
7	W Fulton St & W Fulton St	6
8	W Fulton St & Ionia Ave NW	5
9	Michigan St NE & Lafayette Ave NE	5
10	S Division Ave & Cherry St SE	5
11	W Fulton St & Monroe Ave NW	5
12	Eastern Ave SE & Franklin St SE	5
13	28 th St SE & Kalamazoo Ave SE	5
14	Alpine Ave NW & 3 Mile Rd NW	5
15	Michigan St NE & Fuller Ave NE	5
16	36 th St SW & Byron Center Ave SW	5
17	28 th St SE & East Paris Ave	5
18	28 th St SW & Burlingame Ave	5
19	W Fulton St & Commerce Ave SW	4
20	Ionia Ave SW & Oakes St SW	4

Table 1: Top 20 Pedestrian-Involved Crashes Intersections (2018-2022)

Top 20 Pedestrian-Involved Crash Segments (2018-2022)

Rank	Segment	From	To	Length (Mile)	Number of Pedestrian -Involved Crashes
1	28th St SW	Buchanan Ave SW	S Division Ave	0.25	13
2	S Division Ave	Cutler St SW	Burton St SW	0.065	6
3	Kalamazoo Ave	Shangrai La Dr SE	28th St SE	0.197	6
4	S Division Ave	McConnell St SW	Wealthy St SW	0.063	5
5	N Campus Dr	S Campus Dr	Commons Dr	0.227	5
6	28 th St SW	US 131	Buchanan Ave SW	0.253	4
7	S Division Ave	56th St SW	54th St SW	0.25	4
8	Fuller Ave NE	Crescent St NE	Michigan St NE	0.063	4
9	Kalamazoo Ave	Eastport Dr SE	60 th St SE	0.31	4
10	S Division Ave	Cherry St SE	Oakes St SE	0.09	4
11	W Fulton St	Commerce Ave SW	S Division Ave	0.066	4
12	28 th St SE	Eastern Ave SE	Brooklyn Ave SE	0.461	3
13	Fuller Ave NE	Leonard St NE	Spencer St NE	0.252	3
14	Burlingame Ave SW	Prairie Pkwy SW	28 th St SW	0.193	3
15	Alpine Ave NW	Harding St NW	Hillside Dr NW	0.128	3
16	S Division Ave	Franklin St SW	Graham St SW	0.062	3
17	Eastern Ave SE	Worden St SE	Franklin St SE	0.063	3
18	Pearl St NW	Campau Ave NW	Monroe Ave NW	0.056	3
19	S Division Ave	Sutton St SW	Kirtland St SW	0.062	3
20	Oakes St SW	Market St SW	Grandville Ave SW	0.076	3

Table 2: Top 20 Pedestrian-Involved Crash Segments (2018-2022)

Top 20 Bicycle-Involved Crashes Intersections (2018-2022)

Rank	Intersection	Number of Bicycle -Involved Crashes
1	12th Ave & Baldwin St	6
2	60 th St SE & Kalamazoo Ave	4
3	36th St SW & Clyde Park Ave SW	4
4	Hall St SE & S Division Ave	4
5	Alpine Ave NW & Leonard St NW	4
6	44th St SE & Eastern Ave SE	3
7	20th Ave & Baldwin St	3
8	48th Ave & Lake Michigan Dr	3
9	Kalamazoo Ave SE & Marketplace Dr SE	3
10	68th St SE & S Division Ave	3
11	44th St SW & Rivertown Pkwy SW	3
12	44th St SW & Wilson Ave SW	3
13	Diamond Ave SE & Wealthy St SE	3
14	Monroe Ave NW & W Fulton St	3
15	Lane Ave NW& W Fulton St	3
16	Monroe Ave NW & Pearl St NW	3
17	Lafayette Ave NE & Leonard St NE	3
18	44 th St SE & Stauffer Ave SE	2
19	44 th St SE & Kalamazoo Ave SE	2
20	44th St SE & Breton Rd SE	2

Table 3: Top 20 Bicycle-Involved Crashes Intersections (2018-2022)

Top 20 Crash Intersections Ranked by Number of Fatal (K) and Serious Injury (A) Crashes from 2018-2022

Rank	Intersection Name	Township	Total Crash	Fatal Crash (K)	Serious Injury Crash (A)	Total KA Crash
1	28 th St SE & S Division Ave	Wyoming	324	3	6	9
2	Burton St SE & S Division Ave	Grand Rapids	160	2	6	8
3	28 th St SW & Burlingame Ave	Wyoming	239	0	7	7
4	S Division Ave & 54th St	Kentwood	232	1	5	6
5	Alpine Ave NW & N Center Dr	Walker	203	0	6	6
6	44 th St SE & Eastern Ave	Kentwood	178	0	6	6
7	Hall St SW & S Division Ave	Grand Rapids	163	0	6	6
8	28th St SW & Clyde Park Ave	Wyoming	246	1	4	5
9	Northland Dr NE & 14 Mile Rd	Algoma Twp	91	1	4	5
10	84th St SE & S Division Ave	Byron Twp	56	1	4	5
11	Port Shelton St & 48 th Ave	Blendon Twp	56	1	4	5
12	Sparta Ave & 17 Mile Rd	Tyrone Twp	24	1	4	5
13	N US 131 & Wealthy St	Grand Rapids	233	0	5	5
14	44 th St SE & S Division Ave	Wyoming	148	0	5	5
15	Lincoln Lake Ave & Belding Rd	Grattan Twp	46	0	5	5
16	E Beltline Ave SE & Mall Dr SE	Kentwood	61	2	2	4
17	S Division Ave SW & Abbie St SE	Wyoming	148	2	2	4
18	28 th St SE & Eastern Ave SE	Grand Rapids	252	1	3	4
19	28 th St SW & Byron Center Ave	Wyoming	165	1	3	4
20	Kalamazoo Ave SE & 68th St	Gaines Twp	110	1	3	4

Table 4: Top 20 Crash Intersections Ranked by Number of Fatal (K) and Serious Injury (A) Crashes from 2018-2022

Top 20 Crash Intersections Ranked by Rate of Fatal(K) and Serious Injury (A) Crash from 2018-2022 (Minimum 3 KA Crashes)

Rank	Intersection Name	Township	Total Crash	Type KA Crash	Type KA Crash /MEV
1	Butterworth St SW & Hall St SW	Walker	3	3	0.616
2	Sparta Ave NW & 17 Mile Rd	Tyrone Twp	24	5	0.429
3	Alden Nash Ave SE & 92 nd St SE	Bowne Twp	25	4	0.282
4	84 th St SE & Division Ave	Byron Twp	56	5	0.226
5	Greenly St & 32 nd Ave	Jamestown Twp	14	3	0.207
6	Lincoln Lake Ave NE & Belding Rd NE	Grattan Twp	46	5	0.203
7	84 th St & Alden Nash Ave	Bowne Twp	20	3	0.169
8	Northland Dr & 11 Mile Rd NE	Rockford	15	3	0.164
9	60 th St SE & Wing Ave SE	Kentwood	19	4	0.157
10	12 Mile Rd NW & M- 37 NW	Sparta Twp	34	3	0.152
11	Port Sheldon St & 48 th Ave	Blendon Twp	56	5	0.151
12	60 th St SE & Patterson Ave SE	Kentwood	41	3	0.142
13	S Division Ave SW & Cutler St SW	Grand Rapids	51	4	0.141
14	Burton St SW & Godfrey Ave SW	Wyoming	61	4	0.131
15	76 th St SW & Gordon Industrial Dr	Byron Twp	37	3	0.130
16	S Division Ave SW & Abbie St	Wyoming	30	4	0.130
17	Sherian Ave SW & Hall St SW	Grand Rapids	39	3	0.128
18	Chicago Dr SW & Collingwood Ave SW	Wyoming	21	3	0.120
19	S Division Ave & Dickinson St	Grand Rapids	26	3	0.117
20	S Division Ave SW & Rose St SW	Grand Rapids	28	3	0.117

Table 5: Top 20 Crash Intersections Ranked by Rate of Fatal(K) and Serious Injury (A) Crash from 2018-2022 (Minimum 3 KA Crashes)

Top 20 Crash Segments Ranked by Number of Fatal (K) and Serious Injury (A) Crashes from 2018-2022

Rank	Segment	From	To	Township	Length (Mile)	Total Crash	Fatal Crash (K)	Serious Injury Crash(A)	Number of K+A Crash
1	28th St SW	Buchanan Ave SW	S Division Ave	Wyoming	0.25	233	5	4	9
2	14 Mile Rd NE	Northland Dr NE	14 Mile Ct NE	Courtland Twp	0.99	45	2	5	7
3	28th St SE	Eastern Ave SE	Brooklyn Ave SE	Grand Rapids	0.461	183	2	4	6
4	S Division Ave	Cutler St SW	Burton St. SW	Grand Rapids	0.065	68	2	4	6
5	S US 131	Wealthy St SW	S US 131/Wealthy RAMP	Grand Rapids	0.188	218	0	6	6
6	28th St. SW	Oak Valley Ave.	Burlingame Ave.	Wyoming	0.141	110	0	6	6
7	14 Mile Rd. NE	Lapley Ave NE	Wabasis Ave NE	Oakfield Twp	0.999	22	2	3	5
8	Fillmore St	Meana Dr	28th Ave & 28th St	Georgetown Twp	0.96	74	1	4	5
9	N US 131	US 131 Crossover	US 131/W River Dr Ramp	Plainfield Twp	0.576	34	1	4	5
10	Wilson Ave SW	Drakewood SW	Hall St SW	Walker	0.679	29	2	2	4
11	Alden Nash Ave	36 th St SE	Emberwood Dr SE	Lowell	0.982	22	2	2	4
12	Alpine Ave NW	Westshire Dr NW	Marlene St NW	Alpine Twp	0.06	20	2	2	4
13	West River Dr NW	Springbrook Dr	Greenridge Dr	Walker	0.436	5	2	2	4
14	N US 131	N US 131/Wealthy RAMP	Wealthy St SW	Grand Rapids	0.119	150	1	3	4
15	N US 131	N US 131/Hynes RAMP	N US 131/Hall RAMP	Grand Rapids	0.41	69	1	3	4
16	84th St SW	84th St/N US 131 Ramp	S Division Ave	Byron Twp	0.234	37	1	3	4
17	Lake Michigan Dr	Cheyenne Trl	14 th Ave	Tallmadge Twp	0.844	24	1	3	4
18	Fruit Ridge Ave	10 Mile Rd	12 Mile Rd	Sparta Twp	2.023	23	1	3	4
19	Lake Michigan Dr	Sunset Hills Ave	City/Twp line	Walker	0.246	23	1	3	4
20	8 th Ave	Ransom St	Jackson St	Jamestown	0.443	17	1	3	4

Table 6: Top 20 Crash Segments Ranked by Number of Fatal (K) and Serious Injury (A) Crashes from 2018-2022

Top 20 Crash Segments Ranked by Rate of Fatal (K) and Serious Injury (A) Crash from 2018-2022 (Minimum 3 KA Crashes)

Rank	Segment	From	To	Length	Township	Total Crash	Fatal Crash (K)	Serious Injury Crash (A)	Type KA Crash	Type KA Crash/Million VMT
1	13 Mile Rd NE	Crestway Dr NE	Tefft Ave NE	0.382	Courtland	4	2	1	3	8.219
2	16 Mile Rd NE	Ritchie Ave NE	Shaner Ave NE	0.986	Nelson Twp	3	0	3	3	4.886
3	S Division Ave	Cutler St SW	Burton St SW	0.065	Grand Rapids	68	2	4	6	3.306
4	8 th Ave	North of Hayes St	Hayes St	0.192	Wright Twp	7	0	3	3	3.188
5	S Division Ave	Stewart St SW	Rose St SW	0.062	Grand Rapids	14	0	3	3	1.928
6	Chicago Dr SW	Wyoming Ave SW	Collingwood Ave SW	0.067	Wyoming	13	0	3	3	1.827
7	Chicago Dr SW	Greenfield Ave SW	Wyoming Ave SW	0.067	Wyoming	9	0	3	3	1.827
8	W I 196	W I 196/Ottawa RAMP	N Division Ave	0.204	Grand Rapids	48	0	4	4	1.794
9	17 Mile Rd NW	Daisy Ln	Sparta Ave NW	0.226	Tyrone Twp	9	1	2	3	1.613
10	36 th St SW	Pine Oak Ave SW	Burr Ave SW	0.062	Wyoming	18	0	3	3	1.55
11	Alpine Ave NW	Westshire Dr NW	Marlene St NW	0.06	Alpine Twp	20	2	2	4	1.48
12	Rivertown Pkwy SW	Rivertown Pkwy SW	Potomac Ave SW	0.133	Grandville	29	0	4	4	1.24
13	Breton Rd SE	32nd St SE	Breton Industrial Park Dr	0.081	Kentwood	26	0	3	3	1.211
14	W I 96/S US 131 Ramp	W I 96/S US 131 Ramp	W I 96/S US 131 Ramp	0.261	Walker	37	0	3	3	1.095
15	84th St SW	84th/N US 131 RAMP	S Division Ave	0.234	Byron Twp	37	1	3	4	0.965
16	Fuller Ave NE	Elkhart St NE	Leonard St NE	0.085	Grand Rapids	45	0	3	3	0.920
17	28 th St SW	Oak Valley Ave SW	Burlingame Ave SW	0.141	Wyoming	110	0	6	6	0.909
18	M 37 NW	South of M 37	10 Mile Rd NW	0.119	Alpine Twp	18	0	3	3	0.888
19	Broadmoor Ave SW	South of 60th St	60th St	0.09	Caledonia	22	0	3	3	0.879
20	E Beltline Ave SE	Mall Dr SE	E Mall Dr SE	0.059	Kentwood	38	2	1	3	0.879

Table 7: Top 20 Crash Segments Ranked by Rate of Fatal (K) and Serious Injury (A) Crash from 2018-2022 (Minimum 3 KA Crashes)



Appendix I: Additional Financial Information

Sources of Funding

Federal Highway Funding

Receipts from federal motor fuel taxes (plus some other taxes related to trucks) are deposited in the federal Highway Trust Fund (HTF). Funding is then apportioned to the states. Apportionment is the distribution of funds through formulas in law. The current law governing these apportionments is the Infrastructure Investment and Jobs Act (IIJA), sometimes also referred to as the Bipartisan Infrastructure Law (BIL)]. Through this law, Michigan receives approximately \$1.4 billion in federal-aid highway funding annually. This funding is apportioned in the form of several programs designed to accomplish different objectives, such as road repair, bridge repair, safety, and congestion mitigation. A brief description of the major funding sources follows.

Surface Transportation Block Grant Program (STBG)

Funds construction, reconstruction, rehabilitation, resurfacing, restoration, preservation, and/or operational improvements to federal-aid highways and replacement, preservation, and other improvements to bridges on public roads. Michigan's STBG apportionment from the federal government is split, with slightly more than half allocated to areas of the state based on population and half that can be used throughout the state. A portion of STBG funding is reserved for rural areas. STBG can also be flexed (transferred) to transit projects.

Highway Safety Improvement Program (HSIP)

Funds to correct or improve a hazardous road location or feature or address other highway safety problems. Projects can include intersection improvements, shoulder widening, rumble strips, improving safety for pedestrians, bicyclists, or disabled persons, highway signs and markings, guardrails, and other activities. The State of Michigan retains all Safety funding and uses a portion on the state trunk line system, distributing the remainder to local agencies through a competitive process.



The Rapid's Rideshare program is funded with CMAQ funds

Congestion Mitigation and Air Quality (CMAQ)

Intended to reduce emissions from transportation-related sources. There is currently an emphasis on certain projects that reduce particulate matter (PM), but funds can also be used for traffic signal retiming, actuations, and interconnects; installing dedicated turn lanes; roundabouts; travel demand management (TDM) such as a ride share and vanpools; transit; and non-motorized projects that divert non-recreational travel from single-occupant vehicles.

Carbon Reduction Program (CRP)

New funding source established in IIJA. These funds encompass various eligible activities aimed at reducing transportation emissions defined as carbon dioxide (CO₂) emissions from on-road highway sources. Funds may also be used to promote sustainable transportation practices. Funds are split between the state and various urbanized areas based on population.

Transportation Alternatives Program (TAP)

Funds can be used for a number of activities to improve the transportation system environment, such as nonmotorized projects, preservation of historic transportation facilities, outdoor advertising control, vegetation management in rights-of-way, and the planning and construction of projects that improve the ability of students to walk or bike to school. Funds are split between the state and various urbanized areas based on population.

Federally Generated Transit Funding

Federally generated revenue for transit comes from federal motor fuel taxes, just as it does for highway projects. Some of the federal motor fuel tax collected nationwide is deposited in the Mass Transit Account of the Highway Trust Fund (HTF). Federal transit funding is like federal-aid highway funding as there are several core programs where money is distributed on a formula basis and other programs that are competitive in nature. Here are brief descriptions of some of the most common federal transit programs:

Section 5307

This is the largest single source of transit funding that is apportioned to transit agencies in Michigan. Section 5307 funds can be used for capital projects (such as bus purchases and facility renovations), transit planning, and projects eligible under the former Job Access Reverse Commute (JARC) program (intended to link people without transportation to available jobs). Some of the funds can also be used for operating expenses, depending on the size of the transit agency. One percent of funds received are to be used by the agency to improve security at agency facilities. Distribution is based on formulas including population, population density, and operating characteristics related to transit service. Urbanized areas of 200,000 population or larger receive their own apportionment. Areas between 50,000 and 199,999 population are awarded funds by the governor from the governor's apportionment. In GVMC's region, The Rapid is the only agency that receives Section 5307 funding.

Section 5310, Elderly and Persons with Disabilities

Section 5310 incorporates activities from the former New Freedom program. Urbanized areas in the state with populations over 200,000 receive an apportionment of Sec. 5310 funding directly from the federal government. The State of Michigan allocates funding in remaining areas of the region on a per-project basis.

Section 5311, Non-Urbanized Area Formula Grant

Funds for capital, operating, and rural transit planning activities in areas under 50,000 population. Activities under the former JARC program (see Section 5307 above) in rural areas are also eligible. The state must use 15% of its Section 5311 funding on intercity bus transportation. The State of Michigan operates this program on a competitive basis.

Section 5337, State of Good Repair Grants

Funding to state and local governmental authorities for capital, maintenance, and operational support projects to keep fixed guide-way systems in a state of good repair. Recipients will also be required to develop and implement an asset management plan. Half of Section 5337 funding will be distributed via a formula accounting for vehicle revenue miles and directional route miles; 50% is based on ratios of past funding received. The Rapid has received Section 5337 funding over the last couple years.

Section 5339, Bus and Bus Facilities

Funds will be made available under this program to replace, rehabilitate, and purchase buses and related equipment, as well as construct bus-related facilities. Each state receives a fixed amount, with the remaining funding apportioned to transit agencies based on various population and service factors.

Flex Funding

In addition to these funding sources, transit agencies can also apply for Surface Transportation Program and Congestion Mitigation and Air Quality Improvement (CMAQ) program funds. Within GVMC, up to one half of each year's local CMAQ allocation is reserved for transit projects.

Highway Funding Generated at the State Level

There are two main sources of state highway funding, the state motor fuel tax and vehicle registration fees.

The state law governing the collection and distribution of state highway revenue is Public Act 51 of 1951, commonly known simply as Act 51. All revenue from the motor fuel tax and vehicle registration fees is deposited into the Michigan

Transportation Fund (MTF). Act 51 contains several complex formulas for the distribution of the funding, but essentially, once funding for certain grants and administrative costs are removed, approximately ten percent of the remainder is deposited in the Comprehensive Transportation Fund (CTF) for transit. The remaining funds are then split between the Michigan Department of Transportation (MDOT), county road commissions, and municipalities (incorporated cities and villages) in a proportion of 39.1 percent, 39.1 percent, and 21.8 percent, respectively.⁸ MTF revenue is over \$4 billion annually.

MTF funds are critical to the operation of the road system in Michigan. Since federal funds cannot be used to operate or maintain the road system (items such as snow removal, mowing grass in the rights-of-way, paying the electric bill for streetlights and traffic signals, etc.), MTF funds are local community and county road agencies' main source for funding these items. Most federal transportation funding must be matched so that each project's cost is a maximum of approximately 80% federal-aid funding and a minimum of 20% non-federal matching funds. In Michigan, most match funding comes from the MTF. Finally, federal funding cannot be used on local public roads, such as subdivision streets, or other roads not designated as federal-aid eligible. Here again, MTF is the main source of revenue for maintenance and repair of these roads.

Funding from the MTF is distributed statewide to incorporated cities, incorporated villages, and county road commissions, collectively known as **Act 51 agencies**. The formula is based on population and public road mileage under each Act 51 agency's jurisdiction.

State-Administered Programs that Use both Federal-Aid and State Funding

Michigan has two programs that use both state funding and federal funding. These programs are Transportation Economic Development Fund (TEDF) Category C and TEDF Category D. The state money in these programs is separate from the state MTF money that is distributed to the cities, villages, and county road commissions each year. These funds are distributed to urban and rural counties as defined in Act 51. In the GVMC area, the distribution of each funding source is:

- **TEDF Category C:** Congestion mitigation in designated urban counties (Kent County only)
- **TEDF Category D:** All-season road network in rural counties (Ottawa County only)

Four additional TEDF categories (A, B, E, and F) are 100% state-funded programs that are competitively awarded by the state. Category B is limited to villages and small cities, and Category E is not awarded for GVMC.

Local Bridge is another important program with both federal and state funding components. It is funded through a portion of the state motor fuel tax. It is supplemented with Surface Transportation Block Grant Program (STBG) funding retained by the state. The Local Bridge program is competitive, with funds being awarded by Local Bridge Committees in each of the MDOT planning regions.

State-Generated Transit Funding

The majority of state-level transit funding is derived from the same source as state highway funding, the state tax on motor fuels and vehicle registration fees. Act 51 stipulates that 10 percent of receipts into the MTF, after certain deductions, are to be deposited in a subaccount of the MTF called the Comprehensive Transportation Fund (CTF).⁹ This is

⁸ Act 51 of 1951, Section 10(1)(j).

⁹ However, funding raised through enactment of the transportation laws mentioned earlier cannot be used for public transit, so this will most likely require adjustments to maintain the ten percent rule in Act 51.

similar to the Mass Transit Account of the federal Highway Trust Fund. Additionally, a portion of the state-level auto-related sales tax is deposited in the CTF.¹⁰ Distributions from the CTF are used by public transit agencies for matching federal grants and for operating expenses.

Locally Generated Highway Funding

Local highway funding can come from a variety of sources, including transportation millages, general fund revenues, and special assessment districts. Locally funded transportation projects that are not of regional significance are not required to be included in the MTP. This makes it difficult to determine how much local funding is being spent for roads in the GVMC area. Additionally, special assessment districts and millages generally have finite lives, so an accurate figure for local transportation funding would require knowledge of all millages and special assessment districts in force during each year of the MTP period, which is difficult to achieve. It is therefore assumed that locally generated funding shown in the MTP is constrained to reasonably available revenues

Locally Generated Transit Funding

Major sources of locally generated funding for transit agencies include farebox revenues, general fund transfers from city governments, and transportation millages. All transit agencies in GVMC's MPO area collect fares from riders.

State Trunkline Funding

The state of Michigan maintains an extensive network of highways across the state and within the GVMC area. Each highway with an I-, M-, or US- designation (e.g. I-196, M-6, US-131, etc.), is part of this network, which is known as the State Trunkline System. The portion of the State Trunkline System in the GVMC area is comprised of over 1,128 lane-miles of highway, hundreds of bridges and culverts, signs, traffic signals, safety barriers, sound walls, and other capital that must be periodically repaired, replaced, reconstructed, or renovated. The agency responsible for the State Trunkline System is the Michigan Department of Transportation (MDOT). As a matter of standard operating procedure, it is assumed that the trunkline project list in the GVMC area (and similar lists provided to the other MPOs in the state) is constrained to reasonably available revenues.

Methodology for Allocation of Capacity Improvement/New Road Dollars

The MDOT trunkline capacity improvement and new road (CI/NR) projects in the long-range revenue forecast are in MDOT's Five-Year Transportation Program, are usually on corridors of National Significance, and have major NEPA document (Environmental Impact Statement or Environmental Assessment) federal approval. The revenue remaining after accounting for the CI/NR projects is available for the state highway preservation projects, which accounts for most of the MDOT expenditures expected over the life of the MTP. Additional CI/NR needs will be shown as Illustrative Projects if funding is not committed at this time. GVMC CI/NR projects are included in the illustrative list of projects in Appendix J. Please refer to Chapter 8, "Investing in the Transportation System," for more information on how CI/NR projects are selected in the GVMC area.

¹⁰ Hamilton, William E. *Act 51 Primer* (House Fiscal Agency, February 2007), p. 4.

Innovative Financing Strategies—Highway

Several innovative financing strategies have been developed over the past two decades to help stretch limited transportation dollars. Some are purely public sector; others involve partnerships between the public and private sectors. Some of the more common strategies are discussed below. Most of these strategies are provided for information only. However, Advance Construct/Advance Construct Conversion is a common strategy that GVMC uses to complete projects before funding is available. Additionally, our region has benefitted from the Rebuilding Michigan program, which allows MDOT to sell a total of \$3.5 billion in bonds to finance new and modified road construction projects across the state between 2020 and 2024. Some of these projects are in Kent and Ottawa Counties. Public-Private Partnerships (P3) could foreseeably be used in the future for a large development project where road upgrades are necessary, but it's unlikely that the additional strategies below will be utilized in the GVMC region.

Toll Credits

This strategy allows states to count funding they earn through tolled facilities (after deducting facility expenses) to be used as “soft match,” rather than using the usual cash match for federal transportation projects. States must demonstrate maintenance of effort when using toll credits—in other words, each state must show that the toll money is being used for transportation purposes and that it is not reducing its efforts to maintain the existing system by using the toll credit program. Toll credits have been an important source of funding for the State of Michigan in the past because of the four highway bridge crossings and one tunnel crossing between Michigan and Ontario. Toll credits have also helped to partially mitigate highway-funding shortfalls in Michigan since sufficient non-federal funding has frequently not been available in past years to match all the federal funding apportioned to the state.

State Infrastructure Bank (SIB)

This program is established in a majority of states, including Michigan. Under the SIB program, states can place a portion of their federal highway funding into a revolving loan fund for transportation improvements such as highway, transit, rail, and intermodal projects. Loans are available at 3% interest with a 25-year loan period to public entities such as regional planning commissions, state agencies, transit agencies, railroads, and economic development corporations. Private and nonprofit corporations developing publicly owned facilities may also apply.

Transportation Infrastructure Finance and Innovation Act (TIFIA)

This nationwide program provides lines of credit and loan guarantees to state or local governments for development, construction, reconstruction, property acquisition, and carrying costs during construction. TIFIA enables states and local governments to use the borrowing power and credit of the federal government to fund finance projects at far more favorable terms than they would otherwise be able to do on their own. Repayment of TIFIA funding can be delayed for up to five years after project completion with a repayment period of up to 35 years. Interest rates are also low.

Bonding

Bonding is a form of borrowing where the borrower issues (sells) IOUs for portions of the debt it is incurring, called *bonds*, to willing purchasers of the debt. The borrower is then obligated to repay lenders (bondholders) the principal and an agreed-upon rate of interest over a specific time period. The amount of interest a bond issuer (borrower) will have to pay depends in large part upon its perceived credit risk—the greater the perceived chance of default, the higher the interest rate. To bond, a borrower must pledge a reliable revenue stream for repayment. For example, this can be the toll receipts from a new transportation project. In the case of general obligation bonds, future tax receipts are pledged.

States are allowed to borrow against their federal transportation funds, within certain limitations. While bonding provides money up front for important transportation projects, it also means diminished resources in future years, as funding that could otherwise pay for future projects must instead be reserved for paying the bonds' principal and interest. Michigan's Act 51 law requires that funding for the payment of bond and other debts be taken off the top of motor fuel tax and vehicle registration receipts collected before the distribution of funds for other transportation purposes. Therefore, the advantages of completing a project more quickly need to be carefully weighed with the disadvantages of reduced resources in future years.

Advance Construct/Advance Construct Conversion

This strategy allows a community or agency to build a transportation project with its own funds (advance construct) and then be reimbursed with federal-aid funds for the federal share of the project in a future year (advance construct conversion). Tapered match can also be programmed, where the agency is reimbursed over a period of two or more years. Advance construct allows for the construction of highway projects before federal funding is available; however, the agency must be able to build the project using its own resources up front, and then be able to wait for federal reimbursement in a later year.

Public-Private Partnerships (P3)

Funding available through traditional sources, such as motor fuel taxes, are not keeping pace with the growth in transportation system needs. Governments are increasingly turning to public-private partnerships (P3) to fund large transportation infrastructure projects. An example of a public-private partnership is Design/Build/Finance/Operate (DBFO). In this arrangement, the government keeps ownership of the transportation asset, but hires one or more private companies to design the facility, secure funding, construct the facility, and then operate it, usually for a set period. The private-sector firm is repaid most commonly through toll revenue generated by the new facility.

Highway Funding Demonstration of Constraint (detailed version), 2050 MTP

Funding Source	Funding Level	FY2023-2026 TIP	FY2027-2030 Band Year	FY2031-2040 Band Year	FY2041-2050 Band Year	Total by Source
STP-Flex TMA (Formerly NH), Estimated Available	Federal	\$3,377,000	\$3,971,000	\$10,885,000	\$12,024,000	\$30,258,000
STP-Flex TMA (Formerly NH), Programmed	Federal	\$3,377,000	\$3,971,000	\$10,885,000	\$12,024,000	\$30,258,000
STP Flex TMA, Estimated Available	Federal	\$2,069,000	\$2,332,000	\$6,391,000	\$7,060,000	\$17,851,000
STP Flex TMA, Programmed	Federal	\$2,069,000	\$2,332,000	\$6,391,000	\$7,060,000	\$17,851,000
STP Rural, Estimated Available	Federal	\$4,015,000	\$4,399,000	\$12,058,000	\$13,319,000	\$33,791,000
STP Rural, Programmed	Federal	\$4,015,000	\$4,399,000	\$12,058,000	\$13,319,000	\$33,791,000
STP TMA, Estimated Available	Federal	\$42,719,000	\$47,447,000	\$130,050,000	\$143,656,000	\$363,872,000
STP TMA, Programmed	Federal	\$42,719,000	\$47,447,000	\$130,050,000	\$143,656,000	\$363,872,000
STP Flex Kent County, Estimated Available	Federal	\$5,355,000	\$5,976,000	\$16,380,000	\$18,094,000	\$45,804,000
STP Flex Kent County, Programmed	Federal	\$5,355,000	\$5,976,000	\$16,380,000	\$18,094,000	\$45,804,000
CMAQ, Estimated Available	Federal	\$3,619,000	\$3,907,000	\$10,709,000	\$11,830,000	\$30,065,000

Funding Source	Funding Level	FY2023-2026 TIP	FY2027-2030 Band Year	FY2031-2040 Band Year	FY2041-2050 Band Year	Total by Source
CMAQ, Programmed	Federal	\$3,619,000	\$3,907,000	\$10,709,000	\$11,830,000	\$30,065,000
Carbon Reduction, Estimated Available	Federal	\$5,329,000	\$5,829,000	\$15,978,000	\$17,649,000	\$44,784,000
Carbon Reduction, Programmed	Federal	\$5,329,000	\$5,829,000	\$15,978,000	\$17,649,000	\$44,784,000
Transportation Alternatives Program (TAP), Estimated Available	Federal	\$5,962,000	\$6,435,000	\$17,639,000	\$19,485,000	\$49,522,000
Transportation Alternatives Program (TAP), Programmed	Federal	\$5,962,000	\$6,435,000	\$17,639,000	\$19,485,000	\$49,522,000
EDFC, State	State	\$3,963,000	\$4,155,000	\$11,389,000	\$12,580,000	\$32,087,000
EDFC, Programmed	State	\$3,963,000	\$4,155,000	\$11,389,000	\$12,580,000	\$32,087,000
Total, All Sources, Estimated Available	N/A	\$76,407,000	\$84,452,000	\$231,479,000	\$255,697,000	\$648,035,000
Total, All Sources, Programmed	N/A	\$76,407,000	\$84,452,000	\$231,479,000	\$255,697,000	\$648,035,000
Balance:		\$0	\$0	\$0	\$0	\$0

Financial Methodology

MDOT 2022-2050 MPO Long Range Revenue Forecast Methodology (September 16, 2022)

Highway Revenue Forecast Growth Rate

For the near term (FY2022-2031), federal revenue growth was based on IJIA estimates; state revenue growth was based on the Michigan Transportation Fund (MTF) long-range revenue forecast. The state forecast assumes a \$600 million annual "dedicated general fund" transfer to the MTF that was included in the Michigan Transportation Revenue Package passed in 2015.

For the long term (FY2032-2050) estimates, MDOT Statewide Transportation Planning Division analyzed 20 years of historical state highway revenue and federal obligations. State revenue and federal obligation growth rates were calculated. To take a conservative approach with the federal and state revenue forecasts beyond the near term, 90% of the historic growth rates were used. The resulting rates beyond the near term are federal 1.0% annual growth, and state 1.3% annual growth.

FY2022-2050 Total estimated federal revenue: \$35.8 B

FY2022-2050 Total estimated state revenue: \$50.0 B

Revenue Available for Capital Outlay

Debt service, non-capital uses, and routine maintenance were deducted from the estimated federal and state revenue. The resulting FY 2022-2050 total estimated revenue available for highway capital outlay was \$50.7 billion.

Methodology for MPO Allocation of CI, NR, and TM and RBMP Dollars

The trunkline CI, NR, and TM projects in the Long-Range Revenue Forecast are in the 2022-2026 Five-Year Transportation Program or have an active or completed study. RBMP projects are in the 5YTP. The FY 2022-2050 revenue remaining after accounting for the CI, NR, TM, and RBMP projects was \$42.9 B.

Methodology for MPO Allocation of Highway Program Dollars

A 15-year history (2007-2021) of highway capital program investments (excluding CI, NR, TM, and RBMP) was compiled. Each MPO's share was calculated by dividing the MPO investment by the total statewide investment over the 15-year time frame. Next the FY 2022-2050 total estimated Revenue Available after Subtracting RM and other non-capital Uses, CI, NR, TM, and RBMP was multiplied by each MPO share of historic investments. The result is FY 2022-2050 total estimated revenue for each MPO.

2022 Federal & State Revenue Growth Rates Approved by MDOT Executive Team, Spring 2022

Growth Rates

2022-2031	Annual Growth
2022 Federal	22.0%
2023-2026 Federal	2.0%
2027-2031 Federal	1.9%
2022-2031 State	2.7%
2032-2050	
Federal	1.0%
State	1.3%

The growth rates were developed using the same methodology that was used for the last (2020's MM2045) long-range revenue estimates

2022-2031

- Federal:
 - Matches MDOT Federal Revenue Specialist's estimates
 - FY 2022: first year of IIJA (increase from FY 2021 FAST Act Actual to FY 2022 IIJA estimate)
 - FY 2027: first year after IIJA (reduce FY 2026 by General Funding, and then grow 1.9%)
 - Other FY's: Use annual rate of 2% for IIJA, and 1.9% post-IIJA, based on 2% codified in FAST Act
- State: 2.7%
 - For fuel taxes and vehicle registrations (doesn't include Income Tax Revenue or excise tax on recreational marijuana)
 - Matches Finance's State Trunkline Fund forecast
 - Matches Michigan Transportation Fund long range revenue forecast

2032-2050

- Federal: 1.0%
 - 90% of 20-year historical federal revenue
- State: 1.3%
 - 90% of 20-year historical state revenue (doesn't include Income Tax Revenue or excise tax on recreational marijuana)

The Revenue Estimating Forecast will assume Income Tax Revenue transfers continuing through 2050, with annual transfers for FY2022-2050 at the FY2021 level. Excise tax on recreational marijuana continues at the FY2024 level.



Appendix J: Illustrative Projects

Local Road Agencies and Jurisdictions Illustrative (Unfunded) Projects

Responsible Agency	Road Name	Limits	Description	Deficiency	Anticipated Year of Construction
City of Hudsonville	Highland Dr. E	New Holland St. to Chicago Dr.	Construct	Pavement	2041-2050
KCRC	Kalamazoo Avenue	68th St. to Auditorium Dr.	Widen	Congestion, Safety, and Pavement	2026-2035
KCRC	Knapp Street (Including Bridge)	Grand River Dr. to Shady Dr.	Widen	Congestion and Pavement	2026-2035
KCRC	Pettis Avenue	Honey Creek Ave. to Fulton St.	Widen	Safety and Pavement	2026-2035
KCRC	4 Mile Road	Hendershot Ave. to Walker Ave.	Widen	Congestion	2036-2045
KCRC	Cascade Road (Including Bridge)	Old 28th St. to Hidden Hills Ave.	Widen	Congestion, Safety, and Pavement	2036-2045
KCRC	Burton Street (Including Bridge)	Patterson Ave. to Quail Crest Dr.	Widen	Congestion and Pavement	2036-2045
KCRC	Hudson Street (Including Bridge)	Grand River Dr. to Bowes Rd.	Widen	Congestion, Safety, and Pavement	2026-2035
KCRC	68th Street	US-131 SB Ramps to US-131 NB Ramps	Widen	Congestion and Safety	2041-2050
KCRC	68th Street	Clyde Park Avenue to US-131 SB Ramps	Widen	Congestion and Safety	2041-2050
KCRC	84th Street	Division Avenue to US-131	Widen	Congestion	2041-2050
KCRC	Patterson Avenue	M-37 to 52nd Street	Widen	Congestion and Safety	2026-2035
KCRC	John J Oostema Blvd EB	Patterson Avenue to GRR Airport Terminal	Widen	Congestion and Safety	2026-2035

Responsible Agency	Road Name	Limits	Description	Deficiency	Anticipated Year of Construction
OCRC	8th Ave	M-6 to 44 th St.	Reconstruct to 5 Lanes	Congestion	
OCRC	18 th Ave	Pine Grove to Baldwin	Reconstruct to 3 Lanes	Safety and Pavement	
OCRC	48th Ave	Van Buren Street to Bauer Road	Reconstruct to 3 Lanes	Congestion and Pavement	
OCRC	48 th Ave	Port Sheldon Street Intersection	Roundabout	Congestion, Safety, and Pavement	
OCRC	48 th Ave	Baldwin St. Intersection	Roundabout	Congestion, Safety, and Pavement	
OCRC	48 th Ave	Bauer Road to Pierce St.	Reconstruct to 3 Lanes or 4 Lane Boulevard	Congestion	
OCRC	68 th Ave	Fillmore St. to Arthur St.	Reconstruct to 3 Lanes	Congestion, Safety, and Pavement	
OCRC	68 th Ave	Warner St Intersection	Roundabout	Congestion and Safety	
OCRC	Bauer Road	20 th Ave to 36 th Ave	Reconstruct to 3 Lanes	Pavement	
OCRC	Fillmore St	68 th Ave Intersection	Roundabout	Safety and Pavement	
OCRC	Port Sheldon St.	72 nd Ave to 48 th Ave	Reconstruct to 3 Lanes	Congestion, Safety, and Pavement	
OCRC	Quincy St.	32 nd Ave to 22 nd Ave	Reconstruct to 3 Lanes	Pavement	
OCRC	Quincy St.	22 nd Avenue Intersection	Roundabout	Pavement	
OCRC	Quincy St.	24 th Avenue Intersection	Roundabout	Pavement	
OCRC	Tyler St.	Port Sheldon St. to Kenowa Ave.	Reconstruct to 3 Lanes	Congestion	
Village of Caledonia	Kinsey Street (Phase 2)	100th Street to Maple Street	Reconstruction	Pavement and Safety	2027-2030

Nonmotorized Illustrative (unfunded) Projects List

Project Information							
Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Ada Township							
Ada, Cascade, GR Township and Kentwood Trail Connector	Hall St to Spaulding Ave	Off-Street Shared Use Path	Sharrows/Sidewalk/Shared Use Path	Ada Twp / KCRC	0.53	\$170,000	12
Honey Creek Trail (Ada-Cannon Conn.)	Knapp St to 4 Mile Rd	Off-Street Shared Use Path	Sidepath	Ada Twp / KCRC	1.4	\$654,000	10
Knapp St Bridge	Across the Grand River	Off-Street Shared Use Path	Pedestrian Bridge	Ada Twp / KCRC	N/A	\$7,500,000	9
Spaulding Ave / Fulton St / Carl Dr	Ada Dr to Grand River Dr	Off-Street Shared Use Path	Sidepath	Ada Twp / KCRC	1.61	\$820,000	12
Allendale Charter Township							
68th Ave Trail	Lake Michigan Dr to North Bank Trail & Green Way Trail	Off-Street Shared Use Path	Sidepath	Allendale Twp / OCRC	3	\$450,000	11
Alpine Township							
Alpine Ave Sidewalk (Part 1)	Chris Ln to Marlene St	Sidewalk	Sidewalk on East side only	Alpine Twp / KCRC	0.2	\$75,000	11
Alpine Ave Sidewalk (Part 2)	6 Mile Rd to Chris Ln	Sidewalk	Sidewalk on East side only	Alpine Twp / KCRC	0.3	\$145,000	11
Lamoreaux Dr Sidewalk	Alpine Ave to Westgate Dr	Sidewalk	Sidewalk on North side only	Alpine Twp / KCRC	0.4	\$180,000	13
Alpine Twp Sports Park	1850 Alpine Church St	Sidewalk	6 foot wide sidewalk loop within park & connects to elementary school	Alpine Twp	0.5	\$225,000	10

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
6 Mile Rd East of Alpine Ave (Part 2)	Alpine Ave to Biddeford Dr	Sidewalk	South side of 6 Mile Rd and two segments on Torrey Pines Ave, involves installing storm sewer	Alpine Twp / KCRC	0.5	\$300,000	9
4 Mile Rd Shared Use Path	Peach Ridge Ave to Cordes Ave	Off-Street Shared Use Path	Shared use path on North side only	Alpine Twp / KCRC	2.0	\$1,500,000	11
4 Mile Rd Shared Use Path (Part 2)	Fruit Ridge Ave to Peach Ridge Ave	Off-Street Shared Use Path	Shared use path on north side only	Alpine Twp / KCRC	1.3	\$1,000,000	10
Cordes Ave	From sidewalk terminus on south side of Henze St to Brambleberry Dr on east side of Cordes Ave	Sidewalk	Sidewalk	Alpine Twp / KCRC	0.2	\$90,000	12
6 Mile Rd East of Alpine Ave (Part 1)	Alpine Ave to Rusche Dr	Sidewalk	North side of 6 Mile Rd where existing sidewalk does not exist	Alpine Twp / KCRC	0.2	\$90,000	11
Byron Township							
76th St Trail	Railyard Dr to Byron Cener Ave	Off-Street Shared Use Path	Sidepath	Byron Twp / KCRC	1	\$800,000	8
84th St Sidepath	Burlingame to Byron Commerce Drive, connecting Downtown Byron to Douglas Walker Park to Tanger Outlet Mall	Off-Street Shared Use Path	Sidewalk	Byron Twp / KCRC	1.4	\$375,000	9

Project Information							
Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
84th St Trail	Burlingame Ave to Existing Path in Douglas Walker Park	Off-Street Shared Use Path	Sidepath	Byron Twp / KCRC	1	\$750,000	8
Burlingame Avenue Sidewalk	Planters Row Dr to 76th Street	Sidewalk	Sidewalk	Byron Twp / KCRC	1.6	\$492,000	9
Caledonia Charter Township							
84th St	Cherry Valley to Alaska Ave	Off-Street Shared Use Path	Shared Use Path	Caledonia Twp / KCRC	1.5	\$1,900,000	9
Thornapple River Dr (and Alaska Ave)	84th St to 68th St (and Park Entrance to 68th St)	Off-Street Shared Use Path	Shared Use Path	Caledonia Twp / KCRC	2.0	\$5,500,000	8
Cherry Valley Ave	84th St to 68th St	Off-Street Shared Use Path	Shared Use Path	Caledonia Twp / KCRC	2.0	\$3,600,000	11
South Campau Lake Loop	Whitneyville Rd, Garbow Dr to 76th St; 76th St, Whitneyville Rd to McCords Ave; McCords Ave, 76th St to DNR Boat Launch	Off-Street Shared Use Path	Shared Use Path	Caledonia Twp / KCRC	2.1	\$4,000,000	6
Kraft Avenue	CalPlex to 76th St	Off-Street Shared Use Path	Shared Use Path	Caledonia Twp / KCRC	2.8	\$3,300,000	9
68th St	Cherry Valley Ave to Alaska Ave	Off-Street Shared Use Path	Shared Use Path	Caledonia Twp / KCRC	1.6	\$1,530,000	8

Project Information							
Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
76th St	Patterson Ave to Copper Corner Dr	Off-Street Shared Use Path	Shared Use Path	Caledonia Twp / KCRC	1.0	\$2,000,000	9
Patterson Avenue	76th St to 84th St	Off-Street Shared Use Path	Shared Use Path	Caledonia Twp / KCRC	2.0	\$2,600,000	9
Cannon Township							
Cannon Trail Connector	Luton Park (Hickory Dr) to Courtland Dr (near Meadow Ridge School)	Off-Street Shared Use Path	Sidepath	Cannon Twp / KCRC	1.4	UNK	12
Honey Creek Trail (Ada-Cannon Conn.)	4 Mile Rd to Cannonsburg Rd	Off-Street Shared Use Path	Sidepath	Cannon Twp / KCRC	1.8	\$1,700,000	11
Cascade Charter Township							
Cascade Rd Bridge	Across the Thornapple River	Off-Street Shared Use Path	Separated pedestrian path on Cascade Rd bridge	Cascade Twp / KCRC	N/A	\$500,000	17
Cascade Rd Trail	36th St to Kenrob Dr	Off-Street Shared Use Path	Shared Use Path	Cascade Twp / KCRC	0.32	\$130,000	10
Laraway Lake	Cascade Rd to Cascade Farms Dr	Off-Street Shared Use Path	Shared Use Path	Cascade Twp / KCRC	0.45	\$1,150,000	16
City of Grand Rapids							
Plaster Creek Trail	Buchanan Ave to Century Ave	Off-Street Shared Use Path	New Multi-Use Trail extending current trail to Century Ave. bikeway	City of Grand Rapids	1.2	\$5,068,800	17
Complete ADA Sidewalk Ramp Upgrades	Various	ADA Sidewalk Ramp	ADA Sidewalk Ramp with bulbouts (1,450 ramps)	City of Grand Rapids		\$4,000,000	5

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Clyde Park Ave Sidewalk Infill & Crossing Improvement	Belfield St SW to Kirtland St SW	Sidewalk	Construction of missing sidewalk and needed retaining walls on East side; crossing treatments to facilitate ped crossing across Clyde Park (transit access, bicycle system connectivity between GR and Wyoming)	City of Grand Rapids	0.13	\$200,000	16
Pearl St NW Separated Bicycle Facilities	Division Ave N to Lake Michigan Dr NW	On-Street Bike Facility	Separated bicycle lanes, bicycle signals, signs, markings	City of Grand Rapids	0.6	\$400,000	17
McKee Ave SW / Kirtland St SW Bicycle Facilities	Clyde Park Ave SW to Buchanan Ave SW	On-Street Bike Facility	Shared traffic lanes, trail, signs, markings	City of Grand Rapids	0.8	UNK	16
Ionia Ave SE / SW Separated Bicycle Facilities	Lyon St NE to Fulton St W	On-Street Bike Facility	Separated bikeway(s); signage, intersection modifications; pavement markings	City of Grand Rapids	0.3	\$252,000	14
Mount Vernon Ave NW Separated Bicycle Facilities	Fulton St W to Bridge St NW	On-Street Bike Facility	Two-way separated bikeway with intersection signaling, signage, markings	City of Grand Rapids	0.5	\$620,000	17
3 Mile Rd Sidewalk (North Side)	Monroe Ave to West of Coit Ave	Sidewalk	Construction of sidewalk on north side of 3 Mile Road. This project supports the vision, goals and objectives (connectivity) of the City of Grand Rapids VITAL STREETS PLAN (2016)	City of Grand Rapids	0.2	\$295,625	13
Grand River Edges Trail (East) - Phase III	Fulton St to Wealthy St (with connection to Oxford St Trail and Kent Trails)	Off-Street Shared Use Path	Bicycle and Pedestrian Path - Includes a 12-foot wide path, lighting, ornamental fence, rest areas with a concrete overlook, benches, and landscaping. Flood protection improvements are proposed and may be incorporated into the project at additional cost. This Grand River Edges Trail project is integrated at various levels with the River Restoration Project.	City of Grand Rapids	0.8	\$10,560,000	17

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Madison Ave Sidewalk	Colrain Street to 28th Street (west side)	Sidewalk	Construction of sidewalk along Madison Avenue. This project supports the vision, goals and objectives (connectivity) of the City of Grand Rapids VITAL STREETS PLAN (2016)	City of Grand Rapids	0.1	\$125,417	18
Walker Ave Separated Bikeway - GR Segment	West of Richmond to Leonard	On-Street Bike Facility	Separated trail; separated bike lanes on each side of Walker (TBD)	City of Grand Rapids	1.2	\$1,798,246	20
Lyon St NE Separated Bicycle Facilities	Division Ave N to Diamond Ave NE	On-Street Bike Facility	Separated bikeway(s); shared traffic lanes, route signage, intersection treatments; bicycle signals	City of Grand Rapids	1.5	\$658,000	15
Lyon St NE Bicycle Boulevard	Diamond Ave NE to Plymouth Ave NE	On-Street Bike Facility	Shared traffic lanes, route signage, intersection treatments; ped hybrid beacon at Fuller; trail widening near Fuller Park	City of Grand Rapids	1	\$154,000	16
Richmond St Sidewalk	Oakleigh Ave to Walker Ave	Sidewalk	Construction of sidewalk infill along Richmond Street. This project supports the vision, goals and objectives (connectivity) of the City of Grand Rapids VITAL STREETS PLAN (2016)	City of Grand Rapids	0.3	\$286,667	11
Highland Park Trail	College Ave to Grand Ave	Off-Street Shared Use Path	A connector trail route through Highland Park that will provide trail continuity from the Grand River Edges Trail to the Hastings St NM Path and the city's east bike and sidewalk network. The proposed project is part of the larger Highland Park Improvements and is identified in the CITY OF GRAND RAPIDS PARKS AND RECREATION STRATEGIC MASTER PLAN (2017).	City of Grand Rapids	0.4	\$1,689,600	16

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Planning Study: Extension of Plaster Creek Trail	Planning Study Only - East of the trailhead in Ken-O-Sha Park to east city limits, between Eastern and 28th Street, and west of Buchanan to Grand River	N/A	Planning Study - Shared Use Path	City of Grand Rapids	N/A	\$70,000	N/A
Blaine Ave Sidewalk	Ramona St to Dickinson St	Sidewalk	Sidewalk	City of Grand Rapids		\$250,000	14
Century Ave / Ellsworth SW Separated Bicycle Facilities - Northern Segment	Grandville Ave SW to RR Crossing south of Logan St SW	On-Street Bike Facility	Separated bike facilities, intersection modifications, signs, markings	City of Grand Rapids	0.4	\$240,000	16
Plymouth Ave Trail Extension	Leonard St to Knapp St	Off-Street Shared Use Path	New Multi-Use Trail through Ball Perkins Park connecting the bike facility in Plymouth Ave (south of Leonard) to Knapp St. Also connecting to existing paths in the park to provide access to Ball Ave. and Perkins Ave.	City of Grand Rapids	0.9	\$3,801,600	18
29th St Sidewalk	Breton Ave to East City Limit	Sidewalk	Construction of sidewalk along 29th Street, including small section on north side in City of Kentwood. This project supports the vision, goals and objectives (connectivity) of the City of Grand Rapids VITAL STREETS PLAN (2016)	City of Grand Rapids	0.5	\$487,500	16
Knapp St / Diamond Ave NE Intersection	N/A	Crossing Improvement	Installation of traffic signal (or half signal) to accommodate pedestrian and bicycle crossings	City of Grand Rapids	N/A	\$270,000	15

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
11th St NW Bicycle Boulevard	Garfield Ave NW to Turner Ave NW	On-Street Bike Facility	Shared traffic lanes, route signage, intersection modifications	City of Grand Rapids	1.0	\$133,840	15
1st/2nd St NW Separated Bicycle Facilities (South Side of I-196)	Valley Ave NW to Turner Ave NW	On-Street Bike Facility	Separated bikeway(s), including intersection modifications, signage, markings	City of Grand Rapids	1.0	\$890,000	16
32nd St SE Midblock Pedestrian Crossing / Traffic Calming- Streetscape	Kalamazoo Ave SE to East City Limit	Crossing Improvement	Construction of raised median and rapid flashing pedestrian crossing beacon, related curb/gutter and ADA ramp work	City of Grand Rapids	N/A	\$175,000	16
4 Mile Rd Bicycle Lanes	Willow Dr NE to East City Limit	On-Street Bike Facility	Bicycle lanes; signs, markings	City of Grand Rapids	1.0	\$200,000	13
4th St NW Bicycle Boulevard	Valley Ave NW to Turner Ave NW	On-Street Bike Facility	Shared traffic lanes; intersection modifications	City of Grand Rapids	1.1	\$133,840	16
6th St NW Bicycle Lanes	Broadway Ave NW to Front Ave NW	On-Street Bike Facility	Road diet and addition of bicycle lanes; signs, markings	City of Grand Rapids	0.2	\$5,506	16
7th St / 8th St / 10th St / Atlantic St NW Bicycle Boulevard	Covell Rd NW to Garfield Ave NW	On-Street Bike Facility	Shared traffic lanes; intersection modifications; route signage/markings	City of Grand Rapids	1.15	\$66,424	15
7th St NW Bicycle Lanes	Carpenter Ave NW to Covell Rd NW	On-Street Bike Facility	Bicycle lanes - new; signs, markings	City of Grand Rapids	0.9	\$90,000	10
7th St Sidewalk	Collindale Ave to Covell Ave	Sidewalk	Construction of sidewalk along 7th Street. This project supports the vision, goals and objectives (connectivity) of the City of Grand Rapids VITAL STREETS PLAN (2016)	City of Grand Rapids	0.9	\$1,319,563	10
Aberdeen St / Hollywood St / Sligh Blvd NE Bicycle Lanes / Boulevard	East City Limit to Monroe Ave NW	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings	City of Grand Rapids	2.4	\$212,837	13

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Adams St SE Bicycle Facilities	Madison Ave SE to Plymouth Ave SE	On-Street Bike Facility	Bicycle facilities, intersection modifications	City of Grand Rapids	1.7	\$48,528	15
Alger St SE Raised Bicycle Lanes	Madison Ave SE to Division Ave S	On-Street Bike Facility	Construction of raised bicycle lanes, including signs and markings	City of Grand Rapids	0.5	\$455,000	15
Alger St SE Separated Bicycle Lanes	Kalamazoo Ave SE to Plymouth Ave SE	On-Street Bike Facility	Conversion of existing buffered bicycle lanes to separated bicycle lanes	City of Grand Rapids	1.6	\$645,000	16
Alpine Ave / 11th St NW Pedestrian Crossing Improvements	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	13
Alten Ave NE Bicycle Lanes / Boulevard	Fulton St E to Michigan St NE	On-Street Bike Facility	Bicycle lanes, shared traffic lanes; intersection modifications; signs, markings	City of Grand Rapids	0.5	\$330,080	11
Ann St / Lafayette Ave NE Pedestrian Crossing Improvements (school, general)	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	12
Ann St NW / NE Bicycle Lanes	Monroe Ave NE to Walker City Limits	On-Street Bike Facility	Correct existing bicycle lanes, intersection modifications; road diet between Monroe and Turner for new bicycle lanes; reconstruction of trail crossing at Elizabeth St	City of Grand Rapids	1.6	\$304,500	16
Ball Ave NE / Service Rd NE Bicycle Lanes	Leonard St NE to Plymouth Ave NE	On-Street Bike Facility	New bicycle lanes including construction of new shoulders on Service Rd NE construction); signs, markings	City of Grand Rapids	0.9	\$90,000	15
Barclay Ave / Coit Ave / Matilda St NE Bicycle Lanes / Bicycle Boulevard	Lyon St NE to Clancy St NE	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings	City of Grand Rapids	0.9	\$70,748	12
Blaine Ave Bicycle Boulevard	Griggs St SE to Walsh St SE	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings	City of Grand Rapids	1.2	\$474,590	15

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Boston St SE Bicycle Facilities	Fuller Ave SE to East City Limit	On-Street Bike Facility	Bicycle lanes/advisory bicycle lanes, intersection modifications, signage, pavement markings	City of Grand Rapids	1.2	\$34,256	16
Bradford St / Lydia St / Malta St / Short St NE Bicycle Boulevard	Coit Ave NE to Fuller Ave NE	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings	City of Grand Rapids	2.1	\$151,940	14
Bradford St NE Bikeway - Eastern Segment	Leffingwell Ave NE to East City Limit	On-Street Bike Facility	Bicycle facilities - to be determined; signs, markings	City of Grand Rapids	1.3	\$126,000	9
Bradford St NE Bikeway - Western Segment	Fuller Ave NE to Ball Ave NE	On-Street Bike Facility	Bicycle lanes or off-street trail - depends on ROW	City of Grand Rapids	0.5	\$150,000	14
Breton Rd / Elliott St SE Pedestrian Crossing Improvements	Breton Rd / Elliott St SE Intersection	Crossing Improvement	Construction of raised median and pedestrian hybrid beacon, related curb/gutter and ADA work	City of Grand Rapids	N/A	\$268,500	14
Bridge St / Scott Ave NW Pedestrian Crossing Improvements (general/BB)	N/A	Crossing Improvement	Installation of beacon crossing treatment, some curb modifications	City of Grand Rapids	N/A	\$70,000	15
Buchanan Ave / Graham St SW Bikeway	Hall St SW to Graham St SW / Buchanan Ave to Ionia Ave SW	On-Street Bike Facility	Bicycle lanes, signage, shared lane markings, minor road widening	City of Grand Rapids	0.8	\$73,836	14
Buchanan Ave Bicycle Lanes / Bikeway	Burton St SW to Hall St SW	On-Street Bike Facility	Bicycle lanes completed in both directions meeting current design standards; shared lane and trail segment near north of Hall to Graham; signs, markings	City of Grand Rapids	1.3	\$33,408	14
Burritt St NW Bicycle Boulevard	Maynard Ave NW to Oakleigh Rd NW	On-Street Bike Facility	Shared traffic lanes, route signage/ markings	City of Grand Rapids	1	\$16,047	14
Burritt St NW Sidewalk	Collindale Ave NW to Oakleigh Ave NW	Sidewalk	Construction of missing sidewalk, ramps; provides access to large neighborhood to the west and Shawmut Hills Elementary School between Collindale and Oakleigh	City of Grand Rapids	0.52	\$780,000	10

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Burton St / Union Ave SE (General/BB)	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	14
Burton St SE / Blaine Ave SE Intersection	N/A	Crossing Improvement	Installation of traffic signal (or half signal) to accommodate pedestrian and bicycle crossings	City of Grand Rapids	N/A	\$270,000	13
Burton St SE Bicycle Lanes / Pedestrian Hybrid Beacon Crossing	East Beltline to East Paris Ave	On-Street Bike Facility	Road diet on Burton St, addition of bicycle lanes; construction of midblock raised median refuge island and pedestrian hybrid beacon. Specific location TBD	City of Grand Rapids	0.8	\$308,539	16
Caledonia St / Spencer St NE Bicycle Boulevard	N Monroe Ave / Grand River Edges Trail to Ball St NE	On-Street Bike Facility	Shared traffic lanes, route signage, intersection treatments; connector trail construction; pedestrian hybrid beacon construction at Fuller Ave NE	City of Grand Rapids	2.2	\$323,843	15
Carlton Ave SE / Arthur Ave NE Bicycle Boulevard	Fulton St E to Lyon St NE	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings	City of Grand Rapids	0.6	\$74,996	12
Carrier Creek Trail / Union Ave NE Trail Connection	Coldbrook St NE to Union Ave NE	Off-Street Shared Use Path	Trail construction on existing footpaths; signs, markings	City of Grand Rapids	0.5	UNK	14
Century Ave Sidewalk	Hall St to Franklin St	Sidewalk	Construction of sidewalk along Century Avenue on west side. This project supports the vision, goals and objectives (connectivity) of the City of Grand Rapids VITAL STREETS PLAN (2016)	City of Grand Rapids	0.5	\$501,667	16
Century Ave SW Separated Bicycle Facilities - Southern Segment	Sheridan Ave SW to Burton SW	On-Street Bike Facility	Separated bicycle facilities; signs, markings; intersection modifications	City of Grand Rapids	1.6	\$700,000	15
Cesar E Chavez Ave SW / Cordelia St SW Intersection	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	16

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Cesar E Chavez Ave SW / Stolpe St SW Intersection	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	16
Cherry St SE Bicycle Lanes	LaGrave Ave SE to Lake Dr SE	On-Street Bike Facility	Bicycle lanes ; signs, markings	City of Grand Rapids	1.1	\$44,370	15
Clancy St / Cedar St / Union Ave NE Bicycle Lanes/Bicycle Boulevard	Leonard St NE to Matilda St NE	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings	City of Grand Rapids	1.0	\$70,748	13
Clyde Park Ave Sidewalk	Baylis St to north of Wisconsin	Sidewalk	0.05 miles of sidewalk and retaining wall on east side of Clyde Park.	City of Grand Rapids	0.1	\$75,000	16
Coit Ave Bicycle Lanes	Oakwood Ave NE to Plainfield Ave NE	On-Street Bike Facility	Bicycle lanes, shared lanes, signs, pavement markings, intersection modifications including mini roundabout Guild St NE	City of Grand Rapids	1.5	\$223,989	15
Coit Ave Sidewalk	Sligh Blvd to 3 Mile Rd	Sidewalk	Construction of sidewalk along Coit Avenue. This project supports the vision, goals and objectives (connectivity) of the City of Grand Rapids VITAL STREETS PLAN (2016)	City of Grand Rapids	0.2	\$295,625	12
Cottage Grove St / Union Ave SE Bicycle Boulevard	Buchanan Ave SE to Eastern Ave SE	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings	City of Grand Rapids	2.5	\$79,511	14
Covell Rd / Milford St NW Pedestrian Crossing Improvements (school)	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	11
Covell Rd / Tremont Blvd NW Pedestrian Crossing Improvements (trail/school/general)	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	9

Project Information							
Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Crescent St Corridor Phase II	Division Ave / Crescent St Intersection to Ottawa Ave	Off-Street Shared Use Path	Streetscape Improvements - Pedestrian connectivity including brick pavement, landscaping (water quality elements), lighting.	City of Grand Rapids	0.1	\$1,178,100	14
Crescent St NE Bicycle Boulevard	Ransom St NE to Diamond Ave NE	On-Street Bike Facility	Shared traffic lanes, signage, markings, intersection modifications	City of Grand Rapids	1.0	\$70,748	12
Dean Lake Ave NE Bicycle Lanes	Knapp St NE to Aberdeen St NE	On-Street Bike Facility	Bicycle lanes; signs, markings	City of Grand Rapids	0.5	UNK	8
Delaware/Commons/Alexander Bicycle Boulevard	Ionia Ave SW to East City Limit	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings	City of Grand Rapids	2.2	\$383,859	15
Diamond Ave SE / NE - Spring Ave NE Bicycle Facilities	Sherman St SE to 3 Mile Rd NE	On-Street Bike Facility	Bicycle lanes, shared traffic lanes, separated bikeways; intersection modifications	City of Grand Rapids	4.3	\$152,016	15
Division Ave N Linear Park	I-196 to Mason St	On-Street Bike Facility	Construction of two-way bikeway and linear park. This project supports the vision, goals and objectives (connectivity) of the City of Grand Rapids VITAL STREETS PLAN (2016)	City of Grand Rapids	0.4	\$833,333	13
Division Ave Phase II	Oakes St to Fulton St	Sidewalk	Streetscape Improvements on Division Avenue - Including ornamental lighting, sidewalk, landscaping.	City of Grand Rapids	0.2	\$1,000,000	14
Division Ave S / Andre St SE Pedestrian Hybrid Beacon Crossing	Division Ave/ Andre St	Crossing Improvement	Construction of PHB, related curb/gutter and ADA work	City of Grand Rapids	N/A	\$374,850	17
Division Ave S / Banner-Melville St SE Pedestrian Hybrid Beacon Crossing	Division Ave / Banner-Melville St	Crossing Improvement	Construction of PHB, related curb/gutter and ADA work	City of Grand Rapids	N/A	\$230,000	16
Division Ave S / Dickinson St SE Pedestrian Hybrid Beacon Crossing	Division Ave / Dickinson St	Crossing Improvement	Construction of PHB, related curb/gutter and ADA work	City of Grand Rapids	N/A	\$230,000	15

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Division Ave S / Rose St SE Pedestrian Hybrid Beacon Crossing	Division Ave / Dickinson St	Crossing Improvement	Construction of PHB, related curb/gutter and ADA work	City of Grand Rapids	N/A	\$230,000	15
Eastern Ave / Portland Ave NE Bicycle Lanes	Cherry St SE to Spencer St NE	On-Street Bike Facility	Construction of bicycle lanes, shared traffic lanes; intersection modifications; trail segment	City of Grand Rapids	2.1	\$450,000	15
East-West Rail-with-Trail - Grand Rapids Segment	Bradford St NE to East City Limit	Off-Street Shared Use Path	Construction of a new rail-with-trail that parallels significant sections of the Michigan St corridor and I-196. Intersection crossing, signage, markings	City of Grand Rapids	3.8	\$2,247,700	18
Edison Park Ave NW Sidewalk	Lake Michigan Dr NW to Sibley St NW	Sidewalk	Construction of missing sidewalk, ramps; provides access to large neighborhood to the south and Holy Spirit Church/School and transit along Lake Michigan Dr to the north.	City of Grand Rapids	0.41	\$615,000	12
Elmridge Dr NW Bicycle Lanes	Richmond St NW to Walker City Limits	On-Street Bike Facility	Bicycle lanes - new; signs, markings	City of Grand Rapids	1.2	\$21,085	13
Fremont Ave / Milwaukee Ave Bicycle Boulevard	Bridge St NW to 11th St NW	On-Street Bike Facility	Shared traffic lanes, route signage/ markings, intersection modifications; connector trail widening to I-196 tunnel	City of Grand Rapids	0.9	\$107,380	15
Front Ave SW Bicycle Lanes and Transit Access Improvements	Butterworth St to Wealthy St	On-Street Bike Facility	Bicycle lanes; intersection modifications	City of Grand Rapids	0.35	\$112,500	16
Fuller Ave / Cedar St NE Pedestrian Hybrid Beacon Crossing	Fuller Ave / Cedar St NE Intersection	Crossing Improvement	Construction of PHB, related curb/gutter and ADA work	City of Grand Rapids	N/A	\$151,390	15
Fuller Ave / Spencer St NE Pedestrian Hybrid Beacon Crossing	Fuller Ave / Spencer St Intersection	Crossing Improvement	Construction of PHB, related curb/gutter and ADA work	City of Grand Rapids	N/A	\$151,390	14
Fuller Ave NE / Northlawn St NE Intersection	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	12

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Fulton St E / Eastern Ave NE Offset Intersection	N/A	Crossing Improvement	Installation of beacon crossing treatments	City of Grand Rapids	N/A	\$108,000	14
Fulton St E / Fitzhugh Ave Pedestrian Crossing Improvements (general/FSFM)	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	13
Fulton St E / Gay Ave NE Pedestrian Hybrid Beacon Crossing	Fulton St / Gay Ave NE Intersection	Crossing Improvement	Construction of PHB, related curb/gutter and ADA work	City of Grand Rapids	N/A	\$151,390	15
Fulton St W / Garfield Ave NW Pedestrian Crossing Improvements (BB/general/bus)	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	12
Garfield Ave SW/NW Bicycle Boulevard	Wealthy St SW Fulton St; 2nd St to Richmond St NW	On-Street Bike Facility	Shared traffic lanes, signage, markings, intersection modifications	City of Grand Rapids	2.6	\$228,809	15
Giddings Ave / Ethel Ave SE Bicycle Boulevard	MLK St SE to Wealthy St SE	On-Street Bike Facility	Bicycle lanes (one-way on each street); signage, pavement markings; three traffic circles	City of Grand Rapids	0.9	\$139,326	14
Giddings Ave SE - Burton to MLK	Burton Ave SE to MLK St SE	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings	City of Grand Rapids	2.6	\$58,217	17
Grand Ave / Hake St NE Bicycle Boulevard	Lyon St NE to Diamond Ave SE	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings	City of Grand Rapids	0.7	\$82,325	13
Grand River Edges (East)	Under Ann St Bridge to Riverside Trailhead	Off-Street Shared Use Path	Shared Use Path	City of Grand Rapids	0.1	\$1,387,200	17
Grand River Edges (East)	Leonard St Bridge Underpass	Off-Street Shared Use Path	Shared Use Path	City of Grand Rapids	0.1	\$1,382,200	18

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Grand River Edges Trail (West)	GVSU Front St Parking Lot (Watson Lot) to Pearl St	Off-Street Shared Use Path	Bicycle and Pedestrian Path - Improvements on the west bank of the Grand River, including bicycle and pedestrian path under West Fulton bridge, ramps, overlooks; landscaping, retaining wall, furnishings. Flood protection improvements are proposed and may be incorporated into the project at additional cost. This Grand River Edges Trail project is integrated at various levels with the River Revitalization Project and the GR FORWARD DOWNTOWN AND RIVER ACTION PLAN (2015) and THE RIVER FOR ALL GRAND RIVER CORRIDOR - IMPLEMENTATION PLAN AND RIVER TRAIL DESIGN GUIDELINES (2018)	City of Grand Rapids	0.4	\$19,008,000	19
Griggs St SW / SE, Elliott St SE, Sylvan Ave SE, Englewood Ave SE Bicycle Blvd	Steele Ave SW to Breton Rd SE	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings; pedestrian hybrid beacon	City of Grand Rapids	3.9	\$848,794	17
Hall St SE Bicycle Lanes	Madison Ave to Jefferson St SE	On-Street Bike Facility	Bicycle lanes; intersection treatments; signs, markings	City of Grand Rapids	0.4	\$70,114	15
Hall St SW Bicycle Lanes	Freeman Ave SW to US-131 Cut-off/Shamrock	On-Street Bike Facility	Bicycle lanes, signs, markings	City of Grand Rapids	0.9	\$31,024	13
Hampshire / Norfolk / Woodcliff / Woodlawn Bicycle Boulevard	Burton St SE to East City Limit	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings; new trail segment on Hampshire between Woodlawn and Ridgewood (500 LF)	City of Grand Rapids	1.6	\$84,000	13

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Hastings St Non-Motorized Path - Phase 3 of 3	Livingston Ave to Division Ave	Off-Street Shared Use Path	This project is part of the MICHIGAN STREET CORRIDOR PLAN (2015) and the GR FORWARD PLAN (2015) and CITY OF GRAND RAPIDS BICYCLE ACTION PLAN (2019). Bicycle and Pedestrian Path - Project scope includes a 12 ft wide non-motorized pathway/elevated walkway with railing; ornamental lighting, retaining wall; landscaping; and site furniture.	City of Grand Rapids	0.5	\$25,000,000	15
Highland Park Trail Connection under I-196	Harlan Ave NE to Lloyd Peterson Way (Highland Park)	Off-Street Shared Use Path	Rail with trail connection under I-196 connecting street/sidewalk network and Highland Park	City of Grand Rapids	0.3	\$375,000	15
Indian Mill Creek Trail	Alpine Ave NW to Walker Ave NW	Off-Street Shared Use Path	Construction of new multi-use trail primarily along a former rail bed; intersection crossings; signage, markings	City of Grand Rapids	1.5	\$2,240,000	18
Indian Village Bicycle Boulevard Network - Alger, Barfield, Birchcrest, Chesaning, Menominee, Mulford, Okemos, Onkama, Saginaw, Shawnee, Village, Woodcliff, Woodlawn, Woodmeadow	Plymouth Ave SE to Burton St SE	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings	City of Grand Rapids	4.0	\$322,950	14
Ionia Ave Bicycle Lanes	Fulton St W to Martin Luther King St SW	On-Street Bike Facility	Bicycle lanes; shared traffic lanes; intersection treatments;	City of Grand Rapids	1	\$52,464	16
Ionia Ave SW Bicycle Boulevard / Trail	Franklin St SW to Stevens St SW	On-Street Bike Facility	Shared traffic lanes, signage, markings, intersection modifications; trail segment construction	City of Grand Rapids	0.8	\$102,376	15
Jefferson Ave SE Bicycle Boulevard / Bicycle Lanes / Traffic Calming / Pedestrian Crossings	Alger St SE to Logan St SE	On-Street Bike Facility	Bicycle lanes; shared traffic lanes; intersection treatments; traffic calming	City of Grand Rapids	2.4	\$273,660	14

Project Information							
Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Kalamazoo Ave / Evergreen St SW (School)	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	13
Kalamazoo Ave SE Midblock Crossing	Between Alger St SE and 28th St SE	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	14
Kalamazoo Ave SE / Griggs Ave SE Pedestrian / Bicycle Crossing	N/A	Crossing Improvement	Installation of traffic signal to accommodate pedestrian and bicycle crossings	City of Grand Rapids	N/A	\$270,000	14
Kalamazoo Ave SE Bicycle Lanes / Separated Bicycle Facilities	Burton St SE to 44th St SE	On-Street Bike Facility	Separated bicycle facilities; signs, markings	City of Grand Rapids	3.0	\$1,462,500	17
Ken-O-Sha Neighborhood Bicycle Boulevard Network - Eastern, 33rd, Brooklyn, Van Auken, Poinsettia, Giddings, Millbrook, Eastbrook, Dawes, Chamberlain, Kentridge	32nd St SE to 44th St SE	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings, trail segment; rapid flashing beacon crossing	City of Grand Rapids	2.7	\$291,330	14
Kirtland St SW Pedestrian Hybrid Beacon / Pedestrian Crossing	Kirtland St / Buchanan Ave	Crossing Improvement	Removal of standard traffic signal; relocation of crossing to midblock location; construction of pedestrian hybrid beacon	City of Grand Rapids	N/A	\$216,490	14
Lafayette Ave / Creston Plaza NE Intersection (general/park)	N/A	Crossing Improvement	Installation of beacon crossing treatment, curb extensions	City of Grand Rapids	N/A	\$75,000	14
Lafayette Ave NE / SE Bicycle Facilities	Hastings St NE to Hall St SE	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings	City of Grand Rapids	2.1	\$145,980	14
Lafayette Ave NE Bicycle Facilities	Plainfield Ave NE to Barnett St NE	On-Street Bike Facility	Bicycle lanes, shared traffic lanes, intersection modifications, signage, pavement markings	City of Grand Rapids	0.5	\$48,660	14

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Lake Dr / Carlton Ave SE Intersection	N/A	Crossing Improvement	Installation of traffic signal to accommodate pedestrian and bicycle crossings	City of Grand Rapids	N/A	\$270,000	14
Lake Dr SE Bicycle Lanes and Pedestrian Crossing Improvements	Fulton St E to Genesee St SE	On-Street Bike Facility	Add new and upgrade existing bicycle lanes, intersection modifications, pedestrian crossing improvements at Dwight Ave, Calkins	City of Grand Rapids	1.2	\$150,000	15
Lake Dr Sidewalk	Lake Drive 715 feet East of Woodshire Drive to E. Beltline Avenue	Sidewalk	Construction of sidewalk along Lake Drive. This project supports the vision, goals and objectives (connectivity) of the City of Grand Rapids VITAL STREETS PLAN (2016)	City of Grand Rapids	0.2	\$680,833	15
Langley St SE / Oak Park Dr / Plymouth Ave SE Sidewalk Infill	Kendall St SE to 44th St SE	Sidewalk	Construction of missing sidewalks, ramps; provides access to many apartments, transit at Kalamazoo and 44th St.	City of Grand Rapids	0.77	\$1,500,000	17
Leffingwell Ave Trail / Underpass / Bicycle Lanes	Oak Industrial Dr NE to North city limit	Off-Street Shared Use Path	Trail, underpass structure, bicycle lanes; signs, markings	City of Grand Rapids	1.2	\$840,000	16
Leonard Ave NW / Maplegrove Dr NW Pedestrian Crossing Improvements	N/A	Crossing Improvement	Installation of beacon crossing treatment, raised median	City of Grand Rapids	N/A	\$70,000	11
Leonard St / Carlton Ave NE Intersection	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	15
Leonard St / Penn Ave NE Intersection	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	13
Louis St NW Bicycle Lanes	Monroe Ave NW to Ionia Ave NW	On-Street Bike Facility	Remove turn lane, add new bicycle lanes; add green intersection boxes	City of Grand Rapids	0.3	\$32,262	12
Madison Ave / Delaware St SE (General/BB	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	15

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Madison Ave / Griggs-Dickinson (General/BB)	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	15
Madison Ave SE Bicycle Lanes	Hall St SE to Adams St SE	On-Street Bike Facility	Bicycle lanes - new segment; signs, markings	City of Grand Rapids	0.3	\$60,200	14
Martin Ave SE Sidewalk Infill	Winchell St SE to Burton St SE	Sidewalk	Construction of missing sidewalk along west side of Martin Ave; adjacent to senior and immigrant housing/support services, near planned new LIHTC housing development	City of Grand Rapids	0.18	\$250,000	15
Martin Luther King St St / Benjamin Ave SE (School/Park)	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	15
Martin Luther King St SW Bicycle Lanes Upgrades/Modifications	Division Ave S to Oakland St SW	On-Street Bike Facility	Bicycle lanes, shared traffic lanes; intersection modifications	City of Grand Rapids	0.6	\$34,077	16
Maryland Ave / Oak Industrial Dr NE Intersection	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	13
Maryland Ave NE Bicycle Lanes	Fulton St E to Leonard St NE	On-Street Bike Facility	Bicycle lanes - new and widening of existing segments; signs, markings	City of Grand Rapids	1.5	\$378,000	13
Maryland Ave Sidewalk	Fulton Street to Michigan St	Sidewalk	Construction of sidewalk along Maryland Avenue. This project supports the vision, goals and objectives (connectivity) of the City of Grand Rapids VITAL STREETS PLAN (2016)	City of Grand Rapids	0.5	\$698,750	14
Maynard Ave NW Bicycle Lanes/Trail (TBD)	Brownwood Ave NW to Walker City Limit	On-Street Bike Facility	Bicycle lanes/shoulders OR trail (TBD)	City of Grand Rapids	0.9	\$150,000	13

Project Information							
Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Michigan St / Bridge St NW Separated Bicycle Lanes and Monroe Ave Bicycle Lanes (Michigan to I-196 overpass)	Monroe Ave NW to Mount Vernon Ave NW	On-Street Bike Facility	Separated bicycle lanes, bicycle lanes, signage, markings, intersection modifications	City of Grand Rapids	0.6	\$163,700	15
Michigan St / Grand Ave NE Pedestrian Crossing Improvements (general)	N/A	Crossing Improvement	Installation of beacon crossing treatment, curb extensions	City of Grand Rapids	N/A	\$75,000	14
Michigan St / Houseman Ave NE Pedestrian Crossing Improvements (general)	N/A	Crossing Improvement	Installation of beacon crossing treatment, curb extensions	City of Grand Rapids	N/A	\$75,000	14
Michigan St / Lakeside Dr NE Intersection	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	12
Michigan St Midblock Crossing	Between Fuller and Baynton Ave NE	Crossing Improvement	Installation of beacon crossing treatment, raised median	City of Grand Rapids	N/A	\$85,000	11
Michigan St Sidewalk	Maryland Ave to Leffingwell Ave	Sidewalk	Construction of sidewalk along Michigan Street. This project supports the vision, goals and objectives (connectivity) of the City of Grand Rapids VITAL STREETS PLAN (2016)	City of Grand Rapids	0.5	\$559,896	14
Monroe Ave NW midblock crossing near Veteran's Home/Riverside Park	South of Veteran's Home Driveway across Monroe Ave NW	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	13
Monroe Ave Sidewalk	Guild St to Riverside Park Dr	Sidewalk	Sidewalk along west side of Monroe Avenue, ramp construction, crossing improvements. This project supports the vision, goals and objectives (connectivity) of the City of Grand Rapids VITAL STREETS PLAN (2016)	City of Grand Rapids	0.9	\$376,200	13

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
N Division Ave / Plainfield Ave Bicycle Lanes	Coldbrook St NE to Carrier St NE	On-Street Bike Facility	Bicycle lanes, intersection treatments	City of Grand Rapids	0.7	\$64,000	15
N Division Ave Separated Bicycle Lanes / Plainfield Ave Bicycle Lanes	Crescent St NE to Coldbrook St NE	On-Street Bike Facility	Separated bicycle lanes, signs, markings; Rapid Flashing Beacon crossing at Fairbanks St NW	City of Grand Rapids	1.2	UNK	15
Neland Ave SE Bicycle Boulevard	Hall St SE to Logan St SE	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings, trail segment at Joe Taylor Park	City of Grand Rapids	0.9	\$64,000	15
Nelson, Ottilia, Union, Hoyt, Andre, Aurora, Francis, Cutler Bicycle Boulevard and Trail	Alger St SE to Buchanan Ave SW	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings, trail segment at Burton Woods Park	City of Grand Rapids	2.8	\$413,097	16
Nixon / 10th / Brownwood Bicycle Boulevard	Leonard St NW to Maynard Ave NW	On-Street Bike Facility	Shared traffic lanes, route signage/ markings	City of Grand Rapids	0.7	\$1,698	15
Norwood Ave SE Sidewalk Infill	Lake Dr SE to 250' N of Logan St SE	Sidewalk	Construction of missing sidewalk; closure of long defunct driveway apron	City of Grand Rapids	0.1	\$124,500	15
Oakes St SW / SE Bicycle Lanes	Market Ave SW to Jefferson St SE	On-Street Bike Facility	Bicycle lanes; intersection treatments/ modifications, possible bicycle signal at Division	City of Grand Rapids	0.5	\$84,631	14
Oakleigh Ave / Richmond Ave NW Pedestrian / Bicycle Crossing	N/A	Crossing Improvement	Installation of beacon crossing treatment, possible curb line changes/refuge median	City of Grand Rapids	N/A	\$15,000	10
Oakleigh Ave Shared Use Path	Leonard St to Richmond St	Off-Street Shared Use Path	Construction of a shared use path along Oakleigh Avenue. This project supports the vision, goals and objectives (connectivity) of the City of Grand Rapids VITAL STREETS PLAN (2016)	City of Grand Rapids	0.5	\$1,500,000	12

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Oakleigh Ave Sidewalk	Lake Michigan Dr to Leonard St	Sidewalk	Construction of sidewalk along Oakleigh Avenue. This project supports the vision, goals and objectives (connectivity) of the City of Grand Rapids VITAL STREETS PLAN (2016)	City of Grand Rapids	0.9	\$1,276,563	12
Oxford Trail Access Switchback Upgrades	Oxford Trail to Chestnut St SW	Off-Street Shared Use Path	Modifications to existing Oxford Trail overpass to address multi-user access, safety and ADA	City of Grand Rapids	0.1	\$37,500	15
Park / Elmdale / Lamberton Lake NE Bicycle Lanes/Boulevard	Monroe Ave N to East City Limit	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings, bicycle lanes	City of Grand Rapids	1.5	\$116,785	16
Park St / Watson St SW Bicycle Boulevard	John Ball Park Ave to Lexington Ave SW	On-Street Bike Facility	Shared traffic lanes; intersection modifications; route signage/markings	City of Grand Rapids	1.2	\$326,810	15
Paul Henry Trail Extension	44th St to Eastern Ave	Off-Street Shared Use Path	Non-Motorized Path - Includes a 12-foot wide non-motorized path, lighting, fencing, furnishings, landscaping, and intersection improvements.	City of Grand Rapids	1.5	\$6,336,000	18
Pedestrian/Bicycle Pathway Tunnel	From existing eastside river walkway north of I-196 to Eastward to Bond Ave, and then south under I-196 through abandoned railroad tunnel, to Monroe and Ottawa Ave	Off-Street Shared Use Path	Repurpose an abandoned railroad tunnel for pedestrian/non-motorized use with connections to Monroe Ave, Bond Ave, and Ottawa Ave. The 1,750' path starts at River Edges Trail north of the I-196 freeway; goes east to Hastings Street; north of I-196 to Bond; turns south through the tunnel under I-196; then branches west to Monroe and east to Ottawa and Michigan.	City of Grand Rapids	0.3	\$1,280,000	14
Perkins Ave NE Midblock Crossing to Ball Perkins Park	Between Terrace South and High Bluff	Crossing Improvement	Installation of beacon crossing treatment, possible curb line changes/refuge median	City of Grand Rapids	N/A	\$75,000	14

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Plainfield Ave NE / Carrier St NE Pedestrian Crossing	N/A	Crossing Improvement	Installation of beacon crossing treatment, possible curb line changes/refuge median	City of Grand Rapids	N/A	\$75,000	13
Plaster Creek Trail	1,500' west of Kalamazoo Avenue to East City line	Off-Street Shared Use Path	New Multi-Use Trail	City of Grand Rapids	1.6	\$5,000,000	19
Plaster Creek Trail	Eastern Ave to 28th St	Off-Street Shared Use Path	Multi-use trail including underpass and/or at-grade crossing at 28th Street	City of Grand Rapids	0.4	\$2,450,000	17
Plymouth Ave SE Bicycle Lanes	Alger St SE to 200' north of Burton St SE	On-Street Bike Facility	Bicycle lanes, signs	City of Grand Rapids	0.6	\$21,378	16
Ransom Ave NE Bicycle Lanes, Pedestrian Crossing Improvements (Library St)	Crescent St NE to Fulton St E	On-Street Bike Facility	Bicycle lanes - new, revisions to existing lanes; curb extension(s) and RFB for at Library	City of Grand Rapids	0.4	\$101,141	13
Richmond St NW Bicycle Lanes	Garfield Ave NW to McReynolds Ave NW	On-Street Bike Facility	Bicycle lanes - new; signs, markings	City of Grand Rapids	0.6	UNK	15
Richmond St NW Bicycle Lanes	Covell Rd NW to Garfield Ave NW	On-Street Bike Facility	Widen existing bicycle lanes (too narrow)	City of Grand Rapids	1.0	\$150,000	13
Richmond St NW Bicycle Lanes or Trail (TBD)	Covell Rd NW to Elmridge Dr NW	On-Street Bike Facility	Bicycle lanes - new; signs, markings	City of Grand Rapids	0.6	\$189,000	10
Richmond St NW/ Seward Trail Pedestrian Crossing Improvements (trail)	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	13
Ridgewood Ave SE Sidewalk	Burton St SE north to city limit with East Grand Rapids	Sidewalk	Construction of missing sidewalks, ramps; provides direct access to Our Savior School.	City of Grand Rapids	0.5	\$750,000	15

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Seward Ave / 11th St NW Pedestrian Crossing Improvements (general/BB)	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	13
Seward Ave / 4th St NW Pedestrian Crossing Improvements (general/BB)	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	14
Seward Ave / 6th St or 7th St NW Pedestrian Crossing Improvements (general)	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	15
Seward Ave / Douglas St SW Intersection	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	14
Sheridan Ave SW / Caulfield Ave SW Bicycle Boulevard / Contraflow Bike Lane	Martin Luther King St to Hall St SW	On-Street Bike Facility	Shared traffic lanes, bicycle lanes, signs, marking, signal reconstruction/addition of bicycle signals	City of Grand Rapids	0.9	\$146,883	13
Sherman St / Pleasant St / Buckley St Bicycle Boulevard	East Grand Rapids City Limit to Ionia Ave SW	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings	City of Grand Rapids	2.2	\$390,940	15
Sparks Dr SE Separated Bicycle Lanes	Lake Eastbrook Blvd SE to East Paris Ave SE	On-Street Bike Facility	Raised bicycle lanes or physically separated bike lanes	City of Grand Rapids	0.3	\$255,000	15
Steele Ave SW Bicycle Lanes	Stevens St SW to Burton St SW	On-Street Bike Facility	Bicycle lanes; short trail connections to adjacent streets, signs, markings	City of Grand Rapids	0.9	\$75,000	13
Stocking Ave NW Bicycle Lanes	Bridge St NW to Walker Ave NW	On-Street Bike Facility	Bicycle lanes - new; signs, markings	City of Grand Rapids	0.6	\$48,930	15
Straight Ave NW Bicycle Boulevard	Wealthy St SW to Bridge St NW	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings	City of Grand Rapids	1.0	\$90,887	15

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Straight Ave Trail Connection to Oxford Trail	Wealthy St SW to Oxford Trail north of Grand River	Off-Street Shared Use Path	Removal of existing Oxford Trail segment intersecting Wealthy and construction of new segment north from trail to Straight Ave/Wealthy St intersection	City of Grand Rapids	0.2	\$45,000	17
Tamarack Ave / NW Bicycle Boulevard	11th St NW to Thornapple Ct NW	On-Street Bike Facility	Shared traffic lanes, route signage/ markings, intersection modifications	City of Grand Rapids	1.1	\$90,887	15
Turner Ave Separated Bicycle Facilities	Ann St to Walker City Limits	On-Street Bike Facility	Separated bikeway/lanes intersection signaling, signage, markings	City of Grand Rapids	0.2	\$42,500	13
Turner Ave Separated Bicycle Facilities	Richmond St NW to Ann St NW	On-Street Bike Facility	Upgrade buffered bike lanes to separated bike lanes/bikeway	City of Grand Rapids	0.3	\$63,750	15
Union Ave SE / NE Bicycle Lanes	Lyon St NE to Martin Luther King St SE	On-Street Bike Facility	Bicycle lanes - new; signs, markings	City of Grand Rapids	1.3	\$22,000	16
Union Ave SE Bicycle Boulevard	Martin Luther King St SE to Hall St SE	On-Street Bike Facility	Shared traffic lanes, route signage/ markings	City of Grand Rapids	0.5	\$9,400	13
Walker Ave / Pine St NW Pedestrian Crossing Improvements	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	14
Walsh St SE Bicycle Boulevard	Union Ave SE to Brooklyn Ave SE	On-Street Bike Facility	Shared traffic lanes, intersection modifications, signage, pavement markings	City of Grand Rapids	0.6	\$139,920	14
Wealthy St SW Bicycle Lanes / Separated Bicycle Lanes	Cesar E Chavez Ave SW to Butterworth St SW	On-Street Bike Facility	Separated bicycle lanes; bicycle lanes; intersection modifications	City of Grand Rapids	1	\$58,750	16
Wealthy St SW/ Straight Ave SW Intersection	N/A	Crossing Improvement	Installation of beacon crossing treatment	City of Grand Rapids	N/A	\$54,000	16

Project Information							
Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Winchell St SE Sidewalk Infill	Union Ave SE to Martin Ave SE	Sidewalk	Construction of missing sidewalk along north side of Winchell St; near to senior and immigrant housing/support services, planned new LIHTC housing development. Completes walk connection to Seymour Square business area on Eastern Ave to east.	City of Grand Rapids	0.15	\$250,000	15
City of Hudsonville							
Buttermilk Trail	New Holland St to Highland Dr	Off-Street Shared Use Path	Shared Use Path	City of Hudsonville	0.35	\$342,000	15
Buttermilk Trail	Balsam Dr to Sunrise Park	Off-Street Shared Use Path	Shared Use Path	City of Hudsonville	0.6	\$861,000	10
Buttermilk Creek Pathway	Prospect St to Oak St	Off-Street Shared Use Path	Shared Use Path	City of Hudsonville	0.29	\$1,109,000	14
Chicago Dr (South Side)	40th Ave to 32nd Ave	Off-Street Shared Use Path	Sidepath	City of Hudsonville	1.07	\$583,000	14
City of Kentwood							
Forest Hill Trail Bridge	At I-96	Off-Street Shared Use Path	Pedestrian Bridge	City of Kentwood	UNK	\$3,000,000	15
44th / Walnut Hills	44th St / Walnut Hills	Crossing Improvement	Hawk Ped Hybrid Beacon	City of Kentwood	N/A	\$71,220	17
48th / Marlette	48th / Marlette	Crossing Improvement	Hawk Ped Hybrid Beacon	City of Kentwood	N/A	\$71,220	14
Saddleback Trail	Woodland Creek Apartments to East Paris	Off-Street Shared Use Path	Shared Use Path	City of Kentwood	0.63	\$96,000	15

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Plaster Creek Trail	Breton to West City Limits	Off-Street Shared Use Path	Shared Use Path	City of Kentwood	0.43	\$85,000	18
48th St Trail	Eastern to Poinsettia Street	On-Street Bike Facility	Bike Lanes/Shared Lanes/Sidewalk Gaps	City of Kentwood	UNK	UNK	13
52nd / Primrose	52nd / Primrose	Crossing Improvement	RectangularRapid Beacon	City of Kentwood	N/A	\$32,220	17
52nd St Corridor Trail	Bailey's Grove Dr to East Paris	On-Street Bike Facility	Bike Lanes/Sharrows	City of Kentwood	0.42	\$10,000	8
52nd St Corridor Trail	East Paris to Broadmoor	On-Street Bike Facility	Bike Lanes/Sharrows	City of Kentwood	0.63	\$15,000	9
52nd St Corridor Trail	Broadmoor to Patterson	On-Street Bike Facility	Bike Lanes/Sharrows	City of Kentwood	0.38	\$10,000	10
52nd St Trail	Plaster Creek Trail to Bailey's Grove Dr	Off-Street Shared Use Path	Shared Use Path/Bike Lanes/Shared Lanes	City of Kentwood	N/A	\$100,000	10
52nd St Trail	Breton to Plaster Creek Trail	Off-Street Shared Use Path	Shared Use Path	City of Kentwood	UNK	\$525,000	12
Breton / Stanaback	Breton and Stanaback Park Trail	Crossing Improvement	Hawk Ped Hybrid Beacon	City of Kentwood	N/A	\$71,220	14
Breton Trail	Paul Henry Trail to 52nd	Off-Street Shared Use Path	Shared Use Path	City of Kentwood	0.56	\$132,000	14
Broadmoor Trail	Patterson to 32nd St	Off-Street Shared Use Path	Shared Use Path/Wide Shoulder	City of Kentwood	UNK	UNK	14
Division / 43rd	Division / 43rd	Crossing Improvement	Hawk Ped Hybrid Beacon	City of Kentwood	N/A	\$71,220	16
Division / Montebello	Division / Montebello	Crossing Improvement	Hawk Ped Hybrid Beacon	City of Kentwood	N/A	\$71,220	15

Project Information							
Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
East Paris to Calvin University Connection	East Paris to Calvin University	Off-Street Shared Use Path	Shared Use path	City of Kentwood	0.3	\$132,500	17
Eastern / Springwood	Eastern / Springwood	Crossing Improvement	RectangularRapid Beacon	City of Kentwood	N/A	\$32,220	16
Eastern Ave Trail	44th to 60th Streets	On-Street Bike Facility	Bike Lanes/shared lanes	City of Kentwood	0.78	\$60,000	14
East-West Trail	Lamberts Park through Fisheries Park	Off-Street Shared Use Path	Shared Use Path	City of Kentwood	0.77	\$300,000	11
East-West Trail- Lamberts Park	Walma Avenue, 2600 feet East	Off-Street Shared Use Path	Shared Use Path	City of Kentwood	0.57	\$65,000	13
Forest Creek Dr / Consumers Energy Trail	East Paris to Patterson	Off-Street Shared Use Path	Shared Use Path	City of Kentwood	1	\$200,000	14
Forest Hill / Orchard Cr / Hall	Forest Hill / Orchard Cr / Hall	Crossing Improvement	Hawk Ped Hybrid Beacon	City of Kentwood	N/A	\$71,220	12
Kalamazoo / E-W Trail	Kal / E-W Trail	Crossing Improvement	Hawk Ped Hybrid Beacon	City of Kentwood	N/A	\$71,220	13
Lake Eastbrook Blvd	28th to 32nd	On-Street Bike Facility	Bike Lanes	City of Kentwood	0.5	\$65,000	13
Patterson Avenue Trail - I	28th St to Burton St	Off-Street Shared Use Path	Sidepath	City of Kentwood	0.48	\$66,000	14
Patterson Avenue Trail - II	36th St to 28th St	Off-Street Shared Use Path	Sidepath	City of Kentwood	1	\$132,000	13
Patterson Avenue Trail - III	44th St to 36th St	Off-Street Shared Use Path	Sidepath	City of Kentwood	1	\$132,000	12

Project Information							
Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Patterson Avenue Trail - IV	52nd St to 44th St	Off-Street Shared Use Path	Sidepath	City of Kentwood	1	\$132,000	11
Patterson Trail Crossing	28th St	Crossing Improvement	Refuge Island	City of Kentwood	N/A	\$60,000	14
Plaster Creek Trail	44th St to Shaffer	Off-Street Shared Use Path	Shared Use Path	City of Kentwood	1.31	\$250,000	16
Plaster Creek Trail	Shaffer to Stanaback Park	Off-Street Shared Use Path	Shared Use Path	City of Kentwood	0.84	\$85,000	15
Plaster Creek Trail	44th To 52nd Streets	Off-Street Shared Use Path	Shared Use Path	City of Kentwood	1.03	\$250,000	14
Plaster Creek Trail	Paris Park Dr Extended to 52nd St	Off-Street Shared Use Path	Shared Use Path	City of Kentwood	0.88	\$250,000	14
Plaster Creek Trail	Stanaback Park to Cross Creek Condos	Off-Street Shared Use Path	Shared Use Path	City of Kentwood	UNK	UNK	15
Ridgemoor Trail	28th St to N City Limits	Off-Street Shared Use Path	Bike Lanes/Shared Lanes/Sidewalk	City of Kentwood	0.32	\$80,000	17
Saddleback Trail	East Paris to Shaffer along 32nd St	Off-Street Shared Use Path	Sidepath	City of Kentwood	1	\$132,000	15
Saddleback Trail	Patterson to Woodland Creek Apartments	Off-Street Shared Use Path	Shared Use Path	City of Kentwood	0.84	\$132,000	16
Shaffer Trail	32nd to 44th St	On-Street Bike Facility	Bike Lanes/Shared Lanes	City of Kentwood	1.5	\$45,000	15
Wing Ave	52nd St to 60th St	Sidewalk	Sidewalk	City of Kentwood	1	\$400,000	13

Project Information							
Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
City of Walker							
Fred Meijer Standale / Pioneer Trail Connector	North side of 3 Mile from Kinney to the current eastbound I-96 off-ramp	Off-Street Shared Use Path	Connect 2 regional trails over I-96 at Fruit Ridge Avenue	City of Walker/MD OT	0.15	\$330,000	16
Bristol Sidewalk - Northridge to Fred Meijer Pioneer Trail	Bristol, from Northridge south to Fred Mijer Pioneer Trail (3 Mile)	Sidewalk	Build sidewalk on west side of 3 Mile to connect Northridge with Fred Meijer Pioneer Trail	City of Walker	0.4	\$600,000	14
Regional Trail Network - Mid-block Crossing Enhancements	Five locations: See Below	Crossing Improvement	Provide consistent signal control, crossing islands, and warning signage for 5 midblock crossings on regional trail network	City of Walker	N/A	\$500,000	
Regional Trail Network - Mid-block Crossing Enhancements	Mid-block Crossing Enhancements: Fred Meijer Standale Trail at Remembrance	Crossing Improvement	Provide consistent signal control, crossing islands, and warning signage	City of Walker	N/A	Totaled Above	12
Regional Trail Network - Mid-block Crossing Enhancements	Mid-block Crossing Enhancements: Fred Meijer Standale Trail at Leonard	Crossing Improvement	Provide consistent signal control, crossing islands, and warning signage	City of Walker	N/A	Totaled Above	14
Regional Trail Network - Mid-block Crossing Enhancements	Mid-block Crossing Enhancements: Fred Meijer Standale Trail at Sunset Hills	Crossing Improvement	Provide consistent signal control, crossing islands, and warning signage	City of Walker	N/A	Totaled Above	12

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Regional Trail Network - Mid-block Crossing Enhancements	Mid-block Crossing Enhancements: Fred Meijer Standale Trail at O'Brien and Maynard	Crossing Improvement	Provide consistent signal control, crossing islands, and warning signage	City of Walker	N/A	Totaled Above	11
Regional Trail Network - Mid-block Crossing Enhancements	Mid-block Crossing Enhancements: Kinney Trail at Kinney and Waldorf	Crossing Improvement	Provide consistent signal control, crossing islands, and warning signage	City of Walker	N/A	Totaled Above	13
Walker Ave Trail - 3 Mile to Leonard	Walker Ave, from Fred Meijer Pioneer Trail (3 Mile) to Leonard	Off-Street Shared Use Path	Construction of a non-motorized path along Walker Ave. This is a collaborative project between City of Walker, City of Grand Rapids, and Meijer Corporation. The proposed project supports the CITY OF GRAND RAPIDS BICYCLE ACTION PLAN (2019)	City of Walker / City of Grand Rapids	2.3	\$2,850,000	21
City of Wyoming							
Kelvinator Trail	Burton St to Chicago Dr	Off-Street Shared Use Path	Shared Use Path	City of Wyoming	0.62	\$1,500,000	15
Michael Ave Bike Boulevard	Prairie Parkway to 28th St	On-Street Bike Facility	Shared Use Path	City of Wyoming	0.25	\$800,000	16
52nd St / Canal Sidepath Rehab	Clyde Park to Canal to NCL	Off-Street Shared Use Path	Shared Use Path	City of Wyoming	5	\$1,800,000	14
56th St Sidepath Rehab	Ivanrest Ave to Kenowa	Off-Street Shared Use Path	Shared Use Path	City of Wyoming	2	\$1,000,000	10

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
28 West Place / Hook Ave - Pedestrian Bridge	Hook Ave & 28th St Intersection	Off-Street Shared Use Path	Pedestrian Bridge	City of Wyoming	N/A	\$5,498,000	16
28th St / Jenkins Ave - Pedestrian Bridge	28th St & Jenkins Avenue Intersection	Off-Street Shared Use Path	Pedestrian Bridge	City of Wyoming	N/A	\$5,498,000	15
Grace Christian to Plaster Ck	Grace Christian to Clyde Park/Burton	Off-Street Shared Use Path	Shared Use Path	City of Wyoming	1	\$1,500,000	17
Ivanrest Sidepath Rehab	NCL to SCL	Off-Street Shared Use Path	Shared Use Path	City of Wyoming	2	\$1,000,000	11
Pinery Park to Grace Christian	Grace Christian to Dehoop, Along Dehoop to Pinery Park	Off-Street Shared Use Path	Shared Use Path	City of Wyoming	0.61	\$1,423,250	15
Pinery Park to Hook Ave	28th St & Hook Ave to Pinery Park	Off-Street Shared Use Path	Shared Use Path	City of Wyoming	0.42	\$1,845,625	15
Pinery Park to Porter St	Pinery Park to Porter St & Burlingame Ave	Off-Street Shared Use Path	Shared Use Path	City of Wyoming	0.52	\$1,591,875	15
Pinery Pk to Clyde Park	Pinery Pk to Clyde Park	Off-Street Shared Use Path	Shared Use Path	City of Wyoming	1.25	\$1,100,000	15
Prairie Pkwy to Hook (Pedestrian Bridge)	Prairie Parkway to 28th West Place	Off-Street Shared Use Path	Shared Use Path	City of Wyoming	0.2	\$250,000	16
Courtland Township							
Myers Lake Trail	10 Mile Rd to 12 Mile Rd	Off-Street Shared Use Path	Sidepath	Courtland Twp / KCRC	2.5	\$685,014	7

Project Information							
Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Gaines Charter Township							
Township Trail (Electric Transmission ROW)	Gaines Township population Center to the Dutton Spur connecting to the Paul Henry Trail	Off-Street Shared Use Path	Shared Use Path	Gaines Twp / KCRC	0.3	\$2,500,000	16
Brewer Park / Prairie Wolf Park Connector	Connection between the two parks	Off-Street Shared Use Path	Shared Use Path	Gaines Twp / KCRC	3.5	\$2,000,000	9
Georgetown Charter Township							
36th Ave Connector	Harrison St / Apio Cir to 42nd Ave / Riester St	Off-Street Shared Use Path	Connecting Allendale and Hudsonville through Georgetown Township	Georgetown Township	6.2	\$2,618,880	17
Jamestown Charter Township							
32nd Ave Sidepath	From Riley to Quincy St	Off-Street Shared Use Path	Sidepath	Jamestown Twp / OCRC	1	\$800,000	10
8th Ave	Quincy St to Jackson St	Off-Street Shared Use Path	Sidepath	Jamestown Twp / OCRC	1.1	\$715,000	7
Quincy St	Angling Rd to 8th Ave	Off-Street Shared Use Path	Sidepath	Jamestown Twp / OCRC	1.6	\$1,035,000	10
Ransom St	8th Ave to Kenowa Ave	Off-Street Shared Use Path	Sidepath	Jamestown Twp / OCRC	1.0	\$675,000	7
Jackson St	8th Ave to Kenowa Ave	Off-Street Shared Use Path	Sidepath	Jamestown Twp / OCRC	1.0	\$670,000	11

Project Information							
Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
32nd Ave Sidepath	From Riley to Forest Grove Elementary (Perry St)	Off-Street Shared Use Path	Sidepath	Jamestown Twp / OCRC	2	\$1,600,000	9
Angling Rd Connector	Quincy, Angling Rd, Jackson, 8th Ave, Barry St, to Kenowa Ave	On-Street Bike Facility	Paved Shoulder	Jamestown Twp / OCRC	3.75	\$169,000	9
Perry St	Jamestown Shores Ct. to 32nd Ave	Sidewalk	Sidewalk	Jamestown Twp / OCRC	0.8	\$330,000	6
Kent County							
Fallasburg Covered Bridge	Bridge	Off-Street Shared Use Path	Bridge Preservation	Kent County	0.1	\$200,000	4
Kent County Parks							
Grand River Greenway Trail - North Section	Cannonsburg and Townsend Park Trail Connection	Off-Street Shared Use Path	Shared Use Path	Kent County Parks	2	\$2,000,000	15
Grand River Greenway Trail - North Section	White Pine Trail to Northland Dr	Off-Street Shared Use Path	Shared Use Path	Kent County Parks	2.08	\$3,053,800	16
Grand River Greenway Trail - South Section: Rails with Trail	Railroad Right of Way, McGaw Park Trail to Lowell Footbridge	Off-Street Shared Use Path	Shared Use Path	Kent County Parks	5.2	\$6,025,000	14
Grand River Greenway Trail - South Section: Rails with Trail	Lowell Footbridge to Grand River Valley Rail Trail	Off-Street Shared Use Path	Shared Use Path	Kent County Parks	3.9	\$2,410,000	13

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Grand River Greenway Trail - North Section	Northland Dr to Egypt Valley	Off-Street Shared Use Path	Shared Use Path	Kent County Parks	3.79	\$4,003,800	15
Grand River Greenway Trail - North Section	City of Lowell to Lowell Regional Park and Fairgrounds	Off-Street Shared Use Path	Shared Use Path	Kent County Parks	4.5	\$4,500,000	12
Grand River Greenway Trail - North Section	Egypt Valley to 3 Mile Rd	Off-Street Shared Use Path	Shared Use Path	Kent County Parks	4	\$4,926,970	15
Grand River Greenway Trail - North Section	Chief Hazy Cloud to Roselle Park Bridge	Off-Street Shared Use Path	Shared Use Path	Kent County Parks	UNK	\$5,500,000	13
Grand River Greenway Trail - North Section	Bailey / Vergennes to Alden Nash and Existing Trail	Off-Street Shared Use Path	Shared Use Path	Kent County Parks	4.22	\$5,959,000	16
Grand River Greenway Trail - South Section: Rails with Trail	River St, Bronson St to Thornapple River Dr	Off-Street Shared Use Path	Shared Use Path	Kent County Parks	0.09	\$55,000	13
Grand River Greenway Trail - South Section: Rails with Trail	Utility Right of Way, M21 to Ada Drive	Off-Street Shared Use Path	Shared Use Path	Kent County Parks	0.98	\$2,072,000	16
Grand River Greenway Trail - South Section: Rails with Trail	Legacy Park to McGaw Park Trail	Off-Street Shared Use Path	Shared Use Path	Kent County Parks	1.23	\$4,415,000	13
Grand River Greenway Trail - South Section: Rails with Trail	Railroad Right of Way, River Edges Pathway to Spaulding / M21	Off-Street Shared Use Path	Shared Use Path	Kent County Parks	7.58	\$8,900,000	20

Lowell Charter Township/Vergennes Township

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
Fred Meijer Flat River Valley Rail Trail I	Railroad Corridor From Foreman Road North and East to the County Line	Off-Street Shared Use Path	Shared Use Path	Lowell Twp / Vergennes Twp / KCRC	8.46	\$2,312,840	17
MDOT							
M-44/M-37 NM Facility on Bridge	Over I-96	Off-Street Shared Use Path	NM Facility on existing bridge	MDOT	UNK	UNK	12
US-131 Pedestrian Tunnel	Over Webster	Off-Street Shared Use Path	Pedestrian tunnels	MDOT	UNK	\$5,000,000	11
US-131 Pedestrian Tunnel	Over 10th St	Off-Street Shared Use Path	Pedestrian tunnels	MDOT	UNK	\$5,000,000	12
Plainfield Charter Township							
North Grand River Trail	North Side of Grand River, White Pine Trail to Northland Dr	Off-Street Shared Use Path	Shared Use Path	Plainfield Twp / KCRC	2.7	\$2,125,000	16
Ada Trail	Grand River Dr, East Beltline to 5 Mile Rd	Off-Street Shared Use Path	Shared Use Path	Plainfield Twp / KCRC	2.6	\$2,315,000	14
South Rogue River Trail	Jupiter Ave to Northland Dr	Off-Street Shared Use Path	Shared Use Path	Plainfield Twp / KCRC	1.7	\$2,375,000	15
Beltline Trail	West River Dr to 4 Mile (GR Township Connector)	Off-Street Shared Use Path	Shared Use Path	Plainfield Twp / KCRC	2.5	\$1,250,000	17

Project Information

Job Name	Job Limits	Facility Type	Description	Agency	Length (Miles)	Total Estimated Cost	Total Project Score
North Rogue River Trail	Rogue River Rd to Rogue River Park (KCPR) and White Pine Trail	Off-Street Shared Use Path	Shared Use Path	Plainfield Twp / KCRC	1.9	\$1,400,000	13
10 Mile Trail	Belmont Ave to Premier Park	Off-Street Shared Use Path	Shared Use Path	Plainfield Twp / KCRC	0.9	\$815,000	13
4 Mile Sidewalk	4 Mile, Dean Lake Ave Gap	Sidewalk	Sidewalk	Plainfield Twp / KCRC	0.3	\$100,000	12
Comstock Park Trail Phase 1	Pine Island, West River Dr to 6 Mile Rd to Division Ave	Off-Street Shared Use Path	Shared Use Path	Plainfield Twp / KCRC	2.0	\$1,000,000	15
Comstock Park Trail Phase 2	Pine Island, 6 Mile Rd to Post Dr	Off-Street Shared Use Path	Shared Use Path	Plainfield Twp / KCRC	3.2	\$2,000,000	10
Northland Trail	West River Dr to M44 (Cannon Township Connector)	Off-Street Shared Use Path	Shared Use Path	Plainfield Twp / KCRC	2.1	\$1,375,000	15
Northview Trail	Hunsberger Ave, Plainfield Ave to Airway St	Off-Street Shared Use Path	Shared Use Path	Plainfield Twp / KCRC	0.8	\$440,000	12
Post Dr Trail	Pine Island Dr to Jupiter Ave North Trail	Off-Street Shared Use Path	Shared Use Path	Plainfield Twp / KCRC	1.9	\$940,000	12
Premier Park Trail	10 Mile Rd through Premier Park to White Pine Trail	Off-Street Shared Use Path	Shared Use Path	Plainfield Twp / KCRC	0.8	\$625,000	12
South Grand River Trail	Coit Ave, Jupiter Ave to Versluis Park	Off-Street Shared Use Path	Shared Use Path	Plainfield Twp / KCRC	2.0	\$1,000,000	15

MDOT Illustrative (Unfunded) Projects

Roadway	From Location	To Location	Conceptual Alternative	Estimated Cost (\$ millions)
US-131	Hall Street	Wealthy/Cherry St.	Add Weave-Merge (W/M) or limited through lanes, operational improvements, expanded ITS, interchange modifications, enhanced local street connections & non-motorized access/Pending PEL Study results	\$300-\$400
US-131	M-11 (28 th Street)	Hall Street	Add W/M lanes, interchange modifications, and/or ITS improvements/Pending PEL Study results	\$200
M-11 (Wilson Ave)	I-196	Remembrance Road	Operational improvements/widen to 3 and/or 5 lanes/Pending further study	\$150
M-37 (Broadmoor Avenue)	100th Street	92 nd Street	Monitor traffic operations, corridor study; operational improvements and/or additional lanes/ Pending further study results.	\$20 - \$40
US-131	Ann Street/I-96	M-57 (14 Mile Road)	Add additional through lanes / Operational Improvements expanded ITS, including Flex Route options/Pending further study and outcomes of 2027 US-131 flex lane project analysis between I-296 and Post Drive.	\$150
I-196	44 th Street	US-131	Corridor Study/Add through or add W/M lanes/Bridge replacements, mainline geometric improvements, Operational Improvements and/or expanded ITS	\$50 - \$200
I-96	Cascade Road	M-11 (28 th Street)	Add through or W/M lanes, expended ITS/ Pending further study	N/A
I-96	M-11 (28th St)	M-6 Interchange	Monitor I-96 and M-6 traffic operations, operational improvements and coordination w/ GRF Int'l Airport plans, and possible flex lanes/Pending further study.	N/A
I-96	M-44 Connector (Plainfield Avenue)	Leonard Street	Continue to monitor traffic operations, W/M lanes, expanded ITS/Pending further study	N/A

Roadway	From Location	To Location	Conceptual Alternative	Estimated Cost (\$ millions)
US-131	South County Line	100th Street	Continue to monitor traffic operations, possible additional through or W/M lanes, expanded ITS/Pending further study	\$20 - \$50
US-131	36th Street	M-11 (28th Street)	Monitor traffic operations, continue ITS expansion, possible W/M lanes/Pending further study	\$20
US-131	54 th Street	44 th Street	Monitor traffic operations, continue ITS expansion, possible W/M lanes/Pending further study	\$20
US-131	I-196	I-96 Interchange	Monitor traffic operations, continue ITS expansion, possible operational improvements/Pending further study. Possible operational improvements and study possible nonmotorized tunnel improvements.	N/A
I-96	Walker Avenue	M-44 Connector (Plainfield Ave)	Add W/M lanes, operational improvements/expanded ITS/Pending further study	N/A
I-96	At Forest Hill Avenue		Bridge replacement, including Non-Motorized facility, in coordination with city of Kentwood.	\$30
I-96	At Burton Street		Bridge replacement, widening, including Non-Motorized facility, in coordination with Kent County Road Commission Burton Street improvements	\$10
M-21 (E. Fulton Street)	Pettis Avenue	City of Lowell	Operational and safety improvements/Pending further study	N/A
M-37 (East Beltline)	North of Lake Eastbrook Boulevard	M-21 (E. Fulton Street)	Monitor traffic operations/Operational improvements, ITS/Pending further study	N/A
M-37 (East Beltline)	M-11 (28th Street)	Lake Eastbrook Boulevard	Access management and pedestrian/Vulnerable Road User (VRU) crossing improvements	N/A

Roadway	From Location	To Location	Conceptual Alternative	Estimated Cost (\$ millions)
M-37 (Alpine Avenue)	I-96	6 Mile Road	Corridor study/Operational improvements, and access management/Pending further study and coordination with Walker and Alpine Township studies	N/A
M-44 (Northland Drive)	M-44 Connector (Plainfield Ave)	West River Drive	Monitor traffic operations/Operational improvements, ITS/Pending further study	N/A
M-44 (East Beltline)	Knapp Street	M-44 Connector (Plainfield Avenue)	Monitor traffic operations/Operational improvements, ITS/Pending further study	N/A
M-44 Connector (Plainfield Ave)	I-96	M-44 (East Beltline)	Access management and operational analysis; possible pedestrian improvements/Pending further study	N/A
M-57	US-131	Greenville	Monitor traffic operations, operational improvements/Pending further study	N/A

**Estimates include applicable preservation costs along with improvement costs*

Other Unfunded state and local Projects/Studies/Needs

1. Regional Rail Freight Study
2. East Beltline Transit Feasibility Study
3. North Kent County Freight Access Study
4. Development of Land Use Model
5. WMX - Holland to Grand Rapids transit service
6. Grand Rapids-Detroit/Chicago Rail Passenger Service-Alternative Analysis

Transit Illustrative (Unfunded) Projects

Project	Jurisdiction	Facility Type	Conceptual Improvement	Est Total Cost
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2024	\$ 472,807
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2025	\$ 502,434
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2026	\$ 492,807
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2027	\$ 502,434
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2028	\$ 512,483
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2029	\$ 522,732
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2030	\$ 533,187
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2031	\$ 543,851
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2032	\$ 554,728
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2033	\$ 565,822
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2034	\$ 577,139
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2035	\$ 588,682
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2036	\$ 600,455
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2037	\$ 612,464
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2038	\$ 624,714
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2039	\$ 637,208
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2040	\$ 649,952
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2041	\$ 662,951
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2042	\$ 676,210
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2043	\$ 689,734
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2044	\$ 703,529
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2045	\$ 717,599
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2046	\$ 731,951
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2047	\$ 746,590
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2048	\$ 761,522
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2049	\$ 776,753
Miscellaneous Capital Needs	ITP/The Rapid	Transit	Miscellaneous Capital Needs in 2050	\$ 792,288
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2024	\$ 200,000
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2025	\$ 2,700,000

Project	Jurisdiction	Facility Type	Conceptual Improvement	Est Total Cost
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2026	\$ 2,700,000
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2027	\$ 200,000
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2028	\$ 1,508,492
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2029	\$ 1,583,916
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2030	\$ 1,663,112
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2031	\$ 1,746,267
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2032	\$ 1,833,581
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2033	\$ 1,925,260
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2034	\$ 2,021,523
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2035	\$ 2,122,599
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2036	\$ 2,228,729
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2037	\$ 2,340,165
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2038	\$ 2,457,174
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2039	\$ 2,580,032
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2040	\$ 2,709,034
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2041	\$ 2,844,486
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2042	\$ 2,986,710
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2043	\$ 3,136,046
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2044	\$ 3,292,848
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2045	\$ 3,457,490
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2046	\$ 3,630,365
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2047	\$ 3,811,883
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2048	\$ 4,002,477
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2049	\$ 4,202,601
Facility Expansion/Maintenance	ITP/The Rapid	Transit	Facility Expansion/Maintenance in 2050	\$ 4,412,731
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2024	\$ 8,176,165
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2025	\$ 8,616,420
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2026	\$ 6,000,000
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2027	\$ 6,000,000
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2028	\$ 9,404,183
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2029	\$ 9,592,266
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2030	\$ 9,784,111

Project	Jurisdiction	Facility Type	Conceptual Improvement	Est Total Cost
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2031	\$ 9,979,794
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2032	\$ 10,179,390
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2033	\$ 10,382,977
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2034	\$ 10,590,637
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2035	\$ 11,014,262
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2036	\$ 11,234,548
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2037	\$ 11,459,239
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2038	\$ 11,688,423
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2039	\$ 11,922,192
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2040	\$ 12,160,636
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2041	\$ 12,403,848
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2042	\$ 12,651,925
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2043	\$ 12,904,964
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2044	\$ 13,163,063
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2045	\$ 13,426,324
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2046	\$ 13,694,851
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2047	\$ 13,968,748
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2048	\$ 14,248,123
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2049	\$ 14,533,085
Replacement of fixed-route buses	ITP/The Rapid	Transit	Replacement of fixed route buses in 2050	\$ 14,823,747
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2025	\$ -
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2026	\$ -
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2027	\$ -
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2028	\$ 1,000,000
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2029	\$ 1,000,000
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2030	\$ 1,000,000
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2031	\$ 1,000,000
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2032	\$ 1,000,000
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2033	\$ 1,020,000
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2034	\$ 1,040,400
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2035	\$ 1,061,208
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2036	\$ 1,082,432

Project	Jurisdiction	Facility Type	Conceptual Improvement	Est Total Cost
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2037	\$ 1,104,081
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2038	\$ 1,126,162
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2039	\$ 1,148,686
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2040	\$ 1,171,659
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2041	\$ 1,195,093
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2042	\$ 1,218,994
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2043	\$ 1,243,374
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2044	\$ 1,268,242
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2045	\$ 1,293,607
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2046	\$ 1,319,479
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2047	\$ 1,345,868
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2048	\$ 1,372,786
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2049	\$ 1,400,241
Expansion of fixed-route buses	ITP/The Rapid	Transit	Expansion of fixed route buses in 2050	\$ 1,428,246
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2024	\$ 2,449,500
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2025	\$ 1,665,656
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2026	\$ 1,911,339
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2027	\$ -
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2028	\$ 871,358
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2029	\$ 888,785
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2030	\$ 906,561
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2031	\$ 924,692
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2032	\$ 943,186
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2033	\$ 962,050
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2034	\$ 981,291
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2035	\$ 1,000,916
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2036	\$ 1,020,935
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2037	\$ 1,041,353
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2038	\$ 1,062,180
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2039	\$ 1,083,424
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2040	\$ 1,105,092
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2041	\$ 1,127,194

Project	Jurisdiction	Facility Type	Conceptual Improvement	Est Total Cost
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2042	\$ 1,149,738
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2043	\$ 1,172,733
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2044	\$ 1,196,188
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2045	\$ 1,220,111
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2046	\$ 1,244,514
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2047	\$ 1,269,404
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2048	\$ 1,294,792
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2049	\$ 1,320,688
Replacement of paratransit buses	ITP/The Rapid	Transit	Replacement of paratransit buses in 2050	\$ 1,347,102
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2024	\$ 640,000
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2025	\$ 640,000
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2026	\$ 640,000
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2027	\$ 740,000
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2028	\$ 835,701
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2029	\$ 852,415
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2030	\$ 869,464
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2031	\$ 886,853
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2032	\$ 904,590
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2033	\$ 922,682
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2034	\$ 941,135
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2035	\$ 959,958
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2036	\$ 979,157
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2037	\$ 998,740
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2038	\$ 1,018,715
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2039	\$ 1,039,090
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2040	\$ 1,059,871
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2041	\$ 1,081,069
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2042	\$ 1,102,690
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2043	\$ 1,124,744
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2044	\$ 1,147,239
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2045	\$ 1,170,184
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2046	\$ 1,193,587

Project	Jurisdiction	Facility Type	Conceptual Improvement	Est Total Cost
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2047	\$ 1,217,459
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2048	\$ 1,241,808
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2049	\$ 1,266,644
Information Technology Needs	ITP/The Rapid	Transit	Information Technology Needs in 2050	\$ 1,291,977
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2024	\$ 1,781,089
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2025	\$ 877,295
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2026	\$ 3,028,920
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2027	\$ 2,235,211
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2028	\$ 1,861,242
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2029	\$ 1,898,467
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2030	\$ 1,936,436
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2031	\$ 1,975,165
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2032	\$ 2,014,668
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2033	\$ 2,054,962
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2034	\$ 2,096,061
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2035	\$ 2,137,982
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2036	\$ 2,180,742
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2037	\$ 2,224,357
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2038	\$ 2,268,844
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2039	\$ 2,314,221
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2040	\$ 2,360,505
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2041	\$ 2,407,715
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2042	\$ 2,455,869
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2043	\$ 2,504,987
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2044	\$ 2,555,087
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2045	\$ 2,606,188
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2046	\$ 2,658,312
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2047	\$ 2,711,478
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2048	\$ 2,765,708
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2049	\$ 2,821,022
Bus Maintenance Capital Needs	ITP/The Rapid	Transit	Bus Maintenance Capital Needs in 2050	\$ 2,877,442
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2024	\$ 4,700,000

Project	Jurisdiction	Facility Type	Conceptual Improvement	Est Total Cost
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2025	\$ 4,700,000
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2026	\$ 4,700,000
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2027	\$ 4,700,000
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2028	\$ 4,794,000
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2029	\$ 4,889,880
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2030	\$ 4,987,678
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2031	\$ 5,087,431
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2032	\$ 5,189,180
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2033	\$ 5,292,963
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2034	\$ 5,398,823
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2035	\$ 5,506,799
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2036	\$ 5,616,935
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2037	\$ 5,729,274
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2038	\$ 5,843,859
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2039	\$ 5,960,736
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2040	\$ 6,079,951
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2041	\$ 6,201,550
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2042	\$ 6,325,581
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2043	\$ 6,452,093
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2044	\$ 6,581,135
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2045	\$ 6,712,757
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2046	\$ 6,847,013
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2047	\$ 6,983,953
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2048	\$ 7,123,632
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2049	\$ 7,266,104
Capitalized Operating Expense	ITP/The Rapid	Transit	Capitalized Operating Expense in 2050	\$ 7,411,427
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2024	\$ 1,483,580
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2025	\$ 1,483,580
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2026	\$ 1,483,580
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2027	\$ 1,483,580
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2028	\$ 1,498,416
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2029	\$ 1,513,400

Project	Jurisdiction	Facility Type	Conceptual Improvement	Est Total Cost
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2030	\$ 1,528,534
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2031	\$ 1,543,819
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2032	\$ 1,559,257
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2033	\$ 1,574,850
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2034	\$ 1,590,599
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2035	\$ 1,606,505
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2036	\$ 1,622,570
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2037	\$ 1,638,795
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2038	\$ 1,655,183
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2039	\$ 1,671,735
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2040	\$ 1,688,452
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2041	\$ 1,705,337
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2042	\$ 1,722,390
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2043	\$ 1,739,614
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2044	\$ 1,757,010
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2045	\$ 1,774,580
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2046	\$ 1,792,326
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2047	\$ 1,810,250
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2048	\$ 1,828,352
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2049	\$ 1,846,636
Bus Rapid Transit State of Good Repair	ITP/The Rapid	Transit	Bus Rapid Transit State of Good Repair 2050	\$ 1,865,102
				\$ 736,982,342

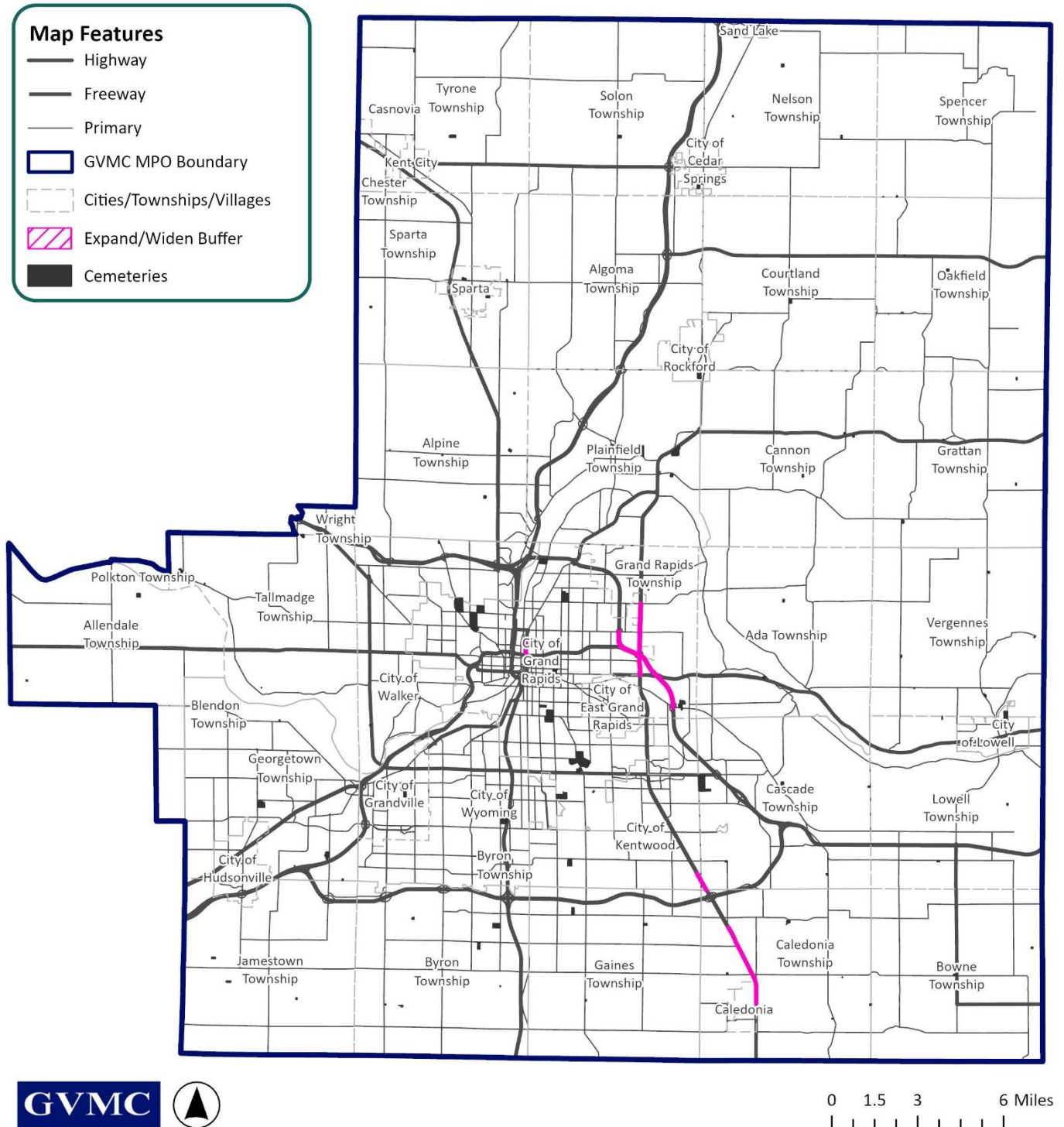


Appendix K: Environmental Mitigation Maps

This appendix contains the following environmental mitigation maps, which are referenced in Chapter 9:

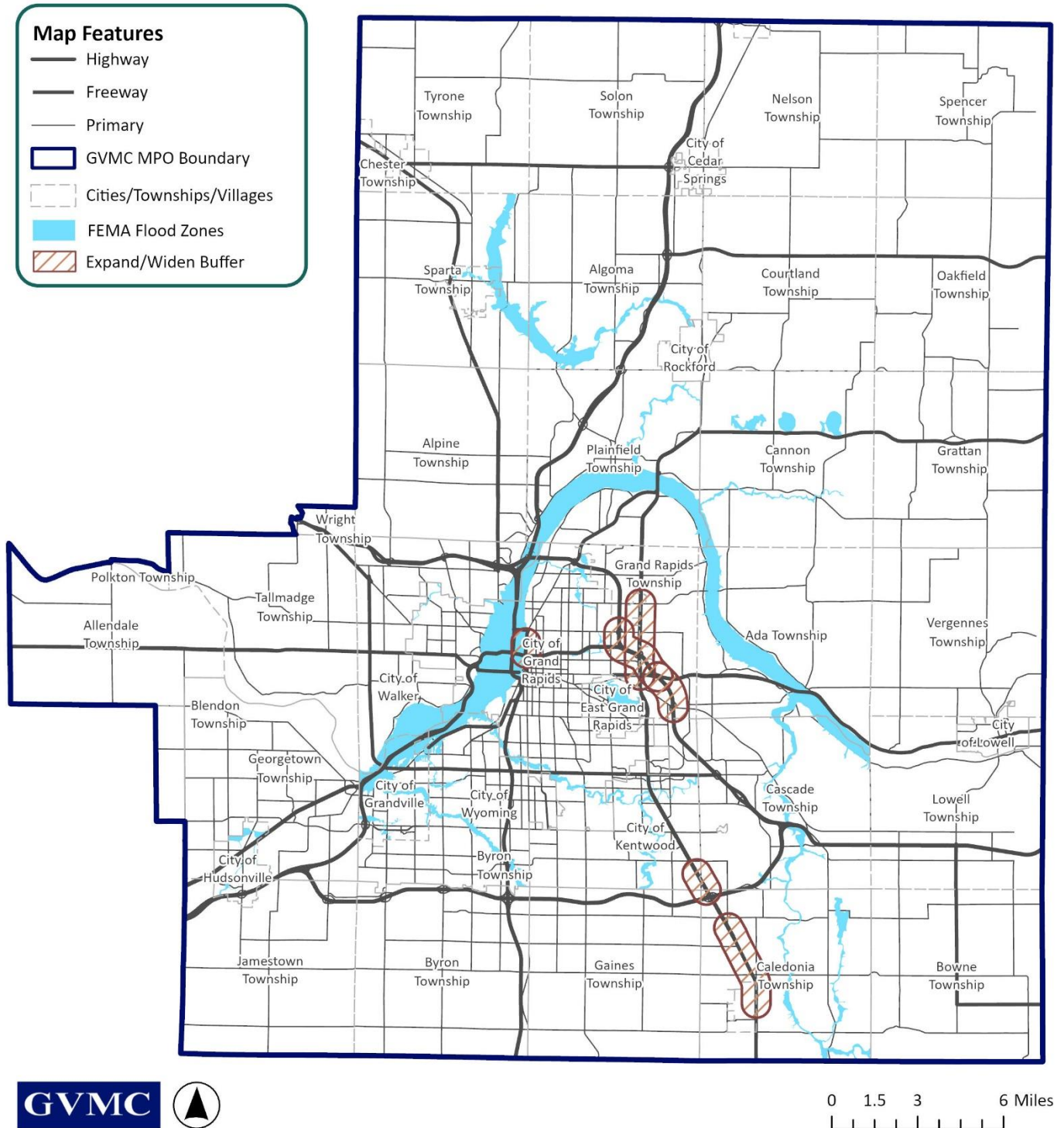
- (1) Cemeteries
- (2) Flood zones
- (3) Historic Sites and Structures
- (4) Parks
- (5) Water Features
- (6) Wetlands
- (7) Woodlands

Environmental Mitigation: Cemeteries



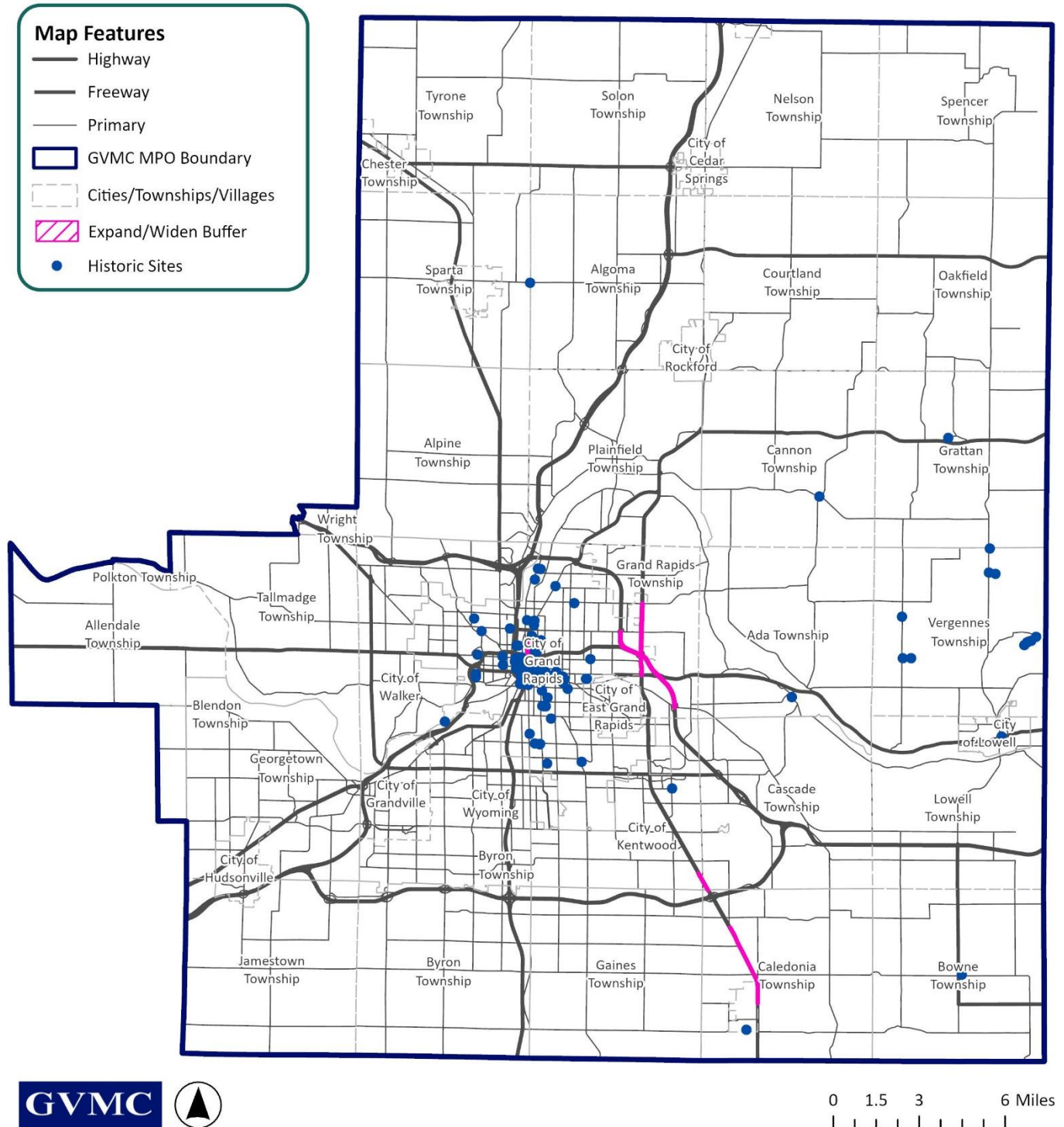
Map 23: Environmental Mitigation: Cemeteries

Environmental Mitigation: Flood Zones



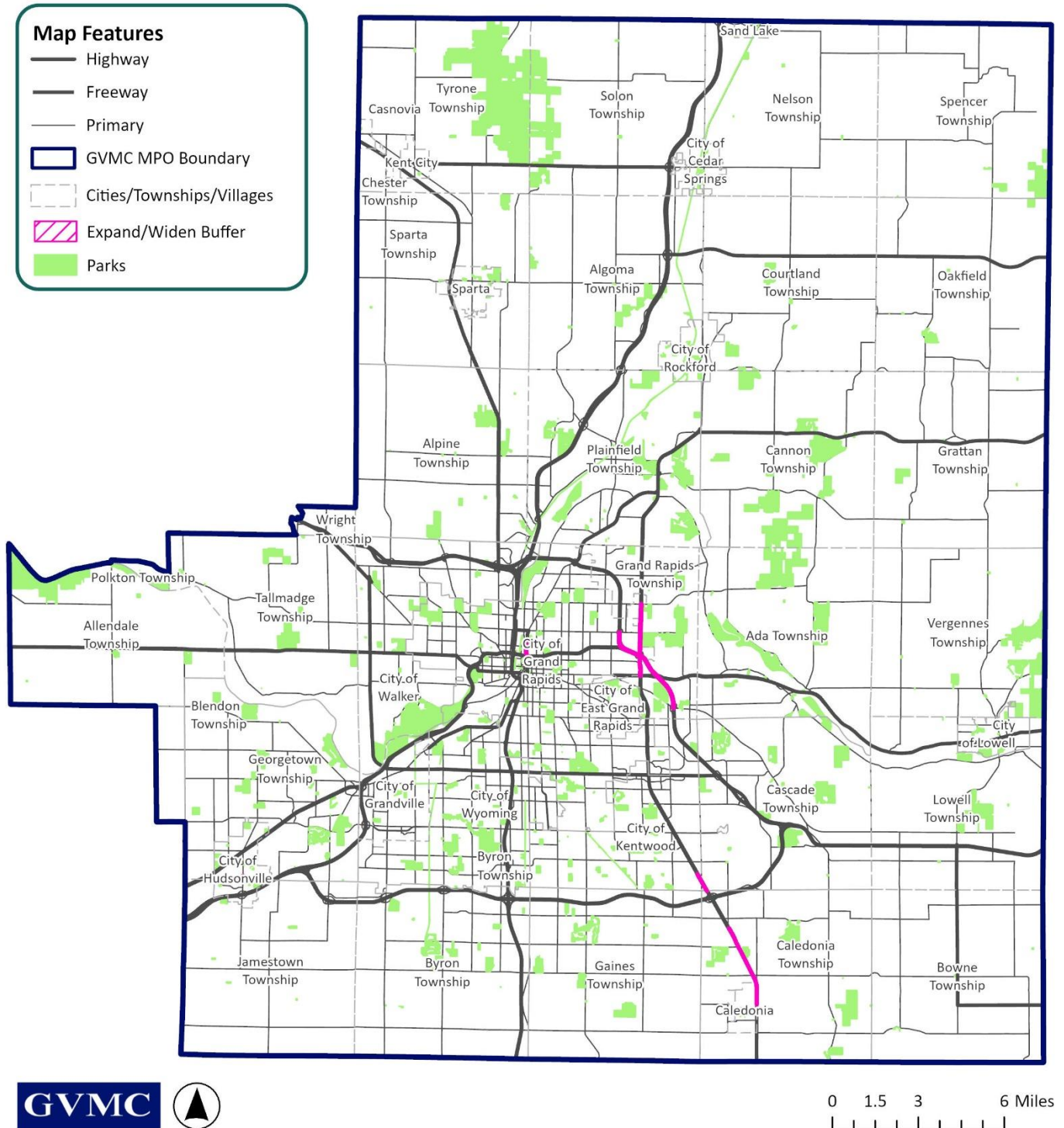
Map 24: Environmental Mitigation: Flood Zones

Environmental Mitigation: Historic Sites



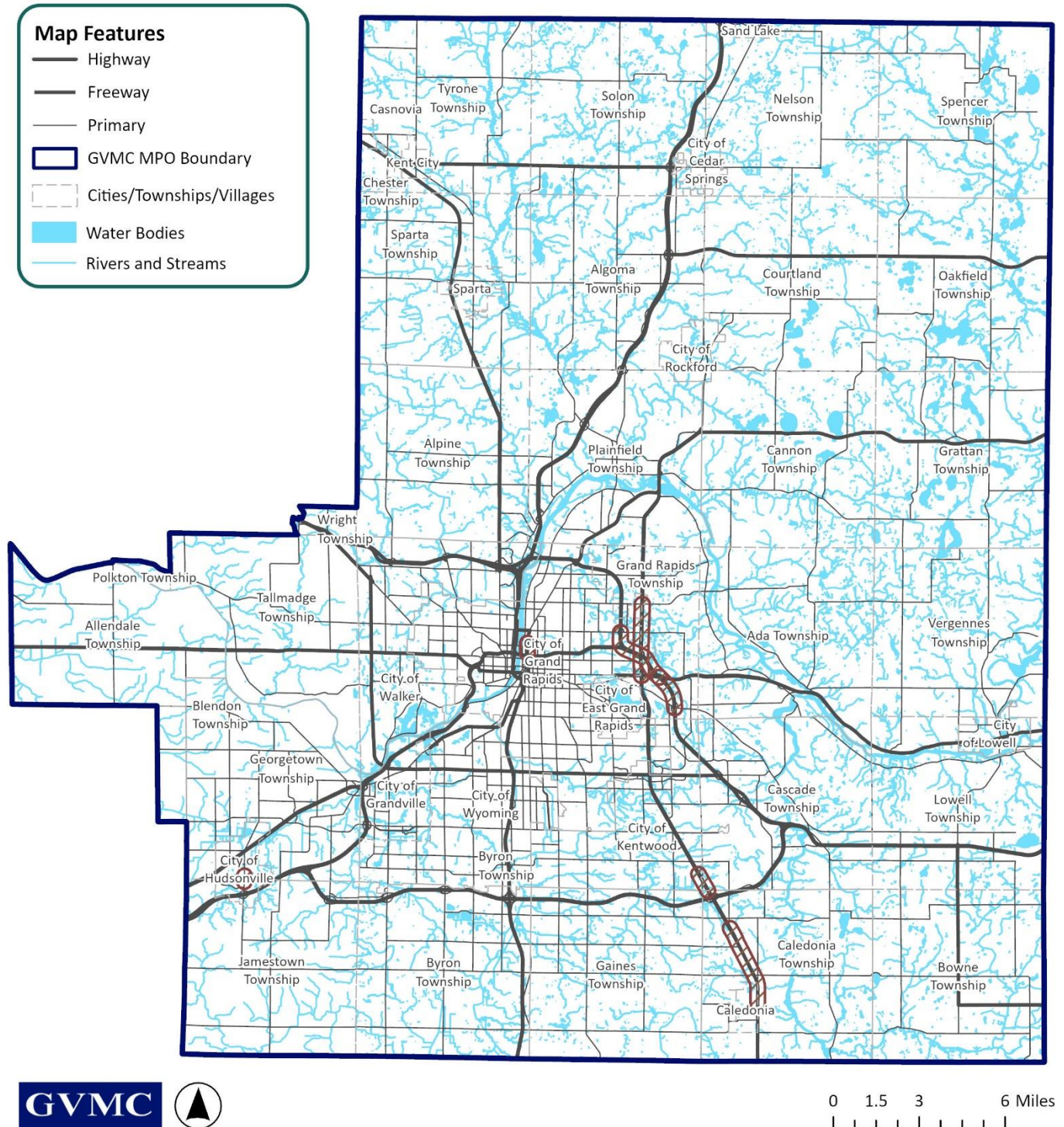
Map 25: Environmental Mitigation: Historic Sites

Environmental Mitigation: Parks



Map 26: Environmental Mitigation: Parks

Environmental Mitigation: Water Features

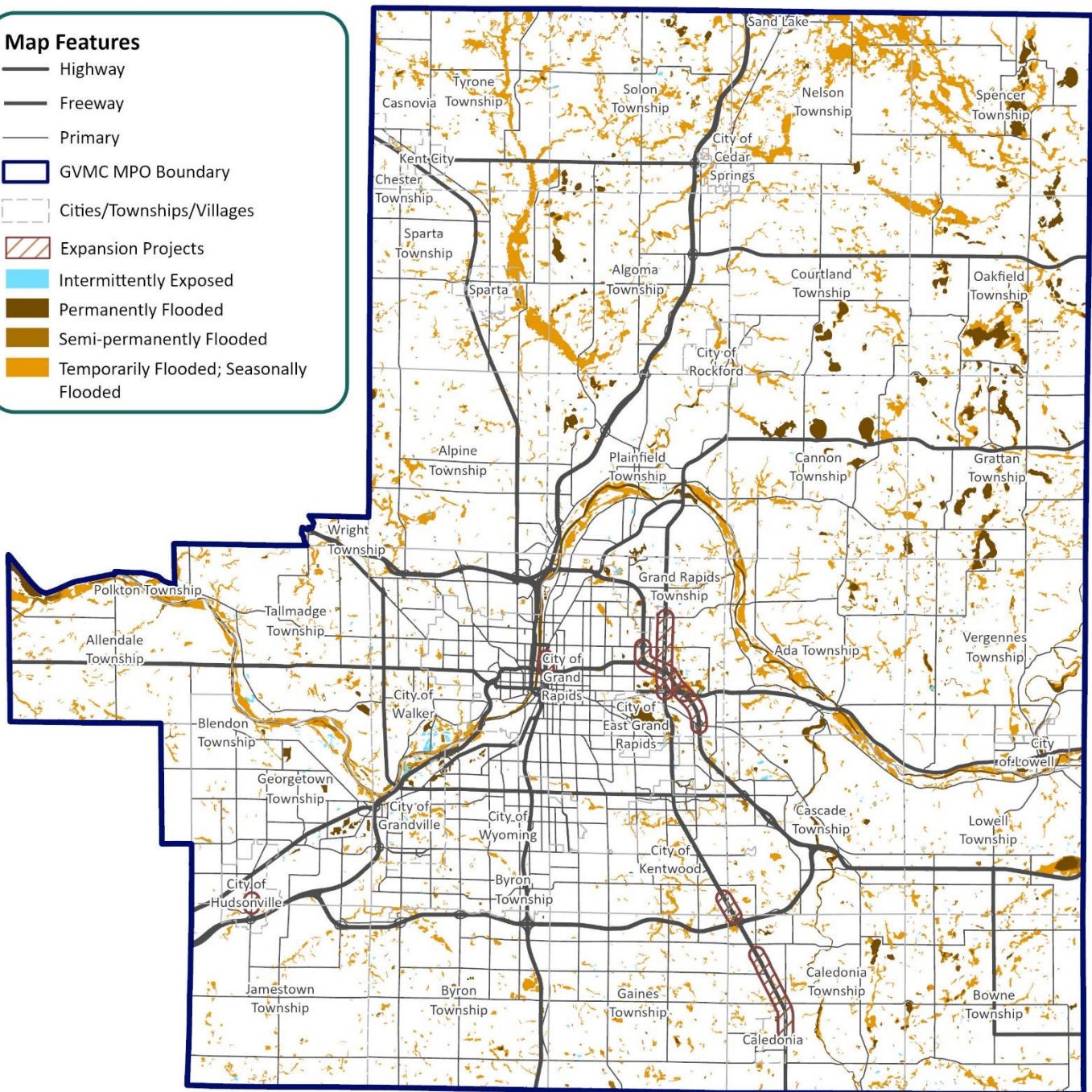


Map 27: Environmental Mitigation: Water Features


Environmental Mitigation: Wetlands

Map Features

-  Highway
-  Freeway
-  Primary
-  GVMC MPO Boundary
-  Cities/Townships/Villages
-  Expansion Projects
-  Intermittently Exposed
-  Permanently Flooded
-  Semi-permanently Flooded
-  Temporarily Flooded; Seasonally Flooded



0 1.5 3 6 Miles

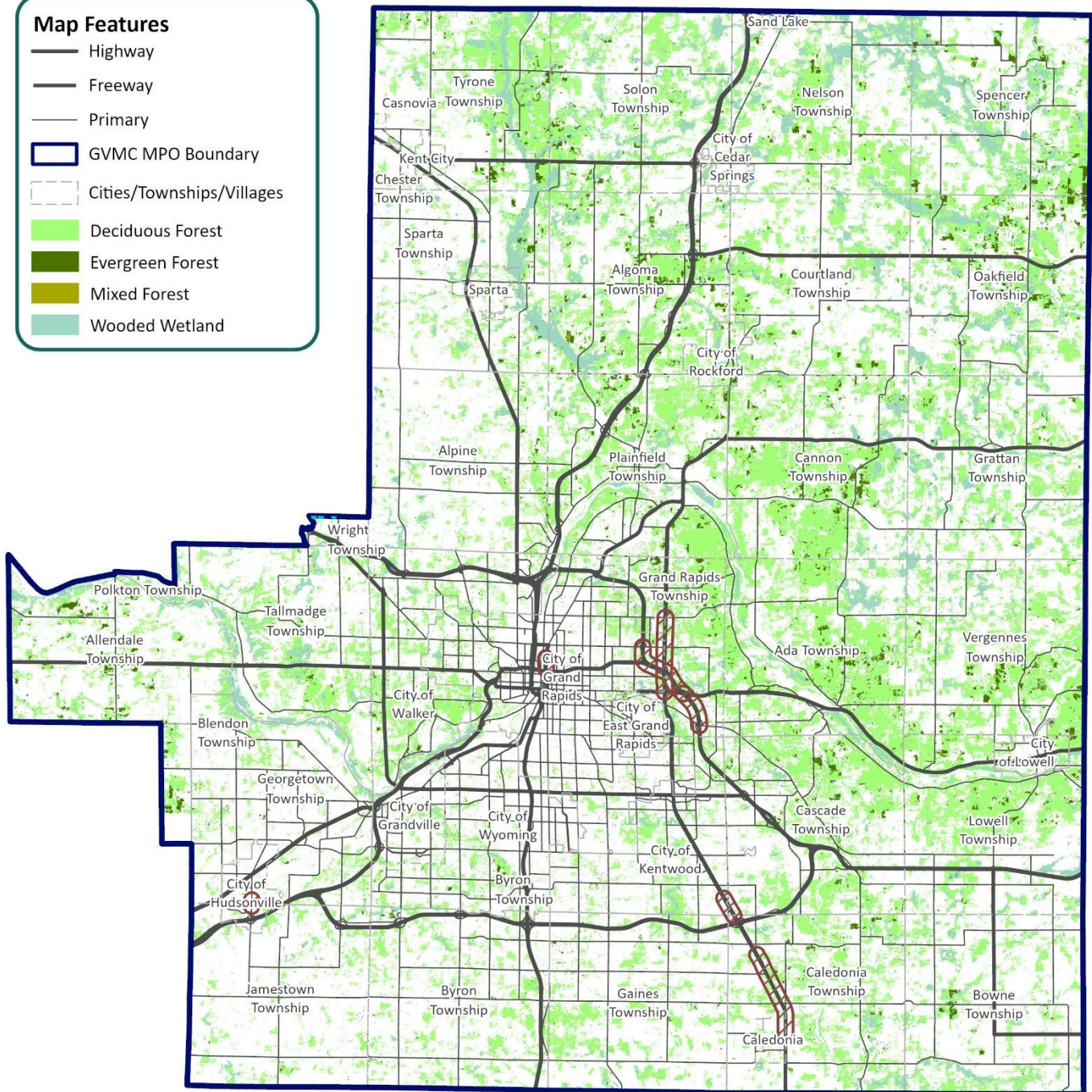


Map 28: Environmental Mitigation: Wetlands


Environmental Mitigation: Woodlands

Map Features

-  Highway
-  Freeway
-  Primary
-  GVMC MPO Boundary
-  Cities/Townships/Villages
-  Deciduous Forest
-  Evergreen Forest
-  Mixed Forest
-  Wooded Wetland



0 1.5 3 6 Miles



Map 29: Environmental Mitigation: Woodlands