

***EXECUTIVE
SUMMARY***
***2040 Metropolitan
Transportation Plan***

for the
**Battle Creek Area
Transportation Study**

November, 2016
601 Avenue A, Springfield, MI 49037
269/963-1158
e-mail: bcats@bcatsmpo.org

ACKNOWLEDGMENTS

This document partially fulfills the Federal requirements for the development of a twenty-year long range Transportation Plan by the Metropolitan Planning Organization (MPO), in this case the Battle Creek Area Transportation Study (BCATS). This Plan was prepared under work activity 2.0428 of the Unified Work Program of BCATS.

The contents of this report reflect the analysis, findings and recommendations of the BCATS planning process and do not necessarily represent programs or projects that have been approved for final funding and implementation by the Michigan Department of Transportation (MDOT), the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), or any local road or transit agency. The contents of this report do not necessarily reflect the official views or polity of the U.S. Department of Transportation. This document does not constitute a standard, specification, or regulation. Final funding and implementation approvals are carried out through the Transportation Improvement Program process.

This Plan and document were financed by the following means: through grants from the FHWA and FTA; with funds provided by the MDOT (for its staff time); and locally with matching funds provided by the City of Battle Creek, the Calhoun County Road Department, and the City of Springfield.

The BCATS 2040 Metropolitan Transportation Plan was formally approved by the BCATS' Policy Committee on November 30, 2016.

Statement of Vision **2040 Metropolitan Transportation Plan**

"The 2040 Metropolitan Transportation Plan for the Battle Creek Area Transportation Study is a vision of the area's transportation system through the year 2040. The transportation improvements in the first four years (2017-2020) of the Plan are considered firm commitments by the implementing agencies. This means that the improvements in the first four years will be completed unless unforeseen circumstances prevent completion. The remaining years of the Plan are a vision of how the transportation system may develop based on the existing master and zoning plans of the cities and townships in the Battle Creek Area Transportation Study area, transit development programs, and the current projections of available revenues. The transportation improvements in the later years (2021-2040) represent current priorities for the future. The transportation plan is updated every four to five years and the priorities for the later years can and will change as conditions warrant."

Battle Creek Area Transportation Study

601 Avenue A — Springfield, MI 49037

269/963-1158

e-mail: bcats@bcatsmpo.org — website: www.bcatsmpo.org

Battle Creek Area Transportation Study
2040 Metropolitan Transportation Plan

November 2016

EXECUTIVE SUMMARY

The Battle Creek Area Transportation Study (BCATS), as the Metropolitan Planning Organization (MPO) for the greater Battle Creek, Michigan area, is charged by the Federal Department of Transportation (DOT) with maintaining a continuing, comprehensive, and cooperative transportation planning program. At present, this charge includes the development of a transportation plan, with a minimum horizon of 20-years, that is fiscally constrained by reasonably available revenues, and meets the conditions of air quality conformity, where applicable.

The development and content of this plan is mandated by federal legislation, starting with the "Intermodal Surface Transportation Efficiency Act" (ISTEA) of 1991, followed by the Transportation Equity Act for the 21st Century" (TEA-21) in 1998, the "Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) legislation in 2005, the Moving Ahead for Progress in the 21st Century (MAP-21) in 2012 and finally the Fixing America's Surface Transportation Act (FAST Act) in 2015. Each of these pieces of legislation had accompanying implementing regulations. The last update of the BCATS transportation plan was approved locally in June, 2011. This current update of the transportation plan, with a horizon year of 2040 was not required to meet the air quality conformity requirements of the USEPA (see Chapter XVII of the *Plan* document). The *2040 Metropolitan Transportation Plan* was approved by the BCATS Policy Committee on November 30, 2016. A copy of the approving resolution is included as the last page of this *Executive Summary*.

GOALS & OBJECTIVES

An important first step in any planning effort is the development of goals & objectives to support and to provide direction for the planning work to come. Goals & objectives reflect the values and desires of the individuals setting them. Goals & objectives are also valuable in measuring the effectiveness and success of the plans that are developed. Some of the objectives may compete or conflict with one another. This is to be expected, as the goals & objectives are broad in nature and designed to deal with many issues. It is the responsibility of the policy decision-makers to weigh the trade-offs between the goals & objectives when evaluating the plans and programs developed to address the needs of the community. It must be recognized that BCATS by itself cannot implement projects or improvements to directly satisfy the stated goals & objectives; however, BCATS provides a forum for coordinated decisions to be made cooperatively in the best interests of the greater Battle Creek area.

In developing goals & objectives for the Plan, and for BCATS in general, several existing plans and policy statements were considered as input, including: BCATS' previously adopted Goals & objectives from the 2035 Long Range Transportation Plan, Michigan Department of Transportation goals for the MI Transportation Plan (see chapter IX), State of Michigan Strategic Highway Safety Plan for 2009-2012, and FHWA's MAP-21/FAST Act rules and regulations which could be utilized during Plan development.

MAP-21/FAST Act requires transportation plans which involve all levels of government and all surface transportation modes. The intent of MAP-21/FAST ACT is to improve transportation and provide for consideration of projects and strategies that:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency
2. Increase the safety of the transportation system for motorized and non-motorized users
3. Increase the security of the transportation system for motorized and non-motorized users
4. Increase accessibility and mobility of people and freight
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
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight
7. Promote efficient system management and operation
8. Emphasize the preservation of the existing transportation system
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation
10. Enhance travel and tourism

The MPO plans are coordinated with the state plans (as noted above) and the statewide planning process. The following goals & objectives were reaffirmed by the BCATS Policy Committee as part of the plan update process to guide this minor update of the *2035 Transportation Plan* to a horizon year of 2040. A complete representation of the goals & objectives for the *Plan* is included in Chapter III of the full *2040 Metropolitan Transportation Plan* document.

GOAL 1: SAFETY

To minimize the loss of life, injuries, and property damage resulting from travel on all modes within the BCATS area

GOAL 2: ACCESSIBILITY

To provide all travelers in the community with reasonable access to important destinations such as: residence, employment, recreation, community facilities and commercial centers

GOAL 3: PRESERVATION

To preserve the investment in the area's transportation system

GOAL 4: EFFICIENCY

To achieve maximum efficiency, utilization, and performance from the transportation system

GOAL 5: FINANCIAL

To minimize the financial costs of the transportation system to travelers and the community as a whole

GOAL 6: COMPREHENSIVE PLANNING

To coordinate the planning and development of transportation facilities within the metropolitan area and in conjunction with countywide and statewide planning efforts

GOAL 7: PUBLIC INVOLVEMENT

To provide for public involvement in the planning and development of transportation facilities and services

GOAL 8: ENVIRONMENTAL IMPACTS

To avoid disrupting social and economic life or creating a less attractive or less healthy living environment for Battle Creek area residents due to unintended harmful effects of transportation on the immediate and global environment

GOAL 9: COMMUNITY IMPACT

To avoid and reduce conflicts between transportation facilities and land use

PUBLIC PARTICIPATION

MAP-21/FAST Act legislation continued the requirements of SAFETEA-LU relative to the public participation process for its predecessor legislation relative to the participation of the public and other interested parties in the transportation planning process. The metropolitan transportation planning regulations originating under SAFETEA-LU specify that:

"The MPO shall develop and use a documented participation plan that defines a process for providing citizens, affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with reasonable opportunities to be involved in the metropolitan transportation planning process."

To this end, BCATS developed the required "Participation Plan", which was approved by the BCATS Policy Committee on December 20, 2006. That original participation plan was updated and approved by the BCATS Policy Committee in July, 2014. A listing of interested parties included in the notification process is included in the full *2040 Metropolitan Transportation Plan* document, Chapter IV - Public Participation.

BCATS provided updates relative to plan development throughout the process, at its regular Committee meetings, online, with newsletters/flyers distributed by e-mail and regular mail and also made available at public facilities across the area, and with a November 10, 2016 public notice in the *Battle Creek Enquirer*. Copies of the newsletter/flyers associated with the plan development, and the public notice are included in the full *2040 Metropolitan Transportation Plan* document, Chapter IV - Public Participation.

CONSULTATION

A requirement for the development of long range plans, since the implementing regulations of SAFETEA-LU back in 2005, is the aspect of “Consultation” with federal, state, and local entities that are responsible for the following:

- Economic growth and development
- Environmental protection
- Airport operations
- Freight movement
- Land use management
- Natural resources
- Conservation
- Historic preservation
- Human service transportation providers

The goal of this process is to eliminate or minimize conflicts with other agencies’ plans and programs that impact transportation, or for which transportation decisions may impact them. A complete listing of contact agencies and organizations is included in the full *2040 Metropolitan Transportation Plan* document in Chapter V - Consultation.

BCATS received comments from some agencies when an initial contact letter was sent out in January, 2007 as part of the *2030 Transportation Plan* consultation process. The comments/issues generated by the 2007 letter that were still relevant were considered in this update of the 2035 plan to a 2040 horizon. The consultation mailing list received the same newsletter information about this plan update process as those on the public participation list. BCATS did not receive any new comments relative to the 2040 Plan update from those on the consultation list. This *Executive Summary*, as well as the full *2040 Metropolitan Transportation Plan* document are available on the BCATS website for consultation at any time.

INTERMODAL CONSIDERATIONS

Three chapters in the *2040 Metropolitan Transportation Plan* are devoted to the consideration of modes other than highways which are utilized for the movement of people and goods in the BCATS area. The modes reviewed included: aviation, rail, trucking, pedestrian, non-motorized, transit, taxicab, intercity bus, and ride-sharing. Transit provided information for the inclusion of transit projects in the overall Plan project listing. Ongoing work done in the planning & implementation of non-motorized projects by the local agencies is supported by BCATS within programming of its own long range transportation plan.

COORDINATION WITH THE STATE LONG RANGE PLAN & LONG RANGE PLANNING

Federal regulations require that BCATS’ Plan coordinate with statewide long range plans required of the state. In July 2016, the Michigan Department of Transportation (MDOT) updated its own long range transportation plan, called the *MI Transportation Plan: Moving Michigan Forward - 2040 State Long-Range Transportation Plan*. The plan sets forth four goals that reflect the same focus as the BCATS Plan goals for the transportation system. Those goals are:

1. System Improvement: Modernize and enhance the transportation system to improve mobility and accessibility.
2. Efficient and Effective Operations: Improve the efficiency and effectiveness of the transportation system and transportation services and expand MDOT’s coordination and collaboration with partners.
3. Safety and Security: Continue to improve transportation safety and ensure the security of the transportation system.
4. Stewardship: Preserve transportation system investments, protect the environment, and utilize public resources in a responsible manner.

MDOT also has updated its State Highway Safety Plan (SHSP), with the most current edition being the *State of Michigan Strategic Highway Safety Plan - 2013-2016*. The current Michigan Governor, Rick Snyder, has issued an energy policy statement that identifies actions and policies in regard to Michigan’s energy future. The focus areas are affordability, adaptability, reliability, and protecting the environment. BCATS has taken these state plans and priorities into consideration in the development of the BCATS *2040 Metropolitan Transportation Plan*.

IDENTIFICATION OF RECOMMENDED PROJECTS FOR THE *2040 METROPOLITAN TRANSPORTATION PLAN*

Future capacity deficiencies on the BCATS roadway network have been identified utilizing a computerized Travel Demand Forecast Model (TDFM) maintained by MDOT. Socio-economic data (population, households, and employment) in the model base year of 2010 were used to develop a simulation of traffic volumes and conditions on the area's roadways which are compared to known volumes and conditions in the same base year. Once the two sets of information are in relative agreement ("calibrated"), the projection of future socio-economic data allows for future traffic volumes to be approximated on the roadway network and for locations of future congestion (too many vehicles for the road design) to be identified. There were no significant future traffic capacity issues identified for the BCATS area using the TDFM.

Safety-related concerns are routinely identified through periodic review of crash data and discussions with staff of the area road agencies & Battle Creek Transit. Typical safety-related projects are largely intersection related, but may also deal with signal progression & other operational issues along corridors, and usually are implemented as short-term operating improvements not specified in long-range plans. One prominent safety-related concern in the BCATS area is the high level of vehicle/deer crashes; this *Plan* includes a discussion of that topic and identification of specific road segments where the levels are significant, although there are no available mitigation techniques for this type of crash.

Pavement rehabilitation projects are listed as "preservation" on the project list for specific improvements which would not be considered "expansion" in nature. The road agencies use pavement management assessment to develop schedules for pavement rehabilitation.

Public transit projects are listed in the project list and represent on-going funding for transit operations, security projects, vehicle replacement, and other types of capital improvements.

OPERATIONAL AND MANAGEMENT STRATEGIES

Federal requirements dictate that BCATS include "operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods." To this end, BCATS has identified a number of transportation strategies that it participates in and/or promotes which will achieve these objectives. These strategies include: asset management, capital preventative maintenance, general maintenance, safety projects, intelligent transportation system activities, access management, pedestrian and non-motorized improvement, and optimization of public transit services.

FINANCIAL PLAN

The federal regulations require an extensive review of the financial feasibility of the improvements included in the long range plan. The BCATS *2040 Metropolitan Transportation Plan* must be financially constrained, which means that there must be sufficient and reasonably available funds to carry-out the projects recommended in the *Plan*. Adequate funding necessary to maintain the existing transportation system must also be shown to exist so that the existing system is preserved. The regulations also require that all revenues and costs be inflated to "year of expenditure dollars" to most accurately reflect the validity of the financial constraint calculated. BCATS has conducted a lengthy process to determine costs and revenues in future dollars. Costs for the operations and maintenance of the of the existing system have been developed and projected over the life of the *Plan*. Based on all of this analysis, tables were developed which summarize available revenue and available costs over the life of the *Plan*. For detail about the development of any figures in the following tables, please see Chapter XIV - Financial Plan of the full *2040 Metropolitan Transportation Plan* document.

Summary of Available Revenues for the BCATS 2040 Metropolitan Transportation Plan

Projected Capital Revenues	Total \$
Federal Transportation Funds for Construction of Local Roads	50,199,000
Federal & State Funding for State Controlled Roadways in BCATS area	153,771,000
Federal/State/Local Transit Funding (operating and capital)	120,292,000
State funding for Operations/Maintenance of State Controlled Facilities	160,800,000
State & Local Funding for Construction and Operations/Maintenance of Local Roads	273,197,000
TOTAL	758,259,000

Summary of 2040 Metropolitan Transportation Plan Operations/Maintenance & Capital Expenditures 2017-2040 (Individual Projects are described in a detailed listing in Chapter XVI)

Operations/Maintenance (O/M) Expenditures for Local & State Roads	Total \$
Estimated Expenditures for O/M of Local Roads	173,557,000
Estimated Expenditures for O/M of State Roads	160,800,000
Planned Capital Expenditures	
Local Road Projects	
Improve/Expand (0 projects)	0
Preservation (17 projects - some multi-year)	33,389,026
Traffic Safety/Operations & Air Quality Improvements (9 projects)	1,891,284
Non-motorized Specific (0 projects)	0
Total	35,280,310
Transit Projects	
Preservation (operating expense projects) (2 multi-year projects)	115,526,976
All Transit Capital (vehicle replacement/addition or facility) (50 projects)	25,335,135
Security (annual) (1 project each year)	383,280
Total	141,245,391
State Projects	
Preservation (5 projects - some multi-year)	132,258,920
Traffic Safety/Operations & Air Quality Improvements (4 projects)	783,264
Bridges (9 projects)	37,281,000
Total	170,323,184
TOTAL CAPITAL EXPENDITURES	346,848,885
Total Expenditures	681,205,885

The total expenditures identified in the BCATS 2040 Metropolitan Transportation Plan are within the total federal, state, and local revenues estimated for the 2040 Metropolitan Transportation Plan. As shown in the following table, there is projected to be adequate revenue available for capital expenditures as well as for operations and maintenance expenditures for the transportation system. Therefore, the BCATS 2040 Metropolitan Transportation Plan is financially constrained.

**Demonstration of Financial Constraint for the
2040 Metropolitan Transportation Plan of the Battle Creek Area Transportation Study**

Total federal, state, and local revenues estimated to be available for road related construction, transit capital/operating and road related operations and maintenance of the major street/primary road system and state roadway system within the BCATS area	\$758,259,000
Expenditures for Operations/Maintenance of Local & State Roads	(\$334,357,000)
Expenditures for Local Road Improvement Projects	(\$35,280,310)
Expenditures for Transit Improvement Projects	(\$141,245,391)
Expenditures for State Improvement Projects	(\$171,323,184)
REMAINING BALANCE	\$77,053,115

ENVIRONMENTAL MITIGATION

Federal regulations require that BCATS include in its long range plan "a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the metropolitan transportation plan."

The goal of this process is to eliminate or minimize environmental impacts from the planned projects in the MPO's transportation plan. This applies primarily to the "improve and expand" type projects. However, addressing this issue in the transportation plan is not intended to be project specific. The owners of any future project are still required to meet all of the necessary requirements of the National Environmental Policy Act (NEPA) process.

In September, 2007, BCATS' Policy Committee adopted a set of guidelines for "Considering Environmental Issues in the Transportation Planning Process" for use by BCATS and the area's transportation agencies. The guidelines include areas of concern specifically identified by some of the agencies contacted under the "Consultation" efforts discussed above. These areas of concern include: farmlands, wetlands, drainage, flood plains, threatened and endangered species, impaired streams and other water bodies, air quality, and noise.

BCATS review of these issues led to the identification of environmental and cultural factors in the BCATS area which were reviewed relative to future transportation projects. The projects which have a specific location identified for them were assessed as to whether they may be in an area that might impact any of eleven selected factors. "Expansion" projects involving the location of a new roadway or widening of existing roads have the greatest potential for impacting multiple resource or cultural areas. There are currently no expansion projects included in the 2040 Plan update.

The environmental guidelines and the assessment table and project overlay maps related to this issue are located in Chapter XV - Environmental Mitigation of the full 2040 Metropolitan Transportation Plan document.

AIR QUALITY CONFORMITY

The Clean Air Act Amendments of 1990 (CAAA) established the mandate for better coordination between air quality and transportation planning. The CAAA requires that all transportation plans and transportation investments in non-attainment and maintenance areas be subject to an air quality conformity determination. The purpose of such a determination is to demonstrate that the *Metropolitan Transportation Plan (MTP)* and *Transportation Improvement Program (TIP)* conform to the intent and purpose of the State Implementation Plan (SIP). Effective July 20, 2013 the United States Environmental Protection Agency (USEPA) revoked the 1997 8-hour 0.080 parts per million (ppm) ozone standard for the purposes of regional transportation conformity. On July 20, 2013, the USEPA also issued designations for a new 8-hour 0.075ppm ozone standard.

This resulted in the Kalamazoo/Battle Creek, MI area being designated attainment under that standard at the present time. Therefore, no air quality conformity determination needs to be made on the BCATS *MTP* or *TIP* until changes are forthcoming from the USEPA. The status of the BCATS area will be monitored relative to air quality to determine if a conformity determination will need to be made on the *MTP* before the next regular update of the *Plan*.

ENVIRONMENTAL JUSTICE

In accordance with federal guidelines on Environmental Justice (EJ) that amplify Title VI of the Civil Rights Act, attention has been placed on the need to incorporate environmental justice principles into the processes and projects of transportation planning. Therefore, it is a regular component of the BCATS' plans and TIPs to evaluate the potential of planned improvements relative to negative impacts on areas with racial minorities, Hispanic populations, and populations with income below the poverty level.

The analysis completed for this component, which is included in detail in Chapter XVIII - Environmental Justice Analysis in the full 2040 *Metropolitan Transportation Plan* document, shows that there will be impacts to non-minority as well as minority and low-income populations as a result of the projects recommended in the 2040 *Metropolitan Transportation Plan*. However, none of the recommended projects involve residential displacements. Other construction related project impacts, such as noise, dust, and access inconvenience will be short-lived and confined to the traditional construction season. When looking at the most directly impacted residents (those within .10 mile of the recommend improvements) there is no glaring disproportional impact to any of the identified groups as compared to the area as a whole.

2040 METROPOLITAN TRANSPORTATION PLAN
RECOMMENDED IMPROVEMENTS

Nearly \$346.9 million in "year of expenditure dollars" would be expended through implementation of the 221 improvement "projects" recommended in the *Plan*. The 44 projects at specific locations where an improvement is proposed are listed in a table, and also displayed on a map, at the end of this *Executive Summary*. The "BCATS 2040 MTP ID" project numbers correspond to the mapped locations.

For discussion and evaluation, the proposed projects were designated one or more of ten "Project Types":	1.	Non-motorized	6.	Traffic Operations
	2.	Expansion (new or widened roads)	7.	Transit Operating
	3.	Preservation (of pavement)	8.	Transit Capital
	4.	Security (generally for transit)	9.	Bridges
	5.	Safety-Related	10.	Air Quality

For projects of multiple "Type", the first category listed is the predominant focus of the project and the category used in tabulating numbers of projects and total project costs by category. Following the map at the end of this *Executive Summary* is a graphic breakdown by project type, by the number of projects and by the total estimated costs of projects in each category.

Other road projects not on the list of "Site-Specific Recommended Improvements", as proposed in this *Plan*, include annual general projects to address pavement preservation on both "local" (non-State) and State trunkline roadways. Specific work for the "Preserve Strategy" projects are typically identified two or three years in advance and programmed accordingly into the Transportation Improvement Program (TIP) for implementation.

Both operating and capital expenditures for public transit are listed as "projects" in this *Plan*. Battle Creek Transit's (BCT's) annual operating cost, annual State "Specialized Services Operating Assistance" funds "passed through" BCT to local social service agencies, and an annual transit security capital improvement project (required by the Federal Transit Administration), are recommended as "projects" in each *Plan* year. Other BCT capital projects over the twenty-five years of the *Plan* include replacement of 82 vehicles, most for BCT but several for the local social service agencies, adding new & replacing bus passenger shelters, periodic upgrades of the electronic farebox system and the automatic vehicle locator/computer aided dispatch (AVL/CAD) system, and periodic renovation of BCT's maintenance garage & administrative offices.

Thirty “illustrative” projects are also referenced in the 2040 MTP, as discussed in Chapter XII - Transportation Deficiencies & Alternatives, and listed at the end of that chapter, and also below. “Illustrative” projects are generally less developed, without cost estimates or likely funding, but are identified in this *Plan* as options to be further developed over the next five years for possible recommendation in the next plan, to provide alternatives for situations considered “deficient” now or into the future, and to highlight conditions to be more closely monitored. Note these “illustrative” projects have no estimated costs or years of implementation, and were not included in the financial plan and determination of fiscal constraint presented in Chapter XIV.

2040 MTP “Illustrative” Projects

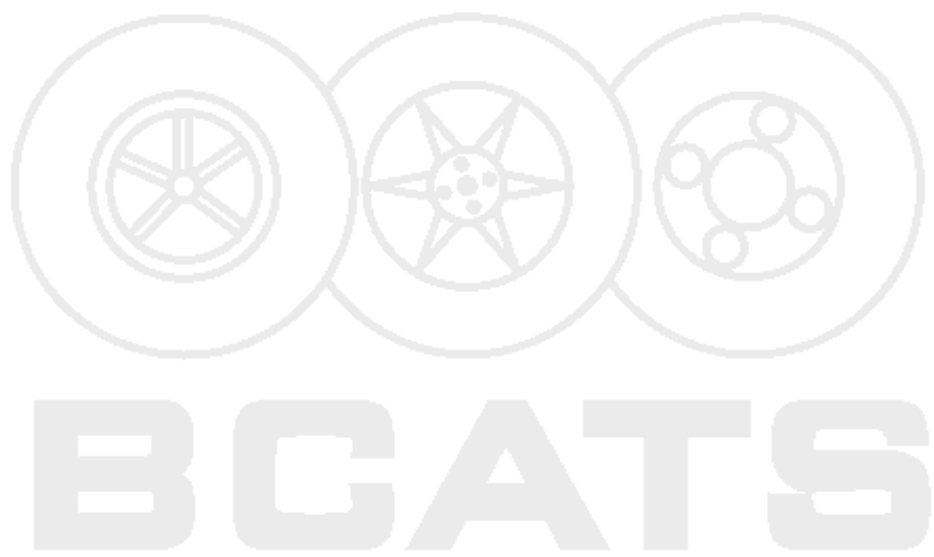
- A. **I-94 widening** (one additional thru lane in each direction), from Sprinkle Rd (I-94 exit 80 in Kalamazoo County) eastward across the BCATS metropolitan area to I-69 at I-94 exit 108 near Marshall.
- B. **I-94 eastbound loop exit ramp to M-311** (Wheatfield/11 Mile Rd) at I-94 exit 104; reconstruct & add capacity as warranted, with appropriate safety improvements..
- C. **M-311 (Wheatfield/11 Mile Rd)**, from M- 96 (Michigan Ave) northward to the intersection with Wheatfield Parkway & the westbound I-94 exit & entrance ramps; improve lane delineation, with widening & added turn lanes as necessary, including the 2 thru lane bridge over I-94 (listed as a separate “illustrative” bridge project).
- D. **M-96 (Michigan Ave E)**, from M-311 (Wheatfield/11 Mile Rd) eastward past Firekeepers’ Casino to metropolitan planning area (MPA) boundary (12 Mile Rd), and further towards Marshall as warranted. Add thru lanes & turn lanes pending nearby future commercial development & increased traffic.
- E. **M-66 (southbound)**, from I-94 southward to Beckley Rd; add capacity as warranted.
- F. **M-294 (Main St/6.5 Mile Rd Beadle Lake Rd)**, from M-96 (Columbia Ave) southward to the Main St split; widen as warranted, improve M-294/M-96 intersection with turn lanes on each approach as appropriate and traffic signal modernization.
- G. **I-194/M-66 southbound Exit 2 off ramp** to M-96 (Columbia Ave); extend two-lane section at M-96 intersection northward down ramp to add capacity as warranted.
- H. **M-96 (Dickman Rd & Columbia Ave) Traffic Signals**, optimize/modernize/upgrade numerous traffic signals along 12.4 miles of M-96 in Calhoun County.
- I. **M-89 (Michigan Ave) @ Augusta Dr**, reconfigure geometry & traffic control signing to favor southeast-bound thru traffic on state trunkline M-89.
- J. **M-89 (Michigan Ave) @ VanBuren St**, reconfigure geometry & traffic control signing to favor northwest-bound thru traffic on state trunkline M-89.
- K. **M-96 (Dickman Rd W) @ Armstrong Rd**. Extend the right-turn approach lanes on westbound M-96 and on southbound Armstrong Rd, add center left-turn lane on the eastbound M-96 approach. Consider full signalization & related geometric improvements pending possible development of US Dept of Defense missile base at Fort Custer Training Center, discussed in this chapter under “Needs Related to Economic Development”.
- L. **Avenue A @ 20th St**. Modernize & upgrade traffic signal(s) ,including interconnection to the control/warning signals at the railroad crossing of 20th St south of Avenue A.
- M. **20th St @ I-94BL (Dickman Rd)**. Remove southwest-bound diagonal crossover in the southeast quadrant of this intersection to shift travel from westbound Dickman Rd to southbound 20th St to the intersection itself.
- N. **I-94 Rest Area**. Reconstruction of Battle Creek Rest Area #703 on eastbound I-94, between Helmer Rd & Capital Ave, including replacement of existing building, parking lot improvements, sidewalks, ADA ramps, & associated site work.
- O. **M-311 (Wheatfield/11 Mile Rd) bridge over I-94**, at I-94 exit 104. Replace functionally obsolete 2-thru lane bridge with wider bridge aligned with widened approaches suggested as part of an “illustrative” capacity project.
- P. **Helmer Rd bridge over I-94**, at I-94 exit 95. Replace functionally obsolete 2-thru lane bridge with wider bridge to add non-motorized access and capacity as warranted, and consider geometric changes to improve sight lines at the bridge approaches’ intersections with both I-94 exit ramps.
- Q. **Comprehensive Non-Motorized Transportation Plan for BCATS Metropolitan Area**. Prepare planning document with mapped current and proposed future non-motorized transportation network.
- R. **M-96 (Dickman Rd) Trail**. Rehabilitate existing shared-use asphalt path along north side of M-96 (Dickman Rd), from Evergreen Rd/American Legion Dr intersection (just north of M-96 near former location of Avenue A intersection with M-96) westward into Kalamazoo County, to Fort Custer National Cemetery, and from there extend new path along M-96 to meet the existing Kalamazoo River Valley Trail (www.krvtrail.com) near Galesburg.
- S. **Battle Creek Linear Park**. Enhance Linear Park (www.bcparks.org/134/Linear-Park) west trailhead on the north side of M-96 (Dickman Rd) at Brady Rd, and improve signing along Linear Park.

- T. **Stringham Rd Non-Motorized Connector.** Modify Stringham Rd from Jackson St north to M-89 (Michigan Ave) to accommodate shared-use off-road path, connecting Linear Park to M-89 (Michigan Ave W).
- U. **Watkins Rd Corridor Non-Motorized Connector.** Develop new non-motorized facilities aligned along Watkins Rd corridor to connect existing non-motorized facilities on Helmer Rd & Capital Ave SW.
- V. **Pennfield Township Non-Motorized Connections.** Identify & develop non-motorized facilities in Pennfield Township to connect southward to existing City of Battle Creek non-motorized facilities.
- W. **Helmer Rd Non-Motorized Crossing over I-94.** Provide non-motorized access over I-94 on Helmer Rd (also part of “illustrative” bridge project to replace the “functionally obsolete” Helmer Rd bridge over I-94).
- X. **Calhoun County Trailway.** Extend existing Calhoun County Trailway from terminus at Historic Bridge Park eastward ~30 miles to meet the Falling Waters Trail near Concord in Jackson County.
- Y. **Battle Creek BCycle.** Promote local bicycle sharing program (<https://battlecreek.bcycle.com/>).
- Z. **I-94 exit 92 interchange, @ I-94BL/M-37 (Columbia Ave W).** Traffic signalization at the exit ramp intersections and geometric improvements such as minor widening for turn lanes, for possible increased traffic with potential location of a new US Dept of Defense Missile Defense Agency (MDA) Continental Interceptor Site (CIS) at the nearby Fort Custer Training Center.
- AA. **I-94BL/M-37 (Columbia Ave) @ Skyline Dr.** Increased traffic from the potential MDA CIS will necessitate signal timing modifications, and, should the main CIS entrance be located westward from the intersection, significant geometric revisions.
- BB. **M-96 (Dickman Rd) @ Hill Brady Rd.** Signal timing modifications for increased traffic from the potential MDA CIS.
- CC. **M-96 (Dickman Rd) @ Armstrong Rd.** Add new signalization & turn lanes at M-96 (Dickman Rd)/Armstrong Rd (identified previously as a “safety-related” illustrative project) for increased traffic from the potential MDA CIS.
- DD. **Hill Brady Rd-Logistics Dr @ Skyline Dr.** Revise signalization and geometry at Hill Brady Rd-Logistics Dr/Skyline Dr (to favor the typical traffic movement following Hill Brady Rd and Skyline Dr, with very limited traffic approaching the intersection westbound from Logistics Dr), for increased traffic from the potential MDA CIS.

CONCLUSION

This *Executive Summary* provides a very cursory review of the contents of the Battle Creek Area Transportation Study's 2040 *Metropolitan Transportation Plan* in an effort to have a succinct summary for interested individuals and the general public at-large. The full 2040 *Plan* document is a lengthy document. Specifics regarding any of the information contained in this *Executive Summary* can be found in the complete *Plan* document.

This *Executive Summary* is included at the beginning of, and as part of, the full *Plan* document. It is also available as a stand alone report. The full document is available as a pdf document online at BCATS' website at <http://www.bcatsmpo.org>. The document can also be obtained by contacting the BCATS staff office at 601 Avenue A, Springfield, MI 49037, 269/963-1158, or contacting BCATS by e-mail at bcats@bcatsmpo.org. A fee may be charged for a paper copy of the full document.



Battle Creek Area Transportation Study
2040 Metropolitan Transportation Plan
Site-Specific Recommended Improvements

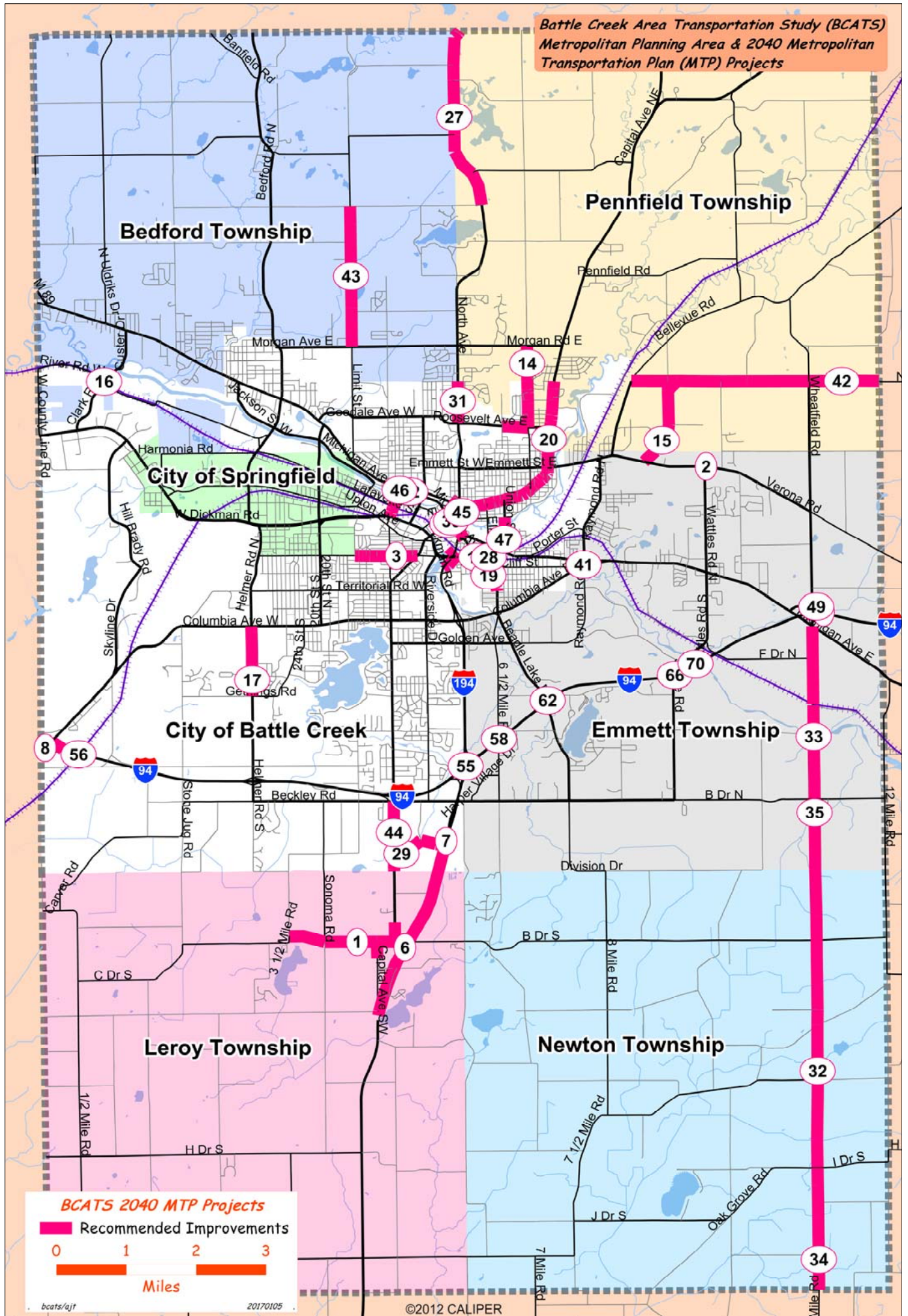
1/6/2017
page 1 of 2

YEAR	BCATS 2040 MTP ID #	NAME	LIMITS	DESCRIPTION	COST (\$)	AGENCY	PROJECT TYPE*
2017	1	B Dr S and Capital Ave SW	B Dr S from 3.5 Mile Rd eastward to M-66 (1.7 mi); Capital Ave SW, 0.25 mi north & south of B Dr S	Resurfacing	\$ 700,000	CCRD	Preservation
2017	2	Intersection Geometrics Improvement - Wattles Rd (9.5 Mile Rd) @ Verona Rd	Wattles Rd @ Verona Rd intersection & approaches, in Emmett Twp	Add dedicated left turn lanes on westbound Verona Rd approach and northbound Wattles Rd approach. Intersection is a "T", with northbound Wattles Rd ending at Verona Rd.	\$ 168,354	CCRD	Traffic Safety/Operations & Air Quality
2017	3	Goguac St, McCamly St, & Roosevelt Ave	Goguac: from Capital Ave SW westward to Carl Ave, 4750'. McCamly: from VanBuren St northward to North Ave, 620'. Roosevelt: from East Ave westward to Garrison Ave, 1996'.	Resurfacing (2" mill & overlay) with spot sidewalk & ramp replacement	\$ 445,180	City of Battle Creek	Preservation
2017	6	M-66 - CON/1	from south of D Dr S northward to north of Glenn Cross Rd	3/4" mill & 1.5" overlay	\$ 635,027	MDOT	Preservation
2017	7	M-66 - CON/2	from 0.10 mi north of Glenn Cross Rd to Glenn Cross Rd	add right turn lane on southbound approach to Glenn Cross Rd	\$ 93,052	MDOT	Traffic Safety/Operations & Air Quality
2017	8	Wrong-Way Crash Reduction at Ramp Terminals (CON)	interchange ramps at I-94 exits 92 & 104, and I-194 exit 3	Improvements to reduce potential for wrong way entry to freeway ramps	\$ 31,952	MDOT	Traffic Safety/Operations
2017	10	Community Action (formerly Community Action Agency) Capital Assistance - Computers & Office Furniture	in Community Action central office, 175 Main St (east side of Main St just north of Dickman Rd E & railroad tracks).	Replacement of computers & furniture at 3 workstations in Community Action central office.	\$ 6,226	Transit - City of Battle Creek	Transit Capital
2018	14	East Ave	from Roosevelt Ave northward to Morgan Rd	Resurfacing	\$ 325,000	CCRD	Preservation
2018	15	McAllister Rd	from Verona Rd northward to N Dr N	Resurfacing	\$ 335,000	CCRD	Preservation
2018	16	Clark Rd @ River Rd	Intersection of Clark Rd/Custer Dr N @ River Rd W, & all four approaches	installation of intersection control beacon & supports for span wire mount	\$ 24,080	City of Battle Creek	Traffic Safety/Operations
2018	17	Helmer Rd	from Gethings Rd northward to Columbia Ave	Resurfacing with spot sidewalk & ramp replacement	\$ 368,900	City of Battle Creek	Preservation & Non-Motorized
2018	18	Intersection Signal Modernization - Capital @ Jackson	Capital Ave @ Jackson St	Upgrade/modernize signal & interconnection to nearby signals and City's Traffic Management Center	\$ 325,000	City of Battle Creek	Traffic Safety/Operations & Air Quality
2018	19	Main St	from Mary St southward to south city limits (~200' south of Kingman Ave), ~0.5 mi; and from M-66 (Division St) southward to Hamblin Ave, ~0.1 mi.	Resurfacing (2" mill & overlay)	\$ 194,090	City of Battle Creek	Preservation
2018	20	M-66 (Capital Ave NE)	M-66 from Capital Ave/Division St intersection northward to Frey Dr	1.5" mill & 1.5" overlay with ADA ramps	\$ 1,452,123	MDOT	Preservation
2018	22	Ancillary Equipment - Transit	BCT facilities, 339 W Michigan Ave, in southwest quadrant of M-89 (Michigan Ave) / Cass St intersection, and on-board vehicles	Computers and vehicle technology	\$ 120,000	Transit - City of Battle Creek	Transit Capital
2019	27	North Ave, Pennfield Twp	from Halbert Rd northward to Calhoun County limits	Resurfacing	\$ 650,000	CCRD	Preservation
2019	28	Elm St	from Mary St northward to Michigan Ave	Resurfacing with spot sidewalk & ramp replacement	\$ 102,420	City of Battle Creek	Preservation & Non-Motorized
2019	29	Glenn Cross Rd	from Capital Ave eastward to M-66	Resurfacing	\$ 260,580	City of Battle Creek	Preservation
2019	30	Intersection Signal Modernization - Capital @ Michigan	Capital Ave @ Michigan Ave	Upgrade/modernize signal & interconnection to nearby signals and City's Traffic Management Center	\$ 325,000	City of Battle Creek	Traffic Safety/Operations & Air Quality
2019	31	North Ave, City of BC	from Roosevelt Ave northward to Coolidge Ave (city limits)	Resurfacing with spot sidewalk & ramp replacement	\$ 240,000	City of Battle Creek	Preservation & Non-Motorized
2019	32	M-311 (11 Mile/Wheatfield Rd) - CON	from BCATS southern Metropolitan Planning Area (MPA) boundary line btwn Newton & Burlington Twps northward to I-94 BL (Michigan Ave)	Multi-course HMA overlay	\$ 4,347,668	MDOT	Preservation
2019	33	M-311 (11 Mile/Wheatfield Rd) Bridge over Kalamazoo River - CON	1/4 mile N+S of Kalamazoo River at M-311 (11 Mile/Wheatfield Rd), just north of D Dr N, including bridge.	Construction to replace bridge & rehabilitate approaches	\$ 3,407,000	MDOT	Bridges

Battle Creek Area Transportation Study
2040 Metropolitan Transportation Plan
Site-Specific Recommended Improvements

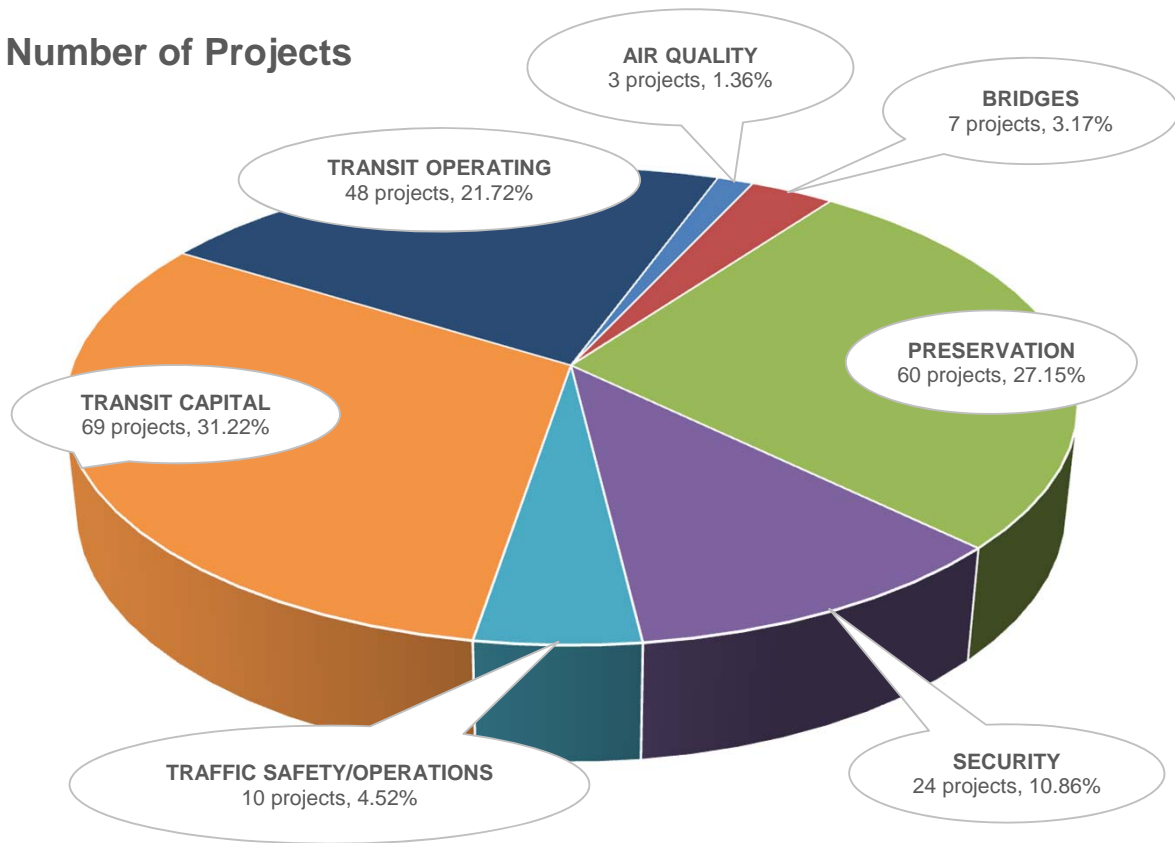
1/6/2017
page 2 of 2

YEAR	BCATS 2040 MTP ID #	NAME	LIMITS	DESCRIPTION	COST (\$)	AGENCY	PROJECT TYPE*
2019	34	M-311 (11 Mile/Wheatfield Rd) CON/1	from BCATS southern Metropolitan Planning Area (MPA) boundary line btwn Newton & Burlington Twps northward to B Drive S	fixed object removal - tree removal and culvert replacement	\$ 522,760	MDOT	Traffic Safety/Operations
2019	35	M-311 (11 Mile/Wheatfield Rd) CON/2	from B Drive S northward to I-94 BL (Michigan Avenue)	fixed object removal - tree removal	\$ 135,500	MDOT	Traffic Safety/Operations
2020	41	Intersection Signal Modernization - Cliff @ Raymond	Cliff St @ Raymond Rd, Emmett Twp	Modernization & upgrade of traffic signal(s) at intersection	\$ 200,000	CCRD	Traffic Safety/Operations & Air Quality
2020	42	N Dr N (Gorsline Rd)	from Bellevue Rd eastward to 12 Mile Rd	Resurfacing	\$ 760,000	CCRD	Preservation
2020	43	Waubascon Rd	from Morgan Rdd northward to Halbert Rd	Resurfacing	\$ 490,000	CCRD	Preservation
2020	44	Capital Ave SW	from south city limits northward to Beckley Rd	Resurfacing with spot sidewalk & ramp replacement	\$ 372,050	City of Battle Creek	Preservation & Non-Motorized
2020	45	Intersection Signal Modernization - Capital @ VanBuren	Capital Ave @ VanBuren St	Upgrade/modernize signal & interconnection to nearby signals and City's Traffic Management Center	\$ 325,000	City of Battle Creek	Traffic Safety/Operations & Air Quality
2020	46	Kendall St	from Dickman Rd northward to Michigan Ave	Resurfacing with spot sidewalk & ramp replacement	\$ 168,600	City of Battle Creek	Preservation & Non-Motorized
2020	47	Union St	from Michigan Ave northward to VanBuren St	Resurfacing with spot sidewalk & ramp replacement	\$ 176,120	City of Battle Creek	Preservation & Non-Motorized
2020	49	I-94 WB entrance ramp at Exit 104 interchange CON	I-94 WB entrance ramp from I-94BL/M-311 (11 Mile/Wheatfield Rd) east-south-westward to I-94	Reconstruction of the loop entrance ramp	\$ 1,123,000	MDOT	Preservation, & Traffic Safety/Operations
2021	55	I-194/M-66 over I-94	I-194 / M-66 north+southbound bridges over I-94	Bridge railing replacement, Epoxy overlay, Concrete deck patching, Zone Paint, Reseal Joints, Concrete surface coating	\$ 1,778,000	MDOT	Bridges
2021	56	I-94 over CN/GTW railroad	I-94 east+westbound bridges over CN/GTW railroad, ~0.5 mi east of I-94BL exit 92	minor widening and rehabilitation	\$ 3,668,000	MDOT	Bridges
2023	58	I-94 over 6 1/2 Mile Rd	I-94 east+westbound bridges over 6 1/2 Mile Rd, ~0.6 mi east of I-194/M-66 exit 98	minor widening and rehabilitation	\$ 4,618,000	MDOT	Bridges
2025	62	I-94 over M-294 (Beadle Lake Rd)	I-94 east+westbound bridges over M-294 (Beadle Lake Rd), at exit 100	minor widening and rehabilitation of bridge, with allowances for future widening of M-294 under bridge	\$ 3,884,000	MDOT	Bridges
2027	66	I-94 over 9 Mile Rd	I-94 east+westbound bridges over 9 Mile Rd, ~2.1 mi west of M-311/11 Mile Rd exit 104	minor widening and rehabilitation	\$ 4,162,000	MDOT	Bridges
2030	70	I-94 over Kalamazoo River	I-94 east+westbound bridges over Kalamazoo River, ~1.8 mi west of M-311/11 Mile Rd exit 104	replacement of bridges	\$ 15,764,000	MDOT	Bridges
2030	72	Transit facility renovation	for Battle Creek Transit, at location of project #22	renovation of facilities	\$ 1,457,000	Transit - City of Battle Creek	Transit Capital
2033	76	Transit Computer System Upgrade	for Battle Creek Transit, at location of project #22	upgrade/replacement of transit computer system	\$ 250,000	Transit - City of Battle Creek	Transit Capital
2035	79	Ancillary Equipment - Transit	BCT facilities, 339 W Michigan Ave, in southwest quadrant of M-89 (Michigan Ave) / Cass St intersection, and on-board vehicles, at location of project #22	Computers, vehicle technology, & furniture (replacement)	\$ 250,000	Transit - City of Battle Creek	Transit Capital
2035	80	Automatic Vehicle Locator/Computer-Aided Dispatch (AVL/CAD) System Upgrade	for Battle Creek Transit, at location of project #22	upgrade AVL/CAD system	\$ 161,000	Transit - City of Battle Creek	Transit Capital
2039	86	Ancillary Equipment - Transit	BCT facilities, 339 W Michigan Ave, in southwest quadrant of M-89 (Michigan Ave) / Cass St intersection, and on-board vehicles, at location of project #22	Computers and vehicle technology	\$ 250,000	Transit - City of Battle Creek	Transit Capital
2040	89	Transit facility renovation	BCT facilities, 339 W Michigan Ave, in southwest quadrant of M-89 (Michigan Ave) / Cass St intersection, at location of project #22	renovation of facilities	\$ 1,700,000	Transit - City of Battle Creek	Transit Capital

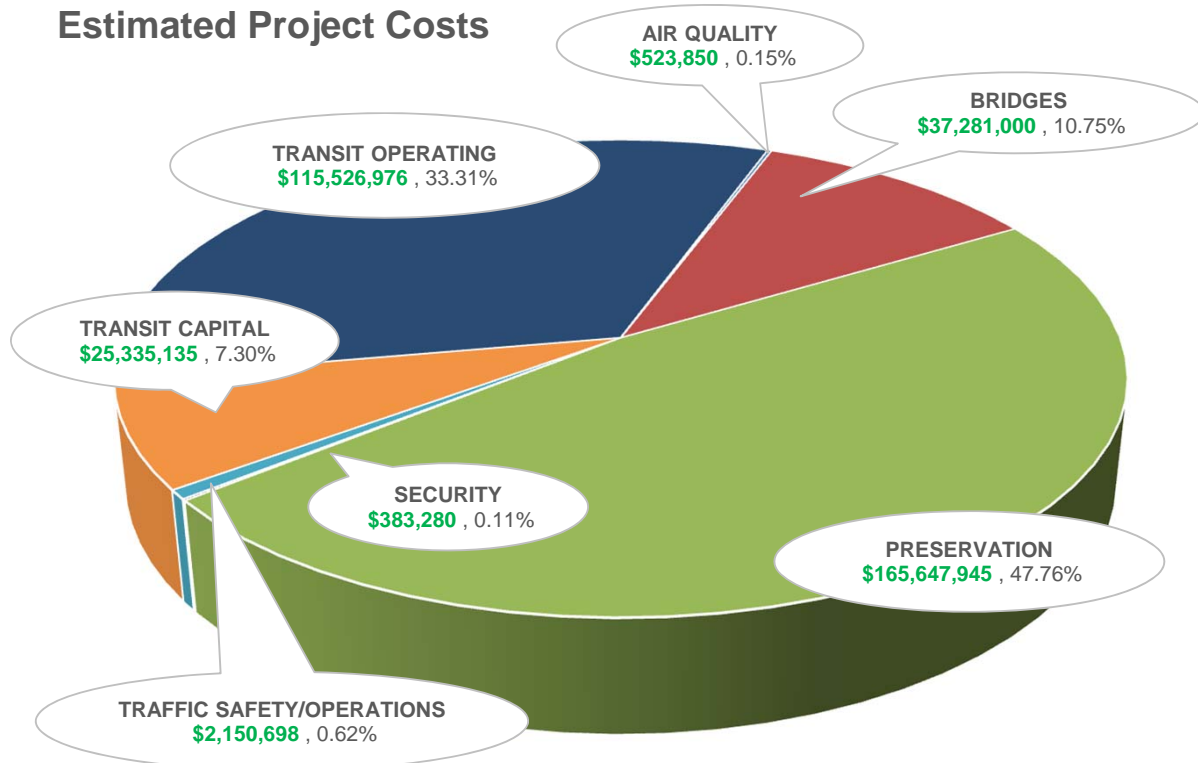


Battle Creek Area Transportation Study
2040 Metropolitan Transportation Plan
Recommended Projects by Type

Number of Projects



Estimated Project Costs





BATTLE CREEK AREA TRANSPORTATION STUDY

601 Avenue A • Springfield, MI 49037 • 269-963-1158 • Fax 269-963-4951

Resolution #16-49

Resolution to Approve the 2040 *METROPOLITAN TRANSPORTATION PLAN* for the Battle Creek Area Transportation Study

WHEREAS, the Battle Creek Area Transportation Study (BCATS) is the designated Policy Committee and Metropolitan Planning Organization (MPO) for the Battle Creek, Michigan urban area; and

WHEREAS, the development of a long range transportation plan is a requirement of both the Federal Highway Administration and the Federal Transit Administration; and

WHEREAS, the BCATS 2040 *Metropolitan Transportation Plan* as been developed pursuant to USC 23 Section 134, as amended by the Moving Ahead for Progress in the 21st Century (MAP-21) and subsequent Fixing America's Surface Transportation (FAST) Act federal transportation legislation, with a planning horizon of at least 20 years; and

WHEREAS, the BCATS 2040 *Metropolitan Transportation Plan* identifies transportation facilities that should function as an integrated metropolitan transportation system; and

WHEREAS, the BCATS 2040 *Metropolitan Transportation Plan* includes a financial analysis that demonstrates how the projects that have been identified will have adequate funding, and indicates the resources that are reasonably expected to be made available to carry out the Plan; and


WHEREAS, the BCATS 2040 *Metropolitan Transportation Plan* recognizes the necessity of preserving the existing transportation system and includes projects that will enhance the efficiency of the existing transportation system to relieve vehicular congestion and improve the mobility of people and goods; and

WHEREAS, the BCATS 2040 *Metropolitan Transportation Plan* was developed through a process that included input from private citizens, private providers of transportation, affected public agencies, and other interested parties; and

WHEREAS, the BCATS 2040 *Metropolitan Transportation Plan* was developed utilizing a consultation process taking into consideration the plans and programs of other agencies; and using information obtained through the consultation process, recognizes potential environmental mitigation needs as related to projects in the Plan; and

WHEREAS, this Plan can be amended periodically upon request and with appropriate documentation supporting such a request;

NOW THEREFORE BE IT RESOLVED, that the Policy Committee of the Battle Creek Area Transportation Study finds the 2040 *Metropolitan Transportation Plan* to be compliant with federal requirements and approves its submission to the Michigan Department of Transportation, the Federal Highway Administration, and the Federal Transit Administration.

ATTEST: 
Angela Kline
Vice-Chair, BCATS Policy Committee

Date: November 30, 2016

Adopted by the Battle Creek Area Transportation Study Policy Committee at its meeting of November 30, 2016

