Niles-Buchanan-Cass Area Transportation Study

2020-2023 Transportation Improvement Program (TIP)

Federal Surface Transportation Block Grant Funds

Project Application

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| Section 1. Applicant Information | | | |
| Agency Name |  | | |
| Contact Name |  | Title |  |
| Phone Number |  | Email |  |

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| Section 2. Project Information | | | |
| Project Name/Road Name |  | | |
| Project Limits  (e.g. Oak St. to Regent St.) |  | | |
| Project Length (nearest hundredth of a mile) |  | Proposed Year of Funding |  |
| Primary Work Type | Reconstruct  Restore & Rehabilitate  Roadside Facility  Resurface  Traffic Operations/Safety  Other | | |
| Project Description  (Please provide major work items including sidewalks, utility work, ADA upgrades etc.) |  | | |
| Was this project awarded funding for the 2017-2020 TIP, but was either canceled or failed to be obligated | Yes No If yes, please explain: | | |

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| Section 3. Project Funding | | |
| Federal Funding Requested | | $ |
| Local Match (18.15% minimum) | | $ |
| Total | | $ |
| Local Match Percentage (local match/total cost) | |  |
| Does your agency have the financial capacity to Advance Construct (AC) all or part of this project if necessary? If yes, what is the maximum dollar amount your agency is willing to Advance Construct (AC)? | | Yes  No  Maximum Dollar Amount you can AC?  $ |
| Section 4. System Preservation | | |
| 2017 [PASER](https://www.mcgi.state.mi.us/tamcMap/) rating |  | |
| Current state of drainage | Adequate  Minor and tolerable drainage problems  Occasional drainage problems with some maintenance required  Inadequate drainage, frequent flooding, excessive maintenance required | |
| Expected increase in Remaining Service life (RSL) | 0-3 years  4-6 7-9 10-14 15-20  Use MDOT’s [*Guidelines for Geometrics on Local Projects*](https://www.michigan.gov/documents/mdot/LAP_3R_Guidelines_2017_SIGNED_FINAL_597272_7.PDF) | |
| What MDOT guidelines does the project conform to? | Reconstruction (4R)  Resurfacing, restoration, and Rehabilitation (3R)  Preventative Maintenance (PM) | |

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| Section 5. Safety | | | | |
| Please list the number and severity of crashes within the proposed project limits over the last 5 yrs.  (2013-2017) (see [Michigan Crash Facts](https://www.michigantrafficcrashfacts.org/) for crash data) | | | | |
| Total Crashes |  | | Pedestrian & Bicycle Crashes |  |
| Fatalities |  | | Serious Injuries |  |
| Using the attached Crash Reduction Factors sheet, please check each safety counter measure that will be included in the project | | | | |
| Describe any other safety improvements this project will provide | |  | | |

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| Section 6. Non-motorized Improvments | |
| Please explain any pedestrian and/or bicycle improvements are included |  |
| Does this project connect to an existing pedestrian/bicycle facility or one that is planned to be completed from 2020-2023? | Yes No  If yes, please provide a map of the connecting facilities |

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| Section 7. Regional Connectivity | |
| What is the most current daily traffic count for the limits of this project? | Less than 2000 2000-5000  5000-10,000 Above 10,000  Year of count:       Source: |
| National Functional Classification (NFC) for this roadway  ([Berrien County NFC Map](https://mdotcf.state.mi.us/public/maps_nfc/pdf/NFC14_BERRIEN.pdf), [Cass County NFC Map](https://mdotcf.state.mi.us/public/maps_nfc/pdf/NFC14_CASS.pdf)) |  |

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| Section 8. Strategic Planning & Investment | |
| Is the project identified in a Asset Management Plan, or Capital Improvement Plan | Yes No  If yes, please cite the plan and page number: |
| Is the project identified in another planning documents such as a master plan or parks and recreation plan | Yes No  If yes, please cite the plan and page number: |
| Does the project cross jurisdictional boundaries? | Yes  No |
| If yes, will it be bid as a single project? | Yes  No  NA |
| Will this project coordinate with other infrastructure projects (i.e. utility, water, sewer, etc.) | Yes  No  If yes, please indicate the project type and construction year: |
| How many water main breaks have you had at this location in the past five years? |  |
| Is there a completed a utilities assessment that included televising the sewers in the project area? | Yes  No |
| Will this project require environmental mitigation, purchase of Right of Way (ROW), or railroad permits? | Yes  No  Not Sure  If yes, which items are required: |
| Does this project perform Resurfacing, Reconstruction, or Preventative Maintenance on a segment adjacent to a segment where a federally-funded project was done during the [2017-2020 NATS TIP](https://www.swmpc.org/downloads/nats_project_list_10_4.pdf) cycle or [RTF](https://www.swmpc.org/downloads/rtf_region4_20172020_project_list.pdf) cycle? | Yes  No  What segment was the PREVIOUS project done on? |

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| Section 9. Existing and Proposed Roadway Design | | | | | | | |
|  | **Existing** | | | | **Proposed** | | |
| Number of Vehicle Lanes | Through Traffic Lanes | Center Turn Lane | | On Street Parking | Through Traffic Lanes | Center Turn Lane | On Street Parking |
|  |  | | Yes  No |  |  | Yes  No |
| Shoulder Surface | Paved  Unpaved | | Width (ft.) | | Paved  Unpaved | | Width (ft.) |
| Sidewalk/ path information | **Placement**  One Side  Both Sides  Intermittent  None | | Width (ft.) | | **Placement**  One Side  Both Sides  Intermittent  None | | Width (ft.) |
| On road bicycle facilities | Bike Lane  Other (specify)  Sharrows  Wide Shoulders  None | | | | Bike Lane  Other (specify)  Sharrows  Wide Shoulders  None | | |
| Utilities, Sewer and Water | Utilities Upgrades Needed  Sewer and water work needed | | | | Replaced Utilities  Relocating Utilities  Sewer and Water Line Work | | |
| Please describe any improvements being made as part of this project to crosswalks, signage or signals, or streetscape elements not discussed in project description | | |  | | | | |
| Does this project enhance connectivity of pedestrian or bicyclists to fixed route or Dial-A-Ride transit? | | | Yes No  If yes, how? | | | | |

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| Section 10. Estimated Project Schedule | |
| Activity | Estimated Date |
| Resolution of Support for Local Match Submitted to SWMPC |  |
| Project Application Submitted to MOT |  |
| Grade Inspection Package Submitted to MDOT |  |
| Grade Inspection Meeting Scheduled |  |
| Final Plan and Estimate to MDOT |  |
| Right of Way (ROW) certified\* |  |
| Rail Road Permits\* |  |
| Environmental Mitigation\* |  |
| Project Obligated |  |
| Project Letting |  |
| Construction Start |  |
| Project Completion |  |

\*Enter NA if these items will not be required.

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|  | **Proposed Improvement** | **% Reduction** | **Associated Crash Types** |
| **SEGMENT CRASH REDUCTION FACTORS** | | |
| **Geometric Safety Enhancements** | | |
|  | **Center Left-Turn Lane -** *Construct* | 80% | Rear-End Left-Turn |
| 50% | Head-On Left-Turn |
| 20% | Head-On, Angle, Sideswipe\* |
| 15% | Non Left-Turn Rear-End, Other\* |
|  | **Right-Turn Lane -** *Construct* | 65% | Rear-End Right-Turn |
| 30% | Angle |
| 15% | Rear-End |
| 10% | Other\* |
|  | **Horizontal Curve Flattening** | 30% | Lane Departure\*\*\* |
|  | **Shoulders -** *Widen to Standard Width (add* ***1'*** *each side)* | 5% | Lane Departure\*\*\* |
|  | **Shoulders -** *Widen to Standard Width (add* ***2'*** *each side)* | 10% | Lane Departure\*\*\* |
|  | **Shoulders -** *Widen to Standard Width (add* ***3'*** *each side)* | 15% | Lane Departure\*\*\* |
|  | **Shoulders -** *Widen to Standard Width (add* ***4'*** *each side)* | 20% | Lane Departure\*\*\* |
|  | **Shoulders -** *Widen to Standard Width (add* ***5'*** *each side)* | 25% | Lane Departure\*\*\* |
|  | **Shoulders -** *Widen to Standard Width (add* ***6'*** *each side)* | 30% | Lane Departure\*\*\* |
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|  | **Shoulders -** *Widen to Standard Width (add* ***7'*** *each side)* | 35% | Lane Departure\*\*\* |
|  | **Vertical Curve Modification** | 20% | All Applicable Crash Types +++ |
|  | **General Segment Enhancements** | | |
|  | **Access Management -** *Improve* | 15% | Drive-way Related Applicable Crashes |
|  | **Centerline Rumble Strips -** *Install* | 44% | K and A injury Applicable Crashes |
| 46% | Single Vehicle Run off Road Left Crashes |
| 43% | Sideswipe Same Crashes |
| 55% | Sideswipe Opposite Crashes |
|  | **High Friction Surface Treatment -** *Install* | 35% | Wet Crashes |
| 20% | All Other Applicable Crashes |
|  | **Recessed Durable Pavement Markings** | 5% | All Applicable Crashes |
|  | **Pedestrian Refuge -** *Install* | 50% | Pedestrian Crashes (Review NCHRP Report 841) |
|  | **Road Diet (4-3 Lane Conversion)** *- Install* | 50% | Suburban - All Applicable Crashes |
|  | **Shoulder Rumble Strips** | 20% | Run-Off the Road Right Crashes |
|  | **Signing/Delineation on Horizontal Curves (Including Recessed Durable Pavement Markings) -** *Install* | 20% | Lane Departure\*\*\* |
|  | **Safety Edge Improvement** | 13% | All non-intersection crashes (CMF Clearing House ID 8658) |

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|  | **Roadside Enhancements** | | |
|  | **Bicycle Lanes -** Install per standards | 50% | Bicycle Crashes |
|  | **Shared Use Path -** *Install* | 33% | Bicycle and Pedestrian Related Crashes |
|  | **Fixed Objects From Clearzone (Trees, Culverts, Etc.) -** *Removal* | 75% | Fixed-Object Applicable Crashes |
|  | **Guardrail -** *Install* | 55% | Lane Departure \*\*\*Fatalities and "A" Injury Applicable Crashes |
|  | **Sidewalk for Pedestrians -** *Construct* | 85% | Pedestrian Crashes |
|  | **Slope Flattening** | 15% | Fixed-Object, Overturn Applicable Crashes |
|  | **Living Snow Fence** | 20% | Crashes due to wintry surface conditions |
|  | **Lighting *-*** *install on segment* | 20% | Dark Unlighted Crashes |
|  | **INTERSECTION CRASH REDUCTION FACTORS** | | |
| **Pedestrian / Bicycle Enhancements** | | |
|  | **Bump Out / Curb Extension -** *Remove Parking / Install* | 30% | All Crashes |
|  | **Bicycle Lanes -** Install per standards | 25% | Bicycle Crashes |
|  | **Sidewalk for Pedestrians -** *Construct* | 85% | Pedestrian Crashes |
|  | **Intersection Lighting** *- install* | 75% | Pedestrian Fatal - Dark Unlighted Crashes |
| 40% | Pedestrian A-Injury - Dark Unlighted Crashes |
| 30% | All Applicable Dark Unlighted Crashes |
|  | **Rectangular Rapid Flashing Beacons** | 47% | Pedestrian Crashes |
|  | **Ped. Countdown Signals -** *Install new Pedestrian signal* | 30% | Pedestrian Crashes |
|  | **Ped. Countdown Signals -** *Upgrade from existing Pedestrian signal* | 25% | Pedestrian Crashes |
|  | **Signal Timing / Hardware Enhancements** | | |
|  | **Multiple Low-Cost Improvements** | 3% | Rear-End |
| 12% | Right-Angle |
| 3% | Nighttime |
|  | **Install Reflectorized Backplates** | 15% | All Applicable Crashes |
|  | **Add All-Red Clearance Interval -** *Add per ITE* | 20% | Head-On Left-Turn, Angle |
|  | **Yellow-Change Interval** - *Increase* | 10% | All Crash Types |
|  | **Box Span Signal -** *Upgrade from Stop Control* | 65% | Angle |
| -25% | Rear-End (Increases Crashes) |
| 20% | All Other Non Rear-End Crashes |
|  | **Box Span Signal -** *Upgrade from Diagonal Span* | 10% | All Applicable Crashes+ |
|  | **Protected Left-Turn Signal Phase -** *Add* | 30% | Left-Turn |
|  | **Signal Head Size -** *Increase to 12 "* | 10% | All Applicable Crashes + |
|  | **Signal Optimization & Timing Updates** | 10% | All Applicable Crashes + |
|  | **Removing Night Flash from Signal Timing** | 50% | Nighttime Flash mode Related Crashes |
|  | **Intersection Geometric Enhancements** | | |
|  | **Center Left-Turn Lane -** *Construct* | 80% | Rear-End Left-Turn |
| 50% | Head-On Left-Turn |
| 20% | Head-On, Angle, Other |
| 15% | Non Left-Turn Rear-End |
|  | **Intersection Improvements (Realignment, Sight-Distance Improvements, Radii Improvements, Etc.)** | 30% | Angle |
| 15% | Rear-End |
| 10% | Head-On, Sideswipe, Pedestrian, Bicycle, Left-Turn Related |
|  | **Offset Left-Turn Lane -** *Construct* | 65% | Angle-Turn, Head-On Left-Turn |
| 20% | Rear-End Left-Turn |
|  | **Offset Right-Turn Lane -** *Construct* | 65% | Angle-Turn |
| 50% | Other Applicable Crashes |
| 20% | Rear-End Right Turn |
|  | **Right-Turn Lane -** *Construct* | 65% | Rear-End Right-Turn |
| 20% | Applicable Rear-End Crashes, Sideswipe Same Direction |
|  | **Roundabout** | 78% | Fatal and A-Injury Reduction |
| 57% | Minor Crash Reduction |
|  | **Lighting** | - | See MDOT Interchange Warranted Lighting Guidance and overall MDOT Lighting Guidance |
|  | **General Intersection Enhancements (Non-Signalized Intersections)** | | |
|  | **All-Way Stop Control -** *New Installation* | 60% | All Applicable Crashes |
|  | **Ground Mounted Flashing Beacons (Red)-** *Install \*\** | 30% | All Crashes On Install Approach |
|  | **Ground Mounted Flashing Beacons(Amber) -** *Install \*\** | 20% | All Crashes On Install Approach |
|  | **Signing -** *Improve/Upgrade* | 30% | Angle, Rear-End Crashes |
|  | **Pavement Markings -** *Improve/Upgrade* | 30% | Angle, Rear-End Crashes |
|  | **Reflective Sheeting on Sign Posts** *(lollipops)* | 15% | All Applicable Crashes |