Appendix K

General Program Accounts

Federal regulations allow for the grouping of projects that are "not considered to be of appropriate scale" to merit individual listing in the STIP. In Michigan these groupings are called General Program Accounts or GPAs. Some projects with specific work type activities and some phases can be grouped together in a GPA. Project lists for each program are typically maintained by the MDOT program manager.

For all GPA categories, the following conditions apply:

1. The total project cost for all phases cannot exceed five million dollars.
2. The project cannot be part of a New Roads or Capacity Expansion project.
3. The project cannot be part of the CMAQ program, American Recovery or Reinvestment Act program, Scenic Byways, or Congressional Earmarks (HPP and HPSL).
4. Each project must also be a categorical exclusion and air quality neutral.
5. ROW activities are limited to grading permits, mutual benefit permits, and minor takings without relocation.

GPAs by MPO for FY 2011

	Non-MPO	SEMCOG	All Other MPOs
Trunkline Highway CPM	x	x	x
Trunkline Bridge CPM/CSM	x	x	x
Trunkline Transportation Enhancements	x	x	x
Trunkline Highway Safety	x	x	x
Trunkline Highway Railroad Crossings	x	x	x
Trunkline Pre-Construction Phases	x	x	x
Trunkline Program Development and Scoping	x	x	x
Local Bridge	x	x	
Local Transportation Enhancements	x	x	
Local Highway Safety	x	x	
Local Highway Railroad Crossings	x	x	
Trunkline Highway Rehab and Reconstruct	x		
Trunkline Bridge Replacement and Rehabilitation	x		
Trunkline Freeway Roadside Infrastructure Improvement		x	

Trunkline Highway Capital Preventive Maintenance GPA

(Minor changes from previous definition)

Project Identification/Selection

Candidate project identification is made by MDOT's Region offices using CPM guidelines, the Region's CPM budget and MDOT's pavement condition goals. Projects are reviewed by the CPM Program Manager then reviewed and approved by the Project Screening Committee as part of the annual Call for Projects process.

Work Type Activities

Generally, projects are low cost trunkline highway maintenance activities that are completed in one construction season to extend pavement life and prevent more costly repairs at a later date. Work activities protect the pavement structure, slow the rate of pavement deterioration and/or correct pavement surface deficiencies and include the following:

Non-structural bituminous overlays
Surface milling with non-structural bituminous overlays
Chip seals
Micro-surfacing, crack treatment
Overband crack filling
Bituminous shoulder ribbons
Ultra-thin overlays
Full depth concrete pavement repair
Concrete joint rescaling
Concrete small repair
Concrete crack sealing
Diamond grinding
Dowel bar retrofit
Concrete pavement restoration
Bituminous shoulder ribbons

Trunkline Bridge Capital Preventive Maintenance/Capital Scheduled Maintenance GPA

(Minor changes from previous definition)

Project Identification/Selection

Candidate project identification is made by MDOT's Region offices using criteria in the *Michigan Structure Inventory and Appraisal Coding Guide*, the *Michigan Bridge Analysis Guide*, bridge management systems and MDOT's capital outlay bridge preservation program goals. Projects are reviewed by MDOT's Bridge Systems Manager then reviewed and approved by the Project Screening Committee as part of the annual Call For Projects process.

Work Type Activities

Generally, projects are low cost trunkline bridge maintenance activities that are completed in a construction season to extend bridge service life. Work activities prevent good/fair condition structures from becoming poor condition structures and include:

Joint replacement

Superstructure wash
Vegetation control
Drain system clean/repair
Paint - complete or zone
Joint replacement
Joint repair
Concrete sealing
Crack sealing
Minor concrete patching
Approach pavement relief joints
Slope paving repair
Pin & hanger replacement
Overlay - epoxy
Deck patching
Scour protection
Substructure patching
HMA cap (no membrane)
HMA overlay (w/ waterproofing membrane)
Miscellaneous bridge CPM
Miscellaneous bridge CSM

Trunkline Transportation Enhancements GPA

(Minor changes from previous definition)

Project Identification/Selection

Eligible applicants submit projects year round to MDOT. There are five project approval stages before funds can be awarded: Project Eligibility/Application Completeness, Concept, Technical, Program Factors and Conditional Funding Commitment (CFC). Once a project has advanced through each stage of the approval process to the CFC stage, it becomes "one project among all projects awaiting completion of funding conditions." A project advances to the funding award level once all CFC conditions are met and funding is available. Project elections/announcements are made more than once a year but are not made on a regular schedule.

Work Type Activities

Projects are awarded reimbursement funding under five broad categories:
Non-motorized (facilities, safety, education, rail trails)
Aesthetics (scenic or historic site acquisition, programs, landscaping)
Historic preservation (historic restoration, preservation, operation)
Water quality (mitigation to address run-off)
Wildlife mortality (reduce mortality & maintain habitat connectivity)

Trunkline Highway Safety GPA

(Minor changes from previous definition)

Project Identification/Selection

All safety funds are allocated to each Region based on percentage of high crash locations, but no Region receives less than 5%. Candidate projects are identified by MDOT's Region offices "through the current High Crash List, 3R/4R Safety Reviews, customer concerns, and Pavement Friction Analyses…[and] must meet a Time-of-Return of 10 years or less." Projects are reviewed and approved as part of the annual Call for Projects process.

Work Type Activities

Generally, projects will be low cost trunkline traffic and safety activities completed within a construction season to reduce the rate or severity of crashes and improve traffic operations. Work activities include:

- Guardrail replacements
- Pavement markings
- Signal upgrades
- New signals
- New signal upgrades
- Signing
- Intersection safety improvements
- Turn lanes
- Minor interchange improvements
- Cantilevers and trusses
- Impact attenuators

Trunkline Highway Railroad Crossing GPA *(Modified from previous definition)*

Project Identification/Selection

The purpose of the Trunkline Railroad Safety Program is to finance safety measures necessary for the at-grade trunkline crossings to improve the surface condition and to upgrade warning devices. This program allows needed crossing improvements to take place much sooner than waiting many years for the railroad to do this work. The crossing inventory serves as the potential project list, and projects are selected based on condition rating and crash data, fixing the worst crossings first.

Work Type Activities

Generally, projects will be low cost trunkline highway/rail crossing improvements. Work activities include:

- Crossing upgrades
- Signals
- Gates
- Miscellaneous railroad crossings safety improvements

Trunkline Pre-Construction Phases GPA

(Replaces the EPE/PE/ROW GPA)

Project Identification/Selection

Construction projects listed in the STIP and TIP documents may require one or more of the following pre-construction phases: Early Preliminary Engineering (EPE), Preliminary Engineering, Right-of-Way (ROW), and Bridge sub-structure design (SUB). The construction phases along with their respective pre-construction phases are selected as part of the annual Call for Projects process.

Early Preliminary Engineering (EPE) – Engineering studies and/or environmental studies to evaluate a transportation corridor and alternative road alignments within that corridor. Additionally, the Early Preliminary Engineering Phase (EPE) is used to fund and conduct a wide variety of studies to assist MDOT in finding ways to improve the overall transportation process.

Preliminary Engineering (PE) – Engineering, survey, and drafting work necessary to develop specific design plans for a construction project and associated construction contract.

Right-of-Way – The coordination and administration of all real estate activities including field inspections, appraisals, the acquisition of property rights, easements, and permits, compliance with all relevant federal and state laws regarding ROW acquisitions.

Sub-Phase (SUB) - Preliminary Engineering for bridges and other structures. Engineering, survey, and drafting work necessary to develop specific plans for a bridge/substructure construction project and associated construction contract.

Work Type Activities

EPE – Early Preliminary Engineering

- Corridor studies
- Engineering studies
- Environmental studies
- Feasibility studies
- Hydraulic studies
- Location studies
- Needs studies
- Planning studies
- Project planning studies
- Route studies
- Traffic studies
- Accident data gathering and analysis
- Aerial photography and mapping
- Engineering inspections
- Field inspections
- General design criteria
- Geotechnical data gathering
- Project scoping

PE – Preliminary Engineering
Conduct survey work
Design and/or review final engineering and construction plans
Project cost estimation

ROW – Right-Of-Way Acquisition
Field inspections
Appraisals
Grading permits
Mutual benefit permits
Minor takes without relocation

SUB – Sub-Phase (bridges/substructures)
Conduct survey work
Geotechnical data gathering
Hydraulic studies
Design and/or review final engineering and construction plans
Project cost estimation

Trunkline Program Development and Scoping GPA

(Minor changes from previous definition)

Project Identification/Selection

Corridors defined by MDOT Regions that contain road or bridge needs will be examined to determine cost and scope for potential projects for use in the Call for Projects process.

Work Type Activities

The work consists of engineering and surveying activities necessary to determine costs and scopes for road and bridge projects within the corridor to meet corridor needs and MDOT improvement strategies. Each corridor will be assigned a Job Number(s) and a Federal Project Number that will cover costs for developing scoping documents for all potential projects in the corridor. The scoping project should only be listed in the STIP or TIP that contains the majority of the corridor as defined by its termini.

Local Bridge GPA

(Modified from previous definition)

Project Identification/Selection

New legislation has established the way projects are selected, and the Local Bridge Program replaces the Michigan Critical Bridge Program. MDOT provides condition, sufficiency and rating point criteria to the Local Bridge Advisory Board (LBAB) and to the seven Regional Bridge Councils (RBC). The RBCs determine initial project priorities. The LBAB finalizes project priorities in a three year bridge plan. Funding is allocated on available funds and weighted ratios stipulated in the new legislation.

Work Type Activities
The Local Bridge Program provides for the improvement, rehabilitation, restoration, or replacement of existing local bridges.

Local Transportation Enhancements GPA

(Minor changes from previous definition)

Project Identification/Selection
Eligible applicants submit projects year round to MDOT. There are five project approval stages before funds can be awarded: Project Eligibility/Application Completeness, Concept, Technical, Program Factors and Conditional Funding Commitment (CFC). Once a project has advanced through each stage of the approval process to the CFC stage, it becomes "one project among all projects awaiting completion of funding conditions." A project advances to the funding award level once all CFC conditions are met and funding is available. Project elections/announcements are made more than once a year but are not made on a regular schedule.

Work Type Activities
Projects are awarded reimbursement funding under five broad categories:
Non-motorized (facilities, safety, education, rail trails)
Aesthetics (scenic or historic site acquisition, programs, landscaping)
Historic preservation (historic restoration, preservation, operation)
Water quality (mitigation to address run-off)
Wildlife mortality (reduce mortality & maintain habitat connectivity)

Local Highway Safety GPA

(Modified from previous definition)

Project Identification/Selection
MDOT conducts a Call for Projects each Nov. for all ACT 51 agencies. The Call for Projects is for projects to be funded two years into the future.

A committee ranks projects based on proposed scope of work in relation to crash data; time of return (TOR) or cost/benefit; coordination with other projects, average daily traffic (ADT); location of project in relation to high impact locations (i.e. schools, parks, entertainment/recreational facilities, etc.), local agency's recent history of receiving safety funds, and local agency's history of delivering projects on time.

Projects are selected based on ranking, and funding availability. A maximum of $400,000.00 of Federal STH funds can be applied to a project. Currently for the Safety (STH) program, 4 targeted funding areas have been identified that approximately 75% of the program will fund. They consist of:
1. Projects involving 'K' and 'A' type injuries.
2. Traffic Signal Optimization (1 second all red phasing).
3. Guardrail upgrades and clear zone improvements.
4. Centerline and/or shoulder rumble strip projects.

The total cost of a project utilizing STH funds can exceed $400,000 as long as the federal STH portion does not exceed $400,000.
HRRR funded projects can exceed the $400,000 limit.

Work Type Activities
Generally, projects are low cost local traffic and safety projects completed within a construction season to reduce the rate or severity of crashes and improve traffic operations.

Work activities include:
- Guardrail replacement, installation or elimination, or slope flattening.
- Traffic signal installation, upgrades, or optimization.
- Curve corrections (horizontal and/or vertical)
- Sight distance improvements
- Drainage improvements
- Bridge railing replacement or retrofit
- Intersection safety/alignment improvements
- Clear zone improvements
- Rumble strips
- Permanent signing improvements
- Permanent pavement marking improvements
- Shoulder widening or adding paved shoulder ribbons.
- Pedestrian and non-motorized facility improvements.
- Super-elevation modification.

Local Highway Railroad Crossings GPA

(Minor changes from previous definition)

Project Identification/Selection
Local crossing inventory serves as project list, and projects are selected based on type of equipment, condition rating, road and rail traffic volumes and crash data, fixing the worst crossings first.

Work Type Activities
Generally, projects are low cost local road/rail crossing improvements. Work activities include:
- Crossing upgrades
- Signals
- Gates
- Miscellaneous railroad crossing safety improvements

Trunkline Freeway Roadside Infrastructure Improvement GPA

(New GPA for SEMCOG only)

Project Identification/Selection:
Consistent with the State Transportation Commission policy, region and Transportation Service Centers (TSC) staffs are proactively investigating opportunities to improve the aesthetics of our highways and bridges. If practical, aesthetic treatments will be included in the design features of

bridge structures and roadsides. During the planning stages of urban reconstruction projects, MDOT works with local communities to identify and pursue funding for streetscape and landscape improvements. MDOT's Annual Call for Projects process allows the MDOT Regions and TSC staffs to recommend additional freeway infrastructure improvements.

Work Type Activities:
Generally, projects are low cost trunkline improvements to roadside infrastructure. Work type activities include the following:

Freeway Lighting
- Replace freeway lighting
- Replace existing lighting
- Replace tower lighting
- Replace median lighting
- Replace shoulder lighting
- Repair existing lighting
- Upgrade freeway lighting
- Install new freeway lighting

Landscaping
- Landscaping for new and existing rest areas
- Landscaping for new and existing weigh stations
- Interchange landscaping
- Tree replacement

Freeway Pump Stations
- Repair existing pump stations
- Replace existing pump stations
- Rehabilitate existing pump stations
- Reconstruct existing pump stations
- Restore existing pump stations

Miscellaneous Freeway Infrastructure Improvements
- Repair, replace, upgrade, and/or install fencing at roadside facilities
- Upgrade ADA ramps and sidewalks at roadside facilities
- Resurface parking areas

Trunkline Highway Rehab and Reconstruct GPA

(New GPA for non-MPO areas only)

Project Identification/Selection
The road preservation projects are prioritized based on approved asset management strategies, with a specific focus on doing the right repair at the right time to extend the life of MDOT's roads and to keep them in good condition. MDOT programs include a combination of long-term fixes (reconstruction), intermediate fixes (resurfacing/rehabilitation), an aggressive capital preventive maintenance (CPM) program, and routine maintenance of the system.

Work Type Activities

Generally, projects are low cost trunkline highway maintenance completed in one construction season to extend pavement life and prevent more costly repairs at a later date. Work activities protect the pavement structure, slow the rate of pavement deterioration and/or correct pavement surface deficiencies and include the following:

Bituminous resurfacing
Bituminous resurfacing and bit shoulders
Resurface, mill and pulverize
Bituminous resurface and minor widening
Thin concrete overlay (< 7") – ultra thin
Thin concrete overlay (> 7") – white topping
Bituminous resurface and drainage improvements
Bituminous resurface and curb & gutter
Reconstruct non freeway
Hot mixed asphalt resurfacing (one course)
Recycle existing concrete pavement
Bituminous shoulders
Drainage correction and culvert replacement
Pumphouse reconstruct/replace
Superelevation correction
Crack and surface over old pavement
Unbonded concrete overlay
Pavement patching
Long and transverse joint repairs
Minor rehabilitation
Concrete pavement inlay
Concrete pavement repair and diamond grinding
Crush – shape – resurface
Cold-in-place recycle and resurface
Concrete pavement rubblize and bituminous resurfacing
Reconstruct existing – no widen
Reconstruct for sight distance
Interchange reconstruction
Concrete reconstruction
Bituminous reconstruction
Multiple course HMA overlays
Resurface parking area
Warranty inspections

Trunkline Bridge Replacement and Rehabilitate GPA

(New GPA for non-MPO areas only)

Project Identification/Selection

MDOT's bridge condition goals are based on the National Bridge Inspection (NBI) ratings. This system rates the major elements of the bridge – deck, superstructure, and substructure. The (NBI) utilizes a 0-9 rating scale for the condition of each element. An element with a rating of 4 or less is considered poor and in need of rehabilitation or replacement. The lowest rating for the

three major elements determines the overall bridge rating. Bridge condition is one of the main factors in project selection. Other major factors are the need to coordinate with other work within a corridor to minimize future traffic impacts and functional deficiencies of the bridge.

Work Type Activities

Bridge Rehabilitation and Replacement activities typically increase the inspection ratings of at least one of the three major elements – deck, superstructure, and substructure. These work activities reduce the deterioration rate and extend the life of the structure. Work type activities include the following:

Superstructure repair
Substructure repair
Substructure replacement
Widen – Maintain lanes
Miscellaneous rehabilitation
Overlay – Shallow
Overlay – Deep
Drainage corrections
Deck replacement
Superstructure replacement
Bridge replacement
Miscellaneous replacement
Culvert replacement