

Michigan 2012 Transparency Report

Locations Exhibiting the Most Severe Safety Needs

Location	Jurisdiction	Potential Remedies	Estimated Costs	Implementation Impediments	Comments	Crash and Injury Data				Human Factors Involvement		
						K/A Crash Pattern*	Total Severe Crashes	A Injuries	Fatalities	Alcohol and/ or Drugs	NO Seatbelt and/ or Helmet Use**	Speed***
NB I-75 - 1/2 Mile S of 9 Mile Rd to 9 Mile Rd	Oakland TSC	Flatten curve; add warning signs	\$1,000-\$10M	ROW	0.45 miles of this curved section was reconstructed (2010) which brought the superelevation up to latest standards. Dynamic speed warning signs added.	Rear end	6	4	2	1	1	1
EB I-696 - 2/10 Mile E of Main St to Campbell-Hilton	Oakland TSC	Geometric improvements to reduce backups; improve signing	\$100,000-\$15M	ROW	None	Rear end	5	4	2	2	2	1
M-153 - Sheldon Rd to I-275	Taylor TSC	Boulevard Roadway; enforcement	\$50M	ROW; enforcement manpower	Road Safety Audit has been conducted.	Pedestrian	3	1	2	2	0	0
NB I-75 - 1/4 S of 7 Mile Rd to State Fair	Detroit TSC	Congestion mitigation strategies	Unknown	Unknown	Cameras utilized to observe peak hour traffic conditions. Specific issues could not be determined. Further study may be required.	Misc.	3	3	0	0	0	1
EB I-94 - Gratiot Ave to Barrett	Detroit TSC	Correct with future I-94 Improve/Expand Project	Total project estimate: \$2B+	N/A	Waiting for project kickoff.	Lane Departure	7	7	1	4	1	2
WB I-94 - 1/10 Mile W of Scotten St to 30th St	Detroit TSC	Verify that freeway lighting works.	N/A	N/A	Current mill and HMA resurface project (Wyoming to 2nd Ave).	Lane Departure	5	6	1	2	0	5
EB I-96 Express/Local - Greenfield to Schaefer	Detroit TSC	Add delineators/reflectors on concrete barrier wall.	Reflective Marker, Permanent Barrier = \$6.48 Each (avg awarded price).	N/A	None	Lane Departure	7	13	1	3	6	4
SB I-75 - Clay to Milwaukee	Detroit TSC	Correct with upcoming I-94 Improve/Expand Project which includes the I-75 interchange and these limits	Total project estimate: \$2B+	N/A	Waiting for project kickoff.	Rear end/ Lane Departure	7	6	5	2	1	2
WB I-94 - ~10 Mile Rd to 11 Mile Rd/I-696	Macomb-St. Clair TSC	Correct drainage issues	\$23.7M total project cost	N/A	64% of crashes are during wet pavement condiditons. Reconstruction to correct drainage issues programmed in the TSC 5 year plan (JN 111354A).	Lane Departure/ Rear end	8	10	1	1	0	3
SB I-75 - Nevada to 1/4 Mile N of 7 Mile Rd	Detroit TSC	Congestion mitigation strategies	Unknown	Unknown	Further study may be required.	Rear end	4	4	0	3	1	0
M-37 (Alpine Ave) - Coventry Dr to Alpine Church St	Grand Rapids TSC	Development an Access Management Plan to Minimize and Combine Drive Locations	\$600,000	Business and local participation	Many crashes are related to the drives on route.	Driveway	9	9	1	0	0	0
M-37/M-44 (E. Beltline Ave) - Fulton St to N of I-96	Grand Rapids TSC	Install a protected left turn phase for M-37/M-44 at Deposit Dr	\$125,000	N/A	An Environmental Assessment (JN 48564) was completed in 2005. Long term plans include constructing additional travel lanes and intersection improvements on M-37/M-44 between M-21 North to Knapp St. Project programmed for August 2012 Letting, JN 110797	Misc.	2	3	0	1	1	0

NB US-131 - Hall St to Franklin St	Grand Rapids TSC	Develop plan to extend accel and decel ramps, with possible weave/merge lanes between interchanges	\$5M	N/A	Corridor Study is currently ongoing (JN 111059), which will analyze possible options.	Rear end	9	10	0	0	0	0	3
US-127BL - Broomfield Rd to Remus Rd	Mt. Pleasant TSC	Boulevard US-127BR with indirect left turns	\$2.6M	Participating agency consensus	Pedestrian island added in 2008. Bike lanes added for a portion of road in 2011. Special crosswalk markings added at signalized intersections in 2011.	Ped/Bike	4	4	0	1	0	0	0
US-24 - Stewart Rd to 1/3 Mile N of Stewart Rd	Brighton TSC	Southern drive to Meijer - Trim vegetation to the south and possible relocation of signing. Investigate need for offset right turn lane. Relocate stop bar on northern most drive to Meijer.	\$1000 per tree removal. \$150 stop bar relocation. \$500 sign relocation. Offset right turn lane -\$350,000.	2012 construction project in this section of roadway. Project is let - may not have enough time to incorporate off-set right turn lane - also possible right of way constraints. Trimming of vegetation is private properties landscaping.	2012 construction project in this location. Will request to incorporate sign relocation, vegetation trimming/removal and stop bar relocation.	Driveway	5	6	0	0	0	0	0
M-43 - 9th St to Maple Hill	Kalamazoo TSC	Driveway modifications	\$50,000	Private Enterprise	TSC staff will work with property owners to recommend improvements to driveway/traffic flow patterns at local businesses and coordinate with the township on future site plan approvals / driveway permit requests.	Misc.	2	2	0	1	0	0	1
US-41 - Ridge St to CR492	Ishpeming TSC	Directional crossover relocations to improve operation of indirect lefts to eliminate direct access across from boulevard openings where possible. Additionally, access management improvements such as drive closures/consolidations, installation of tapers and/or turn lanes.	\$1.2M	N/A	Investigating this for a 2018 Safety project candidate.	Misc.	2	1	1	1	0	0	1
US-127BL - Isabella Rd to Broomfield Rd	Mt. Pleasant TSC	Boulevard US-127BR with indirect left turns	\$1.9M	Participating agency consensus	Bike lanes added for a portion of road in 2011. Special x-walk markings added at signalized intersections in 2011.	Misc.	2	2	0	2	0	0	0
M-11 (28th St) - Buchanan Ave to Division Ave	Grand Rapids TSC	None	N/A	None	There were five (5) pedestrian and two (2) bicycle crashes. Sidewalk was constructed in 2010 (JN 106151).	Pedestrian	3	2	1	0	1	0	0
NB US-131 - 1/4 Mile S of I-196 to I-196	Grand Rapids TSC	Develop proposal to possibly separate and provide more time for US-131 and I-196 traffic ramps / mainline movements. Potential freeway to freeway interchange modifications will be analyzed during the corridor study.	\$10M -\$150M	Active Corridor Study	Corridor study is currently ongoing (JN 111059), which will analyze possible options.	Lane Departure	2	2	2	0	0	0	0
Ramp: WB I-94 to 11 Mile Rd	Marshall TSC	Chevrons with reflective sheeting on posts to be installed	\$1,000	None	None	Lane Departure	2	1	1	1	0	0	1
Ramp: WB I-94 to M-40	Coloma TSC	Remove obstructions from Right-of-Way (including signs); re-align bridge; re-align ramp; signal; roundabout	\$8M+	Participating agency concensus, roadway would need re-aligning in addition to bridge, bridge condition warranting replacement, Right-of-Way, existing geometrics of interchange, existing signals at EB off ramps and north of ramps along M-40.	Future project (I-94 to Lawton) will address bridge on road geometrics.	Pedestrian	1	1	0	1	0	0	0
Ramp: NB I-75 to Mack Ave	Detroit TSC	None	N/A	N/A	Extremely low frequency of crashes.	Lane Departure	1	1	0	0	0	0	0

Ramp: EB I-96 to M-8	Detroit TSC	Delineators; advance curve/speed warning; pavement marking for curves	Delineators \$5 Each, Signs \$100 Each, Pavement Markings \$0.42/Ft	N/A	None	Lane Departure	2	2	0	1	0	1
Ramp: SB US-131 to 68th St	Grand Rapids TSC	Install additional delineators	\$3,500	N/A	A-injuries occurred when a vehicle struck the barrier wall, person left the vehicle and was struck by another vehicle on the ramp.	Misc.	2	2	0	0	0	2
Ramp: SB M-10 to Wyoming St	Detroit TSC	Add chevrons at both on and off ramps; verify lighting is working; ramp speed advisory signing; add wrong way signs closer to wyoming for the entrance ramp	\$25,000	N/A	None	Lane Departure	1	0	1	1	1	0
Ramp: SB US-31 to Laketon	Muskegon TSC	As part of Project Number 109698A, MDOT will have the contractor replace existing Advisory 25 MPH Speed Sign with two larger Advisory 25 MPH Speed signs. A third Advisory 25 MPH Speed sign will be added to the existing Gore sign. In addition, 2 each "SLOW" Pavement Markings will be added to the deceleration lane	\$6,000	N/A	Planned work for 2012.	Lane Departure	1	1	0	0	1	1
Ramp: SB US-131 to 44th St	Grand Rapids TSC	N/A	N/A	N/A	A SPUI was constructed at the interchange in 2009 (JN 51902). The one A-injury was a pedestrian under the influence of alcohol crossing outside the crosswalk.	Pedestrian	1	1	0	1	0	0
Ramp: SB Gratiot Ave to WB I-94	Macomb-St. Clair TSC	Reconfigure interchange to square up approaches to ramp; install overhead lighting; upgrade pedestrian signals; add midblock crossing to relocate pedestrians	\$1.5M	geometric issues with bridge on connector ramps and ROW on M-3.	Severe crashes occurring are Pedstrian and Bike Crashes during the crossing of the NB connector (ramp to WB I-94 and traffic originating from SB M-3.	Ped/Bike	3	3	1	1	1	0
Ramp: NB US-131 to Burton St	Grand Rapids TSC	Remove trees on inside of curve to increase sight distance of ramp alignment; ramp alignments on interchange modification can be investigated during the corridor study	\$3M - \$20M	ROW maybe required	Corridor study is currently ongoing (JN 111059), which will analyze possible options. Tree removal to be investigated.	Misc.	2	2	0	2	1	0
M-153 @ Middlebelt	Taylor TSC	Add pedestrian countdowns; enforcement	\$10,000	Enforcement manpower	Signal currently has mast arms and is modernized.	Misc.	6	7	0	0	0	0
M-97 @ W Metro Parkway	Macomb-St. Clair TSC	Modernize signal; increased enforcement; install backplates	\$150,000	ROW	Predominant crash pattern is angle crashes on westbound side of boulevard.	Rear end/ Angle	7	8	0	2	0	0
M-59 @ Hayes	Macomb-St. Clair TSC	Modernize signal with box span; countdown pedestrian signals	\$300,000	ROW	None	Misc.	3	3	0	3	0	1
M-25 @ Range	Macomb-St. Clair TSC	Shorten time signal is in flash; implement no turn on red; protected left turn phases; install signal back plates; countdown pedestrian signals	\$50,000	Intersection capacity	None	Angle	3	4	0	1	0	0
M-24 @ Harmon	Oakland TSC	Reconfigure roadway geometrics; eliminate left turns	\$450,000	N/A	Safety improvements scheduled to be included in JN 108096 (2015).	Angle	5	4	1	0	1	0

M-17 @ Glencoe Hills Dr	Brighton TSC	Tree trimming and restriping of stop bar on Dalton Road approach; relocate private fence on Dalton Road approach; approach work on Glencoe Hills to correct low area to improve sight distance to east; relocation of AATA site to west to improve sight distance from the west	\$1,000 per tree removal, approach work \$25,000 on Glencoe Hills, fence removal - unknown, Stop Bar - \$150, relocation of AATA - unknown.	Fence on Dalton Road approach located on private property. Public and transit acceptance for relocation of AATA bus stop. Approach work on Glencoe Hills - appears to be a public subdivision roadway under jurisdiction of local road commission. Dalton also under jurisdiction of local road commission. Signalization - may not meet the required warrants.	Currently this location is included in the Complete Streets proposal along the Washtenaw Corridor.	Angle	4	5	0	0	0	0
M-97 @ 14 Mile Rd	Macomb-St. Clair TSC	Eliminate accesses at intersection, modernize signal; signage for lane drop on NB M-97; advanced warning signs for signal ahead	\$150,000	Property owner agreement, ROW, overhead utility conflicts	None	Misc.	6	6	0	0	0	0
Ann Arbor Rd @ Newburg Rd	Taylor TSC	Review signal timing for potential split phase operation; modernize signal to box span	\$100,000	N/A	Previous intersection study considered and ruled out a roundabout at this location.	Angle	4	4	0	1	0	0
Ann Arbor Rd @ Main St	Taylor TSC	Modernize signal to box span w/ pedestrian countdowns; enforcement for red light running	\$100,000	Enforcement manpower	None	Misc.	5	6	0	1	0	0
US-24 @ 7 Mile Rd	Taylor TSC	Modernize signal to box span w/ Pedestrian countdowns; enforcement for red light running	\$150,000	Enforcement manpower	None	Angle	3	3	0	0	0	0
M-3 @ 7 Mile Rd	Detroit TSC	Enforcement and education; close fast food drives	\$100,000/ driveway closure	Enforcement manpower; getting established businesses to close drives	Signal upgraded to box span within last three years.	Misc.	7	5	3	1	3	0
M-3 @ Seymour	Detroit TSC	Enforcement and Education; prohibit left turns from Seymour/McNichols since they're not headed up due to offset intersection	\$500/sign	Enforcement manpower; getting City of Detroit to agree to prohibit left turns from the crossroad	Signal upgraded to box span within last three years.	Pedestrian	7	9	0	1	0	0
M-21 @ State St	Lansing TSC	Add left turn phasing to traffic signal	\$110,000	Left turn volumes and delays may not be significant enough to warrant left turn phasing at this time.	If left turn phasing is not warranted, other options such as a roundabout could be considered.	Angle/ Head on-Left Turn	5	4	1	0	0	0
US-24 @ Pennsylvania	Taylor TSC	Adjust signal head for EB and WB traffic to align with lane; modernize to box span; study for left turn phasing for EB and WB traffic	100,000	N/A	No pedestrian facilities in the vicinity.	Rear end	4	6	0	1	0	1
US-10 @ Pere Marquette Hwy	Cadillac TSC	Left turn phasing for WB US-10 to SB Pere Marquette Hwy	\$30,000	Turning volumes may not warrant a protected left turn phase.	This location was reviewed in 2009 for left turn phasing, but was denied. The study will be revisited given the recent Head-on LT crash pattern and left turn phasing will be pursued.	Head-on Left Turn	5	9	0	1	2	1
Grand River Ave @ Golf Club Rd	Brighton TSC	Installation of back plates on signal. Installation of pedestrian countdown indications and addition of crosswalk markings on Grand River Ave. Check coordination between signals in vicinity. Investigate angle straight type coded crashes to see if they were angle turn or head on left turn. If a pattern of angle turn/head on left turn is noted, then a left turn phasing study will be ordered.	Signal Backplates: \$7500.00, Countdown ped indications - \$1000 each, Installation of sidewalk and ADA ramps for Grand River crossing: \$22,000.	No sidewalk, ADA ramps, pedestrian indications or crosswalk markings currently exist across Grand River. Adding crosswalk and countdown pedestrian indications could negatively effect the operations along Grand River - this would need to be analyzed. No planned road projects in the near future to incorporate the cost of ada ramps, sidewalk and signal work.	Signal was modernized in 2009 as part of a new grocery store and expansion of the Livingston County offices. Crosswalk on north leg of intersection was installed as part of the project. May order left turn phasing study if further crash investigation warrants.	Angle	4	5	0	0	0	0

US-10 @ Brye Rd	Cadillac TSC	Left turn phasing for US-10 or a Roundabout	\$30,000 (phasing) to \$1.5M (roundabout)	Turning volumes/crashes may not warrant a protected left turn phase. The traffic distribution is unbalanced between the US-10 approaches and Brye Rd, which may not be conducive to installing a roundabout. However, it would solve the left turn crash pattern and could act as a gateway into the Ludington area.	Left turn phasing will be studied first. If the phasing does not meet warrants, then the roundabout option will be explored.	Head-on Left Turn	6	6	1	0	0	0
M-25 @ Commerce	Macomb-St. Clair TSC	Relocate driveways; provide access from side street	\$150,000	Property owner agreement	Investigation into exact crash location needed.	Misc.	2	2	0	1	0	0
M-11 (Wilson Ave) @ Obrien	Grand Rapids TSC	Relocation of stop bars; install signal	\$1,500 to \$100,000	Local participation; signal study is in process	45% of crashes occurred during dark conditions; intersection lighting is present	Angle	3	3	0	1	0	0
SB US-131 @ Wealthy St on-ramp	Grand Rapids TSC	Possible new interchange design to lengthen existing accel and decel ramps or design to eliminate left on and off ramps.	\$20M to \$75M	Active Corridor Study	Corridor Study is currently ongoing (JN 111059), Which Will Analyze Possible Options	Misc.	3	3	0	2	0	0
Capac Road - Pratt Rd to Hough Rd	Macomb County	Under Construction	\$131,948	N/A	All roadside signs have been replaced and updated. Roadwork is presently occurring which will include lane widths being widened from 12' to 15'. Superelevation was improved. Adding center and edge line rumble strips.	Lane Departure	6	4	3	3	2	5
Jefferson Ave - Cotton Rd to Pheasant St	Macomb County	Install Target Arrows and Delineators. Update Advanced Curve Ahead Signs. Reconstruct Roadway to 3 Lanes (Center Left Turn Lane). Install Rumble Strips on Center of Road.	\$2.4M	N/A	Constructing to 3 lanes would be determined in future budgetary meetings. Signing is planned for Fall of 2012.	Lane Departure	4	3	3	2	1	1
30th St - 120th Ave to 122nd Ave	Allegan County	Clearing; slope flattening; mill & fill; wider shoulder paving	\$280,000/Mile	ROW, Public pressure against tree removal.	We have already removed one of the trees involved in a fatal; we will look at estimates for the other remedies in the future.	Lane Departure	5	5	2	0	1	1
6 Mile Rd - ~Forest Side Rd to Piche Rd	Chippewa County	Update signage; update pavement markings; possible vertical re-alignment; remove one unused driveway with poor sight distance	signage- \$25,000, realignment and driveway rem. - \$350,000	Sign replacement project is underway and will be completed by Sept. 2013, Currently making application for funds for pavement markings. Vertical realignment would require acquisition of additional ROW. Two homes are in the area that would need to be aquired.	One crash occurred with a vehicle entering a driveway with poor sight distance (hill) and was struck by oncoming vehicle. Since that time that residence has burned and the property is vacant. Currently negotiating with landowner for removal of driveway.	Lane Departure	3	2	2	0	0	1
Old US-23 - 1500' S to 900' N of Clyde Rd	Livingston County	Supplemental curve warning signs; curve modification/reconstruction	\$2,000 to \$600,000	Wetlands, ROW, embankment and fill slopes	LCRC modified and upgraded curve warning signs and intersection control signs in June, 2009. Supplemental signs, in addition to those changes made in 2009, will be considered by LCRC at their expense; project will be scoped for future project.	Lane Departure	3	1	2	0	1	1
Luce St - 26th St to 1/4 M east of 26th St	Ottawa St	Clear brush along shoulder and behind guardrail.	\$500	N/A	OCRC previously completed sign upgrades in 2010 for reverse curve ~1,000' east of 26th Ave.	Lane Departure	3	4	1	1	0	1

Metropolitan Pkwy & Harper Ave	Macomb County	Install Signal Backplates for all Signals. Update Diagonal Spans to Box Spans. Install Pushbutton Posts and Pedestals. Install Countdown Pedestrian Signals.	\$150,000	N/A	Constructing box span would be determined in future HSIP applications. Signal backplates are planned for Fall 2012 installation.	Angle	4	5	1	1	2	0
Long Lake Rd & John R Rd	Oakland County	Modernize traffic signal installation to a box span design and replace left turn phase signal with the flashing yellow arrow (FYA) 4-section head. Installation to include dog-house right turn signal indications to replace current right turn green arrows, and replacement of pedestrian indications with countdown pedestrian indication heads. Upgrade sidewalk and ramps to be ADA compliant.	\$150,000	Utility Conflicts	None	Angle/ Head on-Left Turn	4	6	5	1	1	0
Lake Pleasant Rd & Newark Rd	Lapeer County	Raise intersection grade	\$375,000	Right-of-way, wetlands, exist. driveways	None	Angle	4	4	1	0	1	0
Carpenter & Belsay	Genesee County	Flashing beacons. Safety measures were implemented after the fatal crash in November, 2010. 2- 36" stop signs were placed on EB and WB Carpenter along with 2 - Stop Ahead Warning signs. Advance intersection warning signs were placed on Belsay Road. All signs placed have reflective strips on the sign posts. Cross Traffic does not stop signs were placed under the stop signs on Carpenter. Stop Bars were painted on the pavement.	\$17,000 for Solar Flashers on the approaches.	N/A	Placement of Solar flashers on the stop signs is beginning considered.	Angle	3	2	3	1	1	0
Grand Traverse St & Merriman Rd	Wayne County	Install actuated pedestrian / vehicular traffic signal with ADA improvements	\$250,000	N/A	None	Ped/Bike	3	1	2	0	0	0
14 Mile Rd & Dequindre Rd	Oakland County	Modernize traffic signal installation to a box span design and replace left turn phase signal with the flashing yellow arrow (FYA) 4-section head. Installation to include dog-house right turn signal indications to replace current right turn green arrows, and replacement of pedestrian indications with countdown pedestrian indication heads. Upgrade sidewalk and ramps to be ADA compliant.	\$150,000	Utility Conflicts	A significant amount of concrete repairs have been made within the intersection in recent years to improve surface conditions.	Misc.	3	2	1	0	0	0
133rd Ave & Bowens Mill Rd & Patterson Rd	Allegan/Barry Counties	Double up and replaced stop ahead and stop signs, diamond grade and add post inserts. Add "Cross Road Traffic Does not Stop" signs, diamond grade. Replace intersection signs on Petterson with 45MPH speed panels, diamond grade.	\$1,500	N/A	This work was completed was completed 11-17-2011	Angle	3	5	1	0	0	0
Smith & Lewis	Monroe County	Clearance interval review; box span	\$5,000; \$70,000	N/A	Will see how the clearance interval works and possibly apply for funding to reconfigure signal in the future	Misc.	3	4	1	1	0	1

McNichols & James Couzens Fwy	Wayne County	Revise Ped and Vehicle Clearance Intervals	\$500	N/A	None	Angle	4	5	1	1	0	0
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Additional Notes:	*Crash pattern may not include all severe crashes. Pattern indicated that for the majority of severe crashes. Segments do not include intersection related crashes.
	**Drivers or passengers with fatal or incapacitating injuries were reported when not wearing a seatbelt or helmet (motorcycle crashes). Use for remaining drivers and passengers could be listed as yes, unknown or not applicable.
	***Speed related crashes involve vehicles whose hazardous action was listed at "Speed too fast" or when the crash narrative indicated a driver was speeding.