**I-39/I-90 and Beltline/Verona Road**

**Proposed Incident Management and Traffic Mitigation Strategies**

**June 2018**

| TMP and Incident Management Strategies |
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| Strategy Description | Benefits/Data | Lead Agency | Cost Estimate |
|
| 1. Integrated Corridor Management Strategies on Selected Local Roads (Tied to Strategy #11 and #51)
* Implement advanced signal systems (adaptive/ responsive) on US 14 alternate route through Janesville
* Implement 11 dynamic message signs (DMS) on freeway to provide information throughout corridor construction
* Provide traffic detection on alternate route
* Provide traffic incident management (TIM) on I-39/90 and alternate routes
* Phased deployments starting with 2013 early ITS deployment
* Deploy adaptive system on integrated corridor routes:
* USH 14 from USH 51 to Wright Road;
* STH 26 from USH 14 to Kettering Street;
* I-39/90 Travel Time Equipment (45 Miles) and alternate route travel time equipment/vendor (61 miles)
* 28 Bluetooth Readers along the mainline
* Communications infrastructure (Includes portable cameras)

Discussion/Follow-up:* Intent is to make these permanent alternate routes following construction
* State Patrol would like updates to the Alternate Route Guides in hard copy and electronic format

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = December 2015** | * Improved traffic operations; mainline and alternate routes
* Increased safety through signing, detection, traffic control, etc.
* Improved communications
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. Enhanced Reference Markers
* 1/5 mile spacing preferred for the Beltline and I-39/90

Discussion/Follow-up: * These have been installed.

**RECOMMENDED FOR APPROVAL = YES****COMPLETED DATE = March 2014 (DONE)** | * Improved incident location and response
* Quicker incident clearance
 | I-39/90 CMT (Traffic Unit) | $96,000 |
| 1. Portable Cameras
* Identify “hotspots” where cameras should be placed
* Dane County has informally requested a camera along Midvale Boulevard and the railroad tracks near Cherokee School (looking South)
* Another has been requested near Raymond Road.
* WisDOT took possession of cameras in October 2013.

Discussion/Follow-up:* Discussion regarding access and availability of cameras to outside parties. List being developed.
* Dane County has requested access to a camera feed along Midvale Boulevard during the Verona Road Mega Project construction.
* The WisDOT SWR Mega Project Edgerton Office will have a workstation in which cameras/ITS devices can be viewed/monitored.
* Will portable cameras be recorded, and if so, what are the requirements? Permanent cameras typically operate on a 72-hour recorded loop. Portable cameras are typically not recorded. State Patrol would like cameras with at least 30-60 minute recorded loop to help with incident management and reconstruction.
* Additional cameras would potentially mean additional staffing costs for STOC operations

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = Ongoing** | * Helps monitor traffic flow
* Improved incident detection and verification
* Better access to 911 Dispatch Centers (WSP and Dane Co)
 | I-39/90 CMT (Traffic Unit) | $56,000 per unit; $392,000 Total for purchase(5 for I-39/ 90, 2 for Verona Road) $1,000 to $5,000/unit/month to rent |
| 1. Crash Investigation Sites (CIS)

Discussion/Follow-up:* This refers to permanent sites. SRF memo documented final locations for CIS along the corridor.
* Related to strategies 5 and 9.
* Approved at the CMT meeting on 2/20/14.

**RECOMMENDED FOR APPROVAL = YES****COMPLETED DATE = February 2014 (DONE)** | * Quicker clearance of incidents from mainline
* Improved safety for motorists and responders
 | I-39/90 CMT (Traffic Unit) | $65,000 (rural) to $112,000 (urban)/site  |
| 1. Law Enforcement Pads (LEP)

Discussion/Follow-up:* Related to strategies 4 and 9.
* Discussed concept with DSP.
* Additional information was requested during June 2014 meeting.
* Further review for selection of locations along corridor explored by DSP for life safety purpose (2017)

**RECOMMENDED FOR APPROVAL = Originally YES, now NO** | * Ability to safely park squad car in/near the construction zone and monitor/respond to changing traffic conditions
 | I-39/90 CMT and DSP | $18,000 to $35,000/pad depending on specs |
| 1. Temporary Glare Screens on Concrete Barriers
* Modular sections add 18-30” to top of barrier wall

Discussion/Follow-up:* Crash testing is being investigated, but the group has no opposition to this strategy.
* Screen location criteria need to be established (i.e., volumes, areas with construction in close proximity, crash history, etc.).
* SWR has used this strategy on the 2013 Yahara River bridge work on the Madison Beltline Highway.
* Determine need for counter-directional traffic – Follow up discussions to be held with Jerry Zogg. AECOM (Bill P.) memo also provides guidance.

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = Decision made to use them (DONE) August 2014** | * Eliminate two-way gawking
* Minimize delay
* Reduced secondary crashes
 | I-39/90 CMT (PDS Unit) | $15,000/ mile |
| 1. Temporary/Permanent Emergency Interstate Access Justification Report (IAJR)
* Ability to provide additional emergency access gates along I-39

Discussion/Follow-up:* First responders must be able to enter work zone if there is an accident. Team will work with State Patrol and first responders to identify locations where additional emergency access is needed.
* Locations would be temporary. If they are requested to be permanent, further analysis will be conducted.
* The Bureau of Highway Maintenance will be coordinated with for this work.
* Unofficial access points would either be eliminated or approved through the justification process.
* FHWA has stated that these are to be used for emergency access only and not to be permanent for maintenance purposes.
* Approval process will be a joint effort by FHWA, WisDOT SWR, WisDOT Bureau of Highway Maintenance, and responding local agency.
* FHWA desires a comprehensive approach for IAJR for each county or the entire corridor. Rock County locations prioritized during June 30, 2016 meeting.
* CTH M and CTH B preferred locations (between the bridges; up from the middle)

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE (for FHWA approved IAJR) = September 2018** | * Improved response times (greater accessibility for tow, fire, law, EMS services)
 | I-39/90 CMT (Traffic Unit) | $500,000/ location construction and FHWA coordination |
| 1. Armorguard – Removable Barrier with Gate System

Discussion/Follow-up:* Has been included on four WisDOT SWR projects, but has not been used/implemented. SWR currently owns two of these.
* The proper spacing of these devices will need to be investigated. Spacing guidelines need to be developed.

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = Decision made to use them (DONE)** | * Emergency traffic diversions
* Flexibility in traffic lanes
* Maximize throughput
* Emergency access for first responders in barrier wall
 | I-39/90 CMT (PDS Unit) | TBD – was $28K three years ago |
| 1. Emergency Pull-Out Areas During Construction
* Paved area with a minimum length of 300’, a desired length of 450’ and a minimum width of 15’ for motorists to safely pull over through the construction zone

Discussion/Follow-up:* Related to strategies 4 and 5.
* The I-39/90 project is using 4-foot outside shoulders within the work zone. Temporary emergency pull out locations are being investigated.
* The 300-450 foot proposed length is based on the ability to accommodate a semi and two cars or three passenger vehicles.
* In rural areas they are generally spaced every 2-3 miles.
* Crash history should also be considered for spacing.
* Maximum of 2 hour stopping time.

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = Decision made to use them (DONE) February 2014** | * Minimize delay and back-ups
* Maximize throughput
* Motorist/responder safety
* Helps with FST
 | I-39/90 CMT (Traffic and PDS Units) | TBD |
| 1. Emergency Staging Area/Helicopter Staging Area
* 100’x100’ off-site landing pad for med-flight helicopter
* Asphalt or concrete; fenced area desirable.

Discussion/Follow-up:* Identify areas where landing pads currently exist and make improvements where necessary
* Coordination with fire department personnel and other first responders is underway.
* Existing crossover at MM 166 identified as potential site.
* Map of existing/proposed locations in development.
* Current strategy is to install these at the end of the project.
* Helicopter staging area to be constructed at the median cross-over near MP 166.

**RECOMMENDED FOR APPROVAL = YES** **ESTIMATED COMPLETION DATE = Year 2020 (complete with construction project)** | * Quicker access to and removal of serious injuries from the scene
 | I-39/90 CMT (Traffic Unit) | Estimated cost is $35,000  |
| 1. Integrated Corridor Management System Maintenance and Operations (Tied to Strategy #1 and #51)
* Temporary signal maintenance to be done by contractor
* STH 11 (East Racine Street)/USH 14
* Maintain alternate route
* USH 14 from USH 51 to Wright Road
* STH 26 from USH 14 to Kettering Street
* Adaptive traffic signal support and training through STOC statewide contract
* Maintain communication infrastructure
* Arterial Cameras
* Arterial Dynamic Messaging Signs

Discussion/Follow-up:* Performance measures for response times are desired for signal maintenance.
* Technology failure is more important than knock-downs.
* WisDOT electricians will not be involved in Adaptive System.
* Janesville adaptive signals will be evaluated for permanent use following construction.
* How does STOC know who to dispatch/notify? This will need to be written into the SPV’s and contractor information provided.
* **System diversion trigger configured in February 2017**

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = February 2017** | * Improved safety - A signalized intersection can reduce the frequency and severity of crashes
 | I-39/90 CMT (Traffic Unit) |  |
| 1. Improved Use of Technology – Explore opportunities to provide increased technological tools to WisDOT staff, DSP, etc.
* Smart phones (small/portable, cost effective); Direct communication is desired.
* Cell Phone Upgrades with GPS (Next Generation 911) - Triangulation of towers to accurately identify locations within WSP and County (infrastructure upgrade)
* Computers (larger screen than smart phone, but requires air card)
* Tablets/iPads (larger screen than smart phone)
* Mobile Data Computers (MDCs) (durable, but costly)

Discussion/Follow-up:* The decision making process for shared use vs. direct project use needs to be documented.
* Relate it to FTE equivalent.
* Need input from Budget/Finance as to how to proceed for Strategies 12-22. DSP and WisDOT SWR shall be included in all discussions.

**RECOMMENDED FOR APPROVAL = Originally NO, now YES****ESTIMATED COMPLETION DATE = December 2015** | * Improved communication
* Improved coordination
* Ability to stay abreast of changing conditions (traffic, weather, coordination with various staff and responders, etc.)
 | I-39/90 CMT and DSP | $100/ phone; $100/month for service$2,000/ computer$500/iPad$2,000/MDC |
| 1. DSP Vehicle Equipment
* Push bumpers
* Video cameras
* Speed enforcement lasers
* LED emergency lighting bars

Discussion/Follow-up: * Need input from Budget/Finance as to how to proceed for Strategies 12-22.
* Was originally not moving forward, but based on 6/25/18 meeting between the I-39/90 Team and DSP, this item is now being vetted again. Push bumpers on DSP squads should be further investigated for use.

**RECOMMENDED FOR APPROVAL = NO** | * Quick clearance of minor incidents
* Minimize traffic delay
 | I-39/90 CMT and DSP | TBD |
| 1. Various Consumables for DSP (first aid kits, tires, gas, radios, cones for temporary traffic control, etc.)

Discussion/Follow-up:* Specific to the zone/project
* Need input from Budget/Finance as to how to proceed for Strategies 12-22.

**RECOMMENDED FOR APPROVAL = NO** | * Improved response due to availability of equipment
 | I-39/90 CMT and DSP | $20,000 |
| 1. Emergency Vehicle Preemption (EVP) on Priority Alternate Routes (equipped on signals)
* Determine existing conditions on warranted locations (Verona Road based)

Discussion/Follow-up:* May not be legal on law enforcement vehicles. Undertake legal process to determine if legal/feasible.
* Need input from Budget/Finance as to how to proceed for Strategies 12-22.
* Advance notice for first responders at railroad crossings
* Potential Issues: funding, equipment, cost share
* Need to determine who wants it and their willingness to pay

Recommendation:* Requesting agency/municipality needs to officially request it and pay for installation. After install, WisDOT will maintain the signal, but the vehicle transmitter maintenance is the agency/municipality’s responsibility

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Improved emergency vehicle response times
* Reduction of intersection crashes for emergency vehicles
 | I-39/90 CMT and WisDOT SWR Traffic | TBD |
| 1. Automatic Vehicle Location (AVL) – for Dispatch to Monitor and assign nearest truck
* All law enforcement vehicles, county plow trucks, tow vehicles, etc.
* Include all tow truck vehicles?
* MACH System could also produce same results (see below)

Discussion/Follow-up:* DSP will have MACH system in place by the start of the project (complete)
* Need input from Budget/Finance as to how to proceed for Strategies 12-22.
* Originally this was not moving forward, but based on 6/20/18 meeting between I-39/90 Team and DSP, this item is now moving forward as AVL is being installed on the three FST vehicles within the corridor.

**RECOMMENDED FOR APPROVAL = NO** | * Improved response times
* Enhanced vehicle location to identify what vehicle to send to the scene
 | I-39/90 CMT and DSP | TBD |
| 1. MACH System
* Use of MACH system to monitor travel conditions, response efforts along the corridor

Discussion/Follow-up:* DSP currently has multiple versions of MACH; request has been made to get access for WisDOT management team and selected others
* Need input from Budget/Finance as to how to proceed for Strategies 12-22.

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Accurate, up to date information on incidents
* Improved coordination with DSP and other law enforcement
* Increased safety for motorists and responders
 | I-39/90 CMT and DSP | $0 |
| 1. DSP Vehicles for Response Efforts
* Three motorcycles (3) desired by DSP
* SUVs/Pick-up trucks

Discussion/Follow-up:* Need input from Budget/Finance as to how to proceed for Strategies 12-22.
* Originally this item was not moving forward, but based on 6/25/18 meeting between I-39/90 team and DSP, this item is now being further investigated.

**RECOMMENDED FOR APPROVAL = NO** | * Motorcycles (increased maneuverability)
* SUVs/Pick-up Trucks (trailer pulling capabilities to get traffic control equipment quickly to the scene; can be used in winter weather)
 | I-39/90 CMT and DSP | $40,000 per motorcycle; SUV/Truck cost unknown |
| 1. DSP Construction Troop
* Dedicated troop of 10-12 (or up to 35) troopers to serve construction projects
* 5-year commitments

Discussion/Follow-up:* Specific class previously help for speed limit changes
* Evaluate demand for DSP within the project.
* Benefit-Cost Analysis for pay (OT vs. straight time)
* Need input from Budget/Finance as to how to proceed for Strategies 12-22.
* Need to evaluate options for how to pay for this item – 1) construction troop, 2) conventional mitigation (no equipment), 3) FTE equivalent with equipment purchase

**RECOMMENDED FOR APPROVAL = Originally MAYBE, now NO** | * Increased safety (motorists, responders, etc.)
* Minimized response times
* Increased geographic coverage area
* Maximize traffic operations/ throughput
* Improved communications/ relationships amongst responders
 | I-39/90 CMT and DSP | TBD |
| 1. Cell Phone Upgrades with GPS (Next Generation 911)
* Triangulation of towers to accurately identify locations within DSP and County (infrastructure upgrade)

Discussion/Follow-up:* Included as part of Strategy 12.
* Cell phones now have GPS so this item has been marked “complete.” (6/25/18)

**RECOMMENDED FOR APPROVAL = NO** | * Improved incident location
* Improved response time
 | I-39/90 CMT and DSP | TBD |
| 1. Aerial Surveillance Equipment
* Division of State Patrol Air Support Unit has provided a proposal geared toward quick-clearance efforts through construction zones

Discussion/Follow-up:* Cost effective and efficient
* I-39-90, Verona Road, or other significant construction projects could potentially use.
* Used for previous events (2008 flood, PGA Championship)
* Aircraft are already available. This strategy relates to the video equipment.
* A criteria-driven process is used to determine the frequency of this strategy. Additional follow up is needed.
* Need input from Budget/Finance as to how to proceed for Strategies 12-22.
* Need to coordinate with other Regions regarding use on the Major’s Program.
* February 2016 – WisDOT/DSP has made a decision not explore this concept any further for the time being. Wisconsin is currently being audited and the state has already tentatively agreed to purchase a new aircraft for photogrammetry use. Purchasing another plane at this time is not feasible.
* This initiative has been explored on two separate occasions; one in 2014 and again in 2015/16.
* Based on 6/25/18 meeting between the I-39/90 Team and DSP, this item should be explored again.

**RECOMMENDED FOR APPROVAL = NO**  | * Improved safety/ response times
* Ability to view real-time footage to improve incident response efforts
* Improve detection/response activities based on information provided
* Review recorded footage for project meetings, After Action Reviews (AARs), or other debriefings
* Crash reconstruction
* Speed enforcement
* Minimize motorist delay
 | I-39/90 CMT and DSP | $750,000 capital cost for equipment without a newer aircraft. If a newer aircraft is needed, that would cost an additional $400,000. Operating costs for the Cessna 206 is estimated to be $200-270 per hour |
| 1. Drone/Unmanned Aerial Vehicle (UAV)
* Use of Drone/UAV to monitor traffic conditions, view overhead information of traffic control shifts, and other provide improved response during incidents

Discussion/Follow-up:* Exploring use of cameras on state-owned planes
* Use of aerial surveillance on state-owned planes provides greater range/coverage, can be quickly deployed, and has fewer limitations
* May explore again based on technology advancements (2017)
* Based on 6/25/18 meeting between the I-39/90 Team and DSP, this item should be explored again and coordinate with WisDOT’s Drone/UAV Committee.

**RECOMMENDED FOR APPROVAL = NO** | * Ability to monitor traffic conditions, lane shifts, and other roadway conditions from overhead
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. Crash Reconstruction Equipment
* Use of Total Station/Robotic Total Station
* Photogrammetry

Discussion/Follow-up:* DSP has more trained staff than equipment available.
* Reconstruction equipment will be staged on the project.
* Purchase of equipment has been determined to be more cost effective than leasing.
* The useful life of the equipment and the uses for the equipment after the project will need to be addressed.
* Robotic Total Stations (possibly 2) will be transferred to I-39/90 via surplus of WisDOT survey equipment
* DSP has added one GPS unit to the I-39/90 corridor (Lake Kegonsa SWEF) for corridor use (Oct 2016)
* Based on 6/25/18 meeting between the I-39/90 Team and DSP, DSP expressed interest in obtaining another unit to expedite crash reconstruction.

**RECOMMENDED FOR APPROVAL = YES****COMPLETED DATE = July 2014 (DONE)** | * Minimize delay and increase safety - Reduce reconstruction processing time by 50%
* Increased staff efficiency – requires only one person to operate; reducing personnel resources by 300% (information supplied by DSP, June 2013)
 | I-39/90 CMT and DSP | $131,000 – less if the ones in surplus are used |
| 1. Traffic Volume Data Collection (Mainline and Alternate Routes)
* Collecting traffic volume data via Bluetooth readers, Inrix data, etc.
* Accurately assess traffic conditions throughout the day and week

Discussion/Follow-up:* RFP has been developed and is close to being released for providers of data collection services.
* TomTom will be used; WisDOT currently negotiating the contract with Transcore

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = Decision made to use them (DONE)** | * Provide additional safety based on roadway conditions
* Maximize roadway throughput
* Proactively manage traffic conditions
 | I-39/90 CMT (Traffic Unit) | $150K for Bluetooth along I-39/90; other options vary based on amount of data collected and duration  |
| 1. Tow and Recovery (Performance Based)
* Freeway Service Truck
* Performance-Based Tow (WisDOT Contract)
* Hybrid Option (Combination of FST and Contract Tow)

Discussion/Follow-up:* Some criteria for equipment and response times are already in place: 60 minute for heavy, 30 minute for other.
* The group felt that 60 minutes is too long for a response time.
* The existing policy (Appendix G in the Guidelines) should be enhanced.
* A few options should be developed for tow/recovery
* Provide incentive to increase response; Check with Tow Association regarding what incentives would change behavior/response times.
* Two models should be pursued: 1) With incentive, 2) Without incentive
* Need to develop a summary of options and strategies to move forward.
* Based on 6/25/18 meeting between the I-39/90 Team and DSP, this item should be explored again.

**RECOMMENDED FOR APPROVAL = TO BE DETERMINED****ESTIMATED COMPLETION DATE = TO BE DETERMINED** | * WisDOT controlled response
* Ability to request additional assistance from tow companies if needed
* Handle minor repairs and remove roadway debris
* Assist in traffic control
* Ability to adjust coverage area
* WisDOT determine the contract terms/ specifics through a special contract
* Ability to have tow trucks in a construction zone for a set period of time/schedule
* Ability to dictate truck size and equipment requirements for response efforts regarding high number of trucks along both corridors
* Benefits of both FST and contract tow
 | I-39/90 CMT (Traffic Unit) | TBDNOTE: This may be a cost that WisDOT may incur depending on policy direction determined by the Majors Program |
| 1. Freeway Service Truck
* Contract towing services to private vendor
* Patrol specific segment of the corridor during specific days/times

Discussion/Follow-up:* Use FST to improve clearance times and increase safety

**RECOMMENDED FOR APPROVAL= YES****ESTIMATED COMPLETION DATE = ONGOING** | * Use of FST to expedite recovery effort and minimize delay
* Increased safety for motorists and those working within the corridor
 | I-39/90 CMT and DSP(Traffic Unit) | TBD |
| 1. Use of Contract Tow
* Exclusive contract for towing services to private vendor to meet a designated level of service within a specific segment
* Includes all towing services within the segment including large vehicles in excess of 8,000 pounds

Discussion/Follow-up:* Use in combination with FST to improve clearance times and increase safety

**RECOMMENDED FOR APPROVAL= TO BE DETERMINED****ESTIMATED COMPLETION DATE = ONGOING** | * expedite recovery effort and minimize delay
* Increased safety for motorists and those working within the corridor
 | I-39/90 CMT and DSP(Traffic Unit) | TBD |
| 1. Use of Delayed Recovery
* Recovery of disabled vehicles following a winter storm event or significant incident (delaying recovery a day or more)
* Towing and Recover practice of retrieving disabled vehicles outside of peak-hour travel conditions (delaying recovery a few hours) – Use of Heat Chart to determine timeframes

Discussion/Follow-up:* Delayed Recovery uses a three-pronged approach: 1) Single incident, 2) Towing moratorium, 3) Planned delayed recovery based on travel and lane restrictions for specific hours based on construction.
* On-site inspections are part of the annual review process.

**RECOMMENDED FOR APPROVAL = YES****COMPLETED DATE = Decision made to do this (DONE) August 2013** | * Minimize traffic delays/maximize throughput
* Motorist/responder safety
* Potential for quicker recovery, improved work area
 | I-39/90 CMT and DSP (Traffic Unit) | TBD |
| 1. TIME Meetings and Outreach
* Implement WisDOT’s Traffic Control and Scene Management Guidelines in conjunction with the TIME meetings
* Traffic Incident Management (I-39/90 and Verona Road) meetings
* FST driver training
* Coordination with RIMCs and Duty Officer
* Traffic control set up for incident areas
* Training
* Outreach with Sheriff’s Departments, Highway Departments, Fire/EMS, and law enforcement agencies

Discussion/Follow-up:* Management team will continue to meet with first responders, informing them of the TIME meetings held by WisDOT.
* Explore opportunities for additional work zone safety training.

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Improved coordination
* Knowledgeable team of responders
* Primary focus on County Highway Departments as well as municipal fire, law, EMS responders
 | STOC Staff | $0 |
| 1. DSP TIM Training and Outreach
* Conduct TIM Training with Wisconsin State Patrol for the I-39/90 corridor.
* On-going outreach and coordination with State Patrol

Discussion/Follow-up:* Coordinate training activities with DSP

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Improved coordination
* Knowledgeable team of responders
* Reduced costs through improved coordination
* Decreased response times through coordination efforts and clear understanding of project details
* Reduce serious injuries through improved response times.
 | I-39/90 CMT and DSP (Traffic Unit) | TBD |
| 1. Law Enforcement Coordination
* Regular coordination with Wisconsin State Patrol, County Sheriff, and Local Police Department staff to ensure quick clearance strategies and response efforts
* Clarify communication process amongst first responders

Discussion/Follow-up:* Continue to meet with Law Enforcement staff as necessary

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Reduced costs through improved coordination
* Decreased response times through coordination efforts and clear understanding of project details
* Reduce serious injuries through improved response times.
 | Dane County, Rock County, I-39/90 CMT, and DSP (Traffic Unit) | TBD |
| 1. County Highway Department Coordination
* Regular coordination with County Highway Department staff to ensure quick clearance strategies and response efforts
* Clarify communication process amongst first responders

Discussion/Follow-up:* Continue to meet with Highway Departments as necessary

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Reduced costs through improved coordination
* Decreased response times through coordination efforts and clear understanding of project details
* Reduce serious injuries through improved response times.
 | Dane County, Rock County, I-39/90 CMT, and DSP (Traffic Unit) | TBD |
| 1. Fire Department/EMS Coordination
* Inter-jurisdictional response
* Emergency access evaluations
* Emergency response plan
* Emergency Response Routing – Planning
* Emergency Vehicle Preemption (EVP)
* Signing
* Project information sharing with fire stations, EMS providers and dispatchers

Discussion/Follow-up:* Have previously met with Rock County I-39/90 Fire Departments/EMS. Continue to meet with them as necessary.

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Reduced outreach costs through improved coordination
* Decreased response times with additional emergency access
* Reduce serious injuries through improved response times.
* According to the National Safety Council, a traffic fatality costs society $4.2 million; whereas an injury accident costs society $53k
 | City of BeloitCity of JanesvilleCity of EdgertonCity of StoughtonCity of Madison and I-39/ 90 CMT (Traffic Unit) | TBD |
| 1. Tow/Recovery Coordination
* Regular coordination with tow/recovery personnel to ensure quick, safe clearance of stalled/disabled vehicles and other crash debris
* Clarify communication process amongst first responders

Discussion/Follow-up:* Desire to improve communication and coordination with first responders
* Identify work zone and applicable towers nearby and evaluate their capabilities to provide those services.

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Reduced costs through improved coordination
* Decreased response times through coordination efforts and clear understanding of project details
* Reduce serious injuries through improved response times.
 | I-39/90 CMT and DSP (Traffic Unit) | TBD |
| 1. IDOT and IL Tollway Outreach and Coordination
* Regular coordination with IDOT and IL Tollway regarding construction activities and to ensure quick clearance strategies and response efforts.
* Clarify communication process amongst first responders

Discussion/Follow-up:* Continue to meet with IDOT and IL Tollway as necessary

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Reduced costs through improved coordination
* Decreased response times through coordination efforts and clear understanding of project details
* Reduce serious injuries through improved response times.
 | I-39/90 CMT and DSP (Traffic Unit) | TBD |
| 1. TMP Construction Coordination — process delivery/alternate route management
* Facilitate weekly construction closure schedule meetings
* Facilitate weekly construction traffic coordination meetings
* Maintain weekly closure schedule
* Complete TMP form amendments
* Monitor traffic signal timing modifications in coordination with municipalities
* Collect travel time and volume data during construction

Discussion/Follow-up:* Improve traffic sign information
* Threshold is needed to determine when DMS should be used to divert traffic to alternate routes based on speed and volume. This could be triggered by volume measures via Bluetooth detectors.
* Ongoing coordination needed with STOC.

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Efficient delivery of construction improvements
* Coordination and efficient use of resources among STOC, TOPS Lab, and BTO
* Improved coordination of signal timing modifications
* Responsiveness to operations issues along alternate routes
* Travel time and volume data
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. Statewide Traffic Operations Center Coordination
* Message plan development
* Operate and monitor portable CCTVs on alternate routes
* STOC, TOPs Lab and BTO coordination
* Observe and manage alternate route operations with police departments, DPWs and the STOC
* Supplement current resources to continue 24/7 staffing of control room
* System integration for new and changing FTMS locations
* Provide communication services as a statewide call center 24/7 to include:
* Facilitates communications between various entities such as RDO/RIMC, law enforcement and construction contractors
* Monitor and report construction closure issues
* Create and monitor a DMS closure plan daily
* Provide infrastructure and electrical callout
* Able to communicate with law enforcement and other entities via teletype and WisCOM
* Provide communication and monitor SEOC during significant incidents and special events
* Monitor Rock and Dane County Sheriffs and State Patrol
* Assist and support LCS
* Accept, edit and modify closures as needed
* Enter emergency lane closures in system
* Provide public information through various medium to include:
* Entries in 511 and floodgate messages
* Communication with media for closure issues
* Traffic incident alerts (TIA) and alternate route notifications
* Provide Highway Advisory Radio messages
* Live video feed of camera for local municipalities
* Provide incident management on alternate mainline and routes to include:
* Facilitate signal timing or alternate routes for incident management
* Traffic Incident Management Enhancement program
* Provide regional TIME meeting incident information and facilities debriefs
* Provide support for FST administration to include changes in routes for significant incidents or special route coverage
* Participate in After Action Reviews for EDI’s
* Operators maintain and update construction project manuals for control room reference
* Attend and represent control room at construction meetings as needed

Discussion/Follow-up:* There is a need for additional operators in dispatch to assist with the dispatcher role.
* STOC will likely need to rely on project staff help, which will be an additional project cost.

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Central coordination of traffic operations
* 24/7 real-time information on traffic conditions
* Single point of contact for different elements of incident management
* Improved communication among different elements of traffic incident management effort
* Constant, organized source of information on travel conditions
 | I-39/90 CMT and WisDOT STOC (Traffic Unit) | TBD |
| 1. Incident Management Trailers
* Disperse pre-deployed trailers loaded with traffic control equipment when incidents occur
* Four Locations Identified:
1. Rock Co. Hwy Shop at Shopiere
2. Rock Co. Hwy Shop at Newville
3. SWEF site on NB/WB I-39/90 between CTH N and CTH MN
4. Dane Co. Hwy Shop located at the Badger Interchange

Discussion/Follow-up:* Need to further define roles of highway department, contractors, fire department, etc.

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = August 2014 (DONE)** | * Improved response
* More effective response with equipment on site
* Strategic pre-deployment
 | I-39/90 CMT (Traffic Unit) | $20,000 to $30,000 per trailer x 4 trailers = $80,000 to $120,000 Total |
| 1. Corridor-wide Incident Management Plan
* Recommended communication process during an emergency
* Local stakeholder agency roles and responsibilities
* Emergency contact list
* Integration with WisDOT and ETO Plan and Procedures (STOC)
* Multi-agency exercise to confirm communications and fine-tune plan

Discussion/Follow-up:* This strategy is above and beyond a project incident management plan. Follow the process from Zoo and Mitchell Interchange.
* Need to ensure 24/7 staffing and availability of people and equipment
* Increase coordination, consistency, standards, and expectations for RIMCs – project proximity important

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = December 2014 (DONE)** | * Improved communications/ coordination amongst first responders
* Increased safety
* Minimize delay associated with incidents
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. Temporary Signal at US 51 and Ladd Lane in Edgerton
* Request for temporary signal by Edgerton staff
* Request made to improve emergency vehicle access during incidents and events

Discussion/Follow-up:* This strategy was discussed by WisDOT and determined not feasible for implementation.
* Does not meet warrants for a signal.

**RECOMMENDED FOR APPROVAL = NO** | * Improved emergency vehicle access and operations
* Increased safety
* Minimize delay associated with incidents
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. Dynamic Speed Board
* Request for dynamic speed board by Edgerton staff
* Request made to reduce speeds and improve safety by motorists through Edgerton

Discussion/Follow-up:* This tool is intended to maintain speeds through downtown Edgerton and hence improve safety.

**RECOMMENDED FOR APPROVAL = NO** | * Enforce speed control
* Increased safety and traffic operations
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. Media and Hard-Copy Communication Tools – Construction
* Create brochures, radio spots, and print advertising
* Ride alongs with the media to broadcast conditions
* Get Around Guide
* Buy air time for radio, postage for mailings, printing costs
* Coordinate with stakeholders and rideshare on radio ads
* Provide translations for all pieces
* Promote alternate modes of travel

Discussion/Follow-up:* Electronic billboards and PSAs are also available.

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Improved public awareness of delays and alternate routes
* Reduced delay as some drivers use alternate routes
* Increased safety through information dissemination
 | I-39/90 CMT (Mega Project Comm. Manager) | TBD |
| 1. Traveler Information Display/Exhibits
* Rest area kiosks
* Welcome Centers
* Selected restaurants

Discussion/Follow-up: None**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Better information to the public on road construction activities to minimize delay
* Better information to the public on current travel conditions
* Increased safety
 | I-39/90 CMT and WisDOT Bureau of Traffic Operations (Mega Project Comm. Manager) | TBD |
| 1. Website/Smart Phone Public Information and Construction Outreach
* Messages and outreach via Smart Phones (e.g., texts, mobile website, application development, etc.)
* Web Site outreach, updates, and maintenance
* Provide Web site with real-time traffic and construction information to general public
* Update site with photos, news releases, project detours and project accomplishments
* Leverage 511 website to share internal project information (reports, closure schedules, IM plans)

Discussion/Follow-up:* Non-electronic outreach such as information provided in libraries, city hall, etc. should be used. TV, public access channels, and newspapers should also be considered.
* The next generation of the 511 site has been in place since March 2015 with continual updates being done regularly.
* Cell phone pushes have a significant upkeep cost.

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Improved awareness of travel delays among mobile users, and among web site visitors
* 61% of US consumers use smartphones (Nielsen, 2013[[1]](#footnote-1))
* Over 80% of adults (ages 18+) use the internet (Pew Research[[2]](#footnote-2))
* Improved public relations and sentiment toward WisDOT
 | I-39/90 CMT and WisDOT Bureau of Traffic Operations (Mega Project Comm. Manager) | TBD |
| 1. Promotion of WisDOT Rideshare Program

Discussion/Follow-up:* Information to promote rideshare will be similar to communication tools.
* Need to confirm with SE Region staff that promoting the rideshare program is worthwhile.

**RECOMMENDED FOR APPROVAL = NO (4/20/15)** | * Increased participation in WisDOT Rideshare Program; resulting in reduced congestion/delay
 | WisDOT Rideshare Program (Managed by Karen Schmiechen) and I-39/90 CMT | TBD |
| 1. Janesville Transit System Route Adjustments and Enhancements
* Transportation to Blackhawk Technical College

Discussion/Follow-up:* Alternate route construction on County G could impact bus transit to Blackhawk Tech.
* Need to coordinate with Beloit Transit and Janesville Transit to ensure there is no harm to the function of the transit system.

**RECOMMENDED FOR APPROVAL = NO (4/20/15)** | * Improved transit ridership
* Reduced congestion/delay
 | Janesville Transit Systems and I-39/ 90 CMT | TBD |
| 1. Traffic Management Evaluations and Studies
* TMP Evaluation Plan
* Traffic operations evaluation during construction
* Route choice evaluation
* Regional and local diversion studies
* Measurement of signal performance
* Benefit/Cost Analysis

Discussion/Follow-up: None**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Increased safety for motorists and first responders
* Minimize delay associated with incidents
* Financial accountability
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. School Crossing Guards
* Implement additional crossing guards in project area as deemed necessary.

Discussion/Follow-up:* County Road G alternate route is on Cranston Road, which has many school zones (Aldrich Middle School).
* This project has been completed.

**RECOMMENDED FOR APPROVAL = NO (4/20/15)** | * Increased safety along alternate routes; both motorists and pedestrians
 | I-39/90 CMT | TBD |
| 1. Regional Alternate Route Signing
* Static signs on freeways and local streets to promote diversion away from work zone
* Regional routes for major incidents

Discussion/Follow-up: * In place for both I-39/90 and Verona Road

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Improved utilization of alternate routes to avoid construction delays
* Reduced delays due to major incidents
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. Local Alternate Route Improvements
* Hart Road
* CTH G, CTH BT (Inman Parkway)
* STH 73
* STH 11/140 Intersection

Discussion/Follow-up:* CTH BT and CTH J alternate routes are currently being met with some local resistance. If these issues are not resolved, there may be gaps in the system.
* Signing updates are currently being made to the alternate routes. (6/26/18)

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = November 2016 (DONE)** | * Improved travel time and minimized delay along key local alternate routes
 | I-39/90 CMT and Segment Design Team (PDS/Traffic Unit) | TBD |
| 1. Traffic Signal Operations and Maintenance — Jurisdictional Transfers (Tied to Strategy #1 and #11)
* Transfer operations and maintenance for ASCT to WisDOT
* Upgrade signals to DOT equipment/standards

Discussion/Follow-up:* Alternate route through Janesville would use adaptive signal system.

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = December 2022 (Post Construction)** | * Improved control and coordination of signal operations and maintenance by WisDOT
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. TIM Electronic Resource Guide - eGUIDE
* Compilation of various traffic incident management resources and materials for the I-39/90 and Verona Road construction projects.
* Information divided into three categories; I-39/90 Dane County, I-39/90 Rock County, and Verona Road
* Selected information within the Resource Guide includes:
* Contact information for area first responders, WisDOT staff, and other key contacts
* Various TIM related maps and resources (e.g., emergency service maps, other state/regional/local maps, miscellaneous resource materials, selected project-related information, etc.)
* Construction project related information depicting limits, schedule, WisDOT ID, and other associated information

Discussion/Follow-up:* Resource Guide has been developed and updated approximately 4 times per year (May, July, September, December).

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Organized source of information for different stakeholders in traffic incident management efforts
* Improved communication among traffic incident management stakeholders
* Mechanism used to share/store project-related information (depository of information)
* Information accessible for project staff and other project stakeholders
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. Mobile Electronic Resource Guide
* Mobile version (iPAD, tablet, smart phone, etc.) version of the Electronic Resource Guide. This version would be a reduced version for smaller mobile devices.

Discussion/Follow-up:* Streamline development process so that the full Electronic Resource Guide version can be used on a mobile device.

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Provides first responders and other field users mobile information contained in the Electronic Resource Guide.
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. Corridor Specific I-39/90 and Verona Road Corridor Meetings
* As part of the TIM outreach efforts, routinely meet with local first responders and other stakeholders along the I-39/90 and Verona Road corridors to update them on various project news and TIM-related activities.
* It is envisioned that there would be one meeting; a combined effort for I-39/90 and Verona Road projects.

Discussion/Follow-up:* Initial coordination has been done for Verona Road and the Rock County responders of I-39/90. Additional coordination is needed for Dane County responders and those just across the WI/IL state line who may respond to incidents near Beloit.

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Meetings would be held to improve coordination between local responders and WisDOT as well as increase safety and decrease road closure/blockage times when an incident occurs.
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. Emergency Access Through Noise Wall (entered May 6, 2014)
* Explore emergency access through noise walls for first responders.

Discussion/Follow-up:* Need to evaluate the feasibility of walk-through doors along noise walls for first responders.

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = MAY 2020** | * Follow up with Janesville FD and other responders to determine the need and frequency of walk-through doors in noise walls to access the Interstate.
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. Surplus Fleet Vehicles for First Responders (entered May 6, 2014)
* Evaluate opportunities for area first responders to use WisDOT fleet vehicles for interstate response efforts.

Discussion/Follow-up:* Potential use of an MOU between WisDOT and first responder agencies to use surplus fleet vehicles.
* Gather information from first responders on type of vehicles, opportunity to use an MOU, and feasibility of this concept.
* WisDOT Central Office not in agreement with vehicle repurposing use by local jurisdictions
* WisDOT decided against the use of surplus fleet vehicles for use by local municipalities
* Based on 6/25/18 meeting between the I-39/90 Team and DSP, this item should be explored again. DSP would like to use larger pick-up trucks to supplement the three FST along the corridor.

**RECOMMENDED FOR APPROVAL = NO (Spring 2015)** | * Use of additional vehicles would allow first responders the ability to decrease response times, greater flexibility in response efforts, and options in how to respond to incidents.
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. Remote Water Source for Local Fire Departments
* Pre-staged locations for local fire departments to fill water trucks for crashes on or near the interstate.
* Includes two, 10,000 gallon tanks for water storage

Discussion/Follow-up:* Exact location(s) and details of this need to be determined; current location is somewhere near CTH M overpass.
* Discussions held with Milton FD; however additional discussions with others fire departments is ongoing.
* Additional discussions with Cottage Grove FD and others about additional locations for potential water sources ongoing.
* Explore potential for water storage at Beloit Welcome Center

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = December 2019/ONGOING** | * Having a water supply source close to the interstate will decrease the amount of time needed by local fire departments responding to scenes along the Interstate.
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. Fire Hydrant/Water Source Signs
* Signs or plaques that identify fire hydrants and/or other water supply sources along the corridor to easily identify where a potential water supply is located.

Discussion/Follow-up:* Determine where/how many signs are needed and in how many urban areas.

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = MAY 2020** | * Quickly identifying a potential water supply is helpful for first responders traveling the corridor, especially during winter conditions.
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. Pre-designated drop spots for vehicles involved in crashes
* Identify pre-determined locations where crashed vehicles can be safely relocated for multi-vehicle crashes

Discussion/Follow-up:* Determine locations where vehicles can be relocated

**RECOMMENDED FOR APPOVAL = YES****ESTIMATED COMPLETION DATE = March 2018** | * Increased safety and roadway operations
* Pre-determined locations where vehicles can safely be stored during large events
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. Mainline Closure using barrels
* Closing I-39/90 mainline with pre-deployed barrels
* Need to identify safe and appropriate storage of barrels at interchange locations.
* Corridor test segment Racine Street to US 14; pilot for the rest of the corridor

Discussion/Follow-up:* Need to further discuss and verify feasibility

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Increase safety and roadway operations
* Pre-deployed barrels allow for quick deployment of mainline closure.
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. Use of Armorgate on the Outside Wall
* Use of armorgate to separate traffic from the work zone on the outside wall to allow for construction vehicles to access the mainline or work zone

Discussion/Follow-up:* Need to further discuss

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = ONGOING** | * Increase safety and roadway operations
* Improved access for construction vehicles
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. WisDOT Learn Center Training Presentation
* Develop a presentation that DSP can use to familiarize themselves with I-39/90 construction and related activities
* Would be saved on WisDOT’s Learn Center electronic classroom

Discussion/Follow-up:* Developing PowerPoint presentation

**RECOMMENDED FOR APPROVAL = YES****ESTIMATED COMPLETION DATE = 8/31/18** | * Provide information to DSP and other responders working within the I-39/90 corridor
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. Explore Potential for TIM Training Curriculum and Facility
* Development of a day-long TIM training course for first responders
* In addition to training, several other states have constructed/developed TIM training facilities with sample roadway sections to conduct TIM trainings
* Could be done in partnership with local agencies

Discussion/Follow-up:* Needs additional follow up discussion internally

**RECOMMENDED FOR APPROVAL = TBD****ESTIMATED COMPLETION DATE = TBD** | * Increased safety
* Increased coordination amongst responders
* Improved operations for response
* Unified approach to TIM so all responders are working together
 | I-39/90 CMT (Traffic Unit) | TBD |
| 1. Standpipes on Bridges
* Improve fire department response from nearby cross-streets
* Increase access for first responders and equipment
* Expedited response effort

Discussion/Follow-up:* Further internal discussion needed

**RECOMMENDED FOR APPROVAL = TBD****ESTIMATED COMPLETION DATE = TBD** | * Improved incident response
* Increased safety
* Improved operations for response
 | I-39/90 CMT (Traffic Unit) | TBD |

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1. http://www.nielsen.com/us/en/newswire/2013/mobile-majority--u-s--smartphone-ownership-tops-60-.html [↑](#footnote-ref-1)
2. http://www.pewinternet.org/Static-Pages/Trend-Data-(Adults)/Internet-Adoption.aspx [↑](#footnote-ref-2)