4.12 TSM&O EVALUATION

Beginning January 1, 2016 all projects with a Design Scoping Review on or after February 1, 2016 will require a Transportation Systems Management and Operations (TSM&O) Evaluation.

The TSM&O Evaluation is an evaluation that consists of three parts, a Safety Analysis, an Operations Analysis, and an ITS Analysis. The purpose of the TSM&O Evaluation will be to evaluate the project area and make recommendations to the project team for improvements related to safety and mobility to the project.

To initiate the TSM&O Evaluation, the Project Manager will take the following steps.

- Create the TSM&O Evaluation milestone in SAP when project is initiated. See SAP Workflow 1 in the guidance document on the CDOT website (https://www.codot.gov/business/designsupport/bulletins_manuals/adg). See Design Bulletin 2014-3 Milestone Dates in SAP Project Builder (CJ20N) (https://www.codot.gov/business/designsupport/bulletins_manuals/design-bulletins/db-2014-3/view) February 10, 2014 for more information on entering milestones in SAP CJ20N.

- Prepare the TSM&O Evaluation Request form at the beginning of the Pre-Scoping phase of the project by entering the project information in the request form at the following link:

  http://cdot.dot.state.co.us/business/tsm-o/evaluation/request

- Email the request form to Region Traffic contacts and ITS as indicated on the webpage.

- Fill out the Form 1048 section 4.12 ”Transportation Systems Management and Operations Evaluation”.

The evaluation will be coordinated and conducted by a Region Traffic Representative (RTR) assigned to the project, and provided to the Project Manager before the Field Inspection Review (FIR). In the case of a project incorporating new ITS devices or more complex projects, HQ TSM&O will provide additional support to the Regions.

4.12.01 Background

The TSM&O Reorganization Report of May 2013 recommended that all CDOT projects conduct an operational analysis to ensure improved systematic and integrated delivery of statewide operations. Per federal regulations, the FHWA-CDOT Stewardship Agreement, and CDOT policy, CDOT is required to conduct safety analyses and ITS systems engineering analyses as applicable on CDOT Projects. The TSM&O Evaluation combines all these analyses – safety, operational, and ITS systems engineering – into one coordinated process to ensure that every CDOT project is considering improvements for the safety and efficiency of the travelling public.

Another purpose of the TSM&O Evaluation is to enhance regional partnerships that support collaborative investment and implementation of TSM&O strategies that benefit the Region and its stakeholders. This requires collaborative investment by Maintenance, Access, Regions, Operations, Safety, ITS, FHWA, and other stakeholders to identify and consider operational strategies for implementation early in the project lifecycle. This will help provide the ability to implement new or additional operational strategies at the opportune time during the project lifecycle. Additionally, the TSM&O Evaluation creates enhanced opportunities to provide safety improvements, accountability to stakeholders, increased ability to document and reference lessons learned, and streamline business processes while providing increased system reliability.

4.12.02 Operations Definition

Operations at CDOT refers to a number of innovations and strategies used to improve the volume and flow of traffic to maximize the efficiency and benefit/cost of our roadways. These strategies include the use of traffic control devices, use of shoulders, narrow lanes, variable speed, traffic incident management, quick clearance, adaptive and efficient signal timing, traffic control, demand management (metering), appropriate and pertinent speeds, alternative and innovative intersections, and coordinated work and response efforts. CDOT is committed to improving system operations and safety and is implementing this formal process, the TSM&O Evaluation, to build these strategies into CDOT's roadway projects.

4.12.03 Roles and Responsibilities

4.12.03.01 Project Manager

To the Project Manager this process will look somewhat similar to the current process for the Safety Assessment Report, whereby the Project Manager requests an evaluation, receives a completed TSM&O evaluation from the Regional Traffic Representative and considers recommendations that can be integrated into the scope of the project. The Project Manager will be responsible for assuring that an associated milestone is created in SAP CJ20N, coordinating with the RTR for status of the TSM&O Evaluation process, and discussing recommendations for implementation with his/her Resident Engineer.

4.12.03.02 Region Traffic Representative

The Region Traffic Representative (RTR) referred to in the process is the traffic engineer assigned to the project being evaluated. The RTR is the single point of coordination for the TSM&O Evaluation for the project. In this role, the RTR completes the Level 1 Safety and Operations Analyses and requests that the TSM&O Support Groups complete the Level 2 Analysis when required. The RTR also provides support to the Project Manager and coordinates and consolidates the key recommendations of the Evaluation from the TSM&O support groups, Safety, Operations and ITS. The RTR will be the lead for documenting recommendations from the Safety, Operations and ITS reports implemented into the project design. See Exhibit 1 and Table 1 in the guidance document on the CDOT website (https://www.codot.gov/business/designsupport/bulletins_manuals/adg).

4.12.03.03 TSM&O Support Groups

The TSM&O support group consists of HQ Traffic, Safety, Operations and ITS. Each specialty is responsible for providing detailed analysis and recommendations for each of their respective disciplines. The TSM&O Support Group will coordinate directly with the RTR's. The TSM&O Support Groups will also be responsible for reviewing and following up with the regions on the overall effectiveness of the process.

4.12.04 Additional References:

1. *Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD)*
2. Design Bulletin DB 2014-3 *Milestone Dates in SAP Project Builder (CJ20N)*
3. Design Bulletin DB 2016-1 *TSM&O Evaluations*

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