



## 1.4.1 Project Development Process

The project development process for ITS projects consists of all steps found in FDM Chapter 3. Chapter 3 outlines five different “steps” as follows:

- Concept definition
- Investigation
- Determination
- Final design, and
- Reconstruct administration.

For information on the department’s project development process, refer to FDM Chapter 3, Facilities Development Process.

With the FDM providing thorough guidance on these five steps, this manual does not reiterate this information. However, ITS projects typically require additional steps in the development process as follows:

- Pre-letting administration
- System integration
- Management and operations
- Evaluation and testing

While steps 6 through 9 are not typically required for most highway improvement projects, they are essential in ITS projects.

### 1.4.1.1 Pre-Letting Administration

A large portion of ITS equipment is highly technical in nature, requiring pre-letting activities such as:

- a) conducting pre-letting meetings explaining contract structure or special requirements unique to the contract being administered
- b) conducting pre-qualification of prime contractors for various items and vendors as noted in this manual and as identified under final design in the project development process (such as fiber optic technicians, electronic sign manufactures, other equipment manufacturers)

Pre-qualification requirements are attached to the project proposal, and information must be received and reviewed prior to bid. Under the pre-qualification process, only those bids from contractors who both submit pre-qualification material and meet the stated requirements (as determined by the Department) will be accepted.

### 1.4.1.2 System Integration

System integration of elements contained within ITS projects must be identified and updated during the investigation, determination, and final design steps in the project development process, but must also be developed and identified prior to completion of construction. System integration elements include, but are not limited to:

- a) Identification of central system database additions, such as ramp processors, detectors, and updates to central map
- b) Communication channel and drop assignments
- c) Field termination diagrams illustrating loop detector inputs for field processor assemblies
- d) Development of database configuration files for field processor interface during construction
- e) Field testing of ITS elements (processor assemblies, DMS, CCTV, etc.)

It is envisioned that these system integration elements be performed by, or under direct supervision of the Statewide Traffic Operation Center Systems Engineer.

### 1.4.1.3 Management & Operations

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Management and operations of ITS equipment is a consideration also that should be identified and updated during the investigation, determination, and final design steps in the project development process. However, similarly to system integration, final development of management and operations tasks must be concluded prior to completion of construction.

Tasks involved in the development of management and operations include:

- a) Consideration of staffing involved to manage the equipment at the operations center(s)
- b) Written commitments with respect to operations and maintenance of "shared" equipment (e.g., communication conduit, local agency video, fiber optic cable, etc.)
- c) Preventative maintenance schedules and responsibilities
- d) Emergency maintenance of equipment
- e) Standard maintenance of equipment

#### **1.4.1.4 Evaluation and Testing**

Intelligent Transportation Systems make extensive use of electronic and computerized equipment. The marketplace of electronics and computers is constantly evolving, and evaluation and testing of equipment must routinely take place to ensure that a system does not become outdated, and that the information being obtained and distributed through the system be as efficient and reliable as possible. Evaluation and testing is necessary for all types of equipment across the ITS spectrum. Any equipment being considered for evaluation and testing must be coordinated through the appropriate WisDOT Program/Project Manager.