

## SECTION 1 – INTRODUCTION

### 1.1 ACRONYMS *(Rev. 05-18-20)*

Whenever the following abbreviations are used in this manual, standard specification, or citation they are to be construed the same as the respected expressions represented.

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ADA	American Disabilities Act
AE	Area Engineer
AMRL	AASHTO Material Reference Laboratory
ATSSA	American Traffic Safety Services Association
AWS	American Welding Standards
CCO	Construction Change Order
CCT	Construction Certified Technician
CM	Construction Management (Division)
CMD	Concrete Mix Design
CO	Central Office
CRC	Continuous Reinforced Concrete
CRI	Cost Reduction Incentive
CTT	Certified Testing Technician
CWTS	Certified Worksite Traffic Supervisor
DBE	Disadvantaged Business Enterprise
DCD	District Construction Director
DDC	District Deputy Commissioner
DDCM	Director, Division of Construction Management
DHPA	Division of Historic Preservation and Archeology
DMF	Design Mix Formula
DMT	District Materials & Testing
DMTE	District Materials & Testing Engineer
DNR	Department of Natural Resources
DO	District Office
DT	District Traffic
DTE	District Traffic Engineer
EEO	Equal Employment Opportunity
ES	Environment Services
ESAL	Equivalent Single Axle Load
ESC	Erosion and Sediment Control
FCR	Final Construction Record
FE	Field Engineer (CO Construction Management Division)
FHWA	Federal Highway Administration
FOB	Free on Board
GIFE	General Instructions to Field Employees
HMA	Hot Mix Asphalt
HT	Highway Technician

IA	Independent Assurance
IDEM	Indiana Department of Environmental Management
IDNR	Indiana Department of Natural Resources
IMSA	International Municipal Signal Association
INDOT	Indiana Department of Transportation
IOSHA	Indiana Occupational Safety & Health Agency
ITM	Indiana Test Method or Procedures
JMF	Job Mix Formula
LPA	Local Public Agency
MBE	Minority Business Enterprise
MM	Materials Management
MMS	Materials Management Supervisor
MSG	Maximum Specific Gravity
MUTCD	Manual of Uniform Traffic Control Devices (2008 Indiana Edition)
NAICS	North American Industry Classification System
NOT	Notice of Termination
NRC	Nuclear Regulatory Commission
OES	Office of Environmental Services
OFCCP	Office of Federal Contract Compliance Programs
OG	Original Ground
OGE	Office of Geotechnical Engineering
PCC	Portland Cement Concrete
PCCP	Portland Cement Concrete Pavement
PE/S	Project Engineer/Supervisor
PG	Performance Grade (Asphalt)
PIO	Public Information Office
PM	Project Manager
PR	Pay Rolls
QC	Quality Control
QC/QA	Quality Control/Quality Assurance
QCP	Quality Control Plan
RC	Reinforced Concrete
RCRA	Resource Conservation and Recovery Act
RRS	Railroad Section
RSP	Recurring Special Provision
SCE	State Construction Engineer
SS	Standard Specifications
SSPC	The Society for Protective Coatings
TCLP	Toxicity Characteristic Leaching Procedure
TCT	Testing Certified Technician
US EPA	United States Environmental Protection Agency
USP	Unique Special Provision
UST	Underground Storage Tanks
VC	Vitrified Clay
VFA	Voids Filled with Asphalt
VMA	Voids in Mineral Aggregate
WBE	Women's Business Enterprise

WZSM Work Zone Safety Manual (*INDOT*)

**1.2 ORGANIZATION** (*Rev. 07-31-15*)

Our particular organization begins with the inspector/Highway Technician (HT). Fundamentally, every employee assigned to construction duties is an inspector -- first, last and always. This fact should be remembered by the PE/S.

The inspector/(HT) is under the supervision of the PE/S. The inspector/(HT) will receive instructions and daily assignments from the PE/S. Within the scope of an assignment, the inspector/(HT) will keep accurate records of all activities and prepare reports as required. In order to have satisfactory accomplishment of any task, it is important that the individual has a thorough knowledge of the specifications. In the event of disagreement or misunderstanding, consult with the PE/S for interpretation and clarification of the specifications.

Inspector/(HT) are representatives of State government; and therefore, should perform their duties with a high standard of conduct. This requires courtesy in their relations with both the construction employees and those public citizens with whom they come in contact.

Keep in mind that the Contractor also works through an organization. Therefore, questions or suggestions should ordinarily be made to the Contractor's regularly designated supervisors. In their absence instructions of a minor nature may be given to individual workers involved. Do not waste the foreman's or worker's time by carrying on unnecessary conversation with them during work activities.

Assistant PE/S occupies a status similar to the inspector/(HT) in that they too shall be a qualified inspector; and at the same time be prepared to assume any of the PE/S's duties that may be assigned or delegated.

The PE/S is in local charge of the project representing the Indiana Department of Transportation and is responsible for the project's orderly operation of the state's responsibilities:

- (a) specification enforcement and interpretation
- (b) interpretation of plans
- (c) contacts with the public
- (d) inspection of construction
- (e) preparation and filing of records
- (f) reports and estimates.

The PE/S should keep the project staff informed of project activities as stated above. The PE/S is responsible and accountable to the DDC and any authorized representatives. The PE/S is supervised by the AE who is the State employee in responsible charge of project supervision. The AE is supervised by the DCD who is supervised by the DDC.

Responsibility cannot be delegated. The inspector/(HT) and assistant PE/S are placed on the project to assist the PE/S in carrying out the duties. It is not enough to merely give instructions; you must follow up to see that your instructions are being carried out.

The District organization has similar responsibilities to the Chief Engineer through the DDCM and staff. The Chief Engineer is responsible to the Commissioner, who is responsible to the Governor. It is essential to efficient operation of a large organization of this kind that instructions and decisions come through established channels. It is likewise essential that all personnel assume and carry out their respective duties and assume their allotted responsibilities to the fullest.

The District construction organization is expected to make all decisions within their authority. Only after a problem is thoroughly discussed by the PE/S, AE and DCD and they have concluded that they need assistance in solving their particular problem should the FE be contacted. The DDCM should not be contacted directly unless an emergency exists and the FE cannot be contacted.

The Contractor should be encouraged to work with the District construction organization to solve problems that may arise on projects. For example, the District will have to obtain CO approval on all changes in plans.

The PE/S should not exceed the provisions of the specifications. The provisions of the specifications are to be enforced, but the management of the work is the responsibility of the Contractor. In simple language, the State personnel are inspectors and not foremen and can tell the Contractor what is required, and the Contractor will determine how to do it. Continuous inspection of the work in all its phases is imperative. The time to correct improper work is at the beginning. Do not wait until the work has been completed.

In carrying out your duties, you will be governed by the SS, SP, plans, and such other verbal or written instructions as you may receive from time to time. A Contractor's statement that they were permitted to do something on another job should not affect your judgment on decisions if it is contrary to the specifications.

In case of discrepancy, the coordination of plans, USPs, RSPs, and SS must be followed as outlined in Section 100 of the SS. If a discrepancy or conflict is discovered, the PE/S is to be advised without delay.

There are always changes and revisions necessary to keep the SS up to date. It is important that the SS, USPs, and RSPs for each contract be reviewed.

It is not expected that you know the SS, USPs, and RSPs within your contract documents word for word, but it is expected that you read them and study them sufficiently to have a working knowledge of their contents, and can, when need be, locate the various items pertaining to your work.

### 1.3 PUBLIC RELATIONS *(Rev. 09-14-16)*

There is one important phase of our work that is common to all personnel and that is public relations. Frequently, project personnel have direct contact with the public in some aspect of our work.

In the exercise of our jobs we will encounter property owners and others who will have questions, complaints, and problems. Many of these we cannot solve, but some we can explain and correct. In any event, we can deal with these people in a courteous manner. If the question or problem is beyond your jurisdiction or is from a media source, direct the question or person to the District Public Information Office (PIO).

#### 1.3.1 PE/S Communication Guidelines

These instructions provide guidelines to the PE/S in order to conduct appropriate internal and external communications related to contract matters.

The PE/S should remember that all forms of written communication reflect on the professionalism and integrity of the individual, the reputation of the Department and may become public information or used as evidence in legal proceedings.

All information that is necessary for complete documentation of project construction should be reported factually without the addition of personal opinions, editorial comments or criticism of individuals, companies or INDOT. The PE/S should discuss any concerns regarding the project with the AE.

Specific guidance for various types of communication is provided as follows:

- (a) **Daily Work Reports.** Daily Work Reports (DWRs) and Diary entries in SiteManager should include all information necessary to provide a complete description of the construction activities that occurred on the job and any problems encountered. These reports may become public through requests for information and will be used to substantiate and evaluate claims submitted by the contractor.

It is important that sufficient detail is provided to establish the level of effort provided by the contractor and any problems encountered on the project or with the performance of the contractor. For each day of work, accurate information should be provided concerning weather and impacts to the ability of the contractor to perform work on the controlling operation. Information must be recorded that reports the work effort of the contractor and approved subcontractors with details about the number of personnel and equipment. Individual construction reports can then be generated from SiteManager for selected dates of the contract. This is a valuable tool in the analysis of claims and requires accurate information to be provided.

Problems encountered on the project should be described in sufficient detail to establish when the changed condition or other problem was identified, the decisions and actions needed and what resolutions were obtained.

Communication through the AE to the PM should be documented for major problems and change order decisions. Any concerns with the decisions reached should be discussed with managers but not editorialized in the report.

For problems encountered with the contractor's performance, factual statements of the problem should be made that are compatible with ratings and comments provided in the Contractor Performance Evaluation System (CPE). Individuals or companies should not be criticized in a personal or unprofessional manner.

- (b) Email communications. Emails can be an efficient tool used to exchange information and provide written documentation of the exchange. Email communications should be written in a concise and professional demeanor. All email communications should contain information in the subject line that clearly identifies the contract number and issue. If future requests for information require searches for emails, it is very difficult and time consuming to perform searches of emails without complete subject headings.

Similar to DWRs, emails may also become public information. Individuals, management decisions or companies should not be criticized in emails. When seeking information from a contractor by email, state the question(s) as briefly and clearly as possible in a new, original email written directly to the contractor. Do not forward long chains of internal communications. These internal deliberations may contain other information that does not directly pertain to the question for the contractor and could create confusion or concern about the nature of the request. Furthermore, internal emails may also contain opinions, strategy, or assessment information about the responsibility for a problem which may compromise the Department's position in future negotiations, if forwarded.

- (c) Requests for Information. When responding to requests for information, the PE/S should make sure that the request has been submitted through the INDOT Division of Legal Services. Respond to the request by replying directly to, and only to, the INDOT staff member who initiated the request. Do not provide copies of any project documents directly to citizens, media, vendors, contractors, or others. If one of these external entities makes a direct request for information to you, refer them to the proper channels for making such a request. Calculations, shop drawings, layout details, unit costs, and mix designs should all be considered proprietary information and not released.

#### **1.4 SAFETY** *(Rev. 11-14-17)*

Safe Production is the most important component of highway engineering. It enters into design, construction and maintenance.

A prime consideration of any contract is to provide for the safe and orderly movement of traffic through the work zone, while allowing the contractor to maximize production. All employees must continually look for opportunities to enhance safety at any point during a

project and do their utmost to build safety into our highways following sound principles during construction.

The control of traffic movement should be major topic of discussion at the pre-construction conferences on all contracts. The traffic control plan as shown in the plans must be reviewed and discussed with the Contractor. If conditions warrant an additional review of the traffic control plan, the Area Engineer must be contacted and review necessary changes. The PE/S is responsible for monitoring the traffic control for the Department. The Contractor is required to designate at least one employee as the Work Site Traffic Control Supervisor to be accountable for the over-all traffic control on the project. At all pre-construction conferences the Contractor must verify certification of the Traffic Control Supervisor and provide contact information for the referenced individual.

Proper installation and maintenance of traffic control devices is an important phase of a project; thereby providing safety measures for the traveling public and all employees. Strict and consistent enforcement of the specifications and regulations pertaining to the erection, maintenance and removal is critical to ensuring the well-being of workers and the traveling public. Ensuring adherence to the traffic control plan and enforcement of the specifications is a major responsibility of the PE/S.

Run overs and back overs constitute the highest incident rates for fatalities in construction. Therefore, safety within the work area is as important as safety for the motoring public. Discussions regarding entering/exiting locations, the parking of personal vehicles, use of cell phones, and movement of equipment through the job must be discussed prior to the start of work. When a new phase is implemented, this same discussions must be held again. The increased maneuverability of heavy earth moving equipment has resulted in the necessity for additional safety measures. HTs performing soil compaction tests should be aware of the equipment movement patterns and keep a state vehicle close to the test location if possible.

The Indiana Manual of Uniform Traffic Control Devices supersedes the Manual of Uniform Traffic Control Devices (Federal). Refer to these manuals for additional information and diagrams. Both are located on the Safety website. If additional information is needed, the local Safety Director or the Statewide Safety Division should be contacted.

### **1.5 OCCUPATIONAL SAFETY FOR CONTRACTORS** *(Rev. 11-14-17)*

The Department's employees are expected to be safety conscious and aware of reasonable safety standards and shall cooperate with the Department's Safety personnel and IOSHA in the area of occupational safety and health hazards.

The Contractor's responsibility to comply with Department, IOSHA, as well as all other Federal, State, local safety laws and standards is a topic to be discussed at all pre-construction conferences and documented in the minutes of the meeting. A copy of the minutes must be forwarded to the Statewide Safety Division.

If Department personnel observe what appears to be an obvious violation of the Safety Standards, it should immediately be brought to the attention of the Contractor's job superintendent. All accidents, incidents, or Contractor's injuries involving safety must be

fully documented in the PE/S diary section of the Daily Report. A copy of the Daily Report which documents the apparent violation must be sent to the DCD and local Safety Director or Statewide Safety Division within one day of the incident. It shall also be documented on this report if correction of the apparent violation has been initiated.

If the apparent violation is not corrected the PE/S will immediately contact the local Safety Director or Statewide Safety Division informing them of the potentially dangerous violation.

Construction Department personnel should not make judgments or interpretations of complex safety standards. The Department's safety personnel will collaborate with the Contractor and PE/S to mitigate any safety hazards. If the Department's safety personnel determines that a violation exists, the PE/S will cooperate with implementation for correction.

#### **1.6 FEDERAL HIGHWAY ADMINISTRATION** *(Rev. 03-24-09)*

Many of our projects utilize federal funds; however, federal involvement may not be included. Only those projects designated by The Department will involve federal oversight. Waiver of federal oversight will be indicated on the Proposal Page of the contract documents.

Federal oversight includes but is not limited to the following:

- (a) Pre-construction conference
- (b) Partnering meetings
- (c) Change order approval
- (d) Time extensions
- (e) Problem resolution
- (f) Pre-final inspection
- (g) Claims
- (h) On site project reviews
- (i) Contract acceptance

#### **1.7 UTILITY RELOCATION PROCESS—CONSTRUCTION PHASE** *(Rev. 03-24-09)*

The following coordination process must be used for all Department let contracts. The PE/S must oversee this process. The steps are as follows:

1. Initiate right-of-way staking, if applicable. In cases where early staking would be beneficial, the owner may choose to accomplish this as follows:
  - a. Use its own survey crew.
  - b. Contract the staking out.
  - c. Include a provision in the contract requiring the contractor to stake within two weeks of notice to proceed.
2. Pre-construction Conference. Agenda must address utility coordination and need for individual utility meetings. Contractor and utility schedules shall be shared, reviewed, and modified as necessary.



3. Individual utility meetings for major concerns, if necessary.
4. Contractor performs clearing, right-of-way staking, etc., required by the contract special provisions for utility relocations, within \_\_\_\_\_ days after the pre-construction conference. (The number of days is determined by the special provisions and/or at the pre-construction conference.)
5. Plan changes during construction, including changes in phasing, must be coordinated with affected utilities before implementation.
6. Utilities relocate in a timely manner.
  - a. Utility progress meetings are held when appropriate.
  - b. Utility notifies owner and contractor of relocation plans changes.

Encourage utilities' participation in partnering concepts to help create teamwork with open and honest communication.

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