



# INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

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**Michael R. Pence, Governor**  
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**Commissioner**

September 15, 2015

## CONSTRUCTION MEMORANDUM 13-13 (REVISED)

TO: District Deputy Commissioners  
District Construction Engineers  
District Testing Engineers  
District Area Engineers  
Field Engineers  
District LPA Coordinators  
Project Engineers/Supervisors  
Technical Services Directors  
Office of Bridges  
Office of Highway Design & Tech Support  
Office of Pavement Engineering

FROM:  Mark A. Miller, Director   
Division of Construction Management and District Support

SUBJECT: LPA and State Shop Drawing and Falsework Review Procedures

SUPERSEDES: Construction Memorandum 11-02

In order to make the review process more efficient, the Department will allow the Contractor to submit electronic copies of design calculations and shop drawings for approval in lieu of printed copies. Every submittal must include the contract number, contractor's name, and contact person with contact information. All drawings and calculations should be submitted in the contract units, English or metric. Dual units are acceptable.

**For LPA projects,** review of all shop drawings and other items listed herein are the responsibility of the LPA or their designated representative with the exception that MSE design calculations and deck pour sequences should be forwarded to INDOT for review as indicated herein. Contractors on LPA projects are to submit shop drawings and falsework plans as directed by the LPA. Once shop drawings for structural members have been approved by the LPA or LPA's representative, a copy should be forwarded to INDOT as indicated herein. Questions about LPA procedures should be directed to the District Local Projects Administrator.

**For design-build contracts,** responsibilities and procedures for shop drawing review and approval is typically described in the design-build contract documents.

**For State projects**, the following procedures have been implemented for submittal and review of shop plans, falsework drawings and related items as described below. Regardless of the submittal process described below, it is the intent that contractors communicate directly with the PE/S to keep them informed of the status of submittals. If the District has any concerns about the structural integrity of any shop plans submitted with a P.E. stamp, they should contact their Division of Construction Management and District Support Field Engineer for further assistance.

#### Structural Members & Items

For LPA contracts, shop plans for structural members and items are to be submitted to the LPA or their designated representative for review and approval. Since INDOT is responsible for fabrication inspection of structural members, upon completion of the shop drawing review, the LPA or their representative should forward an electronic copy of the approved shop drawings to INDOT Office of Bridge Design, George Snyder, at the email address below.

For State contracts, shop plans for the following items are to be submitted by the fabricator or supplier directly to Burgess & Niple, Inc. for review and approval. Shop plans must be in accordance with the applicable specifications. These items do not require a P.E. stamp for submittal.

- Structural steel & structural concrete members
- Modular expansion joints
- S-S joints
- Elastomeric bearings

Shop plans are to be sent to Burgess & Niple at [shopplanreview@burgessniple.com](mailto:shopplanreview@burgessniple.com). Their office phone number is 317-237-2760. Burgess & Niple will send approved shop plans to the INDOT Division of Bridges for distribution to the District Construction office. The contact for the INDOT Office of Bridge Design is George Snyder at [gsnyder@indot.in.gov](mailto:gsnyder@indot.in.gov).

#### Mechanically Stabilized Earth (MSE) Retaining Walls

Shop plans and design calculations for MSE retaining walls are to be submitted by the contractor or fabricator directly to the designer of record for review and approval. MSE shop plans and design calculations must be stamped by a P.E. Upon receipt, the designer should forward an electronic copy of the shop drawings and design calculations to the INDOT Office of Geotechnical Services. Include the contract number as part of the subject line. The contact for the INDOT Office of Geotechnical Services is Athar Khan at [atkhan@indot.in.gov](mailto:atkhan@indot.in.gov). The INDOT Office of Geotechnical Services will review the design calculations and will provide comments back to the designer for inclusion in the response back to the contractor or fabricator. The designer will continue to provide the final approval of the MSE shop drawings and design calculations. The designer will attach a cover letter and send a copy of approved shop plans to the submitter and to the District Construction office for further distribution.

#### Sound Barrier Systems

Shop plans and calculations for sound barrier systems are to be submitted by the contractor or fabricator directly to the designer of record for review and approval. The plans and calculations must be stamped by a P.E. The designer will attach a cover letter and send a copy of approved plans and calculations to the submitter and to the District Construction office for further distribution.

## Precast Concrete 3-Sided Structures and Box Culverts (Effective with January 2016 lettings)

Shop drawings and design calculations are to be submitted for all precast concrete 3-sided structures and for precast concrete box culverts that have a dimension or design earth cover not listed in Table 1 of ASTM C 1577. Shop drawings and design calculations must be stamped by a professional engineer. Shop drawings for 3-sided structures must include details to provide sufficient horizontal restraint (prior to backfill being placed) unless the design demonstrates such restraint is not required. Load rating calculations must be included for structures whose span measured along the centerline exceeds 20 ft, except where the height of cover is greater than 8 ft and exceeds the perpendicular span length.

Plans and calculations should be submitted by the contractor to the Project Engineer/Supervisor (PE/S). The PE/S should send the shop drawings directly to the Engineer of Record for review and approval and copy the Office of Roadway Review Coordinator at [coordinator7@indot.in.gov](mailto:coordinator7@indot.in.gov). For structures requiring load rating, the designer should forward an electronic copy of the shop drawings, design calculations, load rating calculations and load rating summary (RPD 700-B-301d) to the Office of Bridge Inspection Load Rating Engineer at [riyer@indot.in.gov](mailto:riyer@indot.in.gov). Load Rating Engineer will provide comments back to the designer.

### Welded Wire Reinforcement

Shop plans and design calculations are to be submitted for locations where the contractor proposes to substitute welded wire reinforcement in lieu of the reinforcing bars shown on the plans. Shop plans must be stamped by a professional engineer.

Plans and calculations are to be submitted to the Project Engineer/Supervisor (PE/S) and forwarded to the Office of Bridge Design Manager at [jhunter@indot.in.gov](mailto:jhunter@indot.in.gov) for review and approval. The Office will distribute approved shop plans to the PE/S for distribution to the contractor.

### Traffic Items

Shop drawings for Signing, Signals, and Lighting will be reviewed and approved by the Office of Traffic Design and Review. These items typically include all overhead sign structures, signal strain poles and cantilevers, high mast lighting, luminaries, and light poles. Plans and calculations should be submitted by the contractor to the Project Engineer/Supervisor (PE/S) and forwarded to the INDOT Office of Roadway Review Coordinator at [coordinator7@indot.in.gov](mailto:coordinator7@indot.in.gov). The coordinator will distribute the plans and calculations via email to the Office of Traffic Design and Review for review and approval. The coordinator will distribute approved shop drawings via email to the PE/S.

### Falsework and Temporary Bridge Drawings

Falsework drawings for the following items are to be submitted to the PE/S. Each drawing must include the contract number, contractor's name and must be stamped by a P.E.

- Cofferdams
- Deck falsework – temporary
- Coping falsework
- Falsework for reinforced concrete slab superstructures

- Falsework for hammerhead pier caps
- Designs for temporary bridges for runarounds

Temporary bridge design submittals must also include design calculations.

The PE/S will review drawings for compliance with the specifications and the specific job conditions only. Division of Construction Management and District Support Field Engineers are available for assistance on any of the above items. Questions should be directed thru the Area Engineer and District Construction office.

#### Permanent Metal Deck Forms

Shop plans for permanent metal deck forms are to be submitted by the contractor to the District Construction office for review for compliance with the specifications and the specific job conditions only. Shop plans submitted by the contractor must be stamped by a P.E. The Division of Construction Management maintains a deck form calculation spreadsheet on the INDOT Y: drive under *Div.contracts&construction/metal deck form calc* that can assist in review of metal deck forms.

#### Foundation Seals and Deck Pour Sequences

Requests for use of foundation seals not shown in the plans are to be submitted to the Office of Bridge Design for review and approval. The submittal must include the contract number, contractor's name and indicate the location and dimensions of the seal. The Office will distribute approved requests.

Requests to revise planned deck pour sequences are to be submitted through the PE/S to the Office of Bridge Design for review and approval. The submittal must include the contract number, contractor's name, indicate the original and proposed alternate sequence and pour rate. The Office will distribute approved requests.

The contact for the above submittals is Jeremy Hunter at [jhunter@indot.in.gov](mailto:jhunter@indot.in.gov).

#### Stream Crossings and Work Bridges

Proposals for stream crossings and work bridges for construction traffic are to be submitted to the District Construction office for review and approval. If the proposal varies from any of the contract's environmental permit conditions, the contractor must obtain approval for the change from the appropriate agency.

#### Miscellaneous

Shop plan submittals for miscellaneous items not covered by the above, i.e. – post tensioning plans, non-standard manholes, etc., should be submitted thru the PE/S. The PE/S should work thru the District Construction office and the Division of Construction Management and District Support to determine the approval process for these items.

MAM/JER/REG/EWP