

**DATE:** July 11, 2013

**TO:** Region Engineers  
Region Associate Construction Engineers  
Region Construction Engineers  
TSC Managers  
TSC Construction Engineers

**FROM:** Gregory C. Johnson, P.E.  
Chief Operations Officer

Randel R. Van Portfliet, P.E.  
Bureau Director of Field Services

**SUBJECT:** Bureau of Highway Instructional Memorandum 2013-07  
Acceptance/Rejection of Fabricated Structural Elements Shipped to the  
Project Site (Supersedes BOH IM 2004-04)

Project personnel are required to use the following procedure for acceptance of fabricated structural elements that are required to have “Fabrication Inspection and Visual Inspection (VI)” as the basis of acceptance in accordance with the Michigan Department of Transportation’s (MDOT’s) *Materials Source Guide*. These structural elements must not be shipped from the fabricator to the project or contractor’s yard without approval by the shop inspector at the time of loading. Fabricated structural elements include, but are not limited to, the following:

- Structural steel for bridges (plate, rolled, hollow structural shape, bridge tube railing, steel deck grating, modular expansion joints, etc.);
- Highway structures (sign structures, tower lighting units, and mast arm traffic signal);
- Structural prestressed concrete (PCI beams, boxbeams, spun concrete poles, etc.);
- Concrete culverts (box and three-sided structures with span length measured parallel to roadway centerline of 20 feet and greater).

Acceptance of fabricated structural elements consist of satisfactory shop inspection by the MDOT shop inspector in accordance with the applicable sections (3.10, 4.04, 4.05, 4.06, 4.10, and 4.11) of MDOT’s *Materials Quality Assurance Procedures Manual* (MQAP) **and** satisfactory visual inspection in the field by the engineer. The following two part process has been added to the upcoming release of the MQAP to clarify the acceptance process:

1. Fabrication Inspection Acceptance: Structural elements must be inspected by the shop inspector after they are loaded for shipping. The elements must be stamped “Approved for Use” prior to shipping if they meet contract requirements. Additionally, the shop

inspector must stamp at least five copies of the Bill of Lading that is prepared by the fabricator. The approval stamp is for use by the Department and does not relieve the contractor of their responsibility to meet contract requirements.

2. Visual Inspection Acceptance: The engineer must collect one copy of the stamped Bill of Lading and use it to verify the delivered structural elements. Additionally, the engineer must verify that the elements are stamped and visually inspect them for signs of damage that may have occurred as a result of shipping and handling. This visual inspection should be documented in the Inspector's Daily Report (IDR).

The contractor is responsible to provide MDOT with an accurate two week notification prior to the start of fabrication so that shop inspection can be coordinated in accordance with MDOT's *2012 Standard Specifications for Construction* (hereafter referred to as standard specifications) and other contract documents. Fabricated structural elements delivered to the project site with a stamped Bill of Lading and approval stamp must be inspected by the engineer as stated in Part 2 of the acceptance process stated above. The engineer reserves the right to reject any shipped element that shows visual signs of damage or does not meet specification requirements in accordance with section 105 of the standard specifications.

Fabricated structural elements delivered to the project site without being stamped and without a stamped Bill of Lading must be **rejected** by the engineer. Note that all structural precast concrete elements will be individually stamped, but only large structural steel elements will be individually stamped. Packaged structural steel elements (containers of fasteners, pallets of diaphragms/ bridge sign connections, etc.) will only be stamped on the outside of the package in multiple locations. The engineer is instructed to contact the Structural Fabrication Unit immediately whenever an element or Bill of Lading arrives on the project site without the approval stamp.

Stockpile payments for fabricated structural elements are to be made in accordance with section 109 of the standard specifications. These elements can be stored at the fabrication facility or at the construction site. If the elements are stored at the construction site then they must be inspected by the engineer as stockpiling occurs since the approval stamp ink could wash off. The engineer must then mark the accepted structural elements in another more permanent way.

A fabrication inspection memorandum will be electronically sent to the project office at the end of each project by the Structural Fabrication Unit. This memorandum is not the basis of acceptance, but rather a brief summary of the fabrication inspection for the project. The project office should place this memorandum in their project files and use it as a reference when requesting fabrication information from the Structural Fabrication Unit. See attached structural fabrication inspection flowcharts for more information on the fabrication inspection process.

The Operations Field Services area should be contacted if project personnel have any questions regarding the acceptability of structural elements shipped to the project site. For structural fabrication questions, please contact the following individuals:

- Structural Precast Concrete: Deanna Papanek (517-204-6689)
- Structural Steel: Jeff Weiler (517-322-1235) or  
Brion Klopf (517-204-6701)
- General Structural Fabrication: Matt Filcek (517-322-5709)

---

Chief Operations Officer

---

Bureau Director of Field Services

FHWA Approval: 06-10-13

Attachments

BOFS:OFS:MJF:mn

Index: Structures

cc: CFS Division Staff  
M. Chaput  
M. DeLong  
B. O'Brien  
P. Collins  
B. Wieferrich  
C. Rademacher  
D. Wedley  
P. Wiese  
L. Wieber  
D. Calabrese, FHWA  
ACM  
ACEC  
APAM  
CRAM  
MCA  
MITA  
MML

# MDOT Structural Steel Fabrication Inspection Flowchart

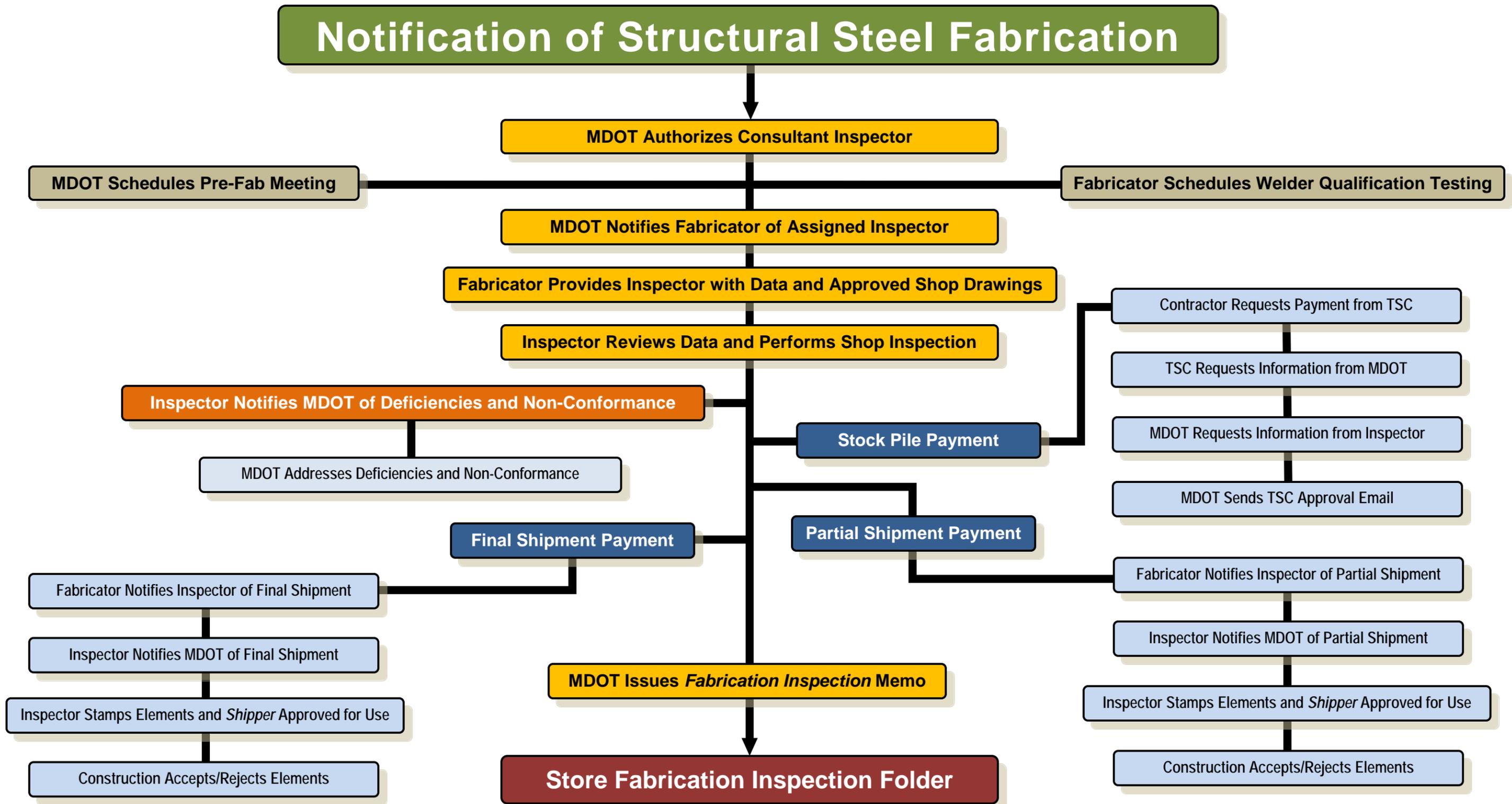


Figure 1.

MDOT structural steel fabrication inspection flowchart showing high level functions performed by MDOT (Structural Fabrication Unit). After loading, but prior to shipping, the shop inspector stamps some elements and *Shipper* "Approved for Use". Construction inspector must collect stamped *Shipper*, visually inspect unloaded elements, accept/reject the elements, and document in Inspectors Daily Report. Elements that arrive to the project without a *Shipper* must be rejected. *Fabrication Inspection Memo* is electronically distributed to the construction office at the end of the project for information only. v033013

# MDOT Structural Precast Concrete Fabrication Inspection Flowchart

## Notification of Structural Precast Concrete Fabrication

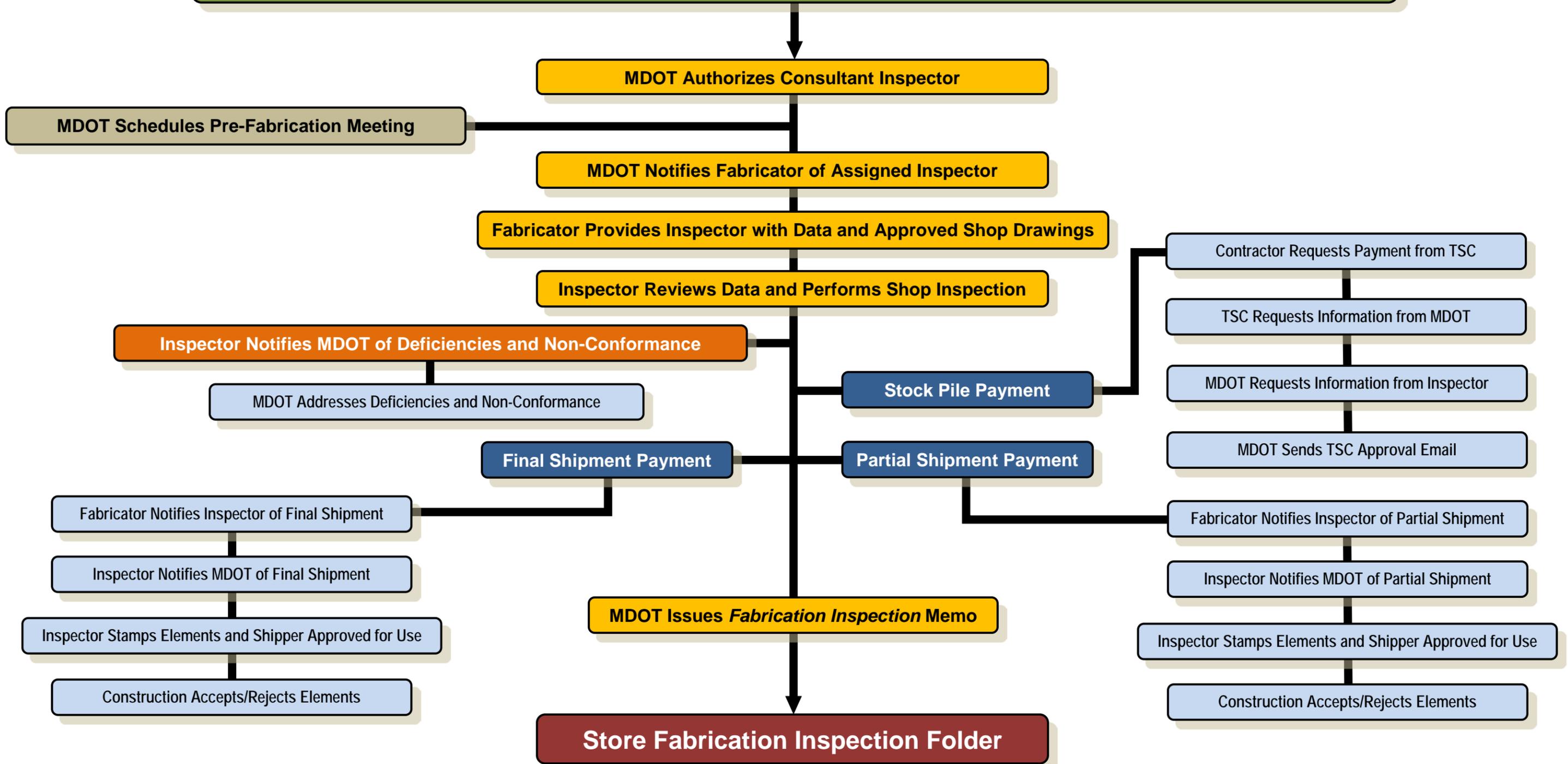


Figure 1.

MDOT structural precast concrete fabrication inspection flowchart showing high level functions performed by MDOT (Structural Fabrication Unit). After loading, but prior to shipping, the shop inspector stamps all elements and *Shipper* "Approved for Use". Construction inspector must collect stamped *Shipper*, visually inspect unloaded elements, accept/reject the elements, and document in Inspectors Daily Report. Elements v033013 that arrive to the project without a *Shipper* must be rejected. *Fabrication Inspection Memo* is electronically distributed to the construction office at the end of the project for information only.