

**OKLAHOMA DEPARTMENT OF TRANSPORTATION**  
**APPROVAL PROCEDURE**  
**FOR**  
**(NON-STRUCTURAL)**  
**PRECAST CONCRETE STRUCTURES**

GENERAL: Non-structural precast concrete structures are usually structures for storm water drainage systems. Manholes, curb inlets, median drains, and junctions boxes are just a few of these type of structures. Non-structural precast concrete structures will be accepted from a manufacturing facility with an unexpired listing on the Oklahoma Department of Transportation (ODOT) Approved Products List (APL). The manufacturer must produce precast concrete structures meeting the requirements of project specific shop drawings approved by the Roadway Design Division. Product acceptance consists of two components; Product Approval, and Field Acceptance. The Product Approval process is described in this document. Field acceptance will be in accordance with the Field Acceptance Method, indicated by the code adjacent to the product listing on the APL.

If there is any change in Company name, ownership, operation, or major processes, the ODOT Materials Engineer must be immediately informed in writing in order to evaluate the continued listing of the manufacturing facility.

All products are subject to sampling and testing at the manufacturing facility and/or at the project site. Products that do not perform adequately or are otherwise found to be non-compliant with requirements will be removed from the project site and replaced at the manufacturer's expense. A manufacturer that provides non-compliant structures may be removed from the APL at any time. Once removed, the manufacturing facility will not be re-listed or approved for use until such time that adherence to the requirements can be verified and the products produced at that facility have undergone a satisfactory performance evaluation.

PLANT APPROVAL: Request for approval of a non-structural precast concrete structure manufacturing facility shall be the responsibility of the manufacturer. The Department may conduct an on-site inspection of the manufacturer's facility and testing laboratory during the approval process or accept the manufacturer's documentation of Quality Control (QC) without an on-site visit for acceptance at the sole discretion of the Materials Engineer. A request for approval of the manufacturer's facility by the ODOT Materials Engineer shall include but is not limited to the following:

- I. Approval will require a written request, written on the manufacturer's Letterhead, from the manufacturer to the ODOT Materials Engineer, requesting placement of the non-structural precast concrete structure manufacturing facility on the Oklahoma Department of Transportation's Approved Products List. The letter of request should include the following:
  - A. Facility mailing address, physical address, telephone number, fax number, and email address.
  - B. Detailed directions to the supplier's facility.
  - C. Names of the Plant Manager, QC Manager and the plants point of contact if not already given.
  
- II. An on-site inspection of the manufacturer's facility may be conducted by ODOT personnel or its representative. The manufacturer is required to provide facility access in accordance with ODOT Standard Specification 106.05. The manufacturer shall provide or send to the ODOT inspector the following:
  - A. Documentation of the roles and responsibilities of the QC manager and QC technicians.
  - B. A copy of the facility's QC manual (if available) and supporting documents.
  - C. QC laboratory qualifications (in-house or contract lab) include calibration date of concrete compression machine and QC personnel qualifications. Personnel performing concrete cylinder or core strength sampling and testing must hold a current certification by the Oklahoma Highway Construction Materials Technician Certification Board (OHCMTCB) for Concrete or

American Concrete Institute (ACI) Concrete Field Testing Technician - Grade I and ACI Concrete Strength Testing Technician.

- D. Source of materials information (including cement, fly ash, admixtures, coarse and fine aggregates, steel reinforcement and joint material).

Upon satisfactory completion of the plant approval process the Oklahoma Department of Transportation will list the manufacturer's facility on the APL.

PRODUCT APPROVAL: Request for approval of non-structural precast concrete structures and related products shall be the responsibility of the manufacturer. The Department will conduct an on-site inspection of the structures at the manufacturing facility for product approval. ODOT requires the manufacturer's request for product approval be received at least two working days before on-site inspection for facilities within a one hundred fifty mile radius of Oklahoma City, OK. ODOT requires the manufacturer's request for product approval be received at least two weeks before on-site inspection for facilities within a radius of from one hundred fifty to three hundred miles of Oklahoma City, OK. ODOT requires the manufacturer's request for product approval be received at least three weeks before on-site inspection for facilities over three hundred miles of Oklahoma City, OK and travel expenses are the responsibility of the Contractor purchasing the structures. ODOT may require a written request for inspection from the manufacturer to the Materials Engineer when such an action is deemed necessary by the Engineer. Non-structural precast concrete structures manufactured at the facility will be tested for acceptance by ODOT personnel or its representative at the manufacturer's facility prior to shipment to the project site.

Precast Concrete Structures will be accepted by the compressive strength of the concrete determined by cylinders, visual inspection for defects, proper documentation and the ODOT inspector may use a non-destructive device to inspect any structure for reinforcing steel at the discretion of the Materials Engineer. A compressive strength test, visual inspection and documentation will be required for each structure. Each approved structure will receive an ODOT inspection stamp from the inspector and a visit number to be stenciled on the structure by the manufacturer. Testing will be conducted in accordance with the applicable standards, specifications and the following policy:

1. Structures accepted by the compressive strength testing of cylinders must meet the minimum load requirement of the applicable project specific shop drawings for that structure. The cylinders are to be made in accordance with AASHTO T 23 and tested in accordance with AASHTO T 22. A minimum of three cylinders must be averaged and two of the three cylinders must be above the required minimum compressive strength for the test to be acceptable. The ODOT inspector must be present at the time of compression testing.
2. A visual inspection will be conducted on all structures by the inspector for defects. Structures found to have defects will be replaced or repaired by the manufacturer at the request and direction of the ODOT inspector.
3. A non-destructive imaging system may be used on any structure by the inspector for determining the location or presence of reinforcing steel. Structures found to have reinforcing steel that does not conform to the project specific shop drawings will be replaced by the manufacturer at the request of the ODOT inspector.
4. The manufacturer is to supply completed MDT-2 form along with the supporting Material Test Reports (MTR's) for all the steel items in each structure.
5. Each structure should have a stenciled manufacturer's mark and structure number.

Revision 6/23/2016: Changed all instances of "Materials & Research Engineer" to "Materials Engineer". Changed division name in left part of header from "Materials & Research Division" to "Materials Division". Added the word "facility" after the word "manufacturer's" in the next to the last sentence of the first paragraph of section "PLANT APPROVAL".