

The following information is pertinent to becoming approved to produce precast concrete products for PennDOT.

Certification

Precasters producing for PennDOT are required to obtain plant certification from the National Precast Concrete Association (NPCA) or the Prestressed Concrete Institute (PCI). This is a prerequisite to making an application for Bulletin 15 approval.

Additionally, Quality Control technicians responsible for performing plastic concrete testing must be able to provide written evidence (wallet card or certification) to demonstrate that they've obtained ACI Level 1 Field Technician certification with not more than a six month interruption in actual production testing.

Application

Form CS-4170 "Preliminary Product Evaluation Application" must be completed, signed and returned to the address indicated.

ftp://ftp.dot.state.pa.us/public/pdf/BOCM_MTD_LAB/PUBLICATIONS/PUB_35/CS-4170.pdf

This application must be received to initiate any further action relative to the approval process. Please note that a copy of your Quality Control plan must accompany this submission.

Publication 145 "Inspection of Prestressed/Precast Products" provides additional information and description regarding our requirements including guidelines for developing your Quality Control plan.

ftp://ftp.dot.state.pa.us/public/pdf/BOCM_MTD_LAB/PUBLICATIONS/PUB_145/Pub%20145.pdf

Examples of associated documentation such as product specific forms used, pre-pour, and post pour checks are included in Publication 145.

After the application and information are received and accepted, further processing will be referred to a PennDOT Staff Engineer whose contact information will be provided at that time.

Concrete

If you intend to produce your own concrete, a mix design completed on Form TR-4221A must be developed and forwarded with the application. Mix designs are prepared using approved aggregates, cement and admixture producers.

Publication 34, Bulletin 14 list approved aggregate producers.

<http://www.dot.state.pa.us/Internet/constrbulletins.nsf/frmBulletin14>

Publication 35, Bulletin 15 lists approved admixture and cement suppliers/materials

ftp://ftp.dot.state.pa.us/public/pdf/BOCM_MTD_LAB/PUBLICATIONS/PUB_35/BULLETIN_15.pdf

Mix designs must be developed using the absolute volume method in accordance with the Department's **Publication 30, Bulletin 5** or the American Concrete Institute Specification 211. Publication 30, Bulletin 5 is not on the PennDOT website, but may be purchased in hardcopy from the following pricelist link

<ftp://ftp.dot.state.pa.us/public/PubsForms/Publications/PUB%2012.pdf>

Mix designs which incorporate one or more aggregates that develop a mortar bar expansion greater than 0.10 % when tested in accordance with AASHTO T-303 must be mitigated in accordance with Section 704.1(h) of **Publication 408** (expansion results are given after each aggregate listing in Publication 34, Bulletin 14)

<ftp://ftp.dot.state.pa.us/public/bureaus/design/pub408/pub%20408-2007.pdf>

If you purchase concrete from a ready-mix concrete supplier, they supplier must be from a source approved by the Department (these are listed in **Publication 42, Bulletin 42**

<http://www.dot.state.pa.us/Internet/constrbulletins.nsf/frmBulletin42>

If a District approved concrete mix design will be used for production, a copy of the design must be forwarded with your application.

Testing must be performed in accordance with the referenced specifications, which may be an AASHTO, ASTM, or PennDOT specific test method. PennDOT specific test methods are included in **Publication 19** "Field Test Manual" (these test methods usually closely parallel the national specifications). This manual is only available in hardcopy and can be found in the pricelist link mentioned above.

Publication 72 "Roadway Construction Standards" contains the standard drawings for the precast items you wish to fabricate for the Department. If your forms do not meet the dimensional requirements listed in Publication 72 you must submit drawings to PennDOT for review and approval prior to casting. Proprietary products are not listed in Publication 72.

<ftp://ftp.dot.state.pa.us/public/Bureaus/design/PUB72M/PUB72COV.pdf>

After the application (Form CS 4170) is received and processed at PennDOT, a plant visit will be scheduled to review your production facility, laboratory and equipment, and the inspection office. During this visit a PennDOT Staff Engineer will discuss our requirements in greater detail. During the facilities inspection, PennDOT must witness the setup, production and handling of any items you are seeking approval for.