

## ALDOT-377-92

# CERTIFICATION PROGRAM FOR CONCRETE PIPE, PRECAST MANHOLES, PRECAST BOX CULVERTS, AND MISCELLANEOUS PRECAST PRODUCTS TECHNICIANS

## 1. Scope

- 1.1. This program establishes the compliance requirements of the certification required by personnel manufacturing, sampling, testing, inspecting, and managing the production of concrete pipe, precast manholes, precast box culverts, and miscellaneous precast products.
- 1.2. The intent of this program is to improve the quality and performance of precast concrete products through knowledge and understanding of the product. The program will provide training and certification for precast concrete products technicians participating in the producer's Quality Control Program and the Department's Quality Assurance Program.
- 1.3. Miscellaneous precast concrete products are those items manufactured under one of the following categories:
  - Right-of-Way markers
  - Concrete pipe end treatments
  - Barrier rails
  - Precast wall panels
  - Precast inlets
- 1.4. This program does not cover the certification of technicians inspecting precast non-prestressed concrete bridge members. Refer to ALDOT-405, "Certification and Qualification Program for Concrete Technicians and Concrete Laboratories" in the Department's Testing Manual for requirements of the certification program for precast non-prestressed concrete bridge member.

## 2. Referenced Documents

- 2.1. ALDOT Standard Specifications for Highway Construction (Web link: [ALDOT SPECIFICATIONS](#))

<b>Sect</b>	<b>Title</b>
512	Precast Non-Prestressed Concrete Bridge Members
524	Reinforced Concrete Box Culverts
529	Retaining Wall
530	Roadway Pipe Culverts
533	Storm Sewers
535	Side Drain Pipe
602	Right of Way and Land Survey Markers
606	Pipe Underdrain
619	Pipe Culvert End Treatments
620	Minor Structure Concrete
621	Inlets, Junction Boxes, Manholes, and Miscellaneous Drainage Structures
629	Concrete Median and Safety Barrier
726	Portable Concrete Safety Barriers and Impact Attenuators

831	Precast Concrete Products
850	Roadway Pipe
851	Side Drain Pipe
852	Underdrain Pipe Materials
853	Sanitary Sewer Pipe, Manholes, and Appurtenances
854	Sewer Pipe

2.2. ALDOT Procedures (Web link: [ALDOT PROCEDURES](#))

364	Procedure for Inspection of Concrete Pipe, Precast Manholes, Precast Box Culverts, and Miscellaneous Precast Products
405	Certification and Qualification Program for Concrete Technicians and Concrete Laboratories

2.3. BMT Forms (Web link: [BMT FORMS](#))

133	Certified Technician Warrant
134	Application for Certification and Recertification

2.4. AASHTO/ASTM Standards

M 86/C 14	Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe
M 170/C 76	Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
M 175/C 444	Perforated Concrete Pipe
M 176/C 654	Porous Concrete Pipe
M 178/C 412	Concrete Drain Tile
M 199/C 478	Precast Reinforced Concrete Manhole Sections
M 206/C 506	Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
M 207/C 507	Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe
M 242/C 655	Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe
M 259/C 789	Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers
M 273/C 850	Precast Reinforced Concrete Box Sections for Culverts, Storm Drains and Sewers with Less Than 2 feet of Cover Subjected to Highway Loadings
T 22/C 39	Compressive Strength of Cylindrical Concrete Specimens
T 23/C 31	Making and Curing Concrete Test Specimens in the Field
T 24/C 42	Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
T 231/C 617	Capping Cylindrical Concrete Specimens
T 280/C 497	Concrete Pipe, Manhole Sections, or Tile

### 3. Program Administration

3.1. A Certification Board (CB) and a Working Task Force (WTF) will administer the certification program.

3.1.1. Certification Board – Membership of the CB will consist of the following:

- Materials and Tests Engineer, Chairman
- Assistant Chief Engineer appointed by the Transportation Director

- Construction Engineer
- Area Operations Engineer appointed by the Transportation Director
- Industry Representative appointed by the Alabama Concrete Pipe Association

3.1.2. Working Task Force – Membership of the WTF will consist of the following:

- Testing Engineer, Chairman
- Aggregate Engineer
- Area Materials Engineer appointed by the Materials and Tests Engineer
- Industry Representative appointed by the Alabama Concrete Pipe Association

#### **4. Precast Concrete Technician Certification Requirements**

4.1. Required For:

4.1.1. The Department, its consultants, and industry personnel responsible for inspecting and/or manufacturing of concrete pipe, precast manholes, precast box culverts, and miscellaneous precast products.

4.2. Prerequisites:

4.2.1. Maintain a current ACI Concrete Field Testing Technician – Grade I certification.

4.2.2. Maintain an ALDOT Concrete Technician certification.

4.2.3. Technicians who perform compression tests on concrete cylinders must have a current ACI Concrete Strength Testing Technician certification.

4.3. Training:

4.3.1. Successful completion of classroom and laboratory training on specifications, quality control, and testing of precast products. Training will be provided by the Department in conjunction with the industry.

4.3.2. The Precast Concrete Technician shall be familiar with all ALDOT Sections, ALDOT Procedures, BMT Forms, AASHTO standards, and AASHTO test procedures listed in Article 2.1 of this procedure.

4.4. Testing:

4.4.1. Successfully passing a written examination administered by the Department or the Department's appointed representative with a minimum score of 75.

4.4.2. Successfully passing a hands-on examination to demonstrate proficiency in the use, calibration, maintenance, and inspection of the Three-Edge Bearing apparatus. This testing requirement applies only to technicians inspecting precast concrete pipe.

#### **5. Certification**

5.1. Personnel meeting the qualifications for the concrete pipe, precast manholes, precast box culverts, and miscellaneous precast products technician certification will be certified as such upon recommendation of the Working Task Force and approval by the Certification Board.

5.2. Certification shall be contingent upon the technician signing BMT-133 and BMT-134.

- 5.3. The Department will issue a “certified technician card” to those technicians meeting the previous two Articles. The technician certification will be valid for a period of five (5) years provided all pre-required certifications are maintained and current.

## **6. Decertification**

- 6.1. Abuse or neglect of the responsibilities of Precast Concrete Products certifications is ground for disciplinary action.
- 6.2. The Working Task Force will investigate all written accusations.
- 6.3. Disciplinary actions will be implemented upon recommendation of the Working Task Force and approval of the Certification Board.
- 6.4. Disciplinary Actions will range from written reprimand to suspension of certification.
- 6.5. Suspensions will be a minimum of one month, plus six months probation, to permanent revocation of certification rights.
- 6.6. Falsification of records will result in permanent revocation of certification.

## **7. Recertification**

- 7.1. Personnel will be re-certified after meeting one of the following three criteria:
  - 7.1.1. Completion of the original training as described in Section 4.
  - 7.1.2. The technician may take a one (1) day refresher course to update him/her on changes in specifications and procedures.
- 7.2. Along with the requirements in Article 7.1 of this procedure the technician must also:
  - 7.2.1. Submit completed BMT-134 to the Working Task Force, including a summary of work, education and training received since last certification.
  - 7.2.2. Submit signed BMT-133 to the Working Task Force.