

**VIRGINIA DEPARTMENT OF TRANSPORTATION**

**MATERIALS DIVISION**

**MEMORANDUM**

<b>GENERAL SUBJECT:</b> Quality Assurance Program for Corrugated Metal Pipe	<b>NUMBER:</b> MD 422-20
<b>SPECIFIC SUBJECT:</b> Revise Section 204.26 (e) and (f) of The Materials Manual of Instructions, Corrugated Metal Pipe Quality Assurance Program covering both Steel and Aluminum Pipe Fabricators and Suppliers	<b>DATE:</b> August 21, 2020
	<b>SUPERSEDES:</b>
<b>APPROVED:</b>	Charles A. Babish, PE State Materials Engineer Approved: _____

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**EFFECTIVE DATE**

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- This memorandum is effective September 1, 2020
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**PURPOSE/NEED/SCOPE/REQUIREMENTS**

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- Revise Section 204.26 (e) for Corrugated Metal Pipe to require participation in a yearly audit under the AASHTO National and Transportation Product Evaluation Program (NTPEP) or the National Corrugated Steel Pipe Association (NCSPA) for inclusion on VDOT approved list No. 25 of Corrugated Metal Pipe Quality Assurance Program.
  - Delete Section 204.26 (f) VDOT Corrugated Metal Pipe Quality Assurance Program and move information under (2) Suppliers.
  - Pipe (e) Corrugated Aluminum Alloy and Corrugate Steel Coated to accept both type of Pipe visually on the project with the statement “We certify that these materials have been tested and conform to the VDOT Corrugated Metal Pipe Quality Assurance Program” on each of the shipping documents and signed by a responsible company representative.
  - Pipe (e) Corrugated Steel Coated, Appendix B CMP Plant Monitor Report, and the measurement table in Section 204 to eliminate the reference to asphalt coated as a type of coating for Corrugated Steel Pipe used on VDOT projects. Only polymer coated or a galvanized coating is permitted by VDOT specifications.
  - Add Appendix N – Corrugated Metal Pipe QA Plan check list.
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Changes are **Shaded**

## PROCEDURES

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### **(e) Corrugated Metal Pipe**

Corrugated metal pipe (CMP) shall be accepted from Fabricators on Approved List No. 25.

#### **(1) Fabricators**

Corrugated metal pipe conforming to the applicable specifications will be accepted on the manufacturer's certification based on the requirement that the Fabricator be actively enrolled in either the AASHTO NTPEP (National Transportation and Product Evaluation Program) or the NCSPA (National Corrugated Steel Pipe Association) audit program. Each individual fabricating facility, if more than one are owned by one company, shall be enrolled in an audit program in order to be on Approved List No. 25. The Fabricator shall submit annually, a Quality Control (QC) Plan defining its routine QC practices. A NTPEP/NCSPA plan may be used for the QC Plan, provided other information such as a cover sheet, organizational chart with line of reporting and responsibilities, and VDOT sample ticket are included. Requirements of this plan can be found in Appendix N of this chapter. The QC plan shall be current at all times and submitted annually to the VDOT Industrial Inspector assigned to monitor that specific facility, and it shall be resubmitted at time of any revision. The Department reserves the right to conduct inspections of fabrication facilities and to collect and test Verification Sampling and Testing (VST) samples as part of its owner QA program, and to discontinue acceptance of a Fabricator's CMP in the event that VDOT's inspection or VST results or NTPEP/NCSPA audits or testing indicate that non-specification material is being provided or QC procedures are not being followed. VST samples shall be a minimum of 1 ft. (300 mm) in length by associated coil width cut from the sheets, and marked in accordance with Section 203, using Form TL-10, as outlined in Section 800. Visual inspection of pipe product shall be made by the VDOT Inspector at the project, and may be rejected for damage from fabrication, shipping or handling.

CMP shall denote both steel and aluminum products that may be accepted under this program as follows.

- (1) Corrugated aluminum alloy pipe, including pipe arches, underdrains, and appurtenances, in accordance with AASHTO M196.
- (2) Corrugated steel pipe with a galvanized or aluminized coating, including pipe-arches, underdrains, and appurtenances, in accordance with AASHTO M36
- (3) Corrugated steel pipe with polymer coating, including pipe-arches, underdrains, and appurtenances, in accordance with AASHTO M246.
- (4) Galvanized steel and end sections and coupling bands. Various approved bands and joint materials are listed on Approved List No. 14.

The Fabricator shall issue the "We certify that these materials have been tested and conform to the VDOT Corrugated Metal Pipe Quality Assurance Program" ~~shall be~~ on each shipping document, and the statement shall be signed by a responsible company representative. When delivering directly to a VDOT project, shipping documents shall include Contractor, project number and product description. Copies of the shipping documents shall be emailed to the VDOT Industrial Inspector assigned to that facility on a weekly basis.

#### **(2) Supplier:**

In order for a Supplier to provide CMP, they shall follow the requirements of Section 112.01 and be included on Approved List No. 44

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**NOTES**

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- Appendix N
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**REFERENCES**

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**COPY DISTRIBUTION:**

Deputy Chief Engineer  
Division Administrators  
District Administrators  
District Location & Design Engineers  
District Construction Engineers  
District Maintenance Engineers  
District Bridge Engineers  
District Traffic Engineers

VDOT Resident Engineers  
Federal Highway Administration  
Virginia Ready Mix Association  
Precast Concrete Association of Virginia  
Virginia Transportation Construction Alliance  
Virginia Asphalt Association  
American Concrete Paving Association Mid-Atlantic Chapter  
Old Dominion Highway Contractors Association

## **Appendix N - Corrugated Metal Pipe QC Plan Checklist**

Company: \_\_\_\_\_

Location: \_\_\_\_\_

1. Coversheet containing the facility's location, phone number, web address, - point of contact information, and current date.  
Yes    No
2. Statement of commitment to VDOT's CMP Program, mission, and purpose.  
Yes    No
3. Personnel or Organizational chart including assignment of responsibilities and the hierarchy of the facility.  
Yes    No
4. Statement that a copy of any shipping documentation be emailed to the VDOT Industrial Inspector for the facility.  
Yes    No
5. NTPEP or NCSPA Quality Control Plan included with other information such as a cover sheet, organizational chart with line of reporting and responsibilities, and VDOT sample ticket are included?  
  
Yes    No
6. Items supplied under this plan.  
Yes    No
7. Copies of records, material certifications, and material tests are retained for a minimum of two years and are made available to VDOT upon request.  
Yes    No
8. Statement allowing VDOT access to the facility for sampling and inspection.  
Yes    No
9. Product storage and handling procedures including actions taken when new product is received, labeling of products, and how failed material is handled.  
Yes    No
10. "Buy America" statement and document traceability.  
Yes    No

11. A sample ticket including VDOT project number, Contractor information, accurate description of material and quantity, lot, batch, heat, or roll number, and QA statement with signature.

Yes    No

12. A list of employees authorized to sign the QA statement. Include a printed version of their name as well as their signature.

Yes    No

Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Department: \_\_\_\_\_