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Title: Construction Site Visual Quality Inspection		

1.0 PURPOSE:

The purpose of this procedure is to describe the Visual Quality inspection, documentation and reporting required of the Construction Site Quality Assurance Inspector prior to the placement of structural concrete for cast-in-place and precast structure elements when NTTA Special Specification 850 is a contractual requirement.

2.0 RESPONSIBILITIES:

2.1 Construction Site Quality Assurance Inspector (CSQAI) – The CSQAI shall be a qualified individual with experience in concrete construction on transportation or architectural building projects, knowledgeable of heavy construction materials and techniques, in particular concrete materials and concrete work with aesthetic requirements and successfully complete training administered by the corridor Visual Quality Assurance Manager (VQAM) and approved by the Assistant Project Manager for Visual Quality. Although, not required but beneficial if the CSQAI posses field testing certification from the Precast/Prestressed Concrete Institute (PCI), American Concrete Institute (ACI) or allied groups. The CSQAI Inspector shall:

- Serve as the primary on-site point-of-contact with construction managers and is responsible for daily visual quality inspection and documentation of concrete work, including bridges, walls and traffic barriers.
- Be responsible for performing and documenting visual quality inspections daily on form (VQ-02-F1) and that the reports are technically accurate. All generated inspection reports are to be submitted for review by the corridor VQAM with any corrections necessary made prior to filing in the NTTA Content Management system by the VQAM.
- Be responsible for the review of precast concrete products to ensure cast concrete color is within the prescribed approved tolerance.
- Be responsible for conducting forensic investigation activities to help improve processes for casting, curing, repair of cast-in-place and precast concrete related to color, quality of surface finishes and other appearance characteristics, should this be necessary.

2.2 Visual Quality Assurance Manager (VQAM) – the VQAM shall be responsible to:

- Review all Visual Quality nonconforming conditions brought to them to determine if a NCR should be created.
- Open a Visual Quality NCR as required for work that is deemed nonconforming product in accordance with VQ-03.

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3.0 SCOPE/APPLICABILITY:

- 3.1 All NTTA projects shall comply with the NTTA Design Guidelines (DG) and approved Corridor Visual Quality Construction Management Plan(s) (CVQMP) unless otherwise directed by the NTTA Board.
- 3.2 All NTTA projects where Gray Concrete Color and Finish will be utilized shall comply with NTTA Special Specification Item 850 Gray Concrete Color and Finish.
- 3.3 All Inter Local Agreement (ILA) language shall include the statement that any NTTA system project/corridor shall adopt the DG for all aesthetic design and NTTA Special Specification Item 850 for Gray Concrete Color and Finish associated with the roadway corridor or project.

4.0 REFERENCES:

- [NTTA Design Guidelines Manual](#)
- NTTA Corridor Visual Quality Management Plan
- NTTA Special Specification 850 for Gray Concrete Color and Finish
- [DM-02](#) Project Delivery Record Management Requirements
- [VQ-03](#) Visual Quality Control of nonconforming Product

5.0 DEFINITIONS & ACRONYMS:

6.0 PROCEDURES:

- 6.1 All exposed cast-in-place and precast concrete structures that are required to meet NTTA Special Specification Item 850 Gray Concrete Color and Finish shall be thoroughly inspected and accepted for visual quality prior to the placement of concrete and immediately after placement. Activities to be inspected shall include installation of aesthetic form liners, installation of reinforcement steel and embedments, form installation, form cleanliness, form surface smoothness, and verification of concrete manufacture plant and delivery preparation for precast and cast-in-place elements. This inspection is to insure that the concrete structures are complying with quality requirements that will offer the best opportunity for production and constructability of uniform product in terms of color, workability and formed surfaces characteristics.
- 6.2 Upon completion of concrete placement and removal of form and curing blankets, a visual quality inspection shall be performed of all exposed concrete for compliance with Special Specification 850. The CSQA will conduct the required visual quality checks and inspections of the concrete elements to ensure conformance to the requirements of the approved Construction Visual Quality Management Plan (CVQMP). In addition to the completion of the visual quality site inspection form the visual quality check and/or inspection will be verified as having been accomplished by submitting a completed Construction Site Inspection Report (CSIR) Form (VQ-02-F1) to the corridor VQAM, prior to filing in the NTTA's Content Management system.

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- 6.3 In accordance with VQ-03, any corrective action deemed necessary to bring concrete elements into conformance with the CVQMP requirements will need to be satisfactorily completed and will be verified by the CSQAI prior to final acceptance of concrete elements.
- 6.4 The CSQAI will retain a copy of the CSIR for his/her file with, an electronic copy forwarded to the corridor VQAM for filing in the NTTA's Content Management System.

7.0 REGULATORY REQUIREMENTS:

N/A

8.0 RELATED BOARD POLICY:

N/A

9.0 COMPONENT DOCUMENTS:

- [VQ-02-F1](#) Construction Site Inspection Report

10.0 FLOWCHART:

N/A

11.0 REVISION HISTORY:

Revision	Revised by:	Date Issued	DRN NO.	Reason for Revision
0	Bryan Dennis	04/28/2011	10258	Original Release
1	Bryan Dennis	10/11/2011	10339 & 10363	Replace QM-09 with VQ-03 in this procedure. QM-09 became obsolete and was split into two separate procedures, VQ-03 and CON-07. Updated 1.0 Purpose, 2.0 Responsibilities, and 6.0 Procedures. Deleted irrelevant references from 4.0 References.
2	Bryan Dennis	9/19/2016	10604	Change 850.1 to 850. This change would eliminate the need to update this procedure every time a newer version of 850 is issued.
3	Bryan Dennis	4/3/2017	10642	Updated title of SS 850 to reflect spec title revision.