CS-698 (8-22)

pennsylvania
DEPARTMENT OF TRANSPORTATION
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POST-INSTALLED ANCHOR INSTALLATION INSPECTION QC CHECKLIST

This QC checklist is in accordance with Pub 408, Section 698 for post-installed anchors. Use only anchors listed in Bulletin 15 and with an ICC-ES or IAPMO-UES listing.
This QC checklist is to be submitted by the contractor with an anchor design for verification by the Department's certified anchor inspector at the time of install. The certified anchor inspector is to complete the Inspector Verification & Comments column.

Project name & ECMS no.: _____ **Project location:** _____

Project plans, specifications, and manufacturer's installation instructions are provided and were reviewed:
☐ Yes ☐ No (Contact project manager)

Weather *(check all that apply):* ☐ Clear ☐ Overcast ☐ Rain ☐ Windy ☐ Indoor **Ambient Air Temp.(F):**_____degrees

	Post-Installed Anchor Design		ESR Page No	Inspector Verification & Comments
Product	Manufacturer: _____	ICC-ESR No.: _____		
	Product Name: _____	Lot Number: _____		
Mechanical / Adhesive Element Details	Anchor Type (check one): ☐ Adhesive ☐ Mechanical			
	Insert Type (check one): ☐ All-thread ☐ Internally threaded ☐ Rebar ☐ Other: _____			
	Material: ☐ Standard ☐ Stainless Steel ☐ High Strength ☐ Other: _____			
	Steel Grade/Coating: _____	Anchor Length: _____ inches		
	☐ Specified dispenser ☐ Specified mixer	☐ Discarded initial adhesive (per manufacturer's instructions)		
	MPII Specified Gel/ Working Time: _____ ☐ minutes ☐ hours	MPII Specified Cure Time: _____ ☐ minutes ☐ hours		
	Head Configuration: ☐ Hex Nut/Threaded ☐ Hex Bolt Head ☐ Torque Cap ☐ Countersunk ☐ Other: _____			
	Rod/Bolt Diameter: ☐ 3/8" ☐ 1/2" ☐ 5/8" ☐ 3/4" ☐ 7/8" ☐ 1" ☐ 1 1/4" ☐ Other: _____			
	Rebar: ☐ #3 ☐ #4 ☐ #5 ☐ #6 ☐ #7 ☐ #8 ☐ #9 ☐ #10 ☐ #11 ☐ Other: _____			
	Adhesive Type: ☐ Cartridge ☐ Capsule Adhesive Expiration Date: _____			

Concrete

Type: ☐ Normal Concrete ☐ Light Weight Concrete ☐ Other: _____			
Design Concrete Strength (psi): ☐ 3000 ☐ 4000 ☐ 5000 ☐ Other: _____			
Concrete Thickness: _____ inches	Concrete Clear Cover: _____ inches		
Assumed Concrete Condition for Design: ☐ Sound ☐ Cracked ☐ Delaminated ☐ Spalled ☐ Other: _____ Field conditions match design conditions? ☐ Yes ☐ No (do not proceed with installation and contact Structural Control Engineer) If no, describe conditions: _____			
Concrete surface temperature at install (F): _____ degrees max. _____ degrees min. Concrete moisture condition at install: ☐ Wet ☐ Dry Anchor designed for wet condition: ☐ Yes ☐ No If the concrete is protected from exposure to moisture, then the design may consider dry conditions. Dry concrete is considered to be concrete not to be exposed to water for 14 days. Also, if the concrete age is less than 21 days, it is to be considered as wet condition. **(Do not install dry condition anchors if concrete is in wet condition.)**			

Drilling & Hole Cleaning

Drill Bit Diameter: _____ inches	Hole Depth: _____ inches		
Drill Bit Type: ☐ Carbide- Tip ☐ Diamond Core ☐ Hollow Drill ☐ Other: _____			
Hole Condition: ☐ Dry ☐ Water Saturated ☐ Water Filled ☐ Under water			
Hole Cleaning: ☐ Compressed air ☐ Hand pump ☐ Wire brush ☐ Nylon brush ☐ Vacuum ☐ Other: _____ Hole Cleaning Procedure: ☐ 2 blow, 2 brush, 2 blow ☐ 4 blow, 4 brush, 4 blow ☐ Other: _____			
Hole cleaning in accordance with **mandatory** manufacturers' printed installation instructions (MPII): ☐ Yes ☐ No			

Application

Anchor Application: ☐ Tension ☐ Shear ☐ Overhead ☐ Horizontal to Overhead ☐ Other: _____			
Anchor Insertion: ☐ Twisting motion ☐ Annular gap filled with adhesive ☐ Air void free injection			
Anchor Spacing: _____ inches ☐ Per Base Plate Plan	Anchor Spacing: _____ inches ☐ Per Base Plate Plan		
Specified Embedment: _____ inches	Actual Embedment: _____ inches		
Installation Torque: _____ ft-lb			

Acceptance

Designed by *(print name)*: _____	Title: _____	Inspector Name (print name): _____
Company: _____	Phone No.: _____	Company: _____
Signature: _____ Date: _____		Certification ID No.: _____ Certification Expiration Date: _____
Date of Submittal: _____		Date: _____ Signature: _____

INSTRUCTIONS FOR COMPLETING POST-INSTALLED ANCHOR INSTALLATION INSPECTION QC FORM CS-698

This QC checklist is in accordance with Pub 408 Section 698 for post-installed anchors. Use only anchors listed in Bulletin 15 and with an ICC-ES or IAPMO-UES listing.
This QC checklist is to be submitted by the contractor with an anchor design for verification by the Department's certified anchor inspector at the time of install. The certified anchor inspector is to complete the Inspector Verification & Comments column.

How to complete Form CS-698:

General Project Information:

- This will be filled out by the Inspector in the field.

Product:

- The Post-Installed Anchor Designer is to fill out this section.
- The Inspector will verify that these are the anchors that are being used in the field.
- The Inspector will fill in the Lot Number.

Mechanical / Adhesive Element Details:

- The Post-Installed Anchor Designer is to fill out this section.
- The Inspector will verify that these are the details of the anchors that are being used in the field.
- The Inspector will fill in the following:
    - Discarded initial adhesive
    - Adhesive Expiration Date

Concrete:

- The Post-Installed Anchor Designer is to fill out the following:
    - Type
    - Design Concrete Strength
    - Concrete Thickness
    - Concrete Clear Cover
    - Assumed Concrete Condition for Design
    - Anchor designed for wet condition
- The Inspector will verify the following:
    - Type
    - Design Concrete Strength
    - Concrete Thickness
    - Concrete Clear Cover
- The Inspector will fill out the following:
    - Field conditions match design conditions
    - Concrete Surface temperature at install
    - Concrete moisture condition at install

Drilling & Hole Cleaning:

- The Post-Installed Anchor Designer is to fill out the following:
    - Drill Bit Diameter
    - Hole Depth
    - Drill Bit Type
    - Hole Condition

    - Hole Cleaning
    - Hole Cleaning Procedure
- The Inspector will verify the following:
    - Drill Bit Diameter
    - Hole Depth
    - Drill Bit Type
    - Hole Condition
    - Hole Cleaning
    - Hole Cleaning Procedure
- The Inspector will fill out the following:
    - Hole cleaning in accordance with mandatory manufacturers' printed instructions (MPII)

Application:

- The Post-Installed Anchor Designer is to fill out the following:
    - Anchor Application
    - Anchor Insertion
    - Anchor Spacing
    - Edge Distance
    - Specified Embedment
    - Installation Torque
- The Inspector will verify the following:
    - Anchor Application
    - Anchor Insertion
    - Anchor Spacing
    - Edge Distance
    - Installation Torque
- The Inspector will fill out the following:
    - Actual Embedment

Acceptance:

- The Post-Installed Anchor Designer is to fill out the following:
    - Designed by
    - Title
    - Company
    - Phone No.
    - Signature
    - Date
- The Inspector will fill out the following:
    - Inspector
    - Company
    - Certification ID No.
    - Certification Expiration Date
    - Signature
    - Date
    - Date of Submittal

Notes:

1. The Post-Installed Anchor Designer is to complete the ESR Page No. column listing the ESR Page No. where each topic in the row is discussed in the ESR.
2. The Inspector will verify and will make any additional comments in the Inspector Comments column.