

## **Construction Quality Improvement Program (CQIP)**

The Construction Division Construction Quality Improvement Program (CQIP) identifies and promotes opportunities for achieving continuous quality improvement in delivery of VDOT's Transportation Programs. CQIP helps maintain established baseline improvements in project quality to support the Department's ongoing quality initiatives.

CQIP has a documented history of being objective, respected, and a voice of quality. While compliance to applicable specifications is but one aspect of an overall quality program, a successful CQIP review depends upon agreement of diverse parameters from preliminary engineering to actual construction activity tasks, where each stakeholder must understand the connection these parameters have with producing a higher quality product. CQIP leads the way in coupling discrete Departmental functions together into a coordinated quality system and is keenly focused on maximizing positive quality outcomes through efficient information exchanges that pinpoint issues which may negatively affect project scope, time, and cost.

The overall guiding principles that have been identified as the base initiatives to achieving the right outcomes are:

❖ **Initiative #1 – Assess Process Integrity**

Process integrity is the foundation of the program. Key concentration areas include data validity, process objectivity, consistency and competent expertise. These areas establish program credibility and galvanize support.

❖ **Initiative #2 – Aligned Quality Performance Goals**

This means obtaining customer buy-in. CQIP must determine mutual areas of goal agreement with the Districts and other customers. We should endeavor to increase District performance while maintaining process integrity.

❖ **Initiative #3 – Advise & Communicate Constructively**

CQIP must maintain professionalism by having a positive, team focused, and service oriented attitude while regularly advertising our success balanced with need to remain transparent.

Successful implementation of these initiatives will increase the likelihood for reaching mission success and several key outcomes:

- ❖ **Key Outcome #1** – Tactical Planning; Performance Measurement; Maximized Quality
- ❖ **Key Outcome #2** – Seamless Information Exchange and Communication
- ❖ **Key Outcome #3** – Unified Quality Processes, Products, and People

\*\*\*\*\* **PRIMARY GOAL – Dynamic Continuous Process Improvement** \*\*\*\*\*



## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
General Provisions	VDOT'S Contract Management	100H	Are the Contractor Performance Evaluations (CPE) being prepared/maintained in accordance with latest applicable instructions? Ref: (IIM-CD-2013-03.01)
General Provisions	VDOT'S Contract Management	104.02(1)	Are deviations from the contract documents properly documented?
General Provisions	VDOT'S Contract Management	104.02(2)	Has extra work been documented and items that require work orders approved prior to work being performed?
General Provisions	VDOT'S Contract Management	105.03(1)	Are project records being maintained in accordance with the guidelines set forth in Appendix C of the Construction Manual?
General Provisions	VDOT'S Contract Management	105.03(2)	Does the Inspector promptly notify the Contractor of non-conformance with the contract documents by the Contractor?
General Provisions	VDOT'S Contract Management	105.08(1)	Where possible, have arrangements for adjusting utilities been made by the Department prior to project construction?
General Provisions	VDOT'S Contract Management	106.01(1)	Does the Inspector have available an approved source of materials and approved changes list on-site? (Appendix C / Form C25)
General Provisions	VDOT'S Contract Management	107.02(1)	Has the Department obtained the appropriate environmental permits?
General Provisions	VDOT'S Contract Management	107.02(a-j)1	Are all permits and special provision maintained on-site and are dates still applicable?
General Provisions	VDOT'S Contract Management	107.02(a-j)3	Were all "no impact" jurisdictional areas marked off and protected prior to construction?
General Provisions	VDOT'S Contract Management	108.01(1)	Is a preconstruction scheduling meeting held prior to beginning construction?
General Provisions	VDOT'S Contract Management	108.03(a)4	If the contractor started work prior to submittal of the baseline progress schedule, was it approved in writing by the engineer?
General Provisions	VDOT'S Contract Management	108.03(d)	Did the Engineer issue a written notice of unsatisfactory performance where progress remains unsatisfactory at the time of preparation of the next monthly progress estimate?
General Provisions	VDOT'S Contract Management	109.01(a)	Has the inspector made appropriate deductions for over-weight tonnage?
General Provisions	VDOT'S Contract Management	302.03(a2a)1	Has the Inspector checked and approved drainage structure foundations before bedding material is placed?
General Provisions	VDOT'S Contract Management	302.03(a2c)1	Did the Inspector check the alignment and grade of pipes before any backfill was placed?
General Provisions	VDOT'S Contract Management	302.03(a2g)1	Have the recommended number of density tests been taken and recorded for drainage items in accordance with current Materials Manual of Instructions?
General Provisions	VDOT'S Contract Management	302.03(b)	Did the Department approve the design of precast drainage structures prior to their use?
General Provisions	VDOT'S Contract Management	303.04(d)	Has minor structure excavation been measured and documented for drainage structure with a span of 48" or greater?
General Provisions	VDOT'S Contract Management	303.04(e)1	Did the Engineer approve the removal of unsuitable material below plan grade of the roadway?
General Provisions	VDOT'S Contract Management	303.04(h)20	Has the required compaction been achieved and documented on fills as required in the Materials Manual?
General Provisions	VDOT'S Contract Management	303.04(k)	Did the Engineer approve, in writing, the wasting or selling of surplus materials prior to the contractor doing it?

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General Provisions	VDOT'S Contract Management	305.03(a)1	Did the Inspector check the subgrade to ensure the cross section was correct and the grade was uniform prior to the Contractor placing any subsequent course?
General Provisions	VDOT'S Contract Management	305.03(a)2	Have the recommended number of density tests been taken and recorded on subgrade?
General Provisions	VDOT'S Contract Management	308.03(b)	Have the recommended number of density tests been taken and recorded for subbase and /or aggregate base courses?
General Provisions	VDOT'S Contract Management	311.04	Is prime coat being measured and paid for in accordance with the contract requirement?
General Provisions	VDOT'S Contract Management	312.05	Have the asphalt and cover material for seal coat been measured and paid for in accordance with contract requirements?
General Provisions	VDOT'S Contract Management	315.07(a)1	Has the surface been straight edged as required?
General Provisions	VDOT'S Contract Management	316.04(k)1	Has the pavement smoothness been determined as specified?
General Provisions	VDOT'S Contract Management	316.06	Has the Inspector documented in the project diary the dimensions needed to compute pay quantities?
General Provisions	VDOT'S Contract Management	401.02(a)	Has the Engineer approved the backfill material prior to use?
General Provisions	VDOT'S Contract Management	401.03(c)1	Was the foundation inspected and approved prior to concrete being ordered?
General Provisions	VDOT'S Contract Management	401.03(i)1	Have the recommended number of density tests been taken and recorded for backfill of structures?
General Provisions	VDOT'S Contract Management	403.06(e)	Are accurate and complete records being maintained on pile driving?
General Provisions	VDOT'S Contract Management	403.06(f)1	Has the center of gravity for each pile group been checked and documented?
General Provisions	VDOT'S Contract Management	403.06(f)2	Have corrections to the pile center of gravity been approved by the District Bridge Engineer?
General Provisions	VDOT'S Contract Management	404.03(a)1	Did the Inspector check and approve the formwork prior to the Contractor placing concrete?
General Provisions	VDOT'S Contract Management	404.03(c)1	Was the concrete tested for conformity to the requirements of materials section on Hydraulic Cement Concrete and approved prior to placement?
General Provisions	VDOT'S Contract Management	404.07(f)	Following concrete set and prior to placement of other slabs, was the deck surface tested and approved by the Engineer and in accordance with this section?
General Provisions	VDOT'S Contract Management	405.05(h)01	Have prestressed items been checked for cracks and the Construction Manager notified as per Section 405 of the Construction Manual?
General Provisions	VDOT'S Contract Management	405.05(h)02	Did the Inspector check the bearing pads and the vertical and horizontal alignment of the beams prior to the contractor installing the diaphragms?
General Provisions	VDOT'S Contract Management	406.03(d)01	Was the reinforcing steel checked and approved for proper position as well as adequacy of the method of maintaining position prior to placement of concrete?
General Provisions	VDOT'S Contract Management	407.03	Does the Inspector have copies of working drawings, shipping statements, and erection diagrams included in the project files and available at the Inspector's field office?
General Provisions	VDOT'S Contract Management	407.06(c4)	Does the Inspector observe the installation and tightening of bolts to ensure that the selected tightening procedure is properly used and that all bolts are tightened?

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General Provisions	VDOT'S Contract Management	411.03(b)2	Has the Contractor implemented required environmental protections when project work involves the removal of greater than 100 square feet of coating from a Type B structure?
General Provisions	VDOT'S Contract Management	411.04(c)1	Did the Inspector determine the dry film thickness of paint coats through the use of a Tooke gage or magnetic gage?
General Provisions	VDOT'S Contract Management	411.04(d)2	Has the Engineer approved the contractor's daily record and mapping format prior to commencement of work as required in this section?
General Provisions	VDOT'S Contract Management	411.08(a)2	Has the Engineer notified the contractor that the site-specific environmental plan contains all the necessary elements stated in this section?
General Provisions	VDOT'S Contract Management	411.08(c)2	Has the Engineer approved the site for temporary storage of waste material in accordance with provisions of this section?
General Provisions	VDOT'S Contract Management	411.09(a)2	Has the contractor's worker health and safety plan been reviewed for completeness prior to beginning of work within 2 weeks of receipt?
General Provisions	VDOT'S Contract Management	414.03(a)01	Was the base for riprap inspected and approved prior to placement of riprap or bedding?
General Provisions	VDOT'S Contract Management	504.01	Does the Inspector review the location of the proposed sidewalk, steps, handrail to ensure that the item is in the proper location as shown on the plans or placed as needed?
General Provisions	VDOT'S Contract Management	505.01(1)	Did a representative of the District Traffic Engineer's office review the proposed location of guardrail and make recommendations for installing guardrail in accordance with the Construction Manual, Section 505?
General Provisions	VDOT'S Contract Management	509.02(a)	Does the Engineer verify the continuing adequacy of the mix design and the minimum compressive strength on a monthly basis?
General Provisions	VDOT'S Contract Management	512.01(1)	Are inspections of work zones that affect traffic conducted and documented in accordance with applicable IIM?
General Provisions	VDOT'S Contract Management	512.01(2)	Has Engineer designated a Work Zone Traffic Coordinator that holds a valid intermediate Work Zone Training Verification Card, provided the Contractor the name of the WZTC Coordinator, in writing, prior to the commencement of construction activities, and posted notice in a conspicuous place on the project? (IIM-CD-2013-02.02)
General Provisions	VDOT'S Contract Management	512.01(3)	Do the Work Zone Traffic Coordinator and/or other required project personnel have available a current copy of the MUTCD and/or Work Area Protection Manual? (Construction Manual)
General Provisions	VDOT'S Contract Management	517.03(2)	Has the Engineer determined the validity of the Contractor's assertion in the written notice of a disagreement with the accuracy of the stakeout or survey work provided by the Department, and responded back to the Contractor within three (3) working days on how to proceed in accordance with this section?
General Provisions	VDOT'S Contract Management	517.06	Has the Department paid more than 60% for construction surveying without having the Contractor provide all surveying field notes, layouts, computations, certified plats, sketches and drawings?
General Provisions	VDOT'S Contract Management	605.03(b)1	Are plants inspected prior to placement and those which are found to be unsatisfactory rejected?
General Provisions	VDOT'S Contract Management	700.04(e)1	Has the Engineer, accompanied by the Contractor, reviewed the proposed locations of each pole, post, or sign structure and advised the contractor of any necessary adjustments?
General Provisions	VDOT'S Contract Management	704.04	Are pavement markings and markers measured and paid for in accordance with this section?
General Provisions	VDOT'S Contract Management	IIM-CD-2013-12.01	Have field changes been documented in accordance with the requirements of IIM-CD-2013-12.01.
General Provisions	VDOT'S Contract Management	SP-100B(1)	Was a process timeline for making decisions and managing communications agreed upon by VDOT and the Contractor at the Pre-Construction Conference?

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General Provisions	VDOT'S Contract Management	SP-100B(2)	Are project communications and decisions being tracked and documented in accordance with special provisions or is a compatible Issue Resolution Process being utilized?
General Provisions	VDOT'S Contract Management	SP-BSCV	Has the blot seal treatment been measured and paid for in accordance with contract requirements?
General Provisions	VDOT'S Contract Management	SP-EASS.V / LMET.VI	Was EASS / LMET measured and paid in accordance with the contract requirements?
General Provisions	VDOT'S Contract Management	SP-STIV	Have the asphalt and cover materials for surface treatment been measured and paid for in accordance with contract requirements?
General Provisions	Control of Work - Plans and Working Drawings	100A	Are details on the plans coordinated throughout and do they show the work to be performed?
General Provisions	Control of Work - Plans and Working Drawings	100B	Are all pay items and quantities shown on the plan sheets in agreement with the pay items and quantities specified in the contract?
General Provisions	Control of Work - Plans and Working Drawings	100C	Are the summaries well-organized, accurate, and easy to use?
General Provisions	Control of Work - Plans and Working Drawings	100D	Have there been any work orders due to plan discrepancies or contract omissions?
General Provisions	Control of Work - Plans and Working Drawings	100E[01000401]	Were there any significant increases or decreases due to any discrepancies in contract quantities in accordance with section 104.02?
General Provisions	Control of Work - Plans and Working Drawings	100F	Are the plans designed in such a manner that the Contractor can construct the project with minimal delays or changes?
General Provisions	Control of Work - Plans and Working Drawings	100G	Are the contract and special provisions complete?
General Provisions	Contractor Contract Management	105.01	Unless otherwise permitted, has the Contractor started work within 15 days of the date of contract execution specified in the Notice to Proceed?
General Provisions	Contractor Contract Management	105.03(a)	Has the Engineer had to suspend the work because the Contractor failed to carry out provisions of the contract?
General Provisions	Contractor Contract Management	105.05	Do the workers and equipment satisfy the requirements of this section?
General Provisions	Contractor Contract Management	105.06	Are subcontracts being handled in accordance with the requirements of this section?
General Provisions	Contractor Contract Management	105.07(1)[03000600]	Has contractor been fully cooperative with engineer, inspector, other contractors involved in prosecution of the work?
General Provisions	Contractor Contract Management	105.07(2)	Does the Contractor have a superintendent on the project at all times?
General Provisions	Contractor Contract Management	105.07(3)	Is the superintendent competent, capable of reading and understanding the plans and specifications, experienced in the type of work being performed, and have full authority to execute the orders and directions of the Engineer?
General Provisions	Contractor Contract Management	105.08(2)[03001100]	Is the Contractor cooperating by giving the utility companies advance notices to permit their utilities to be adjusted simultaneously with project construction operations?
General Provisions	Contractor Contract Management	105.08(3)	Does the Contractor coordinate the project construction with planned utility adjustments?
General Provisions	Contractor Contract Management	105.08(4)	Does the Contractor report any failure on the part of the utility owner to cooperate or proceed with the planned utility adjustments?

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General Provisions	Contractor Contract Management	105.08(5)	Has the Contractor properly protected any existing, adjusted, or new utility facilities which are to remain within the right-of-way?
General Provisions	Contractor Contract Management	105.09(1)	Does the Contractor provide the necessary access to other Contractors performing work in the same geographical area of the work covered by this contract?
General Provisions	Contractor Contract Management	105.09(2)	In a dispute between Contractors working concurrently in an area, did they comply with the Engineer's decisions on the contracts?
General Provisions	Contractor Contract Management	105.09(3)	Have the Contractors, with the Engineer, established a written joint operations schedule based on the limits of the individual contracts and the contract work to be combined?
General Provisions	Contractor Contract Management	105.09(4)	If Contractors fail to agree on a joint schedule of operations, were individual schedules submitted to the Engineer who prepared a schedule binding on each contractor?
General Provisions	Contractor Contract Management	105.10C	Does the Contractor submit his shop and working drawings for timely review by the Engineer to avoid delaying the work?
General Provisions	Contractor Contract Management	105.14	Are entrances and connections in satisfactory locations and being properly maintained?
General Provisions	Contractor Contract Management	105.17	When an inspection reveals that work has not been properly performed, and the Contractor has been so advised, does he immediately inform the Department of a schedule for correcting such work and time at which reinspections of such work can be made?
General Provisions	Contractor Contract Management	105.18	Has the Contractor remedied or removed the unacceptable or unauthorized work at his expense?
General Provisions	Contractor Contract Management	105.19(1)	Has the Contractor submitted a written statement that clearly identifies intent to file a claim at the time of occurrence or beginning of the related work?
General Provisions	Contractor Contract Management	105.19(2)	At the time of occurrence or prior to the beginning of the work, does the Contractor furnish the Engineer with an itemized list for which additional compensation will be claimed?
General Provisions	Contractor Contract Management	105.19(3)	When documenting the claim, did the Contractor and the Engineer compare records and bring them into agreement at the end of each day?
General Provisions	Contractor Contract Management	106.01(2)	Has the contractor submitted a source of materials in accordance with contract requirements?
General Provisions	Contractor Contract Management	106.02	Has the Contractor provided the Engineer with a copy of all invoices for materials delivered to the project?
General Provisions	Contractor Contract Management	106.03	Has the Contractor submitted and received approval in accordance with the specifications on Local Material Sources, all necessary agreements and plans for opening or reopening a local pit or quarry prior to performing any work?
General Provisions	Contractor Contract Management	106.04	Has the Contractor submitted and received approval for all information required in this section before utilizing a disposal area?
General Provisions	Contractor Contract Management	106.08(1)	Are fuels and lubricants stored outside of flood plains and are impoundments in place to contain accidental spills and prevent them from entering waterways?
General Provisions	Contractor Contract Management	106.08(2)	Does the Contractor have more than a total of 1320 gallons of petroleum products stored at the project (55-gallon containers and greater) and if so, does he have a SPCC Plan on site and adequate secondary containment for petroleum storage? (Ref: CD2000-16)
General Provisions	Contractor Contract Management	106.09	Are materials being handled in a manner that will preserve their quality and fitness for the work?
General Provisions	Contractor Contract Management	106.1	Have materials that do not conform to the specifications been replaced, or if repaired, approved by the Engineer prior to use?
General Provisions	Contractor Contract Management	107.01	Prior to commencing work, did the Contractor notify or request the utility company to locate their underground utilities?

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General Provisions	Contractor Contract Management	107.08	Has the contractor furnished the Engineer a copy of executed written agreement(s) prior to entering private property?
General Provisions	Contractor Contract Management	107.11	Are the explosives stored and handled as required by the governing rules and regulations?
General Provisions	Contractor Contract Management	107.17(a)	Does the Contractor continuously prosecute the work on or over the railway right-of-way to minimize the need for flagger or watchman service?
General Provisions	Contractor Contract Management	107.19(b)	Has the Contractor submitted to the Department and had approved by railway a plan of operations showing the design and method of proposed structural operations on railway right-of-way?
General Provisions	Contractor Contract Management	107.19(c)	Has the Contractor and/or subcontractors submitted for approval and retention to the Railway Company, a railroad protection liability insurance policy and certificate of insurance prior to starting work on railway right-of-way?
General Provisions	Contractor Contract Management	107.19(d)	Has the Contractor submitted to the Department a copy of the Railway Company's approval of his railroad insurance?
General Provisions	Legal Responsibilities - Permits, Certificates, and Licenses	107.02(2)	Were required water quality permits obtained and is the contractor adhering to the provisions of the environmental permits?
General Provisions	Legal Responsibilities - Permits, Certificates, and Licenses	107.02(a-j)2	Are all new pipes and/or culverts for road crossings on perennial streams and intermittent streams being countersunk at appropriate depths in accordance with applicable permits?
General Provisions	Legal Responsibilities - Permits, Certificates, and Licenses	107.02(a-j)4	Are all temporary structures in permitted jurisdictional areas properly maintained?
General Provisions	Legal Responsibilities-Environmental Stipulations	107.16(a)1	Has the Contractor properly installed temporary and permanent devices to control erosion and minimize siltation of waterways and adjacent properties?
General Provisions	Legal Responsibilities-Environmental Stipulations	107.16(a)2	* Is the Contractor inspecting and immediately responding to install and correct or maintain erosion and siltation measures so they function properly or when conditions dictate?
General Provisions	Legal Responsibilities-Environmental Stipulations	107.16(a)3	Does the contractor have an employee certified by the Department( ESCCC) during land disturbance activities within the limits of the project?
General Provisions	Legal Responsibilities-Environmental Stipulations	107.16(b)1	Is construction discharge water being filtered to remove deleterious materials prior to discharge into state waters?
General Provisions	Legal Responsibilities-Environmental Stipulations	107.16(b)2	Is the Contractor using mats or other approved materials in wetlands areas to support construction equipment?
General Provisions	Legal Responsibilities-Environmental Stipulations	107.16(b)3	Are excavated materials being disposed of in an approved area above the mean high water elevation in a manner that will prevent their return into state waters?
General Provisions	Legal Responsibilities-Environmental Stipulations	107.16(b)4	Has the Contractor prevented erosion of soil and the pollution and siltation of rivers, streams, and impoundments during the construction of new bridges and culverts and removal of existing bridges and culverts?
General Provisions	Legal Responsibilities-Environmental Stipulations	107.16(b)5	Is the Contractor using mats or other approved materials in wetlands areas to support construction equipment?
General Provisions	Legal Responsibilities-Environmental Stipulations	107.16(b)6	Has the Contractor submitted for approval his design and method of temporarily relocating streams to facilitate construction?
General Provisions	Legal Responsibilities-Environmental Stipulations	107.16(b)2	Has the Contractor's burning been approved and is it in compliance with the DEQ-Air Division Pollution Control Laws and Rules, the local laws and ordinances?
General Provisions	Legal Responsibilities-Environmental Stipulations	107.16(d)	If cultural resources (archeological sites, historic buildings, etc.) are delineated on construction plans for avoidance, are such properties being protected from impact during construction?
General Provisions	Legal Responsibilities-Environmental Stipulations	107.16(e)4	Has the contractor/subcontractor completed form C-107 (construction runoff control inspection form) as required?

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General Provisions	Legal Responsibilities-Construction Safety and Health Standards	OSHA(01)	On vehicles with an obstructed view to the rear, is the Contractor using audible back-up alarms or an effective ground guide system?
General Provisions	Legal Responsibilities-Construction Safety and Health Standards	OSHA(02)	Is the correct angle of repose or adequate shoring being used for trenches or excavations 5 feet or more in depth?
General Provisions	Legal Responsibilities-Construction Safety and Health Standards	OSHA(03)	Does the Contractor's competent person for excavation monitor all excavation sites?
General Provisions	Legal Responsibilities-Construction Safety and Health Standards	OSHA(04)	Are all employees wearing proper head protection as required?
General Provisions	Legal Responsibilities-Construction Safety and Health Standards	OSHA(05)	Are employees using personal protective equipment for eyes, hands, feet, and any other body parts as required?
General Provisions	Legal Responsibilities-Construction Safety and Health Standards	OSHA(06)	Where needed, is the proper fall protection device/devices being used?
General Provisions	Legal Responsibilities-Construction Safety and Health Standards	OSHA(07)	Has the contractor's qualified person monitored the fall protection devices to see that they meet current standards?
General Provisions	Legal Responsibilities-Construction Safety and Health Standards	OSHA(08)	Are employees who are exposed to vehicular traffic wearing traffic vest?
General Provisions	Legal Responsibilities-Construction Safety and Health Standards	OSHA(09)	Have required measures been taken prior to employees entering a confined space?
General Provisions	Legal Responsibilities-Construction Safety and Health Standards	OSHA(10)	Has the contractor's qualified person monitored/documented said measures prior to employees entering a confined space?
General Provisions	Prosecution and Progress of Work-Process Schedule	108.01(2)	Does the contractor meet with the engineer every 30 days to establish dates for starting each critical inspection stage during the next 30 days?
General Provisions	Prosecution and Progress of Work-Process Schedule	108.01(3)	Does the contractor advise the Engineer at least 24 hours in advance of any changes in planned operations or critical staging in accordance with this section and the section for inspection of work?
General Provisions	Prosecution and Progress of Work-Process Schedule	108.03(a)1	Has the contractor's progress schedule, plan of operations, and/or working schedule been submitted within the time frame specified and per applicable requirements? (Ref.: Special Provisions)
General Provisions	Prosecution and Progress of Work-Process Schedule	108.03(a)2	Is the contractor meeting the approved progress schedule and/or earning schedule?(Ref: Special Provisions)
General Provisions	Prosecution and Progress of Work-Process Schedule	108.03(a)3[04000200]	When required, did the contractor submit a revised progress schedule 10 calendars days of engineers request?
General Provisions	Prosecution and Progress of Work-Process Schedule	108.03(c)1	Does the contractor advise the engineer at least once a week of all anticipated critical inspection stages for the subsequent week?
Roadway Construction	Clearing & Grubbing	301.01	Is the clearing and grubbing confined to the area within the construction limits and to other objects as designated on the plans and in the contract?
Roadway Construction	Clearing & Grubbing	301.02(1)	Did the Contractor install erosion and siltation control devices prior to beginning clearing or grubbing operations?
Roadway Construction	Clearing & Grubbing	301.02(2)	Has the Contractor confined the grubbing of root mat and stumps to the area over which excavation is to be actively prosecuted within 15 days following the grubbing operation?
Roadway Construction	Clearing & Grubbing	301.02(3)	Have all items which will be less than 5 feet below the top of earthwork within the area directly below the pavement and shoulders, been removed?
Roadway Construction	Clearing & Grubbing	301.02(4)	Are stumps, other perishable materials, and non-perishable objects that are left in place in accordance with this section?

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Roadway Construction	Clearing & Grubbing	301.02(5)	Have trees and vegetation been disposed of in accordance with this Section?
Roadway Construction	Drainage Structures	302.02	Is the pipe the required gage and strength, to include the special design pipe, and do other materials meet the requirements of this section?
Roadway Construction	Drainage Structures	302.03	Has the contractor furnished and installed lift hole plugs as specified?
Roadway Construction	Drainage Structures	302.03(a)	Have all pipe culverts been checked to determine if damaged materials have been repaired or replaced?
Roadway Construction	Drainage Structures	302.03(a1)	Has the Contractor submitted to the Engineer a complete plan and schedule for jacked and bored pipe installation prior to the beginning of work?
Roadway Construction	Drainage Structures	302.03(a2a)2	Have the pipe culvert foundations been explored by the contractor below the bottom of the excavation?
Roadway Construction	Drainage Structures	302.03(a2a)3	Is the foundation firm, but not unyielding for its full length and width and excavated according to the standard drawings?
Roadway Construction	Drainage Structures	302.03(a2b)1	Has bedding material been furnished in accordance with this section?
Roadway Construction	Drainage Structures	302.03(a2b)2	Has the bedding material been placed and shaped in accordance to this section?
Roadway Construction	Drainage Structures	302.03(a2c)2	Has the pipe been placed in accordance with this Section?
Roadway Construction	Drainage Structures	302.03(a2d)	Are the joints of the pipe tight and properly sealed?
Roadway Construction	Drainage Structures	302.03(a2g)2	Is the backfill placed in uniform layers at the specified thickness?
Roadway Construction	Drainage Structures	302.03(a2g)3	Is the backfill placed simultaneously and compacted on both sides of the pipe as specified?
Roadway Construction	Drainage Structures	302.03(a2g)4	Has all rock over 2 inches in its greatest dimension been removed from within 12 inches of the pipe?
Roadway Construction	Drainage Structures	302.03(a2g)6	Has backfill material been furnished as specified?
Roadway Construction	Drainage Structures	302.03(b1a)	Does the grade of the throat section of the inlets meet the appropriate grade of the gutter?
Roadway Construction	Drainage Structures	302.03(b1b)[08001600]	Are the pipe openings in the precast units not more than 8 inches larger than the outside diameter of the pipe?
Roadway Construction	Drainage Structures	302.03(b1c)	Has the void between the pipe and precast structures been filled as specified?
Roadway Construction	Drainage Structures	302.03(b1d)	Have precast units, which are located adjacent to the subbase or base course, been provided with 3 inches in diameter weep holes and hardware cloth?
Roadway Construction	Drainage Structures	302.03(b1e)	Are precast units, which are located adjacent to cast-in-place items, been connected by means of number 4 smooth steel dowels spaced on approximately 12-inch center?
Roadway Construction	Drainage Structures	302.03(b1f)1	Have the chamber sections been installed in the plumb position?
Roadway Construction	Drainage Structures	302.03(b1f)2	Do the throat and top sections have positive restraints and interlocks to prevent displacement?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Roadway Construction	Drainage Structures	302.03(b1f)3	Has the throat section been installed to conform with the normal slope of the finished grade?
Roadway Construction	Drainage Structures	302.03(b1f)4	Has the buildup section been constructed as specified?
Roadway Construction	Drainage Structures	302.03(b2b)	Have exposed reinforcing bars, inserts, and plates intended for bonding with future extensions of precast arches been protected from corrosion?
Roadway Construction	Drainage Structures	302.03(b2d)	Have the joints between precast arch units been sealed using preformed plastic or mastic gaskets or grout?
Roadway Construction	Drainage Structures	302.03(b3b)	Is epoxy coated reinforcing steel used in the top layer on precast box culverts with 0 - 2 feet of fill over them?
Roadway Construction	Drainage Structures	302.03(b3c)1	Has preformed plastic or mastic gaskets been used to seal the joints between precast box culvert units and are they from the Department's approved list?
Roadway Construction	Drainage Structures	302.03(b3c)2	Has the required buffer zone been provided between lines of box culvert units and has it been backfilled as specified?
Roadway Construction	Drainage Structures	302.03(b3c)3	Have weep holes been provided in the precast box culvert as required?
Roadway Construction	Drainage Structures	302.03(b3d)1	Has sufficient anchorage been provided at the terminus of the precast box culvert units?
Roadway Construction	Drainage Structures	302.03(b3d)2	Has the skew for precast box culvert units been formed by saw cutting, or other methods approved by the Engineer, and there is no variation from the exact skew greater than 1-1/2 inches at any one point?
Roadway Construction	Drainage Structures	302.03(b3f)[08003400]	Has bedding and backfill been placed in accordance with standard PB-1 for box culverts?
Roadway Construction	Drainage Structures	302.03(c)1	Has masonry construction been initiated only when the air temperature is above 40 degrees F in the shade for drop inlets, manholes, junction boxes, spring boxes, intake boxes and end walls?
Roadway Construction	Drainage Structures	302.03(c)2	Has the adjustment of existing drainage structures been performed in accordance with this section?
Roadway Construction	Drainage Structures	302.03(c)3	Are pipe sections flush with the inside of the structure wall?
Roadway Construction	Earthwork	303.01	On projects being constructed under the No Plan and Minimum Plan concept, is the work in accordance with the specifications for No Plan and Minimum Plan projects? (special provision)
Roadway Construction	Earthwork	303.03(b)	Has incremental seeding been performed in accordance with the sequences specified in this section?
Roadway Construction	Earthwork	303.04(a)01	Has the stripping of top soil been confined to the area over which excavation is to be actively prosecuted within 15 days?
Roadway Construction	Earthwork	303.04(a)02	Have underground tanks, existing foundations, and slabs located within the construction limits been removed and disposed of in an approved manner?
Roadway Construction	Earthwork	303.04(a)03	Have foundations and slabs located 5 feet or more below subgrade been broken into particles not more than 18 inches in any dimension and reoriented to break the shear plane and allow for drainage?
Roadway Construction	Earthwork	303.04(a)04	Have cisterns, septic tanks, and other structures been demolished and backfilled in accordance with Section 516, Demolition of Buildings and Clearing Parcels?
Roadway Construction	Earthwork	303.04(a)05	Have wells been closed in accordance with Section 516, Demolition of Building and Clearing Parcels?

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Section	Subsection	Spec Code Reference	CQIP Question
Roadway Construction	Earthwork	303.04(a)06	Did the Contractor schedule the excavation work so that blasting operations in the proximity of proposed concrete structures would be completed prior to initial placement of concrete?
Roadway Construction	Earthwork	303.04(a)07	Is the roadway being graded in such a manner that will provide adequate drainage?
Roadway Construction	Earthwork	303.04(a)08	In areas where rock or boulders were encountered during excavation, were they graded in accordance with specified methods for standard RU-1 undercut?
Roadway Construction	Earthwork	303.04(a)09	Did the Contractor immediately stop excavation and notify the Engineer when solid rock was not encountered at the depth indicated on the plans?
Roadway Construction	Earthwork	303.04(a)10	Have grading operations been confined to the minimum area necessary to accommodate the Contractor's equipment and work force engaged in the earth moving work?
Roadway Construction	Earthwork	303.04(C)	Is undercut excavation being removed, measured and paid for in accordance with this section and material to be disposed of and removed in accordance with Section 106.04 of the general provisions on disposal areas?
Roadway Construction	Earthwork	303.04(e)2	Has the excavation for structures been carried to foundation materials satisfactory to the Engineer?
Roadway Construction	Earthwork	303.04(e)3	During construction, if unsuitable material shown on the plan is found to be suitable, is it used in embankments in lieu of borrow material?
Roadway Construction	Earthwork	303.04(e)4	Has the unsuitable material been disposed of in accordance with Section 106.04 of the general provisions on disposal areas?
Roadway Construction	Earthwork	303.04(g)1	Has the opening to be backfilled been dewatered prior to placing any backfill material?
Roadway Construction	Earthwork	303.04(g)2	Has the backfill material been placed in horizontal layers not more than 6 inches in thickness, loose measurement, and compacted?
Roadway Construction	Earthwork	303.04(g)3	Has the backfill been placed in a manner to deter impoundment of water and facilitate existing drainage?
Roadway Construction	Earthwork	303.04(g)4	Has the required compressive strength been obtained and 4 feet of backfill cover been placed over box culverts prior to construction equipment traffic crossing them?
Roadway Construction	Earthwork	303.04(g)5	When embankment is placed on both sides of the structure, is it placed simultaneously on each side at approximately the same elevations or as specified?
Roadway Construction	Earthwork	303.04(g)6	Were the requirements of the Standard Drawings (PC-1) for cover and length of approach fills met before construction equipment was allowed to cross the pipe?
Roadway Construction	Earthwork	303.04(h)01	Is the embankment that is being placed free from muck, frozen materials, roots, sod or other deleterious materials?
Roadway Construction	Earthwork	303.04(h)02	If rock excavation is available on the project, has an 8 to 15 inch layer of such materials been placed over the lower region of embankments as specified?
Roadway Construction	Earthwork	303.04(h)03	Wherever sufficient right of way exists, were surplus materials used to widen embankments and flatten fill slopes as directed by the Engineer?
Roadway Construction	Earthwork	303.04(h)04	Has the placement of geotextile drainage fabric under rock fills been performed in accordance with the Section 414 / 245, Riprap?
Roadway Construction	Earthwork	303.04(h)05	Has the surface area directly beneath the pavement and shoulders, on which embankments of < 5' depth are to be constructed, been denuded of vegetation, scarified and compacted to a depth of 6" to the same degree as the material to be placed thereon?
Roadway Construction	Earthwork	303.04(h)06	Have embankments placed in saturated areas been constructed by end dumping successive loads in a uniformly distributed layer of a thickness capable of supporting the hauling equipment while subsequent layers are placed?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Roadway Construction	Earthwork	303.04(h)07	Is the nose, or leading edge, of the embankment being maintained in a wedge shape to facilitate mud displacement in a manner that prevents its entrapment in the embankment?
Roadway Construction	Earthwork	303.04(h)08	After the original course of embankment is placed in saturated areas, is the remainder of the embankment constructed in layers and compacted in accordance with the specifications?
Roadway Construction	Earthwork	303.04(h)09	Has the surface of the existing road been scarified to such degree that permits an ample bond between old and new materials?
Roadway Construction	Earthwork	303.04(h)10	Have hydraulic cement concrete and asphalt concrete pavements within the roadway prism been demolished in accordance with Section 508, Demolition of Pavement and Obscuring Roadway?
Roadway Construction	Earthwork	303.04(h)11	Have cement-stabilized courses underlying the demolished pavements been removed when they are 3 feet or less below subgrade elevation? [Ref.: Section 508.02(a)3 of Demolition of Pavement and Obscuring Roadway]
Roadway Construction	Earthwork	303.04(h)12	Have cement-stabilized courses that are located more than 3 feet below subgrade elevation been removed or broken into particles not more than 18 inches in any dimension, sufficiently displaced to allow for adequate drainage, and left in place?(Sect.508.02)
Roadway Construction	Earthwork	303.04(h)13	Have existing slopes been benched to receive embankment materials as specified?
Roadway Construction	Earthwork	303.04(h)14	Are embankments being constructed in uniform layers of specified thickness over the entire fill area?
Roadway Construction	Earthwork	303.04(h)15	Is the embankment being rolled to the outside of the fill and compacted at +/- 20 percent of optimum moisture content to a density of at least 95 percent of theoretical maximum density?
Roadway Construction	Earthwork	303.04(h)16	Has material with a moisture content more than 30 percent above optimum moisture been placed on a previously placed layer of fill?
Roadway Construction	Earthwork	303.04(h)17	As the compaction of each layer progresses, has continuous leveling and manipulation been performed to ensure uniform density?
Roadway Construction	Earthwork	303.04(h)18	Prior to the placement of subsequent layers, has construction equipment been routed uniformly over the entire surface of each layer or the layer scarified to its full depth in the area where the equipment was routed?
Roadway Construction	Earthwork	303.04(h)19	Are rock fills being constructed as specified?
Roadway Construction	Earthwork	303.04(h)2a	Has unsuitable material used to widen embankments and flatten fill slopes been placed in uniform layers not more than 18 inches in thickness and compacted to the extent necessary to produce stable and reasonably even slopes?
Roadway Construction	Earthwork	303.04(i1)	Has the Contractor expedited construction of embankment fills to provide the maximum time possible for settlement as specified?
Roadway Construction	Earthwork	303.04(i2)	Is all settlement plate and surcharge embankment construction performed in accordance with this section?
Roadway Construction	Earthwork	303.04(j)	Are hydraulic embankments constructed in accordance with this section?
Roadway Construction	Earthwork	303.04(k1)	Is the surplus material being disposed of in accordance with Section 106.04, Disposal Areas?
Roadway Construction	Earthwork	303.05(b)	Has the finished grade of the top of earthwork and all slopes been constructed within the specified tolerances of this section?
Roadway Construction	Subgrade & Shoulders	305.03(a1)1	Has the subgrade been scarified to a depth of 6" for a distance of 2 feet beyond the proposed edge of the pavement on each side?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Roadway Construction	Subgrade & Shoulders	305.03(a)1/2	Has all unsuitable materials been removed and replaced with suitable material that will permit compaction?
Roadway Construction	Subgrade & Shoulders	305.03(a)1/3	Has the subgrade been compacted within plus or minus 20 percent optimum moisture and to 100% density with consideration of +4 material?
Roadway Construction	Subgrade & Shoulders	305.03(b)	When solid rock occurs in cuts or the material is not suitable for subgrade or finishing purposes, is the roadbed excavated below the grade shown on the plans and backfilled in accordance with the Standard Drawings for RU-1?
Roadway Construction	Subgrade & Shoulders	305.03(C)	Did the Contractor provide effective drainage for the subgrade and maintain it in a satisfactory condition until the next course was placed?
Roadway Construction	Subgrade & Shoulders	305.03(e)1	Was the aggregate shoulder material placed in accordance with the applicable specifications governing the type material or construction being used?
Roadway Construction	Subgrade & Shoulders	305.03(e)2	Was the aggregate material compacted within plus or minus 2 percentage points of optimum moisture to the required density?
Roadway Construction	Subgrade & Shoulders	305.03(e)3	Were the stabilized and paved shoulders constructed in accordance with the applicable specifications for pavement stabilization?
Roadway Construction	Subgrade & Shoulders	305.03(e)4	If the aggregate shoulder material became over consolidated prior to final finishing, was it scarified for the approximate depth, reshaped, and recompact to conform to the specified grade and cross section?
Roadway Construction	Subgrade & Shoulders	305.03(e)5	Were the shoulders constructed simultaneously or in advance with nonrigid types of base or surface courses to prevent spreading of the base or surface materials?
Roadway Construction	Subgrade & Shoulders	305.03(e)6	When the base or surface courses are being constructed under traffic and exceed one inch in depth, is the adjacent shoulder material placed within 72 hours?
Roadway Construction	Lime Stabilization	306.03	Has manipulation not been started until the surface is free of mud and frost and the temperature is at least 40 degrees Fahrenheit?
Roadway Construction	Lime Stabilization	306.03(b)	Has the roadbed been scarified to the proper depth and width, the prepared material partially pulverized, and material retained on the 3-inch sieve removed?
Roadway Construction	Lime Stabilization	306.03(c)1	Is the application rate of lime as shown on the plans or as directed by the Engineer?
Roadway Construction	Lime Stabilization	306.03(c)2	Where quicklime is slaked on the project to produce a slurry, were measurements calculated in accordance with this section?
Roadway Construction	Lime Stabilization	306.03(c)3	Does the distributing equipment provide continuous agitation of the slurry from the mix site until applied on the roadbed?
Roadway Construction	Lime Stabilization	306.03(c)4	Does the spreading equipment uniformly distribute the lime without excessive loss?
Roadway Construction	Lime Stabilization	306.03(c)5	Is no equipment, except water trucks and mixing and spreading equipment, allowed to pass over the spreaded lime until it is mixed?
Roadway Construction	Lime Stabilization	306.03(d)	Is water added in accordance with the requirements of this section?
Roadway Construction	Lime Stabilization	306.03(e)	Has lime and water been mixed throughout the scarified material and the surface sealed by rollers in accordance with the specifications on mixing and compacting lime stabilization?
Roadway Construction	Lime Stabilization	306.03(f)	Has the material been compacted and finished in accordance with this section?
Roadway Construction	Lime Stabilization	306.03(h)	Is the material protected and cured in accordance with this section?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Roadway Construction	Hydraulic Cement Stabilization	307.02(a)	Has the cement been transported, stored and otherwise protected in accordance with Section 207.03, Hydraulic Cement Concrete?
Roadway Construction	Hydraulic Cement Stabilization	307.04(1)	Was cement stabilization performed in accordance with specified weather limitations?
Roadway Construction	Hydraulic Cement Stabilization	307.04(2)	If there is a possibility of freezing temperatures during the first 24 hours of curing, is the stabilized material protected from freezing for 7 days or covered within 4 hours after the cement stabilization is finished?
Roadway Construction	Hydraulic Cement Stabilization	307.05(a)1	Has the roadbed surface been graded to the approximate line, grade and cross section?
Roadway Construction	Hydraulic Cement Stabilization	307.05(a)2	Is the surface sufficiently firm to support construction equipment and in such condition that the required compaction can be obtained?
Roadway Construction	Hydraulic Cement Stabilization	307.05(b)1	Has the material in the roadbed to be stabilized been scarified and pulverized with any objectionable objects and material retained on the 3 inch sieve removed prior to cement application?
Roadway Construction	Hydraulic Cement Stabilization	307.05(b)2	Has the aggregate subbase, aggregate base, select material and select borrow been mixed in accordance with the requirements of this section?
Roadway Construction	Hydraulic Cement Stabilization	307.05(b)11	Has the cement been applied uniformly and thoroughly blended by equipment capable of handling and spreading the cement as required?
Roadway Construction	Hydraulic Cement Stabilization	307.05(b)12	Has the necessary water to obtain optimum moisture been added within one hour?
Roadway Construction	Hydraulic Cement Stabilization	307.05(b)21	Have the mixed materials been transported and spread as required?
Roadway Construction	Hydraulic Cement Stabilization	307.05(b)22	Has compaction of the cement-treated mixture been started within 60 minutes of the start of mixing at the plant?
Roadway Construction	Hydraulic Cement Stabilization	307.05(c)1	Has the subgrade stabilization been compacted to the density required?
Roadway Construction	Hydraulic Cement Stabilization	307.05(c)2	Has the processed section been completed and compacted to the specified density within 4 hours from the time water was added?
Roadway Construction	Hydraulic Cement Stabilization	307.05(c)3	Have the compacting and finishing operations produced a smooth, dense surface as specified?
Roadway Construction	Hydraulic Cement Stabilization	307.05(c)4	Is the subbase or base stabilization compacted in accordance with the density requirements in specifications for aggregate base course?
Roadway Construction	Hydraulic Cement Stabilization	307.05(d)	Have construction joints been installed as required?
Roadway Construction	Hydraulic Cement Stabilization	307.05(e)1	Is the density of the completed work in compliance with the tolerances as specified?
Roadway Construction	Hydraulic Cement Stabilization	307.05(e)2	Has the contractor corrected areas that are deficient in thickness by more than 1 inch?
Roadway Construction	Hydraulic Cement Stabilization	307.05(f)	Has the stabilized course been protected and maintained in a satisfactory condition until accepted?
Roadway Construction	Subbase Course	308.03(1)	Has the material been placed on the subgrade using an aggregate spreader as specified?
Roadway Construction	Subbase Course	308.03(2)[13000100]	Has the subbase course been compacted at specified moisture plus or minus 2 percentage points and to the minimum of 100% density with consideration of +4 material?

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Section	Subsection	Spec Code Reference	CQIP Question
Roadway Construction	Subbase Course	308.03(3)	If the surface of the subbase becomes uneven or distorted and sets up in that condition, was it scarified, reshaped, and recompactd?
Roadway Construction	Subbase Course	308.03(4)	If the subbase when compacted and shaped shows a deficiency in thickness or if depressions occur in the surface, did the Contractor scarify the subbase before adding additional material?
Roadway Construction	Subbase Course	308.04	Does the depth of the subbase course meet the tolerances of the plan depth as specified?
Roadway Construction	Tack Coat	310.02	Does the type and grade of liquid asphalt comply with contract requirements?
Roadway Construction	Tack Coat	310.03(1)	Does the liquid asphalt material application temperature conform to the requirements of table for Liquid Asphalt Application Temperature?
Roadway Construction	Tack Coat	310.03(2)	During the application of asphalt, has care been taken to prevent spattering adjacent items?
Roadway Construction	Tack Coat	310.03(3)	When not in use, has the distributor(s) been parked so that the spray bar or mechanism will not drip asphalt on the surface of the traveled way?
Roadway Construction	Tack Coat	310.03(4)	Has the existing surface been patched, cleaned, and rendered free from irregularities to the extent necessary to provide a reasonably smooth and uniform surface?
Roadway Construction	Tack Coat	310.03(5)	Have the vertical edges of the existing pavements that are adjacent to new pavements been cleaned to permit adhesion of the asphalt?
Roadway Construction	Tack Coat	310.03(6)	Has asphalt been applied at the specified rate per square yard?
Roadway Construction	Tack Coat	310.03(7)	Has the tack coat been applied in accordance with the same weather limitations that apply to the course being placed?
Roadway Construction	Prime Coat	311.02(b)	Do the cover materials conform to the requirements of Specifications on aggregate materials?
Roadway Construction	Prime Coat	311.03(1)	When asphalt is used as a cover for cement stabilization or as a primer for asphalt concrete, are the weather limitations specified for these particular operations met?
Roadway Construction	Prime Coat	311.03(2)	Has the surface to be primed been shaped to the required grade and section; rendered free from ruts, corrugations, segregated material, or other irregularities; and uniformly compacted?
Roadway Construction	Prime Coat	311.03(3)	Has excess asphalt been removed at the junction of spreads?
Roadway Construction	Prime Coat	311.03(4)	Has the prime been protected from traffic until the asphalt has penetrated and will not pick up?
Roadway Construction	Seal Coat	312.04(1)	Has the area to receive the application of asphalt material been cleaned of dust, mud and foreign matter?
Roadway Construction	Seal Coat	312.04(2)	Is a strip of building paper at least 3 feet in width and having a length equal to that of the spray bar of the distributor plus 1 foot being used at the beginning of each spread?
Roadway Construction	Seal Coat	312.04(3)	Have skipped areas and deficiencies been corrected?
Roadway Construction	Seal Coat	312.04(4)	Is the length of spread of asphalt regulated by the quantity of cover material loaded into trucks?
Roadway Construction	Seal Coat	312.04(5)	Is the spread of the asphalt no more than 6 inches wider than the width of the cover material being applied?
Roadway Construction	Seal Coat	312.04(6)	Is the cover material applied in full-lane widths up to 12 feet immediately following asphalt application?

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Section	Subsection	Spec Code Reference	CQIP Question
Roadway Construction	Seal Coat	312.04(7)	Does the rolling begin immediately after the cover material is applied and consist of at least three complete coverages?
Roadway Construction	Seal Coat	312.04(8)	Is the wearing surface of the seal being maintained and excess material swept off the surface by means of a rotary broom as required or directed by the Engineer?
Roadway Construction	Asphalt Stabilized Open-Graded Material	313.01	Has the asphalt stabilized open-graded coarse been placed in accordance with the specifications?
Roadway Construction	Asphalt Stabilized Open-Graded Material	313.02	Does the Asphalt Cement Stabilized Open-Graded Material conform to the requirements of this section?
Roadway Construction	Asphalt Stabilized Open-Graded Material	313.05(1)	Has the Asphalt Stabilized Open-Graded Material been placed in accordance with the weather limitations referenced in this section?
Roadway Construction	Asphalt Stabilized Open-Graded Material	313.05(2)	Is the surface upon which the Stabilized Open-Graded Material is to be placed free of standing water at the time of placement?
Roadway Construction	Asphalt Stabilized Open-Graded Material	313.05(3)	Has Asphalt Cement Stabilized Material not been cooled with water?
Roadway Construction	Asphalt Stabilized Open-Graded Material	313.05(4)	Have vibratory rollers not been used on the Asphalt Cement Stabilized Material?
Roadway Construction	Asphalt Stabilized Open-Graded Material	313.06(1)	Has the surface upon which the Open-Graded Material is to be placed been properly graded to drain away from the Material to prevent contamination from surface water in the event of rainfall?
Roadway Construction	Asphalt Stabilized Open-Graded Material	313.06(2)	Has contaminated material been promptly removed and replaced in accordance with this section?
Roadway Construction	Asphalt Stabilized Open-Graded Material	313.06(3)[14002724]	Is the finished surface of the Asphalt Stabilized Open-Graded Material uniform without varying more than .5 inch above or below the grade shown on the plans or established by the Engineer?
Roadway Construction	Asphalt Stabilized Open-Graded Material	313.06(4)[14002725]	Has Asphalt Stabilized Open-Graded Material that is higher or lower than .5 inch of the established grade been corrected in accordance with this section?
Roadway Construction	Asphalt Stabilized Open-Graded Material	313.06(5)	Has the Stabilized Open-Graded Material not been used for a haul road or storage area?
Roadway Construction	Asphalt Stabilized Open-Graded Material	313.06(6)[14002715]	Was the equipment used for construction of the Asphalt Stabilized Open-Graded Coarse approved in accordance with 315.03?
Roadway Construction	Asphalt Stabilized Open-Graded Material	313.06(7)	Has Asphalt Cement Stabilized Open-Graded Material been placed in 1 layer with compaction beginning when internal mat temperature is approximately 150 to 200 degrees F?
Roadway Construction	Asphalt Stabilized Open-Graded Material	313.06(8)	Has the Asphalt Cement Open Graded Material been compacted in accordance with this section?
Roadway Construction	Penetration Surface Courses	314.03	Is the Contractor complying with the weather limitations for application of various surface treatments?
Roadway Construction	Penetration Surface Courses	314.04	Do the spreaders, distributors and rollers conform to the requirements for equipment in the specifications for surface treatments?
Roadway Construction	Asphalt Concrete Pavement	315.03(a)1	Do the trucks hauling asphalt have tight, clean, smooth metal bodies?
Roadway Construction	Asphalt Concrete Pavement	315.03(a)2	Are the trucks hauling asphalt equipped with the proper cover to protect the mixture?
Roadway Construction	Asphalt Concrete Pavement	315.03(b)	Does the asphalt paver produce a finished surface as required?

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Section	Subsection	Spec Code Reference	CQIP Question
Roadway Construction	Asphalt Concrete Pavement	315.03(C)	Do the rollers leave the surface in an acceptable condition?
Roadway Construction	Asphalt Concrete Pavement	315.04(1)	Were the weather and surface conditions during placement of the asphalt mixture as required?
Roadway Construction	Asphalt Concrete Pavement	315.04(2)	Are the minimum laydown temperatures as specified?
Roadway Construction	Asphalt Concrete Pavement	315.04(3)	Are intermediate and base courses exceeding the application rate given in Table III-2 placed as specified?
Roadway Construction	Asphalt Concrete Pavement	315.05(b)1	Has the surface of existing pavement or base that is irregular been corrected as required?
Roadway Construction	Asphalt Concrete Pavement	315.05(b)2	Have longitudinal and transverse cracks in hydraulic cement concrete been sealed prior to placement of asphalt?
Roadway Construction	Asphalt Concrete Pavement	315.05(b)3	Have all contact surfaces and cold joints of asphalt been painted as required prior to asphalt placement?
Roadway Construction	Asphalt Concrete Pavement	315.05(b)11	Has a tack or prime coat of asphalt been applied as specified?
Roadway Construction	Asphalt Concrete Pavement	315.05(b)12	Have asphalt cutbacks or emulsions been applied and allowed to form a tacky residue prior to the application of the paving mixture?
Roadway Construction	Asphalt Concrete Pavement	315.05(b)13	Have tack or prime coats which have been damaged or contaminated been repaired prior to placing the paving mixture?
Roadway Construction	Asphalt Concrete Pavement	315.05(b)2	Have irregularities in the existing surface that would result in a compacted thickness of over 3 inches been repaired as specified?
Roadway Construction	Asphalt Concrete Pavement	315.05(c)1	Has a continuous line been placed and maintained to control pavement width and alignment?
Roadway Construction	Asphalt Concrete Pavement	315.05(c)2	Has the longitudinal joint of each layer been offset approximately 6 inches or as specified?
Roadway Construction	Asphalt Concrete Pavement	315.05(c)3	Has the certified Asphalt Concrete Paving Technician inspected and straightedged each layer as required prior to compaction where more than 100 tons of material placed of a single type of material?
Roadway Construction	Asphalt Concrete Pavement	315.05(c)4	Are the specified rates and depth adhered to when placing asphalt concrete base, intermediate and surface course?
Roadway Construction	Asphalt Concrete Pavement	315.05(d)1	Does rolling begin immediately after placement and continue until the mixture is thoroughly and uniformly compacted?
Roadway Construction	Asphalt Concrete Pavement	315.05(d)2	Are there sufficient rollers to obtain the required compaction of the mixture?
Roadway Construction	Asphalt Concrete Pavement	315.05(d)3	Has the rolling of the mixture been accomplished as required by the specifications?
Roadway Construction	Asphalt Concrete Pavement	315.05(d)4	In areas not accessible to rollers, has the material been compacted as required?
Roadway Construction	Asphalt Concrete Pavement	315.05(d)5	Are the edges of the pavement surface true curves or tangents as required?
Roadway Construction	Asphalt Concrete Pavement	315.05(d)6	Are the surfaces of the compacted courses protected until the material has cooled sufficiently to support traffic without marring?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Roadway Construction	Asphalt Concrete Pavement	315.05(e)1	Does the density of the compacted course meet the requirements as specified?
Roadway Construction	Asphalt Concrete Pavement	315.05(e)2	Did the Contractor furnish and operate a nuclear density gage, which had been calibrated within the previous 12 months by an approved calibration service, in accordance with the requirements of this section?
Roadway Construction	Asphalt Concrete Pavement	315.05(e)1a	Has a control strip been constructed for each roadway, shoulder course, and each lift of each course as required?
Roadway Construction	Asphalt Concrete Pavement	315.05(e)1b	Have the required number of density tests been taken by the contractor on specified courses?
Roadway Construction	Asphalt Concrete Pavement	315.05(f)1	Has a transverse joint been cut on the previous run as specified?
Roadway Construction	Asphalt Concrete Pavement	315.05(f)2	Has a brush coat of asphalt been applied to transverse joints as directed?
Roadway Construction	Asphalt Concrete Pavement	315.05(f)3	Have joints adjacent to curbs, gutters, or adjoining pavement been set up to a height sufficient to receive full compression under the rollers?
Roadway Construction	Asphalt Concrete Pavement	315.06	Has the Contractor cut the testing samples and replaced the material as required?
Roadway Construction	Asphalt Concrete Pavement	315.07(a)2	Has the Contractor taken corrective actions to fix surface areas out of tolerance prior to determining the pavement thickness?
Roadway Construction	Asphalt Concrete Pavement	315.07(c)	Does the thickness of the base course meet the requirements?
Roadway Construction	Hydraulic Cement Concrete Pavement	217.08(b)	Has the contractor provided at his expense a storage chamber for the temporary storage of the department's concrete cylinders in accordance with this section?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.02(a)	Is the concrete sufficiently cohesive to prevent detrimental sloughing of the edges when the slip form method is used?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.03	Has the contractor provided sufficient equipment and tools to place and finish the concrete pavement as required?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.03(a)(d)	Do the forms and bulkheads meet the requirements of this sections?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.03(g)	Do the vibrators being used meet the requirements of this section?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(a)	Does the surface of the concrete base course meet the requirements when tested under a 10 foot straightedge and also have a heavy broomed texture?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(c)1	Have "leave out" joints been installed when required and as detailed on the plans?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(c)2	Are the side forms of the slip form paver designed so that tie bars can be placed as specified?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(d)1	Have the forms been pinned sufficiently and locked in place to hold line and grade as required?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(d)2	Prior to concrete placement, have the forms been cleaned and oiled?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(d)3	Has the alignment and grade of the forms been checked and corrected as required by the contractor?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(e)1	Is the concrete placed and finished in accordance with this section?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(e)2	Has the concrete in an adjoining lane attained the strength requirements before mechanical equipment is operated on it?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(g)	If random or uncontrolled cracking occurs, have concrete joints or slabs been repaired as specified?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(g1)	Have the deformed tie bars and longitudinal joints been installed as specified?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(g1a)	Are approved devices used to form the joints and the groove sealed with joint material as required?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(g1b)	Has the material for strip insert joints been approved and installed in accordance with requirements?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(g1c)	Are saw cut joints in accordance with the requirements of this section?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(g2)	Are transverse expansion joints properly formed and sealed with filler placed at the proper grade and elevation?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(g3)	Have transverse contraction joints been installed as specified?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(g4ab)	Have transverse construction joints been constructed as required in this sections?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(g5)1	Are the plain dowels held in place as required?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(g5)2	Has the free end of each dowel been treated as specified?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(g6)	Have isolation joints been formed for structures in the pavement as required?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(h1)	Has concrete been mechanically vibrated to prevent voids and segregation from locations specified?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(h4)	Does the riding surface have a gritty texture and has it been grooved as required?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(j1)	Has the surface and sides of the pavement been sprayed uniformly with curing compound which was continuously and effectively agitated during application?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(j2)	Is the PE film being used for curing the type specified for the time of the year?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(j3)	Has the contractor maintained the surface temperature of the concrete as specified?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(j4)	Has the curing material been placed as early as possible in hot, low humidity or windy weather?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(k)	Is the paved riding surface in compliance with the requirements of this section?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(l)1	Are the forms left in place for the required time before removal?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(l)2	Have major honeycombed areas been removed and replaced?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(m)	Have all joints been thoroughly cleaned and sealed prior to opening the pavement to traffic?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(m1)	Have preformed seals been installed by machines that do not damage the seal and checked in accordance with this section?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(m3)	Have rounded or beveled joints had the seal or sealant installed as specified?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(m4)	Is the joint for hot-poured, or silicone sealer sealed only if the air temperature is at least 40 degrees F.?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(m5)	Has the hot-poured sealer material been stirred during heating and prevented from bonding to the filler as specified?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(m7)	Has the sealer been applied and tooled to form a recess as specified?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.04(n)1	Has the contractor protected the pavement from the effects of rain and all traffic as specified?
Roadway Construction	Hydraulic Cement Concrete Pavement	316.05	Does the pavement meet the thickness tolerance?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-BSC.I	Is the number of applications of liquid asphalt and cover material in accordance with Type B, C, or D Blotted Seal as shown on the plans?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-BSC.II	Are the liquid asphalt, cover aggregate, and fine aggregate in conformance with the material requirements of Section II of the Special Provision?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-BSC.III.1	Are the application rates for the asphalt and aggregate material in accordance with those shown on the plans or altered as directed by the Engineer?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-BSC.III.2	During application, was the temperature of the liquid asphalt material maintained between 160 and 175 degrees F?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-BSC.IV.1	Is each application of liquid asphalt material immediately followed by an application of aggregate?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-BSC.IV.2	Is the aggregate immediately rolled by one pass of a self-propelled steel wheel roller which weighs between 6 and 8 tons if tandem type or between 8 and 10 tons if three wheel type?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-BSC.IV.3	Is the blot coat applied with a self-propelled aggregate spreader of an approved design and immediately rolled one pass with a self-propelled roller?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-EASS.II.A.	Does the emulsified asphalt conform to the requirements of Section 210 of the specifications?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-EASS.II.E.	Did the Contractor submit for the Engineer's approval a mix design for each type of slurry on Form TL-127?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-EASS.II.F.	Did the Contractor place a test strip for approval by the Engineer prior to beginning the work?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-EASS.II.G.	At the discretion of the Engineer, did the Contractor perform a minimum of two consistency tests for each day's production of the approved mix?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-EASS.II.H. / LMET.V.H/ST	Did the Contractor have a certified Slurry Surfacing or Surface Treatment Technician on the job site to control the work?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-EASS.IV.B	Is the surface upon which the slurry seal is applied thoroughly cleaned of all loose material, vegetation, silt spots, and other objectionable material by either brooming or the use of compressed air?

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Section	Subsection	Spec Code Reference	CQIP Question
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-EASS.IV.C(1) / LMET.V.G	Has EASS / LMET been placed in accordance with temperature requirements stated herein.
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-EASS.IV.C(2)	Is the slurry uniformly placed on the road in full lane widths up to and including 12 feet?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-EASS.IV.C(3)	Was the road opened to traffic prior to the slurry seal being cured to the extent that it will no longer be damaged by traffic?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-EASS.IV.D / LMET.V.C	Is the rate of application in accordance with this section?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-LMET.III.A	Does the quick set latex modified cationic emulsion conform to the requirements of Section 210 of the specifications?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-LMET.III.A	Did the Contractor design the mixture in a Department approved lab for the Engineer's approval and the job mix formula met requirements?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-LMET.V.B(1)	Is the surface upon which the latex modified emulsion is applied thoroughly cleaned of all loose materials, vegetation, dirt, mud, and other objectionable materials?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-LMET.V.B(2)	Prior to paving, was asphalt tack coat of the type specified applied at the rate specified in the contract?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-LMET.V.D(1)	Has the mixture been spread to fill minor cracks and shallow potholes to leave a high-skid resistant surface that is uniform in texture and appearance?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-LMET.V.D(2)	Are longitudinal joints overlapped by more than four inches, except on irregular roadway widths when approved by the Engineer?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-LMET.V.D(3)	Are pavement edges reasonably straight and tapered to tie neatly at gutters, entrances, and connections?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-ST.III(a)1	Has the prime coat been permitted to cure prior to the next application of asphalt?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-ST.III(a)2	Is the prime coat and cover material being applied in accordance with sections on prime and seal coat?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-ST.III(a)3	During the period between the application of the prime coat and seal coat, is the prime coat maintained and kept in repair as specified?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-ST.III(b)1	Is the seal coat being applied in accordance with the section on Seal Coat?
Roadway Construction	Surface Treatment / Slurry Seal Project Special Provisions	SP-ST.III(b)2	When cutback asphalt is used for the first seal coat, is the seal coat maintained and permitted to cure for at least 48 hours?
Bridges and Structures	Structure Excavation	401.01	Is the foundation excavation prepared in accordance with the specifications and approved by the Engineer?
Bridges and Structures	Structure Excavation	401.03	Has the excavated material been deposited away from the stream or protected area to prevent siltation?
Bridges and Structures	Structure Excavation	401.03(a)1	Has excavation been performed inside caissons, cribs, cofferdams, or sheet piles?
Bridges and Structures	Structure Excavation	401.03(a)2	Prior to beginning work, did the contractor submit a plan including location, description, number, and dimensions of temporary structures or other obstructions that will constrict stream flow?
Bridges and Structures	Structure Excavation	401.03(a)3	Was material deposited in the stream area because of the Contractor's operations removed, and the stream area freed from obstructions caused by the Contractor's operations?

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Section	Subsection	Spec Code Reference	CQIP Question
Bridges and Structures	Structure Excavation	401.03(b)1	When requested, was the foundation explored by rod soundings or drillings to determine the adequacy of the foundations to support the structure?
Bridges and Structures	Structure Excavation	401.03(b)2	Has the Engineer been consulted when explorations reveal that foundations or subfoundations are inadequate for the structure, or are not within the limits of permissible variation from the bottom of footing elevations?
Bridges and Structures	Structure Excavation	401.03(c)2	Was the foundation cleaned of all loose material before concrete was placed?
Bridges and Structures	Structure Excavation	401.03(c)3	Were approach embankments placed and compacted to top of footing elevation prior to excavation for and placement of footings installed above original ground?
Bridges and Structures	Structure Excavation	401.03(c)4	If the footing is subject to movement because of pressure from overlying or adjacent fill, was the fill compacted in place before the footing was placed?
Bridges and Structures	Structure Excavation	401.03(c)5	When the material on which a foundation is to be placed using piles, is declared unsatisfactory by the engineer, was the excavation undercut and backfilled in accordance with this section?
Bridges and Structures	Structure Excavation	401.03(e)	Were cofferdams installed according to this section and/or other applicable requirements?
Bridges and Structures	Structure Excavation	401.03(f)	Were restrictions on pumping enforced?
Bridges and Structures	Structure Excavation	401.03(i)2	Are the excavated spaces backfilled in uniform lifts and compacted as required by this section - 6" loose measurement?
Bridges and Structures	Structure Excavation	401.03(i)3	Have the concrete strength requirements been met prior to form removal and subsequent backfill?
Bridges and Structures	Bearing Piles	403.03	Is the contractor handling, storing, and protecting the piles in accordance with this section?
Bridges and Structures	Bearing Piles	403.03(d)2	Is welding of splices, points, or point reinforcement performed in accordance with the section on Fabrication Procedures for Steel Structures except for noted certification requirements?
Bridges and Structures	Bearing Piles	403.05(1)	Was the contractor's order list for precast concrete or timber piles submitted to the Engineer for approval prior to ordering the piles?
Bridges and Structures	Bearing Piles	403.05(2)	Were driving test, dynamic pile test ,loading test and refined wave equation analyses completed for each substructure element prior to submission of an order lists?
Bridges and Structures	Bearing Piles	403.06(d)1	Has the capability of the hammer to properly drive piles been verified from test pile records?
Bridges and Structures	Bearing Piles	403.06(d)2	Prior to driving piles, has the Contractor furnished the Engineer for approval the completed Pile and Driving Equipment Data Form for each proposed hammer and pile type combination? (Ref.: Special Provisions)
Bridges and Structures	Bearing Piles	403.06(d)3	At each driving test location, where different subsurface conditions exist, did the Contractor furnish a Wave Equation Analysis of pile driveability performed by a Professional Engineer experienced in such work? (Ref.: Special Provisions)
Bridges and Structures	Bearing Piles	403.06(d)4	If the wave Equation Analysis indicates the possibility of excessive stresses, did the Contractor submit to the Engineer proposed corrective measures for approval? (Ref.: Special Provisions)
Bridges and Structures	Bearing Piles	403.06(f)3	Is the center of gravity of the piles within tolerance, or if not, approved corrections made?
Bridges and Structures	Bearing Piles	403.06(g)	Were all piles driven to the required bearing capacity?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(a)2	Are devices for supporting forms of any type field welded to steel beams or girders?

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Section	Subsection	Spec Code Reference	CQIP Question
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(a)3	Are the forms mortar tight and of sufficient rigidity to prevent distortion and set and maintained true to line and grade?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(a)4	Were forms treated with an approved oil or form coating material or thoroughly wetted with water immediately before concrete placement?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(a1b)1	Have corrugated metal bridge deck forms been installed in accordance with reviewed fabrication and erection plans?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(a1b)2	Does welding conform to the requirements of the section on Fabrication Procedures for Steel Structures for fillet welds except that 1/8 inch fillet welds will be permitted?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(a1b)3	Are form supports placed in direct contact with the stringer or floor beam flanges by hangers or clips?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(a2)	If the Contractor elects to use prestressed deck panel forms, have the redesign details been submitted to the Engineer for acceptance no less than sixty (60) days prior to ordering materials for the work?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(a2b)1	Are precast bridge deck panels adequately supported at panel ends with edges tightly butted together?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(a2b)2	Prior to placement of deck surface concrete on precast deck panels, was all foreign material detrimental to bonding removed by sandblasting, waterblasting, or other approved methods?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(a2b)3	Were deck panel top surfaces thoroughly and continuously water soaked for at least one (1) hour prior to placement of deck surface concrete?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(b)	Did the Contractor have a Professional Engineer inspect and provide required certification that the falsework assembly conforms to the approved working drawings?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(c)2	When individual concrete placements exceed twenty-five (25) cubic yards, were the rates in accordance with this section?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(c)3	Was water and debris removed before concrete was placed?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(c)4	Was the concrete placed in its final position in the forms within the time specified in the Materials Section under Hydraulic Cement Concrete?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(c)5	Are specified measures taken to avoid dropping concrete more than five (5) feet where required?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(c)6	Is the concrete placement regulated so that the pressures caused by the fresh concrete does not exceed those used in the design of the forms?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(c)7	Is the concrete being vibrated in a manner to avoid segregation and in accordance with the section on concrete placement and consolidation?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(c)8	Is the concrete placed in continuous layers not more than 12 inches in thickness?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(c)9	Is the work not stopped or temporarily discontinued within 18 inches below the top of any face unless at the underside of copings having thicknesses of not more than 18 inches?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(e)	Was pumping of concrete authorized by the Engineer and accomplished through use of non-aluminum conduit systems?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(g)1	Are construction and expansion joints installed as shown on the plans or as approved by the Engineer?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(g)2	Is asphalt applied to construction joints against which earth fill is placed?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(h)	Are construction joints bonded as specified in the section on joints?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(j)	Are the forms and form ties left undisturbed in accordance with Table IV-2 and this section?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(k)1	Does curing begin before the sheen disappears from fresh concrete or immediately upon removal of formwork?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(k)2	Was curing continuously maintained through the use of a curing agent or medium for not less than seven (7) days?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(k)3	Is PE film used for curing of the proper type and secured to prevent wind drifts from drying the concrete?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(k)4	Has the curing compound been uniformly sprayed over the surface?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(k)5	When the atmospheric temperature is below 40 degrees F, does the method of curing and protecting concrete provide adequate moisture and maintain the temperature as required in this section?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(l)1	Is concrete not placed against surfaces whose temperature is below 40 degrees F.?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.03(l)2	Did the Contractor perform evaporation rate testing during bridge deck placements and, if necessary, use protective measures to prevent shrinkage cracking?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.04(1)	Was the screed approved by the Engineer prior to beginning of deck placement?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.04(2)	Are the screeds of required length and supported in accordance with this section?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.04(3)	Was an approved positive means of permitting access to the surface of the bridge provided for operations requiring access to the deck surface after passage of the screed?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.04(4)	Was the deck surface tested with a 10 foot straightedge in accordance with this section?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.05	Have joint openings been accurately formed with proper widths, parallel joint faces and free of spalling areas?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.06(1)	Have the bridge seat bearing areas been finished within the specified tolerances?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.06(2)	Are the bearing areas that are to receive elastomeric pads finished to the required roughness in accordance with the section on bearing devices?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.07	Have the surfaces of the concrete received a finish that will satisfy the requirements of the section on finishing concrete surfaces?
Bridges and Structures	Hydraulic Cement Concrete Operations	404.07(a)	If the surface cannot be repaired immediately following removal of forms or before the concrete surface has become dry, was the surface kept wet for 1 to 3 hours prior to application of mortar?
Bridges and Structures	Prestressed Concrete	405.05(e)	Prior to placing concrete on composite units, was the dirt, laitance, and loose aggregate removed from the surface by means of a wire brush or chipping so as to leave the coarse aggregate slightly exposed or roughened to improve bonding?
Bridges and Structures	Prestressed Concrete	405.05(g)	If so designated on the plans, was waterproofing provided in accordance with the section on Waterproofing?
Bridges and Structures	Prestressed Concrete	405.05(h)03	Were precast piles not driven until at least 7 days after the date cast and minimum design compressive strength was attained?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Bridges and Structures	Prestressed Concrete	405.05(h)04	Are prestressed units supported and lifted in accordance with the plans and other requirements?
Bridges and Structures	Prestressed Concrete	405.05(h)05	Were all recesses shown on the plans filled with mortar conforming to the section on Hydraulic Cement Mortar and Grout in one continuous operation for each span?
Bridges and Structures	Prestressed Concrete	405.05(h)06	In the event the Contractor elects to cast the struts & diaphragms separately from the slab, was the concrete cured to meet the requirements in the section on removing formwork & superimposed elements before deck slab concrete was placed?
Bridges and Structures	Prestressed Concrete	405.05(h)07	Are bearing surfaces parallel to the bottom surface of the unit or as specified on the plans?
Bridges and Structures	Prestressed Concrete	405.05(h)08	Have attached bearing assemblies been fabricated so that their bottom bearing surfaces lie in truly horizontal planes when erected?
Bridges and Structures	Prestressed Concrete	405.05(h)09	Has epoxy or grit been applied to smooth bearing areas to create the desired texture?
Bridges and Structures	Prestressed Concrete	405.05(h)10	Are ends of beams, at ends of spans, and diaphragms vertical?
Bridges and Structures	Prestressed Concrete	405.06	Do the precast prestressed concrete I-beams, T-beams, box beams, flat slabs, and prestressed deck panels and piling meet the tolerances of the section?
Bridges and Structures	Reinforcing Steel	406.03(b)1	Has the reinforcing steel been stored above ground, well drained, and protected against deformation?
Bridges and Structures	Reinforcing Steel	406.03(b)2	When placed into work, is the reinforcement steel free from dirt, paint, oil, or other foreign matter?
Bridges and Structures	Reinforcing Steel	406.03(b)3	Upon delivery, was epoxy coated reinforcing steel covered with an opaque covering?
Bridges and Structures	Reinforcing Steel	406.03(b)4	Was epoxy coated reinforcing steel which was partially embedded or placed in formwork and not covered with concrete covered after 30 days exposure to sunlight?
Bridges and Structures	Reinforcing Steel	406.03(d)02	Were reinforcing bars tied according to the section on placing and fastening reinforcing steel?
Bridges and Structures	Reinforcing Steel	406.03(d)03	Were provisions made to accurately maintain the position of steel reinforcement during the placing and setting of concrete?
Bridges and Structures	Reinforcing Steel	406.03(d)04	Were epoxy or plastic coated wires used to tie epoxy steel?
Bridges and Structures	Reinforcing Steel	406.03(d)05	Was all visible damage to epoxy coatings repaired in accordance with the Materials Section on Reinforcing Steel to be Epoxy Coated?
Bridges and Structures	Reinforcing Steel	406.03(d)06	Was a minimum of 2-1/2 inches clear distance maintained between the face of the concrete and the reinforcing steel in superstructures unless otherwise noted in the section on placing and fastening reinforcing steel?
Bridges and Structures	Reinforcing Steel	406.03(d)07	Was a minimum of 3 inches cover maintained in substructures unless otherwise noted in this section?
Bridges and Structures	Reinforcing Steel	406.03(d)08	Have all bars been placed so that the final cast concrete cover is maintained within a tolerance of 0 to +1/2 inch?
Bridges and Structures	Reinforcing Steel	406.03(d)09	Where anchor bolts interfere with reinforcing steel, has the position of the steel been adjusted without cutting to permit the anchor bolts to be placed in the proper location?
Bridges and Structures	Reinforcing Steel	406.03(d)10	Is reinforcing steel in bridge deck slabs and slab spans supported by standard CRSI metal or precast concrete bar supports spaced no more than 4 feet apart transversely or longitudinally?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Bridges and Structures	Reinforcing Steel	406.03(d)11	In reinforced concrete sections other than bridge slabs, is the reinforcing steel supported and spaced in accordance with this section?
Bridges and Structures	Reinforcing Steel	406.03(d)12	Was the minimum clear distance between bars at least 1-1/2 times the specified maximum size of coarse aggregate but not less than 1-1/2 inches?
Bridges and Structures	Reinforcing Steel	406.03(e)1	Was written approval secured from the Engineer for bar splices not shown on the plans?
Bridges and Structures	Reinforcing Steel	406.03(e)2	Are bars lapped at least 30 bar diameters to make the splice?
Bridges and Structures	Reinforcing Steel	406.03(e)3	Was welding of reinforcing steel done only if specified on the plans and in accordance with the requirements of Section 407.04(a)?
Bridges and Structures	Reinforcing Steel	406.03(e)4	Were laps for sheets of welded wire fabric or bar mat reinforcement at least one mesh in width?
Bridges and Structures	Steel Structures	407.03(1)	Has the Contractor submitted working drawings for review by the Engineer of all structural steel, bearing assemblies, and anchorage devices?
Bridges and Structures	Steel Structures	407.03(2)	Do the working drawings specifically identify each piece other than ASTM A709 Grade 36 steel?
Bridges and Structures	Steel Structures	407.04(1)	Does the welding show quality workmanship and are welds of the required size.
Bridges and Structures	Steel Structures	407.04(3)	Do the welding electrodes used in structural welding conform to the approved list?
Bridges and Structures	Steel Structures	407.04(a)1	Has welding only been performed in locations as noted on the plans or as approved by the Engineer?
Bridges and Structures	Steel Structures	407.04(a)3	Have welds that do not conform to the specifications been repaired or removed and replaced or the entire piece rejected?
Bridges and Structures	Steel Structures	407.04(a)4	Has a copy of the welder's certificate of qualification and a certificate stating that the welder has not exceeded any period of 3 months without performing satisfactory welding in the required process been submitted to the Department?
Bridges and Structures	Steel Structures	407.04(d)1	Are the bolt holes no more than 1/16 inch larger than the nominal bolt size?
Bridges and Structures	Steel Structures	407.04(d)2	Have the burrs on the outside of the bolt holes been removed?
Bridges and Structures	Steel Structures	407.04(e)	Is field flame cutting of structural steel units not done?
Bridges and Structures	Steel Structures	407.04(j)1	Are the structural steel stud shear connectors the size and spacing as shown on the plans or denoted in the specifications?
Bridges and Structures	Steel Structures	407.04(j)2	Do the shear connectors project 2 inches above the bottom of the deck slab and 3 inches below the plane of the top of the deck slab?
Bridges and Structures	Steel Structures	407.04(j)3	When prestressed deck panels for cast-in-place concrete deck slabs are used, has the edge distance of studs been adjusted to provide the necessary support areas for ends of the deck panels?
Bridges and Structures	Steel Structures	407.04(l)	When prestressed deck panels for cast-in-place concrete deck slabs are used, has the edge distance of studs been adjusted to provide the necessary support areas for ends of the deck panels?
Bridges and Structures	Steel Structures	407.05(1)	Have materials and units been stored at least 4 inches above ground on platforms, skids, or other supports?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Bridges and Structures	Steel Structures	407.05(2)	Has the structural steel been stored in such manner that it will not be overstressed, become deformed, or otherwise damaged?
Bridges and Structures	Steel Structures	407.05(3)	Is the structural steel kept free from dirt, grease, or other foreign material, protected from corrosion, and properly drained?
Bridges and Structures	Steel Structures	407.05(b)1	Has each unit been identified with an erection mark?
Bridges and Structures	Steel Structures	407.05(b)2	Has the Contractor furnished the materials order shipping statement and erection diagrams?
Bridges and Structures	Steel Structures	407.06	Prior to beginning erection work, did the Contractor fully inform and obtain approval from the Engineer as to the method to be followed and the amount and character of equipment to be used?
Bridges and Structures	Steel Structures	407.06(a)1	Were bolt hole misalignments of no more than 1/8 inch corrected by reaming where allowed by the Engineer?
Bridges and Structures	Steel Structures	407.06(a)2	Was damaged or misfitting steel reported to the Engineer?
Bridges and Structures	Steel Structures	407.06(b)3)2	Were bolt tensioning devices and complete bolt assemblies tested with an approved tension indicating device at the start of construction and on a periodic basis as determined by the Engineer?
Bridges and Structures	Steel Structures	407.06(c)	Were all field connections made with 7/8 inch diameter high-strength bolts where specified?
Bridges and Structures	Steel Structures	407.06(c)1)1	Prior to installation, did the Contractor perform a field rotational capacity test on two (2) nut, bolt, and washer assemblies for each diameter and length in accordance with the materials section on Structural Steel?
Bridges and Structures	Steel Structures	407.06(c)1)2	Did bolts, nuts, and washers conform to the requirements of the Materials Section on Structural Steel, each being from one manufacturer on any one structure, unless approved by the Engineer?
Bridges and Structures	Steel Structures	407.06(c)2)1	Do bolted parts fit solidly together when assembled?
Bridges and Structures	Steel Structures	407.06(c)2)2	Before assembly, were all connecting surfaces, including areas adjacent to the washers, free of scale except for tight mill scale?
Bridges and Structures	Steel Structures	407.06(c)2)3	When required by the plans, were surfaces for bolted splices in main units fabricated of weathering steel and joint surfaces for other connections blast cleaned in accordance with the section of Protective Coating of Metal by Preparing Surfaces?
Bridges and Structures	Steel Structures	407.06(c)3)1	On whichever element is being turned during tightening, was a hardened washer installed under the bolt or nut head?
Bridges and Structures	Steel Structures	407.06(c)3)2	Is the length of all bolts such that the point of the bolt will be flush with or outside the face of the nut when completely installed without overtensioning the bolt?
Bridges and Structures	Steel Structures	407.06(c)3)3	Are fasteners tightened by the turn-of-nut method, or by the use of a direct tension indicator using a load indicator washer?
Bridges and Structures	Steel Structures	407.06(c)3a)1	Has the device used to calibrate power and torque wrenches been checked for accuracy within the previous 12 months?
Bridges and Structures	Steel Structures	407.06(c)3a)2	Was the torque indication corresponding to the calibrating tension noted and used when manual torque wrenches are used?
Bridges and Structures	Steel Structures	407.06(c)3b)	Were bolts brought to a snug condition, given a suitable match mark, and then tightened additionally by the amount of nut rotation specified in Table IV-4 when the turn-of-nut method is used?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Bridges and Structures	Steel Structures	407.06(c3c)1	Is the gap 0.015 inch or less between the direct tension indicator and the bolt head or nut when no washer is used with the indicator?
Bridges and Structures	Steel Structures	407.06(c3c)2	Is the gap 0.010 inch or less between the indicator and washer if a hardened flat washer is incorporated?
Bridges and Structures	Steel Structures	407.06(e)1	Are beam ends, bearing stiffeners, and webs of girders and rolled structural shapes, and other beam sections vertical?
Bridges and Structures	Steel Structures	407.06(e)2	Are channel flanges turned to the downgrade side where practicable?
Bridges and Structures	Steel Structures	407.06(e)3	Have steel plates for use with flexible bearing pads been beveled to meet the grade requirements?
Bridges and Structures	Steel Structures	407.06(j)	Have any depressed areas where water can be trapped been completely sealed with polyurethane or other approved sealant prior to painting?
Bridges and Structures	Bearing Devices & Anchors	408.03(a10)1	Were the bearing assemblies shipped and stored as units with the components of each completed bearing clearly identified?
Bridges and Structures	Bearing Devices & Anchors	408.03(a10)2	Was each completed TFE bearing marked to indicate its location in each structure?
Bridges and Structures	Bearing Devices & Anchors	408.03(a11)1	Were concrete bearing seats prepared at the correct elevation and bush-hammered or dressed to the required flatness tolerances?
Bridges and Structures	Bearing Devices & Anchors	408.03(a11)2	Was erection of structural steel for spans contiguous to each TFE bearing substantially completed prior to loading the bearing?
Bridges and Structures	Bearing Devices & Anchors	408.03(a11)3	Was field welding of bearing plates performed under no-load conditions using temperature-indicating crayons to control maximum temperatures?
Bridges and Structures	Bearing Devices & Anchors	408.03(a11)4	Were the PTFE and polished stainless steel surfaces protected from blast abrasives and paint application during construction?
Bridges and Structures	Bearing Devices & Anchors	408.03(a12)	Did the Contractor submit shop drawings for the Engineer's review prior to fabrication of TFE bearings?
Bridges and Structures	Bearing Devices & Anchors	408.03(a9)	Were the TFE bearings tested and certified in accordance with this section?
Bridges and Structures	Bearing Devices & Anchors	408.03(e)	Prior to assembling in place, was the steel surface on which self-lubricating bearing plates will bear cleaned of all coatings and thoroughly lubricated with the anti-oxidant lubricant furnished by the manufacturer?
Bridges and Structures	Bearing Devices & Anchors	408.03(g)1	Do the bearing plates or pads have uniform bearing over the entire area?
Bridges and Structures	Bearing Devices & Anchors	408.03(g)2	Were provisions made to keep the plates or pads in the correct position during erection of beams or placement of concrete?
Bridges and Structures	Bearing Devices & Anchors	408.03(g)3	Were masonry surfaces finished with a gritty texture prior to placing elastomeric pads and other flexible bearing materials?
Bridges and Structures	Bearing Devices & Anchors	408.03(g)4	Were metal bearing plates or bottoms of prefabricated beams that are to bear on elastomeric pads coated with an epoxy conforming to materials section for epoxy resin systems & then surfaced with a silicon carbide or aluminum oxide grit?
Bridges and Structures	Bearing Devices & Anchors	408.03(g)5	Was the bridge seat bearing area that is to receive metal plates and the three layers of duck placed on it thoroughly swabbed with No. 1 paint?
Bridges and Structures	Bearing Devices & Anchors	408.03(g)6	Are alternate bedding methods used only when indicated on the plans or with written approval of the Engineer?

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Section	Subsection	Spec Code Reference	CQIP Question
Bridges and Structures	Bearing Devices & Anchors	408.03(g)7	Were the rockers or other expansion devices centered and aligned so that the vertical axis will be vertical at 60 degrees F?
Bridges and Structures	Bearing Devices & Anchors	408.03(h)1	Have anchor bolts, nuts, and washers used with steel beams or girders been painted or galvanized?
Bridges and Structures	Bearing Devices & Anchors	408.03(h)2	Have anchor bolts, nuts, washers, bearing assemblies, and insert plates been galvanized when intended for use with concrete superstructure units?
Bridges and Structures	Bearing Devices & Anchors	408.03(h)3	Were the anchor bolts positioned to provide the required fit with bearing plates?
Bridges and Structures	Bearing Devices & Anchors	408.03(h)4	Were the anchors cast into the masonry and positioned by means of templates or other methods that will hold them securely in the correct position until concrete has set?
Bridges and Structures	Bearing Devices & Anchors	408.03(h)5	Did the method of setting allow for proper finishing of concrete bearing areas?
Bridges and Structures	Bearing Devices & Anchors	408.03(h)6	Was the full dead load applied and falsework removed before anchor assembly angles were attached to concrete beams?
Bridges and Structures	Railings and Parapets	410.03(b)1	Have metal railings been fabricated and installed in accordance with this section
Bridges and Structures	Railings and Parapets	410.03(b)2	Are metal railings or metal parapets grounded in accordance with this section?
Bridges and Structures	Railings and Parapets	410.03(c)1	Had the span become self-supporting before concrete railing or parapet was placed?
Bridges and Structures	Railings and Parapets	410.03(c)2	Have concrete railings, bridge median barriers, and parapets been given a Class I finish?
Bridges and Structures	Railings and Parapets	410.03(c)3	Were forms smooth, tight-fitting, rigidly held to line and grade, and removed without damage to the concrete?
Bridges and Structures	Railings and Parapets	410.03(c)4	Have all moldings, panel work, and bevel strips been constructed with neatly mitered joints and corners neatly finished and defect-free?
Bridges and Structures	Railings and Parapets	410.03(c)5	Was the reinforcing steel correctly spaced, supported, and in accordance with the section on reinforcing steel?
Bridges and Structures	Railings and Parapets	410.03(c)6	Have the expansion joints been constructed so as to permit freedom of movement?
Bridges and Structures	Railings and Parapets	410.03(c)7	Are concrete parapets and median barriers constructed within the allowable tolerances as required in this section?
Bridges and Structures	Railings and Parapets	410.03(c)8	In the event the Contractor elects to construct parapet, railing, or median barrier by the extrusion method, is it done in accordance with the requirements of this section?
Bridges and Structures	Protective Coating of Metal in Structures	411.03(a)	Has the contractor submitted proof of certification in accordance with this section prior to commencing coating application, as needed?
Bridges and Structures	Protective Coating of Metal in Structures	411.03(b)	Has the contractor provided evidence of certification to perform coating removal from Type B structures in accordance with this section?
Bridges and Structures	Protective Coating of Metal in Structures	411.03(C)	Has the contractor provided certification by a Professional Engineer, if required, in accordance with this section?
Bridges and Structures	Protective Coating of Metal in Structures	411.04(a)1	Were all surfaces prepared in accordance with this section prior to coating application?
Bridges and Structures	Protective Coating of Metal in Structures	411.04(a)2	Has the contractor collected and contained all solid and liquid waste during surface preparation in accordance with this section?

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Section	Subsection	Spec Code Reference	CQIP Question
Bridges and Structures	Protective Coating of Metal in Structures	411.04(b)02	Was the coating application not done when weather conditions are as noted in this section unless recommended by the manufacturer and approved by the Engineer?
Bridges and Structures	Protective Coating of Metal in Structures	411.04(b)03	Does the application of the coating result in a tight film of specified thickness that is well bonded to metal or underlying coatings, including crevices and corners?
Bridges and Structures	Protective Coating of Metal in Structures	411.04(b)04	Is the application free from laps, streaks, sags, runs, overspray, dry spray, shadow through, skips, excessive film build-up, mud cracking, misses, and other defects?
Bridges and Structures	Protective Coating of Metal in Structures	411.04(b)05	Were all deficient, impaired, or damaged areas of each coat repaired using material from the Department's approved systems list?
Bridges and Structures	Protective Coating of Metal in Structures	411.04(b)06	Were preceding coats dried or cured and approved by the Engineer prior to application of subsequent coats?
Bridges and Structures	Protective Coating of Metal in Structures	411.04(b)07	Were coatings applied in accordance with the requirements of Table IV-6?
Bridges and Structures	Protective Coating of Metal in Structures	411.04(b)08	Were the coatings mixed in accordance with the manufacturer's recommendations?
Bridges and Structures	Protective Coating of Metal in Structures	411.04(b)09	Were zinc-rich coatings applied from containers equipped with a mechanical agitator kept in motion throughout the application period unless otherwise specified by the manufacturer?
Bridges and Structures	Protective Coating of Metal in Structures	411.04(b)10	Was thinning of the coatings performed in accordance with this section?
Bridges and Structures	Protective Coating of Metal in Structures	411.04(d)1	Has the contractor maintained a daily record of coating removal or application as required in this section?
Bridges and Structures	Protective Coating of Metal in Structures	411.04(d)3	Has the contractor stenciled a legend as required at a location approved by the Engineer?
Bridges and Structures	Protective Coating of Metal in Structures	411.05(a)	When located within 5 feet of a deck joint on existing structures, were all uncoated weathering steel items including the entire outside surface of fascia girders and beams, thoroughly cleaned no less than 6 inches outside the area to be coated, and coated with System B?
Bridges and Structures	Protective Coating of Metal in Structures	411.05(b)	Were all remaining coatings in existing structures prepared and coated in accordance with the requirements of this section?
Bridges and Structures	Protective Coating of Metal in Structures	411.06(a)	When located within 5` of a deck joint on new structures, were all uncoated weathering steel items including the entire outside surface of fascia girders and beams, thoroughly cleaned no less than 6 inches outside the coated area and painted with System B?
Bridges and Structures	Protective Coating of Metal in Structures	411.06(b)1	Was the field application of coatings performed only after concrete work was completed and forms removed?
Bridges and Structures	Protective Coating of Metal in Structures	411.06(b)2[25001302]	Were surfaces to be field coated cleaned according to Method 7 as specified?
Bridges and Structures	Protective Coating of Metal in Structures	411.06(b)3	Were all uncoated surfaces and deficient or damaged areas cleaned in accordance with requirements of the coating manufacturer and primed with a touch up primer from System B?
Bridges and Structures	Protective Coating of Metal in Structures	411.06(b)4	After installation and approval by the Engineer, were galvanized bolts or bolts protected with approved coatings cleaned and coated in accordance with this section?
Bridges and Structures	Protective Coating of Metal in Structures	411.06(b)5	Were surfaces that will be inaccessible after assembly and erection coated prior to assembly?
Bridges and Structures	Protective Coating of Metal in Structures	411.07(a)	Were existing uncoated galvanized surfaces cleaned in accordance with the requirements of this section the coated with a coating system from the Department's approved list?
Bridges and Structures	Protective Coating of Metal in Structures	411.07(b)	Were new galvanized surfaces cleaned in accordance with recommendations of the coating manufacturer and coated with a coating system from the Department's approved list?

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Section	Subsection	Spec Code Reference	CQIP Question
Bridges and Structures	Protective Coating of Metal in Structures	411.08(a)1	Prior to beginning painting operations, did the Contractor submit to the Engineer and have reviewed for completeness a detailed site specific environmental plan conforming to the requirements of this section?
Bridges and Structures	Protective Coating of Metal in Structures	411.08(b)	Has the contractor performed air monitoring and submitted analysis to the Engineer as specified in this section?
Bridges and Structures	Protective Coating of Metal in Structures	411.08(c)1	Was material from Type A & B structures stored and disposed of according to the requirements of this section?
Bridges and Structures	Protective Coating of Metal in Structures	411.08(d)1,2)	Has the contractor certified that all non-hazardous solid and liquid waste materials from Type A and B structures have been disposed of in accordance with this section?
Bridges and Structures	Protective Coating of Metal in Structures	411.08(d)3)	Has the contractor disposed of material from a Type B structure classified as hazardous and executed proper documents as required by the section?
Bridges and Structures	Protective Coating of Metal in Structures	411.08(e)1	During the startup and removal portions of paint removal operations, is the Contractor's Certified Industrial Hygienist (CIH), SSPC Supervisor (as identified in the Environmental Plan) present on site?
Bridges and Structures	Protective Coating of Metal in Structures	411.08(e)2	Has the contractor provided certification as specified in this section within one week of completing lead based paint activities?
Bridges and Structures	Protective Coating of Metal in Structures	411.09(a)1	Did the Contractor submit to the Engineer a detailed site-specific worker health and safety plan approved by a CIH or SSPC QP-2 Supervisor/Competent Person conforming to the requirements of this section at least 3 weeks prior to commencing operations?
Bridges and Structures	Protective Coating of Metal in Structures	411.09(b)	Has the monitoring of the contractor's operations been performed for worker health and safety and environmental plans in accordance with this section?
Bridges and Structures	Protective Coating of Metal in Structures	411.09(C)	Has the CIH or SSPC QP-2 Supervisor/Competent Person provided written certification at the completion of the project as required in this section?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(01)	Was cleaning performed by sandblasting, waterblasting, or other approved methods in order to remove concrete or other materials detrimental to achieving a bond?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(02)	Were dimensions of existing structures pertinent to construction field-checked by the Contractor?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(03)	Were plan details not adaptable to existing structures modified with approval of the Engineer?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(04)	Were areas to be repaired outlined with saw cuts to a depth of at least 1 inch or that which will clear the top of reinforcing steel?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(05)	Has all the loose and unsound material been removed using hand tools or pneumatic hammers weighing 30 pounds or less and worked at an angle of 45 to 60 degrees to the plane of the concrete surface being removed?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(06)	Was the surface sounded with a masonry hammer to determine relative concrete strength?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(07)	Have exposed reinforcing bars been cleaned, with sandblasting not done on epoxy coated steel?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(08)	Have reinforcing bars that have lost 1/4 or more of their original cross-sectional area been repaired in accordance with this section?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(09)	Was dust and debris removed by blowing with compressed air or by hosing with water?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(10)	Were dowels or expansion bolts provided when joining new and existing concrete?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(11)	Was concrete work done in accordance with the section 404 on Hydraulic Cement Concrete Operations except that surfaces were finished to match the existing adjacent surfaces?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(a5)	Were epoxy mortar patches exceeding 8 feet in a longitudinal direction and intended for use as a finished riding surface tested according to the section 404.04 Bridge Deck Construction?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(a6)	Have structural or dormant cracks been V-grooved to a depth of approximately 1/2 inch, blown clean, and filled with neat epoxy?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(a7)1	Was superstructure surface repair performed in accordance with Type B patching?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(a7)2	When concrete surface repairs are made, was a cover of at least 2 inches maintained over all reinforcing steel, expansion bolts, and welded wire fabric, except in transition areas, at patches less than 2" in depth over existing concrete?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(b)1	Has the deck repair concrete attained 93% of the minimum design compressive strength before overlays are placed?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(b)2	Was vehicular traffic not allowed on the bridge until the overlay obtained a compressive strength of 3,500 psi?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(b)3	Have expansion joints and dams been maintained through the overlay by use of bulkheads equal in thickness to the width of the joint and installed to the required grade and profile?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(b)4	Was the end of the overlay placement protected from drying during delays of 1 hour or less?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(b1)1	Within 24 hours immediately preceding the beginning of latex or silica fume concrete overlay, was the entire surface to be overlaid thoroughly cleaned?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(b1)2	Was the surface to be overlaid continuously and thoroughly water soaked for at least 1 hour prior to overlay placement?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(b1)3	Is overlay placed only when the ambient air temperature is 50 degrees F and rising?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(b1)4	Prior to deck placement, did the Contractor perform a yield test for each mixing unit according to the requirements of this section?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(b1)5	Was a thorough, even coating of latex concrete or silica fume brushed onto the prepared surface prior to overlay placement?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(b1)6	Were measures taken to reduce the rate of evaporation if the rate exceeds 0.05 lb/sq ft/hr during placement?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(b1)7	Was the latex concrete surface cured through prompt application of wet burlap, covered with polyethylene, and kept continuously moist for the initial 48 hour curing period, followed by 48 hours of air curing?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(b1)8	Were silica fume concrete surfaces cured through prompt application of wet burlap kept continuously moist for the initial 72 hour curing period, followed immediately by the application of curing compound?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(C)	Were the methods used to remove asphalt wearing surfaces from bridge decks and approach slabs of such nature as to promote bonding with subsequent treatments?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(d)1	Was substructure surface repair performed in accordance with Type B patching?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(d)2	Was concrete removed to a depth as specified on the plans or as directed by the Engineer?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(e)1	Did the Contractor submit a method of jacking and blocking beams for seat repair for the Engineer's approval?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(e)2	Was written approval obtained from the Engineer prior to subjecting structures supported on jacks to traffic loadings?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(f1)1	Was the minimum thickness of Class A, Class B, or shotcrete containing silica fume as specified for cover over reinforcing steel?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(f1)2	Did the Contractor submit for the Engineer's approval shotcrete mixture proportions and performance test data for each class of shotcrete based on the materials to be used in the project?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(f2)1	Was shotcrete delivery equipment approved by the Engineer prior to commencement of the work?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(f2)2	Was gunning of test panels required for approval of inexperienced nozzlemen or supervisors?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(f3)	Were existing concrete, earth, rock, or wooden surfaces prepared as specified?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(f4)	Did temperature requirements and application methods conform to the requirements of this section?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(f5)	Was initial and final finishing performed as specified?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(f6)	Was the shotcrete fogged, if necessary, and moist cured for at least 7 days or cured using a curing compound?
Bridges and Structures	Widen, Repair, & Reconstruct Exist. Structures	412.03(f7)	Were test panels for compressive strength and for preconstruction testing, if required, prepared as specified?
Bridges and Structures	Dismantling & Removing Structures	413.02(a)	Is the substructure removed down to stream bed elevation or at least 2' below natural ground or finished grade of an embankment which is to remain in place, including any part or piling that will interfere with new construction?
Bridges and Structures	Dismantling & Removing Structures	413.02(a2)1	Has the Contractor submitted for the Engineer's approval a method for dismantling structures to be retained by the Department that will preserve the existing condition of materials?
Bridges and Structures	Dismantling & Removing Structures	413.02(a2)2	Have units been match marked for re-erection according to an approved diagram provided by the Department?
Bridges and Structures	Dismantling & Removing Structures	413.02(b)1	Is concrete not removed by blasting or other methods which could damage any portion of the structure that will remain in place?
Bridges and Structures	Dismantling & Removing Structures	413.02(b)2	Do pneumatic hammers weigh no more than 90 pounds for widening work or 30 pounds for deck repair work?
Bridges and Structures	Dismantling & Removing Structures	413.02(b)3	Where permitted, are tractor-mounted hammers being used in accordance with this section?
Bridges and Structures	Dismantling & Removing Structures	413.02(b)4	Have all disturbed areas been uniformly graded to natural ground contours that will facilitate drainage and prevent impoundment of water?
Bridges and Structures	Dismantling & Removing Structures	413.02(b)5	Has the contractor received written approval from the Engineer to use hydraulically actuated, jaw type, concrete crushers for parapet removal?
Bridges and Structures	Dismantling & Removing Structures	413.02(b)6	Has the removal of concrete parapets on prestressed concrete slab spans or prestressed concrete box beams been performed in accordance with this section?
Bridges and Structures	Dismantling & Removing Structures	413.02(c)1	When demolition operations involve a Type B structure (as defined in Section 411), has an environmental plan been submitted in accordance with Section 411.08?
Bridges and Structures	Dismantling & Removing Structures	413.02(c)12	Has contractor complied with this section when contractor is not required to have an environmental plan?
Bridges and Structures	Dismantling & Removing Structures	413.02(c)2	Has the contractor submitted for review a worker health and safety plan in accordance with this section?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Bridges and Structures	RIPRAP	414.03(a)	Does dry riprap conform to the weight and grading requirements of this section for Class I, II, III, or AI?
Bridges and Structures	RIPRAP	414.03(a)02	Was dry riprap placed on slopes finished to a reasonably smooth and compact surface within a tolerance of 6 inches of the surface lines shown on the plans?
Bridges and Structures	RIPRAP	414.03(a)03	Was riprap bedding uniformly spread to produce a reasonably even surface free of mounds and depressions?
Bridges and Structures	RIPRAP	414.03(a)04	Has the entire perimeter of geotextile bedding material been turned down and buried at least 9 inches for anchorage?
Bridges and Structures	RIPRAP	414.03(a)05	Do adjacent strips of material overlap at least 18 inches and run up and down the slope?
Bridges and Structures	RIPRAP	414.03(a)06	Is damaged material repaired or replaced with a patch of the same material overlapping the damaged area by at least 18 inches?
Bridges and Structures	RIPRAP	414.03(a)07	Was displaced material repositioned at the Contractor's expense?
Bridges and Structures	RIPRAP	414.03(a)08	Was riprap placed on the embankment no later than 15 days after completion of bedding?
Bridges and Structures	RIPRAP	414.03(a)09	Has riprap been placed in one operation in a manner that will produce a reasonably well graded mass of rock with a minimum practicable percentage of voids?
Bridges and Structures	RIPRAP	414.03(a)10	Was the prohibition on dropping riprap onto fabric adhered to?
Bridges and Structures	RIPRAP	414.03(a)11	Does the finished riprap conform to the tolerance of +/-1/4 of the thickness of the maximum size stone, with the extremes of this tolerance not continuous over an area of more than 200 square feet?
Bridges and Structures	RIPRAP	414.03(a)12	Has the riprap been keyed into natural ground in an approved manner to a depth equal to the bed thickness or to solid rock?
Bridges and Structures	RIPRAP	414.03(a)13	Does the Contractor maintain riprap until accepted and repair displaced areas at his expense?
Bridges and Structures	RIPRAP	414.03(b)1	Does dumped riprap conform to the weight and grading requirements of this section, for Type I or II?
Bridges and Structures	RIPRAP	414.03(b)2	Was dumped riprap placed in the same manner described in this section for dry riprap?
Bridges and Structures	RIPRAP	414.03(c)1	Is Class II dry riprap used for mortared riprap?
Bridges and Structures	RIPRAP	414.03(c)2	Is 50% of the mass composed of broad, flat stones laid with the flat surface uppermost and parallel to the slope?
Bridges and Structures	RIPRAP	414.03(c)3	Are larger stones placed near the base of the slope?
Bridges and Structures	RIPRAP	414.03(c)4	Are spaces between larger stones filled with stones of suitable size, leaving the surface reasonably smooth and tight?
Bridges and Structures	RIPRAP	414.03(c)5	Is the stone laid so that the maximum variation from a true plane is not more than 1-1/4 inch in 4 feet?
Bridges and Structures	RIPRAP	414.03(c)6	Is fresh mortar added to the voids between previously positioned larger stones and smaller stones then shoved into position, forcing excess mortar to the surface?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Bridges and Structures	RIPRAP	414.03(c)7	Is excess mortar uniformly spread to fill surface voids completely?
Bridges and Structures	RIPRAP	414.03(d)1	Does grout consists of 1 part hydraulic cement and 3 parts sand thoroughly mixed with water to produce a thick, creamy consistency?
Bridges and Structures	RIPRAP	414.03(d)2	Are stones of the same sizes and placed in the same manner as specified for dry riprap, Class I?
Bridges and Structures	RIPRAP	414.03(d)3	Was care taken to prevent earth or sand from filling spaces between stones?
Bridges and Structures	RIPRAP	414.03(d)4	Have all spaces between stones been filled with grout and the surface swept with a stiff broom?
Bridges and Structures	RIPRAP	414.03(d)5	Is the prohibition on grouting during freezing weather adhered to?
Bridges and Structures	RIPRAP	414.03(d)6	In hot, dry weather, is the work protected from sunlight and kept moist for 3 days by the use of saturated burlap?
Bridges and Structures	RIPRAP	414.03(e)	Does erosion control stone for culvert outlet protection conform to the weight requirements of this section?
Bridges and Structures	RIPRAP	414.03(e)1	Was Class I dry riprap placed in a manner to present an irregular or rough surface with a depth no less than two feet?
Bridges and Structures	RIPRAP	414.03(e)2	Was Class II dry riprap placed in a manner to present an irregular or rough surface with a total depth not less than three feet?
Bridges and Structures	RIPRAP	414.03(f)	Does erosion control riprap rock not exceed 15 inches in its greatest dimension and contain a sufficient percentage of smaller rocks to provide a reasonably dense mass with a thickness of at least 8 inches?
Bridges and Structures	RIPRAP	414.03(g)1	Has Concrete Riprap in Bags (wet mixture) been performed in accordance with this section?
Bridges and Structures	RIPRAP	414.03(g)2	Has Concrete Riprap in Bags (dry mixture) been performed in accordance with this section?
Bridges and Structures	RIPRAP	414.03(i)1	Does the riprap consist of Class A3 concrete that is cast in place, 6 inches in thickness, and of a consistency that permits placement without using top forms?
Bridges and Structures	RIPRAP	414.03(i)2	Is the welded wire fabric No. 6 gage wire, spaced 6 inches center to center?
Bridges and Structures	RIPRAP	414.03(i)2	Was the slope approved by the Engineer prior to placement of slab riprap?
Bridges and Structures	RIPRAP	414.03(i)2	Is the embankment slope reasonably smooth and dense with a trench dug at the toe of the slope to accommodate the toe of the slab?
Bridges and Structures	RIPRAP	414.03(i)3	Has the concrete been cured in accordance with curing concrete in section [316.04(j)] on hydraulic cement concrete pavement?
Bridges and Structures	RIPRAP	414.03(i)3	Is welded wire fabric positioned at the center of the slab, run continuously throughout the slab, and lapped approximately 6 inches at the edges of each sheet of fabric?
Bridges and Structures	RIPRAP	414.03(i)3	Is the berm portion sloped approximately 12:1 to drain away from the abutment?
Bridges and Structures	RIPRAP	414.03(i)3	Has the joint between the slab and abutment been sealed to a depth of at least 1/2 inch with hot-poured joint sealer?

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Section	Subsection	Spec Code Reference	CQIP Question
Bridges and Structures	RIPRAP	414.03(i3)5	Does the toe of the slab extend to an elevation of at least 3 feet below the toe of the fill?
Bridges and Structures	RIPRAP	414.03(i3)6	Was the lower edge of the slab increased approximately 6 inches in thickness by tapering on the underside to its nominal thickness 3 feet up the slope from the lower edge of the slab?
Bridges and Structures	RIPRAP	414.03(i3a)	Is the slab placed in alternate blocks approximately 4 feet square when using the block method?
Bridges and Structures	RIPRAP	414.03(i3b)1	Is the slab placed in alternate, continuous strips with joints and dimensions conforming to the requirements of this section, when using the strip method?
Bridges and Structures	RIPRAP	414.03(i3b)2	Does the surface not vary more than 1/2 inch under a 10 foot straightedge?
Bridges and Structures	Concrete Slope Protection	415.03(a)1	Was subgrade for concrete block or slab slope protection constructed at required distance below slope surface with soft sections and unsuitable material replaced, and compacted to smooth, uniform surface?
Bridges and Structures	Concrete Slope Protection	415.03(a)2	Was the foundation course spread to a depth of 2 inches and treated at the recommended rate with an approved highly insoluble soil sterilent?
Bridges and Structures	Concrete Slope Protection	415.03(a)3	Are blocks laid with continuous joints extending horizontally and staggered joints extending up or down the slope?
Bridges and Structures	Concrete Slope Protection	415.03(a)4	Have joints between blocks been filled with mortar?
Bridges and Structures	Concrete Slope Protection	415.03(a)5	Has cast in place edging been placed as specified in this section?
Bridges and Structures	Concrete Slope Protection	415.03(b)1	Was the cast in place slab at least 4 inches in thickness and placed in accordance with this section?
Bridges and Structures	Concrete Slope Protection	415.03(b)2	Were approved splash blocks connecting with the paved ditch provided under downspouts draining onto the slope protection?
Bridges and Structures	Concrete Slope Protection	415.03(b)1	Have concrete portions, consisting of a concrete paved ditch and concrete strip approximately 3 feet in width along with stone placed to a depth of 7 to 9 inches, been furnished for combination concrete slab and stone slope protection?
Bridges and Structures	Concrete Slope Protection	415.03(b)2	Was the subgrade prepared in accordance with the section on Concrete Slab Riprap for Stream Crossings and treated with an approved herbicide?
Bridges and Structures	Concrete Slope Protection	415.03(b)3	Does stone used for combination concrete slab and stone slope protection conform to the requirements of the materials section on Crusher Run Aggregate and project no more than 3 inches above the concrete?
Bridges and Structures	Damp-Proofing	417.01	Is the work being performed in accordance with the plans and specifications?
Bridges and Structures	Damp-Proofing	417.02	Do materials used for damp-proofing conform to the requirements of the materials section on damp-proofing and waterproofing?
Bridges and Structures	Damp-Proofing	417.03(a)	Is the surface being damp-proofed cleaned of all loose foreign material and dry?
Bridges and Structures	Damp-Proofing	417.03(b)1	Has the cleaned surface been brush or spray painted with at least 2 coats of primer using at least 1/8 gallon per square yard of surface per coat?
Bridges and Structures	Damp-Proofing	417.03(b)2	Has an application of at least 1/10 gallon per square yard of asphalt seal coat been applied to the primed surface by brush?
Bridges and Structures	Damp-Proofing	417.03(b)3	Was care taken to confine the asphalt to be damp-proofed and not dripped or spread on any other parts of the structure?

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Section	Subsection	Spec Code Reference	CQIP Question
Bridges and Structures	Bridge Conduit & Lighting Systems	419.01	Is the appearance and operation of the bridge conduit and lighting system as required by the plans and specifications?
Bridges and Structures	Bridge Conduit & Lighting Systems	419.02	Have the materials for this work been tested or certified as specified in the materials section for electrical and signal components?
Bridges and Structures	Bridge Conduit & Lighting Systems	419.03(1)	Did the Contractor advise the Engineer at least 48 hours prior to any anticipated de-energizing of the electrical systems?
Bridges and Structures	Bridge Conduit & Lighting Systems	419.03(2)	Were conduits, fittings, and electrical items installed in accordance with the general section on Traffic Control Devices?
Bridges and Structures	Preformed Elastomeric Joint Sealer	420.01(1)	Has the joint sealer been installed in reasonably close conformity with the specifications?
Bridges and Structures	Preformed Elastomeric Joint Sealer	420.02	Have all materials been tested for conformity with Section 212, Joint Materials?
Bridges and Structures	Preformed Elastomeric Joint Sealer	420.03(a)1	Is the joint formed to provide the nominal opening at the specified temperature as shown on the plans?
Bridges and Structures	Preformed Elastomeric Joint Sealer	420.03(a)2	Are the sides of the joint parallel to each other?
Bridges and Structures	Preformed Elastomeric Joint Sealer	420.03(a)3	Are edges of concrete adjacent to the joint rounded to a radius of not more than 1/4 inch?
Bridges and Structures	Preformed Elastomeric Joint Sealer	420.03(a)4	Was the joint thoroughly cleaned to remove all foreign material prior to sealer placement?
Bridges and Structures	Preformed Elastomeric Joint Sealer	420.03(b)1	Has the sealer been installed by tools that will not damage the material during installation?
Bridges and Structures	Preformed Elastomeric Joint Sealer	420.03(b)2	Was the prohibition on stretching the sealer during installation adhered to?
Bridges and Structures	Preformed Elastomeric Joint Sealer	420.03(b)3	Was the prohibition on splices in joint sealers less than 50 feet in length adhered to?
Bridges and Structures	Preformed Elastomeric Joint Sealer	420.03(b)4	Were splices for lengths greater than 50 feet limited to 1 splice for each additional 50 feet?
Bridges and Structures	Preformed Elastomeric Joint Sealer	420.03(b)5	Were splices for lengths greater than 15 meters limited to 1 splice for each additional 15 meters?
Bridges and Structures	Preformed Elastomeric Joint Sealer	420.03(b)6	Are joint sealers installed so that the top surface of the sealer is 3/8 (+/- 1/16) inch below the surface of the adjacent roadway?
Bridges and Structures	Elastomeric Expansion Dams	421.01	Have the expansion dams been installed in conformity with the specifications and with the lines, elevations and locations shown on the plans or as established by the Engineer?
Bridges and Structures	Elastomeric Expansion Dams	421.02	Have all materials been tested for conformity with Section 212, Joint Materials?
Bridges and Structures	Elastomeric Expansion Dams	421.03(1)	Has the Contractor submitted working drawings for review by the Engineer?
Bridges and Structures	Elastomeric Expansion Dams	421.03(2)	Does the Contractor provide a factory-trained representative on the job site prior to and during the initial installation of the expansion dam?
Bridges and Structures	Elastomeric Expansion Dams	421.03(3)	Is the opening between the rigid portions of the expansion dam at roadway level no more than 3-1/2 inches at maximum opening?
Bridges and Structures	Elastomeric Expansion Dams	421.03(4)	Does the dam seal the structure to prevent water and other contaminants from seeping onto the substructure?

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Section	Subsection	Spec Code Reference	CQIP Question
Bridges and Structures	Elastomeric Expansion Dams	421.03(5)	Does the dam have a continuous elastomeric membrane?
Bridges and Structures	Elastomeric Expansion Dams	421.03(6)	Do field-vulcanized joints conform to plan details?
Bridges and Structures	Elastomeric Expansion Dams	421.03(7)	Are the dams cast in place with top surfaces parallel to the bridge deck?
Bridges and Structures	Elastomeric Expansion Dams	421.03(8)	Was concrete placed in such manner as to prevent formation of air pockets in the concrete?
Bridges and Structures	Elastomeric Expansion Dams	421.03(9)	Was final sealing accomplished as soon as possible after installation?
Incidental Construction	Underdrains	232.02(j1)	Is nonperforated pipe used for combination underdrain outlets?
Incidental Construction	Underdrains	501.01	Are underdrain trenches excavated to the dimensions and grade required by the standard drawings, plans, or the Engineer?
Incidental Construction	Underdrains	501.02(a)	When polyethylene (PE) corrugated pipe is used for underdrains or outlet pipe, was the pipe smooth wall, non-perforated at the outlet? [Ref.Section 232.02(j)]
Incidental Construction	Underdrains	501.03(b)	Has Geotextile drainage fabric been installed as designated and has torn or punctured material been replaced with same type of fabric?
Incidental Construction	Underdrains	501.03(c)1[38000200]	Are the perforations on perforated pipe placed facing downward on a bed of aggregate material and pipe sections joined with appropriate couplings?
Incidental Construction	Underdrains	501.03(c)2	If semiround pipe is used, is the rounded side placed down?
Incidental Construction	Underdrains	501.03(c)3	Are the upgrade ends of pipe, except for combination underdrains, closed with suitable plugs?
Incidental Construction	Underdrains	501.03(c)4	Where an underdrain connects with a manhole or catch basin, was a suitable connection made through the wall of the manhole or catch basin?
Incidental Construction	Underdrains	501.03(c)5	After the pipe installation has been approved by the Engineer, was aggregate backfill placed and compacted?
Incidental Construction	Underdrains	501.03(c)6	Was care taken not to displace pipe or the covering at open joints during backfill?
Incidental Construction	Underdrains	501.03(d)	Was the backfill material for combination underdrains placed in 6" lifts and thoroughly compacted?
Incidental Construction	Underdrains	501.03(e)	Are Inspection ports installed on the (Prefabricated Geocomposite Pavement Edgedrain) PGPE at a rate of two per mile of installed PGPE or a minimum of four per project?
Incidental Construction	Incidental Concrete Items	502.01	Are all dimensions and reinforcing steel in accordance with the applicable standards for various incidental concrete items?
Incidental Construction	Incidental Concrete Items	502.03(01)	Does the foundation for incidental concrete items conform to density requirements with all unsuitable material removed and replaced prior to placement of hydraulic cement concrete items?
Incidental Construction	Incidental Concrete Items	502.03(02)	Is the subgrade moist when concrete is placed?
Incidental Construction	Incidental Concrete Items	502.03(03)	Has the concrete been cured and protected in accordance with Section 316.04(j) of Hydraulic Cement Concrete Pavement?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Incidental Construction	Incidental Concrete Items	502.03(a)01	Are forms free of warp and braced to prevent deflection during concrete placement?
Incidental Construction	Incidental Concrete Items	502.03(a)02	Are radial forms sufficiently flexible or otherwise designed to provide a smooth, uniform, curved surface of the required radius?
Incidental Construction	Incidental Concrete Items	502.03(a)03	Are face forms removed as soon as concrete has attained sufficient set and exposed surfaces then smoothed with a suitable finishing tool?
Incidental Construction	Incidental Concrete Items	502.03(a)04	Are transverse joints for crack control in hydraulic cement concrete items provided at the specified locations and times?
Incidental Construction	Incidental Concrete Items	502.03(a)05	Are sections of concrete items the minimum length required?
Incidental Construction	Incidental Concrete Items	502.03(a)06	Are crack control joints formed by the methods indicated?
Incidental Construction	Incidental Concrete Items	502.03(a)07	Are expansion joints placed at 100'± intervals, all radii points on concrete entrances and curb returns, and 6 to 10 feet from drop inlets?
Incidental Construction	Incidental Concrete Items	502.03(a)08	Is concrete sufficiently consolidated to produce a closed surface and edges rounded to a 1/4-inch radius?
Incidental Construction	Incidental Concrete Items	502.03(a)09	Are exposed surfaces immediately adjacent to the roadway, except concrete median barrier, given a light broom finish?
Incidental Construction	Incidental Concrete Items	502.03(a)10	Are concrete median barriers given a Class 1 finish in accordance with Section 404.07(a) of Hydraulic Cement Concrete Operations?
Incidental Construction	Incidental Concrete Items	502.03(a)11	Are paved ditches and flumes given a coarse or roughened texture?
Incidental Construction	Incidental Concrete Items	502.03(b)1	Does slipforming equipment produce equal or better than that of fixed form construction?
Incidental Construction	Incidental Concrete Items	502.03(b)2	Is concrete mixed at least 30 revolutions when water is added during slipforming?
Incidental Construction	Incidental Concrete Items	502.03(b)3	Has contractor placed 1 1/2" thick expansion joint material against each fixed object prior to placement of slipforming concrete on median barriers?
Incidental Construction	Incidental Concrete Items	502.03(b)4	During slipforming is reinforcing steel tied 100% at all intersections to prevent movement of cage during operations?
Incidental Construction	Incidental Concrete Items	502.03(c)1	When mountable curb or combination mountable curb and gutter is placed, are adjacent curbs modified to provide a mountable shape?
Incidental Construction	Incidental Concrete Items	502.03(c)1	Is integral curb placed within 45 minutes of slab placement?
Incidental Construction	Incidental Concrete Items	502.03(c)1	Is the surface of the slab on which integral curb is to be placed roughened or doweled to improve bonding?
Incidental Construction	Incidental Concrete Items	502.03(c)1	Are irregularities in the face & tops of curbs no more than 3/8" per 10' with vertical alignment smooth enough to ensure complete drainage?
Incidental Construction	Incidental Concrete Items	502.03(c)1	Has the contractor anchored curb & gutter to existing pavement by means of smooth dowels or approved adhesive?
Incidental Construction	Incidental Concrete Items	502.03(c)1	Has the curb, gutter, and combination curb and gutter been backfilled and the material compacted within 3 to 7 days?
Incidental Construction	Incidental Concrete Items	502.03(c)2	Are asphalt concrete curbs placed on a clean dry surface which has been tacked at a rate between 0.05 and 0.15 gallons/square yard prior to asphalt placement?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Incidental Construction	Incidental Concrete Items	502.03(c2)2	Does the contractor prevent the spread of bituminous material outside the curb area?
Incidental Construction	Incidental Concrete Items	502.03(c2)3	Is asphalt concrete curb placed by machine except when short sections are required?
Incidental Construction	Incidental Concrete Items	502.03(c2)4	Is bituminous concrete paved ditch placed in a manner which seals the surface sufficiently to provide a smooth, uniform, and dense texture?
Incidental Construction	Incidental Concrete Items	502.03(c4)1	Are concrete median barriers constructed to within a +/- 1/2 inch tolerance for overall depth and width, +/- 1/4 inch for width of the upper portion, and +/- 1/4 inch per 10 feet for horizontal alignment?
Incidental Construction	Incidental Concrete Items	502.03(c4)2	Are concrete median barriers backfilled in accordance with this section?
Incidental Construction	Incidental Concrete Items	502.03(c4)3	Are delineators installed on median barriers in accordance with Section 702.04(b) of Delineators?
Incidental Construction	Sidewalks, Steps, & Handrails	504.02(d)	Does preformed joint filler conform to the materials section on Joint Materials and is it approximately 1/2 inch thick?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(a)1	Is the foundation for sidewalk shaped and compacted to a firm, even surface with unsuitable material and debris removed?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(a)2	Are adjacent strips of geotextile fabric installed as required?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(a)3	Are forms straight, free from warp, and strong enough to withstand concrete pressures?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(a)4	Are forms cleaned and oiled prior to concrete placement?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(a1)01	Is concrete screeded and spaded to prevent honeycombing and the surface floated free of irregularities?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(a1)02	Are outside edges of the slab and joints edged with a 1/4 inch radius edging tool?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(a1)03	Are transverse joints constructed at intervals of ~ 100 feet, except for closures, and filled with 1/2" joint filler extending to 1/4" below the top surface?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(a1)04	Are crack control joints placed as required in this section?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(a1)05	Are slabs at least 3 feet in length?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(a1)06	Are construction joints formed around all appurtenances, except drop inlets where expansion joints are formed between 6 and 10 feet away, and 1/4 inch preformed joint filler placed as required?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(a1)07	When sidewalk is constructed in conjunction with an adjacent curb, or to an existing curb, do expansion joints coincide?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(a1)08	Is the sidewalk scored in a block approximately eight inches wider than the maximum dimension of light poles, poles, or fire hydrants?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(a1)09	Is preformed joint filler securely fastened to prevent displacement?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(a1)10	Is the fresh concrete sidewalk cured and protected in accordance with Section 316.04(j) of Hydraulic Cement Concrete Pavement?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(a1)11	Is the sidewalk protected from traffic until the time or strength requirements are met?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(a1)12	Was the foundation thoroughly moistened immediately prior to concrete placement?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(a2)1	When specified, are layers of No. 8 aggregate, not exceeding four inches of depth, placed and compacted as base for asphalt concrete sidewalk or bike path?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(a2)2	Is asphalt concrete placed in forms in one or more courses to provide the specified depth and yield a smooth dense, uniformly compacted sidewalk?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(b)	Is the tread of steps given a light broom texture?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(c)1	Are all exposed welded joints on handrail finished by grinding or filing to give a neat appearance?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(c)2	Are all handrail items galvanized in accordance with Section 233, Galvanizing?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(c)3	Are all exposed areas of pregalvanized rail repaired with a material conforming to Section 233, Galvanizing?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(c)4	Are handrails installed in accordance with the applicable standards and specifications?
Incidental Construction	Sidewalks, Steps, & Handrails	504.03(c)5	Are handrails grounded in accordance with 410.03(b)?
Incidental Construction	Sidewalks, Steps, & Handrails	SPCN504	Has the contractor submitted a sample of exposed aggregate sidewalk at least 12"x12"x2" depth?
Incidental Construction	Guardrail & Steel Median Barrier	505(Stds.)1	Are guardrail and median barriers placed at distances and heights as specified in the standard drawings for that type?
Incidental Construction	Guardrail & Steel Median Barrier	505(Stds.)2	Has the required type of barrier been placed in front of fixed objects as specified in the standards?
Incidental Construction	Guardrail & Steel Median Barrier	505.01(2)	Are guardrail and steel median barriers installed in accordance with plans, specifications, and in conformity to the lines and grades and tolerances shown on the plans or as designated by the Engineer?
Incidental Construction	Guardrail & Steel Median Barrier	505.03(001)	Has the Contractor submitted two copies of the manufacturers' recommended installation instructions for guardrail end treatments to the Engineer on the project site 2 weeks prior to the start of work?
Incidental Construction	Guardrail & Steel Median Barrier	505.03(002)	Are guardrail posts placed on a continuous line of guardrail all of one type?
Incidental Construction	Guardrail & Steel Median Barrier	505.03(01)	Are rails and elements erected and aligned in a manner that will result in a smooth, continuous, taut installation?
Incidental Construction	Guardrail & Steel Median Barrier	505.03(02)	Are guardrail delineators installed in accordance with section 702.03 on Delineators?
Incidental Construction	Guardrail & Steel Median Barrier	505.03(03)	Are anchor assemblies installed in accordance with this section?
Incidental Construction	Guardrail & Steel Median Barrier	505.03(04)	Are post holes backfilled to proper grade?
Incidental Construction	Guardrail & Steel Median Barrier	505.03(05)	Are steel posts driven by a method that will not damage them?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Incidental Construction	Guardrail & Steel Median Barrier	505.03(06)	Have concrete posts that are chipped or cracked been replaced?
Incidental Construction	Guardrail & Steel Median Barrier	505.03(07)	Have wood posts been sawed to the dimensions shown on plans and in accordance with this section?
Incidental Construction	Guardrail & Steel Median Barrier	505.03(08)	Have split, splintered, or broken posts been replaced?
Incidental Construction	Guardrail & Steel Median Barrier	505.03(09)	Have the threaded portions of all fittings and the cut ends of bolts and other damaged galvanized surfaces been repaired in accordance with Section 233, Galvanizing?
Incidental Construction	Guardrail & Steel Median Barrier	505.03(10)	Has material for reuse guardrail maintained its original shape and is it suitable for reuse?
Incidental Construction	Guardrail & Steel Median Barrier	505.03(11)	Did the Contractor have a trained guardrail installer on the project during guardrail installation?
Incidental Construction	Guardrail & Steel Median Barrier	505.03(12)	Are guardrail posts set with a variation of not more than 1/8 inch per foot from vertical?
Incidental Construction	Fences	507.02	Do materials for fences conform to the requirements of Section 242, Fences?
Incidental Construction	Fences	507.03(1)	Are posts placed approximately 3 feet in-depth or 18 inches into rock, whichever is less, when rock is encountered before the specified post depth is reached?
Incidental Construction	Fences	507.03(2)	Are posts placed in concrete if rock is encountered during installation of gates, corner, or brace posts?
Incidental Construction	Fences	507.03(3)	Are post and braced post anchor devices used in lieu of placing posts and braces in concrete except where rock is encountered?
Incidental Construction	Fences	507.03(4)	Did the Contractor demonstrate that the performance of post and braced post anchor devices will be comparable to that of concrete when used in lieu of concrete?
Incidental Construction	Fences	507.03(5)	Is the diameter of holes prepared for setting post in rock at least 3" greater than the cross section dimension of the post?
Incidental Construction	Fences	507.03(a)	Are standard chain link fences installed in accordance with this section?
Incidental Construction	Fences	507.03(b)	Are standard fences installed in accordance with this section?
Incidental Construction	Fences	507.03(c)1	Has the frame for pedestrian fences for bridges been bonded internally wherever possible to maintain continuity?
Incidental Construction	Fences	507.03(c)2	Are pedestrian fences for bridges electrically grounded in accordance with the section on Metal Railings 410.03(b)?
Incidental Construction	Fences	507.03(d)	Are temporary safety fences installed in accordance with this section?
Incidental Construction	Patching Hydraulic Cement Concrete Pavement	509.01	Has all defective pavement and unstable subbase material been removed prior to placement of new pavement?
Incidental Construction	Patching Hydraulic Cement Concrete Pavement	509.02	Are materials used for patching pavement as specified in Section, 217 Hydraulic Cement Concrete?
Incidental Construction	Patching Hydraulic Cement Concrete Pavement	509.03(1)	Where the existing joint dowel assembly is to be removed, has the existing concrete been saw cut and removed at least one foot on each side of transverse joints?
Incidental Construction	Patching Hydraulic Cement Concrete Pavement	509.03(2)	Have all undisturbed portions of pavement adjacent to patched areas been left with straight, vertical sides that are parallel or perpendicular to the centerline?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Incidental Construction	Patching Hydraulic Cement Concrete Pavement	509.03(3)	In areas from which concrete has been removed, has the subbase been dressed, brought to grade and mechanically compacted?
Incidental Construction	Patching Hydraulic Cement Concrete Pavement	509.03(4)	Is the prohibition on saw cuts extending into adjacent concrete pavement adhered to?
Incidental Construction	Patching Hydraulic Cement Concrete Pavement	509.03(5)	Has preformed asphalt joint filler been installed in accordance with the section 316.04(g)2 on Hydraulic Cement Concrete Pavement for Transverse Expansion Joints?
Incidental Construction	Patching Hydraulic Cement Concrete Pavement	509.03(6)	Are the temperature requirements for the removal and placement of concrete in accordance with this section?
Incidental Construction	Patching Hydraulic Cement Concrete Pavement	509.03(7)	Has all joint material and reinforcing steel been placed in accordance with this section?
Incidental Construction	Patching Hydraulic Cement Concrete Pavement	509.03(8)	Does the existing pavement and patches conform to the 1/4" in 10' tolerance?
Incidental Construction	Maintaining Traffic	512.01(4)	Are the work area zones in compliance with the guidelines as shown in the Typical Traffic Control figure of the Work Area Protection Manual and contract documents?
Incidental Construction	Maintaining Traffic	512.02(b)1	Do signalization, barricades, channelizing devices, pavement markings and other safety devices conform to the requirements of specifications and MUTCD (materials)?
Incidental Construction	Maintaining Traffic	512.02(b)2	Are reflectorized surfaces made from lens sheeting conforming to the requirements of Section 235, 247.02, and 702?
Incidental Construction	Maintaining Traffic	512.03	Are stabilized construction entrances used in construction areas where there is a potential for construction vehicles to track material from the construction site onto a paved surface?
Incidental Construction	Maintaining Traffic	512.03(1)	Are clearance values being maintained as indicated in the Safety Guidelines for Construction Zones of the Work Area Protection Manual?
Incidental Construction	Maintaining Traffic	512.03(2)	Is traffic maintained and protected in accordance with the general provisions sections on Maintenance During Construction (Section 105.14) and Barricades & Warning Signs? [2002 - Ref 107.10]
Incidental Construction	Maintaining Traffic	512.03(3)	Are barricades, barriers and other safety devices inspected daily by the contractor and deficiencies immediately corrected?
Incidental Construction	Maintaining Traffic	512.03(a)	Does the Contractor furnish and install signs when required, maintain signs and furnish accessory items in accordance with this section?
Incidental Construction	Maintaining Traffic	512.03(b)	Does the Contractor provide certified flagger service and pilot vehicles when required in accordance with this section?
Incidental Construction	Maintaining Traffic	512.03(c)	Are electronic arrows furnished, maintained, and moved in accordance with this section and the VA Work Area Protection Manual or Traffic Control Plan.
Incidental Construction	Maintaining Traffic	512.03(d)	Are the type and spacing of warning lights in accordance with this section?
Incidental Construction	Maintaining Traffic	512.03(e)	Are the type and spacing of channelizing devices in accordance with this section?
Incidental Construction	Maintaining Traffic	512.03(f)1	Does the Contractor continuously prosecute the work until completion once the barrier is in place?
Incidental Construction	Maintaining Traffic	512.03(f)2	Is the barrier service removed as soon as construction work is completed to the extent the barrier service is no longer required?
Incidental Construction	Maintaining Traffic	512.03(f)3	Are barrier openings only in tangent sections or along the inside of curved sections and limited to the minimum length required for access?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Incidental Construction	Maintaining Traffic	512.03(f)4	Is the normal pavement alignment at the barrier opening maintained with removable pavement markings?
Incidental Construction	Maintaining Traffic	512.03(f)5	Are ingress and egress openings in accordance with the requirements of this section?
Incidental Construction	Maintaining Traffic	512.03(f)6	Are delineators installed on barrier service in accordance with Section 702, Delineators?
Incidental Construction	Maintaining Traffic	512.03(f)7	Does the Contractor maintain the alignment and structural integrity of the barrier, and are warning lights, delineators, vertical panels, and other devices on barrier service in a clean and visible condition at all times?
Incidental Construction	Maintaining Traffic	512.03(f)8	If Contractor used Traffic Barrier Service not shown on the Department's Approved List, did the Contractor submit to the Department a copy of the FHWA acceptance letter indicating compliance with NCHRP Report 350 prior to it being used?
Incidental Construction	Maintaining Traffic	512.03(f)1	Is guardrail barrier service in accordance with this section?
Incidental Construction	Maintaining Traffic	512.03(f)2)1	Is concrete barrier service installed in accordance with the plans and standard drawings or as directed by the Engineer?
Incidental Construction	Maintaining Traffic	512.03(f)2)2	When barrier terminates at a guardrail, are fixed object attachments in accordance with the applicable standards?
Incidental Construction	Maintaining Traffic	512.03(f)2)3	Is precast concrete parapet service anchored as shown on the plans?
Incidental Construction	Maintaining Traffic	512.03(f)2)4	Upon parapet removal, are anchor holes cleaned and filled with the proper epoxy mortar EP4 or EP5?
Incidental Construction	Maintaining Traffic	512.03(g)	Is impact attenuator service in accordance with this section?
Incidental Construction	Maintaining Traffic	512.03(h)1	When specified on the plans, did the Contractor install and maintain temporary or portable traffic control signalization equipment?
Incidental Construction	Maintaining Traffic	512.03(h)2	Did the Contractor submit and have approved a plan to the Engineer for locating, installing and maintaining signals that depicted the intended traffic flows during construction operations, including type of vehicle detection, phase sequencing and timing?
Incidental Construction	Maintaining Traffic	512.03(h)3	If electrical service is not available, does the contractor provide a generator capable of continuously operating for at least 24 hours unassisted?
Incidental Construction	Maintaining Traffic	512.03(i)1	Are construction pavement markings installed at locations shown on the plans, and the Work Area Protection Manual and at other locations as determined by the Engineer?
Incidental Construction	Maintaining Traffic	512.03(i)2	Are construction pavement markings Type D, E, & F installed in accordance with the manufacturer's recommendations?
Incidental Construction	Maintaining Traffic	512.03(i)3	Have construction pavement markings been maintained and deficiencies been corrected in accordance with this spec?
Incidental Construction	Maintaining Traffic	512.03(j)1	Are pavement markings that may conflict with desired traffic movement eradicated as soon as is practicable?
Incidental Construction	Maintaining Traffic	512.03(j)2	Is eradication and containment being performed in accordance with this section?
Incidental Construction	Maintaining Traffic	512.03(j)3	Are markings for lane shifts/transitions 100% eradicated?
Incidental Construction	Maintaining Traffic	512.03(j)4	Is Type E Black Construction Pavement Marking applied and/or removed in accordance with this section?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Incidental Construction	Maintaining Traffic	512.03(k)1	Are temporary pavement markers installed with construction pavement markings in work zones that occupy the traveled roadway for a period of more than three days?
Incidental Construction	Maintaining Traffic	512.03(k)2	Are temporary pavement markers installed in transition areas on 20-foot centers and in all other areas on 40-foot centers unless otherwise required by the Engineer?
Incidental Construction	Maintaining Traffic	512.03(k)3	Are temporary pavement markers installed with construction pavement markings in work zones that occupy the traveled roadway for a period of more than three days?
Incidental Construction	Maintaining Traffic	512.03(k)4	When double line pavement markings separating traffic are installed, are two-way markers installed on each line, unless the contractor elects to install two one-way markers?
Incidental Construction	Maintaining Traffic	512.03(k)5	Have temporary pavement markers been installed in accordance with this section?
Incidental Construction	Maintaining Traffic	512.03(l)	Are detours provided in accordance with this section?
Incidental Construction	Maintaining Traffic	512.03(m)	Is aggregate material placed in accordance with this section?
Incidental Construction	Maintaining Traffic	512.03(n)	Are construction pavement message markings installed in accordance with this section?
Incidental Construction	Maintaining Traffic	512.03(p)	Did the Contractor prior to use submit the required documentation and does the Truck Mounted Attenuator meet all the requirements of this section?
Incidental Construction	Maintaining Traffic	SP-WZTCM.2.A	Has the Contractor assigned a Traffic Control Supervisor (TCS) and submitted to the ACE a valid copy of their TCS certificate prior to commencing work requiring work zone traffic control management?
Incidental Construction	Maintaining Traffic	SP-WZTCM.2.C	Does the traffic control supervisor perform the specified duties and keep a diary?
Incidental Construction	Maintaining Traffic	SP-WZTCM.2.E	Are unsafe traffic conditions corrected within 24 hours for critical items and 72 hours for non-critical items after such notification is given to the Contractor in writing by the ACE?
Incidental Construction	Planing Pavement	515.01	Has the pavement been planed to the designated depth?
Incidental Construction	Planing Pavement	515.02(1)	Is planing performed with a pavement planing machine of a type that has operated successfully on work comparable to that specified in the Contract?
Incidental Construction	Planing Pavement	515.02(2)	Are all vehicles in use under traffic using the proper lights and arrows?
Incidental Construction	Planing Pavement	515.02(3)	Have all irregularities and high spots in the pavement been eliminated?
Incidental Construction	Planing Pavement	515.02(4)	Where the pavement is to be resurfaced, has a one-inch shoulder been cut along the gutter line to eliminate feathering the edge of the new surface?
Incidental Construction	Planing Pavement	515.02(5)	Have pavement cuttings been disposed of in accordance with the general provisions section on Disposal Areas?
Incidental Construction	Planing Pavement	515.02(6)	Is the planed surface free from gouges, grooves, ridges, soot, oil film, and other imperfections and have a mosaic appearance suitable as a riding surface?
Incidental Construction	Planing Pavement	515.02(a)	Are hot planing methods in accordance with this section?
Incidental Construction	Planing Pavement	515.02(b)	Are milling and cold planing methods in accordance with this section?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Incidental Construction	Contractor Construction Surveying	517.01(1)	Is the contract survey in accordance with the special provisions and the Department's current survey manual?
Incidental Construction	Contractor Construction Surveying	517.02(3)	Did the Contractor ensure that the survey operations listed in this section are performed by or under the direct responsibility, control and personal supervision of a surveyor who is licensed in Virginia as a Land Surveyor and is experienced in highway construction work?
Incidental Construction	Contractor Construction Surveying	517.02(4)	Is the Contractor preserving Department furnished centerline or baseline control, references and location benchmarks and, is the Contractor providing the Engineer a copy of all alignment references established by the contractor, in accordance with this section?
Incidental Construction	Contractor Construction Surveying	517.02(5)[03001601]	Has the Contractor provided to the Engineer a record copy of certified plats, survey drawings, field notes and computations, and stakeout information prior to use for all construction, including the specific requirements for "C" projects, Section 517.04 and "M" projects, Section 517.05?
Incidental Construction	Contractor Construction Surveying	517.02(6)	Did the engineer approve use of electronic data files prior to submission and are the files in a format compatible with the Department's existing computer hardware and software?
Incidental Construction	Contractor Construction Surveying	517.04/05(c)(f)	For Construction (C) or Minimum Plan (M) projects, did the Contractor provide temporary benchmarks in accordance with this section? Ref: 517.04(c) and 517.05(f)
Incidental Construction	Contractor Construction Surveying	517.04/05(d)(c)	For Construction (C) or Minimum Plan (M) projects, did the Contractor provide horizontal and vertical control for bridges in accordance with this section? Ref: 517.04(d) and 517.05(c).
Incidental Construction	Contractor Construction Surveying	517.04/05(e)(d)	For Construction (C) or Minimum Plan (M) projects, did the Contractor provide horizontal and vertical control for all box culverts, all pipe culvert installations (including single and multiple line installations) with a total hydraulic opening equivalent to 12.6 square feet and larger, and for all closed systems such as storm sewers, and sanitary sewers regardless of size, in accordance with this section? Ref: 517.04(e) and 517.05(d).
Incidental Construction	Contractor Construction Surveying	517.04/05(f)(e)	For Construction (C) or Minimum Plan (M) projects, did the Contractor provide horizontal and vertical control for all box culverts, all pipe culvert installations (including single and multiple line installations) with a total hydraulic opening equivalent to 3.1 square feet and up to 12.6 square feet, in accordance with this section? Ref: 517.04(f) and 517.05(e).
Incidental Construction	Contractor Construction Surveying	517.04/05(i)(h)	For Construction (C) or Minimum Plan (M) projects, Were right of way stakes placed at a minimum of 100 foot intervals on each side of the roadway or as directed by the Engineer, and in accordance with this section? Ref: 517.04(i) and 517.05(h).
Incidental Construction	Sound Barrier Walls	519.02	Do soundwall materials conform to the requirements of this section?
Incidental Construction	Sound Barrier Walls	519.03(1)	Are H-piles for sound barriers driven within a +/-1/2" tolerance and in accordance with the section on bearing piles?
Incidental Construction	Sound Barrier Walls	519.03(2)	Is the portion of the post below finished grade and portions of the H-pile lapped with the post painted with asphalt mastic after splicing and are voids caulked prior to painting?
Incidental Construction	Sound Barrier Walls	519.03(3)	Are joints and connections secured so as to be structurally sound with no visible openings, and so as to transmit no noise through vibration?
Incidental Construction	Sound Barrier Walls	519.03(4)	Does the alignment of the top face of the wall not deviate more than 1/2 inch in 10 feet?
Incidental Construction	Sound Barrier Walls	519.03(5)	Are disturbed areas graded and seeded in accordance with the section on Seeding?
Incidental Construction	Sound Barrier Walls	519.03(a)	Are precast sound barrier walls constructed in accordance with this section?
Incidental Construction	Sound Barrier Walls	519.03(b)	Are metal sound barrier walls constructed in accordance with this section?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Incidental Construction	Sound Barrier Walls	519.03(C)	Are plywood sound barrier walls constructed in accordance with this section?
Incidental Construction	Water & Sanitary Sewer Facilities	520.02	Do water and sewer materials conform to the requirements of this section?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(1)	Have all underground utilities and obstructions been located in accordance with the general provisions of Section 105.08, Cooperation with Regard to Utilities? (2002 - Ref Section 105.07)
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(2)	Have the trenches been opened a sufficient distance ahead of the work or test pits made to verify the exact locations and inverts of the utility to allow for changes in line of grade?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(3)	Have provisions been made to maintain adequate and safe passage over excavations to accommodate pedestrians or vehicles?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(a)	Are water supplies protected from contamination by sewage in accordance with this section?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(b)	Is excavation, backfill and compaction performed in accordance with Section 302 and this section?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(C)	Are pipe and fittings inspected for cracks and defects in accordance with this section?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(d)	Is pipe placed in accordance with this section?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(e)	Is pipe for fittings or closure pieces cut in a neat and orderly manner without damage to the pipe?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(f)	Is pipe joined in accordance with this section?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(g)	Are plugs, caps, tees, and bends placed in accordance with this section?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(h)	Is encasement pipe installed in accordance with the Section 302, Drainage Structures?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(i)	Prior to installation, has existing pipe to be encased been cleaned and foreign material removed?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(j)	Are valves, valve boxes and manholes constructed in accordance with this section?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(k)	Are fire hydrants set in accordance with this section?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(l)	Are corporation stops made while the main is under pressure and at a 45-degree angle to the horizontal plane?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(m)	Is concrete encasement constructed in accordance with Section 302 Drainage Structures, 303 Earthwork, 316.04(j) Curing Concrete Pavement, 404 Hydraulic Cement Concrete Operations and 406 Reinforcing Steel?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(n)	Are water meters and yokes placed in accordance with this section?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(o)	Is jacked encasement pipe installed in accordance with Section 302, Drainage Structures for Jacked Method of Pipe Culverts?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(p)	Are sanitary service lateral connections made in accordance with this section?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(q)	Are sanitary manholes and manhole frames and covers constructed in accordance with Section 302, Drainage Structures?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(R)	Are sanitary drop connections constructed in accordance with Section 302 Drainage Structures, 303 Earthwork, 404 Hydraulic Cement Concrete Operations and 406 Reinforcing Steel?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(s)	Are sewer cleanouts constructed in accordance with Section 302 Drainage Structures, 303 Earthwork, 404 Hydraulic Cement Concrete Operations and 406 Reinforcing Steel?
Incidental Construction	Water & Sanitary Sewer Facilities	520.03(t)	Is conveying sewage performed in accordance with this section?
Incidental Construction	Water & Sanitary Sewer Facilities	520.04(a)	Have water mains and appurtenances been tested for leakage in accordance with this section?
Incidental Construction	Water & Sanitary Sewer Facilities	520.04(b)	Have gravity sanitary sewers been tested for leakage in accordance with this section?
Incidental Construction	Water & Sanitary Sewer Facilities	520.04(C)	Have force main sanitary sewers been tested for leakage in accordance with this section?
Incidental Construction	Water & Sanitary Sewer Facilities	520.04(d)	Are offsets of existing pipes placed in accordance with this section?
Incidental Construction	Water & Sanitary Sewer Facilities	520.05	Have all water mains and accessories been disinfected prior to tie-ins in accordance with AWWA C651?
Roadside Development	Topsoil	602.01	Is topsoil spread only on designated areas to the depth shown on the plans or as established by the Engineer?
Roadside Development	Topsoil	602.03(a)3	Is topsoil spread only when the subsoil is in a loose, friable condition?
Roadside Development	Topsoil	602.03(b)	Are all areas designated to receive topsoil graded, shaped and then scarified or tilled by disking, harrowing, or other approved methods to a depth of approximately 2 inches?
Roadside Development	Topsoil	602.03(c)1	Does the applied loose depth of the topsoil allow the area to conform to the elevations shown on the plans after the topsoil settles?
Roadside Development	Topsoil	602.03(c)2	After applying topsoil, have large clods, stones > 3" in diameter, brush, roots, stumps, litter, etc been removed from the area?
Roadside Development	Topsoil	602.03(c)3[62000500]	Is the area seeded within 7 days after topsoil is applied?
Roadside Development	Seeding	603.03	Does seed, lime, fertilizer and mulch conform the requirements of section 244.02? (Materials)
Roadside Development	Seeding	603.03(1)	Are seeding operations not performed when the ground is frozen or weather conditions would prevent proper preparation and subsequent operations?
Roadside Development	Seeding	603.03(2)	Did the Contractor notify the Engineer at least 48 hours prior to starting seeding operations?
Roadside Development	Seeding	603.03(a)	Is lime uniformly applied to areas to be seeded at the rate of 2 tons per acre?
Roadside Development	Seeding	603.03(b)1	After the application of lime, are 3:1 or flatter slopes loosened to a depth of approximately 3"?
Roadside Development	Seeding	603.03(b)2	After the application of lime, has the hard or crusted surfaces of excavated slopes, shoulders, and embankment slopes steeper than 3:1 been loosened to a depth of approximately 1"?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Roadside Development	Seeding	603.03(b)3	Is all material > 3" in diameter removed and disposed of in accordance with Section 106.04 Disposal Areas or as approved by the engineer?
Roadside Development	Seeding	603.03(b)4	Are gullies, washes, and disturbed areas that develop subsequent to final dressing repaired prior to being seeded?
Roadside Development	Seeding	603.03(c)	Is fertilizer uniformly applied in accordance with this specification or as specified by engineer?
Roadside Development	Seeding	603.03(d)1	Are hydroseeding mixtures constantly agitated and applied within 8 hours after mixing began?
Roadside Development	Seeding	603.03(d)2	Are leguminous seed inoculated before they are mixed with other seeds and applied within 24 hours of treatment?
Roadside Development	Seeding	603.03(d)3	Are leguminous seeds treated at 5 times the amount of the manufacturers recommendations when the hydroseeding method is used?
Roadside Development	Seeding	603.03(e)1	Is mulch applied within 48 hours after completion of the seeding operation?
Roadside Development	Seeding	603.03(e)2	When straw or hay mulch is used, is it applied uniformly at the rate specified?
Roadside Development	Seeding	603.03(e)3	When wood cellulose mulch is used, is it applied uniformly at a rate of approximately 1500 lb. (net dry weight) per acre?
Roadside Development	Seeding	603.03(e)4	Is straw or hay mulch applied to a uniform thickness so that no more than 10% of the soil surface is exposed?
Roadside Development	Seeding	603.03(e)5	Is straw or hay mulch anchored in accordance with this section?
Roadside Development	Seeding	603.03(e)6	Does the Contractor protect all adjacent property and pedestrian areas during the mulching operations?
Roadside Development	Seeding	603.04(1)	Are the Contractor Performance Evaluations (CPE) being prepared/maintained in accordance with latest applicable instructions? Ref: (IIM-CD-2013-03.01)
Roadside Development	Seeding	603.04(2)	Are deviations from the contract documents properly documented?
Roadside Development	Planting	605.03(a)	Has extra work been documented and items that require work orders approved prior to work being performed?
Roadside Development	Planting	605.03(b)	Are project records being maintained in accordance with the guidelines set forth in Appendix C of the Construction Manual?
Roadside Development	Planting	605.03(c)	Does the Inspector promptly notify the Contractor of non-conformance with the contract documents by the Contractor?
Roadside Development	Planting	605.03(d)	Where possible, have arrangements for adjusting utilities been made by the Department prior to project construction?
Roadside Development	Planting	605.03(e)1	Does the Inspector have available an approved source of materials and approved changes list on-site? (Appendix C / Form C25)
Roadside Development	Planting	605.03(e)2	Has the Department obtained the appropriate environmental permits?
Roadside Development	Planting	605.03(f)	Are all permits and special provision maintained on-site and are dates still applicable?
Roadside Development	Planting	605.03(g)1	Were all "no impact" jurisdictional areas marked off and protected prior to construction?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Roadside Development	Planting	605.03(g)2	Is a preconstruction scheduling meeting held prior to beginning construction?
Roadside Development	Planting	605.03(g)3	If the contractor started work prior to submittal of the baseline progress schedule, was it approved in writing by the engineer?
Roadside Development	Planting	605.03(h)	Did the Engineer issue a written notice of unsatisfactory performance where progress remains unsatisfactory at the time of preparation of the next monthly progress estimate?
Roadside Development	Planting	605.03(i)	Has the inspector made appropriate deductions for over-weight tonnage?
Roadside Development	Planting	605.03(j)1	Has the Inspector checked and approved drainage structure foundations before bedding material is placed?
Roadside Development	Planting	605.03(j)2	Did the Inspector check the alignment and grade of pipes before any backfill was placed?
Roadside Development	Planting	605.03(j)3	Have the recommended number of density tests been taken and recorded for drainage items in accordance with current Materials Manual of Instructions?
Roadside Development	Planting	605.03(k)1	Did the Department approve the design of precast drainage structures prior to their use?
Roadside Development	Planting	605.03(k3)1	Has minor structure excavation been measured and documented for drainage structure with a span of 48" or greater?
Roadside Development	Planting	605.03(k3)2	Did the Engineer approve the removal of unsuitable material below plan grade of the roadway?
Roadside Development	Planting	605.03(k4)a	Has the required compaction been achieved and documented on fills as required in the Materials Manual?
Roadside Development	Planting	605.03(k4)b	Did the Engineer approve, in writing, the wasting or selling of surplus materials prior to the contractor doing it?
Roadside Development	Planting	605.03(k5)1	Did the Inspector check the subgrade to ensure the cross section was correct and the grade was uniform prior to the Contractor placing any subsequent course?
Roadside Development	Planting	605.03(k7)1	Have the recommended number of density tests been taken and recorded on subgrade?
Roadside Development	Planting	605.03(k7)2	Have the recommended number of density tests been taken and recorded for subbase and /or aggregate base courses?
Roadside Development	Planting	605.03(k7)3	Is prime coat being measured and paid for in accordance with the contract requirement?
Roadside Development	Planting	605.03(k7)4	Have the asphalt and cover material for seal coat been measured and paid for in accordance with contract requirements?
Roadside Development	Planting	605.03(k7)5	Has the surface been straight edged as required?
Roadside Development	Planting	605.03(k7)6	Has the pavement smoothness been determined as specified?
Roadside Development	Planting	605.03(k8)	Has the Inspector documented in the project diary the dimensions needed to compute pay quantities?
Roadside Development	Planting	605.03(l)	Has the Engineer approved the backfill material prior to use?
Roadside Development	Planting	605.03(m)	Was the foundation inspected and approved prior to concrete being ordered?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Roadside Development	Planting	605.03(n)	Have the recommended number of density tests been taken and recorded for backfill of structures?
Roadside Development	Planting	605.03(o)	Are accurate and complete records being maintained on pile driving?
Roadside Development	Planting	605.04	Has the center of gravity for each pile group been checked and documented?
Roadside Development	Planting	605.05(a)	Have corrections to the pile center of gravity been approved by the District Bridge Engineer?
Roadside Development	Planting	605.05(b)1	Did the Inspector check and approve the formwork prior to the Contractor placing concrete?
Roadside Development	Planting	605.05(b)2	Was the concrete tested for conformity to the requirements of materials section on Hydraulic Cement Concrete and approved prior to placement?
Roadside Development	Planting	605.05(b)3	Following concrete set and prior to placement of other slabs, was the deck surface tested and approved by the Engineer and in accordance with this section?
Roadside Development	Planting	605.05(b)4	Have prestressed items been checked for cracks and the Construction Manager notified as per Section 405 of the Construction Manual?
Roadside Development	Planting	605.05(b)5	Did the Inspector check the bearing pads and the vertical and horizontal alignment of the beams prior to the contractor installing the diaphragms?
Roadside Development	Planting	605.05(b)6	Was the reinforcing steel checked and approved for proper position as well as adequacy of the method of maintaining position prior to placement of concrete?
Roadside Development	Planting	605.05(b)7	Does the Inspector have copies of working drawings, shipping statements, and erection diagrams included in the project files and available at the Inspector's field office?
Roadside Development	Planting	605.05(b)8	Does the Inspector observe the installation and tightening of bolts to ensure that the selected tightening procedure is properly used and that all bolts are tightened?
Roadside Development	Planting	605.05(b)9	Has the Contractor implemented required environmental protections when project work involves the removal of greater than 100 square feet of coating from a Type B structure?
Roadside Development	Soil Retention Coverings	606.03(a)1	Did the Inspector determine the dry film thickness of paint coats through the use of a Tooke gage or magnetic gage?
Roadside Development	Soil Retention Coverings	606.03(a)2	Has the Engineer approved the contractor's daily record and mapping format prior to commencement of work as required in this section?
Roadside Development	Soil Retention Coverings	606.03(b)1	Has the Engineer notified the contractor that the site-specific environmental plan contains all the necessary elements stated in this section?
Roadside Development	Soil Retention Coverings	606.03(b)2	Has the Engineer approved the site for temporary storage of waste material in accordance with provisions of this section?
Roadside Development	Soil Retention Coverings	606.03(c)01	Has the contractor's worker health and safety plan been reviewed for completeness prior to beginning of work within 2 weeks of receipt?
Roadside Development	Soil Retention Coverings	606.03(c)02	Was the base for riprap inspected and approved prior to placement of riprap or bedding?
Roadside Development	Soil Retention Coverings	606.03(c)03	Does the Inspector review the location of the proposed sidewalk, steps, handrail to ensure that the item is in the proper location as shown on the plans or placed as needed?
Roadside Development	Soil Retention Coverings	606.03(c)04	Did a representative of the District Traffic Engineer's office review the proposed location of guardrail and make recommendations for installing guardrail in accordance with the Construction Manual, Section 505?

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Section	Subsection	Spec Code Reference	CQIP Question
Roadside Development	Soil Retention Coverings	606.03(c)05	Does the Engineer verify the continuing adequacy of the mix design and the minimum compressive strength on a monthly basis?
Roadside Development	Soil Retention Coverings	606.03(c)06	Are inspections of work zones that affect traffic conducted and documented in accordance with applicable IIM?
Roadside Development	Soil Retention Coverings	606.03(c)07	Has Engineer designated a Work Zone Traffic Coordinator that holds a valid intermediate Work Zone Training Verification Card, provided the Contractor the name of the WZTC Coordinator, in writing, prior to the commencement of construction activities, and posted notice in a conspicuous place on the project? (IIM-CD-2013-02.02)
Roadside Development	Soil Retention Coverings	606.03(c)08	Do the Work Zone Traffic Coordinator and/or other required project personnel have available a current copy of the MUTCD and/or Work Area Protection Manual? (Construction Manual)
Roadside Development	Soil Retention Coverings	606.03(c)09	Has the Engineer determined the validity of the Contractor's assertion in the written notice of a disagreement with the accuracy of the stakeout or survey work provided by the Department, and responded back to the Contractor within three (3) working days on how to proceed in accordance with this section?
Roadside Development	Soil Retention Coverings	606.03(c)11	Has the Department paid more than 60% for construction surveying without having the Contractor provide all surveying field notes, layouts, computations, certified plats, sketches and drawings?
Roadside Development	Soil Retention Coverings	606.03(c)12	Are plants inspected prior to placement and those which are found to be unsatisfactory rejected?
Roadside Development	Soil Retention Coverings	606.03(c)13	Has the Engineer, accompanied by the Contractor, reviewed the proposed locations of each pole, post, or sign structure and advised the contractor of any necessary adjustments?
Roadside Development	Soil Retention Coverings	606.03(c)14	Are pavement markings and markers measured and paid for in accordance with this section?
Roadside Development	Soil Retention Coverings	606.03(c)15	Have field changes been documented in accordance with the requirements of IIM-CD-2013-12.01.
Roadside Development	Soil Retention Coverings	606.03(C)16	Was a process timeline for making decisions and managing communications agreed upon by VDOT and the Contractor at the Pre-Construction Conference?
Roadside Development	Soil Retention Coverings	606.03(C)17	Are project communications and decisions being tracked and documented in accordance with special provisions or is a compatible Issue Resolution Process being utilized?
Roadside Development	Soil Retention Coverings	606.03(d)	Has the blot seal treatment been measured and paid for in accordance with contract requirements?
Traffic Control Devices	General Traffic Control Devices	700.01	Was EASS / LMET measured and paid in accordance with the contract requirements?
Traffic Control Devices	General Traffic Control Devices	700.02	Have the asphalt and cover materials for surface treatment been measured and paid for in accordance with contract requirements?
Traffic Control Devices	General Traffic Control Devices	700.03(1)	Are details on the plans coordinated throughout and do they show the work to be performed?
Traffic Control Devices	General Traffic Control Devices	700.03(2)	Are all pay items and quantities shown on the plan sheets in agreement with the pay items and quantities specified in the contract?
Traffic Control Devices	General Traffic Control Devices	700.03(3)	Are the summaries well-organized, accurate, and easy to use?
Traffic Control Devices	General Traffic Control Devices	700.04(a)[70000400]	Have there been any work orders due to plan discrepancies or contract omissions?
Traffic Control Devices	General Traffic Control Devices	700.04(c)1	Were there any significant increases or decreases due to any discrepancies in contract quantities in accordance with section 104.02?

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Section	Subsection	Spec Code Reference	CQIP Question
Traffic Control Devices	General Traffic Control Devices	700.04(c)2	Are the plans designed in such a manner that the Contractor can construct the project with minimal delays or changes?
Traffic Control Devices	General Traffic Control Devices	700.04(c)3	Are the contract and special provisions complete?
Traffic Control Devices	General Traffic Control Devices	700.04(c)4	Unless otherwise permitted, has the Contractor started work within 15 days of the date of contract execution specified in the Notice to Proceed?
Traffic Control Devices	General Traffic Control Devices	700.04(c)5	Has the Engineer had to suspend the work because the Contractor failed to carry out provisions of the contract?
Traffic Control Devices	General Traffic Control Devices	700.04(e)2	Do the workers and equipment satisfy the requirements of this section?
Traffic Control Devices	General Traffic Control Devices	700.04(e)3	Are subcontracts being handled in accordance with the requirements of this section?
Traffic Control Devices	General Traffic Control Devices	700.04(e)4	Has contractor been fully cooperative with engineer, inspector, other contractors involved in prosecution of the work?
Traffic Control Devices	General Traffic Control Devices	700.04(e)5	Does the Contractor have a superintendent on the project at all times?
Traffic Control Devices	General Traffic Control Devices	700.04(e)6	Is the superintendent competent, capable of reading and understanding the plans and specifications, experienced in the type of work being performed, and have full authority to execute the orders and directions of the Engineer?
Traffic Control Devices	General Traffic Control Devices	700.04(f)	Is the Contractor cooperating by giving the utility companies advance notices to permit their utilities to be adjusted simultaneously with project construction operations?
Traffic Control Devices	General Traffic Control Devices	700.04(g)	Does the Contractor coordinate the project construction with planned utility adjustments?
Traffic Control Devices	General Traffic Control Devices	700.04(h)	Does the Contractor report any failure on the part of the utility owner to cooperate or proceed with the planned utility adjustments?
Traffic Control Devices	General Traffic Control Devices	700.04(h1)	Has the Contractor properly protected any existing, adjusted, or new utility facilities which are to remain within the right-of-way?
Traffic Control Devices	General Traffic Control Devices	700.04(j)	Does the Contractor provide the necessary access to other Contractors performing work in the same geographical area of the work covered by this contract?
Traffic Control Devices	Traffic Signs	701.02	In a dispute between Contractors working concurrently in an area, did they comply with the Engineer's decisions on the contracts?
Traffic Control Devices	Traffic Signs	701.03(a2)	Have the Contractors, with the Engineer, established a written joint operations schedule based on the limits of the individual contracts and the contract work to be combined?
Traffic Control Devices	Traffic Signs	701.03(a3)1	If Contractors fail to agree on a joint schedule of operations, were individual schedules submitted to the Engineer who prepared a schedule binding on each contractor?
Traffic Control Devices	Traffic Signs	701.03(a3)2	Does the Contractor submit his shop and working drawings for timely review by the Engineer to avoid delaying the work?
Traffic Control Devices	Traffic Signs	701.03(a3)3	Are entrances and connections in satisfactory locations and being properly maintained?
Traffic Control Devices	Traffic Signs	701.03(a4)	When an inspection reveals that work has not been properly performed, and the Contractor has been so advised, does he immediately inform the Department of a schedule for correcting such work and time at which reinspections of such work can be made?
Traffic Control Devices	Traffic Signs	701.03(a6)	Has the Contractor remedied or removed the unacceptable or unauthorized work at his expense?

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Section	Subsection	Spec Code Reference	CQIP Question
Traffic Control Devices	Traffic Signs	701.03(a7)	Has the Contractor submitted a written statement that clearly identifies intent to file a claim at the time of occurrence or beginning of the related work?
Traffic Control Devices	Traffic Signs	701.03(b)(C)	At the time of occurrence or prior to the beginning of the work, does the Contractor furnish the Engineer with an itemized list for which additional compensation will be claimed?
Traffic Control Devices	Traffic Signs	701.03(d)	When documenting the claim, did the Contractor and the Engineer compare records and bring them into agreement at the end of each day?
Traffic Control Devices	Traffic Signs	701.03(d)1	Has the contractor submitted a source of materials in accordance with contract requirements?
Traffic Control Devices	Traffic Signs	701.03(d)2	Has the Contractor provided the Engineer with a copy of all invoices for materials delivered to the project?
Traffic Control Devices	Traffic Signals	703.01	Has the Contractor submitted and received approval in accordance with the specifications on Local Material Sources, all necessary agreements and plans for opening or reopening a local pit or quarry prior to performing any work?
Traffic Control Devices	Traffic Signals	703.02(1)	Has the Contractor submitted and received approval for all information required in this section before utilizing a disposal area?
Traffic Control Devices	Traffic Signals	703.02(2)	Are fuels and lubricants stored outside of flood plains and are impoundments in place to contain accidental spills and prevent them from entering waterways?
Traffic Control Devices	Traffic Signals	703.02(3)	Does the Contractor have more than a total of 1320 gallons of petroleum products stored at the project (55-gallon containers and greater) and if so, does he have a SPCC Plan on site and adequate secondary containment for petroleum storage? (Ref: CD2000-16)
Traffic Control Devices	Traffic Signals	703.02(4)	Are materials being handled in a manner that will preserve their quality and fitness for the work?
Traffic Control Devices	Traffic Signals	703.02(5)	Have materials that do not conform to the specifications been replaced, or if repaired, approved by the Engineer prior to use?
Traffic Control Devices	Traffic Signals	703.02(d3)	Prior to commencing work, did the Contractor notify or request the utility company to locate their underground utilities?
Traffic Control Devices	Traffic Signals	703.02(e)	Has the contractor furnished the Engineer a copy of executed written agreement(s) prior to entering private property?
Traffic Control Devices	Traffic Signals	703.02(e2)	Are the explosives stored and handled as required by the governing rules and regulations?
Traffic Control Devices	Traffic Signals	703.02(e3)	Does the Contractor continuously prosecute the work on or over the railway right-of-way to minimize the need for flagger or watchman service?
Traffic Control Devices	Traffic Signals	703.02(e4)	Has the Contractor submitted to the Department and had approved by railway a plan of operations showing the design and method of proposed structural operations on railway right-of-way?
Traffic Control Devices	Traffic Signals	703.02(e5)	Has the Contractor and/or subcontractors submitted for approval and retention to the Railway Company, a railroad protection liability insurance policy and certificate of insurance prior to starting work on railway right-of-way?
Traffic Control Devices	Traffic Signals	703.02(e6)	Has the Contractor submitted to the Department a copy of the Railway Company's approval of his railroad insurance?
Traffic Control Devices	Traffic Signals	703.03(a)1	Were required water quality permits obtained and is the contractor adhering to the provisions of the environmental permits?
Traffic Control Devices	Traffic Signals	703.03(a)2	Are all new pipes and/or culverts for road crossings on perennial streams and intermittent streams being countersunk at appropriate depths in accordance with applicable permits?
Traffic Control Devices	Traffic Signals	703.03(a)3	Are all temporary structures in permitted jurisdictional areas properly maintained?

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## CQIP Checklist - Construction Quality Improvement Program\*

Section	Subsection	Spec Code Reference	CQIP Question
Traffic Control Devices	Traffic Signals	703.03(a)4	Has the Contractor properly installed temporary and permanent devices to control erosion and minimize siltation of waterways and adjacent properties?
Traffic Control Devices	Traffic Signals	703.03(e)	* Is the Contractor inspecting and immediately responding to install and correct or maintain erosion and siltation measures so they function properly or when conditions dictate?
Traffic Control Devices	Traffic Signals	703.03(e1)1	Does the contractor have an employee certified by the Department( ESCCC) during land disturbance activities within the limits of the project?
Traffic Control Devices	Traffic Signals	703.03(e1)2	Is construction discharge water being filtered to remove deleterious materials prior to discharge into state waters?
Traffic Control Devices	Traffic Signals	703.03(e1)3	Is the Contractor using mats or other approved materials in wetlands areas to support construction equipment?
Traffic Control Devices	Traffic Signals	703.03(e2)1	Are excavated materials being disposed of in an approved area above the mean high water elevation in a manner that will prevent their return into state waters?
Traffic Control Devices	Traffic Signals	703.03(e2)2	Has the Contractor prevented erosion of soil and the pollution and siltation of rivers, streams, and impoundments during the construction of new bridges and culverts and removal of existing bridges and culverts?
Traffic Control Devices	Traffic Signals	703.03(g)	Is the Contractor using mats or other approved materials in wetlands areas to support construction equipment?
Traffic Control Devices	Traffic Signals	703.03(g2)1	Has the Contractor submitted for approval his design and method of temporarily relocating streams to facilitate construction?
Traffic Control Devices	Traffic Signals	703.03(g2)2	Has the Contractor's burning been approved and is it in compliance with the DEQ-Air Division Pollution Control Laws and Rules, the local laws and ordinances?
Traffic Control Devices	Traffic Signals	703.03(h)	If cultural resources (archeological sites, historic buildings, etc.) are delineated on construction plans for avoidance, are such properties being protected from impact during construction?
Traffic Control Devices	Traffic Signals	703.03(i)1	Has the contractor/subcontractor completed form C-107 (construction runoff control inspection form) as required?
Traffic Control Devices	Traffic Signals	703.03(i)2	On vehicles with an obstructed view to the rear, is the Contractor using audible back-up alarms or an effective ground guide system?
Traffic Control Devices	Traffic Signals	703.03(i)3	Is the correct angle of repose or adequate shoring being used for trenches or excavations 5 feet or more in depth?
Traffic Control Devices	Pavement Markings & Markers	704.02(1)[74004800]	Does the Contractor's competent person for excavation monitor all excavation sites?
Traffic Control Devices	Pavement Markings & Markers	704.02(2)	Are all employees wearing proper head protection as required?
Traffic Control Devices	Pavement Markings & Markers	704.03(1)	Are employees using personal protective equipment for eyes, hands, feet, and any other body parts as required?
Traffic Control Devices	Pavement Markings & Markers	704.03(2)	Where needed, is the proper fall protection device/devices being used?
Traffic Control Devices	Pavement Markings & Markers	704.03(3)	Has the contractor's qualified person monitored the fall protection devices to see that they meet current standards?
Traffic Control Devices	Pavement Markings & Markers	704.03(a)01	Are employees who are exposed to vehicular traffic wearing traffic vest?
Traffic Control Devices	Pavement Markings & Markers	704.03(a)02	Have required measures been taken prior to employees entering a confined space?

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Section	Subsection	Spec Code Reference	CQIP Question
Traffic Control Devices	Pavement Markings & Markers	704.03(a)03	Has the contractor's qualified person monitored/documentated said measures prior to employees entering a confined space?
Traffic Control Devices	Pavement Markings & Markers	704.03(a)04	Does the contractor meet with the engineer every 30 days to establish dates for starting each critical inspection stage during the next 30 days?
Traffic Control Devices	Pavement Markings & Markers	704.03(a)05	Does the contractor advise the Engineer at least 24 hours in advance of any changes in planned operations or critical staging in accordance with this section and the section for inspection of work?
Traffic Control Devices	Pavement Markings & Markers	704.03(a)06	Has the contractor's progress schedule, plan of operations, and/or working schedule been submitted within the time frame specified and per applicable requirements? (Ref.: Special Provisions)
Traffic Control Devices	Pavement Markings & Markers	704.03(a)07	Is the contractor meeting the approved progress schedule and/or earning schedule?(Ref: Special Provisions)
Traffic Control Devices	Pavement Markings & Markers	704.03(a)08	When required, did the contractor submit a revised progress schedule 10 calendars days of engineers request?
Traffic Control Devices	Pavement Markings & Markers	704.03(a)09	Does the contractor advise the engineer at least once a week of all anticipated critical inspection stages for the subsequent week?
Traffic Control Devices	Pavement Markings & Markers	704.03(a)10	Is the clearing and grubbing confined to the area within the construction limits and to other objects as designated on the plans and in the contract?
Traffic Control Devices	Pavement Markings & Markers	704.03(a)11	Did the Contractor install erosion and siltation control devices prior to beginning clearing or grubbing operations?
Traffic Control Devices	Pavement Markings & Markers	704.03(a)12	Has the Contractor confined the grubbing of root mat and stumps to the area over which excavation is to be actively prosecuted within 15 days following the grubbing operation?
Traffic Control Devices	Pavement Markings & Markers	704.03(a)13	Have all items which will be less than 5 feet below the top of earthwork within the area directly below the pavement and shoulders, been removed?
Traffic Control Devices	Pavement Markings & Markers	704.03(a)14	Are stumps, other perishable materials, and non-perishable objects that are left in place in accordance with this section?
Traffic Control Devices	Pavement Markings & Markers	704.03(a)15	Have trees and vegetation been disposed of in accordance with this Section?
Traffic Control Devices	Pavement Markings & Markers	704.03(a)1	Is the pipe the required gage and strength, to include the special design pipe, and do other materials meet the requirements of this section?
Traffic Control Devices	Pavement Markings & Markers	704.03(a)2)1	Has the contractor furnished and installed lift hole plugs as specified?
Traffic Control Devices	Pavement Markings & Markers	704.03(a)2)2	Have all pipe culverts been checked to determine if damaged materials have been repaired or replaced?
Traffic Control Devices	Pavement Markings & Markers	704.03(c)1	Has the Contractor submitted to the Engineer a complete plan and schedule for jacked and bored pipe installation prior to the beginning of work?
Traffic Control Devices	Pavement Markings & Markers	704.03(c)1)3	Have the pipe culvert foundations been explored by the contractor below the bottom of the excavation?
Traffic Control Devices	Pavement Markings & Markers	704.03(c)2	Is the foundation firm, but not unyielding for its full length and width and excavated according to the standard drawings?
Traffic Control Devices	Lighting Systems	705.03(1)	Has bedding material been furnished in accordance with this section?
Traffic Control Devices	Lighting Systems	705.03(2)	Has the bedding material been placed and shaped in accordance to this section?

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Section	Subsection	Spec Code Reference	CQIP Question
Traffic Control Devices	Lighting Systems	705.03(a)	Has the pipe been placed in accordance with this Section?
Traffic Control Devices	Lighting Systems	705.03(b)	Are the joints of the pipe tight and properly sealed?
Traffic Control Devices	Lighting Systems	705.03(C)	Is the backfill placed in uniform layers at the specified thickness?
Traffic Control Devices	Lighting Systems	705.03(d)	Is the backfill placed simultaneously and compacted on both sides of the pipe as specified?
Traffic Control Devices	Lighting Systems	705.03(e)	Has all rock over 2 inches in its greatest dimension been removed from within 12 inches of the pipe?
Traffic Control Devices	Lighting Systems	705.03(f)	Has backfill material been furnished as specified?

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