



# **Inspector Trainee Job Book**

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## A Path to Success ... Getting Started

**“If You Don’t Know Where You’re Going,  
Any Road Will Get You There”**

Your path to becoming a Construction Inspector is clearly defined. That’s the purpose of the **Job Book**. However, reaching that goal depends on you and your firm. Your experiences along the way will be unique and challenging. In order to ensure your progress, your firm, as your partner, wants to help you **get started** so that you will understand what is expected of you whether you are an existing Trainee or a new Trainee.

### **Existing Trainee:**

- You should become familiar with the new training program by reviewing the **Job Book** and learning how it’s designed to help you achieve your goals.
- Your “progress to date” will be applied to and measured against the required course work and the essential job elements as prescribed in the **Job Book**. This means that you will be meeting with your Mentor to discuss your accomplishments and experiences to date. This will involve required documentation so that your firm will be in a position to reward you accordingly with an in-band adjustment or, upward role change at the one-year mark and completion of the program.

### **New Trainee:**

- During your first month you will attend an orientation to help you understand the culture of your organization, your firm’s expectations, how you fit into the big picture, the roles of other construction-related staff, and the various resources available to you. You will then return to your project where your Mentor will work with you in deciding which job elements are appropriate at this stage of your development.
- You should become familiar with the new training program by reviewing the **Job Book** and learning how it’s designed to help you achieve your goals.
- You may already have completed some of the required (or similar courses), certifications and job elements in the **Job Book**. If so, it’s important that you communicate this information to your Mentor. You will be required to provide the proper documentation or demonstrate proficiency in those tasks in order to obtain the necessary sign-offs.
- Throughout your tenure as a Trainee, you will be working with Monitoring Inspectors and Project Engineers to discuss your accomplishments and experiences.

# **Behavioral/Attitudinal Characteristics** **&** **Indicators**

Department of Labor and Industry recognizes that in order for you to be successful in construction inspection you must perform well behaviorally/attitudinally as well as technically. You may think of behavioral/attitudinal characteristics as another dimension to performance, because they will enable you to perform the technical job elements of the **Job Book** in an acceptable manner.

While the technical job elements represent “what you will be doing”, the behavioral/attitudinal characteristics represent “how you should be doing” the technical job elements.

Therefore, in completing the technical job elements in the **Job Book**, you will also be rated on “how” you accomplish them in terms of the following five (5) areas: Safety Awareness; Initiative; Ethics and Judgment; Customer Service (Responsiveness, Teamwork, Communications, Interpersonal Skills, and Flexibility); and Analysis.

The behavioral/attitudinal indicators shown below have been developed as guides to assist you in defining “how you should be doing” the technical job elements in the **Job Book**.

The indicators vary in applicability to the different technical job elements. When applying these indicators to the completion of a particular technical job element, you should consider the context of the situation and the people involved.

## **Safety Awareness**

### **Indicators:**

- Makes safety the first priority in actions and decisions.
- Remains alert to unsafe working conditions.
- Reports all unsafe circumstances and injuries.
- Takes corrective safety action when necessary.
- Communicates the importance of safety awareness to others.
- Maintains equipment properly.
- Wears appropriate personal safety equipment.
- Follows safety regulations.
- Promotes and encourages safety.
- Maintains a clean, orderly and safe work environment.

## **Initiative/(Drive for Results)**

### **Indicators:**

- Actively seeks to accomplish the technical job elements.
- Asks questions.
- Seeks out opportunities to learn.
- Prepares in advance.
- Listens well to gain information and increase knowledge.
- Recognizes mistakes and learns from them.
- Completes training to prepare for the completion of tasks.

## **Ethics and Judgment (Values)**

### **Indicators:**

- Performs measurements, tests, calculations, and documentation accurately.
- Cultivates trustworthiness in self and in others.
- Provides information (both written and oral) honestly.
- Maintains confidences in regards to sensitive or personal information.
- Seeks help from others when confronted with complex or new situations before deciding on actions.
- Reports all violations of laws, regulations, policies, and procedures.

## **Customer Service (Interpersonal Savvy) (Responsiveness, Teamwork, Communications, Interpersonal Skills, and Flexibility)**

### **Indicators:**

- Responds promptly to customer requests.
- Shows concern for others by taking timely actions.
- Works towards mutually acceptable solutions to problems and differences in opinions.
- Adjusts schedules, priorities, and tasks to accommodate project needs.
- Accepts constructive feedback well about the completion of tasks.
- Honors commitments (delivers what has been promised).
- Takes time to listen to others.
- Handles situations tactfully.

- Informs others about various activities on the project.
- Shows respect for others and their opinions.
- Uses others' talents to solve problems.
- Completes work on time.
- Meets the needs of others.
- Presents ideas and information in a clear, concise, and organized manner.
- Encourages and supports others in their efforts to succeed.

## **Analysis**

### **Indicators:**

- Gathers correct and relevant information.
- Resolves conflicts/differences between contract items based on order.
- Checks details.
- Anticipates problems.
- Develops ideas to solve problems.
- Displays thoroughness.
- Seeks input from others as needed.

# Program Values

- **Safety and Security:** Safety will never be compromised. Security of our people and our assets must never be taken for granted.
- **Truth, Trust and Teamwork:** By always seeking and telling the truth, we create trust. Trust fosters true teamwork, with all of us pulling our share and sharing our talents.
- **Environmental Excellence:** We conduct our business activities in a manner that respects Virginia's natural and historic resources.
- **Action and Accountability:** We know what our job is and we do it. If we have a question, we ask. We are willing to stand up for our actions and to accept responsibility for them.
- **Results and Respect:** We take action to produce results and measure our progress. By producing results, we earn, gain and retain respect of customers and partners.

**CONSTRUCTION INSPECTOR TRAINEE  
COURSE & CERTIFICATION COMPLETION CHARTS**

**Course Title:** The name of the required course or certification

**Class Date(s):** The date(s) of class attendance.

**Instructor's Signature(s):** The signature of the class or certification instructor(s) to verify class attendance.

## COURSE & CERTIFICATION COMPLETION CHARTS

<b>TRAINEE NAME:</b>			
<b>Safety Course Title</b>	<b>Class Date(s)</b>	<b>Instructors' Signature</b>	<b>Successful Completion Date</b>
1. OSHA 10-Hour Construction Outreach			
2. Personal Fall Arrest Systems: Fall Protection			
3. Confined Space Entry & Self Rescue-Competent Person			
<b>Construction Course Title</b>	<b>Class Date(s)</b>	<b>Instructor's Signature</b>	<b>Successful Completion Date</b>
4. Plan Reading and Construction Math			
5. Surveying for Inspectors			
6. Documentation and Recordkeeping – Level I			
7. Roadway & Drainage Construction			
8. Structures & Bridge			
9. SiteManager			

## Required Certification Courses (12 Total)

Certifications Course Title	Class Date(s)	Instructors' Signature	Successful Completion Date
1. Nuclear Gauge Training plus Hazmat			
2. Soil and Aggregate Compaction			
3. Asphalt Field Level I			
4. Asphalt Field Level II			
5. Concrete Field			
6. American Concrete Institute Level I  <b>Virginia Ready Mix Concrete Association</b>			
7. Pavement Marking			
8. Surface Treatment			
9. Slurry Surfacing			
10. Guardrail Installers Training (GRIT): Inspector and Designer Version			

Course Title	Class Date(s)	Instructor's Signature	Successful Completion Date
11. DEQ Erosion and Sediment Control – Inspector Level			
12. DEQ Stormwater Management – Inspector Level			

**Construction Inspector Trainee  
Required Technical “On-the-Job” Element Sets**

<b>Job Element Set:</b>	Refers to a group of related tasks or job elements to be completed by each Trainee.
<b>Road &amp; bridge Specification Series: 2007</b>	The numerical reference to a Road & Bridge Specification series. Example: The 100 series refers to General Provisions, the 300 series to Roadway construction, etc.
<b>Official Completion Date:</b>	<b>Official Completion Date:</b> The date that one of the <u>Company’s Designated Officials (Senior Inspector, Construction Manager, or Engineer)</u> certifies that the Trainee has successfully completed all the related job elements in that specific set.

## CONSTRUCTION INSPECTOR TRAINEE

### REQUIRED TECHNICAL “ON-THE-JOB” ELEMENT SETS

<b>Trainee’s Name:</b>			<b>DATE EMPLOYED:</b>
<b>Job Element Set</b>	<b>Road &amp; Bridge Specifications Series</b>	<b>Official Completion Date</b>	<b>Company Designated Official Signature</b>
<b>GENERAL ORIENTATION (2 TOTAL SETS)</b>			
1. Explain Project Organizational Hierarchy			
2. Explain Company’s Organizational Hierarchy			
<b>GENERAL PROVISIONS (7 TOTAL SETS)</b>			
1. Control of Work (Project Procedures)	100		
2. Control of Work (Construction Stakes, Lines, & Grades) <b>Note:</b> Includes Slope Staking & Bridge Stakeouts	100		

<b>Trainee's Name:</b>			
<b>Job Element Set</b>	<b>Road &amp; Bridge Specifications Series</b>	<b>Official Completion Date</b>	<b>Company Designated Official Signature</b>
3. Control of Material (Materials Entry Data)	100		
4. Control of Work (Disposal Areas)	100		
5. Environmental Protection (Permits, Certificates, Licenses, & Stipulations)	100		
6. Prosecution & Progress of Work (Progress Reports)	100		
7. Measurement of Payment (Computerized Monthly Estimates)	100		

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<b>Trainee's Name:</b>			
<b>Job Element Set</b>	<b>Road &amp; Bridge Specifications Series</b>	<b>Official Completion Date</b>	<b>Company Designated Official Signature</b>
<b>ROADWAY CONSTRUCTION (14 TOTAL SETS)</b>			
1. Clearing & Grubbing	300		
2. Drainage Structures (Pipe & Box Culverts)	300		
3. Earthwork (Borrow Material: Borrow Excavation & Select Borrow)	300		
4. Earthwork (Excavation & Embankments)	300		
5. Earthwork (Undercut Excavation & Backfill)	300		

<b>Trainee's Name:</b>			
<b>Job Element Set</b>	<b>Road &amp; Bridge Specifications Series</b>	<b>Official Completion Date</b>	<b>Company Designated Official Signature</b>
<b>ROADWAY CONSTRUCTION (14 TOTAL SETS)</b>			
6. Subgrade & Shoulders	300		
7. Soils Compaction Tests	300		
8. Nuclear Compactions	300		
9. Hydraulic Cement Stabilization (Soil Cement) Or Lime Stabilization	300		
10. Hydraulic Cement Stabilization (Cement-Stabilized Subbase/Aggregate)	300		

<b>Trainee's Name:</b>			
<b>Job Element Set</b>	<b>Road &amp; Bridge Specifications Series</b>	<b>Official Completion Date</b>	<b>Company Designated Official Signature</b>
<b>ROADWAY CONSTRUCTION (14 TOTAL SETS)</b>			
11. Subbase Course (& Aggregate Base Course)	300		
12. Liquid Bituminous Material	300		
13. Asphalt Concrete Pavement	300		
14. Concrete Testing	300		
<b>BRIDGES &amp; STRUCTURES (12 TOTAL SETS)</b>			
1. Structural Excavation (& Foundations)	400		
2. Pile Driving (Sheet Piles & Bearing Piles)	400		

<b>Trainee's Name:</b>			
<b>Job Element Set</b>	<b>Road &amp; Bridge Specifications Series</b>	<b>Official Completion Date</b>	<b>Company Designated Official Signature</b>
<b>BRIDGES &amp; STRUCTURES (12 TOTAL SETS)</b>			
3. Form Checking - Structures	400		
4. Hydraulic Cement Concrete Operations (Concrete Placing-Structures)	400		
5. Bridge Deck Construction (Placing & Finishing Bridge Decks)	400		
6. Construction Joints, Preformed Elastomeric Joint Sealer, & Elastomeric Expansion Dams (Expansion & Construction Joints)	400		

<b>Trainee's Name:</b>			
<b>Job Element Set</b>	<b>Road &amp; Bridge Specifications Series</b>	<b>Official Completion Date</b>	<b>Company Designated Official Signature</b>
<b>BRIDGES &amp; STRUCTURES (12 TOTAL SETS)</b>			
7. Reinforcing Steel	400		
8. Steel Structures (Structures Steel) or Prestressed Concrete Beams	400		
9. Dismantling & Removing Existing Structures or Removing Portions of Existing Structures	400		
10. Rip Rap	400		
11. Concrete Slope Protection	400		
12. Damp-proofing	400		

<b>Trainee's Name:</b>			
<b>Job Element Set</b>	<b>Road &amp; Bridge Specifications Series</b>	<b>Official Completion Date</b>	<b>Company Designated Official Signature</b>
<b>INCIDENTIAL CONSTRUCTION (20 TOTAL SETS)</b>			
1. Underdrains	500		
2. Incidental Concrete Construction	500		
3. Sidewalks, Steps & Handrails	500		
4. Guardrail & Steel Median Barriers	500		
5. Retaining Walls	500		
6. Fences (Fencing)	500		
7. Demolition of Pavement & Obscuring Roadway	500		

<b>Trainee's Name:</b>			
<b>Job Element Set</b>	<b>Road &amp; Bridge Specifications Series</b>	<b>Official Completion Date</b>	<b>Company Designated Official Signature</b>
<b>INCIDENTIAL CONSTRUCTION (20 TOTAL SETS)</b>			
8. Patching Hydraulic Cement Concrete Pavement	500		
9. Relocating or Modifying Existing Miscellaneous Items	500		
10. Allaying Dust	500		
11. Maintaining Traffic (Maintenance of Traffic)	500		
12. Mobilization	500		
13. Field Office	500		
14. Planning Pavement (Milling & Cold Planning Only)	500		

<b>Trainee's Name:</b>			
<b>Job Element Set</b>	<b>Road &amp; Bridge Specifications Series</b>	<b>Official Completion Date</b>	<b>Company Designated Official Signature</b>
<b>INCIDENTIAL CONSTRUCTION (20 TOTAL SETS)</b>			
15. Demolition of Buildings & Clearing Parcels	500		
16. Contractor Construction Surveying	500		
17. Trainees on Construction Projects	500		
18. Sound Barrier Walls	500		
19. Utility Coordinator and Water & Sanitary Sewer Facilities (Utilities Inspection)	500		
20. Mailbox Post	500		

<b>Trainee's Name:</b>			
<b>Job Element Set</b>	<b>Road &amp; Bridge Specifications Series</b>	<b>Official Completion Date</b>	<b>Company Designated Official Signature</b>
<b>ROADSIDE DEVELOPMENT (1 SET)</b>			
1. Topsoil & Seeding (Topsoil, Seeding and Mulching)	600		
<b>TRAFFIC CONTROL DEVICES (5 TOTAL SETS)</b>			
1. General	700		
2. Traffic Signs	700		
3. Traffic Signals (Traffic Signalization)	700		
4. Pavement Markings & Markers	700		
5. Lighting Systems (Electrical Work & Conduit)	700		

<b>Trainee's Name:</b>			
<b>Job Element Set</b>	<b>Road &amp; Bridge Specifications Series</b>	<b>Official Completion Date</b>	<b>Company Designated Official Signature</b>
<b>MISCELLANEOUS (6 SETS)</b>			
6. Basic Plan Reading	-		
7. Surveying Checklist	-		
8. Level Care & Use	-		
9. Transit Care & Use	-		
10. Project Preparation	-		
11. Project Finalization	-		

## **GLOSSARY OF ACTION VERBS:**

<b>Applies</b> ⇒	Puts to use for a purpose; uses knowledge, skills and abilities, reference materials, or equipment in a particular situation or in completing a task.
<b>Attends</b> ⇒	Is present at.
<b>Calculates</b> ⇒	Determines by mathematical or statistical processes or methods.
<b>Calibrates</b> ⇒	Prepares for use; adjusts or sets for proper use or functioning.
<b>Checks</b> ⇒	Compares with a reference, prescribed procedures/guidelines, or plans/drawings for compliance by firsthand observation.
<b>Completes</b> ⇒	Finishes the task with confidence and little or no hesitation nor prompting.
<b>Computes</b> ⇒	Determines by mathematical or statistical processes.
<b>Confirms</b> ⇒	Insures the accuracy of, consistency of, or completeness of; verifies the quality, performance or execution of; makes sure or certain that.
<b>Corrects</b> ⇒	Eliminates errors or defects.
<b>Defines</b> ⇒	States the limits of; gives the distinguishing characteristics of.
<b>Demonstrates</b> ⇒	Exhibits; shows; displays; reveals; makes evident.
<b>Describes</b> ⇒	Gives an account in words that create a visual image in the minds of others.
<b>Enters</b> ⇒	Records; writes down in a report, diary, log, or list; to make an entry of; places on a spreadsheet or database.
<b>Establishes</b> ⇒	Sets up or creates methods, procedures, or criteria.
<b>Explains</b> ⇒	Provides sufficient information/evidence to demonstrate a good understanding of the nature of short references or procedures with limited/little prompting(1 or no cue or reminder).
<b>Explains in general terms</b> ⇒	Provides sufficient information/evidence to demonstrate a broad understanding of the nature of lengthy references or procedures with 3 or less prompts (cues or reminders).
<b>Insures</b> ⇒	Makes sure or certain that; guarantees; verifies the quality, performance or execution of; confirms the accuracy of, consistency of, or completeness of.

<b>Interprets ⇒</b>	Understands the meaning of; gives or explains the meaning to others.
<b>Investigates ⇒</b>	Examines; investigates; measures; tests; inquires into methodically; probes.
<b>Lists ⇒</b>	Enumerates; itemizes.
<b>Locates ⇒</b>	Finds.
<b>Maintains ⇒</b>	Updates, modifies, or changes routinely; insures that equipment will function properly, readily and easily without much effort and time by storing, caring for, and calibrating it correctly.
<b>Performs ⇒</b>	Completes the task with confidence and little or no hesitation nor prompting by others.
<b>Plots ⇒</b>	Graphically or pictorially shows or displays information and numerical data such as elevations, dimensions, directions, etc.
<b>Probes ⇒</b>	Examines; investigates; measures; tests; inquires into methodically; investigates.
<b>Reads ⇒</b>	Interprets; understands the meaning of; gives or explains the meaning to others.
<b>Recognizes ⇒</b>	Identifies visually or based on testing
<b>Selects ⇒</b>	Chooses or decides on one, or a few from several possibilities.
<b>Serves as ⇒</b>	Acts in the same capacity as and with the same authority as.
<b>Solves ⇒</b>	Demonstrates correct usage of knowledge, skills, abilities, information or procedures in a given situation.
<b>Uses ⇒</b>	Regularly utilizes or takes advantage of information available or contained in a reference.
<b>Verifies ⇒</b>	Confirms firsthand the accuracy of, consistency of, or completeness of; makes certain that.

*100 SERIES*

**GENERAL PROVISIONS**

**CONTROL OF WORK**  
**(PROJECT PROCEDURES)**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Uses the VDOT Construction Manual as a reference.		
Explains the order of contract items as outlined in Section 105.15 of current VDOT Road & Bridge specification Book		
Explains the procedure to solve a discrepancy between the items in a contract in terms of order (Section 105.05)		
Demonstrates a method for updating (identifying & referencing changes shown in the contract) the <u>Road &amp; Bridge Specifications</u> book for a small project with a range of approximately 20 – 40 pay items.		

*100 SERIES*

**GENERAL PROVISIONS**

CONTROL OF WORK  
(PROJECT PROCEDURES)

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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*100 SERIES*

**GENERAL PROVISIONS**

**CONTROL OF WORK**  
**(PROJECT PROCEDURES)**

*CQIP CHECKLIST*

**SECTION**

**QUESTIONS**

- |           |                                                                                                                            |
|-----------|----------------------------------------------------------------------------------------------------------------------------|
| 105.03(1) | Are project records being maintained in accordance with the guidelines set forth in Appendix C of the Construction Manual? |
| 105.03(2) | Does the Inspector promptly notify the Contractor of non-conformance with the contract documents by the Contractor?        |

*100 SERIES*

**GENERAL PROVISIONS**

CONTROL OF WORK

(CONSTRUCTION STAKES, LINES AND GRADES: SLOPE  
STAKING & BRIDGE STATEKOUTS

<b>Job Element</b>	<b>Date</b>	<b>Monitoring Inspector's Signature</b>
Explains the use and meanings of slope stakes.		
Explains when a slope stake is offset.		
Verifies the contractor's survey layout of either a roadway or structure at a minimum of two (2) stations.		

*100 SERIES*

**GENERAL PROVISIONS**

CONTROL OF WORK

(CONSTRUCTION STAKES, LINES AND GRADES: SLOPE  
STAKING & BRIDGE STAKEOUTS)

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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*100 SERIES*

**GENERAL PROVISIONS**

CONTROL OF WORK

(CONSTRUCTION STAKES, LINES AND GRADES: SLOPE  
STAKING & BRIDGE STAKEOUTS)

*CQIP CHECKLIST*

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
517.01(1)	Is the contract survey in accordance with the special provisions and the Department's current survey manual? (Ref.: Special Provisions)
517.02(5)	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?
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).
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).
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).

*100 SERIES*

**GENERAL PROVISIONS**

**CONTROL OF MATERIAL**  
**(MATERIALS ENTRY DATA)**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains why a Materials Notebook should be properly maintained on a project.		
Describes the 4 major types of acceptance methods for highway materials.		
Enters the required information in the Summary of Required Test Documentation of the Materials Notebook for a minimum of 16 different materials (4 per acceptance method).		
For the same materials above, enters the required information in the Summary of Estimated and Pay Quantities of the Materials Notebook.		

*100 SERIES*

**GENERAL PROVISIONS**

CONTROL OF MATERIAL  
(MATERIALS ENTRY DATA)

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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*100 SERIES*

**GENERAL PROVISIONS**

**CONTROL OF MATERIAL  
(MATERIALS ENTRY DATA)**

*CQIP CHECKLIST*

**SECTION**

**QUESTION**

- |        |                                                                                                                                                                                                                                |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 106.02 | Has the Contractor provided the Engineer with a copy of all invoices for materials delivered to the project?                                                                                                                   |
| 106.03 | Has the Contractor submitted for 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 the performing any work? |
| 106.04 | Has the Contractor submitted and had approved all information required in this section before utilizing a disposal area?                                                                                                       |
| 106.09 | Are materials being handled in a manner that will preserve their quality and fitness for the work?                                                                                                                             |
| 106.10 | Have materials that do not conform to the specifications been replaced, or if repaired, approved by the Engineer prior to use?                                                                                                 |

*100 SERIES*

**GENERAL PROVISIONS**

**CONTROL OF MATERIAL**  
**(DISPOSAL AREAS)**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains the procedures that a contractor must follow in securing the approval of a disposal area.		
Explains the contents of a contractor's site plan.		
Explains the responsibilities of both the Contractor and VDOT as they pertain to disposal areas.		

*100 SERIES*

**GENERAL PROVISIONS**

CONTROL OF MATERIAL  
(DISPOSAL AREAS)

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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*100 SERIES*

**GENERAL PROVISIONS**

**CONTROL OF MATERIAL**  
**(DISPOSAL AREAS)**

*CQIP CHECKLIST*

**SECTION**

**QUESTIONS**

106.03

Has the Contractor submitted for 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?

106.04

Has the Contractor submitted and had approved all information required in this section before utilizing a disposal area?

**100 SERIES**

**GENERAL PROVISIONS**

**ENVIRONMENTAL PROTECTION**  
**(PERMITS, CERTIFICATES, LICENSES & STIPULATIONS)**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains in general terms the section on Environmental Stipulations.		
Explains in general terms the section on Permits, Certificates, and Licenses.		
Verifies that the contractor has an employee certified by the Department of Conservation and Recreation on the project during any land-disturbing operations.		
Verifies that the contractor corrects any erosion & siltation problems following a heavy rainfall.		
Enforces all environmental specifications as they pertain to a stream/wetland crossings.		
Describes a minimum of six different erosion and siltation controls. (Reference the <u>Erosion and Sediment Control Handbook</u> .)		
Explains the difference between a Stormwater Management Basin and a Temporary Settlement Basin. (Reference the <u>Erosion and Sediment Control Handbook</u> .)		
Explains the specification pertaining to burning debris from construction operations.		

*100 SERIES*

**GENERAL PROVISIONS**

ENVIRONMENTAL PROTECTION  
(PERMITS, CERTIFICATES, LICENSES & STIPULATIONS)

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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*100 SERIES*

**GENERAL PROVISIONS**

**ENVIRONMENTAL PROTECTION**  
**(PERMITS, CERTIFICATES, LICENSES & STIPULATIONS)**

*CQIP CHECKLIST*

<b><u>SECTIONS</u></b>	<b><u>QUESTIONS</u></b>
107.01	Prior to commencing work, did the Contractor notify or request the utility company to locate their underground utilities?
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?
107.19(b)	Has the Contractor submitted and had approved a plan of operations showing the design and method of proposed structural operations on railway right-of-way?
107.09(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?
107.11	Are the explosives stored and handled as required by the governing rules and regulations?
107.08	Has the Contractor furnished the Engineer a copy of executed written agreement(s) prior to entering private property?

*100 SERIES*

**GENERAL PROVISIONS**

**PROSECUTION AND PROGRESS OF WORK**  
**(PROGRESS REPORTS)**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains the various types of shutdowns.		
Enters the shutdown information on a Minimum of two (2) Progress Reports.		
Explains the various types of time extensions.		
Enters the time extension information on these two (2) Progress Reports.		
Determines the correct work-performed-to-date on these two (2) Progress Reports.		
Completes the "remarks column" on these two (2) Progress Reports.		
Enters the realistic date of completion on these two (2) Progress Reports.		
Verifies the accuracy of all the various details on these two (2) Progress Reports with the Lead Projector Inspector.		

*100 SERIES*

**GENERAL PROVISIONS**

PROSECUTION AND PROGRESS OF WORK  
(PROGRESS REPORTS)

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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*100 SERIES*

**GENERAL PROVISIONS**

**PROSECUTION AND PROGRESS OF WORK**  
**(PROGRESS REPORTS)**

*CQIP CHECKLIST*

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
105.06	Are subletting requests being handled in accordance with the requirements of this section?
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?
105.05	Do the workers and equipment satisfy the requirements of this section?
105.03(a)	Has the Engineer had to suspend the work because the Contractor failed to carry out provisions of the contract?

*100 SERIES*

**GENERAL PROVISIONS**

**MEASUREMENT AND PAYMENT**  
**(COMPUTERIZED MONTHLY ESTIMATES)**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Completes the following reports for one monthly estimate: 1. Summary to Contractor 2. C-79 Report 3. Overrun Report 4. Charge Summary		

*100 SERIES*

**GENERAL PROVISIONS**

MEASUREMENT AND PAYMENT  
COMPUTERIZED MONTHLY ESTIMATES

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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*200 SERIES*

**MATERIALS**

**THIS SECTION OF THE JOB BOOK HAS BEEN  
RESERVED FOR ANY FUTURE UPDATES TO  
INCLUDE JOB ELEMENT SETS FOR THE 200  
SERIES MATERIALS.**

*CITP JOB BOOK - 300 SERIES*

**ROADWAY CONSTRUCTION**

**CLEARING AND GRUBBING**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains in general terms the description and procedures in Section 301- Clearing and Grubbing.		
Maintains the necessary records/documentation related to clearing and grubbing.		
Explains the three (3) different methods of measurement and payment.		
Describes the procedures for the preservation of historical grave sites as referenced in 107.16(d).		
Explains the requirements for clearing and grubbing as outlined in the CQIP questions, i.e., area limits, depth, perishable materials & objects, and disposal of trees & vegetation.		

*CITP JOB BOOK - 300 SERIES*  
**ROADWAY CONSTRUCTION**

**CLEARING AND GRUBBING**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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*CITP JOB BOOK - 300 SERIES*

**ROADWAY CONSTRUCTION**

**CLEARING AND GRUBBING**

*CQIP CHECKLIST*

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
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?
301.02(1)	Did the Contractor install erosion and siltation control devices prior to beginning clearing or grubbing operations?
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?
301.02(3)	Have all items that will be less than 5 feet below the top of earthwork within the area directly below the pavement and shoulders, been removed?
301.02(4)	Are stumps, other perishable materials, and non-perishable objects that are left in place in accordance with this section?
301.02(5)	Have trees and vegetation been disposed of in accordance with this Section?

*CITP JOB BOOK - 300 SERIES*

**ROADWAY CONSTRUCTION**

**DRAINAGE STRUCTURES**

**(PIPE & BOX CULVERTS)**

(2 pages)

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains in general terms the specifications related to Drainage Structures – Section 302.		
Describes <b>seven (7) of the eleven (11)</b> different types of structures covered by the term “drainage structures.”		
Maintains necessary records associated with at least one drainage structure.		
Explains the quality assurance requirements for pipe culverts (Sections 232 and 302.)		
Explains the proper methods of measurement and payment for pipe and box culverts.		
Explains the definition of “minor structure excavation.”		
Determines the dimensions of minor structure excavation at a drainage structure.		
Verifies compliance with the excavation and bedding requirements during the placement of a drainage structure.		
<b>Job elements continued on next page.</b>		

**CITP JOB BOOK - 300 SERIES**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Verifies that a drainage structure is being properly placed in terms of alignment and elevation.		
Interprets correctly the box culvert standards for one such structure.		
Checks the line and grade of a box culvert.		
Verifies that the contractor correctly forms and places the concrete and reinforcing steel.		
Performs the necessary testing procedures for concrete.		
Ensures that the contractor maintains correct drainage at the box culvert during construction.		
Ensures that stream diversions are installed in accordance with an approved in-stream plan, when required.		
Checks the following for compliance at either a pipe culvert or a box culvert: <ul style="list-style-type: none"> <li>• Foundation</li> <li>• Backfilling procedures &amp; compaction</li> <li>• Structure location in relation to stakeout</li> <li>• Cover above the structure</li> <li>• Skew</li> </ul>		

**ROADWAY CONSTRUCTION**

DRAINAGE STRUCTURES

(PIPE & BOX CULVERTS)

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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# *CITP JOB BOOK - 300 SERIES*

## **ROADWAY CONSTRUCTION**

### **DRAINAGE STRUCTURES**

#### **PIPE & BOX CULVERTS**

#### *CQIP CHECKLIST*

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
302.02	Is the pipe the required gage and strength and do the other materials meet the requirements of this section?
302.03(2b)1	Has the pipe bedding material been lightly and uniformly compacted?
302.03(a)	Have all pipe culverts been checked to determine if damaged materials have been repaired or replaced?
302.03(a2a)2	Have the pipe culvert foundations been explored by the contractor below the bottom of the excavation?
302.03(a2a)3	Is the foundation firm, but not unyielding for its full length and width and excavated according to the standard drawings?
302.03(a2b)2	Has the bedding material been placed and shaped in accordance to this section?
302.03(a2c)2	Has the pipe been placed in accordance with this Section?
302.03(a2d)	Are the joints of the pipe tight and properly sealed?
302.03(a2g)2	Is the backfill placed in uniform layers at the specified thickness?
302.03(a2g)3	Is the backfill placed simultaneously and compacted on both sides of the pipe as specified?
302.03(a2g)4	Has all rock over 2 inches in it greatest dimension been removed from within 12 inches of the pipe?
302.03(a2g)5	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?
302.03(b1a)	Does the grade of the throat section of the inlets meet the appropriate grade of the gutter?
302.03(b1b)	Is the pipe opening in the precast units not more than 8 inches larger than the outside diameter of the pipe?
302.03(b1c)	Has the void between the pipe and precast structures been filled as specified?

## *CITP JOB BOOK - 300 SERIES*

- 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?
- 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?
- 302.03(b1f)1 Have the chamber sections been installed in the plumb position?
- 302.03(b1f)2 Do the throat and top sections have positive restraints and interlocks to prevent displacement?
- 302.03(b1f)3 Has the throat section been installed to conformed with the normal slope of the finished grade?
- 302.03(b2b) Has the buildup section been constructed as specified?
- 302.03(b2b) Have exposed reinforcing bars, inserts, and plates intended for bonding with future extensions of precast arches been protected from corrosion?
- 302.03(b2d) Have the joints between precast arch units been sealed using preformed plastic or mastic gaskets or grout?
- 302.03(b3c)1 Has preformed plastic or mastic gaskets been used to seal the joints between precast box culvert units?
- 302.03(b3c)2 Has the required buffer zone been provided between lines of box culvert units and has it been backfilled as specified?
- 302.03(b3c)3 Have weep holes been provided in the precast box culvert as required?
- 302.03(b3d)1 Has sufficient anchorage been provided at the terminus of the precast box culvert units?
- 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?
- 302.03(b3f) Has a minimum of 6 inches thickness of bedding been placed for the precast box culvert foundation?
- 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, spring boxes, intake boxes and end walls?
- 302.03(c)2 Has the adjustment of existing drainage structures been performed in accordance with this section?

*CITP JOB BOOK - 300 SERIES*

**ROADWAY CONSTRUCTION**

**EARTHWORK (BORROW MATERIALS: BORROW  
EXCAVATION AND SELECT BORROW)**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Describes the process of obtaining the necessary Approvals in order for the contractor to obtain the rights to use a borrow site/pit.		
Properly applies the specifications related to borrow excavation and select borrow (Section 303).		
Completes the necessary soils testing of the borrow excavation and select borrow.		
Completes the measurement of the volume of a borrow area by the proper methods.		
Enters the necessary records associated with borrow materials.		

*CITP JOB BOOK - 300 SERIES*

**ROADWAY CONSTRUCTION**

EARTHWORK (BORROW MATERIALS: BORROW  
EXCAVATION AND SELECT BORROW)

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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# *CITP JOB BOOK - 300 SERIES*

## **ROADWAY CONSTRUCTION**

### **EARTHWORK (BORROW MATERIALS: BORROW EXCAVATION AND SELECT BORROW)**

#### *CQIP CHECKLIST*

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
303	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.
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?
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 plan and allow for drainage?
303.04(a)04	Have cisterns, septic tanks, and other structures been filled with broken foundation masonry or rock placed in uniform layers and thoroughly compacted?
303.04(a)5	Have wells been closed in accordance with the section on Demolition of Buildings and Clearing Parcels?
303.04(a)6	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?
303.04(a)7	Is the roadway being graded in such a manner that will provide adequate drainage?
303.04(a)8	In areas where rock or boulders were encountered during excavation, were they graded in accordance with specified methods for standard RU-1 undercut?
303.04(a)9	Did the Contractor immediately stop excavation and notify the Engineer when solid rock was not encountered at the depth indicated on the plans?
303.04(a)10	Has excavation and embankment construction been confined to the minimum area necessary to accommodate the Contractor's equipment and work force engaged in the earth moving work?
303.04(c)	Is undercut excavation being removed, measured and paid for in accordance with this section and material to be disposed of in accordance with Section 106.04 of the general provisions on disposal areas?

## *CITP JOB BOOK - 300 SERIES*

- 303.04(e)2 Has the excavation for structures been carried to foundation materials satisfactory to the Engineer?
- 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?
- 303.04(e)4 Has the unsuitable material been disposed of in accordance with Section 106.04 of the general provisions on disposal areas?
- 303.04(g)1 Has the opening to be backfilled been dewatered prior to placing any backfill material?
- 303.04(g)2 Has the backfill material been placed in horizontal layers not more than 6 inches in thickness, loose measurement, and compacted?
- 303.04(g)3 Has the backfill been placed in a manner to deter impoundment of water and facilitate existing drainage?
- 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?
- 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?
- 303.04(h)2 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?
- 303.04(h)3 Wherever sufficient right of way exists, were surplus materials used to widen embankments and flatten fill slopes as directed by the Engineer?
- 303.04(h)4 Has the placement of geotextile drainage fabric under rock fills been performed in accordance with the Section 414, Riprap?
- 303.04(h)5 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?
- 303.04(h)6 Have embankments placed in swampy 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?
- 303.04(h)7 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 fill?

## *CITP JOB BOOK - 300 SERIES*

- 303.04(h)8 After the original course of fill is placed in swampy areas, is the remainder of the embankment constructed in layers and compacted in accordance with the specifications?
- 303.04(h)9 Has the surface of the existing road been scarified to such degree that permits an ample bond between old and new materials?
- 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?
- 303.04(h)11 Have cement-stabilized courses underlying the demolished pavements been removed when they are 5 feet or less below subgrade elevation? (Ref.: Section 508.02(a)3 of Demolition of Pavement and Obscuring Roadway.)
- 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?
- 303.04(h)13 Have existing slopes been benched to receive fill materials as specified?
- 303.04(h)14 Are embankments being constructed in uniform layers of specified thickness over the entire fill area?
- 303.04(h)15 Is the embankment being rolled to the outside of the fill and compacted at  $\pm 20$  percent of optimum moisture content to a density of at least 95 percent of theoretical maximum density?
- 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?
- 303.04(h)18 As the compaction of each layer progresses, has continuous leveling and manipulation been performed to ensure uniform density?
- 303.04(h)19 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?
- 303.04(h)20 Are rock fills being constructed as specified?
- 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?
- 303.04(i)1 Has the Contractor expedited construction of embankment fills to provide the maximum time possible for settlement as specified?

## *CITP JOB BOOK - 300 SERIES*

- 303.04(i)2 Is al settlement plate and surcharge embankment construction performed in accordance with this section?
- 303.04(j) Are hydraulic embankments constructed in accordance with this section?
- 303.04(k)1 Is the surplus material being disposed of in accordance with Section 106.04, Disposal Areas?
- 303.05(b) Has the finished grade of the top of earthwork and all slopes been constructed within the specified tolerances of this section?

*CITP JOB BOOK - 300 SERIES*

**ROADWAY CONSTRUCTION**

**EARTHWORK (EXCAVATION AND EMBANKMENTS)**

(2 PAGES)

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains in general terms the overall procedures (Section 303) related to excavation and embankment.		
Maintains the proper records.		
Describes the proper methods and payment methods related to excavation and embankments (Section 303)		
Performs the proper testing requirements.		
Checks cut and fill slope ratios for compliance with the plans and OSHA regulations.		
Determines the quantity of excavation of a roadway section by cross sectioning the area.		
Explains restrictions on the placement of rock fill in embankments.		
Explains the procedures for the removal of such items as concrete pavement, curb & gutter, etc.		
Determines whether or not the proper compaction equipment is being used.		
Explains the prescribed procedures associated with the hauling, spreading, and benching of a fill.		
<b>Note: Job elements continued on next page.</b>		

***CITP JOB BOOK - 300 SERIES***

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Verifies that a roadway fill section is being properly placed.		
Explains in general terms the prescribed tolerances on earthwork.		
Verifies that the earthwork in a roadway section is being placed within the prescribed tolerances.		
Explains the need to properly drain earthwork.		
Verifies that an embankment is being placed in a manner to allow proper drainage.		
Explains in general terms the need for the additional specifications related to earthwork: <ul style="list-style-type: none"> <li>• Section 106 – Disposal Areas</li> <li>• Section 414 – Riprap</li> <li>• Section 508 – Demolition</li> <li>• Section 516 – Demolition of Buildings And Clearing Parcels</li> </ul>		

*CITP JOB BOOK - 300 SERIES*

**ROADWAY CONSTRUCTION**

**EARTHWORK (EXCAVATION AND EMBANKMENTS)**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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# *CITP JOB BOOK - 300 SERIES*

## **ROADWAY CONSTRUCTION**

### **EARTHWORK (EXCAVATION AND EMBANKMENTS)**

#### *CQIP CHECKLIST*

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
303	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?
303.04(a)2	Have underground tanks, existing foundations, and slabs located within the construction limits been removed and disposed of in an approved manner?
303.04(a)3	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 plan and allow for drainage?
303.04(a)4	Have cisterns, septic tanks, and other structures been filled with broken foundation masonry or rock placed in uniform layers and thoroughly compacted?
303.04(a)5	Have wells been closed in accordance with the section on Demolition of Buildings and Clearing Parcels?
303.04(a)6	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?
303.04(a)7	Is the roadway being graded in such a manner that will provide adequate drainage?
303.04(a)8	In areas where rock or boulders were encountered during excavation, were they graded in accordance with specified methods for standard RU-1 undercut?
303.04(a)9	Did the Contractor immediately stop excavation and notify the Engineer when solid rock was not encountered at the depth indicated on the plans?
303.04(a)10	Has excavation and embankment construction been confined to the minimum area necessary to accommodate the Contractor's equipment and work force engaged in the earth moving work?
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?

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- 303.04(e)2 Has the excavation for structures been carried to foundation materials satisfactory to the Engineer?
- 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?
- 303.04(e)4 Has the suitable material been disposed of in accordance with Section 106.04 of the general provisions on disposal areas?
- 303.904(g)1 Has the opening to be backfilled been dewatered prior to placing any backfill material?
- 303.04(g)2 Has the backfill material been placed in horizontal layers not more than 6 inches in thickness, loose measurement, and compacted?
- 303.04(g)3 Has the backfill been placed in a manner to deter impoundment of water and facilitate existing drainage?
- 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?
- 303.04(h)2 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?
- 303.04(h)3 Wherever sufficient right of way exists, were surplus materials used to widen embankments and flatten fill slopes as directed by the Engineer?
- 303.04(h)4 Has the placement of geotextile drainage fabric under rock fills been performed in accordance with the Section 414, Riprap?
- 303.04(h)5 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?
- 303.04(h)6 Have embankments placed in swampy area 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?
- 303.04(h)7 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 fill?
- 303.04(h)8 After the original course of fill is placed in swampy areas, is the remainder of the embankment constructed in layers and compacted in accordance with the specifications?

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- 303.04(h)9 Has the surface of the existing road been scarified to such degree that permits an ample bond between old and new materials?
- 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?
- 303.04(h)11 Have cement-stabilized courses underlying the demolished pavements been removed when they are 1 meter or less below subgrade elevation? (Ref.: Section 508.02(a)3 of Demolition of Pavement and Obscuring Roadway)
- 303.04(h)12 Have cement-stabilized courses that are located more than 5 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?
- 303.04(h)13 Have existing slopes been benched to receive fill materials as specified?
- 303.04(h)14 Are embankments being constructed in uniform layers of specified thickness over the entire fill area?
- 303.04(h)15 Is the embankment being rolled to the outside of the fill and compacted at  $\pm$  20 percent of optimum moisture content to a density of at least 95 percent of theoretical maximum density?
- 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?
- 303.04(h)17 As the compaction of each layer progresses, has continuous leveling and manipulation been performed to ensure uniform density?
- 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?
- 303.04(h)19 Are rock fills being constructed as specified?
- 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?
- 303.04(i)1 Has the Contractor expedited construction of embankment fills to provide the maximum time possible for settlement as specified?
- 303.04(i)2 Is all settlement plate and surcharge embankment construction performed in accordance with this section?

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- 303.04(j) Are hydraulic embankments constructed in accordance with this section?
- 303.04(k)1 Is the surplus material being disposed of in accordance with Section 106.04, Disposal Areas?
- 303.05(b) Has the finished grade of the top of earthwork and all slopes been constructed within the specified tolerances of this section?

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**ROADWAY CONSTRUCTION**

EARTHWORK (UNDERCUT EXCAVATION AND BACKFILL)

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains in general terms the Specifications related to undercut excavation including the proper methods of measurement and payment for undercut (Section 303.)		
Recognizes potential unsuitable materials on the project.		
Contacts the correct person(s) for verification that the material is unsuitable.		
Explains who on the project can authorize undercut.		
Verifies that an undercut section is being completed properly.		
Verifies that an undercut section is properly protected prior to backfilling.		
Verifies that an undercut section is properly backfilled.		
Maintains appropriate records related to undercut excavation.		
Explains in general terms the Specifications related to backfill including the proper methods for measurement and payment (Section 303.)		
Describes the proper backfilling technique.		
Completes the proper testing requirements for the backfill.		
Explains how unsuitable material is handled when it is found to be suitable during construction.		
Verifies that backfill is properly layered and scarified.		

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**ROADWAY CONSTRUCTION**

**EARTHWORK (UNDERCUT EXCAVATION AND  
BACKFILL)**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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*CITP JOB BOOK - 300 SERIES*

**ROADWAY CONSTRUCTION**

**SUBGRADE AND SHOULDERS**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Checks grade requirements on a 1,000-foot section of roadway (to include both tangent & radial sections) for compliance with plan profiles.		
Recognizes characteristics of unsuitable subgrade.		
Explains subgrade and shoulder requirements in terms of: <ul style="list-style-type: none"><li>• Compaction</li><li>• Drainage of the subgrade</li></ul>		

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**ROADWAY CONSTRUCTION**

**SUBGRADE AND SHOULDERS**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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# *CITP JOB BOOK - 300 SERIES*

## **ROADWAY CONSTRUCTION**

### **SUBGRADE AND SHOULDERS**

#### *CQIP CHECKLIST*

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
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?
305.03(a1)2	Has all unsuitable materials been removed and replaced with suitable material that will permit compaction?
305.03(a1)3	Has the subgrade been compacted within plus or minus 20 percent optimum moisture and to 100% density with consideration of +4 material?
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?
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?
305.03(e)	Was the aggregate shoulder material placed in accordance with the applicable specifications governing the type material or construction being used?
305.03(e)	Was the aggregate material compacted within plus or minus 2 percentage points of optimum moisture to the required density?
305.03(e)	If the aggregate shoulder material became over consolidated prior to final finishing, was it scarified for the approximate depth, reshaped, and recompactd to conform to the typical cross section?
305.03(e)	Were the shoulders constructed simultaneously or in advance with non-rigid types of base or surface courses to prevent spreading of the base or surface materials.
305.03(e)	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?

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**ROADWAY CONSTRUCTION**

**SOILS COMPACTION TESTS**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains the necessity of soil compaction tests and the applicable specifications.		
Explains how an area is selected for testing.		
Explains the frequency requirements for tests.		
Explains the size requirements of the testing holes.		
Explains calibration requirements of testing sand.		
Completes required computations for soil compaction tests.		
Selects additional information for tests i.e., elevation, station, etc., as needed.		
Completes proctor mold and associated computations.		
Explains actions to be taken upon test failures.		
Plot/records profile information.		
Determines moisture content and requirements.		
Properly cares for testing equipment.		

**ROADWAY CONSTRUCTION**

**SOILS COMPACTION TESTS**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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**ROADWAY CONSTRUCTION**

**SOILS COMPACTION TESTS**

*CQIP CHECKLIST*

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
305.03(a1)2	Has all unsuitable materials been removed and replaced with suitable material that will permit compaction?
305.03(a1)3	Has the subgrade been compacted within plus or minus 20 percent optimum moisture and to 100% density with consideration of +4 material?
306.03(f)	Has the material been compacted and finished in accordance with this section?
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?
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?
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?
401.03(ii)2	Are the excavated spaces backfilled in uniform lifts and compacted as required by this section?

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**ROADWAY CONSTRUCTION**

**NUCLEAR COMPACTION**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Completes nuclear compaction certification requirements.		
Uses the manual of operations for nuclear compaction.		
Wears the nuclear badge when working with nuclear compaction device.		
Calibrates the nuclear device.		
Uses the proper forms and charts.		
Establishes optimum roller pattern for one of the following: soils, aggregate, or asphalt.		
Properly cares for nuclear compaction device.		

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**ROADWAY CONSTRUCTION**

**NUCLEAR COMPACTION**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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*CITP JOB BOOK - 300 SERIES*

**ROADWAY CONSTRUCTION**

**HYDRAULIC CEMENT (SOIL CEMENT) or**  
**LIME STABILIZATION**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains in general terms the related specifications.		
Explains the weather limitations.		
Maintains necessary records.		
Determines proper methods of measurement and payment.		
Performs required testing procedures if applicable.		
Explains why soil cement or lime is used.		
Verifies depth during mixing the hydraulic cement or lime stabilization.		
Verifies the proper application of the cement or lime.		
Computes square yardage of manipulation.		
Verifies that curing operations comply with specifications.		
Verifies cement or lime is within the required tolerances.		

**ROADWAY CONSTRUCTION**

HYDRAULIC CEMENT (SOIL CEMENT) or  
LIME STABILIZATION

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## **ROADWAY CONSTRUCTION**

### **HYDRAULIC CEMENT (SOIL CEMENT) or LIME STABILIZATION**

#### *CQIP CHECKLIST*

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
307.02(a)	Has the cement been transported, stored and otherwise protected in accordance with Section 217, Hydraulic Cement Concrete?
307.04(1)	Was cement stabilization performed in accordance with specified weather limitations?
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?
307.05(a)1	Has the roadbed surface been graded to the approximate line, grade and cross section?
307.05(a)2	Is the surface sufficiently firm to support construction equipment and in such condition that the required compaction can be obtained?
307.05(b)1	Has the material in the road bed to be stabilized been scarified and pulverized with any objectionable objects and material retained on the 3 inch sieve removed prior to cement application?
307.05(b)1)1	Has the cement been applied uniformly and thoroughly blended by equipment capable of handling and spreading the cement as required?
307.05(b)1)2	Has the necessary water to obtain optimum moisture been added within one hour?
307.05(b)2)1	Have the mixed materials been transported and spread as required?
307.05(b)2)2	Has compaction of the cement-treated moisture been started within 60 minutes of the start of mixing at the plant?
307.05(c)1	Has the subgrade stabilization been compacted to the density required?

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<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
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?
307.05(c)3	Have the compacting and finishing operations produced a smooth, dense surface as specified?
307.05(c)4	Is the subbase or base stabilization compacted in accordance with the density requirements in specifications for aggregate base course?
307.05(d)	Have construction joints been installed as required?
307.05(e)1	Is the density of the completed work in compliance with the tolerances as specified?
307.05(e)2	Has the contractor corrected areas that are deficient in thickness by more than 25 mm?
307.05(f)	Has the stabilized course been protected and maintained in a satisfactory condition until accepted?

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**ROADWAY CONSTRUCTION**

HYDRAULIC CEMENT STABILIZATION  
(CEMENT-STABILIZED SUBBASE/AGGREGATE)

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains the associated specifications in general terms.		
Maintains necessary records.		
Determines proper methods of measurement and payment.		
Performs required testing procedures.		
Describes the weather limitations.		
Verifies the required time limit on placement and compaction.		
Verifies that proper equipment and placement methods are used.		
Explains the tolerances associated with cement stabilized subbase.		
Verifies that curing operations comply with specifications.		
Checks for compliance with requirements of cement stabilized subbase in terms of: 1. Compaction of subgrade stabilization 2. Finishing operations 3. Protection before acceptance		

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**ROADWAY CONSTRUCTION**

HYDRAULIC CEMENT STABILIZATION  
(CEMENT-STABILIZED SUBBASE/AGGREGATE)

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## **ROADWAY CONSTRUCTION**

### **HYDRAULIC CEMENT STABILIZATION** **(CEMENT-STABILIZED SUBBASE/AGGREGATE)**

#### *CQIP CHECKLIST*

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
307.02(a)	Has the cement been transported, stored and otherwise protected in accordance with Section 217, Hydraulic Cement Concrete?
307.04(1)	Was cement stabilization performed in accordance with specified weather limitations?
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?
307.05(a)1	Has the roadbed surface been graded to the approximate line, grade and cross section?
307.05(a)2	Is the surface sufficiently firm to support construction equipment and in such condition that the required compaction can be obtained?
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?
307.05(b)2	Has the aggregate sub base, aggregate base, select material and select borrow been mixed in accordance with the requirements of this section?
307.05(b1)1	Has the cement been applied uniformly and thoroughly blended by equipment capable of handling and spreading the cement as required?
307.05(b1)2	Has the necessary water to obtain optimum moisture been added within one hour?
307.05(b2)1	Have the mixed materials been transported and spread as required?
307.05(b2)2	Has compaction of the cement-treated mixture been started within 60 minutes of the start of mixing at the plant?
307.05(c)1	Has the subgrade stabilization been compacted to the density required?

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- 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?
- 307.05(c)4 Is the subbase or base stabilization compacted in accordance with the density requirements in specifications for aggregate base course?
- 307.05(d) Have construction joints been installed as required?
- 307.05(e)1 Is the density of the completed work in compliance with the tolerances as specified?
- 307.05(e)2 Has the contractor corrected areas that are deficient in thickness by more than 25 mm?
- 307.05(f) Has the stabilized course been protected and maintained in a satisfactory condition until accepted?

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**ROADWAY CONSTRUCTION**

SUBBASE COURSE (& AGGREGATE BASE COURSE)

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains the associated specifications in general terms.		
Maintains necessary records.		
Determines proper method of payment and measurement including calculations such as "How much a CY of stone weighs".		
Performs required testing procedures. Understands and can explain roller patterns, test strips and frequencies of tests taken.		
Explain what to check for when placing stone. Explain what makes a surface acceptable to have stone placed on it?		
Explains the tolerances associated with subbase and base materials.		
Explain what can cause material not to reach compaction requirements.		
Explain when an aggregate spreader may not be required.		

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**ROADWAY CONSTRUCTION**

SUBBASE COURSE (& AGGREGATE BASE COURSE)

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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**ROADWAY CONSTRUCTION**

**SUBBASE COURSE (& AGGREGATE BASE COURSE)**

*CQIP CHECKLIST*

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
308.03(1)	Has the material been placed on the subgrade using an aggregate spreader as specified?
308.03(2)	Has the subbase course been compacted at specified moisture plus or minus 20 percent and to the minimum of 100% density with consideration of +4 material?
308.03(3)	If the surface of the subbase becomes uneven or distorted and sets up in that condition, was it scarified, reshaped, and recompact?
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?
308.04	Does the depth of the subbase course meet the tolerances of the plan depth as specified?

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**ROADWAY CONSTRUCTION**

**LIQUID BITUMINOUS MATERIAL**

(Tack, Prime and Seal Coats, Asphalt Surface Treatment, and Penetration Surface Courses)

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains the associated specifications in general terms.		
Maintains necessary records.		
Determines proper methods of measurement and payment.		
Completes necessary testing procedures.		
Differentiates the uses of the various grades of liquid bituminous material.		
Accurately determines the quantity of material used from the distributor truck.		
Completes the correct sampling procedures.		
Properly checks application rate.		
Verifies that the surface was properly prepared prior to application.		
Explains the various types of covering materials and their applications.		
Verifies that the material was properly covered.		
Verifies liquid bituminous material requirements in terms of: <ul style="list-style-type: none"> <li>• Weather limitations</li> <li>• Cover materials</li> <li>• Protection of the prime coat</li> <li>• Cutback asphalt</li> <li>• Temperature requirements</li> </ul>		

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**ROADWAY CONSTRUCTION**

**LIQUID BITUMINOUS MATERIAL**

(Tack, Prime and Seal Coats, Asphalt Surface Treatment, and Penetration Surface Courses)

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## **ROADWAY CONSTRUCTION**

### **LIQUID BITUMINOUS MATERIAL**

**(Tack, Prime and Seal Coats, Asphalt Surface Treatment, and Penetration Surface Courses)**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
310.02	Does the type and grade of liquid asphalt comply with contract requirements?
310.03(1)	Does the liquid asphalt material application temperature conform to the requirements of table for Liquid Asphalt Application Temperature?
310.03(2)	During the application of asphalt, has care been taken to prevent spattering adjacent items?
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?
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?
310.03(6)	Has asphalt been applied at the specified rate per square yard?
310.03(7)	Has the tack coat been applied in accordance with the same weather limitations that apply to the course being placed?
311.02(b)	Do the cover materials conform to the requirements of the Specifications of aggregate materials?
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?
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?
311.03(3)	Has excess asphalt been removed at the junction of spreads?
311.03(4)	Has the prime been protected from traffic until the asphalt has penetrated and will not pick up?

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- 312.04(1) Has the area to receive the application of asphalt material been cleaned of dust, mud and foreign matter?
- 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?
- 312.04(3) Have skipped areas and deficiencies been corrected?
- 312.04(4) Is the length of spread of asphalt regulated by the quantity of cover material loaded into trucks?
- 312.04(5) Is the spread of the asphalt no more than 6 inches wider than the width of the cover material being applied?
- 312.04(6) Is the cover material applied in full-lane widths up to 12 feet immediately following asphalt application?
- 312.04(7) Does the rolling begin immediately after the cover material is applied and consist of at least three complete passes?
- 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?
- 313.03(a)1 Is the prime coat and cover material being applied in accordance with sections on prime and seal coat?
- 313.03(a)2 Has the prime coat been permitted to cure prior to the next application of asphalt?
- 313.03(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?
- 313.03(b)1 Is the seal coat being applied in accordance with the section on Seal Coat?
- 313.03(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?
- 314.03 Is the Contractor complying with the weather limitations for application of various surface treatments?
- 314.04 Do the spreaders, distributors and rollers conform to the requirements for equipment in the specifications for surface treatments?

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- SP-BSC(I) Are 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?
- SP-BSC(II) Is the liquid asphalt, cover aggregate, and fine aggregate in conformance with the material requirements of Section II of the Special Provision?
- 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?
- SP-BSC(III)2 During application, was the temperature of the liquid asphalt material maintained between 160 and 175 degrees F?
- SP-BSC(IV)1 Is each application of liquid asphalt material immediately followed by an application of aggregate?
- 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?
- 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?

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**ROADWAY CONSTRUCTION**

**ASPHALT CONCRETE PAVEMENT**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explain how you determine if the surface of existing pavement or base is irregular. If so, explain what should be done?		
Explain how you determine if the proper mix is being placed.		
Explain the requirement for placing tact along the surface and along the joints.		
Explain the method you use when straight edging the joint.		
Explain how you determine that the surface has been milled properly.		
Explain the process the contractor uses to secure the roller pattern and proper test strip.		
Explain how you determine the proper asphalt temperature range.		
Explain how you determine the proper lift thickness on asphalt.		
Explain how to properly roll the asphalt to include the mat and the joint.		

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**ROADWAY CONSTRUCTION**

**ASPHALT CONCRETE PAVEMENT**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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# *CITP JOB BOOK - 300 SERIES*

## **ROADWAY CONSTRUCTION**

### **ASPHALT CONCRETE PAVEMENT**

#### **CQIP CHECKLIST**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
315.03(A)1	Do the trucks hauling asphalt have tight, clean, smooth metal bodies?
315.03(a)2	Are the trucks hauling asphalt equipped with the proper cover to protect the mixture?
315.03(b)	Has the asphalt paver been approved prior to any paving operation and does it produce a finished surface as required?
315.03(c)	Do the rollers leave the surface in an acceptable condition?
315.03(d)	Has the Contractor saved the required sample as specified?
315.04(1)	Were the weather and surface conditions during placement of the asphalt mixture as required?
315.04(2)	Are the minimum laydown temperatures as specified?
315.04(3)	Are intermediate and base courses exceeding the application rate given in Table II-2 placed as specified?
315.05(b)1	Has the surface of existing pavement or base that is irregular been corrected as required?
315.05(b)2	Have longitudinal and transverse cracks in hydraulic cement concrete been sealed prior to placement of asphalt?
315.05(b)3	Have all contact surfaces and cold joints of asphalt been painted as required prior to asphalt placement.
315.05(b1)1	Has a tack or prime coat of asphalt been applied as specified?
315.05(b1)2	Have asphalt cutbacks or emulsions been applied and allowed to form a tacky residue prior to the application of the paving mixture?
315.05(b1)3	Have tack or prime coats which have been damaged or contaminated been repaired prior to placing the paving mixture?

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- 315.05(b2) Have irregularities in the existing surface that would result in a compacted thickness of over 3 inches been repaired as specified?
- 315.05(c)1 Has a continuous line been placed/maintained to control pavement width/alignment?
- 315.05(c)2 Has the longitudinal joint of each layer been offset approximately 6 six inches or as specified?
- 315.05(c)3 Has the certified Asphalt Concrete Paving Technician inspected and straight-edged each layer as required prior to compaction?
- 315.05(c)4 Are the specified rates and depth adhered to when placing asphalt concrete base, intermediate and surface course?
- 315.05(d)1 Does rolling begin immediately after placement and continue until the mixture is thoroughly and uniformly compacted?
- 315.05(d)2 Are there sufficient rollers to obtain the required compaction of the mixture?
- 315.05(d)3 Has the rolling of the mixture been accomplished as required by the specifications?
- 315.05(d)4 In areas not accessible to rollers, has the material been compacted as required?
- 315.05(d)5 Are the edges of the pavement surface true curves or tangents as required?
- 315.05(d)6 Are the surfaces of the compacted courses protected until the material has cooled sufficiently to support traffic without marring?
- 315.05(e)1 Does the density of the compacted course meet the requirements as specified?
- 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?
- 315.05(e1a) Has a control strip been constructed for each roadway, shoulder course, and each life of each course as required?
- 315.05(e2)2 Have the rollers continued until roller marks are eliminated and the required density has been obtained?

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- 315.05(e 1 b) Have the required number of density tests been taken by the contractor on specified courses?
- 315.05(f)1 Has a transverse joint been cut on the previous run as specified?
- 315.05(f)2 Has a brush coat of asphalt been applied to transverse joints as directed?
- 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?
- 315.06.1 Has the Contractor cut the testing samples and replaced the material as required?
- 315.07(a)2 Has the Contractor taken corrective actions to fix areas out of tolerance?
- 315.07(b) Does the thickness of the base course meet the requirements?

*CITP JOB BOOK - 300 SERIES*

**ROADWAY CONSTRUCTION**

**CONCRETE TESTING**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Properly uses the following testing equipment during placement of hydraulic cement concrete (including caring for the equipment after use):  1. Protex Air Meter		
2. Slump Cone		
3. Thermometer		
4. Concrete Cylinder Molds		
Explains the proper steps to take whenever a test failure occurs with the following testing equipment:  1. Protex Air Meter		
2. Slump Cone		
3. Thermometer		
4. Concrete Cylinder		

*CITP JOB BOOK - 300 SERIES*

**ROADWAY CONSTRUCTION**

**CONCRETE TESTING**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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# 400 SERIES

## BRIDGES AND STRUCTURES

### STRUCTURE EXCAVATION (AND FOUNDATIONS)

Job Element	Date	Project Inspector's Signature
Explains in general terms the basic content of the specifications related to a structure excavation.		
Determines the necessary dimensions in order to compute the volume of excavation.		
Computes the volume of excavation.		
Determines the limits of excavation for one structural element.		
Maintains the necessary records associated with a structure excavation.		
Explains the methods and payment for structure excavation.		
Verifies that the contractor performs a structure excavation properly in terms of: <ol style="list-style-type: none"> <li>1. Equipment -----</li> <li>2. Prescribed elevation(s) -----</li> <li>3. Drainage -----</li> <li>4. Foundation -----</li> </ol>	----- ----- ----- -----	----- ----- ----- -----

**400 SERIES**

**BRIDGES AND STRUCTURES**

**STRUCTURE EXCAVATION (AND FOUNDATIONS)**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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# 400 SERIES

## **BRIDGES AND STRUCTURES**

### **STRUCTURE EXCAVATION (AND FOUNDATIONS)**

#### **CQIP CHECKLIST**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
401.01	Is the foundation excavation prepared in accordance with the specifications and approved by the Engineer?
401.03	Has the excavated material been deposited away from the stream or protected area to prevent siltation?
401.03(a)1	If required, has excavation been formed inside caissons, cribs, coverdams, or sheet piles?
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?
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?
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?
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?
401.03(c)2	Was the foundation cleaned of all loose material before concrete was placed?
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?

## **400 SERIES**

- 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?
- 401.03(c)5 When 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?
- 401.03(e) Were cofferdams installed according to this section and/or other applicable requirements?
- 401.03(f) Were restrictions on pumping enforced?
- 401.03(i)2 Are the excavated spaces backfilled in uniform lifts and compacted as required by this section – 6” loose measurement?
- 401.03(i)3 Have the concrete strength requirements been met prior to form removal and subsequent backfill?

# 400 SERIES

## BRIDGES AND STRUCTURES

### PILE DRIVING

#### (Sheet Piles and Bearing Piles)

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains the difference between sheet piles and bearing piles.		
Describe the different types of bearing piles.		
Correctly determines the tip elevation of a bearing pile.		
Determines that a group of bearing piles is within the allowable tolerances as shown in Table IV-I of the specifications.		
Completes the necessary records related to either a sheet piling or bearing pile placement.		

**400 SERIES**

**BRIDGES AND STRUCTURES**

PILE DRIVING

(Sheet Piles and Bearing Piles)

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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**400 SERIES**  
**BRIDGES AND STRUCTURES**

PILE DRIVING  
(Sheet Piles and Bearing Piles)

CQIP CHECKLIST

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
403.03	Is the contractor handling, storing, and protecting the piles in accordance with this section?
403.03(d2)	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?
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?
403.05(2)	Were driving tests, loading tests, and refined wave equation analyses completed for each substructure element prior to submission of an order list?
403.06(d)1	Has the capability of the hammer to properly drive piles been verified from test pile records?
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)
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)
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)
403.06(f)3	Is the center of gravity of the piles within tolerance, or if not, approved corrections made?
403.06(g)	Were all piles driven to the required bearing capacity?

**400 SERIES**  
**BRIDGES AND STRUCTURES**

**FORM CHECKING - STRUCTURES**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains the different types of forms such as the forms used for the substructure and superstructure.		
Verifies that forms are acceptable in terms of cleanliness and condition.		
Verifies that form bracing and supports are adequately placed.		
Checks the line and grade of the forms.		
Verifies that stay-in-place forms are placed in accordance with respective procedures and requirements.		
Describes the requirements for form removal.		

**400 SERIES**  
**BRIDGES AND STRUCTURES**

**FORM CHECKING - STRUCTURES**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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**400 SERIES**  
**BRIDGES AND STRUCTURES**

**FORM CHECKING – STRUCTURES**

**CQIP CHECKLIST**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
404.03(a)2	Are devices for supporting forms of any type field welded to steel beams or girders?
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?
404.03(a)4	Were forms treated with an approved oil or form coating material or thoroughly wetted with water immediately before concrete placement?
494,93(a1b)1	Have corrugated metal bridge deck forms been installed in accordance with reviewed fabrication and erection plans?
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?
404.03(a1b)3	Are form supports placed in direct contact with the stringer or floor beam flanges by hangers or clips?
404.03(a)2	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?
404.03(a2b)1	Are precast bridge deck panels adequately supported at panel ends with edges tightly butted together?
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?
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?
404.03(b)	Did the contractor have a Professional Engineer inspect and provide required certification that the completed falsework assembly conforms to the approved working drawings?

# 400 SERIES

## BRIDGES AND STRUCTURES

### HYDRAULIC CEMENT CONCRETE OPERATIONS

#### (CONCRETE PLACING - STRUCTURES)

(2 pages)

Job Element	Date	Project Inspector's Signature
Explains the placement limitations related to temperature/weather for hydraulic cement concrete (Section 217).		
Computes the area and volume of pours to be made.		
<p>Verifies that hydraulic cement concrete is placed properly in terms of <u>temperature/weather; procedures; line; grade; finishing; curing; and form removal</u> (Sections 217 and 404) at <b>one of the following:</b></p> <p style="margin-left: 40px;">1. incidental concrete items</p> <p style="margin-left: 40px;">2. retaining walls (see also Section 506)</p> <p style="margin-left: 40px;">1. pavement</p> <p style="margin-left: 40px;">2. bridge deck</p> <p style="margin-left: 40px;">3. box culverts</p>	<p>-----</p> <p>-----</p> <p>-----</p> <p>-----</p> <p>-----</p>	<p>-----</p> <p>-----</p> <p>-----</p> <p>-----</p> <p>-----</p>
Enters the necessary records related to the above items.		
Completes concrete testing requirements related to the above items.		
<b>Job Elements continued on next page.</b>		

## 400 SERIES

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains the purpose of using a vibrator in concrete.		
Discusses the dropping distance for concrete.		
Explains the various types of concrete and their usage.		

**400 SERIES**

**BRIDGES AND STRUCTURES**

HYDRAULIC CEMENT CONCRETE OPERATIONS  
(CONCRETE PLACING - STRUCTURES)

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## **400 SERIES**

### **BRIDGES AND STRUCTURES**

#### **HYDRAULIC CEMENT CONCRETE OPERATIONS** **(CONCRETE PLACING – STRUCTURES)**

##### **CQIP CHECKLIST**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
404.03(c)2	When individual concrete placements exceed twenty-five (25) cubic yards, were the rates in accordance with this section?
404.03(c)3	Was water and debris removed before concrete was placed?
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?
404.03(c)5	Are specified measures taken to avoid dropping concrete more than five (5) feet where required?
404.04(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?
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?
404.03(c)8	Is the concrete placed in continuous layers not more than 12 inches in thickness?
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?
404.03(e)	Was pumping on concrete authorized by the Engineer and accomplished through use of non-aluminum conduit systems?
404.03(g)1	Are construction and expansion joints installed as shown on the plans or as approved by the Engineer?
404.03(g)2	Is asphalt applied to construction joints against which earth fill is placed?
404.03(h)	Are construction joints bonded as specified in the section on joints?

## **400 SERIES**

- 404.03(j) Are the forms and form ties left undisturbed in accordance with Table IV-2 and this section?
- 404.03(k)1 Does curing begin before the sheen disappears from fresh concrete or immediately upon removal of formwork?
- 404.03(k)2 Was curing continuously maintained through the use of a curing agent or medium for not less than seven (7) days?
- 404.03(k)3 Is PE film used for curing of the proper type and secured to prevent wind drifts from drying the concrete?
- 404.03(k)4 Has the curing compound been uniformly sprayed over the surface?
- 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?
- 404.03(11)1 Is concrete not placed against surfaces whose temperature is below 40 degrees F?
- 404.03(11)2 Did the Contractor perform evaporation rate testing during bridge deck placements and, if necessary, use protective measures to prevent shrinkage crackings?

# 400 SERIES

## BRIDGES AND STRUCTURES

### BRIDGE DECK CONSTRUCTION (PLACING AND FINISHING BRIDGE DECKS)

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains in general terms the specifications related to bridge deck construction. (Section 404)		
Verifies that the deck is properly supported prior to pouring.		
Checks the screed and the supporting devices for longitudinal or transverse screeds.		
Explains the time requirements for the placement, finishing and curing of deck concrete.		
Performs required testing procedures on concrete.		
Uses a straight edge properly.		
Probes the bridge deck properly and records the results.		
Checks the beam evaluation and bolster setting properly.		
Ensures that the concrete forms are removed properly.		
Completes the required documentation for the bridge deck construction.		

**400 SERIES**

**BRIDGES AND STRUCTURES**

**BRIDGE DECK CONSTRUCTION**  
**(PLACING AND FINISHING BRIDGE DECKS)**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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# **400 SERIES**

## **BRIDGES AND STRUCTURES**

### **BRIDGE DECK CONSTRUCTION** **(PLACING AND FINISHING BRIDGE DECKS)**

#### **CQIP CHECKLIST**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
404.04(1)	Was the screed approved by the Engineer prior to beginning of deck placement?
404.04(2)	Are the screeds of required length and supported in accordance with this section?
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?
404.04(4)	Was the deck surface tested with a 10 foot straightedge in accordance with this section?
404.05	Have joint opening been accurately formed with proper widths, parallel joint faces and free of spalling areas?
404.06(1)	Have the bridge seat bearing areas been finished within the specified tolerances?
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?
404.07	Have the surfaces of the concrete received a finish that will satisfy the requirements of the section on finishing concrete surfaces?
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?

# 400 SERIES

## BRIDGES AND STRUCTURES

### CONSTRUCTION JOINTS, PREFORMED ELASTOMERIC JOINT SEALER, & ELASTOMERIC EXPANSION DAMS (EXPANSION AND CONSTRUCTION JOINTS)

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Describes the various types of construction joints and/or expansion joints as well as their usage.		
Explains when construction joints are needed.		
Explains the specifications related to the following (see Sections 404.05, 420 & 421)  1. Open joints 2. Filled joints 3. Steel joints 4. Waterstops 5. Expansion dams 6. Field-vulcanized joints		
Verifies that the joints are properly cleaned and protected during construction on one (1) bridge.		
Checks for the correct placement of expansion joints, materials and seals at one (1) bridge.		

**400 SERIES**

**BRIDGES AND STRUCTURES**

**CONSTRUCTION JOINTS, PREFORMED ELASTOMERIC JOINT SEALER, & ELASTOMERIC EXPANSION DAMS**  
**(EXPANSION AND CONSTRUCTION JOINTS)**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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# 400 SERIES

## BRIDGES AND STRUCTURES

### CONSTRUCTION JOINTS, PREFORMED ELASTOMERIC JOINT SEALER, & ELASTOMERIC EXPANSION DAMS EXPANSION AND CONSTRUCTION JOINTS

#### CQIP CHECKLIST

<u>SECTION</u>	<u>QUESTIONS</u>
420.01(1)	Has the joint sealer been installed in reasonably close conformity with the specifications?
420.02	Have all materials been tested for conformity with Section 212, Joint Materials?
420.03(a)1	Is the joint formed to provide the nominal opening at the specified temperature as shown on the plans?
420.03(a)2	Are the sides of the joint parallel to each other?
420.03(a)3	Are edges of concrete adjacent to the joint rounded to a radius of not more than 1/4 inch?
420.03(a)4	Was the joint thoroughly cleaned to remove all foreign material prior to sealer placement?
420.03(b)1	Has the sealer been installed by tools that will not damage the material during installation?
420.03(b)2	Was the prohibition on stretching the sealer during installation adhered to?
420.03(b)3	Was the prohibition on splices in joint sealers less than 50 feet in length adhered to?

## **400 SERIES**

- 420.03(b)4 Were splices for lengths greater than 50 feet limited to 1 splice for each additional 50 feet?
- 420.03(b)5 Are field splices in longitudinal joint sealers sealed with a sealant recommended by the manufacturer?
- 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?
- 421.01 Have the expansion dams been installed in reasonably close conformity with the specifications and with the lines, elevations and locations shown on the plans or as established by the Engineer?
- 421.02 Have all materials been tested for conformity with Section 212, Joint Materials?
- 421.03(1) Has the Contractor submitted working drawings for review by the Engineer?
- 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?
- 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?
- 421.03(4) Does the dam seal the structure to prevent water and other contaminants from seeping onto the substructure?
- 421.03(5) Does the dam have a continuous elastomeric membrane?
- 421.03(6) Do field-vulcanized joints conform to plan details?
- 421.03(7) Are the dams cast in place with top surfaces parallel to the bridge deck?
- 421.03(8) Was concrete placed in such manner as to prevent formation of air pockets in the concrete?
- 421.03(9) Was final sealing accomplished as soon as possible after installation?

## 400 SERIES

### BRIDGES AND STRUCTURES

#### REINFORCING STEEL

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Verifies that reinforcing steel is stored properly.		
Checks the reinforcing steel for rust, dirt, paint, oil, mill scale or other foreign substances.		
Differentiates between rust and mill scale.		
Explains the proper methods of bending and cutting reinforcing steel.		
Verifies that reinforcing steel is properly lapped and spliced.		
Verifies that a section of reinforcing steel is properly placed, laid out/spaced, and fastened/tied and consists of the proper sizes & types of bars.		
Calculates the correct amount of payment that a contractor is due for placing a section of reinforcing steel.		
Enters the records related to this section of reinforcing steel.		

**400 SERIES**

**BRIDGES AND STRUCTURES**

**REINFORCING STEEL**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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# **400 SERIES**

## **BRIDGES AND STRUCTURES**

### **REINFORCING STEEL**

#### **CQIP CHECKLIST**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
406.03(b)1	Has the reinforcing steel been stored above ground, well drained, and protected against deformation?
406.03(b)2	When placed into work, is the reinforcement steel free from dirt, paint, oil, or other foreign matter?
406.03(b)3	Upon delivery, was epoxy coated reinforcing steel covered with an opaque covering?
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?
406.03(d)02	Were reinforcing bars tied according to the section on placing and fastening reinforcing steel?
406.03(d)03	Were provisions made to accurately maintain the position of steel reinforcement during the placing and setting of concrete?
406.03(d)04	Were epoxy or plastic coated wires used to tie epoxy 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?
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?
406.03(d)07	Was a minimum of 3 inches cover maintained in substructures unless otherwise noted in this section?
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?

## **400 SERIES**

- 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?
- 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?
- 406.03(d)11 In reinforced concrete sections other than bridge slabs, is the reinforcing steel supported and spaced in accordance with this section?
- 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?
- 406.03(e)1 Was written approval secured from the Engineer for bar splices not shown on the plans?
- 406.03(e)2 Are bars lapped at least 30 bar diameters to make the splice?
- 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)?
- 406.03(e)4 Were laps for sheets of welded wire fabric or bar mat reinforcement at least one mesh in width?

# 400 SERIES

## BRIDGES AND STRUCTURES

### STEEL STRUCTURES (STRUCTURAL STEEL) or PRESTRESSED CONCRETE BEAMS

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Verifies that structural steel or concrete beams are handled, stored, and shipped properly.		
Defines the terms "beams" and "girders."		
Checks the camber of a beam or girder.		
Interprets the working/fabrication drawings correctly.		
Verifies that bearing areas conform to specifications prior to placement of structural steel or prestressed concrete beams.		
Verifies the calibration of both a (1) torque wrench and (2) power wrench to be used by a contractor.		
Explains the field welding requirements in terms of (1) the welder and (2) the welding materials.		

**400 SERIES**

**BRIDGES AND STRUCTURES**

**STEEL STRUCTURES (STRUCTURAL STEEL) or**  
**PRESTRESSED CONCRETE BEAMS**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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# **400 SERIES**

## **BRIDGES AND STRUCTURES**

### **STEEL STRUCTURES (STRUCTURAL STEEL) or PRESTRESSED CONCRETE BEAMS**

#### **CQIP CHEKLIST**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
407.03(1)	Has the Contractor submitted working drawings for review by the Engineer of all structural steel, bearing assemblies, and anchorage devices?
407.03(2)	Do the working drawings specifically identify each piece other than ASTM A709 Grade A36 steel?
407.04(1)	Does the welding show quality workmanship and are welds of the required size?
407.04(3)	Do the welding electrodes used in structural welding conform to the approved list?
407.04(a)4	Is the surface of the welds relatively even, smooth, and of the required size?
407.04(a)1	Has welding only been performed in locations as noted on the plans or as approved by the Engineer?
407.04(a)3	Have welds that do not conform to the specifications been repaired or removed and replaced or the entire piece rejected?
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?
407.04(d)1	Are the bolt holes no more than 1/16 inch larger than the nominal bolt size?
407.04(d)2	Have the burrs on the outside of the bolt holes been removed?

## **400 SERIES**

- 407.04(e) Is field flame cutting of structural steel units not done?
- 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?
- 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?
- 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.
- 407.04(l) Was shop\field inspection performed in accordance with this section?
- 407.05(1) Have materials and units been stored at least 4 inches above ground on platforms, skids, or other supports?
- 407.05(2) Has the structural steel been stored in such manner that it will not be overstressed, become deformed, or otherwise damaged?
- 407.05(3) Is the structural steel kept free from dirt, grease, or other foreign material, protected from corrosion, and properly drained?
- 407.05(b)1 Has each unit been identified with an erection mark?
- 407.05(b)2 Has the Contractor furnished the materials order shipping statement and erection diagrams?
- 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?
- 407.06(a)1 Were bolt hole misalignments of no more than 1/8 inch corrected by reaming where allowed by the Engineer?
- 407.06(a)2 Was damaged or misfitting steel reported to the Engineer?
- 407.06(c) Were all field connections made with 7/8 inch diameter high-strength bolts where specified?
- 407.06(c)1 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?

## **400 SERIES**

- 407.06(c1)2 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?
- 407.06(c2)1 Do bolted parts fit solidly together when assembled?
- 407.06(c2)2 Before assembly, were all connecting surfaces, including areas adjacent to the washers, free of scale except for tight mill scale?
- 407.06(c2)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 Section 411.04(a)5?
- 407.06(c3)1 On whichever element is being turned during tightening, was a hardened washer installed under the bolt or nut head?
- 407.06(c3)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?
- 407.06(c3)3 Has the device used to calibrate power and torque wrenches been checked for accuracy within the previous 12 months?
- 407.06(c3)4 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 over tensioning the bolt?
- 407.06(c3)5 Are fasteners tightened by the turn-of-nut method, or by the use of a direct tension indicator using a load indicator washer?
- 407.06(c3)6 Was the torque indication corresponding to the calibrating tension noted and used when manual torque wrenches are used?
- 407.06(c3a) 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?
- 407.06(c3b)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?
- 407.06(c3b)2 Is the gap 0.010 inch or less between the indicator and washer if a hardened flat washer is incorporated?

## **400 SERIES**

- 407.06(e)1 Are beam ends, bearing stiffeners, and webs of girders and rolled structural shapes, and other beam sections vertical?
- 407.06(e)2 Are channel flanges turned to the downgrade side where practicable?
- 407.06(e)3 Have steel plates for use with flexible bearing pads been beveled to meet the grade requirements?
- 407.06(i) Have any depressed areas where water can be trapped been completely sealed with polyurethane or other approved sealant prior to painting?

## 400 SERIES

### BRIDGES AND STRUCTURES

#### DISMANTLING & REMOVING EXISTING STRUCTURES OR REMOVING PORTIONS OF EXISTING STRUCTURES

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Describes the requirements in Section 413 for removing an existing structure or portion of an existing structure in terms of elevation and/or grade.		
Verifies that the contractor's plan for removing an existing structure or portion of an existing structure follows the requirements for lead-based paint removal & disposal. (Note: Check for applicability of revisions to Section 413 regarding this activity.)		
Verifies that a structure or portion of a structure is removed in accordance with this Specification.		
Enters the necessary documentation information regarding the removal of a structure or portion of a structure.		
States the method of payment for both the dismantling/removal of a structure and a portion of a structure.		

**400 SERIES**

**BRIDGES AND STRUCTURES**

**DISMANTLING & REMOVING EXISTING STRUCTURES OR  
REMOVING PORTIONS OF EXISTING STRUCTURES**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## **400 SERIES**

### **BRIDGES AND STRUCTURES**

#### **DISMANTLING & REMOVING EXISTING STRUCTURES OR REMOVING PORTIONS OF EXISTING STRUCTURES**

##### **CQIP CHECKLIST**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
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?
413.02(a)2	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?
413.02(a)2	Have units been match marked for re-erection according to an approved diagram provided by the Department?
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?
413.02(b)2	Do pneumatic hammers weigh no more than 90 pounds for widening work or 30 pounds for deck repair work?
413.02(b)3	Where permitted, are tractor-mounted hammers being used in accordance with this section?
413.02(b)4	Have all disturbed areas been uniformly graded to natural ground contours that will facilitate drainage and prevent impoundment of water?
413.02(b)5	Has the Contractor received written approval from the Engineer to use hydraulically actuated, jaw type, concrete crushers for parapet removal?
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?

## **400 SERIES**

- 413.02(c1) 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?
- 413.02(c1)2 Has the Contractor complied with this section when the contractor is not required to have an environmental plan?
- 413.02(c2) Has the contractor submitted for review a worker health and safety plan in accordance with this section?

## 400 SERIES

### BRIDGES AND STRUCTURES

#### RIPRAP

Job Element	Date	Project Inspector's Signature
Discusses, in general terms the different types of riprap in Section 414.		
Explains the different classes of dry riprap.		
Determines that a slope is properly bedded and placed.		
Verifies that at least <b>one</b> of the following is correctly placed. <b>Circle the one selected:</b> <ol style="list-style-type: none"><li>1. Dumped riprap</li><li>2. Mortared riprap for slopes</li><li>3. Grouted riprap for slopes</li><li>4. Erosion control riprap</li><li>5. Concrete riprap in bags</li></ol>		
Enters the necessary follow-up documentation on the two items noted above.		

**400 SERIES**

**BRIDGES AND STRUCTURES**

**RIPRAP**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## **400 SERIES**

### **BRIDGES AND STRUCTURES**

#### **RIPRAP**

#### **CQIP CHECKLIST**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
414.03(a)	Does dry riprap conform to the weight and grading requirements of this section for Class I, II, III, or A1?
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?
414.03(a)03	Was riprap bedding uniformly spread to produce a reasonably even surface free of mounds and depressions?
414.03(a)04	Has the entire perimeter of geotextile bedding material been turned down and buried at least 9 inches for anchorage?
414.03(a)05	Do adjacent strips of material overlap at least 18 inches and run up and down the slope?
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?
414.03(a)07	Was displaced material repositioned at the Contractor's expense?
414.03(a)08	Was riprap placed on the embankment no later than 15 days after completion of bedding?
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?
414.03(a)10	Was the prohibition on dropping riprap onto fabric adhered to?
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?

## **400 SERIES**

- 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?
- 414.03(a)13 Does the Contractor maintain riprap until accepted and repair displaced areas at his expense?
- 414.03(b)1 Does dumped riprap conform to the weight and grading requirements of this section, for Type I or II?
- 414.03(b)2 Was dumped riprap placed in the same manner described in this section for dry riprap?
- 414.03(c)1 Is Class II dry riprap used for mortared 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?
- 414.03(c)3 Are larger stones placed near the base of the slope?
- 414.03(c)4 Are spaces between larger stones filled with stones of suitable size, leaving the surface reasonably smooth and tight?
- 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?
- 414.03(c)6 Is fresh mortar added to the voids between previously positioned larger stones and smaller stones than shoved into position, forcing excess mortar to the surface?
- 414.03(c)7 Is excess mortar uniformly spread to fill surface voids completely?
- 414.03(d)1 Does grout consist of 1 part hydraulic cement and 3 parts sand thoroughly mixed with water to produce a thick, creamy consistency?
- 414.03(d)2 Are stones of the same sizes placed in the same manner as specified for dry riprap, Class I?
- 414.03(d)3 Was care taken to prevent earth or sand from filling spaces between stones?
- 414.03(d)4 Have all spaces between stones been filled with grout and the surface swept with a stiff broom?

## **400 SERIES**

- 414.03(d)5 Is the prohibition on grouting during freezing weather adhered to?
- 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?
- 414.03(e)1 Does erosion control stone conform to the weight requirements of this section?
- 414.03(e)2 Was Class I dry riprap placed in a manner to present an irregular or rough surface with a depth no less than two feet?
- 414.03(e)3 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?
- 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?
- 414.03(g)1 Has Concrete Riprap in Bags (wet mixture) been performed in accordance with this section?
- 414.03(g)2 Has Concrete Riprap in Bags (dry mixture) been performed in accordance with this section?
- 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?
- 414.03(i)2 Is the welded wire fabric No. 6 gage wire, spaced 6 inches center to center?
- 414.03(i)2)1 Was the slope approved by the Engineer prior to placement of slab riprap?
- 414.03(i)2)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?
- 414.03(i)3)1 Has the concrete been cured in accordance with during concrete in section [316.04(j)] on hydraulic cement concrete pavement?
- 414.03(i)3)2 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?

## **400 SERIES**

- 414.03(i3)3 Is the berm portion sloped approximately 12:1 to drain away from the abutment?
- 414.03(i3)4 Has the joint between the slab and abutment been sealed to a depth of at least ½ inch with hot-poured joint sealer?
- 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?
- 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?
- 414.03(i3a) Is the slab placed in alternate blocks approximately 4 feet square when using the block method?
- 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?
- 414.03(i3b)2 Does the surface not vary more than ½ inch under a 10-foot straightedge?

# 400 SERIES

## BRIDGES AND STRUCTURES

### CONCRETE AND SLOPE PROTECTION

Job Element	Date	Project Inspector's Signature
Explains in general terms the different types of concrete slop protection in Section 415.		
Explains when slope protection is needed.		
Verifies the proper placement of <b>one</b> of the following: 1. precise concrete block slope protection 2. concrete slab slope protection		
Completes the required documentation for the different types of concrete slope protection.		

**400 SERIES**

**BRIDGES AND STRUCTURES**

**CONCRETE SLOPE PROTECTION**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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# **400 SERIES**

## **BRIDGES AND STRUCTURES**

### **CONCRETE SLOPE PROTECTION**

#### **CQIP CHECKLIST**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
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?
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?
415.03(a)3	Are blocks laid with continuous joints extending horizontally and staggered joints extending up or down the slope?
415.03(a)4	Have joints between blocks been filled with mortar?
415.03(a)5	Has cast in place edging been placed as specified in this section?
415.03(b)1	Was the cast in place slab at least 4 inches in thickness and placed in accordance with this section?
415.03(b)2	Were approved splash blocks connecting with the paved ditch provided under downspouts draining onto the 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?
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?
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?

**400 SERIES**

**BRIDGES AND STRUCTURES**

**DAMP-PROOFING**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Describes the information in Section 417.		
Verifies that the surface of the concrete is properly prepared.		
Verifies that the primer and the asphalt seal coat are applied properly.		
Completes required documentation.		

**400 SERIES**

**BRIDGES AND STRUCTURES**

**DAMP-PROOFING**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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# **400 SERIES**

## **BRIDGES AND STRUCTURES**

### **DAMP-PROOFING**

#### **CQIP CHECKLIST**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
417.01	Is the work being performed in accordance with the plans and specifications?
417.02	Do materials used for damp-proofing conform to the requirements of the materials section on damp-proofing and waterproofing?
417.03(a)	Is the surface being damp-proofed cleaned of all loose foreign material and dry?
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?
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?
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?

## 400 SERIES

### BRIDGES AND STRUCTURES

#### DRILLED SHAFTS

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Determine the location, dimensions, plumbness, drilling time, elevation of water table, and seepage.		
Observe placement of rebar cage. Discuss the importance of the 2 1/2" cover around edges.		
Verifies that structure was placed properly in <b>one</b> of the following:  1. Dry Shafts  2. Wet Shafts  3. Casing  Explain differences of each.		
Enters the necessary records related to the above items.		
Explain various methods of excavation.		
Discuss the differences of materials encountered at all elevations.		
Observe CSL Integrity Test tube installation and testing.		

# **400 SERIES**

## **BRIDGES AND STRUCTURES**

### **DRILLED SHAFTS**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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# **400 SERIES**

## **BRIDGES AND STRUCTURES**

### **DRILLED SHAFTS**

#### **CQIP CHECKLIST**

Has the contractor's Drill Shaft Installation Plan been approved?

When required, was the trial shaft cut-off 2-feet below finished grade and disturbed areas restored to original condition?

When performing drilled shafts utilizing the Dry Construction Method, a) was less than 12" of water present after 1hr with no pumping, b) were sides and bottom stable without detrimental caving, sloshing, or swelling over a 4-hour period?

When performing drilled shafts using the Wet Construction Method, was a minimum of 5 feet of positive head of fluid above groundwater table maintained?

If the contractor proposed the use of slurry, do they have a slurry management plan?

Was the center of the drilled shaft within 3 inches of plan position in the horizontal plane at the plan elevation for the top of the shaft?

Was the minimum 2 1/2" cover maintained between the outside of the reinforcing cage and the side of the excavated hole?

If the steel cage was spliced, was it done properly in accordance with contract documents?

Was the correct placement method used? Tremies, pumps, drop chutes, etc.

Did the contractor overflow the shaft until good concrete flowed?

Were CSL tubes installed parallel and as far away from longitudinal bars as possible?

Was the Drilled Shaft Concrete Volumes Form filled out to plot theoretical and actual concrete volume curves?

# 500 SERIES

## INCIDENTAL CONSTRUCTION

### UNDERDRAINS (Ref. Section 501)

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains in general terms the specifications related to underdrains (Section 501.)		
Explains the different types of underdrains.		
Verifies that an underdrain is being properly placed in terms of: 1. trench dimensions; 2. trench grade; 3. placing geotextile fabric; 4. installing pipe; 5. connections to manhole or catch basin; 6. placement of aggregate backfill; and 7. compaction of backfill materials; 8. inspection ports.		
Maintains necessary records throughout placement of one underdrain to support payment.		
Describes the proper method and payment for underdrains.		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**UNDERDRAINS**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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# 500 SERIES

## INCIDENTAL CONSTRUCTION

### UNDERDRAINS

#### CQIP CHECKLIST

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
501.01	Are underdrain trenches excavated to the dimensions and grade required by the standard drawings, plans, or the Engineer?
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)
501.03(b)	Has geotextile drainage fabric been installed as designated and has torn or punctured material been replaced with the same type of fabric?
501.03(c)1	Are the perforations on perforated pipe placed facing downward on a bed of aggregate material and pipe sections joined with appropriate couplings?
501.03(c)2	If semi round pipe is used, is the rounded side placed down?
501.03(c)3	Are the upgrade ends of pipe, except for combination underdrains, closed with suitable plugs?
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?
501.03(c)5	After the pipe installation has been approved by the Engineer, was aggregate backfill placed and compacted?
501.03(c)6	Was care taken not to displace pipe or the covering at open joints during backfill?
501.03(d)	Was the backfill material for combination underdrains placed in 6" lifts and thoroughly compacted?
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?
232.02(j)1	Is nonperforated pipe used for combination underdrain outlets?

# 500 SERIES

## INCIDENTAL CONSTRUCTION

### INCIDENTAL CONCRETE ITEMS

(Ref. Section 502)

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Checks work line and grade of forms for a <b>minimum of three (3)</b> of the following: <ol style="list-style-type: none"><li>1. Drop inlets</li><li>2. Paved ditches</li><li>3. Concrete entrances</li><li>4. Manholes</li><li>5. Curbs and gutters</li><li>6. Concrete Median Barrier</li><li>7. Foundation reviewed prior to concrete placement.</li></ol>		
Verifies that the following are completed correctly for a least one incidental concrete construction site: <ol style="list-style-type: none"><li>1. Joint construction</li><li>2. Reinforcing Steel</li><li>3. Placing concrete</li><li>4. Finishing concrete</li><li>5. Curing concrete</li></ol>		
Verifies that the backfill is correctly placed for incidental concrete construction items.		
Performs materials testing related to at least one incidental construction item.		
Documents the required information for at least three of the selected incidental concrete construction items.		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**INCIDENTAL CONCRETE ITEMS**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## **500 SERIES**

### **INCIDENTAL CONSTRUCTION**

#### **INCIDENTAL CONCRETE ITEMS**

##### **CQIP CHECKLIST**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
502.01	Are all dimensions and reinforcing steel in accordance with the applicable standards for various 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?
502.03(02)	Is the subgrade moist when concrete is placed?
502.03(03)	Has the concrete been cured and protected in accordance with Section 316.04(j) of Hydraulic Cement Concrete Pavement?
502.03(a)01	Are forms free of warp and braced to prevent deflection during concrete placement?
502.03(a)02	Are radial forms sufficiently flexible or otherwise designed to provide a smooth, uniform, curved surface of the required radius?
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?
502.03(a)04	Are transverse joints for crack control in hydraulic cement concrete items provided at the specified locations and times?
502.03(a)05	Are sections of concrete items the minimum length required?
502.03(a)06	Are crack control joints formed by the methods indicated?
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?
502.03(a)08	Is concrete sufficiently consolidated to produce a closed surface and edges rounded to a ¼-inch radius?
502.03(a)09	Are exposed surfaces immediately adjacent to the roadway, except concrete median barrier, given a light broom finish?

## **500 SERIES**

- 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?
- 502.03(a)11 Are paved ditches and flumes given a coarse or roughened texture?
- 502.03(b)1 Does slipforming equipment produce equal or better than that of fixed form construction?
- 502.03(b)2 Is concrete mixed at least 30 revolutions when water is added during slipforming?
- 502.03(b)3 Has the contractor placed 1-1/2" thick expansion joint material against each fixed object prior to placement of slipforming concrete on median barriers?
- 502.03(b)4 During slipforming is reinforcing steel tied 100% at all intersections to prevent movement of the cage during operations?
- 502.03(c1)1 When mountable curb or combination mountable curb and gutter is placed, are adjacent curbs modified to provide a mountable shape?
- 502.03(c1)2 Is integral curb placed within 45 minutes of slab placement?
- 502.03(c1)3 Is the surface of the slab on which integral curb is to be placed roughened or doweled to improve bonding?
- 502.03(c1)4 Are irregularities in the face & tops of curbs no more than 3/8" per 10' with vertical alignment smooth enough to ensure complete drainage?
- 502.03(c1)5 Has the contractor anchored the curb & gutter to existing pavement by means of smooth dowels or approved adhesive?
- 502.03(c1)6 Has the curb, gutter, and combination curb and gutter been backfilled and the material compacted within 3 to 7 days?
- 502.03(c2)1 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?
- 502.03(c2)2 Does the Contractor prevent the spread of bituminous material outside the curb area?
- 502.03(c2)3 Is asphalt concrete curb placed by machine except when short sections are required?
- 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?

## **500 SERIES**

- 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 ten feet for horizontal alignment?
- 502.03(c4)2 Are concrete median barriers backfilled in accordance with this section?
- 502.03(c4)3 Are delineators installed on median barriers in accordance with this section?

## 500 SERIES

### INCIDENTAL CONSTRUCTION

#### SIDEWALKS, STEPS, AND HANDRAILS (Ref. Section 504)

Job Element	Date	Project Inspector's Signature
<ol style="list-style-type: none"><li>1. Ensure C-25 submitted and approved</li><li>2. Time allowed for handrail review and approved by Central Office</li><li>3. Assure handrails from an AISC manufacturer</li><li>4. Inspect forms and steel layout prior to concrete pour</li><li>5. Ensure shop drawings are approved prior to fabrication of handrails</li><li>6. Provide sketches and calculations</li><li>7. Check joints</li><li>8. Check grounding of handrails</li><li>9. Test the concrete</li></ol>		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**SIDEWALKS, STEPS, AND HANDRAILS  
(Ref. Section 504)**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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# 500 SERIES

## INCIDENTAL CONSTRUCTION

### SIDEWALKS, STEPS, AND HANDRAILS (Ref. Section 504)

#### CQIP CHECKLIST

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
504.02(d)	Does preformed joint filler conform to the materials section on Joint Materials and is it approximately ½ inch thick?
504.03(a)1	Is the foundation for sidewalk shaped and compacted to a firm, even surface with unsuitable material and debris removed?
504.03(a)2	Are adjacent strips of geotextile fabric installed as required?
504.03(a)3	Are forms straight, free from warp, and strong enough to withstand concrete pressures?
504.03(a)4	Are forms cleaned and oiled prior to concrete placement?
504.03(a1)01	Is concrete screeded and spaded to prevent honeycombing and the surface floated free of irregularities?
504.03(a1)02	Are outside edges of the slab and joints edged with a ¼ inch radius edging tool?
504.03(a1)03	Are transverse joints constructed at intervals of 100 feet, except for closures, and filled with ½ inch joint filler extending ¼ inch below the top surface?
504.03(a1)04	Are crack control joints placed as required in this section?
504.03(a1)05	Are slabs at least three feet in length?
504.03(a1)06	Are construction joints formed around all appurtenances, except drop inlets where expansion joints are formed between six and ten feet away, and ¼ inch preformed joint filler placed as required?

## **500 SERIES**

- 504.03(a1)07 When sidewalk is constructed in conjunction with an adjacent curb, or to an existing curb, do expansion joints coincide?
- 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?
- 504.03(a1)09 Is preformed joint filler securely fastened to prevent displacement?
- 504.03(a1)10 Is the fresh concrete sidewalk cured and protected in accordance with Section 316.04(j) of Hydraulic Cement Concrete Pavement?
- 504.03(a1)11 Is the sidewalk protected from traffic until the time or strength requirements are met?
- 504.03(a1)12 Was the foundation thoroughly moistened immediately prior to concrete placement?
- 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?
- 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?
- 504.03(b) Is the tread of steps given a light broom texture?
- 504.03(c)1 Are all exposed welded joints on handrail finished by grinding or filing to give a neat appearance?
- 504.03(c)2 Are all handrail items galvanized in accordance with Section 233, Galvanizing?
- 504.03(c)3 Are all exposed areas of pregalvanized rail repaired with a material conforming to Section 233, Galvanizing?
- 504.03(c)4 Are handrails installed in accordance with the applicable standards and specifications?
- 504.03(c)5 Are handrails grounded in accordance with Section 410.03(b)?
- SPCN 504 Has the Contractor submitted a sample of exposed aggregate sidewalk at least 12" x 12" x 2" in depth?

## 500 SERIES

### GUARDRAIL AND STEEL MEDIAN BARRIERS (Ref. Section 505)

Job Element	Date	Project Inspector's Signature
<p>Completes the Guardrail Installers Training: Inspector and Designer Version.</p> <p><b>You can access the Grit Manual by going to <a href="#">insidevdot's homepage</a> and search for "Grit Manual 2010."</b></p>		
<p>Lists the four (4) types of approved guardrail systems, see Chapter 2 of the <u>GRIT – Guardrail Installation Training Manual</u>.</p>		
<p>Contacts the District Traffic Engineer for approval of the location of guardrail or steel median barrier.</p>		
<p>Ensures underground utilities are located prior to installation of guardrail or steel median barriers.</p>		
<p>Verifies that one section of guardrail or steel median barrier is placed in accordance with the specifications &amp; standards.</p>		
<p>Check VDOT's approved NCHRP list</p>		
<p>Verifies material under the guardrail meets IIM-LD-150.10</p>		
<p>Verifies "Buy American" certification</p>		
<p>Verify manufacturer install recommendation on file</p>		
<p>Verifies areas of deflection are free and clear</p>		
<p>Verifies contractors installer certification</p>		
<p>Explains the requirements for guardrail elements such as:</p> <ol style="list-style-type: none"> <li>1. Concrete post</li> <li>2. Wood post</li> <li>3. Anchor assemblies</li> <li>4. Anchor bolts and nuts</li> <li>5. Galvanized rail</li> <li>6. Guardrail delineators (Section 702)</li> </ol>		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**GUARDRAIL AND STEEL MEDIAN BARRIERS**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## **500 SERIES**

### **INCIDENTAL CONSTRUCTION**

#### **GUARDRAIL AND STEEL MEDIAN BARRIERS**

##### **CQIP CHECKLIST**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
505(Std.)1	Are guardrail and median barriers placed at distances and heights as specified in the standard drawings for that type?
505(Std.)2	Has the required type of barrier been placed in front of fixed objects as specified in the standards?
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?
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?
505.03(002)	Are guardrail posts placed on a continuous line of guardrail all of one type?
505.03(01)	Are rails and elements erected and aligned in a manner that will result in a smooth, continuous, taut installation?
505.03(02)	Are guardrail delineators installed in accordance with Section 702.03 on Delineators?
505.03(03)	Are anchor assemblies installed in accordance with this section?
505.03(04)	Are post holes backfilled to proper grade?
505.03(05)	Are steel posts driven by a method that will not damage them?
505.03(06)	Have concrete posts that are chipped or cracked been replaced?
505.03(07)	Have wood posts been sawed to the dimensions shown on plans and in accordance with this section?
505.03(08)	Have split, splintered, or broken posts been replaced?

## **500 SERIES**

- 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?
- 505.03(10) Has material for reuse guardrail maintained its original shape and is it suitable for reuse?
- 505.03(11) Did the Contractor have a trained guardrail installer on the project during guardrail installation?
- 505.03(12) Are guardrail posts set with a variation of not more than 1/8 inch per foot from vertical?

## 500 SERIES

### INCIDENTAL CONSTRUCTION

#### RETAINING WALLS (Ref. Section 506)

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Describes the different types of retaining walls.		
Verifies that a retaining wall or headwall is constructed correctly in terms of form construction and placement of concrete.		
Verifies that a retaining wall or headwall is properly backfilled.		
Ensures that the incidental construction, i.e., joints, damp-proofing, aggregate, etc., is done correctly.		
Computes quantity of materials for one retaining wall or one headwall.		
Enter the proper documentation.		
Completes measurement and pavement for one type of retaining wall or one headwall.		
Verify plans, location and foundation prior to start of work.		
Check for any environmental permitting and review requirements		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**RETAINING WALLS**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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# 500 SERIES

## INCIDENTAL CONSTRUCTION

### FENCES (Ref. Section 507)

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Lists the different types of fences.		
Confirms that at least one section of fence is placed correctly.		
Verifies that materials conform to the requirements of Section 242 (Fences).		
Verifies Buy America Certification prior to install		
Ensure approved source of materials, and if not secure a sample and submit for review		
Verify easements and access for the contractor. Additionally review the RW-24 with the contractor.		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**FENCES**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## **500 SERIES**

### **INCIDENTAL CONSTRUCTION**

#### **FENCES**

##### **CQIP CHECKLIST**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
507.02	Do materials for fences conform to the requirements of Section 242, 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?
507.03(2)	Are posts placed in concrete if rock is encountered during installation of gates, corner, or brace posts?
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?
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?
507.03(a)	Are standard chain link fences installed in accordance with this section?
507.03(b)	Are standard fences installed in accordance with this section?
507.03(c)1	Has the frame for pedestrian fences for bridges been bonded internally wherever possible to maintain continuity?
507.03(c)2	Are pedestrian fences for bridges electrically grounded in accordance with the section on Metal Railings 410.03(b)?
507.03(d)	Are temporary safety fences installed in accordance with this section?

## 500 SERIES

### INCIDENTAL CONSTRUCTION

#### DEMOLITION OF PAVEMENT & OBSCURING ROADWAY

(Ref. Section 508)

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains the procedures for the demolition of either hydraulic cement concrete pavement or asphalt concrete pavement.		
Completes documentation regarding the demolition of either hydraulic cement concrete pavement or asphalt concrete pavement.		
Describes the requirements for obscuring pavement both inside and outside the construction limits.		
Verifies that at least one area to receive vegetation is prepared/conditioned properly.		
Explains the methods of payment for both pavement demolition and obscuring roadway.		
Photo documentation and sketch of existing pavement markings if being replaced.		
Plan for waste material and proper disposal		
Provide sketch and measurements for payment		
Check measurements before and after removal		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**DEMOLITION OF PAVEMENT & OBSCURING ROADWAY**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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**500 SERIES**

**CQIP CHECKLIST (NO QUESTIONS)**

## 500 SERIES

### INCIDENTAL CONSTRUCTION

#### PATCHING HYDRAULIC CEMENT CONCRETE PAVEMENT (Ref. Section 509)

Job Element	Date	Project Inspector's Signature
Verifies the materials used for patching hydraulic cement concrete pavement meets the applicable Section 200 for materials.		
Explains the procedures for patching hydraulic cement concrete pavement.		
Describes the requirements for the placement of joint material and reinforcing steel.		
Explains the methods of payment for patching hydraulic cement concrete pavement.		
Discuss the plan of operation with the contractor.		
Review designated areas of repair		
Be sure to have approved C-25		
Document traffic on TE-9700		
Approved SWPP if needed.		
Review and check the subgrade prior to placing material.		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**  
**PATCHING HYDRAULIC CEMENT CONCRETE PAVEMENT**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## **500 SERIES**

### **INCIDENTAL CONSTRUCTION**

#### **PATCHING HYDRAULIC CEMENT CONCRETE PAVEMENT**

##### **CQIP CHECKLIST**

<i>SECTION</i>	<i>QUESTIONS</i>
509.01	Has all defective pavement and unstable subbase material been removed prior to placement of new pavement?
509.02	Are materials used for patching pavement as specified in Section 217, Hydraulic Cement Concrete?
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?
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?
509.03(3)	In areas from which concrete has been removed, has the subbase been dressed, brought to grade and mechanically compacted?
509.03(4)	Is the prohibition on saw cuts extending into adjacent concrete pavement adhered to?
509.03(5)	Has preformed asphalt joint filler been installed in accordance with Section 316.04(g)2 on Hydraulic Cement Concrete Pavement for transverse expansion joints?
509.03(6)	Are the temperature requirements for the removal and placement of concrete in accordance with this section?
509.03(7)	Has all joint material and reinforcing steel been placed in accordance with this section?
509.03(8)	Does the existing pavement and patches conform to the ¼" in 10 foot tolerance?

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**RELOCATING OR MODIFYING EXISTING  
MISCELLANEOUS ITEMS**

**(Ref. Section 510)**

<b><u>Job Element</u></b>	<b><u>Date</u></b>	<b><u>Project Inspector's Signature</u></b>
<ol style="list-style-type: none"><li>1. Verify plans, location for removal, reuse or modification items.</li><li>2. If reused ensure item is not damaged during removal or installation</li><li>3. Be sure to have approved C-25 for new items if modifying</li><li>4. Approved disposal area if needed.</li><li>5. Provide needed sketches and/or calculations.</li></ol>		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**RELOCATING OR MODIFYING EXISTING  
MISCELLANEOUS ITEMS**

**[\(Ref. Section 510\)](#)**

**General description of how competencies were completed:**

**Trainee's Comments:**

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**Project Inspector's Comments:**

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**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**RELOCATING OR MODIFYING EXISTING  
MISCELLANEOUS ITEMS**  
**(Ref. Section 510)**

**CQIP QUESTIONS**

1. Has Engineer approved the reuse of the item?
2. Has the contractor provided an approved disposal area if needed?
3. Has a Source of Materials been approved for new items if needed for modifications?

# 500 SERIES

## INCIDENTAL CONSTRUCTION

### ALLAYING DUST (Ref. Section 511)

<u>Job Element</u>	<u>Date</u>	<u>Project Inspector's Signature</u>
<p>Ensure trucks are at least 1,000 gallons and proper pumps are used to meet the time frames (30 minutes).</p> <p>If Calcium Chloride is used verify and document application rate</p> <p>Document truck hrs. or tons of calcium chloride for payment</p> <p>If Calcium Chloride is used ensure that a letter from contractor that material is not stored on site or ensure it is included in the project SWPPP.</p>		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**ALLAYING DUST**  
**(Ref. Section 511)**

**General description of how competencies were completed:**

**Trainee's Comments:**

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**Project Inspector's Comments:**

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## **500 SERIES**

### **INCIDENTAL CONSTRUCTION**

#### **ALLAYING DUST** **(Ref. Section 511)**

#### **CQIP QUESTIONS**

1. If Calcium Chloride is used is the application rate included in the plans?
2. Has the contractor provided sufficient size truck and pumps?
3. Has truck hours been agreed upon with inspector and contractor?
4. If Calcium Chloride is used has it been applied at the appropriate rate and paid accordingly?

# 500 SERIES

## INCIDENTAL CONSTRUCTION

### MAINTENANCE OF TRAFFIC MAINTAINING TRAFFIC

(Ref. Section 512)

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Describes the different types of standard traffic control devices.		
Demonstrates an awareness of and concern for the traveling public by: <ol style="list-style-type: none"><li>1. Confirming that unsafe areas of work such as open ditches, manholes, etc. are correctly barricaded.</li><li>2. Verifying that the proper methods of flagging are used.</li><li>3. Checking to see if traffic is functioning properly through a construction work area.</li><li>4. Verifying that the proper Maintenance of Traffic typical is being used in accordance with the Work Area Protection Manual.</li><li>5. Correcting all safety devices found on the project.</li><li>6. Performs work zone safety checklist to document the above activities (items 1-5).</li></ol>		
Explains the different types of the following: <ol style="list-style-type: none"><li>1. Warning lights.</li><li>2. Channelizing devices.</li><li>3. Pavement markings.</li><li>4. Electronic Arrows</li><li>5. Traffic Barrier Service</li><li>6. Temporary Signalization</li><li>7. Type III Barricades</li><li>8. Truck-mounted Attenuator</li><li>9. Portable Changeable Message Sign</li></ol>		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**MAINTENANCE OF TRAFFIC MAINTAINING TRAFFIC**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## **500 SERIES**

### **INCIDENTAL CONSTRUCTION**

#### **MAINTENANCE OF TRAFFIC MAINTAINING TRAFFIC**

##### **CQIP CHECKLIST**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
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 and contract documents?
512.02(b)1	Do signalization, barricades, channelizing devices, pavement markings and other safety devices conform to the requirements of specifications and MUTCD (materials)?
512.02(b)2	Are reflectorized surfaces made from lens sheeting conforming to the requirements of Section 235, 247.02 and 702?
512.03(1)	Are clearance values being maintained as indicated in the Safety Guidelines for Construction Zones of the Work Area Protection Manual?
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)
512.03(3)	Are barricades, barriers and other safety devices inspected daily by the Contractor and deficiencies immediately corrected?
512.03(a)	Does the Contractor furnish and install signs when required, maintain signs and furnish accessory items in accordance with this section?
512.03(b)	Does the Contractor provide certified flagger service and pilot vehicles when required in accordance with this section?
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?
512.03(d)	Are the type and spacing of warning lights in accordance with this section?
512.03(e)	Are the type and spacing of channelizing devices in accordance with this section?

## **500 SERIES**

- 512.03(f)1 Does the Contractor continuously prosecute the work until completion once the barrier is in place?
- 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?
- 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?
- 512.03(f)4 Is the normal pavement alignment at the barrier opening maintained with removable pavement markings?
- 512.03(f)5 Are ingress and egress openings in accordance with the requirements of this section?
- 512.03(f)6 Are delineators installed on barrier service in accordance with Section 702, Delineators?
- 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?
- 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?
- 512.03(f1) Is guardrail barrier service in accordance with this section?
- 512.03(f2)1 Is concrete barrier service installed in accordance with the plans and standard drawings or as directed by the Engineer?
- 512.03(f2)2 When barrier terminates at a guardrail, are fixed object attachments in accordance with the applicable standards?
- 512.03(f2)3 Is precast concrete parapet service anchored as shown on the plans?
- 512.03(f2)4 Upon parapet removal, are anchor holes cleaned and filled with the proper epoxy mortar EP4 or EP5?
- 512.03(g) Is impact attenuator service in accordance with this section?
- 512.03(h)1 When specified on the plans, did the Contractor install and maintain temporary or portable traffic control signalization equipment?

## **500 SERIES**

- 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?
- 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?
- 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?
- 512.03(i)2 Are construction pavement markings Type D, E, & F installed in accordance with the manufacturer's recommendations?
- 512.03(i)3 Have construction pavement markings been maintained and deficiencies been corrected in accordance with this specification?
- 512.03(j)1 Are pavement markings that may conflict with desired traffic movement eradicated as soon as is practicable?
- 512.03(j)2 Is eradication and containment being performed in accordance with this section?
- 512.03(j)3 Are markings for lane shifts/transitions 100% eradicated?
- 512.04(j)4 Is Type E black construction pavement marking applied and/or removed in accordance with this section?
- 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?
- 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?
- 512.03(k)3 Are temporary pavement markers located in alignment with the pavement markings?
- 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?
- 512.03(k)5 Have temporary pavement markers been installed in accordance with this section?

## **500 SERIES**

- 512.03(l) Are detours provided in accordance with this section?
- 512.03(m) Is aggregate material placed in accordance with this section?
- 512.03(n) Are construction pavement message markings installed in accordance with this section?
- 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?
- SP-WZTCM.2.C Does the Traffic Control Supervisor perform the specified duties and keep a diary?
- 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?

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**MOBILIZATION**  
**(Ref. Section 513)**

<b><u>Job Element</u></b>	<b><u>Date</u></b>	<b><u>Project Inspector's Signature</u></b>
<p>Ensure contractor has submitted equipment and employee list.</p> <p>Document when mobilization started and completed</p> <p>Pay 50% at the start of mobilization and then remaining 50 % on the next estimate following the completion of mobilization</p>		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**MOBILIZATION**  
**(Ref. Section 513)**

**General description of how competencies were completed:**

**Trainee's Comments:**

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**Project Inspector's Comments:**

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**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**MOBILIZATION**  
**(Ref. Section 513)**

**CQIP QUESTIONS**

1. Did the contractor provide the equipment and employee list prior to start of work?
2. Was mobilization properly documented and paid?

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**FIELD OFFICE**  
**(Ref. Section 514)**

<b><u>Job Element</u></b>	<b><u>Date</u></b>	<b><u>Project Inspector's Signature</u></b>
<p>Meet with contractor to select an agreed upon location.</p> <p>Review plans and specification for correct field office</p> <p>Ensure contractor obtains proper property owners agreements</p> <p>Verify all permits are obtained</p> <p>Obtain certification from contractor that office is free of asbestos or other hazardous materials</p>		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**FIELD OFFICE**  
**(Ref. Section 514)**

**General description of how competencies were completed:**

**Trainee's Comments:**

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**Project Inspector's Comments:**

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**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**FIELD OFFICE**  
**(Ref. Section 514)**

**CQIP QUESTIONS**

1. Has contractor obtained proper property owners agreements?
2. Has contractor obtained all required permits?
3. Has contractor provided certification from that office is free of asbestos or other hazardous materials?
4. Does the office meet the requirements stated in Section 514.02?
5. Is the office included in the project SWPPP when required?

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**PLANING PAVEMENT**  
**(Ref. Section 515)**

<b><u>Job Element</u></b>	<b><u>Date</u></b>	<b><u>Project Inspector's Signature</u></b>
<p>Verify plans, location and depth prior to start of work.</p> <p>Ensure contractor has proper equipment and the vehicles are properly equipped.</p> <p>Provide necessary sketches and calculations for payment.</p> <p>Ensure cuttings are disposed of properly.</p> <p>Ensure planed surfaces are free from gouges, grooves, soot, oil film and other imperfections suitable for riding.</p> <p>For resurfacing projects ensure a 1" shoulder is cut along gutter lines.</p>		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**PLANING PAVEMENT**  
**(Ref. Section 515)**

**General description of how competencies were completed:**

**Trainee's Comments:**

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**Project Inspector's Comments:**

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# **500 SERIES**

## **INCIDENTAL CONSTRUCTION**

### **PLANING PAVEMENT** **(Ref. Section 515)**

#### ***CQIP CHECKLIST***

<b>SECTION</b>	<b>QUESTIONS</b>
<b>515.01</b>	Has the pavement been planned to the designated depth?
515.02(1)	Is planning performed with a pavement planning machine of a type that has operated successfully on work comparable to that specified in the contract?
515.02(2)	Are all vehicles in use under traffic using the proper lights and arrows?
515.02(3)	Have all irregularities and high spots in the pavement been eliminated?
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?
515.02(5)	Have pavement cuttings been disposed of in accordance with the general provisions section of Disposal Areas?
515.02(6)	Is the planned surface free from gouges, grooves, ridges, soot, oil film, and other imperfections and have a mosaic appearance suitable as a riding surface?
515.02(a)	Are hot planning methods in accordance with this section?
515.02(b)	Are milling and cold planning methods in accordance with this section?

# 500 SERIES

## INCIDENTAL CONSTRUCTION

### DEMOLITION OF BUILDINGS & CLEARING PARCELS (Ref. Section 516)

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Describes what work is included under this topic.		
Verifies that a Contractor prepares a parcel for clearing in terms of utilities, demolition of buildings, and disposal/removal of materials.		
Completes required documentation associated with the clearing activities in the preceding Job Element.		
Verifies that Asbestos Abatement has been performed on all buildings designated for demolition in accordance with the applicable Special Provision.		
Describes the measurement and payment methods associated with:  1. Demolition of buildings. 2. Clearing parcels. 3. Closing wells.		
Verify plans, location and type prior to start of work.		
Ensure contractor has submitted and obtained an approved asbestos plan		
Ensure contractor is licensed for asbestos abatement activities		
Ensure the contractor has proper Personal Protective Equipment and Decontamination are identified and in place.		
Ensure the Department has a licensed monitor on site during asbestos removal operations		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**DEMOLITION OF BUILDINGS & CLEARING PARCELS**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## **500 SERIES**

### **DEMOLITION OF BUILDINGS & CLEARING PARCELS**

#### **CQIP CHECKLIST**

1. Were utilities cleared prior to demolition activities?
2. Has all asbestos been removed prior to demolition activities?
3. Has all well closings been performed prior to demolition activities?
4. Has contractor performed well closings in accordance w/ State Board of Health Private Well Regulations, State Water Control Board and Local Jurisdictions?
5. Has the contractor provided the proper documents for well abandonments?
6. Has the contractor submitted and obtained an approved asbestos abatement plan?
7. Has the contractor provided the proper documentation for asbestos and other hazardous removal? Provided Hazardous Disposal documents?

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**CONTRACTOR CONSTRUCTION SURVEYING**

[\(Ref. Section 517\)](#)

<b><u>Job Element</u></b>	<b><u>Date</u></b>	<b><u>Project Inspector's Signature</u></b>
<p>Verify plans prior to start of work.</p> <p>Ensure contractor is performing all surveying under direct control and supervision of a licensed Virginia Land Surveyor</p> <p>Ensure contractor preserves all the Department furnished baseline or centerline controls and benchmarks</p> <p>Ensure the contractor provides certified plats, survey drawings, field notes with computations prior to using such information.</p> <p>Ensure no more than 60% is paid until the contractor provides certified plats, survey drawings, field notes with computations.</p>		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**CONTRACTOR CONSTRUCTION SURVEYING**

**(Ref. Section 517)**

**General description of how competencies were completed:**

**Trainee's Comments:**

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**Project Inspector's Comments:**

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## 500 SERIES

### INCIDENTAL CONSTRUCTION

#### CONTRACTOR CONSTRUCTION SURVEYING (Ref. Section 517)

##### CQIP CHECKLIST

<u>SECTION</u>	<u>QUESTIONS</u>
517.01(1)	Is the contract survey in accordance with the Special Provisions and the Department's current survey manual?
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?
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?
517.02(5)	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?
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?
517.04/05(c)(f)	For Construction "C" or Minimum Plan "M" projects, did the Contractor provide temporary benchmarks in accordance with the section? Ref: 517.04(c) and 517.05(f)
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)

## **500 SERIES**

- 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)
- 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)
- 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)

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**TRAINEES ON CONSTRUCTION PROJECTS**  
**(Ref. Section 518)**

<b><u>Job Element</u></b>	<b><u>Date</u></b>	<b><u>Project Inspector's Signature</u></b>
Verify at pre-construction meeting with District Civil Rights Manager.  Coordinate and document with District Civil Rights Manager the trainee requirements		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**TRAINEES ON CONSTRUCTION PROJECTS**  
**(Ref. Section 518)**

**General description of how competencies were completed:**

**Trainee's Comments:**

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**Project Inspector's Comments:**

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**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**TRAINEES ON CONSTRUCTION PROEJECTS**  
**(Ref. Section 518)**

**NO CQIP QUESTIONS**

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**SOUND BARRIER WALLS**

**(Ref. Section 519)**

<b><u>Job Element</u></b>	<b><u>Date</u></b>	<b><u>Project Inspector's Signature</u></b>
Verify plans, location and foundation prior to start of work.  Ensure C-25 submitted approved  Review manufacturers recommendations  Review approved shop drawings		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**SOUND BARRIER WALLS**  
**(Ref. Section 519)**

**General description of how competencies were completed:**

**Trainee's Comments:**

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**Project Inspector's Comments:**

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## **500 SERIES**

### **INCIDENTAL CONSTRUCTION**

#### **SOUND BARRIER WALLS** **(Ref. Section 519)**

##### **CQIP CHECKLIST**

<i>SECTION</i>	<i>QUESTIONS</i>
519.02	Do sound wall materials conform to the requirements of this section?
519.03(1)	Are H-piles for sound barriers driven within a +/- 1/2 inch tolerance and in accordance with the section on bearing piles?
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?
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?
519.03(4)	Does the alignment of the top face of the wall not deviate more than 1/2 inch in ten feet?
519.03(5)	Are disturbed areas graded and seeded in accordance with the section on seeding?
519.03(a)	Are precast sound barrier walls constructed in accordance with this section?
519.03(b)	Are metal sound barrier walls constructed in accordance with this section?
519.03(c)	Are plywood sound barrier walls constructed in accordance with this section?

## 500 SERIES

### INCIDENTAL CONSTRUCTION

#### UTILITY COORDINATOR AND WATER & SANITARY SEWER FACILITIES

[\(Ref. Section 520\)](#)

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Describes the different types of utilities.		
Explains the need for utility adjustments and relocations.		
Interprets/reads utility plans correctly.		
Explains when the Contractor must contact the utility hotline (MISS UTILITY).		
Checks that the backfilling procedures and the compaction operations are within contract compliance.		
Explains the allowable separation and crossing distances between water and sanitary sewer placement.		
Differentiates the color codes for marking utility lines.		
Explains in general terms the specifications related to Water and Sanitary Sewer Facilities – Section 520.		
Explains in general terms the testing requirements related to Water and Sanitary Sewer Facilities – Section 520.		
Verify plans, location and foundation prior to start of work.		
Ensure C-25 submitted approved		
Ensure required CT #'s are obtained		
Review manufacturers recommendations		
Document and review all testing results		

**500 SERIES**

**INCIDENTAL CONSTRUCTION**  
**UTILITY COORDINATOR AND WATER & SANITARY SEWER**  
**FACILITIES**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## **500 SERIES**

### **INCIDENTAL CONSTRUCTION** **UTILITY COORDINATOR AND WATER & SANITARY SEWER** **FACILITIES**

#### **CQIP CHECKLIST**

<i>SECTION</i>	<i>QUESTIONS</i>
520.02	Do water and sewer materials conform to the requirements of this section?
520.03(1)	Have all underground utilities and obstructions been located in accordance with the general provisions of Section <u>105.08</u> , Cooperation with Regard to Utilities? ( <u>2002 – Ref. Section 105.07</u> )
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?
520.03(3)	Have provisions been made to maintain adequate and safe passage over excavations to accommodate pedestrians or vehicles?
520.03(a)	Are water supplies protected from contamination by sewage in accordance with this section?
520.03(b)	Is excavation, backfill and compaction performed in accordance with Section 302 and this section?
520.03(c)	Are pipe and fittings inspected for cracks and defects in accordance with this section?
520.03(d)	Is pipe placed in accordance with this section?
520.03(e)	Is pipe for fittings or closure pieces cut in a neat and orderly manner without damage to the pipe?
520.03(f)	Is pipe joined in accordance with this section?
520.03(g)	Are plugs, caps, tees, and bends placed in accordance with this section?
520.03(h)	Is encasement pipe installed in accordance with the Section 302, Drainage Structures?
520.03(i)	Prior to installation, has existing pipe to be encased been cleaned and foreign material removed?

## **500 SERIES**

- 520.03(j) Are valves, valve boxes and manholes constructed in accordance with this section?
- 520.03(k) Are fire hydrants set in accordance with this section?
- 520.03(l) Are corporation stops made while the main is under pressure and at a 45-degree angle to the horizontal plane?
- 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?
- 520.03(n) Are water meters and yokes placed in accordance with this section?
- 520.03(o) Is jacked encasement pipe installed in accordance with Section 302, Drainage Structures for Jacked Method of Pipe Culverts?
- 520.03(p) Are sanitary service lateral connections made in accordance with this section?
- 520.03(q) Are sanitary manholes and manhole frames and covers constructed in accordance with Section 302, Drainage Structures?
- 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?
- 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?
- 520.03(t) Is conveying sewage performed in accordance with this section?
- 520.04(a) Have water mains and appurtenances been tested for leakage in accordance with this section?
- 520.04(b) Have gravity sanitary sewers been tested for leakage in accordance with this section?
- 520.04© Have force main sanitary sewers been tested for leakage in accordance with this section?
- 520.04(d) Are offsets of existing pipes placed in accordance with this section?
- 520.05 Have all water mains and accessories been disinfected prior to tie-ins in accordance with AWWA C651?

**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**MAILBOX POST**  
**(Ref. Section 521)**

<b><u>Job Element</u></b>	<b><u>Date</u></b>	<b><u>Project Inspector's Signature</u></b>
Verify plans and location prior to start of work.  Ensure conformance to Standard RFD-1		

**INCIDENTAL CONSTRUCTION**

**MAILBOX POST**  
**(Ref. Section 521)**

**General description of how competencies were completed:**

**Trainee's Comments:**

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**Project Inspector's Comments:**

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**500 SERIES**

**INCIDENTAL CONSTRUCTION**

**MAILBOX POST**  
**(Ref. Section 521)**

**CQIP QUESTIONS**

1. Were mailbox posts replaced per the plans and standard drawing RFD-1?

600 SERIES

**ROADSIDE DEVELOPMENT**

**TOPSOIL AND SEEDING**  
**(TOPSOIL, SEEDING AND MULCHING)**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Describes the different types of topsoils.		
Stakes out an area to be topsoiled and seeded.		
Verifies that a seedbed is correctly prepared.		
Enters the proper documentation in regards to topsoil, seeding, and mulching.		

600 SERIES

**ROADSIDE DEVELOPMENT**

**TOPSOIL AND SEEDING**  
**(TOPSOIL, SEEDING AND MULCHING)**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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# 600 SERIES

## ROADSIDE DEVELOPMENT

### TOPSOIL AND SEEDING (TOPSOIL, SEEDING AND MULCHING)

#### CQIP CHECKLIST

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
602.03(a)1	Are all areas designated to receive topsoil shaped, graded, and then scarified or tilled to a depth of approximately 2”?
602.03(a)2	Is topsoil spread only on designated areas to the depth shown on the plans?
602.03(a)3	Is topsoil spread only when the subsoil is in a loose, friable condition?
602.03(b)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?
602.03(b)2	After applying topsoil, have large clods, stones >3” in diameter, brush, roots, stumps, litter, etc. been removed from the area?
602.03(b)3	Is the area seeded within 7 days after topsoil is applied?
603.03(1)	Are seeding operations not performed when the ground is frozen or weather conditions would prevent proper preparation and subsequent operations?
603.03(2)	Did the Contractor notify the Engineer at least 48 hours prior to starting seeding operations?
603.03(a)	Is lime uniformly applied to areas to be seeded at the rate of 2 tons per acre?
603.03(b)1	After the application of lime, are 3:1 or flatter slopes loosened to a depth of approximately 3”?
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”?

## 600 SERIES

- 603.03(b)3 Is all material >3" in diameter removed and disposed of in accordance with the section on Disposal Areas or as approved by the Engineer?
- 603.03(b)4 Are gullies, washes, and disturbed areas that develop subsequent to final dressing repaired prior to being seeded?
- 603.03(c) Is fertilizer uniformly applied at a rate of 600 lbs. of 15-30-15 or an equivalent quantity of 1-2-1 fertilizer per acre or as specified?
- 603.03(d)1 Are hydroseeding mixtures constantly agitated and applied within 8 hours after mixing began?
- 603.03(d)2 Are leguminous seed inoculated before they are mixed with other seeds and applied within 24 hours of treatment?
- 603.03(d)3 Are leguminous seeds treated at 5 times the amount of the manufacturers recommendations when the hydroseeding method is used?
- 603.03(e)1 Is mulch applied within 48 hours after completion of the seeding operation?
- 603.03(e)2 When straw or hay mulch is used, is it applied uniformly at the rate specified?
- 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?
- 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?
- 603.03(e)5 Is straw or hay mulch anchored in accordance with this section?
- 603.03(e)6 Does the Contractor protect all adjacent property and pedestrian areas during the mulching operations?
- 603.04(1) Does the Contractor furnish certified scales to weigh opened bags of seed transferred between projects?
- 603.04(2) Does the Contractor maintain seeded areas until final acceptance of the project?

700 SERIES

**TRAFFIC CONTROL DEVICES**

**GENERAL**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains in general terms Section 700 – General regarding the items of work common to signing, signals, and lighting.		
Explains the general grounding procedures for electrical traffic control devices.		
Verifies that the Contractor has submitted the correct electrical equipment based on the shop drawings.		

700 SERIES

**TRAFFIC CONTROL DEVICES**

**GENERAL**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## 700 SERIES

### **TRAFFIC CONTROL DEVICES** **GENERAL**

#### **CQIP CHECKLIST**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
700.04(c)3	Have foundation designs for signal poles and overhead sign structures been furnished by the Contractor?
700.04(e)2	Has the location of each pole, post, and sign structure been established by the Contractor with a stake bearing the number or identification designated on the plans?
700.04(e)3	If a pole, overhead sign structure, or span wire is located within 10 feet in any direction of an electric power line, did the Contractor notify the Engineer immediately?
700.04(e)4	Has a noncorrosive metal tag been permanently attached to each signal, pedestal and lighting pole, overhead sign structure, and I-beam steel sign post (except U-channel sign post) approximately 30 inches above the foundation?
700.04(e)5	Are hand holes provided on poles, and are they located on the side away from traffic?
700.04(e)6	Are the hand holes at least 3 inches by 5 inches and provided with a cover and gasket?
700.04(f)	Are breakaway support systems installed in lighting and pedestal poles when required by the plans in accordance with this section?
700.04(g)	Is a Megger test run by the Contractor when required?
700.04(h)	After installation, was each conduit tested for obstructions in the presence of the Engineer?
700.04(h1)	When accessible to the public, was PVC or fiberglass conduit covered with a protective shield for a distance of at least 8 feet above finished grade?
700.04(j)	When disturbed by the installation of equipment, was sidewalk replaced in accordance with the section on Sidewalks along existing joint lines?

700 SERIES

**TRAFFIC CONTROL DEVICES**

**TRAFFIC SIGNS**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Locates signs on a set of plans.		
Describes the different types of signs based on shape (not in R & B Specifications).		
Verifies that the reflective sheeting used in traffic signs complies with Section 247 (Reflective Sheeting).		
Verifies that the message on <b>three (3)</b> different signs comply with the MUTCD.		
Describes the proper handling of new and relocated signs during transport and storage.		
Maintains necessary record-keeping related to sign placement.		

700 SERIES

**TRAFFIC CONTROL DEVICES**

**TRAFFIC SIGNS**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## 700 SERIES

### **TRAFFIC CONTROL DEVICES** **TRAFFIC SIGNS**

#### **CQIP CHECKLIST**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
701.02	Did the reflective sheeting used in traffic signs conform to the requirements of the Materials Section 247, Reflective Sheeting?
701.03(a2)	Are sign panels smooth, flat, and free from metal burrs and splinters and fabricated of aluminum 0.100 inch in thickness?
701.03(a3)1	Was the prohibition on joints, splices, or laps on sign panels less than 16 square feet in area, except for one factory splice from the roll or for sign panels fabricated with fluorescent prismatic lens orange sheeting, adhered to?
701.03(a3)2	When more than one width of sheeting, except fluorescent prismatic lens orange, has been applied to a sign panel, do sheeting edges form a vertical butt joint or overlap $\leq 3/8$ inch or overlap $> 3/8$ shingle style for horizontal joints?
701.03(a3)3	Are the finished sign panels free from cracks, gaps, streaks, wrinkles, blisters, discoloration, buckles, and warps and have a smooth surface of uniform color?
701.03(a4)	Do all of the messages, symbols, and other features of the sign message conform to the requirements of the MUTCD?
701.03(a6)	Are lines of message and features straight and properly spaced with letters, numerals, and borders smooth and free of irregular edges?
701.03(a7)	Has the complete outer edge, splices, messages, and borders of the signs been sealed?
701.03(b)(c)	Have all new or relocated signs been transported, stored, and protected in accordance with the requirements of these sections?
701.03(d)1	When sign panels are installed prior to their need, was a porous cloth cover rendering the message nonvisible placed over the sign panel and properly secured?
701.03(d)2	Is damage to reflective sheeting repaired in accordance with the requirements of this section?

700 SERIES

**TRAFFIC CONTROL DEVICES**

**TRAFFIC SIGNALS**  
**(TRAFFIC SIGNALIZATION)**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Interprets the special symbols on the signalization plans.		
Explains how the Contractor properly performs the demonstration test at a signalized intersection.		
Explains the Phase I and Phase II testing procedures after the Contractor has completed the demonstration test at a signalized intersection.		
Enters the correct records related to the measurement and payment of <b>at least one traffic signal.</b>		

700 SERIES

**TRAFFIC CONTROL DEVICES**

**TRAFFIC SIGNALS**  
**(TRAFFIC SIGNALIZATION)**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## 700 SERIES

### TRAFFIC CONTROL DEVICES

#### TRAFFIC SIGNALS (TRAFFIC SIGNALIZATION)

#### CQIP CHECKLIST

<u>SECTION</u>	<u>QUESTIONS</u>
703.01	Are the traffic signals being installed in accordance with the specifications, plans, or as directed by the Engineer?
703.02(1)	Has the manufacturer provided certification from an independent testing lab that controller model, auxiliary equipment, and flasher conform to NEMA environmental and test procedures and any exceptions stated herein unless otherwise specified?
703.02(2)	Are controllers furnished completely housed in a waterproof cabinet?
703.02(3)	Has the Contractor furnished the manufacturer's instructions for installing and maintaining the equipment?
703.02(4)	Does the Contractor furnish the Department 3 copies of the timing data and documents used in calculating the timings 60 days prior to timing implementation?
703.02(5)	Did the Contractor request the final timing plan at least 90 days in advance of implementation?
703.02(d3)	Has the Contractor installed 2 blue and white prints of the circuit diagram inside the controller cabinet and furnished 3 additional copies to the Engineer?
703.02(e1)	Are cast aluminum signal heads used for span wire installations, free-swinging mast arm installations, and pedestal-mounted installations that use only slipfitters?
703.02(e2)	Are traffic signal backplates specifically manufactured for the type and brand of signal heads used to ensure proper fit with a border width of 5 inches, of one piece construction, and without louvers?
703.02(e3)	Do standard signal head sections conform to the ITE Standard for Vehicle Traffic Control Signal Heads and Section 238, Electrical and Signal Components?

## 700 SERIES

- 703.02(e4) Do selective view traffic signal head sections conform to the requirements of Section 238, Electrical and Signal Components?
- 703.02(e5) Do pedestrian signal heads conform to ITE Standards for Pedestrian Traffic Control Signal Indications and Section 238, Electrical and Signal Components?
- 703.02(e6) Do Lane-use control signal heads conform to ITE Standards for Lane-Use Traffic Control Signal Heads and Section 238, Electrical and Signal Components?
- 703.03(a)1 Did the Contractor obtain approval from the Engineer at least 48 hours prior to discontinuing operation of an existing signal?
- 703.03(a)2 Does the Contractor provide necessary traffic control for maintenance of traffic, as approved by the Engineer, while modifying or replacing existing traffic signals?
- 703.03(a)3 Has the Contractor furnished the Engineer with the name and telephone number of the supervisory employee responsible for responding to repair calls during non-working hours?
- 703.03(a)4 Does the Contractor repair signal malfunctions within four hours from the time of notification?
- 703.03(e) Have new or modified signal heads been covered with a durable, non-transparent cover until put into operation?
- 703.03(e1)1 Has the Contractor verified the location and alignment of each signal head for orientation to its approach lane(s) prior to installing the signal conductor cable?
- 703.03(e1)2 Is the bottom of the housing of all pedestal or bracket-mounted signal faces adjacent to the pavement at least 8 but not more than 15 feet above the sidewalk or pavement grade at the center of the roadway?
- 703.03(e1)3 Is the lowest point of the signal head assembly, including backplates and tether wire attachments, at least 15 feet for mast arm and 16 feet for span wire installations above the pavement grade at center of roadway?
- 703.03(e2)1 Are pedestrian signal heads mounted with the bottom of the lower signal unit at least 7 but no more than 10 feet above the sidewalk?

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- 703.03(e)2 When mounted on the same support, are pedestrian indications mounted below vehicular indications and are they at least 1 foot apart?
- 703.03(g) Has the Contractor submitted a detailed drawing for the Engineer's written approval if detector locations vary more than (+/-) 2 feet from plan location?
- 703.03(g)2)1 Are inductive loop detectors not installed in pavement that has been open cut, repaired, or rebuilt in a manner where the pavement structure is not sound and continuous?
- 703.03(g)2)2 Were Megger tests performed before and after sealant installation in accordance with the requirements of this section?
- 703.03(h) Do rigging details conform to the requirements of this section?
- 703.03(i)1 Does the Contractor conduct a demonstration test of each signalized intersection for 30 continuous days?
- 703.03(i)2 Have Phase I & II tests of the traffic control signal system master controller and system coordination been conducted upon completion of the demonstration test for each signalized intersection?
- 703.03(i)3 Did the Contractor furnish the Department written certification that the system control equipment has been installed in accordance with the manufacturer's specifications?

700 SERIES

**TRAFFIC CONTROL DEVICES**

**PAVEMENT MARKINGS AND MARKERS**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Explains the different types and classes of pavement markings.		
Applies the weather limitation to <b>two (2)</b> types of pavement markings.		
Explains the different types of pavement markers.		
Measures either a pavement line marking or a pavement marker for the correct payment parameter.		
Accurately records either pavement marking or pavement marker information.		

700 SERIES

**TRAFFIC CONTROL DEVICES**

**PAVEMENT MARKINGS AND MARKERS**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## 700 SERIES

### TRAFFIC CONTROL DEVICES

#### PAVEMENT MARKINGS AND MARKERS

##### CQIP CHECKLIST

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
704.02(1)	Does the Contractor use an approved inventory tracking system and provide copies of certified delivery tickets for all pavement marking materials?
704.02(2)	Do all materials conform to the requirements of this section?
704.03(1)	Did the Contractor have a certified Pavement Marking Technician present during pavement marking operations?
704.03(2)	Were pavement marking installations completed within the time limits given in this section for new and resurfaced roadways?
704.03(3)	Did the Contractor install and maintain Type D markings within the same time limits if intended markings could not be placed with the required time limits?
704.03(a)01	Are the pavement markings white or yellow for the specific location as required by the MUTCD or as specified by the Engineer?
704.03(a)02	Are pavement markings installed in accordance with Table VII-1 unless otherwise recommended by the manufacturer and approved by the Engineer?
704.03(a)03	Did the Contractor furnish a copy of the manufacturer's installation recommendations to the Engineer?
704.03(a)04	Did the Contractor, in the presence of the Engineer, perform quality control testing for application thickness and glass bead rate at the beginning of each workday and every three hours thereafter?
704.03(a)05	Was Form C-85: Pavement Marking, Contractors Daily Log and Quality Control Report, maintained according to the requirements of this section?
704.03(a)06	Were crosswalks and stop lines installed using Type B, Class I or IV markings?

## 700 SERIES

- 704.03(a)07 Were solid lines or skip lines installed using Type A or Type B markings as specified?
- 704.03(a)08 Were pavement message markings installed using Type B, Class I, IV, or VI markings?
- 704.03(a)09 Did the Contractor protect the public from damage attributed to pavement marking operations?
- 704.03(a)10 Did the Contractor prepare the roadway surface in accordance with this section immediately prior to the installation of pavement markings?
- 704.03(a)11 Was the pavement surface dry at time of application with no material being applied within 24 hours following rain or other inclement weather?
- 704.03(a)12 Were liquid markings applied so as to prevent splattering and overspray and protected from traffic until track free?
- 704.03(a)13 Were pavement markings applied evenly and have a uniform application and appearance, exhibit good workmanship, and appear clearly visible at all times?
- 704.03(a)14 Were glass beads applied at the specified rate and evenly distributed over the entire surface of the marking?
- 704.03(a)15 Were beads applied to the surface of liquid markings, unless otherwise noted, by a dispenser that is equipped with a synchronized cut-off control and attached to the applicator?
- 704.03(a)1 Were Type A markings installed according to the requirements of this section?
- 704.03(a)2)1 Did non-truck mounted equipment conform to the requirements of this section for thermoplastic, polyester, and epoxy resin application?
- 704.03(a)2)2 Were Type B markings, which include Thermoplastic, Polyester Resin, Epoxy Resin, and Preformed Tape, installed according to the requirements of this section?
- 704.03(c)1)1 Were snow plowable raised pavement markers installed in accordance with this section?
- 704.03(c)1)2 Was the installed height of snow plowable raised pavement markers approximately ½ inch above the pavement surface?

## 700 SERIES

- 704.03(c2)1 Were recessed pavement markers installed in accordance with this section?
- 704.03(c2)2 Was the installed top of the marker flush with or no more than 1/16 below the pavement surface?
- 704.03(c3) Were raised pavement markers installed in accordance with section?

700 SERIES

**TRAFFIC CONTROL DEVICES**

**LIGHTING SYSTEMS**  
**(ELECTRICAL WORK & CONDUIT)**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Describes the three (3) different types of lighting systems.		
Verifies that the Contractor correctly follows the procedures when de-energizing any portion of the electrical system.		
Applies the correct measurement and payment methods to a luminaire system and a control center.		

700 SERIES

**TRAFFIC CONTROL DEVICES**

**LIGHTING SYSTEMS**  
**(ELECTRICAL WORK & CONDUIT)**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## 700 SERIES

### **TRAFFIC CONTROL DEVICES**

#### **LIGHTING SYSTEMS** **(ELECTRICAL WORK & CONDUIT)**

#### **CQIP CHECKLIST**

<b><u>SECTION</u></b>	<b><u>QUESTIONS</u></b>
705.03(1)	Does the Contractor verify or locate the origin of the power source and verify voltage when modifying, removing, or relocating existing electrical systems?
705.03(2)	Does the Contractor notify the Engineer at least 48 hours in advance of his anticipated time of de-energizing any portion of the electrical system?
705.03(a)	Are the luminaires for roadway lighting installed in accordance with this section?
705.03(b)	Are sign luminaries installed in accordance with this section?
705.03(c)	Are high-mast luminaire assemblies installed in accordance with this section?
705.03(d)	Are ballasts installed in accordance with this section?
705.03(e)	Are control centers installed in accordance with this section?
705.03(f)	Are electrical components tested in accordance with this section?

# MISCELLANEOUS

## BASIC PLAN READING

Job Element	Date	Project Inspector's Signature
<p>Using a set of project plans (or more, if needed), complete the following tasks:</p> <ol style="list-style-type: none"> <li>1. Computes distances by using station numbers.</li> <li>2. Computes equalities.</li> <li>3. Identifies the construction and right-of-way limits for a project on the plans.</li> <li>4. Compute the percent of grade using a profile sheet.</li> <li>5. Identifies the conventional signs shown on most title sheets.</li> <li>6. Describes the types and depth of the proposed materials from the subgrade to finished grade using a typical section sheet.</li> <li>7. Interprets the standards for fencing, guardrail, and curb &amp; gutter.</li> </ol> <p><b>Note:</b> Sign and date when trainee can complete all of the above.</p>		
<p>Defines each of the following five items:</p> <ol style="list-style-type: none"> <li>1. P.C.</li> <li>2. P.I.</li> <li>3. P.T.</li> <li>4. P.O.C.</li> <li>5. P.O.T</li> </ol>		

**MISCELLANEOUS**

**BASIC PLAN READING**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## MISCELLANEOUS

### Surveying Checklist for Transportation Construction Inspector Trainees

<b>Activity</b>	<b>Date</b>	<b>Monitoring Inspector's or Surveyor's Signature</b>
1. Using an English scale, measures 5 plan items.		
2. Using a cloth tape, verifies in the field the lengths of the 5 plan items in Activity 1 above.		
3. Measures undercut areas and topsoil removal areas using a hand level, fold up rulers and a cloth tape.		
4. Establishes radius points for 4 different pavement flares using a cloth tape.		
5. Using either a cloth tape or a distance wheel, measures the surface area of one (1) seeding area.		
6. Using a cloth tape and a hand level, verifies 2 utility layouts.		
7. Using a hand level and rod, verifies the height of 4 concrete structures in relation to travel way elevations.		
8. Using a cloth tape, measures the surface area of one (1) concrete slope protection.		
9. Using a level rod, determines 3 critical vertical clearances.		
10. Verifies the location and offset distance of 2 right-of-way monuments using a metal tape.		

## MISCELLANEOUS

### Surveying Checklist for Transportation Construction Inspector Trainees

<b>Activity</b>	<b>Date</b>	<b>Monitoring Inspector's or Surveyor's Signature</b>
11. Measures one (1) section of fencing (up to 200') using a cloth or metal tape.		
12. Verifies the accuracy of an automatic level by the "pegging" method. ( <b>Note:</b> See the outline of the "pegging method" at the end of the accompanying notes.)		
13. Using the elevation at a benchmark, determines elevations at a minimum of 5 points by taking 5 level readings with an automatic level. ( <b>Note:</b> See Activity 14 before completing this one).		
14. Records the 5 level readings and elevations (from Activity 13) in a level book using standard VDOT notations.		
15. Checks the slope rates on 3 different driveways by using either an automatic level or a Locke level		
16. Checks 6 critical grade points using an automatic level or a hand level.		
17. Using an automatic level and rod, verifies fine grades.		

## MISCELLANEOUS

### Surveying Checklist for Transportation Construction Inspector Trainees

<b>Activity</b>	<b>Date</b>	<b>Monitoring Inspector's or Surveyor's Signature</b>
18. Verifies the inlet and outlet invert elevations at 3 different pipe or box culverts using an automatic level.		
19. Checks the slope rates at 2 different cut cross-sections by using an automatic level. <b>(Note:</b> Activities 19 & 20 can be accomplished at 4 cut/fill cross-sections.)		
20. Checks the slope rates at two (2) different fill cross-sections by using an automatic level. <b>(Note:</b> Activities 19 & 20 can be accomplished at 4 cut/fill cross-sections.)		
21. Describes finished roadway/ earthwork product at four (4) stations after reading associated slope stakes.		
22. Verifies the plumbness of any combination of three (3) of the following: traffic poles, structure pilings, or concrete pier forms.		

## **Notes to Accompany the Surveying Checklist for Transportation Construction Inspector Trainees**

Inspector Trainees should begin to complete the checklist as soon as possible after completing their Plan Reading and Surveying for Inspector classes. In addition, the Trainees will find helpful information in the Construction Manual, Appendix D – Road and Bridge Stakeout on the following topics: slope stakes; fine grade stakes; bridge stakeout responsibilities; use of surveying instruments; and checking plan dimensions and elevations.

In completing the checklist, the Trainees should attempt to visualize/picture in their minds what the measurements, distances, elevations, locations, clearances, slope rates, etc. mean in relation to ongoing construction activities as well as to the completed project.

With most of the tasks, the Trainee and the Monitoring Inspector (or Surveyor) will find specified conditions or standards (the number of instances or times to complete a task, the number of items to measure, the lengths to measure, the number of locations and types of items to check/verify, etc.) under which the performance is to occur.

Recognizing that the Trainees will differ individually in skills, abilities, and experience, VDOT is listing these conditions or standards as simple guidelines for both the Trainee and the Monitoring Inspector/Surveyor to use as appropriate.

However, VDOT expects each Trainee to “master” the task at-hand - and to not just meet the specified condition(s) or standard(s) - to insure that he/she can successfully complete it in the future on a repeated, ongoing, and sustainable basis as a part of his/her normal work functions with little or no help from other people.

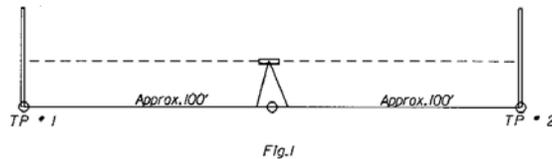
Some Trainees may require more attempts and some may require less attempts in order to master a particular task. Therefore, the Monitoring Inspector/Surveyor must only “sign-off” when he/she is comfortable that the Trainee can complete the task on a repeated, ongoing, and sustainable basis in the future with little or no help from others.

### LEVEL ACCURACY CHECK BY " PEGGING METHOD "

- 1 . Set up Automatic level midway between two stable turning points, approximately 100' in each direction. (Fig.1)
- 2 . Read rod on TP \* 1 to the thousandth and add to assumed elevation of 100.000', creating height of instrument.
- 3 . Rotate level 180° and read rod on TP \* 2 : subtract from H.I., creating elevation on TP \* 2
- 4 . Relocate level and set up approximately 10' past TP \* 2. (Fig.2)
- 5 . Read rod on TP \* 2 and add to elevation of TP \* 2, creating new H I.
- 6 . Read rod on TP \* 1 : subtract from H.I. to determine elevation of TP \* 1.

#### \* IMPORTANT \*

If elevation determined in Step \* 6 varies from the beginning elevation of 100.000' by as much as 0.020', the Level is not reading on a truly level line. For confidence in your own observations, repeat the entire procedure. If a similar variance is determined adjustment or repair is necessary. For assistance call the Survey Section of your District Location And Design Unit.



### SAMPLE LEVEL NOTES

STATION	PLUS	HT. INST.	MINUS	ELEV.	BENCHMARK
TP * 1			5.574	100.007	100.000'
TP * 2	5.338	105.581	4.973	100.243	
TP * 1	5.216	105.216			100.000'

## **MISCELLANEOUS**

### **LEVEL CARE & USE**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Performs the use the level road in the field on actual inspection scenarios (6 times).		
Maintains the level properly.		
Performs proper use of the level in the field on actual inspection scenarios (6 times).		
Enters the data from the actual inspection scenarios above.		
Checks the level for accuracy (3 times).		
Performs the checking, transferring, and resetting of grades (4 times).		

**MISCELLANEOUS**

**LEVEL CARE & USE**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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**MISCELLANEOUS**

**TRANSIT CARE & USE**

<b>Job Element</b>	<b>Date</b>	<b>Project Inspector's Signature</b>
Maintains the transit properly.		
Performs the correct use of the transit in the field on actual inspection scenarios (6 times).		
Computes curve data associated with the actual inspection scenarios above (6 times).		
Checks the transit for accuracy (3 times).		
Enter the data from the 6 actual inspection scenarios above.		

**MISCELLANEOUS**

**TRANSIT CARE & USE**

General description of how competencies were completed:

Trainee's Comments:

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Project Inspector's Comments:

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## MISCELLANEOUS

### Project Preparation

<b>Job Element</b>	<b>Date completed</b>	<b>Project Inspector's Signature</b>
1. Explains why project preparation is important.		
2. Attends each of the following project meetings three times: a. Pre-advertisement Meeting i. Date ii. Date iii. Date b. Project Showing i. Date ii. Date iii. Date c. Pre-construction meeting i. Date ii. Date iii. Date		
3. Explains why pre-construction project conditions must be photographed.		
4. Completes photographing pre-construction project conditions.		
5. Can establish the project files for a project.		
6. Review the project file at the Residency Office and ensures that the following are copied and placed in project files: a. Right-of- Way Agreements b. Soil Survey c. Environmental Permits d. Constructability Review (if available) e. Bid-ability Review (if available) f. Pre-construction Quantity Estimate		

<b>Job Element</b>	<b>Date completed</b>	<b>Project Inspector's Signature</b>
7. Reviews at least 2 of the 6 documents shown in item 6 above for informational purposes.		
8. Verifies that the Contractor has provided the source list for all no-pay materials.		
9. Verifies that the Right-of-Way and all easements are staked before construction begins.		
10. Ensures that all Begin Construction and End Construction Signs are properly placed before construction starts.		
11. Ensures that the bid quantities in the contract match the quantities shown on the plans (for the same 6 different quantity units).		
12. With a highlighter, identifies from the General Notes on the plans those conditions that apply to the project.		
14. Completes the Job Element Set on Field Office. Note; Should include "Verifies that the Network Connection is completed", etc.		

## MISCELLANEOUS

### PROJECT FINALIZATION

<b>Job Element</b>	<b>Date Completed</b>	<b>Project Inspector's Signature</b>
1. Explains the concept that project finalization begins when the construction of a project is started.		
2. On a small, no-plan project, compares the tonnage figures for both stone and asphalt to the associated quantities shown in the Final Summary in SiteManager and the Materials Notebook.		
3. On a small, no-plan project, completes the Asphalt Monthly for a minimum of 3 months.		
4. Completes the Drop Inlet Adjustment Summary for a minimum of 6 different drop inlet structures.		
5. On a Federal-aid project, completes the letter advising where the project payrolls are stored.		
6. Compares the Final Summary against either the current estimate or the Semi-final Estimate.		
7. Resolves any discrepancies found in item 6 above to find any unauthorized or any incorrect Daily Work Reports (DWR's) by running Installed Reports on SiteManager.		

<b>Job Element</b>	<b>Date Completed</b>	<b>Project Inspector's Signature</b>
8. Authorizes or edits (with proper permissions) the unauthorized or incorrect DWR's found in item 7 above.		
9. Checks the Transition Summary Report against the project diary at least once per month for a period of a minimum of 3 months just prior to the estimate completion date.		
10. Determines if the DWR's support the payment of 10 different pay items each with different units.		
11. Prepares a set of final records for a small project (preferably a no-plan project) to include the distinct separation of the tonnage and non-tonnage tickets.		