

500 SERIES

INCIDENTAL CONSTRUCTION

UNDERDRAINS (Ref. Section 501)

Job Element	Date	Project Inspector's Signature
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.		

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INCIDENTAL CONSTRUCTION

UNDERDRAINS

General description of how competencies were completed:

Trainee's Comments:

Project Inspector's Comments:

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INCIDENTAL CONSTRUCTION

UNDERDRAINS

CQIP CHECKLIST

<u>SECTION</u>	<u>QUESTIONS</u>
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?

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INCIDENTAL CONCRETE ITEMS

(Ref. Section 502)

Job Element	Date	Project Inspector's Signature
Checks work line and grade of forms for a minimum of three (3) of the following: <ol style="list-style-type: none">1. Drop inlets2. Paved ditches3. Concrete entrances4. Manholes5. Curbs and gutters6. Concrete Median Barrier7. Foundation reviewed prior to concrete placement.		
Verifies that the following are completed correctly for a least one incidental concrete construction site: <ol style="list-style-type: none">1. Joint construction2. Reinforcing Steel3. Placing concrete4. Finishing concrete5. Curing concrete		
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.		

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INCIDENTAL CONSTRUCTION

INCIDENTAL CONCRETE ITEMS

General description of how competencies were completed:

Trainee's Comments:

Project Inspector's Comments:

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INCIDENTAL CONSTRUCTION

INCIDENTAL CONCRETE ITEMS

CQIP CHECKLIST

<u>SECTION</u>	<u>QUESTIONS</u>
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?

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- 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?

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- 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?

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INCIDENTAL CONSTRUCTION

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

Job Element	Date	Project Inspector's Signature
<ol style="list-style-type: none">1. Ensure C-25 submitted and approved2. Time allowed for handrail review and approved by Central Office3. Assure handrails from an AISC manufacturer4. Inspect forms and steel layout prior to concrete pour5. Ensure shop drawings are approved prior to fabrication of handrails6. Provide sketches and calculations7. Check joints8. Check grounding of handrails9. Test the concrete		

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INCIDENTAL CONSTRUCTION

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

General description of how competencies were completed:

Trainee's Comments:

Project Inspector's Comments:

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INCIDENTAL CONSTRUCTION

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

CQIP CHECKLIST

<u>SECTION</u>	<u>QUESTIONS</u>
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?

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- 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?

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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>You can access the Grit Manual by going to insidevdot's homepage and search for "Grit Manual 2010."</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 & 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"> 1. Concrete post 2. Wood post 3. Anchor assemblies 4. Anchor bolts and nuts 5. Galvanized rail 6. Guardrail delineators (Section 702) 		

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INCIDENTAL CONSTRUCTION

GUARDRAIL AND STEEL MEDIAN BARRIERS

General description of how competencies were completed:

Trainee's Comments:

Project Inspector's Comments:

500 SERIES

INCIDENTAL CONSTRUCTION

GUARDRAIL AND STEEL MEDIAN BARRIERS

CQIP CHECKLIST

<u>SECTION</u>	<u>QUESTIONS</u>
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?

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- 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?

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INCIDENTAL CONSTRUCTION

RETAINING WALLS (Ref. Section 506)

Job Element	Date	Project Inspector's Signature
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		

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INCIDENTAL CONSTRUCTION

RETAINING WALLS

General description of how competencies were completed:

Trainee's Comments:

Project Inspector's Comments:

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INCIDENTAL CONSTRUCTION

FENCES (Ref. Section 507)

Job Element	Date	Project Inspector's Signature
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.		

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INCIDENTAL CONSTRUCTION

FENCES

General description of how competencies were completed:

Trainee's Comments:

Project Inspector's Comments:

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INCIDENTAL CONSTRUCTION

FENCES

CQIP CHECKLIST

<u>SECTION</u>	<u>QUESTIONS</u>
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?

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INCIDENTAL CONSTRUCTION

DEMOLITION OF PAVEMENT & OBSCURING ROADWAY (Ref. Section 508)

Job Element	Date	Project Inspector's Signature
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		

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INCIDENTAL CONSTRUCTION

DEMOLITION OF PAVEMENT & OBSCURING ROADWAY

General description of how competencies were completed:

Trainee's Comments:

Project Inspector's Comments:

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CQIP CHECKLIST (NO QUESTIONS)

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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.		

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INCIDENTAL CONSTRUCTION
PATCHING HYDRAULIC CEMENT CONCRETE PAVEMENT

General description of how competencies were completed:

Trainee's Comments:

Project Inspector's Comments:

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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?

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INCIDENTAL CONSTRUCTION

**RELOCATING OR MODIFYING EXISTING
MISCELLANEOUS ITEMS**

(Ref. Section 510)

<u>Job Element</u>	<u>Date</u>	<u>Project Inspector's Signature</u>
<ol style="list-style-type: none">1. Verify plans, location for removal, reuse or modification items.2. If reused ensure item is not damaged during removal or installation3. Be sure to have approved C-25 for new items if modifying4. Approved disposal area if needed.5. Provide needed sketches and/or calculations.		

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INCIDENTAL CONSTRUCTION

**RELOCATING OR MODIFYING EXISTING
MISCELLANEOUS ITEMS**

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

General description of how competencies were completed:

Trainee's Comments:

Project Inspector's Comments:

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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?

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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>		

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INCIDENTAL CONSTRUCTION

ALLAYING DUST
(Ref. Section 511)

General description of how competencies were completed:

Trainee's Comments:

Project Inspector's Comments:

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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?

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INCIDENTAL CONSTRUCTION

MAINTENANCE OF TRAFFIC MAINTAINING TRAFFIC (Ref. Section 512)

Job Element	Date	Project Inspector's Signature
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">1. Confirming that unsafe areas of work such as open ditches, manholes, etc. are correctly barricaded.2. Verifying that the proper methods of flagging are used.3. Checking to see if traffic is functioning properly through a construction work area.4. Verifying that the proper Maintenance of Traffic typical is being used in accordance with the Work Area Protection Manual.5. Correcting all safety devices found on the project.6. Performs work zone safety checklist to document the above activities (items 1-5).		
Explains the different types of the following: <ol style="list-style-type: none">1. Warning lights.2. Channelizing devices.3. Pavement markings.4. Electronic Arrows5. Traffic Barrier Service6. Temporary Signalization7. Type III Barricades8. Truck-mounted Attenuator9. Portable Changeable Message Sign		

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INCIDENTAL CONSTRUCTION

MAINTENANCE OF TRAFFIC MAINTAINING TRAFFIC

General description of how competencies were completed:

Trainee's Comments:

Project Inspector's Comments:

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INCIDENTAL CONSTRUCTION

MAINTENANCE OF TRAFFIC MAINTAINING TRAFFIC

CQIP CHECKLIST

<u>SECTION</u>	<u>QUESTIONS</u>
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?

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- 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?

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- 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?

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- 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)

<u>Job Element</u>	<u>Date</u>	<u>Project Inspector's Signature</u>
<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:

Project Inspector's Comments:

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)

<u>Job Element</u>	<u>Date</u>	<u>Project Inspector's Signature</u>
<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:

Project Inspector's Comments:

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)

<u>Job Element</u>	<u>Date</u>	<u>Project Inspector's Signature</u>
<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:

Project Inspector's Comments:

500 SERIES

INCIDENTAL CONSTRUCTION

PLANING PAVEMENT (Ref. Section 515)

CQIP CHECKLIST

SECTION	QUESTIONS
515.01	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)

Job Element	Date	Project Inspector's Signature
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:

Project Inspector's Comments:

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

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

<u>Job Element</u>	<u>Date</u>	<u>Project Inspector's Signature</u>
<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:

Project Inspector's Comments:

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)

<u>Job Element</u>	<u>Date</u>	<u>Project Inspector's Signature</u>
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:

Project Inspector's Comments:

500 SERIES

INCIDENTAL CONSTRUCTION

TRAINEES ON CONSTRUCTION PROEJECTS
(Ref. Section 518)

NO CQIP QUESTIONS

500 SERIES

INCIDENTAL CONSTRUCTION

SOUND BARRIER WALLS

(Ref. Section 519)

<u>Job Element</u>	<u>Date</u>	<u>Project Inspector's Signature</u>
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:

Project Inspector's Comments:

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

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

Job Element	Date	Project Inspector's Signature
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:

Project Inspector's Comments:

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?

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- 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?

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INCIDENTAL CONSTRUCTION

MAILBOX POST
(Ref. Section 521)

<u>Job Element</u>	<u>Date</u>	<u>Project Inspector's Signature</u>
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:

Project Inspector's Comments:

500 SERIES

INCIDENTAL CONSTRUCTION

MAILBOX POST
(Ref. Section 521)

CQIP QUESTIONS

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