



AGENDA

January 19, 2023 Standards Committee Meeting

MEMORANDUM

January 6, 2023

TO: Standards Committee

FROM: Scott Trammell, Secretary

RE: Agenda for the January 19, 2023 Standards Committee Meeting

A Standards Committee meeting is scheduled for 09:00 a.m. on January 19, 2023 will be held virtually via *Teams* (Microsoft application). Please contact Scott Trammell (stammell@indot.in.gov) for instructions on how to join this event.

The following items are listed for consideration:

A. GENERAL BUSINESS

OLD BUSINESS

(No items on this agenda)

NEW BUSINESS

1. *Approval of the Minutes from the [December 16, 2022](#) meeting*
2. *Standards & Policy Division Proposal Process (z. Corrice, Operations Analyst • Standards & Policy)*

B. CONCEPTUAL PROPOSAL

2024 Standard Specifications (draft) (Division 100) editorial changes (K. Pelz) [pg.4](#)

C. STANDARD SPECIFICATIONS, SPECIAL PROVISIONS, AND STANDARD DRAWINGS PROPOSAL

OLD BUSINESS

(No items on this agenda)

NEW BUSINESS

Item No. 1 (2022 SS)	Mr. Novak	pg. 5
2022 Standard Specifications:		
217.01	Description	
Item No. 2 (2022 SS)	Mr. Reilman	pg. 9
2022 Standard Specifications:		
211.03.1	Structure Backfill Types	
731.02	General Design Requirements	
731.05	Materials	
731.11	Backfill Placement	
904.03	Coarse Aggregates	
Item No. 3 (2022 SS)	Mr. Dave	pg. 16
2022 Standard Specifications:		
307.05	Mix Design	
Item No. 4 (2022 SS)	Mr. Boruff	pg. 20
Special Provision and 2022 Standard Specifications:		
100-C-166	AS-BUILT TRAFFIC SIGNAL PLANS	
805.14	Final Clean-Up	
805.16	Basis of Payment	
Item No. 5 (2022 SS)	Mr. Boruff	pg. 24
Special Provision and 2022 Standard Specifications:		
100-C-226	AS-BUILT LIGHTING PLANS	
807.16	Testing of Highway Lighting System	
807.19	Basis of Payment	
Item No. 6 (2022 SS)	Mr. Novak	pg. 28
2022 Standard Specifications:		
108.09	Failure to Complete on Time	
Item No. 7 (2022 SS)	Mr. Reilman	pg. 34
2022 Standard Specifications:		
714.02	Materials	

714.10	Precast Reinforced-Concrete Box Structure Section Joints
714.12	Basis of Payment
723.02	Materials
723.14	Joints
723.18	Basis of Payment
907.05	Precast Reinforced Concrete Structure Sections
907.07	Joint Membrane System for Precast Reinforced Concrete Box Structure Sections
907.11	Pipe Joint Sealant
907.13	Rubber Type Gaskets

Item No. 8 (2022 SS) Mr. Novak pg. 46

2022 Standard Specifications:
SECTION 205

STORMWATER MANAGEMENT

Item No. 9 (2022 SS) Mr. Novak pg. 71

2022 Standard Specifications:

101.11	Concrete Wastewater
101.75	Wastewater
107.16	Illicit Discharge
108.04	Prosecution of the Work

Item No. 10 (2022 SS) Mr. Novak pg. 76

2022 Standard Specifications:
SECTION 205

TEMPORARY EROSION AND SEDIMENT CONTROL

cc: Committee Members
FHWA
ICI

CONCEPTUAL PROPOSAL

PROPOSED EDITORIAL REVISIONS TO DIVISION 100 – GENERAL PROVISIONS (2022 STANDARD SPECIFICATIONS)

CONCEPTUAL PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: INDOT Standard Specifications have been in circulation since 1934 and have been regularly updated by adding new or revising existing statements, work procedures, materials, methods, etc.

Prior to publishing a 2024 Standard Specifications book (effective September 1, 2023), the review of the current edition is underway and a summary of proposed edits to the **DIVISION 100 – GENERAL PROVISIONS** is shown.

PROPOSED SOLUTION (conceptual): Continue to review of all Divisions (100 thru 900) of the 2024 (draft) Standard Specifications and to make editorial (grammar) corrections as found necessary. Inform offices on questionable or outdated information and seek any necessary corrective action. Statements that are not clearly formulated or their written intentions are hard to follow have been rewritten, grammatical errors have been corrected and are proposed here for your review. Proposed revisions to Division 100 were made with this concept in mind and are shown for your review.

APPLICABLE STANDARD SPECIFICATIONS: 2022 Standard Specifications and approved RSPs

APPLICABLE STANDARD DRAWINGS: n/a

APPLICABLE DESIGN MANUAL SECTION: n/a

APPLICABLE SECTION OF GIFE: n/a

APPLICABLE RECURRING SPECIAL PROVISIONS: various RSPs (if affected)

PAY ITEMS AFFECTED: n/a

APPLICABLE SUB-COMMITTEE ENDORSEMENT: ad-hoc Specification's review group: Kurt Pelz, Scott Trammell, Lana Podorvanova.

IMPACT ANALYSIS (attach report): n/a

Submitted By: Kurt Pelz

Title: Construction Management Technical Support

Organization: INDOT

Phone Number: 317-691-4800

Date: 1/6/2023

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Standard Specification 217 Soils Drying with Chemical Modifiers includes in the description of work a 2% moisture threshold for applicability. This threshold has been incorrectly interpreted to mean all soils on the project having 2% or more moisture above optimum will be chemically modified when a 217 pay item is included in the contract.

PROPOSED SOLUTION: Remove the 2% language and replace with a reference to the plans or as directed.

APPLICABLE STANDARD SPECIFICATIONS: 217

APPLICABLE STANDARD DRAWINGS: n/a

APPLICABLE DESIGN MANUAL SECTION: n/a

APPLICABLE SECTION OF GIFE: none

APPLICABLE RECURRING SPECIAL PROVISIONS: n/a

PAY ITEMS AFFECTED: n/a

APPLICABLE SUB-COMMITTEE ENDORSEMENT: None, action being taken as a result of a claim against the Department.

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE:
Required for all contracts with **217-11917** *Drying Soils for Embankment* pay item.

IMPACT ANALYSIS (attach report): none

Submitted By: Joe Novak

Title: State Construction Engineer

Division: Construction Management

E-mail: jnovak@indot.in.gov

Date: 12/20/22

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? No

Will approval of this item affect the Qualified Products List (QPL)? no

Will this proposal improve:

Construction costs? no

Construction time? no

Customer satisfaction? no

Congestion/travel time? no

Ride quality? no

Will this proposal reduce operational costs or maintenance effort? no

Will this item improve safety:

For motorists? no

For construction workers? no

Will this proposal improve quality for:

Construction procedures/processes? no

Asset preservation? no

Design process? no

Will this change provide the contractor more flexibility? no

Will this proposal provide clarification for the Contractor and field personnel? yes

Can this item improve/reduce the number of potential change orders? yes

Is this proposal needed for compliance with:

Federal or State regulations? no

AASHTO or other design code? no

Is this item editorial? no

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda: none

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 217 – SOILS DRYING WITH CHEMICAL MODIFIERS

217.01 Description

(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 217, BEGIN LINE 1, DELETE AND INSERT AS FOLLOWS:

SECTION 217 – SOILS DRYING WITH CHEMICAL MODIFIERS

217.01 Description

This work shall consist of drying soils by uniformly mixing fly ash or lime with soil to aid in achieving the workability of soils ~~having moisture over 2% above optimum moisture content~~ *as shown on the plans or as directed.*

AGENDA

COMMENTS AND ACTION

217.01 Description

DISCUSSION:

Motion:	<u>Action:</u>
Second:	— Passed as Submitted
Ayes:	— Passed as Revised
Nays:	— Withdrawn
FHWA Approval:	
2022 Standard Specifications Sections referenced and/or affected: 217.01 pg. 252	— 2024 Standard Specifications — Revise Pay Items List
Recurring Special Provisions or Plan Details: NONE	— Create RSP (No. __) — Effective:
Standard Drawing affected: NONE	— Revise RSP (No. __) — Effective:
Design Manual Sections affected: NONE	— Standard Drawing — Effective:
GIFE Sections cross-references: NONE	— Create RPD (No. __) — Effective:
	— GIFE Update
	— Frequency Manual Update
	— SiteManager Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: There is confusion with the allowable aggregate types as structure backfill type 3. Some cleanup is needed. Also there are some points that need additional clarification in the 731 spec.

PROPOSED SOLUTION: Clarify the allowable aggregate types for structure backfill type 3. Remove structure backfill No. 4 from the list of allowable materials and add AASHTO No. 57 as an allowable type. Edits to the backfill placement and compaction section are proposed.

APPLICABLE STANDARD SPECIFICATIONS: 211.03.1, 731, 904

APPLICABLE STANDARD DRAWINGS: None

APPLICABLE DESIGN MANUAL SECTION: None

APPLICABLE SECTION OF GIFE:

APPLICABLE RECURRING SPECIAL PROVISIONS: revise 731-R-743 and 904-M-059

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: INDOT Retaining Wall Committee

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE:

IMPACT ANALYSIS (attach report):

Submitted By: Jim Reilman

Title: State Materials Engineer

Organization: INDOT

Phone Number: (317) 522-9692

Date: 12/19/22

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? No

Will approval of this item affect the Approved Materials List? No

Will this proposal improve:

Construction costs? N/A

Construction time? Yes

Customer satisfaction? Yes

Congestion/travel time? N/A

Ride quality? Yes

Will this proposal reduce operational costs or maintenance effort? Yes

Will this item improve safety:

For motorists? Yes

For construction workers? N/A

Will this proposal improve quality for:

Construction procedures/processes? Yes

Asset preservation? Yes

Design process? N/A

Will this change provide the contractor more flexibility? N/A

Will this proposal provide clarification for the Contractor and field personnel? Yes

Can this item improve/reduce the number of potential change orders? Yes

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

Is this item editorial? No

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda:

REVISION TO 2022 STANDARD SPECIFICATIONS

DIVISION 200 – EARTHWORK
 DIVISION 700 – STRUCTURES
 731.05 Materials
 SECTION 904 – AGGREGATES

211.03.1 Structure Backfill Types
 731.02 General Design Requirements
 731.11 Backfill Placement
 904.03 Coarse Aggregates

(Note: Proposed changes shown highlighted gray.
 Previously approved changes shown in italics such: *Higher*.
 Proposed deletion of the previously approved changes as: ~~*Higher*~~).

The Standard Specifications are revised as follows:

SECTION 211, BEGIN LINE 111, DELETE AND INSERT AS FOLLOWS:

(c) Type 3

Structure backfill *1 in. or 1/2 in.* in accordance with 904.05, ~~except only nominal size aggregates 1 in., 1/2 in., No. 4 or No. 30, and~~ or coarse aggregate No. 5, No. 8, No. 9, No. 11, ~~or~~ No. 12, *or AASHTO No. 57 aggregate, in accordance with 904* shall be used. If ACBF is used, it shall only be used in sizes that meet the size requirements for coarse aggregate No. 5 or No. 8, *or AASHTO No. 57*.

A type A certification in accordance with 916 shall be provided for the additional structure backfill. The results of the following shall be shown on the certification.

Property	Criteria	Test Method
pH (Note 1)	5 < pH < 10	AASHTO T 289
Organic Content (Note 2)	1% max.	AASHTO T 267
Permeability, min. (Note 3)	30 ft/day	AASHTO T 215
<i>Coefficient of Uniformity, Cu, D₆₀/D₁₀</i>	<i>≥ 4.0</i>	<i>AASHTO T 27</i>
Notes:		
1. One p pH test is required for each bench of stone, each source of air-cooled blast furnace slag, and each source of gravel.		
2. One organic content test is required for each source of gravel.		
3. One permeability test is required for the smallest aggregate size from each source. Sizes No. 5, No. 8, and No. 9, <i>and AASHTO No. 57</i> do not require a permeability test.		

The gradation shall be performed on the material used in the permeability test. Testing for permeability shall be performed on the sample of the material compacted to 95% in accordance with AASHTO T 99, Method C or D. All of the tests listed above shall be performed a minimum of once every 12 months per source.

In addition to the criteria above, structure backfill for retaining wall systems containing metal components in contact with structure backfill shall also be in accordance with the following criteria:

Property	Criteria	Test Method
Chlorides	< 100 ppm	AASHTO T 291
Sulfates	< 200 ppm	AASHTO T 290
Resistivity, min.	3,000 Ω-cm	AASHTO T 288
Internal friction angle, φ, min.	34°	AASHTO T 236* or T 297*
* under consolidated drained conditions		

REVISION TO 2022 STANDARD SPECIFICATIONS

DIVISION 200 – EARTHWORK
 DIVISION 700 – STRUCTURES
 731.05 Materials
 SECTION 904 – AGGREGATES

211.03.1 Structure Backfill Types
 731.02 General Design Requirements
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If the minimum resistivity exceeds 5,000 Ω -cm, the requirement for the testing of chlorides and sulfates will be waived. The resistivity shall be tested at 100% saturation. All of the tests listed above shall be run a minimum of once every 12 months per source. The Department's Division of Materials and Tests will evaluate the material from each source and determine the appropriate tests to be performed.

Testing for ϕ shall be performed using a sample of the material compacted to 95% in accordance with AASHTO T 99, Method C or D. Testing for ϕ will not be required when using coarse aggregate No. 5, No. 8, ~~or No. 9~~, *or AASHTO No. 57.*

SECTION 731, BEGIN LINE 48, INSERT AS FOLLOWS:

Where walls or wall sections intersect with an included angle of 130° or less, a *single* vertical corner element separate from the standard panel face shall abut and interact with the opposing panels. The corner element shall have ground reinforcement connected specifically to that panel. All turn-point locations where the wall forms an angle that are shown on the working drawings shall correspond to those shown on the plans unless otherwise approved in writing by the Engineer.

SECTION 731, BEGIN LINE 289, DELETE AND INSERT AS FOLLOWS:

731.05 Materials

Materials shall be in accordance with the following:

Admixtures for Concrete	912.03
Air Cooled Blast Furnace Slag	901.09
Alignment Pins.....	910.07(d)
B Borrow	211.02
Coarse Aggregate, Class A or Higher, Size No. 8, or 91	904.03
<i>Coarse Aggregate, Class F or Higher, Size No. 93PG.....</i>	<i>904.03</i>
Components of MSE Retaining Walls	901.10
Concrete, Class A or Class C.....	702
Deformed and Smooth Steel WWR	910.01(b)5
Fine Aggregate, Size No. 23	904
Fly Ash	901.02
Geotextile for Use Under Riprap	918.02
<i>Ground Reinforcement</i>	<i>910.07(b)</i>
Joint Spacers and Joint Covering.....	901.10(b)
Portland Cement.....	901.01(b)
<i>Preformed Expansion Joint Filler.....</i>	<i>906.03</i>
Rapid Setting Patch Materials.....	901.07
Reinforcing Bars	910.01
Steel Components <i>of MSE Retaining Walls</i>	910.07
Structure Backfill, <i>Type 3</i>	211.03.1, 904.05
Underdrains.....	718

REVISION TO 2022 STANDARD SPECIFICATIONS

DIVISION 200 – EARTHWORK
DIVISION 700 – STRUCTURES
731.05 Materials
SECTION 904 – AGGREGATES

211.03.1 Structure Backfill Types
731.02 General Design Requirements
731.11 Backfill Placement
904.03 Coarse Aggregates

Underdrains for MSE Walls 718.03
Water 913.01

Concrete for the leveling pad and coping shall be class A. Concrete used in openings to accommodate appurtenances behind, in front of, under, mounted upon, or passing through the wall shall be class C. << moved from below, no changes >>

The Contractor shall supply all materials listed in 901.10, 910.07, and tie strips, bearing pads, and all necessary incidentals through a manufacturer listed on the QPL of Retaining Wall Systems.

(a) Backfill

1. Reinforced Backfill Zone

MSE wall backfill, and the horizontal bench in front of the wall, shall consist of structure backfill type 3 in the reinforced backfill zone in accordance with 211, except that nominal size aggregate No. 30 shall not be used. Structure backfill in the retained backfill zone shall be type 3 or B borrow as shown on the plans. Structure backfill type 3 in accordance with 211 shall be used in the MSE wall reinforced backfill zone and the horizontal bench in front of the wall. Structure backfill nominal size aggregates No. 4 and No. 30 shall not be used.

2. Retained Backfill Zone

Structure backfill in the retained backfill zone shall be type 3 or B borrow as shown on the plans. << moved from above, no changes >>

(b) Geotextile Requirements in Backfill Zones

If coarse aggregate No. 5, No. 8, No. 9, or No. 11 or structure backfill 1 in. or 1/2 in. is used in the reinforced backfill zone and the Contractor elects to use a different material size aggregate in the retained backfill zone from that used in the reinforced backfill zone, geotextiles Type 2B in accordance with 918.02(a) shall be installed at the interface between the reinforced and retained backfill zones except for the interface between No. 4 structure backfill and B borrow.

<<existing text separated into new paragraph>> If the Contractor elects to use the same size coarse aggregate No. 5, No. 8, No. 9, or No. 11 or structure backfill 1 in. or 1/2 in. in both the reinforced and retained backfill zones, geotextiles Type 2B in accordance with 918.02(a) shall be installed along the interface between the retained backfill zone and the adjacent soil. In addition, geotextiles Type 2B in accordance with 918.02(a) shall be installed over the top of the No. 5, No. 8, No. 9, or No. 11 aggregate used in the reinforced or retained backfill zones at all interfaces of coarse aggregate and finer soils when used in the foundation.

Concrete for the leveling pad and coping shall be class A. Concrete used in

REVISION TO 2022 STANDARD SPECIFICATIONS

DIVISION 200 – EARTHWORK
DIVISION 700 – STRUCTURES
731.05 Materials
SECTION 904 – AGGREGATES

211.03.1 Structure Backfill Types
731.02 General Design Requirements
731.11 Backfill Placement
904.03 Coarse Aggregates

~~openings to accommodate appurtenances behind, in front of, under, mounted upon, or passing through the wall shall be class C.~~ << moved up, no changes >>

~~The Contractor shall supply the MSE retaining wall components listed above, including tie strips, fasteners, bearing pads, and all necessary incidentals, through a manufacturer listed on the QPL of Retaining Wall Systems.~~

SECTION 731, BEGIN LINE 460, DELETE AND INSERT AS FOLLOWS:

731.11 Backfill Placement

Backfill placement shall follow erection of each course of panels and ground reinforcement. All sheeting and bracing shall be removed as the backfilling progresses. Backfill shall be placed so as to avoid damage or disturbance to the wall materials or misalignment of the concrete face panels. All material for backfill shall be subject to approval and shall be free from lumps, wood, or other undesirable material. Wall materials that become damaged or disturbed during backfill placement shall be removed and replaced or corrected as directed. All misalignment or distortion of the concrete face panels due to placement of backfill outside the limits described herein shall be corrected as directed.

~~B borrow and structure backfill type 3 shall be compacted in accordance with 203.23 or 203.24. Compaction equipment shall be in accordance with 409.03(d). For all other structure backfill Type 3 material used, compaction shall consist of four five passes with a vibratory roller and one pass with the same roller in static mode. Compaction equipment shall be in accordance with 409.03(d). The vibratory roller shall be equipped with a variable amplitude system and a speed control device. It shall have a minimum vibration frequency of 1,000 vibrations per minute. A roller in accordance with 409.03(d)4 may be used. All displacement or rutting of the aggregate shall be repaired prior to placing subsequent material.~~

The maximum loose lift thickness shall not exceed 89 in. However, lifts within 3 ft of the wall shall not exceed 5 in. in loose thickness. This lift thickness shall be decreased if necessary, to obtain the specified density.

SECTION 904, AFTER LINE 279, INSERT AS FOLLOWS:

~~Where an AASHTO coarse aggregate is specified as an option, gradation shall be in accordance with AASHTO M 43. All other aggregate properties shall be in accordance with 904.~~

COMMENTS AND ACTION

- 211.03.1 Structure Backfill Types
- 731.02 General Design Requirements
- 731.05 Materials
- 731.11 Backfill Placement
- 904.03 Coarse Aggregates

DISCUSSION:

	<u>Action:</u>
Motion:	
Second:	
Ayes:	— Passed as Submitted
Nays:	— Passed as Revised
FHWA Approval:	— Withdrawn
<hr/>	
2022 Standard Specifications Sections referenced and/or affected: 211.03.1 pg. 231; 731.02 pg. 824; 731.05 pg. 830; 731.11 pg. 834; 904 pg 1005.	— 2024 Standard Specifications — Revise Pay Items List
Recurring Special Provisions or Plan Details: 731-R-743 Mechanically Stabilized Earth Retaining Walls and 904-M-059 Aggregates	— Create RSP (No. __) Effective:
Standard Drawing affected: NONE	— Revise RSP (No. __) Effective:
Design Manual Sections affected: NONE	— Standard Drawing Effective:
GIFE Sections cross-references: TBD	— Create RPD (No. __) Effective:
	— GIFE Update
	— Frequency Manual Update
	— SiteManager Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: When the Full Depth Recycling (FDR) specifications were being developed multiple strengths for the FDR were allowed. After a few years of use, INDOT has settled on one strength for cement FDR projects

PROPOSED SOLUTION: Delete the notes and show a single strength requirement

APPLICABLE STANDARD SPECIFICATIONS: 307

APPLICABLE STANDARD DRAWINGS: none

APPLICABLE DESIGN MANUAL SECTION: none

APPLICABLE SECTION OF GIFE: none

APPLICABLE RECURRING SPECIAL PROVISIONS: none

PAY ITEMS AFFECTED: none

APPLICABLE SUB-COMMITTEE ENDORSEMENT: INDOT Cold Recycling Committee

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE: 307 pay items are used

IMPACT ANALYSIS (attach report): attached

Submitted By: Kumar Dave on the behalf of Nick Cosenza

Title: Pavement Engineering

Division: Highway Engineering

E-mail: ncosenza@indot.in.gov

Date: 12/16/2022

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? no

Will approval of this item affect the Qualified Products List (QPL)? no

Will this proposal improve:

Construction costs? yes

Construction time? yes

Customer satisfaction? n/a

Congestion/travel time? n/a

Ride quality? yes

Will this proposal reduce operational costs or maintenance effort? yes

Will this item improve safety:

For motorists? n/a

For construction workers? n/a

Will this proposal improve quality for:

Construction procedures/processes? yes

Asset preservation? yes

Design process? yes

Will this change provide the contractor more flexibility? n/a

Will this proposal provide clarification for the Contractor and field personnel? yes

Can this item improve/reduce the number of potential change orders? n/a

Is this proposal needed for compliance with:

Federal or State regulations? yes

AASHTO or other design code? yes

Is this item editorial? no

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda: no

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 307 – CEMENT STABILIZED FULL DEPTH RECLAMATION, FDR
307.05 Mix Design

(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 307, BEGIN LINE 62, DELETE AND INSERT AS FOLLOWS:

307.05 Mix Design

The FDR mix design shall be in accordance with ITM 595 and comprised of existing RAP, existing base and subgrade materials, cement, and if necessary, recycling additives. ~~The 7-day unconfined strength shall be based on the overlay lay rate specified on the plans.~~

Test	Procedure	Requirement
7-Day Unconfined Strength	ASTM D1633, Method A	see notes 1, 2, 3 <i>350 psi minimum</i>
Notes:		
1. 300 psi minimum when an HMA overlay with a total lay rate ≥ 330 lb/sq yd.		
2. 400 psi minimum when an HMA overlay with a total $165 \text{ lb/sq yd} \leq \text{lay rate} < 330$ lb/sq yd.		
3. 500 psi minimum when an HMA overlay with a total lay rate < 165 lb/sq yd or an applied seal coat surface.		

COMMENTS AND ACTION

307.05 Mix Design

DISCUSSION:

Motion:	<u>Action:</u>
Second:	— Passed as Submitted
Ayes:	— Passed as Revised
Nays:	— Withdrawn
FHWA Approval:	—
2022 Standard Specifications Sections referenced and/or affected: 307.05 pg. 281.	— 2024 Standard Specifications Revise Pay Items List
Recurring Special Provisions or Plan Details: NONE	— Create RSP (No. __) Effective:
Standard Drawing affected: NONE	— Revise RSP (No. __) Effective:
Design Manual Sections affected: NONE	— Standard Drawing Effective:
GIFE Sections cross-references: NONE	— Create RPD (No. __) Effective:
	— GIFE Update
	— Frequency Manual Update
	— SiteManager Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: RSP 100-C-166 on as-built signal plans has not been revised since 2007 and is based on paper submittals. It also does not reference the relevant part of §805.

PROPOSED SOLUTION: Update RSP 100-C-166 and move it into the Standard Specifications.

APPLICABLE STANDARD SPECIFICATIONS: 805

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: RSP 100-C-166

PAY ITEMS AFFECTED: No

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Yes, Traffic Standards Subcommittee

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE:
Required for all contracts with Permanent Traffic Signal installations.

IMPACT ANALYSIS (attach report): Yes

Submitted By: Joe Bruno on behalf of Dave Boruff

Title: Sr. Traffic Engineer, Signals & Markings

Division: Traffic Engineering

E-mail: jbruno@indot.in.gov

Date: 12-22-2022

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? No

Will approval of this item affect the Qualified Products List (QPL)? No

Will this proposal improve:

Construction costs? No

Construction time? No

Customer satisfaction? No

Congestion/travel time? No

Ride quality? No

Will this proposal reduce operational costs or maintenance effort? Yes

Will this item improve safety:

For motorists? No

For construction workers? No

Will this proposal improve quality for:

Construction procedures/processes? Yes

Asset preservation? Yes

Design process? No

Will this change provide the contractor more flexibility? No

Will this proposal provide clarification for the Contractor and field personnel? Yes

Can this item improve/reduce the number of potential change orders? No

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

Is this item editorial? No

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda: The agenda item is intended to sunset RSP 100-C-166 and put the current information about as-built signal plans in the 2024 Standard Specifications.

REVISION TO 2022 STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS

100-C-166 AS-BUILT TRAFFIC SIGNAL PLANS

SECTION 805 - TRAFFIC SIGNALS

805.14 Final Clean-Up

805.16 Basis of Payment

(Note: Proposed changes shown highlighted gray.)

100-C-166 AS-BUILT TRAFFIC SIGNAL PLANS

(Revised xx-xx-23)

~~The Contractor shall prepare two sets of as built plans for the traffic signal portion of the contract. The as built traffic signal plans shall be submitted to the Engineer no later than the date the signal is placed into operation.~~

~~Traffic signal as built plans shall include a copy of the project title sheet and the plan sheets that show the traffic signal related work. The plans shall indicate the as built location of steel strain poles, signal cantilevers, electrical service, signal controller, loop detectors, conduit runs, and traffic signal handholes.~~

~~The cost of as built traffic signal plans shall be included in the cost of the traffic signal items~~

The Standard Specifications are revised as follows:

SECTION 805, BEGIN LINE 580, INSERT AS FOLLOWS:

805.14 Final Clean-Up

When the installation is completed, all disturbed portions of sidewalk, pavement, shoulders, driveways, and sod, shall be cleaned and any excess excavation or other materials shall be disposed. All cutting in the sidewalk and pavement areas shall be done with a saw. Sidewalk removal and replacement shall be to the nearest tool joint. Unless otherwise directed, cuts in pavement areas shall be no greater than 12 in. in width.

Within 30 calendar days after completion of the work, as-built drawings shall be submitted in electronic format to the Engineer. The signal as-built drawings shall indicate the as-built location of steel strain poles, signal cantilevers, service points, controller cabinet, loop detectors, conduit runs, and signal handholes.

SECTION 805, BEGIN LINE 824, INSERT AS FOLLOWS:

The cost of excavation, backfill, final cleanup in accordance with 805.14, the cost of repainting existing metallic equipment to be re-used, *the preparation and transmittal of as-built drawings*, and necessary incidentals shall be included in the cost of the pay items in this section.

COMMENTS AND ACTION

100-C-166 AS-BUILT TRAFFIC SIGNAL PLANS

805.14 Final Clean-Up

805.16 Basis of Payment

DISCUSSION:

	<u>Action:</u>
Motion:	
Second:	
Ayes:	— Passed as Submitted
Nays:	— Passed as Revised
FHWA Approval:	— Withdrawn
2022 Standard Specifications Sections referenced and/or affected: 805.14 pg. 916 and 805.16 pg. 917.	— 2024 Standard Specifications Revise Pay Items List
Recurring Special Provisions or Plan Details: 100-C-166 AS-BUILT TRAFFIC SIGNAL PLANS	— Create RSP (No. __) Effective:
Standard Drawing affected: NONE	— Revise RSP (No. __) Effective:
Design Manual Sections affected: NONE	— Standard Drawing Effective:
GIFE Sections cross-references: NONE	— Create RPD (No. __) Effective:
	— GIFE Update
	— Frequency Manual Update
	— SiteManager Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: RSP 100-C-226 on as-built lighting plans has not been revised since 2012 and is based on paper submittals. It also does not reference the relevant part of §807.

PROPOSED SOLUTION: Update RSP 100-C-226 and move it into the Standard Specifications.

APPLICABLE STANDARD SPECIFICATIONS: 807

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: RSP 100-C-226

PAY ITEMS AFFECTED: No

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Yes, Traffic Standards Subcommittee

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE:
Required for **all** contracts with **lighting**.

IMPACT ANALYSIS (attach report): Yes

Submitted By: Joe Bruno on behalf of Dave Boruff

Title: Sr. Traffic Engineer, Signals & Markings

Division: Traffic Engineering

E-mail: jbruno@indot.in.gov

Date: 12-22-2022

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? No

Will approval of this item affect the Qualified Products List (QPL)? No

Will this proposal improve:

Construction costs? No

Construction time? No

Customer satisfaction? No

Congestion/travel time? No

Ride quality? No

Will this proposal reduce operational costs or maintenance effort? Yes

Will this item improve safety:

For motorists? No

For construction workers? No

Will this proposal improve quality for:

Construction procedures/processes? Yes

Asset preservation? Yes

Design process? No

Will this change provide the contractor more flexibility? No

Will this proposal provide clarification for the Contractor and field personnel? Yes

Can this item improve/reduce the number of potential change orders? No

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

Is this item editorial? No

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda: The agenda item is intended to sunset RSP 100-C-226 and put the current information about as-built lighting plans in the 2024 Standard Specifications.

REVISION TO 2022 STANDARD SPECIFICATIONS AND SPECIAL PROVISION

100-C-226 AS-BUILT LIGHTING PLANS
SECTION 807 – HIGHWAY ILLUMINATION
807.16 Testing of Highway Lighting System
807.19 Basis of Payment

(Note: Proposed changes shown highlighted gray.)

100-C-226 AS-BUILT LIGHTING PLANS

(Revised xx-xx-23)

~~The Contractor shall prepare two sets of as-built plans for the lighting portion of the contract. The as built lighting plans shall be submitted to the Engineer no later than the end of the burn in period for the luminaire.~~

~~Lighting as built plans shall include a copy of the project title sheet and the plan sheets that show the lighting related work. The plans shall indicate the as built location of light poles, high mast towers, electrical service, conduit runs, and lighting handholes.~~

~~The cost of as built lighting plans shall be included in the cost of the lighting items.~~

The Standard Specifications are revised as follows:

SECTION 807, BEGIN LINE 736, INSERT AS FOLLOWS:

(b) Testing and Inspecting Luminaires

The lighting system from the service point through the last luminaire shall be subjected to 14 days of normal operation prior to final acceptance. This testing procedure may be conducted separately on each circuit or on the entire system.

Normal operation is defined as the luminaires being on during the darkness hours and off during the daylight hours as controlled by the service point photocells and relay switches. Malfunctioning equipment shall be replaced or repaired before final inspection. The pattern of light and correlated color temperature delivered to the pavement by roadway, high mast, and underpass luminaires will be inspected at night. At this inspection, the proper tools, equipment, and personnel shall be available to make all adjustments. These items shall specifically include a bucket truck capable of reaching all luminaires in the system, safety equipment, and a level to determine the proper luminaire position.

Within 30 calendar days after completion of the work, as-built drawings shall be submitted in electronic format to the Engineer. The lighting as-built drawings shall indicate the as-built location of light poles, high mast towers, service points, conduit runs, and lighting handholes.

SECTION 807, BEGIN LINE 899, INSERT AS FOLLOWS:

The cost of maintaining highway illumination during the life of the contract *and the preparation and transmittal of as-built drawings* shall be included in the cost of other pay items.

COMMENTS AND ACTION

100-C-226 AS-BUILT LIGHTING PLANS
 807.16 Testing of Highway Lighting System
 807.19 Basis of Payment

DISCUSSION:

	<u>Action:</u>
Motion:	
Second:	
Ayes:	<input type="checkbox"/> Passed as Submitted
Nays:	<input type="checkbox"/> Passed as Revised
FHWA Approval:	<input type="checkbox"/> Withdrawn
2022 Standard Specifications Sections referenced and/or affected: 807.16 pg. 937 and 807.19 pg. 939.	<input type="checkbox"/> 2024 Standard Specifications <input type="checkbox"/> Revise Pay Items List
Recurring Special Provisions or Plan Details: 100-C-226 AS-BUILT LIGHTING PLANS	<input type="checkbox"/> Create RSP (No. __) Effective:
Standard Drawing affected: NONE	<input type="checkbox"/> Revise RSP (No. __) Effective:
Design Manual Sections affected: NONE	<input type="checkbox"/> Standard Drawing Effective:
GIFE Sections cross-references: NONE	<input type="checkbox"/> Create RPD (No. __) Effective:
	<input type="checkbox"/> GIFE Update
	<input type="checkbox"/> Frequency Manual Update
	<input type="checkbox"/> SiteManager Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: The liquidated damages rate chart in Standard Specification (SS) 108.09 is outdated. As per 23 CFR 635.127 the estimated average daily construction inspection costs shall be established and reviewed every 2 years. Also, it is simpler for the current internal contract preparation process that the liquidated damage (LD) rate be assigned prior to letting.

PROPOSED SOLUTION: Remove the outdated rate chart in the SS. Add the rate chart to the Contract Preparation Document, ESum 14-1C.

APPLICABLE STANDARD SPECIFICATIONS: 108.09

APPLICABLE STANDARD DRAWINGS: n/a

APPLICABLE DESIGN MANUAL SECTION: n/a

APPLICABLE SECTION OF GIFE: none

APPLICABLE RECURRING SPECIAL PROVISIONS: 108-C-095 can be discontinued as it will no longer serve a purpose.

PAY ITEMS AFFECTED: n/a

APPLICABLE SUB-COMMITTEE ENDORSEMENT: None, action being taken as required by the CFR and to improve assignment of LD's rate process between the Contracts and Construction Management Divisions.

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE: n/a

IMPACT ANALYSIS (attach report): none

Submitted By: Joe Novak

Title: State Construction Engineer

Division: Construction Management

E-mail: jnovak@indot.in.gov

Date: 1/3/23

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? no

Will approval of this item affect the Qualified Products List (QPL)? no

Will this proposal improve:

Construction costs? no

Construction time? no

Customer satisfaction? no

Congestion/travel time? no

Ride quality? no

Will this proposal reduce operational costs or maintenance effort? no

Will this item improve safety:

For motorists? no

For construction workers? no

Will this proposal improve quality for:

Construction procedures/processes? no

Asset preservation? no

Design process? no

Will this change provide the contractor more flexibility? no

Will this proposal provide clarification for the Contractor and field personnel? no

Can this item improve/reduce the number of potential change orders? no

Is this proposal needed for compliance with:

Federal or State regulations? no

AASHTO or other design code? no

Is this item editorial? no

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda: none

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 108 – PROSECUTION AND PROGRESS

108.09 Failure to Complete on Time

(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 108, BEGIN LINE 554, DELETE AND INSERT AS FOLLOWS:

108.09 Failure to Complete on Time

For each calendar day, as specified, that work shall remain incomplete during the months of April through November inclusive, after the control time specified for the completion of the work provided for in the contract, the sum specified in the ~~schedule below~~ *Proposal Book or Special Provisions* will be deducted, as liquidated damages, from any money due the Contractor. Account will be taken of adjustment of the contract time for completion of the work granted in accordance with 108.08. Calendar days will not be charged while waiting for final inspection as defined in 105.15 provided all contract work has been satisfactorily completed. However, five work days will be allowed after notification from the Department to complete all corrective or clean up work necessary for final inspection. Thereafter, time will be charged for each day the work remains uncompleted. Further, 10 calendar days will be allowed after notification by the Department to remove all construction signs and temporary traffic control devices. Thereafter, time will be charged for each day the signs and devices remain.

For each calendar day, as specified, that any work shall remain incomplete during the months of December through March inclusive, liquidated damages will be deducted. However, when the project is open for its intended purpose or modified for safe use, liquidated damages will not be deducted, and payment for the field office and field laboratory, if set out as a pay item in the itemized proposal, will not be made. Intended purpose will include all pavement lanes, sidewalks, trails, drainage features, and all safety appurtenances. The Contractor may be required to make temporary repairs to the pavement or structures. Liquidated damages will be assessed until temporary repairs are made. No payment will be made for such temporary repairs.

If the contract is not completed, or the pavement or structure is not opened to traffic within the stipulated time as set out in the Proposal book, the Department may reduce the qualified rating of the Contractor for bidding on future contracts.

Allowing the Contractor to continue and finish the work or a part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the Department of any of its rights under the contract.

Schedule of Liquidated Damages for Each Day of Overrun in Contract Time

Original Contract Amount		Daily Charge
From Greater Than	To Less Than or Equal To	Calendar Day or Fixed Date
\$0	\$500,000	\$500.00

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 108 – PROSECUTION AND PROGRESS

108.09 Failure to Complete on Time

\$500,000	\$2,000,000	\$1,000.00
\$2,000,000	\$5,000,000	\$1,500.00
\$5,000,000	\$10,000,000	\$2,000.00
\$10,000,000	and higher	\$2,250.00

~~When the contract time is on either the calendar day or fixed calendar date basis, the schedule for calendar days shall be used.~~

Adjustments to the contract payment with respect to liquidated damages will be included in a liquidated damages pay item. The unit price for this pay item will be \$1.00 and the quantity will be in units of dollars. The quantity is the total calculated in accordance with the ~~above schedule~~ *Proposal Book or Special Provisions*.

AGENDA

BACKUP 1

Recurring Special Provision 108-C-095 FAILURE TO COMPLETE ON TIME FOR CALENDAR COMPLETION DATE (*proposed to discontinue*)

Basis For Use: “*As determined necessary by the Department personnel who sets contract time.*”

~~108-C-095 FAILURE TO COMPLETE ON TIME FOR CALENDAR COMPLETION DATE~~

~~(Revised 04-25-21)~~

The Standard Specifications are revised as follows:

SECTION 108, BEGIN LINE 588, DELETE AND INSERT AS FOLLOWS:

**Schedule of Liquidated Damages for
Each Day of Overrun in Contract Time**

Original Contract Amount		Daily Charge
From Greater Than	To Less Than or Equal To	Calendar Day or Fixed Date
\$0	\$500,000	\$500.00
\$500,000	\$2,000,000	\$1,000.00
\$2,000,000	\$5,000,000	\$1,500.00
\$5,000,000	\$10,000,000	\$2,000.00
\$10,000,000	and higher	\$2,250.00

If the contract is not completed on or before the contract completion date shown on the Proposal sheet, \$ _____ will be assessed as liquidated damages, not as a penalty, but as damages sustained, for each calendar day that the contract is not complete.

Extension of contract time, if required, shall be in accordance with 108.08.

COMMENTS AND ACTION

108.09 Failure to Complete on Time

DISCUSSION:

<p>Motion: Second: Ayes: Nays: FHWA Approval:</p>	<p><u>Action:</u> <input type="checkbox"/> Passed as Submitted <input type="checkbox"/> Passed as Revised <input type="checkbox"/> Withdrawn</p>
<p>2022 Standard Specifications Sections referenced and/or affected: 108.09 pg. 95.</p> <p>Recurring Special Provisions or Plan Details: 108-C-095 FAILURE TO COMPLETE ON TIME FOR CALENDAR COMPLETION DATE</p> <p>Standard Drawing affected: NONE</p> <p>Design Manual Sections affected: NONE</p> <p>GIFE Sections cross-references: NONE</p>	<p><input type="checkbox"/> 2024 Standard Specifications Revise Pay Items List</p> <p><input type="checkbox"/> Create RSP (No. __) Effective:</p> <p><input type="checkbox"/> Revise RSP (No. __) Effective:</p> <p><input type="checkbox"/> Standard Drawing Effective:</p> <p><input type="checkbox"/> Create RPD (No. __) Effective:</p> <p><input type="checkbox"/> GIFE Update <input type="checkbox"/> Frequency Manual Update <input type="checkbox"/> SiteManager Update</p>

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Clarification and updating is necessary for butt joints in precast concrete box and three-sided culverts

PROPOSED SOLUTION: Incorporate the proposed changes which clarify the material(s) to be placed between joints in precast concrete box and three-sided culvert sections. Also clarify and update the material used to wrap the exterior of the joint shall be in accordance with an ASTM spec.

APPLICABLE STANDARD SPECIFICATIONS: 714, 723, 907.05, 907.07, 907.11, 907.13

APPLICABLE STANDARD DRAWINGS: revise E714-BCJT-01; create new 723 drawing

APPLICABLE DESIGN MANUAL SECTION:

APPLICABLE SECTION OF GIFE:

APPLICABLE RECURRING SPECIAL PROVISIONS: None

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad hoc: Jim Reilman, Pete White, Precast Concrete Industry

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE: N/A

IMPACT ANALYSIS (attach report):

Submitted By: Jim Reilman

Title: State Materials Engineer

Organization: INDOT

Phone Number: (317) 522-9692

Date:

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? No

Will approval of this item affect the Approved Materials List? No

Will this proposal improve:

Construction costs? N/A

Construction time? N/A

Customer satisfaction? Yes

Congestion/travel time? N/A

Ride quality? N/A

Will this proposal reduce operational costs or maintenance effort? Yes

Will this item improve safety:

For motorists? Yes

For construction workers? N/A

Will this proposal improve quality for:

Construction procedures/processes? Yes

Asset preservation? Yes

Design process? N/A

Will this change provide the contractor more flexibility? N/A

Will this proposal provide clarification for the Contractor and field personnel? Yes

Can this item improve/reduce the number of potential change orders? N/A

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

Is this item editorial? No

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda:

REVISION TO 2022 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

SECTION 714 – REINFORCED CONCRETE BOX STRUCTURES

714.02 Materials

714.12 Basis of Payment

714.10 Precast Reinforced-Concrete
Box Structure Section Joints

SECTION 723 – REINFORCED CONCRETE THREE-SIDED STRUCTURES

723.02 Materials

723.18 Basis of Payment

723.14 Joints

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS

907.05 Precast Reinforced Concrete Structure Sections

907.07 Joint Membrane System for Precast Reinforced Concrete Box Structure Sections

907.11 Pipe Joint Sealant

907.13 Rubber Type Gaskets

(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 714, BEGIN LINE 14, DELETE AND INSERT AS FOLLOWS:

714.02 Materials

Materials shall be in accordance with the following:

Chemical Anchor System.....	901.05
Coarse Aggregates, Class A or Higher, Size No. 91	904.03
Concrete.....	702
Epoxy Coated Reinforcing Bars	910.01
Flowable Backfill.....	213
Geotextile	918.02(b)
Hydrated Lime	913.04(a)
Joint Membrane System for Precast Reinforced Concrete Box <i>and Three-Sided</i> Structure Sections.....	907.07
Masonry Cement.....	901.01(c)
Mortar Sand	904.02(e)
Natural Sand	904.02(a)
Non-Epoxy PCC Sealer.....	909.10
Pipe Joint Sealant.....	907.11
Portland Cement	901.01(b)
Precast Reinforced Concrete Headwalls, Wingwalls, Footings, and Spandrel Walls.....	907.06
Precast Reinforced Concrete Structure Sections	907.05
Reinforcing Bars	910.01
Riprap.....	904
Structure Backfill.....	904.05
WWR, Smooth and Deformed.....	910.01

SECTION 714, BEGIN LINE 337, DELETE AND INSERT AS FOLLOWS:

714.10 Precast Reinforced-Concrete Box Structure Section Joints

(a) Between Structure Sections

~~Joints between P~~precast reinforced concrete box structure sections ~~joints~~ shall be sealed with ~~pipe joint sealant~~ as shown on the plans. ~~Pipe joint~~The sealant shall be applied once the concrete surface temperature is above 40°F or above the minimum application temperature recommended by the pipe joint sealant manufacturer. The concrete surfaces

REVISION TO 2022 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

SECTION 714 – REINFORCED CONCRETE BOX STRUCTURES

714.02 Materials

714.10 Precast Reinforced-Concrete
Box Structure Section Joints

714.12 Basis of Payment

SECTION 723 – REINFORCED CONCRETE THREE-SIDED STRUCTURES

723.02 Materials

723.14 Joints

723.18 Basis of Payment

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS

907.05 Precast Reinforced Concrete Structure Sections

907.07 Joint Membrane System for Precast Reinforced Concrete Box Structure Sections

907.13 Rubber Type Gaskets

907.11 Pipe Joint Sealant

shall be clean and dry prior to application of the pipe joint sealant. Heat may be applied to the concrete surfaces until they are in accordance with the temperature and dryness requirements. ~~The pipe joint sealant shall be centered on both sides of the joint as it is being applied. After application, the geotextile or membrane material shall be rolled to avoid wrinkling. If the roll of geotextile or membrane material does not cover the full length of the joint, an overlap of at least 2 1/2 in. will be required to start the next roll of material. The manufacturer's application instructions shall apply in addition to the above requirements.~~

(b) Exterior Surface Treatment

After sealing with pipe joint sealant and assembling the box sections, the top and both sides of every joint between structure sections shall be covered with a joint membrane in accordance with 907.07 that is centered on the joint. The exterior concrete box surface shall be clean and dry before the joint membrane is applied. The top and both sides of every joint shall be completely covered for the entire length of each joint. Where joining two sections of joint membrane material, or where two ends meet, a 3 in. overlap shall be provided. The overlapping strip shall be firmly pressed onto the end of the underlying strip to seal the joint. Joints between structure sections and wingwalls, between wingwalls and spandrel walls, and between structure sections and headwalls or spandrel walls shall also be covered with joint membrane. The manufacturer's application instructions shall apply in addition to the above requirements.

The joint membrane shall be maintained in its installed location centered on the joint and shall not be damaged or dislodged during the backfilling operation.

SECTION 714, BEGIN LINE 412, INSERT AS FOLLOWS:

The cost of excavation except as provided in 206.11(a), expansion joint material, perpetuation of existing drains shown on the plans, removal of portions of existing structures, cleaning out old channels or structures, chemical anchor system, precast reinforced concrete structure joints, *pipe joint sealant, joint membrane*, and necessary incidentals shall be included in the cost of the structure or structure extension.

SECTION 723, BEGIN LINE 18, INSERT AS FOLLOWS:

723.02 Materials

Materials shall be in accordance with the following:

Chemical Anchor System	901.05
Coarse Aggregates, Class A or Higher, Size No. 91	904.03
Concrete	702

REVISION TO 2022 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

SECTION 714 – REINFORCED CONCRETE BOX STRUCTURES

714.02 Materials

714.12 Basis of Payment

714.10 Precast Reinforced-Concrete
Box Structure Section Joints

SECTION 723 – REINFORCED CONCRETE THREE-SIDED STRUCTURES

723.02 Materials

723.18 Basis of Payment

723.14 Joints

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS

907.05 Precast Reinforced Concrete Structure Sections

907.07 Joint Membrane System for Precast Reinforced Concrete Box Structure Sections

907.11 Pipe Joint Sealant

907.13 Rubber Type Gaskets

Epoxy Coated Reinforcing Bars	910.01(b)9
Flowable Backfill	213
Geotextile.....	918.02
Hydrated Lime	913.04(a)
<i>Joint Membrane for Precast Reinforced Concrete</i>	
<i>Box and Three-Sided Structure Sections</i>	<i>907.07</i>
Masonry Cement	901.01(c)
Mortar Sand	904.02(e)
Natural Sand	904.02(a)
Non-Epoxy PCC Sealer.....	909.10
Pipe Joint Sealant.....	907.11
Portland Cement.....	901.01(b)
Precast Reinforced Concrete Headwalls, Wingwalls, Footings, and Spandrel Walls.....	907.06
Precast Reinforced Concrete Structure Sections.....	907.05
Preformed Flexible Joint Sealant	907.11(a)
Reinforcing Bars	910.01
Riprap	904
Structure Backfill	904
WWR, Smooth and Deformed.....	910.01

SECTION 723, BEGIN LINE 395, DELETE AND INSERT AS FOLLOWS:

723.14 Precast Reinforced Concrete Three-Sided Structure Section Joints

(a) Between Structure Sections

Joints between *precast reinforced concrete* structure sections for three-sided arch-topped structures and true arch shape structures, and for flat-topped structures with cover of 3 ft or more, may be either butt joints or keyway joints.

1. Butt Joints

All butt joints shall be sealed with preformed flexible joint sealant as shown on the plans. The sealant shall be applied once the concrete surface temperature is above 40°F or above the minimum application temperature recommended by the joint sealant manufacturer. The concrete surfaces shall be clean and dry prior to application of the joint sealant. Heat may be applied to the concrete surfaces until they are in accordance with the temperature and dryness requirements.

Joints in true arch shape and flat-topped structures shall be sealed with 1 1/2 in. diameter preformed flexible joint sealant.

REVISION TO 2022 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

SECTION 714 – REINFORCED CONCRETE BOX STRUCTURES

714.02 Materials

714.12 Basis of Payment

714.10 Precast Reinforced-Concrete
Box Structure Section Joints

SECTION 723 – REINFORCED CONCRETE THREE-SIDED STRUCTURES

723.02 Materials

723.18 Basis of Payment

723.14 Joints

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS

907.05 Precast Reinforced Concrete Structure Sections

907.07 Joint Membrane System for Precast Reinforced Concrete Box Structure Sections

907.11 Pipe Joint Sealant

907.13 Rubber Type Gaskets

2. Keyway Joints

The sections of flat-topped structures with less than 3 ft of cover shall be produced with a minimum 4 in. depth by 1 1/2 in. width keyway joint. Non-shrink grout in accordance with 707.09 shall be placed in the keyway joint.

(b) Exterior Surface Treatment

After sealing with preformed flexible joint sealant or non-shrink grout as directed above, and assembly of three-sided structure sections, all butt and keyway joints between structure sections shall be covered with a joint wrap membrane in accordance with ASTM C877-907.07 and centered on the joint. The exterior surface of the concrete sections shall be free of dirt clean and dry before the joint material membrane is applied. The entire top and both sides of every joint shall be continuously completely covered for the entire length of each joint. Where joining two sections of joint membrane material, or where two ends meet, a 3 in. overlap shall be provided. The overlapping strip shall be firmly pressed onto the end of the underlying strip to seal the joint. Joints between structure sections and wingwalls, between wingwalls and spandrel walls, and between structure sections and headwalls or spandrel walls shall also be covered with either the same wrap used between structure sections or with geotextile in accordance with 918.02a joint membrane.

The joint wrap membrane shall be kept maintained in its properly installed location over centered on the joint. It shall not be damaged during the backfilling operation.

Joints in true arch shape structures shall be sealed with 1 1/2 in. diameter preformed pipe joint sealant before placement of the joint wrap.

SECTION 723, BEGIN LINE 502, INSERT AS FOLLOWS:

The cost of all design, coring, testing, pedestals or extended legs, excavation, repairs, plugging core and handling holes, mortar, grout, sealer, *preformed flexible joint sealant, joint membrane*, cylinder molds, and necessary incidentals shall be included in the cost of the structure or structure extension.

SECTION 907, BEGIN LINE 73, DELETE AND INSERT AS FOLLOWS:

907.05 Precast Reinforced Concrete Structure Sections

Precast reinforced concrete structure sections shall be from a source listed on the QPL of Certified Precast Concrete Producers, in accordance with ITM 813. A water-reducing admixture from the QPL of PCC Admixtures and Admixture Systems may be used.

REVISION TO 2022 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

SECTION 714 – REINFORCED CONCRETE BOX STRUCTURES

714.02 Materials

714.12 Basis of Payment

714.10 Precast Reinforced-Concrete
Box Structure Section Joints

SECTION 723 – REINFORCED CONCRETE THREE-SIDED STRUCTURES

723.02 Materials

723.18 Basis of Payment

723.14 Joints

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS

907.05 Precast Reinforced Concrete Structure Sections

907.07 Joint Membrane System for Precast Reinforced Concrete Box Structure Sections

907.11 Pipe Joint Sealant

907.13 Rubber Type Gaskets

Handling devices or holes will be allowed in each structure section. Holes for handling shall be filled with material in accordance with 901.07, 901.08, or with precast concrete plugs which shall be secured with portland cement mortar or other approved adhesive before backfilling. Drilled handling holes shall be filled with portland cement mortar. Prior to backfilling the structure, all holes shall be covered with ~~joint wrap material with a minimum width of 9 in~~ *in a joint membrane in accordance with 907.07.*

SECTION 907, BEGIN LINE 133, DELETE AND INSERT AS FOLLOWS:

907.07 Joint Membrane System for Precast Reinforced Concrete Box and Three-Sided Structure Sections

~~The Contractor may elect to use an approved self-adhering membrane system in lieu of the detail shown on the plans.~~

~~The joint membrane systems shall be self-adhering and in accordance with the following requirements.~~ *ASTM C877.*

Property	ASTM Test Method	Requirement
Thickness, minimum	D3767, Procedure A	59 mil
Tensile Strength, minimum	Grab Tensile Strength, D4632	650 N
Elongation, minimum	Grab Tensile Strength, D4632	20%
Bursting Strength, minimum	Mullen Burst, D3786	290 psi
Peel Strength, minimum	D903	850 N/m
Permeance, maximum	E96, Water Method	1.05 Perm

~~The joint membrane system shall be supplied in roll widths of at least 12 minimum of 11 in. The membrane shall be a composite sheet material composed of a non-woven fabric and a polymer membrane material. Joint membrane shall be installed in accordance with all manufacturer's installation instructions including surface preparation and primer materials. The joint membrane shall be protected by a release paper.~~

~~A type BC certification in accordance with 916 shall be provided for the joint membrane system. The limits of the above shall be shown on the certification.~~

SECTION 907, BEGIN LINE 172, DELETE AND INSERT AS FOLLOWS:

907.11 Pipe Joint Sealant

~~A type B certification in accordance with 916 shall be provided for the material for the sealing of joints of bell and spigot or tongue and groove concrete or clay pipe or culverts furnished under this specification. The material shall not contain asbestos fibers. The limits of the following shall be shown on the certification.~~

REVISION TO 2022 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

SECTION 714 – REINFORCED CONCRETE BOX STRUCTURES

714.02 Materials

714.12 Basis of Payment

714.10 Precast Reinforced-Concrete
Box Structure Section Joints

SECTION 723 – REINFORCED CONCRETE THREE-SIDED STRUCTURES

723.02 Materials

723.18 Basis of Payment

723.14 Joints

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS

907.05 Precast Reinforced Concrete Structure Sections

907.07 Joint Membrane System for Precast Reinforced Concrete Box Structure Sections

907.11 Pipe Joint Sealant

907.13 Rubber Type Gaskets

(a) Preformed Flexible Joint Sealants

Joint sealants shall be either bitumen or butyl rubber in accordance with ASTM C990. ~~The results of the following tests shall be shown on the type B certification. A type C certification shall be provided for the preformed flexible joint sealant.~~

Property	Test Method
Hydrocarbon Blends	ASTM D4 (bitumen) or D297 (butyl)
Ash-Inert Mineral Matter	AASHTO T 111
Volatile Matter	ASTM D6
Specific Gravity @ 77°F	ASTM D71
Ductility @ 77°F	AASHTO T 51 or ASTM D113
Flash Point	ASTM D92
Fire Point	ASTM D92
Softening Point	ASTM D36
Compression Index @ 77°F and 32°F	ASTM C972
Cone Penetration @ 77°F and 32°F, 150 g, 5 s, mm/10	ASTM D217
Chemical Resistance	ASTM C990

(b) Bituminous Mastic Sealant

A cold applied, mineral filled, bituminous joint sealing compound that can be applied to the joints with a trowel when the air temperature is between 20° and 100°F.

The bituminous material shall adhere to the concrete or clay pipe so as to make a watertight seal and shall not flow, crack, or become brittle when exposed to the atmosphere.

The mastic shall also be in accordance with the following. The results of the tests shall be shown on the type ~~B~~A certification.

SECTION 907, BEGIN LINE 208, DELETE AND INSERT AS FOLLOWS:

907.13 Rubber Type Gaskets

Ring gaskets for pipe shall be in accordance with ASTM C1619, class C. A type ~~BC~~ certification in accordance with 916 shall be provided for the rubber type gaskets. ~~The limits of the following shall be shown on the certification.~~

Property	Test Method
Tensile Strength and Elongation	ASTM D412
Hardness	ASTM D2240

REVISION TO 2022 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

SECTION 714 – REINFORCED CONCRETE BOX STRUCTURES

714.02 Materials

714.12 Basis of Payment

714.10 Precast Reinforced-Concrete
Box Structure Section Joints

SECTION 723 – REINFORCED CONCRETE THREE-SIDED STRUCTURES

723.02 Materials

723.18 Basis of Payment

723.14 Joints

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS

907.05 Precast Reinforced Concrete Structure Sections

907.07 Joint Membrane System for Precast Reinforced Concrete Box Structure Sections

907.11 Pipe Joint Sealant

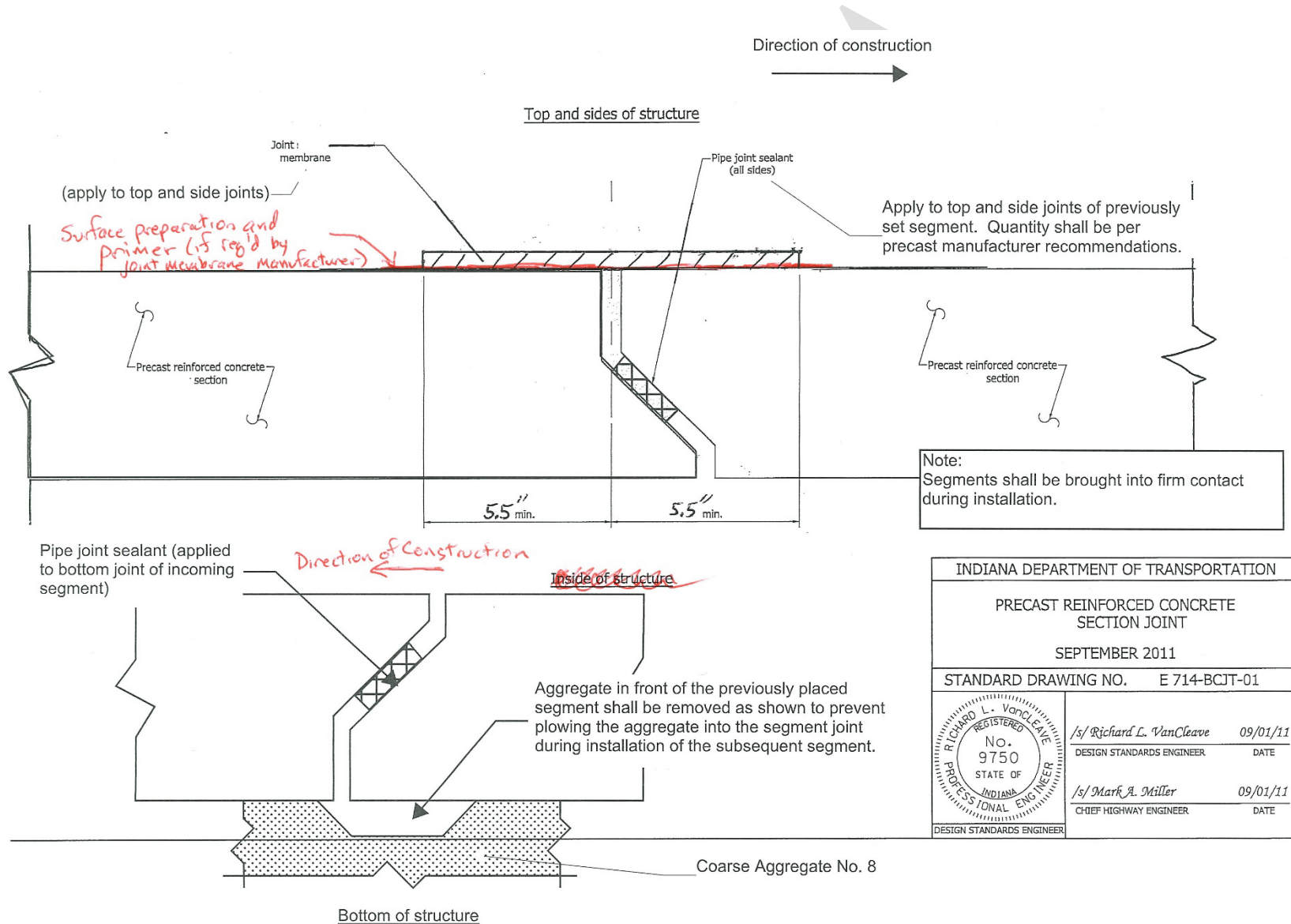
907.13 Rubber Type Gaskets

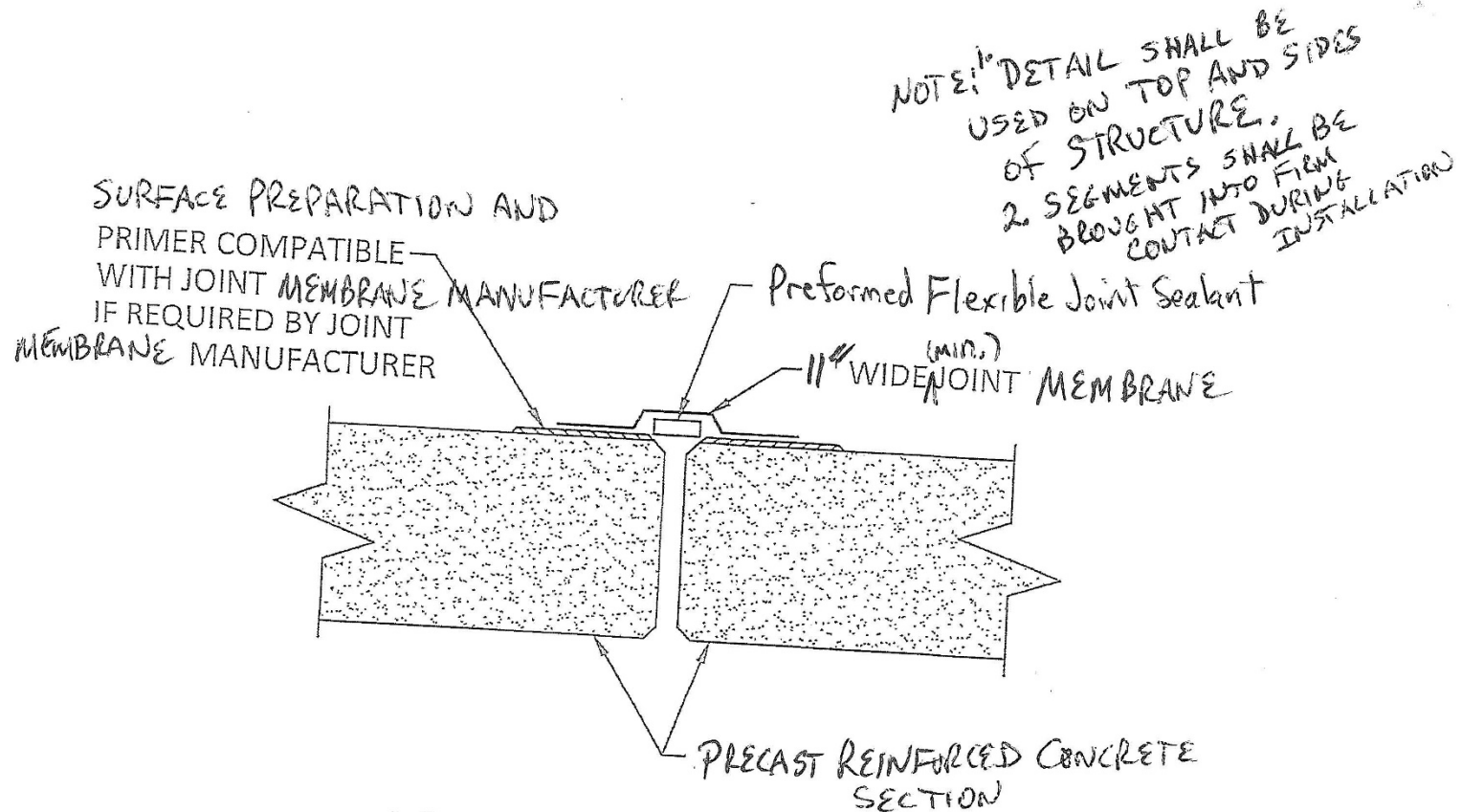
Oven-age tensile reduction, of original	ASTM D573 and D412
Oven-age elongation reduction, of original	ASTM D573 and D412
Compression Set	ASTM D395
Immersion, water	ASTM D471
Ozone resistance	ASTM D1149
Splice Strength Classification	ASTM D2527

AGENDA

REVISION TO 2022 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

E 714-BCJT-01 PRECAST REINFORCED CONCRETE SECTION JOINTS (WITH MARKUPS)





JOINT SEAL DETAIL

NOT TO SCALE

723-TSJT-01

COMMENTS AND ACTION

714.02 Materials

714.10 Precast Reinforced-Concrete Box Structure Section Joints

714.12 Basis of Payment

723.14 Joints

907.05 Precast Reinforced Concrete Structure Sections

907.07 Joint Membrane System for Precast Reinforced Concrete Box Structure Sections

907.11 Pipe Joint Sealant

723.02 Materials

723.18 Basis of Payment

907.13 Rubber Type Gaskets

DISCUSSION:

	<u>Action:</u>
Motion: Second: Ayes: Nays: FHWA Approval:	— Passed as Submitted — Passed as Revised — Withdrawn
2022 Standard Specifications Sections referenced and/or affected: 714 begin pg. 721; 723 begin pg. 791; 907 begin pg. 1020. Recurring Special Provisions or Plan Details: 714-R-748 WATERPROOFING MEMBRANE FOR REINFORCED-CONCRETE BOX STRUCTURES AND THREE-SIDED STRUCTURES (BFU: As determined necessary by the Project Designer. Approved not for 2024 SS) Standard Drawing affected: Revise E 714-BCJT-01; create new 723 drawing. Design Manual Sections affected: GIFE Sections cross-references: TBD	— 2024 Standard Specifications — Revise Pay Items List — Create RSP (No. __) Effective: — Revise RSP (No. __) Effective: — Standard Drawing Effective: — Create RPD (No. __) Effective: — GIFE Update — Frequency Manual Update — SiteManager Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Construction activities that disturb more than 1 acre of surface area are now regulated by the IDEM Construction Stormwater General Permit rather than Rule 5. This proposal modifies the existing 205 to comply with the revised permit requirements.

PROPOSED SOLUTION: The proposed revisions update 205 to meet the new requirements. Also, this eliminates the SWQM level designation and provides criteria in the section to determine the SWQM credentials. The established prices were last updated for the 2020 book, this proposal increases prices approximately 20%.

APPLICABLE STANDARD SPECIFICATIONS: 205

APPLICABLE STANDARD DRAWINGS: None

APPLICABLE DESIGN MANUAL SECTION: 14-2, 17-6.0 Design Memorandum 20-05

APPLICABLE SECTION OF GIFE: 3.1

APPLICABLE RECURRING SPECIAL PROVISIONS: None

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Working Group comprised of: Tom Harris, Greg Couch, Cam Maschino, Jen Napier, Reed Hathaway, Sara Lamkin, Patrick Patterson, Subhi Bazlamit,

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE: N/A

IMPACT ANALYSIS (attach report): Yes

Submitted By: Joe Novak

Title: State Construction Engineer

Division: Construction Management

E-mail: jnovak@indot.in.gov

Date: 12/29/22

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? No

Will approval of this item affect the Qualified Products List (QPL)? No

Will this proposal improve:

Construction costs? Yes

Construction time? No

Customer satisfaction? No

Congestion/travel time? No

Ride quality? No

Will this proposal reduce operational costs or maintenance effort? No

Will this item improve safety:

For motorists? No

For construction workers? No

Will this proposal improve quality for:

Construction procedures/processes? Yes

Asset preservation? No

Design process? No

Will this change provide the contractor more flexibility? Yes

Will this proposal provide clarification for the Contractor and field personnel? Yes

Can this item improve/reduce the number of potential change orders? No

Is this proposal needed for compliance with:

Federal or State regulations? Yes

AASHTO or other design code? No

Is this item editorial? No

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda:

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 205 – STORMWATER MANAGEMENT

(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 205, BEGIN LINE 1, DELETE AND INSERT AS FOLLOWS:

SECTION 205 – STORMWATER MANAGEMENT

205.01 Description

This work shall consist of furnishing, installing, inspecting, maintaining, and removing BMPs in accordance with 105.03, the Department’s Design SWPPP3, the submitted and accepted SWQCP or an approved written site plan developed by the Contractor.

MATERIALS

205.02 Materials

Materials shall be in accordance with the following:

Coarse Aggregate, Class F or Higher.....	904.03
Fertilizer.....	914.03
Filter Sock.....	914.09(h)
Geotextile.....	918.02
Grass Seed, Temporary	914.02
Manufactured Surface Protection Products ...	205.04(c)
Metal End Sections	908.06
Mulch.....	914.05(a)
Pipe Drains.....	715.02(d)
Plastic Net.....	914.09(g)
Revetment Riprap.....	904.04*
Stakes.....	914.09(b)
Staples.....	914.09(f)
Top Soil	914.01
Water	914.09(a)

* The minimum depth does not apply.

CONSTRUCTION REQUIREMENTS

205.03 General Requirements

For contracts requiring waterway permits, with a Construction Stormwater General Permit (CSGP), or a 327 IAC 15-5 permit, an SWQCP shall be developed and submitted to the Engineer for review.

The Contractor shall furnish, install, inspect, maintain, and remove BMPs for land-disturbing activity areas, and develop an SWQCP in accordance with the Construction Stormwater General Permit or 327 IAC 15-5. The Contractor’s SWQCP shall be a required contract specific component to the Department’s Design SWPPP3. The submitted and accepted Contractor’s SWQCP shall interrelate with the Department’s Design SWPPP3 in

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 205 – STORMWATER MANAGEMENT

order to satisfy the requirements of the Construction Stormwater General Permit, ~~or 327 IAC 15-5.~~

(a) Stormwater Quality Control Plan Development

The Contractor's SWQCP shall be developed by a professional engineer who holds a current CPESC certification or approved equivalent. The SWQCP developer shall be familiar with the project site and be able to develop the SWQCP in accordance with the site conditions. In the event of conflict between requirements, pollution control laws, rules, or regulations of other Federal, State or local agencies, the Contractor's SWQCP shall adhere to the more restrictive laws, rules, or regulations. The SWQCP developer shall issue clarifications, correct errors and omissions, and revise the SWQCP as required. The Contractor's SWQCP shall be signed and sealed by the SWQCP developer, as defined above.

The Contractor shall develop the SWQCP in accordance with the Construction Stormwater General Permit, ~~327 IAC 15-5,~~ the IDEM "Indiana Storm Water Quality Manual", ITM 803, and all other applicable contract documents.

(b) Stormwater Quality Control Plan Content

The Contractor's SWQCP shall include the processes and procedures of how the Contractor intends to meet the requirements outlined in this section and in accordance with ITM 803.

The Contractor may elect to prepare and submit the SWQCP in multiple phases. The first phase shall show the location, installation, and maintenance of BMPs for the existing topography of the project and identify the total number of proposed construction phases for the contract. Additional phases shall be submitted for review prior to land-disturbing activities for those phases and shall show the progression from the existing topography to final grade. Each phase of the SWQCP shall be modified to meet existing field conditions as needed.

Any individual phase of the SWQCP shall be submitted to the Engineer for review a minimum of 14 calendar days prior to commencing land-disturbing activities for that phase. Upon receipt, the Engineer will perform a review of the submitted phase of the SWQCP within 14 calendar days for acceptance.

~~At a minimum, the SWQCP shall include the following:~~

- ~~1. Description of the site.~~
- ~~2. Locations of all proposed soil stockpiles.~~
- ~~3. Locations of all proposed equipment storage areas, fueling locations, construction trailers, batch plants, and designated concrete truck washout areas.~~

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 205 – STORMWATER MANAGEMENT

4. Proposed construction sequence and phasing of BMPs including plans for installation, inspection, maintenance, and removal of BMPs. The total number of proposed construction phases shall also be specified.
5. Locations of offsite areas that drain onto project limits. The SWQCP shall include BMPs properly sized and placed to accommodate runoff from outside of the project limits and from within the project limits.
6. Locations of all construction entrances where vehicles and equipment will enter and exit the site.
7. An updated stormwater management budget including a complete list of all proposed BMPs with price calculations based upon the established unit prices or contract prices. If the total proposed budget exceeds the original stormwater management budget pay item, the Contractor shall submit a Change Order Request form, in accordance with 109.05, to provide an explanation and justification for the additional BMPs. Proposed BMPs and costs will be reviewed by the Engineer. If accepted, the changes shall be included into the SWQCP. Additional accepted costs will be included in the contract in accordance with 109.05.
8. Material handling and spill prevention plan. A plan for the collection, storage, and disposal of concrete washout wastewater shall be in accordance with 205.03(d).
9. Statements that the BMPs for the project shall, at a minimum, be inspected each calendar week and by the end of the next work day following every 1/2 in. rain event.
10. Provisions to ensure that pollutants such as fuels, lubricants, asphalt, sewage, wash water, wastewater, or waste from concrete mixing operations, and other harmful materials shall not be discharged into existing bodies of water.
11. Provisions to ensure that all applicable regulations and statutes relating to the prevention and abatement of pollution shall be complied with in the performance of the contract.

When Waters of the United States, wetlands, or other protected resources are identified in the plans within or adjacent to the project limits the following shall also be addressed in the SWQCP:

1. The location of protected resource fencing, or protected resource

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 205 – STORMWATER MANAGEMENT

~~signs. These measures shall be used to provide clear delineation for protected resources that have the potential to be impacted by construction operations.~~

- ~~2. A method for conducting work located in or adjacent to bodies of water and protected resources. The method shall indicate how the work in these locations shall be conducted to comply with all conditions of the project permits.~~

Based on changes in scope, in accordance with 104.02 and 104.03, the Engineer may request a cost breakdown of the stormwater management implementation item.

The Contractor's SWQCP shall incorporate all narrative information, plan sheets, and implementation information necessary for stormwater management utilized for the project. The SWQCP shall include any revisions to the Department's Design SWPPP3 and the plans. The revisions shall comply with all known permit requirements applicable to the construction phase of the project including waterway permits, or a Construction Stormwater General Permit, or a 327 IAC 15-5 permit, and those required by the Contractor in accordance with 107.01 and 205.03(c). Electronic files of any plan sheets and narratives included as part of the SWQCP submittal shall be provided in PDF format.

On projects requiring an SWQCP, an updated field copy of the SWQCP ~~shall~~ will be retained in the office of the Engineer or at a mutually agreed upon location. Any accepted revisions shall be annotated in the field copy of the SWQCP and initialed and dated by the SWQM and the Engineer.

A copy of the Contractor's offsite operations permits for items such as offsite stockpiles, borrow sites, waste sites, or storage areas shall be submitted to the Engineer prior to any land-disturbing activities at those sites.

Revisions to the SWQCP shall be submitted and signed and sealed by the SWQCP developer, for items that are hydraulically sized or calculated such as sediment basins or other similar measures. The SWQM may submit revisions for items that are not hydraulically sized or calculated. Adjustments to the BMPs shall be subject to the Engineer's acceptance.

If a governmental agency or a local governmental authority finds a violation of NPDES or other surface waterway permits provided in the contract documents, if any BMPs are incomplete, or the Contractor's SWQCP is incomplete, full responsibility shall be borne by the Contractor to make the necessary corrections. In addition, if an assessment, damage judgment or finding, agreed order, fine, or any other expense for a violation of the contract requirements is leveled against the Department, the Contractor shall reimburse the State for that amount within 30 days. The Contractor agrees to indemnify and hold harmless the Department and will reimburse the Department for any assessments, damage judgments or finding, fine, penalty, or other expense relating to this portion of the contract. The Department may withhold the amount owed from the Contractor's subsequent pay

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 205 – STORMWATER MANAGEMENT

estimates. Delays caused by stop work orders from regulatory agencies, suspension of work orders from the Department, or any other delays caused by inadequate submittals or implementation will be considered Non-Excusable Delays in accordance with 108.08(c).

(c) Stormwater Quality Manager

On contracts ~~requiring an SWQCP with a CSGP or waterway permits~~, the Contractor shall designate one person as the contract SWQM. The name of the SWQM shall be furnished to the Engineer at, or prior to, the pre-construction conference. If the designated individual is replaced during the contract, the replacement shall be designated, and notification given to the Engineer within 24 h. ~~The designated individual shall be trained as a level 1 or level 2 SWQM as specified within the contract documents. The SWQM training level shall meet or exceed the level required within the contract documents.~~

1. ~~Level 1~~ Waterways SWQM

~~A level 1 SWQM~~ On contracts *requiring waterway permits and not requiring a Construction Stormwater General Permit*, the individual shall have successfully completed the Department's Construction Stormwater Training course and hold a current training verification document for that course.

2. ~~Level 2~~ CSGP SWQM

~~A level 2 SWQM~~ On contracts *requiring a Construction Stormwater General Permit*, the individual shall ~~meet the requirements of 205.03(e)1~~; *have successfully completed the Department's Construction Stormwater Training course* and hold a current certification as a CESSWI, or a CISEC, or a CPESC, or an approved equivalent.

3. SWQM Responsibilities

The SWQM shall ~~attend~~ hold the pre-disturbance meeting, in accordance with 205.03(d). The SWQM shall attend at least one meeting with the Contractor, relevant Subcontractors, and the Engineer per calendar month in any month in which weekly and post-event inspections are being completed and work is ongoing. The requirement to attend these meetings may be waived entirely or in part upon written approval from the Engineer.

The SWQM shall be responsible for ensuring that the Contractor's SWQCP has been submitted for review prior to implementation. Implementation of stormwater features shall include installation, inspection, maintenance, and removal of all BMPs. The SWQM shall also be in responsible charge of inspecting the implementation of the Contractor's SWQCP or the contract site plan. The SWQM shall be in responsible charge of the weekly and post-event inspections. Anyone performing inspections under the responsible charge of the SWQM shall, at a minimum, meet the training requirements of a ~~level 1~~ Waterways SWQM.

The SWQM shall accompany personnel from IDEM or other regulatory or governmental agencies, ~~as required~~, during site visits by those agencies.

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 205 – STORMWATER MANAGEMENT

(d) Pre-Disturbance Meeting

On contracts requiring an SWQCP, a pre-disturbance meeting shall be held on-site prior to beginning land-disturbing activities. The meeting invitees shall include the SWQM, the Contractor, the SWQCP Developer, appropriate Department field staff, the District Erosion Control Specialist, District Environmental Section Manager, Ecology and Waterway Permitting Specialist, and all relevant subcontractors for the work being performed. The pre-disturbance meeting shall be held not more than 30 days prior to the start of land-disturbing activities. The following shall be reviewed:

1. Stormwater management implementation including phasing and sequencing.
2. Permit conditions and authorized impacts.
3. Relevant Unique and Recurring Special Provisions.
4. Relevant commitments.

If requested in writing, pre-disturbance meeting requirements may be waived in part or in full subject to the approval by the Engineer. No land-disturbing activity shall begin until this meeting has occurred or until written approval to waive the meeting has been received.

(e) Temporary BMPs

Incoming and outgoing drainage areas impacting a work location shall have temporary BMPs installed as soon as practicable and prior to land-disturbing activities at those locations. Pipe end sections and anchors shall be installed when the structure is installed. If the pipe end sections or anchors cannot be placed at the same time, temporary riprap splashpads shall be placed at the outlets of the pipes until end sections or anchors can be installed.

Adjustments of the BMPs shall be made to satisfy field conditions and shall be subject to the Engineer's approval. Adjustments made to meet field conditions shall be made as soon as practicable, shall be maintained as necessary, and shall be noted in the SWQCP.

The Contractor shall provide a stable construction entrance at the points where construction traffic will enter onto an existing road. Where there is insufficient space for a stable construction entrance, other measures shall be taken to prevent the tracking of sediment onto the pavement. These temporary entrances shall be the responsibility of the Contractor to completely install, inspect, maintain, and remove.

A copy of the current manufacturer's installation and maintenance recommendations shall be provided prior to installation of manufactured BMPs. Shipping, handling, storage, and installation of manufactured BMPs shall be in accordance with the manufacturers' recommendations or as directed. In the event of conflict between the

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 205 – STORMWATER MANAGEMENT

Department's specifications and the manufacturer's recommendations, the Contractor shall adhere to the more restrictive regulation or as directed.

Within the SWQCP, the Contractor shall provide a written plan for the collection, storage, and disposal of concrete wastewater that is adequate for the size of the concrete pour, the environmental conditions of the job site, and in accordance with ~~327 IAC 15-5-7(2) and 327 IAC 15-13-17(2)(F)~~ *CSGP 3.3(a)*. An emergency concrete washout container shall be available, be part of the material handling and spill prevention plan, and available on-site during concrete pours. Straw bale washout pits will not be allowed. Concrete washout wastewater may either be recycled back into the truck, washed out into an adequately sized and lined roll off container or lined in-ground pit, an approved manufactured product, or taken back to the batch plant. Lining shall consist of a minimum of one sheet of 10 mil plastic, be continuous with no over lapping, and shall be free of leaks.

Concrete washout capacity shall not be exceeded. Concrete wastewater shall not be allowed to leak onto the ground, run into storm drains, or into any body of water. Where concrete wastewater leaks onto the ground, all contaminated soils shall be excavated and disposed of in accordance with ~~202.08~~, except that all costs associated with excavation and disposal shall be the responsibility of the Contractor.

The installation of BMPs shall include those necessary or required by permits at off-site locations such as borrow and disposal areas, field office sites, batch plants, locations where the Contractor's vehicles enter and leave public roads, and other locations where work pertaining to the contract is occurring. The Contractor's SWQM shall be responsible for the installation, inspection, maintenance, and removal of these measures.

The Contractor shall employ dust control measures in accordance with 107.08(b).

(f) Posting Requirements

On contracts requiring a Construction Stormwater General Permit, ~~or a 327 IAC 15-5 permit~~, directions to the updated field copy of the SWQCP, a copy of the NOI, and a copy of the NOS shall be posted and maintained so they are legible and visible at an agreed upon and publicly accessible location for the contract. In lieu of posting the NOI and NOS, ~~an NOI with an IDEM time stamp 48 h prior to the beginning~~ *a copy of operations* ~~the Construction Stormwater Posting Project Information form (CSPP)~~ shall also meet the posting requirements. On contracts requiring waterway permits the Contractor shall follow the posting requirements of those permits.

(g) Inspections

Inspections shall be required on all work areas associated ~~with any waterway permit~~, a Construction Stormwater General Permit, ~~or a 327 IAC 15-5 permit~~. This shall include drainage areas within contract limits leading to BMPs, areas of land-disturbance, and areas with impacts or potential impacts to protected resources. For contracts that have multiple work sites, inspections shall only be required for areas operating under a Construction Stormwater General Permit, ~~or 327 IAC 15-5 permit~~, or a waterway permit.

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 205 – STORMWATER MANAGEMENT

~~On contracts requiring waterway permits and not requiring a Construction Stormwater General Permit or a 327 IAC 15-5 permit, inspections shall be conducted at a minimum of once per calendar week. Inspections for these contracts shall stop once the Engineer has accepted, in writing, that the disturbed areas are permanently stabilized and that all temporary measures have been removed.~~

~~On contracts requiring a Construction Stormwater General Permit or 327 IAC 15-5 permit, inspections shall be performed at a minimum of once per calendar week and also, twenty-four (24) hours prior to a qualifying rain event, or by the end of the next work day following every 1/2 in. or greater rain event. Recorded rainfall shall be recorded using an on-site rain gauge and a log documenting rainfall total or a weather station representative of the project location and approved by the Engineer. For specific areas of the project which are permanently stabilized with vegetative cover at (70) percent density and/or no active erosion present; inspections for that area can be reduced to once per month if approved by the Engineer in writing. A single inspection performed either before or after a rain event shall satisfy the requirement for both the rain event and the weekly inspection. No more than three (3) inspections shall be required in a calendar week. Inspections for these contracts shall stop once all disturbed areas are permanently stabilized, all temporary measures have been removed, and the NOT has been obtained.~~

Inspection reports *for CSGP contracts* shall be submitted by the SWQM within 24 h of the day of the inspection. The inspection reports *for CSGP contracts* shall be documented and submitted electronically using the current version of the Department's stormwater inspection management report which is available on the Department's website. A paper inspection form shall only be used in the event that the electronic inspection form is out of service or as directed. Inspections shall begin when the installation of BMPs start, when land disturbing activities begin, or if potential impacts to protected resources will occur, whichever is earliest.

~~On contracts not requiring a Construction Stormwater General Permit or 327 IAC 15-5 permit, and if requested in writing, the Engineer may temporarily waive the requirement to complete weekly inspections during the winter months, or when the prosecution of work is temporarily discontinued, or when the inspection areas are stabilized to minimize the potential for off-site sedimentation.~~

(h) Permanent BMPs

Permanent BMPs shall be incorporated into the work at the earliest practicable time.

205.04 Temporary Surface Stabilization

Non-vegetated areas shall be temporarily stabilized if the area remains inactive for more than seven days. The area will be considered inactive when no meaningful work toward accomplishing a pay item has been performed at a site of land-disturbing activity. Stabilization methods shall be in accordance with the SWQCP, or as directed.

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 205 – STORMWATER MANAGEMENT

(a) Seed

Temporary seeding shall be placed on disturbed areas that are expected to be inactive for more than seven days, or as agreed to by the Contractor and the Engineer. Seed shall be placed either by drilling in, spraying in a water mixture, or by use of a mechanical method which places the seed in direct contact with the soil. Where inaccessible to mechanical equipment, or where the area to be seeded is small, a hand operated cyclone seeder or other approved equipment may be used. Seed shall not be covered more than 1/2 in. Seed shall be distributed utilizing approved methods which allow for even distribution of the seed. If as a result of a rain event, the prepared seed bed becomes rutted, crusted or eroded, or depressions exist, the soil shall be reworked until it is smooth. Reworked areas shall be re-seeded. All seeded areas shall be mulched within 24 h after seeding.

Temporary seed shall be used for surface stabilization and temporary ground cover. Temporary cover mixtures shall be placed and be subject to seasonal limitations as defined herein. This mixture is not intended to be used as a permanent seed mixture. This mixture shall not be used to satisfy the requirements of the warranty bond. The mix shall be spray mulched where the slope is steeper than 3:1. From June 16 through August 31, mulching alone shall be used to stabilize the soil.

1. Spring Mix

Spring mix shall be used from January 1 through June 15. This mixture shall be applied at the rate of 150 lb/ac. The mix shall consist of oats.

2. Fall Mix

Fall mix shall be used from September 1 through December 31. This mixture shall be applied at the rate of 150 lb/ac. This mix shall consist of winter wheat.

Unless otherwise specified in the SWQCP or the contract site plan, fertilizer shall be spread uniformly over the area to be seeded and shall be applied at 1/2 the rate shown in 621.05(a). Fertilizer shall only be applied during the active growing season March through November.

(b) Mulch

Mulch shall be applied uniformly in a continuous blanket at the rate of 2.5 t/ac. If areas are seeded, mulch shall be placed within 24 h after seeding. The percent of moisture in the mulch shall be determined in accordance with 621.14(c). Mulch shall be placed in accordance with one of the following types or as directed.

On a slope flatter than 3:1, or where specified, type A shall be used. On a slope of 3:1 or steeper but flatter than 2:1, or where specified, type B or type C may be used. On a slope of 2:1 or steeper, or where specified, a manufactured surface protection product, in accordance with 205.04(c), shall be used.

1. Type A

Mulch shall be punched into the soil so that it is partially covered. The punching operation shall be performed parallel to the contour of the slope. The tools used for

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punching purposes shall be disks that are notched and have a minimum diameter of 16 in. The disks shall be flat or uncupped. Disks shall be placed a minimum of 8 in. apart. Shaft or axle sections of disks shall not exceed 8 ft in length.

The disk for punching shall be constructed so that weight may be added or hydraulic force may be used to push puncher into the ground. An even distribution of mulch shall be incorporated into the soil.

2. Type B

The mulch shall be held in place by means of commercially produced water borne mulch binder product. The product shall be manufactured and used in accordance with all applicable State and Federal regulations and shall be applied in accordance with the manufacturer's written instructions. A copy of the written instructions shall be supplied to the Engineer prior to the seeding work. The product shall include a coverage indicator to facilitate visual inspection for evenness of application. If the mulch fails to stay in place, the Contractor shall repair all damaged areas.

3. Type C

The mulch shall be held in place with a polymeric plastic net. The plastic net shall be unrolled such that it lays out flat, evenly, and smoothly, without stretching the material. The plastic net shall be held in place by means of staples. The staples shall be driven at a 90° angle to the plane of the soil slope. Staples shall be spaced not more than 4 ft apart with rows alternately spaced. The plastic net shall be secured along the top and bottom of the soil slope with staples spaced not more than 1 ft on center. The ends and edges of the plastic net shall be overlapped approximately 4 in. and stapled. Overlaps running parallel to the slope shall be stapled 1 ft on center and overlaps running perpendicular to the slope shall be stapled at least 3 ft on center. The plastic net shall be placed with the length running from top of slope to toe of slope, or the plastic net shall be placed with the length running horizontally or parallel to the contour.

(c) Manufactured Surface Protection Products

Prior to placing a manufactured surface protection product, the area to be covered shall be free of all rocks or clods of over 1 1/2 in. in diameter, and all sticks or other foreign material, which prevent the close contact of the blanket with the seed bed.

After the area has been properly shaped, fertilized, and seeded, the manufactured surface protection product shall be laid out flat, evenly, and smoothly, without stretching the material.

Manufactured surface protection products may be used for covering an area that has not been seeded. Soil cover shall not be used to cover seeded areas.

1. Excelsior Blanket

An excelsior blanket may be used as mulch for seeding where seeding is specified or where erosion control blanket is specified. Excelsior blankets shall be placed within 24 h after seeding operations have been completed. Excelsior blankets shall be installed in

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accordance with the manufacturer's recommendations.

2. Straw Blanket

A straw blanket may be used as mulch for seeding where mulched seeding is specified or where erosion control blanket is specified. Straw blankets shall be placed within 24 h after seeding. The straw blanket shall be unrolled over the designated area so that the plastic mesh is on top and the straw fibers are snugly and uniformly in contact with the soil surface. The rolls shall be butted together and stapled in place. The staples shall be driven through the blanket at a 90° angle to the plane of the ground surface. Each staple shall anchor the plastic mesh. The staples shall be spaced in accordance with the manufacturer's recommendations.

For placement on a slope, the straw blankets shall be placed with the length running from the top of slope to the toe of slope and shall extend a minimum of 3 ft over the crown of the slope. The blanket shall be stapled in accordance with the manufacturer's recommendations.

For placement in ditch lines, the straw blanket shall be unrolled parallel to the centerline of the ditch. The blanket shall be placed so that there are no longitudinal seams within 24 in. of the bottom centerline of the ditch. In a ditch line, the blanket shall be stapled in accordance with the manufacturer's recommendations with a minimum of six staples across the upstream end of each roll.

3. Rolled Erosion Control Products

The Contractor shall use degradable RECPs including netting, open weave textile, and erosion control blankets.

Seed shall be applied in accordance with 621 unless soil infilling is required.

If soil infilling is required, RECP shall be first installed and then seed applied and brushed or raked 1/4 to 3/4 in. of topsoil into voids in the RECP filling the full product thickness. Staples of at least 6 in. in length shall be used to secure the RECP. The RECP shall be unrolled parallel to the primary direction of flow and placed in direct contact with the soil surface. The RECP shall not bridge over surface inconsistencies. Edges of adjacent RECP shall be overlapped by 2 to 4 in. Staples shall be placed to prevent seam separation in accordance with the manufacturer's recommendations.

4. Geotextile

Disturbed soil shall be covered with geotextile. The covering shall be placed over the exposed soil in a shingle like fashion with a 2 ft minimum overlap covering all loose or disturbed soil. The geotextile, if new, shall be in accordance with 918.02. The geotextile used for soil covering need not be new but shall not have holes or unrepaired rips or tears. All repairs shall be made in accordance with the manufacturer's recommendation.

205.05 Concentrated Flow Protection

(a) Check Dam

Check dams and modified check dams shall be constructed as shown on the plans. Geotextile for check dams shall be in accordance with 616 unless otherwise specified. Temporary revetment riprap shall be in accordance with 616. No. 5 and No. 8 filter stone shall be in accordance with 904.

(b) Check Dam, Traversable

Traversable check dams shall be composed of 8 in. minimum diameter socks filled with straw, ground wood chips, shredded bark, or other approved material for site specific conditions. Rolls and socks may be stacked in a triangle pattern as shown on the plans. Check dams shall be staked as shown on the plans or as specified by the manufacturer.

(c) Diversion Interceptors

Grading for diversion interceptors shall be in accordance with 203 with the exception that compaction requirements will not apply. The Contractor shall identify the construction areas which shall utilize diversion type A or B. Slope drains shall be provided at the low points of the diversion interceptor. Perimeter diversion, type C shall be installed prior to earth moving activities and shall be immediately stabilized. Type A or B shall be stabilized if anticipated to be left in place for more than seven calendar days.

(d) Sediment Traps

Sediment traps shall be constructed with revetment riprap, filter stone and geotextile.

(e) Sediment Basins

Embankment construction shall be in accordance with 203. Temporary revetment riprap used for overflow protection shall be in accordance with 904, unless otherwise specified in the SWQCP. Sediment basins shall be constructed as shown on the plans, or as specified in the SWQCP. Sediment basins shall be designed to provide a minimum storage volume to contain the runoff from a 10 year 24 h storm event. When required, water shall be withdrawn from the top of the water column. Basin slopes shall be stabilized upon achieving design grades. Outfalls shall be stabilized within 24 h of installation of the basin outlet.

(f) Slope Drains

Slope drain pipes shall be lengthened as required due to the construction of the embankment.

(g) Vegetative Filter Strips

Designated vegetative filter strips shall not be disturbed. Rills that form shall be repaired. Fertilizer shall be applied as specified in the SWQCP.

(h) Splashpads

Splashpads shall be constructed using revetment riprap on geotextile, or other approved material for site specific conditions and shall be sized to prevent erosion or scour.

(i) Inlet Protection

All inlets shall have sediment control measures installed when the drainage area contributing to the inlet is affected by land-disturbing activity, adjacent to hauling operations, adjacent to disturbed areas, or as directed. A copy of the current manufacturer's installation and maintenance recommendations shall be provided prior to installation of manufactured inlet protection in accordance with 205.03(e). All inlet protection devices shall provide a means of emergency overflow. Geotextile wrapped under or over a grate shall not be used.

205.06 Perimeter and Resource Protection**(a) Silt Fence**

Shipping, handling and storage shall be in accordance with the manufacturer's recommendations. Silt fence material shall be in accordance with 918.02(d). The silt fence material will be rejected if it has defects, tears, punctures, flaws, deterioration, or damage incurred during manufacture, transportation, storage, or installation. Each roll shall be labeled or tagged to provide product identification.

Joints shall be made from the ends of each section of fence wrapped around a wood stake and joined together or other method recommended by the manufacturer. Copies of all current manufacturer manuals shall be provided prior to installation. Silt fence shall not be used in conveyance channels, areas prone to flooding, or areas of concentrated flow.

(b) Filter Sock

Filter sock shall be designed for filtration or diversion depending on its intended use. Filter sock shall be installed, secured and overlapped in accordance with the standard drawings. The manufacturer's specifications for installation may be substituted with the approval of the Engineer. Filter sock shall be in accordance with 914.09 (h).

(c) Filter Berm

Filter berms shall be constructed of filter sock, or a combination of riprap or No. 5 and No. 8 filter stone.

(d) Protected Resource Fence

Protected resource fence shall be a commercially available material marketed as snow fencing, have a minimum height of 4 ft and be made of high density polyethylene. All protected resource fence shall be orange in color. Protected resource fence shall be installed using T-posts spaced no more than 10 ft apart and secured with plastic fence ties. Pull posts and corner posts will not be required. T-posts shall be buried to 1/3 of their height.

(e) Protected Resource Signs

Within areas prone to flooding, or concentrated flow "Do Not Disturb" signs in accordance with 622.20 may be accepted in lieu of fencing, if requested and accepted in writing prior to installation. If "Do Not Disturb" signs are used in lieu of fencing, they shall be spaced at a distance of 25 ft apart to delineate the entire length of concern. At a

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minimum, two signs shall be used.

205.07 Maintenance

BMPs shall be inspected in accordance with 205.03(g). If conditions do not allow the Contractor access to the location of the BMPs using normal equipment and maintenance, the Contractor ~~shall~~ may submit to the Engineer an acceptable written alternate schedule, within 48 h, to bring the BMPs back into compliance.

(a) Filter Sock

Accumulated sediment shall be removed once it reaches 1/2 of the height of the filter sock when used for perimeter protection and 1/3 the height when used for inlet protection. The filter sock shall be inspected to ensure that it is holding its shape and allowing adequate flow. Eroded and damaged areas shall be repaired.

(b) Silt Fence

If the fence fabric tears, starts to decompose, or becomes ineffective, the affected portion shall be replaced. Deposited sediment shall be removed once it reaches 1/3 the height of the fence at its lowest point. Once the contributing drainage area has been stabilized, the Contractor shall remove the fence and sediment deposits, grade the site to blend with the surrounding area, and stabilize the graded area.

(c) Filter Berm

Accumulated sediment shall be removed once it reaches 1/4 of the height of the filter berm. The filter berm shall be inspected to ensure that it is holding its shape and allowing adequate flow. Eroded and damaged areas shall be repaired.

(d) Inlet Protection

Accumulated sediment shall be removed once identified and after each storm event. Flushing with water will not be allowed. The sediment shall not be allowed to re-enter the paved area or storm drains. Manufactured inlet protection shall be maintained in accordance with the manufacturer's recommendations.

(e) Check Dams

Sediment shall be removed once it reaches 1/2 the height of the check dam. Sediment shall be removed and disposed of in accordance with 201.03 and 203.08. The Contractor shall rebuild or repair each damaged check dam to maintain the design height, cross section, and control function.

(f) Sediment Traps

Following each rain event, the Contractor shall repair slope erosion and piping holes as required. Sediment shall be removed once it has accumulated to 1/2 design volume. The Contractor shall replace the coarse aggregate filter stone if the sediment pool does not drain within 72 h following a rain event.

(g) Sediment Basin

Sediment shall be removed once it has accumulated to 1/2 the design volume. The

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filter stone around the riser pipe shall be replaced if the sediment pool does not drain within 72 h following a rain event.

(h) Concrete Washout

The containment system shall be inspected for leaks, spills, and tears, and shall be repaired or replaced as necessary. The Contractor shall ensure that each containment system maintains adequate capacity *and has the appropriate lining*. Solidified waste concrete shall be disposed of in accordance with 202.

(i) Protected Resource Fence

Protected resource fence shall be maintained in an upright position with no tears or missing sections.

(j) Protected Resource Signs

Protected resource signs and posts shall be maintained in an upright and legible condition.

(k) Sediment Tracked onto Public Roadways

Sediment discharged or tracked onto roadways that are open to traffic must be removed as directed by a regulatory authority or at a minimum, removed by the end of the same day. Clearing of sediment must not include the utilization of mechanical methods that will result in mobilization of dust off the project site or flushing the area with water unless the flushed water is directed to an appropriate sediment control measure. Cleared sediment must be redistributed or disposed of in a manner that is in accordance with all applicable statutes and regulations.

205.08 Stormwater BMP Deficiencies

~~If the Engineer documents deficient BMPs at any time during a contract, including the time during seasonal suspension, written notification of the deficiency will be provided to the Contractor.~~

(a) Emergency Immediate Deficiencies

~~Emergency Immediate deficiencies shall include:~~

- ~~1. Discharge of wastewater into a drainage structure, jurisdictional waterway, or similar environmental resource.~~
- ~~2. Failure to comply with the conditions and commitments of the contract stormwater and waterway permits and regulations.~~
- ~~3. Beginning land-disturbing activities without the Engineer's acceptance of a submitted SWQCP or prior to the pre-disturbance meeting, if not waived by written permission.~~
- ~~3. Leakage from a fueling facility that contaminates soil or a water resource.~~

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4. *Failure to perform a site inspection as required by 205.03(g) and CSGP.*

Corrective actions for ~~emergency~~*immediate* deficiencies shall be completed *as directed by the Engineer or* no later than 24 h after notification, including weekends or holidays.

(b) General BMP Deficiencies

~~General BMP~~ deficiencies shall include:

1. Failure to install, construct, or maintain BMPs as shown on the plans or the accepted SWQCP.
- ~~2. Failure to perform a site inspection as required by 205.03(g).~~
- ~~3.~~ 2. Deficiencies as listed in 205.08(c).

Corrective actions for ~~general BMP~~ deficiencies shall be completed within 48 h of notification or as directed. *Corrective action for failure to hold a pre disturbance meeting shall consist of holding the meeting on-site after earth disturbing activities have begun or BMPs have been installed.*

For unresolved ~~emergency or general~~ deficiencies, the Engineer may suspend work on the contract except for that work necessary to correct the deficiencies, for traffic maintenance, and for the protection of life and property until the deficiencies are corrected. Delays caused by these deficiencies will be considered non-excusable delays in accordance with 108.08(c).

(c) Quality Adjustments

If ~~emergency~~*immediate* deficiencies are not remedied within 24 h after written notification, ~~or the contractor may be assessed quality adjustments. If BMP deficiencies are not remedied~~ within 48 h after written notification ~~for general deficiencies~~, the Contractor may be assessed quality adjustments. When an alternate schedule is accepted by the Engineer, in accordance with 205.07, and that schedule is not met, the Contractor may be assessed quality adjustments.

In accordance with 109, the Contractor may be assessed quality adjustments of \$200 for each *BMP* deficiency per calendar day, or part thereof, that the deficiency remains uncorrected after the initial notification period. No *BMP deficiency* quality adjustments will accrue without prior written notification from the Engineer of the deficiency.

In accordance with 109, the contractor may be assessed quality adjustments of \$200 for each immediate deficiency per calendar day, or part thereof, that the deficiency remains uncorrected.

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In accordance with 107.16 and 109, the Contractor will be assessed quality adjustments of \$500 for each illicit discharge.

Permit postings will be considered deficient and subject to quality adjustments if they do not meet the requirements of the permitting agency or the requirements listed in 205.03(f).

Each contiguous 100 ft section, or portion thereof, of silt fence will be considered deficient and subject to quality adjustments if the fence material has a cut or tear exceeding 1 ft in length, or a seam has separated, or the retained sediment exceeds 1/2 of the height of the fence, or the fence is not installed as shown on the standard drawings.

Each contiguous 50 ft section, or portion thereof, of filter sock will be considered deficient and subject to quality adjustments if it is not installed and maintained in accordance with the standard drawings and the manufacturer's recommendations.

Each check dam, sediment basin, or sediment trap will be considered deficient and subject to quality adjustments if stormwater circumvents the measure, or the retained sediment exceeds 1/2 of the design volume, or they are not installed in accordance with the accepted SWQCP, as shown on the plans, or the contract site plan.

Inlet protection devices will be considered deficient and subject to quality adjustments if stormwater circumvents the measure, or they are not installed and maintained in accordance with the manufacturer's recommendations, or they do not provide a means of emergency overflow lower than the adjacent roadway, or the accumulated sediment exceeds 1/2 of the capacity of the device.

Manufactured BMPs will be considered deficient and subject to quality adjustments if stormwater circumvents the measure, or they are not installed and maintained in accordance with the manufacturer's recommendations.

Other BMPs will be considered deficient and subject to quality adjustments if they are not installed in accordance with the accepted SWQCP, as shown on the plans, the contract site plan, or they are not maintained adequately to perform their intended function.

For any specific deficiency, quality adjustments will cease accruing when that specific deficiency is corrected. Site inspection quality adjustments will cease accruing when the next acceptable inspection is performed.

205.09 Removal

BMPs shall be removed as soon as an area becomes stable. All BMPs shall be removed prior to application for the NOT. The Contractor shall remove and dispose of all excess silt accumulations, dress the area, and reestablish vegetation to all bare areas in accordance with the contract requirements. Use or disposal of the BMPs shall be as specified in the SWQCP.

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205.10 Method of Measurement

Temporary silt fence and traversable check dams will be measured by the linear foot.

Protected resource fence will be measured by the linear foot, installed and removed. Measurement will be made along the top of the fence from outside to outside of end posts for each continuous run of fence.

Protected resource signs, temporary sediment basins, standard metal end sections, and temporary inlet protection will be measured by the number of complete units installed.

Temporary revetment riprap check dams, temporary revetment riprap, temporary sediment traps, splashpads, temporary filter stone, temporary mulch, No. 2 stone for stable construction entrances, and fertilizer will be measured by the ton.

Temporary mulch stabilization, manufactured surface protection products, and temporary geotextile will be measured by the square yard.

Temporary seeding will be measured by the pound.

Removal of sediment will be measured by the cubic yard.

Temporary slope drains will be measured by the linear foot. Measurement will be made for the maximum footage in place at one time, per drain location regardless of the number of times the material is moved.

Temporary filter berms and filter sock will be measured by the linear foot complete in place. Overlapping sections of filter sock will not be measured for payment.

Revetment riprap and filter stone used in sediment basins will be measured by the ton.

Excavation for detention ponds, temporary sediment traps and temporary sediment basins will be measured as common excavation in accordance with 203.27.

Diversion interceptors type A and B, and interceptor ditches will not be measured for payment. Diversion interceptors type C will be measured by the linear foot.

Mobilization and demobilization for surface stabilization will be measured by each trip as provided in the submitted and accepted SWQCP.

Weekly inspections will be measured by the number of specified weekly inspections conducted after the ~~original~~ contract completion date.

SWQCP preparation and stormwater management implementation will not be measured for payment.

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BMPs used at the off-site locations in accordance with 205.03 and concrete washouts will not be measured for payment.

205.11 Basis of Payment

The accepted quantities of diversion interceptors type C, protected resource fence, silt fence, and traversable check dams will be paid for at the established unit price per linear foot.

Protected resource signs, temporary sediment basins, standard metal end sections, and temporary inlet protection will be paid for at the established unit price per each unit installed.

Temporary revetment riprap check dams, temporary revetment riprap, temporary sediment traps, splashpads, temporary filter stone, temporary mulch, No. 2 stone for stable construction entrances, and fertilizer will be paid for at the established unit price per ton.

Temporary mulch stabilization, manufactured surface protection products, and temporary geotextile will be paid for at the established unit price per square yard.

Temporary seeding will be paid for at the established unit price per pound.

Removal of sediment will be paid for at the established unit price per cubic yard.

Temporary slope drains, temporary filter berms, and filter sock will be paid for at the established unit price per linear foot. No additional payment will be made for any required overlapping sections of filter sock.

Revetment riprap and filter stone used in sediment basins will be paid for at the established unit price per ton.

The accepted quantities of excavation for detention ponds, temporary sediment traps, and temporary sediment basins will be paid for as common excavation in accordance with 203.28.

Mobilization and demobilization for surface stabilization will be paid for at the established unit price per each and will be made for the initial movement to the project site, and for each occurrence as specified in the submitted and accepted SWQCP, or as directed.

Weekly inspections will be paid for at the established unit price per each for inspections conducted after the ~~original~~ contract completion date. No payment will be made for inspections during the time when liquidated damages, in accordance 108.09, are assessed.

The Department will include the pay item Stormwater Management Budget, with an established dollar amount, in the proposal to pay for BMP work. This established

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amount is the Department's estimate of the total cost of the BMP work required to be performed for the contract. The established amount shown in the proposal is included in the total bid amount. The Department will pay for those items installed and listed with established prices for the quantities installed as specified in the submitted and accepted SWQCP. If the BMP work exceeds the Department's estimated amount, the additional BMPs shall be explained and submitted as a revision to the SWQCP. The additional work will be reviewed for acceptance in accordance with 104.03 except that the additional BMP work will be paid for at the pre-determined established prices shown.

The Department will pay to replace BMPs that have failed due to differing site conditions or significant changes in the character of work in accordance with 104.02, if those BMPs have been installed and maintained in accordance with the accepted SWQCP, as shown on the plans, or the contract site plan.

The Department will pay to replace BMPs that have failed after exceeding the lifespan of the BMP, as specified in the manufacturer's guidelines, if those BMPs were installed and maintained in accordance with the accepted SWQCP, as shown on the plans, or the contract site plan. Payment will be at the established prices shown in 205.11 and may occur no more than once per year.

The item SWQCP Preparation will be paid for based on the highest total number of construction phases for the contract. The highest total number of phases will be based on either the number of phases established within the original contract documents or the number of phases proposed in the SWQCP. The initial submitted and accepted SWQCP shall list the number of construction phases. Payments on the item will be made after a SWQCP phase has been reviewed and accepted. The payment of the SWQCP Preparation lump sum item will be calculated as follows:

$$\text{SWQCP payment} = P_{SA}/P_t$$

where:

P_{sa} = Total number of submitted and accepted phases of the SWQCP.

P_t = Total number of construction phases established for the contract.

After the contract site plan or the initial phase of the SWQCP has been submitted and accepted, 25% of the Stormwater Management Implementation contract bid price will be paid. The balance will be paid as the plan is implemented over the life of the contract. Stormwater Management Implementation shall include any costs beyond the established prices associated with the inspection, installation, maintenance, and removal including mobilization and demobilization of all temporary BMPs.

Items shown with an established price will be paid for at the prices shown. If any of the following items are shown in the schedule of pay items, the bid item and price will prevail over the established prices shown.

Payment will be made under:

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Pay Item	Pay Unit Symbol	Price Established
Diversion Interceptor Type C	LFT.....	\$22.50 27.00
Fertilizer.....	TON	\$775.00 800.00
Filter Sock.....	LFT.....	\$5.50 6.50
Manufactured Surface Protection Product.....	SYS	\$1.35 1.75
Mobilization and Demobilization		
for Surface Stabilization	EACH.....	\$700.00 800.00
No. 2 Stone	TON	\$30.00 50.00
Protected Resource Fence.....	LFT.....	\$2.00 2.50
Protected Resource Sign.....	EACH.....	\$80.00 96.00
Sediment, Remove	CYS	\$22.00 26.50
Splashpad.....	TON	\$60.00 70.00
Standard Metal End Section	EACH.....	\$365.00 400.00
Stormwater Management Budget.....	DOL	
Stormwater Management Implementation	LS	
SWQCP Preparation.....	LS	
Temporary Check Dam, Revetment Riprap	TON	\$65.00 75.00
Temporary Check Dam, Traversable	LFT.....	\$16.00 20.00
Temporary Filter Berm.....	LFT.....	\$16.00 20.00
Temporary Filter Stone.....	TON	\$45.00 54.00
Temporary Geotextile.....	SYS	\$2.75 3.50
Temporary Inlet Protection.....	EACH.....	\$110.00 130.00
Temporary Mulch Stabilization	SYS	\$0.30 0.40
Temporary Mulch.....	TON	\$425.00 510.00
Temporary Revetment Riprap	TON	\$60.00 70.00
Temporary Sediment Basin	EACH.....	\$3,200.00 3800.00
Temporary Sediment Trap.....	TON	\$42.50 51.00
Temporary Seed	LBS	\$2.75 3.30
Temporary Silt Fence	LFT.....	\$2.15 2.75
Temporary Slope Drain.....	LFT.....	\$21.50 25.00
Weekly Inspection.....	EACH.....	\$425.00 510.00

The cost for revisions or amendments to permits required due to the Contractor's means and methods shall be included in the cost of SWQCP Preparation.

The cost for any future revisions to the SWQCP due to the Contractor's means and methods shall be included in the cost of SWQCP Preparation.

The costs for trenching, backfilling, posts, fencing, and all necessary incidentals shall be included in the cost of temporary silt fence.

The costs for protected resource fence shall include all materials, placement, removal, maintenance, and all necessary incidentals.

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The costs for protected resource signs shall include all materials, placement, removal, maintenance, and all necessary incidentals.

The cost for stakes, trenching, backfilling, posts, and all necessary incidentals shall be included in the cost of temporary check dams, traversable.

The payment for temporary sediment basin shall include all costs involved with construction of the basin except for excavation, revetment riprap, and filter stone.

The payment for temporary sediment trap shall include all costs involved with construction of the trap except for excavation.

Temporary entrances utilized by the Contractor for borrow and waste areas will not be paid for directly.

The costs for diversion interceptor types A and B and interceptor ditches shall be included in the cost of other earth moving items.

The cost for anchors and all incidentals necessary to perform the work shall be included in the cost of temporary slope drains.

The costs of materials, installation, inspection, maintenance, and removal of BMPs at off-site locations designated in 205.03 will not be measured for payment.

The payment for BMPs specified herein shall include materials, installation, maintenance, removal and proper disposal.

The costs associated with sediment removal due to BMP maintenance shall be included in the cost of sediment removal.

The costs associated with the replacement of temporary filter stone due to BMP maintenance will be paid for as temporary filter stone.

The costs of constructing, maintaining, and removal of the construction entrance, other than those constructed by the Contractor for borrow and waste sites, shall be included in No. 2 stone. No direct payment will be made for construction entrances for borrow and waste sites.

The costs associated with concrete washout will not be paid for directly but shall be included in the costs of other concrete pay items.

All costs associated with the weekly and *pre and* post-event inspections, including inspections required by regulatory agencies, and all other inspections conducted prior to the ~~original~~ contract completion date, shall be included in the cost of Stormwater Management Implementation.

COMMENTS AND ACTION

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DISCUSSION:

	<u>Action:</u>
Motion:	
Second:	<input type="checkbox"/> Passed as Submitted
Ayes:	<input type="checkbox"/> Passed as Revised
Nays:	<input type="checkbox"/> Withdrawn
FHWA Approval:	
2022 Standard Specifications Sections referenced and/or affected: 205 begin pg. 191.	<input type="checkbox"/> 2024 Standard Specifications <input type="checkbox"/> Revise Pay Items List
Recurring Special Provisions or Plan Details: NONE	<input type="checkbox"/> Create RSP (No. __) Effective:
Standard Drawing affected: NONE	<input type="checkbox"/> Revise RSP (No. __) Effective:
Design Manual Sections affected: NONE	<input type="checkbox"/> Standard Drawing Effective:
GIFE Sections cross-references: NONE	<input type="checkbox"/> Create RPD (No. __) Effective:
	<input type="checkbox"/> GIFE Update
	<input type="checkbox"/> Frequency Manual Update
	<input type="checkbox"/> SiteManager Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: As part of the 205 update for the Construction Stormwater General Permit the definition of Wastewater needs to be added, a requirement to not allow an illicit discharge into waterways needs to be added and add some general requirements for the site plan requirements of 108.

PROPOSED SOLUTION: Make the attached revisions to 101, 107 and 108.

APPLICABLE STANDARD SPECIFICATIONS: 101.11, 101.75, 107.16 and 108.04

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: None

APPLICABLE SECTION OF GIFE: None

APPLICABLE RECURRING SPECIAL PROVISIONS: None

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Working Group comprised of: Tom Harris, Greg Couch, Cam Maschino, Jen Napier, Reed Hathaway, Sara Lamkin, Patrick Patterson, Subhi Bazlamit,

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE: All Contracts

IMPACT ANALYSIS (attach report): Yes

Submitted By: Joe Novak

Title: State Construction Engineer

Organization: INDOT

email: jnovak@indot.in.gov

Date: 12/29/22

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? No

Will approval of this item affect the Approved Materials List? No

Will this proposal improve:

Construction costs? No

Construction time? No

Customer satisfaction? No

Congestion/travel time? No

Ride quality? No

Will this proposal reduce operational costs or maintenance effort? No

Will this item improve safety:

For motorists? No

For construction workers? No

Will this proposal improve quality for:

Construction procedures/processes? Yes

Asset preservation? No

Design process? No

Will this change provide the contractor more flexibility? Yes

Will this proposal provide clarification for the Contractor and field personnel? Yes

Can this item improve/reduce the number of potential change orders? Yes

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

Is this item editorial? No

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda:

REVISION TO 2022 STANDARD SPECIFICATIONS

DIVISION 100 – GENERAL PROVISIONS

SECTION 101 – DEFINITIONS AND TERMS

101.11 Concrete Wastewater

101.75 Wastewater

SECTION 107 – LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

SECTION 108 – PROSECUTION AND PROGRESS

108.04 Prosecution of the Work

(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 101, BEGIN LINE 199, DELETE AND INSERT AS FOLLOWS:

101.11 Concrete Wastewater

~~Blank
Wastewater associated with liquid waste from concrete, grout, mortar, stucco, and other similar construction materials resulting from concrete washout, hydrodemolition, saw cutting, coring, or dewatering operations contaminated by concrete pours or similar activities.~~

SECTION 101, BEGIN LINE 535, DELETE AND INSERT AS FOLLOWS:

101.75 Wastewater

Water containing waste residue from paint, form release oils, curing compounds and other construction debris, as well as soaps, detergents or solvents used in vehicle, equipment and structure washing, or other material defined as illicit discharge in accordance with ~~327 IAC 15-13-5(28)~~ *the Indiana Municipal Storm Sewer General Permit (MS4GP) including untreated sediment-laden stormwater and wastewater associated with liquid waste from concrete, grout, mortar, stucco, and other similar construction materials resulting from concrete washout, hydrodemolition, saw cutting, coring, or dewatering operations contaminated by concrete pours or similar activities.*

SECTION 107, AFTER LINE 545, INSERT AS FOLLOWS:

107.16 Illicit Discharge

The Contractor shall not discharge wastewater, soap, detergent, solvents, fuel, oil, or other pollutants into a drainage structure, jurisdictional waterway, or similar environmental resource. Cationic polymers shall not be used. Quality adjustments will be assessed in accordance with 109 and 205. << if approved, sections 107.16 through 107.25 will be renumbered sequentially >>

SECTION 108, BEGIN LINE 125, DELETE AND INSERT AS FOLLOWS:

For those contracts not requiring waterway permits, or a Construction Stormwater General Permit, ~~or a 327 IAC 15-5 permit,~~ the Contractor shall submit a written site plan to the Engineer describing the following:

1. A description of the contract site.
2. The locations of all equipment storage areas, *staging areas*, fueling locations, construction trailers, batch plants, and designated concrete truck washout locations.

REVISION TO 2022 STANDARD SPECIFICATIONS

DIVISION 100 – GENERAL PROVISIONS

SECTION 101 – DEFINITIONS AND TERMS

101.11 Concrete Wastewater

101.75 Wastewater

SECTION 107 – LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

SECTION 108 – PROSECUTION AND PROGRESS

108.04 Prosecution of the Work

3. A material handling and spill prevention plan for *sanitation facilities and fueling and concrete washout locations.*

Based on changes in scope, in accordance with 104.02 and 104.03, the Engineer may request a cost breakdown of the stormwater management implementation item, when the item exists within the contract.

The site plan shall be submitted for acceptance seven calendar days prior to the start of any construction activity. Construction activities shall not begin until the written site plan has been approved by the Engineer.

The cost of preparation of the site plan described above shall be included in the cost of other items of the contract. The cost of the stormwater management implementation *item* of the site plan will be paid for in accordance with 205.11.

For contracts not requiring waterway permits but having a Stormwater Management Budget, the Contractor shall locate, install, maintain and remove temporary stormwater, sediment, and erosion control BMPs, for land-disturbing activity areas in accordance with 205. An SWQCP will not be required for these contracts.

For contracts requiring ~~waterway permits~~, a ~~Construction Stormwater General Permit~~ *CSGP*, ~~or a 327 IAC 15-5 permit~~, an SWQCP shall be developed and submitted to the Engineer for review, in accordance with 205.03.

For contracts requiring waterway permits and no CSGP a written site plan shall be developed and submitted to the Engineer for review, in accordance with this section.

Borrow and disposal sites shall be in accordance with 203.08. When required by a ~~Construction Stormwater General Permit~~ *CSGP* ~~or 327 IAC 15-5~~, stockpile and storage sites shall have their own permit. The Contractor shall submit an NOS to the Engineer prior to the beginning of operations at those locations. An NOI with an IDEM time stamp 48 h prior to the beginning of operations at these locations shall also meet these requirements.

COMMENTS AND ACTION

- 101.11 Concrete Wastewater
- 101.75 Wastewater
- 107.16 Illicit Discharge
- 108.04 Prosecution of the Work

DISCUSSION:

<p>Motion:</p> <p>Second:</p> <p>Ayes:</p> <p>Nays:</p> <p>FHWA Approval:</p>	<p>Action:</p> <p>— Passed as Submitted</p> <p>— Passed as Revised</p> <p>— Withdrawn</p>
<p>2022 Standard Specifications Sections referenced and/or affected: 101.11 pg. 5; 101.75 pg. 12; 108.04 pg. 85.</p> <p>Recurring Special Provisions or Plan Details: NONE</p> <p>Standard Drawing affected: NONE</p> <p>Design Manual Sections affected: NONE</p> <p>GIFE Sections cross-references: NONE</p>	<p>— 2024 Standard Specifications</p> <p>— Revise Pay Items List</p> <p>— Create RSP (No. __)</p> <p>— Effective:</p> <p>— Revise RSP (No. __)</p> <p>— Effective:</p> <p>— Standard Drawing</p> <p>— Effective:</p> <p>— Create RPD (No. __)</p> <p>— Effective:</p> <p>— GIFE Update</p> <p>— Frequency Manual Update</p> <p>— SiteManager Update</p>

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Currently when a contract has any 205 item the full requirements of 205 go into effect including the QCP, the implementation item, weekly inspections and documentation of the inspections. This has the effect of requiring additional work and expenses that are not necessary.

PROPOSED SOLUTION: This proposal will replace the existing 205 section with a reduced version that requires the contractor to only do the work required by waterway permits.

APPLICABLE STANDARD SPECIFICATIONS: 205

APPLICABLE STANDARD DRAWINGS: None

APPLICABLE DESIGN MANUAL SECTION: 14-2, 17-6.0 Design Memorandum 20-05

APPLICABLE SECTION OF GIFE: 3.1 through 3.1.4

APPLICABLE RECURRING SPECIAL PROVISIONS: None

PAY ITEMS AFFECTED: This will require the pay item, “*Temporary Stormwater BMP ...LS*” to be added to the pay item menu.

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Working Group of Tom Harris, Patrick Patterson, Cam Maschino, Jen Napier, Sara Lamkin, Reed Hathaway, Subhi Bazlamit.

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE:
“Contracts with a 205 item that do not have a CSGP.”

IMPACT ANALYSIS (attach report): Yes

Submitted By: Joe Novak

Title: State Construction Engineer

Division: Construction Management

E-mail: jnovak@indot.in.gov

Date: 12/29/22

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? No

Will approval of this item affect the Qualified Products List (QPL)? No

Will this proposal improve:

Construction costs? Yes

Construction time? No

Customer satisfaction? No

Congestion/travel time? No

Ride quality? No

Will this proposal reduce operational costs or maintenance effort? Yes

Will this item improve safety:

For motorists? No

For construction workers? No

Will this proposal improve quality for:

Construction procedures/processes? Yes

Asset preservation? No

Design process? No

Will this change provide the contractor more flexibility? Yes

Will this proposal provide clarification for the Contractor and field personnel? Yes

Can this item improve/reduce the number of potential change orders? No

Is this proposal needed for compliance with:

Federal or State regulations? Yes

AASHTO or other design code? No

Is this item editorial? No

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda:

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 205 – TEMPORARY EROSION AND SEDIMENT CONTROL (proposed draft)

The Standard Specifications are revised as follows:

SECTION 205, DELETE LINES 1 THROUGH 991.

SECTION 205, BEGIN LINE 1, INSERT AS FOLLOWS:

SECTION 205 – TEMPORARY EROSION AND SEDIMENT CONTROL

205.01 Description

This work shall consist of furnishing, installing, maintaining, and removing temporary erosion and sediment control measures in accordance with 105.03.

MATERIALS

205.02 Materials

Materials shall be in accordance with the following:

<i>Coarse Aggregate, Class F or Higher.....</i>	<i>904</i>
<i>Fertilizer</i>	<i>914.03</i>
<i>Filter Sock.....</i>	<i>914.09(h)</i>
<i>Geotextile.....</i>	<i>918</i>
<i>Grass Seed, Temporary</i>	<i>914.02</i>
<i>Manufactured Surface Protection Products</i>	<i>205.04(c)</i>
<i>Mulch.....</i>	<i>914.05(a)</i>
<i>Pipe Drains.....</i>	<i>715.02(d)</i>
<i>Plastic Net.....</i>	<i>914.09(g)</i>
<i>Revetment Riprap.....</i>	<i>904*</i>
<i>Stakes.....</i>	<i>914.09(b)</i>
<i>Top Soil.....</i>	<i>914.01</i>

**Minimum depth does not apply*

CONSTRUCTION REQUIREMENTS

205.03 General Requirements

The installation of temporary erosion and sediment control measures shall be in accordance with 105.05. Temporary erosion control measures shall be placed as soon as practicable and prior to land-disturbing activities. The contractor shall monitor the condition of the BMPs in accordance with the permit requirements and conduct maintenance as required when deficiencies are discovered. Inspections will be conducted by the Engineer. Perimeter protection and sediment traps shall be installed prior to beginning earth disturbing activities. Pipe end sections and anchors shall be installed when the structure is installed. If the pipe end sections or anchors cannot be placed at the same time, temporary riprap splashpads shall be placed at the outlets of the pipes until end sections or anchors can be installed.

The Contractor shall designate one person as the contract SWQM. The name and credentials of the SWQM shall be furnished to the Engineer at the pre-construction

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 205 – TEMPORARY EROSION AND SEDIMENT CONTROL (proposed draft)

conference. The Contractor's designated individual shall be responsible for the installation, maintenance and removal of the erosion and sediment control measures. If the designated individual is replaced during the contract, the replacement shall be designated, and notification given to the Engineer within 24 h. On contracts requiring waterway permits the SWQM shall have successfully completed the Department's Construction Stormwater Training course and hold a current training verification document for that course.

Adjustments of the erosion and sediment control measures shall be subject to the Engineer's approval.

The Contractor shall provide a stable construction entrance at the points where construction traffic will enter onto an existing road. Where there is insufficient space for a stable construction entrance, other measures shall be taken to prevent the tracking of sediment onto the pavement.

Sediment discharged or tracked onto roadways that are open to traffic shall be removed as directed by a regulatory authority or at a minimum, removed by the end of the same day. Clearing of sediment shall not include the utilization of mechanical methods that will result in mobilization of dust off the project site. Cleared sediment shall be redistributed or disposed of in a manner that is in accordance with all applicable statutes and regulations.

Temporary entrances utilized by the Contractor for borrow and waste areas will not be paid for directly. These temporary entrances shall be the responsibility of the Contractor to completely install, maintain, and remove.

The Contractor shall provide concrete washout facilities of adequate capacity in accordance with project requirements. The concrete washout shall be located as far from surface waters as practical and shall be able to contain all liquid and solid material from concrete truck or mixer washing operations without contacting or contaminating the ground.

The Contractor shall employ dust control measures in accordance with 107.08.

If a governmental agency or a local governmental authority finds a violation of NPDES or other surface waterway permits provided in the contract documents, or if any BMPs are incomplete, full responsibility shall be borne by the Contractor to make the necessary corrections. In addition, if an assessment, damage judgment or finding, agreed order, fine, or any other expense for a violation of the contract requirements is leveled against the Department, the Contractor shall reimburse the State for that amount within 30 days. The Contractor agrees to indemnify and hold harmless the Department and will reimburse the Department for any assessments, damage judgments or finding, fine, penalty, or other expense relating to this portion of the contract. The Department may withhold the amount owed from the Contractor's subsequent pay estimates. Delays caused by stop work orders from regulatory agencies, suspension of work orders from the

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 205 – TEMPORARY EROSION AND SEDIMENT CONTROL (proposed draft)

Department, or any other delays caused by inadequate submittals or implementation will be considered Non-Excusable Delays in accordance with 108.08(c).

205.04 Temporary Surface Stabilization

Non-vegetated areas shall be temporarily stabilized if the area remains inactive for more than seven days. The area will be considered inactive when no meaningful work toward accomplishing a pay item has been performed at a site of land-disturbing activity.

(a) Seed

Temporary seeding shall be placed on disturbed areas that are expected to be inactive for more than seven days, or as agreed to by the Contractor and the Engineer. Seed shall be placed either by drilling in, spraying in a water mixture, or by use of a mechanical method which places the seed in direct contact with the soil. Where inaccessible to mechanical equipment, or where the area to be seeded is small, a hand operated cyclone seeder or other approved equipment may be used. Seed shall not be covered more than 1/2 in. Seed shall be distributed utilizing approved methods which allow for even distribution of the seed. If as a result of a rain event, the prepared seed bed becomes rutted, crusted or eroded, or depressions exist, the soil shall be reworked until it is smooth. Reworked areas shall be re-seeded. All seeded areas shall be mulched within 24 h after seeding.

Temporary seed shall be used for surface stabilization and temporary ground cover. Temporary cover mixtures shall be placed and be subject to seasonal limitations as defined herein. This mixture is not intended to be used as a permanent seed mixture. This mixture shall not be used to satisfy the requirements of the warranty bond. The mix shall be spray mulched where the slope is steeper than 3:1. From June 16 through August 31, mulching alone shall be used to stabilize the soil.

1. Spring Mix

Spring mix shall be used from January 1 through June 15. This mixture shall be applied at the rate of 150 lb/ac. The mix shall consist of oats.

2. Fall Mix

Fall mix shall be used from September 1 through December 31. This mixture shall be applied at the rate of 150 lb/ac. This mix shall consist of winter wheat.

Unless otherwise specified, fertilizer shall be spread uniformly over the area to be seeded and shall be applied at 1/2 the rate shown in 621.05(a). Fertilizer shall only be applied during the active growing season March through November.

(b) Mulch

Mulch shall be applied uniformly in a continuous blanket at the rate of 2.5 t/ac. If areas are seeded, mulch shall be placed within 24 h after seeding. The percent of moisture in the mulch shall be determined in accordance with 621.14(c). Mulch shall be placed in accordance with one of the following types or as directed.

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 205 – TEMPORARY EROSION AND SEDIMENT CONTROL (proposed draft)

On a slope flatter than 3:1, or where specified, type A shall be used. On a slope of 3:1 or steeper but flatter than 2:1, or where specified, type B or type C may be used. On a slope of 2:1 or steeper, or where specified, a manufactured surface protection product, in accordance with 205.04(c), shall be used.

1. Type A

Mulch shall be punched into the soil so that it is partially covered. The punching operation shall be performed parallel to the contour of the slope. The tools used for punching purposes shall be disks that are notched and have a minimum diameter of 16 in. The disks shall be flat or uncupped. Disks shall be placed a minimum of 8 in. apart. Shaft or axle sections of disks shall not exceed 8 ft in length.

The disk for punching shall be constructed so that weight may be added or hydraulic force may be used to push puncher into the ground. An even distribution of mulch shall be incorporated into the soil.

2. Type B

The mulch shall be held in place by means of commercially produced water borne mulch binder product. The product shall be manufactured and used in accordance with all applicable State and Federal regulations and shall be applied in accordance with the manufacturer's written instructions. A copy of the written instructions shall be supplied to the Engineer prior to the seeding work. The product shall include a coverage indicator to facilitate visual inspection for evenness of application. If the mulch fails to stay in place, the Contractor shall repair all damaged areas.

3. Type C

The mulch shall be held in place with a polymeric plastic net. The plastic net shall be unrolled such that it lays out flat, evenly, and smoothly, without stretching the material. The plastic net shall be held in place by means of staples. The staples shall be driven at a 90° angle to the plane of the soil slope. Staples shall be spaced not more than 4 ft apart with rows alternately spaced. The plastic net shall be secured along the top and bottom of the soil slope with staples spaced not more than 1 ft on center. The ends and edges of the plastic net shall be overlapped approximately 4 in. and stapled. Overlaps running parallel to the slope shall be stapled 1 ft on center and overlaps running perpendicular to the slope shall be stapled at least 3 ft on center. The plastic net shall be placed with the length running from top of slope to toe of slope, or the plastic net shall be placed with the length running horizontally or parallel to the contour.

(c) Manufactured Surface Protection Products

Prior to placing a manufactured surface protection product, the area to be covered shall be free of all rocks or clods of over 1 1/2 in. in diameter, and all sticks or other foreign material, which prevent the close contact of the blanket with the seed bed.

After the area has been properly shaped, fertilized, and seeded, the manufactured surface protection product shall be laid out flat, evenly, and smoothly, without stretching the material.

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 205 – TEMPORARY EROSION AND SEDIMENT CONTROL (proposed draft)

Manufactured surface protection products may be used for covering an area that has not been seeded. Geotextile soil cover shall not be used to cover seeded areas.

1. Excelsior Blanket

An excelsior blanket may be used as mulch for seeding where seeding is specified or where erosion control blanket is specified. Excelsior blankets shall be placed within 24 h after seeding operations have been completed. Excelsior blankets shall be installed in accordance with the manufacturer's recommendations.

2. Straw Blanket

A straw blanket may be used as mulch for seeding where mulched seeding is specified or where erosion control blanket is specified. Straw blankets shall be placed within 24 h after seeding. The straw blanket shall be unrolled over the designated area so that the plastic mesh is on top and the straw fibers are snugly and uniformly in contact with the soil surface. The rolls shall be butted together and stapled in place. The staples shall be driven through the blanket at a 90° angle to the plane of the ground surface. Each staple shall anchor the plastic mesh. The staples shall be spaced in accordance with the manufacturer's recommendations.

For placement on a slope, the straw blankets shall be placed with the length running from the top of slope to the toe of slope and shall extend a minimum of 3 ft over the crown of the slope. The blanket shall be stapled in accordance with the manufacturer's recommendations.

For placement in ditch lines, the straw blanket shall be unrolled parallel to the centerline of the ditch. The blanket shall be placed so that there are no longitudinal seams within 24 in. of the bottom centerline of the ditch. In a ditch line, the blanket shall be stapled in accordance with the manufacturer's recommendations with a minimum of six staples across the upstream end of each roll.

3. Rolled Erosion Control Products

The Contractor shall use degradable RECPs including netting, open weave textile, and erosion control blankets.

Seed shall be applied in accordance with 621 unless soil infilling is required.

If soil infilling is required, RECP shall be first installed and then seed applied and brushed or raked 1/4 to 3/4 in. of topsoil into voids in the RECP filling the full product thickness. Staples of at least 6 in. in length shall be used to secure the RECP. The RECP shall be unrolled parallel to the primary direction of flow and placed in direct contact with the soil surface. The RECP shall not bridge over surface inconsistencies. Edges of adjacent RECP shall be overlapped by 2 to 4 in. Staples shall be placed to prevent seam separation in accordance with the manufacturer's recommendations.

4. Geotextile

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SECTION 205 – TEMPORARY EROSION AND SEDIMENT CONTROL (proposed draft)

Disturbed soil shall be covered with geotextile. The covering shall be placed over the exposed soil in a shingle like fashion with a 2 ft minimum overlap covering all loose or disturbed soil. The geotextile, if new, shall be in accordance with 918.02. The geotextile used for soil covering need not be new but shall not have holes or unrepaired rips or tears. All repairs shall be made in accordance with the manufacturer's recommendation.

205.05 Concentrated Flow Protection

(a) Check Dam

Check dams shall be constructed as shown on the plans. Geotextile for check dams shall be in accordance with 616 unless otherwise specified. Temporary revetment riprap shall be in accordance with 616. No. 5 and No. 8 filter stone shall be in accordance with 904.

(b) Check Dam, Traversable

Traversable check dams shall be composed of 8 in. minimum diameter socks filled with straw, ground wood chips, shredded bark, or other approved material for site specific conditions. Rolls and socks may be stacked in a triangle pattern as shown on the plans. Check dams shall be staked as shown on the plans or as specified by the manufacturer.

(c) Diversion Interceptors

Grading for diversion interceptors shall be in accordance with 203 with the exception that compaction requirements will not apply. The Contractor shall identify the construction areas which shall utilize diversion type A or B. Slope drains shall be provided at the low points of the diversion interceptor. Perimeter diversion, type C shall be installed prior to earth moving activities and shall be immediately stabilized. Type A or B shall be stabilized if anticipated to be left in place for more than seven calendar days.

(d) Sediment Traps

Sediment traps shall be constructed with revetment riprap, filter stone and geotextile.

(e) Sediment Basins

Embankment construction shall be in accordance with 203. Temporary revetment riprap used for overflow protection shall be in accordance with 904. Sediment basins shall be constructed as shown on the plans. Sediment basins shall be designed to provide a minimum storage volume to contain the runoff from a 10 year 24 h storm event. Water shall be withdrawn from the top of the water column. Basin slopes shall be stabilized upon achieving design grades. Outfalls shall be stabilized within 24 h of installation of the basin outlet.

(f) Slope Drains

Slope drain pipes shall be lengthened as required.

(g) Vegetative Filter Strips

Designated vegetative filter strips shall not be disturbed. Rills that form shall be

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 205 – TEMPORARY EROSION AND SEDIMENT CONTROL (proposed draft)

repaired. Fertilizer shall be applied as directed.

(h) Splashpads

Splashpads shall be constructed using revetment riprap on geotextile, or other approved material for site specific conditions and shall be sized to prevent erosion or scour.

(i) Inlet Protection

All inlets shall have sediment control measures installed when the drainage area contributing to the inlet is affected by land-disturbing activity, adjacent to hauling operations, adjacent to disturbed areas, or as directed. A copy of the current manufacturer's installation and maintenance recommendations shall be provided prior to installation of manufactured inlet protection in accordance with 205.03(e). All inlet protection devices shall provide a means of emergency overflow. Geotextile wrapped under or over a grate shall not be used.

205.06 Perimeter and Resource Protection***(a) Silt Fence***

Shipping, handling and storage shall be in accordance with the manufacturer's recommendations. Silt fence material shall be in accordance with 918.02(d). The silt fence material will be rejected if it has defects, tears, punctures, flaws, deterioration, or damage incurred during manufacture, transportation, storage, or installation. Each roll shall be labeled or tagged to provide product identification.

Joints shall be made from the ends of each section of fence wrapped around a wood stake and joined together or other method recommended by the manufacturer. Copies of all current manufacturer manuals shall be provided prior to installation. Silt fence shall not be used in conveyance channels, areas prone to flooding, or areas of concentrated flow.

(b) Filter Sock

Filter sock shall be installed, secured and overlapped in accordance with the standard drawings. The manufacturer's specifications for installation may be substituted with the approval of the Engineer. Filter sock shall be in accordance with 914.09 (h).

(c) Filter Berm

Filter berms shall be constructed of filter sock, or a combination of riprap or No. 5 and No. 8 filter stone.

(d) Protected Resource Fence

Protected resource fence shall be a commercially available material marketed as snow fencing, have a minimum height of 4 ft and be made of high density polyethylene. All protected resource fence shall be orange in color. Protected resource fence shall be installed using T-posts spaced no more than 10 ft apart and secured with plastic fence ties. Pull posts and corner posts will not be required. T-posts shall be buried to 1/3 of their

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SECTION 205 – TEMPORARY EROSION AND SEDIMENT CONTROL (proposed draft)

height.

(e) Protected Resource Signs

Within areas prone to flooding, or concentrated flow “Do Not Disturb” signs in accordance with 622.20 may be accepted in lieu of fencing, if requested and accepted in writing prior to installation. If “Do Not Disturb” signs are used in lieu of fencing, they shall be spaced at a distance of 25 ft apart to delineate the entire length of concern. At a minimum, two signs shall be used.

205.07 Maintenance

BMPs shall be inspected in accordance with waterway permit requirements. If conditions do not allow the Contractor access to the location of the BMPs using normal equipment and maintenance, the Contractor shall submit to the Engineer an acceptable written alternate schedule, within 48 h, to bring the BMPs back into compliance.

(a) Filter Sock

Accumulated sediment shall be removed once it reaches 1/2 of the height of the filter sock when used for perimeter protection and 1/3 the height when used for inlet protection. The filter sock shall be inspected to ensure that it is holding its shape and allowing adequate flow. Eroded and damaged areas shall be repaired.

(b) Silt Fence

If the fence fabric tears, starts to decompose, or becomes ineffective, the affected portion shall be replaced. Deposited sediment shall be removed once it reaches 1/3 the height of the fence at its lowest point. Once the contributing drainage area has been stabilized, the Contractor shall remove the fence and sediment deposits, grade the site to blend with the surrounding area, and stabilize the graded area.

(c) Filter Berm

Accumulated sediment shall be removed once it reaches 1/4 of the height of the filter berm. The filter berm shall be inspected to ensure that it is holding its shape and allowing adequate flow. Eroded and damaged areas shall be repaired.

(d) Inlet Protection

Accumulated sediment shall be removed once identified and after each storm event. Flushing with water will not be allowed. The sediment shall not be allowed to re-enter the paved area or storm drains. Manufactured inlet protection shall be maintained in accordance with the manufacturer’s recommendations.

(e) Check Dams

Sediment shall be removed once it reaches 1/2 the height of the check dam. Sediment shall be removed and disposed of in accordance with 201.03 and 203.08. The Contractor shall rebuild or repair each damaged check dam to maintain the design height, cross section, and control function.

(f) Sediment Traps

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SECTION 205 – TEMPORARY EROSION AND SEDIMENT CONTROL (proposed draft)

Following each rain event, the Contractor shall repair slope erosion and piping holes as required. Sediment shall be removed once it has accumulated to 1/2 design volume. The Contractor shall replace the coarse aggregate filter stone if the sediment pool does not drain within 72 h following a rain event.

(g) Sediment Basin

Sediment shall be removed once it has accumulated to 1/2 the design volume. The filter stone around the riser pipe shall be replaced if the sediment pool does not drain within 72 h following a rain event.

(h) Concrete Washout

The containment system shall be inspected for leaks, spills, and tears, and shall be repaired or replaced as necessary. The Contractor shall ensure that each containment system maintains adequate capacity. Solidified waste concrete shall be disposed of in accordance with 202.

(i) Protected Resource Fence

Protected resource fence shall be maintained in an upright position with no tears or missing sections.

(j) Protected Resource Signs

Protected resource signs and posts shall be maintained in an upright and legible condition.

205.08 Stormwater BMP Deficiencies

If the Engineer documents deficient BMPs at any time during a contract, including the time during seasonal suspension, written notification of the deficiency will be provided to the Contractor.

(a) Deficiencies

Deficiencies include:

- 1. Discharge of wastewater or concrete washout water into a drainage structure, jurisdictional waterway, or similar environmental resource.*
- 2. Failure to comply with the conditions and commitments of the contract waterway permits and regulations.*
- 3. Leakage from a fueling facility that contaminates soil or a water resource.*
- 4. Failure to install, construct, or maintain BMPs as shown on the plans or permits.*
- 5. Deficiencies as listed in 205.08(b).*

REVISION TO 2022 STANDARD SPECIFICATIONS

SECTION 205 – TEMPORARY EROSION AND SEDIMENT CONTROL (proposed draft)

Corrective actions for deficiencies shall be completed no later than 24 h after notification, including weekends or holidays.

For unresolved deficiencies, the Engineer may suspend work on the contract except for that work necessary to correct the deficiencies, for traffic maintenance, and for the protection of life and property until the deficiencies are corrected. Delays caused by these deficiencies will be considered non-excusable delays in accordance with 108.08(c).

(b) Quality Adjustments

If deficiencies are not remedied within 24 h after written notification the Contractor may be assessed quality adjustments. When an alternate schedule is accepted by the Engineer, in accordance with 205.07, and that schedule is not met, the Contractor may be assessed quality adjustments.

In accordance with 109, the Contractor may be assessed quality adjustments of \$200 for each deficiency per calendar day, or part thereof, that the deficiency remains uncorrected after the initial notification period. No quality adjustments will accrue without prior written notification from the Engineer of the deficiency.

Permit postings will be considered deficient and subject to quality adjustments if they do not meet the requirements of the permitting agency.

Each contiguous 100 ft section, or portion thereof, of silt fence will be considered deficient and subject to quality adjustments if the fence material has a cut or tear exceeding 1 ft in length, or a seam has separated, or the retained sediment exceeds 1/2 of the height of the fence, or the fence is not installed as shown on the standard drawings.

Each contiguous 50 ft section, or portion thereof, of filter sock will be considered deficient and subject to quality adjustments if it is not installed and maintained in accordance with the standard drawings and the manufacturer's recommendations.

Each check dam, sediment basin, or sediment trap will be considered deficient and subject to quality adjustments if stormwater circumvents the measure, or the retained sediment exceeds 1/2 of the design volume, or they are not installed as shown on the plans, or the contract site plan.

Inlet protection devices will be considered deficient and subject to quality adjustments if stormwater circumvents the measure, or they are not installed and maintained in accordance with the manufacturer's recommendations, or they do not provide a means of emergency overflow lower than the adjacent roadway, or the accumulated sediment exceeds 1/2 of the capacity of the device.

Manufactured BMPs will be considered deficient and subject to quality adjustments if stormwater circumvents the measure, or they are not installed and maintained in accordance with the manufacturer's recommendations.

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Other BMPs will be considered deficient and subject to quality adjustments if they are not installed as shown on the plans, the contract site plan, or they are not maintained adequately to perform their intended function.

For any specific deficiency, quality adjustments will cease accruing when that specific deficiency is corrected.

205.09 Removal

BMPs shall remain in place until all permit conditions have been met or removed as directed by the Engineer. The Contractor shall remove and dispose of all excess silt accumulations, dress the area, and reestablish vegetation to all bare areas in accordance with the contract requirements.

205.10 Method of Measurement

BMPs installed in accordance with this section will not be measured for payment. Any items included in the schedule of pay items will be measured in accordance with the associated unit.

Excavation for detention and retention ponds will be measured as common excavation in accordance with 203.27. Retention pond liners will not be measured for payment.

205.11 Basis of Payment

Payment will be made at the contract lump sum price for BMPs. The bid price shall include all costs for installation, monitoring the condition, maintenance and removal of all BMPs shown in the contract documents. Any additional BMPs installed beyond those shown will be paid in accordance with 109.05.

The accepted quantities of excavation for detention or retention ponds will be paid for as common excavation in accordance with 203.28. The cost of retention pond liners shall be included in the lump sum.

Payment will be made under:

Pay Item

Pay Unit Symbol

Temporary Stormwater BMP LS

The cost of materials, installation, inspection, maintenance, and removal of temporary erosion and sediment control measures at off-site locations designated in 205.03 will not be measured for payment.

The cost of materials, removal of sediment, installation, maintenance, and removal of temporary erosion and sediment control items shall be included in the lump sum item.

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The cost of constructing, maintaining, and removal of all construction entrances shall be included in the lump sum item. No direct payment will be made for construction entrances for borrow and waste sites.

Costs associated with concrete washout shall be included in the costs of the concrete pay items.

Costs associated with filter stone replacement due to maintenance and sediment removal shall be included in the lump sum.

AGENDA

COMMENTS AND ACTION

SECTION 205 – TEMPORARY EROSION AND SEDIMENT CONTROL

DISCUSSION:

	<u>Action:</u>
Motion: Second: Ayes: Nays: FHWA Approval:	<input type="checkbox"/> Passed as Submitted <input type="checkbox"/> Passed as Revised <input type="checkbox"/> Withdrawn
2022 Standard Specifications Sections referenced and/or affected: 205 pg. 191 – 212.	<input type="checkbox"/> 2024 Standard Specifications <input type="checkbox"/> Revise Pay Items List
Recurring Special Provisions or Plan Details: NONE	<input type="checkbox"/> Create RSP (No. __) <input type="checkbox"/> Effective:
Standard Drawing affected: NONE	<input type="checkbox"/> Revise RSP (No. __) <input type="checkbox"/> Effective:
Design Manual Sections affected: 14-2, 17-6.0 Design Memorandum 20-05	<input type="checkbox"/> Standard Drawing <input type="checkbox"/> Effective:
GIFE Sections cross-references: 3.1 through 3.1.4	<input type="checkbox"/> Create RPD (No. __) <input type="checkbox"/> Effective: <input type="checkbox"/> GIFE Update <input type="checkbox"/> Frequency Manual Update <input type="checkbox"/> SiteManager Update