INDIANA DEPARTMENT OF TRANSPORTATION

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Eric Holcomb, Governor
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FINAL DRAFT MINUTES

January 16, 2020 Standards Committee Meeting

(Changes to the Agenda and First Draft Minutes by the Action of the Committee shown as highlighted in yellow)

FINAL DRAFT MINUTES

February 10, 2020

TO: Standards Committee

FROM: Scott Trammell, Secretary

RE: Minutes from the January 16, 2020 Standards Committee Meeting

The Standards Committee meeting was called to order by Mr. Novak, sitting in as proxy for Mr. Pankow, Chair, at 09:01 a.m. on January 16, 2020 in the N955 Bay Window Conference Room. The meeting was adjourned at 11:18 a.m.

The following committee members were in attendance:

Joseph Novak*, Chairman, Director, Construction Management
Michael Beuchel, Contract Administration Division
Dave Boruff, Traffic Engineering
Elizabeth Phillips**, Bridge Design Division
James Culbertson***, Construction Management
Kumar Dave, Pavement Engineering, Highway Design
Jim Reilman, Materials Management
Michael Koch, District Construction, Fort Wayne District
Elena Veksler, Highway Design and Technical Support
Kurt Pelz, Construction Technical Support

**Proxy for Gregory Pankow*
***Proxy for Mark Orton*
****Proxy for Joseph Novak*

Also in attendance were the following:

Nayyar Siddiki, INDOT
Greg Couch, INDOT
Dan Osborn, ICI
Derrick Hauser, INDOT
Nate Pfeiffer, INDOT
Donovan Wilczynski, INDOT
John Susong, Rinker Materials
Corey Senich, INDOT
Steve Smart, County Materials
Nathan Awwad, INDOT

Joe Hile, Specialties Company
Zach Corrice, INDOT
Steve Fisher, INDOT
Tom Harris, INDOT
Tom Duncan, FHWA
Steve Duncan, INDOT
Lana Podorvanova, INDOT
Nick Cosenza, INDOT

The following items were discussed:

A. GENERAL BUSINESS ITEMS

OLD BUSINESS

(No items were listed)

NEW BUSINESS

1. Approval of the Minutes from the December 19, 2019 meeting

DISCUSSION: Mr. Novak requested a motion to approve the minutes from the December 19, 2019 meeting.

Motion: Ms. Phillips
Second: Mr. Boruff
Ayes: 9
Nays: 0

ACTION: PASSED AS SUBMITTED

B. CONCEPTUAL PROPOSAL ITEMS

OLD BUSINESS

(No items were listed)

NEW BUSINESS

(No items were listed)

C. STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS PROPOSED ITEMS

OLD BUSINESS

(No items were listed)

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NEW BUSINESS

Item No. 1	Mr. Beeson	pg 4

2020 Standard Specifications:

304.04	Patching
304.07	Basis of Payment

ACTION: PASSED AS REVISED

Item No. 2	Mr. Beeson	pg 9

2020 Standard Specifications:

SECTION 215	CHEMICAL MODIFICATION OF ~~*SUBGRADE*~~ SOILS

ACTION: WITHDRAWN

Item No. 3	Mr. Pelz	pg 18

2020 Standard Specifications:

101.01	Abbreviations
108.04	Prosecution of the Work
SECTION 205	STORMWATER MANAGEMENT

ACTION: PASSED AS REVISED

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cc: Committee Members
FHWA
ICI

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PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Confusion with HMA patching pay items. Design manual and 304 SS reference partial and full depth HMA patching, but no distinction in the pay item. Patching tables typically define "partial" vs "full depth". Designers are creating supplemental descriptions of "full" vs "partial" for the pay item. Technically a supplemental description requires a USP, which is not happening consistently.

PROPOSED SOLUTION: Update 304 section language and create partial and full depth patching items as already alluded to in the design manual and specification.

APPLICABLE STANDARD SPECIFICATIONS: 304

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: 17-5.09 4 a, 304-11.0, 304.11.02, 304-15.0, 304-21CC, 304-21EE,

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: N/A

PAY ITEMS AFFECTED: HMA Patching pay item

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Sub-committee of OMM/Pavement Committee, consisting of Nathan Awwad, Derrick Hauser and Nick Cosenza

IMPACT ANALYSIS (attach report):

Submitted By: Matt Beeson for Nathan Awwad

Title: Director, Office of Materials Management

Organization: INDOT

Phone Number: 317-522-9662

Date: 12/19/19

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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? N

Will approval of this item affect the Approved Materials List? N

Will this proposal improve:

Construction costs? N

Construction time? N

Customer satisfaction? N

Congestion/travel time? N

Ride quality? N

Will this proposal reduce operational costs or maintenance effort? Y

Will this item improve safety:

For motorists? N

For construction workers? N

Will this proposal improve quality for:

Construction procedures/processes? Y

Asset preservation? Y

Design process? Y

Will this change provide the contractor more flexibility? N

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

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

Is this proposal needed for compliance with:

Federal or State regulations? N

AASHTO or other design code? N

Is this item editorial? N

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda: Trying to bring the spec and pay item into alignment with what seems to be the current practice.

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REVISION TO STANDARD SPECIFICATIONS

SECTION 304 - ASPHALT BASES
304.04 PATCHING
304.07 BASIS OF PAYMENT

(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 304, BEGIN LINE 16, DELETE AND INSERT AS FOLLOWS:

304.04 *Partial Depth and Full Depth* Patching

Areas to be patched will be marked on the surface by the Engineer. The marked pavement shall be removed to the depth shown on the typical section or as directed. A minimum 2 in. vertical joint shall be constructed with the pavement that remains in place. If it is determined that the marked pavement is to be removed full depth, the patch depth shall be to the bottom of the existing asphalt material or as directed.

Subgrade of aggregate base under patches shall be compacted in accordance with 203.25. If the excavation for patches reveals unsuitable subgrade material, such material shall be removed to a depth of 6 in. and backfilled to the top of subgrade with compacted aggregate in accordance with 301. Unauthorized excavation beyond neat lines shall be replaced with compacted aggregate in accordance with 301.

The excavated patch areas shall be filled with HMA for patching of the type specified in the pay item *and as shown on the plans*. ~~Partial depth patches shall use HMA intermediate mixture and full depth patches shall use HMA base mixture in accordance with 402.~~*HMA used for ~~patches~~ patching shall be in accordance with 402.* A MAF in accordance with 402.05 will not apply. Mixtures will be accepted in accordance with 402.09.

Each course shall be compacted by approved mechanical equipment in accordance with 409.03(d).

A smooth riding surface shall be maintained on HMA patches at all times. Deformation due to traffic or other conditions shall be corrected immediately. ~~HMA base, intermediate, or surface mixtures may~~*HMA of the type specified in the pay item shall* be used to maintain patches. Unless otherwise specified, patches shall be completed during daylight hours and opened to traffic at the close of the workday. Patches that cannot be completed prior to the end of daily operations shall be backfilled, compacted, and a temporary surface placed to carry traffic, unless otherwise specified.

SECTION 304, BEGIN LINE 79, INSERT AS FOLLOWS:

Payment will be made under:

Pay Item	**Pay Unit Symbol**
*HMA Patching, Full Depth, __*__ type*	*TON*

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REVISION TO STANDARD SPECIFICATIONS

SECTION 304 - ASPHALT BASES
304.04 PATCHING
304.07 BASIS OF PAYMENT

HMA Patching, *Partial Depth,* __*__ .....TON
type

Widening with HMA, __*__.....TON
type

* Mixture type in accordance with 402.04.

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COMMENTS AND ACTION

304.04 PATCHING
304.07 BASIS OF PAYMENT

DISCUSSION:
This item was introduced and presented by Mr. Reilman, assisted by Mr. Awwad, who explained that there has been some confusion with HMA patching pay items. The design manual and 304.04 reference partial and full depth HMA patching, but there is no distinction in the pay item descriptions. Patching tables typically define "partial" vs "full depth". Designers are creating supplemental descriptions of "full" vs "partial" for the pay item. Technically a supplemental description requires a USP, which is not happening consistently.

Mr. Reilman proposed to update the language in 304 and to create partial and full depth patching pay items as already alluded to in the design manual and in 304.

Ms. Phillips asked for clarification of the "modified" pay items, which was explained by Mr. Koch and Mr. Reilman. Further clarification was provided by Mr. Dave concerning which patching items will be shown on the plans. Mr. Culbertson mentioned that different types of patching could be shown on the plans, making the pay item revisions necessary for clarification. Mr. Cosenza recommended a design memo to help designers with this process.

Minor editorial revisions have been incorporated as a result of these discussions, for clarification.
There was no further discussion, Mr. Reilman revised his motion and this item passed as revised.

Motion: Mr. Reilman Second: Mr. Koch Ayes: 9 Nays: 0 FHWA Approval: YES	Action: ___ _X_ ___	 Passed as Submitted Passed as Revised Withdrawn
Standard Specifications Sections referenced and/or affected: 304 pg 255-257.	_X_ _X_	2022 Standard Specifications Revise Pay Items List
Recurring Special Provision references in: NONE	_X_	Create RSP (No. 304-R-711) Effective: September 1, 2020 RSP Sunset Date:
Standard Drawing affected: NONE	___	Revise RSP (No.___) Effective: RSP Sunset Date:
Design Manual Sections affected: 17-5.09 4 a, 304-11.0, 304.11.02, 304-15.0, 304-21CC, 304-21EE,	___	Standard Drawing Effective:
GIFE Sections cross-references: NONE	___	Create RPD (No. ___) Effective:
	_X_	GIFE Update
	___	SiteManager Update

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PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Specification 215 was originally written with the contractor bidding on lime only. During construction, field work resulting in a mix design is performed by the contractor. Occasionally the field work results in a mix design recommending cement instead of lime. This results in a change order being generated to change from lime to cement. There are over 50 such change orders on state projects every year. In addition, there are also numerous change orders on local agency projects. Unfortunately, most of the local public agencies do not have this additional cost available.

PROPOSED SOLUTION: To add cement modification as a pay item in Sec 215 would reduce change orders.

APPLICABLE STANDARD SPECIFICATIONS: 215

APPLICABLE STANDARD DRAWINGS: NA

APPLICABLE DESIGN MANUAL SECTION: NA

APPLICABLE SECTION OF GIFE: Yes

APPLICABLE RECURRING SPECIAL PROVISIONS: Yes

PAY ITEMS AFFECTED: Yes

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Contractors, ACPA, geotechnical consultant

IMPACT ANALYSIS (attach report): NA

Submitted By: Matt Beeson for Nayyar Siddiki

Title: Director

Organization: Office of Materials Management

Phone Number: 317-522 9662

Date: 12/28/19

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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? yes

Will this proposal improve:

Construction costs? Yes

Construction time? Yes

Customer satisfaction? Yes

Congestion/travel time? Na

Ride quality? Na

Will this proposal reduce operational costs or maintenance effort? NA

Will this item improve safety:

For motorists? NA

For construction workers? NA

Will this proposal improve quality for:

Construction procedures/processes? yes

Asset preservation? NA

Design process? Yes

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? NA

AASHTO or other design code? NA

Is this item editorial? No

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

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(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 215, BEGIN LINE 1, DELETE AND INSERT AS FOLLOWS:

SECTION 215 – CHEMICAL MODIFICATION OF ~~*SUBGRADE*~~ SOILS

215.01 Description

This work shall consist of the modification of ~~*subgrade*~~ soils by uniformly mixing portland cement, fly ash, *or* lime ~~or a combination of the materials~~ with soil to aid in strength gain and achieving the workability of soils ~~having excessive moisture content~~.

MATERIALS

215.02 Materials

Materials shall be in accordance with the following:

Fly Ash, *Class C* 901.02
Lime .....913.04(b)
Portland Cement, Type I .....901.01(b)
Water 913.01
Note: Quicklime or portland cement may be used dry or as a slurry.

~~Soils containing greater than 6% by dry weight calcium/magnesium carbonate, or organic material, or having a maximum dry density of less than 95 pcf, or with a soluble sulfate content greater than 1,000 ppm shall not be used in the subgrade. The density shall be determined in accordance with AASHTO T 99, the loss on ignition shall be determined in accordance with AASHTO T 267, the calcium/magnesium carbonate shall be determined in accordance with ITM 507, and the sulfate content shall be determined in accordance with ITM 510~~*Soils for chemical modification shall meet the following requirements.*

Properties for Chemical Modification		
Soil Property	*Test Method*	*Requirement*
Maximum Dry Density	*AASHTO T 99*	*≥90 pcf*
Organic Material	*AASHTO T 267*	*≤6%*
Sulfate ~~Cement~~Content	*ITM 510*	*≤1,000 ppm*

~~*Table 1*~~

CONSTRUCTION REQUIREMENTS

215.03 Testing and Mix Design

The Contractor shall be responsible for ~~all tests required to determine the chemical modifier type and optimum chemical modifier content for modification of the soils. The modifier selection,~~ laboratory testing~~,~~ and mix design, *and* shall be performed by an

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approved geotechnical consultant in accordance with the Department's Design Procedures for Soil Modification or Stabilization.

The quantities for hydrated lime, quicklime, or portland cement shall be based on ~~4.0%~~*5.0%* of the maximum dry density of the soils. The quantities for lime by-products shall be based on ~~5.0%~~*6.0%* of the maximum dry density of the soils. The quantities for fly ash class C shall be based on 12.0% of the maximum dry density of the soils. Class F fly ash shall not be used~~ except in combination with lime or cement~~.

If hydrated lime, quick lime, lime by-products or portland cement are used, test results and the geotechnical consultant recommendations shall be submitted to the Engineer prior to use. If fly ash *is* ~~or any combination of chemical modifiers are~~ used, the test results and the geotechnical consultant recommendations shall be submitted to the Engineer and to the Office of Geotechnical Services for approval at least ~~five~~*three* business days prior to use. If the modifier as bid is not appropriate for the soils encountered, portland cement shall be used. Portland cement, fly ash, lime, and lime by-products shall be from the Department's list of approved sources.

The quantity of chemical modifier may be adjusted for different soil types. However, the source or type of chemical modifier shall not be changed during the progress of the work without approval. A change in source or type shall require a new mix design.

215.04 Storage and Handling

The chemical modifier shall be stored and handled in accordance with the manufacturer's recommendations.

215.05 Weather Limitations

The chemical soil modification shall be performed when the soil has a minimum temperature of 45°F, measured 4 in. below the surface, and with the air temperature rising. The chemical modifier shall not be mixed with frozen soils or with soil containing frost. Chemical soil modification shall only be performed in areas which are going to be paved during the same construction season.

215.06 Preparation of Soils

The soils shall be prepared in accordance with 207.03. All aggregates which are larger than approximately 3 in. encountered before or after mixing the soils and chemical modifiers shall be removed.

215.07 Spreading of Chemical Modifiers

Where type A-6 or A-7 soils are used or encountered, the surface shall be scarified to the specified depth prior to distribution of the chemical modifier. ~~If a combination of modifiers is used, the modifiers shall be mixed mechanically prior to being incorporated.~~ The chemical modifier shall be distributed uniformly by a cyclone, screw-type, or pressure manifold type distributor. If a slurry is used, the surface shall be scarified prior to the distribution of the slurry. The chemical modifier shall not be applied when wind conditions

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create problems in adjacent areas or create a hazard to traffic on any adjacent roadway. The spreading of the chemical modifier shall be limited to an amount which can be incorporated into the soil within the same work day. If weather causes stoppage of work or exposes the chemical modifier to washing or blowing, additional chemical modifier may be spread when the work resumes.

215.08 Mixing

The chemical modifier, soil, and water when necessary, shall be thoroughly mixed by rotary speed mixers~~ or a disc harrow~~. The mixing shall continue until a homogenous layer of the required thickness has been obtained. One hundred percent of the material, exclusive of rock particles, shall pass a 1 in. (25 mm) sieve and at least 60% shall pass a No. 4 (4.75 mm) sieve. The mixing depth shall be 14 in. *The gradation test shall be performed in accordance with ITM 516* ~~*and results shall be reported to the Division of Geotechnical Services*~~.

The chemically modified soil mixture shall be at least 1% above the optimum moisture content during mixing and compaction. Water shall not be added to the chemically modified soil when the moisture content of the soil exceeds 3% above optimum moisture. Water shall be added during mixing only.

215.09 Compaction

Compaction of the mixture shall begin as soon as practicable after mixing and shall be in accordance with ~~203 or~~ 207.03 as applicable. Compaction after mixing shall be as follows:

(a) For portland cement modified soils, mixing shall be completed within 1 h of portland cement placement and grading and final compaction shall be completed within 3 h after mixing.

(b) Fly ash modified soils shall be compacted within 4 h.

(c) Lime modified soils shall be compacted within 24 h.

Acceptance of chemically modified soils will be determined~~ by measuring the compaction with a Dynamic Cone Penetrometer, DCP,~~ in accordance with *ITM 508 or* ITM 509~~ or with a Light Weight Deflectometer, LWD, in accordance with 203.24(b)~~. Testing of the chemically modified soils will~~*may*~~ begin *a minimum of* 24 h~~ours~~ after compaction.

Acceptance ~~*of the compaction*~~ *of chemically modified soils will be determined by averaging three LWD tests obtained at random stations determined in accordance with ITM 802. The average deflection shall be equal to or less than the* ~~*maximum*~~ *allowable average deflection shown in* ~~*the Table 2*~~ *below.* ~~*The frequency of LWD testing will be three tests for each 1,400 cu yd of chemically modified soils.*~~

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Allowable Average Deflection for Chemically Modified Soil		
Material Type	*Allowable Average Deflection, (mm)*	*Maximum Deflection at a Single Test Location (mm)*
Cement Modified ~~Subgrade~~Soil	*0.27*	*0.31*
Lime Modified ~~Subgrade~~Soil	*0.30*	*0.35*

~~*Table 2*~~

For measuring the compaction with a DCP, three random test locations will be determined in accordance with ITM 802. ~~for each 1,500 lft*1,400 cu yd* of chemically modified soil for each 2-lane pavement section. The average of the blow counts obtained at the three random locations will be the DCP blow count representing the 1,500 lft*1,400 cu yd* section~~. Blow counts of 15 and above will be used to determine the average for the top 6 in. of a 14 in. lift. Blow counts of 14 and above will be used to determine the average for the bottom 8 in. of a 14 in. lift. Blow counts of 18 and above will be used to determine the average for the 8 in. lift. Locations with test results less than the specified minimum blow counts will be retested and shall be reworked if the minimum blow count is not obtained. *The frequency of LWD and DCP testing will be three tests for each 1,400 cu yd of chemically modified soils.*

The chemically modified soil lift shall meet the following requirements for compaction:

(a) The average DCP blow count shall not be less than 17 for the top 6 in. of a 14 in. lift.

(b) The average DCP blow count shall not be less than 16 for the bottom 8 in. of a 14 in. lift.

(c) The average DCP blow count shall not be less than 20 for an 8 in. lift.

(d) Moisture tests for chemically modified soils mixture shall be performed in accordance with ITM 506 every 4 h during chemical and soils mixing.

(e) One gradation test shall be performed for each 2,500 cu yd of chemically modified soil in accordance with 215.08 and ITM 516.

~~Moisture tests for chemically modified soils mixture will be performed every 4 h during chemical and soils mixing. One gradation test in accordance with 215.08 will be performed for each 2,500 lft of chemically modified soil for each 2-lane pavement section.~~

Construction traffic or equipment will not be allowed on the treated soils until the soil meets the ~~DCP~~*compaction* test requirements.

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215.10 Curing

~~The moisture content of the mixture shall be at the optimum moisture content or above the optimum moisture content as determined by the mix design in accordance with 215.03. Moisture content will be determined in accordance with ITM 506.~~ Moisture content shall be maintained *at 1%* above the optimum moisture content for the first 48 h after mixing ~~with quicklime or hydrated lime~~.

215.11 Proofrolling

Proofrolling shall be performed in accordance 203.26. ~~*The proofrolling shall cover the entire subgrade surface. The maximum allowable deflection or rutting in subgrade shall not be greater than 1/2 in*~~.

215.~~11~~*12*Method of Measurement

The accepted quantity of chemically modified soils will be measured by the square yard, complete in place ~~*in accordance with 207*~~. All removal and replacement required to modify the soils below the specified depth will be measured in accordance with 203.27(b).

215.~~12~~*13* Basis of Payment

The accepted quantity of chemically modified soils, *for the material specified,* will be paid for by the square yard, complete in place. *Fly ash, when used, will be paid for as lime.* All removal and replacement required to modify the soils below the specified depth will be paid for in accordance with 203.28.

Adjustment of materials for chemical modification that exceeds the limits of 215.03 will be included in a change order for materials only and paid for as chemical modifier adjustments. If mix design test results show that the chemical modifier as bid by the Contractor is not appropriate and the strength of the modified soil can not be achieved, a price adjustment will be made for the use of portland cement. The price adjustment will be calculated at a cost equal to the difference in the invoice cost of the chemical modifier found to be appropriate for use and the invoice or quoted delivered cost of the chemical modifier as bid by the Contractor. This adjustment will be included in a change order and will be paid for as chemical modifier adjustments. *Fly ash will not be considered for price adjustments.* Payment for chemical modifier adjustments will be made for direct delivered material costs incurred by the Contractor ~~and shall not include any other markups~~*in accordance with 109.05*.

Payment will be made under:

Pay Item	**Pay Unit Symbol**
Chemical Soil Modification, _____, ... *material*	SYS
~~*Subgrade, _____ Modification..... type*~~	~~*SYS*~~

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The cost of performing the laboratory tests, providing an approved geotechnical consultant, scarification of the *soil*~~subgrade~~, spreading and mixing of the chemical modifier and soil, compaction of the resultant mixture, shaping the *soil*~~subgrade~~, ~~subgrade~~, work required due to adjustments of modifier proportioning, additional modification required due to weather conditions, correction of deficient areas, water required for the modification process, modified *soil*~~subgrade~~, ~~subgrade~~ trimming, *moisture testing, gradation testing, proofrolling,* and all operations needed to meet the requirements of this specification shall be included in the cost of the pay items of this section.

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COMMENTS AND ACTION

SECTION 215 - CHEMICAL MODIFICATION OF SOILS

DISCUSSION:

Mr. Reilman, taking over for Mr. Beeson, introduced this item, which was presented with the help of Mr. Siddiki, who explained that standard specification section 215 was originally written with the contractor bidding on lime only. During construction, field work resulting in a mix design is performed by the contactor. Occasionally the field work results in a mix design recommending cement instead of lime. This results in a change order being generated to change from lime to cement. There are over 50 such change orders on state projects every year. In addition, there are also numerous change orders on local agency projects. Unfortunately, most of the local public agencies do not have this additional cost available.

Following a discussion with Mr. Koch, Ms. Phillips, and Mr. Siddiki concerning "a combination of materials", the optimum moisture content, how material types are to be paid and whether or not this specification should be constrained to only subgrade soils, Mr. Reilman proposed the additional revisions as shown highlighted above.

Further discussion ensued concerning how these revisions will affect 207, which will be presented at the next meeting. Mr. Novak asked if the 215 pay item needs to include the material designation, and if the 207 revisions will have an effect on 215. Mr. Reilman withdrew this item pending further review and so that it can be presented along with the 207 revisions at the next meeting. Recommended revisions resulting from the aforementioned discussions are as shown highlighted above.

Mr. Osborn had asked if RSP 203-R-685 should be made obsolete, and Mr. Siddiki replied that yes, it should.

Motion: Mr. Reilman Second: Mr. Koch Ayes: Nays: FHWA Approval:	Action: ___ Passed as Submitted ___ Passed as Revised _X_ Withdrawn
Standard Specifications Sections referenced and/or affected: 215 pg 239 -243. Recurring Special Provision references in: NONE Standard Drawing affected: NONE Design Manual Sections affected: NONE GIFE Sections cross-references: TBD	___ 2022 Standard Specifications ___ Revise Pay Items List ___ Create RSP (No.___) Effective: RSP Sunset Date: ___ Revise RSP (No.___) Effective: RSP Sunset Date: ___ Standard Drawing Effective: ___ Create RPD (No. ___) Effective: ___ GIFE Update ___ SiteManager Update

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PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: As a result of the findings developed from an FHWA/INDOT Stormwater process review conducted in the late summer of 2018 several processes were identified as needing improvement. The improvements were no surprise and several of the findings had already begun to be a focus of improvement. An evaluation and of the existing Specifications was a finding within the process review.

PROPOSED SOLUTION: An in-depth evaluation of the existing Specifications, originally developed and implemented several years prior to the process review, was conducted utilizing a committee composed of the contracting industry, consulting industry, and Department personnel.

Several areas of the existing Specification were identified for revision based on comments from the process review field visits to both construction sites and to the District Offices. Lessons have been learned on all sides based on the increased level of stormwater knowledge gained over the past years.

APPLICABLE STANDARD SPECIFICATIONS: 101, 108, AND 205
APPLICABLE STANDARD DRAWINGS: E-205 Series
APPLICABLE DESIGN MANUAL SECTION: Chapter 205
APPLICABLE SECTION OF GIFE: Section 3.1
APPLICABLE RECURRING SPECIAL PROVISIONS: RSP 205-R-706

PAY ITEMS AFFECTED: **New**: **1**). Protected Resource Fence, **2**). Protected Resource Sign, **3**). Stormwater Management Implementation, Level 1 or 2, **4**). SWQCP Preparation, **5**.) Temporary Underdrain Outlet Pipe. **Delete**: **1**). SWQCP Preparation and Implementation, Level 1 and 2

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Specification Sub-Committee members: (INDOT) Greg Couch, Corey Senich, Rick Phillabaum, Kurt Pelz, Tom Harris, Jennifer Napier, Rachel Albert, Megan Bolyard, Andrew Pinkstaff, Eric Felix, Clara Furst, Donovan Wilczynski (FHWA) Michelle Allen, Eryn Fletcher, (ACEC) Christa Petzke, Michele Meyer, (ICI) Scott Beyer, Nelson Slusser, Dan Osborn

IMPACT ANALYSIS (attach report): Yes

Submitted By: Kurt Pelz

Title: Technical Services Manager

Organization: Construction Management

Phone Number: 317-234-7726
Date:

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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? Yes

Construction time? Yes

Customer satisfaction? Yes

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? 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? 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: Partial FHWA/INDOT process review finding resolution.

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REVISION TO STANDARD SPECIFICATIONS

SECTION 101 - DEFINITIONS AND TERMS
101.01 ABBREVIATIONS
SECTION 108 - PROSECUTION AND PROGRESS
108.04 PROSECUTION OF THE WORK
SECTION 205 - STORMWATER MANAGEMENT

The Standard Specifications are revised as follows:

SECTION 101, BEGIN LINE 95, DELETE AND INSERT AS FOLLOWS:

NOI Notice of ~~Intend~~*Intent*

SECTION 101, AFTER LINE 186, INSERT AS FOLLOWS: *(Note: numbering for 101 section should be revised to reflect the additions indicated)*

101.10.1 Concrete Wastewater

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, AFTER LINE 306, INSERT AS FOLLOWS:

101.29.1 Land-disturbing activity

Any man-made action to the land surface that exposes the underlying soil including clearing, grading, excavation operations, cutting and filling, or the movement and stockpiling of top soils.

SECTION 101, AFTER LINE 512, INSERT AS FOLLOWS:

101.71.1 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) including untreated sediment-laden stormwater.

SECTION 108, DELETE LINES 119 THROUGH 147.

SECTION 108, BEGIN LINE 119, INSERT AS FOLLOWS:

For those contracts not requiring water quality 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, fueling locations, construction trailers, batch plants, and designated concrete truck washout locations.*
3. *A material handling and spill prevention plan.*

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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 of the site plan will be paid for in accordance with 205.11.

For contracts not requiring 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. A SWQCP will not be required for these contracts.

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

Borrow and disposal sites shall be in accordance with 203.08. When required by a Construction Stormwater General Permit 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.

SECTION 205, DELETE LINE 1 THROUGH 774.

SECTION 205, BEGIN LINE 1, 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 SWPPP, 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
Fertilizer 914.03
Filter Sock ..... 914.09(h)

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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**
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 water quality permits, ~~or~~ a Construction Stormwater General Permit, or a 327 IAC 15-5 permit, a 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 a 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 SWPPP. The submitted and accepted Contractor's SWQCP shall interrelate with the Department's Design SWPPP in 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 ~~stamped~~signed and sealed by the SWQCP developer, as defined above.

The Contractor shall develop the ~~project~~ SWQCP in accordance with the Construction Stormwater General Permit, 327 IAC 15-5, ~~Chapter 205 of the Indiana~~

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~~Department of Transportation Design Manual~~, 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.*

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.*

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

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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.*

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 SWPPP and the plans. The revisions shall comply with all known permit requirements applicable to the construction phase of the project including water quality 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 a SWQCP, an updated field copy of the SWQCP shall 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 ~~stamped~~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 water 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 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).

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(c) Stormwater Quality Manager

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 SWQM

A level 1 SWQM shall have successfully completed the Department's Construction Stormwater Training course and hold a current training verification document for that course.

2. Level 2 SWQM

A level 2 SWQM shall meet the requirements of 205.03(c)1, 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 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 management 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 SWQM.

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

(d) Pre-Disturbance Meeting

On contracts requiring a 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

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

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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). 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 of operations shall also meet the posting requirements. On contracts requiring water quality permits the Contractor shall follow the posting requirements of those permits.

(g) Inspections

Inspections shall be required on all work areas associated with any water quality 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 water quality permit.

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On contracts requiring water quality 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 ~~jobs~~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 by the end of the next work day following every 1/2 in. or greater rain event. A single inspection performed after a rain event shall satisfy the requirement for both the rain event and the weekly inspection. Inspections for these ~~jobs~~contracts shall stop once all disturbed areas are permanently stabilized, all temporary measures have been removed, and the NOT has been obtained.

Inspection reports shall be submitted by the SWQM within 24 h of the day of the inspection. The inspection reports 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.

(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.

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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.

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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.

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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 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. RECP shall not bridge over surface inconsistencies. Edges of adjacent

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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,

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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.

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(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 rip-rap 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 ~~H~~high ~~D~~density ~~P~~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 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 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

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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 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.

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(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) Emergency Deficiencies

Emergency 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 environmental 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.*

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

b) General Deficiencies

General 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. *Deficiencies as listed in 205.08(c).*

Corrective actions for general deficiencies shall be completed within 48 h of notification or as directed.

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.

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Delays caused by these deficiencies will be considered non-excusable delays in accordance with 108.08(c).

c) Quality Adjustments

If emergency deficiencies are not remedied within 24 h after notification, or within 48 h after 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 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 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 in 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.

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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.

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 ~~in accordance with 603.07~~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.

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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 ~~required~~specified weekly inspections conducted after the original contract completion date.

SWQCP Preparation and Stormwater Management Implementation Level 1 or Level 2 will not be measured for payment.

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.

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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.

Payment for 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 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,

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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. Item payments will be made in accordance with:

$$SWQCP\ payment = 1.00 - \left(1.00 - \left(\frac{(P_{sa})}{(P_t)}\right)\right)$$

Where:

P_{sa} = Submitted and accepted phases of the SWQCP.
P_t = Highest total number of construction phases established for the contract.

The item Stormwater Management Implementation Level 1 or Level 2 will be paid for as specified in the contract documents. After the initial phase of the SWQCP or the contract site plan has been submitted and accepted, 25% of the Stormwater Management Implementation bid price will be paid. The balance will be paid as the plan is implemented over the life of the contract. Stormwater Management Implementation Level 1 or Level 2 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: (Note: shown below pay items have been approved on October 17, 2019 Standards Committee meeting and are listed in Recurring Special Provision 205-R-706, effective June 1, 2020. Pay items: Protected Resource Fence, Protected Resource Sign, and Temporary Underdrain Outlet Pipe are added new.)

Pay Item	***Pay Unit Symbol***	***Established Price***
Diversion Interceptor Type C	*LFT*	*$22.50*
Fertilizer	*TON*	*$775.00*
Filter Sock	*LFT*	*$5.50*
Manufactured Surface Protection Product	*SYS*	*$1.35*

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Mobilization and Demobilization for Surface Stabilization	*EACH*	*$700.00*
No. 2 Stone	*TON*	*$30.00*
Protected Resource Fence	*LFT*	*$2.00*
Protected Resource Sign	*EACH*	*$80.00*
Sediment, Remove	*CYS*	*$22.00*
Splashpad	*TON*	*$60.00*
Standard Metal End Section	*EACH*	*$365.00*
Stormwater Management Budget	*DOL*	
Stormwater Management Implementation, Level 1~~———~~...-LS		
Stormwater Management Implementation, Level 2....LS~~—~~ ~~(Level)~~		
SWQCP Preparation	*LS*	
Temporary Check Dam, Revetment Riprap	*TON*	*$65.00*
Temporary Check Dam, Traversable	*LFT*	*$16.00*
Temporary Filter Berm	*LFT*	*$16.00*
Temporary Filter Stone	*TON*	*$45.00*
Temporary Geotextile	*SYS*	*$2.75*
Temporary Inlet Protection	*EACH*	*$110.00*
Temporary Mulch Stabilization	*SYS*	*$0.30*
Temporary Mulch	*TON*	*$425.00*
Temporary Revetment Riprap	*TON*	*$60.00*
Temporary Sediment Basin	*EACH*	*$3,200.00*
Temporary Sediment Trap	*TON*	*$42.50*
Temporary Seed	*LBS*	*$2.75*
Temporary Silt Fence	*LFT*	*$2.15*
Temporary Slope Drain	*LFT*	*$21.50*
~~*Temporary Underdrain Outlet Pipe*~~	~~*LFT*~~	~~*$5.50*~~
Weekly Inspection	*EACH*	*$425.00*

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 ~~of~~ shall include all materials, placement, removal, maintenance, and all necessary incidentals~~ shall be included in the cost of protected resource fence~~.

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The costs for protected resource signs ~~of~~ shall include all materials, placement, removal, maintenance, and all necessary incidentals ~~shall be included in the cost of protected resource signs~~.

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, except for the removal of sediment.

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.

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~~The~~All costs associated with the weekly and post-event inspections~~ and all other 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.

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COMMENTS AND ACTION

101.01 ABBREVIATIONS
108.04 PROSECUTION OF THE WORK
SECTION 205 - STORMWATER MANAGEMENT

DISCUSSION:

This item was introduced and presented by Mr. Pelz who stated that several processes were identified as needing improvement, as a result of the findings developed from an FHWA/INDOT Stormwater process review conducted in the late summer of 2018.

Mr. Pelz explained that an in-depth evaluation of the existing Specifications, originally developed and implemented several years prior to the process review, was conducted utilizing a committee composed of the contracting industry, consulting industry, and Department personnel.

Mr. Pelz proposed the above shown revisions stating that several areas of the existing Specification were identified for revision based on comments from the process review field visits to both construction sites and to the District Offices. Mr. Pelz further explained that lessons have been learned on all sides based on the increased level of stormwater knowledge gained over the years. Further collaboration and concurrence was provided by Mr. Couch and Mr. Wilczynski from the environmental department.

Mr. Koch inquired about the pre-disturbance meeting requirements and worries that we may unintentionally assume responsibility. Mr. Pelz responded that the concept behind requiring the pre-disturbance meeting was developed with the intent similar to the pre-paving meetings held for paving operations, in order to prevent past problems with the stormwater "team" not understanding the field conditions for a particular contract well enough at the start of work. Mr. Pelz agreed that the process should be monitored continually and on the list of discussion topics at the progress meetings. Mr. Pelz stated that this will help to identify potential issues as early as possible and prepare for those issues before allowing them to gain a foothold. Mr. Pelz further explained that the SWQCP is intended to be a dynamic, living document that initially presents and documents changes necessary to meet the needs and compliance requirements of the contract. Continued effort, from start to finish, should be utilized to maintain compliance on any particular contract. It was the intent of the sub-committee that helped develop this revision that the concept of a "pre-activity" meeting was a benefit, based on past problems, and should be established within the proposed specification revision. Mr. Wilczynski stated that the language is presented to allow some flexibility regarding potential variable timeline issues. Mr. Culbertson offered that the QCP should have been submitted prior to the meeting so everyone has an idea of what is expected. Mr. Wilczynski said that he can see the validity in both points, and intends to make the process as productive as possible. Mr. Pelz restated his reasoning as illustrated above, which should counteract any potential problems, and which will provide the flexibility to address any issues or changes as they arise in order to be able to do the right things at the right times.

Minor editorial revisions, for clarification, are as shown highlighted above. Mr. Koch asked about how we'll handle issues with the underdrain outlet, and Mr. Pelz explained that we currently have a USP that is being used. Further revisions will be incorporated at a later date.

Further editorial revisions are as shown. With no additional comments or discussion, this item passed as revised.

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COMMENTS AND ACTION

101.01 ABBREVIATIONS
108.04 PROSECUTION OF THE WORK
SECTION 205 - STORMWATER MANAGEMENT

[continued]

Motion: Mr. Pelz Second: Mr. Dave Ayes: 9 Nays: 0 FHWA Approval: YES	Action: __ Passed as Submitted _X_ Passed as Revised __ Withdrawn
Standard Specifications Sections referenced and/or affected: 101 pg 3, 108 pg 86 - 87, and 205 pg 191 - 207. Recurring Special Provision references in: 205-R-706 STORMWATER MANAGEMENT Standard Drawing references: E-205 series Design Manual Sections affected: Chapter 205 GIFE Sections cross-references: Section 3.1	_X_ 2022 Standard Specifications _X_ Revise Pay Items List __ Create RSP (No.__) Effective: RSP Sunset Date: _X_ Revise RSP (No. 205-R-706) Effective: September 1, 2020 RSP Sunset Date: 2022 SS book __ Standard Drawing Effective: __ Create RPD (No. __) Effective: _X_ GIFE Update __ SiteManager Update

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