INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758 CM
Indianapolis, Indiana 46204

www.in.gov/indot

Mike Braun, Governor
Lyndsay Quist, Commissioner

APPROVED MINUTES

August 21, 2025, Standards Committee Meeting

September 25, 2025

TO: Standards Committee

FROM: Scott Trammell, Secretary

RE: Minutes from August 21, 2025, Standards Committee Meeting

The Standards Committee meeting was called to order by Mr. Novak, sitting in as proxy for Mr. Pankow, Chair, at 09:02 a.m. on Thursday, August 21, and was held virtually via *Teams* (Microsoft application). The meeting was adjourned at 10:08 a.m. The next meeting is scheduled for Thursday, **September 18**, 2025.

The following committee members were in attendance:

Novak, Joseph*, Chairman, Director, Construction Management
Garg, Lalit**, Traffic Engineering
Dave, Kumar, Pavement Engineering
Koch, Mike, District Construction, Fort Wayne District
Hauser, Derrick***, Construction Management
Orton, Mark, Highway Engineering
Pelz, Kurt, Construction Technical Support
Reilman, Jim, Materials and Tests
White, Peter, Bridge Engineering
Wooden, John, Contract Administration
Rearick, Anne, Asset Management
**Proxy* for Pankow, Gregory
***Proxy* for Boruff, Dave
****Proxy* for Novak, Joseph

Also, the following attendees and others were captured by Teams:

Awwad, Nathan, INDOT
Beeson, Matthew, INDOT
Betz, Ryan, guest
Blanchard, Jacob, INDOT
Mouser, Elizabeth, INDOT
Mueller, Bart, INDOT
Osborn, Dan, ICI
Pangallo, Andrew, INDOT

Clawson, Samuel G, INDOT
Cosenza, Nicholas, INDOT
Couch, Gregory, INDOT
Delp, Patrick, INDOT
Duncan, Steve, INDOT
Duncan, Thomas, FHWA
Emmert, Rhonda, INDOT
Galetka, Jason, INDOT
Harding, Matthew, INDOT
Harris, Tom, INDOT
Hathaway, Reed, INDOT
Jacobs, David, INDOT
John Leckie, IRMCA
Kachler, Mischa, INDOT
Pastuszka, Elizabeth, Asphalt Indiana
Pepenella, Keith, INDOT
Podorvanova, Lana, INDOT
Powell, Traci M, INDOT
Russell, Melissa, INDOT
Smith, Charles, INDOT
Stahl, Carina, INDOT
Steve Smart, County Materials
Tennis, Paul, cement.org
Thornton, Donald, INDOT
Towner, Anna E, INDOT
Trammell, Scott, INDOT
Wheat, Faith, INDOT

The following items were discussed at the meeting:

A. GENERAL BUSINESS

OLD BUSINESS *(No items were listed)*

NEW BUSINESS *Approval of the Minutes from the July 17 2025 meeting*

Mr. Novak requested a motion to approve the Minutes from the July 17, 2025 meeting.

Motion: Mr. Reilman
Second: Mr. Pelz
Ayes: 10
Nays: 0

ACTION: PASSED AS SUBMITTED

B. CONCEPTUAL PROPOSAL

(No items were listed)

C. STANDARD SPECIFICATIONS, DRAWINGS, AND SPECIAL PROVISIONS PROPOSAL

OLD BUSINESS *(No items were listed)*

NEW BUSINESS

Item No. 1 Mr. Dave pg. 4
Recurring Special Provision:
310-R-xxx *CEMENT TREATED PERMEABLE BASE* (proposed new)

ACTION: PASSED AS REVISED

Item No. 2 — Mr. Reilman — pg. 18

2026 Standard Specifications:

203.09 — General Requirements

ACTION: PASSED AS REVISED

Item No. 3 — Mr. Reilman — pg. 25

2026 Standard Specifications:

203.20 — Rock and Shale Embankment

ACTION: WITHDRAWN

Item No. 4 — Mr. Reilman — pg. 30

2026 Standard Specifications:

203.21 — Embankment on Hillsides or Slopes

ACTION: PASSED AS REVISED

Item No. 5 — Mr. Reilman — pg. 34

Recurring Special Provision:

901-M-069 — PORTLAND CEMENT

ACTION: PASSED AS REVISED

Item No. 6 — Mr. Reilman — pg. 41

2026 Standard Specifications:

913.01 — Water

ACTION: PASSED AS REVISED

Item No. 7 — Mr. Reilman — pg. 45

2026 Standard Specifications:

918.05 — Geogrid

ACTION: PASSED AS SUBMITTED

cc: Committee Members
FHWA
ICI

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED:

Background and History

In the early 2000s and 2010s, INDOT utilized Recycled Concrete Aggregates, RCA, as an unbound aggregate subbase and subgrade directly beneath PCC pavement. Unfortunately, performance issues led to the discontinuation of its use for these applications. These issues included:

- Leachate clogging underdrains and environmental concerns due to high pH levels.
- Low durability of the aggregates.

Current specifications now restrict RCA usage to embankments, below underdrains, to mitigate leachate risks.

Focus Group Findings

Last year, INDOT established a focus group to explore ways to reintroduce RCA above the embankment. After extensive research and discussion, the group concluded that RCA should not be pursued as an unbound aggregate base in pavement structures due to:

- Persistent leachate concerns, even with blending or modified gradations.
- Lower strength (Resilient Modulus) compared to gravel or limestone aggregates.
- Additional pavement thickness requirements when using RCA.

However, the group recommended developing a specification for using RCA as an aggregate source for Cement-Treated Permeable Base, CTPB. Key benefits of this approach include:

- Reduced pavement thickness (6 in. CTPB vs. 9 in. subbase for PCCP).
- Significantly reduced leachate risks with bound materials.
- Compatibility with existing equipment—no special gradation required.

PROPOSED SOLUTION:

The result of this effort is the following specification allowing RCA as a replacement for virgin aggregates in CTPB layers. This provides contractors with the option to crush existing concrete onsite and reuse it in CTPB applications. The current specification for using RCA in embankments below underdrains remains unchanged.

INDOT has successfully implemented CTPB with virgin aggregates on projects such as I-65 (R-41841, Des 1802967), and other states like Michigan DOT have demonstrated successful use of RCA in CTPB layers.

APPLICABLE STANDARD SPECIFICATIONS: Create a new 310 section

APPLICABLE STANDARD DRAWING: None

[continued from previous page]

APPLICABLE DESIGN MANUAL CHAPTER: Update 602-3.02(04) and 602-3.03(01)

APPLICABLE SECTION OF GIFE: None

APPLICABLE RECURRING SPECIAL PROVISION OR PLAN DETAILS: None

PAY ITEMS AFFECTED: Create new pay item

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Recycled Concrete Aggregates Focus Group – consisting of Laracuente, Luis; Barnes, Tracy; Dave, Kumar; Reilman, Jim; Couch, Gregory; Nantung, Tommy; Ehrhart, Melissa; Fox, Gary; Beeson, Matthew; Novak, Joseph; Lowther, Jason; Bailey, Mark; Nelson, Mike; and Blanchard, Jacob.

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE: Pay Item: 310-xxxxxx *Cement Treated Permeable Base* – The pavement design will direct designers when to use the pay item

IMPACT ANALYSIS (attach report): See Attached

Submitted By: Nick Cosenza on behalf of Kumar Dave

Title: Pavement Engineer

Division: Highway Design

E-mail: ncosenza@indot.in.gov

Date: 7/28/25

IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No
Will approval of this item affect the Qualified Products List (QPL)? NO
Will this proposal improve:

- Construction costs? Yes
- Construction time? Yes
- Customer satisfaction? Yes
- Congestion/travel time? N/A
- Ride quality? Yes

Will this proposal reduce operational costs or maintenance effort? Yes

Will this item improve safety:

- For motorists? N/A
- For construction workers? N/A

Will this proposal improve quality for:

- Construction procedures/processes? Yes
- Asset preservation? Yes
- Design process? Yes

Will this change provide the contractor more flexibility? Yes

Will this proposal provide clarification for the Contractor and field personnel? N/A

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? Yes

Is this item editorial? No

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

310-R-xxx CEMENT TREATED PERMEABLE BASE

(Adopted xx-xx-25)

The Standard Specifications are revised as follows:

SECTION 310, BEGIN LINE 1, INSERT AS FOLLOWS:

SECTION 310 – CEMENT TREATED PERMEABLE BASE

310.01 Description

This work shall consist of constructing a cement treated permeable base, CTPB, on a prepared subgrade in accordance with 105.03.

310.02 Quality Control

The mixture for CTPB shall be produced by a plant in accordance with ITM 405 and transported and placed in accordance with the QCP prepared and submitted by the Contractor in accordance with ITM 803. The QCP shall be submitted to the Engineer for approval at least 15 calendar days prior to commencing production. The QCP shall also include, but not be limited to, details concerning the following critical aspects of CTPB placement and paving:

(a) All equipment shall be listed by type and manufacturer used to deliver, place, and spread the CTPB material. The procedures to control segregation of the material during this operation shall be identified.

(b) All equipment shall be listed by type and manufacturer used to compact and finish the CTPB. Each roller shall be identified by type and weight. The rolling operation shall be described. Test methods and frequencies used to monitor and control compaction shall be identified.

(c) Field procedures and test methods, including frequencies to monitor, control, and correct the thickness and finished surface grading of the CTPB.

MATERIALS

310.03 Materials

Materials shall be in accordance with the following:

Admixtures.....912.03
Coarse Aggregate, Class B or Higher, Size No. 8.....904
Fine Aggregate, Size No. 23.....904
Geotextile, Type 2A, non-woven.....918.02(a)
Portland Cement, Type I or IL.....901.01(b)
Water.....913.01

310.04 Recycled Concrete Aggregate

The Contractor may elect to salvage PCCP and superstructure concrete from within the project limits and process the concrete into recycled concrete aggregates for use in CTPB. The

Contractor shall identify any salvaged stockpiled concrete material by the State Route, US Highway, or Interstate Route along with what the concrete is from, such as~~;~~:

(a) Portland Cement Concrete Pavement and Approaches

(b) Structure~~(s)~~

(c) Other applications not identified here, ~~must~~shall be as approved by the Engineer.

The Contractor may remove the salvaged concrete from within the project limits and process the recycled concrete aggregate at an established CAPP source, or the Contractor has the following options for processing the salvaged concrete into recycled concrete aggregate from a local site:

(a) the establishment of a CAPP Producer Yard at the local site in accordance with 917; or

(b) use a CAPP Certified Aggregate Technician or a consultant on the list of Qualified Geotechnical Consultants for Gradation Control Testing.

The QCP shall include how the recycled concrete will be stored, crushed, stockpiled, and segregated from other materials. Identify what processes shall be used to ensure that no contamination will occur with other materials. The Engineer may visit these locations to ensure operations are following the approved QCP.

Recycled concrete aggregate processed from routes not maintained by the Agency shall not be used. Recycled concrete aggregates processed from adjacent or nearby contracts may be permitted if approved by the Engineer and documented in the QCP. If insufficient recycled concrete aggregate is produced to complete the work, the Contractor shall supplement with new materials in sufficient quantities to complete the work in accordance with the specifications. Foreign materials such as reinforcement and other steel materials, asphalt, and joint materials shall not be included in the recycled concrete aggregate. Waste materials from recycling operations shall remain the property of the Contractor. Final disposal of the surplus material shall be in accordance with 104.07 and 203.08.

Recycled concrete aggregate for CTPB shall be in accordance with the following criteria:

Gradation Requirements						
Sieve Analysis						
Sieve Size	*1 1/2 in.*	*1 in.*	*1/2 in.*	*No. 4*	*No. 8*	*No. 200*
Percent Passing	*100*	*90 – 100*	*25 – 60*	*0 – 20*	*0 – 12*	*6 max.*
Physical Requirements						
Los Angeles Abrasion, % max.					*45*	

Los Angeles Abrasion shall be tested once for each different stockpiled source of material processed for recycled concrete aggregate. All Los Angeles Abrasion tests shall be performed by the Contractor. The Contractor shall report the results of the tests to the Engineer in writing within one day after completion of the test.

For material processed within the project limits, gradation control testing ~~will~~shall be performed by the ~~Department~~Contractor. The frequency of gradation control testing ~~will~~shall be one test per 2,000 t based on production samples into a stockpile or by over the scales measurement, with a minimum of two tests per contract, one in the beginning and one near the mid-point. The sampling and testing of these materials ~~will~~shall be in accordance with the applicable requirements of 904 for coarse aggregates. The Contractor shall report the results of the tests to the Engineer in writing within one day after completion of the test.

All test results and responses to test results shall be maintained during the duration of the contract and made available to the Engineer upon request. Failure to meet any of the requirements for recycled concrete aggregate may result in the rejection of the material, as directed by the Engineer.

310.05 Concrete Mix Design

A CMD shall be ~~in accordance with 310.05~~as specified herein. The CMD shall be submitted to the DTE a minimum of seven calendar days prior to production. The CMDS shall include the information shown in 502.03. Use of the Department provided spreadsheet is not required. Production shall not commence until the DTE has assigned a mix number to the CMDS. The mix design will henceforth be identified as a concrete mix design for production, CMDP.

Any changes or adjustments to the CMDP shall be in accordance with 502.03.

A CMDP developed in accordance with ~~310.05~~the requirements specified herein from a previous contract may be submitted for review for the current contract to the DTE. The DTE will notify the Contractor when the review is complete and whether or not the previously used CMDP can be used on the current contract.

310.06 Concrete Mix Criteria

The CMD shall produce workable concrete mixtures, with the minimum amount of water, and having the following properties.

Minimum portland cement content ..... 235 lbs/cu yd
Maximum portland cement content..... 329 lbs/cu yd
Maximum water/cement ratio..... 0.40
Compressive Strength..... 400 psi min. at 7 days
Coefficient of Permeability..... 350 to 1,500 ft/day

The mix design and all associated testing shall be performed by a laboratory that is CCRL accredited for concrete and AASHTO re:source accredited for soil and aggregates. Compressive strength testing shall be performed in accordance with AASHTO T 22. All cylinders for compressive strength shall be 6 in. diameter by 12 in., molded and standard cured in accordance

with AASHTO T 23. Coefficient of permeability testing shall be performed in accordance with AASHTO T 215. The Contractor shall submit with the mix design the specifications use and test results, the name of the testing laboratory, the date of the tests, and accreditations of the lab running the specified tests. Tests shall be representative of the material to be used for the project.

Absorption tests shall be performed on the fine aggregate in accordance with AASHTO T 84 and on the coarse aggregate in accordance with AASHTO T 85. Absorption test results for a particular size of aggregate that differ by more than 1.0 percentage point from the Department's source value shall be investigated. The Contractor shall report any differences that exceed 1.0% to the Department. The Contractor's results shall be used when calculating the water/cementitious ratio.

No ~~fly~~coal ash or other pozzolans shall be used. Crushed stone shall be used. Chemical admixtures Type A, Type B, Type C, Type D, Type E, Type F, and Type G may be allowed with prior written approval.

310.07 Acceptance

Acceptance of CTPB for field permeability, compressive strength, and thickness will be determined on the basis of tests performed by the Contractor in the presence of the Engineer. The Engineer will randomly select the location for sampling in accordance with ITM 802.

The random sample shall be of sufficient quantity to perform all required tests and obtained in accordance with AASHTO R 60. The compressive strength test results of for each test will be averaged and shall be in accordance with 310.05. Test results will be shared in a timely manner.

Test or Determination	*Frequency*	*Test Method*	*Precision*
Field Permeability	*one per 5,000 sq yds*	*ASTM C1701*	*1 sec*
Thickness	*one per 2,500 sq yds*	*ITM 404*	*0.1 in.*
Compressive Strength	*one per 5,000 sq yds*	*AASHTO T 22*	*1 psi*

Rounding will be in accordance with 109.01(a).

CONSTRUCTION REQUIREMENTS

310.08 Preparation of Grade

The subgrade shall be prepared and proofrolled in accordance with 207.04. When shown on the plans, geosynthetics shall be placed in accordance with 214.03 or as directed. Proofrolling will not be required in trench sections and other areas where proofrolling equipment cannot be used.

310.09 Control Strip

The first day of production, where at least 500 ft has been constructed, shall be considered the control strip. The Contractor shall demonstrate, in the presence of the Engineer, that the materials, equipment, and construction processes meet the requirements of the specification. A

control strip that does not meet construction requirements shall be removed and replaced at no additional cost to the Department. Production shall not continue until the control strip has been accepted by the Engineer. The control strip shall be considered acceptable when aggregate is completely coated with cement paste with no evidence of crushing; the surface is firm, unyielding and stable under compaction equipment, and the layer meets the field permeability in accordance with 310.19.

A new control strip shall be constructed if changes are made to the mix design, equipment, or construction methods.

310.10 Weather Limitation

The CTPB material shall not be mixed or placed while the ambient temperature is below 40°F or when conditions indicate that the temperature may fall below 35°F within 24 h of placement. The CTPB shall not be placed on frozen underlying courses or mixed when aggregate is frozen.

310.11 Mixing and Transportation

The CTPB shall be produced at a mixing plant in accordance with 508.02. The CTPB shall be completely mixed in a central or stationary mixer and transported from the plant to the job site in trucks or other hauling equipment having beds that are smooth and clean. Shrink or transit mixing shall not be used for CTPB.

Discharge from the hauling equipment shall be completed within 45 minutes from the start of mixing the CTPB.

The batch ticket for contract dedicated plants and delivery tickets for ready mix plants shall include the CMDP number. The tickets shall be delivered to the Engineer.

The CTPB material shall not be re-tempered by adding water or by other means.

310.12 Placing

The CTPB material shall be placed using a mechanical spreader, or a conventional HMA paver in accordance with 409.03. The CTPB shall be installed in a single lift at the compacted thickness shown on the plans ~~after having been compacted~~. Mechanical spreaders shall be capable of placing a uniform, full-depth layer of material across the full lane width in one pass. The batches shall be deposited ~~so as~~ to have a uniform mix and require as little rehandling as possible. The CTPB shall not segregate during placement.

CTPB shall not be mixed, placed, or finished when the natural light is insufficient unless an adequate and approved artificial lighting system is operated.

The Contractor shall have available at all times sufficient materials for the protection of uncured CTPB from the effects of rain. Covering material such as burlap or polyethylene sheeting shall be provided. When rain appears imminent, paving operations shall stop. All available personnel shall be used to cover the CTPB.

310.13 Compaction

The Contractor shall compact the CTPB by completing one to three passes of the entire width of the material with a steel-wheeled, two-axle tandem roller weighing between 5 and 12 tons in static mode. The Contractor shall initiate compaction within 30 minutes following the placement. If the rolling pattern results in undue displacement of the surface, or causes crushing of the aggregate, work shall be stopped until the cause can be determined and corrections are made.

In all places not accessible to the rollers, the CTPB material shall be compacted with approved mechanical hand-operated tampers.

310.14 Joints

Longitudinal joints shall be located within 12 in. of the lane lines of the overlying PCCP. All joints shall be made in such a manner as to ensure a continuous bond between old and new material and shall present the same texture and smoothness as other sections of the course.

All contact surfaces of previously constructed courses shall be cleaned of all dirt or other objectionable material and thoroughly moistened with water prior to placing new material.

310.15 Curing

The Contractor shall moist cure the CTPB by spraying the CTPB surface with a fine spray of water every two hours for a period of eight hours. The curing process shall ~~Begin~~begin ~~the curing process~~ the morning after placement of the base. The CTPB shall remain in place for a minimum of three days before placing the subsequent PCCP course.

310.16 Surface Requirements

The Contractor shall check that the finished surface of the CTPB after trimming and compaction is within ± 1/~~2~~ 4 in. longitudinally ~~or~~and transversely, as measured with a 16 ft rolling straightedge in the presence of the Engineer. When the finished surface is more than ± 1/~~2~~ 4 in. from the planned value, the surface shall be corrected to an elevation that falls within ± 1/4 in. of the planned value. All out-of-tolerance surface corrections shall be performed at no additional cost to the Department. The Engineer may approve the removal of high spots to within the specified tolerance by a method which does not produce contamination of the CTPB. Neither grinding nor milling will be allowed.

310.17 Protection of Surface

The CTPB shall not be used as a haul road or storage area. Construction vehicles or equipment shall not be allowed on the CTPB, except for equipment required to place the next course. The Contractor shall remove and replace areas damaged or contaminated at no cost to the Department. The CTPB shall be constructed only in areas where the subsequent course will be paved during the same construction season.

310.18 Bond Breaker

Prior to placing the overlaying PCCP, a geotextile bond breaker shall be placed on the surface to prevent bonding with the CTPB. There shall be a minimum of 3 in. of overlap where adjoining sections of geotextile come together.

310.19 Field Permeability

Field permeability testing shall be performed by the Contractor in the presence of the Engineer. The permeability of the CTPB will be determined in accordance with ASTM C1701. The field permeability will be considered acceptable if the time it takes to pour 40 lbs of water into the ring, while maintaining an acceptable head level, until no free water is on the surface is less than or equal to 8 minutes.

If results from the field permeability test do not meet the requirements, additional tests shall be completed at 100 ft intervals on each side of the original test. These additional testing locations shall be on a line which passes through the original testing location and parallel to the centerline of the CTPB. The testing shall continue in both directions at 100 ft intervals until two successive testing locations meet the requirements, or where testing can no longer be completed on the CTPB.

Where two failed adjacent permeability tests occur, the CTPB shall be removed and replaced at no additional cost to the Department. The limits of removal and replacement shall extend from the original failed testing location to the first additional passing testing location in every direction.

310.20 Thickness

Cores, 4 in. inside diameter, shall be taken in the presence of the Engineer for the full depth of the CTPB. The Engineer will take immediate possession of the cores. Cores shall not be taken within 6 in. of the edge of the CTPB, within 3 in. of longitudinal joints, or within 5 ft of a transverse construction joint. Cores shall be taken and measured in accordance with ITM 404. If the intact core cannot be recovered, the Engineer will measure the thickness of the CTPB based on the depth of the core hole.

All core holes shall be filled with cement grout or rapid setting patch material within 24 h of coring.

If a core measurement reveals that the CTPB is more than 1 in. deficient in thickness, additional cores shall be drilled at 20 ft intervals ~~on each side off~~from the original core. These additional cores shall be on a line which passes through the original core and parallel to the centerline of the CTPB. The drilling shall continue in both directions at 20 ft intervals until two successive cores indicate a thickness deficiency of 1 in. or less, or where cores can no longer be drilled in the CTPB.

When a single core indicates a thickness deficiency of more than 1 1/2 in., or if two or more adjacent cores indicate a thickness deficiency of more than 1 in., the investigation will be expanded to include adjoining CTPB. The additional cores shall be taken from the adjoining traffic lanes or shoulders at the same station at which the first core or cores indicated the deficiency, whether the lane was paved at the same time or not.

The width of adjudicated CTPB shall be the full width of the lane in which the deficiency occurs. CTPB that has been replaced shall be investigated for thickness.

When test results for CTPB thickness do not meet the specified thickness, Department action will be assessed as follows:

Where two adjacent cores indicate a thickness deficiency of more than 1 in., no payment will be made unless the CTPB is removed and replaced. The limits of non-payment shall extend in every direction from the deficient core to the first additional core indicating a thickness deficiency of less than 1 in.

Where two adjacent cores indicate a thickness deficiency of more than 1~~.5~~1/2 in. the CTPB shall be removed and replaced. The limits of removal and replacement shall extend in every direction from the deficient core to the first additional core indicating a thickness deficiency of less than 1 in.

310.21 Compressive Strength

Compressive strength testing shall be performed by the Contractor in the presence of the Engineer. One sample of CTPB ~~will~~shall be taken for compressive strength testing in accordance with AASHTO R 60. Two test cylinders ~~will~~shall be made and standard cured from the sample in accordance with AASHTO T 23 and the 7-day compressive strength of each cylinder determined in accordance with AASHTO T 22. The compressive strength will be computed by averaging the two 7-day compressive strengths.

If the compressive strength of one or more cylinders in a strength test is below 75% of the required strength, the entire test will be considered as failed. Failure to meet the strength requirements in accordance with 310.06 will be cause for rejection of the quantity of concrete represented by the cylinders. All molds, facilities, and materials necessary to prepare and cure the specimens shall be furnished with no additional payment.

310.22 Method of Measurement

CTPB will be measured by the square yard for the thickness specified. The width of the CTPB will be as shown on the plans and will not include any additional width for the safety edge. The length of the CTPB will be measured parallel to the CTPB along the centerline of the roadway or ramp, excluding paving exceptions as shown on the plans.

310.23 Basis of Payment

The accepted quantities of CTPB will be paid for at the contract unit price per square yard for the thickness specified, complete in place.

Payment will be made under:

Pay Item	***Pay Unit Symbol***
Cement Treated Permeable Base	*SYS*

No direct payment will be made for the production of recycled concrete aggregate.

The cost of mixing, transporting, placing, compacting, curing, testing, geotextile, and necessary incidentals shall be included in the cost of the CTPB.

The cost of corrections for the surface requirements shall be included in the cost of ~~cement treated permeable base~~the CTPB.

Furnishing and operating a 16 ft straightedge shall be included in the cost of other pay items within this section.

The cost of coring and refilling of the CTPB holes for disputes caused by deficient thickness shall be included in the cost of CTPB.

Traffic control for disputes caused by deficient thickness shall be supplied with no additional payment.

Removal and replacement of CTPB damaged by freezing shall be completed with no additional payment.

Removal and replacement of CTPB determined to be deficient in thickness shall be completed with no additional payment.

COMMENTS AND ACTION

310-R-xxx CEMENT TREATED PERMEABLE BASE (proposed new)

DISCUSSION:
This item was introduced and presented by Mr. Dave, assisted by Mr. Cosenza, who explained the Background and History for Recycled Concrete Aggregates, RCA, as described on the proposal page. Current specifications now restrict RCA usage to embankments, below underdrains, to mitigate leachate risks.

Last year, INDOT established a focus group to explore ways to reintroduce RCA above the embankment. After extensive research and discussion, the group concluded that RCA should not be pursued as an unbound aggregate base in pavement structures. However, the group recommended developing a specification for using RCA as an aggregate source for Cement-Treated Permeable Base, CTPB.

Mr. Dave proposed to create a new 310 section as shown above, and as described on the proposal page. INDOT has successfully implemented CTPB with virgin aggregates on projects such as I- 65 (R-41841, Des 1802967), and other states like Michigan DOT have demonstrated successful use of RCA in CTPB layers.

Further explanation was provided by Mr. Cosenza.

Following discussions by Mr. White, Mr. Dave and Mr. Cosenza, minor editorial revisions are as shown.

Prior to the meeting:
Mr. Koch asked, concerning 310.04, after completion of what: the test or the contract? Mr. Cosenza responded that it is after completion of the test. Language added. Mr. Koch further stated that the 2000 ton threshold testing for B Borrow is a Contractor duty. Do we have the capacity to perform the testing? Mr. Cosenza proposed the revisions as shown.

Mr. Koch asked, concerning 310.14, if the longitudinal joint is cut in line with the PCCP longitudinal joint, would a seam be created potentially allowing fines to pump as the PCCP ages? Should the joints be staggered? Mr. Cosenza responded that there are no concerns if the longitudinal joints overlap. The bond breaking geotextile placed between the CTPB and PCCP will prevent fines from migrating or pumping.

Mr. Koch asked if it is okay for the CTPB to exposed over winter months? Mr. Cosenza stated that no, the CTPB should be covered to protect it from contamination. Plastic sheeting would probably be acceptable as a cover during the winter shutdown. Mr. Koch asked if language will be added for that. Mr. Cosenza responded that he is not sure if it's necessary, but is fine with adding if desired. Subgrade treatment, FDR, aggregates, HMA, OG HMA and none of those sections have a specific requirement to cover/protect during winter stoppage. The only requirement I could find was in 503 that PCCP joints need to be sealed before stopping work for the winter. Mr. Koch asked if that language could be added.

With regard to 310.16, Mr. Koch asked if it is necessary to correct the conformance to better than elsewhere? Mr. Cosenza responded that yes, since the elevation of the CTPB affects the final thickness of the PCCP.
Mr. Koch stated that we typically check smoothness with a 16 ft straight edge set to ¼ in. of clearance. Are we asking that the straight edge be set to ½ in. of clearance and if it scrapes, to correct to ¼ in.? Or are we wanting the CTPB to be 'within close conformance' and then perform a standard ¼ in. straight edge?
Mr. Cosenza clarified to set the straight edge to ½ in. of clearance, and if it scrapes, then correct to ¼ in.

Mr. Nantung mentioned that we need to address the surface of the CTPB. There should be a bond breaker between the CTPB and the concrete pavement on the top, otherwise reflective cracks will appear. I prefer they put white pigmented curing compound and there should be no rain after placing the curing compound and placing of the concrete pavement on the top. Mr. Koch agreed and stated that 310.18 addresses the bond breaker. Generally non-woven geotextile should drainage better than woven yet would the PCCP plug the fabric during installation hinder the dissipation of water within the pavement structure? Mr. Cosenza responded that Non-woven Geotextiles have been used for many years on unbound concrete overlays. As far as I am aware, the concrete paste is not viscous

COMMENTS AND ACTION

310-R-xxx CEMENT TREATED PERMEABLE BASE (proposed new)

enough to clog geotextile. Cores have been taken in the studies showing the geotextile remains intact and visible between the two concrete layers.

In response to Mr. Leckie's questions, Mr. Cosenza replied that yes, recycled concrete is optional and the virgin aggregate can be used. The two can even be blended; it wouldn't surprise me if we see a mix design using the recycled concrete as the coarse agg and sand as the fine agg. Also, there is some ability in the current spec to stockpile the recycled concrete at a CAPP plant for later use. Recycled concrete aggregates processed from adjacent or nearby contracts may be allowed if approved by the Engineer and documented in the QCP. It's vague, but to start, we didn't want to leave it open where plants were stockpiling concrete from multiple projects, expecting to use it later.

In response to the above discussions and concerns, Mr. Cosenza proposed the revisions as shown.

Mr. Duncan, FHWA, proposed clarification revisions to 310.12, regarding compaction, as shown above.

Mr. Dave revised his motion, which was seconded by Mr. Reilman.

There was no further discussion and this item passed as revised.

Motion: Mr. Dave Second: Mr. Reilman Ayes: 10 Nays: 0 FHWA Approval: YES	**Action:** __ Passed as Submitted X Passed as Revised __ Withdrawn
2026 Standard Specifications Sections: SECTION 310 (proposed new) Recurring Special Provisions or Plan Details: Proposed new Standard Drawing affected: NONE Design Manual Chapter: 602-3.02(04) and 602-3.03(01) GIFE Section: NONE	__ 2028 Standard Specifications X Revise Pay Items List __ Notification to Designers if change is not addressed by RSP X Create RSP (No. 310-R-803) Effective: March 1, 2026 __ Revise RSP (No.__) Effective: __ Standard Drawing Effective: __ Create RPD (No. __) Effective: __ GIFE Update X Frequency Manual Update X AWP Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Some language was unclear for the soil requirements and the availability of the No. 5 aggregate during construction.

PROPOSED SOLUTION: A table was created and inserted into the section, clarifying language was added, the sulfate test was added, and No. 5 was removed.

APPLICABLE STANDARD SPECIFICATIONS: 203.09

APPLICABLE STANDARD DRAWING: None

APPLICABLE DESIGN MANUAL CHAPTER: None

APPLICABLE SECTION OF GIFE: Yes

APPLICABLE RECURRING SPECIAL PROVISION OR PLAN DETAILS: Yes

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad Hoc committee consisting of Nayyar Siddiki and Samuel Clawson

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

IMPACT ANALYSIS (attach report): Yes

Submitted By: Jim Reilman and Nayyar Siddiki

Title: State Materials Engineer

Division: Materials and Test

E-mail: Jreilman@INDOT.IN.GOV

Date: 7/21/2025

IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No
Will approval of this item affect the Qualified Products List (QPL)? No
Will this proposal improve:

Construction costs? No
Construction time? Yes
Customer satisfaction? Yes
Congestion/travel time? No
Ride quality? No

Will this proposal reduce operational costs or maintenance effort? No

Will this item improve safety:

For motorists? No
For construction workers? No

Will this proposal improve quality for:

Construction procedures/processes? Yes
Asset preservation? No
Design process? No

Will this change provide the contractor more flexibility? Yes

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

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

Is this proposal needed for compliance with:

Federal or State regulations? No
AASHTO or other design code? No

Is this item editorial? No

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

The Standard Specifications are revised as follows:

SECTION 203, BEGIN LINE 338, DELETE AND INSERT AS FOLLOWS:

203.09 General Requirements

The excavation and embankments for the roadway, intersections, and entrances shall be finished to reasonably smooth and uniform surfaces. Excavated materials shall not be wasted without permission. Excavation operations shall be conducted so that material outside the limits of slopes will not be disturbed. Prior to beginning excavation, grading, or embankment operations in any area, all necessary clearing and grubbing in that area shall have been performed in accordance with 201.

The Contractor shall stabilize an area if disturbed ground is anticipated to be left bare and unworked for seven consecutive calendar days or if directed. The stormwater management control features shall be installed in accordance with 205 or as otherwise directed. The area of the exposed materials shall be limited by the Contractor's capacity to adequately maintain permanent and temporary stormwater management control features.

~~Soils containing organic material greater than 6% by dry weight, or soils with a maximum dry density of less than 90 pcf shall not be incorporated in the embankment. Organic content will be determined in accordance with AASHTO T 267, and maximum dry density will be determined in accordance with AASHTO T 99~~*Soils meeting the following criteria will be allowed to be used in embankment~~.~~:*

Soil Property	*Test Method*	*Requirements*
Dry Weight Organic Material	*AASHTO T 267*	*~~≥~~≤ 6 %*
Maximum Dry Density	*AASHTO T 99*	*≥ ~~≤~~90 pcf*
Soluble Sulfate	*ITM 510*	*≤ 1,000 ppm*

Frozen materials, stumps, roots, all or parts of trees, brush, weeds, sod, *all spongy, yielding, soft, and unstable materials,* or other perishable materials shall not be incorporated in the embankment. ~~Rocks greater than 3 in. in any dimension shall not be left within 18 in. of the finished subgrade~~*Removed materials may only be used in embankment construction if they are constructed in accordance with 203.23.* The original ground surface, or the surface of any lift in place shall not be frozen and shall be free of snow, ice, or mud.

~~All vegetation, all spongy, yielding, soft, and unstable materials, which are encountered, shall be removed as shown on the plans or as directed. Removed materials may only be used in embankment construction if they are constructed in accordance with 203.23.~~

After clearing of the embankment area and prior to embankment placement, all pronounced depressions left in the original ground shall be filled with suitable material and compacted in accordance with 203. Proofrolling of the natural ground surface shall be performed in accordance with 203.26 within all areas where new fill shall be placed.

If the original ground cannot be compacted to the required strength because of soft or unstable soils, the use of stabilizing materials consisting of coarse aggregate No. ~~5~~*2* encapsulated in geotextile, in accordance with 214.03(a), or soil ~~drying~~*stabilizing* with a chemical modifier in accordance with ~~217~~*215* shall be used as directed. The coarse aggregate materials used for stabilization shall be 1 to 2 ft thick and shall allow the encapsulated material in the embankment to drain.

When free water is encountered, backfilling shall be accomplished using ~~B borrow~~*sand or other approved material*, in accordance with ~~904.06~~*903.02*. ~~with the exception that~~ ACBF or GBF shall not be used *in backfilling*. Backfilling using ~~B borrow~~*sand or other approved material* shall occur to an elevation at least 2 ft above the free water level. ~~Compaction of the B borrow placed above the free water level shall be accomplished using heavy vibratory equipment.~~

The use of hydraulic methods to construct embankments will be allowed only when authorized in writing. Only ~~B borrow~~*sand or other approved material* without ACBF or GBF shall be placed below the free water level. Backfill at structures shall be in accordance with 211.04.

The embankment shall be kept drained at all times by keeping the center higher than the sides and uniformly graded. *Side ditches shall be constructed as directed prior to the construction of the embankment.*

Each embankment lift shall extend transversely over the entire area and shall be kept smooth. When fill materials are deposited in large masses onto the embankment, the materials shall be spread out in uniform lifts. *Rocks greater than 3 in. in any dimension shall not be left within 18 in. of the finished embankment.* Rock or shale used for embankment construction shall be in accordance with 203.20.

When grading operations are performed in non-daylight hours, artificial lighting shall be provided and maintained, to enable the construction and inspection of the operations.

When the embankment soils are granular, silty loam, sandy loam, *or* silts, ~~or when the plasticity index of the material is less than 8,~~ the embankment shall be encased with materials consisting of silty clay loam, clay loam, sandy clay loam, or silty clay of 12 in. minimum depth measured perpendicular to the face of the slope. ~~The plasticity index for these materials shall be equal to or greater than 8 and the organic content shall not exceed 6%.~~ The surface of any necessary encasement shall meet the finished slope limits shown on the plans or as directed.

All slopes to be graded and not immediately stabilized with stormwater management control measures shall be roughened, as described herein, until stormwater management control measures are placed. The soil slopes shall be roughened to create a series of ridges and depressions parallel to the contour by making grooves at least 1 in. deep and not more than 15 in. apart. Slopes shall be stabilized in accordance with 205. Roughening shall take place each day after work is performed on the slopes, or as directed to re-establish the roughening.

Sufficient quantities of excavated materials suitable for the growth of vegetation shall be preserved from within the planned excavation area and used on constructed cut, fill, and shoulder slopes to help develop the growth of vegetation. Materials suitable for vegetative growth shall be at least 6 in. deep or as indicated within the contract documents and shall be measured perpendicular to the face of the slope. *This material shall have a pH value~~be~~ in accordance with 914.01 prior to placement.* Unless otherwise provided, no additional compensation will be allowed for this work, except payment will be made for the class of excavation involved for authorized undercutting of back slopes. Encasement of rock embankment and cut slopes will not be required unless otherwise directed. *The material placed on backslopes of cut sections shall be placed in accordance with 203.21.*

~~Material suitable for the growth of vegetation shall be in accordance with 914.01 prior to placement. The material placed on backslopes of cut sections shall be placed in accordance with 203.21.~~

If sufficient excavation materials suitable for the growth of vegetation and used on constructed cut, fill, and shoulder slopes are not available, borrow or other material suitable for vegetative growth shall be furnished. The sources of all borrow material shall be in accordance with 203.08 and 914.01. Payment for borrow will be made in accordance with 203.28. If the contract does not contain a pay item for borrow, a change order will be executed for payment of borrow. Suitable portions of common excavation may be preserved or borrow material may be furnished for encasement provided all suitable excavation is used constructively.

COMMENTS AND ACTION

203.09 General Requirements

DISCUSSION:

This item was introduced and presented by Mr. Reilman who stated that some language was unclear for the soil requirements and the availability of the No. 5 aggregate during construction.

Mr. Reilman proposed to create a table and insert the table into the section. Clarifying language was added, the sulfate test was added, and No. 5 was removed. Other minor editorial revisions were made by Mr. Reilman, as shown.

Mr. Koch asked about the new table in 203.09, and if the new language should say “will” or “will not”. Mr. Clawson proposed the changes shown in the table, meaning that the language shall remain as “will”.

Mr. Koch stated that using existing topsoil can be a cost saving and sufficient for use. Can the requirement for formal topsoil and testing be removed, in reference to 914.01? Mr. Clawson responded that they feel that it is important for the topsoils to be put through a simple pH test, as described in 914.01, prior to being placed.

Mr. Koch commented that if during the design, we believe that soils may be lacking, RSP 629-R-791 should be implemented, yet at times we have an abundance of topsoil. By requiring topsoil in accordance with 914.01 we would effectively implement a ‘lite’ version of 629-R-791 by amending with lime. Spec section 203 does mention no additional payment which could also mean we would not be paying for lime amendments if the 629 RSP is included, creating a conflict. If we have sufficient topsoil, ideally we would not increase costs by requiring further testing and amendments. Please either consider striking the 914.01 reference or perhaps switch the language to MAY, instead of shall.

Following discussions with Mr. Siddiki and Mr. Clawson, that language has been revised as shown. Mr. Koch agreed with this revision.

Mr. Reilman revised his motion, which was seconded by Mr. Koch.

There was no further discussion and this item passed as revised.

[continued on next page]

COMMENTS AND ACTION

203.09 General Requirements

[continued]

Motion: Mr. Reilman Second: Mr. Hauser Ayes: 10 Nays: 0 FHWA Approval: YES	**Action:** ___ Passed as Submitted _X_ Passed as Revised ___ Withdrawn
2026 Standard Specifications Sections: 203.09 pg. 159-162. Recurring Special Provisions or Plan Details: NONE Standard Drawing affected: NONE Design Manual Chapter: NONE GIFE Section: TBD	_X_ 2028 Standard Specifications ___ Revise Pay Items List ___ Notification to Designers if change is not addressed by RSP _X_ Create RSP (No. 203-R-xxx) Effective: March 1, 2026 ___ Revise RSP (No.___) Effective: ___ Standard Drawing Effective: ___ Create RPD (No. ___) Effective: _X_ GIFE Update ___ Frequency Manual Update ___ AWP Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: The original rock embankment construction was not clear enough for designers, often times the designer asked about the embankment and the subgrade.

PROPOSED SOLUTION: We reduced the overburden of the rock embankment, we added a geotextile separation layer between the coarse and finer material, and clarification language was added.

APPLICABLE STANDARD SPECIFICATIONS: 203.20

APPLICABLE STANDARD DRAWING: None

APPLICABLE DESIGN MANUAL CHAPTER: None

APPLICABLE SECTION OF GIFE: Yes

APPLICABLE RECURRING SPECIAL PROVISION OR PLAN DETAILS: Yes

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad Hoc committee consisting of Nayyar Siddiki, Mike Koch, and Samuel Clawson

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

IMPACT ANALYSIS (attach report): Yes

Submitted By: Jim Reilman and Nayyar Siddiki

Title: State Material Engineer

Division: Materials and Test

E-mail: Jreilman@INDOT.IN.GOV

Date: 7/21/2025

IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No
Will approval of this item affect the Qualified Products List (QPL)? No
Will this proposal improve:

Construction costs? Yes
Construction time? Yes
Customer satisfaction? Yes
Congestion/travel time? No
Ride quality? Yes

Will this proposal reduce operational costs or maintenance effort? Yes

Will this item improve safety:

For motorists? No
For construction workers? No

Will this proposal improve quality for:

Construction procedures/processes? Yes
Asset preservation? No
Design process? 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? N/A
AASHTO or other design code? N/A

Is this item editorial? No

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

The Standard Specifications are revised as follows:

SECTION 203, BEGIN LINE 853, DELETE AND INSERT AS FOLLOWS:

203.20 Rock and Shale Embankment

Utilization of these materials in embankment construction shall be in accordance with the following.

(a) Rock Embankment

Where rock is used for embankment, no large stones shall be allowed to nest but shall be distributed over the area to avoid pockets. Voids shall be filled carefully with small stones. The final ~~2 ft~~*6 in.* of the embankment ~~just below the subgrade elevation shall be composed of suitable material placed in layers not exceeding 8 in. loose measurement and compacted to the required density~~*shall be constructed with aggregate No. 53 in accordance with 301.* ~~Shale~~*Rock* or shale-like materials shall not be incorporated in the upper ~~2 ft~~*6 in.* of the embankment. *A geotextile in accordance with 918.02(a), Type 2A shall be placed between the rock and aggregate No. 53 in the embankments described below. The lift thickness shall be 2 ft.*

~~*Where*~~*When the depth of an embankment is less than or equal to 10 ft, the material shall be placed in lifts. The material placed in the rock embankment lift shall not exceed 1 ft in each direction. The material shall be spread with a track mounted dozer or other equipment having a minimum effective weight of 40 t.* ~~*Each layer*~~*The material shall be thoroughly choked with small broken stone* ~~*or other suitable material and be compacted with a minimum of 8 passes with a track-mounted roller having a minimum effective weight of 40 t*~~*and compacted with a vibratory roller. The final 6 in. of the embankment*~~*, including the subgrade,Each layer shall be thoroughly choked with broken stone or other suitable material and be compacted with a minimum of 8 passes with a track-mounted roller having a minimum effective weight of 40 t. The final 6 in. of the embankment, including the subgrade,*~~ *shall be constructed in accordance with 301.*

~~Where~~*When* the depth of an embankment exceeds ~~5~~*10* ft and ~~is to~~ consist*s* entirely of rock, the rock shall be deposited in lifts not to exceed ~~the top size of the material being placed, but in no event exceeding 4~~*2* ft. The rock for any particular lift shall be deposited on and pushed over the end of the lift being constructed by means of ~~bulldozers~~*a track mounted dozer* or other approved equipment. Depositing of rock over the end of any lift from hauling equipment will not be allowed. If the voids of the last lift are not closed sufficiently, they shall be choked with small broken stone or other suitable material and compacted ~~as directed. A geotextile in accordance with 918.02(a), Type 2A shall be placed between the rock and the soil.~~*with a vibratory roller.* ~~*minimum of 8 passes*~~*The material shall be spread with a track -mounted* ~~*roller*~~*dozer or other equipment having a minimum effective weight of 40 t* ~~*on each 5 ft lift minimum of 8 passes with a track-mounted roller having a minimum effective weight of 40 t on each 5 ft lift*~~*. The final 6 in. of the embankment shall be constructed in accordance with 301.*

~~Where the depth of embankment is 5 ft or less, or where the material being placed does not consist entirely of rock, the material shall be placed in lifts not to exceed the top size of the rock being placed but not exceeding 2 ft. Each layer shall be choked thoroughly with broken stone or~~

~~other suitable material and be compacted to the required density or as directed. A geotextile in accordance with 918.02(a), Type 2A shall be placed between the rock and the soil.~~

Proofrolling shall be performed on the final lift of the embankment in accordance with 203.26.

Where a rock fill is to be placed over a structure, the structure shall first be covered with 2 ~~to 4~~ ft of ~~earth~~*B borrow* or other approved material *as directed* and properly compacted before the rock is placed. This covering shall be placed in accordance with 203.19.

~~Shale shall not be incorporated as rock embankment unless written permission is obtained.~~

COMMENTS AND ACTION

203.20 Rock and Shale Embankment

DISCUSSION:
Mr. Reilman introduced and presented this item stating that the original rock embankment construction was not clear enough for designers. Often times the designer asked about the embankment and the subgrade.

Mr. Reilman proposed to reduce the overburden of the rock embankment, add a geotextile separation layer between the coarse and finer material, and add language for clarification.

Some editorial revisions were made by Mr. Reilman, as shown.

Mr. Clawson stated that at this time, he and Mr. Siddiki feel that 203.20 Rock Embankment still needs more work and as such are planning to retract this submission and continue working on it a little longer.

Mr. Reilman withdrew this item, and welcomes any additional comments, questions, thoughts. If so, please forward those on to Mr. Siddiki and Mr. Clawson.

Motion: Mr. Second: Mr. Ayes: Nays: FHWA Approval:	**Action:** ___ Passed as Submitted ___ Passed as Revised _X_ Withdrawn
2026 Standard Specifications Sections: 203.20 pg. 171. Recurring Special Provisions or Plan Details: NONE Standard Drawing affected: NONE Design Manual Chapter: NONE GIFE Section: TBD	___ 2028 Standard Specifications ___ Revise Pay Items List ___ Notification to Designers if change is not addressed by RSP ___ Create RSP (No._) Effective: ___ Revise RSP (No.___) Effective: ___ Standard Drawing Effective: ___ Create RPD (No. ___) Effective: ___ GIFE Update ___ Frequency Manual Update ___ AWP Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: The original specification does not include the drainage requirement for when the new embankment is constructed or widened on the slope that causes landslides.

PROPOSED SOLUTION: Added requirements for improving drainage.

APPLICABLE STANDARD SPECIFICATIONS: 203.21

APPLICABLE STANDARD DRAWING: None

APPLICABLE DESIGN MANUAL CHAPTER: None

APPLICABLE SECTION OF GIFE: Yes

APPLICABLE RECURRING SPECIAL PROVISION OR PLAN DETAILS: Yes

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad Hoc committee consisting of Nayyar Siddiki, Mike Koch, and Samuel Clawson

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

IMPACT ANALYSIS (attach report): Yes

Submitted By: Jim Reilman and Nayyar Siddiki

Title: State Material Engineer

Division: Materials and Test

E-mail: Jreilman@INDOT.IN.GOV

Date: 7/21/2025

IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No
Will approval of this item affect the Qualified Products List (QPL)? No
Will this proposal improve:

Construction costs? No
Construction time? Yes
Customer satisfaction? Yes
Congestion/travel time? No
Ride quality? Yes

Will this proposal reduce operational costs or maintenance effort? Yes

Will this item improve safety:

For motorists? Yes
For construction workers? No

Will this proposal improve quality for:

Construction procedures/processes? Yes
Asset preservation? Yes
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? No
AASHTO or other design code? No

Is this item editorial? No

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

The Standard Specifications are revised as follows:

SECTION 203, BEGIN LINE 955, DELETE AND INSERT AS FOLLOWS:

203.21 Embankment on Hillsides or Slopes

The side ditches and drainage blankets shall be constructed prior to the embankment construction. Drainage blankets shall be in accordance with 214.03. ~~Before a~~*A*~~n~~ ~~*embankment*~~ *E*mbankment ~~is~~ *shall be* placed on ~~natural soil slopes or~~*a drainage blanket when* existing fill slopes ~~of~~*are* 4:1 or flatter~~,~~. ~~the existing ground surfaces shall be plowed or deeply scarified or,~~ ~~i~~If the nature of the ground indicates greater precautions should be taken for integrating the proposed fill materials with the existing slopes, benches shall be cut into the existing slopes before fill placement is started. ~~All such precautionary work shall be done as directed. No direct payment will be made for plowing or scarifying, the cost thereof shall be included in the various pay items of the contract. Before an embankment is placed on natural soil slopes or existing fill slopes steeper than 4:1,~~ ~~b~~*B*enches a minimum of 10 ft wide, unless otherwise specified, shall be cut into the slopes prior to the placement of embankment fill *when the existing fill slopes or natural soil slopes are steeper than 4:1*. If benches are cut, the excavation involved will be paid for at the contract unit price per cubic yard for the class or classes of excavation encountered. ~~*The cost thereof shall be included in the cost of the pay items of this section.*~~

COMMENTS AND ACTION

203.21 Embankment on Hillsides or Slopes

DISCUSSION:
This item was introduced and presented by Mr. Reilman, assisted by Mr. Siddiki, who explained that the original specification does not include the drainage requirement for when the new embankment is constructed or widened on the slope that causes landslides.

Mr. Reilman proposed to add requirements for improving drainage, as shown above.

A minor editorial revision is as shown. Mr. Clawson also proposed revisions as shown along with the revised language as proposed by Mr. Reilman.

Mr. Reilman revised his motion, which was seconded by Mr. Dave.

There was no further discussion and this item passed as revised.

Motion: Mr. Reilman Second: Mr. Hauser Ayes: 10 Nays: 0 FHWA Approval: YES	**Action:** __ Passed as Submitted X Passed as Revised __ Withdrawn
2026 Standard Specifications Sections: 203.21 pg. 173. Recurring Special Provisions or Plan Details: NONE Standard Drawing affected: NONE Design Manual Chapter: NONE GIFE Section: TBD	X 2028 Standard Specifications __ Revise Pay Items List __ Notification to Designers if change is not addressed by RSP X Create RSP (No. 203-R-xxx) Effective: March 1, 2026 __ Revise RSP (No.__) Effective: __ Standard Drawing Effective: __ Create RPD (No. __) Effective: X GIFE Update __ Frequency Manual Update __ AWP Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: In May 2025, changes were made to the 901 cement section. It has come to the Department's attention that additional changes are needed.

PROPOSED SOLUTION: Incorporate the additional changes shown into RSP 901-M-069.

APPLICABLE STANDARD SPECIFICATIONS: 901.01

APPLICABLE STANDARD DRAWINGS: None

APPLICABLE DESIGN MANUAL SECTION: None

APPLICABLE SECTION OF GIFE: None

APPLICABLE RECURRING SPECIAL PROVISIONS: 901-M-069

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad hoc: Matt Beeson, Mike Nelson, Jim Reilman

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

IMPACT ANALYSIS (attach report):

Submitted By: Jim Reilman

Title: State Materials Engineer

Organization: INDOT

Phone Number: (317) 522-9692

Date: 7/28/25

IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No
Will approval of this item affect the Qualified Products List? No
Will this proposal improve:

Construction costs? No
Construction time? Yes
Customer satisfaction? Yes
Congestion/travel time? N/A
Ride quality? N/A

Will this proposal reduce operational costs or maintenance effort? Yes

Will this item improve safety:

For motorists? N/A
For construction workers? N/A

Will this proposal improve quality for:

Construction procedures/processes? Yes
Asset preservation? Yes
Design process? N/A

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

Will this proposal provide clarification for the Contractor and field personnel? N/A

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

Is this proposal needed for compliance with:

Federal or State regulations? No
AASHTO or other design code? No

Is this item editorial? No

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

901-M-069 PORTLAND CEMENT*S AND BLENDED CEMENTS*

(Adopted 05-15-25)

The Standard Specifications are revised as follows:

SECTION 901, BEGIN LINE 18, DELETE AND INSERT AS FOLLOWS:

(b) Portland Cement*s and Blended Cements*

Portland cement*s and blended cements* shall ~~conform to the requirements of the following specifications except as noted~~*be furnished from a source listed on the QPL of Cement Sources. Cement sources will be considered for inclusion on the QPL by completing the requirements in ITM 806, Procedure X.*

1. Requirements

Portland cements and blended cements shall be in accordance with the following specifications and exceptions.

Cement	Specifications
Air-Entraining Portland Blast-Furnace Slag Cement	AASHTO M 240, Type IS-A
Air-Entraining Portland Cement~~**~~	AASHTO M 85, Type IA or IIIA
Air-Entraining Portland-Pozzolan Cement	AASHTO M 240, Type IP-A
Portland Blast-Furnace Slag Cement	AASHTO M 240, Type IS
Portland Cement~~**~~	AASHTO M 85, Type I, II, or III
Portland-Limestone Cement	AASHTO M 240, Type IL*(~~8t~~*)*
Portland-Pozzolan Cement	AASHTO M 240, Type IP

* *The cement manufacturer may select their target percentage by mass, t, of limestone in the finished blended IL cement, however the amount of limestone in the finished blended cement shall not exceed 10% by mass of the blended cement. Every variation and tolerance in all production variables shall be accounted for such that the amount of limestone in the finished blended IL cement does not exceed 10% by mass of the blended cement.*

~~** If a manufacturer or distributor elects to supply portland cement with a higher sulfur trioxide content in accordance with footnote B from Table 1 in AASHTO M 85, they shall supply all the required supporting data to the Department's Division of Materials and Tests prior to supplying such cement.~~

The exceptions to AASHTO M 240 are as follows:

a. Section 7.1.3 shall read as follows, Portland-Pozzolan Cement – Portland pozzolan cement shall be a hydraulic cement in which the pozzolan constituent is up to 20% by mass of the blended cement.

~~a.~~b Section 7.1.5~~, the limestone content in the portland-limestone cement shall be~~shall read as follows, Portland-Limestone Cement – Portland-limestone cement shall be a hydraulic cement in which the limestone content is more than 5% but less than or equal to 10% by

mass of the blended cement.

~~a~~*c*. The amount of pozzolan shall be limited to 20% ±5% by weight of the portland-pozzolan cement for types IP and IP-A.

~~b~~*d*. The pozzolan in the portland-pozzolan cements, types IP and IP-A, shall be in accordance with ASTM C618, Class C or Class F with the loss on ignition of the pozzolan limited to a maximum of 3%.

~~c~~*e*. The pozzolan in the portland-pozzolan cements, types IP and IP-A, shall be interground with the portland cement clinker.

2. ~~Acceptance Criteria~~*Blank*

~~Portland cements and blended cements will be accepted based upon the manufacturer's or distributor's documented ability to consistently furnish these materials in accordance with the applicable AASHTO requirements.~~

~~a. General Requirements~~

~~Cements shall comply with the applicable requirements of 901 and will be accepted by certification from qualified manufacturers or distributors. The manufacturer is defined as the plant producing the cement. A manufacturer or distributor shall become qualified by establishing a history of satisfactory quality control of cement produced as evidenced by results of tests performed by a testing laboratory which is regularly inspected by the Cement and Concrete Reference Laboratory of the NIST and Technology. Proof of such inspection shall be furnished upon request. All certifications shall be prepared by the manufacturer or distributor in accordance with the applicable requirements of 916.~~

~~If a manufacturer or distributor elects to supply portland cement with a higher sulfur trioxide content in accordance with footnote B from Table 1 in AASHTO M 85, they shall supply all the required supporting data to the Department's Division of Materials and Tests prior to supplying such cement. A QPL of Cement Sources will be maintained by the Department.~~

~~The manufacturer or distributor shall conduct sufficient tests to confirm that adequate quality control is maintained and that cement furnished is in accordance with the specification requirements. Documentation pertaining to cement shipped on certification shall be maintained for a period of at least three years and shall be provided when requested.~~

~~Random samples of cement will be obtained at the concrete plant. If the sample is not in accordance with the specification requirements, an investigation will be conducted. A copy of the findings and conclusions resulting from the investigation will be furnished to the Contractor. Unless the investigation finds the Department is responsible for the failure to comply, the cost of the investigation plus any required corrective action will be assessed to the Contractor.~~

~~b. Requirements for Domestic Source Qualification~~

~~Cement manufacturers requesting to be qualified to supply cement shall provide the following:~~

(1) For the initial qualification, the manufacturer shall provide to the Department's Division of Materials and Tests a QCP in accordance with the applicable requirements of ITM 806. The QCP shall also include the location and type of samples taken, and a monthly summary of mill test data for the previous year's production. A current SDS shall be submitted as an integral part of the initial qualification package.

(2) To maintain qualification, a monthly average of mill test data shall be submitted to the Department's Division of Materials and Tests. If a specific type of cement is not manufactured in a given month, the monthly submittal shall state "No type_____ cement was manufactured during the month of _____, 20____".

c. Requirements for Foreign Source Qualification

Foreign cement manufacturers or their domestic distributors requesting to be qualified to supply cement shall provide the following:

(1) For the initial qualifications, the manufacturer and distributor shall provide to the Department's Division of Materials and Tests a QCP in accordance with the applicable requirements of ITM 806. The QCP shall also include the location and type of samples taken and a summary of complete test results from the proposed cement source. A current SDS shall be submitted as an integral part of the initial qualification package. The QCP shall explain the linkage between the cement being furnished and the manufacturer's or distributor's quality control data, relative to ship-loads, barge-loads, railroad car-loads, and other applicable loads.

(2) Once the initial qualifications have been met, the manufacturer or distributor shall be required to furnish the cement test results for each shipment prior to Department cement usage for the first five cement shipments intended for Department use. The test results for all five of these cement shipments shall fully comply with the required material specifications. If not, this requirement will be continued for subsequent cement shipments until five consecutive cement shipment test results fully comply with the required material specifications, or Department source approval is withdrawn due to the inability to consistently supply satisfactory cement.

(3) To maintain qualification after compliance with the previous requirements, a monthly submission of all cement shipment test results for cement intended for Department usage shall be

~~submitted to the Department's Division of Materials and Tests. If no cement shipments are received during a given month, the monthly submittal shall state "No cement was received during the month of _____, 20____".~~

~~**d. Certification**~~

~~Only manufacturers and distributors included on the QPL of Cement Sources may furnish cement on certification. A sample certification form addressing all required information is included in ITM 804. Alternate procedures and forms will be considered when requested and will be approved if there is a positive link between the cement furnished and the manufacturer's quality control data.~~

SECTION 901, BEGIN LINE 147 DELETE AND INSERT AS FOLLOWS:

(d) Rapid Hardening Hydraulic Cement

Rapid hardening hydraulic cement shall be calcium sulfoaluminate, CSA, cement furnished from a manufacturer or manufacturer/distributor on the QPL of Cement Sources. A source will be considered for inclusion on the QPL by completing the requirements of ~~901.01(b)2b or 901.01(b)2c~~*ITM 806 Procedure X*.

COMMENTS AND ACTION

901-M-069 PORTLAND CEMENT

DISCUSSION:
This item was introduced and presented by Mr. Reilman who stated that in May 2025, changes were made to the 901 cement section. It has come to the Department's attention that additional changes are needed.

Mr. Reilman proposed to incorporate the additional changes shown into RSP 901-M-069.

Mr. Reilman proposed the above shown revisions following comments from industry, which was presented by Mr. Leckie of the ACPA.

Mr. Reilman revised his motion, which was seconded by Mr. White.

There was no further discussion and this item passed as revised.

Post-meeting: at the request of Mr. Reilman and with concurrence by the chairman of this meeting, Mr. Novak, the effective letting date has been changed from March 1, 2026 to December 1, 2025.

Motion: Mr. Reilman Second: Mr. White Ayes: 10 Nays: 0 FHWA Approval: YES	**Action:** __ Passed as Submitted X Passed as Revised __ Withdrawn
2026 Standard Specifications Sections: 901 pgs. 983-986. Recurring Special Provisions or Plan Details: 901-M-069 PORTLAND CEMENT Standard Drawing affected: NONE Design Manual Chapter: NONE GIFE Section: NONE	__ 2028 Standard Specifications __ Revise Pay Items List __ Notification to Designers if change is not addressed by RSP __ Create RSP (No.__) Effective: X Revise RSP (No. 901-M-069) Effective: ~~March 1, 2026~~*December 1, 2025* __ Standard Drawing Effective: __ Create RPD (No. __) Effective: __ GIFE Update __ Frequency Manual Update __ AWP Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Some of the potable water found in cities has a higher sulfate content which is thought to be causing heaving in cement modified soils.

PROPOSED SOLUTION: Require that potable water needs to be tested in accordance with the 913.01 table.

APPLICABLE STANDARD SPECIFICATIONS: 913.01

APPLICABLE STANDARD DRAWING: None

APPLICABLE DESIGN MANUAL CHAPTER: None

APPLICABLE SECTION OF GIFE: Yes

APPLICABLE RECURRING SPECIAL PROVISION OR PLAN DETAILS: None

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad Hoc Committee composed of Nayyar Siddiki and Samuel Clason

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

IMPACT ANALYSIS (attach report):

Submitted By: Jim Reilman and Nayyar Siddiki

Title: State Material Engineer

Division: Materials and Test

E-mail: Jreilman@indot.in.gov

Date: 7/21/2025

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? Yes
Will approval of this item affect the Qualified Products List (QPL)? No
Will this proposal improve:

Construction costs? No
Construction time? No
Customer satisfaction? N/A
Congestion/travel time? N/A
Ride quality? N/A

Will this proposal reduce operational costs or maintenance effort? Yes

Will this item improve safety:

For motorists? Yes
For construction workers? No

Will this proposal improve quality for:

Construction procedures/processes? Yes
Asset preservation? Yes
Design process? N/A

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

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

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

Is this proposal needed for compliance with:

Federal or State regulations? No
AASHTO or other design code? No

Is this item editorial? No

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

The Standard Specifications are revised as follows:

SECTION 913, BEGIN LINE 3, DELETE AND INSERT AS FOLLOWS:

913.01 Water

Water shall be clean and free of oil, algae, salt, acid, alkali, sugar, vegetable, or other substance injurious to the finished product.

Where the source of water is relatively shallow, the intake shall be enclosed to exclude silt, mud, grass, or other foreign materials. Water shall be tested in accordance with the test methods listed in the table below.

To be acceptable for use, the results of the water testing shall be in accordance with the following results:

Property	Test Method	Result
pH	ASTM D1293	6.0 to 8.0
Chloride Ions	ASTM D512	less than 300 ppm
Sulfate (SO_4)	ASTM D516	less than 500 ppm
Total Solids	ASTM C1603	less than 1,500 ppm

A Type A certification in accordance with 916 shall be provided for ~~*potable and*~~ non-potable sources. *A Type A certification in accordance with 916 shall be provided for potable sources when the water is being used in conjunction with 207, 215, 217, or 219 work.* The results of the tests listed in the table above shall be provided on the certification.

~~Water known to be of potable quality may be used without testing.~~

COMMENTS AND ACTION

913.01 Water

DISCUSSION:
This item was introduced and presented by Mr. Reilman who stated that some of the potable water found in cities has a higher sulfate content which is thought to be causing heaving in cement modified soils.

Mr. Reilman proposed to require that potable water needs to be tested in accordance with the 913.01 table.

Further revisions were incorporated as proposed by Mr. Reilman resulting from comments received from Mr. Jacobs and Mr. Smith, as shown above.

Mr. Reilman revised his motion, which was second by Mr. Koch.

Motion: Mr. Reilman Second: Mr. Hauser Ayes: 10 Nays: 0 FHWA Approval: YES	**Action:** __ Passed as Submitted X Passed as Revised __ Withdrawn
2026 Standard Specifications Sections: 913.01 pg. 1118. Recurring Special Provisions or Plan Details: NONE Standard Drawing affected: NONE Design Manual Chapter: NONE GIFE Section: TBD	X 2028 Standard Specifications __ Revise Pay Items List __ Notification to Designers if change is not addressed by RSP X Create RSP (No. 913-M-071) Effective: March 1, 2026 __ Revise RSP (No.__) Effective: __ Standard Drawing Effective: __ Create RPD (No. __) Effective: __ GIFE Update X Frequency Manual Update X AWP Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: The original specification does not include Geogrid Type 1C for long lasting pavement.

PROPOSED SOLUTION: Include Geogrid Type 1C for long lasting pavement and changed the table from Modulus to Strength.

APPLICABLE STANDARD SPECIFICATIONS: 918.05

APPLICABLE STANDARD DRAWING: None

APPLICABLE DESIGN MANUAL CHAPTER: None

APPLICABLE SECTION OF GIFE: None

APPLICABLE RECURRING SPECIAL PROVISION OR PLAN DETAILS: Yes

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad Hoc committee consisting of Nayyar Siddiki and Samuel Clawson

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

IMPACT ANALYSIS (attach report): Yes

Submitted By: Jim Reilman and Nayyar Siddiki

Title: State Material Engineer

Division: Materials and Test

E-mail: Jreilman@INDOT.IN.GOV

Date: 7/21/2025

IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No
Will approval of this item affect the Qualified Products List (QPL)? Yes
Will this proposal improve:

Construction costs? No
Construction time? No
Customer satisfaction? Yes
Congestion/travel time? No
Ride quality? Yes

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? 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? No

Is this proposal needed for compliance with:

Federal or State regulations? No
AASHTO or other design code? No

Is this item editorial? No

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

The Standard Specifications are revised as follows:

SECTION 918, BEGIN LINE 69, DELETE AND INSERT AS FOLLOWS:

918.05 Geogrid

Geogrid shall be a biaxial or multi axial composition of a regular network of connected polymer tensile elements with aperture geometry sufficient to enable significant mechanical interlock with the surrounding material. The material shall be polypropylene, ASTM D4101 (97% minimum) and Carbon Black, ASTM D1603 (0.5% minimum).

The geogrid structure shall be dimensionally stable and shall be able to retain its geometry under construction stresses. The geogrid structure shall have a resistance to damage during construction, ultraviolet degradation, and all forms of chemical and biological degradation encountered in the soil being placed.

Geogrid shall be in accordance with the property requirements as specified in the Geosynthetic Research Institute, GRI, Standard Test methods GG1, GG3, GG4, ASTM D5262, and ASTM D6637.

The geogrid shall be in accordance with the property requirements for the type specified as follows:

(a) Type IA, ~~and~~ Type IB*, and Type IC*

	Test Method	Unit	**Type IA** Value, min.	**Type IB** Value, min.	***Type IC*** *Value, min.*
Aperture Area	Calibered	sq in.	1.3	1.3	*1.3*
Open Area	COE, CW02215	%	> 50.0 ≤ 80.0	> 50.0 ≤ 80.0	*>50.0 ≤ 80.0*
Junction Strength	ASTM D7737	lb/ft	-----	788	*1,200*
Tensile ~~Modulus~~*Strength*, machine direction cross machine direction	ASTM D6637~~[1]~~[2,3]	lb/ft lb/ft	~~10,000~~*500*[1] ~~10,000~~*500*[1]	~~10,000~~*500*[1] ~~10,000~~*500*[1]	*400*[4] *600*[4]
Ultimate Strength, machine direction cross machine direction	ASTM D6637[2,3]	lb/ft lb/ft	800 800	800 800	*1,300* *1,900*
Ultraviolet Stability	ASTM D4355	-----	-----	70% at 500 hrs	*90% at 500 hrs*

[1] ~~Secant modulus~~*Tensile strength* at 5% elongation.
[2] Results for machine direction, MD, and cross machine direction, CMD, are required.
[3] Minimum average roll values shall be in accordance with ASTM D4759.
[4] *Tensile strength at 2% elongation.*

COMMENTS AND ACTION

918.05 Geogrid

DISCUSSION:
Mr. Reilman introduced and presented this item stating that the original specification does not include Geogrid Type 1C for long lasting pavement.

Mr. Reilman proposed to include Geogrid Type 1C for long lasting pavement and changed the table from Modulus to Strength. Further explanation and clarification was provided by Mr. Siddiki and Mr. Clawson. Mr. Dave and Mr. Clawson also clarified that the use of the Type IC will be specified in the Geotech report.

In response to Mr. Jacobs' inquiry, Mr. Clawson said that the Type IC will be a separate pay item, which they will discuss after the meeting.

There was no further discussion and this item passed as submitted.

Motion: Mr. Reilman Second: Mr. White Ayes: 10 Nays: 0 FHWA Approval: YES	**Action:** _X_ Passed as Submitted __ Passed as Revised __ Withdrawn
Standard Specifications Sections: 918.05 pg.1158. Recurring Special Provisions or Plan Details: NONE Standard Drawing affected: NONE Design Manual Chapter: NONE GIFE Section: NONE	_X_ 2028 Standard Specifications _X_ Revise Pay Items List __ Notification to Designers if change is not addressed by RSP _X_ Create RSP (No. 918-M-072) Effective: March 1, 2026 __ Revise RSP (No.__) Effective: __ Standard Drawing Effective: __ Create RPD (No. __) Effective: __ GIFE Update __ Frequency Manual Update _X_ AWP Update