Special Provisions

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 1146-75-76, STH 76 – New London, CTH T – WI Central RR & 1146-75-77, STH 76 – New London, WI Central RR – CTH JJ, Outagamie County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2019 Edition, as published by the department, and these special provisions.

If all or a portion of the plans and special provisions are developed in the SI metric system and the schedule of prices is developed in the US standard measure system, the department will pay for the work as bid in the US standard system.

100-005 (20191121)

2. Scope of Work.

The work under this contract shall consist of grading, base, concrete pavement, concrete curb and gutter, HMA pavement, pavement marking, finishing, landscaping, structures C-44-124 and C-44-126, and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

3. Prosecution and Progress.

Begin work within ten calendar days after the engineer issues a written notice to do so. Provide the start date to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Upon approval, the engineer will issue the notice to proceed within ten calendar days before the approved start date.

To revise the start date, submit a written request to the engineer at least two weeks before the intended start date. The engineer will approve or deny that request based on the conditions cited in the request and its effect on the department's scheduled resources.

4. Traffic

Stage 1

STH 15, Givens Road East and Givens Road West shall remain open to traffic.

Stage 2

STH 15 traffic will be detoured. The detour route shall be USH 45 – USH 10 – IH 41

Close STH 15 to traffic from approximately 0.5 miles west of Givens Road West to approximately 900 feet east of Givens Road East. Close the Givens Road East and Givens Road West intersections with STH 15.

Opening of Roundabout

The STH 15/CTH T roundabout shall not be fully opened to traffic prior to substantial completion of project 1146-75-78, which will be constructed concurrently. The contractor shall coordinate traffic control and opening of the roundabout with the contractors of both projects and the engineer.

If project 1146-75-72 is not substantially complete within 7 days of substantial completion of this contract, the STH 15/CTH T roundabout shall be partially opened to traffic with the east leg of the roundabout remaining closed, until such time as project 1146-75-78 are substantially complete.

General

Maintain access at all times to abutting property owners and businesses located along the project. Do not close or remove from service any residential or commercial driveway prior to constructing temporary access for that driveway.

Keep appropriate emergency officials informed of routes to provide emergency services.

Wisconsin Lane Closure System Advance Notification

Provide the following advance notification to the engineer for incorporation into the Wisconsin Lane Closure System (LCS).

TABLE 108-1 CLOSURE TYPE AND REQUIRED MINIMUM ADVANCE NOTIFICATION

Closure type with height, weight, or width restrictions (available width, all lanes in one direction < 16')	MINIMUM NOTIFICATION
Lane and shoulder closures	7 calendar days
Full roadway closures	7 calendar days
Ramp closures	7 calendar days
Detours	7 calendar days
Closure type without height, weight, or width restrictions (available width, all lanes in one direction ≥16')	MINIMUM NOTIFICATION
Lane and shoulder closures	3 business days
Ramp closures	3 business days
Modifying all closure types	3 business days

Discuss LCS completion dates and provide changes in the schedule to the engineer at weekly project meetings in order to manage closures nearing their completion date.

stp-108-057 (20161130)

Portable Changeable Message Signs – Construction Start

Post PCMS seven calendar days prior to the start of the construction to advise traffic about planned work.

Portable Changeable Message Signs – Message Prior Approval

After coordinating with the department construction field staff, notify the Northeast Region Traffic Section at (920) 366-8033 (secondary contact number is (920) 360-3107) three business days prior to deploying or changing a message on a PCMS to obtain approval of the proposed message. The Northeast Traffic Unit will review the proposed message and either approve the message or make necessary changes.

5. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying STH 15 traffic, and entirely clear the traveled way and shoulders of such portions of the highway of equipment, barricades, signs, lights, and any other material that might impede the free flow of traffic during the following holiday periods:

- From noon Friday, 05/26/2023 to 6:00 AM Tuesday, 05/29/2023;
- From noon Monday, 07/03/2023 to 6:00 AM Monday, 07/10/2023
- From noon Friday, 09/1/2023 to 6:00 AM Tuesday, 09/04/2023.

stp-107-005 (20050502)

6. Utilities.

This contract comes under the provision of Administrative Rule Trans 220.

stp-107-065 (20080501)

7. Other Contracts.

The following projects will be under construction concurrently with the work under this contract. Coordinate trucking, detours, work zone traffic control, roadway and lane closures, and other work items as required with other contracts.

Project 1146-75-77, WI Central RR – CTH JJ, Outagamie County, Wisconsin is under a department contract. Work area under this contract is not expected to inhibit any construction under this contract.

Project 1146-75-78, CTH JJ – WI Central RR, Outagamie County, Wisconsin is under a department contract. Work area under this contract is not expected to inhibit any construction under this contract.

8. Railroad Insurance and Coordination.

A Description

Enter A1 or A2 and press F3

A.1 Railroad Insurance Requirements

In addition to standard spec 107.26, provide railroad protective liability insurance coverage as specified in standard spec 107.17.3. Enter B1, B2 or B3 and press F3

A.2 Work by Railroad

The railroad will perform the work described in this section, except for work described in other special provisions and will be accomplished without cost to the contractor. Enter a description of the work or write "None"

A.3 Names and addresses of Railroad Representatives for Consultation and Coordination

Contact Enter one of the following: WSOR; CN; UPR, BNSF; CP(SOO) then press F3

Amend standard spec 108.4 to include the railroad in the distribution of the initial bar chart, and monthly schedule updates. The bar chart shall specifically show work involving coordination with the railroad.

A.4 Temporary Grade Crossing

Enter C1 or C2 and press F3

A.5 Train Operation

Approximately Enter the number of trains passenger trains and Enter the number of trains through freight trains operate ***Choose an item.*** through the construction site. Passenger trains operate at up to Enter the

speed of the trains mph. Through freight trains operate at up to Enter the speed of the trains mph. Enter sentence about switching movements

A.6 Rail Security Awareness and Contractor Orientation

Enter CNSAFETY or Others then press F3

9. Environmental Protection, Historic Property

The Town of Hortonia Town Hall is eligible for the National Historic Register. This property is located near the intersection of CTH T/ Givens Road (West)

To minimize impacts to the historic boundary prior to construction, temporary fencing shall be placed along the southern property boundary and the southernmost 20 feet of the eastern boundary. Intense vibration-causing equipment for pavement obliteration such as concrete breakers will not be used for existing Givens Road and County T. Pavement will be removed with graders or similar heavy equipment

10. Environmental Protection and Erosion Control.

Fish Spawning

There shall be no instream disturbance of the unnamed tributary (existing crossing STA 53'OWL'+41) to the Wolf River as a result of construction activity under or for this contract, from March 1st to June 15th both dates inclusive, in order to avoid adverse impacts upon the spawning of various fish species.

Any change to this limitation will require submitting a written request by the contractor to the engineer, subsequent review and concurrence by the Department of Natural Resources in the request, and final approval by the engineer. The approval will include all conditions to the request as mutually agreed upon by WisDOT and DNR.

Fish (20090901)

Construction Over or Adjacent to Navigable Waters.

Supplement standard spec 107.19 with the following:

The unnamed tributary to the Wolf River crossing at STA 53'OWL'+41 is classified as a navigable waterway.

Black Otter Creek is classified as a navigable waterway.

107-060 (20040415)

Information to Bidders, U.S. Army Corps of Engineers Section 404 Permit.

The department has obtained a U.S. Army Corps of Engineers Section 404 permit. Comply with the requirements of the permit in addition to requirements of the special provisions. A copy of the permit is available from the regional office by contacting William Bertrand at (920) 360-3124.

107-054 (20080901)

Environmental Protection, Aquatic Exotic Species Control.

Exotic invasive organisms such as VHS, zebra mussels, purple loosestrife, and Eurasian water milfoil are becoming more prolific in Wisconsin and pose adverse effects to waters of the state. Wisconsin State Statutes 30.07, "Transportation of Aquatic Plants and Animals; Placement of Objects in Navigable Waters", details the state law that requires the removal of aquatic plants and zebra mussels each time equipment is put into state waters.

At construction sites that involve navigable water or wetlands, use the follow cleaning procedures to minimize the chance of exotic invasive species infestation. Use these procedures for all equipment that comes in contact with waters of the state and/or infested water or potentially infested water in other states.

Ensure that all equipment that has been in contact with waters of the state, or with infested or potentially infested waters, has been decontaminated for aquatic plant materials and zebra mussels prior to being used in other waters of the state. Before using equipment on this project, thoroughly disinfect all equipment that has come into contact with potentially infested waters. Use the following inspection and removal procedures (guidelines from the Wisconsin Department of Natural Resources http://dnr.wi.gov/topic/fishing/documents/vhs/disinfection_protocols.pdf for disinfection:

1. Prior to leaving the contaminated site, wash machinery and ensure that the machinery is free of all soil and other substances that could possibly contain exotic invasive species;
2. Drain all water from boats, trailers, bilges, live wells, coolers, bait buckets, engine compartments, and any other area where water may be trapped;
3. Inspect boat hulls, propellers, trailers and other surfaces. Scrape off any attached mussels, remove any aquatic plant materials (fragments, stems, leaves, seeds, or roots), and dispose of removed mussels and plant materials in a garbage can prior to leaving the area or invested waters; and
4. Disinfect your boat, equipment and gear by either:
    a. Washing with ~212º F water (steam clean), or
    b. Drying thoroughly for five days after cleaning with soap and water and/or high pressure water, or
    c. Disinfecting with either 200 ppm (0.5 oz per gallon or 1 Tablespoon per gallon) Chlorine for 10-minute contact time or 1:100 solution (38 grams per gallon) of Virkon Aquatic for 20- to 30-minute contact time. Note: Virkon is not registered to kill zebra mussel veligers nor invertebrates like spiny water flea. Therefore this disinfect should be used in conjunction with a hot water (>104º F) application.

Complete the inspection and removal procedure before equipment is brought to the project site and before the equipment leaves the project site.

stp-107-055 (20130615)

Environmental Protection, Non-Aquatic Invasive Species Plants

Phragmites, invasive plant species, may exist within the project limits. All Topsoil that will be excavated or salvaged as part of the work within the contract shall be salvaged and used as topsoil within the project limits, placed in designated areas if shown in the plan, placed as fill per Section 205.3.12 of the Standard Specifications or deposited at an engineer approved waste site. All waste sites are subject to review and approval by the department and shall be suitable for the waste of material containing invasive species to control their spread in compliance with NR 40. Waste sites suitable for invasive species would be areas that would prevent or control the growth and spread of the plant by burying, mowing or other control practices. The contractor shall submit his method for managing topsoil on this project for approval as part of the Erosion Control Implementation Plan. Prior to moving equipment out of infested area clean soils, seeds, plant parts, or invertebrates from exterior surfaces. Use most effective method that is practical by the following methods: Brush, broom, or other hand tools; high pressure air; steam cleaning; or portable wash station that contains runoff from washing equipment. Do not clean equipment, vehicles or trailers in or near waterways as it may promote the spread of invasive species downstream.

(NER17-0806)

Northern Long-eared Bat (*Myotis septentrionalis*)

Northern Long-eared Bats (NLEB) have the potential to inhabit the project limits because they roost in trees. Roosts have been identified within 150 feet of the project limits. The species and all active roosts are protected by the Federal Endangered Species Act. If an individual bat or active roost is encountered during construction operations, stop work and notify the engineer and the WisDOT Regional Environmental Coordinator (REC).

To avoid adverse impacts upon the NLEBs, no Clearing is allowed between June 1 and July 31, both dates inclusive.

If the required Clearing is not completed by May 31, the department will suspend all clearing and associated work directly impacted by Clearing. The department will issue a notice to proceed with Clearing and associated work directly impacted by clearing after consulting with the United States Fish and Wildlife Service (USFWS).

Submit a schedule and description of clearing operations with the ECIP 14 days prior to any Clearing operations. The department will determine, based on schedule and scope of work, what additional erosion control measures shall be implemented prior to the start of Clearing operations, and list those additional measures in the ECIP.

Oak Wilt

To prevent the spread of oak wilt, no clearing, grubbing or cutting of oak trees and saplings is allowed between April 1 and September 30, both dates inclusive. The department has removed known locations of oak trees and saplings within the project area prior to the project. These restrictions apply to any oak tree or sapling in the project work area.

11. Traffic Control

Perform this work conforming to standard spec 643, and as the plans show, or as the engineer approves, except as follows.

Submit to engineer for approval a detailed traffic control plan for any changes to the proposed traffic control detail as the plans show. Submit this plan ten (10) days before the preconstruction conference.

Provide 24 hours-a-day availability of equipment and forces to expeditiously restore lights, signs, or other traffic control devices that are damaged or disturbed. The cost to maintain and restore the above items shall be considered incidental to the item as bid and no additional payment will be made therefore.

Supply the name and telephone number of a local contact person for traffic control repair before starting work.

Have available at all times sufficient experienced personnel to promptly install, remove and reinstall the required traffic control devices to route traffic during the construction operations.

The turning of traffic control devices when not in use to obscure the message will not be allowed under this contract.

Obtain prior approval from the engineer for the location of egress and ingress for construction vehicles to prosecute the work.

Cover existing signs which conflict with traffic control as the engineer directs.

Conduct operations in such a manner that causes the least interference and inconvenience to the free flow of vehicles on the roadways. This includes the following:

Do not park or store any vehicle, piece of equipment, or construction materials on the right of way, unless otherwise specified in the traffic control article or without approval of the engineer.

All construction vehicles and equipment entering or leaving live traffic lanes shall yield to through traffic.

Equip all vehicles and equipment entering or leaving the live traffic lanes with a hazard identification beam (flashing yellow signal) capable of being visible on a sunny day when viewed without the sun directly on or behind the device from a distance of 1000 feet. Activate the beam when merging into or exiting a live traffic lane.

Do not disturb, remove or obliterate any traffic control signs, advisory signs, shoulder delineators or beam guard in place along the traveled roadways without the approval of the engineer. Immediately repair or replace any damage done to the above during the construction operations at contractor expense.

The traffic requirements are subject to change at the direction of the engineer in the event of an emergency.

ner-643-065 (20171213)

Clear Zone Working Restrictions

The temporary work zone clear zone for this project is 18-feet from the edge of traveled way. If auxiliary lanes are present, clear zone is from the outside edge of the auxiliary lane.

Do not perform work in the median at any time unless protected by concrete barrier temporary precast in both directions except as allowed during lane closure periods.

Do not perform work within the clear zone unless protected by concrete barrier temporary precast or a lane closure during the allowed closure periods.

Park equipment and store materials, including stockpiles, a minimum of 30-feet from the edge of the traveled way. Equipment may be parked and material stored in the median if it meets the minimum distance requirement from both traveled ways or if it is protected by concrete barrier temporary precast.

If unsure whether an individual work operation will meet the safety requirements for working within the clear zone, review the proposed work operation with the engineer before proceeding with the work.

Replace standard specification 305.3.3.3(2) with the following:

If the roadway remains open to through traffic during construction and a 2-inch or more drop-off occurs within the clear zone, eliminate the drop-off prior to completing that day's work. Unless the special provisions specify otherwise, provide aggregate shoulder material compacted to a temporary 3:1 or flatter cross slope from the surface of the pavement edge.

ner-104-001 (20181017)

12. Permanent Restoration.

Topsoil shall be placed and permanently restored as the height of the fills progresses. Areas of the project with fills heights less than 10 feet shall be topsoiled and restored once they reach the subgrade shoulder point height including out to the slope intercepts. Areas of the project with fill heights greater than 10 feet shall be topsoiled and permanent restoration placed once the fill height reaches 10 feet including out to the slope intercept. The remaining portion of the fill shall be topsoiled and restored once it reaches the subgrade shoulder point.

The contractor shall show timing of these EC mobilizations as part of proposed schedule in the ECIP.

13. Base Aggregate Dense 1¼-Inch for Lower Base Layers.

Replace standard spec 305.2.2.1(2) with the following:

1. Use 1¼-inch base throughout the full base depth.
2. Use ¾-inch base in the top 3 inches of the unpaved portion of shoulders. Use ¾-inch base or 1¼-inch base elsewhere in shoulders.

stp-305-020 (20080902)

14. QMP HMA Pavement Nuclear Density.

A Description

Replace standard spec 460.3.3.2 (1) and standard spec 460.3.3.2 (4) with the following:

(1) This special provision describes density testing of in-place HMA pavement with the use of nuclear density gauges. Conform to standard spec 460 except as modified in this special provision.

(2) Provide and maintain a quality control program defined as all activities and documentation of the following:

1. Selection of test sites.
2. Testing.
3. Necessary adjustments in the process.
4. Process control inspection.

(3) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required procedures.

http://wisconsindot.gov/rdwy/cmm/cm-08-00toc.pdf

(4) The department's Materials Reporting System (MRS) software allows contractors to submit data to the department electronically, estimate pay adjustments, and print selected reports. Qualified personnel may obtain MRS software from the department's web site at:

http://www.atwoodsystems.com/

B Materials

B.1 Personnel

(1) Nuclear gauge owners and personnel using nuclear gauges shall comply with WisDOT requirements according to 460.3.3 and CMM 8-15.

B.2 Testing

(1) Conform to ASTM D2950 and CMM 8.15 for density testing and gauge monitoring methods. Conform to CMM 8-15.10.4 for test duration and gauge placement.

B.3 Equipment

B.3.1 General

(1) Furnish nuclear gauges according to CMM 8-15.2.

(2) Furnish nuclear gauges from the department's approved product list at

http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/appr-prod/default.aspx

B.3.2 Comparison of Nuclear Gauges

B.3.2.1 Comparison of QC and QV Nuclear Gauges

(1) Compare QC and QV nuclear gauges according to CMM 8-15.7.

B.3.2.2 Comparison Monitoring

(1) Conduct reference site monitoring for both QC and QV gauges according to CMM 8-15.

B.4 Quality Control Testing and Documentation

B.4.1 Lot and Sublot Requirements

B.4.1.1 Mainline Traffic Lanes, Shoulders, and Appurtenances

(1) Divide the pavement into lots and sublots for nuclear density testing according to CMM 8-15.10.2.

(2) Determine required number of tests according to CMM 8-15.10.2.1.

(3) Determine random testing locations according to CMM 8-15.10.3.

B.4.1.2 Side Roads, Crossovers, Turn Lanes, Ramps, and Roundabouts

(1) Divide the pavement into lots and sublots for nuclear density testing according to CMM 8-15.10.2.

(2) Determine required number of tests according to CMM 8-15.10.2.2.

(3) Determine random testing locations according to CMM 8-15.10.3.

B.4.2 Pavement Density Determination

B.4.2.1 Mainline Traffic Lanes and Appurtenances

(1) Calculate the average sublot densities using the individual test results in each sublot.

(2) If all sublot averages are no more than one percent below the target density, calculate the daily lot density by averaging the results of each random QC test taken on that day's material.

(3) If any sublot average is more than one percent below the target density, do not include the individual test results from that sublot when computing the lot average density and remove that sublot's tonnage from the daily quantity for incentive. The tonnage from any such sublot is subject to disincentive pay as specified in standard spec 460.5.2.2.

B.4.2.2 Mainline Shoulders

B.4.2.2.1 Width Greater Than 5 Feet

(1) Determine the pavement density as specified in B.4.2.1.

B.4.2.2.2 Width of 5 Feet or Less

(1) If all sublot test results are no more than 3.0 percent below the minimum target density, calculate the daily lot density by averaging all individual test results for the day.

(2) If a sublot test result is more than 3.0 percent below the target density, the engineer may require the unacceptable material to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine the limits of the unacceptable material according to B.4.3.

B.4.2.3 Side Roads, Crossovers, Turn Lanes, Ramps, and Roundabouts

(1) Determine the pavement density as specified in B.4.2.1.

B.4.2.4 Documentation

(1) Document QC density test data as specified in CMM 8.15. Provide the engineer with the data for each lot within 24 hours of completing the QC testing for the lot.

B.4.3 Corrective Action

(1) Notify the engineer immediately when an individual test is more than 3.0 percent below the specified minimum in standard spec 460.3.3.1. Investigate and determine the cause of the unacceptable test result.

(2) The engineer may require unacceptable material specified in B.4.3(1) to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine limits of the unacceptable area by measuring density of the layer at 50-foot increments both ahead and behind the point of unacceptable density and at the same offset as the original test site. Continue testing at 50-foot increments until a point of acceptable density is found as specified in standard spec 460.5.2.2(1). Removal and replacement of material may be required if extended testing is in a previously accepted sublot. Testing in a previously accepted sublot will not be used to recalculate a new lot density.

(3) Compute unacceptable pavement area using the product of the longitudinal limits of the unacceptable density and the full sublot width within the traffic lanes or shoulders.

(4) Retesting and acceptance of replaced pavement will be as specified in standard spec 105.3.

(5) Tests indicating density more than 3.0 percent below the specified minimum, and further tests taken to determine the limits of unacceptable area, are excluded from the computations of the sublot and lot densities.

(6) If 2 consecutive sublot averages within the same paving pass and same target density are more than one percent below the specified target density, notify the engineer and take necessary corrective action. Document the locations of such sublots and the corrective action that was taken.

B.5 Department Testing

B.5.1 Verification Testing

(1) The department will have a HTCP certified technician, or ACT working under a certified technician, perform verification testing. The department will test randomly at locations independent of the contractor's QC work. The department will perform verification testing at a minimum frequency of 10 percent of the sublots and a minimum of one sublot per mix design. The sublots selected will be within the active work zone. The contractor will supply the necessary traffic control for the department's testing activities.

(2) The QV tester will test each selected sublot using the same testing requirements and frequencies as the QC tester.

(3) If the verification sublot average is not more than one percent below the specified minimum target density, use the QC tests for acceptance.

(4) If the verification sublot average is more than one percent below the specified target density, compare the QC and QV sublot averages. If the QV sublot average is within 1.0 lb/ft^3 of the QC sublot average, use the QC tests for acceptance.

(5) If the first QV/QC sublot average comparison shows a difference of more than 1.0 lb/ft^3 each tester will perform an additional set of tests within that sublot. Combine the additional tests with the original set of tests to compute a new sublot average for each tester. If the new QV and QC sublot averages compare to within 1.0 lb/ft^3, use the original QC tests for acceptance.

(6) If the QV and QC sublot averages differ by more than 1.0 lb/ft^3 after a second set of tests, resolve the difference with dispute resolution specified in B.6. The engineer will notify the contractor immediately when density deficiencies or testing precision exceeding the allowable differences are observed.

B.5.2 Independent Assurance Testing

(1) Independent assurance is unbiased testing the department performs to evaluate the department's verification and the contractor's QC sampling and testing including personnel qualifications, procedures, and equipment. The department will perform the independent assurance review according to the department's independent assurance program.

B.6 Dispute Resolution

(1) The testers may perform investigation in the work zone by analyzing the testing, calculation, and documentation procedures. The testers may perform gauge comparison according to B.3.2.1.

(2) The testers may use comparison monitoring according to B.3.2.2 to determine if one of the gauges is out of tolerance. If a gauge is found to be out of tolerance with its reference value, remove the gauge from the project and use the other gauge's test results for acceptance.

(3) If the testing discrepancy cannot be identified, the contractor may elect to accept the QV sublot density test results or retesting of the sublot in dispute within 48 hours of paving. Traffic control costs will be split between the department and the contractor.

(4) If investigation finds that both gauges are in error, the contractor and engineer will reach a decision on resolution through mutual agreement.

B.7 Acceptance

(1) The department will not accept QMP HMA Pavement Nuclear Density if a non-compared gauge is used for contractor QC tests.

C (Vacant)

D (Vacant)

E Payment

E.1 QMP Testing

(1) Costs for all sampling, testing, and documentation required under this special provision are incidental to the work. If the contractor fails to perform the work required under this special provision, the department may reduce the contractor's pay. The department will administer pay reduction under the Non-performance of QMP administrative item.

E.2 Disincentive for HMA Pavement Density

(1) The department will administer density disincentives as specified in standard spec 460.5.2.2.

E.3 Incentive for HMA Pavement Density

(1) The department will administer density incentives as specified in standard spec 460.5.2.3.

stp-460-020 (20181119)

15. Concrete Pavement Flexural Strength.

This special provision describes accepting concrete pavement based on flexural strength. Conform to standard spec part 7 as modified in this special provision.

Add the following to standard spec table 701-2:

TEST	TEST STANDARD
Flexural Strength of Concrete	AASHTO T97

Replace 710.5.5 with the following:

710.5.5 Strength

(1) Cast all 6-inch by 12-inch cylinders or 6-inch x 6-inch x 21-inch beams in a set from the same sample. Do not cast more than one set of specimens from a single truckload of concrete. Mark each specimen to identify the lot and sublot or location on the project it represents.

(2) Provide facilities for initial curing. For up to 48 hours after casting, maintain the temperature adjacent to the specimens in the range of 60 to 80 F and prevent moisture loss. Between 24 and 48 hours after casting, transport the specimens to a department-qualified laboratory for standard curing until testing at 28 days.

(3) Determine the 28-day strength of each specimen in psi. Test each specimen to failure. Use a testing machine that automatically records the date, time, rate of loading, and maximum load of each specimen. Provide a printout of this information for each specimen tested.

Replace 715.2.1(2) with the following:

(2) The contractor need not provide separate laboratory mix designs for high early strength concrete nor provide routine 28-day strength tests during placement for high early strength concrete.

Replace 715.2.3.1(1) with the following:

(1) Use at least 5 pairs of beams to demonstrate the flexural strength of a mix design. Use either laboratory strength data for new mixes or field strength data for established mixes. Demonstrate that the 28-day flexural strength of the proposed mix will equal or exceed the 85 percent within limits criterion specified in 715.5.2.

Replace 715.3.1.1(1) with the following:

(1) Provide slump, air content, concrete temperature, and strength test results as specified in 710.5. Provide a battery of QC tests, consisting of results for each specified property, using a single sample randomly located within each sublot. Cast 3 specimens for strength evaluation.

Replace 715.3.1.3(1) with the following:

(1) The department will perform verification testing for air content, slump, temperature, and strength at a minimum of 1 verification test per lot.

Replace 715.3.2.1 with the following:

715.3.2.1 General

(1) The department will make pay adjustments for strength on a lot-by-lot basis using the strength of contractor QC specimens. The department will use flexural strength for pavements and compressive strength for structures. The department will assess concrete for removal and replacement based on a sublot-by-sublot analysis of core strength. Perform coring and testing, fill core holes with an engineer approved non-shrink grout, and provide traffic control during coring.

(2) Randomly select 2 QC strength specimens to test at 28 days for percent within limits (PWL). Compare the strengths of the 2 randomly selected QC specimens and determine the 28-day sublot average strength as follows:

- If the lower strength divided by the higher strength is 0.9 or more, average the 2 QC specimens.
- If the lower strength divided by the higher strength is less than 0.9, break one additional specimen and average the 2 higher strength specimens.

Replace 715.3.2.2.1 with the following:

715.3.2.2.1 Pavement

(1) If a sublot strength is less than 500 psi, the department may direct the contractor to core that sublot to determine its structural adequacy and whether to direct removal. Cut and test cores according to AASHTO T24 as and where the engineer directs. Have an HTCP-certified PCC technician I perform or observe the coring.

(2) The sublot pavement is conforming if the compressive strengths of all cores from the sublot are 2500 psi or greater or the engineer does not require coring.

(3) The sublot pavement is nonconforming if the compressive strengths of any core from the sublot is less than 2500 psi. The department may direct removal and replacement or otherwise determine the final disposition of nonconforming material as specified in 106.5.

Replace 715.5.1 with the following:

715.5.1 General

(1) The department will pay incentive for strength under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
715.0415	Incentive Strength Concrete Pavement	DOL
715.0502	Incentive Strength Concrete Structures	DOL

(2) Incentive payment may be more or less than the amount the schedule of items shows.

(3) The department will administer disincentives for strength under the Disincentive Strength Concrete Pavement and Disincentive Strength Concrete Structures administrative items.

(4) The department will adjust pay for each lot using PWL of the 28-day sublot average strengths for that lot. The department will measure PWL relative to the lower specification limit of 650 psi for pavements and 4000 psi for structures. The department will not pay a strength incentive for concrete that is nonconforming in another specified property, for ancillary concrete accepted based on tests of class I concrete, or for high early strength concrete unless placed in pavement gaps as allowed under 715.3.1.2.1.

(5) Submit strength results to the department electronically using the MRS software. The department will validate contractor data before determining pay adjustments.

(6) All coring and testing costs under 715.3.2.2 including filling core holes and providing traffic control during coring are incidental to the contract.

Replace 715.5.2 with the following:

715.5.2 Pavements

(1) The department will adjust pay for each lot using equation “QMP 6.01” as follows:

Percent Within Limits (PWL)	Pay adjustment (dollars per square yard)
≥ 95 to 100	(0.2 x PWL) - 19
≥ 85 to < 95	0
≥ 50 to <85	(2.0/35 x PWL) - 170/35
<50	-2

(2) The department will not pay incentive if the lot standard deviation is greater than 60 psi.

(3) For lots with a full battery of QC tests at less than 4 locations, there is no incentive but the department will assess a disincentive based on the individual sublot average strengths. The department will reduce pay for sublots with an average strength below 600 psi by $2 per square yard.

(4) For integral shoulder pavement and pavement gaps accepted using tests from the adjacent travel lane, The department will adjust pay using strength results of the travel lane for integrally placed concrete

shoulders and pavement gaps regardless of mix design and placement method, included in a lane-foot lot.

bts-715-015 (20180126)

16. Landscape Planting Surveillance and Care Cycles

If the care specialist fails to perform any of the required care cycles as specified in standard spec 632.3.19.1, the department will assess daily damages in the amount of $100 to cover the cost of performing the work with other forces. The department will assess these damages for each day the requirements of the care cycle remain incomplete, except when the engineer extends the required time period.

stp-632-005 (20070510)

17. Electrical Service for WisDOT Roundabout at STH 15 & Old STH 15 West

A Description

Work under this item shall be in accordance with Section 656 of the Standard Specifications with the following addition.

C Construction

The Contractor is responsible for making early application for the electric service lateral.

Contact We-Energies at (800) 714-7777 or mailto:contactwe@mail.we-energies.com to make application and request a time of use meter.

The future monthly invoices can go to the following address:

Wisconsin Dept. of Transportation

Expenditure Acct (L44-2018)

P.O. Box 7366

Madison, WI 53707-7366

E Payment

The Contractor shall pay the utility company promptly for the electric service lateral installation cost.

415-020 DELETE ALL DESIGNER NOTES FROM YOUR SPECIAL PROVISIONS

Use this special provision along with SDD 13C18 if the plans include concrete pavement or concrete base.

18. Concrete Pavement Joint Layout, Item 415.5110.S.

A Description

This special provision describes providing a concrete pavement or concrete base joint layout design for intersections and marking the location of joints in the field

B (Vacant)

C Construction

Plan and locate all points necessary to establish the horizontal position of the transverse and longitudinal joints in the concrete to prevent uncontrolled cracking. Submit a joint layout design to the engineer at least 7 calendar days before paving each intersection. Do not lay out joints until the engineer has reviewed the joint layout design. Mark the location of concrete joints in the field. Follow the plan details for joints in concrete making adjustments as required to fit field conditions.

D Measurement

The department will measure Concrete Pavement Joint Layout as a single lump sum unit for all joint layout designs and marking acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
415.5110.S	Concrete Pavement Joint Layout	LS

Payment is full compensation for providing the intersection joint layout designs and marking all joints in the field.

The department will adjust pay for crack repairs as specified in standard spec 415.5.3.

stp-415-020 (20170615)

19. Stone or Rock Ditch Checks, Item 628.7515.S.

A Description

This special provision describes furnishing and installing stone or rock ditch checks as the plans show or as the engineer directs.

B Materials

Provide materials conforming to size requirements for size no. 2 coarse aggregate for concrete masonry or riprap according to the standard spec 501.2.5.4.5. Railroad ballast or breaker run stone conforming to the following applicable gradations may also be used:

Railroad Ballast

Sieve Size	Percent by Weight Passing
2 Inch	100
1 Inch	20 – 55
3/8 Inch	0 -5

Breaker Run Stone

Sieve Size	Percent by Weight Passing
5 Inch	100
1½ Inch	0 – 50
3/8 Inch	0 - 5

Incorporate stone or rock in the ditch checks that is hard, sound, and durable, and meets the approval of the engineer.

C Construction

Place stone or rock ditch checks immediately after shaping of the ditches or slopes is completed. Place stone or rock ditch checks at right angles to the direction of flow and construct to the dimensions and according to the details the plans show.

Remove sediment from behind the stone or rock ditch checks when it has accumulated to one half of the original height of the dam.

D Measurement

The department will measure Stone or Rock Ditch Checks in volume by the cubic yard of material incorporated in the work.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
628.7515.S	Stone or Rock Ditch Checks	CY

Payment is full compensation for furnishing, producing, crushing, loading, hauling, placing, and shaping and maintaining Stone or Rock Ditch Check.

The quantity of sediment removed shall be multiplied by a factor of ten and paid for as Enter type of excavation Excavation.

stp-628-050 (20170615)

20. Optimized Aggregate Gradation Incentive, Item 715.0710.

Description

This special provision describes optional contractor optimized aggregate gradation, optional optimized mixture designs, and associated additional requirements for class 1 concrete used in concrete pavements. Conform to standard specification part 7 and as follows:

Optimized Aggregate Gradation

A Job Mix Formula (JMF) contains all of the following:

Proportions for each aggregate fraction conforming to table 1.

Individual gradations for each aggregate fraction.

Composite gradation of the combined aggregates including working ranges on each sieve in accordance with table 2.

Submit the target JMF and aggregate production gradation test results to the engineer for review 10 business days before initial concrete placement.

TABLE 1 TARANTULA CURVE GRADATION BAND

SIEVE SIZES	PERCENT RETAINED
2 in.	0
1 1/2 in.	≤5
1 in.	≤16
3/4 in.	≤20
1/2 in.	4-20
3/8 in.	4-20
No. 4	4-20
No. 8[1]	≤12
No. 16[1]	≤12
No. 30[1] [2]	4-20
No. 50 [2]	4-20
No. 100 [2]	≤10
No. 200 [2]	≤2.3

[1] Minimum of 15% retained on the sum of the #8, #16, and #30 sieves.

[2] Conform to 24-34% retained of fine sand on the #30-200 sieves.

TABLE 2 JMF WORKING RANGE

SIEVE SIZES	WORKING RANGE[1] (PERCENT)
2 in.	+/- 5
1 1/2 in.	+/- 5
1 in.	+/- 5
3/4 in.	+/- 5
1/2 in.	+/- 5
3/8 in.	+/- 5
No. 4	+/- 5
No. 8	+/- 4
No. 16	+/- 4
No. 30	+/- 4
No. 50	+/- 3
No. 100	+/- 2
No. 200	≤ 2.3

[1] Working range limits of composite gradation based on moving average of 4 tests.

Replace standard spec 710.5.6 with the following:

Determine the complete gradation, including P200, using a washed analysis for both fine and coarse aggregates. Test each stockpile for each component aggregate once per 1,500 cubic yards during concrete production.

Take samples by one of the following sampling methods:

1. At the belt leading to the weigh hopper.
2. Working face of the stock piles at the concrete plant if approved by the engineer.

The department will take independent QV samples using the same sampling method the contractor uses for QC sampling. QV samples may be taken by the contractor's QC personnel if witnessed by the department's QV personnel. The department will split each QV sample and retain half for all dispute resolutions. If QV test results conform to the specification, the department will take no further action. If QV test results are nonconforming, add the QV to the QC test results as if it were an additional QC test.

If, during concrete production, the moving average of four for any sieve fall outside the allowable JMF working range do the following:

1. Notify the engineer of the test results within 1 business day from the time of sampling.
2. Make immediate adjustments to the JMF, within the limits specified in Table 3;
3. Review JMF adjustments with the engineer. Both the contractor and engineer will sign the adjusted JMF if the adjustments comply with Table 3.
4. If the moving average of four falls outside the adjusted allowable working range, stop production and provide a new mix design including JMF to the engineer.

TABLE 3 ALLOWABLE JMF ADJUSTMENTS

SIEVE SIZES	ALLOWABLE ADJUSTMENT (PERCENT)
>= No. 4	+/- 5
No. 8 – No. 30	+/- 4
No. 50	+/- 3
No. 100	+/- 2

Dispute Resolution

The department will resolve disputes as specified in standard spec 106.3.4.3.5 using QV split samples.

Sublot and Lot Size

A sublot consists of up to 1,500 cubic yards. A lot consists of two sublots.

Optimized Concrete Mixtures

The contractor may use a reduced cementitious content for concrete pavement placed if the contractor does the following:

1. Use an optimized aggregate gradation as defined in this special provision.
2. Conform to the additional testing requirements for flexural strength as specified in the contract special provisions.
3. Submit aggregate gradation result records no more than 2 years old when developing the mix design.
4. Determine the volume of voids in the optimized aggregates using ASTM C29.
5. Download and follow the instructions tab of the Optimized Gradation and Mix Design Spreadsheet located at:

   https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/qmp/default.aspx
6. Design an appropriate paste content based upon the Performance-based PCC Mix Design Guide located at:

   https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/qmp/default.aspx
7. Provide a minimum Vpaste/Vvoids of 1.25. (Paste/Void ratio equals the volume of paste divided by the volume of voids.).
8. Evaluate workability of trial batches by following section 6.8 of AASHTO Draft Performance Engineered Concrete Pavement Mixtures Specifications located at:

   https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/qmp/default.aspx
9. Submit trial batch workability results when submitting the mix design.
10. Submit the CP Tech center computer spreadsheet concrete mix design to the engineer for review at least 3 business days before producing concrete.
11. Provide a minimum cement content of 520 pounds per cubic yard, except if using type I, IL, or III cement in a mix where the geologic composition of the coarse aggregate is primarily igneous or metamorphic materials, provide a minimum cement content of 660 pounds per cubic yard.
12. The contractor may use class C fly ash or grade 100 or 120 slag as a partial replacement for cement. For binary mixes use up to 30% fly ash or slag. For ternary mixes use up to 30% fly ash plus slag in combination. Replacement values are in percent by weight of the total cementitious material in the mix.
13. See CMM 8-70.2.2.3 for additional guidance.

Measurement

The department will measure Optimized Aggregate Gradation Incentive by the dollar, for each combined averaged lot of QC test results meeting Table 1.

Payment

The department will pay incentive of 3 percent of the contract unit price for concrete pavement under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
715.0710	Optimized Aggregate Gradation Incentive	DOL

stp-715-005 (20181119)

21. Roadway Embankment, Item SPV.0035.01.

A Description

This special provision describes providing embankments and the materials needed to construct embankments. Conform to standard spec 207 and 208 and as below.

Material to construct embankments is incidental to this bid item, including Borrow.

B Materials

Furnish materials in accordance to standard spec 207.2.

If Borrow material is used conform to standard spec 208.2.

C Construction

Conform to standard spec 207.3.

If Borrow material is used conform to standard spec 208.3.

D Measurement

The department will measure Roadway Embankment by the cubic yard, acceptably completed in its final position, using the method of average end areas, with no correction for curvature. The department will determine the end areas from preconstruction cross-sections of the area being covered by the proposed embankment and from cross-sections of the completed work. The department will not make allowances for shrinkage, subsidence, lateral movement of the material, or for material in excess of that required for work the plans show or the engineer orders.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.01	Roadway Embankment	CY

Payment is full compensation for placing material to construct embankments which includes hauling, placing, forming, compacting, shaping, sloping, trimming, finishing, maintaining embankments and other incidental work required under standard spec 207 and 208.

Payment includes clearing, grubbing, excavating, disposing of surplus and unsuitable material and spreading salvaged material for covering the surfaces of excavated areas within the borrow sites.

The department will not pay separately for removing and disposing of rock, stone and boulders that the engineer rejects under 207.3.11.

The department will not pay separately for Borrow, 208.0100; it is incidental to this SPV.

The department will pay separately for Select Borrow under the bid item 208.1100.

ner-207-015 (20190402)

22. Low Maintenance Seed Mix, Item SPV.0085.01.

A Description

This special provision describes furnishing and sowing low-maintenance seed at the locations the plans show. Conform to standard spec 630 and as follows.

B Materials

Furnish one of the following seed mixes: “No-Mow” seed mix as produced by Prairie Nursery, Westfield, Wisconsin; “Eco-Grass” as produced by Prairie Moon Nursery, Winona, MN; or an approved equal.

C Construction

Prepare the seed bed conforming to standard spec 630.3.2. Sow the seed mix conforming to standard spec 630.3.3. Sow seed at a rate that is conforming to the manufacturer’s recommendations.

D Measurement

The department will measure Low Maintenance Seed Mix by the pound in place.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0085.01	Low Maintenance Seed Mix	LB

Payment is full compensation for performing the work as described in 630.5 of the standard specification.

ner-630-005 (20171213)

23. Temporary Bypass Channel, (C-44-0126 – C-44-0124), Item SPV.0105.01

A Description

This special provision describes providing a temporary bypass channel for the drainage way through structures the bid items designate. The contractor may propose other alternatives for a temporary bypass

channel as long as the proposed alternative is outlined in the ECIP. Materials used for alternative proposals are incidental to this item.

B Materials

Construct temporary bypass channel conforming to the details provided in the plan. Provide polyethylene sheeting conforming to standard spec 628.2 and provide select crushed material conforming to standard spec 312. Submit stockpile gradation test result prior to placement.

C Construction

Construct temporary bypass channel conforming to standard spec 205.3 and 628.3. Maintain channel flow at all times and minimize erosion into the existing stream using appropriate erosion control measures.

D Measurement

The department will measure Temporary Bypass Channel (Structure) as a single lump sum of work acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Temporary Bypass Channel (C-44-0126 – C-44-0124)	LS

Payment is full compensation for furnishing materials, any excavation required, hauling, placing all materials, including sand bags, polyethylene sheeting, anchors, and select crushed material, and for channel change removal.

ner-210-010 (20190712)