



Wisconsin Department of Transportation

August 28, 2024

**Division of Transportation Systems
Development**

Bureau of Project Development
4822 Madison Yards Way, 4th Floor South
Madison, WI 53705

Telephone: (608) 266-1631
Facsimile (FAX): (608) 266-8459

NOTICE TO ALL CONTRACTORS:

**Proposal #22: 1190-06-61, WISC 2024441
Eau Claire – Chippewa Falls
Golf Road to 40th Avenue
USH 53
Eau Claire and Chippewa
Counties**

Letting of Letting Date

This is Addendum No. 01, which provides for the following:

Special Provisions:

Revised Special Provisions	
Article No.	Description
19	Rapid Concrete Pavement Replacement Special, Item SPV.0180.001; Rapid Concrete Pavement Repair Special, Item SPV.0180.002

Added Special Provisions	
Article No.	Description
20	Concrete Pavement Approach Slab, Item 415.0410.

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

Mike Coleman

Proposal Development Specialist
Proposal Management Section

ADDENDUM NO. 01

1190-06-61

August 29, 2024

Special Provisions

19. Rapid Concrete Pavement Replacement Special, Item SPV.0180.001; Rapid Concrete Pavement Repair Special, Item SPV.0180.002.

Replace entire article language with the following:

A Description

This special provision describes specialized material and construction requirements for full depth concrete pavement repair and replacement using calcium sulphoaluminate cements.

B Materials

B.1 General

(1) Furnish the following materials conforming to standard spec sections:

- Tie Bars and Dowel Bars: 416.2.2
- Chemical Admixtures: 501.2.5
- Mixing Water: 501.2.6
- Concrete Curing Materials: 501.2.8

(2) Provide QMP for class II ancillary concrete as specified in 716.

B.2 Calcium Sulphoaluminate Cement

(1) Use calcium sulphoaluminate cement that conforms to ASTM C1600 Type VRH or Type URH.

(2) The engineer will reject cement that is partially set or contains lumps.

(3) The engineer may reject cement if the temperature at the time of delivery to the mixer exceeds 165 F. To avoid this, store it until it cools to at least 165 F before incorporating into the batch.

B.3 Concrete Composition

(1) For calcium sulphoaluminate concrete:

- Provide air-entrainment
- Use a water-reducing admixture
- Do not use calcium chloride or accelerating chemical admixtures
- Do not use Supplementary Cementitious Materials
- Citric acid can be used to extend delivery time

(2) Conform to the following cement content and water-to-cement (w/cm) limits:

- Minimum cement content for mixtures using the Combined Aggregate Gradations: 565 lb/cy
- Minimum cement content for mixtures using Optimized Aggregate Gradations: 500 lb/cy
- Maximum w/cm: 0.45

(3) Furnish aggregates for use in concrete conforming to 501.2.7. Aggregates do not need to be tested for alkali silica reactivity per 501.2.7.3.4.

- (4) The air content of the concrete shall be 3.0 percent +/- 1.0 percent. Test air content according to WTM T152 or WTM T395 at the contract-required frequency and as the engineer directs.
- (5) The slump of the concrete shall be 5.0 inches +/- 1.0 inch. Test slump according to WTM T119 at the contract-required frequency and as the engineer directs.
- (6) The engineer will allow the contractor to open to construction traffic and public traffic when the concrete reaches 2000 psi. During the contract closure window, the contractor is required to complete all construction operations for the work to be able to open to service.
- (7) Provide 28-day compressive strength (f'c) that equals or exceeds 3700 psi.
- (8) If the concrete temperature at the point of placement exceeds 90 F, do not place concrete.
- (9) Submit a mix design including trial batching results, surface resistivity results, material sources and quantities, to the department at least 14 calendar days before use. The engineer will coordinate with the BTS laboratory for review and approval.
- (10) Complete at least two QC and two QV resistivity tests during construction. Follow the requirements in 715.3.1.1.2 and WTM358 except provide resistivity results at 28 and 58 days using a non-accelerated curing method.

B.4 Trial Batching

- (1) Have a certified-HTCP PCC Technician II perform at least 3 separate trial batches to demonstrate the mixture design meets the required opening strength for the contract closure window and air content to be able to open to service. Use a department qualified laboratory to conduct trial batching.
- (2) Complete Surface Resistivity testing as part of the trial batching. Follow the requirements in section 715.3.1.1.2 and WTM358 except provide resistivity results at 28 and 58 days using a non-accelerated curing method.

B.5 Strength Evaluation

- (1) Conduct a continued strength evaluation during the course of the work to ensure continued compliance with opening strength requirements.
- (2) Notify the engineer before making test cylinders and, if the engineer chooses, make arrangements for the engineer to observe cylinder production. Use a department qualified laboratory and an HTCP-certified technician to conduct preliminary and continued strength evaluations. Base each reported value on a minimum of 2 cylinders. After submitting data showing attainment of the required opening strength, do not change the mix without first submitting new trial batch results showing conformance to the opening strength and air content requirements.

C Construction

C.1 General

- (1) Conform to standard spec 416.3 and 501.3. Replace standard spec 415.3.12 with C.2 Curing Calcium Sulphoaluminate Concrete.

C.2 Curing Calcium Sulphoaluminate Concrete

- (1) After finishing and surface texturing operations, the concrete shall be cured with wet burlap until the concrete has achieved the minimum opening strength.
- (2) Apply curing compound after removing the wet burlap.
- (3) Provide sufficient agitation while spraying curing compound to ensure uniform consistency and dispersion of pigment within the material during application.
- (4) For tined surfaces, apply the curing compound uniformly at or exceeding a minimum rate of one gallon per 150 square feet. For other surface finishes, apply the curing compound uniformly at or exceeding a minimum rate of one gallon per 200 square feet.
- (5) If the contractor requests, the engineer may approve the use of alternate curing methods. Supply technical

specifications, test results or performance records to the engineer and BTS Laboratory 5 business days before concrete placement for review and approval.

- (6) If the contractor does not cure as specified in this subsection, the engineer may suspend concrete placement.

D Measurement

The department will measure Rapid Concrete Pavement Repair Special and Rapid Concrete Pavement Replacement Repair Special by the square yard, acceptably completed.

E Payment

Conform to standard spec 416.5 and as modified in this special provision.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.001	Rapid Concrete Pavement Replacement Special	SY
SPV.0180.002	Rapid Concrete Pavement Repair Special	SY

Payment for the Rapid Concrete Pavement Repair and the Rapid Concrete Pavement Replacement bid items is full compensation for furnishing, hauling, preparing, placing, curing, and protecting materials; for replacing damaged pavement designated to remain in place; for removing existing pavements and excavated materials; for repairing asphaltic shoulders; for sawing joints; for preparing the foundation; for backfilling; and for testing concrete cylinders. The department will pay for individual repairs at least one lane wide and greater than 15 feet to less than 300 feet long as Rapid Concrete Pavement Replacement. Payment includes jointing and providing tie bars and dowel bars in unhardened concrete. The department will pay separately for associated work as follows:

- For tie bars and dowel bars in concrete not placed under the contract, exclusive of those necessary to repair contractor-caused damage, under the Drilled Tie Bars and Drilled Dowel Bars bid items.
- For sawing existing concrete for removal, under the Sawing Concrete bid item as specified in 690.5.
- For repairs 300 feet long or longer, under the Removing Concrete Pavement bid item as specified in 204.5 and the Concrete Pavement bid items as specified in 415.5.

20. Concrete Pavement Approach Slab, Item 415.0410.

The contractor may furnish Grade C concrete without accelerators conforming to 501 or utilize the approved mix used for the Rapid Concrete Pavement Replacement/Repair Special items in order to meet the lane closure requirements outlined in the Traffic Section of these special provisions.

END OF ADDENDUM