

HIGHWAY WORK PROPOSAL

Wisconsin Department of Transportation
DT1502 10/2010 s.66.29(7) Wis. Stats.

Proposal Number:

2 Ø

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
St. Croix	8110-02-72		Stillwater - Somerset CTH E TO 150 TH AV, B-55-0226,C-55-0035	STH 64

This proposal, submitted by the undersigned bidder to the Wisconsin Department of Transportation, is in accordance with the advertised request for proposals. The bidder is to furnish and deliver all materials, and to perform all work for the improvement of the designated project in the time specified, in accordance with the appended Proposal Requirements and Conditions.

Proposal Guaranty Required, \$ 310,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: December 9, 2014 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code
Contract Completion Time December 11, 2015	SAMPLE NOT FOR BIDDING PURPOSES
Assigned Disadvantaged Business Enterprise Goal 0%	This contract is exempt from federal oversight.

This certifies that the undersigned bidder, duly sworn, is an authorized representative of the firm named above; that the bidder has examined and carefully prepared the bid from the plans, Highway Work Proposal, and all addenda, and has checked the same in detail before submitting this proposal or bid; and that the bidder or agents, officer, or employees have not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal bid.

Do not sign, notarize, or submit this Highway Work Proposal when submitting an electronic bid on the Internet.

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

(Print or Type Name, Notary Public, State Wisconsin)

(Date Commission Expires)

Notary Seal

(Bidder Signature)

(Print or Type Bidder Name)

(Bidder Title)

For Department Use Only

Type of Work Grading, Structures B-55-226, C-55-0035, C-55-0036, base aggergate, storm sewer, concrete and asphalt paving, three single lane roundabouts.	Date Guaranty Returned
Notice of Award Dated	

**PLEASE ATTACH
PROPOSAL GUARANTY HERE**

Effective with November 2007 Letting

PROPOSAL REQUIREMENTS AND CONDITIONS

The bidder, signing and submitting this proposal, agrees and declares as a condition thereof, to be bound by the following conditions and requirements.

If the bidder has a corporate relationship with the proposal design engineering company, the bidder declares that it did not obtain any facts, data, or other information related to this proposal from the design engineering company that was not available to all bidders.

The bidder declares that they have carefully examined the site of, and the proposal, plans, specifications and contract forms for the work contemplated, and it is assumed that the bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished, and as to the requirements of the specifications, special provisions and contract. It is mutually agreed that submission of a proposal shall be considered conclusive evidence that the bidder has made such examination.

The bidder submits herewith a proposal guaranty in proper form and amount payable to the party as designated in the advertisement inviting proposals, to be retained by and become the property of the owner of the work in the event the undersigned shall fail to execute the contract and contract bond and return the same to the office of the engineer within fourteen (14) days after having been notified in writing to do so; otherwise to be returned.

The bidder declares that they understand that the estimate of quantities in the attached schedule is approximate only and that the attached quantities may be greater or less in accordance with the specifications.

The bidder agrees to perform the said work, for and in consideration of the payment of the amount becoming due on account of work performed, according to the unit prices bid in the following schedule, and to accept such amounts in full payment of said work.

The bidder declares that all of the said work will be performed at their own proper cost and expense, that they will furnish all necessary materials, labor, tools, machinery, apparatus, and other means of construction in the manner provided in the applicable specifications and the approved plans for the work together with all standard and special designs that may be designed on such plans, and the special provisions in the contract of which this proposal will become a part, if and when accepted. The bidder further agrees that the applicable specifications and all plans and working drawings are made a part hereof, as fully and completely as if attached hereto.

The bidder, if awarded the contract, agrees to begin the work not later than ten (10) days after the date of written notification from the engineer to do so, unless otherwise stipulated in the special provisions.

The bidder declares that if they are awarded the contract, they will execute the contract agreement and begin and complete the work within the time named herein, and they will file a good and sufficient surety bond for the amount of the contract for performance and also for the full amount of the contract for payment.

The bidder, if awarded the contract, shall pay all claims as required by Section 779.14, Statutes of Wisconsin, and shall be subject to and discharge all liabilities for injuries pursuant to Chapter 102 of the Statutes of Wisconsin, and all acts amendatory thereto. They shall further be responsible for any damages to property or injury to persons occurring through their own negligence or that of their employees or agents, incident to the performance of work under this contract, pursuant to the Standard Specifications for Road and Bridge Construction applicable to this contract.

In connection with the performance of work under this contract, the contractor agrees to comply with all applicable state and federal statutes relating to non-discrimination in employment. No otherwise qualified person shall be excluded from employment or otherwise be subject to discrimination in employment in any manner on the basis of age, race, religion, color, gender, national origin or ancestry, disability, arrest or conviction record (in keeping with s.111.32), sexual orientation, marital status, membership in the military reserve, honesty testing, genetic testing, and outside use of lawful products. This provision shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation, and selection for training, including apprenticeship. The contractor further agrees to ensure equal opportunity in employment to all applicants and employees and to take affirmative action to attain a representative workforce.

The contractor agrees to post notices and posters setting forth the provisions of the nondiscrimination clause, in a conspicuous and easily accessible place, available for employees and applicants for employment.

If a state public official (section 19.42, Stats.) or an organization in which a state public official holds at least a 10% interest is a party to this agreement, this contract is voidable by the state unless appropriate disclosure is made to the State of Wisconsin Ethics Board.

BID PREPARATION

Preparing the Proposal Schedule of Items

A General

- (1) Obtain bidding proposals as specified in **section 102** of the standard specifications prior to 11:45 AM of the last business day preceding the letting. Submit bidding proposals using one of the following methods:
 1. Electronic bid on the internet.
 2. Electronic bid on a printout with accompanying diskette or CD ROM.
 3. Paper bid under a waiver of the electronic submittal requirements.
- (2) Bids submitted on a printout with accompanying diskette or CD ROM or paper bids submitted under a waiver of the electronic submittal requirements govern over bids submitted on the internet.
- (3) The department will provide bidding information through the department's web site at <http://www.dot.wisconsin.gov/business/engrserv/bid-letting-information.htm>. The contractor is responsible for reviewing this web site for general notices as well as information regarding proposals in each letting. The department will also post special notices of all addenda to each proposal through this web site no later than 4:00 P.M. local time on the Thursday before the letting. Check the department's web site after 5:00 P.M. local time on the Thursday before the letting to ensure all addenda have been accounted for before preparing the bid. When bidding using methods 1 and 2 above, check the Bid Express™ on-line bidding exchange at <http://www.bidx.com/> after 5:00 P.M. local time on the Thursday before the letting to ensure that the latest schedule of items Expedite file (*.ebs or *.00x) is used to submit the final bid.
- (4) Interested parties can subscribe to the Bid Express™ on-line bidding exchange by following the instructions provided at the www.bidx.com web site or by contacting:

Info Tech Inc.
5700 SW 34th Street, Suite 1235
Gainesville, FL 32608-5371
email: <mailto:customer.support@bidx.com>

- (5) The department will address equipment and process failures, if the bidder can demonstrate that those failures were beyond their control.
- (6) Contractors are responsible for checking on the issuance of addenda and for obtaining the addenda. Notice of issuance of addenda is posted on the department's web site at <http://www.dot.wisconsin.gov/business/engrserv/bid-letting-information.htm> or by calling the department at (608) 266-1631. Addenda can ONLY be obtained from the departments web site listed above or by picking up the addenda at the Bureau of Highway Construction, Room 601, 4802 Sheboygan Avenue, Madison, WI, during regular business hours.

B Submitting Electronic Bids

B.1 On the Internet

- (1) Do the following before submitting the bid:
 1. Have a properly executed annual bid bond on file with the department.
 2. Have a digital ID on file with and enabled by Info Tech Inc. Using this digital ID will constitute the bidder's signature for proper execution of the bidding proposal.
- (2) In lieu of preparing, delivering, and submitting the proposal as specified in **102.6** and **102.9** of the standard specifications, submit the proposal on the internet as follows:

1. Download the latest schedule of items reflecting all addenda from the Bid Express™ web site.
 2. Use Expedite™ software to enter a unit price for every item in the schedule of items.
 3. Submit the bid according to the requirements of Expedite™ software and the Bid Express™ web site. Do not submit a bid on a printout with accompanying diskette or CD ROM or a paper bid. If the bidder does submit a bid on a printout with accompanying diskette or a paper bid in addition to the internet submittal, the department will disregard the internet bid.
 4. Submit the bid before the hour and date the Notice to Contractors designates.
 5. Do not sign, notarize, and return the bidding proposal described in 102.2 of the standard specifications.
- (3) The department will not consider the bid accepted until the hour and date the Notice to Contractors designates.

B.2 On a Printout with Accompanying Diskette or CD ROM

- (1) Download the latest schedule of items from the Wisconsin pages of the Bid Express™ web site reflecting the latest addenda posted on the department's web site at <http://www.dot.wisconsin.gov/business/engrserv/bid-letting-information.htm>. Use Expedite™ software to prepare and print the schedule of items. Provide a valid amount for all price fields. Follow instructions and review the help screens provided on the Bid Express™ web site to assure that the schedule of items is prepared properly.
- (2) Staple an 8 1/2 by 11 inch printout of the Expedite™ generated schedule of items to the other proposal documents submitted to the department as a part of the bidder's sealed bid. As a separate submittal not in the sealed bid envelop but due at the same time and place as the sealed bid, also provide the Expedite™ generated schedule of items on a 3 1/2 inch computer diskette or CD ROM. Label each diskette or CD ROM with the bidder's name, the 4 character department-assigned bidder identification code from the top of the bidding proposal, and a list of the proposal numbers included on that diskette or CD ROM as indicated in the following example:

Bidder Name

BN00

Proposals: 1, 12, 14, & 22

- (3) If bidding on more than one proposal in the letting, the bidder may include all proposals for that letting on one diskette or CD ROM. Include only submitted proposals with no incomplete or other files on the diskette or CD ROM.
- (4) The bidder-submitted printout of the Expedite™ generated schedule of items is the governing contract document and must conform to the requirements of section 102 of the standard specifications. If a printout needs to be altered, cross out the printed information with ink or typewriter and enter the new information and initial it in ink. If there is a discrepancy between the printout and the diskette or CD ROM, the department will analyze the bid using the printout information.
- (5) In addition to the reasons specified in section 102 of the standard specifications, proposals are irregular and the department may reject them for one or more of the following:
 1. The check code printed on the bottom of the printout of the Expedite™ generated schedule of items is not the same on each page.
 2. The check code printed on the printout of the Expedite™ generated schedule of items is not the same as the check code for that proposal provided on the diskette or CD ROM.

3. The diskette or CD ROM is not submitted at the time and place the department designates.

C Waiver of Electronic Submittal

- (1) The bidder may request a waiver of the electronic submittal requirements. Submit a written request for a waiver in lieu of bids submitted on the internet or on a printout with accompanying diskette or CD ROM. Use the waiver that was included with the paper bid document sent to the bidder or type up a waiver on the bidder's letterhead. The department will waive the electronic submittal requirements for a bidding entity (individual, partnership, joint venture, corporation, or limited liability company) for up to 4 individual proposals in a calendar year. The department may allow additional waivers for equipment malfunctions.
- (2) Submit a schedule of items on paper conforming to [section 102](#) of the standard specifications. The department charges the bidder a \$75 administrative fee per proposal, payable at the time and place the department designates for receiving bids, to cover the costs of data entry. The department will accept a check or money order payable to: "Wisconsin, Dept. of Transportation."
- (3) In addition to the reasons specified in [section 102](#) of the standard specifications, proposals are irregular and the department may reject them for one or more of the following:
 1. The bidder fails to provide the written request for waiver of the electronic submittal requirements.
 2. The bidder fails to pay the \$75 administrative fee before the time the department designates for the opening of bids unless the bidder requests on the waiver that they be billed for the \$75.
 3. The bidder exceeds 4 waivers of electronic submittal requirements within a calendar year.
- (4) In addition to the reasons specified in [section 102](#) of the standard specifications, the department may refuse to issue bidding proposals for future contracts to a bidding entity that owes the department administrative fees for a waiver of electronic submittal requirements.

PROPOSAL BID BOND

DT1303 1/2006

Wisconsin Department of Transportation

Proposal Number	Project Number	Letting Date
Name of Principal		
Name of Surety	State in Which Surety is Organized	

We, the above-named Principal and the above-named Surety, are held and firmly bound unto the State of Wisconsin in the sum equal to the Proposal Guaranty for the total bid submitted for the payment to be made; we jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns. The condition of this obligation is that the Principal has submitted a bid proposal to the State of Wisconsin acting through the Department of Transportation for the improvement designated by the Proposal Number and Letting Date indicated above.

If the Principal is awarded the contract and, within the time and manner required by law after the prescribed forms are presented for signature, enters into a written contract in accordance with the bid, and files the bond with the Department of Transportation to guarantee faithful performance and payment for labor and materials, as required by law, or if the Department of Transportation shall reject all bids for the work described, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect. In the event of failure of the Principal to enter into the contract or give the specified bond, the Principal shall pay to the Department of Transportation **within 10 business days of demand** a total equal to the Proposal Guaranty as liquidated damages; the liability of the Surety continues for the full amount of the obligation as stated until the obligation is paid in full.

The Surety, for value received, agrees that the obligations of it and its bond shall not be impaired or affected by any extension of time within which the Department of Transportation may accept the bid; and the Surety does waive notice of any such extension.

IN WITNESS, the Principal and Surety have agreed and have signed by their proper officers and have caused their corporate seals to be affixed this date: **(DATE MUST BE ENTERED)**

PRINCIPAL

(Company Name) **(Affix Corporate Seal)**

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

On the above date, this instrument was acknowledged before me by the named person(s).

(Signature, Notary Public, State of Wisconsin)

(Print or Type Name, Notary Public, State of Wisconsin)

(Date Commission Expires)

Notary Seal

(Name of Surety) **(Affix Seal)**

(Signature of Attorney-in-Fact)

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

On the above date, this instrument was acknowledged before me by the named person(s).

(Signature, Notary Public, State of Wisconsin)

(Print or Type Name, Notary Public, State of Wisconsin)

(Date Commission Expires)

Notary Seal

IMPORTANT: A certified copy of Power of Attorney of the signatory agent must be attached to the bid bond.

CERTIFICATE OF ANNUAL BID BOND

DT1305 8/2003

Wisconsin Department of Transportation

Time Period Valid (From/To)	
Name of Surety	
Name of Contractor	
Certificate Holder	Wisconsin Department of Transportation

This is to certify that an annual bid bond issued by the above-named Surety is currently on file with the Wisconsin Department of Transportation.

This certificate is issued as a matter of information and conveys no rights upon the certificate holder and does not amend, extend or alter the coverage of the annual bid bond.

Cancellation: Should the above policy be cancelled before the expiration date, the issuing surety will give thirty (30) days written notice to the certificate holder indicated above.

(Signature of Authorized Contractor Representative)

(Date)

March 2010

LIST OF SUBCONTRACTORS

Section 66.0901(7), Wisconsin Statutes, provides that as a part of the proposal, the bidder also shall submit a list of the subcontractors the bidder proposes to contract with and the class of work to be performed by each. In order to qualify for inclusion in the bidder's list a subcontractor shall first submit a bid in writing, to the general contractor at least 48 hours prior to the time of the bid closing. The list may not be added to or altered without the written consent of the municipality. A proposal of a bidder is not invalid if any subcontractor and the class of work to be performed by the subcontractor has been omitted from a proposal; the omission shall be considered inadvertent or the bidder will perform the work personally.

No subcontract, whether listed herein or later proposed, may be entered into without the written consent of the Engineer as provided in Subsection 108.1 of the Standard Specifications.

[illegible]

DECEMBER 2000

**CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER
RESPONSIBILITY MATTERS - PRIMARY COVERED TRANSACTIONS**

Instructions for Certification

1. By signing and submitting this proposal, the prospective contractor is providing the certification set out below.
2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective contractor shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective contractor to furnish a certification or an explanation shall disqualify such person from participation in this transaction.
3. The certification in this clause is a material representation of fact upon which reliance was placed when the department determined to enter into this transaction. If it is later determined that the contractor knowingly rendered an erroneous certification in addition to other remedies available to the Federal Government the department may terminate this transaction for cause or default.
4. The prospective contractor shall provide immediate written notice to the department to whom this proposal is submitted if at any time the prospective contractor learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the department to which this proposal is being submitted for assistance in obtaining a copy of those regulations.
6. The prospective contractor agrees by submitting this proposal that, should this contract be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department entering into this transaction.
7. The prospective contractor further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," which is included as an addendum to PR-1273 - "Required Contract Provisions Federal Aid Construction Contracts," without

modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

8. The contractor may rely upon a certification of a prospective subcontractor/materials supplier that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A contractor may decide the method and frequency by which it determines the eligibility of its principals. Each contractor may, but is not required to, check the Disapproval List (telephone # 608/266/1631).
9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
10. Except for transactions authorized under paragraph 6 of these instructions, if a contractor in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions

- (1) The prospective contractor certifies to the best of its knowledge and belief, that it and its principals:
 - (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property;
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offense enumerated in paragraph (1)(b) of this certification; and
 - (d) Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- (2) Where the prospective contractor is unable to certify to any of the statements in this certification, such prospective contractor shall attach an explanation to this proposal.

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 8110-02-72, Stillwater – Somerset, CTH E to 150th Av, B-55-0226, C-55-0035, STH 64, St. Croix 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, 2015 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 (20140630)

2. Scope of Work.

The work under this contract shall consist of bridge construction, culvert construction, grading, aggregate roadway structure, HMA pavement, concrete pavement, storm sewer, erosion control 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.

Prosecution and progress meetings will be held once every week. The contractor's superintendent or designated representative and subcontractor representative for ongoing subcontract work or subcontract work expected to begin within the next two weeks shall attend and provide a written schedule of the next week(s) operations. The written schedule shall include begin and end dates of specific prime and subcontractor work operations. These dates shall be substantiated by production rates showing quantities of manpower and equipment necessary to meet projected production levels of those operations. Agenda

items at the meeting will include review of the contractor's linear schedule, evaluation of progress, and making revisions if necessary. Plans and specifications for upcoming work will be reviewed to prevent potential problems or conflicts with other contracts. Any outstanding issues will be reviewed.

Conformance with DNR requirements, which will prevent erosion in the grading areas from entering private lands and public waterways, will require the contractor to install erosion control, as the project progresses. The plan provides erosion control mobilizations and emergency erosion control mobilizations for this project per the requirements of standard spec 628.

Follow the staged construction as outlined below, unless otherwise approved by the engineer. Provide a schedule of construction staging, material hauling plan, and construction equipment delivery schedule and plan to the engineer for approval prior to starting work. Coordinate all operations and traffic control as necessary between the various locations for proposed work under this contract.

Construction vehicles and equipment are not allowed to cross STH 64 live traffic at any time during construction. The construction engineer may approve on a limited basis intermittent crossing of unloaded construction equipment (loader, dozer, grader, and similar). Approval must be obtained prior to any crossing movement.

The contractor is advised that there will be multiple mobilizations for such items as; traffic control, grading, and other incidental items related to construction. No additional payment will be made by the department for said mobilizations.

Stage 1 South:

Construction of Structure B-55-225 may begin. Structure shall be completed by the end of Stage 3 South.

Begin and complete construction of Box Culvert C-55-35 and C-55-36.

Construct bypass at STH 35/Main St (Old STH 35) roundabout and prepare for traffic.

Construct Glen Pond contours and all finishing items. Topsoil and finish prior to grading STH 64 Station 200+00 – Existing STH 64 in Stage 2 South.

Begin grading School Road, STH 35/CTH E Stations 19+00 – 41+00, interchange ramp roundabouts, and the remainder of the ramps not completed by the previous construction contract to finished contours. Construct to aggregate base layer. Existing CTH E shall remain open to traffic.

Stage 1 North:

Once started, Stage 1 North shall be completed within 14 calendar days and Stage 2 North must begin within 7 calendar days of Stage 1 North completion unless otherwise approved

by the engineer. The intent is to minimize the duration of temporary concrete barrier use on STH 35/64.

Deliver and install temporary precast concrete barrier on existing STH 35/64 westbound lane Station 267+27 – 285+00 and STH 35/64 eastbound Station 291+15 – 306+00.

Prepare crossover at 150th Av and STH 35/64 eastbound inside lane Station 290+00-310+00 for westbound traffic shift onto existing STH 35/64 eastbound inside lane.

Deliver and install temporary precast concrete barrier on existing STH 35/64 westbound lane Station 285+00-291+15.

Stage 2 South:

Construction of Structure B-55-225 may begin or continue from Stage 1 South. Structure shall be completed by the end of Stage 3 South.

Shift STH 35 traffic to bypass lanes. Complete STH 35/Main Street Roundabout and northbound/southbound through lanes to final plans. Cover permanent signs and install traffic control items per staged construction plan or as directed by the construction engineer.

Grade STH 35/64 eastbound and westbound lanes from Stations 200+00 – 225+00 to final contours. Construct to aggregate base layer. Do not disrupt traffic on existing STH 35/64.

Continue construction of the interchange ramp roundabouts. Existing CTH E shall remain open to traffic.

Stage 2 North:

Grade STH 35/64 westbound lanes from Station 231+50 – 304+50, STH 35/64 eastbound lanes from Station 231+50 – 260+00, Frontage Road B, and Frontage Road A from Station 232+00 – 248+50. Construct to aggregate base layer.

Pave STH 35/64 westbound lanes from Station 231+50 – 304+50, Frontage Road A and Frontage Road B.

Grade and pave temporary connection from existing STH 35/64 to STH 35/64 westbound lanes.

Stage 3 South:

Once STH 35 traffic is using the STH 35/Main Street Roundabout in the through direction (north/southbound), remove the temporary by-pass and construct Pond E to final contours.

Detour and close existing CTH E.

Grade STH 35 Stations 5+00-19+00, School Road and CTH E intersection, CTH E Stations 41+00 – 55+00, Thelen Farm Trail and STH 64 Stations 183+50 – 185+50. Construct to aggregate base layer.

Complete Structure B-55-226.

Pave and complete STH 35, CTH E, interchange roundabouts, ramps as indicated in the plan, School Road, School Road and CTH E intersection, and Thelen Farm Trail.

Stage 3 North:

Stage 3 South must be completed before starting work on Frontage Road C and the Frontage Road C intersections with Setterler's Way and 20th Avenue.

Grade STH 35/64 Stations 225+00 – 231+50. Construct to aggregate base layer.

Remove temporary precast concrete barrier from existing STH 35/64 westbound lane.

Grade STH 35/64 eastbound lanes Stations 260+00 – 304+50. Construct to aggregate base layer.

Grade and pave Frontage Road C Stations 233+42 – 240+00 and 257+00 – 273+25. Mill and pave Stations 240+00 – 257+00.

4. Traffic.

Provide the engineer with a schedule of lane closures for the following week by noon on Thursday of the previous week. In addition, provide the following minimum advance notification to the engineer for incorporation into the Wisconsin Lane Closure System:

Advance Notice: 14 Calendar Days

- New lane closures and ramp restrictions (with height, weight, or width restrictions [available width, all lanes in one direction <16ft])
- Full roadway or ramp closure
- Project start
- Construction stage changes
- Detours

Advance Notice: 3 Business Days

- Lane closures and ramp restrictions (without height, weight, or width restrictions [available width, all lanes in one direction > 16ft])
- Extending all closure types

All lane and shoulder closures and duration are subject to the approval of the engineer based on operational needs and safety. Notify the engineer if there are any changes in the schedule, early completions, or cancellations of scheduled work.

Contact the State Patrol two weeks prior to the closure.

Stage 1 South Traffic

STH 35 and CTH E traffic to remain open at all times. Disruption of traffic along STH 35 and CTH E shall be limited to daytime only flagging operations, except during the hours of 7:00 AM - 8:00 AM and 4:00 PM – 6:00 PM unless approved by the engineer in the field.

Stage 1 North Traffic

STH 35/64 eastbound traffic will remain one lane (outside) from Stations 290+00 – 310+00.

Prepare traffic control on the median crossover north of 150th Avenue for westbound traffic and STH 35/64 for bi-directional traffic. STH 35/64 westbound traffic will be reduced to one lane (inside lane) north of 150th Avenue as shown in the plans.

During existing STH 35/64 westbound temporary precast concrete barrier delivery and installation the westbound lane shall be closed. A lane closure and flagging operation shall be used. Work requiring a lane closure will be allowed Monday – Thursday, between the hours of 8:30 AM to 2:30 PM.

Once all temporary precast concrete barrier is installed east and west of existing STH 35/64 westbound merge to bidirectional traffic; shift STH 35/64 westbound traffic to STH 35/64 eastbound, utilizing the crossover north of 150th Avenue.

During existing STH 35/64 westbound temporary precast concrete barrier delivery and installation at the merge gap, the westbound lane shall be closed. A lane closure and flagging operation shall be used. Work requiring a lane closure will be allowed Monday – Thursday, between the hours of 8:30 AM to 2:30 PM.

Stage 2 South Traffic

CTH E traffic to remain open at all times. Disruption of traffic along CTH E shall be limited to daytime only flagging operations, except during the hours of 7:00 AM - 8:00 AM and 4:00 PM – 6:00 PM unless approved by the engineer in the field.

STH 35 traffic will use the STH 35 by-pass constructed in Stage 1 South.

Stage 2 North Traffic

Traffic remains bi-directional on existing STH 35/64 with westbound traffic using the median crossover north of 150th Avenue.

Residential access from the Kilbane (Frontage Road A) and Sutter (Frontage Road B) properties to STH 35/64 or Anderson Scout Camp Road must be maintained for the project duration.

Anderson Scout Camp Road will remain open to the maximum extent possible. Once the intersection is closed, traffic will be detoured and access STH 35/64 at the CTH V interchange. A temporary connection to STH 35/64 westbound lanes will be completed before Stage 3 North begins.

Existing STH 35/64 westbound shoulder will be closed at Station 225+00 while grading and paving for the temporary connection to STH 35/64 westbound lanes is being constructed.

All other grading and construction equipment shall be located outside a 30 foot clearzone or shielded by the temporary precast concrete barrier.

Stage 3 South Traffic

STH 35 traffic will use the newly constructed STH 35/Main Street Roundabout in a north/south through movement. Once complete, CTH E will be detoured on CTH V and STH 35 as show in the plan. The detour shall be removed with traffic using the new CTH E and STH 35 roadway by September 4, 2015. Disruption of traffic along STH 35 shall be limited to daytime only flagging operations, except during the hours of 7:00 AM - 8:00 AM and 4:00 PM - 6:00 PM unless approved by the engineer.

Residential access from the Plahn (CTH E), Reneau (CTH E) and Fagerlund (CTH E) properties to CTH E must be maintained for the project duration unless written approval is provided by the resident or the engineer.

Field access from the Durand (CTH E) and Severson (CTH E) properties shall be coordinated with the land owners or approved by the engineer.

Local traffic from the Settlers Glen subdivision shall be provided entrance and egress on Thelen Farm Trail and CTH E east of Thelen Farm Trail within three weeks following the CTH E detour start date. A gravel driving surface suitable for a passenger car shall be maintained until the completion of Stage 3 South. If traffic volumes, either local or through become conducive to construction activities, the engineer may approve or direct the road closure be reinstated.

Stage 3 North Traffic

STH 35/64 traffic will remain bi-directional on the temporary connection, westbound lanes (constructed in Stage 2 North), and median crossover north of 150th Avenue until noted in the proceeding contract by others.

Traffic from Anderson Scout Camp Road will have access to bi-directional traffic on STH 35/64 westbound lanes via a temporary intersection constructed in Stage 2 North.

Stage 3 South must be complete and the CTH E detour must be removed before the Settlers Way and 20th Avenue intersections with STH 35/64 are removed. The intersections may not be removed or reconstructed concurrently. Provide construction schedule to the Newman and Crawford properties one week prior to beginning construction of each intersection.

Winter Shutdown

STH 35/64 traffic remains the same as in Stage 3 North. Replace and update traffic control items as shown in the Traffic Control: Winter Details STH 35/64 plan sheets.

STH 35/CTH E traffic will be restricted to only the through movement at the new interchange roundabouts. See Traffic Control: Winter Details CTH E plan sheets.

State Patrol Contact For incident management and coordinating portable changeable message sign locations if required, contact Northwest Region State Highway Patrol, Brian Erickson, (715) 577-7139 or (715) 836-3810 Ext. 103, or PCS Becky Grangaard, (715) 839-3800, Ext. 109.

Maintain emergency access to the project area at all times.

Keep all private entrances and field entrances accessible at all times, unless written permission is obtained from the property owner 48 hours in advance of closing the access.

Have available at all times experienced personnel to promptly install, remove and reinstall the required traffic control devices to route traffic in order to perform the necessary construction operations.

Provide the engineer with a list for 24-hour contacts. The engineer will be responsible for distributing the contact list.

Equip all construction vehicles and equipment entering or leaving live traffic lanes with a hazard identification beam (flashing yellow signal). The beam shall be activated when merging into or exiting a live traffic lane.

5. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

Check for and comply with local ordinances governing the hours of operation of construction equipment. Do not operate motorized construction equipment from 9:00 PM until the following 7:00 AM, unless prior written approval is obtained from the engineer.
107-001 (20060512)

6. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying STH 35/64, STH 35 and CTH E 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, May 22, 2015 to 6:00 AM Tuesday, May 26, 2015 for Memorial Day;
- From noon Friday, July 3, 2015 to 6:00 AM Monday, July 6, 2015 for Independence Day;
- From noon Friday, September 4, 2015 to 6:00 AM Tuesday, September 8, 2015 for Labor Day.

107-005 (20050502)

7. Utilities.

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

107-065 (20080501)

There are known utility adjustments required for the construction of this project. Coordinate construction activities by calling Diggers Hotline and a direct call to the utilities known to have facilities in the area as required by state statutes. Use caution to ensure the integrity and maintain required clearances of underground and overhead facilities at all times.

The relocation schedules detailed represent the utility companies' best estimate of their plans to relocate and adjust conflicting facilities. The utility companies may encounter problems that prevent them from meeting their anticipated schedules. Contact each utility company listed in the plans prior to preparing bids, to obtain current information on the status of any utility relocation work.

Utility relocations will have impacts to access, detours and traffic staging throughout the project. Accommodate these relocations and include them in the schedule. Coordination with all utilities is required throughout this project.

Some of the utility work described below is dependent on prior work being performed by the contractor at a specific site. In such situations, provide the engineer and the affected utility a good faith notice of when the utility is to start work at the site. Provide this notice 14 to 16 calendar days in advance of when the prior work will be completed and the site will be available to the utility. Follow-up with a confirmation notice to the engineer and utility not less than 3 working days before the site will be ready for the utility to begin work.

AT&T Wisconsin (Communications) has underground facilities within the project area:

Underground facilities and above ground pedestals along STH 35:

An underground copper communications line on the west side of STH 35, Station 295+00'K' – Station 320+00'K', with pedestals located at Station 302+31'K', 28 feet RT; Station 313+11'K', 53 feet LT; Station 315+59'K', 44 feet LT; and Station 318+27'K', 51 feet LT. Also a crossing at Station 318+36'K'. These facilities are in conflict.

A second underground copper communications line on the east side of STH 35 beginning at a pedestal at Station 313+44'K', 56 feet RT crosses STH 35 at Station 313+52'K' and continues north with the previously described line. These facilities are in conflict.

AT&T Wisconsin will relocate the facilities in conflict prior to construction, anticipated to be completed by April 2015.

Underground facilities and above ground pedestals along and near existing CTH E:

A 72 strand fiber optic cable located approximately 40 feet north of the existing centerline of CTH E. Boring equipment was used to place the fiber optic cable at depths of 17 to 20 feet through the area of the proposed interchange, which included boring through rock. The fiber optic cable is located about 10 feet below the bottom of the lowest cut and should not be affected by the excavation. This facility is not shown completely on the plan sheets. Do not blast to aid in excavating the ponds on the north side of CTH E due to the potential for damage to the fiber optic.

Three copper cables paralleling CTH E east of the proposed interchange at CTH E and four copper cables paralleling CTH E west of the proposed interchange. The copper cables, one 600 pair cable, two 100 pair cables and one 50 pair cable are located 20' to 70' south of the existing centerline of CTH E and are in conflict. AT&T WI will abandon these prior to construction in the interchange area and can be excavated during construction. Contact Rick Podolak, 715-410-0656 to confirm these are abandoned prior to excavating them.

3-4 copper cables along the south side of CTH E, with a crossing at 59+42'G', and continuing east out of the project limits.

Two copper cables from Thelan Farm Road (13th Street), south to existing CTH E and then turning east on the north side of existing CTH E and continuing out of the project limits.

AT&T Wisconsin copper facilities in conflict along CTH E will be abandoned in place and can be removed during construction, by July 2015. Contact Rick Podolak at (715) 410-0656 to verify prior to impacting these facilities.

AT&T Wisconsin fiber optic facilities along CTH E will remain in place.

Underground facilities and above ground pedestals along and near existing STH 64:

1-2 copper cables along the north side of existing STH 64 from Station 218+00'T' Frontage Road A to the main crossing of STH 64 at Station 232+08'A' and then continuing along the north side of Frontage Road C and then crossing proposed Frontage Road C at Station 262+08'V' and continuing south along the east side of 20th Street and continuing south out of the project limits with crossings and pedestals throughout. These facilities are in conflict.

A copper cable from Anderson Scout Camp Road, south to existing STH 64, crossing at Station 244+07'A', and then turning east and continuing along the north side of existing STH 64. These facilities are in conflict.

AT&T Wisconsin copper facilities along STH 64 will be abandoned and relocated outside of the right-of-way.

Midwest Natural Gas (Gas) has underground natural gas facilities within the project area:

One underground gas lines on the east side of STH 35, Station 295+00'J' – Station 320+00'J' and to the north, with a crossing of STH 35 at approximately Station 313+00'J' and continuing west. There are multiple services connecting to these lines. These facilities are in conflict.

Midwest Natural Gas will abandon these facilities in the spring of 2015 and construct new facilities along the western right-of-way of STH 35.

An underground gas facility along the northern right-of-way of existing CTH E, from the northern intersection of CTH E with School Road to Station 60+00 and continuing east, with two lines branching off at Thelen Farm Road, and continuing north. These facilities are in conflict from the proposed cul-de-sac west of the NW Ramp of STH 64 and new STH 35 interchange and continuing east through Thelen Farm Road.

Midwest Natural Gas will abandon these facilities and construct a new 4-inch poly gas main on the northern right-of-way of CTH E, paralleling the right-of-way, and crossing STH 64 freeway underground at approximately Station 190+00'A' and continuing west out of the project limits. This work will be completed in the fall of 2014.

An underground gas facility on the southern right-of-way of existing STH 64 from 219+00'T' Frontage Road A and continuing along existing STH 64 to 243+25'V' Frontage Road C and then turning north along the western right-of-way of existing Anderson Scout Camp Rd to Station 250+00'P' and continuing north. These facilities are in conflict.

Midwest Natural Gas will abandon these facilities by June 2015 and construct a new gas main along the northern right-of-way of Frontage Road A, that branches south and crosses STH 64 freeway at approximately Station 237+00'A' and Frontage Road C, and also continues east along the northern right-of-way of Frontage Road A and continues north out of the project limits.

Midwest Natural Gas relocations will occur both prior to and during construction, with two crossings of STH 64 freeway to be installed during construction once final grading has been completed. Contact Midwest Natural Gas prior to excavating near any facility that is thought to be abandoned.

St. Croix Electric Cooperative (Electricity – Distribution) has overhead and underground electric facilities within the project area:

Overhead electric distribution along existing STH 64 (Frontage Road A and STH 35/64 eastbound and westbound:

- Station 218+52.5'T', 47.8 feet LT an existing utility pole not in conflict.
- Station 220+88.3'T', 46.5 feet LT an existing utility pole not in conflict.
- Station 222+98.2'T', 78.5 feet RT an existing utility pole not in conflict.
- Station 223+92.4'T', 31.5 feet LT an existing utility pole not in conflict.
- Station 226+88.4'T', 24.9 feet RT an existing utility pole in conflict.
- Station 230+20.3'A', 66.2 feet LT an existing utility pole in conflict.
- Station 233+10.0'A', 17.1 feet RT an existing utility pole in conflict.
- Station 235+71.1'A', 52.7 feet RT AND underground electric service from the utility pole to the south, crossing Frontage Road C at Station 235+15.8'V' and continuing to two electrical pedestals at Station 234+99'V", 38.2 feet RT and continuing south with underground electric approximately 40 feet RT out of the project limits in conflict.
- Station 238+75.5'A', 59.7 feet RT an existing utility pole in conflict.
- Station 241+91.1'A', 61.3 feet RT and existing utility pole in conflict, with overhead crossing Frontage Road C at Station 242+10'V' to a utility pole at Station 242+17'V", 54 feet RT AND with a crossing Station 243+18'B' to a utility pole at Station 244+07'U', 40 feet RT Frontage Road B and continuing north, crossing Frontage Road B at Station 43+93'U' and continuing north 30-40 feet RT of Frontage Road A and out of the project limits
- Station 245+24.9'A', 62.9 feet RT an existing utility pole in conflict, with overhead continuing southeast, crossing Frontage Road C at Station 245+59'V'
- Station 248+12.2'A', 63.1 feet RT an existing utility pole in conflict.
- Station 251+59.5'A', 64.6 feet RT an existing utility pole in conflict.
- Station 255+12.8'A', 65.6 feet RT an existing utility pole in conflict.
- Station 258+00.0'A', 65.7 feet RT in conflict with a service crossing to the southwest, crossing Frontage Road C at Station 257+66'V' to a utility pole at Station 257+11'V', 54 feet RT.
- Station 261+87.8'A', 29.5 feet RT an existing utility pole in conflict.

- Station 265+23.7'A', 2.8 feet RT an existing utility pole , with a service to the north crossing westbound at Station 265+42'B' and crossing Frontage Road B proposed cul-de-sac at Station 265+77'NN' in conflict and continuing north out of the project limits.
- Station 267+32.7'A', 36.9 feet LT an existing utility pole in conflict.
- Station 270+19.0'A', 62.4 feet LT an existing utility pole with guy lines and overhead south to a utility pole at Station 269+73.0'A', 73.7 feet RT in conflict and continuing south to a utility pole at Station 270+16'V', 15 feet LT Frontage Road C, and continuing overhead south out of the project limits and a service crossing Frontage Road C at Station 269+81'V'.
- Station 272+96'B', 49 feet LT an existing utility pole in conflict.
- Station 277+07.4'B', 54.6 feet LT an existing utility pole Station 272+96'B', 49 feet LT an existing utility pole in conflict, with multiple guy line anchors and a crossing Station 277+94.2'A', 128.7 feet RT
- Station 281+24.7'B', 64.7 feet LT an existing utility pole with multiple guy line anchors and a service to the northwest Station 272+96'B', 49 feet LT an existing utility pole in conflict.
- Station 284+29.0'B', 62.9 feet LT an existing utility pole Station 272+96'B', 49 feet LT an existing utility pole in conflict.
- Station 286+81.9'B', 60.2 feet LT an existing utility pole Station 272+96'B', 49 feet LT an existing utility pole in conflict.
- Station 289+39.3'B', 57.5 feet LT an existing utility pole with a guy line anchor Station 272+96'B', 49 feet LT an existing utility pole in conflict.
- Station 292+59.2'B', 56.2 feet LT an existing utility pole Station 272+96'B', 49 feet LT an existing utility pole in conflict.
- Station 295+91.2'B', 54.8 feet LT an existing utility pole in conflict.
- Station 296+80.3'B', 54.3 feet LT an existing utility pole with an electrical pedestal Station 296+88.4'B', 72.3 feet LT and underground service crossing STH 64 westbound and eastbound in conflict.
- Station 297+11.6'B', 54.4 feet LT an existing utility pole with multiple guy line anchors in conflict.

Underground and overhead electric distribution along existing south side of CTH E:

Electric pedestals at Station 53+46.7'G', 42.0 feet RT and Station 53+56.7'G', 39.8 feet RT in conflict to a utility pole and pedestal at Station 55+99.5'G', 41.8 feet RT (pole) and continuing to Station 57+48.1'G', 38.5 feet RT utility pole and pedestal, continuing to Station 59+53.6'G', 36.4 feet RT utility pole and two pedestals, and continuing east out of the project limits.

Electric pedestal at Station 50+43.1'G', 47.6 feet LT and continuing north along Thelan Farm Road (13th Street) in conflict and out of the project limits.

All St. Croix Electric Cooperative poles and pedestals that are in conflict will have the facilities relocated underground onto private easement. The new facilities are anticipated to be completed prior to construction, with the removal of some poles being completed

during construction, estimated to be completed by the beginning of April 2015. A new crossing of STH 64 freeway will also be constructed by directional boring once the final grade as been constructed, to a depth that is not in conflict.

Xcel Energy (Electricity – Distribution) has overhead and underground electric facilities within the project area:

Overhead electric distribution along the east and west sides of STH 35:

- Station 300+28'J', 53 feet RT an existing utility pole not in conflict with this project.
- Station 302+78'J', 44 feet RT an existing utility pole in conflict.
- Station 305+31.4'J', 52 feet RT an existing utility pole in conflict.
- Station 308+13'J', 16 feet RT an existing utility pole in conflict.
- Station 310+62'J', 1.4 feet RT an existing utility pole (and guy to Station 310+64'J', 10 feet LT) in conflict.
- Station 313+08.6'J', 47.6 feet RT an existing utility pole not in conflict.
- Station 313+62'J', 96 feet LT an existing utility pole not in conflict.
- Station 315+52'J', 44 feet LT an existing utility pole not in conflict.
- Station 315+66'J', 53.3 feet RT an existing utility pole not in conflict.
- Station 318+11'J', 23.7 feet RT an existing utility pole not in conflict with this project.
- Station 319+71.4'J', 19.8 feet LT an existing utility pole not in conflict with this project.
- Station 319+75.6'J', 23.4 feet RT an existing utility pole not in conflict with this project.

Xcel Energy poles that are in conflict along STH 35 will be relocated to the western right-of-way of STH 35, prior to construction, anticipated to be completed by April 2015.

Overhead electric distribution along existing CTH E, from existing STH 35 to the intersection with School Road.

The pole furthest east in line is in conflict.

The last Xcel Energy pole to the east along CTH E will be removed with underground facilities installed prior to construction.

8. Environmental Protection.

Make a good faith effort to ensure all cleared and grubbed material is burned only as a last resort. Stumps, roots, brush, waste logs and limbs, timber tops and debris resulting from clearing and grubbing or occurring within the clearing and grubbing limits could be disposed of by chipping or removing from the highway right-of-way.

This construction project is encompassed in the larger St. Croix Crossing project. Take special care to prevent pollution, siltation, or contamination of any water run-off as a result of work under this contract.

During sawing and milling operations, appropriate measures shall be taken to minimize fugitive dust that will be created. Slurry and/or waste produced from these operations may not be discharged into any surface waters or wetlands nor on slopes directly upgradient from such resources.

Take special care in the handling of petroleum products. Formulate a contingency plan which would be effective in the event of a spill.

If a spill of any potential pollutants should occur, it is the responsibility of the contractor to contact the Department of Natural Resources, Office of Solid Waste Management, phone (715) 839-3775, Attn: Mr. John Grump, within 24 hours and it is the contractor's responsibility to remove such material and to minimize any contamination resulting from the spill.

9. Hauling Restrictions.

Prior to the pre-construction conference, submit a hauling plan to the engineer for approval. This plan shall include the locations of the points of entry and traffic control that will be used. Any changes to the hauling plan shall be made at the discretion of the engineer.

At all times conduct operations in a manner that causes minimum inconvenience to the free flow of vehicles on roadways. The contractor will be allowed access to these roads at locations approved by the engineer.

When hauling across any public roads, provide the necessary flagging and signing to control traffic flow. Flagging operations will not be allowed on STH 35 or CTH E between the peak hours of 7:00 AM to 8:00 AM, and 4:00 PM to 6:00 PM.

Repair and maintenance of haul crossings shall be the contractor's responsibility, incidental to the contract.

10. Notice to Contractor: Rock Excavation.

Geological information indicates that the bedrock within the project limits should be between 50-feet and 200-feet. It is not anticipated bedrock will be encountered during the grading operations of STH 64. However, previous structure borings near STH 64 Station 185+00 encountered weathered sandstone between 26 ½-feet and 57-feet and a utility company encountered a cemented material at an undocumented depth during the installation of an underground facility along the north side of CTH E.

If the bedrock is encountered during construction, excavate to a depth at least 6-inches below proposed subgrade elevation as per standard spec 205.3.7.1.

The sandstone should be rippable, due to weathering and, therefore, explosives will not be permitted.

If the segment of rock removal is less than 50-feet long, continue the application of the Select Materials at Subgrade through the area to avoid a noticeable differential settlement in the roadway. If the rock area is longer than 50-feet, then the Select Crushed material can be excluded in that segment. In this case, the additional 6-inches can be made up with Base Aggregate Dense, 1 1/4-inch.

11. Notice to Contractor: Waste Site Locations.

The State of Wisconsin owns land near the project site that has been identified in the plans to be a potential waste site for excess excavated material from the construction site or a borrow site. Only clean fill can be placed on these areas, and shall not be used for contractor staging or storage areas. If intending to use these sites, the contractor shall identify in the Erosion Control Implementation Plan, and acquire all applicable permits.

The south site was used as a waste site for the previous construction project (8110-02-71). Final contours or available waste/borrow quantities are not available from the department.

If used, restore either site to final contours as approved in the Erosion Control Implementation Plan or as approved by the engineer in the field. Finishing costs shall be the contractor's responsibility similar to the use of a private site.

If State owned land is used for the haul road to the waste site, and said haul road is located on tillable fields, the contractor shall be required to restore the area back to its original condition, including original topsoil depth and soil densities. The contractor's restoration plan shall be approved through the Erosion Control Implementation Plan process, and shall include methods for restoring soil densities to a tillable condition. Subsoiling operations shall be performed to a minimum of 20 inches. The equipment shall be capable of exerting a penetration force necessary for the site. No disc cultivators, chisel plows, or spring-loaded equipment will be allowed.

12. Notice to Contractor: Work By Others.

Previous grading from the river bridge to Station 200+00 and portions of the interchange and ramps were completed by others under WisDOT project 8110-02-71. The existing ground surface shown within the 8110-02-71 project limits is from computer model data, not survey data. Differences between the plan and site conditions will be paid as Excavation Common at the contract unit price. Project 8110-02-71 work will be completed by December 2014; no coordination is required.

Portions of STH 35/64 and Frontage Road A will be completed by others, as shown in the plans. Work by others will be under a separate contract; no coordination is required.

13. Notice to Contractor: Control Points.

To ensure proper site calibration of survey equipment and GPS machine control equipment to the project plan and previous project grading by others, only points 1001-1006 of the “Control Points” plan sheet shall be included. Prior to conducting each site calibration, the contractor shall confirm which control points to use with the engineer, Mike Piller, Technical Services Supervisor, (715) 395-3021 or Dennis Danowski, Surveyor, (715) 635-4994.

14. 3D Roadway Model Data.

In addition to, but separate from the contractor staking packet, the department will provide detailed 3D proposed roadway model data for 8110-02-72. The department will provide the data prior to project LET date within five business days of a contractor request submitted as follows: by email to Beth Cunningham at beth.cunningham@dot.wi.gov.

The 3D Roadway Model data consists of the following:

- 1) LandXML v1.2 files containing reference line and proposed profile information
- 2) AutoCAD 2014 DWG files containing 3D surface models as follows:
 - a. Existing ground surface
 - b. Ultimate Datum Surface
 - Top of topsoil outside the roadway subgrade shoulder points extended to the slope intercepts.
 - Subgrade surface within the roadway subgrade shoulder points.
 - c. Ultimate Subbase Surface
 - Top of select crushed material layer within the roadway edges of traveled way.
 - d. Ultimate Base Course Surface
 - Top of base course within the roadway edges of traveled way.
- 3) AutoCAD 2014 DWG files containing 3D Surface Model longitudinal breaklines for proposed surfaces.

15. Select Borrow.

Conform to the requirements of standard spec 208 and as hereinafter provided.

Material

Furnish and use material that consists of granular material meeting the following requirements: Granular Backfill, Grade 2.
208-005 (20031103)

16. QMP Base Aggregate.

A Description

A.1 General

- (1) This special provision describes contractor quality control (QC) sampling and testing for base aggregates, documenting those test results, and documenting related production and placement process changes. This special provision also describes department quality verification (QV), independent assurance (IA), and dispute resolution.
- (2) Conform to standard spec 301, standard spec 305, and standard spec 310 as modified here in this special provision. Apply this special provision to material placed under all of the Base Aggregate Dense and Base Aggregate Open Graded bid items, except do not apply this special provision to material classified as reclaimed asphaltic pavement placed under the Base Aggregate Dense bid items.
- (3) Do not apply this special provision to material placed under the Aggregate Detours, Salvaged Asphaltic Pavement Base, Breaker Run, Select Crushed, Pit Run, Subbase, or Riprap bid items.
- (4) Provide and maintain a quality control program, defined as all activities related to and documentation of the following:
 1. Production and placement control and inspection.
 2. Material sampling and testing.
- (5) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required sampling and testing procedures. The contractor may obtain the CMM from the department's web site at:

<http://roadwaystandards.dot.wi.gov/standards/cmm/index.htm>

A.2 Contractor Testing for Small Quantities

- (1) The department defines a small quantity, for each individual Base Aggregate bid item, as a plan quantity of 9000 tons or less of material as shown in the schedule of items under that bid item.
- (2) The requirements under this special provision apply equally to a small quantity for an individual bid item except as follows:
 1. The contractor need not submit a full quality control plan but shall provide an organizational chart to the engineer including names, telephone numbers, and current certifications of all persons involved in the quality control program for material under affected bid items.

2. Divide the aggregate into uniformly sized sublots for testing as follows:

Plan Quantity	Minimum Required Testing
≤ 1500 tons	One test from production, load-out, or placement at the contractor's option ^[1]
> 1500 tons and ≤ 6000 tons	Two tests of the same type, either from production, load-out, or placement at the contractor's option ^[1]
> 6000 tons and ≤ 9000 tons	Three placement tests ^{[2][3]}

- ^[1] If using production tests for acceptance, submit test results to the engineer for review prior to incorporating the material into the work. Production test results are valid for a period of 3 years.
 - ^[2] For 3-inch material, obtain samples at load-out.
 - ^[3] If the actual quantity overruns 9000 tons, create overrun sublots to test at a rate of one additional placement test for each 3000 tons, or fraction of 3000 tons, of overrun.
3. No control charts are required. Submit aggregate load-out and placement test results to the engineer within one business day of obtaining the sample. Assure that all properties are within the limits specified for each test.
 4. Department verification testing is optional for quantities of 6000 tons or less.
- (3) Material represented by a subplot with any property outside the specification limits is nonconforming. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

B Materials

B.1 Quality Control Plan

- (1) Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not place base before the engineer reviews and comments on the plan. Construct the project as that plan provides.
- (2) Do not change the quality control plan without the engineer's review. Update the plan with changes as they become effective. Provide a current copy of the plan to the engineer and post in each of the contractor's laboratories as changes are adopted. Ensure that the plan provides the following elements:
 1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
 2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication means that will be used, and action time frames.
 3. A list of source and processing locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
 4. Test results for wear, sodium sulfate soundness, freeze/thaw soundness, and plasticity index of all aggregates requiring QC testing. Obtain this information from the region materials unit or from the engineer.

5. Descriptions of stockpiling and hauling methods.
6. Locations of the QC laboratory, retained sample storage, and where control charts and other documentation is posted.
7. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.

B.2 Personnel

- (1) Have personnel certified under the department's highway technician certification program (HTCP) perform sampling, testing, and documentation as follows:

Required Certification Level:	Sampling or Testing Roles:
Aggregate Technician IPP Aggregate Sampling Technician Aggregate Assistant Certified Technician (ACT-AGG)	Aggregate Sampling ^[1]
Aggregate Technician IPP Aggregate Assistant Certified Technician (ACT-AGG)	Aggregate Gradation Testing, Aggregate Fractured Particle Testing, Aggregate Liquid Limit and Plasticity Index Testing

^[1] Plant personnel under the direct observation of an aggregate technician certified at level one or higher may operate equipment to obtain samples.

- (2) A certified technician must coordinate and take responsibility for the work an ACT performs. Have a certified technician ensure that all sampling and testing is performed correctly, analyze test results, and post resulting data. No more than one ACT can work under a single certified technician.

B.3 Laboratory

- (1) Perform QC testing at a department-qualified laboratory. Obtain information on the Wisconsin laboratory qualification program from:

Materials Management Section
3502 Kinsman Blvd.
Madison, WI 53704
Telephone: (608) 246-5388

<http://www.dot.state.wi.us/business/engrserv/lab-qualification.htm>

B.4 Quality Control Documentation

B.4.1 General

- (1) Submit base aggregate placement documentation to the engineer within 10 business days after completing base placement. Ensure that the submittal is complete, neatly organized, and includes applicable project records and control charts.

B.4.2 Records

- (1) Document all placement observations, inspection records, and control adjustments daily in a permanent field record. Also include all test results in the project records. Provide test results to the engineer within 6 hours after obtaining a sample. For 3-inch

base, extend this 6-hour limit to 24 hours. Post or distribute tabulated results using a method mutually agreeable to the engineer and contractor.

B.4.3 Control Charts

- (1) Plot gradation and fracture on the appropriate control chart as soon as test results are available. Format control charts according to CMM 8.30. Include the project number on base placement control charts. Maintain separate control charts for each base aggregate size, source or classification, and type.
- (2) Provide control charts to the engineer within 6 hours after obtaining a sample. For 3-inch base, extend this 6-hour limit to 24 hours. Post or distribute charts using a method mutually agreeable to the engineer and contractor. Update control charts daily to include the following:
 1. Contractor individual QC tests.
 2. Department QV tests.
 3. Department IA tests.
 4. Four-point running average of the QC tests.
- (3) Except as specified under B.8.2.1 for nonconforming QV tests, include only QC tests in the running average. The contractor may plot process control or informational tests on control charts, but do not include these tests, conforming QV tests, or IA tests in the running average.

B.5 Contractor Testing

- (1) Test gradation, fracture, liquid limit and plasticity index during placement for each base aggregate size, source or classification, and type.
- (2) Test gradation once per 3000 tons of material placed. Determine random sample locations and provide those sample locations to the engineer. Obtain samples after the material has been bladed, mixed, and shaped but before compacting; except collect 3-inch samples from the stockpile at load-out. Do not sample from material used to maintain local traffic or from areas of temporary base that will not have an overlying pavement. On days when placing only material used to maintain local traffic or only temporary base that will not have an overlying pavement, no placement testing is required.
- (3) Split each contractor QC sample and identify it according to CMM 8.30. Retain the split for 7 calendar days in a dry, protected location. If requested for department comparison testing, deliver the split to the engineer within one business day.
- (4) The engineer may require additional sampling and testing to evaluate suspect material or the technician's sampling and testing procedures.
- (5) Test fracture for each gradation test until the fracture running average is above the lower warning limit. Subsequently, the contractor may reduce the frequency to one test per 10 gradation tests if the fracture running average remains above the warning limit.

- (6) Test the liquid limit and plasticity index for the first gradation test. Subsequently, test the liquid limit and plasticity index a minimum of once per 10 gradation tests.

B.6 Test Methods

B.6.1 Gradation

- (1) Test gradation using a washed analysis conforming to the following as modified in CMM 8.60:
Gradation..... AASHTO T 27
Material finer than the No. 200 sieve..... AASHTO T 11
- (2) For 3-inch base, if 3 consecutive running average points for the percent passing the No. 200 sieve are 8.5 percent or less, the contractor may use an unwashed analysis. Wash at least one sample out of 10. If a single running average for the percent passing the No. 200 sieve exceeds 8.5 percent, resume washed analyses until 3 consecutive running average points are again 8.5 percent passing or less.
- (3) Maintain a separate control chart for each sieve size specified in standard spec 305 or standard spec 310 for each base aggregate size, source or classification, and type. Set control and warning limits based on the standard specification gradation limits as follows:
 1. Control limits are at the upper and lower specification limits.
 2. There are no upper warning limits for sieves allowing 100 percent passing and no lower control limits for sieves allowing 0 percent passing.
 3. Dense graded warning limits, except for the No. 200 sieve, are 2 percent within the upper and lower control limits. Warning limits for the No. 200 sieve are set 0.5 percent within the upper and lower control limits.
 4. Open graded warning limits for the 1-inch, 3/8-inch, and No. 4 sieves are 2 percent within the upper and lower control limits. Upper warning limits for the No. 10, No. 40, and No. 200 sieves are 1 percent inside the upper control limit.

B.6.2 Fracture

- (1) Test fracture conforming to CMM 8.60. The engineer will waive fractured particle testing on quarried stone.
- (2) Maintain a separate fracture control chart for each base aggregate size, source or classification, and type. Set the lower control limit at the contract specification limit, either specified in another special provision or in table 301-2 of standard spec 301.2.4.5. Set the lower warning limit 2 percent above the lower control limit. There are no upper limits.

B.6.3 Liquid Limit and Plasticity

- (1) Test the liquid limit and plasticity according to AASHTO T 89 and T 90.
- (2) Ensure the material conforms to the limits specified in standard spec table 301-2.

B.7 Corrective Action

B.7.1 General

- (1) Consider corrective action when the running average trends toward a warning limit. Take corrective action if an individual test exceeds the contract specification limit. Document all corrective actions both in the project records and on the appropriate control chart.

B.7.2 Placement Corrective Action

- (1) Do not blend additional material on the roadbed to correct gradation problems.
- (2) Notify the engineer whenever the running average exceeds a warning limit. When 2 consecutive running averages exceed a warning limit, the engineer and contractor will discuss appropriate corrective action. Perform the engineer's recommended corrective action and increase the testing frequency as follows:
 1. For gradation, increase the QC testing frequency to at least one randomly sampled test per 1000 tons placed.
 2. For fracture, increase the QC testing frequency to at least one test per gradation test.
- (3) If corrective action improves the property in question such that the running average after 4 additional tests is within the warning limits, the contractor may return to the testing frequency specified in B.5.3. If corrective action does not improve the property in question such that the running average after 4 additional individual tests is still in the warning band, repeat the steps outlined above starting with engineer notification.
- (4) If the running average exceeds a control limit, material starting from the first running average exceeding the control limit and ending at the first subsequent running average inside the control limit is nonconforming and subject to pay reduction.
- (5) For individual test results significantly outside the control limits, notify the engineer, stop placing base, and suspend other activities that may affect the area in question. The engineer and contractor will jointly review data, data reduction, and data analysis; evaluate sampling and testing procedures; and perform additional testing as required to determine the extent of potentially unacceptable material. The engineer may direct the contractor to remove and replace that material. Individual test results are significantly outside the control limits if meeting one or more of the following criteria:
 1. A gradation control limit for the No. 200 sieve is exceeded by more than 3.0 percent.
 2. A gradation control limit for any sieve, except the No. 200, is exceeded by more than 5.0 percent.
 3. The fracture control limit is exceeded by more than 10.0 percent.

B.8 Department Testing

B.8.1 General

- (1) The department will conduct verification testing to validate the quality of the product and independent assurance testing to evaluate the sampling and testing. The

department will provide the contractor with a listing of names and telephone numbers of all QV and IA personnel for the project, and provide test results to the contractor within 2 business days after the department obtains the sample.

B.8.2 Verification Testing

B.8.2.1 General

- (1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in B.2 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.
- (2) The department will conduct QV tests of each base aggregate size, source or classification, and type during placement conforming to the following:
 1. One non-random test on the first day of placement.
 2. At least one random test per 30,000 tons, or fraction of 30,000 tons, placed.
- (3) The department will sample randomly, at locations independent of the contractor's QC work, collecting one sample at each QV location. The department will collect QV samples after the material has been bladed, mixed, and shaped but before compacting; except, for 3-inch aggregates, the department will collect samples from the stockpile at load-out. The department will split each sample, test half for QV, and retain half.
- (4) The department will conduct QV tests in a separate laboratory and with separate equipment from the contractor's QC tests. The department will use the same methods specified for QC testing.
- (5) The department will assess QV results by comparing to the appropriate specification limits. 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.

B.8.3 Independent Assurance

- (1) Independence assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing including personnel qualifications, procedures, and equipment. The department will perform an IA review according to the department's independent assurance program. That review may include one or more of the following:
 1. Split sample testing.
 2. Proficiency sample testing.
 3. Witnessing sampling and testing.
 4. Test equipment calibration checks.
 5. Reviewing required worksheets and control charts.
 6. Requesting that testing personnel perform additional sampling and testing.

- (2) If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in B.9.

B.9 Dispute Resolution

- (1) The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department and contractor may review the data, examine data reduction and analysis methods, evaluate sampling and testing procedures, and perform additional testing. Use ASTM E 178 to evaluate potential statistically outlying data.
- (2) Production test results, and results from other process control testing, may be considered when resolving a dispute.
- (3) If the project personnel cannot resolve a dispute, and the dispute affects payment or could result in incorporating non-conforming product, the department will use third party testing to resolve the dispute. The department's central office laboratory, or a mutually agreed on independent testing laboratory, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent laboratory. The department may use third party test results to evaluate the quality of questionable materials and determine the appropriate payment. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

C (Vacant)

D (Vacant)

E Payment

- (1) Costs for all sampling, testing, and documentation required under this special provision are incidental to this 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.
- (2) For material represented by a running average exceeding a control limit, the department will reduce pay by 10 percent of the contract price for the affected Base Aggregate bid items listed in subsection A. The department will administer pay reduction under the Nonconforming QMP Base Aggregate Gradation or Nonconforming QMP Base Aggregate Fracture Administrative items. The department will determine the quantity of nonconforming material as specified in B.7.2.

301-010 (20100709)

17. QMP Ride; Incentive IRI Ride, Item 440.4410.S.

A Description

- (1) This special provision describes profiling pavements with a non-contact profiler, locating areas of localized roughness, and determining the International Roughness Index (IRI) for each wheel path segment.
- (2) Profile the final riding surface of all mainline pavements. Include auxiliary lanes in Category I and II segments; crossroads with county, state or U.S. highway designations greater than 1500 feet in continuous length; bridges, bridge approaches; and railroad crossings. Exclude roundabouts and pavements within 150 feet of the points of curvature of roundabout intersections.
- (3) The engineer may direct straightedging under standard spec 415.3.10 for pavement excluded from localized roughness under C.5.2 (1); for bridges; and for roundabouts and pavements within 150 feet of the points of curvature of roundabout intersections. Other surfaces being tested under this provision are exempt from straightedging requirements.

B (Vacant)

C Construction

C.1 Quality Control Plan

- (1) Submit a written quality control plan to the engineer at or before the pre-pave meeting. Ensure that the plan provides the following elements:
 1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of all quality control personnel.
 2. The process by which quality control information and corrective action efforts will be disseminated to the appropriate persons. Include a list of recipients, the communication means that will be used, and action time frames.
 3. The methods and timing used for monitoring and/or testing ride quality throughout the paving process. Also indicate the approximate timing of acceptance testing in relation to the paving operations.
 4. The segment locations of each profile run used for acceptance testing.
 5. Traffic Control Plan

C.2 Personnel

- (1) Have a profiler operator, certified under the department's highway technician certification program (HTCP), operate the equipment, collect the required data, and analyze the results using the methods taught in the HTCP profiling course. Ensure that an HTCP-certified profiler operator supervises data entry into the material records system (MRS).

C.3 Equipment

- (1) Furnish a profile-measuring device capable of measuring IRI from the list of department-approved devices published on the department's web site:
<http://roadwaystandards.dot.wi.gov/standards/qmp/index.htm>
- (2) Unless the engineer and contractor mutually agree otherwise, arrange to have a calibrated profiler available when paving the final riding surface.
- (3) Perform daily calibration verification of the profiler using test methods according to the manufacturer's recommendations. Notify the engineer before performing the calibration verification. If the engineer requests, arrange to have the engineer observe the calibration verification and operation. Maintain records of the calibration verification activities, and provide the records to the engineer upon request.

C.4 Testing

C.4.1 Run and Reduction Parameters

- (1) Enter the equipment-specific department-approved filter settings and parameters given in the approved profilers list on the department's QMP ride web site.
<http://roadwaystandards.dot.wi.gov/standards/qmp/profilers.pdf>

C.4.2 Contractor Testing

- (1) Operate profilers within the manufacturer's recommended speed tolerances. Perform all profile runs in the direction of travel. Measure the longitudinal profile of each wheel track of each lane. The wheel tracks are 6.0 feet apart and centered in the traveled way of the lane.
- (2) Coordinate with the engineer to schedule profile runs for acceptance. The department may require testing to accommodate staged construction or if corrective action may be required.
- (3) Measure the profiles of each standard or partial segment. Define primary segments starting at a project terminus and running contiguously along the mainline to the other project terminus. Field-locate the beginning and ending points for each profile run. When applicable, align segment limits with the subplot limits used for testing under the QMP Concrete Pavement specification. Define segments one wheel path wide and distinguished by length as follows:
 1. Standard segments are 500 feet long.
 2. Partial segments are less than 500 feet long.

- (4) Treat partial segments as independent segments.

The department will categorize each standard or partial segment as follows:

Segments with a Posted Speed Limit of 55 MPH or Greater	
Category	Description
HMA I	Asphalt pavement with multiple opportunities to achieve a smooth ride. The following operations performed under this contract are considered as opportunities: a layer of HMA, a leveling or wedging layer of HMA, and diamond grinding or partial depth milling of the underlying pavement surface.
HMA II	Asphalt pavement with a single opportunity to achieve a smooth ride.
HMA III	Asphalt pavement segments containing any portion of a bridge, bridge approach, railroad crossing, or intersection. An intersection is defined as the area within the points of curvature of the intersection radii.
PCC II	Concrete pavement.
PCC III	Concrete pavement segments containing any portion of a bridge, bridge approach, railroad crossing, intersection or gap. An intersection is defined as the area within the points of curvature of the intersection radii.

Segments with Any Portion Having a Posted Speed Limit Less Than 55 MPH	
Category	Description
HMA IV	Asphalt pavement including intersections, bridges, approaches, and railroad crossings.
PCC IV	Concrete pavement including gaps, intersections, bridges, approaches, and railroad crossings.

C.4.3 Verification Testing

- (1) The department may conduct verification testing (QV) to validate the quality of the product. A HTCP certified profiler operator will perform the QV testing. The department will provide the contractor with a listing of the names and telephone numbers of all verification personnel for the project.
- (2) The department will notify the contractor before testing so the contractor can observe the QV testing. Verification testing will be performed independent of the contractor's QC work using separate equipment from the contractor's QC tests. The department will provide test results to the contractor within 1 business day after the department completes the testing.
- (3) The engineer and contractor will jointly investigate any testing discrepancies. The investigation may include additional testing as well as review and observation of both the department's and contractor's testing procedures and equipment. Both parties will document all investigative work.

- (4) If the contractor does not respond to an engineer request to resolve a testing discrepancy, the engineer may suspend production until action is taken. Resolve disputes as specified in C.6.

C.4.4 Documenting Profile Runs

- (1) Compute the IRI for each segment and analyze areas of localized roughness using the ProVAL software. Also, the contractor shall prepare the ProVAL Ride Quality Module Reports, showing the IRI for each segment and the areas of localized roughness exceeding an IRI of 200 in/mile. Use ride quality module report as follows:

	<u>Fixed Interval</u>	<u>Continuous (Localized Roughness)</u>
Base-length	500'	25'
Threshold	140"/Mile	200"/Mile

The ProVAL software is available for download at:

<http://www.roadprofile.com>.

- (2) As part of the profiler software outputs and ProVAL reports, document the areas of localized roughness. Field-locate the areas of localized roughness prior to the engineer's assessment for corrective actions. Document the reasons for areas excluded and submit to the engineer.
- (3) Within 5 business days after completing profiling of the pavement covered under this special provision, unless the engineer and contractor mutually agree to a different timeline, submit the electronic ProVAL project file containing the .ppf files for each profiler acceptance run data and Ride Quality Module Reports, in .pdf format using the department's Materials Reporting System (MRS) software available on the department's web site:

<http://www.atwoodsystems.com/mrs>

Notify the engineer when the Profiler Acceptance Run data and the Ride Quality Report have been submitted to the MRS system.

C.5 Corrective Actions

C.5.1 General

- (1) Analyze the data from the PROVAL reports and make corrective action recommendations to the department. The department will independently assess whether a repair will help or hurt the long-term pavement performance before deciding on corrective action. Correct the ride as the engineer directs in writing.

C.5.2 Corrective Actions for Localized Roughness

- (1) Apply localized roughness requirements to all pavements, including HMA III, PCC III, HMA IV, and PCC IV; except localized roughness requirements will not be applied to pavements within 25 feet of the following surfaces if they are not constructed under this contract: bridges, bridge approaches, or railroad crossings. The department may direct the contractor to make corrections to the pavement within the 25-foot exclusionary zones.
- (2) The engineer will review each individual wheel track for areas of localized roughness. The engineer will assess areas of localized roughness within 5 business days of receiving notification that the reports were uploaded. The engineer will analyze the report documenting areas that exceed an IRI of 200 in/mile and do one of the following for each location:
 1. Direct the contractor to correct the area to minimize the effect on the ride.
 2. Leave the area of localized roughness in place with no pay reduction.
 3. Except for HMA IV and PCC IV segments, assess a pay reduction as follows for each location in each wheel path:

Localized Roughness IRI (in/mile)	Pay Reduction ^[1] (dollars)
> 200	(Length in Feet) x (IRI – 200)

^[1] A maximum \$250 pay reduction may be assessed for locations of localized roughness that are less than or equal to 25 feet long. Locations longer than 25 feet may be assessed a maximum pay reduction of \$10 per foot.

- (3) The engineer will not direct corrective action or assess a pay reduction for an area of localized roughness without independent identification of that area as determined by physically riding the pavement. For corrections, use only techniques the engineer approves.
- (4) Re-profile corrected areas to verify that the IRI is less than 140 in/mile after correction. Submit a revised ProVAL ride quality module report to the reference documents section of the MRS for the corrected areas to validate the results.

C.5.3 Corrective Actions for Excessive IRI

- (1) If an individual segment IRI exceeds 140 in/mile for HMA I, HMA II, and PCC II pavements after correction for localized roughness, the engineer may require the contractor to correct that segment. Correct the segment final surface as follows:

- HMA I: Correct to an IRI of 60 in/mile using whichever of the following methods as approved by the engineer:
Mill and replace the full lane width of the riding surface excluding the paved shoulder.
Continuous diamond grinding or fine-tooth milling the full lane width, if required, of the riding surface including adjustment of the paved shoulders.
- HMA II: Correct to an IRI of 85 in/mile using whichever of the following methods as approved by the engineer:
Mill and replace the full lane width of the riding surface excluding the paved shoulder.
Continuous diamond grinding or fine-tooth milling of the full lane width, if required, of the riding surface including adjustment of the paved shoulders
- PCC II: Correct to an IRI of 85 in/mile using whichever of the following methods as approved by the engineer:
Continuous diamond grinding of the full lane width, if required, of the riding surface including adjustment of the paved shoulders. Conform to sections C.1 through C.4 of Concrete Pavement Continuous Diamond Grinding Special provision contained elsewhere in the contract.
Remove and replace the full lane width of the riding surface.

- (2) Re-profile corrected segments to verify that the final IRI meets the above correction limits and there are no areas of localized roughness. Enter a revised ProVAL ride quality module report for the corrected areas to the reference documents section of the MRS. Segments failing these criteria after correction are subject to the engineer's right to adjust pay for non-conforming work under standard spec 105.3.

C.6 Dispute Resolution

- (1) The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department and contractor may review the data, examine data reduction and analysis methods, evaluate testing procedures, and perform additional testing.
- (2) If the project personnel cannot resolve a dispute and the dispute affects payment or could result in incorporating nonconforming pavement, the department will use third party testing to resolve the dispute. The department's Quality Assurance Unit, or a mutually agreed on independent testing company, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in

error will pay service charges incurred for testing by an independent tester. The department may use third party tests to evaluate the quality of questionable pavement and determine the appropriate payment.

D Measurement

- (1) The department will measure Incentive IRI Ride by the dollar, adjusted as specified in E.2.

E Payment

E.1 Payment for Profiling

- (1) Costs for furnishing and operating the profiler, documenting profile results, and correcting the final pavement surface are incidental to the contract. The department will pay separately for engineer-directed corrective action performed within the 25-foot exclusionary zones under C.5.2 as extra work.

E.2 Pay Adjustment

- (1) The department will pay incentive for ride under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
440.4410.S	Incentive IRI Ride	DOL

- (2) Incentive payment is not limited, either up or down, to the amount the schedule of items shows.
- (3) The department will administer disincentives for ride under the Disincentive IRI Ride administrative item.
- (4) The department will not assess disincentive on HMA III or PCC III segments. Incentive pay for HMA III and PCC III segments will be according to the requirements for the category of the adjoining segments.
- (5) The department will adjust pay for each segment based on the initial IRI for that segment. If corrective action is required, the department will base disincentives on the IRI after correction for pavement meeting the following conditions:
 - All Pavement: The corrective work is performed in a contiguous, full lane width section 500 feet long, or a length as agreed with the engineer.
 - HMA Pavements: The corrective work is a mill and inlay or full depth replacement and the inlay or replacement layer thickness conforms to standard spec 460.3.2.
 - Concrete Pavements: The corrective work is a full depth replacement and conforms to standard spec 415.

- (6) The department will adjust pay for 500-foot long standard segments nominally one wheel path wide using equation “QMP 1.04” as follows:

HMA I	
Initial IRI (inches/mile)	Pay Adjustment^[1] (dollars per standard segment)
< 30	250
≥ 30 to <35	$1750 - (50 \times \text{IRI})$
≥ 35 to < 60	0
≥ 60 to < 75	$1000 - (50/3 \times \text{IRI})$
≥ 75	-250

HMA II and PCC II	
Initial IRI (inches/mile)	Pay Adjustment^{[1][2]} (dollars per standard segment)
< 50	250
≥ 50 to < 55	$2750 - (50 \times \text{IRI})$
≥ 55 to < 85	0
≥ 85 to < 100	$(4250/3) - (50/3 \times \text{IRI})$
≥ 100	-250

HMA IV and PCC IV	
Initial IRI (inches/mile)	Pay Adjustment^{[1][2]} (dollars per standard segment)
< 35	250
≥ 35 to < 45	$1125 - (25 \times \text{IRI})$
≥ 45	0

^[1] If the engineer directs placing upper layer asphaltic mixtures between October 15 and May 1 for department convenience as specified in standard spec 450.3.2.1(5), the department will not adjust pay for ride on pavement the department orders the contractor to place when the temperature, as defined in standard spec 450.3.2.1(2), is less than 36 F.

^[2] If the engineer directs placing concrete pavement for department convenience, the department will not adjust pay for ride on pavement the department orders the contractor to place when the air temperature falls below 35 F.

- (7) The department will prorate the pay adjustment for partial segments based on their length.

440-010 (20130615)

18. 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 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. Obtain the CMM from the department's web site at:
<http://roadwaystandards.dot.wi.gov/standards/cmm/index.htm>
- (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/mrs>

B Materials

B.1 Personnel

- (1) Perform HMA pavement density (QC, QV) testing using a HTCP certified nuclear technician I, or a nuclear assistant certified technician (ACT-NUC) working under a certified technician.
- (2) If an ACT is performing sampling or testing, a certified technician must coordinate and take responsibility for the work an ACT performs. Have a certified technician ensure that all sampling and testing is performed correctly, analyze test results, and post resulting data. No more than one ACT can work under a single certified technician.

B.2 Testing

- (1) Conform to ASTM D2950 and CMM 8.15 for density testing and gauge monitoring methods. Perform nuclear gauge measurements using gamma radiation in the backscatter position. Perform each test for 4 minutes of nuclear gauge count time.

B.3 Equipment

B.3.1 General

- (1) Furnish nuclear gauges from the department's approved product list at <http://www.dot.wisconsin.gov/business/engrserv/approvedprod.htm>.
- (2) Have the gauge calibrated by the manufacturer or an approved calibration service within 12 months of its use on the project. Retain a copy of the manufacturer's calibration certificate with the gauge.
- (3) Prior to each construction season, and following any calibration of the gauge, the contractor must perform calibration verification for each gauge using the reference blocks located in the department's central office materials laboratory. To obtain information or schedule a time to perform calibration verification, contact the department's Radiation Safety Officer at:
Materials Management Section
3502 Kinsman Blvd.
Madison, Wisconsin 53704
Telephone: (608) 243-5998

B.3.2 Correlation of Nuclear Gauges

B.3.2.1 Correlation of QC and QV Nuclear Gauges

- (1) Select a representative section of the compacted pavement prior to or on the first day of paving for the correlation process. The section does not have to be the same mix design.
- (2) Correlate the 2 or more gauges used for density measurement (QC, QV). The QC and QV gauge operators will perform the correlation on 5 test sites jointly located. Record each density measurement of each test site for the QC, QV and back up gauges.
- (3) Calculate the average of the difference in density of the 5 test sites between the QC and QV gauges. Locate an additional 5 test sites if the average difference exceeds 1.0 lb/ft³. Measure and record the density on the 5 additional test sites for each gauge.
- (4) Calculate the average of the difference in density of the 10 test sites between the QC and QV gauges. Replace one or both gauges if the average difference of the 10 tests exceeds 1.0 lb/ft³ and repeat correlation process from B.3.2.1 (2).
- (5) Furnish one of the QC gauges passing the allowable correlation tolerances to perform density testing on the project.

B.3.2.2 Correlation Monitoring

- (1) After performing the gauge correlation specified in B.3.2.1, establish a project reference site approved by the department. Clearly mark a flat surface of concrete or asphalt or other material that will not be disturbed during the duration of the project. Perform correlation monitoring of the QC, QV, and all back-up gauges at the project reference site.

- (2) Conduct an initial 10 density tests with each gauge on the project reference site and calculate the average value for each gauge to establish the gauge's reference value. Use the gauge's reference value as a control to monitor the calibration of the gauge for the duration of the project.
- (3) Check each gauge on the project reference site a minimum of one test per day if paving on the project. Calculate the difference between the gauge's daily test result and its reference value. Investigate if a daily test result is not within 1.5 lb/ft³ of its reference value. Conduct 5 additional tests at the reference site once the cause of deviation is corrected. Calculate and record the average of the 5 additional tests. Remove the gauge from the project if the 5-test average is not within 1.5 lb/ft³ of its reference value established in B.3.2.2(2).
- (4) Maintain the reference site test data for each gauge at an agreed location.

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) A lot consists of the tonnage placed each day for each layer and target density specified in standard spec 460.3.3.1. A lot may include partial sublots.
- (2) Divide the roadway into sublots. A sublot is 1500 lane feet for each layer and target density.
- (3) A sublot may include HMA placed on more than one day of paving. Test sublots at the pre-determined random locations regardless of when the HMA is placed. No additional testing is required for partial sublots at the beginning or end of a day's paving.
- (4) If a resulting partial quantity at the end of the project is less than 750 lane feet, include that partial quantity with the last full sublot of the lane. If a resulting partial quantity at the end of the project is 750 lane feet or more, create a separate sublot for that partial quantity.
- (5) Randomly select test locations for each sublot as specified in CMM 8.15 prior to paving and provide a copy to the engineer. Locate and mark QC density test sites when performing the tests. Perform density tests prior to opening the roadway to traffic.
- (6) Use Table 1 to determine the number of tests required at each station, depending on the width of the lane being tested. When more than one test is required at a station, offset the tests 10 feet longitudinally from one another to form a diagonal testing row across the lane.

Lane Width	No. of Tests	Transverse Location
5 ft or less	1	Random
Greater than 5 ft to 9 ft	2	Random within 2 equal widths
Greater than 9 ft	3	Random within 3 equal widths

Table 1

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

- (1) A lot represents a combination of the total daily tonnage for each layer and target density.
- (2) Each side road, crossover, turn lane, ramp, and roundabout must contain at least one subplot for each layer.
- (3) If a side road, crossover, turn lane, or ramp is 1500 feet or longer, determine sublots and random test locations as specified in B.4.1.1.
- (4) If a side road, crossover, turn lane, or ramp is less than 1500 feet long, determine sublots using a maximum of 750 tons per subplot and perform the number of random tests as specified in Table 2.

Side Roads, Turn Lanes, Crossovers, Ramps, Roundabouts: Sublot/Layer tonnage	Minimum Number of Tests Required
25 to 100 tons	1
101 to 250 tons	3
251 to 500 tons	5
501 to 750 tons	7

Table 2

B.4.2 Pavement Density Determination

B.4.2.1 Mainline Traffic Lanes and Appurtenances

- (1) Calculate the average subplot densities using the individual test results in each subplot.
- (2) If all subplot 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 subplot average is more than one percent below the target density, do not include the individual test results from that subplot when computing the lot average density and remove that subplot's tonnage from the daily quantity for incentive. The tonnage from any such subplot is subject to disincentive pay according to 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 subplot 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 subplot 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 subplot. Testing in a previously accepted subplot 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 subplot width within the traffic lanes or shoulders.
- (4) Retesting and acceptance of replaced pavement will be according to 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 subplot and lot densities.
- (6) If 2 consecutive subplot 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 subplot 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 subplot using the same testing requirements and frequencies as the QC tester.
- (3) If the verification subplot average is not more than one percent below the specified minimum target density, use the QC tests for acceptance.
- (4) If the verification subplot average is more than one percent below the specified target density, compare the QC and QV subplot averages. If the QV subplot average is within 1.0 lb/ft^3 of the QC subplot average, use the QC tests for acceptance.
- (5) If the first QV/QC subplot average comparison shows a difference of more than 1.0 lb/ft^3 each tester will perform an additional set of tests within that subplot. Combine the additional tests with the original set of tests to compute a new subplot average for each tester. If the new QV and QC subplot averages compare to within 1.0 lb/ft^3 , use the original QC tests for acceptance.
- (6) If the QV and QC subplot 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 correlation according to B.3.2.1.

- (2) The testers may use correlation 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 subplot density test results or retesting of the subplot 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-correlated 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 according to standard spec 460.5.2.2.

E.3 Incentive for HMA Pavement Density

- (1) Delete standard spec 460.5.2.3.
- (2) If the lot density is greater than the minimum specified in standard spec table 460-3 and all individual air voids test results for that mixture are within +1.0 percent or -0.5 percent of the design target in standard spec table 460-2, the department will adjust pay for that lot as follows:

Percent Lot Density Above Minimum	Pay Adjustment Per Ton
From -0.4 to 1.0 inclusive	\$0
From 1.1 to 1.8 inclusive	\$0.40
More than 1.8	\$0.80

- (3) The department will adjust pay under the Incentive Density HMA Pavement bid item. Adjustment under this item is not limited, either up or down, to the bid amount shown on the schedule of items.

- (4) If a traffic lane meets the requirements for disincentive, the department will not pay incentive on the integrally paved shoulder.
 - (5) Submit density results to the department electronically using the MRS software. The department will validate all contractor data before determining pay adjustments.
- 460-020 (20100709)

19. Concrete Staining B-55-226, Item 517.1010.S.01.

A Description

Furnish and apply a two coat concrete stain to the exposed concrete surfaces of the structure, as detailed in the plans and as hereinafter provided.

B Materials

B.1 Mortar

Use mortar for sack rubbing the concrete surfaces as given in standard spec 502.3.7.5 or use one of the following products:

Preblended, Packaged Type II Cement: Tri-Mix by TK Products
 Thoroseal Pearl Gray by Thoro Products

The mortar shall contain one of the following acrylic bonding admixtures mixed and applied in accordance to manufacturer's recommendations:

Acrylic Bonding Admixture: TK-225 by TK Products
 Achro 60 by Thoro Products
 Achro Set by Master Builders

B.2 Concrete Stain

Use concrete stain manufactured for use on exterior concrete surfaces, consisting of a base coat and a pigmented sealer finish coat. Use the following products, or equal as approved by the department, as part of the two coat finish system:

Tri-Sheen Concrete Surfacer, Smooth by TK Products
Tri-Sheen Acrylic by TK Products
TK-1450 Natural Look Urethane Anti-Graffiti Primers by TK Products
Safe-Cure and Seal EPX by Chem Masters
H&C Concrete Stain Solid Color Water Based by Sherwin-Williams

C Construction

C.1 General

Furnish, prepare, apply, cure, and store all materials in accordance to the product manufacturer's specifications for the type and condition of application required.

Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, prior to staining.

C.2 Preparation of Concrete Surfaces

Provide a sack rubbed finish in accordance to standard spec 502.3.7.5, using mortar as indicated above on concrete surfaces with open voids or honeycombing.

Following the sack rubbing, clean all concrete surfaces that are to be coated to ensure that the surface is free of all laitance, dirt, dust, grease, efflorescence, and any foreign material and that the surface will accept the coating material according to product requirements. As a minimum, clean the surface using a 3000-psi water blast. Hold the nozzle of the water blaster approximately 6 inches from the concrete surface and move it continuously in a sweeping motion. Give special attention to smooth concrete surfaces to produce an acceptable surface texture. Correct any surface problems resulting from the surface preparation methods. Grit blasting of the concrete surface is not allowed.

C.3 Staining Concrete Surfaces

Apply the concrete stain in accordance to the manufacturer's recommendations.

Apply the concrete stain when the temperature of the concrete surface is 45° F or higher, or as given by the manufacturer.

The color of the stain shall be as given on the plan. Tint the base coat to match the finish coat; the two coats shall be compatible with each other.

Do not begin staining the structure until earthwork operations are completed to a point where this work can begin without receiving damage. Where this work is adjacent to exposed soil or pavement areas, provide temporary covering protection from overspray or splatter.

C.4 Test Areas

Prior to applying stain to the structure, apply the stain to sample panels measuring a minimum of 48-inches x 48-inches and constructed to demonstrate workmanship in the use of the form liner specified on the structure if applicable. Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, prior to staining. Prepare the concrete surfaces of the sample panels and apply stain using the same materials and in the same manner as proposed for the structure, including staining of the joints between the stones produced by the form liner if applicable. Do not apply stain to the structure until the department approves the test panels.

C.5 Surfaces to be Coated.

Apply concrete stain to the surfaces in accordance to the plan.

D Measurement

The department will measure Concrete Staining (Structure) in area by the square foot of surface, acceptably prepared and stained.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1010.S.01	Concrete Staining B-55-226	SF

Payment is full compensation for furnishing and applying the two coat system; for preparing the concrete surface; and for preparing the sample panels.
517-110 (20140630)

20. Concrete Staining Multi-Color B-55-226, Item 517.1015.S.01; C-55-35, Item 517.1015.S.02.

A Description

Furnish and apply a multi-color concrete stain to the exposed concrete surfaces of the structure, as detailed in the plans and as hereinafter provided.

B Materials

B.1 Mortar

Use mortar for sack rubbing the concrete surfaces as given in standard spec 502.3.7.5 or use one of the following products:

Preblended, Packaged Type II Cement: Tri-Mix by TK Products
Thorseal Pearl Gray by Thoro Products

The mortar shall contain one of the following acrylic bonding admixtures mixed and applied in accordance to manufacturer's recommendations:

Acrylic Bonding Admixture: TK-225 by TK Products
Achro 60 by Thoro Products
Achro Set by Master Builders

B.2 Concrete Stain

Use concrete stain manufactured for use on exterior concrete surfaces. Use the following products, or equal as approved by the department:

Tri-Shien Concrete Surfer, Smooth by TK Products
Tri-Shien Acrylic by TK Products
TK-1450 Natural Look Urethane Anti-Graffiti Primers by TK Products
Safe-Cure and Seal EPX by Chem Masters
H&C Concrete Stain Solid Color Water Based by Sherwin-Williams

C Construction

C.1 General

Furnish, prepare, apply, cure, and store all materials in accordance to the product manufacturer's specifications for the type and condition of application required.

Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, prior to staining.

C.2 Preparation of Concrete Surfaces

Provide a sack rubbed finish in accordance to standard spec 502.3.7.5, using mortar as indicated above on concrete surfaces with open voids or honeycombing.

Following the sack rubbing, clean all concrete surfaces that are to be coated to ensure that the surface is free of all laitance, dirt, dust, grease, efflorescence, and any foreign material and that the surface will accept the coating material according to product requirements. As a minimum, clean the surface using a 3000-psi water blast. Hold the nozzle of the water blaster approximately 6 inches from the concrete surface and move it continuously in a sweeping motion. Give special attention to smooth concrete surfaces to produce an acceptable surface texture. Correct any surface problems resulting from the surface preparation methods. Grit blasting of the concrete surface is not allowed.

C.3 Staining Concrete Surfaces

Apply the concrete stain in accordance to the manufacturer's recommendations.

Apply the concrete stain when the temperature of the concrete surface is 45° F or higher, or as given by the manufacturer.

The color of the staining shall produce a multi-color effect that consists of multiple colors replicating varying natural stone coloration. Stain the joints between stones produced by the form liner to create the appearance of grouted joints.

Do not begin staining the structure until earthwork operations are completed to a point where this work can begin without receiving damage. Where this work is adjacent to exposed soil or pavement areas, provide temporary covering protection from overspray or splatter.

C.4 Test Areas

Prior to applying stain to the structure, apply the stain to sample panels measuring a minimum of 48-inches x 48-inches and constructed to demonstrate workmanship in the use of the form liner specified on the structure if applicable. Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, prior to staining. Submit color samples to the department prior to staining the sample panels. Prepare the concrete surfaces of the sample panels and apply stain using the same materials and in the same manner as proposed for the structure, including staining of the joints between stones produced by the form liner. Do not apply stain to the structure until the department approves the test panels.

C.5 Surfaces to be Coated.

Apply concrete stain to the surfaces in accordance to the plan.

D Measurement

The department will measure Concrete Staining Multi-Color (Structure) in area by the square foot of surface, acceptably prepared and stained.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1015.S.01	Concrete Staining Multi-Color B-55-226	SF
517.1015.S.02	Concrete Staining Multi-Color C-55-35	SF

Payment is full compensation for furnishing and applying the coloring system; for preparing the concrete surface; and for constructing and staining the sample panels.
517-115 (20140630)

21. Architectural Surface Treatment B-55-226, Item 517.1050.S.01; C-55-35, Item 517.1050.S.02.

A Description

Construct a concrete masonry architectural surface treatment on the exposed concrete surfaces of the structure, as detailed in the plans and as hereinafter provided.

B Materials

Use form liners that attach easily to the forming system, and do not compress more than ¼-inch when poured at a rate of 10 vertical feet/hour.

Use a release agent that is compatible with the form liner and coloring materials.

Wall ties shall have set “break-backs” at a minimum of ¾-inches from the finished concrete surface.

C Construction

C.1 Equipment

Equipment and tools necessary for performing all parts of the work shall be satisfactory as to design, capacity, and mechanical condition for the purposes intended. Repair, improve, replace, or supplement all equipment that is not maintained in full working order, or which is proven inadequate to obtain the results prescribed.

C.2 Form Liner Preparation

Clean the form liner prior to each pour and ensure that it is free of any build-up. Visually inspect each liner for blemishes or tears, and repair if necessary per manufacturer’s recommendations.

Apply form release per manufacturer’s recommendations.

C.3 Form Liner Attachment

Place adjacent liners less than 1/4-inch from each other, attach liner securely to forms in accordance to the manufacturer's recommendations, and coordinate wall ties with form liner and form manufacturer, e.g., diameter, size, and frequency.

C.4 Surface Finishing

Ensure that the textured surface is free of laitance; sandblasting is not permitted.

Grind or fill pouring blemishes.

D Measurement

The department will measure Architectural Surface Treatment (Structure) in area by the square foot of architectural surface, 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
517.1050.S.01	Architectural Surface Treatment B-55-226	SF
517.1050.S.02	Architectural Surface Treatment C-55-35	SF

Payment is full compensation for producing the proposed architectural surface treatment including: preparing the foundation; finishing and protecting the surface treatment; and for properly disposing of surplus material.

517-150 (20110615)

22. Wall Modular Block Gravity, Item 532.0200.S.

A Description

This special provision describes designing, furnishing materials, and erecting a permanent earth retention system in accordance to the lines, dimension, elevations and details as shown on the plans and provided in the contract. The design life of the wall and all wall components shall be 75 years.

B Materials

B.1 Proprietary Modular Block Gravity Wall Systems

The department specifies approved modular block gravity wall products on the department's approved products list.

Proprietary wall systems may be used for this work, but must conform to the requirements of this specification and be pre-approved for use by the departments' Bureau of Structures, Structures Development Section. The name of the companies supplying pre-approved material shall be furnished within 25 days after the award of contract. The department maintains a list of pre-approved systems of retaining walls. To be eligible for use on this project, a system must have been pre-approved and added to that list prior to the bid opening date.

Applications for pre-approval may be submitted at any time. Applications must be prepared in accordance to the requirements of chapter 14 of the department's Bridge manual. Information and assistance with the pre-approval process can be obtained by contacting the Structures Development Section in Room 601 of the Hill Farms State Transportation Building in Madison or by calling (608) 266-8494.

B.2 Design Requirements

It is the responsibility of the contractor to supply a design and supporting documentation as required by this special provision for review by the department to show that the proposed wall design is in compliance with the design specifications. The following shall be submitted to the engineer for review and acceptance no later than 21 days before wall construction will begin.

The design/shop plans shall be prepared on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the project identification number and structure number. Design calculations and notes shall be on 8½ inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. All plans and calculations shall be signed, sealed, and dated by a professional engineer licensed in the State of Wisconsin. Four copies of the shop drawings and two copies of the design calculations and supporting materials shall be submitted.

The design of the Modular Block Gravity Wall shall be in conformance to the latest edition of the AASHTO Standard Specifications for Highway Bridges including interim specifications, the standard specifications, and standard engineering design procedures as determined by the department. The design must include analyses that clearly show the factors of safety for overturning, sliding, and soil bearing stress. The width of the modular block from front face to back face of the wall shall be given in the design computations and shown on the wall shop drawings.

The minimum embedment to the bottom of the modular block shall be 1 foot 6 inches, or as specified in the plan.

B.3 Wall System Components

Materials furnished under this contract shall conform to the requirements hereinafter provided.

B.3.1 Backfill

Wall Backfill, Type A, shall comply with the requirements for coarse aggregate No. 1 as given in standard spec 501.2.5.4. All backfill placed within a zone from the base of the leveling pad to the top of the final layer of wall facing units and within 1 foot behind the back face of the wall shall be Wall Backfill, Type A. This includes all material used to fill openings in the wall facing units.

A layer of Geotextile Fabric Type “DF” (Schedule B) shall be placed vertically between the retained soil and the Type A backfill. The geotextile fabric shall extend from the top of the leveling pad to 6 inches below the surface of the retained soil. The geotextile shall then wrap across the top of the Type A backfill to the back of block wall facing.

B.3.2 Wall Facing

Provide wall facing units that consist of precast modular concrete blocks. All units shall incorporate a mechanism or devices that will develop a mechanical connection between vertical block layers. Units that are cracked, chipped or have other imperfections in accordance to ASTM C1372 or excessive efflorescence shall not be used within the wall. A single block type and style shall be used throughout each wall. The color and surface texture of the block shall be as given on the plan, or chosen by the engineer.

The top course of facing units shall be a solid precast concrete unit designed to be compatible with the remainder of the wall. The finishing course shall be bonded to the underlying facing units with a durable, high strength, flexible adhesive compound compatible with the block material. A formed cast-in-place concrete cap may also be used to finish the wall. A cap of this type shall be designed to have texture, color, and an appearance that complements the remainder of the wall. The vertical dimension of the cap shall not be less than 3½ inches. Expansion joints shall be placed in the cap to correspond with each 24-inch change in vertical wall height or at a maximum spacing of 10 feet. Concrete for all cast-in-place caps shall be Grade A and shall conform to the requirements of standard spec 501.3.

Block dimensions may vary no more than ±1/8 inch from the standard values published by the manufacturer, in accordance to ASTM C1372. Blocks must have a minimum depth (front face to back face) of 8 inches. The minimum front face thickness of blocks shall be 4 inches measured perpendicular from the front face to inside voids greater than 4 square inches. Also the minimum allowed thickness of any other portion of the block is 2 inches. The front face of the blocks shall conform to plan requirements for color, texture, or patterns.

Cementitious materials and aggregates for modular blocks shall conform to the requirements of ASTM C1372 section 4.1 and 4.2. Modular blocks shall meet the following requirements:

Test	Method	Requirement
Compressive Strength (psi)	ASTM C140	5000 min.
Water Absorption (%)	ASTM C140	6 max.
Freeze-Thaw Loss (%)	ASTM	
40 cycles, 5 of 5 samples	C1262 ⁽¹⁾	1.0 max. ⁽²⁾
50 cycles, 4 of 5 samples		1.5 max. ⁽²⁾
⁽¹⁾ Test shall be run using a 3% saline solution.		
⁽²⁾ Test results that meet either of the listed requirements for Freeze-Thaw Loss are acceptable.		

All blocks shall be certified as to strength, absorption, and freeze-thaw requirements unless, due to contract changes after letting, certified blocks are not available when required. At the time of delivery of the certified blocks, furnish the engineer a certified test report from a department-approved independent testing laboratory for each lot of modular blocks. The certified test report shall clearly identify the firm conducted the sampling and testing, the type of block, the date sampled, name of the person conducting the sampling, the represented lot, the number of blocks in the lot, and the specific test results for each of the stated requirements of this specification. A lot shall not exceed 5000 blocks. The certified test results will represent all blocks within the lot. Each pallet of blocks delivered shall bear lot identification information. Block lots that do not meet the requirements of this specification or blocks without supporting certified test reports will be rejected and shall be removed from the project at the contractor's expense.

A department-approved independent testing laboratory shall control and conduct all modular block sampling and testing for certification. Prior to sampling, the manufacturer's representative shall identify all pallets of modular blocks contained in each lot. All pallets of blocks within the lot shall be numbered and marked to facilitate random sample selection. The representative of the independent testing laboratory shall identify five pallets of blocks by random numbers and shall then select one block from each of these pallets. Solid blocks used as a finishing or top course shall not be selected. The selected blocks shall remain under the control of the person who conducted the sampling until shipped or delivered to the testing laboratory. All pallets of blocks within a lot shall be strapped or wrapped to secure the contents and tagged or marked for identification. The engineer will reject any pallet of blocks delivered to the project without intact security measures. The contractor shall remove all rejected blocks from the project at no expense to the department.

The department may conduct testing of certified or non-certified modular blocks lots delivered to the project. The department will not do freeze-thaw testing on blocks less than 45 days old. If a random sample of five blocks of any lot tested by the department fails to meet any of the requirements of this specification (nonconforming), the contractor shall remove from the project site all blocks from the failed lot that have not been installed in the finished work, at no cost to the department, unless the engineer allows otherwise. Nonconforming blocks installed in the finished work will be considered approved by the department as stated in standard spec 106.5(2) and any adjustment to the contract price will not exceed the price of the blocks charged by the supplier.

B.3.3 Leveling Pad

For all walls over 5 feet tall measured from the top of the leveling pad to the top of the wall, the wall leveling pad shall consist of a poured concrete masonry pad made from Grade A concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for class II concrete as specified in standard spec 716. The depth of the leveling pad shall be as shown on the plans or 6-inches minimum. The leveling pad shall be as wide as the blocks plus 6-inches. Six inches of leveling pad shall extend beyond the front face of the blocks. The bottom of the blocks shall be horizontal and 100% of the block surface shall bear on the leveling pad. A concrete leveling pad shall be used

for the entire length of the wall. All walls with a Structure Number assigned (such as R-XX-XXX) shall be built using the concrete leveling pad given above. The leveling pad shall step to follow the general slope of the ground line. The leveling pads steps shall keep the bottom of the wall within one block's thickness of the minimum embedment, i.e. minimum embedment plus up to the thickness of one block. Additional embedment may be detailed but will not be measured for payment.

On walls less than or equal to 5 feet in height without a wall number assigned, a compacted leveling pad made from base aggregate dense 1¼ inch as given in standard spec 305 may be used. The depth of the aggregate leveling pad shall be as shown on the plans or 12-inches minimum. The aggregate leveling pad shall be as wide as the blocks plus 12 inches with 12 inches of pad extending beyond the front face of the wall.

C Construction

C.1 General

Construct the modular block gravity wall in accordance to the manufacturer's instructions, at the locations and to the dimensions shown on the plan and as directed by the engineer. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the front face of the wall.

Place materials in the areas as indicated on the plans and as detailed in this specification. Backfill lifts shall be no more than 8-inches in depth. Backfilling shall closely follow erection of each course of wall facing units.

Compact each layer of wall backfill Type A with at least three passes of lightweight manually operated compaction equipment acceptable to the engineer.

Conduct backfilling operations in such a manner as to prevent damage or misalignment of the wall facing units. At no expense to the department, correct any such damage or misalignment as directed by the engineer.

Do not operate tracked or wheeled equipment within 3 feet of the back face of the blocks. The engineer may order the removal of any large or heavy equipment that may cause damage or misalignment of the wall facing units.

After construction of the wall, restore the surrounding area located above and below all precast block retaining wall sites to its original condition and to the finished details on the plans.

C.2 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. The allowable soil bearing capacity is given on the plan. After completion of excavation, the department's Regional Soils Engineer will inspect the site and determine if the foundation is adequate for the intended loads. Allow the region's Soils Engineer two working days to perform the inspection.

D Measurement

The department will measure Wall Modular Block Gravity in area by the square foot of face on a vertical plane between the top of the leveling pad and a line indicating the top of wall including wall cap or copings as required and shown on the plans. Unless directed by the engineer, wall area constructed above or below these limits will not be measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
532.0200.S	Wall Modular Block Gravity	SF

Payment is full compensation for supplying a design and shop drawings; preparing the site, including all necessary excavation and disposal of surplus materials; supplying all necessary wall components to produce a functional system including cap and copings; constructing the retaining system; providing backfill, backfilling, and compacting the backfill; and furnishing and installing geotextile fabric. Parapets, railings, and other items above the wall cap or coping will be paid for separately.

Any required topsoil, fertilizer, seeding or sodding and mulch will be paid for at the contract unit price of topsoil, fertilizer, seeding or sodding and mulch, respectively.
532-030 (20120615)

23. Storm Sewer Adjustment Rings.

Adjustment rings located within the roundabouts central island shall be rubber adjustment rings supplied from a manufacture on the departments approved product list.

24. Removing Signs Type II Item 638.2602.

This work shall be in accordance to the pertinent requirements of standard spec 638 and as provided here.

Type II signs are the department's property. All DOT signs removed, and not identified for reuse, shall be separated plywood from aluminum signs and palletize the shipment for handling with a forklift. Notify DTSD Eau Claire Sign Shop Coordinator Steve Allard (715) 855-7671 a minimum of 3 business days prior to delivery to coordinate shipment to be delivered to the DTSD Eau Claire Sign Shop at:

5009 Hwy 53 S
Eau Claire WI 54701

All signs removed or replaced which are not deemed the department's shall be returned to the St. Croix County Highway Department.

25. Covering Signs Type II.

This work shall be in accordance to the pertinent requirements of standard spec 643 and as provided here.

Covers used on Type II signs to become property of the department at the conclusion of the contract.

26. Removing Raised Pavement Markers, Item 646.0790.S.

A Description

This special provision describes removing raised pavement markers.

B (Vacant)

C Construction

Remove raised pavement markers as shown on the plans.

D Measurement

The department will measure Removing Raised Pavement Markers by each raised pavement marker, acceptably removed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
646.0790.S	Removing Raised Pavement Markers	Each

Payment is full compensation for removing and properly disposing of raised pavement markers.

646-070 (20070904)

27. Pavement Marking Grooved Wet Reflective Contrast Tape 8-Inch, Item 646.0843.S.

A Description

This special provision describes furnishing, grooving and installing preformed wet reflective pavement marking contrast tape for grooved applications as shown on the plans, according to standard spec 646, and as hereinafter provided.

B Materials

Furnish wet reflective pavement marking contrast tape and adhesive material, per manufacturer's recommendation if required, from the department's approved products list.

Furnish a copy of the manufacturer's recommendations to the engineer before preparing the pavement marking grooves.

C Construction

C.1 General

For quality assurance, provide the engineer and the region's Marking Section evidence of manufacturer training in the proper placement and installation of pavement marking contrast tape.

Plane the grooved lines according to details in the plan and per manufacturer's recommendations. Use grooving equipment with a free-floating, independent cutting head. Plane a minimum number of passes to create a grooved surface per manufacturer's recommendations.

C.2 Groove Depth

Cut the groove to a depth of 120 mils \pm 10 mils from the pavement surface or, if tined, from the high point of the tined surface. To measure the depth, the contractor may use a depth plate placed in the groove and a straightedge placed across the plate and groove, or the contractor may use a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.3 Groove Width – Longitudinal Markings

Cut the groove one-inch wider than the width of the tape.

C.4 Groove Position

Position the groove edge according to plan details. Groove a minimum of 4 inches, but not greater than, 12 inches from both ends of the tape segment. Achieve straight alignment with the grooving equipment.

C.5 Groove Cleaning

C.5.1 Concrete

Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with high-pressure water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, and prior to pavement marking application. The groove surface shall be clean and dry before applying the adhesive, and the pavement marking tape. Use a high-pressure air blower with at least 185 ft³/min air flow and 120 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

C.5.2 New Asphalt

Groove pavement five or more days after paving.

Use a high-pressure air blower with at least 185 ft³/min air flow and 90 psi air pressure to clean the groove.

C.5.3 Existing Asphalt

Check for structural integrity in supporting grooving operations. If the structural integrity of the asphalt pavement is inadequate to support grooving operations, immediately notify the engineer.

Use a high-pressure air blower with at least 185 ft³/min air flow and 90 psi air pressure to clean the groove.

C.6 Tape Application

Apply the tape when both the air and surface temperature are 40 degrees F and rising.

Apply tape in the groove as per manufacturer's recommendations. If manufacturer's recommendations require surface preparation adhesive

- 1) For the Southeast Region and the ozone non-attainment Northeast Region counties of Sheboygan, Manitowoc, and Kewaunee:
 - Apply SPA-60 during May 1 to September 30, both dates inclusive due to Volatile Organic Compound Limitations.
 - Apply P-50 during October 1 to April 30, both dates inclusive.
- 2) For the remainder counties:
 - Apply either adhesive.

Refer to the manufacturer's instructions for determining when the surface preparation adhesive is set.

Tamp the wet reflective pavement marking contrast tape with a tamper cart roller, with a minimum of a 200-lb load, cut to fit the groove. Tamp a minimum of three complete cycles (6 passes) with grooved modified tamper roller cart.

D Measurement

The department will measure Pavement Marking Grooved Wet Reflective Contrast Tape (Width) for grooved applications in length by the linear foot of tape placed according to the contract and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
646.0843.S	Pavement Marking Grooved Wet Reflective Contrast Tape 8-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface; furnishing and installing the material; and for removing temporary pavement marking, if necessary.
646-022 (20120615)

28. Pavement Marking Grooved Wet Reflective Tape 8-Inch, Item 646.0883.S.

A Description

This special provision describes furnishing, grooving and installing preformed wet reflective pavement marking tape for grooved applications as shown on the plans, according to standard spec 646, and as hereinafter provided.

B Materials

Furnish grooved wet reflective pavement marking tape and adhesive material per manufacturer's recommendations, if required, from the department's approved products list.

Furnish a copy of the manufacturer's recommendations to the engineer before preparing the pavement marking grooves.

C Construction

C.1 General

For quality assurance, provide the engineer and the region's Marking Section evidence of manufacturer training in the proper placement and installation of pavement marking tape.

Plane the grooved lines according to details in the plan and per manufacturer's recommendations. Use grooving equipment with a free-floating, independent cutting head. Plane a minimum number of passes to create a grooved surface per manufacturer's recommendations.

C.2 Groove Depth

Cut the groove to a depth of 120 mils \pm 10 mils from the pavement surface or, if tined, from the high point of the tined surface. To measure the depth, the contractor may use a depth plate placed in the groove and a straightedge placed across the plate and groove, or the contractor may use a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.3 Groove Width – Longitudinal Markings

Cut the groove one-inch wider than the width of the tape.

C.4 Groove Position

Position the groove edge according to plan details. Groove a minimum of 4 inches, but not greater than, 12 inches from both ends of the tape segment. Achieve straight alignment with the grooving equipment.

C.5 Groove Cleaning

C.5.1 Concrete

Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with high-pressure water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, and prior to pavement marking application. The groove surface shall be clean and dry before applying the adhesive, and pavement marking tape. Use a high-pressure air blower with at least 185 ft³/min air flow and 120 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

C.5.2 New Asphalt

Groove pavement five or more days after paving.

Use a high-pressure air blower with at least 185 ft³/min air flow and 120 psi air pressure to clean the groove.

C.5.3 Existing Asphalt

Check for structural integrity in supporting grooving operations. If the structural integrity of the asphalt pavement is inadequate to support grooving operations, immediately notify the engineer.

Use a high-pressure air blower with at least 185 ft³/min air flow and 120 psi air pressure to clean the groove.

C.6 Tape Application

Apply the wet reflective pavement marking tape when both the air and surface temperature are 40 degrees F and rising.

Apply tape in the groove as per manufacturer's recommendations. If manufacturer's recommendations require surface preparation adhesive

- 1) For the Southeast Region and the ozone non-attainment Northeast Region counties of Sheboygan, Manitowoc, and Kewaunee:
 - Apply SPA-60 during May 1 to September 30, both dates inclusive due to Volatile Organic Compound Limitations.
 - Apply P-50 during October 1 to April 30, both dates inclusive.
- 2) For the remainder counties:
 - Apply either adhesive.

Refer to the manufacturer's instructions for determining when the surface preparation adhesive is set.

Tamp the wet reflective pavement marking tape with a tamper cart roller, with a minimum of a 200-lb load, cut to fit the groove. Tamp a minimum of three complete cycles (6 passes) with grooved modified tamper roller cart.

D Measurement

The department will measure Pavement Marking Grooved Wet Reflective Tape (Width) for grooved applications in length by the linear foot of tape placed according to the contract and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
646.0883.S	Pavement Marking Grooved Wet Reflective Tape 8-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface; furnishing and installing the material; and for removing temporary pavement marking, if necessary.
646-018 (20120615)

29. General Requirements for Electrical Work.

Add the following to standard spec 651.2, Materials:

- (7) The approved products list is located at:
<http://www.dot.wisconsin.gov/business/engrserv/docs/ap3/electrical.pdf>

30. Electrical Service Meter Breaker Pedestal, Item 656.0200.

Delete standard spec 656.3.2, Service Lateral, paragraph (1) and replace with the following:

- (1) The local utility shall furnish and install a 200 A, 120/240 volt AC, single phase, 3-wire underground electrical service lateral. Arrange and assume responsibility for the timely installation of the service lateral by the utility. The lateral shall be terminated at a meter pedestal as the plans show.

Submit the application to the utility for all required electrical services. Pay the utility installation costs promptly and seek reimbursement through the "Electrical Service Lateral" administrative contract bid item.

Arrange for future monthly energy usage billing to be established in the name of the appropriate entity. Contact WisDOT Northwest Region for this information.

Ensure that electrical service is installed and energized a minimum of one week prior to the lighting system activation deadline.

31. Anchor Assemblies Light Poles on Structures, Item 657.6005.S.

A Description

This special provision describes furnishing and installing anchor bolt assemblies for light poles as shown on the plans, and as hereinafter provided.

B Materials

Furnish anchors of the size and spacing as given on the plans, and that conform to ASTM A449 or AASHTO M314 GR 55. The upper 8 inches of the bolts, nuts, and washers shall be hot-dipped galvanized in accordance to ASTM A153, Class C. Provide enlarged threads on nuts for proper fit after galvanizing.

C Construction

Provide two nuts and two washers per anchor bolt, and install per light standard manufacturer's recommendations.

D Measurement

The department will measure Anchor Assemblies Light Poles on Structures as a unit for each individual anchor bolt assembly, 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
657.6005.S	Anchor Assemblies Light Poles on Structures	Each

Payment is full compensation for furnishing and installing the anchorages.
657-060 (20100709)

32. Traffic Control Signs, Special, Item SPV.0060.11.

A Description

This special provision describes providing Traffic Control Signs, Special as shown on the plans and as hereinafter provided. These signs will be left in place over the winter, and become property of the department.

B Materials

Provide Traffic Control Signs according to standard spec 643.

C Construction

Install signs in accordance to the departments sign plate book.

D Measurement

The department will measure Traffic Control Signs, Special by each individual unit, 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.0060.11	Traffic Control Signs, Special	Each

Payment is full compensation for furnishing sign, furnishing post, installing and placing of all materials; and any mounting hardware required.

33. Junction Boxes 4X4X4-Inch, Item SPV.0060.12.**A Description**

This work shall be in accordance to the requirements of standard spec 653, the plans, standard detail drawings, and as hereinafter provided.

B Materials

In accordance to the plans and standard spec 653.2.2, Junction Boxes.

C Construction

In accordance to the plans and standard spec 653.3.

D Measurement

The department will measure Junction Boxes 4x4x4-Inch as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.12	Junction Boxes 4X4X4-Inch	Each

Payment is full compensation in accordance to standard spec 653.5.

34. Construction Staking Stormwater Pond, SPV.0060.20.**A Description**

This special provision describes the contractor-performed construction staking required in accordance to standard spec 650 and as hereinafter provided.

B (Vacant)

C Construction

Set construction stakes or marks at 50-foot intervals, maximum. Set and maintain additional stakes as necessary to establish location and grade of pond contours including point of change in grade, along radii, and at the radius point of intersecting radii to achieve the required accuracy and to support the method of operations. Locate stakes to within 0.25 feet horizontally and establish the grade elevation to within 0.10 feet vertically.

D Measurement

The department will measure Construction Staking Stormwater Pond by each individual pond, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.20	Construction Staking Stormwater Pond	Each

The department will not make final payment until the contractor submits all survey notes and computations used to establish the required lines and grades to the engineer within 21 days of completing this work. The department will deduct from payments due the contractor for the additional costs specified in standard spec 105.6.

Payment is full compensation for locating and setting all construction stakes; for relocating and resetting damaged or missing construction stakes.

35. Pavement Marking Grooved Preformed Thermoplastic Arrows, Type 2, Item SPV.0060.31; Words, Item SPV.0060.33; Pavement Marking Grooved Preformed Thermoplastic Yield Line 18-Inch, Item SPV.0090.50.

A Description

This special provision describes work in accordance to standard spec 646, and as hereinafter provided.

B Materials

The markings must be a resilient white, yellow, or other color thermoplastic product, wherein every other shaped portion contains glass beads or abrasives with a minimum hardness of 7 (Mohs scale). The marking must be resistant to the detrimental effects of motor fuels, lubricants, hydraulic fluids, etc. Lines, legends and symbols are capable of being affixed to bituminous and/ or Portland cement concrete pavements by the use of the normal heat of a propane torch.

The markings must be capable of conforming to pavement contours, breaks, and faults through the action of traffic at normal pavement temperatures. The markings shall have resealing characteristics, such that it is capable of fusing with itself and previously applied thermoplastic when heated with the torch.

The marking shall not have minimum ambient and road temperature requirements for application, storage, or handling.

The markings must be composed of an ester modified resin resistant to degradation by motor fuels, lubricants etc. in conjunction with aggregates, pigments, binders abrasives, and glass beads which have been factory produced as a finished product, and meets the requirements of the current edition of the Manual on Uniform Traffic Control Devices for Streets and Highways. The thermoplastic material conforms to AASHTO designation M249-70 (98), with the exception of the relevant differences due to the material being supplied in a performed state.

B.1 Graded Glass Beads

B.1.1

The material must contain a minimum of thirty percent (30%) intermixed graded glass beads by weight. The intermixed beads shall be clear and transparent. Not more than twenty Percent (20%) consists of irregular fused spheroids, or silica. The index of refraction shall not be less than 1.50.

B.1.2

The material must have factory applied coated surface beads and abrasives in addition to the intermixed beads at a rate of 1/2lb. (+/- 20%) per 11 sq ft. The surface beads and abrasives must be applied so that every other shaped portion contains glass beads, or abrasives with a minimum hardness of 7 (Mohs scale). These factory applied coated surface beads shall have the following specifications:

- 1) Minimum 80% rounds
- 2) Minimum refractive index of 1.5
- 3) Minimum SiO₂ content of 70%
- 4) Maximum iron content of 0.1%

Size Gradation		Retained, %	Passing, %
US Mesh	Um		
12	1700	0-2%	98 – 100%
14	1400	0 – 6%	94 – 100%
16	1180	1 – 21%	79 – 99%
18	1000	28 – 62%	38 – 72%
20	850	62 – 71%	29 – 38%
30	600	67 – 77%	23 – 33%
50	300	86 – 95%	5 – 14%
80	200	97 – 100%	0 – 3%

B.2 Pigments

B.2.1 White

The material shall be manufactured with sufficient titanium dioxide pigment to meet FHWA Docket No. FHWA-99-6190 Table 5 and Table 6 as revised and corrected.

B.2.2 Red, Blue, and Yellow

The material shall be manufactured with sufficient titanium dioxide pigment to meet FHWA Docket No. FHWA-99-6190 Table 5 and Table 6 as revised and corrected. The yellow pigments must be organic and must be heavy-metal free.

B.2.3 Other Colors

The pigments must be heavy-metal free.

B.3 Heating Indicators

The top surface of the material (same side as the factory applied surface beads) shall have regularly spaced indents. These indents act as a visual cue during application that the material has reached a molten state so satisfactory adhesion and proper bead embedment has been achieved and a post-application visual cue that the installation procedures have been followed.

B.4 Skid Resistance

The surface of the preformed retroreflective materials, wherein every other shaped portion contains glass beads, or abrasives with a hardness of 7 (Mohs scale), shall upon application provide a minimum skid resistance value of 60 BPN when tested according to ASTM E 303.

B.5 Thickness

The material must be supplied at a minimum thickness of 100 mils (2.29 mm).

B.6 Retroreflectivity

The preformed retroreflective marking materials upon application shall exhibit adequate and uniform nighttime retroreflectivity. The marking materials shall have the following retroreflectivity as measured using a Delta LTL 2000 or LTL-X Retroreflectometer.

White preformed reflective marking materials-minimum of $275 \text{ med-m}^{-2}\text{-lx}^{-1}$

Note: Initial retroreflection and skid resistance are affected by the amount of heat applied during installation. When ambient temperatures are such that greater amounts of heat are required for proper installation, initial retroreflection and skid resistance levels may be affected.

B.7 Environmental Resistance

The material must be resistant to deterioration due to exposure to sunlight, water, salt or adverse weather conditions and impervious to oil and gasoline.

B.8 Abrasives

The material must have a factory applied surface adhesives, wherein every other shaped portion contains glass beads, or abrasives with a minimum hardness of 7 (Mohs scale).

C Application

C.1

Location of Pavement Marking Grooved Preformed Thermoplastic (Type) shall be approved by engineer prior to installations.

Apply preformed marking as the manufacturer specifies, the pavement shall be grooved to receive the preformed material and the leading edge of all installations shall be heated and beveled; provide the engineer with the manufacturer's specifications. Cut groove to a depth of 100 mils +/- 10 mils. The engineer will evaluate the performance of the preformed marking as specified in standard spec 646.3.3.4.

C.2 Asphalt

The Materials shall be applied using the propane torch method recommended by the manufacturer. The material must be able to be applied without minimum requirements for ambient and road temperatures and without any preheating of the pavement to a specific temperature. The material must be able to be applied without the use of a thermometer. The pavement shall be clean, dry and free of debris. Supplier must enclose application instructions with each box/package.

C.3 Portland Concrete

The same application procedure shall be used as described under section C2. However a compatible sealer may be applied before application to assure proper adhesion.

D Measurement

The department will measure Pavement Marking Grooved Preformed Thermoplastic (Type) by each individual unit, acceptably completed.

The department will measure Pavement Marking Grooved Preformed Thermoplastic Yield Line 18-Inch in length by the linear foot of material placed, 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.0060.31	Pavement Marking Grooved Preformed Thermoplastic Arrows, Type 2	Each
SPV.0060.33	Pavement Marking Grooved Preformed Thermoplastic Words	Each
SPV.0090.50	Pavement Marking Grooved Preformed Thermoplastic Yield Line 18-Inch	LF

Payment is full compensation for providing, locating and installation of pavement marking grooved preformed thermoplastic arrows and pavement marking grooved preformed thermoplastic words.

36. Pavement Marking Contrast Grooved Preformed Thermoplastic, Arrows Type 2, Item SPV.0060.35; Arrows Type 3R, Item SPV.0060.38; Words, Item SPV.0060.39; Crosswalk 6-Inch, Item SPV.0090.40; Yield Line 18-Inch, Item SPV.0090.41.

A Description

This special provision describes grooving the pavement surface, and furnishing and installing contrast preformed thermoplastic pavement marking as shown on the plans, in accordance to standard spec 647, and as hereinafter provided.

B Materials

Furnish 125 mils preformed thermoplastic pavement marking from the department's approved products list. If required, furnish sealant material recommended by the manufacturer.

C Construction

C.1 General

For quality assurance, provide the engineer and the region's Marking Section evidence of manufacturer training in the proper placement and installation of preformed thermoplastic pavement marking.

Plane the grooved lines in accordance to the plan details. Use grooving equipment with a free-floating, independent cutting or grinding head. Plane a minimum number of passes to create a smooth groove.

C.2 Groove Depth

Cut the groove to a depth of 120 mils \pm 10 mils deep from the pavement surface or, if tined, from the high point of the tined surface. Measure depth using a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.3 Groove Width – Linear Markings

Cut the groove 1-inch wider than the width of the thermoplastic.

C.4 Groove Position

Position the groove edge in accordance to the plan details.

C.4.1 Linear Marking

Groove at a minimum of 4-inches, but not greater than, 12-inches from both ends of the line segment. Achieve straight alignment with the grooving equipment.

C.4.2 Special Marking

Groove at a minimum of 4-inches from the perimeter of the special marking. Groove separate areas for Word Items.

C.5 Groove Cleaning

C.5.1 Concrete

Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, after removal of excess water, and prior to pavement marking application. Clean and dry the groove for proper application of the sealant, and placement of the pavement marking. Use a high-pressure air blower with at least 185 ft³/min air flow and 90 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

C.5.2 Asphalt

Use a high-pressure air blower with at least 185 ft³/min air flow and 90 psi air pressure to clean the groove.

Check for structural integrity in supporting grooving operations. If the structural integrity of the asphalt pavement is inadequate to support grooving operations, immediately notify the engineer.

C.6 Preformed Thermoplastic Application

Preheat the surface if necessary based on manufacturer's recommendation.

Apply preformed thermoplastic in the groove as per manufacturer's recommendations. If manufacturer's recommendations require a sealant, apply a sealant lower than 91g/l VOC during the following period of time due to Volatile Organic Compound Limitations:

May 1 to September 30, both dates inclusive – the Southeast Region and the ozone non-attainment Northeast Region counties of Sheboygan, Manitowoc, and Kewaunee.

Use any sealant in the remainder counties and for the remainder of the year. The sealant must be wet.

D Measurement

The department will measure Pavement Marking Contrast Grooved Preformed Thermoplastic (Type) by the unit, acceptably placed, or in length by the linear foot of material placed in accordance to the contract and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.35	Pavement Marking Contrast Grooved Preformed Thermoplastic Arrows Type 2	Each
SPV.0060.38	Pavement Marking Contrast Grooved Preformed Thermoplastic Arrows Type 3R	Each
SPV.0060.39	Pavement Marking Contrast Grooved Preformed Thermoplastic Words	Each
SPV.0090.40	Pavement Marking Grooved Preformed Thermoplastic, Crosswalk 6-Inch	LF
SPV.0090.41	Pavement Marking Contrast Grooved Preformed Thermoplastic Yield Line 18-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface; and for furnishing and installing the material.

37. Traffic Control, Vertical Panels, Item SPV.0060.40.

A Description

This special provision describes the furnishing and installing vertical panels, their supporting posts, and surface-mounted bases in accordance to the MUTCD and pertinent requirements of standard spec 643.

B Materials

Provide vertical panels and flexible supporting posts made of non-metallic material that have a reactive spring so as to be resistant to direct wheel impacts with speeds up to 60 mph, and have the capability of immediately restoring itself to a vertical position when struck by a standard vehicle.

The surface-mounted bases shall have a maximum size of 8 inches square and shall not be a hazard to vehicles.

Provide new and unused vertical panels, supporting posts, and bases.

Provide vertical panels with alternating orange and white reflective stripes in accordance to MUTCD. The panels shall face direction of traffic as indicated on the plans and shall have an overall height above the pavement of 36 inches. The dimensions of the reflective sheeting shall be 12 inches by 24 inches. Reflective sheeting shall meet the requirements of standard spec 637.2.2.2 and shall be suitable for use on reboundable traffic control devices. The alternating orange and white stripes shall slope downward when facing the panel in the direction traffic is to flow.

C Construction

Attach vertical panels and supporting posts to the bases in accordance to the manufacturer's recommendations. The bases shall be fastened to the pavement using the manufacturer's recommendations.

D Measurement

The department will measure Traffic Control, Vertical Panels in place by each individual panel, 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.0060.40	Traffic Control, Vertical Panels	Each

Payment is full compensation for furnishing, installing, and removing the vertical panels, their supporting posts, bases and mounting hardware.

38. Native Butterfly Seed Mix, SPV.0085.01.**A Description**

This special provision describes preparing seed beds and furnishing and sowing the required seed on slopes, appurtenances, and other areas, and on borrow pits and material disposal sites as shown on the plans.

B Materials

This work shall be in accordance to the pertinent provisions of standard spec 630.2 and as hereinafter provided.

Add the following to the table of Native Seed Mixtures in standard spec 630.2.1.5.1.1.1:

Seeding Mixture Native Seed Butterfly Mix

Common Name	Botanical Name	Mixture %
Forbs		
Butterfly Weed	<i>Asclepias tuberosa</i>	7
Common Milkweed	<i>Asclepias syriaca</i>	10
New England Aster	<i>Aster novae-angliae</i>	2
Rough Blazingstar	<i>Liatris aspera</i>	2
Showy Goldenrod	<i>Solidago speciosa</i>	2
Wild White Indigo *	<i>Baptisia leucantha</i>	2
Pale Purple Coneflower	<i>Echinacea pallida</i>	2
Common Boneset	<i>Eupatorium perfolium</i>	2
Showy Tick Trefoil *	<i>Desmodium Canadense</i>	3
Purple Prairie Clover *	<i>Dalea purpurea</i>	3
	<i>total</i>	35%

Grasses

Sideoats Gramma	<i>Bouteloua curtipendula</i>	16
Canada Wildrye	<i>Elymus Canadensis</i>	16
Little Bluestem	<i>Schizachyrium scoparium</i>	16
Indiangrass	<i>Sorghastrum nutans</i>	17
	<i>total</i>	65%

*Legumes

Add the following to standard spec 630.2.1.5.1.3:

If seeding bare soil with Seeding Mixture Native Seed Butterfly Mix plant a seeding nurse crop as specified in standard spec 630.2.1.5.1.4.

C Construction

This work shall be in accordance to the pertinent provisions of standard spec 630.3, as shown on the plans, and as hereinafter provided.

Add the following to standard spec 630.3.3.5.1:

Seed Mixture Native Seed Butterfly Mix at 0.4 pounds per 1000 sf.

Add the following to standard spec 630.3.3.6 (1):

During the first two growing seasons after plating Seeding Mixture Native Seed Butterfly Mix, mow as the engineer directs.

(2) During the first two growing season after planting Seeding Mixture Native Seed Butterfly Mix, eradicate the following species:

Phragmites or Common Reed	Phragmites australis
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(3) Inspect the site to determine if any existing unwanted species are present and mark the areas of plant eradication. Areas marked by the contractor will be inspected by the department. Make adjustments as directed by the engineer. Eradicate the invasive species within all areas defined by the engineer.

Seeded areas shall be kept free of unwanted species until the nurse crop has germinated and reached a minimum height of 4 inches.

D Measurement

The department will measure Seeding Mixture Native Seed Butterfly Mix by the pound acceptably completed. The department will measure quantities based on net weights of seed shipments, or on quantities weighed on department-approved scales the contractor furnishes. The department will make deductions for all quantities wasted or not actually incorporated in the work according to the contract. The department will determine the

equivalent pounds of seed furnished and applied by dividing the actual pounds of seed applied by the sum of the unadjusted and adjusted percentages of the various species in the seed mixture sown. The department will use the unadjusted and adjusted percentages determined in standard spec 630.3.3.5.1.

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	Seeding Mixture Native Seed Butterfly Mix	LB

Payment is full compensation for providing, handling, and storing all seed; for providing the required culture and inoculating seed as specified; and for preparing the seed bed, sowing, covering and firming the seed.

39. Construction Staking, Select Subgrade, SPV.0090.20.

A Description

This special provision describes the contractor-performed construction staking required in accordance to standard spec 650 and as hereinafter provided.

B (Vacant)

C Construction

Perform construction staking for Select Subgrade for the select crushed material layer in accordance to Construction Staking, Subgrade, bid item 650.4500.

D Measurement

The department will measure Construction Staking Select Subgrade by the linear foot, acceptably completed, measured along each roadway centerline.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.20	Construction Staking, Select Subgrade	LF

The department will not make final payment until the contractor submits all survey notes and computations used to establish the required lines and grades to the engineer within 21 days of completing this work. The department will deduct from payments due the contractor for the additional costs specified in standard spec 105.6.

Payment is full compensation for locating and setting all construction stakes; for relocating and resetting damaged or missing construction stakes.

40. Concrete Curb and Gutter Cure and Seal Treatment, Item SPV.0090.30.

A Description

This work includes treating all newly constructed concrete curb and gutter with a surface cure and seal treatment as shown on plans, and as hereinafter provided.

B Materials

Materials shall conform to a clear treating material listed on the current approved WISDOT product list for “Cure and Seal Compounds for Non-Trafficked Surfaces on Structural Masonry”.

C Construction

Application rates for the treating material shall be in accordance to the manufacturer’s specifications.

D Measurement

The department will measure Concrete Curb and Gutter Cure and Seal Treatment by the linear foot, 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.0090.30	Concrete Curb and Gutter Cure and Seal Treatment	LF

Payment is full compensation for furnishing and applying Concrete Curb and Gutter Cure and Seal Treatment.

41. Cleaning, Grading and Shaping Existing Ditch, SPV.0090.60.

A Description

This work includes removing deposits of silt, sand, grass, rocks, and deleterious materials from existing ditches at locations selected by the engineer or as designated on the plans. This work also includes grading and shaping the selected areas, if necessary, to reestablish a flow line.

B (Vacant)

C Construction

Clean and shape the ditches sufficiently to allow proper hydraulic flow, with a minimum ditch gradient of 0.30%, and in a manner suitable to the engineer.

D Measurement

The department will measure Cleaning, Grading and Shaping Existing Ditch in linear feet, acceptably completed, measured along the flowline of the ditch for completed work.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.60	Cleaning, Grading and Shaping Existing Ditch	LF

Payment is for full compensation for cleaning, grading and shaping, and for removing and properly disposing of deleterious material.

The finishing items of salvaged topsoil, fertilizer, seed, mulch, and riprap (if required) will be measured and paid under their respective items.

42. Railing Steel Type C2 Galvanized Pedestrian C-55-35, Item SPV.0105.05.

A Description

This special provision describes fabricating, galvanizing, painting and installing railing in accordance to standard specs 506, 513 and 517 and the plan details, as directed by the engineer, and as hereinafter provided.

B Materials

All materials for railing shall be new stock, free from defects impairing strength, durability and appearance. Railing assemblies shall be galvanized and receive a two-coat paint system. Bubbles, blisters and flaking in the coating will be a basis for rejection.

B.1 Coating System

B.1.1 Galvanizing

After fabrication, blast clean steel railing assemblies per SSPC-SP6 and galvanize according to ASTM A123. Vent holes shall be drilled in members as required to facilitate galvanizing and drainage. Location and size of vent holes are to be shown on the shop drawings. All burrs at component edges, corners and at holes shall be removed and sharp edges chamfered before galvanizing. Condition any thermal cut edges before blast cleaning by shallow grinding or other cleaning to remove any hardened surface layer. Remove all evident steel defects exposed in accordance to AASHTO M 160 prior to blast cleaning. Lumps, projections, globules, or heavy deposits of galvanizing, which will provide surface conditions that when painted, will produce unacceptable aesthetic and/or visual qualities, will not be permitted.

B.1.2 Two-Coat Paint System

After galvanizing, paint all exterior surfaces of steel railing assemblies and inside of rail elements at field erection and expansion joints as hereinafter provided. All galvanized surfaces to be painted shall be cleaned per SSPC-SP1 to remove chlorides, sulfates, zinc salts, oil, dirt, organic matter and other contaminants. The cleaned surface shall then be brush blast cleaned per SSPC-SP16 to create a slight angular surface profile per manufacturer's recommendation for adhesion of the tie coat. Blasting shall not fracture the galvanized finish or remove any dry film thickness. After cleaning, apply a tie coat from an approved coating system that is specifically intended to be used on a galvanized surface, per manufacturer's recommendations. The tie coat shall etch the galvanized rail

and prepare the surface for the top coat. Apply a top coat per manufacturer's recommendations, matching the specified color shown on the plans. Use a preapproved top coat that is resistant to the effects of the sun and is suitable for a marine environment. The tie and top coats should be of contrasting colors, and come from the same manufacturer.

Ensure that the paint manufacturer reviews the process to be used for surface preparation and application of the paint coating system with the paint applicator. The review shall include a visit to the facility performing the work if requested by the paint manufacturer. Provide written confirmation, from the paint manufacturer to the engineer, that the review has taken place and that issues raised have been addressed before beginning coating work under the contract.

Use one of the qualified paint manufacturers and products given below. An equivalent system may be used with the written approval of the engineer.

Manufacturer	Coat	Products	Dry Film Minimum Thickness (mils)	Min. Time¹ Between Coats (hours)
<u>Sherwin Williams</u> 1051 Perimeter Drive Suite 710 Schaumburg, IL 60173 (847) 330-1562	Tie	Recoatable Epoxy Primer B67-5 Series / B67V5	2.0 to 4.0	6
	Top	Acrolon 218 HS Polyurethane, B65-650	2.0 to 4.0	NA
<u>Carboline</u> 350 Hanley Industrial St. Louis, MO 63144 (314) 644-1000	Tie	Rustbond Penetrating Sealer FC	1	36
	Tie	Carboguard 60	4.0 to 6.0	10
	Tie	Carboguard 635	4.0 to 6.0	1
	Top	Carbothane 133 LH(satin)	4	NA
<u>Wasser Corporation</u> 4118 B Place NW Suite B Auburn, WA 98001 (253) 850-2967	Tie	MC-Ferrox B 100	3.0 to 5.0	8
	Top	MC-Luster 100	2.0 to 4.0	NA
<u>PPG Protective and Marine Coatings</u> P.O. Box 192610 Little Rock, AR 72219-2610 (414) 339-5084	Tie	Amercoat 399	3.0 to 5.0	3
	Top	Amercoat 450H	2.0 to 4.0	NA

¹ Time is dependent on temperature and humidity. Contact manufacturer for more specific information.

B.2 Shop Drawings

Submit shop drawings showing the details of railing construction. Show the railing height post spacing, rail location, weld sizes and locations and all dimensions necessary for the construction of the railing. Show location of shop rail splices, field erection joints and expansion joints. State the name of the paint manufacturer and the product name of the tie coat and top coat used along with the color. State the size and material type used for all components. Also show the size and location of any vent or drainage holes provided.

C Construction

C.1 Delivery, Storage and Handling

Deliver material to the site in an undamaged condition. Upon receipt at the job site, all materials shall be thoroughly inspected to ensure that no damage occurred during shipping or handling and conditions of materials is in conformance with these specifications. If coating is damaged, contractor shall repair or replace railing assemblies to the approval of the engineer at no additional cost to the owner. Carefully store the material off the ground to ensure proper ventilation and drainage. Exercise care so as not to damage the coated surface during railing installation. No field welding, field cutting or drilling will be permitted without the approval of the engineer.

C.2 Touch-up and Repair

For minor damage caused by shipping, handling or installation to coated surfaces, touch-up the surface in conformance with the manufacturer's recommendations. If damage is excessive, the railing assembly shall be replaced at no additional cost to the owner. The contractor shall provide the engineer with a copy of the manufacturer's recommended repair procedure and materials before repairing damaged coatings.

D Measurement

The department will measure Railing Steel Type C2 Galvanized Pedestrian C-55-35 as a single lump sum unit of work, acceptably completed for each structure where railing is satisfactorily furnished and installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.05	Railing Steel Type C2 Galvanized Pedestrian C-55-35	LS

Payment is full compensation for fabricating, galvanizing, painting, transporting, and installing the railing, including any touch-up and repairs.

43. Concrete Crack Mitigation and Repair Special, Item SPV.0105.20.

A Description

This special provision describes work in accordance to standard spec 415, and as hereinafter provided.

B (Vacant)

C Construction

Provide the engineer with HIPERPAV analysis three days prior to the placement of Concrete Pavement 9.0-Inch Special and Concrete Pavement 10.5-Inch Special. If seven calendar days elapse between staging paving operations, an additional analysis of HIPERPAV may be requested by the engineer.

If cracks occur, selection of repair type shall be as specified in Procedure 4.24 of the Construction and Materials Manual (CMM).

D Measurement

The department will measure Concrete Crack Mitigation and Repair Special by the lump sum unit of work, acceptably completed.

E Payment

Delete entire standard spec 415.5.3 and replace with the following.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.20	Concrete Crack Mitigation and Repair Special	LS

Payment is full compensation for performing mix design HIPERPAV analysis, mix design adjustments and corrections as per Project Concrete Crack Mitigation and Repair Special, all PCC pavement repairs, mobilization, all necessary traffic control devices.

Fifty percent payment of this item will be paid to the contractor after the completion of the first HIPERPAV analysis. The remaining fifty percent will be paid for upon final project acceptance.

44. Construction Staking Concrete Pavement Joint Layout, Item SPV.0105.30.

A Description

This work shall consist of staking the location of all joints on the project, including mainline and intersections to accommodate the concrete paving operation. The contractor shall set all points necessary to establish the horizontal position of the dowel bar sets and saw joints in the concrete pavement in accordance to the plans or as directed by the engineer.

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. Mark the location of all concrete joints in the field. Make joint adjustments as required to fit field conditions, traffic staging, or as directed by the engineer.

D Measurement

The department will measure Construction Staking Concrete Pavement Joint Layout as a single lump sum unit, 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.0105.30	Construction Staking Concrete Pavement Joint Layout	LS

Payment is full compensation for survey work necessary to locate all dowel bar sets and saw joints on the mainline and intersections, for adjustments to match field conditions and traffic staging.

45. Construction Staking Concrete Roundabout East Ramp Terminal, Item SPV.0105.40; West Ramp Terminal, Item SPV.0105.41.

A Description

This work consists of staking the horizontal and vertical position of the subgrade, concrete pavement, curb, curb and gutter, and truck apron colored concrete at the roundabout as shown in the plans.

B (Vacant)

C Construction

Perform Construction Staking Concrete Roundabout in accordance to the pertinent provisions of standard spec 650.

D Measurement

The department will measure Construction Staking Concrete Roundabout (Location) as a single lump sum unit 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.0105.40	Construction Staking Concrete Roundabout East Ramp Terminal	LS
SPV.0105.41	Construction Staking Concrete Roundabout West Ramp Terminal	LS

Payment is full compensation for Construction Staking Concrete Roundabout work necessary to locate and set all construction stakes; and for maintaining, relocating, and resetting construction stakes at the roundabout throughout all project stages.

The department will not make final payment for this bid item until the contractor submits all survey notes and computations used to establish the required lines and grades to the engineer within 21 days of completing this work. The department will deduct from payments due the contractor for the additional costs specified in standard spec 105.6.

46. Construction Staking Roundabout STH 35/Main St, Item SPV.0105.42.

A Description

This work consists of staking the horizontal and vertical position of the subgrade, concrete pavement, curb, curb and gutter, and truck apron colored concrete at the roundabout as shown in the plans.

B (Vacant)

C Construction

Perform Construction Staking Concrete Roundabout in accordance to the pertinent provisions of standard spec 650.

D Measurement

The department will measure Construction Staking Concrete Roundabout as a single lump sum unit 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.0105.42	Construction Staking Roundabout STH 35/Main St.	LS

Payment is full compensation for Construction Staking Concrete Roundabout work necessary to locate and set all construction stakes; for maintaining, relocating, and resetting construction stakes at the roundabout throughout all project stages.

The department will not make final payment for this bid item until the contractor submits all survey notes and computations used to establish the required lines and grades to the engineer within 21 days of completing this work. The department will deduct from payments due the contractor for the additional costs specified in standard spec 105.6.

47. Concrete Sidewalk Cure and Seal Treatment, Item SPV.0165.10.

A Description

This work includes treating all newly constructed concrete sidewalk with a surface cure and seal treatment as shown on plans, and as hereinafter provided.

B Materials

Materials shall conform to a clear treating material listed on the current approved WISDOT product list for “Cure and Seal Compounds for Non-Trafficked Surfaces on Structural Masonry”.

C Construction

Application rates for the treating material shall be in accordance to the manufacturer’s specifications.

D Measurement

The department will measure Concrete Sidewalk Cure and Seal Treatment by the square foot, 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.0165.10	Concrete Sidewalk Cure and Seal Treatment	SF

Payment is full compensation for furnishing and applying Concrete Sidewalk Cure and Seal Treatment.

48. Modified Slope Paving Crushed Aggregate, Item SPV.0180.10.

A Description

Furnish, crush and place aggregate for slope paving and apply an epoxy resin binder with the aggregate, as shown in the plans, in accordance to the applicable provisions of standard spec 604, and as hereinafter provided.

B Materials

B.1 General

The epoxy resin binder shall be a low modulus, medium-viscosity, two-component epoxy resin.

Furnish evidence, to the satisfaction of the engineer, that the proposed product has been successfully used in a similar application.

Epoxy resin binder shall be clear to light amber when fully cured.

Crushed aggregate shall be native Wisconsin limestone with hues of tan, amber and gray. Crushed aggregate shall have 100% fractured faces.

Crushed aggregate shall conform to the following nominal requirements:

Sieve Size	Percent by Weight Passing
4-Inch	100
1-Inch	0-25

B.2 Minimum Requirements

The epoxy resin binder shall conform to ASTM C-881 and AASHTO M-235 specifications and the following requirements:

- Total water absorption, ASTM D-570
 - 7 day, 1.3% (2 hour boil)
 - 14 day, 0.232% (24 hour immersion)
- Viscosity: 2,500 cps

C Construction

C.1 Application

The binder shall be applied in accordance to the manufacturer's directions, uniformly over the surface of the paving at a rate sufficient to assure penetration and binding of the particles in the upper 2 inches of the aggregate blanket. Application of the binder shall take place utilizing a two part sprayer with mixing completed at the nozzle.

Apply and mix epoxy resin binder under dry conditions only. Do not apply if rain is expected within 8 hours following epoxy resin application to crushed aggregate.

Air and surface temperature should be between 50 and 90 degrees Fahrenheit during and for 24 hours following application and mixing of the epoxy resin binder.

Protect installed crushed aggregate with epoxy resin binder from excessive dust exposure for the first 4 hours of curing.

C.2 Test Section

Prior to placing slope paving, prepare a test section utilizing the proposed aggregate and epoxy resin binder so the engineer will be able to assess the adequacy of the product and the application and mixing methods to yield the desired results. Test section to be 3-feet x 3-feet and a minimum of 4-inches thick. Notify the engineer no less than 24 hours in advance of preparing the test section to allow him time to arrange for witnessing the epoxy resin binder application and mixing with the aggregate. Test section shall be allowed to cure according to product manufacturer's requirements before the engineer will accept the product for use on the final structures.

If the test section is not accepted, prepare another test section and repeat the process, using either a different aggregate or epoxy resin binder. Repeat this procedure until the engineer accepts the test section. Use the same aggregate and epoxy resin binder means and methods when installing the product under each structure that were used in preparing the accepted test section.

D Measurement

The department will measure Modified Slope Paving Crushed Aggregate by the square yard in place, 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.0180.10	Modified Slope Paving Crushed Aggregate	SY

Payment is full compensation for furnishing, crushing and placing crushed aggregate; for furnishing, mixing and applying the epoxy resin binder to the aggregate; for preparing the subsurface; for cleaning any splatter of epoxy resin binder to adjacent pavement or structures; and for making and disposing of the test section.

49. Concrete Pavement 9.0-Inch Special, Item SPV.0180.20; 10.5-Inch Special, Item SPV.0180.30; Approach Slab Special, Item SPV.0180.40.

A Description

This special provision describes construction of doweled concrete pavement in accordance to standard specs 415, 710, and 715, as shown on the plans, and as hereinafter provided.

B Materials**B.1 Concrete Mixtures**

Add the following to standard spec 715.2:

Concrete mix designs shall be the responsibility of the contractor. Provide the concrete mix designs necessary to accommodate contractor's operations and contractor scheduling according to the traffic provisions and the prosecution and progress provisions included in the plan. At least seven business days before producing concrete, submit concrete mix documentation to the engineer for approval. Approval of the design mix does not relieve the contractor of the responsibility for meeting contractual requirements located within the traffic provisions and the prosecution and progress provisions.

If the geological composition of the coarse aggregate is primarily igneous or metamorphic materials, modify and supplement standard specs 415, 710, and 715 with the following:

1. The contractor may use class C fly ash or grade 100 or 120 slag as a partial replacement for Portland cement. For binary mixes use up to 15% fly ash or slag, except for slip-formed work the contractor may use up to 20% slag. For ternary mixes use up to 25% fly ash and slag in combination. Replacement values are in percent by weight of the total cementitious material in the mix.

2. One hundred percent of the aggregate shall pass the 1-inch sieve.

Use of recycled concrete for coarse aggregate will not be allowed.

C Construction

C.1 Construction Methods

Add the following to standard spec 415.3.16.1 (2):

At anytime during pavement placement or after pavement placement, the engineer may require coring to supplement the probing testing operation for conforming thickness verification to compliment normal QV testing. The coring will be completed at department expense.

D Measurement

The department will measure Concrete Pavement (Inch) Special and Concrete Pavement Approach Slab Special by area in square yards, completed in accordance to the contract and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.20	Concrete Pavement 9.0-Inch Special	SY
SPV.0180.30	Concrete Pavement 10.5-Inch Special	SY
SPV.0180.40	Concrete Pavement Approach Slab Special	SY

Delete standard spec 415.5.3 and replace with special provision Project Concrete Crack Mitigation and Repair, Item SPV.0105.20.

50. QMP Base Aggregate Dense 1 1/4-inch Compaction, Item SPV.0195.01.

A Description

- (1) This special provision modifies the compaction and density testing documentation requirements of work done under the Base Aggregate Dense 1 1/4-inch bid items. Conform to standard specification standard spec 305 as modified in this special provision and to the contract QMP Base Aggregate article.
- (2) Provide and maintain a quality management program. A quality management program is defined as all activities, including process control, inspection, sampling and testing, and necessary adjustments in the process related to construction of dense graded base which meets all the requirements of this provision.
- (3) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes sampling and testing procedures. The contractor may obtain the CMM from the department's web site at:

<http://roadwaystandards.dot.wi.gov/standards/cmm/index.htm>

- (4) This special provision applies to Base Aggregate Dense 1 1/4-inch material placed on both the mainline traveled way and its adjacent mainline shoulders in accordance to the typical finished sections. Unless otherwise specified by the contract; all Base Aggregate Dense 1 1/4-inch material placed on side roads, private and public entrances, ramps, tapers, turn lanes, and other locations not described as the mainline traveled way and its adjacent mainline shoulders is exempt from the compaction and density requirement modifications and testing contained within this special provision.

B (Vacant)

C Construction

C.1 General

- (1) The engineer shall approve the grade prior to placement of the base. Approval of the grade shall be in accordance to applicable provisions of the standard specifications.

Add the following to standard spec 305.3.2.2:

- (3) Compact the 1 1/4-inch dense graded base to a minimum of 93.0% of the material target density. Ensure that adequate moisture is present during placement and compaction operations to prevent segregation and to help achieve compaction. The material target density will be identified using one of the following methods:
1. For 1 1/4-inch dense graded base composed of $\leq 20\%$ reclaimed asphaltic pavement (RAP) or crushed concrete (RCA); as determined by classification of material (aggregate or RAP and/or RCA), and percentage by weight of each material type, retained on the No. 4 Sieve; maximum dry density as determined by AASHTO T-180, Method D, with correction for coarse particles as determined by AASHTO T224; modified to require determination of Bulk Specific Gravity (G_m) in accordance to AASHTO T 85, Bulk Specific Gravities determined in accordance to standard spec 106.3.4.2.2 for aggregate source approval may be utilized
 2. For 1 1/4-inch dense graded base composed of $>20\%$ RAP or RCA; as determined by classification of material (aggregate or RAP and/or RCA), and percentage by weight of each material type, retained on the No. 4 Sieve; the contractor's option of:
 - a. Maximum dry density as determined by AASHTO T-180, Method D, with correction for coarse particles as determined by AASHTO T224; modified to require determination of Bulk Specific Gravity (G_m) in accordance to AASHTO T 85.
 - b. Maximum wet density as determined by AASHTO T-180, Method D, modified to define *Maximum Density* as the wet density in pounds per cubic foot of soil at optimum moisture content under the Method D specified compaction, and with correction for coarse particles as determined by AASHTO T224; modified to require determination of Bulk Specific Gravity (G_m) in accordance to AASHTO T 85.

Average of 10 random control strip wet density measurements as described in section C.2.4.1.

- (4) Base aggregate dense 1 1/4-inch will be accepted for compaction on a target density lot basis.

Field density tests on materials using contractor elected target density methods C.1(4).2.b or C.1(4).2.c will not be considered for lot acceptance on the basis of compaction under the requirements of this provisions until the moisture content of the in-place material is less than 2.0 percentage points above of the maximum wet density optimum moisture or 2.0 percentage points of the average moisture content of the 10 density tests representing a control strip, respectively.

C.2 Quality Management Program

C.2.1 Quality Control Plan

- (1) Submit a comprehensive written quality control plan to the engineer no later than 10 business days before placement of material. Do not place any dense graded base before the engineer reviews and accepts the plan. Construct the project as the plan provides.
- (2) Do not change the quality control plan without the engineer's review and acceptance. Update the plan with changes as they become effective. Provide a current copy of the plan to the engineer and post in the contractor's laboratory as changes are adopted. Ensure that the plan provides the following elements:
 - 1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
 - 2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication process that will be used, and action time frames.
 - 3. A list of source locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
 - 4. Descriptions of stockpiling and hauling methods.
 - 5. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
 - 6. Location of the QC laboratory, retained sample storage, and other documentation.
 - 7. A summary of the locations and calculated quantities to be tested under this provision.

C.2.2 Personnel

- (1) Perform the quality control sampling, testing, and documentation required under this provision using technicians certified by the department's Highway Technician Certification Program (HTCP). Have a HTCP Nuclear Density Technician I, or ACT certified technician, perform field density and field moisture content testing.

- (2) If an ACT is performing sampling or testing, a certified technician must coordinate and take responsibility for the work an ACT performs. Have a certified technician ensure that all sampling and testing is performed correctly, analyze test results, and post resulting data. No more than one ACT can work under a single certified technician.

C.2.3 Equipment

- (1) Furnish the necessary equipment and supplies for performing quality control testing. Ensure that all testing equipment conforms to the equipment specifications applicable to the required testing methods. The engineer may inspect the measuring and testing devices to confirm both calibration and condition. Calibrate all testing equipment according to the CMM and maintain a calibration record at the laboratory.
- (2) Furnish nuclear gauges from the department's approved product list at:
<http://www.dot.wisconsin.gov/business/engrserv/approvedprod.htm>
- (3) Ensure that the nuclear gauge manufacturer or an approved calibration service calibrates the gauge the same calendar year it is used on the project. Retain a copy of the calibration certificate with the gauge.
- (4) For all target density methods; conform to ASTM D 6938 and CMM 8.15 for wet density testing and gauge monitoring methods.
- (5) For the specified target density method C.1(4).1 compute dry densities for dense graded base composed of $\leq 20\%$ RAP or RCA, according to ASTM D 6938.
- (6) For contractor elected target density method C.1(4).2.a compute dry densities of dense graded base composed of $>20\%$ RAP or RCA using a moisture correction factor and the nuclear wet density value. Determine the moisture correction value; for each Proctor produced under the requirements of C.2.4.2; using the moisture bias, as shown in CMM 8.15.4.1, except the one-point Proctor tests of the 5 random tests is not required. Determine natural moistures in the laboratory.

Perform nuclear gauge measurements using gamma radiation in the backscatter or direct transmission position. Backscatter may be used only if the material being tested cannot reliably maintain an undistorted Direct Transmission test hole. Direct transmission tests must be performed at the greatest possible probe depth of 2 inches, 4 inches, or 6 inches; not to exceed the depth of the compacted layer being tested. Perform each test for 4 minutes of nuclear gauge count time.

C.2.4 Contractor Testing

- (1) Perform compaction testing on the mainline dense graded base material, as defined by A.(4). Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians as required in C.2.2. Conform to CMM 8.15 for testing and gauge monitoring methods.

- (2) Select test sites randomly using ASTM Method D3665. Do not test less than 1 ½ feet from the unsupported edge of the dense graded base layer. Test sites must be located within the mainline traveled way or the traveled way's adjacent mainline shoulder.

C.2.4.1 Contractor Required Quality Control (QC) Testing

- (1) Conduct testing at a minimum frequency of one test per lot. A lot will consist of each 1500 tons, of each layer with a minimum lift thickness of 2", of base aggregate dense 1 1/4-inch material placed; regardless of location of placement. Each lot of in-place mainline, as defined by A.(4), 1 1/4-inch base aggregate dense material will be accepted for compaction when the lot field density meets the required minimum 93.0% of target density, or for lots not achieving 93.0% of target density in accordance to C.2.6.
- (2) Notify the engineer, if a lot field density test falls below the required minimum value. Document and perform corrective action in accordance to C.2.6. Deliver documentation of all compaction testing results to the engineer at the time of testing.

C.2.4.1.1 Target Density Determination

C.2.4.1.1.1 Density Control Strip Method

- (1) For contractor elected target density method C.1(4).2.c; construct a control strip for each layer of placement to identify the target wet density for the base aggregate dense material. The control strip construction and density testing will occur under the direct observation and/or assistance of the department QV personnel.
- (2) Unless the engineer approves otherwise, construct control strips to a minimum dimension of 300 feet long and one full lane width.
- (3) Completed control strips may remain in-place to be incorporated into the final roadway cross-section.
- (4) Construct additional control strips, at a minimum, when:

The gradation on any one sieve differs from the original gradation test result for that sieve, by more than 10 percentage points. The original gradation test is defined as the gradation of the material used to construct the control strip.

The source of base aggregate changes.

The percentage of blended recycled materials; from classification of material retained on the No. 4 sieve; in the original gradation test, differs by more than 10 percentage points. The original gradation test is defined as the gradation of the material used to construct the control strip.

The layer thickness changes in excess of 2.0 inches.

The percent target density exceeds 103.0% on two consecutive density measurements.

Construct control strips using equipment and methods representative of the operations to be used to place and compact the remaining 1 1/4-inch base aggregate dense material. Wet the base, as mutually agreed upon by the contractor and engineer, to obtain and/or maintain adequate moisture content to ensure proper compaction. Discontinue water placement if the base begins to exhibit signs of saturation or instability.

After compacting the control strip with a minimum of 2 passes, mark and take density measurements at 3 random locations, at least 1 1/2 feet from the edge of the base. Subsequent density measurements will be taken at the same 3 locations.

After each subsequent pass of compaction equipment over the entirety of the control strip, take density measurements at the 3 marked locations. Continue compacting and testing until the increase in density measurements is less than 2.0 lb/ft³, or the density measurements begin to decrease.

Upon completion of control strip compaction, take 10 randomly located density measurements within the limits of the control strip, at least 1 1/2 feet from the edge of the base. The final measurements recorded at the 3 locations under article C.2.4.1.1(6) may be included as 3 of the 10 measurements. Average the 10 measurements to obtain the control strip target density and target moisture for use in contractor elected method C.1(4).2.c.

C.2.4.1.1.2 Maximum Wet and/or Dry Density Methods

- (1) For contractor elected target density methods C.1(4).2.a, C.1(4).2.b, and contractually specified target density method C.1(4).1; perform one gradation and 5-point Proctor test before placement of 1 1/4-inch dense graded base. Perform additional gradations every 3000 tons. If sampling requirements are identical, samples/testing performed for the QMP Base Aggregate specification may be used to fulfill the gradation testing requirements of this specification.
- (2) Perform additional 5-point Proctor tests, at a minimum, when:
The gradation on any one sieve differs from the original gradation test result for that sieve, by more than 10 percentage points. The original gradation test is defined as the gradation of the material used to create a 5-point Proctor. Each 5-point Proctor test will remain valid for any material with gradation for all sieves within 10.0 percentage points of that Proctor's original gradation test.

The source of base aggregate changes.

The percentage of blended recycled materials ; from classification of material retained on the No. 4 sieve; in the original gradation test, differs by more than 10 percentage points. The original gradation test is defined as the gradation of the material used to construct the control strip.

Percent target density exceeds 103.0% on two consecutive density tests..

- (3) Provide Proctor test results to the engineer within 48 hours of sampling. Provide gradation test results to the engineer within 24 hours of sampling.
- (4) Split each contractor QC sample and identify it according to CMM 8.30. Retain the split for 7 calendar days in a dry, protected location. If requested for department comparison testing, deliver the split to the engineer within one business day.

C.2.4.2 Optional Contractor Assurance (CA) Testing

- (1) CA Testing is optional and is conducted to further validate QC testing. The contractor may submit recorded CA data to provide additional information for the following:
Process control decisions
Troubleshooting possible sampling, splitting, or equipment problems.
Limiting liability and/or corrective action limits as a result of QV or QC testing. These provisions do not supersede the department's rights under 107.16

CA testing used to limit liability and/or corrective action limits must conform to all the requirements of required contractor QC testing, with the exclusion of a required test frequency.

C.2.5 Department Testing

C.2.5.1 General

- (1) The department will conduct verification testing to validate the quality of the product and independent assurance testing to evaluate the sampling and testing. The department will provide the contractor with a listing of names and telephone numbers of all QV and IA personnel for the project, and provide test results to the contractor within 2 business days after the department obtains the sample.

C.2.5.2 Quality Verification (QV) Testing

- (1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in C.2.2 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.
- (2) The department will conduct QV tests at the minimum frequency of 30% of the required gradation, density and proctor contractor tests.
- (3) The department will locate gradation, proctor and nuclear density test samples, at locations independent of the contractor's QC work, collecting one sample at each QV location. The department will split each QV sample, test half for QV, and retain the remaining half for 7 calendar days.

- (4) The department will conduct QV tests in a separate laboratory and with separate equipment from the contractor's QC tests. The department will use the same methods specified for QC testing.
- (5) The department will utilize control strip target density testing results in lieu of QV proctor sampling and testing when the contractor elected C.1(4).2.c target density method is used.
- (6) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to this special provision, the department will take no further action. If QV test results are nonconforming, take corrective actions in accordance to C.2.6 until the requirements of this special provision are met. Differing QC and QV nuclear density values of more than 2.0 pcf will be investigated and resolved.

C.2.5.3 Independent Assurance (IA)

- (1) Independence assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing, including personnel qualifications, procedures, and equipment. The department will perform an IA review according to the department's independent assurance program. That review may include one or more of the following:
 1. Split sample testing.
 2. Proficiency sample testing.
 3. Witnessing sampling and testing.
 4. Test equipment calibration checks.
 5. Requesting that testing personnel perform additional sampling and testing.
- (2) If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in C.2.5.4.

C.2.5.4 Dispute Resolution

- (1) The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department and contractor shall review the data, examine data reduction and analysis methods, evaluate sampling and testing methods/procedures, and perform additional testing. Use ASTM E 178 to evaluate potential statistically outlying data.
- (2) Production test results, and results from other process control testing, may be considered when resolving a dispute.
- (3) If project personnel cannot resolve a dispute, and the dispute affects payment or could result in incorporating non-conforming product or work, the department will use third party testing to resolve the dispute. The department's central office laboratory, or a

mutually agreed on independent testing laboratory, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent laboratory. The department may use third party test results to evaluate the quality of questionable materials and determine the appropriate payment. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

C.2.6 Corrective Action

Lots not achieving 93.0% of target density may be addressed and accepted for compaction in accordance to the requirements of this section. Unless otherwise stated, the actions taken to address an unacceptable lot must be applied to the entire lot.

Passing CA test results in accordance to section C.2.4.2, will reduce the limits of lot investigations and/or corrective actions.

At no additional cost to the department, investigate the moisture content of material in an unacceptable lot. Moisture content testing/samples collected under the QC and/or QV testing articles of this specification may be used to complete this investigation. Obtain moisture content readings in accordance to ASTM D 6938. For material composed of >20% RAP or RCA, correct the moisture content with the moisture correction value using the moisture bias, as shown in CMM 8.15.4.1, except the one-point Proctor tests of the 5 random tests is not required.

Lots with moisture contents within 2.0 percentage points of optimum moisture for target density methods C.1(4).1, C.1(4).2.a, or C.1(4).2.b ; or within 2.0 percentage points of the target moisture content for target density method C.1(4).2.c; and exhibiting no signs of deflection when subjected to loading by the heaviest roller used in the placement and compaction operations; will be, at no additional cost to the department, compacted a minimum of one more pass using equipment and methods representative of the operations used to place and compact the base aggregate dense; and density tested at the same location (station and offset) as the failing QC and/or QV density tests. If the change in density exceeds 2.0 lb/ft³ continue subsequent compactive efforts and density testing on that lot, at no additional cost to the department. If the change in density is less than or equal to 2.0 lb/ft³, the lot is accepted as satisfying the compaction requirements of this provision.

Lots with moisture contents within 2.0 percentage points of optimum moisture for target density methods C.1(4).1, C.1(4).2.a, or C.1(4).2.b ; or within 2.0 percentage points of the target moisture content for target density method C.1(4).2.c; and exhibiting signs of deflection when subjected to loading by the heaviest roller used in the placement and compaction operations; will be reviewed by the engineer. The engineer may request subgrade improvement methods, such as excavation below subgrade (EBS), installation of geotextile fabrics, installation of breaker run material or others to be completed and paid for in accordance to standard spec 301.5; or may request, at no additional cost to the department, an additional pass of compactive effort using equipment and methods

representative of the operations used to place and compact the base aggregate dense and density test.

If, after an additional pass, the change in density at the same location (station and offset) as the failing QC and/or QV density tests exceeds 2.0 lb/ft^3 in a lot continue subsequent compactive efforts and density testing on that lot, at no additional cost to the department. If the change in density at the same location (station and offset) as the failing QC and/or QV density tests is less than or equal to 2.0 lb/ft^3 , and subgrade improvement methods are not requested by the engineer, the lot is accepted as satisfying the compaction requirements of this provision.

If subgrade improvement methods are requested by the engineer, upon completion, including compaction of the restored base material, conduct a density test within the improved subgrade limits. This density test result will replace the prior field density value. If the lot field density equals or exceeds 93.0% of target density the lot is accepted as satisfying the compaction requirements of this provision. If the lot field density fails to achieve 93.0% of target density, at no additional cost to the department, compact the lot a minimum of one more pass using equipment and methods representative of the operations used to place and compact the base aggregate dense; and density test at the same location (station and offset) as the failing QC and/or QV density tests. If the change in density exceeds 2.0 lb/ft^3 continue subsequent compactive efforts and density testing on that lot, at no additional cost to the department. If the change in density is less than or equal to 2.0 lb/ft^3 , the lot is accepted as satisfying the compaction requirements of this provision.

Lots with moisture contents in excess of 2.0 percentage points above or below optimum moisture for target density methods C.1(4).1, C.1(4).2.a, or C.1(4).2.b; or within 2.0 percentage points of the target moisture content for target density method C.1(4).2.c; shall receive contractor performed and documented corrective action; including additional density testing; at no additional cost to the department.

Density tests completed subsequent to any corrective action will replace previous field density test results for that lot. Continue corrective actions until 93.0% of target density is achieved; or an alternate compaction acceptance criteria is met in accordance to this section.

Field moisture contents of materials tested using contractor elected target density methods C.1(4).2.b or C.1(4).2.c cannot exceed 2.0 percentage points of the optimum moisture content or 2.0 percentage points of the target moisture content, respectively. Density tests on materials using contractor elected target density methods C.1(4).2.b or C.1(4).2.c will not be considered for lot compaction acceptance until the moisture content of the corresponding density test of the in-place material is less than 2.0 percentage points above of the optimum moisture content or 2.0 percentage points of the target moisture content, respectively.

D Measurement

- (1) The department will measure QMP Base Aggregate Dense 1 1/4-inch Compaction by the ton. The measured tons of QMP Base Aggregate Dense 1 1/4-inch Compaction equals the tons of Base Aggregate Dense 1 1/4-inch acceptably completed, regardless of placement location and density testing eligibility.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.01	QMP Base Aggregate Dense 1 1/4-inch Compaction	TON

- (2) Payment is full compensation for performing compaction testing; for sampling and laboratory testing; and for developing, completing, and documenting the compaction quality management program. The department will pay separately for providing the aggregate under the Base Aggregate Dense 1 1/4-inch bid item.

ADDITIONAL SPECIAL PROVISION 4

Payment to First-Tier Subcontractors

Within 10 calendar days of receiving a progress payment for work completed by a subcontractor, pay the subcontractor for that work. The prime contractor may withhold payment to a subcontractor if, within 10 calendar days of receipt of that progress payment, the prime contractor provides written notification to the subcontractor and the department documenting "just cause" for withholding payment.

The prime contractor may also withhold routine retainage from payments due subcontractors.

Payment to Lower-Tier Subcontractors

Ensure that subcontracting agreements at all tiers provide prompt payment rights to lower-tier subcontractors that parallel those granted first-tier subcontractors in this provision.

Release of Routine Retainage

After granting substantial completion the department may reduce the routine retainage withheld from the prime contractor to 75 percent of the original total amount retained.

When the Department sends the semi-final estimate the department may reduce the routine retainage withheld from the prime contractor to 10 percent of the original total amount retained.

Within 30 calendar days of receiving the semi-final estimate from the department, submit written certification that subcontractors at all tiers are paid in full for acceptably completed work and that no routine retainage is being withheld. The department will pay the prime contractor in full and reduce the routine retainage withheld from the prime contractor to zero when the department approves the final estimate.

This special provision does not limit the right of the department, prime contractor, or subcontractors at any tier to withhold payment for work not acceptably completed or work subject to an unresolved contract dispute.

ADDITIONAL SPECIAL PROVISIONS 5**Fuel Cost Adjustment****A Description**

Fuel Cost Adjustments will be applied to partial and final payments for work items categorized in Section B as a payment to the contractor or a credit to the department. ASP-5 shall not apply to any force account work.

B Categories of Work Items

The following items and Fuel Usage Factors shall be used to determine Fuel Cost Adjustments:

(1) Earthwork.		Unit	Gal. Fuel Per Unit
205.0100	Excavation Common	CY	0.23
205.0200	Excavation Rock	CY	0.39
205.0400	Excavation Marsh	CY	0.29
208.0100	Borrow	CY	0.23
208.1100	Select Borrow	CY	0.23
209.0100	Backfill Granular	CY	0.23
350.0102	Subbase	CY	0.28
350.0104	Subbase	Ton	0.14
350.0115	Subbase 6-Inch	SY	0.05
350.0120	Subbase 7-Inch	SY	0.05
350.0125	Subbase 8-Inch	SY	0.06
350.0130	Subbase 9-Inch	SY	0.07
350.0135	Subbase 10-Inch	SY	0.08
350.0140	Subbase 11-Inch	SY	0.09
350.0145	Subbase 12-Inch	SY	0.09

C Fuel Index

A Current Fuel Index (CFI) in dollars per gallon will be established by the Department of Transportation for each month. The CFI will be the price of No. 2 fuel oil, as reported in U.S. Oil Week, using the first issue dated that month. The CFI will be the average of prices quoted for Green Bay, Madison, Milwaukee and Minneapolis.

The base Fuel Index (BFI) for this contract is \$2.90 per gallon.

D Computing the Fuel Cost Adjustment

The engineer will compute the ratio CFI/BFI each month. If the ratio falls between 0.85 and 1.15, inclusive, no fuel adjustment will be made for that month. If the ratio is less than 0.85 a credit to the department will be computed. If the ratio is greater than 1.15 additional payment to the contractor will be computed. Credit or additional payment will be computed as follows:

- (1) The engineer will estimate the quantity of work done in that month under each of the contract items categorized in Section B.
- (2) The engineer will compute the gallons of fuel used in that month for each of the contract items categorized in Section B by applying the unit fuel usage factors shown in Section B.
- (3) The engineer will summarize the total gallons (Q) of fuel used in that month for the items categorized in Section B.
- (4) The engineer will determine the Fuel Cost Adjustment credit or payment from the following formula:

$$FA = \left(\frac{CFI}{BFI} - 1 \right) \times Q \times BFI$$

(plus is payment to contractor; minus is credit to the department)

Where	FA	=	Fuel Cost Adjustment (plus or minus)
	CFI	=	Current Fuel Index
	BFI	=	Base Fuel Index
	Q	=	Monthly total gallons of fuel

E Payment

A Fuel Cost Adjustment credit to the department will be deducted as a dollar amount each month from any sums due to the contractor. A Fuel Cost Adjustment payment to the contractor will be made as a dollar amount each month.

Upon completion of the work under the contract, any difference between the estimated quantities and the final quantities will be determined. An average CFI, calculated by averaging the CFI for all months that fuel cost adjustment was applied, will be applied to the quantity differences. The average CFI shall be applied in accordance with the procedure set forth in Section D.

ADDITIONAL SPECIAL PROVISION 6

ASP 6 - Modifications to the standard specifications

Make the following revisions to the standard specifications:

455.3.2.1 General

Replace paragraph two with the following effective with the December 2014 letting:

- (2) Use tack material of the type and grade the contract specifies. The contractor may, with the engineer's approval, dilute tack material as allowed under 455.2.4. Provide calculations using the asphalt content as-received from the supplier and subsequent contractor dilutions to show that as-placed material has 50 percent or more residual asphalt content. Apply at 0.050 to 0.070 gallons per square yard, after dilution, unless the contract designates otherwise. The engineer may adjust the application rate based on surface conditions. Limit application each day to the area the contractor expects to pave during that day.

460.2.2.3 Aggregate Gradation Master Range

Replace paragraph one with the following effective with the December 2014 letting:

- (1) Ensure that the aggregate blend, including recycled material and mineral filler, conforms to the gradation requirements in table 460-1. The values listed are design limits; production values may exceed those limits.

TABLE 460-1 AGGREGATE GRADATION MASTER RANGE AND VMA REQUIREMENTS

SIEVE	PERCENTS PASSING DESIGNATED SIEVES						
	NOMINAL SIZE						
	37.5 mm	25.0 mm	19.0 mm	12.5 mm	9.5 mm	SMA 12.5 mm	SMA 9.5 mm
50.0-mm	100						
37.5-mm	90 – 100	100					
25.0-mm	90 max	90 - 100	100				
19.0-mm	—	90 max	90 - 100	100		100	
12.5-mm	—	—	90 max	90 - 100	100	90 - 97	100
9.5-mm	—	—	—	90 max	90 - 100	58 - 72	90 - 100
4.75-mm	—	—	—	—	90 max	25 - 35	35 - 45
2.36-mm	15 – 41	19 - 45	23 - 49	28 - 58	20 - 65	15 - 25	18 - 28
75-µm	0 – 6.0	1.0 - 7.0	2.0 - 8.0	2.0 - 10.0	2.0 - 10.0	8.0 - 12.0	10.0 - 14.0
% MINIMUM VMA	11.0	12.0	13.0	14.0 ^[1]	15.0 ^[2]	16.0	17.0

^[1] 14.5 for E-0.3 and E-3 mixes.

^[2] 15.5 for E-0.3 and E-3 mixes.

465.2 Materials

Replace paragraph two with the following effective with the December 2014 letting:

- (2) Under the other section 465 bid items, the contractor need not submit a mix design. Furnish aggregates mixed with a type AC asphaltic material, except under the Asphaltic Curb bid item furnish PG58-28 asphaltic material. Use coarse and fine mineral aggregates uniformly coated and mixed with the asphaltic material in an engineer-approved mixing plant. The contractor may include reclaimed asphaltic pavement materials in the mixture.

Errata

Make the following corrections to the standard specifications:

501.3.2.4.4 Water Reducer

Correct errata by deleting the reference to footnote 6 for grade D concrete.

- (1) Add a water reducing admixture conforming to 501.2.3. Determine the specific type and rate of use based on the atmospheric conditions, the desired properties of the finished concrete and the manufacturer's recommended rate of use. The actual rate of use shall at least equal the manufacturer's recommended rate, and both the type and rate used require the engineer's approval before use.

ADDITIONAL SPECIAL PROVISION 7

- A. Reporting 1st Tier and DBE Payments During Construction
1. Comply with reporting requirements specified in the department's Civil Rights Compliance, Contractor's User Manual, Sublets and Payments.
 2. Report payments to all DBE firms within 10 calendar days of receipt of a progress payment by the department or a contractor for work performed, materials furnished, or materials stockpiled by a DBE firm. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.
 3. Report payments to all first tier subcontractor relationships within 10 calendar days of receipt of a progress payment by the department for work performed. Report the payment as specified in A(1) for all work satisfactorily performed.
 4. All tiers shall report payments as necessary to comply with the DBE payment requirement as specified in A(2).
 5. Require all first tier relationships, DBE firms and all other tier relationships necessary to comply with the DBE payment requirement in receipt of a progress payment by contractor to acknowledge receipt of payment as specified in A(1), (2), (3) and (4).
 6. All agreements made by a contractor shall include the provisions in A(1), (2), (3), (4) and (5), and shall be binding on all first tier subcontractor relationships and all contractors and subcontractors utilizing DBE firms on the project.
- B. Costs for conforming to this special provision are incidental to the contract.

ADDITIONAL SPECIAL PROVISION 9
Electronic Certified Payroll Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) to submit certified payrolls electronically. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at:

<http://www.dot.wi.gov/business/civilrights/laborwages/index.htm>

(2) Ensure that all tiers of subcontractors, as well as all trucking firms, submit their weekly certified payrolls electronically through CRCS. These payrolls are due within seven calendar days following the close of the payroll period. Every firm providing physical labor towards completing the project is a subcontractor under this special provision.

(3) Upon receipt of contract execution, promptly make all affected firms aware of the requirements under this special provision and arrange for them to receive CRCS training as they are about to begin payrolls. The department will provide training either in a classroom setting at one of our regional offices or by telephone. Contact Tess Mulrooney at 608-267-4489 to schedule the training.

(4) The department will reject all paper submittals of forms DT-1816 and DT-1929 for information required under this special provision. All costs for conforming to this special provision are incidental to the contract.

(5) Firms wishing to export payroll data from their computer system into CRCS should have their payroll coordinator send several sample electronic files to Tess two months before a payroll needs to be submitted. Not every contractor's payroll system is capable of producing export files. For details, see pages 17-22 of the CRCS System Background Information manual available online on the Labor, Wages, and EEO Information page at:

<http://www.dot.wi.gov/business/civilrights/laborwages/docs/crc-payroll-manual.pdf>

DECEMBER 2013

BUY AMERICA PROVISION

All steel and iron materials permanently incorporated in this project shall be domestic products and all manufacturing and coating processes for these materials from smelting forward in the manufacturing process must have occurred within the United States. Coating includes epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of a material subject to the requirements of Buy America. The exemption of this requirement is the minimal use of foreign materials if the total cost of such material permanently incorporated in the product does not exceed one-tenth of one percent (1/10 of 1%) of the total contract cost or \$2,500.00, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the subject products as they are delivered to the project. The contractor shall take actions and provide documentation conforming to CMM 2-28.5 to ensure compliance with this "Buy America" provision.

<http://roadwaystandards.dot.wi.gov/standards/cmm/cm-02-28.pdf#cm2-28.5>

Upon completion of the project certify to the engineer, in writing using department form WS4567, that all steel, iron, and coating processes for steel or iron incorporated into the contract work conform to these "Buy America" provisions. Attach a list of exemptions and their associated costs to the certification form. Department form WS4567 is available at:

<http://roadwaystandards.dot.wi.gov/standards/forms/ws4567.doc>

Effective with September 2004 Letting

**WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS AND TRANSPORTATION FACILITIES**

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS

- I. Wage Rates, Hours of labor and payment of Wages
- II. Payroll Requirements
- III. Postings at the Site of the Work
- IV. Affidavits
- V. Wage Rate Redistribution
- VI. Additional Classifications

I. WAGE RATES, HOURS OF LABOR AND PAYMENT OF WAGES

The schedule of "Minimum Wage Rates" attached hereto and made a part hereof furnishes the prevailing wage rates that have been determined pursuant to Section 103.50 of the Wisconsin Statutes. These wage rates are the minimum required to be paid to the various laborers, workers, mechanics and truck drivers employed by contractors and subcontractors on the construction work embraced by the contract and subject to prevailing hours and wages under Section 103.50, Stats. If necessary to employ laborers, workers, mechanics or truck drivers whose classification is not listed on the schedule, they shall be paid at rates conformable to those listed for similar classifications. Apprentices shall be paid at rates not less than those prescribed in their state indenture contracts.

While the wage rates shown are the minimum rates required by the contract to be paid during its life, this is not a representation that labor can be obtained at these rates. It is the responsibility of bidders to inform themselves as to the local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price shall be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

Pursuant to Section 103.50 of the Wisconsin Statutes, the prevailing hours of labor have been determined to be up to 10 hours per day and 40 hours per calendar week Monday through Friday. If any laborer, worker, mechanic or truck driver is permitted or required to work more than the prevailing number of hours per day or per calendar week on this contract, they shall be paid for all hours in excess of the prevailing hours at a rate of at least one and one-half (1 1/2) times their hourly rate of pay. All work on Saturday, Sunday and the following holidays is to be paid at time and a half: (1) January 1, (2) the last Monday in May, (3) July 4, (4) the first Monday in September, (5) the fourth Thursday in November, (6) December 25, (7) the day before if January 1, July 4 or December 25 falls on a Saturday and (8) the day following if January 1, July 4 or December 25 falls on a Sunday.

All laborers, workers, mechanics and truck drivers shall be paid unconditionally not less often than once a week. Persons who own and operate their own trucks must receive the prevailing truck driver rate for the applicable type of truck (i.e. 2 axle, 3 or more axle, articulated, eculid or dumptor) he or she operates, plus an agreed upon amount for the use of his or her truck. Every owner-operator MUST be paid separately for their driving and for the use of their truck.

For those projects subject to the requirements of the Davis-Bacon Act, the Secretary of Labor will also have determined "Minimum Wage Rates" for work to be performed under the contract. These rates are, for all or most of the labor, worker, mechanic or truck driver classifications, identical to those established under Section 103.50 of the Wisconsin Statutes. In the event the rates are not identical, the higher of the two rates will govern.

II. PAYROLL REQUIREMENTS

All contractors and subcontractors must submit weekly Certified Payrolls and Compliance Statement verifying that all laborers, workers, mechanics and truck drivers working on the project have been paid the prevailing wage rates for all work performed under the contract required by Section 103.50 of the Wisconsin Statutes.

III. POSTINGS AT THE SITE OF THE WORK

In addition to the required postings furnished by the Department, the contractor shall post the following in at least one conspicuous place at the site of work:

- a. "NOTICE TO EMPLOYEES," which provides information required to be posted by the provisions of Section 103.50 of the Wisconsin Statutes.
- b. A copy of the State of Wisconsin Minimum Wages Rates. (Four pages.)
- c. A copy of the contractor's Equal Employment Opportunity Policy.
- d. On any project involving federal aid, in addition to the furnished postings, the contractor shall post a copy of the "Davis-Bacon Act, Minimum Wage Rates". (Three pages.)

IV. WAGE RATE REDISTRIBUTION

The amount specified as the hourly basic rate of pay and the amount(s) specified as the fringe benefit contribution(s), for all classes of laborers, workers, mechanics or truck drivers may be redistributed, when necessary, to conform to those specified in any applicable collective bargaining agreement, provided that both parties to such agreement

request and receive the approval for any such redistribution from both the Department of Transportation and the Department of Workforce Development prior to the implementation of such redistribution.

V. ADDITIONAL CLASSIFICATIONS

Any unlisted laborer or mechanic classification that is needed to perform work on this project, and is not included within the scope of any of the classifications listed in the application prevailing wage rate determination, may be added after award only if all of the following criteria have been met:

1. The affected employer(s) must make a written request to WisDOT Central Office to utilize the unlisted classification on this project.
2. The request must indicate the scope of the work to be performed by the unlisted classification and must indicate the proposed wage/fringe benefit package that the unlisted classification is to receive.
3. The work to be performed by the unlisted classification must not be performed by a classification that is included in the applicable prevailing wage rate determination.
4. The unlisted classification must be commonly employed in the area where the project is located.
5. The proposed wage/fringe benefit package must bear a reasonable relationship to those set forth in the applicable prevailing wage rate determination.
6. The request should be made prior to the actual performance of the work by the unlisted classification.
7. DWD must approve the use of the unlisted classification and the proposed wage/fringe benefit package. USDOL also must approve the use of the unlisted classification and the proposed wage/fringe benefit package on federal aid projects.
8. WisDOT and DWD may amend the proposed wage/fringe benefit package, as deemed necessary, and may set forth specific employment ratios and scope of work requirements in the approval document.

The approved wage/fringe benefit package shall be paid to all laborers, workers, mechanics or truck drivers performing work within the scope of that performed by the unlisted classification, from the first day on which such work is performed. In the event that work is performed by the unlisted classification prior to approval, the wage/fringe benefit package to be paid for such work must be in conformance with the wage/fringe

benefit package approved for such work. Under this arrangement a retroactive adjustment in wages and/or fringe benefits may be required to be made to the affected laborers, workers, mechanics or truck drivers by the affected employer(s).

**ANNUAL PREVAILING WAGE RATE DETERMINATION
FOR ALL STATE HIGHWAY PROJECTS
ST. CROIX COUNTY**

Compiled by the State of Wisconsin - Department of Workforce Development
for the Department of Transportation
Pursuant to s. 103.50, Stats.
Issued on May 1, 2014

CLASSIFICATION: Contractors are required to call the Department of Workforce Development if there are any questions regarding the proper trade or classification to be used for any worker on a public works project.

OVERTIME: Time and one-half must be paid for all hours worked over 10 hours per day and 40 hours per calendar week and for all hours worked on Saturday, Sunday and the following six (6) holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25; the day before if January 1, July 4 or December 25 falls on a Saturday; the day following if January 1, July 4 or December 25 falls on a Sunday.

FUTURE INCREASE: If indicated for a specific trade or occupation, the full amount of such increase MUST be added to the "TOTAL" indicated for such trade or occupation on the date(s) such increase(s) becomes effective.

PREMIUM PAY: If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whenever such pay is applicable.

SUBJOURNEY: Wage rates may be available for some of the classifications indicated below. Any employer that desires to use any subjourney classification on a project MUST request the applicable wage rate from the Department of Workforce Development PRIOR to the date such classification is used on such project. Form ERD-10880 is available for this purpose and can be obtained by writing to the Department of Workforce Development, Equal Rights Division, P.O. Box 8928, Madison, WI 53708.

<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
	\$	\$	\$
Bricklayer, Blocklayer or Stonemason	30.92	20.48	51.40
Carpenter	30.48	15.90	46.38
Cement Finisher	32.65	17.32	49.97
Future Increase(s): Add \$1.87 on 6/1/14; Add \$1.87 on 6/1/15; Add \$1.75 on 6/1/16.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Electrician	29.72	18.24	47.96
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Fence Erector	14.91	0.00	14.91
Ironworker	34.15	22.05	56.20
Future Increase(s): Add \$1.35/hr on 5/1/2014; Add \$1.50/hr on 5/1/2015.			
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.			
Line Constructor (Electrical)	38.25	17.31	55.56
Painter	21.87	11.37	33.24
Pavement Marking Operator	30.00	0.00	30.00
Piledriver	30.98	18.75	49.73
Roofer or Waterproofing	31.29	17.81	49.10
Teledata Technician or Installer	16.50	6.35	22.85
Tuckpointer, Caulker or Cleaner	35.28	10.61	45.89
Underwater Diver (Except on Great Lakes)	34.48	15.90	50.38
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	34.43	15.24	49.67

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	\$	\$	\$
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	30.60	16.89	47.49
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.78	13.58	40.36
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.86	12.97	37.83
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	12.70	34.45

TRUCK DRIVERS

Single Axle or Two Axle	34.22	19.90	54.12
Three or More Axle	24.52	17.77	42.29
Future Increase(s): Add \$1.30/hr on 6/1/2014. Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Articulated, Euclid, Dumptor, Off Road Material Hauler	29.27	20.40	49.67
Future Increase(s): Add \$1.75/hr on 6/1/14; Add \$1.25/hr on 6/1/15; Add \$1.30/hr on 6/1/16; Add \$1.25/hr on 6/1/17. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm .			
Pavement Marking Vehicle	23.31	17.13	40.44
Shadow or Pilot Vehicle	34.22	19.90	54.12
Truck Mechanic	23.31	17.13	40.44

LABORERS

General Laborer	29.04	14.63	43.67
Future Increase(s): Add \$1.60/hr on 6/1/2014. Premium Pay: Add \$.10/hr for topman, air tool operator, vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add \$.15/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add \$.20/hr for blaster and powderman; Add \$.25/hr for bottomman; Add \$.35/hr for line and grade specialist; Add \$.45/hr for pipelayer. DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Asbestos Abatement Worker	24.36	15.08	39.44
Landscaper	29.04	14.63	43.67
Future Increase(s): Add \$1.60/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Flagperson or Traffic Control Person	25.67	14.63	40.30
Future Increase(s): Add \$1.60/hr on 6/1/2014. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	\$	\$	\$
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	15.00	4.54	19.54
Railroad Track Laborer	23.46	1.36	24.82

HEAVY EQUIPMENT OPERATORS

Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Traveling Crane (Bridge Type).	36.72	20.40	57.12
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Future Increase(s): Add \$1.75/hr on 6/1/2014); Add \$1.25/hr on 6/1/2015); Add \$1.30/hr on 6/1/2016); Add \$1.25/hr on 6/ 1/ 2017.

Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium.

See DOT'S website for details about the applicability of this night work premium at: <http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm>.

Backhoe (Track Type) Having a Mfg'r.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver.	36.22	20.40	56.62
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Future Increase(s): Add \$1.75/hr on 6/1/2014); Add \$1.25/hr on 6/1/2015); Add \$1.30/hr on 6/1/2016); Add \$1.25/hr on 6/ 1/ 2017.

Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium.

See DOT'S website for details about the applicability of this night work premium at: <http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm>.

Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfg'r.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle	35.72	20.40	56.12
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<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
	\$	\$	\$
Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A- Frames. Future Increase(s): Add \$1.75/hr on 6/1/2014); Add \$1.25/hr on 6/1/2015); Add \$1.30/hr on 6/1/2016); Add \$1.25/hr on 6/ 1/ 2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:// www.dot.wi.gov/business/ civilrights/ laborwages/ pwc. htm .			
Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawyer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Telehandler; Tining or Curing Machine. Future Increase(s): Add \$1.75/hr on 6/1/2014); Add \$1.25/hr on 6/1/2015); Add \$1.30/hr on 6/1/2016); Add \$1.25/hr on 6/ 1/ 2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:// www.dot.wi.gov/business/ civilrights/ laborwages/ pwc. htm .	35.46	20.40	55.86
Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add \$1.75/hr on 6/1/2014); Add \$1.25/hr on 6/1/2015); Add \$1.30/hr on 6/1/2016); Add \$1.25/hr on 6/ 1/ 2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:// www.dot.wi.gov/business/ civilrights/ laborwages/ pwc. htm .	35.17	20.40	55.57
Fiber Optic Cable Equipment.	20.00	8.21	28.21

SCHEDULE OF ITEMS

REVISED:

CONTRACT:
20141209020PROJECT(S):
8110-02-72FEDERAL ID(S):
N/A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS

SECTION 0001 CONTRACT ITEMS

0010	201.0105 CLEARING	79.000 STA	.		.	
0020	201.0205 GRUBBING	79.000 STA	.		.	
0030	203.0100 REMOVING SMALL PIPE CULVERTS	9.000 EACH	.		.	
0040	204.0100 REMOVING PAVEMENT	3,320.000 SY	.		.	
0050	204.0170 REMOVING FENCE	6,150.000 LF	.		.	
0060	205.0100 EXCAVATION COMMON	506,849.000 CY	.		.	
0070	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-55-226	LUMP	LUMP		.	
0080	206.2000 EXCAVATION FOR STRUCTURES CULVERTS (STRUCTURE) 01. C-55-35	LUMP	LUMP		.	
0090	206.2000 EXCAVATION FOR STRUCTURES CULVERTS (STRUCTURE) 02. C-55-36	LUMP	LUMP		.	

SCHEDULE OF ITEMS

REVISED:

CONTRACT:
20141209020PROJECT(S):
8110-02-72FEDERAL ID(S):
N/A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0100	208.0100 BORROW	7,178.000 CY	.		.	
0110	208.1100 SELECT BORROW	3,453.000 CY	.		.	
0120	210.0100 BACKFILL STRUCTURE	4,350.000 CY	.		.	
0130	213.0100 FINISHING ROADWAY (PROJECT) 01. 8110-02-72	1.000 EACH	.		.	
0140	305.0110 BASE AGGREGATE DENSE 3/4-INCH	13,850.000 TON	.		.	
0150	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	115,862.000 TON	.		.	
0160	311.0115 BREAKER RUN	180.000 CY	.		.	
0170	312.0110 SELECT CRUSHED MATERIAL	190,911.000 TON	.		.	
0180	330.0100 MILL AND RELAY	4,861.000 SY	.		.	
0190	405.0100 COLORING CONCRETE RED	426.000 CY	.		.	
0200	416.0508 CONCRETE ROUNDAABOUT TRUCK APRON 8-INCH	1,923.000 SY	.		.	

SCHEDULE OF ITEMS

CONTRACT:
20141209020PROJECT(S):
8110-02-72FEDERAL ID(S):
N/A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0210	416.0620 DRILLED DOWEL BARS	24.000 EACH	.		.	
0220	416.1110 CONCRETE SHOULDER RUMBLE STRIPS	6,950.000 LF	.		.	
0230	440.4410.S INCENTIVE IRI RIDE	504.000 DOL	1.00000		504.00	
0240	455.0110 ASPHALTIC MATERIAL PG58-34	105.000 TON	.		.	
0250	455.0145 ASPHALTIC MATERIAL PG64-34P	872.000 TON	.		.	
0260	455.0605 TACK COAT	2,112.000 GAL	.		.	
0270	460.1100 HMA PAVEMENT TYPE E-0.3	1,829.000 TON	.		.	
0280	460.1103 HMA PAVEMENT TYPE E-3	15,550.000 TON	.		.	
0290	460.2000 INCENTIVE DENSITY HMA PAVEMENT	7,202.000 DOL	1.00000		7202.00	
0300	465.0105 ASPHALTIC SURFACE	622.000 TON	.		.	
0310	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	217.000 TON	.		.	

SCHEDULE OF ITEMS

REVISED:

CONTRACT:
20141209020PROJECT(S):
8110-02-72FEDERAL ID(S):
N/A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0320	465.0125 ASPHALTIC SURFACE TEMPORARY	2,448.000 TON	.		.	
0330	465.0315 ASPHALTIC FLUMES	357.000 SY	.		.	
0340	465.0400 ASPHALTIC SHOULDER RUMBLE STRIPS	10,634.000 LF	.		.	
0350	502.0100 CONCRETE MASONRY BRIDGES	811.000 CY	.		.	
0360	502.3200 PROTECTIVE SURFACE TREATMENT	1,850.000 SY	.		.	
0370	503.0146 PRESTRESSED GIRDER TYPE I 45W-INCH	1,750.000 LF	.		.	
0380	504.0100 CONCRETE MASONRY CULVERTS	526.000 CY	.		.	
0390	505.0405 BAR STEEL REINFORCEMENT HS BRIDGES	10,720.000 LB	.		.	
0400	505.0410 BAR STEEL REINFORCEMENT HS CULVERTS	52,280.000 LB	.		.	
0410	505.0605 BAR STEEL REINFORCEMENT HS COATED BRIDGES	137,960.000 LB	.		.	
0420	505.0610 BAR STEEL REINFORCEMENT HS COATED CULVERTS	5,920.000 LB	.		.	

SCHEDULE OF ITEMS

REVISED:

CONTRACT:
20141209020PROJECT(S):
8110-02-72FEDERAL ID(S):
N/A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0430	506.2605 BEARING PADS ELASTOMERIC NON-LAMINATED	32.000 EACH	.		.	
0440	506.4000 STEEL DIAPHRAGMS (STRUCTURE) 01. B-55-226	28.000 EACH	.		.	
0450	513.4090 RAILING TUBULAR SCREENING (STRUCTURE) 01. B-55-226	LUMP	LUMP		.	
0460	516.0500 RUBBERIZED MEMBRANE WATERPROOFING	117.000 SY	.		.	
0470	517.1010.S CONCRETE STAINING (STRUCTURE) 01. B-55-226	6,750.000 SF	.		.	
0480	517.1015.S CONCRETE STAINING MULTI-COLOR (STRUCTURE) 01. B-55-226	108.000 SF	.		.	
0490	517.1015.S CONCRETE STAINING MULTI-COLOR (STRUCTURE) 02. C-55-35	540.000 SF	.		.	
0500	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 01. B-55-226	108.000 SF	.		.	
0510	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 02. C-55-35	540.000 SF	.		.	
0520	521.0118 CULVERT PIPE CORRUGATED STEEL 18-INCH	80.000 LF	.		.	

SCHEDULE OF ITEMS

REVISED:

CONTRACT:
20141209020PROJECT(S):
8110-02-72FEDERAL ID(S):
N/A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0530	521.0124 CULVERT PIPE CORRUGATED STEEL 24-INCH	24.000 LF	.		.	
0540	521.1018 APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH	2.000 EACH	.		.	
0550	521.1024 APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH	2.000 EACH	.		.	
0560	522.0118 CULVERT PIPE REINFORCED CONCRETE CLASS III 18-INCH	472.000 LF	.		.	
0570	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH	480.000 LF	.		.	
0580	522.0130 CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH	232.000 LF	.		.	
0590	522.0148 CULVERT PIPE REINFORCED CONCRETE CLASS III 48-INCH	336.000 LF	.		.	
0600	522.0324 CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH	184.000 LF	.		.	
0610	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	29.000 EACH	.		.	
0620	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	15.000 EACH	.		.	

SCHEDULE OF ITEMS

REVISED:

CONTRACT:
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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0630	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH	EACH 4.000	.		.	
0640	522.1036 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH	EACH 3.000	.		.	
0650	522.1048 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 48-INCH	EACH 4.000	.		.	
0660	523.0124 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 24X38-INCH	LF 64.000	.		.	
0670	523.0129 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 29X45-INCH	LF 32.000	.		.	
0680	523.0524 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 24X38-INCH	EACH 3.000	.		.	
0690	523.0529 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 29X45-INCH	EACH 2.000	.		.	
0700	532.0200.S WALL MODULAR BLOCK GRAVITY	SF 175.000	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0710	550.0500 PILE POINTS	62.000				
	EACH		.		.	
0720	550.1100 PILING STEEL HP 10-INCH X 42 LB	2,820.000				
	LF		.		.	
0730	601.0405 CONCRETE CURB & GUTTER 18-INCH TYPE A	838.000				
	LF		.		.	
0740	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A	4,860.000				
	LF		.		.	
0750	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D	2,813.000				
	LF		.		.	
0760	601.0551 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE A	752.000				
	LF		.		.	
0770	601.0553 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D	1,193.000				
	LF		.		.	
0780	601.0555 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A	356.000				
	LF		.		.	
0790	601.0557 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	7,349.000				
	LF		.		.	
0800	601.0580 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R	802.000				
	LF		.		.	
0810	601.0582 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE T	401.000				
	LF		.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0820	601.0600 CONCRETE CURB PEDESTRIAN	883.000 LF	.		.	
0830	602.0415 CONCRETE SIDEWALK 6-INCH	73,288.000 SF	.		.	
0840	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA	584.000 SF	.		.	
0850	603.1142 CONCRETE BARRIER TYPE S42	100.000 LF	.		.	
0860	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	5,000.000 LF	.		.	
0870	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	5,000.000 LF	.		.	
0880	606.0200 RIPRAP MEDIUM	1,322.000 CY	.		.	
0890	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	233.000 LF	.		.	
0900	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	2,369.000 LF	.		.	
0910	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	789.000 LF	.		.	
0920	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH	394.000 LF	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0930	610.0124 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 24X38-INCH	169.000 LF	.		.	
0940	611.0610 INLET COVERS TYPE BW	2.000 EACH	.		.	
0950	611.0624 INLET COVERS TYPE H	40.000 EACH	.		.	
0960	611.0627 INLET COVERS TYPE HM	34.000 EACH	.		.	
0970	611.0642 INLET COVERS TYPE MS	25.000 EACH	.		.	
0980	611.0652 INLET COVERS TYPE T	9.000 EACH	.		.	
0990	611.3004 INLETS 4-FT DIAMETER	38.000 EACH	.		.	
1000	611.3225 INLETS 2X2.5-FT	5.000 EACH	.		.	
1010	611.3230 INLETS 2X3-FT	42.000 EACH	.		.	
1020	611.3902 INLETS MEDIAN 2 GRATE	12.000 EACH	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1030	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH	670.000 LF	.		.	
1040	614.0150 ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	3.000 EACH	.		.	
1050	614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL	2.000 EACH	.		.	
1060	614.0230 STEEL THRIE BEAM	175.000 LF	.		.	
1070	614.0395 GUARDRAIL MOW STRIP CONCRETE	40.000 SY	.		.	
1080	614.0905 CRASH CUSHIONS TEMPORARY	3.000 EACH	.		.	
1090	614.2500 MGS THRIE BEAM TRANSITION	78.000 LF	.		.	
1100	614.2610 MGS GUARDRAIL TERMINAL EAT	2.000 EACH	.		.	
1110	616.0100 FENCE WOVEN WIRE (HEIGHT) 01. 4.5'	20,313.000 LF	.		.	
1120	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 8110-02-72	1.000 EACH	.		.	
1130	619.1000 MOBILIZATION	1.000 EACH	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1140	620.0300 CONCRETE MEDIAN SLOPED NOSE	1,290.000 SF	.		.	
1150	623.0200 DUST CONTROL SURFACE TREATMENT	135,779.000 SY	.		.	
1160	624.0100 WATER	4,763.000 MGAL	.		.	
1170	625.0500 SALVAGED TOPSOIL	353,780.000 SY	.		.	
1180	627.0200 MULCHING	352,816.000 SY	.		.	
1190	628.1104 EROSION BALES	500.000 EACH	.		.	
1200	628.1504 SILT FENCE	16,950.000 LF	.		.	
1210	628.1520 SILT FENCE MAINTENANCE	16,950.000 LF	.		.	
1220	628.1905 MOBILIZATIONS EROSION CONTROL	10.000 EACH	.		.	
1230	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	10.000 EACH	.		.	
1240	628.1920 CLEANING SEDIMENT BASINS	1,000.000 CY	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1250	628.2023 EROSION MAT CLASS II TYPE B	30,640.000 SY	.		.	
1260	628.6510 SOIL STABILIZER TYPE B	33.000 ACRE	.		.	
1270	628.7005 INLET PROTECTION TYPE A	13.000 EACH	.		.	
1280	628.7010 INLET PROTECTION TYPE B	9.000 EACH	.		.	
1290	628.7015 INLET PROTECTION TYPE C	76.000 EACH	.		.	
1300	628.7504 TEMPORARY DITCH CHECKS	2,746.000 LF	.		.	
1310	628.7555 CULVERT PIPE CHECKS	57.000 EACH	.		.	
1320	628.7560 TRACKING PADS	4.000 EACH	.		.	
1330	628.7570 ROCK BAGS	108.000 EACH	.		.	
1340	629.0210 FERTILIZER TYPE B	222.600 CWT	.		.	
1350	630.0120 SEEDING MIXTURE NO. 20	7,893.000 LB	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1360	630.0140 SEEDING MIXTURE NO. 40	357.000 LB	.		.	
1370	630.0200 SEEDING TEMPORARY	1,307.000 LB	.		.	
1380	630.0300 SEEDING BORROW PIT	981.000 LB	.		.	
1390	630.0400 SEEDING NURSE CROP	209.000 LB	.		.	
1400	633.1100 DELINEATORS TEMPORARY	300.000 EACH	.		.	
1410	633.5200 MARKERS CULVERT END	32.000 EACH	.		.	
1420	634.0612 POSTS WOOD 4X6-INCH X 12-FT	16.000 EACH	.		.	
1430	634.0614 POSTS WOOD 4X6-INCH X 14-FT	53.000 EACH	.		.	
1440	634.0616 POSTS WOOD 4X6-INCH X 16-FT	86.000 EACH	.		.	
1450	634.0618 POSTS WOOD 4X6-INCH X 18-FT	16.000 EACH	.		.	
1460	634.0620 POSTS WOOD 4X6-INCH X 20-FT	10.000 EACH	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1470	637.0620 SIGN FLAGS PERMANENT TYPE II	68.000 EACH	.		.	
1480	637.2210 SIGNS TYPE II REFLECTIVE H	1,540.050 SF	.		.	
1490	637.2230 SIGNS TYPE II REFLECTIVE F	437.250 SF	.		.	
1500	638.2101 MOVING SIGNS TYPE I	1.000 EACH	.		.	
1510	638.2102 MOVING SIGNS TYPE II	16.000 EACH	.		.	
1520	638.2602 REMOVING SIGNS TYPE II	35.000 EACH	.		.	
1530	638.3000 REMOVING SMALL SIGN SUPPORTS	32.000 EACH	.		.	
1540	638.4000 MOVING SMALL SIGN SUPPORTS	17.000 EACH	.		.	
1550	638.4100 MOVING STRUCTURAL STEEL SIGN SUPPORTS	2.000 EACH	.		.	
1560	642.5401 FIELD OFFICE TYPE D	1.000 EACH	.		.	

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N/A

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1570	643.0200 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 01. 8110-02-72	310.000 DAY	.		.	
1580	643.0300 TRAFFIC CONTROL DRUMS	57,880.000 DAY	.		.	
1590	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	5,844.000 DAY	.		.	
1600	643.0453 TRAFFIC CONTROL BARRICADES PERMANENT TYPE III	38.000 EACH	.		.	
1610	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	457.000 EACH	.		.	
1620	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	354.000 EACH	.		.	
1630	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A	11,688.000 DAY	.		.	
1640	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C	12,230.000 DAY	.		.	
1650	643.0800 TRAFFIC CONTROL ARROW BOARDS	5.000 DAY	.		.	
1660	643.0900 TRAFFIC CONTROL SIGNS	17,784.000 DAY	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1670	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II	37.000 EACH	.		.	
1680	643.1050 TRAFFIC CONTROL SIGNS PCMS	96.000 DAY	.		.	
1690	643.2000 TRAFFIC CONTROL DETOUR (PROJECT) 01. 8110-02-72	1.000 EACH	.		.	
1700	643.3000 TRAFFIC CONTROL DETOUR SIGNS	9,224.000 DAY	.		.	
1710	645.0105 GEOTEXTILE FABRIC TYPE C	590.000 SY	.		.	
1720	645.0120 GEOTEXTILE FABRIC TYPE HR	4,285.000 SY	.		.	
1730	646.0106 PAVEMENT MARKING EPOXY 4-INCH	46,305.000 LF	.		.	
1740	646.0126 PAVEMENT MARKING EPOXY 8-INCH	1,620.000 LF	.		.	
1750	646.0600 REMOVING PAVEMENT MARKINGS	13,917.000 LF	.		.	
1760	646.0790.S REMOVING RAISED PAVEMENT MARKERS	232.000 EACH	.		.	
1770	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH	795.000 LF	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1780	646.0883.S PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH	455.000 LF	.		.	
1790	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2	13.000 EACH	.		.	
1800	647.0456 PAVEMENT MARKING CURB EPOXY	75.000 LF	.		.	
1810	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH	115.000 LF	.		.	
1820	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY	8.000 EACH	.		.	
1830	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	415.000 LF	.		.	
1840	647.0766 PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	390.000 LF	.		.	
1850	649.0100 TEMPORARY PAVEMENT MARKING 4-INCH	17,900.000 LF	.		.	
1860	649.2100 TEMPORARY RAISED PAVEMENT MARKERS	232.000 EACH	.		.	
1870	650.4000 CONSTRUCTION STAKING STORM SEWER	131.000 EACH	.		.	
1880	650.4500 CONSTRUCTION STAKING SUBGRADE	42,023.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1890	650.5000 CONSTRUCTION STAKING BASE	32,690.000 LF	.		.	
1900	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	11,456.000 LF	.		.	
1910	650.6000 CONSTRUCTION STAKING PIPE CULVERTS	16.000 EACH	.		.	
1920	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-55-226	LUMP	LUMP		.	
1930	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 02. C-55-35	LUMP	LUMP		.	
1940	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 03. C-55-36	LUMP	LUMP		.	
1950	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT	11,310.000 LF	.		.	
1960	650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01. 8110-02-72	LUMP	LUMP		.	
1970	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 8110-02-72	LUMP	LUMP		.	
1980	650.9920 CONSTRUCTION STAKING SLOPE STAKES	50,556.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1990	652.0110 CONDUIT RIGID METALLIC 1-INCH	10.000 LF	.		.	
2000	652.0210 CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	240.000 LF	.		.	
2010	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	7,255.000 LF	.		.	
2020	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	485.000 LF	.		.	
2030	653.0135 PULL BOXES STEEL 24X36-INCH	2.000 EACH	.		.	
2040	653.0140 PULL BOXES STEEL 24X42-INCH	39.000 EACH	.		.	
2050	653.0220 JUNCTION BOXES 18X6X6-INCH	4.000 EACH	.		.	
2060	653.0222 JUNCTION BOXES 18X12X6-INCH	2.000 EACH	.		.	
2070	654.0106 CONCRETE BASES TYPE 6	37.000 EACH	.		.	
2080	654.0230 CONCRETE CONTROL CABINET BASES TYPE L30	2.000 EACH	.		.	
2090	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG	10,825.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
2100	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG	10,910.000 LF	.		.	
2110	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG	25,270.000 LF	.		.	
2120	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. CB100	LUMP	LUMP		.	
2130	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 02. CB200	LUMP	LUMP		.	
2140	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	37.000 EACH	.		.	
2150	657.0327 POLES TYPE 6-ALUMINUM	39.000 EACH	.		.	
2160	657.0715 LUMINAIRE ARMS TRUSS TYPE 4 1/2-INCH CLAMP 15-FT	56.000 EACH	.		.	
2170	657.6005.S ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	2.000 EACH	.		.	
2180	659.1120 LUMINAIRES UTILITY LED B	56.000 EACH	.		.	
2190	659.1205 LUMINAIRES UNDERDECK LED A	10.000 EACH	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2200	659.2130 LIGHTING CONTROL CABINETS 120/240 30-INCH	2.000 EACH	.		.	
2210	690.0150 SAWING ASPHALT	382.000 LF	.		.	
2220	690.0250 SAWING CONCRETE	52.000 LF	.		.	
2230	715.0415 INCENTIVE STRENGTH CONCRETE PAVEMENT	13,096.000 DOL	1.00000		13096.00	
2240	715.0502 INCENTIVE STRENGTH CONCRETE STRUCTURES	10,552.000 DOL	1.00000		10552.00	
2250	SPV.0060 SPECIAL 11. TRAFFIC CONTROL SIGNS SPECIAL	69.000 EACH	.		.	
2260	SPV.0060 SPECIAL 12. JUNCTION BOXES 4X4X4-INCH	10.000 EACH	.		.	
2270	SPV.0060 SPECIAL 20. CONSTRUCTION STAKING STORMWATER POND	3.000 EACH	.		.	
2280	SPV.0060 SPECIAL 31. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2	4.000 EACH	.		.	
2290	SPV.0060 SPECIAL 33. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS	14.000 EACH	.		.	

SCHEDULE OF ITEMS

REVISED:

CONTRACT:
20141209020PROJECT(S):
8110-02-72FEDERAL ID(S):
N/A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2300	SPV.0060 SPECIAL 35. PAVEMENT MARKING CONTRAST GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2	EACH 4.000	.		.	
2310	SPV.0060 SPECIAL 38. PAVEMENT MARKING CONTRAST GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3R	EACH 4.000	.		.	
2320	SPV.0060 SPECIAL 39. PAVEMENT MARKING CONTRAST GROOVED PREFORMED THERMOPLASTIC WORDS	EACH 11.000	.		.	
2330	SPV.0060 SPECIAL 40. TRAFFIC CONTROL, VERTICAL PANELS	EACH 298.000	.		.	
2340	SPV.0085 SPECIAL 10. NATIVE BUTTERFLY SEED MIX	LB 105.000	.		.	
2350	SPV.0090 SPECIAL 20. CONSTRUCTION STAKING SELECT SUBGRADE	LF 27,399.000	.		.	
2360	SPV.0090 SPECIAL 30. CONCRETE CURB AND GUTTER CURE AND SEAL TREATMENT	LF 19,064.000	.		.	
2370	SPV.0090 SPECIAL 40. PAVEMENT MARKING CONTRAST GROOVED PR EFORMED THERMOPLASTIC CROSSWALK 6-INCH	LF 185.000	.		.	

SCHEDULE OF ITEMS

REVISED:

CONTRACT:
20141209020PROJECT(S):
8110-02-72FEDERAL ID(S):
N/A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2380	SPV.0090 SPECIAL 41. PAVEMENT MARKING CONTRAST GROOVED PR EFORMED THERMOPLASTIC YIELD LINE 18-INC	225.000 LF	.		.	
2390	SPV.0090 SPECIAL 50. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC YIELD LINE 18-INCH	80.000 LF	.		.	
2400	SPV.0090 SPECIAL 60. CLEANING, GRADING & SHAPING EXISTING DITCH	900.000 LF	.		.	
2410	SPV.0105 SPECIAL 05. RAILING STEEL TYPE C2 GALVANIZED PEDESTRIAN C-55-35	LUMP	LUMP		.	
2420	SPV.0105 SPECIAL 20. CONCRETE CRACK MITIGATION AND REPAIR SPECIAL	LUMP	LUMP		.	
2430	SPV.0105 SPECIAL 30. CONSTRUCTION STAKING CONCRETE PAVEMENT JOINT LAYOUT	LUMP	LUMP		.	
2440	SPV.0105 SPECIAL 40. CONSTRUCTION STAKING CONCRETE ROUNDABOUT EAST RAMP TERMINAL	LUMP	LUMP		.	
2450	SPV.0105 SPECIAL 41. CONSTRUCTION STAKING CONCRETE ROUNDABOUT WEST RAMP TERMINAL	LUMP	LUMP		.	
2460	SPV.0105 SPECIAL 42. CONSTRUCTION STAKING ROUNDABOUT STH 35/MAIN ST	LUMP	LUMP		.	

SCHEDULE OF ITEMS

REVISED:

CONTRACT:
20141209020PROJECT(S):
8110-02-72FEDERAL ID(S):
N/A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2470	SPV.0165 SPECIAL 10. CONCRETE SIDEWALK CURE AND SEAL TREATMENT	73,288.000 SF	.		.	
2480	SPV.0180 SPECIAL 10. MODIFIED SLOPE PAVING CRUSHED AGREGATE	635.000 SY	.		.	
2490	SPV.0180 SPECIAL 20. CONCRETE PAVEMENT 9. 0-INCH SPECIAL	14,521.000 SY	.		.	
2500	SPV.0180 SPECIAL 30. CONCRETE PAVEMENT 10. 5-INCH SPECIAL	20,511.000 SY	.		.	
2510	SPV.0180 SPECIAL 40. CONCRETE PAVEMENT APPROACH SLAB SPECIAL	174.000 SY	.		.	
2520	SPV.0195 SPECIAL 01. QMP BASE AGGREGATE DENSE 1 1/4" COMPACTION	50,094.000 TON	.		.	
	SECTION 0001 TOTAL				.	
	TOTAL BID				.	

PLEASE ATTACH SCHEDULE OF ITEMS HERE