HIGHWAY WORK PROPOSAL

Proposal Number: 3 2

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Dodge	1390-04-82		Watertown - STH 60 East Road, CTH J to STH 60 East	STH 26

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, $ 380,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: December 10, 2013 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time September 4, 2015	
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, borrow, rock excavation, select crushed material, base aggregate, concrete pavement, HMA pavement, Structures B-14-196, B-14-197 and C-14-3063, retaining walls R-14-15 and R-14-16, culvert pipes, concrete curb and gutter, beam guard, permanent signing, pavement marking and all incidental items.	
Notice of Award Dated	Date Guaranty Returned

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.

Effective with August 2007 Letting

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

Wisconsin Department of Transportation

DT1303 1/2006

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

Wisconsin Department of Transportation

DT1305 8/2003

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.

Name of Subcontractor	Class of Work	Estimated Value

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 1390-04-82; Watertown – STH 60 East Road, CTH J – STH 60 East, STH 26, Dodge 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, 2014 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 (20130615)

2. Scope of Work.

The work under this contract shall consist of grading, borrow, rock excavation, select crushed material, base aggregate, concrete pavement, HMA pavement, Structures B-14-196, B-14-197 and C-14-3063, retaining walls R-14-15 and R-14-16, culvert pipes, concrete curb and gutter, beam guard, permanent signing, pavement marking 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.

A General
Begin work within ten calendar days after the engineer issues a written notice to do so.

Provide the time frame for construction of the project to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Assure that the time frame is consistent with the contract completion time. Upon approval, the engineer will issue the notice to proceed within ten calendar days before the beginning of the approved time frame.

To revise the time frame, submit a written request to the engineer at least two weeks before the beginning of the intended time frame. 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.

B Schedule
Complete all stage 1A, 1B, 1C and 2 work during the 2014 construction season. This is based on an expedited work schedule and may require extraordinary forces and equipment. Do not suspend construction for the winter in 2014 until stage 2 has been

completed. Northbound STH 26 traffic will use the new northbound lanes, Ramp 2, and the STH 60 detour over the winter. Southbound STH 26 traffic will use the STH 60 detour, Ramp 3 and existing southbound STH 26 south of the interchange over the winter.

Side roads shall not be closed to traffic for more than 30 calendar days.

Supplement standard spec 108.11 as follows:

If the contractor closes a side road and does not reopen it to traffic within 30 calendar days, the department will assess the contractor $1605 in interim liquidated damages for each calendar day that the side road remains closed beyond 30 calendar days. An entire calendar day will be charged for any period of time within a calendar day that this work remains incomplete beyond 12:01 AM.

The department will not grant time extensions to the completion date specified for the following:

1. Severe weather as specified in standard spec 108.10.2.2.
2. Labor disputes that are not industry wide.
3. Delay in material deliveries.

If contract time expires prior to completing all contract work, additional liquidated damages will be affixed according to standard spec 108.11.

Meet weekly with the engineer to review progress on the project. At these meetings, present a current, updated project schedule and discuss all proposed activities in detail for the upcoming 2-week time period.

C Existing Union Pacific Railroad Bridge Removal

The railroad operates 4 trains a day, but fluctuates during the week and weekend.

The contractor shall notify the Union Pacific Railroad Company, in writing, no less than 30 calendar days in advance of starting bridge removal operations requiring the railroad to be shut down.

The contractor shall have all arrangements for temporary crossings or other items needed done prior to requesting the window. The requested closure window shall include time for the railroad to remove the track and replace the track along with the time to remove the bridge. It is anticipated that the railroad will require 2 hours to remove the track and approximately 2 hours to replace the track after all fill and sub ballast are installed.

D Miscellaneous
Install all erosion control measures, including seeding (permanent and temporary) and lawn sod prior to suspending construction operations for the winter.

Grade high fill approaches to Structure B-14-198 as early as practical to allow for settlement to occur during the 2014-2015 winter season. Grade the high fill slopes to within 1 foot of the bottom of the select crushed material prior to shut down for the winter.

The contractor shall coordinate with all property owners who are building portions of their entrances along Kreuziger Way to ensure that the match point and match elevation are the same. The property owners who will have entrances off of Kreuziger Way shall be notified at least 30 calendar days before construction of Kreuziger Way begins.

4. Traffic.

A General
Maintain STH 26 traffic during construction using the existing roadway, the newly constructed roadway, and temporary crossovers. Construct STH 26 in stages as described below to accommodate STH 26 and local traffic access. Side roads may not be closed for longer than 30 calendar days and require a 7 day advance warning prior to being closed. Open all side roads prior to winter shut down. The CTH J and CTH K detour route may not be used before May 1, 2014.

If traffic delays become longer than 15 minutes, coordinate with the engineer to limit or alter construction operations to prevent undue inconvenience to the traveling public as specified under standard spec 108.5. The engineer may direct additional action or temporarily suspend work to mitigate recurring delays. The department will not make additional payment or extend contract time for suspensions the engineer directs under this paragraph.

A.1 Overview
The following is a general overview of the construction and traffic control staging required throughout all stages of the project.

A.2 Construction and traffic operations during Stage 1A:
Work consists of grading, base aggregate dense and asphalt pavement in the STH 26 median at the following locations:

- Station 1273+00 to 1279+00
- Station 1307+00 to 1310+00

Maintain STH 26 and STH 16/60 traffic on their existing roadways during construction operations.

A.3 Construction and traffic operations during Stage 1B:
Work consists of Structure B-14-196 at the STH 16/60 interchange (bridge work starts in April 2014); and grading, base aggregate dense and asphalt/concrete pavement at the following locations:

- Station 690+00 S to 705+69.74 S
- Ramp 3 (SW) from Station 1284+00 R3 to 1295+40 R3: asphalt widening and temporary asphalt connection to accommodate two-way STH 26 traffic
- Ramp 4 (NW) from Station 1295+80 R4 to 1304+00 R4: asphalt widening and asphalt temporary connection to accommodate two-way STH 26 traffic
- Eternal Lane

Maintain STH 26 traffic on the existing roadway except between Station 1270+00 and 1313+00 where traffic shifts to the existing northbound roadway. Detour STH 16/60 traffic using CTH J and CTH K. Maintain westbound STH 60 traffic on its existing roadway.

A.4 Construction and traffic operations during Stage 1C:
Work consists of grading, base aggregate dense and asphalt/concrete pavement at the following locations:

- Station 1232+00 to 1294+00 northbound
- Ramp 2 (SE): asphalt widening to accommodate two-way STH 26 traffic
- Temporary Detour from Station 38+00 TR to 58+00 TR
- CTH J East
- Crossover 8 – South of CTH J

Work consists of base aggregate dense and asphalt/concrete pavement at the following locations:

- STH 60 East from Station 707+82.25 S to 752+00 S
- Temporary Road from Station 10+00 TR to 35+00 TR
- Temporary Connection from Station 0+00 T to 6+69 T
- Biwer Road from Station 10+00 B to 25+00 B (no pavement being placed)
- Biwer Road from Station 31+50 B to 40+50 B

Continue work on Structure B-14-196 at the STH 16/60 interchange. Mill and overlay existing STH 60 east from Station 35+00 TR to 38+00 TR.

Maintain STH 26 traffic on its existing roadway with widened Ramps 3 and 4 being used. STH 60 traffic uses new STH 60 west and existing STH 60 east. CTH J/CTH K detour is no longer active.

A.5 Construction and traffic operations during Stage 2:
Work consists of grading and base aggregate dense at the following locations:

- Station 1318+00 to 1357+00
- Bailey Private Entrance (D6)

Work consists of grading, base aggregate dense and asphalt pavement at the following locations:

- Kreuziger Way
- Holl Road
- CTH J West

Begin construction on Structures B-14-197, R-14-15, and R-14-16. Begin and complete construction on Structure C-14-89.

Maintain northbound STH 26 traffic on the new northbound lanes, Ramp 2, new STH 60 East, and the temporary road. Maintain southbound STH 26 traffic on the temporary road, new STH 60 East, Ramp 3, and on existing southbound STH 26 south of the interchange. Maintain STH 60 traffic on the new STH 60 West, the new STH 60 East, the temporary roads, and existing STH 60 East.

A.6 Construction and traffic operations during Stage 3:

Work consists of grading, base aggregate dense and concrete/asphalt pavement at the following locations:

- Station 1230+00 to 1318+00 southbound
- Station 1294+00 to 1318+00 northbound
- Ramp 3 (SW) from Station 1281+00 R3 to 1287+00 R3
- Ramp 4 (NW) from Station 1300+00 R4 to 1309+00 R4
- Station 775+00 S to 782+50 S
- Station 14+20 W to 17+50 W

Work consists of base aggregate dense and concrete/asphalt pavement at the following locations:

- Ramp 1 (NE)
- STH 26 from Station 1318+00 to 1357+00
- STH 60 from Station 752+00 S to 775+00 S
- CTH W from Station 10+00 W to 14+20 W

Construction on Structures B-14-197, R-14-15 and R-14-16 continues. Remove widening on Ramp 3 (SW) and Ramp 4 (NW). Install curb and gutter around west median nose on STH 60.

Maintain northbound STH 26 traffic on the new northbound lanes, widened Ramp 2, the new STH 60 East, and the temporary road. Maintain southbound STH 26 traffic on the temporary road, the new STH 60 East, widened Ramp 2, and the new STH 26 northbound lanes south of the interchange. Maintain STH 60 traffic on the new STH 60 West and East, the temporary roads, and the existing STH 60 East.

A.7 Construction and traffic operations during Stage 4:
Work consists of the following:

- Remove the temporary road from Station 10+00 TR to 35+00 TR and Station 38+00 TR to 58+00 TR.
- Remove the temporary connection from Station 0+00 T to 6+69 T.
- Obliterate existing STH 60 from just east of STH 26 to Station 775+00 S.
- Remove the widening on Ramp 2 (SE).
- Remove Crossover 9 and Crossover 5 constructed previously under Project 1390-04-81.
- Install curb and gutter around east median nose on STH 60.

Maintain STH 26 traffic on the new northbound and southbound lanes; and STH 60 traffic on the new STH 60.

B Local Traffic Access to Project
Stage construction activities to maintain local access during the construction of Biwer Road, 'FJ' Frontage Road, and 'FK' Frontage Road.

B.1 Requirements for Local Access Traffic Control
B.1.1 General
Construct and maintain a local access route on a section of roadway that will carry only local traffic conforming to the following criteria:

- Number of Lanes: One lane in each direction
- Lane Width: Minimum of 10 foot width
- OR one lane roadway with flagging
- Driving Surface: Acceptable driving surfaces include base aggregate, asphaltic surface temporary, HMA pavement, concrete pavement.

Maintaining local access is considered incidental to the Traffic Control (Project) bid item.

B.1.2 Traffic Control Devices
Place traffic control, temporary and permanent pavement marking, and channelizing devices, in conformance with the plans and the Wisconsin Manual on Uniform Traffic Control Devices (MUTCD), latest edition. Traffic control devices shall be completely in place by the end of the working day of a traffic switch.

C Property Access
Maintain access to properties along the project for local residents, businesses, and emergency vehicles. Access to all driveways and parking lots where alternative access is not available shall remain open at all times, except when it is absolutely necessary to close them for the purpose of storm sewer construction. Concrete curb and gutter, concrete driveway, and concrete sidewalk construction shall be staged to maintain driveway access. Keep business entrances open by partial driveway construction or by closing only one access at a time for properties with multiple driveways. Construct temporary commercial entrances including a crushed aggregate surface within 24 hours

of removal. Combine temporary commercial entrances wherever practical to minimize the number of access locations.

All closures must be coordinated with the property owner and are subject to approval by the engineer. Notify the property owner a minimum of 48 hours in advance of all closures. Maintaining property access is considered incidental to the Traffic Control (Project) bid item.

D Advance Notification
Notify the Dodge County Sheriff's and Highway Departments, Wisconsin State Patrol, Watertown School District, Watertown Post Office, Towns of Emmet and Clyman, and the Watertown Daily Times a minimum of 48 hours in advance of the start of work, the closure of existing streets, and prior to traffic control changes. Notifications must be given by 4:00 PM on Thursday for any such work to be done on the following Monday. Advance notification is considered incidental to the Traffic Control (Project) bid item.

E Construction Activities
Coordinate and stage all construction activities within the areas of local traffic routes, as required, to maintain a traveled way conforming to the above requirements.

5. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying STH 16, STH 26, and STH 60 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 23, 2014 to 6:00 AM Tuesday, May 27, 2014 for Memorial Day;
- From noon Thursday, July 3, 2014 to 6:00 AM Monday, July 7, 2014 for Independence Day;
- From noon Friday, August 29, 2014 to 6:00 AM Tuesday, September 2, 2014 for Labor Day;
- From noon Wednesday, November 26, 2014 to 6:00 AM Monday, December 1, 2014 for Thanksgiving;
- 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)

6. Utilities.

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

There are underground and overhead utility facilities located within the project limits. The contractor shall coordinate their construction activities with a call to Diggers Hotline or a direct call to the utilities that have facilities in the area as required per statues. The contractor shall use caution to insure the integrity of the underground facilities and shall maintain code clearances from overhead facilities at all times.

AT&T Wisconsin (Communication Lines) has underground facilities located within the project limits. Work will be done prior to construction. All depths are listed as approximate depths. All stations and offsets are approximate.

Existing buried cables will be discontinued in place. Contact AT&T Wisconsin for any line found in the construction area before cutting the item of plant to confirm “active” or “discontinued” identity of the cable.

AT&T has an existing buried fiber optic cable routing north/south at various distances west from the present roadway center line. The present cable route begins 1000 feet +- south of CTH J and ends at the north end of the road project at Station 1357+00 LT 60 feet.

A new buried fiber optic will be installed following this same route at 5 feet east of existing and proposed west right-of-way lines. The cable will cross STH 60 at Station 703+00 S. North of STH 60 the cable continues at the same distance, 5 feet, from right-of-way lines to Station 1331+00 LT 195 feet. At Station 1331+00 LT 195 feet the buried cable continues on a direct line below two proposed retaining walls, to Station 1335+72 LT 50 feet, then north to Station 1337+50 LT 50 feet. At that station the buried line routes to Station 1339+90.97 LT 97 feet, continuing north at 5 feet east of the west right-of-way line to Station 1341+50. From Station 1341+50 to Station 1351+00 it will be installed 70 feet west of the roadway base line, then continuing north at 5 feet east of the west right-of-way line to Station 1354+00 where the present buried fiber cable will be picked up.

Coordinate the field location of plant installed below planned retaining walls between Station 1331+00 and 1336+00 (west side of roadway). Extra caution is necessary to avoid damage to the new buried fiber cable.

Station		Comments
Start	End	
1232-90 LT	1241+96.89 LT	Bore at 36” depth
1241+96.89 LT	1244+70 LT	Bore at 36” depth
1244+70 LT	1245+38 LT	Start bore at 36” depth lowering to 5 feet depth
1245+38 LT	1250+00 LT	Bore at 5 feet depth
1250+00 LT	1250+60 LT	Start bore at 5 feet depth rising to 36” depth
1250+60 LT	1253+00 LT	Bore at 36’ depth
1253+00 LT	1256+35 LT	Bore at 36’ depth
1256+35 LT	1257+00 LT	Bore at 36” depth
1257+00 LT	1260+00 LT	Bore at 36” depth
1260+00 LT	1261+00 LT	Bore at 36” depth
1261+00 LT	1262+00 LT	Start bore at 36” depth lowering to 5 feet depth
1262+00 LT	1265+00 LT	Bore at 5 feet depth
1265+00 LT	1267+40 LT	Start bore at 5 feet depth rising to 36” depth
1267+40 LT	1268+00 LT	Start bore at 36” depth lowering to 5 feet depth
1268+00 LT	1269+00 LT	Bore at 5 feet depth
1269+00 LT	1276+20R3 LT	Start bore at 5 feet depth rising to 36” depth
1276+20R3 LT	1284+90R3 LT	Bore at 36” depth
1284+90R3 LT	1292+56R3 LT	Bore at 36” depth
1292+56R3 LT	1292+90R3 LT	Bore at 36” depth
1292+90R3 LT	703+00S Baseline	Start at 36” depth lowering to 14 feet depth
703+00S Baseline	703+00S LT	Start at 14 feet depth rising to 48” depth
703+00S LT	1304+30R4 LT	Start at 48” depth rising to 36” depth
1304+30R4 LT	1312+08 LT	Bore at 36” depth
1312+08 LT	1320+00 LT	Bore at 36” depth
1320+00 LT	1324+00 LT	Bore at 36” depth
1324+00 LT	1325+50 LT	Start bore at 36” depth lowering to 48” depth
1325+50 LT	1330+00 LT	Start bore at 48” depth lowering to 5 feet depth
1330+00 LT	1331+00 LT	Start bore at 5 feet depth lowering to 6 feet depth
1331+00 LT	1332+00 LT	Start bore at 6 feet depth lowering to 15 feet depth
1332+00 LT	1332+47.03 LT	Bore at 15 feet depth
1332+47.03 LT	1333+00 LT	Start bore at 15 feet depth rising to 48” depth
1333+00 LT	1334+00 LT	Start bore at 48” depth lowering to 27 feet depth under railroad tracks
1334+00 LT	1335+00 LT	Start bore at 27 feet depth rising to 6 feet depth
1335+00 LT	1336+00 LT	Start bore at 6 feet depth lowering to 7 feet depth
1336+00 LT	1337+00 LT	Bore at 7 feet depth
1337+00 LT	1337+50 LT	Start bore at 7 feet depth rising to 6 feet depth
1337+50 LT	1338+00 LT	Bore at 6 feet depth
1338+00 LT	1339+00 LT	Start bore at 6 feet depth rising to 48” depth
1339+00 LT	1340+00 LT	Start bore at 48” depth rising to 36” depth
1340+00 LT	1341+50 LT	Bore at 36” depth
1340+50 LT	1345+00 LT	Start bore at 36” depth lowering to 48” depth
1345+00 LT	1348+00 LT	Start bore at 48” depth rising to 36” depth
1348+00 LT	1354+00 LT	Bore at 36” depth

Timeline – Estimated construction time is 65 working days with and anticipated start date of September 1, 2013.

Field contact for AT&T Wisconsin is Bob Kosanke, 2005 Pewaukee Road, Waukesha, WI 53188, (262) 896-7485 office, (414) 534-7746 mobile, or e-mail RK1462@att.com.

Charter Communication (Communication Line) has underground facilities located within the project limits. Work will be done prior to construction. Charter will bury cable no more than 2 feet away from the right-a-way line. Buried cable will be at an approximate depth of 36 inches. All stations are listed as approximate locations.

Charter Communications will place fiber optic line along the south side of CTH J at the intersection of STH 26 and CTH J. Then continue from CTH J to Biwer Road along the east side of STH 26.

Station		Comments
Start	End	
5+25 RT CTH J	5+25 RT CTH J	At Existing pole Trench 18 feet north
5+25 RT CTH J	8+00 RT CTH J	Bore 278 feet
8+00 RT CTH J	1240+50 LT	Trench 32 feet
1240+50 LT	1240+50 RT	Bore 259 feet crossing STH 26
1240+50 RT	1241+00 RT	Bore 52 feet
1241+00 RT	11+75 RT CTH J	Bore 167 feet
11+20 RT CTH J	1245+50 RT	Bore 246 feet
1245+50 RT	1245+50 RT	Bore west 21 feet
1245+50 RT	1250+00 RT	Bore 287 feet
1250+00 RT	1251+00 RT	Bore 58 feet
1251+00 RT	1254+00 RT	Bore 149 feet
1254+00 RT	1256+00 RT	Bore 103 feet
1256+00 RT	1258+00 RT	Bore 98 feet
1258+00 RT	1268+00 RT	Bore 503 feet
1268+00 RT	1275+00 RT	Bore 354 feet
1275+00 RT	10 B RT Biwer Rd	Bore 82.5 feet

Timeline – Estimated construction time is 60 working days with and anticipated start date of July 1, 2013.

Frontier (Communication Lines) has underground facilities located within the project limits. Work will be done prior to construction. All depths are listed as approximate depths. All stations are listed as approximate locations.

Station		Comments
Start	End	
7+00 J RT CTH J	8+00 J RT CTH J	Bore
1240+50 LT	1234+00 LT	Bore
1234+40 LT	1234+40 RT	Bore 8 feet deep
1234+40 RT	1240+50 RT	Bore
11+00 J RT CTH J	15+00 J RT CTH J	Trench to Hand Hold beyond Station 15+00 J
7+00 J RT CTH J	7+00 J LT CTH J	Bore crossing CTH J
7+00 J LT CTH J	5+00 J LT CTH J	Bore then trench to existing ped beyond Station 5+00 J
7+00 J LT CTH J	1242+00 LT	Trench
1242+00 LT	1246+00 LT	Trench
1246+00 LT	1251+00 LT	Bore
1251+00 LT	1257+00 LT	Trench to new ped
1257+00 LT	1263+00 LT	Trench
1263+00 LT	1265+00 LT	Bore
1257+00 LT	1257+00 RT	Bore crossing STH 26
1252+50 RT	1257+00 RT	Trench
1257+00 RT	1268+00 RT	Bore
1268+00 RT	1276+50 RT	Trench to new ped
1257+00 LT	1263+00 LT	Trench
1263+00 LT	1268+00 LT	Bore
1268+00 LT	1276+00 LT	Trench
1276+00 LT	1278+00 LT	Bore
1278+00 LT	1292+50 LT	Trench
1292+50 LT	698+50 S RT STH 60	Trench to new ped
699+00 S RT STH 60	699+00 S LT STH 60	Bore crossing STH 60
690+00 S LT STH 60	703+00 S LT STH 60	Trench
703+00 S LT STH 60	1350+00 LT	Trench
1340+50 LT	1343+25 LT	Trench
1343+25 LT	1347+60 LT	Trench to new ped
1347+60 LT	1347+60 RT	Bore crossing STH 26 to new ped
1347+60 LT	1351+25 LT	Trench

Timeline – Estimated construction time is 60 working days with and anticipated start date of September 15, 2013.

We-Energies (Electric) has underground and overhead facilities located within the project limits. Work will be done prior to construction.

There will be some grading obstructions around poles and anchors.

Any facilities not explicitly identified as being relocated have been deemed to be not in conflict and will remain in place as is.

The following tables include detailed information for We-Energies with respect to their existing and proposed electric facilities. All Stations and offsets are approximate.

Station	Comments
1244+71 LT181’	Pole to remain at slope intercept
1243+80 LT80’	Remove pole
1247+32 LT175’	Pole & pedestal to remain outside slope intercept
1249+98 LT171’	New pole outside slope intercept
1249+98 LT163’	New anchor in slope intercept – grade around
1249+93 LT163’	Remove pole
1251+31 LT187’	New pole at slope intercept/New anchor outside slope intercept
1251+22 RT57’	New pole & anchor outside slope intercept
Private property	New underground service cable on private property
1253+64 LT202’	New pole at slope intercept/New anchor outside slope intercept
1252+53 LT165’	Remove pole
1252+53 LT63’	Remove pad mounted transformer
1252+53 LT165’ to 1252+53 LT63’	Abandon underground cable
Private property to 1252+53 LT63’	Abandon underground service cable on private property
1255+97 LT191’	New pole at slope intercept
1255+09 LT160’	Remove pole
1258+30 LT180’	New pole outside slope intercept
1257+70 LT157’	Remove pole
1260+63 LT169’	New pole at slope intercept/New anchor outside slope intercept
1260+32 LT152’	Remove pole
1262+95 LT147’	Pole to remain - outside slope intercept
1262+95 LT142’	New anchor in slope intercept – o.k. to excavate
1264+76 LT152’	Pole to remain – lower 2’ for excavation
1265+23 LT152’	Pole to remain – lower 2’ for excavation
1265+23 LT144’	Anchor to remain – o.k. to excavate
1266+86 LT152’	New pole outside slope intercept
1266+86 LT144’	New anchor outside slope intercept
1267+84 LT70’	Remove pole
1267+78 LT157’	Remove pole
1269+21 LT184’	New pole & anchor outside slope intercept
1270+47 LT187’	Remove pole
1271+31 LT199	New pole outside slope intercept
1273+03 LT211’	Pole to remain outside slope intercept
1285+21 LT66’ R3	Pole to remain outside slope intercept
1285+19 LT54’	New anchor outside slope intercept
1287+72 LT63’ R3	New pole outside slope intercept

Station	Comments
1287+79 LT6’ R3	Remove pole & anchor
1290+24 LT61’ R3	New pole at slope intercept
1290+43 RT38’ R3	Remove pole & anchor
1292+63 LT72’ R3	New pole outside slope intercept
1292+68 LT59’ R3	New anchor at slope intercept
1293+14 LT98’ R3	Remove pole & anchor
1293+68 LT178’R3	New pole outside slope intercept
1293+76 LT170’R3	New anchor outside slope intercept
699+85 RT63’ S	New pole at slope intercept
699+76 RT75’ S	New anchor outside slope intercept
	Remove pole outside right of way
699+08 LT87’ S	New pole outside slope intercept
698+72 LT87’ S	New anchor outside slope intercept
698+94 LT120’ S	New anchor outside slope intercept
699+53 LT80’ S	Remove pole
696+26 LT79’ S	Pole to remain at slope intercept
694+58 LT73’ S	New pole at slope intercept
692+53 LT66’ S	New pole & anchor outside slope intercept
692+50 LT66’ S	Remove pole & anchor
700+97 LT111’ S	New pole outside slope intercept
1296+53 LT123’ S	New pole outside slope intercept
1296+34 LT128’R4	New anchor outside slope intercept
1296+60 LT99’ R4	New anchor in slope intercept – fill o.k.
702+81 LT71’ S	Remove pole & anchor
1298+00 LT76’ R4	New pole outside slope intercept
1297+97 LT 64’ R4	New anchor in slope intercept, o.k. to grade around
1298+84 LT49’ R4	Remove pole & anchor
1300+00 LT57’ R4	New pole outside slope intercept
1300+00 LT45’ R4	New anchor in slope intercept, o.k. to grade around
1300+87 LT72’ R4	Remove pole & anchor
1302+44 LT91’ R4	Pole to remain outside slope intercept
1302+64 LT92’ R4	Pole to remain outside slope intercept
1304+48 LT96’ R4	Pole to remain outside slope intercept
1307+12 LT102’R4	Pole to remain outside slope intercept
1309+68 LT108’R4	Pole to remain outside slope intercept
1311+99 LT161’	Pole to remain outside slope intercept
1314+91 LT154’	Pole to remain outside slope intercept
1318+00 LT142’	Pole to remain outside slope intercept
1319+90 LT130’	New pole outside slope intercept
1319+90 LT 124’	New anchor at slope intercept
1275+50 LT231’	New pole outside slope intercept
1275+52 LT231’	Remove pole & anchor
1275+12 RT68’	New pole & anchor outside slope intercept
1275+09 RT84’	New anchor outside slope intercept

Station	Comments
10+32 RT33' B	New pole in slope intercept, o.k. to fill around
10+17 RT33' B	New anchor in slope intercept, o.k. to fill around
10+32 RT33' B to 10+00 RT45' B	New underground cable in slope intercept, o.k. to fill
10+00 RT45' B	Splice new underground cable to existing cable – in slope intercept, o.k. to fill
1277+85 LT238'	Pole to remain outside slope intercept
1277+85 LT238' to 10+00 RT45' B	Abandon underground cable
12+68 RT35' B	New pole at slope intercept
1279+97 LT242'	Pole to remain outside slope intercept
15+04 RT137' B	New pole outside slope intercept
1282+30 LT114'R3	Pole & anchor to remain outside slope intercept
17+42 RT36' B	New pole outside slope intercept
17+42 RT31' B	New anchor outside slope intercept
19+42 RT36' B	New pole outside slope intercept
21+43 RT36' B	New pole at slope intercept – grade around
24+12 RT36' B	New pole outside slope intercept
26+82 RT36' B	New pole outside slope intercept
26+84 RT26' B	New anchor outside slope intercept
28+24 RT37' B	New pole outside slope intercept
28+24 RT28' B	New anchor at slope intercept
28+46 LT24' B	Remove pole
1282+30 LT114'R3 to 28+46 LT24' B	Abandon underground cable
29+70 RT34' B	New pole outside slope intercept
29+68 RT24' B	New anchor in slope intercept – Fill o.k.
30+62 RT19' B	Remove pole
31+42 RT27' B	New pole at slope intercept
33+02 RT38' B	New pole outside slope intercept
33+05 RT29' B	New anchor outside slope intercept
32+73 RT26' B	Remove pole
1321+83 LT133'	New pole outside slope intercept
1322+18 LT134'	New anchor outside slope intercept
1320+96 LT124'	Remove pole
1321+83 LT121' to 1321+28 RT150'	Bore underground cable for STH 26 road crossing
1321+24 RT149'	New pole outside slope intercept
1320+89 RT149'	New anchor outside slope intercept
1323+55 RT143'	New pole at slope intercept

Station	Comments
1323+97 LT107’	Remove pole
1325+86 RT137’	New pole in slope intercept, pole set 2’ extra depth
1326+91 LT90’	Remove pole
1328+19 RT132’	New pole in slope intercept, o.k. to fill around
1329+56 LT84’	Remove pole
1330+52 RT119’	New pole in slope intercept, o.k. to grade around
1330+52 RT110’	New anchor inside slope intercept - grade around
1332+62 RT144’	New pole outside slope intercept
1332+79 LT75’	Remove pole
1334+49 RT164’	New pole at slope intercept
1334+49 RT173’	New anchor outside slope intercept
1335+17 LT74’	Remove pole
1336+97 RT135’	New pole in slope intercept, o.k. to fill around
1339+44 RT100’	Pole to remain in slope intercept, o.k. to grade around
1339+44 RT92’	New anchor – fill o.k.
1338+25 LT80’	Remove pole & anchor
1342+17 RT106’	New pole in slope intercept, o.k. to fill around
1342+17 RT106’ to 1341+89 RT109’	New underground cable in slope intercept, fill o.k.
1341+89 RT109’	Bore pit for underground cable in slope intercept, fill o.k.
1341+89 LT89’	Bore pit for underground cable in slope intercept, fill o.k.
1341+89 LT90’	Bore pit for underground cable outside slope intercept
1341+89 RT109’ to 1341+89 LT90’	Bore underground cable for STH 26 road crossing
1341+89 LT90’ to 1340+73 LT97’	New underground cable on private property outside slope intercept
1342+43 LT82’	Remove pole
1340+73 LT97’	New pad mounted transformer on private property
1340+59 LT95’	Splice new underground cable to existing cable – outside slope intercept on private property
1340+59 LT93’	Remove pole & anchor
1344+90 RT104’	New pole in slope intercept, fill o.k.
1345+24 LT72’	Remove pole
1347+63 RT96’	New pole in slope intercept, fill o.k.
1348+13 LT68’	Remove pole
1347+63 RT96’ to 1348+13 LT68’	Abandon underground cable
1350+42 RT84’	New pole at slope intercept
1350+15 LT67’	Remove pole

Station	Comments
1352+00 RT77’	New pole outside slope intercept
1352+12 RT70’	Bore pit for underground cable outside slope intercept
1352+00 RT77’ to 1352+10 RT70’	New underground cable outside slope intercept
1352+12 LT78’	Bore pit for underground cable outside slope intercept
1352+12 RT70’ to 1352+12 LT78’	Bore underground cable for STH 26 road crossing
1352+01 LT79’	New pad mounted transformer on private property
1352+00 LT65’	Remove pad mounted transformer
1352+45 LT64’	Remove pole
1351+63 LT83’	New pad mounted transformer on private property
1351+57 LT67’	Remove pad mounted transformer
1351+72 LT65’	Remove pole
1353+19 RT172’	New pole in slope intercept, o.k. to grade around
1353+14 LT63’	Remove pole & anchor
1355+82 RT71’	New pole outside slope intercept
1355+87 LT66’	Remove pole
1358+60 RT73.5’	New pole at slope intercept
1358+69 LT69’	Remove pole
1361+47 RT72’	New pole & anchors outside slope intercept
1361+44 LT72’	New pole & anchors outside slope intercept
1361+50 LT72’	Remove pole
1364+40 LT72’	Pole to remain
1367+60 LT71’	Pole to remain
1370+52 LT72’	Pole to remain

Contact We-Energies before removing any electrical underground cables to verify they have been discontinued and carry no electrical current. Do not assume that unmarked facilities have been discontinued. At no time is it acceptable to push, pull, cut or drill an unmarked facility without explicit consent from We-Energies. Call the We-Energies 24 hour dispatch line to arrange for this verification.

We-Energies Electric Dispatch # (800) 662-4797

Timeline – Estimated construction time is 120 working days with an anticipated start date of August 1, 2013. Pole removals will follow and are dependent on telephone and cable TV removal of facilities from We-Energies poles.

Field contact for We-Energies (Electric) is Todd Stach, 500 S 116th St., West Allis, WI 53214, (262) 968-5709 office, (920) 988-4702 mobile, or email todd.stach@we-energies.com.

We-Energies (Gas) has underground facilities located within the project limits. Work will be done prior to construction.

We-Energies will be replacing gas main along STH 26 from Station 1232+00 224' LT to Station 1248+50 169' LT.

We-Energies will locate all valves and test stand prior to the start of the project. Do not place or store equipment or material over these facilities. If the valves or test stands are damaged during construction call We-Energies dispatcher at (800) 261-5325.

Any facilities not explicitly identified as being relocated have been deemed to be not in conflict and will remain in place as is. Work safely around any facilities left within the work-zone.

We-Energies plans to relocate its facilities prior to the start of road construction. The 8" main that is being relocated is a one-way feed, with approximately 2,300 customers that could be out of service. Follow the state statutes of Diggers Hotline and contact We-Energies at (800) 261-5325 a minimum of 24 hours in advance when working with-in 5 feet of this main.

STH 26

All locations listed are approximate locations. All depths listed are approximate depths.

Station	CL Trench Offset	Prop Depth	Comments
1233+00	224' LT	42"	Start Trenching
1234+00	226' LT	42"	Trench
1235+00	228' LT	42"	Trench
1236+00	225' LT	42"	Trench
1237+00	222' LT	42"	Trench
1238+00	220' LT	42"	Trench
1239+00	217' LT	42"	Trench
1240+00	214' LT	42"	Trench
1240+35	213' LT	42"	End Trenching / Tee going South
1240+35	201' LT	42"	Start Boring CTH J / Tee going North
1241+00	201' LT	60"	Bore
1242+00	201' LT	42"	End Boring/Start Trenching
1243+00	201' LT	42"	Trench
1244+00	201' LT	42"	Trench
1245+00	201' LT	42"	8" 45 deg ell Trench
1245+31	170' LT	60"	8" 45 deg ell Trench
1246+00	169' LT	60"	Trench
1247+00	169' LT	42"	Trench
1248+00	169' LT	42"	Trench
1248+50	169' LT	42"	End Trenching

Contact We-Energies before removing any gas facilities to verify that they have been abandoned and carry no natural gas. Do not assume that unmarked facilities have been abandoned. At no time is it acceptable to push, pull, cut or drill an unmarked facility without explicit consent from We-Energies. Call the We-Energies 24 hour dispatch line to arrange for this verification.

We-Energies Gas Dispatch # (800) 261-5325

We-Energies will remove and dispose of the hazardous material in all affected sections which require removal. In all unaffected areas, remove and dispose of the sections of the abandoned facilities necessary to continue with the project after We-Energies verifies that the lines are dead per the above paragraph.

Timeline: Work will be completed prior construction.

Field contact for We-Energies (Gas) is Joe Dable, 500 S 116th St., West Allis, WI 53214, (414) 944-5543 office, (414) 303-0310 mobile , or email joe.dable@we-energies.com.

7. Other Contracts.

The department is currently constructing Project 1390-04-81, Watertown – STH 60 East Road (CTH Q – CTH J) for grading, structures, roadway aggregate and paving for STH 26. Coordinate with this project.

8. Railroad Insurance and Coordination.

A Description

Comply with standard spec 107.17 for all work affecting Union Pacific Railroad Company property and any existing tracks.

A.1 Railroad Insurance Requirements

In addition to standard spec 107.26, provide railroad protective liability insurance coverage as specified in standard spec 107.17.3. Insurance is filed in the name of Union Pacific Railroad Company.

Notify evidence of the required coverage, and duration to John Venice Manager Special Projects – Industry and Public Projects Engineering Department at 101 North Wacker Drive, Chicago, IL 60606, Telephone: (312) 777-2043, email: jnvenice@up.com.

Include the following information on the insurance document:

Project 1390-04-81 and 82
Route Name STH 26, Dodge County

A.2 Work by Railroad

The railroad will perform the work described in this section, except for work described in other special provisions and will be accomplished without cost to the contractor.

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

Contact John Venice, Manager Special Projects – Industry and Public Projects Engineering Department, 101 North Wacker Drive, Chicago, IL 60606, Telephone: (312) 777-2043, email: jnvenice@up.com, for consultation on railroad requirements during construction.

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

A.4 Temporary Grade Crossing

If a temporary grade crossing is desired, submit a written request to the railroad representative named in A.3 several weeks prior to the time needed. Approval is subject to the discretion of the railroad. The department has made no arrangements for a temporary grade crossing.

A.5 Train Operation

Approximately 4 through freight trains operate daily through the construction site. Through freight trains operate at up to 50 mph. In addition to through movements there are 2 switching movements at slower speeds.

A.6 Temporary Clearances During Construction

Replace subparagraphs (2) 4.1 and (2) 4.2 of standard spec 107.17.1 with the following:

Provide 12 feet 0 inches (3.6 m) plus 1.5 inches (38 mm) per degree of track curvature, measured horizontally from the track center line.

Provide 21 feet 0 inches (6.4 m) plus compensation for super-elevated track, measured vertically above the top of the highest rails.

B Railroad Flagging

Arrange with the railroad for the flagging of trains and safety of railroad operations if clearances specified in standard spec 107.17.1 are not maintained during construction operations. The following conditions may also warrant flagging:

1. Cranes swinging or handling materials or equipment within 25 feet of the centerline of any track.
2. Construction operations that are in proximity of power lines or railroad signal and communication lines, underground cables, fuel oil facilities or pipe lines and which might result in fire or damage to such facilities, danger to railroad operations or danger to the public in the transaction of business on railroad premises.
3. Excavation, tunneling, blasting, pile driving, placing, or removing cofferdams or sheeting, or similar activities might cause the railroad's tracks or buildings to be undermined, heaved out of normal level, shifted out of alignment, or otherwise impaired.

4. Bridge painting activities including rigging of falsework, scaffolding or similar activities within 25 feet of the centerline of any track.
5. Deck removal activities within 25 feet of the centerline of any track.
6. Pouring of bridge decks in spans over an operated track.
7. At any other time in railroad representative's judgment, the contractor's work or operations constitute an intrusion into the track zone and create an extraordinary hazard to railroad traffic, and at any other time when flagging protection is necessary for safety to comply with the operating rules of the railroad.

Projects with concurrent activity may require more than one flagger.

Projects with heavy contractor activity within 25 feet of the centerline of any track or unusual or heavy impact on railroad facilities will normally require a full-time flagger.

The department and railroad will monitor operations for compliance with the above flagging requirements. Violations may result in removal from railroad property until arrangements to adhere to the flagging requirements are satisfied. If the railroad imposes additional flagging requirements beyond the above flagging requirements due to the previous violations, the contractor shall bear all costs of the additional flagging requirements.

C Flagging by Railroad– Railroad Does Not Pay Flagging Costs

C.1 General

Replace paragraph (3) of standard spec 107.17.1 with the following:

Comply with the railroad's rules and regulations regarding operations on railroad right-of-way. If the railroad's chief engineering officer requires, arrange with the railroad to obtain the services of qualified railroad employees to protect railroad traffic through the work area. Bear the cost of these services and make payment directly to the railroad. Notify the appropriate railroad representative as listed in section A.3 above, in writing, at least 5 business days before starting work near a track. Provide the specific time planned to start the operations.

C.2 Rates – Union Pacific

The following rates, reimbursement provisions, and excluded conditions will be used to determine the contractor's cost of flagging:

$600 daily rate for an eight-hour day (including wages, labor surcharges, meals, lodging, vehicle and mileage expenses),

$1,500 "Rest Time" or nightly rate for weekday overnight work for an eight-hour day (including wages, labor surcharges, meals, lodging, vehicle and mileage expenses),

$900 daily rate for an eight-hour day on Saturdays, Sundays or holidays (including wages, labor surcharges, meals, lodging, vehicle and mileage expenses),

$1,500 “Rest Time” or nightly rate for weekend overnight work for an eight-hour day (including wages, labor surcharges, meals, lodging, vehicle and mileage expenses),

$100 per hour overtime rate for all time worked before or after the regular assigned eight hours on any day, or for a minimum three hour call on Saturdays, Sundays, or Holidays.

The flagger is required to set flags each day in advance of the contractor commencing work that will require flagging. The flagger must also remove the flags each day after the completion of work that required flagging. Any time worked before or after the minimum eight-hour flagging day to set or remove flags will be billed at the overtime rate. The contractor is responsible for knowing the requirements of the railroad for arranging and terminating flagging services and for the associated costs of those services.

C.3 Reimbursement Provisions

The actual cost for flagging will be billed by the railroad. After the completion of the work requiring flagging protection as provided in section B above, the department will reimburse 50% of the cost of such services up to the rates provided above based on paid railroad invoices, except for the excluded conditions enumerated below. In the event actual flagging rates exceed the rates stated above, the department will reimburse 100% of the portion of the rate that is greater than the rates stated above.

C.4 Excluded Conditions

The department will not reimburse any of the cost for additional flagging attributable to the following:

1. Additional flagging requirements imposed by the railroad beyond the flagging requirements provided in subsection B above due to violations by the contractor.
2. Temporary construction crossings arranged for by the contractor.

The contractor shall bear all costs of the additional flagging requirements for the excluded conditions.

C.5 Payment for Flagging

Railroads may issue progressive bills. Notify the railroad when the work is completed and request a final bill from the railroad. The railroad will issue a final bill. Promptly pay railroad-flagging bills, less any charges that may be in dispute. The department will pay for flagging reimbursement under the Railroad Flagging Reimbursement administrative item. The department will withhold flagging reimbursement until any disputed charges are resolved and the final bill is paid. No reimbursement for flagging will be made by the department if a violation of subsection B is documented.

107-034 (20090901)

9. Union Pacific Railroad Company Requirements.

A General

In addition to requirements of the standard specifications and other articles within these special provisions, comply with the following requirements of Union Pacific Railroad Company (UPRR).

B Request for Information / Clarification

All requests for information (RFI) involving work within UPRR right-of-way shall be in accordance to the procedures listed elsewhere in the special provisions. Submit all RFIs to the engineer for submittal to UPRR. Allow four weeks for UPRR's review after receipt from the engineer.

C Plans / Specifications

Changes to the plans or specifications are subject to the approval of UPRR. Submit all change requests to the engineer. Allow four weeks for UPRR review time after receipt of a change request from the engineer.

D Construction Submittals

Submit six sets of the following to the engineer. All design submittals shall be stamped and signed by a professional engineer registered in the State of Wisconsin. The engineer will submit four sets of each submittal, along with any review comments to UPRR. A satisfactory submittal review does not relieve the contractor of responsibility and liability.

The engineer and UPRR may review the submittals. If the engineer or UPRR finds a submittal unsatisfactory, make all required changes and resubmit it. A satisfactory submittal review does not relieve the contractor of responsibility and liability of complying with the plans, specifications and the special provisions and for the structural integrity and proper functioning of the item that is the subject of the submittal. Allow four weeks for UPRR's review time after receipt of a submittal from the engineer.

Item	Description of Submittal Item	Notes
1	Shoring Design and Details	
2	Falsework Design and Details	
3	Drainage Design Provisions	
4	Erection Diagrams and Sequence	
5	Demolition Diagram and Sequence	
6	Shop Drawings	Steel and concrete members.

Whenever work may affect the operations or safety of trains, the method of doing such work shall first be submitted to UPRRs designated representative for review. Review by UPRR shall not relieve the contractor from liability.

E Infringement on Minimum Clearances

Submit to the engineer requests for infringement upon the minimum horizontal or vertical clearance requirements of standard spec 107.17.1 (2) 4. The engineer will submit the requests to UPRR's designated representative. Allow four weeks for UPRR's review time

after receipt of a submittal from the engineer. Do not infringe upon the minimum clearances unless they are first approved in writing by UPRR.

F Approval of Details
Submit details of construction affecting UPRR tracks, structure, and right-of-way not included in the plans to the engineer for UPRR review before undertaking such work. Allow four weeks for UPRR's review after receipt from the engineer.

G Site Inspections by UPRR
UPRR may make site inspections at any time. Provide the engineer a schedule of anticipated dates for the following activities; the engineer will furnish the schedule to UPRR:

1. Shoring
2. Demolition
3. Falsework
4. Erection of superstructure
5. Completion of the bridge structure.

Update the schedule monthly, or more frequently if necessary, so that site visits may be scheduled.

I Construction Excavations and Demolition
Construction excavations shall meet OSHA and American Railway Engineering and Maintenance-of-Way Association (AREMA) requirements and the UPRR "Guidelines for Temporary Shoring" (GTS).

Demolition shall be done in accordance with Union Pacific's Guidelines for Preparation of a Bridge Demolition and Removal Plan for Structures over Railroad (GPBDRP)

The GTS and the GPBDRP are available for review from the Southwest Region's Railroad Coordinator at the department's Southwest Regional Office located at 2101 Wright Street, Madison, Wisconsin 53704.

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

The department has obtained a U.S. Army Corps of Engineers Section 404 permit. Comply with the requirements of the permit in addition to requirements of the special provisions. A copy of the permit is available from the regional office by contacting Karla Knorr at (608) 246-7965.
107-054 (20080901)

11. Archaeological Cultural Resource Evaluation.

Sites or locations beyond the right-of-way that are proposed for borrow sites, batch plant sites, waste sites or staging areas for this project are required to have an evaluation for archaeological significance. Contact Jim Becker, (608) 261-0137 or Lynn Cloud, (608) 266-0099 at the Bureau of Technical Services (BTS) at least 10 working days in

advance to schedule an archaeological evaluation of any proposed borrow site, batch plant site, waste site or staging area.

If a potentially significant archaeological feature or material is discovered from the evaluation, the engineer will promptly notify the contractor to determine an appropriate course of action to be taken. Excavation shall not commence until authorized by the engineer.

Sites which have been previously excavated shall be exempt from these requirements.

12. Notice to Contractor – Burial Sites.

Cemeteries are located within the project from Station 699+41 S to Station 700+94 S right and from Station 1304+35 to Station 1305+33 left. A qualified archaeologist shall be present to monitor project related ground-disturbing activities beyond the existing shoulders and/or below sub-grade within the boundaries of the burial sites. Contact Jim Becker, (608) 261-0137 or Lynn Cloud, (608) 266-0099 at the Bureau of Technical Services (BTS) at least 10 working days in advance to schedule if necessary.

If human bone is discovered during construction, cease ground disturbing activities immediately and contact Jim Becker, Bureau of Technical Services at 608-261-0137.

13. Environmental Protection and Erosion Control.

Supplement standard spec 107.20 with the following:

Dispose of all waste and demolition material from the project properly. Disposal in wetlands is not permitted.

Supplement standard spec 107.20 with the following:

Pursue operations in a timely and diligent manner, continuing all construction operations methodically from the initial topsoil stripping through the subsequent grading and re-topsoiling to minimize the period of potential exposure to erosion.

Re-topsoil, seed, fertilize and mulch graded areas, as designated by the engineer, within 7 working days after grading is completed.

Perform grading and finishing operations in a continuous and timely manner in environmentally sensitive areas, which are all areas that drain to wetlands, stream crossings, tributaries or other sensitive areas. Place temporary or permanent erosion control measures in environmentally sensitive areas that have been stripped of topsoil and on which significant grading operations have not occurred for more than 14 calendar days. Multiple reinstallations of said temporary measures, as determined by the engineer, will not be considered a reasonable alternative to accomplishing grading and finishing operations in a continuous and timely manner.

Do not disturb or store any materials including topsoil beyond the slope intercepts in wetland areas without approval from the engineer.

If dewatering is required, pump the dirty water removed into a settling basin before it is allowed to enter the live stream.

Place stockpiled spoil material on an upland site an adequate distance from the stream and any open water created by excavation. Install silt fence between the spoil pile and excavation site and between any disturbed area and the waterway. Seed and mulch all disturbed areas as soon as possible following construction. Leave the silt fence in place until the seeded area has produced sufficient grass cover to stabilize the area and thereby reduce the danger of site erosion.

Use and maintain proper erosion control measures both during and after construction. Develop an erosion control implementation plan (ECIP) and submit it to this office 14 days prior to the preconstruction conference.

14. Notice to Contractor, Notification of Demolition and/or Renovation No Asbestos Found.

John Roelke, RMT, Inc., License Number AII-119523, inspected Structure B-14-38 for asbestos on November 10, 2009. No regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is available from: Karla Knorr at (608) 246-7965.

In accordance with NR447 and DHS159, ensure that DNR or DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (R 4/11), or subsequent revision) via U.S. mail, hand-delivery, or using the online notification system at least 10 working days prior to beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form to Mark Vesperman, WisDOT – SW Region, 2101 Wright Street, Madison, WI 53704 and DOT BTS-ESS attn: Hazardous Materials Specialist PO Box 7965, Madison, WI. 53707-7965. In addition, comply with all local or municipal asbestos requirements. Use the following information to complete WisDNR form 4500-113:

- Site Name: Structure B-14-38, STH 16/60 over STH 26/60
- Site Address: Latitude 43°19'42.74"N, Longitude 88°44'09.18"W
- T 10 N, R 15 E, Section 17
- Ownership Information: WisDOT Southwest Transportation Regional Office – Madison, 2101 Wright Street, Madison WI 53704-2583
- Contact: Teri Shopp (Regional construction engineer)
- Phone: (608) 245-2662
- Age: 51 years old. This structure was constructed in 1962. The superstructure was replaced in 1992.
- Area: 8,811 SF of deck

John Roelke, TRC, License Number AII-119523, inspected UPRR over STH 26 Structure for asbestos on April 29, 2013. No regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is available from: Karla Knorr at (608) 246-7965.

In accordance with NR447 and DHS159, ensure that DNR or DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (R 4/11), or subsequent revision) via U.S. mail, hand-delivery, or using the online notification system at least 10 working days prior to beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form to Mark Vesperman, WisDOT – SW Region, 2101 Wright Street, Madison, WI 53704 and DOT BTS-ESS attn: Hazardous Materials Specialist P.O. Box 7965, Madison, WI 53707-7965. In addition, comply with all local or municipal asbestos requirements. Use the following information to complete WisDNR form 4500-113:

- Site Name: Structure #, Union Pacific Railroad over STH 16/60
- Site Address: 1533' south of STH 60 East intersection
- Ownership Information: Union Pacific Railroad
- Contact Teri Shopp (Regional construction engineer)
- Phone: (608) 245-2662
- Age: Estimated at 60+ years
- Area: 817 SF of deck

Insert the following paragraph in Section 6.g.:

> If asbestos not previously identified is found or previously non-friable asbestos becomes crumbled, pulverized, or reduced to a powder, stop work immediately, notify the engineer, and the engineer will notify the department's Bureau of Technical Services at (608) 266-1476 for an emergency response in accordance to standard spec 107.24. Keep material wet until it is abated or until it is determined to be non-asbestos containing material.

107-125 (20120615)

15. Clearing and Grubbing.

A Existing Trees

The owners of Parcel 57 would like the wood from any trees that are removed on their property. The contractor shall set the wood outside the work area.

16. Removing Guardrail.

This special provision describes removing guardrail in accordance to the pertinent requirements of standard spec 204 and as hereinafter provided.

The removed guardrail shall become the property of the Dodge County Highway Department. Carefully remove and stockpile at a location on the right-of-way, outside the

construction limits, all salvageable posts, guardrail and hardware for pick up by Dodge County. Remove and dispose of all other material from the right-of-way.

Contact Randy Franks, West Side Patrol Superintendent at (920) 210-1762 to arrange for a time to pick up the stockpiled items.

17. Removing Old Structure (Station 1332+95).

Revise standard spec 203.3.2.2 as follows:

The contractor shall leave the existing bridge abutments in place. Fill between the abutments shall be placed to a height that allows for 95% compaction. When the fill has been properly compacted, Union Pacific Railroad will cut and remove the existing railroad tracks. The contractor will then remove the existing bridge superstructure.

18. Abandoning Wells, Item 204.0265.

Complete this work in accordance with the requirements of standard spec 204, except as hereinafter specified:

Properly abandon all wells in conflict with grading operations in the construction area prior to the start of any grading work. Contact Marty Nessman of the Wisconsin Department of Natural Resources at (608) 267-2449 for questions on abandoning flowing wells. Properly abandon any wells discovered during grading work in accordance with NR 812.26

19. Temporary Shoring, Item 206.6000.S.

A Description
This special provision describes designing and providing temporary shoring at locations the plans show.

B Materials
B.1 Shoring Design
Provide a shoring design for each location where the plan requires temporary shoring. Have a professional engineer, registered in the State of Wisconsin and knowledgeable of the specific site conditions and requirements, verify the adequacy of the design. Submit one copy of each shoring design, signed and sealed by the same professional engineer verifying the design, to the engineer for incorporation into the permanent project record.

C Construction
Provide temporary shoring at each required location conforming to the design developed for that location.

Remove the shoring when it is no longer needed unless the engineer allows it to remain in place. Backfill the space that is excavated but not occupied by the new permanent construction conforming to standard spec 206.3.13.

D Measurement

The department will measure Temporary Shoring by the square foot acceptably completed at locations the plans show, measured as the area of exposed face in the plane of the shoring from the ground line in front of the shoring to a maximum of one foot above the retained grade. Shoring used for staged construction in multiple configurations without removal and reinstallation will be measured once based on the configuration with the largest area of exposed face.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
206.6000.S	Temporary Shoring	SF

Payment is full compensation for designing and providing shoring; for providing a signed and sealed copy of the design; and for backfilling and removing the shoring.

The department will not pay for temporary shoring, installed for contractor convenience, that is not required in the plans.

206-005 (20110615)

20. 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 sublot 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)

21. Base Aggregate Dense ¾ -Inch.

This work shall be in accordance to the pertinent requirements of standard spec 305, except that the material used in all unpaved field entrances and private entrances and the top 2 inches of all unpaved portions of shoulders, as shown in the plan, shall consist of crushed stone.

22. Base Aggregate Dense 1 1/4-Inch.

Revise standard spec 305.2.2.1 as following:

Use 1¼-inch base that conforms to the following gradation requirements.

Percentage by weight passing

Sieve Size	Percentage of Mass Passing
1 1/4 inch	95 – 100
1 inch	---
3/4 inch	70 – 90
3/8 inch	45 – 75
No. 4	30 – 60
No. 10	20 – 40
No. 40	7 – 25
No. 200	2 - 12 [1], [3]

[1] Limited to a maximum of 8% for base placed between old and new pavement.
[3] 3 - 10 percent passing when base is ³ 50% crushed gravel

23. Longitudinal Tining.

In the interest of creating a quieter riding surface for concrete pavement, use longitudinal tining on concrete pavements constructed under this contract.

24. Concrete Pavement.

Revise standard spec 415.2.4 as following:

Furnish liquid curing compound conforming to ASTM C309, Type 2, Class A, except for water retention testing. The department will conduct water retention tests according to AASHTO T 155, except as follows:

1. The department will not seal the edges of the specimen.

2. The department will apply the curing compound at one gallon per 200 square feet of surface or at the manufacturers recommended rate whichever is greater.

25. Rout and Seal, Item 415.6000.S.

A Description
This special provision describes routing, cleaning, drying, and sealing the longitudinal edge of pavement joints in new asphaltic pavement shoulders immediately adjacent to the edge of the concrete mainline pavement. The work shall conform to the plan details and as hereinafter provided.

B Materials
Furnish material that conforms to the requirements of the Specifications for Joint Sealants, Hot-Poured, for Concrete and Asphalt Pavements, ASTM Designation: D 6690, Type II, modified to require that the bond strength test be run at -20 degrees F. (The unmodified ASTM D 6690, Type II allows this test to be run at either 0 degrees F or -20 degrees F.)

Deliver each lot or batch of sealing compound to the jobsite in the manufacturer's original sealed container. Mark each container with the manufacturer's name, batch or lot number, and the safe heating temperature. Present the manufacturer's certification stating that the compound meets the requirements of this specification. Prior to applying the sealant, furnish to the engineer a certificate of compliance and a copy of the manufacturer's recommendations on heating and applying the sealant.

C Construction
C.1 Equipment
Heat the sealing compound to the pouring temperature recommended by the manufacturer in an approved kettle or tank, constructed as a double boiler, with the space

between the inner and outer shells filled with oil or other satisfactory heat transfer medium. If and when using the heating kettle on concrete or asphaltic pavement, properly insulate the heating kettle to ensure heat is not radiated to the pavement surface.

Make rout cuts in a single pass. Two-pass cutting will not be allowed. Use a self-propelled mechanical router capable of routing the bituminous pavement to provide a 1.0:1.0 depth to width ratio of all routed cracks. The router blade or blades shall be of such size and configuration to cut the desired joint reservoir in one pass of the rout. No spacers between blades shall be allowed unless the contractor can demonstrate to the engineer that the desired reservoir and rout cut can be obtained with them. Either wet or dry routing will be permitted provided the above conditions are met. Use a pressure distributor for applying sealing material through a hand-operated wand or nozzle in accordance to sealant manufacturer's instructions.

C.2 Methods

Conduct the operation so that the routing, cleaning, and sealing are continuous operations. Traffic shall not be allowed to knead together or damage the routed joints. Rerout, if necessary, routed joints not sealed before traffic is allowed on the pavement when routing and sealing operations resume at no additional cost to the department. Do not perform rout cutting, cleaning, and sealing, within 48 hours of the placement of the shoulder's surface course.

Rout the longitudinal joint to a minimum width of ¾-inches and a minimum depth of 3/4-inches. Use a power vacuum or equivalent to immediately remove any routing slurry, dirt, or deleterious matter adhering to the joint walls or remaining in the joint cavity, or both. Prior to sealing, dry the cleaned joints either by air-drying or by using a high capacity torch. Immediately prior to sealing, blow out the dried crack with a blast of compressed air, 80-psi minimum. Continue cleaning until the joint is dry, and until all dirt, dust, or deleterious matter is removed from the joint and adjacent pavement to the satisfaction of the engineer. If the air compressor produces dirt or other residue in the joint cavity, the contractor shall be required to clean the joint again.

If cleaning operations could cause damage to, or interfere with, traffic in adjacent lanes, or both, provide protective screening that is subject to the approval of the engineer to the cleaning operation.

Following cleaning, dry the routed joints and warm them with a hot air lance. Take care not to burn the pavement surface. Under no circumstances shall more than two minutes elapse between the time the hot air lance is used and the sealant is placed.

Provide positive temperature control and mechanical agitation. Do not heat the sealant to more than 20 degrees F below the safe heating temperature. The safe heating temperature can be obtained from the manufacturer's shipping container. Provide a direct connecting pressure type extruding device with nozzles shaped for insertion into the joint. Immediately remove sealant spilled on the surface of the pavement.

Seal the joints when the sealant material is at the pouring temperature recommended by the manufacturer. Fill the joint such that after cooling, the sealant is flush with the adjacent pavement surface. Do not overfill the joint; the engineer may allow a very slight overband. Sand shall not be spread on the sealed joints to allow for opening to traffic. Before opening to traffic, the sealant shall be tack free.

D Measurement

The department will measure Rout and Seal in length by the linear foot, 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
415.6000.S	Rout and Seal	LF

Payment is full compensation for rout cutting; cleaning the joint; furnishing and installing all materials, including sealant; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

415-100 (20080902)

26. 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 sublot 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:

	Fixed Interval	Continuous (Localized Roughness)
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 x IRI)
≥ 35 to < 60	0
≥ 60 to < 75	1000 – (50/3 x 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 x IRI)
≥ 55 to < 85	0
≥ 85 to < 100	(4250/3) – (50/3 x 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-(25xIRI)
≥ 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)

27. 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/ft^3. 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/ft^3 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/ft^3 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/ft^3 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 sublot 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 sublot 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 sublot densities using the individual test results in each sublot.

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

(3) If any sublot average is more than one percent below the target density, do not include the individual test results from that sublot when computing the lot average density and remove that sublot's tonnage from the daily quantity for incentive. The tonnage from any such sublot is subject to disincentive pay 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 sublot test results are no more than 3.0 percent below the minimum target density, calculate the daily lot density by averaging all individual test results for the day.

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

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

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

B.4.2.4 Documentation

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

B.4.3 Corrective Action

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

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

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

(4) Retesting and acceptance of replaced pavement will be 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 sublot and lot densities.

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

B.5 Department Testing

B.5.1 Verification Testing

(1) The department will have a HTCP certified technician, or ACT working under a certified technician, perform verification testing. The department will test randomly at

locations independent of the contractor's QC work. The department will perform verification testing at a minimum frequency of 10 percent of the sublots and a minimum of one sublot per mix design. The sublots selected will be within the active work zone. The contractor will supply the necessary traffic control for the department's testing activities.

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

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

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

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

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

B.5.2 Independent Assurance Testing

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

B.6 Dispute Resolution

(1) The testers may perform investigation in the work zone by analyzing the testing, calculation, and documentation procedures. The testers may perform gauge 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 sublot density test results or retesting of the sublot in dispute within 48 hours of paving. Traffic control costs will be split between the department and the contractor.

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

B.7 Acceptance

(1) The department will not accept QMP HMA Pavement Nuclear Density if a non-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)

28. Architectural Surface Treatment B-14-196, Item 517.1050.S.01.

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 ¼-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-14-196	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)

29. Pipe Grates, Item 611.9800.S.

A Description
This special provision describes furnishing and installing pipe grates on the ends of pipes as shown in the plans, and as hereinafter provided.

B Materials
Furnish steel conforming to the requirements of standard spec 506.2.2.1. Furnish steel pipe conforming to the requirements of standard spec 506.2.3.6.

Furnish pipe grates galvanized according to ASTM A123.
Furnish angles and brackets galvanized according to ASTM A123.

Furnish required hardware galvanized according to ASTM A153.

C Construction
Repair pipes, rods, angles and brackets on which the galvanized coating has been damaged in accordance to the requirements of AASHTO M36M.

D Measurement
The department will measure Pipe Grates in units of work, where one unit is one grate, 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
611.9800.S	Pipe Grates	Each

Payment is full compensation for furnishing and installing all materials; and for drilling and connecting grates to pipes.
611-010 (20030820)

30. Fence Safety, Item 616.0700.S.

A Description

This special provision describes furnishing and installing a plastic fence at locations shown on the plans and as hereinafter provided.

B Materials

Furnish notched conventional metal "T" or "U" shaped fence posts.
Furnish fence fabric meeting the following requirements.

Color:	International orange (UV stabilized)
Roll Height:	4 feet
Mesh Opening:	1 inch min to 3 inch max
Resin/Construction:	High density polyethylene mesh
Service Temperature:	-60° F to 200° (ASTM D648)
Tensile Yield:	Avg. 2000 lb per 4 feet width (ASTM D638)
Ultimate Tensile Strength:	Avg. 3000 lb per 4 feet width (ASTM D638)
Elongation at Break (%):	Greater than 100% (ASTM D638)
Chemical Resistance:	Inert to most chemicals and acids

C Construction

Drive posts into the ground 12 to 18 inches. Space posts at 7 feet.

Use a minimum of three wire ties to secure the fence at each post. Weave tension wire through the top row of strands to provide a top stringer that prevents sagging.

Overlap two rolls at a post and secure with wire ties.

D Measurement

The department will measure Fence Safety by the linear foot along the base of the fence, center-to-center of posts.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
616.0700.S.	Fence Safety	LF

Payment is full compensation for furnishing and installing fence and posts; maintaining the fence and posts in satisfactory condition; and for removing and disposing of fence and posts at project completion.
616-030 (20070510)

31. Field Facilities.

Replace standard spec 642.2.2.1 (1) with the following:

Provide field office with a minimum useable area of 1,000 square feet.

32. Traffic Control Signs PCMS, Item 643.1050.

Replace standard spec 643.2.7 with the following:

A Description

(1) This special provision describes furnishing, maintaining installing, and operating 6 portable changeable message signs, 2 portable removable base stations (laptop notebooks), a dedicated telephone line, computer software, surge protection for system components, and operating manuals as hereinafter provided.

A.1 General

(1) During the life of this contract, provide 24 hour-a-day availability of equipment and forces to promptly restore or revise the Portable Changeable Message Signs. Provide the engineer with the name of the local individual, and one alternative contact, responsible for the maintenance and operation of the message signs.

(2) Upon verbal notification of a required sign message modification, complete the message revision within 5 minutes, except during non-working hours complete the message revision within 15 minutes. Upon verbal notification of a required sign modification involving moving, replacing or adding a message sign, complete the sign modification within 1 hour.

(3) The department reserves the right to coordinate all message sign revisions with the contractor based on actual traffic conditions. During non-working hours, respond to message sign requests as deemed necessary by the State Patrol.

(4) Program a master list of predetermined messages, provided by the department, into the message sign software. A unique identification number shall be assigned to each pre-determined message. The numbering system for the pre-approved messages shall be consistent on all the portable changeable message signs, base stations and personal laptop computer. Submit any special messages not on the master list, for approval to Jeff Gustafson, the Changeable Message Sign Coordinator at the SW Region, (608) 516-6400 prior to displaying the message on any message sign.

(5) Prior to delivery of the message signs to the project site, coordinate with Jeff Gustafson, the Changeable Message Sign Coordinator at the SW Region, (608) 516-6400 to allow at least ten working days for the inspection and approval of the Portable Changeable Message Signs.

(6) Supply portable changeable message signs that utilize a consistent computer software technology to operate all the message signs.

(7) Maintain and make all repairs on the message signs delivered to the project. Ensure that the message signs remain operational throughout the duration of the project. Wash the face of the message sign a minimum of once per month or as directed by the engineer.

(8) Provide two portable removable base stations. These base stations shall be laptop notebooks with the minimum requirements as listed in these specifications under B.6 Materials. The engineer will use one of the portable removable base stations. The contractor's 24-hour-a-day emergency contact will use the second portable removable base station.

(9) Provide the department an operating manual and instructions for the portable changeable message signs and base stations.

A.2 Pre-Approved Manufacturers

(1) To become pre-approved as a qualified vendor of Portable Changeable Message Signs, the vendor must initially submit the unit specifications to the department. If the department approves the specifications, the vendor may arrange a message sign demonstration with the department at which the operation and features of the unit shall be demonstrated. All demonstrations shall be coordinated with Jeff Gustafson, the Changeable Message Sign Coordinator at District 1, (608) 516-6400.

(2) The department has previously approved the following manufacturers:

a. ADDCO Incorporated
b. American Electronic Sign Company
c. American Signal Company
d. Display Solutions Incorporated
e. Precision Solar
f. Work Area Protection
g. Solar Tech

B Materials

(1) Furnish equipment that one person can easily transport and operate without assistance.

2) Provide a complete Portable Changeable Message Sign and trailer that is painted highway safety orange, except the sign case, which shall be painted black. Each message sign shall have a unique identification number displayed on both sides of the trailer with lettering that has a minimum height of 6 inches. The message sign identification numbers shall be positioned on the trailer in such a manner to be visible to shoulder traffic. The identification numbers shall have a reflective coating visible during nighttime operations.

B.1 Sign Case

(1) The sign shall be capable of displaying a minimum of three lines of message text per message frame. Each line shall consist of a minimum of eight characters, equally spaced a minimum of 3 inches and a maximum of 4 1/2 inches apart. Characters shall be a

minimum of 17 inches high and a minimum of 11 inches wide and be legible from a minimum of 850 feet during both day and night conditions. The maximum sign width shall be 11 feet 6 inches.

(2) The sign display shall consist of either a continuous matrix of pixels or individual character modules consisting of smaller matrices of pixels. Each matrix forming a character shall consist of a minimum 35 pixels in a 5 horizontal pixel by 7 vertical pixel arrangement. Each pixel shall consist of a high-intensity LED cluster. The LED lamps shall run at a minimum voltage to provide extended lamp life. Each pixel shall be either square in shape with a minimum of 2-inch sides or round in shape with a minimum 2-inch diameter. The driver board shall provide means for dimming the display. The entire message sign shall complete a message change within 100 milliseconds.

(3) The circuit boards used in the sign case shall be constructed of components readily available from at least two other sources. A schematic of the circuit boards shall be provided to the engineer.

(4) The sign housing shall be weatherproof and shall be constructed of aluminum. The front face shall be covered with either a one-piece, clear, non-glare, lexan panel, or individual one-piece, clear, non-glare, lexan panels.

B.2 Raise and Lower Mechanism

(1) The message sign shall have a vertical mast assembly constructed of structural steel tubing. The message sign shall include a built-in electric powered hydraulic pump capable of fully raising the sign within one minute. Each message sign shall also be equipped with a readily accessible manual lifting device. The message sign shall be capable of rising and locking at various heights. The bottom of the message sign shall be able to rise to a minimum height of 7 feet 0 inches above the ground.

(2) A means shall be provided to prevent tampering with the message sign when the sign is raised to any locked height. The message sign shall be capable of rotating 360 degrees atop the vertical mast assembly when raised to any locked height. The mast assembly shall have a mechanism for locking the message sign in place when it is extended. When extended, the message sign shall be capable of being locked at any display angle. A means shall be provided to prevent tampering with the display angle once the message sign angle is locked.

B.3 Controller

(1) Sign operations shall be at the direction and control of a programmable microprocessor (controller). The controller shall be furnished with a full size 101 key keyboard. The controller keyboard shall contain standard alphanumeric keys. The keyboard shall be capable of being used for operation of the controller in creating, storing and displaying additional sign messages. The controller shall be capable of storing a minimum of 200 messages (frames). The sign shall be capable of displaying from one to six messages in sequence. A minimum of 150 messages shall be preprogrammed and installed by the manufacturer. The controller shall also have the capacity for storage, recall and display

of a minimum of 50 operator created messages. The controller shall be able to recall from memory, preview, and display message sequences at least six frames long. The controller shall be capable of storing a minimum of 25 message sequences that can be created by the operator using any combination of preprogrammed messages and user created messages.

(2) The controller shall allow the operator to vary the message flash rate and sequence rate in 1/4-second intervals or less with the flash rate extending from zero seconds to at least four seconds. The controller shall also allow the operator to generate a moving or flashing arrow symbol that shall be capable of being displayed on any line of a message while text is displayed on other lines of the message. The controller shall also allow the operator to generate a larger moving or flashing arrow symbol that shall be capable of being displayed on the entire sign face, using all three lines. Either of these message frames containing arrow symbols shall be capable of being included in a sequence. The controller shall allow the operator to flash (blink) selected lines of messages and include these messages within a message sequence.

(3) The controller shall be equipped with a display screen for previewing the actual sign message prior to displaying the message on the sign. The controller shall be removable for ease of replacement, service, or programming.

(4) Each controller shall be programmed with a password system that will deter unauthorized programming of the controller. The password system shall include at least two levels of security such that operators at one level may only change message sequences displayed using preprogrammed sequences and operators at a higher level may create and store messages or message sequences. Operators at the higher level shall also be capable of displaying message sequences.

(5) A back up battery shall supply power to the controller when the message sign is not in operation.

(6) The circuit boards used in the controller shall be constructed of components readily available from at least three other sources. Provide the engineer with a schematic of the circuit boards.

(7) Ambient light controlled continuous dimming, with a minimum range of one hundred percent to forty percent shall be provided for the sign display. A means for manually controlled dimming shall also be provided.

(8) The control panel shall have switches for raising and lowering the sign. Provide a night light for the control panel and controller screen and install it in the controller console cabinet.

(9) The Portable Changeable Message Sign shall be fully equipped to receive commands to change standard messages and to allow monitoring of sign operations through a cellular telephone connection at the sign unit, without rewiring the cabinet connections. Provide

a modem that operates at a minimum speed of 33.6K BAUD. The controller shall be capable of receiving commands via cellular telephone from a personal computer based remote station. The controller shall be furnished with a standard RS-232 interface such that a laptop personal computer may be connected with the controller to exchange data. The controller shall also be equipped to connect to a standard telephone landline for remote control operation.

(10) The command protocol with which the controller communicates externally shall be of a standard format and be capable of being reconfigured. The command protocol with which the controller communicates via an RS-232 interface shall be a standard format and be capable of being reconfigured.

(11) A cellular phone unit shall be provided and installed in the message sign by the manufacturer.

(12) Provide and maintain a dedicated telephone line to the field office for the portable changeable message signs. Provide surge protection for all of the electronic components and telephone lines.

B.4 Power Source

(1) The solar Portable Changeable Message Sign shall run on a battery system using a solar charging system. The solar-powered battery charging system shall consist of an array of high-efficiency, single-crystal silicon cells mounted on top of the sign panel and a voltage regulator to prevent overcharging of the battery system. The system shall use deep-cycle batteries and shall include a voltage meter, ammeter and an hour meter. The hour meter will be capable of indicating the cumulative time that the message sign has been operational and displaying messages.

(2) The solar cells shall be capable of charging and maintaining the batteries at operational levels under all weather conditions experienced in Wisconsin. The solar array panel shall be capable of rotating 360 degrees atop the sign case and shall be capable of being locked in any position. The solar array panel shall either be tilted at an angle of 45 degrees relative to the horizon or shall be capable of tilting from 0 degrees to a minimum of 45 degrees and shall be capable of being locked in any position. A switch shall be provided to disconnect the solar power supply for safety during maintenance.

(3) The batteries shall be housed in a waterproof, heavy-duty housing which is equipped with necessary hardware to be locked using a padlock or build in lock. The batteries shall be of a standard size and type and be available from at least three different manufacturers. The housing that contains the batteries shall be capable of accommodating batteries from at least three different manufacturers. The batteries shall provide adequate back up power for the Changeable Message Sign to operate at full operation for 20 days having ambient air temperatures of 20 degrees Fahrenheit without any sun exposure to the solar array. Certification of the message sign's ability to operate for a period of 20 days without exposure to sunlight, as stated above, shall be provided

by an independent laboratory. A switch shall be supplied to disconnect the battery supply for safety during maintenance.

(4) The sign shall also be equipped to receive and use external 110 volt alternating current as an alternate source of power.

(5) The sign shall also be equipped with a charging device which operates on 110 volt alternating current and that is capable of charging the deep-cycle battery system within 24 hours. The charging device shall automatically shut off when battery system is fully charged to prevent overcharging.

(6) The entire unit shall be equipped with an isolated ground circuit. The ground wires shall be connected to an isolated terminal block. The frame of the trailer shall not be a part of the ground system, except possibly for the alternating current charging and operating systems.

(7) All external wiring shall be single length with no splices and shall be protected from weather and obstructions encountered during transport.

(8) All break lines shall be protected from obstructions encountered during transport.

B.5 Trailer

(1) The highway trailer shall have a maximum width of eight feet six inches and shall be constructed of heavy-gauge, rectangular structural steel tubing, equipped with either screw-type or hydraulic leveling jacks, trailer tongue jack with wheel, fenders, surge brakes, trailer hitch coupling with safety chains and a rear bumper. The trailer shall have a straight axle and two fifteen-inch wheels and tires with a combined rated load capacity greater than the weight of the entire sign unit and trailer.

(2) The trailer shall be equipped with standard highway brake lights, turn signals, and hazard lights and shall be wired into a round, six-prong connector. All wires shall be single lengths with no splices. Separate rustproof metal cabinets shall enclose the battery system and the controller console. The cabinets shall be equipped with the necessary hardware to be locked using a padlock or built in lock. Exterior metal surfaces shall be painted federal orange. The doors and lids of the cabinets shall be capable of being locked in the open position to prevent accidental closure.

(3) The trailer shall include a 6,000 pound capacity surge brake actuator.

(4) The trailer hitch coupling shall be Class III with a minimum capacity of 5,000 pounds and shall provide for hookup to a two-inch ball type hitch. The coupling shall be capable of being tightened to the ball type hitch by hand turning a wheel. Heavy-duty safety chains with safety type hooks shall be provided and be attached to the trailer for use with the coupling and hitch assembly.

(5) The trailer shall be equipped with a means of preventing theft of the trailer.

(6) The trailer shall be equipped with heavy-duty, walk-on type fenders. A walk-on deck, a minimum of 18 inches in width, shall be provided on the trailer along both sides of the sign case. The decks shall be installed so that they are in front of and adjacent to both sides of the sign case when the sign case is locked in the transport mode. The walk-on decks shall be equal in length to the trailer. Non-slip treads shall be provided on these decks and on all trailer locations where service or maintenance standing or climbing will be required.

(7) The trailer shall contain at least four leveling jacks, as previously described, which will level the trailer on a 6:1 slope and support 5000 pounds each.

(8) The trailer shall have storage space for the leveling jacks when the jacks are not in use. When the leveling jacks are stored within the trailer, the jacks shall not protrude beneath the frame of the trailer. The trailer and sign shall be capable of withstanding wind gusts of up to 80 miles per hour when in operation with the sign raised to maximum height and the leveling jacks extended. The trailer shall also be equipped with a tongue jack that has a wheel. The tongue jack shall have a capacity greater than the tongue weight of the trailer.

(9) The trailer shall be capable of mounting or descending six-inch curb heights without the frame striking the curb.

(10) The trailer shall be legal for use on Wisconsin roads in accordance to State of Wisconsin statutes.

B.6 Laptop Personal Computer (Notebook)

B.6.1 Hardware

(1) Provide a laptop personal computer with the following minimum hardware requirements.

- IBM Compatible PC Pentium 200MHz Processor
- 64 MB of RAM
- 250 MB Free disk space
- 3 1/2-inch 1.44 MB diskette drive
- 24X CD ROM drive
- Mouse or other Windows compatible pointing device
- Color VGA (640 by 480 pixels or higher) or compatible screen display
- Internal or External Hayes compatible 56K modem

B.6.2 Software

(1) Provide a laptop personal computer with the following minimum software requirements:

- Windows 95, Windows 98 or greater.
- With all of the hardware drivers installed and working properly.

C Construction

(1) Initially place the message sign in accordance to the plans and as approved by the engineer. Provide the engineer with a written list of initial message sign locations.

(2) Install the message signs a minimum 30 feet and a maximum 50 feet the edge line of the existing travel lane. Install the message signs perpendicular to the travel lane and level the message sign. Install the message signs to provide a 900-foot line of sight to approaching vehicles as measured from the centerline of the roadway. Ensure that the installation of message signs does not impede emergency vehicle access along any existing shoulder within the project vicinity.

(3) Have a representative familiar with the operation and repair of the message signs available at the project site on the day the signs are to become operational. The representative shall remain available until all message signs are operating satisfactorily. Provide training to the engineer, as required, on operating, adjusting, and controlling the portable changeable message signs, base stations and personal laptop computer.

D Measurement

(1) The department will measure Traffic Control Signs PCMS by the unit in use as directed by the engineer per day.

(2) Any day in which the changeable message boards are not working properly for more than two hours will result in one day being deducted from the quantity measured for payment, plus an additional $500 that the contractor will be liable to the department. Improper operation of a Portable Changeable Message Sign shall include displaying an incorrect message or a message sign operating at an incorrect location. More than a single day deduction in payment can be assessed if multiple operational errors occur on the project involving different Portable Changeable Message Signs on the same calendar day.

E Payment

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

ITEM NUMBER	DESCRIPTIION	UNIT
643.1050	Traffic Control Signs PCMS	Day

(2) Payment is full compensation for furnishing, maintaining and installing the complete unit; and for furnishing all labor, tools, equipment, services, and incidentals necessary to complete the contract work.

33. Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch, Item 646.0841.S; 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 ± 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 ft^3/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 ft^3/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 ft^3/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
646.0841.S	Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	LF
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)

34. Concrete Stone Size No. 2, Item SPV.0035.01.

A Description
This special provision describes furnishing and installing Concrete Stone Size No. 2 as shown on the plans.

B Materials
Concrete Stone Size No. 2 shall conform to aggregate gradation requirements for Size No. 2 as specified in standard spec 501.2.5.4.4.

C Construction
Place Concrete Stone Size No. 2 as shown on the plans.

D Measurement
The department will measure Concrete Stone Size No. 2 by the cubic yard, 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.0035.01	Concrete Stone Size No. 2	CY

Payment is full compensation for furnishing and installing the aggregate; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

35. Backfill Special, Item SPV.0035.02.

A Description

This work shall consist of furnishing and placing Backfill Special in accordance to the pertinent requirements of standard spec 209 except as hereinafter modified.

B Materials

Furnish and place Backfill Special for area to be backfilled as shown on the plans and as hereinafter provided.

Provide and use backfill that consists of natural sand or a mixture of sand with gravel, crushed gravel or crushed stone. It shall not contain recycled or milled asphalt, recycled concrete, foundry sand, bottom ash, blast furnace slag or other potentially corrosive material.

Provide material conforming to the following gradation requirements as per AASHTO T27.

Sieve Size	Percentage by Weight Passing
1 inch	100
No. 40	0 - 60
No. 200	0 - 15

The material shall have a liquid limit not greater than 25, as per AASHTO T89, and a plasticity index not greater than 6, as per AASHTO T90. In addition, backfill material shall meet the following requirements.

Test	Method	Value
pH	AASHTO T-289	5 – 10.0
Sulfate content	AASHTO T-290	200 ppm max.
Chloride content	AASHTO T-291	100 ppm max.
Electrical Resistivity	AASHTO T-288	3000 ohm/cm min.
Organic Content	AASHTO T-267	1.0% max.
Angle of Internal Friction	AASHTO T-236	30 degrees min.

Prior to placement of the backfill, obtain and furnish to the engineer a current certified report of test results that the backfill material complies with the requirements of this specification. This certified report of test shall be less than 6 months old. Tests will be performed by a certified independent laboratory. When backfill characteristics and/or sources change, a certified report of tests will be provided for the new backfill material.

C Construction

Prior to placement of Backfill Special provide for positive drainage of the area to be backfilled. Completely fill excavation in a single operation. Compaction will need to meet the Union Pacific Rail Road compaction requirements.

D Measurement
The department will measure Backfill Special in volume by the cubic yard of material, acceptably completed. Such volume will be computed from dimensions of the area to be backfilled as shown in the construction details. In irregular or inaccessible areas, the engineer may allow volume to be determined by other appropriate methods.

E Payment
The department will pay for measured quantities at the contract unit price according to standard spec 209.5 under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.02	Backfill Special	CY

Payment for Backfill Special is full compensation for furnishing and placing Backfill Special, for providing positive drainage of the area to be backfilled and for all testing as required by the Union Pacific Railroad.

36. Remove and Reset Concrete Apron Endwalls, Item SPV.0060.01.

A Description
This special provision describes removing and resetting concrete apron endwalls as shown on the plan.

B (Vacant)

C Construction
Remove existing concrete apron endwall, reinstall concrete apron endwall at new end of pipe, install joint ties, backfill and shape, compact and finish as necessary to set endwall to the elevation established by the engineer.

Dispose of all surplus and unsuitable material properly in accordance to standard spec 205.3.11.

D Measurement
The department will measure Remove and Reset Concrete Apron Endwalls by each individual unit, acceptably completed. A unit will consist of one concrete apron endwall.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.01	Remove and Reset Concrete Apron Endwalls	Each

Payment is full compensation for furnishing all excavation; resetting the number of concrete apron endwalls stated in the plan; furnishing and installing joint ties; grading, shaping and compacting; and for furnishing and placing fill.

37. Reinforced Concrete Endwalls 24-Inch 6:1 Special, Item SPV.0060.02; 30-Inch 6:1 Special, Item SPV0060.03; 19x30-Inch 6:1 Special, Item SPV.0060.04; 24x38-Inch 6:1 Special, Item SPV.0060.05.

A Description

This special provision describes constructing Reinforced Concrete Endwalls Special as shown in the plans in accordance to standard spec 522, and as hereinafter provided.

B Materials

Furnish materials that conform to the pertinent requirements of standard spec 522.

C (Vacant)

D Measurement

The department will measure Reinforced Concrete Endwalls (Inch) 6:1 Special as 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.0060.02	Reinforced Concrete Endwalls 24-Inch 6:1 Special	Each
SPV.0060.03	Reinforced Concrete Endwalls 30-Inch 6:1 Special	Each
SPV.0060.04	Reinforced Concrete Endwalls 19x30-Inch 6:1 Special	Each
SPV.0060.05	Reinforced Concrete Endwalls 24x38-Inch 6:1 Special	Each

Payment for the Reinforced Concrete Endwalls Special bid item is full compensation for providing all materials, including all masonry, pipe connections and other fittings; for furnishing all excavating, backfilling, disposing of surplus material, and for cleaning out and restoring the work site.

38. Covering Inlets, Item SPV.0060.06.

A Description

This special provision describes furnishing and installing a steel plate to cover the open inlet structures after the grading work has been completed on STH 26. The covers shall remain in place until no longer needed.

B Materials

Provide a 0.25-inch minimum thickness steel plate that extends to the outside edge of the existing masonry.

C (Vacant)

D Measurement
The department will measure Covering Inlets as 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.0060.06	Covering Inlets	Each

Payment is full compensation for furnishing, installing and removing the cover plates.

39. Reinforced Concrete Pipe Tee 30-Inch, Item SPV.0060.07.

A Description
This special provision describes constructing Reinforced Concrete Pipe Tee 30-Inch as shown in the plans in accordance to standard spec 520, and as hereinafter provided.

B Materials
Furnish materials that conform to the pertinent requirements of standard spec 520.

C (Vacant)

D Measurement
The department will measure Reinforced Concrete Pipe Tee 30-Inch as 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.0060.07	Reinforced Concrete Pipe Tee 30-Inch	Each

Payment for the Reinforced Concrete Pipe Tee 30-Inch bid item is full compensation for providing and installing all materials, including all masonry, pipe connections and other fittings; for furnishing all excavating, backfilling, disposing of surplus material, and for cleaning out and restoring the work site.

40. Diversion Channels, Item SPV.0060.08.

A Description
This special provision describes constructing Diversion Channels as shown in the plans.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Diversion Channels as 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.0060.08	Diversion Channels	Each

Payment for the Diversion Channels bid item is full compensation for providing all materials, for furnishing all excavating, backfilling, disposing of surplus material, and for cleaning out and restoring the work site. The Concrete Stone Size No. 2 and Polyethylene Sheeting will be paid for separately.

41. Removing Pavement Markings Water Blasting, Item SPV.0090.01.

A Description
Remove pavement markings by water blasting with a vacuum recovery system.

B Materials
All materials shall conform to the requirements of standard spec 646 and as hereinafter provided.

C Construction
The water blaster shall remove the stripe from the pavement using a high pressurized water spray with a vacuum recovery system to provide a clean, almost dry surface, without the use of a secondary cleanup process. The removal shall be to the satisfaction of the engineer. The equipment shall contain a storage system that allows for the storage of the wastewater while retaining the debris. The operator shall be in immediate control of the blast head.

D Measurement
The department will measure Removing Pavement Markings Water Blasting by the linear foot of removed pavement markings, 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.0090.01	Removing Pavement Markings Water Blasting	LF

Payment is full compensation for pavement markings by water blasting with a vacuum recovery system.

42. Fence Chain Link Polymer-Coated 6-FT, Item SPV.0090.02.

A Description

This special provision describes furnishing and installing a new polymer-coated fence system on structures in accordance to the pertinent plan details, as directed by the engineer and as hereinafter provided. The color of all components in this fence system shall be the same and shall be as specified on the plans.

B Materials

All materials for this fence system shall be new stock, free from defects impairing strength, durability, and appearance. Fabric shall be produced by methods recognized as good commercial practice. Wire used in the manufacture of the fabric shall be capable of being woven into fabric without the polymer-coating cracking or peeling. Pipes used in framework shall be straight, true to section and free of defects. All burrs at the ends of pipes shall be removed before galvanizing. The polymer-coating shall be a dense impervious covering, applied without voids, tears or cuts that reveal the substrate. Excessive roughness, bubbles, blisters and flaking in the polymer-coating will be a basis for rejection.

B1 Fabric

Provide steel chain link fence fabric that conforms to the requirements of ASTM F668, Class 2b, a polymer-coating fused and adhered to wire that is zinc-coated. Provide fabric woven from 9-gage wire using plan specified mesh size, diamond pattern, with both the top and bottom selvages knuckled. The minimum breaking strength of the wire shall be 1290 lbs. The color of polymer-coating shall conform to the requirements of ASTM F934.

B2 Framework

Provide steel rails, posts and post sleeves conforming to the requirements of ASTM F1083, Standard Weight Pipe (Schedule 40) of the size (O.D.) and weight as shown on the plans. The minimum yield strength shall be 30,000 psi and the minimum tensile strength shall be 48,000 psi. These components shall be zinc-coated inside and outside by the hot-dip process as stated in ASTM F1083. Provide polymer-coating over zinc-coating that conforms to ASTM F1043. The color of polymer-coating shall conform to the requirements of ASTM F934, and match the color of the other fence components. Weld base plate to posts or post sleeves and complete any additional welding of components before galvanizing.

B3 Fittings

Provide end post caps, line post caps, top rail sleeves, rail ends, line rail clamps, brace bands, tension bands, tension bars, and tie wires that are steel and conform to the requirements of ASTM F626. Tie wires shall be round and 9-gage wire. These components (excluding tie wires) shall be zinc-coated by the hot-dip process as stated in ASTM F626. Provide polymer-coating over zinc-coating on components (excluding tie wires) that conforms to the requirements of ASTM F626. For tie wires, provide polymer-coating on wire that is zinc-coated using the same procedure as used for the wires in the

fence fabric. End post caps and line post caps shall fit tightly over posts to prevent moisture intrusion. Supply dome style caps for end posts and loop type caps for line posts. The color of polymer-coating shall conform to the requirements of ASTM F934, and match the color of the other fence components.

B4 Bolts

All bolts are to be supplied with lock washers and nuts. Use galvanized steel bolts, nuts and washers per plan details.

B5 Tests

B5.1 Fabric and Tie Wire

Breaking Strength:	ASTM A370
Zinc-Coating Requirements	
Weight of Zinc-Coating:	ASTM A90
Polymer-Coating Requirements	
Thickness of Polymer-Coating:	ASTM F668
Adhesion: ASTM F668	
Accelerated Aging Test:	ASTM F668, D1499
Mandrel Bend Test:	ASTM F668

B5.2 Framework

Tensile and Yield Strength:	ASTM E8
Zinc-Coating Requirements	
Weight of Zinc-Coating:	ASTM A90
Polymer-Coating Requirements	
Thickness of Polymer-Coating:	ASTM E376
Adhesion:	ASTM F1043
Accelerated Aging Test:	ASTM F1043, D1499

B5.3 Fittings

Zinc-Coating Requirements	
Weight of Zinc-Coating:	ASTM A90Polymer-Coating Requirements
Thickness of Polymer-Coating:	ASTM F626
Adhesion:	ASTM F1043 (same test as for framework)
Accelerated Aging Test:	ASTM F1043, D1499 (same test as for framework)

B6 Submittals

In addition to the engineer, send submittals listed in this section to the name below for informational purposes:

David Nelson
WisDOT, Bureau of Structures
4802 Sheboygan Ave., Room 601
PO Box 7916
Madison, WI 53707

B6.1 Shop Drawings
Submit shop drawings showing the details of fence construction. Show the fence height, post spacing, rail location, and all dimensions necessary for the construction of the chain link fence. Label the end posts, line posts, rails, post sleeves, top rail sleeves, bolts and fittings. State the polymer-coating type used on the fabric, framework and fittings and the Class of coating used on the fabric. State the color of polymer-coating to be used on the fence components. For the fabric, state the wire gage, mesh size, and type of selvages used. For the framework, state the size (O.D.) and unit weight for the posts and rails. For the fittings, state the size for top rail sleeves, brace bands, tension bands, tension bars, line rail clamps, size and type of bolts, and the tie wire gage. State the material type used for fabric, framework, and fittings. Also give the breaking strength for the fabric wire and the tensile and yield strength properties for the framework.

B6.2 Specification Compliance
Submit certification of compliance with material specifications. Provide material certification and test documentation for fabric, framework, fittings and hardware that shows that all materials meet or exceed the specifications of this contract and the tests in B5. This document shall provide the name, address and phone number of the manufacturer, and the name of a contact person.

C Construction
C1 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 condition of materials is in conformance with these specifications. If polymer-coating is damaged, Contractor shall repair or replace components as necessary to the approval of the engineer at no additional cost to the Owner. Carefully store material off the ground to ensure proper ventilation and drainage and to provide protection against damage caused by ground moisture. Handle all polymer-coated material with care.

C2 Touch-up and Repair
For minor damage caused by shipping, handling or installation to polymer-coated surfaces, touch-up the finish in conformance with the manufacturer's recommendations. Provide touch-up coating such that repairs are not visible from a distance of 6-feet. If damage is beyond repair, the fencing component 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.

C3 General
Install the chain link fence in accordance to ASTM F567 and the manufacturer's instructions. The contractor shall provide staff that is thoroughly familiar with the type of construction involved and materials and techniques specified. Chain link fabric shall be installed on the side of the posts indicated on the plans. Fabric shall be attached to the end posts with tension bars and tension bands. It shall be attached to rails, and posts without tension bands, with tie wires. The fabric shall be installed and pulled taut to provide a

smooth and uniform appearance free from sag, without permanently distorting the fabric diamond or reducing the fabric height. Install top rail to pass through line post caps and form a continuous brace between end posts. Minimum length of top rail between splices shall be 20-feet. Splice top rail at joints with sleeves for a rigid connection. Locate splices near ¼ point of post spacing. Heads of bolts shall be on the side of the fence adjacent to pedestrian traffic.

D Measurement
The department will measure Fence Chain Link Polymer-Coated 6-FT 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.0090.02	Fence Chain Link Polymer-Coated 6-FT	LF

Payment is full compensation for fabricating, galvanizing and polymer-coating all fence components, and transporting to jobsite; for erecting components to create a polymer-coated fence system, including any touch-up and repairs.

43. Abandon and Seal Existing 24-Inch Culvert Pipe, Item SPV.0105.01.

A Description
Abandon and seal the existing culvert in accordance to the pertinent requirements of standard spec 204 and as hereinafter provided.

B Materials
Provide grouting material consisting of one part by volume Portland cement Type I or II, three parts by volume sand, and water to achieve required fluidity. Provide sand meeting the requirements of fine aggregates in standard spec 501.2.5. Provide water meeting the requirements of standard spec 501.2.4.

C Construction
Thoroughly clean the ends of the existing culvert and seal them with brick, concrete block, any grade of concrete specified under standard spec 501.3.1.3, or by any other method approved by the engineer that will sufficiently contain the grouting material.

Completely fill the existing culvert with grouting material in a manner that will leave no voids inside the culvert. The contractor may place grout in lifts to prevent excessive forces on the walls of the existing culvert or on the end seals. Contain any water that is displaced during grouting operations in a settling basin before allowing it to return to the stream.

D Measurement
The department will measure Abandon and Seal Existing 24-Inch Culvert Pipe as a single lump sum unit of work, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Abandon and Seal Existing 24-Inch Culvert Pipe	LS

Payment is full compensation for furnishing all materials, for cleaning the ends of the existing culvert prior to constructing end seals, for constructing end seals, for placing or pumping grouting material, for containing any displaced water, and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

44. Railing Pipe Galvanized R-14-15, Item SPV.0105.02; R-14-16, Item SPV.0105.03.

A Description

This special provision describes fabricating, galvanizing, painting and installing railing in accordance to standard spec 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.

B1 Coating System

B1.1 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.

B1.2 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 applier. 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. Time[1] Between Coats (hours)**
Sherwin Williams 1051 Perimeter Dr Suite 710 Schaumburg, IL 60173 (847) 330-1562	Tie Top	Recoatable Epoxy Primer B67-5 Series / B67V5 Acrolon 218 HS Polyurethane, B65-650	2.0 to 4.0 2.0 to 4.0	6 NA
Carboline 350 Hanley Industrial St. Louis, MO 63144 (314) 644-1000	Tie Tie Tie Top	Rustbond Penetrating Sealer FC Carboguard 60 Carboguard 635 Carbothane 133 LH (satin)	1 4.0 to 6.0 4.0 to 6.0 4	36 10 1 NA
Wasser Corporation 4118 B Place NW Suite B Auburn, WA 98001 (253) 850-2967	Tie Top	MC-Ferrox B 100 MC-Luster 100	3.0 to 5.0 2.0 to 4.0	8 NA

Manufacturer	Coat	Products	Dry Film Minimum Thickness (mils)	Min. Time[1] Between Coats (hours)
PPG Protective and Marine Coatings P.O. Box 192610 Little Rock, AR 72219-2610 (414) 339-5084	Tie Top	Amercoat 399 Amercoat 450H	3.0 to 5.0 2.0 to 4.0	3 NA

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

B2 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

C1 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.

C2 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 Pipe Galvanized (Structure) as a single lump sum unit of work for each structure where railing is acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.02	Railing Pipe Galvanized R-14-15	LS
SPV.0105.03	Railing Pipe Galvanize R-14-16	LS

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

45. Wall Concrete Panel Mechanically Stabilized Earth LRFD, Item SPV.0165.01.

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 Mechanically Stabilized Earth Concrete Panel Wall Systems

The supplied wall system must be from the department's approved list of concrete panel mechanically stabilized earth wall systems.

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 department's Bureau of Structures, Structures Design Section. 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. The name of the pre-approved proprietary wall system selected shall be furnished to the engineer within 25 days after the award of contract. The location of the plant manufacturing the concrete panels shall be furnished to the engineer at least 14 days prior to the start of panel production.

To receive pre-approval, the retaining wall system must comply with all pertinent requirements of this provision. 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 LRFD Bridge Manual. Information and assistance with the pre-approval process can be obtained by contacting the Structures Design 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 the proposed wall design is in compliance with the design specifications.

The plans and shop drawings 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 8 ½ 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, shop drawings, and calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

The design shall be in compliance with the *AASHTO LRFD Bridge Design Specifications 5th Edition 2010*, (AASHTO LRFD) with latest interim specifications for Mechanically Stabilized Earth Walls, WisDOT's current *Standard Specifications for Highway and Structure Construction* (Standard Specifications), Chapter 14 of the WisDOT LRFD Bridge Manual and standard engineering design procedures as determined by the Department. Loads, load combinations, load and resistance factors shall be as specified in AASHTO LRFD Section 11. The associated resistance factors shall be defined in accordance to Table11.5.6-1 LRFD.

Design and construct the walls in accordance to the lines, grades, heights and dimensions shown on the plans, as herein specified, and as directed by the engineer. Where wall or wall sections intersect with an included angle of 130 degrees or less, a vertical corner element separate from the standard panel face shall abut and interact with the opposing standard panels. The corner element shall have ground reinforcement connected specifically to that panel and shall be designed to preclude lateral spread of the intersecting panels. If the wall is installed in front of a bridge abutment or wing, it shall also be designed to resist the applied abutment/bridge lateral forces specified on the contract plans.

Walls parallel to supporting highway traffic shall be designed for the effects of highway surcharge loading equivalent of 2 feet soil surcharge weight or 240 psf. The design shall also consider the traffic barrier impact where applicable. Walls that do not carry highway traffic shall be designed for a live load surcharge of 100 psf in accordance to Chapter 14 of the WisDOT LRFD Bridge Manual or as stated on the plans.

A maximum value of the angle of internal friction of the wall backfill material used for design shall be assumed to be 30 degrees without a certified report of tests. If a certified report of tests yields an angle of internal friction greater than 30 degrees, the larger test value may be used for design, up to a maximum value of 36 degrees.

An external stability check at critical wall stations showing Capacity Demand Ratios (CDR) for sliding, eccentricity, and bearing checks is performed by the department and are provided on the wall plans.

The design of the Wall Concrete Panel Mechanically Stabilized Earth by the contractor shall consider the internal and compound stability of the wall mass in accordance to AASHTO LRFD 11.10.6. The internal stability shall include soil reinforcement pullout,

soil reinforcement rupture, and panel-reinforcement connection failure at each soil reinforcement level. The design shall be performed using the Simplified Method or Coherent Gravity Method. Calculations for factored stresses and resistances shall be based upon assumed conditions at the end of the design life. Compound stability shall be computed for the applicable strength limits.

Facing panels shall meet the design requirements of AASHTO LRFD 11.10.2.3. The Facing panels shall also be designed to resist compaction stresses that occur during the wall erection. The minimum thickness of the Facing panel shall be 5.5 inches. The surface area of a standard single panel cannot exceed 60 square feet. The maximum height of a standard panel shall be 5 feet. The top and bottom panels may exceed 5 foot in height based on site topography subject to the approval by the Structures Design Section. The design of the steel reinforcement within the panels shall be based on one-way bending action. Design the wall panels and joints between panels to accommodate a maximum differential settlement of 1 foot over a 100-foot length, unless the plans indicate other.

The minimum length of soil reinforcement measured from the back face of the wall shall be equal to 0.7 the wall height or as shown on the plan. In no case shall this length be less than 8 feet. The soil reinforcement length shall be the same from the bottom to the top of the wall. The soil reinforcement shall extend a minimum of 3.0 feet beyond the theoretical failure plane in all cases. The maximum vertical spacing of soil reinforcement layers shall be 31 inches. The uppermost layer of the reinforcement shall be located a minimum of six inches below the bottom of an overlying slab, footing or top of the wall. The upper layers of the soil reinforcement shall also be checked to verify that they have sufficient tensile resistance against traffic barrier impact where applicable.

All soil reinforcement steel required for the reinforced soil zone shall be connected to the face panels. The reinforcement and the reinforcement/facing connection strength shall be designed to resist maximum factored reinforcement loads in accordance to AASHTO LRFD Section 11.10.6. Facing connection strength shall be defined as the resistance factor times the failure load or the load at 0.5 inch deformation times 0.9, whichever is less. The nominal long term design strength in steel reinforcement and connections shall be based upon assumed conditions at the end of the design life.

Soil reinforcement shall be prefabricated into single or multiple elements before galvanizing. Soil reinforcement shall be fabricated or designed to avoid piling, drainage structures or other obstacles in the fill without field modifications. Cutting or altering of the basic structural section of either the strip or grid at the site is prohibited unless approved by the Structures Design Section. A minimum clearance of 3” shall be maintained between any obstruction and reinforcement unless otherwise approved. Splicing steel reinforcement is not allowed unless approved by the Structures Design Section.

MSE facing panels shall be installed on concrete leveling pads. The minimum cross section of the leveling pad shall be 6-inches deep by 1-foot wide. Potential depth of frost penetration at the wall location shall not be considered in designing the wall for depth of leveling pad.

Submit the following to the engineer for review: complete design calculations, explanatory notes, supporting materials, specifications, and detailed plans and shop drawings for the proposed wall system. Sample analyses and hand output shall be submitted to verify the output by the software. The design calculations and notes shall clearly indicate the Capacity to Demand Ratios (CDR) for all internal stabilities as defined in AASHTO LRFD.

The wall submittal package shall be submitted electronically to the engineer and Structures Design Section. Submit all required information no later than 30 days prior to beginning construction of the wall. The detailed plans and shop drawings shall include all details, dimensions, quantities and cross-sections necessary to construct the walls.

B.3 Wall System Components

Materials furnished for wall system components under this contract shall conform to the requirements of this specification. All certifications related to material and components of the wall systems specified in this subsection shall be submitted to the engineer.

B.3.1 General

The walls shall have modular precast concrete face panels produced by a wet cast process, and have cast-in-place concrete pads or footings. The concrete panels shall have a minimum strength of 4000 psi at 28 days. The panel edges shall be configured so as to conceal the joints. The detail shall be a shiplap, tongue and groove or other detail adequate to prevent vandalism or ultraviolet light damage to the backside of the wall joint covering. Joints between panels shall be no more than 0.75 inch. Use full wall height slip joints at points of differential settlement when detailed on the plan. Horizontal joints must be provided with a compressible bearing material to prevent concrete to concrete contact.

A minimum of two bearing pads shall be used per panel. The allowable bearing stress shall not exceed 900 psi. The bearing pads shall be either preformed EPDM rubber conforming to ASTM D-2000, Grade 2, Type A, Class A with a minimum Durometer Hardness of 80 or high- density polyethylene pads with a minimum density of 0.034 lb/in^3 in accordance to ASTM 1505.

An 18-inch wide geotextile shall be used on the back face of the wall panels to cover all panel joints. The geotextile shall meet the physical requirements stated in standard spec 645.2.4 for Geotextile Fabric, Type DF, Schedule B, except that the grab tensile strength shall be a minimum of 180 pounds in both the machine and cross-machine directions. The geotextile shall be attached with a standard construction adhesive suitable for use on concrete surfaces and cold temperatures. The adhesive shall be applied to the panels, not to the geotextile.

All steel portions of the wall system exposed to earth shall be galvanized. All soil reinforcement and attachment devices shall be carefully inspected to ensure they are true size and free from defects that may impair the strength and durability.

Use a wall leveling pad that consists of poured concrete masonry , Grade A, A-FA, A-S, A-T,A-IS or A-IP concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for leveling pad concrete as specified in standard spec 716.

The minimum embedment to the top of the leveling pad shall be 1 foot 6 inches or as given on the plan or given in AASHTO LRFD 11.10.2.2 whichever is greater. Step the leveling pad to follow the general slope of the ground line. The leveling pad's steps shall keep the bottom of the wall within one half the panel heights of the minimum embedment i.e. the minimum embedment plus up to one half the height of one panel. Additional embedment may be detailed by the contractor but will not be measured for payment.

B.3.2 Backfill

Furnish and place backfill for mechanically stabilized earth concrete panel walls as shown on the plans and as hereinafter provided.

Provide and use backfill that consists of natural sand or a mixture of sand with gravel, crushed gravel or crushed stone. It shall not contain recycled or milled asphalt, recycled concrete, foundry sand, bottom ash, blast furnace slag or other potentially corrosive material.

Provide material conforming to the following gradation requirements as per AASHTO T27.

Sieve Size	Percentage by Weight Passing
1 inch	100
No. 40	0 - 60
No. 200	0 - 15

The material shall have a liquid limit not greater than 25, as per AASHTO T89, and a plasticity index not greater than 6, as per AASHTO T90. In addition, backfill material shall meet the following requirements.

Test	Method	Value
pH	AASHTO T-289	5 – 10.0
Sulfate content	AASHTO T-290	200 ppm max.
Chloride content	AASHTO T-291	100 ppm max.
Electrical Resistivity	AASHTO T-288	3000 ohm/cm min.
Organic Content	AASHTO T-267	1.0% max.
Angle of Internal Friction	AASHTO T-236	30 degrees min.

Prior to placement of the backfill, obtain and furnish to the engineer a current certified report of test results that the backfill material complies with the requirements of this specification. This certified report of test shall be less than 6 months old. Tests will be performed by a certified independent laboratory. When backfill characteristics and/or sources change, a certified report of tests will be provided for the new backfill material.

C Construction

C.1 Excavation and Backfill

Excavation will encompass the preparation of the foundation for the leveling pad and the reinforcing strips in accordance to standard spec 206. The volume of excavation covered is limited to the width of the reinforced mass and to the depth of the leveling pad unless shown or noted otherwise on the plan. 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 back of the wall.

Compact all backfill behind the wall as specified in standard spec 207.3.6.

Backfill placement shall closely follow the erection of each course of panels. Compact the backfill to 95.0% of maximum density as determined by AASHTO T-99, Method C. Compaction of backfill within 3 feet of the back face of the wall should be accomplished using lightweight compaction devices. Use of heavy compaction equipment or vehicles should be avoided within 3 feet of the panels.

Perform compaction testing on the backfill. When performing nuclear testing, use a nuclear gauge from the department's approved list, ensure that the operator is a HTCP certified Nuclear Density Technician I, and conform to CMM 8.15 for testing and gauge monitoring methods. Conduct testing at a minimum frequency of 1 test per 2 feet of vertical wall height, per 200 feet length of wall, or major portion thereof. At least one test for every 2-foot of vertical wall height is required. Test sites will be selected using ASTM Method D3665. Deliver documentation of all compaction testing results to the engineer at the time of testing. The cost of compaction testing shall be considered incidental to the cost of the wall.

Place and compact the MSE backfill to the level of the next higher layer of MSE reinforcement before placing the MSE reinforcement or connecting it to the wall facing. The MSE reinforcement shall lay horizontally on top of the most recently placed and compacted layer of MSE backfill. Bending of MSE reinforcement that result in a kink in the reinforcement shall not be allowed. If skewing of the reinforcement is required due to obstruction in the reinforced fill, the maximum skew angle shall not exceed 15 degrees from the normal position unless a greater skew angle is shown on the plans. The adequacy of the skewed reinforcement in such a case shall be addressed by supporting calculations.

C.2 Panel Tolerances

As backfill material is placed behind a panel, maintain the panel in its proper inclined position according to the supplier specifications and as approved by the engineer. The supplier shall specify the back batter so that the final position of the wall is vertical. Vertical tolerances and horizontal alignment tolerances shall not exceed ¾-inch when measured along a 10-foot straight edge. The maximum allowable offset in any panel joint shall be ¾-inch. The overall vertical tolerance of the wall (plumbness from top to bottom) shall not exceed ½-inch per 10 feet of wall height. Erect the precast face panels to ensure that they are located within 1 inch from the contract plan offset at any location to ensure proper wall location at the top of the wall. Provide a ¾-inch joint separation between all adjacent face panels to prevent direct concrete-to-concrete contact. Maintain this gap by the use of bearing pads and/or alignment pins. Failure to meet this tolerance may cause the engineer to require the contractor to disassemble and re-erect the affected portions of the wall. In addition, imperfect molding, honeycombing, cracking or severe chipping of panels shall be cause of panel rejection.

C.3 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. After completing wall excavation of the entire reinforced soil zone, notify the department and allow the Regional Soils Engineer two working days to review the foundation.

D Measurement

The department will measure Wall Concrete Panel Mechanically Stabilized Earth LRFD in area by the square foot, acceptably completed, measured as the vertical area within the pay limits the contract plan show. No other measurement of quantities shall be made in the field. Unless the engineer directs in writing, a change to the limits indicated on the contract plan, 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
SPV.0165.01	Wall Concrete Panel Mechanically Stabilized Earth LRFD	SF

Payment is full compensation for supplying a design and shop drawings; preparing the site, including all necessary excavation and disposal of materials; supplying all necessary wall components to produce a functional system including cap and copings; constructing the retaining system and drainage system; providing backfill, backfilling, compacting, performing compaction testing; and for furnishing all tools, labor, equipment, and incidentals necessary to complete the contract work. Parapets, railings, abutment bodies and other items above the wall cap or coping will be paid for separately. Vehicle barrier and its support will be paid 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.

46. Geogrid Reinforcement, Item SPV.0180.01.

A Description

This special provision describes furnishing and installing geogrids for subgrade stabilization, base reinforcement, or pavement structure applications in accordance to the plans, standard spec 645, and as hereinafter provided.

B Materials

Provide geogrid that consists of either single or joined multiple layers of a uniform rectangular grid of bonded, formed, or fused polymer tensile strands crossing with a nominal right angle orientation. The polymer shall consist of polyester, polypropylene, polyamide, or polyetheylene. The grid shall maintain dimensional stability during handling, placing, and installation. The geogrid shall be insect, rodent, mildew, and rot resistant. Minimum geogrid width shall be 6.0 feet.

Provide geogrid that complies with the following physical properties:

Test	Method	Value [(1)]
Tensile Strength at 5% Strain, Both Principal Directions (lb/ft)	ASTM D 4595 [(2)]	450 min.
Flexural Rigidity Both Principal Directions (mg-cm)	ASTM D 1388 [(3)]	150,000 min.
Aperture Area (in^2)	Inside Measurement [(4)]	5.0 max.
Aperture Dimension (in)	Inside Measurement [(4)]	0.5 min.

All numerical values represent minimum/maximum average roll values, i.e. the average minimum test results on any roll in a lot should meet or exceed the minimum specified value.

The tensile strength (T) of a joined multi-layered geogrid shall be computed using the following equation:

$$T = n(f)t$$

Where

n = the number of individual layers in the joined multi-layered geogrid,

t = the tensile strength of a single layer of geogrid as determined using testing method ASTM D4595, and

f = reduction factor based on the number of layers comprising the multi-layered system and determined by the equation f=1.00 - [0.04(n - 1)].

Values shall be determined by Option "A" (Cantilever Test) of testing method ASTM D1388 using test specimens that are 36 inches ±0.04 inch long. Test specimen widths for differing geogrids shall be variable and equal to 1 element plus ½ the aperture width on both sides of that element. An element is defined as the minimum number of parallel strands that form a distinguishable repeating pattern.

Aperture Area and Aperture Dimension for joined multi-layer geogrids shall be determined based on measurement of a single layer of the geogrid.

Protect the geogrid from ultraviolet radiation and from damage due to shipping and handling. Keep the geogrid dry until it is installed. The geogrid rolls shall be clearly marked to identify the material contained.

Deliver a sample of the geogrid material to the engineer at least 10 days prior to its incorporation into the work. At the same time, furnish a manufacturer's Certified Report of Test or Analysis that verifies that the geogrid delivered for use on the work meets the above requirements. Samples of geogrid for test purposes will be obtained from the job site for each 10,000 square yards or portions thereof used on the contract.

C Construction

Prior to placement of the geogrid, bring the indicated placement surface to the required lines, grades, and dimensions as shown on the plans. Smooth and shape the surface to eliminate any rocks, clods, roots, or other items that may cause damage to the geogrid during placement or covering.

Place the geogrid on the prepared surface at the locations and to the limits as shown on the plans. After placement, pull the geogrid taut and secure it using pins, clips, staples, or other devices to prevent movement or displacement. Place parallel strips of geogrid with a minimum overlap of 6 inches. Lap butt joints between roll ends a minimum of 12 inches. Fasten all lapped sections together by using ties, straps, clips, or other devices to develop a secure joint that meets the approval of the engineer. No vehicles or construction equipment shall be permitted to operate directly on the geogrid.

Cover small rips, tears, or defects in the geogrid with an additional section of geogrid; secure the additional geogrid in place so that it overlaps the damaged area by at least 3 feet in all directions. Remove and replace geogrid sections with large rips, tears, defects, or other damage at the direction of the engineer. All costs to repair or replace damaged or defective geogrid shall be the responsibility of the contractor.

After placement, cover the geogrid to the indicated depth with the type of material required on the plans or in the special provisions. Placing, spreading, and compacting of this material shall comply with the applicable sections of the standard specifications or special provisions except that the initial lift of material placed on the geogrid must be at least 4 inches. Place, spread, and compact the required backfill material so that the

geogrid is not displaced or damaged. The engineer may require changes in equipment and/or operations to prevent such damage or displacement.

D Measurement
The department will measure Geogrid Reinforcement by the square yard of surface area upon which the geogrid has been placed 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.0180.01	Geogrid Reinforcement	SY

Payment is full compensation for furnishing, transporting, and installing the geogrid; and for furnishing and installing all devices and materials necessary to join or secure the geogrid in place.

47. Select Crushed Material Intercepting Groundwater, Item SPV.0180.02.

A Description
This special provision describes excavating, grading, shaping and compacting as necessary to place Select Crushed Material in ditch locations, as shown on the plans, in accordance to the pertinent requirements of the standard specifications, and as hereinafter provided.

B Materials
Furnish material that conforms to the requirements of the standard spec 312 for Select Crushed Material.

C (Vacant)

D Measurement
The department will measure Select Crushed Material Intercepting Groundwater by the square yard of surface area upon which the select crushed material has been placed 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.0180.02	Select Crushed Material Intercepting Groundwater	SY

Payment is full compensation for excavation, providing and placing select crushed material, restoring adjacent work, and for disposing of surplus material.

48. Soil Loosening Special, Item SPV.0180.03.

A Description

After removing the pavement, aggregate and the fill placed on the previous project (1390-04-96), loosen the subgrade prior to placing the final topsoil per the plan detail, as directed by the engineer, and as hereinafter provided.

B (Vacant)

C Construction

Loosen the subgrade under the temporary road before topsoil placement. Schedule a 50-foot test and demonstrate competence to the engineer prior to continuing operations. The engineer shall identify the test area. Loosen temporary road subgrade to a depth of 20 inches of the in-place material. After obtaining approval by the engineer that the equipment and methods are sufficient to perform the work, complete the soil loosening. Work done without the engineer's approval will be considered as unauthorized work.

Complete the soil loosening in one pass. Loosen the soil by a commercially available, multi-shanked implement attached to track-type equipment. 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. The infiltration depth shall be a minimum 20 inches. If soils are saturated, delay operations until the soil has dried enough to allow the soil loosening operations to adequately proceed.

Upon completion and acceptance of the loosened soil areas, grade topsoil as described in standard spec 625.3.3, except that only light-weight equipment, as approved by the engineer, may be used to place and spread topsoil and to break down clods and lumps. Drive no other equipment over the loosened soil areas after the topsoil is finish-graded. Any loosened soil areas that are re-compacted must be re-loosened and finish-graded at no expense to the department.

D Measurement

The department will measure Soil Loosening Special by the square yard, 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.0180.03	Soil Loosening Special	SY

Payment is full compensation for loosening the temporary road subgrade.

49. Salvaged Topsoil Special, Item SPV.0180.04.

A Description
This special provision describes removing, placing, spreading and stockpiling salvaged topsoil as indicated on the plan in accordance to standard spec 625 and the special provisions provided herein.

B Materials
This work shall be in accordance with standard spec 625.2.

C Construction
Perform the work in accordance with standard spec 625.3, the plans and as hereinafter provided.

Amend standard spec 625.3.2, Processing Topsoil or Salvaged Topsoil, paragraph (2) to read as follows:

(2) Strip off all the humus-bearing soil within the locations designated in the plans. Take care to minimize removing the underlying sterile soil. Then stockpile the topsoil on the right of way. The stockpiled Salvaged Topsoil Special shall not be used to topsoil any other areas other than those shown in the plans. Prior to removing the temporary road, strip off the existing Salvaged Topsoil Special from the temporary road side slopes and re-stockpile the material. Upon removal of the temporary road, the stockpiled Salvaged Topsoil Special shall be placed back to its original depth and in its original location.

D Measurement
The department will measure Salvaged Topsoil Special by the square yard, 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.0180.04	Salvaged Topsoil Special	SY

Payment is full compensation for removing, stockpiling, reclaiming, hauling, and placing this material.

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 PROVISION 6

ASP 6 - Modifications to the standard specifications

Make the following revisions to the 2014 edition of the standard specifications:

101.3 Definitions

Replace the definition of semi-final estimate with the following effective with the December 2013 letting:

Semi-final estimate An estimate indicating the engineer has measured and reported all contract quantities and materials requirements.

105.11.1 Partial Acceptance

Replace paragraph two with the following effective with the December 2013 letting:

(2) Partial acceptance will relieve the contractor of maintenance responsibility for the designated portion of the work. By relieving the contractor of maintenance, the department does not relieve the contractor of responsibility for defective work or damages caused by the contractor's operations. Do not construe partial acceptance to be conditional final acceptance or final acceptance of any part of the project, or a waiver of any legal rights specified under 107.16.

105.11.2 Final Acceptance

Retitle and replace the entire text with the following effective with the December 2013 letting:

105.11.2 Project Acceptance

105.11.2.1 Inspection

105.11.2.1.1 General

(1) Notify the engineer when the project is substantially complete as defined in 105.11.2.1.3. As soon as it is practical, the engineer will inspect the work and categorize it as one of the following:

1. Unacceptable or not complete.
2. Substantially complete.
3. Complete.

105.11.2.1.2 Unacceptable or Not Complete

(1) The engineer will identify, in writing, work that is unacceptable or not complete. Immediately correct or complete that work. The engineer will assess contract time until the work is corrected or completed.

(2) Proceed as specified in 105.11.2.1.1 until the engineer determines that the work is complete.

105.11.2.1.3 Substantially Complete

(1) The project is substantially complete and the engineer will no longer assess contract time if the contractor has completed all contract bid items and change order work, except for the punch-list. As applicable, the following must have occurred:

1. All lanes of traffic are open on a finished surface.
2. All signage and traffic control devices are in place and operating.
3. All drainage, erosion control, excavation, and embankments are completed.
4. All safety appurtenances are completed.

(2) The engineer will provide a written punch-list enumerating work the contractor must perform and documents the contractor must submit before the the engineer will categorize the work as complete.

1. Punch-list work includes uncompleted cleanup work required under 104.9 and minor corrective work. Immediately correct or complete the punch-list work. The engineer may restart contract time if the contractor does not complete the punch-list work within 5 business days after receiving the written punch-list. The engineer and contractor may mutually agree to extend this 5-day requirement.
2. Punch-list documents include whatever contract required documentation is missing. The engineer may restart contract time if the contractor does not submit the punch-list documents within 15 business days after receiving the written punch-list. The engineer and contractor may mutually agree to extend this 15-day requirement.

(3) Proceed as specified in 105.11.2.1.1 until the work is complete.

105.11.2.1.4 Complete

(1) The project is complete when the contractor has completed all contract bid items, change order work, and punch-list work including the submission of all missing documentation.

105.11.2.2 Conditional Final Acceptance

(1) When the engineer determines that the project is complete, the engineer will give the contractor written notice of conditional final acceptance relieving the contractor of maintenance responsibility for the completed work.

105.11.2.3 Final Acceptance

(1) The engineer will grant final acceptance of the project after determining that all contract is work complete; all contract, materials, and payroll records are reviewed and approved; and the semi-final estimate quantities are final under 109.7.

(2) Failure to discover defective work or materials before final acceptance does not prevent the department from rejecting that work or those materials later. The department may revoke final acceptance if the department discovers defective work or materials after it has accepted the work.

105.13.3 Submission of Claim

Replace paragraph one with the following effective with the December 2013 letting:

(1) Submit the claim to the project engineer as promptly as possible following the submission of the Notice of Claim, but not later than final acceptance of the project as specified in 105.11.2.3. If the contractor does not submit the claim before final acceptance of the project, the department will deny the claim.

107.17.3 Railroad Insurance Requirements

Replace paragraph one with the following effective with the December 2013 letting:

(1) If required by the special provisions, provide or arrange for a subcontractor to provide railroad protective liability insurance in addition to the types and limits of insurance required in 107.26. Keep railroad protective liability insurance coverage in force until completing all work, under or incidental to the contract, on the railroad right of way or premises of the railroad and until the engineer determines that the work is complete as specified in 105.11.2.1.4.

107.26 Standard Insurance Requirements

Replace paragraph one with the following effective with the December 2013 letting:

(1) Maintain the following types and limits of commercial insurance in force until the engineer determines that the work is complete as specified in 105.11.2.1.4.

TABLE 107-1 REQUIRED INSURANCE AND MINIMUM COVERAGES

TYPE OF INSURANCE	MINIMUM LIMITS REQUIRED[1]
1. Commercial general liability insurance endorsed to include blanket contractual liability coverage.[2]	$2 million combined single limits per occurrence with an annual aggregate limit of not less than $4 million.
2. Workers' compensation.	Statutory limits
3. Employers' liability insurance.	Bodily injury by accident: $100,000 each accident Bodily injury by disease: $500,000 each accident $100,000 each employee
4. Commercial automobile liability insurance covering all contractor-owned, non-owned, and hired vehicles used in carrying out the contract.[2]	$1 million-combined single limits per occurrence.

[1] The contractor may satisfy these requirements with primary insurance coverage or with excess/umbrella policies.

[2] The Wisconsin Department of Transportation, its officers, agents, and employees shall be named as an additional insured under the general liability and automobile liability insurance.

108.14 Terminating the Contractor's Responsibility

Replace paragraph one with the following effective with the December 2013 letting:

(1) The contractor's responsibilities are terminated, except as set forth in the contract bond and specified in 107.16, when the department grants final acceptance as specified in 105.11.2.3.

109.2 Scope of Payment

Replace paragraph two with the following effective with the December 2013 letting:

(2) The department will pay for the quantity of work acceptably completed and measured for payment as the measurement subsection for each bid item specifies. Within the contract provide means to furnish and install the work complete and in-place. Payment is full compensation for everything required to perform the work under the applicable bid items including, but not limited to, the work elements listed in the payment subsection. Payment also includes all of the following not specifically excluded in that payment subsection:

1. Furnishing and installing all materials as well as furnishing the labor, tools, supplies, equipment, and incidentals necessary to perform the work.
2. All losses or damages, except as specified in 107.14, arising from one or more of the following:
   - The nature of the work.
   - The action of the elements.
   - Unforeseen difficulties encountered during prosecution of the work.
3. All insurance costs, expenses, and risks connected with the prosecution of the work.
4. All expenses incurred because of an engineer-ordered suspension, except as specified in 104.2.2.3.
5. All infringements of patents, trademarks, or copyrights.
6. All other expenses incurred to complete and protect the work under the contract.

109.6.1 General

Replace paragraphs three and four with the following effective with the December 2013 letting:

(3) The department's payment of an estimate before conditional final acceptance of the work does not constitute the department's acceptance of the work, and does not relieve the contractor of responsibility for:

1. Protecting, repairing, correcting, or renewing the work.
2. Replacing all defects in the construction or in the materials used in the construction of the work under the contract, or responsibility for damage attributable to these defects.

(4) The contractor is responsible for all defects or damage that the engineer may discover on or before the engineer's conditional final acceptance of the work. The engineer is the sole judge of these defects or damage, and the contractor is liable to the department for not correcting all defects or damage.

109.7 Acceptance and Final Payment

Replace paragraphs one and two with the following effective with the December 2013 letting:

(1) After the engineer grants conditional final acceptance of the work as specified in 105.11.2.2 and reviews required document submittals and materials test reports, the engineer will issue the semi-final estimate.

(2) Within 30 calendar days after receiving the semi-final estimate, submit to the engineer a written statement of agreement or disagreement with the semi-final estimate. For an acceptable statement of disagreement, submit an item-by-item list with reasons for each disagreement. If the contractor does not submit this written statement within those 30 days, the engineer will process the final estimate for payment. The engineer and the contractor can mutually agree to extend this 30-day submission requirement.

450.3.3 Maintaining the Work

Replace paragraph one with the following effective with the December 2013 letting:

(1) Protect and repair the prepared foundation, tack coat, base, paved traffic lanes, shoulders, and seal coat. Correct all rich or bleeding areas, breaks, raveled spots, or other nonconforming areas in the paved surface.

455.3.2.5 Maintaining Tack Coat

Replace paragraph one with the following effective with the December 2013 letting:

(1) Protect and repair the existing surface and the tack coat. Correct areas with excess or deficient tack material and any breaks, raveled spots, or other areas where bond might be affected.

520.3.8 Protection After Laying

Delete the entire subsection.

614.2.1 General

Replace paragraphs five and six with the following effective with the December 2013 letting:

(5) Furnish zinc coated wire rope and fitting conforming to the plans and galvanized according to ASTM A741.

(6) Before installation store galvanized components above ground level and away from surface run off. The department may reject material if the zinc coating is physically damaged or oxidized.

(7) Provide manufacturer's drawings, and installation and maintenance instructions when providing proprietary systems.

614.2.3 Steel Rail and Fittings

Replace paragraph one with the following effective with the December 2013 letting:

(1) Furnish galvanized steel rail conforming to AASHTO M180 class A, type II beam using the single-spot test coating requirements. Furnish plates, anchor plates, post mounting brackets, and other structural steel components conforming to 506.2.2.1 and hot-dip galvanized according to ASTM A123.

614.2.7 Crash Cushions

Replace paragraph one with the following effective with the December 2013 letting:

(1) Furnish permanent and temporary crash cushions from the department's approved products list. Use cushions as wide or wider than the plan back-width. Furnish transitions conforming to the crash cushion manufacturer's design and specifications. Submit manufacturer crash cushion and transition design details to engineer before installing.

616.3.1 General

Replace paragraph six with the following effective with the December 2013 letting:

(6) Remove and dispose of all excess excavation and surplus materials from the fence site.

618.3.3 Restoration

Replace paragraph one with the following effective with the December 2013 letting:

(1) Upon termination of hauling operations and before conditional final acceptance, restore all haul roads, including drainage facilities and other components, to the equivalent of pre-hauling conditions.

627.3.1 General

Replace paragraph four with the following effective with the December 2013 letting:

(4) Maintain the mulched areas and repair all areas damaged by wind, erosion, traffic, fire or other causes.

637.3.2.1 General

Delete paragraph three effective with the December 2013 letting.

670.3.4.2 Post-Construction Work

Replace paragraph one with the following effective with the December 2013 letting:

(1) Submit 5 copies of ITS documentation including but not limited to the following:

- Operator's manual: for contractor furnished equipment, submit a manual containing detailed operating instructions for each different type or model of equipment and or operation performed.
- Maintenance procedures manuals: for contractor furnished equipment, submit a manual containing detailed preventive and corrective maintenance procedures for each type or model of equipment furnished.
- Cabinet fiber optic wiring diagram: submit a cabinet wiring diagram, identified by location for each cabinet. Include both electrical wiring and fiber optic conductor and cable connections. Place one copy of the fiber optic wiring diagram in a weatherproof holder in the cabinet. Deliver the other copies to the engineer.
- As-built drawings: submit final as-built drawings that detail the final placement of all conduit, cabling, equipment, and geometric modifications within the contract. Provide all documentation in an electronic format adhering to the region’s ITS computer aided drafting standards and according to the department’s as-built requirements. The department will review the as-built drawings for content and electronic format. Modify both the content and format of as-built drawings until meeting all requirements.
- Equipment inventory list: submit an inventory list including serial number, make, model, date installed, and location installed of all equipment installed under the contract.

Errata

Make the following corrections to the 2013 edition of the standard specifications:

415.3.14 Protecting Concrete

Correct errata by referencing the opening to service specification.

(1) Erect and maintain suitable barricades and, if necessary, provide personnel to keep traffic off the newly constructed pavement until it is opened for service as specified in 415.3.15. Conform to 104.6 for methods of handling and facilitating traffic.

501.2.9 Concrete Curing Materials

Correct errata by changing AASHTO M171 to ASTM C171.

(2) Furnish sheeting conforming to ASTM C171 for white opaque polyethylene film, except that the contractor may use clear or black polyethylene for cold weather protection.

607.2 Materials

Correct errata by changing AASHTO M198 to ASTM C990.

(1) Use materials conforming to the requirements for the class of material named and specified below.

Composite pipe, couplings, fittings and joint materials	ASTM D2680
Annular rubber and plastic gaskets for flexible, watertight joints	ASTM C990
External rubber gaskets, mastic, and protective film	ASTM C877
Mortar	519.2.3

637.2.1.3 Sheet Aluminum

Correct errata by changing ASTM B449 to B921 and eliminating the specification for coating thickness.

(4) Degrease, etch, and coat the sign blank on both sides with a chromate treatment conforming to ASTM B921, class 2.

637.3.3.4 Performance

Correct errata to reference to 105.11.2.3 as revised to implement changes to the finals process.

(1) Under 105.11.2.3 the department may revoke acceptance and direct the contractor to repair or replace previously accepted sign installations if the department subsequently discovers evidence of defective materials or improper installation. Deficiencies that warrant department action include but are not limited to the following:

- Sign posts more than five degrees out of plumb.
- Signs twisted by more than 5 degrees from plan orientation.
- Signs with delaminated or warped plywood.
- Signs with bubbling, fading, delaminating, or buckling sheeting.

646.3.3.4 Proving Period

Correct errata to reference to 105.11.2.3 as revised to implement changes to the finals process.

(4) Replace all marking within sections with a percent failing more than 10% and repair or replace all markings that, in the engineer's assessment, show evidence of improper construction. If post-acceptance inspections uncover evidence of defective materials or improper construction, the department may revoke acceptance under 105.11.2.3.

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://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm

(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://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/crc-basic-info.pdf

APRIL 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 2-28.4 to ensure compliance with this “Buy America” provision.

http://roadwaystandards.dot.wi.gov/standards/cmm/cm-02-28.pdf#cm2-28.4

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 contacts.

While the wage rates shown are the minimum rates required by the contract to be paid during its life, this in 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
DODGE COUNTY

Compiled by the State of Wisconsin - Department of Workforce Development
for the Department of Transportation
Pursuant to s. 103.50, Stats.
Issued on September 1, 2013

CLASSIFICATION: Contractors are required to call the Department of Workforce Development if there are any questions reqarding 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.

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Bricklayer, Blocklayer or Stonemason	35.58	19.20	54.78
Carpenter	30.16	15.31	45.47
Cement Finisher	31.52	16.60	48.12
Future Increase(s): Add $1.87 on 6/1/13; 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	31.54	21.19	52.73
Fence Erector	28.00	4.50	32.50
Ironworker	30.90	19.11	50.01
Line Constructor (Electrical)	31.29	15.34	46.63
Painter	26.65	13.10	39.75
Pavement Marking Operator	29.22	16.69	45.91
Piledriver	30.66	15.31	45.97
Roofer or Waterproofer	29.40	8.55	37.95
Teledata Technician or Installer	21.26	13.31	34.57
Tuckpointer, Caulker or Cleaner	32.01	16.85	48.86
Underwater Diver (Except on Great Lakes)	37.45	19.45	56.90
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	29.64	16.95	46.59
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	33.35	15.91	49.26
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.94	13.57	39.51
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.08	12.96	37.04
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	11.90	33.65

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
TRUCK DRIVERS			
Single Axle or Two Axle	33.22	18.90	52.12
Three or More Axle	23.31	17.13	40.44
Future Increase(s): Add $1.85/hr on 6/1/2013. 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	27.77	19.90	47.67
Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/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 $1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
Pavement Marking Vehicle	23.84	14.93	38.77
Shadow or Pilot Vehicle	33.22	18.90	52.12
Truck Mechanic	22.50	16.19	38.69
LABORERS			
General Laborer	28.07	13.90	41.97
Future Increase(s): Add $1.70/hr on 6/1/2013; 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	37.16	1.23	38.39
Landscaper	28.07	13.90	41.97
Future Increase(s): Add $1.70/hr on 6/1/13; 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	24.70	13.90	38.60
Future Increase(s): Add $1.70/hr on 6/1/2013; 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.			
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	17.81	12.22	30.03
Railroad Track Laborer	23.41	14.53	37.94

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
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). Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/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 $1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	35.22	19.90	55.12
Backhoe (Track Type) Having a Mfgr.'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. Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/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 $1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	34.72	19.90	54.62
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 Mfgr.'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 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 $2/hr on 6/1/13; Add $1.75/hr on 6/1/14.	34.22	19.90	54.12

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
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://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
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 Sawer (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.	33.96	19.90	53.86
Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/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 $1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
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.	33.67	19.90	53.57
Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/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 $1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
Fiber Optic Cable Equipment.	16.00	2.92	18.92

SCHEDULE OF ITEMS REVISED:

CONTRACT: 20131210032 PROJECT(S): 1390-04-82 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 CONTRACT ITEMS					
0010	201.0105 CLEARING	70.000 STA		.		.
0020	201.0205 GRUBBING	70.000 STA		.		.
0030	203.0100 REMOVING SMALL PIPE CULVERTS	57.000 EACH		.		.
0040	203.0200 REMOVING OLD STRUCTURE (STATION) 01. STA. 706+25	LUMP	LUMP			.
0050	203.0200 REMOVING OLD STRUCTURE (STATION) 02. STA. 1332+95	LUMP	LUMP			.
0060	203.0200 REMOVING OLD STRUCTURE (STATION) 03. STA. 1334+83	LUMP	LUMP			.
0070	204.0100 REMOVING PAVEMENT	13,900.000 SY		.		.
0080	204.0110 REMOVING ASPHALTIC SURFACE	41,400.000 SY		.		.
0090	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS	1,100.000 SY		.		.
0100	204.0120 REMOVING ASPHALTIC SURFACE MILLING	1,800.000 SY		.		.

CONTRACT: 20131210032 PROJECT(S): 1390-04-82 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0110	204.0150 REMOVING CURB & GUTTER	1,150.000 LF		.		.
0120	204.0165 REMOVING GUARDRAIL	3,750.000 LF		.		.
0130	204.0220 REMOVING INLETS	2.000 EACH		.		.
0140	204.0265 ABANDONING WELLS	1.000 EACH		.		.
0150	205.0100 EXCAVATION COMMON	481,000.000 CY		.		.
0160	205.0200 EXCAVATION ROCK	11,250.000 CY		.		.
0170	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-14-196	LUMP	LUMP			.
0180	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 02. B-14-197	LUMP	LUMP			.
0190	206.2000 EXCAVATION FOR STRUCTURES CULVERTS (STRUCTURE) 03. C-14-3063	LUMP	LUMP			.
0200	206.3000 EXCAVATION FOR STRUCTURES RETAINING WALLS (STRUCTURE) 01. R-14-15	LUMP	LUMP			.

CONTRACT: 20131210032 PROJECT(S): 1390-04-82 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0210	206.3000 EXCAVATION FOR STRUCTURES RETAINING WALLS (STRUCTURE) 02. R-14-16	LUMP	LUMP			.
0220	206.5000 COFFERDAMS (STRUCTURE) 01. C-14-3063	LUMP	LUMP			.
0230	206.6000.S TEMPORARY SHORING	2,270.000 SF		.		.
0240	208.0100 BORROW	677,500.000 CY		.		.
0250	209.0100 BACKFILL GRANULAR	2,990.000 CY		.		.
0260	210.0100 BACKFILL STRUCTURE	3,849.000 CY		.		.
0270	213.0100 FINISHING ROADWAY (PROJECT) 01. 1390-04-82, STH 26	1.000 EACH		.		.
0280	213.0100 FINISHING ROADWAY (PROJECT) 02. 1390-04-82, STH 60	1.000 EACH		.		.
0290	214.0100 OBLITERATING OLD ROAD	31.000 STA		.		.
0300	305.0110 BASE AGGREGATE DENSE 3/4-INCH	12,850.000 TON		.		.
0310	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	133,000.000 TON		.		.

CONTRACT: 20131210032 PROJECT(S): 1390-04-82 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0320	305.0130 BASE AGGREGATE DENSE 3-INCH	2,200.000 TON		.		.
0330	310.0110 BASE AGGREGATE OPEN GRADED	340.000 TON		.		.
0340	311.0115 BREAKER RUN	320.000 CY		.		.
0350	312.0110 SELECT CRUSHED MATERIAL	97,500.000 TON		.		.
0360	415.0085 CONCRETE PAVEMENT 8 1/2-INCH	75,500.000 SY		.		.
0370	415.0210 CONCRETE PAVEMENT GAPS	3.000 EACH		.		.
0380	415.0410 CONCRETE PAVEMENT APPROACH SLAB	500.000 SY		.		.
0390	415.6000.S ROUT AND SEAL	34,785.000 LF		.		.
0400	416.0610 DRILLED TIE BARS	43.000 EACH		.		.
0410	416.0620 DRILLED DOWEL BARS	48.000 EACH		.		.
0420	440.4410.S INCENTIVE IRI RIDE	10,465.000 DOL	1.00000		10465.00	

CONTRACT: 20131210032 PROJECT(S): 1390-04-82 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0430	455.0105 ASPHALTIC MATERIAL PG58-28	1,650.000 TON		.		.
0440	455.0605 TACK COAT	4,600.000 GAL		.		.
0450	460.1100 HMA PAVEMENT TYPE E-0.3	13,000.000 TON		.		.
0460	460.1101 HMA PAVEMENT TYPE E-1	800.000 TON		.		.
0470	460.1103 HMA PAVEMENT TYPE E-3	11,400.000 TON		.		.
0480	460.1110 HMA PAVEMENT TYPE E-10	4,250.000 TON		.		.
0490	460.2000 INCENTIVE DENSITY HMA PAVEMENT	21,430.000 DOL	1.00000		21430.00	
0500	465.0105 ASPHALTIC SURFACE	330.000 TON		.		.
0510	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	10.000 TON		.		.
0520	465.0125 ASPHALTIC SURFACE TEMPORARY	5,400.000 TON		.		.
0530	465.0315 ASPHALTIC FLUMES	475.000 SY		.		.

CONTRACT: 20131210032 PROJECT(S): 1390-04-82 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0540	465.0400 ASPHALTIC SHOULDER RUMBLE STRIP	34,150.000 LF		.		.
0550	502.0100 CONCRETE MASONRY BRIDGES	1,259.000 CY		.		.
0560	502.3200 PROTECTIVE SURFACE TREATMENT	2,585.000 SY		.		.
0570	503.0146 PRESTRESSED GIRDER TYPE I 45W-INCH	2,646.000 LF		.		.
0580	504.0100 CONCRETE MASONRY CULVERTS	590.000 CY		.		.
0590	505.0405 BAR STEEL REINFORCEMENT HS BRIDGES	21,110.000 LB		.		.
0600	505.0410 BAR STEEL REINFORCEMENT HS CULVERTS	52,320.000 LB		.		.
0610	505.0605 BAR STEEL REINFORCEMENT HS COATED BRIDGES	211,760.000 LB		.		.
0620	505.0610 BAR STEEL REINFORCEMENT HS COATED CULVERTS	860.000 LB		.		.
0630	506.2605 BEARING PADS ELASTOMERIC NON-LAMINATED	50.000 EACH		.		.
0640	506.4000 STEEL DIAPHRAGMS (STRUCTURE) 01. B-14-196	32.000 EACH		.		.

CONTRACT: 20131210032 PROJECT(S): 1390-04-82 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0650	506.4000 STEEL DIAPHRAGMS (STRUCTURE) 02. B-14-197	12.000 EACH		.		.
0660	516.0500 RUBBERIZED MEMBRANE WATERPROOFING	102.000 SY		.		.
0670	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 01. B-14-196	1,024.000 SF		.		.
0680	520.0118 CULVERT PIPE CLASS III 18-INCH	731.000 LF		.		.
0690	520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH	30.000 EACH		.		.
0700	520.1024 APRON ENDWALLS FOR CULVERT PIPE 24-INCH	2.000 EACH		.		.
0710	520.4018 CULVERT PIPE TEMPORARY 18-INCH	40.000 LF		.		.
0720	520.4024 CULVERT PIPE TEMPORARY 24-INCH	140.000 LF		.		.
0730	520.8000 CONCRETE COLLARS FOR PIPE	5.000 EACH		.		.
0740	521.0336 APRON ENDWALLS FOR CULVERT PIPE SLOPED CROSS DRAINS STEEL 36-INCH 4 TO 1	2.000 EACH		.		.

CONTRACT: 20131210032 PROJECT(S): 1390-04-82 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0750	521.0436 APRON ENDWALLS FOR CULVERT PIPE SLOPED CROSS DRAINS STEEL 36-INCH 6 TO 1	3.000 EACH		.		.
0760	521.0442 APRON ENDWALLS FOR CULVERT PIPE SLOPED CROSS DRAINS STEEL 42-INCH 6 TO 1	1.000 EACH		.		.
0770	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH	6.000 EACH		.		.
0780	521.1518 APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 18-INCH 6 TO 1	8.000 EACH		.		.
0790	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH	1,601.000 LF		.		.
0800	522.0130 CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH	1,075.000 LF		.		.
0810	522.0136 CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH	484.000 LF		.		.
0820	522.0142 CULVERT PIPE REINFORCED CONCRETE CLASS III 42-INCH	87.000 LF		.		.
0830	522.0148 CULVERT PIPE REINFORCED CONCRETE CLASS III 48-INCH	221.000 LF		.		.
0840	522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	8.000 EACH		.		.

CONTRACT: 20131210032 PROJECT(S): 1390-04-82 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0850	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	15.000 EACH		.		.
0860	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH	8.000 EACH		.		.
0870	522.1036 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH	9.000 EACH		.		.
0880	522.1042 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 42-INCH	2.000 EACH		.		.
0890	522.1048 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 48-INCH	4.000 EACH		.		.
0900	523.0119 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 19X30-INCH	182.000 LF		.		.
0910	523.0124 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 24X38-INCH	134.000 LF		.		.
0920	523.0129 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 29X45-INCH	37.000 LF		.		.

CONTRACT: 20131210032 PROJECT(S): 1390-04-82 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0930	523.0519 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 19X30-INCH	6.000 EACH		.		.
0940	523.0529 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 29X45-INCH	2.000 EACH		.		.
0950	550.0020 PRE-BORING ROCK OR CONSOLIDATED MATERIALS	530.000 LF		.		.
0960	550.1100 PILING STEEL HP 10-INCH X 42 LB	3,360.000 LF		.		.
0970	601.0555 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A	2,440.000 LF		.		.
0980	601.0557 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	3,170.000 LF		.		.
0990	604.0400 SLOPE PAVING CONCRETE	44.000 SY		.		.
1000	604.0500 SLOPE PAVING CRUSHED AGGREGATE	579.000 SY		.		.
1010	606.0200 RIPRAP MEDIUM	1,410.000 CY		.		.
1020	606.0300 RIPRAP HEAVY	73.000 CY		.		.

CONTRACT: 20131210032 PROJECT(S): 1390-04-82 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1030	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	1,028.000 LF		.		.
1040	611.0606 INLET COVERS TYPE B	1.000 EACH		.		.
1050	611.0624 INLET COVERS TYPE H	11.000 EACH		.		.
1060	611.0645 INLET COVERS TYPE MS-A	8.000 EACH		.		.
1070	611.0654 INLET COVERS TYPE V	6.000 EACH		.		.
1080	611.2044 MANHOLES 4X4-FT	1.000 EACH		.		.
1090	611.3220 INLETS 2X2-FT	2.000 EACH		.		.
1100	611.3225 INLETS 2X2.5-FT	4.000 EACH		.		.
1110	611.3230 INLETS 2X3-FT	8.000 EACH		.		.
1120	611.3902 INLETS MEDIAN 2 GRATE	4.000 EACH		.		.
1130	611.9800.S PIPE GRATES	30.000 EACH		.		.

CONTRACT: 20131210032 PROJECT(S): 1390-04-82 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1140	612.0106 PIPE UNDERDRAIN 6-INCH	1,220.000 LF		.		.
1150	612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH	55.000 LF		.		.
1160	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH	1,317.000 LF		.		.
1170	614.0150 ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	8.000 EACH		.		.
1180	614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL	2.000 EACH		.		.
1190	614.0230 STEEL THRIE BEAM	225.000 LF		.		.
1200	614.2300 MGS GUARDRAIL 3	4,375.000 LF		.		.
1210	614.2500 MGS THRIE BEAM TRANSITION	473.000 LF		.		.
1220	614.2610 MGS GUARDRAIL TERMINAL EAT	12.000 EACH		.		.
1230	616.0700.S FENCE SAFETY	590.000 LF		.		.
1240	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 1390-04-82	1.000 EACH		.		.

CONTRACT: 20131210032 PROJECT(S): 1390-04-82 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1250	619.1000 MOBILIZATION	1.000 EACH		.		.
1260	620.0100 CONCRETE CORRUGATED MEDIAN	3,600.000 SF		.		.
1270	620.0200 CONCRETE MEDIAN BLUNT NOSE	68.000 SF		.		.
1280	620.0300 CONCRETE MEDIAN SLOPED NOSE	57.000 SF		.		.
1290	621.0100 LANDMARK REFERENCE MONUMENTS	20.000 EACH		.		.
1300	624.0100 WATER	5,400.000 MGAL		.		.
1310	625.0100 TOPSOIL	40,100.000 SY		.		.
1320	625.0500 SALVAGED TOPSOIL	448,500.000 SY		.		.
1330	627.0200 MULCHING	304,500.000 SY		.		.
1340	628.1504 SILT FENCE	30,250.000 LF		.		.
1350	628.1520 SILT FENCE MAINTENANCE	30,250.000 LF		.		.

CONTRACT: 20131210032 PROJECT(S): 1390-04-82 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1360	628.1905 MOBILIZATIONS EROSION CONTROL	10.000 EACH		.		.
1370	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	8.000 EACH		.		.
1380	628.2004 EROSION MAT CLASS I TYPE B	140,500.000 SY		.		.
1390	628.5505 POLYETHYLENE SHEETING	1,265.000 SY		.		.
1400	628.7010 INLET PROTECTION TYPE B	15.000 EACH		.		.
1410	628.7015 INLET PROTECTION TYPE C	11.000 EACH		.		.
1420	628.7504 TEMPORARY DITCH CHECKS	1,500.000 LF		.		.
1430	628.7555 CULVERT PIPE CHECKS	444.000 EACH		.		.
1440	628.7570 ROCK BAGS	50.000 EACH		.		.
1450	629.0210 FERTILIZER TYPE B	750.000 CWT		.		.
1460	630.0120 SEEDING MIXTURE NO. 20	12,100.000 LB		.		.

CONTRACT: 20131210032 PROJECT(S): 1390-04-82 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1470	630.0140 SEEDING MIXTURE NO. 40	610.000 LB		.		.
1480	630.0200 SEEDING TEMPORARY	3,850.000 LB		.		.
1490	630.0300 SEEDING BORROW PIT	10,100.000 LB		.		.
1500	633.0100 DELINEATOR POSTS STEEL	175.000 EACH		.		.
1510	633.0500 DELINEATOR REFLECTORS	216.000 EACH		.		.
1520	633.1100 DELINEATORS TEMPORARY	13.000 EACH		.		.
1530	633.5200 MARKERS CULVERT END	87.000 EACH		.		.
1540	634.0614 POSTS WOOD 4X6-INCH X 14-FT	35.000 EACH		.		.
1550	634.0616 POSTS WOOD 4X6-INCH X 16-FT	95.000 EACH		.		.
1560	634.0618 POSTS WOOD 4X6-INCH X 18-FT	62.000 EACH		.		.
1570	634.0620 POSTS WOOD 4X6-INCH X 20-FT	7.000 EACH		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS		UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1580	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS	3,491.000	LB		.		.
1590	636.0100 SIGN SUPPORTS CONCRETE MASONRY	8.800	CY		.		.
1600	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT	528.000	LB		.		.
1610	637.1220 SIGNS TYPE I REFLECTIVE SH	1,219.000	SF		.		.
1620	637.2210 SIGNS TYPE II REFLECTIVE H	1,570.000	SF		.		.
1630	637.2230 SIGNS TYPE II REFLECTIVE F	354.250	SF		.		.
1640	638.2601 REMOVING SIGNS TYPE I	10.000	EACH		.		.
1650	638.2602 REMOVING SIGNS TYPE II	245.000	EACH		.		.
1660	638.3000 REMOVING SMALL SIGN SUPPORTS	135.000	EACH		.		.
1670	642.5201 FIELD OFFICE TYPE C	1.000	EACH		.		.
1680	643.0100 TRAFFIC CONTROL (PROJECT) 01. 1390-04-82	1.000	EACH		.		.

CONTRACT: 20131210032 PROJECT(S): 1390-04-82 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	643.0300 TRAFFIC CONTROL					
1690	DRUMS	153,900.000 DAY		.		.
	643.0420 TRAFFIC CONTROL					
1700	BARRICADES TYPE III	25,700.000 DAY		.		.
	643.0500 TRAFFIC CONTROL					
1710	FLEXIBLE TUBULAR MARKER POSTS	450.000 EACH		.		.
	643.0600 TRAFFIC CONTROL					
1720	FLEXIBLE TUBULAR MARKER BASES	450.000 EACH		.		.
	643.0705 TRAFFIC CONTROL					
1730	WARNING LIGHTS TYPE A	18,950.000 DAY		.		.
	643.0715 TRAFFIC CONTROL					
1740	WARNING LIGHTS TYPE C	24,000.000 DAY		.		.
	643.0800 TRAFFIC CONTROL					
1750	ARROW BOARDS	740.000 DAY		.		.
	643.0900 TRAFFIC CONTROL					
1760	SIGNS	116,000.000 DAY		.		.
	643.1050 TRAFFIC CONTROL					
1770	SIGNS PCMS	98.000 DAY		.		.
	643.2000 TRAFFIC CONTROL					
1780	DETOUR (PROJECT) 01. 1390-04-82	1.000 EACH		.		.
	643.3000 TRAFFIC CONTROL					
1790	DETOUR SIGNS	5,800.000 DAY		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1800	645.0105 GEOTEXTILE FABRIC TYPE C	572.000 SY		.		.
1810	645.0112 GEOTEXTILE FABRIC TYPE DF SCHEDULE B	660.000 SY		.		.
1820	645.0120 GEOTEXTILE FABRIC TYPE HR	154.000 SY		.		.
1830	645.0130 GEOTEXTILE FABRIC TYPE R	2,850.000 SY		.		.
1840	646.0106 PAVEMENT MARKING EPOXY 4-INCH	101,400.000 LF		.		.
1850	646.0126 PAVEMENT MARKING EPOXY 8-INCH	1,900.000 LF		.		.
1860	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH	380.000 LF		.		.
1870	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH	3,520.000 LF		.		.
1880	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2	8.000 EACH		.		.
1890	647.0356 PAVEMENT MARKING WORDS EPOXY	4.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1900	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH	365.000 LF		.		.
1910	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY	10.000 EACH		.		.
1920	647.0736 PAVEMENT MARKING DIAGONAL EPOXY 18-INCH	300.000 LF		.		.
1930	647.0746 PAVEMENT MARKING DIAGONAL EPOXY 24-INCH	400.000 LF		.		.
1940	649.0100 TEMPORARY PAVEMENT MARKING 4-INCH	82,800.000 LF		.		.
1950	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	14,400.000 LF		.		.
1960	649.0701 TEMPORARY PAVEMENT MARKING 8-INCH	500.000 LF		.		.
1970	649.1100 TEMPORARY PAVEMENT MARKING STOP LINE 18-INCH	220.000 LF		.		.
1980	649.1200 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH	100.000 LF		.		.
1990	650.4000 CONSTRUCTION STAKING STORM SEWER	18.000 EACH		.		.
2000	650.4500 CONSTRUCTION STAKING SUBGRADE	48,250.000 LF		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2010	650.5000 CONSTRUCTION STAKING BASE	29,450.000 LF		.		.
2020	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	3,170.000 LF		.		.
2030	650.6000 CONSTRUCTION STAKING PIPE CULVERTS	46.000 EACH		.		.
2040	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-14-196	LUMP	LUMP			.
2050	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 02. B-14-197	LUMP	LUMP			.
2060	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 03. C-14-3063	LUMP	LUMP			.
2070	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 04. R-14-16	LUMP	LUMP			.
2080	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 05. R-14-17	LUMP	LUMP			.
2090	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT	27,650.000 LF		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2100	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1390-04-82	LUMP	LUMP			.
2110	650.9920 CONSTRUCTION STAKING SLOPE STAKES	48,250.000 LF		.		.
2120	690.0150 SAWING ASPHALT	160.000 LF		.		.
2130	715.0415 INCENTIVE STRENGTH CONCRETE PAVEMENT	8,288.000 DOL	1.00000		8288.00	
2140	715.0502 INCENTIVE STRENGTH CONCRETE STRUCTURES	1,259.000 DOL	1.00000		1259.00	
2150	SPV.0035 SPECIAL 01. CONCRETE STONE NO. 2	40.000 CY		.		.
2160	SPV.0035 SPECIAL 02. BACKFILL SPECIAL	1,015.000 CY		.		.
2170	SPV.0060 SPECIAL 01. REMOVE AND RESET CONCRETE APRON ENDWALLS	8.000 EACH		.		.
2180	SPV.0060 SPECIAL 02. REINFORCED CONCRETE ENDWALLS 24-INCH 6:1 SPECIAL	11.000 EACH		.		.
2190	SPV.0060 SPECIAL 03. REINFORCED CONCRETE ENDWALLS 30-INCH 6:1 SPECIAL	8.000 EACH		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SPV.0060 SPECIAL 04.					
2200	REINFORCED CONCRETE ENDWALLS 19X30-INCH 6:1 SPECIAL	2.000 EACH		.		.
	SPV.0060 SPECIAL 05.					
2210	REINFORCED CONCRETE ENDWALLS 24X38-INCH 6:1 SPECIAL	4.000 EACH		.		.
	SPV.0060 SPECIAL 06.					
2220	COVERING INLETS	6.000 EACH		.		.
	SPV.0060 SPECIAL 07.					
2230	REINFORCED CONCRETE PIPE TEE 30-INCH	1.000 EACH		.		.
	SPV.0060 SPECIAL 08.					
2240	DIVERSION CHANNELS	2.000 EACH		.		.
	SPV.0090 SPECIAL 01.					
2250	REMOVING PAVEMENT MARKINGS WATER BLASTING	22,120.000 LF		.		.
	SPV.0090 SPECIAL 02.					
2260	FENCE CHAIN LINK POLYMER-COATED 6-FT	642.000 LF		.		.
	SPV.0105 SPECIAL 01.					
2270	ABANDON AND SEAL EXISTING 24-INCH CULVERT PIPE	LUMP	LUMP			.
	SPV.0105 SPECIAL 02.					
2280	RAILING PIPE GALVANIZED R-14-15	LUMP	LUMP			.
	SPV.0105 SPECIAL 03.					
2290	RAILING PIPE GALVANIZED R-14-16	LUMP	LUMP			.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2300	SPV.0165 SPECIAL 01. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD	17,800.000 SF		.		.
2310	SPV.0180 SPECIAL 01. GEOGRID REINFORCEMENT	103,000.000 SY		.		.
2320	SPV.0180 SPECIAL 02. SELECT CRUSHED MATERIAL, INTERCEPTING GROUNDWATER	2,100.000 SY		.		.
2330	SPV.0180 SPECIAL 03. SOIL LOOSENING SPECIAL	31,550.000 SY		.		.
2340	SPV.0180 SPECIAL 04. SALVAGED TOPSOIL SPECIAL	12,500.000 SY		.		.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE