HIGHWAY WORK PROPOSAL

Proposal Number: 2 2

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Lafayette	5944-03-84		Darlington - Argyle Wells Street - Clay Street	STH 81

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, $ 75,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: November 11, 2014 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time Seventy-five (75) Working Days	
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 Soldier pile retaining walls R-33-0004, R-33-0005, R-33-0006, CIP retaining wall, common excavation, sidewalks, and pedestrian ramps.	
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)

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

(Signature of Attorney-in-Fact)

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

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.

Special Provisions

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 5944-03-84, Darlington – Argyle, Wells Street – Clay Street, STH 81, Lafayette 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 soldier pile retaining walls R-33-004, R-33-005, R-33-006, common excavation, sidewalks, pedestrian ramps, and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.
104-005 (20090901)

3. Prosecution and Progress.

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

Provide the time frame for construction of the project within the 2015 construction season 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.

Complete Water and Sanitary Sewer utility moves prior to commencing work on the retaining walls.

Construct the pedestrian ramp located at Station 23+00 on the south side of STH 81 prior to work beginning on the north side of STH 81.

Complete work on retaining wall R-33-004 from Station 11+50 to Station 12+95 in front of the parking lot between Monday and Saturday to not interfere with heavy parking lot use. If not completed in this timeframe, supply ADA compliant pedestrian safety rail at contractor's expense.

4. Traffic.

Perform the construction sequence, including the associated traffic control, as detailed in the traffic control details in the plan, and as described in this Traffic article.

Maintain access to all residential and commercial entrances. Notice must be given to property owners 24 hours in advance of interruption.

Do not perform the lane shift until the pedestrian ramp located on the south side of STH 81 at Station 23+00 is completed.

Install roadway signing in places as detailed on the plans and in conformance with the Manual on Uniform Traffic Control Devices (MUTCD), latest edition. Install traffic control completely in place by the end of the working day of a traffic switch. Cover all conflicting signs in a non-destructive manner as necessary to avoid confusion.

Deliver and store all materials and equipment not within open travel lanes or open side roads during any stage of construction. Use flaggers when temporarily closing lanes or halting traffic. Notify the engineer prior to any such closure.

Conduct operations in a manner that will cause the least interference to traffic and pedestrian movements within and adjacent to the construction activities.

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 81 traffic, and entirely clear the traveled way and shoulders of such portions of the highway of equipment, barricades, signs, lights, and any other material that might impede the free flow of traffic during the following holiday periods:

- From noon Friday, May 22, 2015 to 6:00 AM Tuesday, May 26, 2015 for Memorial Day;
- From noon Friday, July 3, 2015 to 6:00 AM Monday, July 6, 2015 for Independence Day;
- From 7:00 PM Tuesday, July 7, 2015 to 6:00 AM Monday, July 13, 2015 for the Lafayette County Fair.

107-005 (20050502)

6. Utilities.

This contract comes under the provision of Administrative Rule Trans 220.
107-065 (20080501)

The plans show utility facilities existing at the time of the original survey in spring of 2013. Facilities installed after this are addressed in the special provisions.

Coordinate construction activities with a call to Diggers Hotline or a direct call to the utilities that have facilities in the area as required by statutes.

The following utilities have facilities within the project limits:

- City of Darlington – Water and Sewer
- Alliant Energy – Natural Gas
- Alliant Energy – Electrical Distribution
- CenturyLink – Communication Line
- MediaCom – Communication Line

City of Darlington has numerous water and sewer laterals in conflict with the project. These are being modified as part of this contract. The plans and elsewhere in these special provisions show the locations and details of these lateral moves.

Alliant Energy – Natural Gas has several lines that will be relocated prior to construction. Relocated services should be deep enough to accommodate new retaining walls, but dig with caution.
Station 6+91 – Station 9+00: Gas main will be relocated to the south side of STH 81. Current lateral connections will be removed and relocated to match into the relocated main.
Station 12+80 (Ohio Street): Gas line will be abandoned from the main located on the south side of STH 81 to the first service line to the north.
Station 16+50 (Division Street): Gas line will be abandoned from the main located on the south side of STH 81 to the first service line to the north.
Station 19+25: Gas service line will be replaced with plastic.

Alliant Energy – Electrical Distribution has several overhead lines that will be relocated to new underground lines. Relocations will be prior to construction.
Station 11+50: Pole located on the north side of STH 81 will be relocated to the north to the right-of-way line to service the line from the south to north.
Station 13+75 to Station 22+50: Poles will be removed and the line will be relocated to the south side of STH 81 as an underground service.
Station 11+50 to Station 13+50: Secondary will be installed on the north side paralleling STH 81 at the right-of-way line.

Station 17+60 and Station 20+75: Secondary will be crossing the road to service the properties on the north.
Station 19+75 to 23+00: Secondary will be installed on the north side paralleling STH 81 at the right-of-way line.

CenturyLink has existing overhead facilities that are in conflict. Most of the lines are located on Alliant Energy Poles and will relocate to underground facilities along with Alliant. Relocations will take place prior to construction.
Station 10+35: Pole located on the north side of STH 81 will be removed. Line will be moved to an underground facility on the south side of roadway.
Station 9+50 to Station 11+50: Facility will be relocated to a solo trench on the south side of STH 81.
Station 13+40: A solo underground crossing STH 81 from the south right-of-way of STH 81 to the north.
Station 16+25: A solo underground crossing STH 81 from the south R/W of STH 81 to the north.
Station 11+50 to Station 13+50, Station 19+75 to Station 19+75 to 23+00: North side of STH 81 jointly with Alliant Lines.
Station 13+25 to Station 24+25: South side of STH 81 jointly with Alliant Lines.
Station 18+05, 21+00, 24+25: Crossings of STH 81 jointly with Alliant Energy.

MediaCom has existing overhead facilities that are in conflict. The lines are located on Alliant Energy Poles and will relocate to underground facilities along with Alliant. Relocations will take place prior to construction.
Station 11+50 to Station 24+00: All facilities will move along with Alliant relocated poles.

7. Municipality Acceptance of Sanitary Sewer and Water Construction.

Both the department and the City of Darlington personnel will inspect construction of sanitary sewer and water items under this contract. However, construction staking, testing, and acceptance of the sanitary sewer and water construction will be by the City of Darlington.

8. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

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

9. Removing Concrete Sidewalk.

Amend standard spec 204.4(6) to include handrails appurtenant to the concrete steps.

10. Removing Modular Block Retaining Wall (Station 15+50), Item 204.9105.S.01; (Station 20+00), Item 204.9105.S.02.

A Description
This special provision describes removing existing modular block retaining walls from approximately 14+90, LT to 16+19, LT (Station 15+50) and from approximately 16+58, LT to 21+56, LT (Station 20+00) in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided. Removal of existing handrail is incidental to removal of modular block retaining wall.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Modular Block Retaining Wall as a single lump sum unit of work for each retaining wall and associated items removed, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9105.S.01	Removing Modular Block Retaining Wall (Station 15+50)	LS
204.9105.S.02	Removing Modular Block Retaining Wall (Station 20+00)	LS

204-025 (20041005)

11. Excavation For Structures Retaining Walls.

Add the following to the end as paragraph three and four of standard spec 206.2 Materials:

(3) If the plan details call for Controlled Low Strength Material (CLSM), provide CLSM for backfill consisting of a designed cementitious mixture of natural or processed materials. Allowable materials include natural sand, natural gravel, produced sand, foundry sand, produced gravel, fly ash, Portland cement, and other broken or fragmented mineral materials. The designed mixture shall have a consistent texture and flow characteristics, be self-leveling and not exhibit shrinkage after hardening. Design the mixture to reach a state of hardening such that it can support foot traffic in no more than 24 hours. Provide a mixture that also meets the following requirements:

Test	Method	Value
Flow	ASTM D-6103	9-inches minimum
Compressive Strength	ASTM D-6024	20-40 psi @ 14 days 40-80 psi @ 28 days 80-120 psi @ 90 days

Chemical admixtures to control air content and setting time are allowable. Ten days prior to placement, furnish the engineer with a design mix detailing all components and their proportions in the mix. Also, provide documentation from the supplier of the industrial byproducts that the foundry sand and fly ash used in the mixture meet the requirements for Industrial Byproducts Categories 1, 2, 3, or 4 in NR 538 of the Wisconsin Administrative Code for use as a confined geotechnical fill.

(4) If the plan details call for flowable backfill, provide backfill material consisting of aggregates that conform to standard spec 501 for Grade A Concrete and do not add any cementitous material; cement or fly ash, to the flowable fill mix. Weigh aggregates at a batch plant suitable for batching concrete masonry. Mix and deliver to the project site using a truck mixer. Add enough water to enable the mixture to flow readily.

Add the following to the end as paragraph thirteen and fourteen of standard spec 206.3.13.1 General:

(13) For soldier pile retaining walls, when called for in the plans, backfill around soldier piles above the soldier pile foundations with CLSM as shown on the plans. If the official Weather Bureau forecast for the construction site predicts temperatures at or below freezing within the next 24 hours after placement of controlled low strength backfill, protect the placed materials from freezing during that time period. If the temperature is not forecast to rise above 40º F for 72 hours after placement, the engineer may require protection from freezing for up to 72 hours. No controlled low strength backfill shall be allowed to enter any stream, lake, or sewer system. The contractor shall be responsible for any clean up or remediation costs resulting from such occurrences.

(14) For soldier pile retaining walls, when called for on the plans, fill all voids behind timber lagging and excavated soil with flowable backfill. Prior to placement of flowable backfill, provide for positive drainage of the area to be backfilled. Discharge from the truck in a manner to prevent segregation. Completely fill excavation in a single operation. Consolidation or compaction effort is not required.

Add the following to the end as paragraphs eight and nine of standard spec 206.5.2 Excavation For Structures:

(8) Payment for Structure Excavation Retaining Walls includes providing and placing CLSM as backfill when CLSM as backfill is called for on the plans.

(9) Payment for Structure Excavation Retaining Walls includes providing and placing flowable backfill when flowable backfill is called for on the plans.

12. 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)

13. Concrete Staining R-33-004, Item 517.1010.S.01; R-33-005, Item 517.1010.S.02; R-33-006, Item 517.1010.S.03.

A Description

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

B Materials

B.1 Mortar

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

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

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

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

B.2 Concrete Stain

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

Tri-Sheen Concrete Surfacer, Smooth by TK Products
Tri-Sheen Acrylic by TK Products
TK-1450 Natural Look Urethane Anti-Graffiti Primers by TK Products
Safe-Cure & Seal EPX by Chem Masters
H + C Shield Plus by Sherwin-Williams

C Construction

C.1 General

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

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

C.2 Preparation of Concrete Surfaces
Provide a sack rubbed finish in accordance to standard spec 502.3.7.5, using mortar as indicated above on concrete surfaces with open voids or honeycombing.

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

C.3 Staining Concrete Surfaces
Apply the concrete stain in accordance to the manufacturer's recommendations.

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

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

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

C.4 Test Areas
Prior to applying stain to the structure, apply the stain to sample panels measuring a minimum of 48-inches x 48-inches and constructed to demonstrate workmanship in the use of the form liner specified on the structure if applicable. Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, prior to staining. Prepare the concrete surfaces of the sample panels and apply stain using the same materials and in the same manner as proposed for the structure, including staining of the joints between the stones produced by the form liner if applicable. Do not apply stain to the structure until the department approves the test panels.

C.5 Surfaces to be Coated.
Apply concrete stain to the surfaces in accordance to the plan.

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1010.S.01	Concrete Staining R-33-004	SF
517.1010.S.02	Concrete Staining R-33-005	SF
517.1010.S.03	Concrete Staining R-33-006	SF

Payment is full compensation for furnishing and applying the two coat system; for preparing the concrete surface; and for preparing the sample panels.

517-110 (20100709)

14. Architectural Surface Treatment R-33-004, Item 517.1050.S.01; R-33-005, Item 517.1050.S.02; R-33-006, Item 517.1050.S.03.

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 R-33-004	SF
517.1050.S.02	Architectural Surface Treatment R-33-005	SF
517.1050.S.03	Architectural Surface Treatment R-33-006	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)

15. Concrete Masonry Soldier Pile Footings, Item SPV.0035.01.

A Description
Work under this item consists of furnishing and placing concrete in predrilled holes for soldier piles and installation of soldier piles. Perform work in accordance to pertinent parts of the standard specifications, the plans, and these special provisions.

B Materials
Provide and use concrete masonry for Concrete Masonry Soldier Pile Footings conforming to grade A or grade A-FA as specified in standard spec 501.

C Construction
Before placing concrete masonry give the engineer sufficient notice to allow inspection of the predrilled holes, soldier piles, and casting preparations. For concrete masonry soldier pile footings constructed without the use of slurry, no more than 3 inches of standing water is permitted in the bottom of the drilled hole prior to beginning soldier pile installation and immediately prior to placing concrete masonry in the hole around the soldier pile. If necessary, place up to 2 feet of concrete at the bottom of the hole to assist in aligning the soldier pile. Block or clamp the soldier pile in place at the ground surface before placing concrete.

For holes drilled or excavated without slurry, the department will allow the contractor to place concrete by free-falling the concrete from the ground surface down the shaft around the soldier pile. If temporary casing is used, begin placement of the concrete before removing the casing. Remove the casing while the concrete remains workable. For holes drilled or excavated using slurry, place concrete using a tremie method from the bottom of the shaft. Withdraw the tremie pipe slowly as the level of concrete rises in the shaft and never let the level of the tremie pipe outlet exceed the height of the slurry.

D Measurement

The department will measure Concrete Masonry Soldier Pile Footings by 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 Masonry Soldier Pile Footings	CY

Payment is full compensation for furnishing all materials, pumping, placing, finishing, curing, protecting, and heating for installation of soldier piles.

16. Sanitary Sewer Lateral Relocations, Item SPV.0060.01.

A Description

1.01 DESCRIPTION

A. Work Included: This section shall include furnishing all materials for the Sanitary Sewer Lateral Relocation as shown on the drawings and as specified herein.

1.02 REFERENCE STANDARDS

A. American Society for Testing and Materials (ASTM):

1.	ASTM D1784	Spec. for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
2.	ASTM D1785	Spec. for Poly (Vinyl Chloride) (PVC) Plastic Pipe Schedules 40, 80, and 120.
3.	ASTM D2241	Spec. for Poly (Vinyl Chloride) (PVC) Plastic Pipe (SDR-PR).
4.	ASTM D2412	Test for External Loading Properties of Plastic Pipe by Parallel-Plate Loading.
5.	ASTM D2466	Spec. for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40.
6.	ASTM D2467	Spec. for Socket-Type Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80.
7.	ASTM D2837	Standard Test Method for Obtaining Hydrostatic Design Basics for Thermoplastic Pipe Materials.

8.	ASTM D2855	Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings.
9.	ASTM D3034	Spec. for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
10.	ASTM D3139	Spec. for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals.
11.	ASTM D3212	Spec. for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.
12.	ASTM F438	Spec. for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40.
13.	ASTM 439	Spec. for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80.
14.	ASTM F441	Spec. for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Schedules 40 and 80.
15.	ASTM F477	Spec. for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
16.	ASTM F679	Spec. for Poly (Vinyl Chloride) (PVC) Large Diameter Plastic Gravity Sewer Pipe and Fittings.

B. American Association of State Highway and Transportation Officials (AASHTO).

1.03 QUALITY ASSURANCE

A. Pipe shall be available to Owner's Representative for inspection.

B. Pipe shall be considered defective and will be rejected when:
   1. Pitted or cratered.
   2. Flaking.
   3. Straightness varies more than ½-inch in 10 feet.
   4. Any defect that prevents assembly according to manufacturer's recommendations.

C. Material brands and/or pipe classes shall not be mixed.

1.04 PRODUCT DELIVERY

A. Pipe Marking - pipe shall be marked as follows:
   1. Manufacturer's name, trademark, or logo.
   2. Nominal size.
   3. PVC minimum cell classification.
   4. Pipe stiffness designation, dimension ratio or schedule size and pressure class.
   5. ASTM or AWWA designation.
   6. National Sanitation Foundation approval (pipe for potable water).
   7. Production date.

B. Storage:
   1. Provide a covered storage area.
   2. Keep pipe material safe from damage and theft.
   3. Protect pipe material from direct rays of the sun.
   4. Protect gaskets from sun rays, excessive heat, grease, oil, and electric motors that produce ozone.

1.05 PROTECTION OF PROPERTY MARKERS

A. Contractor shall protect all property markers from movement from original position.

B. Cost of replacement of property markers during construction shall be at the contractor's expense.

B Materials

2.01 NON-PRESSURE RATED PIPE

A. Gravity Sewer
   1. All pipe shall be the product of one manufacturer.
   2. All fittings shall be the product of one manufacturer.
   3. Pipe shall be manufactured in accordance to the following standards:
      a. Sizes 8-inch through 15-inch: ASTM D3034.
   4. Elastomeric Gaskets: Conform with F477
   5. Fittings and repair couplings shall be the same class and physical properties as pipe and monolithically molded or extruded.
   6. Solvent welded and stainless steel strapped wyes or tees may be used for storm sewer laterals: conform to ASTM D3034 and ASTM F679.
   7. Elastomeric Joints: ASTM D3212
   8. Solvent Weld Joints: Not permitted.

B. Sewer Services
   1. Conform with ASTM D1784 and D1785.
   2. Pipe sizes 4-inch and 6-inch: Schedule 40
   3. Solvent Weld Joints: ASTM D2855
   4. Fittings: Socket type, ASTM D2466

C. Piping System Specification
   1. Conform with ASTM D1784 and D1785.
   2. Solvent Weld Joints: ASTM D2855.
   3. Threaded Joints: ASTM D2464-06.
   4. Fittings: Socket Type, ASTM D2466.

2.02 CLEAN-OUTS

A. Light duty: In earth or grass foot-traffic areas, provide a frost sleeve for DSPS 382.35 Requirements.

B. Heavy Duty: In vehicle traffic areas use top loading rated heavy duty, ASME A112.36.2M, round, cast-iron housing with clamping device and round secured, scoriated cast-iron cover. Include cast-iron ferrule with inside caulk or spigot connection and countersunk, tapered-thread, brass closure plug.

C. Frost sleeve shall be same material as specified for sanitary sewer piping.

2.03 WYES, RISERS, AND FITTINGS

A. Shall be the same type and class as the sewer service pipe.

2.04 INSULATION BOARD

A. Extruded polystyrene conforming with ASTM C578.

B. Insulation shall be a minimum 1-inch thick.

C. Provide where required by plans.

2.05 PIPE BEDDING AND BACKFILLING

A. Pipe bedding and haunch shall be compacted to a minimum of 90% of modified proctor to the springline of the pipe prior to placement of initial backfill.

B. Subsequent backfilling shall be in accordance to the standard details.

C Construction

3.01 SEWER MAIN INSTALLATION

A. Pipe Installation

1. Lay pipe upgrade with spigot pointing in direction of flow.
2. When any portion of a section of PVC sewer between manholes has a bury depth equal to or greater than 25 feet, SDR-26 pipe shall be installed.
3. When the entire section of PVC sewer between manholes is less than 25 feet of bury depth, SDR-35 may be installed.

B. Grade and alignment shall be established with laser equipment.

1. Sewers shall be laid with straight alignment between manholes.
2. Slope between manholes shall be uniform with no ponding water.
3. Laser alignment shall be checked a minimum of every 100 feet.

C. Water/Sewer Line Crossing

1. Wherever the sanitary sewer crosses above watermain with less than a clear vertical separation of 18 inches (outside of pipe to outside of pipe) or below the watermain with less than a clear vertical separation of 6 inches (outside of pipe to outside of pipe), the sewer shall be constructed equal to watermain pipe. One full pipe length shall be centered on the watermain crossing and shall be pressure tested.
2. The type of pipe material and/or joints shall not change between manholes.

D. Maintaining Sanitary Sewer Service

1. The contractor shall provide adequate equipment and facilities to provide bypass pumping for all elements of work requiring interruption to flow in the sanitary sewer. Provide backup or standby capabilities satisfactory to the Owner. The contractor shall be responsible for damages to private or public property due to sewer backup while controlling sewage flow.
2. Under no circumstances will bypassing of untreated wastewater to any storm drainage facility or surface water course be allowed.
3. The contractor shall notify the Owner and engineer 7 days in advance of sewer sections, which will not be useable in order to allow time for the Owner to notify residents. Interruptions shall then be verified at least 24 hours in advance.
4. Interruptions of service shall be limited to 8 hours.
5. All existing sanitary laterals shall be permanently reconnected within two days after initial disconnection of the main line sewer bypass. These existing sanitary laterals shall be temporarily reconnected if the permanent reconnection cannot be accomplished immediately after disconnection.
6. All costs for flow control, temporary pumping, etc., shall be inclusive to the unit price bid for Sanitary Sewer Lateral Relocations.
7. All costs associated with connecting proposed sewers to existing sewers or manholes, manhole removal and abandonment, sanitary sewer removals and abandonment, shall, be included in the unit price bid for Sanitary Sewer Lateral Relocations.

3.02 SERVICE CONNECTIONS

A. Services shall conform with all plumbing codes for depths and installation. Service depth shall be 12 feet deep at the property line, or as deep as sewer main allows, or as shown on plans.

B. (Vacant)

C. Clean-outs required by the plumbing code or ordinances shall be incidental to the service installation.

D. When a service is not immediately connected.

1. Mark in accordance to details. The contractor shall record the location, length and depth for record drawings.
2. Provide a watertight cap on end of service.

E. Install wye branches where directed

1. New sewers: Utilize a factory made wye.
2. Existing sewers- Utilize a solvent welded saddle type wye with stainless steel straps.

3. Wyes connected to concrete pipe shall be core drilled and installed with a flexible watertight connector, which can be mechanically expanded into the cored opening.
4. Wyes shall be oriented at a 10 or 2 o'clock position from the main.

F. Riser Installation
1. Install where requested by Owner's Representative.
2. Conform with appropriate details.
3. Bends shall be 45°.
4. Place risers on a minimum of 6-inches of 3/4-inch crushed clean stone compacted to 95% Modified Proctor Density.
5. Risers shall be installed at maximum 45° from horizontal. (Standard service lateral or deep service lateral).
6. Risers shall be installed at maximum 67.5° from horizontal (Optional deep service lateral).

G. Lateral Relocations
1. The lateral relocations shall be performed in accordance to this specification section and typical sections titled:
   a. “Sanitary Sewer Lateral Relocation Detail”
   b. “Standard Service Lateral”
   c. “Deep Service Lateral”
   d. “PVC Sewer and Water Main Bedding and Trench Section”
   e. “Sewer and Water Laterals in Common Trench”

3.03 CLEAN-OUTS

A. Install clean-outs and riser from sanitary sewer pipe to clean-out at grade. Install piping so clean-outs open in direction of flow.

B. Set clean-outs frames and covers in unpaved areas flush with finished grade.

C. Set clean-outs frames and covers in paving with tops flush with surface paving.

D. Set clean-out frames and covers in pavement in a cast-in-place concrete block, 18-inch x 18-inch x 12-inch deep. Slope top of concrete away from clean-out.

3.04 REPAIRS

A. Contractor shall repair all visible leaks, defects, and pipeline, which have failed testing.

B. After repairs are made, re-test and re-televise repaired sections.

D Measurement

4.01 SEWER LATERAL RELOCATION

A. The department will measure Sanitary Sewer Lateral Relocation as each individual relocation, acceptably completed, which includes:

1. Pipe material, equipment, and labor.
2. Clearing and grubbing.
3. Stripping and stockpiling topsoil.
4. Traffic, dust and erosion control.
5. Loading, hauling and disposal of street surfacing and curb and gutter in trench area.
6. Dewatering and excavation.
7. Pipe bedding and initial cover material.
8. Loading, hauling and disposal of surplus excavated material.
9. Backfilling and compaction.
10. Riser pipes.
11. All fittings.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.01	Sanitary Sewer Lateral Relocation	Each

Payment is full compensation for removals, hauling, handling, and installing the lateral including all items listed in Section D Measurement above.

17. Water Main, Hydrant Relocation, Item SPV.0060.02; Water Main, Water Service Relocation, Item SPV.0060.03

A Description

1.01 SUMMARY

A. Work Included: This section includes water main installation, hydrant relocation water service relocation, materials, and restoration.

1.02 REFERENCE STANDARDS

A. American Water Works Association (AWWA):

1. AWWA C900 Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4-inch through 12-inch for water.
2. AWWA C905 Standard for Polyvinyl Chloride (PVC) Water Transmission Pipe, Nominal Diameters 14-inch through 36-inch.

B. American Society of State Highway and Transportation Officials (ASSHTO).

C. NSF/ANSI

1.03 QUALITY ASSURANCE

A. Pipe shall be available to Owner's Representative for inspection.

B. Pipe shall be considered defective and will be rejected when:
   1. Pitted or cratered.
   2. Flaking.
   3. Straightness varies more than ½-inch in 10 feet.
   4. Any defect that prevents assembly according to manufacturer's recommendations.

C. Material brands and/or pipe classes shall not be mixed.

1.04 PRODUCT DELIVERY

A. Pipe Marking - pipe shall be marked as follows:
   1. Manufacturer's name, trademark, or logo.
   2. Nominal size.
   3. PVC minimum cell classification.
   4. Pipe stiffness designation, dimension ratio or schedule size and pressure class.
   5. ASTM or AWWA designation.
   6. National Sanitation Foundation approval (pipe for potable water).
   7. Production date.

B. Storage:
   1. Provide a covered storage area.
   2. Keep pipe material safe from damage and theft.
   3. Protect pipe material from direct rays of the sun.
   4. Protect gaskets from sun rays, excessive heat, grease, oil, and electric motors that produce ozone.

B Materials

2.01 PRESSURE RATED PIPE

A. Water main
   1. All pipe shall be the product of one manufacturer.
   2. All fittings shall be the product of one manufacturer.
   3. Pipe shall be manufactured in accordance to the following standards:
   a. Pipe sizes 4-inch through 12-inch: AWWA C900, pressure Class 150, thickness Class DR 18.
   4. Elastomeric gaskets shall be manufactured as defined in ASTM F477.
   5. Joints shall conform to ASTM D3139.
   6. Solvent weld joints may not be used.

B. Pressure Sewer (3 Inches and Smaller)

1. Pipe and joints shall be manufactured in ASTM D2241, minimum pressure Class 160 and thickness Class SDR 26.
2. Solvent Weld Joints: ASTM 2855

C. Pressure Sewer (4 Inches and Larger)

1. Pipe and joints shall meet one of the following minimums:
   a. Pipe sizes 4-inch through 12-inch:
      1) AWWA C900, pressure Class 150, thickness Class DR 18.
      2) ASTM D2241, pressure Class 250, thickness Class SDR 17.
   b. Pipe sizes 14-inch through 36-inch: AWWA C905, pressure Class 150, thickness Class DR 18.
2. Elastomeric Joints: ASTM D3139
3. Piping Systems (Plant Piping)

2.02 RESTRAINED JOINT PVC PIPE

A. Water Main or Sanitary Sewer.

1. Acceptable manufacturer is Certanteed Certa-Lok C900/RJ PVC pipe or equal.
2. Pipe shall be manufactured in accordance to the following standards:
   a. Pipe sizes 4-inch through 12-inch: AWWA C900, pressure Class 235, thickness Class DR 18 in right-of-way or easements (non-traffic areas).
   b. Pipe sizes 4-inch through 12-inch: AWWA C900, pressure class 305, thickness Class DR 14 in traffic areas.
3. Restrained Joint Couplings
   a. Non-metallic restrained type couplings. Pipe and couplings shall be designed as an integral system and shall be provided by a single manufacturer for maximum reliability and interchangeability. Pipe and couplings shall be joined using high-strength flexible plastic splines inserted into mating precision-machined grooves, which align when the pipe is fully inserted provided a full 360º restraint with evenly distributed loading. No external pipe-to-pipe restraining devices that clamp onto or otherwise damage the pipe surface as a result of point loading shall be permitted.

2.03 HYDRANTS

A. Manufacturer: Kennedy Guardian, K81D, or equal, conforming to AWWA C502.

B. Hydrants shall have 5¼-inch main valve opening, 6-inch mechanical joint connection, standard 2-piece pentagon operating nut, two 2½-inch hose connections, and one 4½-inch pumper connection.\

C. Hydrants shall be provided with O-ring seals and compression type shut off.

D. All buried bolts on the hydrant body shall be Type 304 stainless steel. All stainless steel threads shall be coated with anti-seize compound prior to assembly.

E. Depth of Bury shall be as required to conform to the hydrant flange elevations as shown on plans or a 7-foot minimum measured from the bottom of inlet to the hydrant ground line. No additional compensation will be allowed for hydrant extensions if required.

F. Color shall be Red.

G. Equip hydrants with a break-away safety flange and coupling at the ground line.

2.03 VALVES

A. Resilient Gate Valve
   1. Manufacturer shall be American Flow Control Series 2500, or equal.
   2. Resilient encapsulating wedge valve shall be used in water main sizes 4-inch through 12-inch.
   3. Valves shall conform with AWWA C515.
   4. Stem shall be non-rising.
   5. Valve body and bonnet shall be epoxy coated inside and out, conforming to AWWA C550. All bonnet bolts shall be Type 304 stainless steel. All stainless steel threads shall be coated with anti-seize compound prior to assembly.
   6. Waterway shall be smooth with no cavities or depressions in seat area.

B. Butterfly Valves
   1. Manufacturer shall be American Flow Control or equal.
   2. Butterfly valve shall be used in water main 14 inches and larger.
   3. Conform with AWWA C504, Class 150-B.
   4. Valve shaft shall be stainless steel.
   5. Valve disc shall be ductile iron.
   6. All buried bolts on the valve body and operator shall be Type 304 stainless steel.

C. Valve Boxes
   1. Manufacturer shall be Clow, Tyler, Sigma, or equal.
   2. Valve boxes shall be cast iron, three-piece, screw-type – Cast Iron.
   3. Shaft shall be 5¼-inch diameter.
   4. Lid shall be diameter drop type, anti-rattle and marked “Water.”
   5. Base shall be round or oval, sized to fit valve.
   6. Provide Valve box hangers.
      a. Valve Box Hangers: Manufacturer shall be Adaptor Inc., or equal.

2.04 FITTINGS

A. Conform with AWWA C153.
   1. All fittings shall be the product of one manufacturer.

B. Mechanical Joint 3-inch through 24-inch:
   1. Class 52.
   2. Rated Pressure 350 psi.

C. Coating and Lining:
   1. Exterior Coating: Asphaltic Coating, minimum of 1-mil. thick.
   2. Interior Lining: Standard thickness of cement-mortar conforming with AWWA C104.

D. Joining pipe of different material or outside diameter.
   1. Mechanical pipe couplings shall be Dresser Style 162, Romac 501 or equal.

2.05 POLYETHYLENE ENCASEMENT

A. Polyethylene encasement shall conform with AWWA C105.

B. Polyethylene encasement shall be Class C Black, Type 1 and Grade E-1.

C. Thickness shall be 8 mils minimum.

2.06 WATER SERVICE MATERIAL

A. Copper Tubing
   1. Type "K" conforming with AWWA C800.

B. Corporation Stops
   1. Manufacturer shall be Mueller H-15008, McDonald 4701 Q, Ford F-1000Q, or equal.
   2. Corporation stops shall conform with AWWA C800.
   3. Inlet shall have AWWA standard thread.
   4. Outlet shall be compression.

C. Curb Stops
   1. Manufacturer shall be Mueller B-25155, McDonald 6104 Q, Ford B44-444MQ, or equal.
   2. Curb stops shall conform with AWWA C800.
   3. Inlet and outlet shall be compression.

D. Curb Boxes
   1. Curb boxes shall be Mueller H-10300, McDonald 5614 or Ford EM2-70-56 for ½ to 1-inch curb stops, H-10302 or McDonald 5614 for 1¼-inch, and H-10300, McDonald 5615 or Ford EM2-70-57 for 1½-inch and 2-inch curb stops or equal.
   2. Minneapolis pattern with 1¼-inch upper section.
   3. Lid shall be plug style with pentagon bolt and marked “WATER.”
   4. The curb boxes shall extend 7 feet and be complete with minimum 4-foot long stainless steel stationary rods and stainless steel pin.

5. Base size shall match curb stop size.
6. Two curb box keys and wrenches per contract or one per thirty curb boxes, whichever number is greater.

E. Service Saddles
1. Manufacturer shall be Romac 306, Smith Blair 372, Cascade CSC2, Ford FS 313, or equal.
2. Service saddles shall be used when tapping PVC water main.

F. Fittings
1. Fittings for copper water service piping shall be of cast brass and shall meet NSF "no lead requirements."
2. Fittings shall have a uniform wall thickness and strength, and shall be free of defects, which may affect their serviceability.
3. Fittings shall be of the flared and compression type only.
4. Unions shall be extra heavy 3-part type.

2.07 TEMPORARY BYPASS SERVICE MATERIALS

A. All materials furnished for use as temporary bypass pipe, service hose, connections and related appurtenances that come into contact with drinking water are to be certified for compliance with ANSI/NSF Standard 61 by an ANSI approved third-party certification program or laboratory. All materials shall be fully adequate to withstand the required water pressure and all other conditions of use, and shall provide adequate water tightness before being put into service. All previously used materials may only have been used in potable water applications.

B. All materials for use as main temporary bypass lines, connections and related appurtenances shall have a minimum working pressure rating of 200 psi and be made of materials that will not have an adverse effect on the taste or odor of the water.

C. When the Contract documents or the engineer requires the temporary water system to include one or more temporary hydrants, the main temporary bypass line must be at least 4-inch diameter; otherwise, the main temporary bypass line must be at least 2-inch in diameter.

D. Match the diameter of the temporary service line with the existing service lateral diameter for all services 1½-inch diameter to ¾-inch diameter. Use a ¾-inch temporary service line for any service lateral smaller than ¾-inch diameter. Use hoses or piping that is hydraulically equivalent to the service size for all services 2 inch in diameter and larger.

E. Temporary fire hydrants shall consist of a 4 inch by 4 inch tee or 4 inch 90° bend, with a butterfly valve connected to the end of the tee or bend, and an operating nut to control the valve. Temporary fire hydrant shall be equipped with a 4-1/2 inch diameter National Standard threaded nozzle with hydrant cap installed.

2.08 TRACER WIRE

A. Provide the following:
   1. Tracer wire shall be No. 12 AWG, stainless steel, single conductor with Type UF insulation rated for direct burial service for all borings.
   2. Tracer wire shall be No. 10 AWG, copper, or No. 12 AWG stainless steel, single conductor, with Type UF insulation rated for direct burial service for open cut.

B. Tracer wire splices shall be made soldered. The soldered connection shall be coated with 3M Scotchkote electricians coating and then securely taped in a tee configuration.

C. Tracer wire signal connection box shall be three-piece, 5¼-inch cast iron valve box with top marked, "Water" as manufactured by Clow, Tyler, or equal.

2.09 PIPE BEDDING AND BACKFILLING

A. Trenching, backfilling and compaction shall be in accordance to the detail drawings.

2.10 THRUST BLOCKING

A. Thrust blocks shall be constructed of concrete having a minimum 28-day compressive strength of 2,000 psi. Hardwood blocking may be used, if approved by the engineer.

B. The minimum cement content shall be 4½-pound bags of cement per cubic yard of concrete. The allowable slump shall be 4 to 5 inches.

C. Blocking shall be placed between solid ground and the fitting to be anchored; the area of bearing on the pipe and on the ground shall be as shown or required by the engineer.

D. The blocking shall, unless otherwise specified or required, be placed so that the pipe and fitting joints will be accessible for repair.

E. A piece of 15-pound building paper or other approved material shall be placed between the cap or plug and the concrete.

2.11 JOINT RESTRAINT MATERIAL

A. Rods shall be ¾-inch diameter, Type 304, or 316 Stainless Steel.

B. Underground clamps shall conform to the following:
   1. ½-inch x 2 inches flat bar stock clamps, Astral Corp., or equal.
   2. Clamps shall include retainer washer.

C. T-bolts shall be Type 304 or 316 stainless steel.
   1. All stainless steel threads shall be coated with nickel based anti-seize compound prior to assembly.
   2. In lieu of anti-seize compound, a green fluoropolymer coated stainless steel nut may be substituted. The coating shall be FlourKote#1 manufactured by Metal Coatings Corporation.

D. Megalugs, by EBAA iron, Sigma "One-Lok", Ford, or equal may be used for joint restraint.

2.12 BUILT UP MASTIC COATINGS

A. Materials shall be applied in full accordance with manufacturer's recommendations. Coating shall be Tapecoat, TC Mastic, or equal.

C Construction

3.01 GENERAL

A. Before excavation of trenches begins, the Contactor shall uncover the end of the existing water main to which the new main is to be connected. This will permit adjustments in line and grade to avoid using extra fittings. The exposed end of an existing main must be protected and blocked by the contractor to prevent the blowing out of the plug or cap at the end of the main.

B. The contractor shall have sufficient and adequate equipment on the site of the work for unloading and lowering pipe and fittings into the trench. Extreme care shall be exercised by the contractor in handling all pipe, fittings, and special castings to prevent breakage and coating damage. Any significant damage to coating shall be repaired before installation. Under no circumstances shall pipe or fittings be dropped into the trench or so handled as to receive hard blows or jolts. All mud or concentration of dirt shall be removed prior to installation.

C. Every precaution shall be taken to prevent foreign materials from entering the pipe while it is being placed in the line. If the pipe-laying crew cannot put the pipe into the trench and in place without getting earth into it, the engineer may require that before lowering the pipe into the trench, a heavy, tightly woven canvas bag of suitable size shall be placed over each end and left there until the connection is to be made to the adjacent pipe. During the laying operations, no debris, tools, clothing, or other material shall be placed in the pipe.

D. At all times when pipe laying is not in progress, the open ends of pipe shall be closed by a watertight plug or other means accepted by the engineer. This provision shall apply during the noon hour as well as overnight. If water is in the trench, the seal shall remain in place until the trench is pumped completely dry. No pipe shall be laid in water or when trench conditions are unsuitable.

3.02 PIPE INSTALLATION

A. Pipe installation shall conform with specifications and detail drawings.

B. Lay pipe to line and depth shown on plans. Unless otherwise stated, pipe shall be laid with the bell ends facing the direction of laying. When grade exceeds 2 feet per 100 feet, the bells shall face upgrade.

C. When the depth is not shown on the plans, bury the pipe with 6 feet of cover as determined from the top of pipe to the finished ground elevation.

D. Keep pipe, fittings, and hydrants free of debris and foreign matter. The interior of all pipes shall be clean before being installed. The contractor shall provide the necessary means to wipe, brush, swab, or air blast to remove foreign matter.

E. Assemble all joints in accordance to manufacturer's recommendations.

F. Utilize full lengths of pipe, except at fittings.

G. Provide thrust blocking or restraints at the following locations:
   1. Bend deflecting 11½ degrees or more.
   2. Hydrants.
   3. Valves and tees.
   4. Plugs and caps.

H. When it is necessary to interrupt an existing system to complete construction, adhere to the following:
   1. No valves, controls, or appurtenances shall be operated by the contractor.
   2. Operation of existing valves, controls, and appurtenances for interruption of existing service shall be done by owner personnel at the owner's convenience and normal working schedule.
   3. Contact owner a minimum 24 hours prior to an anticipated interruption.

3.03 HYDRANTS

A. General
   1. Hydrants shall be set on hardwood blocking and in concrete thrust blocks as shown in the detail. Immediately before installation of hydrants, the following operation shall be performed:
      a. The hydrant shall be thoroughly inspected and cleaned on the interior.
      b. The hydrant shall be opened and closed as many times as necessary to determine if all parts are in proper working order.

B. Location and Position
   1. Hydrants shall be located as shown or as required to provide complete accessibility and minimize the possibility of damage from vehicles or injury to pedestrians.

2. When placed behind the curb, the hydrant barrel shall be set so that no portion of the pumper or hose nozzle cap will be less than 18 inches nor more than 24 inches from the gutter face of the curb, unless otherwise shown on drawing details.
3. When set in the lawn space between the sidewalk and the property line, no portion of the hydrant or nozzle cap shall be within 6 inches of the sidewalk.
4. All hydrants shall stand plumb within ¼-inch, 3 feet in all directions, and shall have their nozzles parallel with, or at right angles to the curb, with the pumper nozzle facing the curb, except that hydrants having two hose nozzles 90 degrees apart shall be set with each nozzle facing the curb at an angle of 45 degrees. Hydrants shall be set to the established grade, with nozzles at least 18 inches above the ground as shown or as required by the engineer.

C. Hydrant
1. Drainage shall be provided by placing crushed stone around the hydrant as shown on the detail. The minimum amount of crushed stone shall be 6 inches above the waste opening in the hydrant, and 1 foot around the hydrant.

D. The hydrant relocations shall be performed in accordance to this specification section and the typical section titled "Water Main Hydrant Relocation Detail" and "PVC Sewer and Water Main Bedding and Trench Section," detail.

3.04 VALVES

A. Install as shown on the drawings.

B. Provide gate valves for sizes through 12 inches.

C. Provide butterfly valves for sizes 14 inches and larger.

D. Install valve boxes plumb, and centered over valve operating nut:
1. Install in a manner that will prevent shock loads and stress being transmitted to the valve and water main.
2. After backfill has been placed and compacted, demonstrate to the engineer that all valves are operable.

E. The valves associated with the hydrant relocations shall be performed in accordance to this specification section and the typical sections titled "Water Main Hydrant Relocation Detail" and "Valve Box Setting" details.

3.05 POLYETHYLENE ENCASEMENT

A. Wrap all below ground metal in accordance to AWWA C105, including:
1. Ductile iron pipe.
2. Fittings, valves, and valve boxes.

3. Corporations, curb stops, and curb boxes - their entire length.
4. All portions of hydrants below grade.
5. Copper water services.
6. All metal restraining devices.

3.06 WATER SERVICES

A. Water services shall conform with all plumbing codes.

B. Terminate services at the property line or easement line as shown on the plans.

C. Three-part unions shall be used to connect to existing water services.

D. Connection to water main
Water services shall be made by tapping the water main for the corporation stop unless use of a service saddle is required. The corporation stop connection shall be a minimum of 1 foot from any pipe or fitting joint and must have a minimum of 1 foot between connections and stagger 30° around the circumference of the water main.

E. All polyethylene water services shall have tracer wire brought up and cable wrapped with zip ties to the outside of the curb box. Tracer wire shall be extended to the termination point of the service.

F. All connections to water main shall be under system pressure when the water services are installed as part of relay construction. All connections to water main during new construction shall be under system pressure and tested when the water main is tested.

G. Corporation Stops, Curb Stops, and Curb Boxes
Unless specified otherwise, the contractor shall provide and install one corporation stop, curb stop, and curb box, at each water service. Corporation stop and curb stop shall be service line size unless specified otherwise.

H. Position and Grade
In common trench construction, the water service shall be run parallel and a minimum of 12 inches above the sanitary sewer lateral. The water service shall be laid with a minimum cover of 6 feet or shall be insulated with acceptable material. The curb stop shall be placed between 6 and 7 feet below established or proposed grade.

I. Setting the Curb Box
The curb box shall be centered over the curb stop and shall be brought to proper grade. The legs of the service box shall rest firmly upon a 2-inch x 5-inch x 8-inch hardwood board or 4-inch x 8-inch x 16-inch solid concrete block. Clearance shall be provided so that the service box does not rest upon the water service pipe. Where the bench does not afford a firm support for the service box blocking, such

support shall be finished by the use of a 2-inch by 6-inch plank placed across the building sanitary sewer trench and firmly supported in each bank.

The curb box shall be plumbed and braced so it will remain vertical throughout the backfilling. Sufficient excavation shall be made for the curb box installation to ensure proper setting and backfilling around the curb box.

Before placing backfilling around the curb service box, the contractor shall wrap polyethylene around the base, and bedding material shall be tamped in place from a point above the main to a point 6 inches above the blocking to prevent entrance of backfill materials into the openings at the base.

After backfill has been placed and compacted, demonstrate to the engineer that all curb stops are operable.

J. The water service lateral relocation shall be performed in accordance to this specification section and typical sections titled "Water Main Water Service Relocation Detail," "Tap Service Piping (Copper), and Sewer and Laterals in Common Trench," details.

3.07 TRACER WIRE

A. Run tracer wire along pipe from hydrant to hydrant.

B. Tape wire to each length of pipe at a minimum of two points.

C. A maximum of one splice will be allowed between each hydrant.

D. Tracer wire shall be tested for continuity prior to acceptance of project.

3.08 PROTECTION OF BURIED METAL SURFACES

A. All steel clamps, rods, bolts, and other metal accessories using reaction anchorage or joint harness and all mechanical pipe fittings installed underground shall be protected with a built-up mastic coating and covered with a polyethylene in accordance to this section.

B. Surfaces shall be cleaned by wire brushing immediately prior to application of the mastic.

C. The mastic shall be molded firmly to encase all bolts, nuts, clamps, straps and flanges, and built-up to a uniform surface over the entire fitting.

3.09 NOTIFICATION REQUIREMENTS FOR SERVICE INTERRUPTIONS:

A. Notify the engineer at least 48-hours in advance of any planned service interruption.

B. Provide affected customers at least 48-hour notice advance of any planned service interruption. The notice shall include the delivery of a door-hanger or similar pamphlet which indicates the date and time of the planned service interruption and, as applicable, the proposed location of temporary service connection and the proposed route of the temporary service line and main bypass line. The notice shall attempt to coordinate the service interruption at a time that is convenient to the customer. Include contact information for the contractor's field representative and the engineer.

C. Whenever possible, make connections to the customer's water service line on a day and at a time that is convenient to the customer. Make satisfactory arrangements with the customer so that stop and waste valves shall be accessible at all times.

D. Do not interrupt any customer's service until certain that all labor, material and equipment necessary to perform the work are present at the work site.

E. Bear all responsibility for any loss or damage arising out of the failure of any such customer to receive the specified notice of a planned interruption of service.

F. Restore service as soon as possible. Immediately notify the owner or engineer regarding the restoration of service.

G. Emergency Shutdowns and Notifications:
In the event of a break on a water main, service, bypass pipe, temporary service or other failure of the owner's facilities, whether the result of contractor's activities or other unrelated matters, act in accordance to the following procedure:
1. Immediately notify the owner and engineer and inform them of the situation, the affected area, estimated duration, and if there is a need for an immediate water main shutdown.
2. The contractor is NOT to operate any valves unless directly authorized to do so by the Owner.
3. Notify all affected residents affected by the emergency service interruption.

3.10 JOINING PIPE OF DIFFERENT MATERIAL OR OUTSIDE DIAMETER

A. Where specified or required, pipes of different material or outside diameter shall be joined with mechanical pipe couplings.

B. Couplings shall be suitable for the intended service and shall be installed in accordance to the manufacturer's instructions.

C. The contractor shall submit details of proposed coupling for engineer's review.

3.11 CONTRACTOR RECORD KEEPING

A. Measure and record the following:
   1. Service locations: Point of origin and terminus.
   2. Valve and fitting locations.
   3. Water main locations.

3.12 DISINFECTION

A. The following water main shall be disinfected:
   1. New water main.
   2. Existing water main when cut into or repaired.
   3. Disinfect and flush system until samples test safe.

B. Contractor will perform sampling and have an independent laboratory (certified by the Department of Natural Resources) perform bacteriological testing to certify that water is free of coliform bacteria. Supply engineer with copy of test results.

C. Tablet Method: AWWA C651
   1. Place 5-gram calcium hypochlorite tablets each section of pipe as determined by the following table:

Number of Tablets Per Section of Pipe

Pipe Diameter (inches)	**Length of Pipe section (feet)**		
	13 or less	**18**	**20**
4	1	1	1
6	1	1	1
8	1	2	2
10	2	3	3
12	3	4	4
16	4	6	7

   2. Place one tablet in each hydrant, hydrant lead, and other appurtenance.
   3. Attach tablets with a food-grade adhesive to the top inside surface of the pipe:
      a. Adhesive shall be USDA for contact with edible products.
      b. Adhesive shall be Permatex Form-A-Gasket No. 2, Permatex Clear RTV Silicone, or equal.
      c. Permatex Form-A-Gasket No. 1 is not acceptable.
   4. Fill main in a manner such that the water velocity within the main will not exceed 1 fps.
   5. Water shall remain in pipe for a minimum of 24 hours, if water temperature is less than 40^{o} F, it shall remain in pipe a minimum of 48 hours.
   6. For pipe diameters larger than 16 inches, refer to AWWA C651 for correct calcium hypochlorite dosage.

D Measurement

A. The department will measure Water Main, Hydrant Relocation, as each individual hydrant relocation, acceptably completed.
   1. Unit price per hydrant shall include:
      a. Labor, material, and equipment.
      b. Excavation, dewatering, and backfilling.
      c. Tie rods, restraint clamps, and reaction blocking.
      d. Drainage stone.
      e. Removal, hauling, and disposal of all street surfacing and curb and gutter in the trench area.
      f. Erosion control.
      g. Installation of water main pipe materials, fittings, including pipe bedding and cover material.
      h. Poly-wrap fittings, valves, valve boxes, valve box hangers, and hydrants.
      i. Reaction blocking.
      j. Joint restraints.
      k. Loading, hauling and disposal of surplus excavated material.
      l. Dust control.
      m. Restore all facilities damaged or destroyed during construction.
      n. Landscaping.
      o. Leakage and pressure testing.
      p. Sterilize and flush the lines until a satisfactory test can be obtained from a certified laboratory.
      q. Provide bacteriological testing.
      r. Tracer wire.

B. The department will measure Water Main, Water Service Relocation as each individual water service relocation, acceptably completed, which includes:
   1. Corporation stop, curb stop, curb box, and unions.
   2. Copper water service pipe.
   3. Labor, material, and equipment.
   4. Removal, hauling and disposal of all street surfacing, and curb and gutter in the trench area.
   5. Excavation, dewatering, and backfilling.
   6. Installation of water service pipe materials, fittings, including pipe bedding and cover material.
   7. Traffic, dust, and erosion control.
   8. Restoration and landscaping.
   9. Leakage and pressure testing.
   10. Tracer wire where required.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.02	Water Main, Hydrant Relocation	Each
SPV.0060.03	Water Main, Water Service Relocation	Each

Payment is full compensation for removals, hauling, handling, and installing items, including all items listed under Section D Measurement above.

18. Foundation Drilling 24-Inch Diameter, Item SPV.0090.01.

A Description

This special provision describes drilling/boring holes for the H pile posts for the retaining wall. Work shall be in accordance to the plans, the pertinent sections of the standard specifications and as hereinafter provided.

The Site Investigation Report, the boring log, and soil samples are available for inspection from Knight E/A, Inc at 700 North Third Street, Suite 104, La Crosse, WI, 54601, (608) 519-1455.

B (Vacant)

C Construction

Determine the proper means, methods and procedure for accomplishing the work as specified herein and on the plans.

Submit the proposed method for foundation drilling prior to beginning construction. Perform all work in accordance to the rules and regulations of the local, state and federal governing authorities having jurisdiction over the project site.

Bore holes to the diameter and depth as shown on the plans. If necessary, use casings or alternative methods during drilling operations to maintain an open hole. If bentonite or equivalent slurry is used to maintain an open hole, prevent spillage of the slurry into adjacent waterways. Locate the post holes to within the following tolerances:

Horizontal Location	3 inches
Vertical Location	1 inch
Vertical Alignment	1/8 inch per foot
Hole Diameter	24” to 26”

D Measurement

The department will measure Foundation Drilling 24-Inch Diameter by the linear foot, acceptably completed, measured from the bottom of the hole to the top of the foundation footing.

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	Foundation Drilling 24-Inch Diameter	LF

Payment is full compensation for drilling/boring the holes; for rock coring as necessary, for furnishing casing or alternative drilling methods as necessary.

19. Railing Pipe Galvanized, Item SPV.0090.02.

A Description

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

B Materials

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

B.1 Coating System

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

[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, touchup 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 by the linear foot of railing, 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	Railing Pipe Galvanized	LF

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

20. Railing Steel Type C2 Galvanized Pedestrian R-33-004, Item SPV.0105.01, R-33-005, Item SPV.0105.02, R-33-006, Item SPV.0105.03.

A Description

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

B Materials

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

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

[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, touchup the surface in conformance with the manufacturer's recommendations. If damage is excessive, the railing assembly shall be replaced at no additional cost to the owner. The contractor shall provide the engineer with a copy of the manufacturer's recommended repair procedure and materials before repairing damaged coatings.

D Measurement
The department will measure Railing Steel Type C2 Galvanized Pedestrian R-33-004 as a single lump sum unit of work, acceptably completed.

The department will measure Railing Steel Type C2 Galvanized Pedestrian R-33-005 as a single lump sum unit of work, acceptably completed.

The department will measure Railing Steel Type C2 Galvanized Pedestrian R-33-006 as a single lump sum unit of work, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Railing Steel Type C2 Galvanized Pedestrian R-33-004	LS
SPV.0105.02	Railing Steel Type C2 Galvanized Pedestrian R-33-005	LS
SPV.0105.03	Railing Steel Type C2 Galvanized Pedestrian R-33-006	LS

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

21. Timber Lagging, Item SPV.0110.01.

A Description
Work under this item consists of furnishing, delivering, and installing all timber lagging for soldier pile and lagging walls. Perform work in accordance to pertinent parts of the standard specifications, the plans, and these special provisions.

B Materials
Furnish materials that conform to lumber as specified in standard spec 507 except that preservative treatments according to standard spec 507.2.2.6 are not required and untreated lumber may be used. Use Douglas fir or Southern pine construction grade rough-cut lumber with a minimum nominal thickness of 3-inches. Where necessary provide certification that the timber conforms to the grade, species, and other specified requirements. The minimum tabulated unit stress in bending (Fb), used for the design of the timber lagging, shall be 1000 psi (6.9 MPa) unless otherwise specified on the plans.

C Construction

Place timber lagging from the top down in sufficiently small lifts immediately after excavation to prevent erosion of materials into excavation. Before placing lagging, smooth the soil face to create a contact surface for the lagging. Lagging shown above grade shall be installed and backfilled against prior to installing any permanent facing to minimize post construction deflections. Over-excavation required to place the timber lagging behind the flanges of the soldier piles shall be the minimum necessary to install the lagging. Any voids produced behind the lagging shall be filled with flowable backfill as defined in the Excavation for Structures Retaining Wall article at the contractor's expense. When the plans require the contractor to design the timber lagging, the design shall be based on established practices published in FHWA or AASHTO documents considering lateral earth pressure, construction loading, traffic surcharges and the lagging span length(s). The contractor shall be responsible for the successful performance of the lagging system until the concrete facing is installed. Shear walls, next to the stairs, that call out for an additional offset pile contains timber lagging on the backside of the wall. Timber lagging is to be installed as stated above. Never place lagging in tight contact to adjacent lagging.

D Measurement

The department will measure Timber Lagging by the thousand feet board measure (MBM), acceptably completed. The department will compute quantities from the nominal sizes and from the lengths as framed and erected. The department will not make any allowances for waste. The department will only measure timber that is a part of the completed work.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0110.01	Timber Lagging	MBM

Payment is full compensation for Timber Lagging; for furnishing, framing, installing, and the timber lagging.

22. Geocomposite Drain Board, Item SPV.0165.01.

A Description

This special provision describes supplying and installing prefabricated geocomposite drain board as indicated on the plans. Perform work in accordance to pertinent provisions of the standard specifications, the plans, and as hereinafter provided.

B Materials

Use materials that conform to the following:

Physical Properties	Test Method	Value
Thickness		0.25 inch
Flow capacity, (at 3600 psi with I = 1)	ASTM D 4716 (mod)	9 gpm/ft
Geotextile tensile strength	ASTM D 4632	100 lb
Compressive strength	ASTM D 1621 (mod)	10,000 lbs/SF
Mullen burst	ASTM D 3786	Min. 200 lb
Apparent opening size	ASTM D 4751	70
Flow rate	ASTM D 4491	Min140 gpm/SF

C Construction

Geocomposite wall drain shall be constructed in horizontal courses. The geocomposite shall be in direct contact with the wall and secured with concrete nails not less than 2 in long with approved washers not less than 9 sq in. in area. The spacing of the concrete nails shall be as directed by the engineer but shall not be more than 3 feet apart, both horizontally and vertically. There shall be at least one horizontal row of nails in each course. The wall drain shall be installed on the concrete facing side of the lagging with the pervious (fabric) side of the drain installed to face the lagging. When a concrete facing is not specified on the plans, the pervious (fabric) side of the drain shall be installed to face the soil. In this case, the drain shall be installed in stages as the lagging is installed. The wall drain shall be placed in sections and spliced, or kept on a continuous roll, so that as each piece of lagging is placed, the drain can be properly located as the excavation proceeds.

Horizontal seams shall be formed by a 4 in. flap of geotextile extending from the upper course and lapping over the top of the lower course or by a 12 in. wide continuous strip of geotextile centered over the seam and securely fastened to the upper course with continuous 3 in. wide plastic tape. The overlapping flap or strip shall be fastened to the lower course intermittently as directed by the engineer, but the spacing shall not exceed 2 ft. Vertical splices shall be formed by a 4 in. flap of geotextile extending from one or the other abutting pieces or by a 12 in. wide continuous strip of geotextile centered over the splice. Vertical splice flaps or strips shall be continuously fastened to the geocomposite with continuous applications of contact adhesive or 3 in. wide plastic tape.

The bottom, side, and top edges of the geocomposite shall be covered with a suitable cap formed by folding a 6 in. flap or a 12 in. wide strip of geotextile over the edge and securing it in place with a continuous application of contact adhesive or 3 in. wide plastic tape. All seams, splices, bottom caps, top caps, and end caps shall be constructed so that backfill material cannot enter the geocomposite during or after construction.

Connection to pipe outlet systems shall be as shown on the plans. Outlet fittings shall be fastened to the wall drains as directed by the manufacturer and so that backfill materials cannot enter the system during or after construction. If necessary, to facilitate the rapid and complete flow of water from the wall drain into the pipe outlet, a portion of the wall drain

core equal to the cross section at the outlet shall be removed. Weep holes shall be accommodated by cutting a matching hole through the wall drain. An approved weep hole cover extending at least 4 in. from the edge(s) of the hole shall be securely fastened to the soil side of the wall drain by 3 in. wide plastic tape or contact adhesive applied continuously around its periphery.

D Measurement

The department will measure Geocomposite Drain Board in area by the square foot, acceptably completed. The department will not pay for repairs to the geocomposite and will not pay for overlap of drain elements.

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	Geocomposite Drain Board	SF

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

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.

460.2.2.3 Aggregate Gradation Master Range

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

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

TABLE 460-1 AGGREGATE GRADATION MASTER RANGE AND VMA REQUIREMENTS

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

[1] 14.5 for E-3 mixes.

[2] 15.5 for E-3 mixes.

460.2.7 HMA Mixture Design

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

(1) For each HMA mixture type used under the contract, develop and submit an asphaltic mixture design according to the department's test method number 1559 as described in CMM 8-66 and conforming to the requirements of table 460-1 and table 460-2. The values listed are design limits; production values may exceed those limits. The department will review mixture designs and report the results of that review to the designer according to the department's test method number 1559.

TABLE 460-2 MIXTURE REQUIREMENTS

Mixture type	E - 0.3	E - 1	E - 3	E - 10	E - 30	E - 30x	SMA
ESALs x 10^6 (20 yr design life)	< 0.3	0.3 - < 1	1 - < 3	3 - < 10	10 - < 30	>= 30	___
LA Wear (AASHTO T96)							
100 revolutions(max % loss)	13	13	13	13	13	13	13
500 revolutions(max % loss)	50	50	45	45	45	45	40
Soundness (AASHTO T104) (sodium sulfate, max % loss)	12	12	12	12	12	12	12
Freeze/Thaw (AASHTO T103) (specified counties, max % loss)	18	18	18	18	18	18	18
Fractured Faces (ASTM 5821) (one face/2 face, % by count)	60 / __	65 / __	75 / 60	85 / 80	98 / 90	100/100	100/90
Flat & Elongated (ASTM D4791) (max %, by weight)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	20 (3:1ratio)
Fine Aggregate Angularity (AASHTO T304, method A, min)	40	40	43	45	45	45	45
Sand Equivalency (AASHTO T176, min)	40	40	40	45	45	50	50
Gyratory Compaction							
Gyrations for N_{ini}	6	7	7	8	8	9	8
Gyrations for N_{des}	40	60	75	100	100	125	65
Gyrations for N_{max}	60	75	115	160	160	205	160
Air Voids, $\%V_a$ ($\%G_{mm}$ N_{des})	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)
% G_{mm} N_{ini}	<= 91.5[1]	<= 90.5[1]	<= 89.0[1]	<= 89.0	<= 89.0	<= 89.0	___
% G_{mm} N_{max}	<= 98.0	<= 98.0	<= 98.0	<= 98.0	<= 98.0	<= 98.0	___
Dust to Binder Ratio[2] (% passing 0.075/P_{be})	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	1.2 - 2.0
Voids filled with Binder (VFB or VFA, %)	68 - 80[4] [5]	65 - 78[4]	65 - 75[3] [4]	65 - 75[3] [4]	65 - 75[3] [4]	65 - 75[3] [4]	70 - 80
Tensile Strength Ratio (TSR) (ASTM 4867)							
no antistripping additive	0.70	0.70	0.70	0.70	0.70	0.70	0.70
with antistripping additive	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Draindown at Production Temperature (%)	___	___	___	___	___	___	0.30

[1] The percent maximum density at initial compaction is only a guideline.

[2] For a gradation that passes below the boundaries of the caution zone(ref. AASHTO MP3), the dust to binder ratio limits are 0.6 - 1.6.

[3] For 9.5mm and 12.5 mm nominal maximum size mixtures, the specified VFB range is 70 - 76%.

[4] For 37.5mm nominal maximum size mixes, the specified VFB lower limit is 67%.

[5] For 25.0mm nominal maximum size mixes, the specified VFB lower limit is 67%.

460.2.8.2.1.5 Control Limits

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

(1) Conform to the following control limits for the JMF and warning limits based on a running average of the last 4 data points:

ITEM	JMF LIMITS	WARNING LIMITS
Percent passing given sieve:		
37.5-mm	+/- 6.0	+/- 4.5
25.0-mm	+/- 6.0	+/- 4.5
19.0-mm	+/- 5.5	+/- 4.0
12.5-mm	+/- 5.5	+/- 4.0
9.5-mm	+/- 5.5	+/- 4.0
2.36-mm	+/- 5.0	+/- 4.0
75-µm	+/- 2.0	+/- 1.5
Asphaltic content in percent	- 0.3	- 0.2
Air voids in percent	+/- 1.3	+/- 1.0
VMA in percent[1]	- 0.5	- 0.2

[1] VMA limits based on minimum requirement for mix design nominal maximum aggregate size in Table 460-1.

(2) Warning bands are defined as the area between the JMF limits and the warning limits.

460.2.8.2.1.6 Job Mix Formula Adjustment

Replace the entire text with the following effective with the January 2014 letting:

(1) The contractor may request adjustment of the JMF according to the department's test method number 1559. Have an HTCP HMA technician certified at a level appropriate for process control and troubleshooting or mix design submit a written JMF adjustment request. Ensure that the resulting JMF is within specified master gradation bands. The department will have an HMA technician certified at level III review the proposed adjustment and, if acceptable, issue a revised JMF.

(2) The department will not allow adjustments that do the following:

- Exceed specified JMF tolerance limits.
- Reduce the JMF asphalt content unless the production VMA running average meets or exceeds the minimum VMA design requirement defined in table 460-1for the mixture produced.

(3) Have an HMA technician certified at level II make related process adjustments. If mixture redesign is necessary, submit a new JMF, subject to the same specification requirements as the original JMF.

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 2014 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://www.dot.wi.gov/business/civilrights/laborwages/index.htm

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

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

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

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

DECEMBER 2013

BUY AMERICA PROVISION

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

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

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

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

Effective with September 2004 Letting

WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS AND TRANSPORTATION FACILITIES

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS

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

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
LAFAYETTE COUNTY

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

CLASSIFICATION: Contractors are required to call the Department of Workforce Development if there are any questions 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	32.01	17.35	49.36
Carpenter	30.48	16.00	46.48
Cement Finisher	33.51	16.13	49.64
Future Increase(s): Add $1.87 on 6/1/14; Add $1.87 on 6/1/15; Add $1.75 on 6/1/16. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Electrician	34.07	19.25	53.32
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Fence Erector	24.33	0.00	24.33
Ironworker	31.25	19.46	50.71
Line Constructor (Electrical)	36.01	18.94	54.95
Painter	21.87	11.37	33.24
Pavement Marking Operator	30.00	0.00	30.00
Piledriver	30.98	16.00	46.98
Roofer or Waterproofer	18.50	4.00	22.50
Teledata Technician or Installer	21.89	11.85	33.74
Tuckpointer, Caulker or Cleaner	35.25	13.12	48.37
Underwater Diver (Except on Great Lakes)	34.48	15.90	50.38
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	34.43	15.24	49.67
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	35.50	15.89	51.39
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.78	13.58	40.36
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.86	12.97	37.83

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	12.70	34.45
TRUCK DRIVERS			
Single Axle or Two Axle	34.22	19.90	54.12
Three or More Axle	26.87	15.10	41.97
Articulated, Euclid, Dumptor, Off Road Material Hauler	29.27	20.40	49.67
Future Increase(s): Add $1.75/hr on 6/1/14); Add $1.25/hr on 6/1/15); Add $1.30/hr on 6/1/16); Add $1.25/hr on 6/ 1/ 17. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
Pavement Marking Vehicle	26.87	15.10	41.97
Shadow or Pilot Vehicle	34.22	19.90	54.12
Truck Mechanic	26.87	15.10	41.97
LABORERS			
General Laborer	29.04	14.63	43.67
Future Increase(s): Add $1.60/hr on 6/1/2014. Premium Pay: Add $.10/hr for topman, air tool operator, vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add $.15/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add $.20/hr for blaster and powderman; Add $.25/hr for bottomman; Add $.35/hr for line and grade specialist; Add $.45/hr for pipelayer. DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Asbestos Abatement Worker	24.36	14.79	39.15
Landscaper	29.04	14.63	43.67
Future Increase(s): Add $1.60/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Flagperson or Traffic Control Person	25.67	14.63	40.30
Future Increase(s): Add $1.60/hr on 6/1/2014. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	18.31	12.67	30.98
Railroad Track Laborer	23.46	1.36	24.82

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 $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	36.72	20.40	57.12
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 $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	36.22	20.40	56.62
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	35.72	20.40	56.12

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
& A- Frames. Future Increase(s): Add $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint 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. Future Increase(s): Add $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	35.46	20.40	55.86
Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	35.17	20.40	55.57
Fiber Optic Cable Equipment.	26.69	16.65	43.34

CONTRACT: 20141111022 PROJECT(S): 5944-03-84 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	201.0120 CLEARING	74.000 ID		.		.
0020	201.0220 GRUBBING	74.000 ID		.		.
0030	204.0100 REMOVING PAVEMENT	53.000 SY		.		.
0040	204.0110 REMOVING ASPHALTIC SURFACE	24.000 SY		.		.
0050	204.0150 REMOVING CURB & GUTTER	302.000 LF		.		.
0060	204.0155 REMOVING CONCRETE SIDEWALK	862.000 SY		.		.
0070	204.0165 REMOVING GUARDRAIL	128.000 LF		.		.
0080	204.9105.S REMOVING (ITEM DESCRIPTION) 01. MODULAR BLOCK RETAINING WALL (STA 15+50)	LUMP	LUMP			.
0090	204.9105.S REMOVING (ITEM DESCRIPTION) 02. MODULAR BLOCK RETAINING WALL (STA 20+00)	LUMP	LUMP			.

CONTRACT: 20141111022 PROJECT(S): 5944-03-84 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
0100	205.0100 EXCAVATION COMMON	1,709.000 CY		.		.
0110	205.0300 EXCAVATION STONE PILES AND STONE FENCES	45.000 CY		.		.
0120	206.3000 EXCAVATION FOR STRUCTURES RETAINING WALLS (STRUCTURE) 01. 9+50	LUMP	LUMP			.
0130	206.3000 EXCAVATION FOR STRUCTURES RETAINING WALLS (STRUCTURE) 02. R-33-004	LUMP	LUMP			.
0140	206.3000 EXCAVATION FOR STRUCTURES RETAINING WALLS (STRUCTURE) 03. R-33-005	LUMP	LUMP			.
0150	206.3000 EXCAVATION FOR STRUCTURES RETAINING WALLS (STRUCTURE) 04. R-33-006	LUMP	LUMP			.
0160	210.0100 BACKFILL STRUCTURE	68.500 CY		.		.
0170	213.0100 FINISHING ROADWAY (PROJECT) 01. 5944-03-84	1.000 EACH		.		.
0180	305.0115 BASE AGGREGATE DENSE 3/4-INCH	167.000 CY		.		.
0190	416.0160 CONCRETE DRIVEWAY 6-INCH	60.000 SY		.		.

CONTRACT: 20141111022 PROJECT(S): 5944-03-84 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
0200	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	6.000 TON		.		.
0210	504.0500 CONCRETE MASONRY RETAINING WALLS	422.000 CY		.		.
0220	505.0615 BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	39,780.000 LB		.		.
0230	506.0605 STRUCTURAL STEEL HS	127,400.000 LB		.		.
0240	506.3014 WELDED STUD SHEAR CONNECTORS 3/4X6-INCH	1,736.000 EACH		.		.
0250	517.1010.S CONCRETE STAINING (STRUCTURE) 01. R-33-004	612.000 SF		.		.
0260	517.1010.S CONCRETE STAINING (STRUCTURE) 02. R-33-005	972.000 SF		.		.
0270	517.1010.S CONCRETE STAINING (STRUCTURE) 03. R-33-006	1,704.000 SF		.		.
0280	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 01. R-33-004	612.000 SF		.		.
0290	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 02. R-33-005	972.000 SF		.		.

CONTRACT: 20141111022 PROJECT(S): 5944-03-84 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
0300	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 03. R-33-006	1,704.000 SF		.		.
0310	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D	302.000 LF		.		.
0320	601.0600 CONCRETE CURB PEDESTRIAN	4.000 LF		.		.
0330	602.0405 CONCRETE SIDEWALK 4-INCH	9,934.000 SF		.		.
0340	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA	106.000 SF		.		.
0350	602.1500 CONCRETE STEPS	85.000 SF		.		.
0360	611.8115 ADJUSTING INLET COVERS	2.000 EACH		.		.
0370	612.0106 PIPE UNDERDRAIN 6-INCH	1,454.000 LF		.		.
0380	612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH	185.000 LF		.		.
0390	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 5944-03-84	1.000 EACH		.		.
0400	619.1000 MOBILIZATION	1.000 EACH		.		.

CONTRACT: 20141111022 PROJECT(S): 5944-03-84 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
0410	624.0100 WATER	5.000 MGAL		.		.
0420	625.0500 SALVAGED TOPSOIL	6,660.000 SY		.		.
0430	628.1504 SILT FENCE	100.000 LF		.		.
0440	628.1520 SILT FENCE MAINTENANCE	100.000 LF		.		.
0450	628.1905 MOBILIZATIONS EROSION CONTROL	5.000 EACH		.		.
0460	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	5.000 EACH		.		.
0470	628.2008 EROSION MAT URBAN CLASS I TYPE B	1,623.000 SY		.		.
0480	628.7005 INLET PROTECTION TYPE A	1.000 EACH		.		.
0490	628.7015 INLET PROTECTION TYPE C	17.000 EACH		.		.
0500	629.0210 FERTILIZER TYPE B	1.040 CWT		.		.
0510	630.0140 SEEDING MIXTURE NO. 40	29.240 LB		.		.

CONTRACT: 20141111022 PROJECT(S): 5944-03-84 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
0520	630.0200 SEEDING TEMPORARY	43.850 LB		.		.
0530	634.0614 POSTS WOOD 4X6-INCH X 14-FT	9.000 EACH		.		.
0540	637.2210 SIGNS TYPE II REFLECTIVE H	51.220 SF		.		.
0550	637.2230 SIGNS TYPE II REFLECTIVE F	15.250 SF		.		.
0560	638.2102 MOVING SIGNS TYPE II	15.000 EACH		.		.
0570	638.2602 REMOVING SIGNS TYPE II	15.000 EACH		.		.
0580	638.3000 REMOVING SMALL SIGN SUPPORTS	9.000 EACH		.		.
0590	638.4000 MOVING SMALL SIGN SUPPORTS	10.000 EACH		.		.
0600	642.5001 FIELD OFFICE TYPE B	1.000 EACH		.		.
0610	643.0100 TRAFFIC CONTROL (PROJECT) 01. 5944-03-84	1.000 EACH		.		.
0620	643.0300 TRAFFIC CONTROL DRUMS	8,250.000 DAY		.		.

CONTRACT: 20141111022 PROJECT(S): 5944-03-84 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
0630	643.0410 TRAFFIC CONTROL BARRICADES TYPE II	1,750.000 DAY		.		.
0640	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	750.000 DAY		.		.
0650	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A	3,250.000 DAY		.		.
0660	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C	1,250.000 DAY		.		.
0670	643.0900 TRAFFIC CONTROL SIGNS	5,750.000 DAY		.		.
0680	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II	2.000 EACH		.		.
0690	645.0111 GEOTEXTILE FABRIC TYPE DF SCHEDULE A	1,152.000 SY		.		.
0700	646.0106 PAVEMENT MARKING EPOXY 4-INCH	5,340.000 LF		.		.
0710	646.0600 REMOVING PAVEMENT MARKINGS	5,340.000 LF		.		.
0720	647.0256 PAVEMENT MARKING SYMBOLS EPOXY	2.000 EACH		.		.
0730	649.0100 TEMPORARY PAVEMENT MARKING 4-INCH	5,260.000 LF		.		.

CONTRACT: 20141111022 PROJECT(S): 5944-03-84 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
0740	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. STA 9+50	LUMP	LUMP			.
0750	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 02. R-33-004	LUMP	LUMP			.
0760	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 03. R-33-005	LUMP	LUMP			.
0770	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 04. R-33-006	LUMP	LUMP			.
0780	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 5944-03-84	LUMP	LUMP			.
0790	650.9920 CONSTRUCTION STAKING SLOPE STAKES	1,650.000 LF	.			.
0800	690.0150 SAWING ASPHALT	33.000 LF	.			.
0810	690.0250 SAWING CONCRETE	155.000 LF	.			.
0820	715.0502 INCENTIVE STRENGTH CONCRETE STRUCTURES	2,430.000 DOL	1.00000		2430.00	

CONTRACT: 20141111022 PROJECT(S): 5944-03-84 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
0830	SPV.0035 SPECIAL 01. CONCRETE MASONRY SOLDIER PILE FOOTINGS	129.000 CY		.		.
0840	SPV.0060 SPECIAL 01. SANITARY SEWER LATERAL RELOCATION	10.000 EACH		.		.
0850	SPV.0060 SPECIAL 02. WATER MAIN, HYDRANT RELOCATION	2.000 EACH		.		.
0860	SPV.0060 SPECIAL 03. WATER MAIN, WATER SERVICE RELOCATION	9.000 EACH		.		.
0870	SPV.0090 SPECIAL 01. FOUNDATION DRILLING 24-INCH DIAMETER	1,094.000 LF		.		.
0880	SPV.0090 SPECIAL 02. RAILING PIPE GALVANIZED	280.000 LF		.		.
0890	SPV.0105 SPECIAL 01. RAILING STEEL TYPE C2 GALVANIZED PEDESTRIAN R-33-004	LUMP	LUMP			.
0900	SPV.0105 SPECIAL 02. RAILING STEEL TYPE C2 GALVANIZED PEDESTRIAN R-33-005	LUMP	LUMP			.
0910	SPV.0105 SPECIAL 03. RAILING STEEL TYPE C2 GALVANIZED PEDESTRIAN R-33-006	LUMP	LUMP			.
0920	SPV.0110 SPECIAL 01. TIMBER LAGGING	19.980 MBM		.		.

CONTRACT: 20141111022 PROJECT(S): 5944-03-84 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	SPV.0165 SPECIAL 01. GEOCOMPOSITE DRAIN BOARD	7,254.000 SF		.		.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE