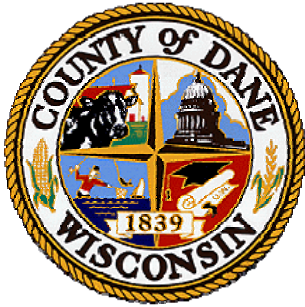


**RFB NO. 311009**



## **CONSTRUCTION DOCUMENTS PROJECT MANUAL**

DANE COUNTY DEPARTMENT OF PUBLIC WORKS,  
HIGHWAY AND TRANSPORTATION

PUBLIC WORKS ENGINEERING DIVISION  
1919 ALLIANT ENERGY CENTER WAY  
MADISON, WISCONSIN 53713

### **REQUEST FOR BIDS NO. 311009 2011 RESTORATION CAPITOL SQUARE SOUTH PARKING RAMP 113 SOUTH HENRY STREET MADISON, WISCONSIN**

Opening Date / Time: **TUESDAY, MAY 3, 2011 / 2:00 P.M.**

Location: **PUBLIC WORKS OFFICE**

Performance / Payment Bond: **100% OF CONTRACT AMOUNT**

Bid Deposit: **5% OF BID AMOUNT**

---

FOR INFORMATION ON THIS REQUEST FOR BIDS, PLEASE CONTACT:

JOHN SCHRAUFNAGEL, PROJECT ENGINEER  
DANE COUNTY DEPARTMENT OF PUBLIC WORKS,  
HIGHWAY & TRANSPORTATION  
1919 ALLIANT ENERGY CENTER WAY  
MADISON, WISCONSIN 53713  
TELEPHONE NO.: 608/266-4798  
FAX NO.: 608/267-1533  
E-MAIL: [SCHRAUFNAGEL@COUNTYOFDANE.COM](mailto:SCHRAUFNAGEL@COUNTYOFDANE.COM)

**DOCUMENT INDEX FOR RFB NO. 311009**

**PROCUREMENT AND CONTRACTING REQUIREMENTS**

- Project Manual Cover Page
- Documents Index
- Invitation to Bid (Legal Notice)
- Instructions to Bidders
- Bid Form
- Fair Labor Practices Certification
- Best Value Contracting Application
- Sample Public Works Contract
- Sample Bid Bond
- Sample Performance Bond
- Sample Payment Bond
- General Conditions of Contract
- Supplementary Conditions
  - Prevailing Wage Rates

**DIVISION 01 – GENERAL REQUIREMENTS**

- 01 00 00 – Basic Requirements
- 01 15 10 – Unit Pricing
- 01 74 09 – Recycling

**DIVISION 02 – EXISTING CONDITIONS**

- 02 41 49 – Selective Structure Demolition

**DIVISION 03 - CONCRETE**

- 03 01 30.70 – Rehabilitation of CIP Concrete – Redimix
- 03 01 30.71 – Rehabilitation of CIP Concrete – Redimix
- 03 21 00 – Concrete Reinforcement
- 03 37 12 – Gunite
- 03 37 13 – Shotcrete
- 03 64 23 – Epoxy Injection

**DIVISION 04 - MASONRY**

- 04 01 20.91 Masonry Restoration and Repair

**DIVISION 05 – METALS**

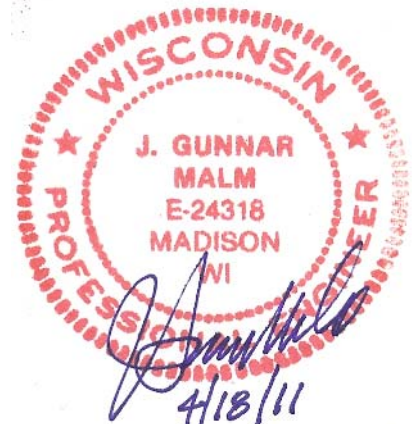
- 05 50 00 – Metal Fabrications

**DIVISION 07 – THERMAL AND MOISTURE PROTECTION**

- 07 18 17 – Broadcast Overlay System
- 07 19 10 - Epoxy Crack Healer – Penetrating Sealer
- 07 92 13 – Elastomeric Joint Sealant
- 07 95 10 – Vehicular Expansion Joint

**DIVISION 08 – OPENINGS**

- 08 11 00 – Hollow Metal Doors and Frames



4/18/11  
Div. 2 - DW. B

## **DRAWINGS**

To be printed to correct scale or size, plot sheets on 30" x 42" (E1) paper

- T0-01 – Title Page
- S1-02 – Topside Plans 7, 6, 5, 4,
- S1-02 – Topside Plans 3, 2, 1, LL
- S1-03 – Underside Plans 1, 2, 3, 4
- S1-04 - Underside Plans 5
- S2-01 – Glass Block Elevations
- S4-01 – Stair Sections & Plans
- S4-02 - Stair Details
- S5-01 – Details & Sections

END OF SECTION

## LEGAL NOTICE

### INVITATION TO BID

Dane County Public Works, Highway & Transportation Dept., 1919 Alliant Energy Center Way, Madison, WI 53713, will receive sealed Bids until:

**2:00 P.M., TUESDAY, MAY 3, 2011**

**REQUEST FOR BIDS NO. 311009**

**2011 RESTORATION  
CAPITOL SQUARE SOUTH PARKING RAMP  
MADISON, WISCONSIN**

Dane County is inviting Bids for construction services primarily consisting of cast-in-place concrete slab, beam, & column repairs in selected areas on floors 1 through 5. Penetrating epoxy crack treatment coating on portions of floors 1 through 4 & 7. Additional construction services include expansion joint replacement, coating of trench drains, masonry repairs & tuckpointing & stairwell repairs.

Request for Bids package may be obtained at Dane County Public Works, Highway & Transportation Dept., 1919 Alliant Energy Center Way, Madison, WI 53713, by calling 608-266-4018, or downloading it from [www.danepurchasing.com/rfps.aspx](http://www.danepurchasing.com/rfps.aspx). Please call John Schraufnagel at 608-266-4798 for any questions or additional information.

All Bidders must be a registered vendor with Dane County & pay an annual registration fee. Complete Vendor Registration Form at [www.danepurchasing.com](http://www.danepurchasing.com) or obtain one by calling 608-266-4131.

A non-mandatory facility tour will be held on Wednesday, April 27, 2011 at 10:00 A.M. at the Capitol Square South Parking Ramp, starting in the lower level office.

**PUBLISH:     APRIL 19 and 26, 2011 - WISCONSIN STATE JOURNAL  
                  APRIL 19 and 26, 2011 - THE DAILY REPORTER**

# INSTRUCTIONS TO BIDDERS

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### **1. GENERAL**

- A. Before submitting Bid, bidder shall thoroughly examine all Construction Documents. Successful Bidder shall be required to provide all the Work that is shown on Drawings, set forth in Specifications, or reasonably implied as necessary to complete Contract for this project.
- B. Bidder shall visit site to become acquainted with adjacent areas, means of approach to site, conditions of actual site and facilities for delivering, storing, placing, and handling of materials and equipment.
- C. Pre-bid meeting is scheduled on April 27, 2011 at 10:00 AM at Capitol Square South Parking Ramp, 113 S. Henry Street, Madison, in Office. Attendance by all bidders is optional, however bidders and subcontractors are strongly encouraged to attend. The contact person for the pre-bid tour is Ronald Bernhagen @ Gunnar Malm & Associates, 608-288-1108.
- D. Additional visits at other times can also be arranged. Coordinate site access activities with Facility Manager, Karen Shevet-Dinah, 608/266-4363. All questions shall be directed to Ronald Bernhagen @ Gunnar Malm & Associates, 608-288-1108.
- E. Failure to visit site or failure to examine any and all Construction Documents will in no way relieve successful Bidder from necessity of furnishing any necessary materials or equipment, or performing any work, that may be required to complete the Work in accordance with

Drawings and Specifications. Neglect of above requirements will not be accepted as reason for delay in the Work or additional compensation.

## **2. DRAWINGS AND SPECIFICATIONS**

- A. Drawings and Specifications that form part of this Contract, as stated in Article 1 of General Conditions of Contract, are enumerated in Document Index of these Construction Documents.
- B. Complete sets of Drawings and Specifications for all trades will be issued to all Bidders, irrespective of category of work to be bid on, in order that all Bidders may be familiar with work of other trades as they affect their bid.

## **3. INTERPRETATION**

- A. No verbal explanation or instructions will be given in regard to meaning of Drawings or Specifications before Bid Opening. Bidders shall bring inadequacies, omissions or conflicts to Owner or Architect / Engineer's attention at least ten (10) days before Bid Opening. Prompt clarification will be available to all bidders by Addendum.
- B. Failure to so request clarification or interpretation of Drawings and Specifications will not relieve successful Bidder of responsibility. Signing of Contract will be considered as implicitly denoting that Contractor has thorough understanding of scope of the Work and comprehension of Construction Documents.
- C. Owner or Engineer will not be responsible for verbal instructions.

## **4. QUALIFICATIONS OF BIDDER (CONTRACTOR AND SUBCONTRACTOR)**

- A. Before award of Contract can be approved, Owner shall be satisfied that Bidder involved meets following requirements:
  - 1. Has completed at least one (1) project of at least fifty percent (50%) of size or value of Division of work being bid and type of work completed is similar to that being bid. If greater magnitude of experience is deemed necessary, other than size or value of work, such requirements will be described in appropriate section of Specifications.
  - 2. Maintains permanent place of business.
  - 3. Can be bonded for terms of proposed Contract.
  - 4. Complies with Dane County Best Value Contracting Ordinance. Qualification with State of Wisconsin's Executive Order 108 or City of Madison's Best Value Contracting Ordinance meets qualification requirements of County.
  - 5. Has record of satisfactorily completing past projects and supplies list of five (5) most recent, similar projects, with architect or engineer's and owner's names, addresses and telephone numbers for each project. Submit to Public Works Project Engineer within three (3) days after Bid Opening. Criteria which will be considered in determining satisfactory completion of projects by bidder will include:
    - a) Completed contracts in accordance with drawings and specifications.
    - b) Diligently pursued execution of work and completed contracts according to established time schedule unless Owner grants extensions.
    - c) Fulfilled guarantee requirements of construction documents.

- d) Is not presently on ineligible list maintained by County's Department of Administration for noncompliance with equal employment opportunities and affirmative action requirements.
  - e) Authorized to conduct business in Wisconsin. By submitting Bid, bidder warrants that it has: complied with all necessary requirements to do business in State of Wisconsin; that persons executing contract on its behalf are authorized to do so; and, if corporation, that name and address of bidder's registered agent are as set forth in Contract. Bidder shall notify Owner immediately, in writing, of any change in its registered agent, their address, and bidder's legal status. For partnership, term "registered agent" shall mean general partner.
- B. County's Public Works Project Engineer will make such investigations as are deemed necessary to determine ability of bidder to perform the Work, and bidder shall furnish to County's Public Works Project Engineer or designee all such information and data for this purpose as County's Public Works Project Engineer may request. Owner reserves right to reject Bid if evidence submitted by, or investigation of, bidder fails to satisfy Owner that bidder is responsible and qualified to carry out obligations of Contract and to complete the Work contemplated therein.

## **5. BID GUARANTEE**

- A. Bank certified check, cashier's check or Bid Bond, payable to County in amount not less than five percent (5%) of maximum bid, shall accompany each Bid as guarantee that if Bid is accepted, Bidder will execute and return proposed Contract and Performance and Payment Bonds within ten (10) days after being notified of acceptance of Bid. Company issuing bonds must be licensed to do business in Wisconsin.
- B. Any bid, which is not accompanied by bid guarantee, will be considered "No Bid" and will not be read at Bid Opening.
- C. If successful Bidder so delivers Contract, Certificate of Insurance, and Performance and Payment Bonds, check will be returned to Bidder. In case Bidder fails to deliver such Contract, insurance, and bond, amount of bid guarantee will be forfeited to County as liquidated damages.
- D. All checks tendered as bid guarantee, except those of three lowest qualified, responsible bidders, will be returned to their makers within three (3) days after Bid Opening. All such retained checks will be returned immediately upon signing of Contract and Performance and Payment Bonds by successful Bidder.

## **6. WITHDRAWAL OF BIDS**

- A. Bids may be withdrawn by written request received from bidder or authorized representative thereof prior to time fixed for Bid Opening, without prejudice to right of bidder to file new Bid. Withdrawn Bids will be returned unopened. Negligence on part of bidder in preparing their Bid confers no right for withdrawal of Bid after it has been opened.
- B. No Bid may be withdrawn for period of sixty (60) days after Bid Opening date.
- C. If Bid contains error, omission or mistake, bidder may limit liability to amount of bidder's guarantee by giving written Notice of Intent not to execute Contract to Owner within seventy-two (72) hours of Bid Opening.

## 7. CONTRACT FORM

- A. Sample copy of contract that successful Bidder will be required to enter into is included in these Construction Documents and bidders are required to familiarize themselves with all conditions contained therein.

## 8. CONTRACT INTERESTS BY COUNTY PUBLIC OFFICIALS

- A. In accordance with Wisconsin Statute 946.13, county official may not bid for or enter into any contract involving receipts or disbursements of more than \$7,500.00 in a year, in which they have private pecuniary interest, direct or indirect if at same time they are authorized to take official action with respect to making of this Contract. Any contract entered into in violation of this Statute is void and County incurs no liability thereon. This subsection does not affect application and enforcement of Wisconsin Statute 946.13 by state prosecutors in criminal courts of this state.

## 9. EMERGING SMALL BUSINESS PROVISIONS

- A. **Emerging Small Business Definition.** For purposes of this provision, ESB is defined as:
  - 1. Independent business concern that has been in business minimum of one year;
  - 2. Business located in State of Wisconsin;
  - 3. Business comprised of less than 25 employees;
  - 4. Business must not have gross sales in excess of three million dollars (\$3,000,000.00) over past three years; and
  - 5. Business does not have history of failing to complete projects.
- B. **Emerging Small Business (ESB) Involvement.** Bidder shall make good faith effort to award minimum of ten percent (10%) of the Work to ESBs. Bidder shall submit report to Dane County Contract Compliance Officer within twenty-four (24) hours after Bid Opening demonstrating such efforts. Good faith efforts means significant contact with ESBs for purposes of soliciting bids from them. Failure to make or demonstrate good faith efforts will be grounds for disqualification.
- C. **Emerging Small Business Report.** Emerging Small Business Enterprise Report is to be submitted by Bidder in separate envelope marked "Emerging Small Business Report". This report is due by 2:00 p.m. following specified twenty-four (24) hours after Bid Opening. Bidder who fails to submit Emerging Small Business Report shall be deemed not responsive.
- D. **ESB Goal.** Ten percent (10%) ESB participation is goal of this project. ESB utilizations are shown as percentage of total Bid. If Bidder meets or exceeds specified goal, Bidder is only required to submit Form A - Certification, and Form B - Involvement. Goal shall be met if Bidder qualifies as ESB.
- E. **Report Contents.** Following award of Contract, Bidder shall submit copies of executed contracts for all Emerging Small Businesses. Emerging Small Business Report shall consist of these:
  - 1. Form A - Certification;



2. Form B - Involvement;
  3. Form C - Contacts;
  4. Form D - Certification Statement (if appropriate); and
  5. Supportive documentation (i.e., copies of correspondence, telephone logs, copies of advertisements).
- F. **ESB Listing.** Bidders will solicit bids from ESB listing provided by Dane County.
- G. **ESB Certification.** All contractors, subcontractors and suppliers seeking ESB certification must complete and submit Emerging Small Business Certification Application to Dane County Contract Compliance Program.
- H. **Certification Statement.** If ESB firm has not been certified by County as ESB prior to submittal of this Bid, ESB Report cannot be used to fulfill ESB goal for this project unless firm provides "Form D - Certification Statement". Certification statement must be completed and signed by ESB firm.
- I. **Questions.** Questions concerning Emerging Small Business provisions shall be directed to:  
Dane County Contract Compliance Officer  
City-County Building, Room 421  
210 Martin Luther King, Jr. Blvd.  
Madison, WI 53703  
608/266-5623
- J. **Substituting ESBs.** In event of any significant changes in subcontract arrangements or if need arises to substitute ESBs, Bidder shall report such proposed changes to Contract Compliance Officer to making any official changes and request authorization to substitute ESB firm. Bidder further agrees to make every possible effort to replace ESB firm with another qualified ESB firm.
- K. **Good Faith Efforts.** Good faith efforts can be demonstrated by meeting all of these obligations:
1. Selecting portions of the Work to be performed by ESBs in order to increase likelihood of meeting ESB goal including, where appropriate, breaking down Contract into smaller units to facilitate ESB participation.
  2. Advertising in general circulation, trade associations, and women / minority focus media concerning subcontracting opportunities.
  3. Providing written notices to reasonable number of specific ESBs that their interest in Contract was being solicited in sufficient time to allow ESBs to participate effectively.
  4. Following up on initial solicitations of interest by contacting ESBs within five (5) working days prior to Bid Opening date to determine with certainty whether ESB were interested, to allow ESBs to prepare bids.
  5. Providing interested ESB with adequate information about Drawings, Specifications and requirements of Contract.

6. Using services of available minority, women and small business organizations and other organizations that provide assistance in recruitment of MBEs / WBEs / ESBs.
7. Negotiating in good faith with interested ESBs, not rejecting ESBs as unqualified without sound reason based on thorough investigation of their capabilities.
8. Submitting required project reports and accompanying documents to County's Contract Compliance Officer within twenty-four (24) hours after Bid Opening.

L. **Appeals Disqualification of Bid.** Bidder who is disqualified may appeal to Public Works & Transportation Committee and Equal Opportunity Commission.

## **10. METHOD OF AWARD - RESERVATIONS**

- A. Following will be basis of award of Contract, providing cost does not exceed amount of funds then estimated by County as available to finance Contract(s):
  1. Lowest dollar amount submitted by qualified responsible bidder on Base Bid for all work comprising project, combined with such additive Owner accepted alternates.
  2. Owner reserves right to reject all bids or any bid, to waive any informality in any bid, and to accept any bid that will best serve interests of County.
  3. Unit Prices and Informational Bids will not be considered in establishing low bidder.

## **11. SECURITY FOR PERFORMANCE AND PAYMENTS**

- A. Simultaneous with delivery of signed Contract, Bidder shall be required to furnish Performance and Payment Bonds as specified in Article 29 of General Conditions of Contract, "Contract Security". Surety Company shall be licensed to do business in Wisconsin. Performance and Payment Bonds must be dated same date or subsequent to date of Contract. Performance and Payment Bonds must emulate information in Sample Performance and Payment Bonds in Construction Documents.
- B. Provide certified copy of power of attorney from Surety Company showing that agent who signs Bond has power of attorney to sign for Surety Company. Secretary or Assistant Secretary of company must sign this certification, not attorney-in-fact. Certification must bear same or later date as Bond. Power of Attorney must emulate model power of attorney information detailed in Sample Performance and Payment Bonds.
- C. If Bidder is partnership or joint venture, State certified list, providing names of individuals constituting partnership or joint venture must be furnished. Contract itself may be signed by one partner of partnership, or one partner of each firm comprising joint venture, but Performance and Payment Bonds must be signed by all partners.
- D. If Bidder is a corporation, it is necessary that current certified copy of resolution or other official act of directors of corporation be submitted showing that person who signs Contract is authorized to sign contracts for corporation. It is also necessary that corporate seal be affixed to resolution, contract, and performance and payment bonds. If your corporation has no seal, it is required that above documents include statement or notation to effect that corporation has no seal.

## **12. TAXES**

- A. Bidder shall include in Bid, all Sales, Consumer, Use and other similar taxes required by law.
- B. In accordance with Wisconsin Statute 71.80(16)(a), successful nonresident bidder, whether incorporated or not, and not otherwise regularly engaged in business in this state, shall file surety bond with State of Wisconsin Department of Revenue payable to Department of Revenue, to guarantee payment of income taxes, required unemployment compensation contributions, sales and use taxes and income taxes withheld from wages of employees, together with any penalties and interest thereon. Amount of bond shall be three percent (3%) of Contract or subcontract price on all contracts of \$50,000 or more.

## **13. SUBMISSION OF BIDS**

- A. All Bids shall be submitted on standard Bid Form bound herein and only Bids that are made on this Bid Form will be considered. Entire Bid Form and other supporting documents, if any, shall be removed or copied from Construction Documents, filled out, and submitted in manner specified hereinafter. Submit completed Bid Bond with Bid as well.
- B. No bids for any subdivision or any sub-classification of this Work, except as indicated, will be accepted. Any conditional Bid, amendment to Bid Form or appended item thereto, or inclusion of any correspondence, written or printed matter, or details of any nature other than that specifically called for, which would alter any essential provision of Construction Documents, or require consideration of unsolicited material or data in determining award of Contract, will disqualify Bid. Telecommunication alterations to Bid will not be accepted.
- C. Bidders must submit single Bid for all the Work.
- D. Bid amounts shall be inserted in words and in figures in spaces provided on Bid Form; in case of conflict, written word amounts will govern.
- E. Addenda issued after Bid Letting shall become part of Construction Documents. Bidders shall acknowledge receipt of such addenda in appropriate space provided on Bid Form. Bid will be rejected if receipt of any particular addendum applicable to award of Contract has not been acknowledged on Bid Form.
- F. Bids shall be signed, placed in envelope, sealed and delivered before time of closing to place designated in Invitation to Bid, and identified with project name, bid number, location, category of work being bid upon, Bid Opening date, name and address of bidder.
- G. Bidder shall be responsible for sealed Bid being delivered to place designated for Bid Opening on or before date and time specified. Bids received after time of closing will be rejected and returned to bidder unopened.
- H. Bid will be considered invalid and will be rejected if bidder has not signed it.
- I. Faxed Bids will not be accepted.
- J. Bidder's organization shall submit completed with Bid, Fair Labor Practices Certification form, included in these Construction Documents.

## **14. SUBCONTRACTOR LISTING**

- A. Bidders shall be required to submit list of major subcontractors for General Construction, Plumbing, HVAC, and Electrical work proposed for this project to include committed prices for each subcontractor. List shall be placed in separate sealed envelope that must be clearly identified as “Major Subcontractor List”, for named project and name of Bidder submitting it. County must receive envelope no later than date by which successful Bidder is required to submit his or her signed Contract, as established in Construction Documents.

#### **15. ALTERNATE BIDS**

- A. Bidder shall carefully read requests for Alternate Bids, and thoroughly examine Drawings and Specifications to determine extent various changes and conditions will affect Bid.
- B. Space is provided in Bid Form for requested Alternate Bids. Failure to submit bid for any requested Alternate Bids may result in rejection of entire Bid.
- C. Bidder shall state amount to be added / subtracted to Base Bid for providing alternates, including all incidentals, omissions, additions, and adjustments as may be necessary or required by such changes. If there is no difference in price, Bidder shall state, “No Change”.
- D. Descriptions of requested Alternate Bids are as set forth in Construction Documents.

#### **16. UNIT PRICES**

- A. Provide unit prices where requested on Bid Form. Unit prices will include all costs for materials, labor, insurance, taxes, overhead and profit necessary to perform specified work. Estimated quantities are approximate only. Payment will be based upon actual quantities placed, provided or installed. Failure to provide requested unit prices may result in rejection of entire Bid.
- B. Owner reserves right to accept or reject any unit prices as given in Bid.
- C. Bidder shall refer to Bid Form and applicable specification section to determine basis of unit measure and detailed information related to each unit price item requested.

#### **17. COMMENCEMENT AND COMPLETION**

- A. Successful Bidder shall commence work when schedule and weather permit, but no later than stated in Bid Form. Contractor shall pursue the Work regularly and continuously at reasonable rate to insure completion of the Work within time stated in Bid.
- B. Should it be found impossible to complete the Work on or before time specified for completion, written request may be submitted for extension of time setting forth reasons believed to justify granting of such request. Refer to Article 20 of General Conditions of Contract, titled “Time for Completion”.

#### **18. WORK BY OWNER**

- A. This work will be accomplished by Owner or will be let under separate contracts and will not be included under this Contract. Highlighted portions in specifications signifies work by Owner.

**19. SPECIAL HAZARDS COVERAGE**

- A. Not Applicable.

**FORM A**

**DANE COUNTY  
EMERGING SMALL BUSINESS REPORT - CERTIFICATION**

In accordance with General Conditions of Contract, submit this Emerging Small Business Report within 24 hours after Bid Opening.

PROJECT NAME: \_\_\_\_\_

\_\_\_\_\_

BID NO.: \_\_\_\_\_ BID OPENING DATE: \_\_\_\_\_

**BIDDER INFORMATION**

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

TELEPHONE NO.: \_\_\_\_\_

CONTACT PERSON: \_\_\_\_\_

**FORM B**

**DANE COUNTY  
EMERGING SMALL BUSINESS REPORT - INVOLVEMENT**

Page \_\_\_ of \_\_\_  
(Copy this Form as necessary to provide complete information)

COMPANY NAME: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_ BID NO.: \_\_\_\_\_

ESB NAME: \_\_\_\_\_ CONTACT PERSON: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ PHONE NO.: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

**Indicate percentage of financial commitment to this ESB: \_\_\_\_\_ % Amount: \$ \_\_\_\_\_**

ESB NAME: \_\_\_\_\_ CONTACT PERSON: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ PHONE NO.: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

**Indicate percentage of financial commitment to this ESB: \_\_\_\_\_ % Amount: \$ \_\_\_\_\_**

ESB NAME: \_\_\_\_\_ CONTACT PERSON: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ PHONE NO.: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

**Indicate percentage of financial commitment to this ESB: \_\_\_\_\_ % Amount: \$ \_\_\_\_\_**

**FORM C**

**DANE COUNTY  
EMERGING SMALL BUSINESS REPORT - CONTACTS**

Page \_\_\_ of \_\_\_  
(Copy this Form as necessary to provide complete information)

COMPANY NAME: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_ BID NO.: \_\_\_\_\_

	<u>ESB FIRM NAME CONTACTED</u>	<u>DATE</u>	<u>PERSON CONTACTED</u>	<u>DID ESB BID?</u>	<u>DID YOU ACCEPT BID?</u>	<u>REASON FOR REJECTION</u>
1)	_____	_____	_____	_____	_____	_____
2)	_____	_____	_____	_____	_____	_____
3)	_____	_____	_____	_____	_____	_____
4)	_____	_____	_____	_____	_____	_____
5)	_____	_____	_____	_____	_____	_____
6)	_____	_____	_____	_____	_____	_____
7)	_____	_____	_____	_____	_____	_____



**FORM D**

**DANE COUNTY  
EMERGING SMALL BUSINESS REPORT - CERTIFICATION STATEMENT**

I, \_\_\_\_\_, \_\_\_\_\_ of  
Name Title

\_\_\_\_\_ certify to best of my knowledge and  
Company

belief that this business meets Emerging Small Business definition as indicated in Article 9 and  
that information contained in this Emerging Small Business Report is true and correct.

\_\_\_\_\_  
Bidder's Signature

\_\_\_\_\_  
Date

**BID FORM**

**BID NO. 311009**

**PROJECT: 2011 RESTORATION  
CAPITOL SQUARE SOUTH PARKING RAMP**

**TO: DANE COUNTY DEPARTMENT OF PUBLIC WORKS, HIGHWAY &  
TRANSPORTATION PROJECT ENGINEER  
1919 ALLIANT ENERGY CENTER WAY  
MADISON, WISCONSIN 53713**

**SINGLE BASE BID 01 WITH UNIT PRICING**

(Refer to Specification Section 01 15 10 – Unit Prices)

The undersigned, having examined the site where the Work is to be executed and having become familiar with local conditions affecting the cost of the Work and having carefully examined the Drawings and Specifications, all other Construction Documents and Addenda thereto prepared by Dane County Department of Public Works, Highway & Transportation hereby agrees to provide all labor, materials, equipment and services necessary for the complete and satisfactory execution of the entire Restoration Work at the Capitol Square South Parking Ramp, as specified in the Construction Documents, for the Base Bid unit pricing as follows:

<u>Item</u>	<u>Quantity</u>	<u>Unit Price</u>
Topside epoxy pressure injection of unbonded 1 1/2" +/- concrete topping	(100 S.F.)	\$_____ Per S.F.
Structural underside repair of delaminated concrete slab - two layers of reinforcing	(1705 S.F.)	\$_____ Per S.F.
Epoxy pressure injection of underside delaminated concrete slab	(792 S.F.)	\$_____ Per S.F.
Structural underside & vertical repair of delaminated concrete beams	(297 S.F.)	\$_____ Per S.F.
Epoxy coated #4 concrete reinforcing for supplemental use in restoration	(1 Ton)	\$_____ Per Ton
Structural repair of delaminated concrete columns	(201 S.F.)	\$_____ Per S.F.
Structural repair of delaminated concrete foundation walls	(119 S.F.)	\$_____ Per S.F.
Epoxy pressure injection of foundation wall cracks	(55 L.F.)	\$_____ Per L.F.
Structural topside repair of delaminated concrete intermediate landing slab & stair treads	(441 S.F.)	\$_____ Per S.F.

Structural underside / vertical repair of delaminated concrete intermediate landing slab & stair stringers	(287 S.F.)	\$_____ Per S.F.
Debonded existing aluminum tread nosings: gravity feed under debonded nosing with epoxy, install (2) anchors per tread	(82 Nosing)	\$_____ Per Nosing
Structural through slab repair of 6" concrete intermediate stair landing slab (This repair type must be approved by E.O.R)	(50 S.F.)	\$_____ Per S.F.
Application of epoxy healer sealer to concrete intermediate landing slabs	(1,176 S.F.)	\$_____ Per S.F.
Application of epoxy broadcast overlay system to concrete intermediate landing slabs & treads	(2,556 S.F.)	\$_____ Per S.F.
Removal of existing sealant in random topside slab cracks & construction joints, rout per drawings, gravity feed epoxy to rejection	(6752 L.F.)	\$_____ Per L.F.
Removal of existing sealant cove at transition of slab & vertical surface, replace w/ new sealant	(2798 L.F.)	\$_____ Per L.F.
Removal of existing expansion joint in Level 05 slab, replace w/ new vehicular expansion joint	(168 L.F.)	\$_____ Per L.F.
Provide new Polydrain trench drain grating lock stainless steel hardware where original is missing or failed, (Hardware set = bolt & internal wing nut)	(25 Sets)	\$_____ Per Set
Removal and replacement of broken / cracked 8" x 8" x 4" glass block with new	(137 Block)	\$_____ Per Each
Removal and replacement of broken / cracked 12" x 12" x 4" glass block with new	(46 Block)	\$_____ Per Each
Rusted imbedded vertical railings, cut rusted vertical, remove imbed in curb, install new base	(28 Bases)	\$_____ Per Each

**BASE BID 01.** All work required to fully complete the project in accordance with the Contract Documents:

Total: \$ \_\_\_\_\_  
 Numeric Price

\_\_\_\_\_ and \_\_\_\_\_ /100 Dollars  
 Written Price

NOTE: In case of multiplication errors of multiplying the quantities by the Unit Price Bid, or addition errors for the "Total," the "Total" with corrected multiplication and/or addition shall determine the "Total" bid for each contract.

The undersigned further agrees to add the alternate(s) portion of the Work as described, for the following addition(s) to or subtraction(s) from the Base Bid stipulated below. They further agree to honor the alternate(s) bid for 60 days from date of Award of Contract.

**ALTERNATE BID ITEMS:**

(Refer to Specification Section 01 15 10 – Unit Prices)

**ALTERNATE BID A01 - LUMP SUM:**

Contractor to provide all labor, materials, equipment and services necessary for the complete and satisfactory execution of the installation of angles to close the void between all of the intermediate stair landing slab & glass block work defined as A01, as specified in the Construction Documents.

Total: \$ \_\_\_\_\_  
Numeric Price

\_\_\_\_\_ and \_\_\_\_\_ /100 Dollars  
Written Price

**ALTERNATE BID A02 – LUMP SUM:**

Contractor to provide all labor, materials, equipment and services necessary for the complete and satisfactory execution of the replacement of existing stair handrails on exterior stair walls with code compliant stair handrails work defined as A02, as specified in the Construction Documents.

Total: \$ \_\_\_\_\_  
Numeric Price

\_\_\_\_\_ and \_\_\_\_\_ /100 Dollars  
Written Price

**ALTERNATE BID A03 – LUMP SUM:**

Contractor to provide all labor, materials, equipment and services necessary for the complete and satisfactory execution of the installation of chain link divider wall system between the stairs and adjacent parking work defined as A03, as specified in the Construction Documents.

Total: \$ \_\_\_\_\_  
Numeric Price

\_\_\_\_\_ and \_\_\_\_\_ /100 Dollars  
Written Price

**ALTERNATE BID A04 – LUMP SUM:**

Contractor to provide all labor, materials, equipment and services necessary for the complete and satisfactory execution of the installation of mesh divider wall system between the opposing runs of stairs work defined as A04, as specified in the Construction Documents.

Total: \$ \_\_\_\_\_  
Numeric Price

\_\_\_\_\_ and \_\_\_\_\_ /100 Dollars  
Written Price

**ALTERNATE BID A05 WITH UNIT PRICING:**

Contractor to provide all labor, materials, equipment and services necessary for the complete and satisfactory execution of the underside concrete slab and beam restoration work on Level 04 & 05 areas defined in drawings 4/S1-03 & 1/S1-04 respectively as A05, as specified in the Construction Documents.

<u>Item</u>	<u>Quantity</u>	<u>Unit Price</u>
Structural underside repair of delaminated concrete slab - two layers of reinforcing	(1205 S.F.)	\$ _____ Per S.F.
Structural underside & vertical repair of delaminated concrete beams	(771 S.F.)	\$ _____ Per S.F.

Total: \$ \_\_\_\_\_  
Numeric Price

\_\_\_\_\_ and \_\_\_\_\_ /100 Dollars  
Written Price

**ALTERNATE BID A06 WITH UNIT PRICING:**

Contractor to provide all labor, materials, equipment and services necessary for the complete and satisfactory execution of the delaminated vertical face concrete column restoration work on Level 05 areas defined in drawings 3/S1-01 as A06, as specified in the Construction Documents.

<u>Item</u>	<u>Quantity</u>	<u>Unit Price</u>
Structural repair of delaminated concrete columns	(49 S.F.)	\$ _____ Per S.F.

Total: \$ \_\_\_\_\_  
Numeric Price

\_\_\_\_\_ and \_\_\_\_\_ /100 Dollars  
Written Price

**ALTERNATE BID A07 – LUMP SUM:**

Contractor to provide all labor, materials, equipment and services necessary for the complete and satisfactory execution of the slab surface preparation, existing perimeter & random crack / CJ sealant joint work and installation of epoxy healer sealer penetrating sealer work on Level 04 & 05 areas defined in drawings 4/S1-01 & 3/S1-01 respectively as A07, as specified in the Construction Documents.

Total: \$ \_\_\_\_\_  
Numeric Price

\_\_\_\_\_ and \_\_\_\_\_ /100 Dollars  
Written Price

Receipt of the following addenda and inclusion of their provisions in this Bid is hereby acknowledged:

Addendum No(s). \_\_\_\_\_ through \_\_\_\_\_

Dated \_\_\_\_\_

Assuming the Notice to Proceed is issued by June 1, 2011, when can you commence and complete this job in compliance with Specifications Section 01 00 00. The Owner reserves the right to terminate the contract if completion date is not met. Costs incurred by the Owner as a result of the Contractor not meeting the completion date and final project closeout date will be passed on to the Contractor.

Commencement Date: \_\_\_\_\_ Completion Date: \_\_\_\_\_  
(final, not substantial)

I hereby certify that all statements herein are made on behalf of:

\_\_\_\_\_  
(Name of Corporation, Partnership or Person submitting Bid)

Select one of the following:

1. A corporation organized and existing under the laws of the State of \_\_\_\_\_, or
2. A partnership consisting of \_\_\_\_\_, or
3. A person conducting business as \_\_\_\_\_;

Of the City, Village, or Town of \_\_\_\_\_ of the State of \_\_\_\_\_.

I have examined and carefully prepared this Bid from the associated Construction Documents and have checked the same in detail before submitting this Bid; that I have full authority to make such statements and submit this Bid in (its) (their) (my) behalf; and that the said statements are true and correct. In signing this Bid, we also certify that we have not, either directly or indirectly, entered into any agreement or participated in any collusion or otherwise taken any action in restraint of free competition; that no attempt has been made to induce any other person or firm to submit or not to submit a Bid; that this Bid has been independently arrived at without collusion with any other bidder, competitor, or potential competitor; that this Bid has not been knowingly disclosed prior to the opening of Bids to another bidder or competitor; that the above statement is accurate under penalty of perjury.

**SIGNATURE:** \_\_\_\_\_  
(Bid is invalid without signature)

Print Name: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_

Email Address: \_\_\_\_\_

Contact Person: \_\_\_\_\_

**THIS PAGE IS FOR BIDDERS' REFERENCE AND NEED NOT BE SUBMITTED WITH BID FORM.**

**BID CHECK LIST:**

These items **must** be included with Bid:

Bid Form

Bid Bond

Fair Labor Practices Certification

**BIDDERS SHOULD BE AWARE OF THE FOLLOWING:**

**DANE COUNTY VENDOR REGISTRATION PROGRAM**

Any person bidding on any County contract must be registered with the Dane County Purchasing Division & pay an annual registration fee. A contract will not be awarded to an unregistered vendor. Obtain a *Vendor Registration Form* by calling 608/266-4131 or complete a new form or renewal one online at:

[www.danepurchasing.com/registration](http://www.danepurchasing.com/registration)

**DANE COUNTY BEST VALUE CONTRACTING PRE-QUALIFICATION**

Contractors must be pre-qualified as a Best Value Contractor with the Dane County Public Works Engineering Division before the award of contract. Obtain a *Best Value Contracting Application* by calling 608/266-4018 or complete one online at:

[www.co.dane.wi.us/pwht/BVC\\_Application.aspx](http://www.co.dane.wi.us/pwht/BVC_Application.aspx)

**EQUAL BENEFITS REQUIREMENT**

By submitting a Bid, the contractor acknowledges that a condition of this contract is to provide equal benefits as required by Dane County Code of Ordinances Chapter 25.016. Contractor shall provide equal benefits as required by that Ordinance to all required employees during the term of the contract. For more information:

[www.danepurchasing.com/partner\\_benefit.aspx](http://www.danepurchasing.com/partner_benefit.aspx)



## FAIR LABOR PRACTICES CERTIFICATION

The undersigned, for and on behalf of the BIDDER, APPLICANT or PROPOSER named herein, certifies as follows:

A. That he or she is an officer or duly authorized agent of the above-referenced BIDDER, APPLICANT or PROPOSER, which has submitted a proposal, bid or application for a contract with the county of Dane.

B. That BIDDER, APPLICANT or PROPOSER has (check one):

\_\_\_\_\_ not been found by the National Labor Relations Board (“NLRB”) or the Wisconsin Employment Relations Commission (“WERC”) to have violated any statute or regulation regarding labor standards or relations in the seven years prior to the signature date of this Certification.

\_\_\_\_\_ been found by the National Labor Relations Board (“NLRB”) or the Wisconsin Employment Relations Commission (“WERC”) to have violated any statute or regulation regarding labor standards or relations in the seven years prior to the signature date of this Certification.

\_\_\_\_\_  
Officer or Authorized Agent Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed or Typed Name and Title

\_\_\_\_\_  
Printed or Typed Business Name

**NOTE:** You can find information regarding the violations described above at: [www.nlr.gov](http://www.nlr.gov) and [werc.wi.gov](http://werc.wi.gov).

For reference, Dane County Ordinance 25.11(28)(a) is as follows:

(28) BIDDER RESPONSIBILITY. (a) Any bid, application or proposal for any contract with the county, including public works contracts regulated under chapter 40, shall include a certification indicating whether the bidder has been found by the National Labor Relations Board (NLRB) or the Wisconsin Employment Relations Committee (WERC) to have violated any statute or regulation regarding labor standards or relations within the last seven years. The purchasing manager shall investigate any such finding and make a recommendation to the committee, which shall determine whether the conduct resulting in the finding affects the bidder’s responsibility to perform the contract.

**If you indicated that the NLRB or WERC have found you to have such a violation, you must include copies of any relevant information regarding such violation with your proposal, bid or application.**



# DANE COUNTY DEPARTMENT of PUBLIC WORKS, HIGHWAY and TRANSPORTATION

County Executive  
Kathleen M. Falk

1919 Alliant Energy Center Way • Madison, Wisconsin 53713  
Phone: (608) 266-4018 • FAX: (608) 267-1533

Commissioner / Director  
Gerald J. Mandli

## BEST VALUE CONTRACTING APPLICATION

### CONTRACTORS / LICENSURE APPLICANTS

The Dane County Department of Public Works requires all contractors to be pre-qualified as a best value contractor with the County prior to being awarded a contract. In addition, the County pre-qualifies potential contractors and sub-contractors who wish to work on County contracts. Subcontractors must become pre-qualified ten (10) days prior to commencing work under any Dane County Public Works Contract. Potential subcontractors are urged to become pre-qualified as early as possible. This document shall be completed, properly executed, along with the necessary attachments and additional information that the County requires for the protection and welfare of the public in the performance of a County contract.

Contractors or subcontractors of any tier who attain prequalification status will retain that status for a period of two (2) years from the date of qualification. Contractors shall notify the Dane County Department of Public Works, Highway & Transportation within 15 days of any changes to its business or operations that are relevant to the prequalification application. Failure to do so could result in suspension, revocation of the contractor's prequalification, debarment from County contracts for up to three years and / or other sanctions available under the law.

No contracts will be awarded for construction work performed on Dane County projects unless the contractor is currently approved as a Wisconsin Trade Trainer or has applied for approval as an Apprenticeship Trade Trainer to the Wisconsin Department of Workforce Development and agrees to an acceptable apprenticeship program. If you are not currently approved as a Wisconsin Trade Trainer, or have not applied for approval as an Apprenticeship Trade Trainer, please contact the Department of Workforce Development - Bureau of Apprenticeship Standards at 608/266-3133 or visit their web site at: [dwd.wisconsin.gov/apprenticeship/](http://dwd.wisconsin.gov/apprenticeship/).

### EXEMPTIONS

- Contractors or subcontractors of any tier attain prequalification status with Dane County if the contractor has current Executive Order 108 precertification status with the State of Wisconsin.
- Contractors who employ less than five (5) apprenticeable trade workers are not required to prequalify.
- Contractors performing work that does not apply to an apprenticeable trade, as outlined in Appendix A.
- The contractor / subcontractor provides sufficient documentation to demonstrate one or more of the following:
  - apprentices are not available in a specific geographic area;
  - the applicable apprenticeship program is unsuitable or unavailable; or
  - there is a documented depression of the local construction market which prevents compliance.

SEC.	PROOF OF RESPONSIBILITY	CHECK IF APPLICABLE
1	Does your firm possess all technical qualifications and resources, including equipment, personnel and financial resources, necessary to perform the work required for any project or obtain the same through the use of responsible, prequalified subcontractors?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
2	Will your firm possess all valid, effective licenses, registrations or certificates required by federal, state, county, or local law, which are necessary for the type of work to be performed including, but not limited to, those for any type of trade work or specialty work?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
3	Will your firm meet all bonding requirements as required by applicable law or contract specifications?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
4	Will your firm meet all insurance requirements as required by applicable law or specifications, including general liability insurance, workers compensation insurance and unemployment insurance requirements?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
5	Will your firm maintain a substance abuse policy for employees hired for public works contracts that comply with Wis. Stats. Sec. 103.503?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
6	Does your firm acknowledge that it must pay all craft employees on public works projects the wage rates and benefits required under Section 66.0903 of the Wisconsin Statutes?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
7	Will your firm fully abide by the equal opportunity and affirmative action requirements of all applicable laws, including County ordinances?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
8	In the past three (3) years, has your firm had control or has another corporation, partnership or other business entity operating in the construction industry controlled it? If so, please attach a statement explaining the nature of the firm relationship?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
9	In the past three (3) years, has your firm had any type of business, contracting or trade license, certification or registration revoked or suspended?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
10	In the past three (3) years, has your firm been debarred by any federal, state or local government agency?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
11	In the past three (3) years, has your firm defaulted or failed to complete any contract?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
12	In the past three (3) years, has your firm committed a willful violation of federal, state or local government safety laws as determined by a final decision of a court or government agency authority.	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
13	In the past three (3) years, has your firm been in violation of any law relating to your contracting business where the penalty for such violation resulted in the imposition of a penalty greater than \$10,000?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
14	Is your firm Executive Order 108 precertified with the State of Wisconsin?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
15	Is your firm an active Wisconsin Trade Trainer as determined by the Wisconsin Bureau of Apprenticeship Standards and listed at: <a href="http://dwd.wisconsin.gov/apprenticeship/executive_order108.htm">dwd.wisconsin.gov/apprenticeship/executive_order108.htm</a> ?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
16	Is your firm exempt from being prequalified with Dane County?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach reason for exemption.
17	Does your firm acknowledge that in doing work under any County Public Works Contract, it will be required to use as subcontractors only those contractors that are also prequalified with the County or become so ten days prior to commencing work?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>

## SIGNATURE SECTION

Your firm's Officer, or the individual who would sign a bid and / or contract documents must sign this document.

I do hereby certify that all statements herein contained are true and correct to the best of my knowledge:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed or Typed Name and Title

NAME AND ADDRESS OF CONTRACTOR	
Name of Firm:	
Address:	
City, State, Zip:	
Telephone Number:	
Fax Number:	
E-mail Address:	

## REMEMBER!

Return all to forms and attachments, or questions to:

**CALEB BARTH**

**EMAIL: BARTH.CALEB@CO.DANE.WI.US**

**OFFICE: (608)266-4592, CELL: (608)219-2917, FAX: (608)267-1533**

**DANE COUNTY DEPARTMENT OF PUBLIC WORKS,  
HIGHWAY & TRANSPORTATION  
1919 ALLIANT ENERGY CENTER WAY  
MADISON, WI 53713**

# APPENDIX A

## APPRENTICEABLE TRADES

Bricklayer  
Carpenter  
Cement Mason (Concrete Finisher)  
Cement Mason (Heavy Highway)  
Construction Craft Laborer  
Data Communications Installer  
Electrician  
Elevator Mechanic / Technician  
Environmental Systems Technician / HVAC Service Technician / HVAC Install & Service  
Glazier  
Heavy Equipment Operator / Operating Engineer  
Insulation Worker (Heat & Frost)  
Iron Worker (Assembler, Metal Buildings)  
Painter / Decorator  
Plasterer  
Plumber  
Roofer / Waterproofer  
Sheet Metal Worker  
Sprinkler Fitter  
Steamfitter (Service & Refrigeration)  
Taper & Finisher  
Telecommunications (Voice, Data & Video) Installer / Technician  
Tile Setter

**COUNTY OF DANE**

**PUBLIC WORKS CONTRACT**

Contract No. \_\_\_\_\_ Bid No. 311009

Authority: Res. \_\_\_\_\_, [2011-12]

**THIS CONTRACT**, made and entered into as of the date by which authorized representatives of both parties have affixed their signatures, by and between the County of Dane (hereafter referred to as "COUNTY") and \_\_\_\_\_ (hereafter, "CONTRACTOR"), and

**WITNESSETH:**

**WHEREAS**, COUNTY, whose address is c/o Associate Public Works Director, 1919 Alliant Energy Center Way, Madison, WI 53713, desires to have CONTRACTOR provide 2011 Restoration at the Capitol Square South Parking Ramp [including Alternate/Bid[s] X, Y & Z (if applicable)] ("the Project"); and

**WHEREAS**, CONTRACTOR, whose address is \_\_\_\_\_ is able and willing to construct the Project, in accordance with the Construction Documents;

**NOW, THEREFORE**, in consideration of the above premises and the mutual covenants of the parties hereinafter set forth, the receipt and sufficiency of which is acknowledged by each party for itself, COUNTY and CONTRACTOR do agree as follows:

1. CONTRACTOR agrees to construct, for the price of \$\_\_\_\_\_ the Project and at the CONTRACTOR'S own proper cost and expense to furnish all materials, supplies, machinery, equipment, tools, superintendence labor, insurance, and other accessories and services necessary to complete the Project in accordance with the conditions and prices stated in the Bid Form, General Conditions of Contract, the drawings which include all maps, plats, plans, and other drawings and printed or written explanatory matter thereof, and the specifications therefore as prepared by Gunnar Malm & Associates, Inc. (hereinafter referred to as "the Engineer"), and as enumerated in the Project Manual Document Index, all of which are made a part hereof and collectively evidence and constitute the Contract.
2. COUNTY agrees to pay the CONTRACTOR in current funds for the performance of the Contract subject to additions and deductions, as provided in the General Conditions of Contract, and to make payments on account thereof as provided in Article entitled, "Payments to Contractor" of the General Conditions of Contract.
3. During the term of this Contract, CONTRACTOR agrees to take affirmative action to ensure equal employment opportunities. The CONTRACTOR agrees in accordance with Wisconsin Statute 111.321 and Chapter 19 of the Dane County Code of Ordinances not to discriminate on the basis of age, race, ethnicity, religion, color, gender, disability, marital status, sexual orientation, national origin, cultural differences, ancestry, physical appearance, arrest record or conviction record, military participation or membership in the national guard, state defense force

or any other reserve component of the military forces of the United States, or political beliefs. Such equal opportunity shall include, but not be limited to, the following: employment, upgrading, demotion, transfer, recruitment, advertising, layoff, termination, training, rates of pay, and any other form of compensation. CONTRACTOR agrees to post in conspicuous places, available to all employees and applicants for employment, notices setting forth the provisions of this paragraph.

**4.** CONTRACTOR shall file an Affirmative Action Plan with the Dane County Contract Compliance Officer in accord with Chapter 19 of the Dane County Code of Ordinances. CONTRACTOR must file such plan within fifteen (15) days of the effective date of this Contract. During the term of this Contract CONTRACTOR shall also provide copies of all announcements of employment opportunities to COUNTY'S Contract Compliance Office, and shall report annually the number of persons, by race, ethnicity, gender, and disability status, which apply for employment and, similarly classified, the number hired and number rejected.

**5.** During the term of this Contract, all solicitations for employment placed on CONTRACTOR'S behalf shall include a statement to the effect that CONTRACTOR is an "Equal Opportunity Employer."

**6.** CONTRACTOR agrees to comply with provisions of Chapter 25.016 of the Dane County Code of Ordinances, which pertains to domestic partnership benefits.

**7.** CONTRACTOR agrees to furnish all information and reports required by COUNTY'S Contract Compliance Officer as the same relate to affirmative action and nondiscrimination, which may include any books, records, or accounts deemed appropriate to determine compliance with Chapter 19, Dane County Code of Ordinances, and the provisions of this Contract.

**8.** CONTRACTOR agrees that all persons employed by CONTRACTOR or any subcontractor shall be paid no less than the minimum wage established under Chapter 40, Subchapter II, Dane County Code of Ordinances. CONTRACTOR agrees to abide by and comply with the provisions of Chapter 40, Subchapter II of the Dane County Code of Ordinances, and said Subchapter is fully incorporated herein by reference.

**9.** This Contract is intended to be a Contract solely between the parties hereto and for their benefit only. No part of this Contract shall be construed to add to, supplement, amend, abridge or repeal existing rights, benefits or privileges of any third party or parties including, but not limited to, employees of either of the parties.

**10.** The entire agreement of the parties is contained herein and this Contract supersedes any and all oral agreements and negotiations between the parties relating to the subject matter hereof. The parties expressly agree that the express terms of this Contract shall not be amended in any fashion except in writing, executed by both parties.

**11.** CONTRACTOR must be pre-qualified as a Best Value Contractor with Dane County Public Works Engineering Division before award of Contract. Subcontractors must be pre-qualified ten (10) days prior to commencing Work under this Contract.

**IN WITNESS WHEREOF**, COUNTY and CONTRACTOR, by their respective authorized agents, have caused this Contract and its Schedules to be executed, effective as of the date by which all parties hereto have affixed their respective signatures, as indicated below.

\* \* \* \* \*

**FOR CONTRACTOR:**

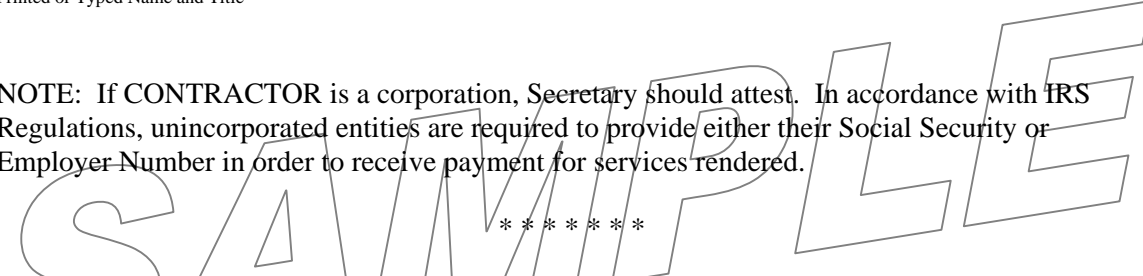
\_\_\_\_\_  
Signature Date

\_\_\_\_\_  
Printed or Typed Name and Title

\_\_\_\_\_  
Signature Date

\_\_\_\_\_  
Printed or Typed Name and Title

NOTE: If CONTRACTOR is a corporation, Secretary should attest. In accordance with IRS Regulations, unincorporated entities are required to provide either their Social Security or Employer Number in order to receive payment for services rendered.



\* \* \* \* \*

This Contract is not valid or effectual for any purpose until approved by the appropriate authority designated below, and no work is authorized until the CONTRACTOR has been given notice to proceed by COUNTY'S Associate Public Works Director.

**FOR COUNTY:**

\_\_\_\_\_  
Kathleen M. Falk, County Executive Date

\_\_\_\_\_  
Robert Ohlsen, County Clerk Date



THE AMERICAN INSTITUTE OF ARCHITECTS



AIA Document A310

Bid Bond

Bond No.

KNOW ALL MEN BY THESE PRESENTS, that we (Here insert full name and address or legal title of Contractor)

as Principal, hereinafter called the Principal, and (Here insert full name and address or legal title of Surety)

a corporation duly organized under the laws of the State of WI as Surety, hereinafter called the Surety, are held and firmly bound unto (Here insert full name and address or legal title of Owner)

as Obligee, hereinafter called Obligee, in the sum of ( ) Percent of total amount bid Dollars (\$) Percent of attached bid.

For the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for Project No.: (Here insert full name, address, and description of project)

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this day of , 20 .

(Principal) (Seal)
(Witness)
(Title)
(Surety) (Seal)
(Witness)
ATTORNEY-IN-FACT

THE AMERICAN INSTITUTE OF ARCHITECTS



Bond No. \_\_\_\_\_

AIA Document A312

Performance Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address): \_\_\_\_\_

SURETY (Name and Principal Place of Business): \_\_\_\_\_

OWNER (Name and Address): \_\_\_\_\_

CONSTRUCTION CONTRACT  
Date: \_\_\_\_\_  
Amount: \$ \_\_\_\_\_  
Description (Name and Location): \_\_\_\_\_

BOND

Date (Not earlier than Construction Contract Date): \_\_\_\_\_

Amount: \$ \_\_\_\_\_

Modifications to this Bond: \_\_\_\_\_

None

See Page 3

CONTRACTOR AS PRINCIPAL  
COMPANY: \_\_\_\_\_  
(Corporate Seal)

SURETY COMPANY: \_\_\_\_\_  
(Corporate Seal)

Signature: \_\_\_\_\_  
Name and Title:

Signature: \_\_\_\_\_  
Name and Title:

Attorney-in-Fact

(Any additional signatures appear on page 3)

FOR INFORMATION ONLY-Name, Address and Telephone  
AGENT OR BROKER: \_\_\_\_\_

OWNER'S REPRESENTATIVE (Architect,  
Engineer or other party): \_\_\_\_\_

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 3.1.

3. If there is no Owner Default, the Surety's obligation under this Bond shall arise after:

3.1 The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default; and

3.2 The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the contract. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and the Surety have received notice as provided in Subparagraph 3.1; and

3.3 The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a contractor selected to perform the Construction Contract in accordance with the terms of the contract with the Owner.

4. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

4.1 Arrange for the Contractor, with consent of the Owner, to perform and complete the Construction Contract; or

4.2 Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or

4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and the contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default; or

4.4 Waive its rights to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

1. After investigation, determine the amount for

which it may be liable to the Owner and, as soon as practicable after the amount is determined, tender payment therefor to the Owner; or

2. Deny liability in whole or in part and notify the Owner citing reasons therefor.

5. If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Subparagraph 4.4, and the Owner refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

6. After the Owner has terminated the Contractor's right to complete the Construction Contract, and if the Surety elects to act under Subparagraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the Owner of the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:

6.1 The responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

6.2 Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 4; and

6.3 Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

7. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, or successors.

8. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page.

11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

**12 DEFINITIONS**

12.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other

claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

12.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

12.3 Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.

12.4 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

**MODIFICATIONS TO THIS BOND ARE AS FOLLOWS:**

SAMPLE

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL  
Company: (Corporate Seal)

SURETY  
Company: (Corporate Seal)

Signature: \_\_\_\_\_  
Name and Title:  
Address:

Signature: \_\_\_\_\_  
Name and Title:  
Address:

THE AMERICAN INSTITUTE OF ARCHITECTS



Bond No. \_\_\_\_\_

AIA Document A312

Payment Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Principal Place of Business):

OWNER (Name and Address):

CONSTRUCTION CONTRACT  
Date:  
Amount: \$  
Description (Name and Location):

BOND

Date (Not earlier than Construction Contract Date):

Amount: \$

Modifications to this Bond:

None

See Page 6

CONTRACTOR AS PRINCIPAL  
COMPANY: (Corporate Seal)

SURETY COMPANY:  
(Corporate Seal)

Signature: \_\_\_\_\_  
Name and Title:

Signature: \_\_\_\_\_  
Name and Title:  
Attorney-in-Fact

(Any additional signatures appear on page 6)

FOR INFORMATION ONLY-Name, Address and Telephone  
AGENT OR BROKER:

OWNER'S REPRESENTATIVE (Architect,  
Engineer or other party):

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.
2. With respect to the Owner, this obligation shall be null and void if the Contractor:
  - 2.1 Promptly makes payment, directly, or indirectly, for all sums due Claimants, and
  - 2.2 Defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity whose claim, demand, lien or suit is for the payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, provided the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety, and provided there is no Owner Default.
3. With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.
4. The Surety shall have no obligation to Claimants under this Bond until:
  - 4.1 Claimants who are employed by or have a direct contract with the Contractor have given notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
  - 4.2 Claimants who do not have a direct contract with the Contractor:
    1. Have furnished written notice to the Contractor and sent a copy, or notice thereof, to the Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and
    2. Have either received a rejection in whole or in part from the Contractor, or not received within 30 days of furnishing the above notice any communication from the Contractor by which the Contractor has indicated the claim will be paid directly or indirectly; and
    3. Not having been paid within the above 30 days, have sent a written notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the Contractor.
5. If a notice required by Paragraph 4 is given by the Owner to the Contractor or to the Surety, that is sufficient compliance.
6. When the Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:
  - 6.1 Send an answer to the Claimant, with a copy to the Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
  - 6.2 Pay or arrange for payment of any undisputed amounts.
7. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
8. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any Construction Performance Bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
9. The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.
11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Subparagraph 4.1 or Clause 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
12. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the Owner or the Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
14. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor

shall promptly furnish a copy of this Bond or shall permit a copy to be made.

**15. DEFINITIONS**

**15.1 Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's

subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

**15.2 Construction Contract:** The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

**15.3 Owner Default:** Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

**MODIFICATIONS TO THIS BOND ARE AS FOLLOWS:**

SAMPLE

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL  
Company: (Corporate Seal)

SURETY  
Company: (Corporate Seal)

Signature: \_\_\_\_\_  
Name and Title:  
Address:

Signature: \_\_\_\_\_  
Name and Title:  
Address:

# GENERAL CONDITIONS OF CONTRACT

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## **1. CONSTRUCTION DOCUMENTS**

- A. Construction Documents, listed in Table of Contents of this Specification volume shall form part of this Contract and provisions of Construction Documents shall be as binding upon parties as if they were fully set forth in Contract itself.
- B. These shall also be considered as part of Construction Documents: Addenda, including additions and modifications incorporated in such addenda before execution of Contract; requests for information; construction bulletins; change orders; and written interpretations by Engineer or Public Works Project Engineer that are made after execution of Contract.
- C. Construction Documents are complementary, and what is required by one shall be as binding as if required by all. Intent of Construction Documents is to include all labor, materials and equipment necessary for proper execution of the Work.

## **2. DEFINITIONS**

- A. These terms as used in this Contract are respectively defined as follows:
  - 1. All uses of term "County" in Construction Documents shall mean Dane County.
  - 2. All uses of term "Department" in Construction Documents shall mean Department of Public Works, Highway & Transportation, which is a unit of Dane County government. Department is County agency overseeing Contract with Contractor.
  - 3. Public Works Project Engineer is appointed by and responsible to Department. Public Works Project Engineer has authority to act on behalf of Department and will sign change orders, payment requests and other administrative matters related to projects.
  - 4. Public Works Project Engineer is responsible for supervision, administration and management of field operations involved in construction phase of this Work.
  - 5. Term "Work" includes all labor, equipment and materials necessary to produce project required by Construction Documents.
  - 6. Term "Substantial Completion" is date when project or specified area of project is certified by Engineer that construction is sufficiently completed, in accordance with Construction Documents, and as modified by any subsequent changes agreed to by parties, so that County may occupy project or specified area of project for use for which it was intended subject to permit approval for occupancy.
  - 7. Contractor is person, firm, or corporation with whom County makes Contract. Though multiple contracts may be involved, Construction Documents treat them throughout as if each were of singular number.

## **3. ADDITIONAL INSTRUCTIONS AND DRAWINGS**

- A. Contractor may be furnished additional instructions and detail drawings as necessary to carry out the Work included in Contract. Additional drawings and instructions thus supplied to Contractor will coordinate with Construction Documents and will be so prepared that they can be reasonably interpreted as part thereof. Contractor shall carry out the Work in accordance with additional detail drawings and instructions.

## **4. SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

- A. Unless otherwise noted, provide 1 electronic copy of each submittal in pdf format. Submit to project architect/engineer (A/E) unless otherwise directed by Dane County Construction Representative at the Pre-Construction Meeting.

- B. Contractor shall submit, on an on-going basis and as directed, Product Data such as brochures that shall contain catalog cuts and specifications of all furnished mechanical and electrical equipment. After Engineer's approval, one (1) copy shall remain in Engineer's file, one (1) kept at Department's office and one (1) kept at job site by Contractor for reference purposes.
- C. Samples shall consist of physical examples furnished by Contractor in sufficient size and quantity to illustrate materials, equipment or workmanship, and to establish standards to compare the Work.
  - 1. Submit Samples in sufficient quantity (minimum of two (2)) to permit Engineer to make all necessary tests and of adequate size showing quality, type, color range, finish, and texture. Label each Sample stating material, type, color, thickness, size, project name, and Contractor's name.
  - 2. Submit transmittal letter requesting approval, and prepay transportation charges to Engineer's office on samples forwarded.
  - 3. Materials installed shall match approved Samples.
- D. Contractor shall review Shop Drawings and place their dated stamp thereon to evidence their review and approval and shall submit with reasonable promptness and in orderly sequence to cause no delay in the Work or in work of any other contractor. At time of submission, Contractor shall inform Engineer in writing of any deviation in Shop Drawings or Samples from requirements of Construction Documents. Engineer will not consider partial lists.
- E. Engineer will review and approve or reject Shop Drawings with reasonable promptness to cause no delay. Engineer's approval shall not relieve Contractor from responsibility for errors or omission in Shop Drawings.
- F. Contractor shall not commence any work requiring Shop Drawing, Product Data or Sample submission until Engineer has approved submission. All such work shall be in accordance with approved Shop Drawings, Product Data and Samples.
- G. Contractor shall keep on site of the Work, approved or conformed copy of Shop Drawings and shall at all time give Department access thereto.
- H. By stamping and submitting Shop Drawings, Product Data and Samples, Contractor thereby represents that he or she has or will determine and verify all field measurements, field construction criteria, materials, catalog numbers, and similar data and that he or she has checked and coordinated each Shop Drawing, Product Data and Sample with requirements of the Work and of Construction Documents. Engineer shall return without examination, Shop Drawings, Product Data and Samples not so noted.
- I. All Shop Drawings from any one Contractor should be numbered consecutively and on cover sheet shall bear name and location of project, name of Contractor, date of submittal and date of each correction or revision and associated Specification section and page number.
- J. Additional submittals beyond the required defined in the technical specification sections, provide Phasing Plan, Dust Protection Enclosure, Drain Protection Plan to present at the pre-construction meeting.

## **5. CUTTING AND PATCHING**

- A. Contractor shall be responsible for all cutting, fitting or patching required to complete the Work or to make its parts fit together properly.

- B. Contractor shall not damage or endanger portion of the Work or fully or partially completed construction of County or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. Contractor shall not cut or otherwise alter such construction by County or separate contractor except with written consent of County and of such separate contractor; such consent shall not be unreasonably withheld. Contractor shall not withhold unreasonably from County or separate contractor, Contractor's consent to cutting or otherwise altering the Work.

## **6. CLEANING UP**

- A. Contractor shall keep premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under Contract. Contractor shall remove from and about the Work waste materials, rubbish, Contractor's tools, construction equipment, machinery, and surplus materials at completion of the Work. Contractor shall maintain streets and sidewalks around the Work site in clean condition. Contractor shall remove all spillage and prevent tracking of spillage arising from performance of the Work, into, out of, and within the Work site. Contractor shall establish regular maintenance program of sweeping, vacuuming and / or hosing to minimize accumulation of dirt and dust upon such areas.
- B. If Contractor fails to clean up as directed in Construction Documents, County may do so and shall charge Contractor cost thereof.
- C. Contractor shall be responsible for broken windows and glass, and at completion of the Work shall replace such damaged or broken windows and glass. After replacing damaged or broken windows and glass, Contractor shall remove all labels, wash and polish both sides of all windows and glass.
- D. In addition to general cleaning (sweeping, vacuuming and / or hosing, as is appropriate to work surface), Contractor shall perform following final cleaning for all trades at completion of the Work:
  - 1. Remove temporary protections;
  - 2. Remove marks, stains, fingerprints and other soil or dirt from painted, decorated and finished woodwork and wall surfaces;
  - 3. Remove spots, plaster, soil and paint from ceramic tile, marble and other finished materials, and wash or wipe clean;
  - 4. Clean fixtures, cabinet work and equipment, removing stains, paint, dirt and dust, and leave same in undamaged, new condition;
  - 5. Clean aluminum in accordance with recommendations of manufacturer; and
  - 6. Clean resilient floors thoroughly with well-rinsed mop containing only enough moisture to clean off any surface dirt or dust and buff dry by machine to bring surfaces to sheen.

## **7. USE OF SITE**

- A. Contractor shall provide County and Engineer access to the Work under all circumstances.
- B. Contractor shall confine operations at site to areas permitted by County, law, ordinance, permits and Construction Documents and shall not unreasonably encumber site with materials or equipment. Contractor shall assure free, convenient, unencumbered, direct and safe access to all properties adjacent to the Work for County, its employees, invitees and guests.

## **8. MATERIALS AND WORKMANSHIP**

- A. Contractor shall perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, necessary to complete the Work required by this Contract, within time specified, in accordance with provisions of Construction Documents.
- B. All equipment and materials incorporated in the Work covered by this Contract are to be new; use recycled and / or recovered materials to extent that such use is technically and economically feasible. Recovered materials are products recovered from solid waste in form identical to original form for use that is same as, or similar to original use. Recycled materials are products manufactured from solid waste.
- C. If requested, Contractor shall furnish satisfactory evidence as to kind and quality of construction materials proposed or used. Contractor shall furnish to Engineer, for approval, manufacturer name and model, performance capacities and other pertinent information of machinery, mechanical, electrical or other types of equipment, which Contractor plans to install.
- D. If not otherwise provided, materials and labor called for in this Contract shall be provided and performed in accordance with established practice and standards recognized by Architects, Engineers, Department, and construction industry.
- E. Reference to "Standard" specifications of any association or manufacturer, or codes of County authorities, intends most recent printed edition or catalog in effect on date that corresponds with date of Construction Documents.
- F. Whenever reference is made in Specifications that work shall be "performed", "applied", in accordance with "manufacturer's directions or instructions", Contractor to whom those instructions are directed shall furnish three (3) printed copies of such instructions to Engineer before execution of the Work.

## **9. CONTRACTOR'S TITLE TO MATERIALS**

- A. Contractor or any subcontractor shall not purchase materials or supplies for the Work subject to any chattel mortgage or under conditional sale contract or other agreement by which seller retains interest. Contractor warrants that all materials and supplies used in the Work are free from all liens, claims or encumbrances and Contractor has good title to them.

## **10. "OR EQUAL" CLAUSE**

- A. Whenever equipment or materials are identified on Drawings or in Specifications by reference to manufacturer's or vendor's name, trade name, catalog number, and other identifying information, it is intended to establish standards; and any equipment or material of other manufacturers and vendors which will perform adequately duties imposed by general design will be considered equally accepted provided equipment or material so proposed is, in opinion of Engineer, of equal substance and function. Engineer and Department shall provide written approval before Contractor may purchase or install it.
- B. Equipment or materials of manufacturers, other than those named, may be used only upon following conditions:
  - 1. That, in opinion of Engineer and Department, proposed material or equipment item is fully equal or superior (in design, materials, construction, workmanship, performance,

- finish, etc.) to named item. No compromise in quality level, however small, is acceptable.
2. That, in substituting materials or equipment, Contractor assumes responsibility for any changes in system or for modifications required in adjacent or related work to accommodate such substitution despite Engineer's and Department's approval, and all costs growing out of approval of "or equal" items shall be responsibility of Contractor. No extra costs resulting from such approval shall become responsibility of Department, Engineer or any other separate Contractor.
  3. It shall be understood that use of materials or equipment other than those specified, or approved equal by Engineer and Department, shall constitute violation of Contract, and that Engineer and Department shall have right to require removal of such materials or equipment and their replacement with specified materials or equipment at Contractor's expense.
  4. Product and manufacturer named first in Specifications or on information shown on Drawings is basis of selection of manufactured items and equipment, particularly mechanical equipment. In using other than first named products or manufacturers, including those specified as additionally approved or acceptable, Contractor assumes responsibility for any changes in system and for modifications in any work required to accommodate them. Engineer's approval of such additionally acceptable products or manufacturers, either in Specifications or in Addendum, does not relieve Contractor from obligation to coordinate such optional products with other Contractors, whose work may be affected by them, and to pay all additional costs resulting from their inclusion into the Work. Contractor's liability shall include payment of Engineer's fees for any additional services made necessary by or directly connected to such product changes. No extra costs resulting from such changes shall become responsibility of Department, Engineer or any other separate Contractor.
- C. No request for approval of "or equal" materials will be entertained except from Contractor. Identify any request for substitution as substitution on Contractor's letter of transmittal and give reasons for substitution. Department may in its sole discretion allow substitutions of materials.

## **11. PATENTS AND ROYALTIES**

- A. If Contractor uses any design, device or material covered by letters, patent or copyright, it is mutually agreed and understood, that, without exception, contract prices shall include all royalties or costs arising from use of such design, device or materials, in any way involved in the Work.
- B. Contractor shall indemnify and save harmless County from any and all claims for infringement by reason of use of such patent or copyright in connection with the Work agreed to be performed under this Contract, and shall indemnify County for any cost, expense or damage which it may be obliged to pay by reason of such infringement at any time during prosecution of the Work or after completion of the Work.

## **12. SURVEYS, PERMITS, REGULATIONS AND TAXES**

- A. Department will furnish to Contractor all site, topography and property surveys necessary for execution of the Work.
- B. Contractor shall procure all permits, licenses and approvals necessary for execution of this Contract.

- C. Contractor shall give all notices and comply with all State of Wisconsin, Federal and local laws, codes, rules and regulations relating to performance of the Work, protection of adjacent property, and maintenance of passageways, guard fences or other protective facilities.
- D. Contractor shall pay all Sales, Consumer, Use and other similar taxes required by law.
- E. Contractor shall promptly notify Engineer of any variances of Drawings or Specifications with that of any State of Wisconsin, federal or local law, code, rule or regulation. Upon such notification, Engineer will require correction of variance to comply with applicable law, code, rule or regulation at no additional cost to Contractor.
- F. Work under this Contract shall comply with all applicable State of Wisconsin, Federal and local laws, codes and regulations.
- G. Contractor shall pay charges for water, sewer and other utility connections made by municipalities where required by Specifications.

### **13. CONTRACTOR'S OBLIGATIONS AND SUPERINTENDENCE**

- A. Contractor shall provide and pay for all materials, labor, tools, equipment, transportation and superintendence necessary to execute, complete and deliver the Work within specified time. Contractor agrees to secure at their own expense all personnel necessary to carry out the Work. Such personnel shall not be deemed County employees nor shall they have or be deemed to have any direct contractual relationship with County.
- B. Performance of any work necessary after regular working hours, on Sundays or Legal Holidays shall be without additional expense to County. Performance of any work at site at other than normal working hours must be coordinated with Public Works Project Engineer.
- C. Contractor shall furnish, erect, maintain and remove such temporary works as may be required.
- D. Contractor shall observe, comply with, and be subject to all terms, conditions, requirements and limitations of Construction Documents.
- E. At the Work site, Contractor shall give personal superintendence to the Work or shall employ construction superintendent or foreman, experienced in character of work covered by Contract, who shall have full authority to act for Contractor. Understand that such superintendent or foreman shall be acceptable to Engineer and Department.
- F. Remove from project or take other corrective action upon notice from Engineer or Department for Contractor's employees whose work is considered by Engineer or Department to be unsatisfactory, careless, incompetent, unskilled or otherwise objectionable.
- G. Contractor and subcontractors shall be required to conform to Labor Laws of State of Wisconsin and various acts amendatory and supplementary thereto and to other laws, ordinances and legal requirements applicable to the Work.
- H. Presence and observation of the Work by Engineer or Public Works Project Engineer shall not relieve Contractor of any obligations.

#### **14. WEATHER CONDITIONS**

- A. In event of temporary suspension of work, or during inclement weather, or whenever Engineer shall direct, Contractor shall, and shall cause subcontractors to protect carefully all work and materials against damage or injury from weather. If, in opinion of Engineer or Department, any work or materials that have been damaged or injured due to failure on part of Contractor or any subcontractors so to protect the Work, such materials shall be removed and replaced at expense of Contractor.

#### **15. PROTECTION OF WORK AND PROPERTY**

- A. Contractor shall at all times safely guard County's property from injury or loss in connection with this Contract. Contractor shall at all times safely guard and protect the Work, and adjacent property, from damage. Contractor shall replace or make good any such damage, loss or injury unless such be caused directly by errors contained in Contract, or by County, or County's duly authorized representative.
- B. Contractor may act diligently, without previous instructions from Engineer and / or Department, in emergency that threatens loss or injury of property, or safety of life. Contractor shall notify Engineer and / or Department immediately thereafter. Promptly submit any claim for compensation by Contractor due to such extra work to Engineer and / or Department for approval as provided for in Article 18 herein.

#### **16. INSPECTION AND TESTING OF MATERIALS**

- A. Authorized representatives and agents of County government shall have access at all times to the Work wherever it is in preparation or progress and Contractor shall provide facilities for such access and for inspection.
- B. Should it be considered necessary or advisable at any time before final acceptance of the Work to make examination of work already completed, by removing or tearing out same, Contractor shall upon request, promptly furnish all necessary facilities, labor and materials. If such work is found to be defective in any aspect, due to fault of Contractor or subcontractors thereof, Contractor shall assume all expenses of such examination and of satisfactory reconstruction. Contractor will be reimbursed for such examination and replacement in accordance with Article 18 - A.3., of these General Conditions of Contract if such work is found to meet requirements of Contract.
- C. If Specifications, Engineer's, or Public Works Project Engineer's instructions require any work to be specially tested or approved, Contractor shall give Engineer and Public Works Project Engineer timely notice of its readiness for testing or inspection. Test all materials and equipment requiring testing in accordance with accepted or specified standards, as applicable. Engineer shall recommend laboratory or inspection agency and Department will select and pay for all initial laboratory inspection services. Should retesting be required, due to failure of initial testing, cost of such retesting shall be borne by Contractor.
- D. Cost of any testing performed by manufacturers or Contractor for substantiating acceptability of proposed substitution of materials and equipment, or necessary conformance testing in conjunction with manufacturing processes or factory assemblage, shall be borne by Contractor or manufacturer responsible.

#### **17. REPORTS, RECORDS AND DATA**

- A. Contractor shall submit to Engineer and Public Works Project Engineer such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, invoices, records and other data as either may request concerning work performed or to be performed under this Contract.

## **18. CHANGES IN THE WORK**

- A. Make no changes, except in cases of emergency, in the Work covered by approved Construction Documents without having prior written approval of Department. Charges or credits for the Work covered by approved change shall be determined by one of these methods:
1. Unit bid prices previously approved.
  2. Agreed lump sum based on actual cost of:
    - a) Labor, including foremen, and all fringe benefits that are associated with their wages.
    - b) Materials entering permanently into the Work.
    - c) Ownership or rental cost of construction tools and equipment during time of use on extra work.
    - d) Power and consumable supplies for operation of power equipment.
    - e) Workmen's Compensation Insurance, Contractor's Public Liability and Property Damage Insurance, and Comprehensive Automobile Liability Insurance.
    - f) Social Security and old age and unemployment contributions.
    - g) Add to cost under (2), fixed fee to be agreed upon, but not to exceed fifteen percent (15%) of actual cost of work performed with their own labor force. Fee shall be compensation to cover cost of supervision, overhead, bond, profit and any other general expense.
    - h) On that portion of the Work under (2) done under subcontract, Contractor may include not over seven and one-half percent (7½%) for supervision, overhead, bond, profit and any other general expense.
    - i) Department may require correct amount of costs with supporting vouchers; Contractor shall keep and present in such form as directed.
  3. Cost-plus work, with not-to-exceed dollar limit, based on actual cost of:
    - a) Labor, including foremen, and all fringe benefits that are associated with their wages.
    - b) Materials entering permanently into the Work.
    - c) Ownership or rental cost of construction tools and equipment during time of use on extra work. Rental cost cannot exceed fifty percent (50%) replacement value of rented equipment.
    - d) Power and consumable supplies for operation of power equipment.
    - e) Workmen's Compensation Insurance, Contractor's Public Liability and Property Damage Insurance, and Comprehensive Automobile Liability Insurance.
    - f) Social Security and old age and unemployment contributions.
    - g) To cost under (3), there shall be added fixed fee to be agreed upon but not to exceed fifteen percent (15%) of actual cost of work performed with their own labor force. Fee shall be compensation to cover cost of supervision, overhead, bond, profit, and any other general expense.
    - h) On that portion of the Work under (3) done under subcontract, Contractor may include not over seven and one-half percent (7½%) for supervision, overhead, bond, profit, and any other general expense.
    - i) Contractor shall keep and present, in such form as directed, correct amount of cost together with such supporting vouchers as may be required by Department.
- B. If Contractor claims that by any instructions given by Engineer, Department, by drawings or otherwise, regarding performance of the Work or furnishing of material under Contract,



involves extra cost, Contractor shall give Department written notice of cost thereof within two (2) weeks after receipt of such instructions and in any event before proceeding to execute work, unless delay in executing work would endanger life or property.

- C. No claim for extra work or cost shall be allowed unless it was done in pursuance of written Change Order from Engineer and approved by Department, as previously mentioned, and claim presented with payment request submitted after changed or extra work is completed.
- D. Negotiation of cost for change in the Work shall not be cause for Contractor to delay prosecution of the Work if Contractor has been authorized in writing by Public Works Project Engineer to proceed.

## **19. EXTRAS**

- A. Without invalidating Contract, Department may order extra work or make changes by altering, adding to or deducting from the Work, contract sum being adjusted in accordance with Article 18 herein.

## **20. TIME FOR COMPLETION**

- A. Contractor agrees that the Work shall be prosecuted regularly and diligently and complete the Work as stated in Construction Documents.

## **21. CORRECTION OF WORK**

- A. All work, all materials whether incorporated in the Work or not, and all processes of manufacture shall at all times and places be subject to inspection of Engineer and Public Works Project Engineer who shall be judge of quality and suitability of the Work, materials, and processes of manufacture for purposes for which they are used. Should they fail to meet Engineer's and Public Works Project Engineer's approval they shall be reconstructed, made good, replaced or corrected, by Contractor at Contractor's expense. Immediately remove all rejected material from site.
- B. If Contractor defaults or neglects to carry out the Work in accordance with Construction Documents or fails to perform any provision of Contract, Department may, after ten (10) days' written notice to Contractor and without prejudice to any other remedy County may have, make good such deficiencies. In such case, appropriate Change Order shall be issued deducting from Contractor's payments then or thereafter, cost of correcting such deficiencies, including cost of Engineer's additional services made necessary by such default, neglect or failure.

## **22. SUBSURFACE CONDITIONS FOUND DIFFERENT**

- A. If Contractor encounters subsurface or latent conditions at site materially differing from those shown on Drawings or indicated in Specifications, Contractor shall immediately give notice to Engineer and Public Works Project Engineer of such conditions before they are disturbed. Engineer will thereupon promptly investigate conditions, and if Engineer finds that they materially differ from those shown on Drawings or indicated in Specifications, Engineer will at once make such changes as necessary, any increase or decrease of cost resulting from such changes to be adjusted in manner provided in above Article 18 entitled "Changes in the Work".

## **23. RIGHT OF DEPARTMENT TO TERMINATE CONTRACT**

- A. In event that any provisions of this Contract are violated by Contractor or by any subcontractors, County may serve written notice upon Contractor and Surety of its intention to terminate Contract, such notice to contain reasons for such intention to terminate Contract, and unless within ten (10) days after serving of such notice upon Contractor, such violation or delay shall cease and satisfactory arrangement or correction be made, Contract shall, upon expiration of said ten (10) days, cease and terminate.
- B. In event of any such termination, County shall immediately serve notice thereof upon Surety and Contractor, and Surety shall have right to take over and perform Contract subject to County's approval; provided, however, that if Surety does not commence performance thereof within ten (10) days from date of mailing to such Surety of notice of termination, County may take over the Work and prosecute same to completion by contract, or by force account, at expense of Contractor; Contractor and Surety shall be liable to County for any excess cost occasioned County thereby, and in such event County may take possession of and utilize in completing the Work, such materials and equipment as may be on the Work site and therefore necessary.

## **24. CONSTRUCTION SCHEDULE AND PERIODIC ESTIMATES**

- A. Contractor shall be responsible for Construction Schedule and coordination. Immediately after execution and delivery of Contract and before making first payment, Contractor shall notify all subcontractors to furnish all required information to develop Construction Schedule. Contractor and all subcontractors associated with the Work shall furnish following information from each Division of Specifications:
  - 1. List of construction activities;
  - 2. Start, finish and time required for completion of each activity;
  - 3. Sequential relationships between activities;
  - 4. Identify all long lead-time items, key events, meetings or activities such as required submittals, fabrication and delivery, procurement of materials, installation and testing;
  - 5. Weekly definition of extent of work and areas of activity for each trade or Subcontract; and
  - 6. Other information as determined by Public Works Project Engineer.
- B. In addition to above requested items, Contractor shall request delivery dates for all County-furnished equipment, materials or labor. This shall include any work handled by Department under separate contracts such as asbestos abatement, air and water balancing, etc. Indicate on Construction Schedule these associated delivery and installation dates.
- C. Progress Reporting:
  - 1. Contractor shall update and publish Construction Schedule on monthly basis. Revisions to Schedule shall be by Contractor and made in same detail as original Schedule and accompanied by explanation of reasons for revision; and shall be subject to approval by Department.
  - 2. Failure of Contractor to keep Schedule in updated format shall result in County hiring firm specializing in construction schedule development and deducting those costs associated with updating process from payments due Contractor.
  - 3. Contractor shall submit show actual percentage of each activity completed, estimated future progress, and anticipated completion time.

- D. Responsibility for timely completion requires:
1. Contractor and subcontractors understand that performance of each is interdependent upon performance of others.
  2. Whenever it becomes apparent from current schedule, that phasing or progress completion dates will not be met, Contractor must take some or all following actions at no additional cost to County:
    - a) Increase construction manpower in such quantities and crafts as will eliminate backlog of work.
    - b) Increase number of working hours per shift, shifts per working day, working days per week, amount of construction equipment, or any combination of foregoing to eliminate backlog of work.
    - c) Reschedule work (yet remain in conformance with Drawings and Specifications).
  3. Prior to proceeding with any of above actions, Contractor shall notify Public Works Project Engineer.
- E. Maintain current Construction Schedule at all times. Revise Construction Schedule in same detail as original and accompany with explanation of reasons for revision. Schedule shall be subject to approval by Engineer and Public Works Project Engineer.

## **25. PAYMENTS TO CONTRACTOR**

- A. Contractor shall provide:
1. Detailed estimate giving complete breakdown of contract price by Specification Division; and
  2. Periodic itemized estimates of work done for purpose of making partial payments thereon.
- Submit these estimates for approval first to Engineer, then to Public Works Project Engineer. Costs employed in making up any of these schedules are for determining basis of partial payments and not considered as fixing basis for additions to or deductions from Contract price.
- B. County will make partial payments to Contractor for value, proportionate to amount of Contract, of all labor and material incorporated in the Work during preceding calendar month upon receipt of Application and Certificate for Payment form from Engineer and approval of Department.
- C. Contractor shall submit for approval first to Engineer, and then to Public Works Project Engineer all Application and Certificate for Payment forms. If requested, Application and Certificate for Payment shall be supported by such additional evidence as may be required, showing Contractor's right to payment claimed.
- D. Application and Certificate for Payment for preparatory work and materials delivered and suitably stored at site to be incorporated into the Work at some future period, will be given due consideration. Requesting payment for materials stored off site, may be rejected, however, if deemed essential for reasons of job progress, protection, or other sufficient cause, requests will be considered, conditional upon submission by Contractor of bills of sale, photographs and such other procedures as will adequately protect County's interest such as storage in bonded warehouse with adequate coverage. If there is any error in payment, Contractor is obligated to notify Department immediately, but no longer than ten (10) days from receipt of payment.
- E. Payments by County will be due within forty-five (45) days after receipt by Department of Application and Certificate for Payment.

- F. County will retain five percent (5%) of each Application and Certificate for Payment until final completion and acceptance of all the Work covered by Contract. However, anytime after fifty percent (50%) of the Work has been furnished and installed at site, County will make remaining payments in full if Engineer and Public Works Project Engineer find that progress of the Work corresponds with Construction Schedule. If Engineer and Public Works Project Engineer find that progress of the Work does not correspond with Construction Schedule, County may retain up to ten percent (10%) of each Application and Certificate for Payment for the Work completed.
- G. All material and work covered by partial payments made shall become sole property of County, but this provision shall not be construed as relieving Contractor from sole responsibility for care and protection of materials and work upon which payments have been made, or restoration of any damaged work, or as waiver of right of County to require fulfillment of all of terms of Contract.
- H. County will make final payment within sixty (60) days after final completion of the Work, and will constitute acceptance thereof.
- I. County may make payment in full, including retained percentages and less authorized deductions, upon completion and acceptance of each Division where price is stated separately in Contract.
- J. Every contractor engaged in performance of any contract for Department of Public Works, Highway & Transportation shall submit to this Department, as requested and with final application for payment for work under said contract, affidavit(s) as required to prove that all debts and claims against this Work are paid in full or otherwise satisfied, and give final evidence of release of all liens against the Work and County. If Wisconsin Prevailing Wage Rate Determination is required for this Work, use "Prime Contractor Affidavit of Compliance With Prevailing Wage Rate Determination" and "Agent or Subcontractor Affidavit of Compliance With Prevailing Wage Rate Determination" (if applicable). If Wisconsin Prevailing Wage Rate Determination is not required for this Work, use "Dane County, Wisconsin Contractor Wage Affidavit". Forms of such affidavits are included in Supplementary Conditions.

## **26. WITHHOLDING OF PAYMENTS**

- A. County, after having served written notice on said Contractor, may either pay directly any unpaid bills of which Department has written notice, or withhold from Contractor's unpaid compensation sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged; whereupon, payment to Contractor shall be resumed in accordance with terms of this Contract, but in no event shall these provisions be construed to impose any obligations upon County to either Contractor or Contractor's Surety.
- B. In paying any unpaid bills of Contractor, County shall be deemed agent of Contractor, and any payment so made by County, shall be considered as payment made under Contract by County to Contractor and County shall not be liable to Contractor for any such payment made in good faith.
- C. Contractor shall indemnify, hold harmless and defend Dane County, its boards, commissions, agencies, officers, employees and representatives from all claims growing out of lawful demands of subcontractors, laborers, workmen, mechanics, material men, and furnishers of

machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in performance of this Contract.

- D. At Department's request, Contractor shall furnish satisfactory evidence that all obligations of nature designated above have been paid, discharged or waived.

## **27. ACCEPTANCE OF FINAL PAYMENT AS RELEASE**

- A. Making of final payment shall constitute waiver of all claims by County except those arising from:
1. Unsettled lien;
  2. Faulty or defective work appearing after substantial completion;
  3. Failure of the Work to comply with requirements of Construction Documents; or
  4. Terms of any special guarantees required by Construction Documents.
- B. Acceptance of final payment shall constitute waiver of all claims by Contractor.

## **28. PAYMENTS BY CONTRACTOR**

- A. Contractor shall pay following not later than fifth (5<sup>th</sup>) day following each payment received from County:
1. All transportation and utility services rendered;
  2. All materials, tools, and other expendable equipment that have been delivered at site of the Work to extent of ninety percent (90%) of cost thereof, and balance of cost thereof when said balance is paid to Contractor; and
  3. Each subcontractor, respective amount allowed Contractor because of work performed by subcontractor to extent of subcontractor's interest therein.

## **29. CONTRACT SECURITY**

- A. Contractor shall furnish Performance and Payment Bonds in amount at least equal to one hundred percent (100%) of Contract price as security for faithful performance of this Contract and payment of all persons performing labor on project under this Contract and furnishing materials in connection with this Contract.
- B. Sample Performance and Payment Bonds that Contractor will be required to execute is bound into these Construction Documents. Before construction Contract is consummated, completed Performance and Payment Bonds must be approved by Department.

## **30. ASSIGNMENTS**

- A. Contractor shall not assign whole or any part of this Contract or any moneys due or to become due hereunder without written consent of Department. In case Contractor assigns all or any part of any moneys due or to become due under this Contract, instrument of assignment shall contain clause substantially to effect that it is agreed that right of assignee in and to any moneys due or to become due to Contractor shall be subject to prior claims of all persons, firms and corporations for services rendered or materials supplied for performance of the Work called for in this Contract.

## **31. MUTUAL RESPONSIBILITY OF CONTRACTORS**

- A. If, through acts of neglect on part of Contractor or any subcontractor shall suffer loss or damage on the Work, Contractor agrees to settle with such subcontractor by agreement or arbitration if such other subcontractor will so settle. If such subcontractor shall assert any claim against County on account of any damage alleged to have been sustained, Department shall notify Contractor, who shall indemnify, hold harmless and defend Dane County, its boards, commissions, agencies, officers, employees and representatives against any such claim.

### **32. SEPARATE CONTRACTS**

- A. Department may award other contracts for the Work and all Contractors shall fully cooperate with each other and carefully adjust their work to that provided under other contracts as may be directed by Department. No Contractor shall commit or permit any act that will interfere with performance of the Work by any other Contractor.
- B. Contractor shall coordinate the Work with those of other Contractors. Cooperation will be required in arrangement for storage of materials and in detailed execution of the Work. Contractor, including subcontractors, shall keep informed of progress and detail work of others and shall notify Engineer or Department immediately of lack of progress or defective workmanship on part of others. Failure of Contractor to keep informed of the Work progressing on site and failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by Contractor of status of the Work as being satisfactory for proper coordination with Contractor's own work.

### **33. SUBCONTRACTS**

- A. Contractor may use services of specialty subcontractors on those parts of the Work that, under normal contracting practices, are performed by specialty subcontractors.
- B. Contractor shall not award any work to any subcontractor without prior approval of Department. Qualifications of subcontractors shall be same as qualifications of Contractor. Request for subcontractor approval shall be submitted to Department fifteen (15) days before start of subcontractor's work. If subcontractors are changed or added, Contractor shall notify Department in writing.
- C. Contractor shall be as fully responsible to County for acts and omissions of subcontractors, and of persons either directly or indirectly employed by them, as Contractor is for acts and omissions of persons directly employed by Contractor.
- D. Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind subcontractors to Contractor by terms of General Conditions of Contract and other Construction Documents insofar as applicable to work of subcontractors and to give Contractor same power as regards terminating any subcontract that Department may exercise over Contractor under any provision of Construction Documents.
- E. Nothing contained in this Contract shall create any contractual relation between any subcontractor and County.
- F. Contractor shall insert in all subcontracts, Articles 26, 33, 43 and 45, respectively entitled: "Withholding of Payments", "Subcontracts", "Affirmative Action Provision and Minority / Women / Disadvantaged Business Enterprises", and "Minimum Wages", and shall further require all subcontractors to incorporate physically these same Articles in all subcontracts.

### **34. PUBLIC WORKS PROJECT ENGINEER'S AUTHORITY**

- A. Public Works Project Engineer shall:
  - 1. Administer and ensure compliance with Construction Documents;
  - 2. Provide responsible on-site observations of construction and have authority to request work and to stop work whenever necessary to insure proper enforcement of Construction Documents;
  - 3. Convene and chair project meetings and foreman's coordination meetings when necessary to coordinate resolution of conflicts between Contractors, Architects, Engineers, Consultants, and Department; and
  - 4. Check and inspect material, equipment and installation procedures of all trades for proper workmanship and for compliance with Drawings, Specifications and Shop Drawings, permit no material on project site that is not satisfactory and reject work not in compliance with Construction Documents.

### **35. ENGINEER'S AUTHORITY**

- A. Engineer is retained by, and is responsible to Department acting for County.
- B. Engineer shall determine amount, quality, acceptability, and fitness of several kinds of work and materials that are provided under this Contract and shall decide all questions that may arise in relation to said work and construction thereof.
- C. Engineer shall decide meaning and intent of any portion of Specifications and of any Drawings where they may be found obscure or be in dispute.
- D. Engineer shall provide responsible observation of construction. Engineer has authority to stop the Work whenever such stoppage may be necessary to insure proper execution of Construction Documents.
- E. Engineer shall be interpreter of conditions of Construction Documents and judge of its performance.
- F. Within reasonable time, Engineer shall make decisions on all matters relating to progress of the Work or interpretation of Construction Documents.
- G. Engineer's decisions are subject to review by Public Works Project Engineer.

### **36. ESTIMATES OF QUANTITIES**

- A. Whenever estimated quantities of work to be done and materials to be furnished under this Contract are shown in any of Construction Documents, they are given for use in comparing bids and right is especially reserved to increase or diminish them as they may be deemed reasonably necessary or desirable by Department to complete the Work included in this Contract, and cost for such increase or diminution shall be adjusted in manner provided for in General Conditions of Contract Article 18 entitled "Changes in the Work".

### **37. LANDS AND RIGHTS-OF-WAY**

- A. Prior to start of construction, County shall furnish all land and rights-of-way necessary for carrying out and completion of the Work to be performed under this Contract.

### **38. GENERAL GUARANTEE**

- A. Neither final certificate of payment nor any provision in Construction Documents nor partial or entire occupancy of premises by County shall constitute acceptance of work not done in accordance with Construction Documents or relieve Contractor of liability in respect to any expressed warranties or responsibility for faulty materials or workmanship.
  - 1. In no event shall making of any payment required by Contract constitute or be construed as waiver by County of any breach of covenants of Contract or waiver of any default of Contractor and making of any such payment by County while any such default or breach shall exist shall in no way impair or prejudice right of County with respect to recovery of damages or other remedy as result of such breach or default.
- B. Contractor shall remedy and make good all defective workmanship and materials and pay for any damage to other work resulting there from, which appear within period of one (1) year from date of substantial completion, providing such defects are not clearly due to abuse or misuse by County. Department will give notice of observed defects with reasonable promptness.
- C. Guarantee on work executed after certified date of substantial completion will begin on date when such work is inspected and approved by Engineer and Public Works Project Engineer.
- D. Where guarantees or warranties are required in sections of Specifications for periods in excess of one (1) year, such longer terms shall apply; however, Contractor's Performance and Payment Bonds shall not apply to any guarantee or warranty period in excess of one (1) year.

### **39. CONFLICTING CONDITIONS**

- A. Any provision in any of Construction Documents which may be in conflict or inconsistent with any Articles in these General Conditions of Contract or Supplementary Conditions shall be void to extent of such conflict or inconsistency.
- B. In case of ambiguity or conflict between Drawings and Specifications, Specifications shall govern.
- C. Printed dimensions shall be followed in preference to measurements by scale. Large-scale drawings take precedence over small-scale drawings. Dimensions on Drawings and details are subject to field measurements of adjacent work.

### **40. NOTICE AND SERVICE THEREOF**

- A. Any notice to Contractor from Department relative to any part of this Contract shall be in writing and considered delivered and service thereof completed, when said notice is posted, by certified or registered mail, to Contractor at Contractor's last given address, or delivered in person to said Contractor, or Contractor's authorized representative on the Work.

### **41. PROTECTION OF LIVES AND HEALTH**



- A. In order to protect lives and health of Contractor's employees under Contract, Contractor shall comply with all pertinent provisions of Wisconsin Administrative Code, Rules of Department of Commerce, relating to Safety and Health.
- B. Contractor alone shall be responsible for safety, efficiency and adequacy of Contractor's tools, equipment and methods, and for any damage that may result from their failure or their improper construction, maintenance or operation.

**42. AFFIRMATIVE ACTION PROVISION AND MINORITY / WOMEN / DISADVANTAGED BUSINESS ENTERPRISES**

- A. Affirmative Action Provisions.
  - 1. During term of their Contract, Contractor agrees not to discriminate on basis of race, religion, color, sex, handicap, age, sexual preference, marital status, physical appearance, or national origin against any person, whether recipient of services (actual or potential), employee, or applicant for employment. Such equal opportunity shall include but not be limited to following: employment, upgrading, demotion, transfer, recruitment, advertising, layoff, termination, training, rates of pay, and any other form of compensation or level of service(s). Contractor agrees to post in conspicuous places, these affirmative action standards so as to be visible to all employees, service recipients and applicants for this paragraph. Listing of prohibited bases for discrimination shall not be construed to amend in any fashion state or federal law setting forth additional bases and exceptions shall be permitted only to extent allowable in state or federal law.
  - 2. Contractor is subject to this Article only if Contractor has ten (10) or more employees and receives \$10,000.00 or more in annual aggregate contracts with County. Contractor shall file and Affirmative Action Plan with Dane County Contract Compliance Officer in accord with Chapter 19 of Dane County Code of Ordinances. Such plan must be filed within fifteen (15) days of effective date of this Contract and failure to do so by said date shall constitute ground for immediate termination of Contract by County. Contractor shall also, during term of this Contract, provide copies of all announcements of employment opportunities to County's Contract Compliance Office, and shall report annually number of persons, by race, sex and handicap status, who apply for employment and, similarly classified, number hired and number rejected.
  - 3. Contact Dane County Contract Compliance Officer at Dane County Contract Compliance Office, 210 Martin Luther King, Jr. Blvd., Room 421, Madison, WI 53703, 608/266-4114.
  - 4. In all solicitations for employment placed on Contractor's behalf during term of this Contract, Contractor shall include statement to effect Contractor is "Equal Opportunity Employer". Contractor agrees to furnish all information and reports required by County's Contract Compliance Officer as same relate to affirmative action and nondiscrimination, which may include any books, records, or accounts deemed appropriate to determine compliance with Chapter 19, Dane County Code of Ordinances, and provision of this Contract.
- B. Minority / Women / Disadvantaged / Emerging Small Business Enterprises.
  - 1. Chapter 19.508 of Dane County Code of Ordinances is official policy of Dane County regarding utilization of, to fullest extent of, Minority Business Enterprises (MBEs), Women Business Enterprises (WBEs) Disadvantage Business Enterprises (DBEs) and Emerging Small Business Enterprises (ESBEs).
  - 2. Contractor may utilize MBEs / WBEs / DBEs / ESBEs as subcontractors or suppliers. List of subcontractors will be required of low bidder as stated in this Contract. List shall indicate which are MBEs / WBEs / DBEs / ESBEs and percentage of subcontract awarded, shown as percentage of total dollar amount of bid.

#### **43. COMPLIANCE WITH FAIR LABOR STANDARDS**

- A. During term of this Contract, Contractor shall report to County Contract Compliance Officer, within ten (10) days, any allegations to, or findings by National Labor Relations Board (NLRB) or Wisconsin Employment Relations Commission (WERC) that Contractor has violated statute or regulation regarding labor standards or relations. If investigation by Contract Compliance Officer results in final determination that matter adversely affects Contractor's responsibilities under this Contract, and which recommends termination, suspension or cancellation of this Contract, County may take such action.
- B. Contractor may appeal any adverse finding by Contract Compliance Officer as set forth in Dane County Ordinance 25.015(11)(c) through (e).
- C. Contractor shall post this statement in prominent place visible to employees: "As condition of receiving and maintaining contract with Dane County, this employer shall comply with federal, state and all other applicable laws prohibiting retaliation or union organizing."

#### **44. DOMESTIC PARTNERSHIP BENEFITS**

- A. Contractor agrees to provide same economic benefits to all of its employees with domestic partners as it does to employees with spouses, or cash equivalent if such benefit cannot reasonably be provided. Contractor agrees to make available for County inspection Contractor's payroll records relating to employees providing services on or under this Contract or subcontract. If any payroll records of Contractor contain any false, misleading or fraudulent information, or if Contractor fails to comply with provisions of Chapter 25.016, Dane County Ordinances, contract compliance officer may withhold payments on Contract; terminate, cancel or suspend Contract in whole or in part; or, after due process hearing, deny Contractor right to participate in bidding on future County contracts for period of one year after first violation is found and for period of three years after second or subsequent violation is found.

#### **45. USE AND OCCUPANCY PRIOR TO ACCEPTANCE**

- A. Contractor agrees to use and occupancy of portion or unit of the Work before formal acceptance by Department, provided Department:
  - 1. Secures written consent of Contractor; except when in opinion of Public Works Project Engineer, Contractor is chargeable with unwarranted delay in final cleanup of punch list items or other Contract requirements.
  - 2. Secures endorsement from insurance carrier and consent of Surety permitting occupancy of building or use of the Work during remaining period of construction, or, secures consent of Surety.
  - 3. Assumes all costs and maintenance of heat, electricity and water.
  - 4. Accepts all work completed within that portion or unit of the Work to be occupied, at time of occupancy.

#### **46. MINIMUM WAGES**

- A. Contractor shall post, at appropriate conspicuous point on site of project, schedule showing all determined minimum wage rates for various classes of laborers and mechanics to be

engaged in the Work under this Contract and all deductions, if any, required by law to be made from unpaid wages actually earned by laborers and mechanics so engaged.

- B. Supplementary Conditions section in Construction Documents lists wage determinations required by State Law.
- C. If, after award of Contract, it becomes necessary to employ any person in trade or occupation not classified in wage determinations, such person shall be paid at not less than such rate as shall be determined by Wisconsin Department of Workforce Development. Such approved minimum rate shall be retroactive to time of initial employment of such person in such trade or occupation. Contractor shall notify Department of Contractor's intention to employ persons in trades or occupations not so classified in sufficient time for Department to obtain approved rates for such trades or occupations.
- D. Specified wage rates are minimum rates only, and Department will not consider any claims for additional compensation made by Contractor because of payment by Contractor of any wage rate in excess of applicable rate contained in this Contract. Contractor shall adjust any disputes in regard to payment of wages in excess of those specified in this Contract.
- E. Submit required affidavit(s) to Department of Public Works, Highway & Transportation, as requested and with final application for payment for work under said contract. Affidavit(s) shall clearly indicate name, trade or occupation, and paid wages of every laborer, workman or mechanic employed by Contractor and all subcontractors during billing period including accurate record of number of hours worked by each employee and actual wages paid as stipulated in Wisconsin Statute 66.0903. If Wisconsin Prevailing Wage Rate Determination is required for this Work, use "Prime Contractor Affidavit of Compliance With Prevailing Wage Rate Determination" and "Agent or Subcontractor Affidavit of Compliance With Prevailing Wage Rate Determination" (if applicable). If Wisconsin Prevailing Wage Rate Determination is not required for this Work, use "Dane County, Wisconsin Contractor Wage Affidavit". Forms of such affidavits are included in Supplementary Conditions.

#### **47. CLAIMS**

- A. No claim may be made until Department's Associate Public Works Director has reviewed Engineer's decision as provided for in Article 35 of General Conditions of Contract. If any claim remains unresolved after such review by Department's Associate Public Works Director, claim may be filed under Wisconsin Statute 893.80. Work shall progress during period of any dispute or claim. Unless specifically agreed between parties, venue will be in Dane County, Wisconsin.

#### **48. ANTITRUST AGREEMENT**

- A. Contractor and County recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by County. Therefore, Contractor hereby assigns to County any and all claims for such overcharges as to goods and materials purchased in connection with this Contract, except as to overcharges which result from antitrust violations commencing after price is established under this Contract and any change order thereto.

#### **49. INSURANCE**

- A. Contractor Carried Insurance:

1. Contractor shall not commence work under this Contract until Contractor has obtained all insurance required under this Article and has provided evidence of such insurance to Risk Manager, 425 City-County Building, 210 Martin Luther King Jr. Blvd., Madison, WI 53703. Contractor shall not allow any subcontractor to commence work until insurance required of subcontractor has been so obtained and approved. Company providing insurance must be licensed to do business in Wisconsin.
2. Worker's Compensation Insurance:
  - a) Contractor shall procure and shall maintain during life of this Contract, Worker's Compensation Insurance as required by statute for all of Contractor's employees engaged in work at site of project under this Contract and, in case of any such work sublet, Contractor shall require subcontractor similarly to provide Worker's Compensation Insurance for all of latter's employees to be engaged in such work unless such employees are covered by protection afforded by Contractor's Worker's Compensation Insurance.
  - b) If any claim of employees engaged in hazardous work on project under this Contract is not protected under Worker's Compensation Statute, Contractor shall provide and shall cause each subcontractor to provide adequate Employer's Liability Insurance for protection of such of Contractor's employees as are not otherwise protected.
3. Contractor's Public Liability and Property Damage Insurance:
  - a) Contractor shall procure and maintain during life of this Contract, Contractor's Public Liability Insurance and Contractor's Property Damage Insurance in amount not less than \$1,000,000 bodily injury, including accidental death, to any one person, and subject to same limit for each person, in amount not less than \$1,000,000 on account of one accident, and Contractor's Property Damage Insurance in amount not less than \$1,000,000 or combined single limit of at least \$1,000,000 with excess coverage over and above general liability in amount not less than \$5,000,000. Contractor shall add "Dane County" as additional insured for each project.
  - b) Contractor's Public Liability and Property Damage Insurance shall include Products, Completed Operation, and Contractual Liability under Insurance Contract. "Contractor shall in all instances save, defend, indemnify and hold harmless County and Engineer against all claims, demands, liabilities, damages or any other costs which may accrue in prosecution of the Work and that Contractor will save, defend, indemnify and hold harmless County and Engineer from all damages caused by or as result of Contractor's operations" and each shall be listed as additional insured on Contractor's and sub-contractors' insurance policies.
  - c) Obligations of Contractor under Article 48.A.2)b) shall not extend to liability of Engineer, agents or employees thereof, arising out of:
    - 1) Preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications; or
    - 2) giving of or failure to give directions or instructions by Engineer, agents or employees thereof provided such giving or failure to give is primary cause of injury or damage.
  - d) Contractor shall procure and shall maintain during life of this Contract, Comprehensive Automobile Liability Insurance covering owned, non-owned and hired automobiles for limits of not less than \$1,000,000 each accident single limit, bodily injury and property damage combined with excess coverage over and above general liability in amount not less than \$5,000,000.
  - e) Contractor shall either:
    - 1) Require each subcontractor to procure and to maintain during life of subcontract, subcontractor's Public Liability Property Damage Insurance, and Comprehensive Automobile Liability Insurance of type and in same amount specified in preceding paragraphs; or
    - 2) Insure activities of subcontractors in Contractor's own policy.

4. Scope of Insurance and Special Hazards: Insurance required under Article 48.A.2 hereof shall provide adequate protection for Contractor and subcontractors, respectively, against damage claims which may arise from operations under this Contract, whether such operation be by insured or by anyone directly or indirectly employed by insured and also against any of special hazards which may be encountered in performance of this Contract as enumerated in Supplementary Conditions.
5. Proof of Carriage of Insurance: Contractor shall furnish Risk Manager with certificates showing type, amount, class of operations covered, effective dates, dates of expiration of policies and "Dane County" listed as additional insured. Such certificates shall also contain (substantially) following statement: "Insurance covered by this certificate will not be canceled or materially altered, except after ten (10) days written notice has been received by Risk Manager."

**B. Builder's Risk:**

1. County shall provide Builder's Risk policy. Terms of this policy will be made available by County's Risk Manager, upon Contractor's request. By executing this Contract, Contractor warrants it is familiar with terms of said policy.

**C. Indemnification / Hold Harmless:**

1. Contractor shall indemnify, hold harmless and defend Dane County, its boards, commissions, agencies, officers, employees and representatives from and against all claims, damages, losses and expenses including attorneys' fees arising out of or resulting from performance of the Work, provided that any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting therefrom, and is caused in whole or in part by any act or omission of Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by part indemnified hereunder.
2. In any and all claims against Dane County, its boards, commissions, agencies, officers, employees and representatives or by any employee of Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, indemnification obligation under this Contract shall not be limited in any way by any limitation on amount or type of damages, compensation or benefits payable by or for Contractor or any subcontractor under worker's compensation acts, disability benefits or other employee benefit acts.
3. Obligations of Contractor under this Contract shall not extend to liability of Engineer, its agents or employees arising out of:
  - a) Preparation or approval of maps, drawings, opinion, reports, surveys, change orders, designs or specifications; or
  - b) Giving of or failure to give directions or instruction by Engineer, its agents or employees provided such giving or failure to give is primary cause of injury or damage.
4. Dane County shall not be liable to Contractor for damages or delays resulting from work by third parties or by injunctions or other restraining orders obtained by third parties.


**50. WISCONSIN LAW CONTROLLING**

- A. It is expressly understood and agreed to by parties hereto that in event of any disagreement or controversy between parties, Wisconsin law shall be controlling.

# SUPPLEMENTARY CONDITIONS

## 1. APPLICATION & CERTIFICATE FOR PAYMENT

- A. Every contractor engaged in performance of any contract for Department of Public Works, Highway & Transportation shall submit partial and final Application & Certificate for Payment for work under said contract. Form shall provide similar information as shown on AIA G702™ and G703™ forms (samples shown below). Forms shall be submitted to Engineer & Public Works Project Engineer for approval.


**AIA Document G702™ – 1992**

**Application and Certificate for Payment**

<b>TO OWNER:</b>	<b>PROJECT:</b>	<b>APPLICATION NO:</b>	<b>Distribution to:</b>
		<b>PERIOD TO:</b>	OWNER <input type="checkbox"/>
		<b>CONTRACT FOR:</b>	ARCHITECT <input type="checkbox"/>
<b>FROM CONTRACTOR:</b>	<b>VIA ARCHITECT:</b>	<b>CONTRACT DATE:</b>	CONTRACTOR <input type="checkbox"/>
		<b>PROJECT NOS:</b>	FIELD <input type="checkbox"/>
			OTHER <input type="checkbox"/>

---

**CONTRACTOR'S APPLICATION FOR PAYMENT**  
Application is made for payment, as shown below, in connection with the Contract. Continuation Sheet, AIA Document G703, is attached.

1. ORIGINAL CONTRACT SUM ..... \$

2. Net change by Change Orders ..... \$

3. CONTRACT SUM TO DATE (Line 1 + 2) ..... \$

4. TOTAL COMPLETED & STORED TO DATE (Column G on G703) ..... \$

5. RETAINAGE:

a. % of Completed Work (Column D + E on G703) ..... \$

b. % of Stored Material (Column F on G703) ..... \$

Total Retainage (Lines 5a + 5b or Total in Column I of G703) ..... \$

6. TOTAL EARNED LESS RETAINAGE ..... \$

7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate) ..... \$

8. CURRENT PAYMENT DUE ..... \$

9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 6 less Line 8) ..... \$

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR:  
 By: \_\_\_\_\_ Date: \_\_\_\_\_  
 State of \_\_\_\_\_  
 County of \_\_\_\_\_  
 Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_  
 Notary Public:  
 My Commission expires: \_\_\_\_\_

---

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	\$	\$
Total approved this Month	\$	\$
<b>TOTALS</b>	\$	\$
NET CHANGES by Change Order	\$	\$

**ARCHITECT'S CERTIFICATE FOR PAYMENT**  
In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED ..... \$  
(Although explanation of amount certified differs from the amount applied, initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

ARCHITECT:  
 By: \_\_\_\_\_ Date: \_\_\_\_\_

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

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**Continuation Sheet**

AIA Document G703, APPLICATION AND CERTIFICATION FOR PAYMENT, containing Contractor's signed certification is attached.  
 In tabulations below, amounts are stated in the nearest dollar.  
 Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO:  
 APPLICATION DATE:  
 PERIOD TO:  
 ARCHITECT'S PROJECT NO.:

A LINE NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED		F MATERIALS PRESENTLY STORED (NET-GROSS DOLLARS)	G TOTAL COMPLETED AND STORED TO DATE (D+E+F)	H % (G ÷ C)	I BALANCE TO FINISH (C - G)	J RETAINAGE (@ VARIABLE RATE)
			D FROM PREVIOUS APPLICATION (D + E)	E THIS PERIOD					

**CAUTION:** You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.  
 AIA Document G703™ – 1992. Copyright © 1993, 1995, 1996, 1997, 1970, 1976, 1982 and 1992 by The American Institute of Architects. All rights reserved. (AIA/INHS). This AIA® Document is protected by U.S. Copyright Law and International Treaties. Unauthorized reproduction or distribution of this AIA® Document, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law. Purchasers are permitted to reproduce for 175 copies of this document when completed. To report copyright violations of AIA Contract Documents, e-mail The American Institute of Architects legal counsel, copyright@aia.org.

**2. PREVAILING WAGE RATE DETERMINATION**

- A. These supplements shall modify, delete, and / or add to General Conditions of Contract. Where any article, paragraph, or subparagraph in General Conditions of Contract is supplemented by one of these paragraphs, provisions of such article, paragraph, or subparagraph shall remain in effect and supplementary provisions shall be considered as added thereto. Where any article, paragraph, or subparagraph in General Conditions of Contract is amended, voided, or superseded by any of these paragraphs, provisions of such article, paragraph, or subparagraph not so amended, voided, or superseded shall remain in effect.
  - 1. General Conditions of Contract Article 45, “Minimum Wages”, paragraph B. Following Prevailing Wage Rate Determination No. 201100908 is added to General Conditions of Contract.
  
- B. These State of Wisconsin forms, hereinafter set forth in this section, shall be filled out and submitted to Department of Public Works, Highway & Transportation:
  - 1. Prime Contractor Affidavit of Compliance With Prevailing Wage Rate Determination (ERD-5724)
  - 2. Agent or Subcontractor Affidavit of Compliance With Prevailing Wage Rate Determination (ERD-10584)
  - 3. Disclosure of Ownership (ERD-7777)
  - 4. Request To Employ Subjourneyperson (ERD-10880)

# Prime Contractor Affidavit of Compliance With Prevailing Wage Rate Determination

**NOTICE REQUIRED UNDER Section 15.04(1)(m), Wisconsin Statutes.** Authorization for this form is provided under Sections, 66.0903(9)(b) and 103.49(4r)(9b) Wisconsin Statutes. The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes. Personally identifiable information may be used for secondary purposes.

This form must **ONLY** be filed with the **Awarding Agency** indicated below.

State Of            )  )SS  County Of            )	Project Name		
	Project Number	Determination Number	
	Date Determination Issued	Date of Contract	
	Awarding Agency		
	Date Work Completed		

After being duly sworn, the person whose name and signature appears below hereby states under penalty of perjury that

- **I am** the duly authorized officer of the corporation, partnership, sole proprietorship or business indicated below and have recently completed all of the work required under the terms and conditions of a contract with the above-named awarding agency and make this affidavit in accordance with the requirements set forth in Section 66.0903(9)(c) or 103.49(4r)(c), Wisconsin Statutes and Chapter DWD 290 of the Wisconsin Administrative Code in order to obtain FINAL PAYMENT from such awarding agency.
- **I have** fully complied with all of the wage and hour requirements applicable to this project, including all of the requirements set forth in the prevailing wage rate determination indicated above which was issued for such project by the Department of Workforce Development on the date indicated above.
- **I have** received the required affidavit of compliance from each of my agents and subcontractors that performed work on this project and have listed each of their names and addresses on page 2 of this affidavit.
- **I have** full and accurate records that clearly indicate the name and trade or occupation of every worker(s) that I employed on this project, including an accurate record of the hours worked and actual wages paid to such worker(s).
- **I will** retain the records and affidavit(s) described above and make them available for inspection for a period of at least three (3) years from the completion date indicated above at the address indicated below and shall not remove such records or affidavit(s) without prior notification to the awarding agency indicated above.

Name of Corporation, Partnership, Sole Proprietorship or Business				
Street Address or P O Box	City	State	Zip Code	Telephone Number (    )    -
Print Name of Authorized Officer			Date Signed	
Signature of Authorized Officer				



**List of Agents and Subcontractors**

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number ( ) -			Telephone Number ( ) -		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number ( ) -			Telephone Number ( ) -		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number ( ) -			Telephone Number ( ) -		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number ( ) -			Telephone Number ( ) -		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number ( ) -			Telephone Number ( ) -		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number ( ) -			Telephone Number ( ) -		

**If you have any questions call (608) 266-0028**

## Agent or Subcontractor Affidavit of Compliance With Prevailing Wage Rate Determination

**NOTICE REQUIRED UNDER Section 15.04(1)(m), Wisconsin Statutes.** Authorization for this form is provided under Sections, 66.0903(9)(b) and 103.49(4r)(9b) Wisconsin Statutes. The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes. Personally identifiable information may be used for secondary purposes.

This form must **ONLY** be filed with the **Awarding Contractor** indicated below.

State Of            )    )SS  County Of            )	Project Name		
	Project Number		Determination Number
	Date Determination Issued		Date of Subcontract
	Awarding Contractor		
	Date Work Completed		

After being duly sworn, the person whose name and signature appears below hereby states under penalty of perjury that

- **I am** the duly authorized officer of the corporation, partnership, sole proprietorship or business indicated below. We have recently completed all of the work required under the terms and conditions of a subcontract with the above-named awarding contractor. We make this affidavit in accordance with the requirements set forth in Section 66.0903(9)(b) or 103.49(4r)(b), Wisconsin Statutes and Chapter DWD 290 of the Wisconsin Administrative Code in order to obtain FINAL PAYMENT from such awarding contractor.
- **I have** fully complied with all of the wage and hour requirements applicable to this project, including all of the requirements set forth in the prevailing wage rate determination indicated above which was issued for such project by the Department of Workforce Development on the date indicated above.
- **I have** received the required affidavit of compliance from each of my agents and subcontractors that performed work on this project and have listed each of their names and addresses on page 2 of this affidavit.
- **I have** full and accurate records that clearly indicate the name and trade or occupation of every worker(s) that I employed on this project, including an accurate record of the hours worked and actual wages paid to such worker(s).
- **I will** retain the records and affidavit(s) described above and make them available for inspection for a period of at least three (3) years from the completion date indicated above at the address indicated below and shall not remove such records or affidavit(s) without prior notification to the awarding contractor.

Name of Corporation, Partnership, Sole Proprietorship or Business				
Street Address	City	State	Zip Code	Telephone Number (    )    -
Print Name of Authorized Officer			Date Signed	
Signature of Authorized Officer				

**List of Agents and Subcontractors**

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number ( ) -			Telephone Number ( ) -		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number ( ) -			Telephone Number ( ) -		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number ( ) -			Telephone Number ( ) -		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number ( ) -			Telephone Number ( ) -		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number ( ) -			Telephone Number ( ) -		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number ( ) -			Telephone Number ( ) -		

**If you have any questions call (608) 266-0028**

## Disclosure of Ownership

**Notice required under Section 15.04(1)(m), Wisconsin Statutes.** The statutory authority for the use of this form is prescribed in Sections 66.0903(12)(d) and 103.49(7)(d), Wisconsin Statutes. The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes. Personal information you provide may be used for secondary purposes.

- (1) On the date a contractor submits a bid to or completes negotiations with a state agency or local governmental unit, on a project subject to Section 66.0903 or 103.49, Wisconsin Statutes, the contractor shall disclose to such state agency or local governmental unit the name of any "other construction business", which the contractor, or a shareholder, officer or partner of the contractor, owns or has owned within the preceding three (3) years.
- (2) The term "other construction business" means any business engaged in the erection, construction, remodeling, repairing, demolition, altering or painting and decorating of buildings, structures or facilities. It also means any business engaged in supplying mineral aggregate, or hauling excavated material or spoil as provided by Sections 66.0903(3), 103.49(2) and 103.50(2), Wisconsin Statutes.
- (3) This form must ONLY be filed, with the state agency or local governmental unit that will be awarding the contract, if **both (A) and (B) are met.**
  - (A) The contractor, or a shareholder, officer or partner of the contractor:
    - (1) Owns at least a 25% interest in the "other construction business", indicated below, on the date the contractor submits a bid or completes negotiations.
    - (2) Or has owned at least a 25% interest in the "other construction business" at any time within the preceding three (3) years.
  - (B) The Wisconsin Department of Workforce Development (DWD) has determined that the "other construction business" has failed to pay the prevailing wage rate or time and one-half the required hourly basic rate of pay, for hours worked in excess of the prevailing hours of labor, to any employee at any time within the preceding three (3) years.

### Other Construction Business

Name of Business

Street Address or P O Box

City

State

Zip Code

Name of Business

Street Address or P O Box

City

State

Zip Code

Name of Business

Street Address or P O Box

City

State

Zip Code

Name of Business

Street Address or P O Box

City

State

Zip Code

**I hereby state under penalty of perjury that the information, contained in this document, is true and accurate according to my knowledge and belief.**

Print the Name of Authorized Officer

Signature of Authorized Officer

Date Signed

Name of Corporation, Partnership or Sole Proprietorship

Street Address or P O Box

City

State

Zip Code

**If you have any questions call (608) 266-0028**

## Request To Employ Subjourneyperson

Personal information you provide may be used for secondary purposes. [See Section 15.04(1)(m), Wisconsin Statutes for details.] The use of this form is mandatory. The authority for the use of this form is prescribed in Section DWD 290.025, Wisconsin Administrative Code. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes.

The employer indicated below requests that the Department of Workforce Development (DWD) determine the prevailing wage rate(s) and related qualifications to enable such employer to utilize a subjourneyperson(s) on the following public works project, in accordance with the provisions of Section DWD 290.025, Wisconsin Administrative Code.

<b>1. Name of Public Works Project</b>	
<b>County</b>	<b>City, Village or Township</b>
<b>Determination Number</b>	<b>Project Number</b>

2. Name of Employee (Last, First and Initial)	P.O. Box or Street Address	City	State	Zip Code

<b>3. Name of Employer (Print)</b>	<b>Name of Person Making Request</b>
<b>P.O. Box or Street Address</b>	<b>City</b>
<b>Telephone Number</b> (   ) -   -   -	<b>Title of Requestor</b>

**READ CAREFULLY:** I fully understand that this request is ONLY applicable to the project and employee(s) listed above and that such employee(s) will ONLY work under the direction of and directly assist a skilled trades employee by frequently using the tools of a skilled trades employee and will NOT regularly perform the duties of a general laborer, heavy equipment operator or truck driver. If the employee(s) indicated above regularly perform(s) the work of a different trade or occupation, he/she will be compensated for such work at the applicable journeypersons prevailing wage rate. I agree not to employ any employee as a subjourneyperson on this project until I receive written confirmation from the DWD. After such confirmation is received, I will compensate the employee(s) indicated above in strict accordance with the directions received from the DWD.

Signature of Requestor \_\_\_\_\_  
 Date Signed \_\_\_\_\_

MAIL COMPLETED REQUEST TO Equal Rights Division, Labor Standards Bureau, P.  
 O. Box 8928 Madison WI 53708.

You may call (608) 266-6860 if you need assistance in completing your request  
 ERD-10880-E (R. 10/2004)

**ISSUE DATE:** 3/11/2011

**PROJECT:**

2011 RESTORATION CAPITOL SQUARE SOUTH PARKING RAMP  
MADISON CITY, DANE COUNTY, WI  
Determination No. 201100908 [Owner Project No. 311009]

**PROJECT OWNER:**

CALEB BARTH, ENGINEERING INTERN  
DANE COUNTY PUBLIC WORKS  
1919 ALLIANT ENERGY CENTER WAY  
MADISON, WI 53713

**REQUESTER:**

CALEB BARTH, ENGINEERING INTERN  
DANE COUNTY PUBLIC WORKS  
1919 ALLIANT ENERGY CENTER WAY  
MADISON, WI 53713

**ADDITIONAL CONTACT:**

**NOTE:** The Requester must provide a copy of this Project Determination and enclosures to the Project Owner and Additional Contact.

The department received an application for prevailing wage rate determination for the above-captioned project. The department conducted a survey to determine the prevailing wage rate for the trade(s) or occupation(s) needed to complete the project. The survey's findings appear in the attached project determination.

If you believe that the wage rate for any trade or occupation does not accurately reflect the prevailing wage rate in the city, village or town where the project is located, you may ask the department to conduct an administrative review of such wage rate. You must submit this request in writing within 30 days from the date indicated above. Additionally, your request must include wage rate information from at least three similar projects in the city, village or town where the proposed project is located and on which some work has been performed by the contested trade(s) during the current survey period and was previously considered by the department in issuing the attached determination. See DWD 290.10 of the Wisconsin Administrative Code and either s. 66.0903(3)(br), s. 66.0904(4)(e), or s. 103.49(3)(c), Stats., for a complete explanation of the administrative review process.

Enclosures

It is hereby ordered that the prevailing wage rates set forth in the attached project determination shall only be applicable to the above referenced project. This order is a **FINAL ORDER** of the department unless a timely request for an administrative review is filed with the department.

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Equal Rights Division  
Labor Standards Bureau  
Construction Wage Standards Section  
PO Box 8928 Madison, WI 53708-8928  
(608)266-6861

Web Site: <http://dwd.wisconsin.gov/er/>

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**PREVAILING WAGE RATE DETERMINATION**

Issued by the State of Wisconsin  
Department of Workforce Development  
Pursuant to s. 66.0903, Wis. Stats.  
Issued On: 3/11/2011

**DETERMINATION NUMBER:** 201100908

**EXPIRATION DATE:** Prime Contracts MUST Be Awarded or Negotiated On Or Before 12/31/2011. If NOT, You MUST Reapply.

**PROJECT NAME:** 2011 RESTORATION CAPITOL SQUARE SOUTH PARKING RAMP  
PROJECT NO: 311009

**PROJECT LOCATION:** MADISON CITY, DANE COUNTY, WI

**CONTRACTING AGENCY:** DANE COUNTY PUBLIC WORKS

<b>CLASSIFICATION:</b>	Contractors are responsible for correctly classifying their workers. Either call the Department of Workforce Development (DWD) with trade or classification questions or consult DWD's Dictionary of Occupational Classifications & Work Descriptions on the DWD website at: <a href="http://dwd.wisconsin.gov/er/prevailing_wage_rate/Dictionary/dictionary_main.htm">dwd.wisconsin.gov/er/prevailing_wage_rate/Dictionary/dictionary_main.htm</a> .
<b>OVERTIME:</b>	Time and one-half must be paid for all hours worked: <ul style="list-style-type: none"><li>- over 10 hours per day on prevailing wage projects</li><li>- over 40 hours per calendar week</li><li>- Saturday and Sunday</li><li>- on all of the following holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25;</li><li>- The day before if January 1, July 4 or December 25 falls on a Saturday;</li><li>- The day following if January 1, July 4 or December 25 falls on a Sunday.</li></ul>
<b>FUTURE INCREASE:</b>	When a specific trade or occupation requires a future increase, you MUST add the full hourly increase to the "TOTAL" on the effective date(s) indicated for the specific trade or occupation.
<b>PREMIUM PAY:</b>	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.
<b>APPRENTICES:</b>	Pay apprentices a percentage of the applicable journey person's hourly basic rate of pay and hourly fringe benefit contributions specified in this determination. Obtain the appropriate percentage from each apprentice's contract or indenture.
<b>SUBJOURNEY:</b>	Subjourney wage rates may be available for some of the trades or occupations indicated below with the exception of laborers, truck drivers and heavy equipment operators. Any employer interested in using a subjourney classification on this project MUST complete Form ERD-10880 and request the applicable wage rate from the Department of Workforce Development PRIOR to using the subjourney worker on this project.
<b>ELECTRONIC CERTIFIED: PAYROLL REPORTS:</b>	Every contractor working on this project MUST file monthly certified payroll reports in an electronic format that meets the Wisconsin Department of Workforce Development's reporting requirements. These certified payroll reports must be filed by the 7th of the month following the month in which the contractor performed work on this project at the following website: <a href="http://dwd.wisconsin.gov/er/prevailing_wage_rate/default.htm">http://dwd.wisconsin.gov/er/prevailing_wage_rate/default.htm</a> .

This document **MUST BE POSTED** by the **CONTRACTING AGENCY** in at least one conspicuous and easily accessible place **on the site of the project**. A local governmental unit may post this document at the place normally used to post public notices if there is no common site on the project. This document **MUST** remain posted during the entire time any worker is employed on the project and **MUST** be physically incorporated into the specifications and all contracts and subcontracts. If you have any questions, please write to the Equal Rights Division, Labor Standards Bureau, P.O. Box 8928, Madison, Wisconsin 53708 or call (608) 266-6861.

**The following statutory provisions apply to local governmental unit projects of public works and are set forth below pursuant to the requirements of s. 66.0903(8), Stats.**

**s. 66.0903 (1) (f) & s. 103.49 (1) (c) "PREVAILING HOURS OF LABOR"** for any trade or occupation in any area means 10 hours per day and 40 hours per week and may not include any hours worked on a Saturday or Sunday or on any of the following holidays:

1. January 1.
2. The last Monday in May.
3. July 4.
4. The first Monday in September.
5. The 4th Thursday in November.
6. December 25.
7. The day before if January 1, July 4 or December 25 falls on a Saturday.
8. The day following if January 1, July 4 or December 25 falls on a Sunday.

**s. 66.0903 (10) RECORDS; INSPECTION; ENFORCEMENT.**

(a) Each contractor, subcontractor, or contractor's or subcontractor's agent performing work on a project of public works that is subject to this section shall keep full and accurate records clearly indicating the name and trade or occupation of every person performing the work described in sub. (4) and an accurate record of the number of hours worked by each of those persons and the actual wages paid for the hours worked.

**s. 66.0903 (11) LIABILITY AND PENALTIES.**

(a) 1. Any contractor, subcontractor, or contractor's or subcontractor's agent who fails to pay the prevailing wage rate determined by the department under sub. (3) or who pays less than 1.5 times the hourly basic rate of pay for all hours worked in excess of the prevailing hours of labor is liable to any affected employee in the amount of his or her unpaid wages or his or her unpaid overtime compensation and in an additional amount as liquidated damages as provided under subd. 2., 3., whichever is applicable.

2. If the department determines upon inspection under sub. (10) (b) or (c) that a contractor, subcontractor, or contractor's or subcontractor's agent has failed to pay the prevailing wage rate determined by the department under sub. (3) or has paid less than 1.5 times the hourly basic rate of pay for all hours worked in excess of the prevailing hours of labor, the department shall order the contractor to pay to any affected employee the amount of his or her unpaid wages or his or her unpaid overtime compensation and an additional amount equal to 100 percent of the amount of those unpaid wages or that unpaid overtime compensation as liquidated damages within a period specified by the department in the order.

3. In addition to or in lieu of recovering the liability specified in subd. 1. as provided in subd. 2., any employee for and in behalf of that employee and other employees similarly situated may commence an action to recover that liability in any court of competent jurisdiction. If the court finds that a contractor, subcontractor, or contractor's or subcontractor's agent has failed to pay the prevailing wage rate determined by the department under sub. (3) or has paid less than 1.5 times the hourly basic rate of pay for all hours worked in excess of the prevailing hours of labor, the court shall order the contractor, subcontractor, or agent to pay to any affected employee the amount of his or her unpaid wages or his or her unpaid overtime compensation and an additional amount equal to 100 percent of the amount of those unpaid wages or that unpaid overtime compensation as liquidated damages.

5. No employee may be a party plaintiff to an action under subd. 3. unless the employee consents in writing to become a party and the consent is filed in the court in which the action is brought. Notwithstanding s. 814.04 (1), the court shall, in addition to any judgment awarded to the plaintiff, allow reasonable attorney fees and costs to be paid by the defendant.



<b>BUILDING OR HEAVY CONSTRUCTION</b>
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Includes sheltered enclosures with walk-in access for the purpose of housing persons, employees, machinery, equipment or supplies and non-sheltered work such as canals, dams, dikes, reservoirs, storage tanks, etc. A sheltered enclosure need not be "habitable" in order to be considered a building. The installation of machinery and/or equipment, both above and below grade level, does not change a project's character as a building. On-site grading, utility work and landscaping are included within this definition. Residential buildings of four (4) stories or less, agricultural buildings, parking lots and driveways are NOT included within this definition.

<b>SKILLED TRADES</b>
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<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
		\$	\$	\$
101	Acoustic Ceiling Tile Installer	28.31	14.91	43.22
102	Boilermaker	33.64	19.92	53.56
103	Bricklayer, Blocklayer or Stonemason	32.66	16.20	48.86
104	Cabinet Installer	28.31	14.91	43.22
105	Carpenter	28.31	14.91	43.22
106	Carpet Layer or Soft Floor Coverer	28.31	14.91	43.22
107	Cement Finisher	30.73	14.38	45.11
108	Drywall Taper or Finisher	25.95	13.20	39.15
109	Electrician	32.55	18.68	51.23
110	Elevator Constructor	43.79	21.82	65.61
111	Fence Erector	22.50	3.66	26.16
112	Fire Sprinkler Fitter	36.89	15.10	51.99
113	Glazier	36.92	8.53	45.45
114	Heat or Frost Insulator	33.28	22.51	55.79
115	Insulator (Batt or Blown)	23.62	11.55	35.17
116	Ironworker	30.90	17.11	48.01
117	Lather	28.31	14.91	43.22
118	Line Constructor (Electrical)	35.26	21.35	56.61
119	Marble Finisher	29.40	14.31	43.71
120	Marble Mason	31.46	15.45	46.91
121	Metal Building Erector	30.90	16.69	47.59
122	Millwright	29.91	14.91	44.82
123	Overhead Door Installer	17.25	3.00	20.25

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
124	Painter Future Increase(s): Add \$.60/hr. on 6/1/2011; Add \$.75/hr. on 6/1/2012 Premium Increase(s): Add \$.25/hr. sandblasting; Add \$.40/hr. paperhanging; Add \$1.00/hr. spray/structural steel; Add \$.30/hr. for drywall taper.	25.65	13.20	38.85
125	Pavement Marking Operator	25.65	13.10	38.75
126	Piledriver	28.81	14.91	43.72
127	Pipeline Fuser or Welder (Gas or Utility)	28.91	17.34	46.25
129	Plasterer	27.68	14.22	41.90
130	Plumber	36.62	14.92	51.54
132	Refrigeration Mechanic	37.21	19.04	56.25
133	Rofer or Waterproofer	28.85	0.37	29.22
134	Sheet Metal Worker	34.23	19.60	53.83
135	Steamfitter Future Increase(s): Add \$.90/hr on 2/1/11; Add \$.90/hr on 6/1/11; Add \$.85/hr on 12/1/11; Add \$.90/hr on 6/1/12; Add \$.85/hr on 12/1/12.	39.00	15.76	54.76
137	Teledata Technician or Installer	21.26	11.52	32.78
138	Temperature Control Installer	31.61	17.90	49.51
139	Terrazzo Finisher	29.40	14.31	43.71
140	Terrazzo Mechanic	29.40	14.31	43.71
141	Tile Finisher	20.27	0.44	20.71
142	Tile Setter	29.21	7.80	37.01
143	Tuckpointer, Caulker or Cleaner	31.46	17.43	48.89
144	Underwater Diver (Except on Great Lakes)	32.31	14.91	47.22
146	Well Driller or Pump Installer Future Increase(s): Add \$1.60/hr on 6/1/11. Premium Increase(s): On Sunday & holidays, pay two times the hourly basic rate.	24.22	14.80	39.02
147	Siding Installer	12.00	4.34	16.34
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	26.88	13.71	40.59

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	27.66	0.00	27.66
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.68	1.09	25.77
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.44	0.00	25.44
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	17.41	9.80	27.21

**TRUCK DRIVERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
201	Single Axle or Two Axle	31.32	10.83	42.15
203	Three or More Axle	17.75	15.58	33.33
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Premium Increase(s): On Sunday & holidays, pay two times the hourly basic rate.	31.89	17.96	49.85
205	Pavement Marking Vehicle	20.85	11.02	31.87
207	Truck Mechanic	17.75	15.58	33.33

**LABORERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
301	General Laborer Premium Increase(s): Add \$1.00/hr for certified welder; Add \$.25/hr for mason tender	24.69	12.90	37.59
302	Asbestos Abatement Worker	16.00	4.81	20.81
303	Landscaper	13.00	0.00	13.00
310	Gas or Utility Pipeline Laborer (Other Than Sewer and Water) Future Increase(s): Add \$1.00/hr. on 6/1/2011	19.94	11.65	31.59
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	15.00	3.59	18.59
314	Railroad Track Laborer	22.81	13.42	36.23

**HEAVY EQUIPMENT OPERATORS  
SITE PREPARATION, UTILITY OR LANDSCAPING WORK ONLY**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>				
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
		<b>\$</b>	<b>\$</b>	<b>\$</b>
501	Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Milling Machine; Boring Machine (Directional, Horizontal or Vertical); Backhoe (Track Type) Having a Mfgr's Rated Capacity of 130,000 Lbs. or Over; Backhoe (Track Type) Having a Mfgr's Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bulldozer or Endloader (Over 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Crane, Shovel, Dragline, Clamshells; Forklift (Machinery Moving or Steel Erection, 25 Ft & Over); Gradall (Cruz-Aire Type); Grader or Motor Patrol; Master Mechanic; Mechanic or Welder; Robotic Tool Carrier (With or Without Attachments); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Tractor (Scraper, Dozer, Pusher, Loader); Trencher (Wheel Type or Chain Type Having Over 8 Inch Bucket).	30.89	17.85	48.74
502	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Environmental Burner; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Jeep Digger; Screed (Milling Machine); Skid Rig; Straddle Carrier or Travel Lift; Stump Chipper; Trencher (Wheel Type or Chain Type Having 8 Inch Bucket & Under). Premium Increase(s): On Sunday & holidays, pay two times the hourly basic rate.	32.42	17.96	50.38
503	Air Compressor (&/or 400 CFM or Over); Augers (Vertical & Horizontal); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Crusher, Screening or Wash Plant; Farm or Industrial Type Tractor; Forklift; Generator (&/or 150 KW or Over); Greaser; High Pressure Utility Locating Machine (Daylighting Machine); Mulcher; Oiler; Post Hole Digger or Driver; Pump (3 Inch or Over) or Well Points; Refrigeration Plant or Freeze Machine; Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack. Premium Increase(s): On Sunday & holidays, pay two times the hourly basic rate.	31.89	17.96	49.85
504	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	35.05	18.08	53.13
505	Work Performed on the Great Lakes Including Crane or Backhoe Operator; Assistant Hydraulic Dredge Engineer; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder; 70 Ton & Over Tug Operator. Premium Increase(s): Add \$.50/hr for friction crane, lattice boom or crane certification (CCO). On Sunday & holidays, pay two times the hourly basic rate.	37.45	19.45	56.90

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b><u>TOTAL</u></b>
<b><u>CODE</u></b>	<b><u>TRADE OR OCCUPATION</u></b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
506	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery. Premium Increase(s): On Sunday & holidays, pay two times the hourly basic rate.	33.35	19.33	52.68

507	Work Performed on the Great Lakes Including Deck Equipment Operator, Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks - Great Lakes ONLY.	32.20	18.69	50.89
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**HEAVY EQUIPMENT OPERATORS  
EXCLUDING SITE PREPARATION, UTILITY, PAVING LANDSCAPING WORK**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b><u>TOTAL</u></b>
<b><u>CODE</u></b>	<b><u>TRADE OR OCCUPATION</u></b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
508	Boring Machine (Directional); 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; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic. Premium Increase(s): Add \$.50/hr at 200 ton; Add \$1.00/hr. at 300 ton; Add \$1.50/hr at 400 ton; Add \$2.00/hr at 500 ton. On Sunday & holidays, pay two times the hourly basic rate.	34.62	17.96	52.58

509	Backhoe (Track Type) Having a Mfgr's Rated Capacity of 130,000 Lbs. or Over; Boring Machine (Horizontal or Vertical); Caisson Rig; 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; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Pile Driver; Versi Lifts, Tri-Lifts & Gantrys (20,000 Lbs. & Over).	34.88	9.78	44.66
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510	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump (Over 46 Meter), Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Dredge (NOT Performing Work on the Great Lakes); Forklift (Machinery Moving or Steel Erection, 25 Ft & Over); Gradall (Cruz-Aire Type); Hydro-Blaster (10,000 PSI or Over); Milling Machine; Skid Rig; Traveling Crane (Bridge Type).	33.28	9.70	42.98
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<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
511	Air, Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Bulldozer or Endloader (Over 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Pump (46 Meter & Under), Concrete Conveyor (Rotec or Bidwell Type); Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Environmental Burner; Gantrys (Under 20,000 Lbs.); Grader or Motor Patrol; High Pressure Utility Locating Machine (Daylighting Machine); Manhoist; Material or Stack Hoist; Mechanic or Welder; Railroad Track Rail Leveling Machine, Tie Placer, Extractor, Tamper, Stone Leveler or Rehabilitation Equipment; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yd or More Capacity; Screed (Milling Machine); Sideboom; Straddle Carrier or Travel Lift; Tining or Curing Machine; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Trencher (Wheel Type or Chain Type Having Over 8-Inch Bucket). Premium Increase(s): On Sunday & holidays, pay two times the hourly basic rate.	31.89	17.96	49.85
512	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Finishing Machine (Road Type); Fireman (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Grout Pump; Hoist (Tugger, Automatic); Industrial Locomotives; Jeep Digger; Lift Slab Machine; Mulcher; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Screw or Gypsum Pumps; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Stump Chipper; Trencher (Wheel Type or Chain Type Having 8-Inch Bucket & Under); Winches & A-Frames. Premium Increase(s): On Sunday & holidays, pay two times the hourly basic rate.	29.82	17.96	47.78
513	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Boatmen (NOT Performing Work on the Great Lakes); Boiler (Temporary Heat); Crusher, Screening or Wash Plant; Elevator; Farm or Industrial Type Tractor; Fireman (Asphalt Plant NOT Performing Work on the Great Lakes); Forklift; Generator (&/or 150 KW or Over); Greaser; Heaters (Mechanical); Loading Machine (Conveyor); Oiler; Post Hole Digger or Driver; Prestress Machine; Pump (3 Inch or Over) or Well Points; Refrigeration Plant or Freeze Machine; Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack.	23.98	6.72	30.70
514	Gas or Utility Pipeline, Except Sewer & Water (Primary Equipment).	34.89	19.68	54.57
515	Gas or Utility Pipeline, Except Sewer & Water (Secondary Equipment). Future Increase(s): Add \$1.60/hr on 6/1/2011.	29.27	16.85	46.12
516	Fiber Optic Cable Equipment Future Increase(s): Add \$1.75/hr on 2/1/11.	24.39	15.45	39.84



<b>SEWER, WATER OR TUNNEL CONSTRUCTION</b>
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Includes those projects that primarily involve public sewer or water distribution, transmission or collection systems and related tunnel work (excluding buildings).

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**SKILLED TRADES**

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<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		
		<u>HOURLY BASIC RATE OF PAY</u> \$	<u>HOURLY FRINGE BENEFITS</u> \$	<u>TOTAL</u> \$
103	Bricklayer, Blocklayer or Stonemason	31.46	15.45	46.91
105	Carpenter	31.38	16.03	47.41
107	Cement Finisher	24.00	18.63	42.63
109	Electrician	29.02	11.47	40.49
111	Fence Erector	22.50	3.66	26.16
116	Ironworker	31.31	21.79	53.10
118	Line Constructor (Electrical)	35.26	21.35	56.61
125	Pavement Marking Operator	25.65	13.10	38.75
126	Piledriver Future Increase(s): Add \$2.65/hr on 6/6/11. Premium Increase(s): Add \$.65/hr for Piledriver Loftsman; Add \$.75/hr for Sheet Piling Loftsman.	28.11	23.76	51.87
130	Plumber	34.45	15.50	49.95
135	Steamfitter	31.65	15.04	46.69
137	Teledata Technician or Installer	21.26	11.52	32.78
143	Tuckpointer, Caulker or Cleaner	31.46	17.43	48.89
144	Underwater Diver (Except on Great Lakes)	32.31	14.91	47.22
146	Well Driller or Pump Installer	24.22	14.80	39.02
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	26.88	13.71	40.59
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	27.66	0.00	27.66
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.68	1.09	25.77
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.44	0.00	25.44
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	17.41	9.80	27.21



**TRUCK DRIVERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
201	Single Axle or Two Axle	31.32	10.83	42.15
203	Three or More Axle	17.75	14.95	32.70
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Premium Increase(s): On Sunday & holidays, pay two times the hourly basic rate.	31.89	17.96	49.85
205	Pavement Marking Vehicle	20.85	11.02	31.87
207	Truck Mechanic	17.75	14.95	32.70

**LABORERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
301	General Laborer Future Increase(s): Add \$1.45/hr on 6/6/2011. Premium Increase(s): Add \$.20 for blaster, bracer, manhole builder, caulker, bottomman and power tool; Add \$.55 for pipelayer; Add \$1.00 for tunnel work 0-15 lbs. compressed air; Add \$2.00 for over 15-30 lbs. compressed air; Add \$3.00 for over 30 lbs. compressed air.	25.83	12.89	38.72
303	Landscaper	13.00	0.00	13.00
304	Flagperson or Traffic Control Person	21.40	12.40	33.80
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	12.50	0.00	12.50
314	Railroad Track Laborer	22.81	13.42	36.23

**HEAVY EQUIPMENT OPERATORS  
SEWER, WATER OR TUNNEL WORK**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
521	<p>Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &amp;/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; Master Mechanic; Pile Driver.</p> <p>Premium Increase(s): Add \$.50/hr at 200 ton; Add \$1.00/hr. at 300 ton; Add \$1.50/hr at 400 ton; Add \$2.00/hr at 500 ton. On Sunday &amp; holidays, pay two times the hourly basic rate.</p>	34.62	17.96	52.58
522	<p>Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. &amp; Under); Boring Machine (Directional); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump (Over 46 Meter), Concrete Conveyor (Rotec or Bidwell Type); Concrete Spreader &amp; Distributor; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &amp;/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. &amp; Under; Dredge (NOT Performing Work on the Great Lakes); Milling Machine; Skid Rig; Telehandler; Traveling Crane (Bridge Type).</p> <p>Premium Increase(s): On Sunday &amp; holidays, pay two times the hourly basic rate.</p>	32.42	17.96	50.38
523	<p>Air Track, Rotary or Percussion Drilling Machine &amp;/or Hammers, Blaster; Boring Machine (Horizontal or Vertical); Bulldozer or Endloader (Over 40 hp); Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Concrete Pump (46 Meter &amp; Under), Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb &amp; Gutter Machine; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Hydro-Blaster (10,000 PSI or Over); Manhoist; Material or Stack Hoist; Mechanic or Welder; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yd or More Capacity; Screed (Milling Machine); Sideboom; Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Trencher (Wheel Type or Chain Type Having Over 8-Inch Bucket).</p> <p>Premium Increase(s): On Sunday &amp; holidays, pay two times the hourly basic rate.</p>	31.89	17.96	49.85

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
524	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Finishing Machine (Road Type); Environmental Burner; Fireman (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Hoist (Tugger, Automatic); Grout Pump; Jeep Digger; Lift Slab Machine; Mulcher; Power Subgrader; Pump (3 Inch or Over) or Well Points; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Screw or Gypsum Pumps; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Stump Chipper; Tining or Curing Machine; Trencher (Wheel Type or Chain Type Having 8-Inch Bucket & Under); Winches & A-Frames. Premium Increase(s): On Sunday & holidays, pay two times the hourly basic rate.	31.89	17.96	49.85
525	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Crusher, Screening or Wash Plant; Farm or Industrial Type Tractor; Fireman (Asphalt Plant NOT Performing Work on the Great Lakes); Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Loading Machine (Conveyor); Post Hole Digger or Driver; Refrigeration Plant or Freeze Machine; Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add \$1.90/hr on 6/6/2011; Add \$2.05/hr on 6/4/2012. Premium Increase(s): Add \$.25/hr for operating tower crane. On Sunday & holidays, pay two times the hourly basic rate except pump/generator operators when employed on non-productive projects.	29.41	17.75	47.16
526	Boiler (Temporary Heat); Forklift; Greaser; Oiler. Future Increase(s): Add \$1.90/hr on 6/6/2011; Add \$2.05/hr on 6/4/2012. Premium Increase(s): Add \$.25/hr for operating tower crane. On Sunday & holidays, pay two times the hourly basic rate except pump/generator operators when employed on non-productive projects.	29.41	17.75	47.16
527	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	35.05	18.08	53.13
528	Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder.	35.05	18.08	53.13

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b><u>CODE</u></b>	<b><u>TRADE OR OCCUPATION</u></b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
529	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	32.20	18.69	50.89
530	Work Performed on the Great Lakes Including Deck Equipment Operator; Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under), Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks - Great Lakes ONLY.	32.20	18.69	50.89

<b>LOCAL STREET OR MISCELLANEOUS PAVING CONSTRUCTION</b>
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Includes roads, streets, alleys, trails, bridges, paths, racetracks, parking lots and driveways (except residential or agricultural), public sidewalks or other similar projects (excluding projects awarded by the Wisconsin Department of Transportation).

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**SKILLED TRADES**

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<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		
		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
		\$	\$	\$
103	Bricklayer, Blocklayer or Stonemason	31.46	15.45	46.91
105	Carpenter Future Increase(s): Add \$2.65 on 6/6/11	31.68	18.41	50.09
107	Cement Finisher	28.67	14.77	43.44
109	Electrician	31.61	18.59	50.20
111	Fence Erector	22.50	3.66	26.16
116	Ironworker	31.31	21.79	53.10
118	Line Constructor (Electrical)	35.26	21.35	56.61
124	Painter	25.65	13.10	38.75
125	Pavement Marking Operator	23.46	9.45	32.91
126	Piledriver	28.81	14.91	43.72
133	Rofer or Waterproofer	28.85	0.37	29.22
137	Teledata Technician or Installer	21.26	11.52	32.78
143	Tuckpointer, Caulker or Cleaner	31.46	17.43	48.89
144	Underwater Diver (Except on Great Lakes)	32.31	14.91	47.22
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	26.88	13.71	40.59
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	28.60	12.67	41.27
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.68	12.41	37.09
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	22.92	11.87	34.79
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	29.06	15.39	44.45

**TRUCK DRIVERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
201	Single Axle or Two Axle	21.42	5.62	27.04
203	Three or More Axle	13.00	15.56	28.56
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Premium Increase(s): On Sunday & holidays, pay two times the hourly basic rate.	31.89	17.96	49.85
205	Pavement Marking Vehicle	20.85	11.02	31.87
206	Shadow or Pilot Vehicle	21.42	5.62	27.04
207	Truck Mechanic	13.00	15.56	28.56

**LABORERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
301	General Laborer	22.14	12.07	34.21
303	Landscaper Future Increase(s): Add \$1.60/hr on 6/1/11; Add \$1.60/hr on 6/1/12; Add \$1.70/hr on 6/1/13; Add \$1.60/hr on 6/1/14. Premium Increase(s): "Airport Pavement or State Highway Construction" project type only, 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).	26.15	12.90	39.05
304	Flagperson or Traffic Control Person	21.40	11.76	33.16
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	15.00	3.59	18.59
314	Railroad Track Laborer	22.81	13.42	36.23

**HEAVY EQUIPMENT OPERATORS  
CONCRETE PAVEMENT OR BRIDGE WORK**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
541	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; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic.	31.97	16.96	48.93
542	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 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; Crane, Tower Crane Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or 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 \$1.95/hr on 6/1/11; Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. Premium Increase(s): On Sunday & holidays, pay two times the hourly basic rate. For "Airport Pavement or State Highway Construction" project type only, add \$1.50/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).	32.57	18.10	50.67

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
543	Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); 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); Manhoist; Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A-Frames. Future Increase(s): Add \$1.85/hr on 5/31/2011. Premium Increase(s): On Sunday & holidays, pay two times the hourly basic rate.	32.32	16.75	49.07
544	Backfiller; 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 (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Jeep Digger; Joint Sawyer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Telehandler; Tining or Curing Machine.	28.57	16.48	45.05
545	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; 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.	29.97	16.72	46.69
546	Fiber Optic Cable Equipment.	22.79	15.30	38.09
547	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	35.05	18.08	53.13



<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
548	Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder.	35.05	18.08	53.13
549	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or more); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	32.20	18.69	50.89
550	Work Performed on the Great Lakes Including Deck Equipment Operator; Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks - Great Lakes ONLY.	32.20	18.69	50.89

**HEAVY EQUIPMENT OPERATORS  
ASPHALT PAVEMENT OR OTHER WORK**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
551	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; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads and/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic.	31.97	17.35	49.32
552	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 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; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver.	30.42	17.05	47.47

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
553	<p>Air, Track, Rotary or Percussion Drilling Machine &amp;/or Hammers, Blaster; Asphalt Heater, Planer &amp; Scarifier; Asphalt Milling Machine; Asphalt Screed; Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. &amp; Under); Bituminous (Asphalt) Plant &amp; Paver, Screed; Boring Machine (Directional, Horizontal or Vertical); Bulldozer or Endloader; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Laser/Screed; Concrete Slipform Placer Curb &amp; Gutter Machine; 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; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Manhoist; Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Railroad Track Rail Leveling Machine, Tie Placer, Extractor, Tamper, Stone Leveler or Rehabilitation Equipment; 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); 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 &amp; A-Frames.</p> <p>Premium Increase(s): On Sunday &amp; holidays, pay two times the hourly basic rate.</p>	31.89	17.96	49.85
554	<p>Backfiller; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed &amp; Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver &amp; Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawyer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self-Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Telehandler.</p> <p>Future Increase(s): Add \$1.95/hr on 6/1/11; Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14.</p> <p>Premium Increase(s): On Sunday &amp; holidays, pay two times the hourly basic rate.</p>	31.52	17.75	49.27
555	<p>Air Compressor (&amp;/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical &amp; Horizontal); Automatic Belt Conveyor &amp; Surge Bin; Boiler (Temporary Heat); Crusher, Screening or Wash Plant; Generator (&amp;/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.</p> <p>Future Increase(s): Add \$1.95/hr on 6/1/11; Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14.</p> <p>Premium Increase(s): On Sunday &amp; holidays, pay two times the hourly basic rate.</p>	31.52	17.75	49.27

**Fringe Benefits Must Be Paid On All Hours Worked**

<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u> \$	<u>HOURLY FRINGE BENEFITS</u> \$	<u>TOTAL</u> \$
556	Fiber Optic Cable Equipment.	22.79	15.30	38.09

\*\*\*\*\* END OF RATES \*\*\*\*\*



The documents following the Prevailing Wage Rate Determination consist of 13 pages of various forms/documents that will be used throughout the completion of the project. The chart below lists the form number, form/document name, the party who uses the document, and the document's number of pages. If you have any questions regarding these forms please call the Prevailing Wage Office at (608)266-6861.

ERD Form Number	Form Name	Party Who Uses the Form	Pages
16056	Post the White Sheet	Contracting agency	1
16770	Substance Abuse Prevention on Public Works and Publicly Funded Projects, §103.503, Wis. Stats.	All contractors working on public works and publicly funded private construction projects	1
10908	Consolidated List of Debarred Contractors	Any party contracting someone to complete work on a prevailing wage project	1
7777	Disclosure of Ownership	Contractors that meet the criteria set out in (3)(A)&(B) of the form	1
5724	Prime Contractor Affidavit of Compliance	Prime contractor files with contracting agency upon completion of the work before receiving final payment	2
10584	Agent or Subcontractor Affidavit of Compliance	Subcontractors file with their awarding contractor upon completion of their work on the project before receiving final payment	2
10880	Request to Employ Subjourneyperson	Contractors wishing to employ a subjourneyperson(s)	1
	Prevailing Wage - Public Entity Project Owners	Explanation of project owner responsibilities	2
	Prevailing Wage – Contractors	Explanation of contractor responsibilities	2

## **POST THE WHITE SHEET**

As the public entity receiving this prevailing wage rate determination, YOU ARE REQUIRED by law to post the prevailing wage rate determination (i.e., white sheet) in at least one conspicuous and easily accessible place on the project site that is available to all construction workers. The white sheet must remain posted from the onset of the project until all construction labor on the project has been completed.

[See, Wis. Admin. Code §DWD 290.12(1)]

Posting the white sheet inside the general contractor's trailer does not meet this requirement. That placement is not available/accessible to all workers and is not a location over which you have control.

If you have questions about posting, please call (608)266-6861 and ask for prevailing wage intake.

## Disclaimer

**Employers performing work on public works and publicly funded private construction projects in Wisconsin are required to have a written substance abuse testing program in place. The provisions of this requirement are contained in Sec. 103.503, Wis. Stats. The Department of Workforce Development is neither responsible for enforcement of this law nor authorized to answer questions concerning its provisions. For legal advice on complying with Sec. 103.503, Wis. Stats., you may wish to consult with a private attorney.**

### **103.503 Substance abuse prevention on public works and publicly funded projects. (1) DEFINITIONS.** In this section:

(a) "Accident" means an incident caused, contributed to, or otherwise involving an employee that resulted or could have resulted in death, personal injury, or property damage and that occurred while the employee was performing the work described in s. 66.0903 (4), 66.0904 (3), or 103.49 (2m) on a project.

(b) "Alcohol" has the meaning given in s. 340.01 (1q).

(c) "Contracting agency" means a local governmental unit, as defined in s. 66.0903 (1) (d), a state agency, as defined in s. 103.49 (1) (f), or an owner or developer under s. 66.0904 that has contracted for the performance of work on a project.

(d) "Drug" means any controlled substance, as defined in s. 961.01 (4), or controlled substance analog, as defined in s. 961.01 (4m), for which testing is required by an employer under its substance abuse prevention program under this section.

(e) "Employee" means a laborer, worker, mechanic, or truck driver who performs the work described in s. 66.0903 (4), 66.0904 (3), or 103.49 (2m) on a project.

(f) "Employer" means a contractor, subcontractor, or agent of a contractor or subcontractor that performs work on a project.

(g) "Project" means a project of public works that is subject to s. 66.0903 or 103.49 or a publicly funded private construction project that is subject to s. 66.0904.

**(2) SUBSTANCE ABUSE PROHIBITED.** No employee may use, possess, attempt to possess, distribute, deliver, or be under the influence of a drug, or use or be under the influence of alcohol, while performing the work described in s. 66.0903 (4), 66.0904 (3), or 103.49 (2m) on a project. An employee is considered to be under the influence of alcohol for purposes of this subsection if he or she has an alcohol concentration that is equal to or greater than the amount specified in s. 885.235 (1g) (d).

**(3) SUBSTANCE ABUSE PREVENTION PROGRAMS REQUIRED.** (a) Before an employer may commence work on a project, the employer shall have in place a written program for the prevention of substance abuse among its employees. At a minimum, the program shall include all of the following:

1. A prohibition against the actions or conditions specified in sub. (2).

2. A requirement that employees performing the work described in s. 66.0903 (4), 66.0904 (3), or 103.49 (2m) on a project submit to random, reasonable suspicion, and post-accident drug and alcohol testing and to drug and alcohol testing before commencing work on a project, except that testing of an employee before commencing work on a project is not required if the employee has been participating in a random testing program during the 90 days preceding the date on which the employee commenced work on the project.

3. A procedure for notifying an employee who violates sub. (2), who tests positive for the presence of a drug in his or her system, or who refuses to submit to drug or alcohol testing as required under the program that the employee may not perform work on a project until he or she meets the conditions specified in sub. (4) (b) 1. and 2.

(b) Each employer shall be responsible for the cost of developing, implementing, and enforcing its substance abuse prevention program, including the cost of drug and alcohol testing of its employees under the program. The contracting agency is not responsible for that cost, for the cost of any medical review of a test result, or for any rehabilitation provided to an employee.

**(4) EMPLOYEE ACCESS TO PROJECT.** (a) No employer may permit an employee who violates sub. (2), who tests positive for the presence of a drug in his or her system, or who refuses to submit to drug or alcohol testing as required under the employer's substance abuse prevention program under sub. (3) to perform work on a project until he or she meets the conditions specified in par. (b) 1. and 2. An employer shall immediately remove an employee from work on a project if any of the following occurs:

1. The employee violates sub. (2), tests positive for the presence of a drug in his or her system, or refuses to submit to drug or alcohol testing as required under the employer's substance abuse prevention program.

2. An officer or employee of the contracting agency has a reasonable suspicion that the employee is in violation of sub. (2) and requests the employer to immediately remove the employee from work on the project.

(b) An employee who is barred or removed from work on a project under par. (a) may commence or return to work on the project upon his or her employer providing to the contracting agency documentation showing all of the following:

1. That the employee has tested negative for the presence of drugs in his or her system and is not under the influence of alcohol as described in sub. (2).

2. That the employee has been approved to commence or return to work on the project in accordance with the employer's substance abuse prevention program.

(c) Testing for the presence of drugs or alcohol in an employee's system and the handling of test specimens shall be conducted in accordance with guidelines for laboratory testing procedures and chain-of-custody procedures established by the substance abuse and mental health services administration of the federal department of health and human services.

**(5) LOCAL ORDINANCES: STRICT CONFORMITY REQUIRED.** A local governmental unit, as defined in s. 66.0903 (1) (d), may enact an ordinance regulating the conduct regulated under this section only if the ordinance strictly conforms to this section.

History: 2005 a. 181; 2009 a. 28.

Consolidated List of Debarred Contractors  
Prepared and Issued By  
State of Wisconsin  
Department of Workforce Development

January 1, 2011

This list has been prepared in accordance with the provisions of s. 66.0903(12) and s. 103.49(7), Stats. and Chapter DWD 294 of the Wisconsin Administrative Code. All contractors on this list were found to have committed a "debarable offense" related to certain labor standard provisions determined or established for a state or local public works project. No state agency or local governmental unit may knowingly solicit bids from, negotiate with or award any contracts to or approve or allow any subcontracts with a debarred contractor, including all divisions, affiliates or other organizational elements of such contractor that are engaged in construction business activities, until the debarment is terminated. The name of each debarred contractor must remain on this list for a period of three (3) years from the termination date indicated below. The contractor is, however, only "debarred" from the "effective date" through the "termination date" indicated for that contractor. Questions regarding this list should be addressed to Julie Eckenwalder, Equal Rights Division, P. O. Box 8928, Madison, WI 53708 or call (608) 266-3148. Deaf, hearing or speech-impaired callers may contact the department by calling its TDD number (608) 264-8752.

<u>Name of Contractor</u>	<u>Address</u>	<u>Effective Date</u>	<u>Termination Date</u>	<u>Cause Code</u>	<u>Date of Violation(s)</u>	<u>Limitations/Deviations</u>
Custom Heating & Air LLC	283 Tony Lane Green Bay, WI 54304	12/1/06	11/30/09	1, 2 and 4	2003 to 2004	None
D. C. Nevels Trucking, Inc. or D. C. Nevels Trucking	3246 North Sherman Blvd. Milwaukee, WI 53216	6/1/05	5/31/08	1, 2 and 4	2000- 2002	None
Joseph Stoller Company	N8426 Hwy 42 Algoma WI 54201	2/1/2007	1/31/2010	1 and 2	2004 and 2005	None
Keiver, David	See Custom Heating & Air LLC	12/1/06	11/30/09	1, 2 and 4	2003 and 2004	None
Nevels, Betty	See D. C. Nevels Trucking, Inc.					
Nevels, Donald	See D. C. Nevels Trucking, Inc.					
Stoller Enterprises LLC	N8426 Hwy 42 Algoma, WI 54201-9552	2/1/2007	1/31/2010	1 and 2	2005 to 2006	None
Stoller, Joseph	See Joseph Stoller Company					
Stoller, Patrick J.	See Stoller Enterprises LLC					

Cause Code: 1 = Failure to Pay Straight Time 2 = Failure to Pay Overtime 3 = Kickback 4 = Payroll Records.

## Disclosure of Ownership

The statutory authority for the use of this form is prescribed in Sections 66.0903(12)(d), 66.0904(10)(d) and 103.49(7)(d), Wisconsin Statutes.

The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes.

Personal information you provide may be used for secondary purposes [Privacy Law, s. 15.04(1) (m), Wisconsin Statutes]

- (1) On the date a contractor submits a bid to or completes negotiations with a state agency, local governmental unit, or developer, investor or owner on a project subject to Section 66.0903, 66.0904 or 103.49, Wisconsin Statutes, the contractor shall disclose to such state agency, local governmental unit, or developer, investor or owner, the name of any "other construction business", which the contractor, or a shareholder, officer or partner of the contractor, owns or has owned within the preceding three (3) years.
- (2) The term "other construction business" means any business engaged in the erection, construction, remodeling, repairing, demolition, altering or painting and decorating of buildings, structures or facilities. It also means any business engaged in supplying mineral aggregate, or hauling excavated material or spoil as provided by Sections 66.0903(3), 66.0904(2), 103.49(2) and 103.50(2), Wisconsin Statutes.
- (3) This form must ONLY be filed, with the state agency project owner, local governmental unit project owner, or developer, investor or owner of a publicly funded private construction project that will be awarding the contract, if **both (A) and (B) are met.**
  - (A) The contractor, or a shareholder, officer or partner of the contractor:
    - (1) Owns at least a 25% interest in the "other construction business", indicated below, on the date the contractor submits a bid or completes negotiations.
    - (2) Or has owned at least a 25% interest in the "other construction business" at any time within the preceding three (3) years.
  - (B) The Wisconsin Department of Workforce Development (DWD) has determined that the "other construction business" has failed to pay the prevailing wage rate or time and one-half the required hourly basic rate of pay, for

### Other Construction Business

Name of Business			
Street Address or P O Box	City	State	Zip Code
Name of Business			
Street Address or P O Box	City	State	Zip Code
Name of Business			
Street Address or P O Box	City	State	Zip Code
Name of Business			
Street Address or P O Box	City	State	Zip Code

**I hereby state under penalty of perjury that the information, contained in this document, is true and accurate according to my knowledge and belief.**

Print the Name of Authorized Officer			
Signature of Authorized Officer	Date Signed		
Name of Corporation, Partnership or Sole Proprietorship			
Street Address or P O Box	City	State	Zip Code

**If you have any questions call (608) 266-6861**



## Prime Contractor Affidavit of Compliance With Prevailing Wage Rate Determination

Authorization for this form is provided under Sections 66.0903(9)(c), 66.0904(7)(c) and 103.49(4r)(c) Wisconsin Statutes.

The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes.

Personal information you provide may be used for secondary purposes [Privacy Law, s. 15.04(1)(m), Wisconsin Statutes].

This form must **ONLY** be filed with the **Awarding Agency** indicated below.

State Of )	Project Name	
	DWD Determination Number	Project Number (if applicable)
County Of )  )SS	Date Determination Issued	Date of Contract
	Awarding Agency	
	Date Work Completed	

After being duly sworn, the person whose name and signature appears below hereby states under penalty of perjury that

- **I am** the duly authorized officer of the corporation, partnership, sole proprietorship or business indicated below and have recently completed all of the work required under the terms and conditions of a contract with the above-named awarding agency and make this affidavit in accordance with the requirements set forth in Section 66.0903(9)(c), 66.0904(7)(c) or 103.49(4r)(c), Wisconsin Statutes and Chapter DWD 290 of the Wisconsin Administrative Code in order to obtain FINAL PAYMENT from such awarding agency.
- **I have** fully complied with all the wage and hour requirements applicable to this project, including all of the requirements set forth in the prevailing wage rate determination indicated above which was issued for such project by the Department of Workforce Development on the date indicated above.
- **I have** received the required affidavit of compliance from each of my agents and subcontractors that performed work on this project and have listed each of their names and addresses on page 2 of this affidavit.
- **I have** full and accurate records that clearly indicate the name and trade or occupation of every worker(s) that I employed on this project, including an accurate record of the hours worked and actual wages paid to such worker(s).
- **I will** retain the records and affidavit(s) described above and make them available for inspection for a period of at least three (3) years from the completion date indicated above at the address indicated below and shall not remove such records or affidavit(s) without prior notification to the awarding agency indicated above.

Name of Corporation, Partnership, Sole Proprietorship, Business, State Agency or Local Governmental Unit				
Street Address	City	State	Zip Code	Telephone Number
Print Name of Authorized Officer			Date Signed	
Signature of Authorized Officer				

## List of Agents and Subcontractors

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		

**If you have any questions call (608) 266-6861**

## Agent or Subcontractor Affidavit of Compliance With Prevailing Wage Rate Determination

Authorization for this form is provided under Sections 66.0903(9)(b), 66.0904(7)(b) and 103.49(4r)(9b), Wisconsin Statutes. The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes.

Personal information you provide may be used for secondary purposes [Privacy Law, Section 15.04(1)(m), Wisconsin Statutes].

This form must **ONLY** be filed with the **Awarding Contractor** indicated below.

State Of _____ )  )SS  County Of _____ )	Project Name	
	DWD Determination Number	Project Number (if applicable)
	Date Determination Issued	Date of Subcontract
	Awarding Contractor	
	Date Work Completed	

After being duly sworn, the person whose name and signature appears below hereby states under penalty of perjury that

- **I am** the duly authorized officer of the corporation, partnership, sole proprietorship or business indicated below. We have recently completed all of the work required under the terms and conditions of a subcontract with the above-named awarding contractor. We make this affidavit in accordance with the requirements set forth in Section 66.0903(9)(b), 66.0904(7)(b) or 103.49(4r)(b), Wisconsin Statutes and Chapter DWD 290 of the Wisconsin Administrative Code in order to obtain FINAL PAYMENT from such awarding contractor.
- **I have** fully complied with the entire wage and hour requirements applicable to this project, including all of the requirements set forth in the prevailing wage rate determination indicated above which was issued for such project by the Department of Workforce Development on the date indicated above.
- **I have** received the required affidavit of compliance from each of my agents and subcontractors that performed work on this project and have listed each of their names and addresses on page 2 of this affidavit.
- **I have** full and accurate records that clearly indicate the name and trade or occupation of every worker(s) that I employed on this project, including an accurate record of the hours worked and actual wages paid to such worker(s).
- **I will** retain the records and affidavit(s) described above and make them available for inspection for a period of at least three (3) years from the completion date indicated above at the address indicated below and shall not remove such records or affidavit(s) without prior notification to the awarding contractor.

Name of Corporation, Partnership, Sole Proprietorship, Business, State Agency or Local Governmental Unit				
Street Address or PO Box	City	State	Zip Code	Telephone Number (    )
Print Name of Authorized Officer			Date Signed	
Authorized Officer Signature				

## List of Agents and Subcontractors

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number (     )			Telephone Number (     )		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number (     )			Telephone Number (     )		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number (     )			Telephone Number (     )		
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Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number (     )			Telephone Number (     )		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number (     )			Telephone Number (     )		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number (     )			Telephone Number (     )		

**If you have any questions call (608) 266-6861**

# Request to Employ Subjourneyperson

The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes. Personal information you provide may be used for secondary purposes (Privacy Law, s. 15.04(1)(m), Wisconsin Statutes).

The employer indicated below requests that the Department of Workforce Development (DWD) determine the prevailing wage rate(s) and related qualifications to enable such employer to use a subjourneyperson(s) on the following prevailing wage project, in accordance with the provisions of Section DWD 290.025, Wisconsin Administrative Code.

1. Name of Project Appearing on the Project Determination	
County	City, Village or Town
DWD Project Determination Number	Project Number (if applicable)
2. Job Classification(s) for which you request a subjourney rate (i.e., carpenter, electrician, plumber, etc.)	
a.	b.
c.	d.
3. Employer Name (Print)	
Address	City State Zip Code
Telephone Number ( )	Requester Title
Email address (if you prefer to receive your response via email)	Fax Number (if you prefer to receive your response via fax) ( )

**READ CAREFULLY:** I understand that this request is ONLY applicable to the project and job classification(s) listed above and that subjourney employees primarily work under the direction of and assist a skilled trade employee by frequently using the tools of a skilled trade and will NOT regularly perform the duties of a general laborer, heavy equipment operator or truck driver. If the subjourney employee regularly performs the work of a different trade or occupation, he/she will be compensated for such work at the applicable journeyperson prevailing wage rate. I agree to compensate subjourney employees in strict accordance with the directions received from the DWD.

Requester Signature	Date Signed
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MAIL the completed request to:  
 EQUAL RIGHTS DIVISION, LABOR STANDARDS BUREAU  
 PO BOX 8928, MADISON WI 53708  
**OR**  
 FAX the completed request to: (608) 267-0310 / **DO NOT e-mail your request.**  
 Call (608) 266-6861 for assistance in completing this form.



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## PREVAILING WAGE – Public Entity Project Owners

Any public works project that has a total estimated project cost of at least \$25,000 will require a prevailing wage rate determination issued by the Department of Workforce Development (DWD). Public works include erecting, constructing, remodeling, repairing, demolishing, alterations, painting and decorating projects for a local governmental unit or state agency. State law excludes minor service or maintenance work, warranty work, or work under a supply-and-installation contract. There is a statutory definition for each of these exclusions. The prevailing wage laws that apply to local governmental units include §66.0903, Wis. Stats. and §66.0904, Wis. Stats. The prevailing wage law that applies to state agencies is §103.49, Wis. Stats. The applicable administrative rules for all public entities are DWD 290 and DWD 294, Wis. Adm. Code.

Effective January 1, 2010, a local governmental unit or state agency that has a public works project of \$25,000 or more must do all of the following:

- Request a prevailing wage rate determination for the project from DWD at least 30 days before soliciting bids or negotiating contracts. An Application for Prevailing Wage Rate Determination is available on the DWD website: [http://dwd.wisconsin.gov/er/prevailing\\_wage\\_rate/default.htm](http://dwd.wisconsin.gov/er/prevailing_wage_rate/default.htm)
- Tell potential contractors the project is subject to state prevailing wage law when soliciting bids.
- Include the prevailing wage rate determination in the construction contract, or if there is no written contract, provide a copy of the project determination to each prime contractor.
- Award contracts to contractors who do *not* appear on the “Consolidated List of Debarred Contractors.”
- Tell contractors they must provide DWD certified payroll records monthly in a format that meets DWD reporting requirements.
- Post the prevailing wage rate determination on the project site. (This document is often referred to as “the white sheet.”)

- Notify project contractors that if DWD finds that a contractor violated the prevailing wage law, DWD will assess liquidated damages of 100% of the wages owed to employees.
- Obtain an Affidavit of Compliance from each prime contractor before making final payment for the project.

If the total estimated cost of the project is at least \$25,000, a local governmental unit or state agency also must obtain a prevailing wage rate determination under the following circumstances:

- when a completed facility is leased, purchased, lease-purchased or otherwise acquired by or dedicated to a public entity in lieu of the public entity contracting for the project,
- when one public entity does work for another public entity,
- when a *private* entity will construct a road, street, bridge, sanitary sewer or water main project and dedicate it to a local governmental unit or the state for its ownership or maintenance.

Finally, a new prevailing wage law (§66.0904, Stats.) that affects local governmental units requires that the prevailing wage applies to publicly funded private construction projects that receive at least \$1,000,000 in direct financial assistance from the local governmental unit.

For more information, please visit the prevailing wage website: [http://dwd.wisconsin.gov/er/prevailing\\_wage\\_rate/default.htm](http://dwd.wisconsin.gov/er/prevailing_wage_rate/default.htm). For further assistance, please call the Equal Rights Division at 608-266-6861 and ask for prevailing wage.



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## PREVAILING WAGE – Contractors

Any public works project that has a total estimated project cost of at least \$25,000 requires a prevailing wage rate determination issued by the Department of Workforce Development (DWD). Public works include erecting, constructing, remodeling, repairing, demolishing, alterations, painting and decorating projects for a local governmental unit or state agency. State law excludes minor service or maintenance work, warranty work, or work under a supply-and-installation contract. There is a statutory definition for each of these exclusions. The prevailing wage laws that apply to local governmental units and their contractors include §66.0903, Wis. Stats. and §66.0904, Wis. Stats. The prevailing wage law that applies to state agencies and their contractors is §103.49, Wis. Stats. The applicable administrative rules for all prevailing wage projects are DWD 290 and DWD 294, Wis. Adm. Code. These laws include provisions that apply to all contractors and subcontractors working on prevailing wage projects.

Effective January 1, 2010, any contractor or subcontractor working on a local governmental unit or state agency's public works project of \$25,000 or more must do all of the following:

- Provide DWD certified payroll records monthly in an electronic format that meets DWD reporting requirements by the 7<sup>th</sup> day of the month following a month in which the work was conducted. These payroll records must be uploaded to the prevailing wage website at: [http://dwd.wisconsin.gov/er/prevailing\\_wage\\_rate/cpr.htm](http://dwd.wisconsin.gov/er/prevailing_wage_rate/cpr.htm)
- Receive and review the project's prevailing wage rate determination (i.e., white sheet).
- Tell subcontractors the project is subject to state prevailing wage law and include the prevailing wage rate determination in the construction contract, or if there is no written contract, provide a copy of the project determination to each subcontractor.
- Hire subcontractors who do *not* appear on the "Consolidated List of Debarred Contractors."



- Notify project subcontractors that if DWD finds that a contractor or subcontractor violated the prevailing wage law, DWD will assess liquidated damages of 100% of the wages owed to employees.
- Apply to DWD for subjourney wage rates prior to employing these individuals on the project.
- Receive and retain a completed Affidavit of Compliance from each subcontractor brought on to the project before providing final payment to those subcontractors.
- Submit a completed Affidavit of Compliance to the contractor who brought the subcontractor on to the project before receiving final payment for the project.

If a contractor or subcontractor is working on a prevailing wage project that started prior to January 1, 2010 and work on that project continues into 2010, the contractor or subcontractor must do the following:

- Effective January 1, 2010 and each month thereafter, file certified payroll records with DWD monthly in an electronic format that meets DWD reporting requirements by the 7<sup>th</sup> day of the month following a month in which the work was conducted. These payroll records must be uploaded to the prevailing wage website at: [http://dwd.wisconsin.gov/er/prevailing\\_wage\\_rate/cpr.htm](http://dwd.wisconsin.gov/er/prevailing_wage_rate/cpr.htm)

Finally, a new prevailing wage law (§66.0904, Stats.) that affects local governmental units requires that the prevailing wage applies to publicly funded private construction projects that receive at least \$1,000,000 in direct financial assistance from the local governmental unit. Again, there are provisions in this statute that apply to contractors and subcontractors.

For more information, visit the prevailing wage website: [http://dwd.wisconsin.gov/er/prevailing\\_wage\\_rate/default.htm](http://dwd.wisconsin.gov/er/prevailing_wage_rate/default.htm). For further assistance, please call the Equal Rights Division at 608-266-6860 and ask for prevailing wage.

SECTION 01 00 00  
BASIC REQUIREMENTS

PART 1 GENERAL

1.1 SECTION SUMMARY

- A. Section Includes:
1. Section Summary
  2. Summary of the Work
  3. Contractor Use of Premises
  4. Applications for Payment
  5. Alternates
  6. Coordination
  7. Cutting and Patching
  8. Conferences
  9. Progress Meetings
  10. Job Site Administration
  11. Contractor Work Hours
  12. Submittal Procedures
  13. Proposed Products List
  14. Product Data
  15. Quality Assurance / Quality Control of Installation
  16. References
  17. Protection of Installed Work
  18. Parking
  19. Temporary Facilities
  20. Controls
  21. Special Controls
  22. Security
  23. Progress Cleaning
  24. Product Options
  25. Substitutions
  26. Contract Closeout Procedures
  27. Final Cleaning
  28. Maintenance Materials
  29. Record Drawings

1.2 SUMMARY OF THE WORK

- A. Project Description: Perform the Work as specified and detailed in Construction Documents package. Contractor to provide construction services primarily consisting of repairs to cast-in-place concrete slab, beam, & column repairs on floors Lower Level through 5 & slab crack treatment on floors 1 through 4 & 7. Additional construction services include expansion joint, trench drain and stairwell repairs.

- B. Work by Owner or let under separate contracts: Owner will supply third-party testing for concrete used in restoration.
- C. Permits: Prior to commencement of the Work, Contractor to secure any and all necessary permits for completion of the Work and facility occupancy.
- D. The Capitol Square South Parking Ramp, formally known as the Dane County Parking Ramp, is owned and operated by Dane County, Wisconsin. The structure was originally constructed with a basement and four levels in 1957 and had two levels added in 1963. In plan, the three-bay wide structure is approximately 263 feet by 188 feet. The supported floor system consists of conventionally reinforced concrete two-way flat slabs supported by wide, flat-shaped conventionally reinforced concrete beams supported by interior and exterior conventionally reinforced concrete columns. There are a total of seven parking levels including the slab-on-grade level. Total parking capacity is approximately 1000 cars.

### 1.3 CONTRACTOR USE OF PREMISES

- A. Confine operations at the site to areas permitted by law, ordinance, permit, and contract documents.
- B. Do not unreasonably encumber site with materials and equipment.
- C. Do not load structure with weight that will endanger structure.
- D. Assume full responsibility for protection and safekeeping of products stored on the premises. Construction equipment, shoring, tools, etc. shall not be stored in areas of the Owner's continued use.
- E. Move any stored products which interfere with operations of Owner or other Contractor.
- F. There is no storage for materials outside of Contractor's work area.
- G. Contractor may only close one stair tower at a time to complete the repairs. Perform repairs in stair towers by sequentially moving to each tower until complete.
- H. Contractor provide phasing of work to maintain traffic flow through the structure, all drive lane work to be divided in half so cars may pass at all times.
- I. Customer access to the change machine at level 03 shall be maintained at all times unless coordinated with Dane County and GMA Engineers. Blocking access to the change machine will need to be coordinated to keep this duration to a minimum.

### 1.4 APPLICATIONS FOR PAYMENT

- A. Submit two (2) copies of each application on AIA G702™ and G703™ forms or approved contractors invoice form.
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.

- C. Payment Period: Bi-weekly.

#### 1.5 ALTERNATES

- A. Alternates quoted on Bid Form shall be reviewed and accepted or rejected at the Owner's option.
- B. Coordinate related work and modify surrounding work as required.
- C. Schedule of Alternates: See Bid Form

#### 1.6 COORDINATION

- A. The successful Contractor must agree to commence work on a date to be specified in a written Notice to Proceed and to fully complete all work within 90 consecutive business days thereafter. Completion time will be converted to a specific date at the time the Notice to Proceed is issued. Completion shall include all construction as outlined in the plans and specifications as well as removal of all materials, debris, barricades, and other construction related items from the site.
- B. Final project closeout shall be completed within 30 days of the construction completion date for all work addressed above. Final project closeout shall include, but not be limited to, submittal of warranties, lien waivers, wage rate compliance affidavits, documents of completed work, and proper pay applications
- C. Restoration will be completed in phases to allow for the continued operation of the parking garage during the restoration. Phasing shall consist of concrete removal from the centerline of the drive lane to the parapet along the slab edge allowing traffic flow on the other half of the bay. Phasing may also consist of concrete removal along the drive lane while allowing traffic flow on either side along the parking lanes. The Contractor shall produce phasing plans which will be submitted at the pre-construction meeting.
- D. Contractor at Contractor's expense is responsible for removing and reinstalling or protecting in place electrical conduits, light fixtures, water pipes, and anything else that may be in the way of the work.
- E. The Contractor shall be allowed approximately 100 parking stalls out of service for their work area from Tuesday through Friday. This shall consist of the top of slab area directly below the area being restored for the bottom of slab restoration, the adjacent area closed for traffic flow and the parking and drive lane areas directly above the restoration. Similarly, for top of slab removal, the area being restored and the slab area adjacent to the restoration for a drive lane shall be included in the Contractor's area as well as the floor area directly below the restoration.
- F. The Contractor will be asked to reduce the number and type of parking spaces out of service for Special Events dates. The Owner will provide the Contractor with a schedule of dates.

- G. Dust protection, required along full length of work area, shall be in place prior to concrete removal.
- H. Steel plates shall be used to cover top of slab removal areas in locations of public access during evening and weekend hours when flag persons are not present.
- I. The Contractor shall maintain access to undisturbed parking areas throughout the concrete restoration. Owner shall accommodate traffic rerouting and shifting of construction occupancy as required. Contractor will provide traffic barriers.
- J. The Contractor shall provide appropriate signage warning the public of the construction area and directing them to exits.
- K. The Owner will occupy all but the work areas during construction. Coordinate with Engineer in scheduling work.

#### 1.7 CUTTING AND PATCHING

- A. Employ a skilled and experienced installer to perform cutting and patching new work; restore work with new Products.
- B. Submit written request in advance of cutting or altering structural or building enclosure elements.
- C. Fit work tight to adjacent elements. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
- D. Refinish surfaces to match adjacent finishes.

#### 1.8 CONFERENCES

- A. Dane County Department Public Works, Highway & Transportation will schedule a preconstruction conference after Award of Contract for all affected parties.
- B. Contractor shall submit Construction Schedule at the pre-construction meeting.
- C. When required in individual Specification section, convene a pre-installation conference at project site prior to commencing work of the section.

#### 1.9 PROGRESS MEETINGS

- A. Biweekly project meetings will be held at the project site by the Engineer's representative and Owner's representative for the purpose of coordinating and expediting the Work progress.
- B. Attendance at project meetings by all Prime Contractors, subcontractors, or their authorized representative, is mandatory.

- C. Contractors shall give verbal reports of progress on the project, discuss the work schedule for the coming period and present all conflicts, discrepancies or other difficulties for resolution.
- D. Time of the meeting will be determined at the pre-construction meeting.

#### 1.10 JOB SITE ADMINISTRATION

- A. The Contractor shall have a project superintendent at the site a minimum of 4 hours per day during the progress of the work.
- B. The Engineer will have a representative at the site an average of 8 hours per week during the progress of the work.
- C. The Engineer's inspections and project coordination shall take place between normal working hours of 7 a.m. to 5 p.m. The Contractor will take all necessary steps to allow the Engineer to carry out his duties without interference by noise, dust, or other construction activities.

#### 1.11 CONTRACTOR WORK HOURS

- A. The Contractor shall work Tuesday through Friday only, no work is allowed on Saturday through Monday. Works hours can be from 7:00 am to 7:00 pm as City of Madison Noise Ordinance will allow.

#### 1.12 SUBMITTAL PROCEDURES

- A. Submittal form to identify Project, Contractor, Subcontractor or supplier; and pertinent Construction Documents references.
- B. Apply Contractor's stamp, signed or initialed, certifying that review, verification of Products required, field dimensions, adjacent construction work, and coordination of information is in accordance with requirements of the Work and Construction Documents.
- C. Identify variations from Construction Documents and Product or system limitations that may be detrimental to successful performance of completing the Work.
- D. Revise and resubmit submittals as required; identify all changes made since previous submittal.

#### 1.13 PROPOSED PRODUCTS LIST

- A. Within fifteen (15) days after date of Award of Contract, submit complete list of major Products proposed for use, with name of manufacturer, trade name, and model number of each Product.

1.14 PRODUCT DATA

- A. Submit number of copies that Contractor requires, plus two (2) copies that shall be retained by Public Works Project Engineer and one (1) copy that will be retained by the Engineer.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information unique to this Project.

1.15 QUALITY ASSURANCE / QUALITY CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with specified standards as minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- C. Owner will provide third-party testing for concrete used in the restoration.

1.16 REFERENCES

- A. Conform to reference standard by date of issue current as of date for receiving bids.
- B. Should specified reference standard conflict with Construction Documents, request clarification from Public Works Project Engineer before proceeding.

1.17 PROTECTION OF INSTALLED WORK

- A. Protect installed work and provide special protection where specified in individual Specification sections.

1.18 PARKING

- A. Parking of vehicles and equipment required for construction purposes shall be in the Contractor's designated work areas. Any vehicle in the parking ramp other than those of the Contractor which are required for this project will be charged for parking.
- B. All Contractors and their employees shall cooperate with the General Contractor and others in the parking of vehicles to avoid interference with normal construction activities.
- C. Do not obstruct existing service drives and parking lots with equipment, materials and/or vehicles. Keep accessible for Owner's use at all times.

1.19 TEMPORARY FACILITIES

- A. TEMPORARY UTILITIES
  - 1. The Contractor shall arrange for, obtain and pay for all temporary utilities necessary to complete the work except as stated otherwise in these specifications.

B. WATER

1. The Owner, during non-freezing conditions, will provide needed water for the Contractor's use. This shall consist of the existing water supply in the ramp. Water requirements beyond what is supplied in the ramp shall be contracted between the Contractor and the City and be paid for by the Contractor. Water shall be used prudently. Connections are the responsibility of the Contractor.

C. ELECTRICAL AND LIGHTING

1. The Contractor shall provide all temporary electric power and connections necessary for the Contractor's work. The Contractor can use the existing 110/220 volt service in the ramp. If existing electrical service is inadequate for the operation of Contractor's equipment the contractor shall provide at his own cost a portable generator for the project. The Owner shall provide the existing lighting currently installed in the parking structure. Supplementary lighting, if necessary, shall be provided by the Contractor.
2. Prior to start of work, the Contractor shall survey the existing electrical lighting and conduits. Conduits that are broken shall be brought to the attention of the Engineer. The Contractor at the Contractor's expense shall remove and/or protect in place the lighting fixtures and conduits for lighting and cathodic protection. Conduits and lighting damaged by the Contractor shall be replaced by the Contractor at the Contractor's expense.

D. DRAINS, SUMPS AND SEWERS

1. The Contractor shall not permit debris, or other deleterious contaminants to be washed down drains within the garage and be discharged into the City sewer system.
2. The Contractor shall meet the DNR waste water regulations of 40 milligrams of solids per liter measured at the discharge from the sump pit. The Contractor shall provide filters, settling tanks, or other methods necessary to meet these requirements.
3. Prior to the start of work, the Contractor in the presence of the Engineer and Owner shall inspect the condition of the drains, sump and sump pump in areas affected by the Contractor's work to determine that they are clean and in proper working order. During and at the completion of the project, the drains, sump and sump pump shall be in similar condition and working order as observed in the initial inspection.
4. Contractor to maintain the existing drains during construction and shall provide protection to existing drains to avoid any debris from being allowed into drains. Minimum protection of drains to be a layer of filter fabric under grating or in front of the water access area. Do not flush any construction materials down drains. Be responsible for control measures to prevent damage from flooding, erosion, and sedimentation to on-site and off-site areas.

E. TELEPHONE

1. The Contractor shall provide temporary telephone service. This service shall consist of at least a cellular phone for the Contractor's purpose.



F. TOILETS

1. The Contractor may use the toilet facilities located on the basement level of the ramp. If it is found that the toilet facilities are not being maintained and are being abused by the Contractor, the use of the ramp facilities by the Contractor will end. As an option, the Contractor may provide and maintain suitable, weather tight, painted sanitary toilet facilities for all workers during construction period. When toilet facilities are no longer required, promptly remove from site, disinfect, and clean or treat the area as required.
2. General Contractor shall keep all toilet facilities clean and supplied with toilet tissue at all times. Maintain facilities in accordance with requirements of applicable building codes.

G. PROJECT SIGN

1. No individual advertising signs, plaques or credits, temporary or permanent, will be permitted on the building or premises, except the name of each contractor on their office or material shed.

H. EXPLOSIVES

1. Use of explosives, for any purpose, is prohibited.

I. FIRST AID

1. The Contractor shall provide temporary first-aid facilities on the site.

J. FIRE PROTECTION

1. The Contractor shall provide temporary fire protection as required by federal, state, and local laws and ordinances. The Lead Contractor shall provide and maintain in working order during the entire construction period, a minimum of three (3) fire extinguishers on each floor level, including basement of the building, and one (1) in temporary office. Extinguishers shall be nonfreeze type such as A-B-C rated dry chemical, of not less than 10-pound capacity each.

1.20 CONTROLS

A. TRAFFIC/DUST/DEBRIS CONTROL

1. The Contractor shall provide personnel, signs, barricades, lights and warning devices to control the orderly flow of traffic, both inside and outside of the garage where needed, and prevent pedestrians and cars from entering areas of the Contractor's operations. The traffic devices shall meet the requirements of the U.S. Department of Transportation Manual on Uniform Traffic Control Devices.
2. Traffic control signs may be necessary several bays removed from the actual work area to maintain an orderly flow of traffic. The Owner shall make the final determination as to the required limit of traffic control.
3. The Contractor shall move these signs, barricades, lights and warning devices as necessary as the location of the work within the garage changes and previously worked-in areas are occupied by the Owner. The ramp personal will accommodate traffic rerouting and shifting of construction occupancy as required.
4. The Contractor shall provide temporary barriers around areas of overhead removal to prevent damage or injury from flying debris associated with this

work. Barriers shall consist of plywood screen walls or reinforced polyethylene extending floor to the underside of the floor above and supported by steel post shores or Ellis post shores.

5. Where possible, hoses, conduits, electrical cords, etc. shall be located overhead. Whenever such items are located in traffic paths, plywood coverings with adequate signs shall be provided.
6. Contractor shall provide and maintain necessary safe passage through the areas being restored to prevent bodily injury to the public and to maintain normal public usage during course of construction. Engineer's approval required for all proposed temporary exitways or walkways.
7. The Contractor shall erect temporary enclosures of polyethylene or other suitable materials around the area of work, including areas adjacent to stairwells, driving lanes, parapets, walkways, etc. Dust filters shall be erected to limit dust being carried from the site.
8. The Contractor shall use crack router with vacuum attachment to eliminate dust from this process. Water or similar measures shall be used when sawing. The Contractor shall provide adequate protection to prevent damage to vehicles from flying debris. The Contractor shall provide dust protection around the exhaust fans in lower level.
9. The Contractor shall protect ramp parking meters against all damage. This shall include but is not limited to impact and infiltration of dust. Damaged meters will be replaced by the Owner at the Contractor's expense. Meter posts that are mounted to the underside of the slab and need to be removed due to slab repairs at the post locations, will be removed by the Contractor and reinstalled by the Owner.
10. All plastic sheeting shall be new or like new with no holes or rips that will allow the escape of dust. Plastic sheeting shall be replaced when it becomes torn.
11. All plastic sheeting shall conform to NFPA 701.
12. Plywood or other suitable material must be placed below compressors to protect the substrate from grease, oil, and other debris.
13. All Contractors shall comply with applicable OSHA regulations.
14. Contractor to obtain a sidewalk occupancy permit from the City of Madison for a dumpster located on Main Street.

## 1.21 SPECIAL CONTROLS

### A. NOISE CONTROL

1. The Contractor shall confine hours of operations to those required by State, County and City laws and ordinances. Work shall be limited to the hours between 7:00 a.m. and 7:00 p.m., Tuesday through Friday. Noise levels shall be held to a minimum considering the nature of the work.

### B. WATER CONTROL

1. The Contractor shall not permit water to run uncontrolled off of the work or be carried airborne off the site or onto vehicles and persons occupying part of the site. To prevent this, suitable enclosures shall be provided.
2. The Contractor shall meet the DNR waste water regulations for construction site runoff requirements.

C. SPECIAL RESPONSIBILITIES

1. The Contractor shall be responsible for damages to vehicles in or near the garage, resulting from the Contractor's operations. The Contractor shall be responsible for maintaining any means of egress required by governing codes, for the continued use of the parking facility. Enclosures which limit the means of egress from the structure shall have provisions for emergency egress through the partitions.

D. PEDESTRIAN AND VEHICULAR CONTROL

Confine all operations, equipment, apparatus and storage of materials, to the immediate area of work to the greatest possible extent. Contractor shall ascertain, observe and comply with all rules and regulations in effect on the project site, including but not limited to parking and traffic regulations, use of walks, security restrictions and hours of allowable ingress and egress. Any special traffic control during construction involving lane closures shall be in accordance with the federal standard, Manual of Uniform Traffic Control Devices and provided by the Contractor. Traffic barricades, traffic signs, and warning devices shall meet the requirements of applicable OSHA standards and the FHA Manual of Uniform Traffic Control Devices (MUTCD). Dane County to provide to Contractor any traffic flow signage needed.

E. POLLUTION CONTROL

1. All internal combustion engines used in the Contractor's work and operating in a fixed location while running shall have their exhaust piped to the outside of the building and directed away from this building or any adjacent structures so as to prevent accumulation of fumes or carbon stains on the surfaces of the structure.

F. DUST PROTECTION ENCLOSURES

Temporary dust protection enclosures shall be erected and maintained around occupied phase during concrete restoration work and during preparation for the traffic membrane. Provide HEPA filtration devices to ensure a negative zone in the occupied construction area. Provide OSHA approved protection to the workers for dusty conditions within construction limits. The contractor shall submit a dust protection plan at the preconstruction meeting for approval by E.O.R & Dane County Representative.

1.22 SECURITY

- A. The Contractor shall provide for the security of materials and equipment stored at the site. Material and equipment shall not be stored in areas which the Owner continues to use. The Contractor may store equipment and materials in areas in which the Contractor is working; otherwise, they shall be removed from the site. Special care shall be taken to secure all materials, new and removed, and equipment prior to the weekend due to the location of this structure with regards to weekend activities.

1.23 PROGRESS CLEANING

- A. Each Contractor shall keep premises free of accumulation of surplus materials and rubbish resulting from their operations.
  1. Do not throw rubbish from windows or roof.
  2. Remove all rubbish from premises.

3. No burning or rubbish on premises allowed.
  4. Do not use County-owned dump containers.
- B. Accomplish rubbish removal daily and additionally as required by the Engineer. Keep interior of building free at all times of unattended combustible rubbish.
  - C. Provide on-site dump container for collection of waste materials, debris and rubbish. Location of dump container is to be coordinated with Engineer's representative and Owner.
  - D. Drive lanes, adjacent to work area, shall be cleaned daily to eliminate airborne dust.
  - E. Remove all tools, equipment, scaffolding and temporary facilities immediately when no longer required for execution of the work.
  - F. The General Contractor shall "broom-clean" all floors within and adjacent to work areas as construction progresses to eliminate dirt and trash accumulation and maintain proper project cleanliness. Stair towers and areas of pedestrian traffic flow shall be "broom-clean" daily. Unless work area is secured against entry by pedestrians, all rubble shall be removed from ramp surface and all open holes shall be covered prior to the weekend.

#### 1.24 PRODUCT OPTIONS

- A. Where definite material is specified, it is not intention to discriminate against "equal" product made by another manufacturer. Intention is to set definite standard of material quality. Should bidder choose to bid materials other than those specified, bidder shall submit said materials specifications to Department of Public Works, Highway & Transportation for approval at least seven (7) days prior to Bid Opening.
- B. Products and materials that are not specified, but have been approved for use by Public Works Project Engineer shall be identified in addenda to all bidding contractors.
- C. Requests for material or product substitutions submitted after Bid Opening shall be considered. Dane County reserves right to approve or reject substitutions based on Specification requirements and intended use.

#### 1.25 SUBSTITUTIONS

- A. Public Works Project Engineer shall consider requests for Substitutions only within fifteen (15) days after date of Public Works Contract.
- B. Document each request with complete data substantiating compliance of proposed Substitution with Construction Documents.
- C. Submit three (3) copies of requests for Substitution for consideration. Limit each request to one (1) proposed Substitution.
- D. Substitutions shall not change contract price established at Bid Opening.

## 1.26 CONTRACT CLOSEOUT PROCEDURES

- A. Completion: All work shall be complete when written notice requesting final inspection is submitted to the Engineer.
- B. Guarantees, Bonds and Affidavits: Required prior to final payment is made. Submit all required written documents including guarantees, bonds, and affidavits.
  - 1. Guarantees shall extend the full period of the required guarantee period after:
    - a. Replacement of work found defective during guarantee period at any time after Completion.
    - b. Repair of inoperative items or adjustments to proper working condition of items not operating properly at time of inspection at Completion.
    - c. Completion of work not completed at time of Completion.
  - 2. Items of equipment or material bearing a guarantee of the manufacturer or supplier longer than that described in the General Conditions shall not service to release the manufacturer or supplier from their obligation to repair or replace such items within the limits of their guarantee after expiration of guarantees required by these specifications.
- C. Record Drawings: Required prior to final payment is made.

## 1.27 FINAL CLEANING

- A. Immediately prior to final inspection the General Contractor shall:
  - 1. Clean all surfaces to condition acceptable for immediate occupancy by the Owner. Remove all foreign matter from all finished items.
- B. The General Contractor shall leave all work clean in all respects, ready for use and occupancy by the Owner without additional work.
- C. Employ experienced workmen, or professional cleaners, for final cleaning.
- D. In preparation of substantial completion or occupancy, conduct final inspection of sight exposed interior and exterior surfaces, and of concealed spaces.
- E. Repair, patch, and touch up marred surfaces to specified finish, to match adjacent surfaces.
- F. Water blast and broom-clean to remove dust and debris from paved surfaces, walls, ceilings and stairs within and adjacent to work areas. Hand wash with rags, sponges or equivalent, all railings, pipes, windows, door frames, etc. and rinse. If dust protection is not erected and maintained to prevent dust and debris from being tracked throughout the structure, the Contractor will be required to perform final cleaning procedures throughout the structure from the top level to the basement.
- G. Clean dust from all light fixtures.
- H. Remove debris from drains and sumps and check that drains are again operable.

1.28 MAINTENANCE MATERIALS

- A. Provide Products, maintenance and extra materials in quantities specified in individual Specification Sections.
- B. Deliver to the Work site and place in location as directed.

1.29 RECORD DRAWINGS

- A. Contractor-produced Drawings shall remain property of Contractor whether Project for which they are made is executed or not. Contractor shall furnish Public Works Project Engineer with original tracings of drawings in reproducible format and one set of record drawings in AutoCAD 2007 (or lower) or manually drafted format.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

## SECTION 01 15 10

### UNIT PRICES

#### PART 1 GENERAL

##### 1.1 PAYMENT

- A. Work is to be paid for on a Unit Price basis and bid on estimated quantities. . These work items are to be installed and completed per specifications and as shown on the drawings. Unit prices shall include all costs of materials, labor, insurance, taxes, overhead and profit.

##### 1.2 MEASUREMENT OF QUANTITIES

- A. Work to be performed on a unit price basis shall be measured according to the quantities described above. Payment will be made for work actually performed, based on quantities recorded by the Contractor and approved by the Engineer. Unless stated otherwise, records described below shall consist of both plan view drawings and tables cross-referenced to the drawings with the required measured quantities. Unless otherwise stated, the Engineer will verify the accuracy of the record by visual examination of the work performed and measuring the quantities with a measuring wheel.
- B. The Contractor shall notify the Owner and the Engineer at once in writing of any unit price work that deviates materially from the prescribed basis for bidding and for which an adjustment in Unit Price is desired. The Contractor shall measure and quantify all such deviations, subject to the Engineer's verification, prior to any repair work which might make verification impossible. No adjustments in Unit Prices will be considered unless supporting field measurements are provided, and subject to the Owner's prior approval. Adjustments will only be considered if all repairs of a given type have been measured and all deviations, both plus and minus have been included in the determination of the average deviation from the Unit Price basis.
- C. Removal of slab concrete.
  - 1. The Contractor shall maintain a record of the location and quantity of concrete removed, identified by unit price item. This record shall be submitted to the Engineer on a weekly basis. The quantities shall be reported in the form of ¼" = 1'-0" scale maps along with tables cross-referenced to the drawings. Underside removal shall be treated in a similar manner to topside removal.
- D. Placing replacement and supplemental reinforcing.
  - 1. The Contractor shall maintain a record of the location and quantity of reinforcement placed. This record shall show the quantity and size placed. Replacement and supplemental reinforcement records shall be associated with the concrete removal maps. This record shall be submitted to the Engineer on a weekly basis.

- E. Joint and crack repair and replacement.
1. The Contractor shall maintain a record of the location and quantity of cracks sealed and joints replaced. Drawings in the form of 1/8" = 1'-0" scale maps along with tables cross-referenced to the drawings shall show length of crack sealed or joint replaced and related work item.

END OF SECTION



## SECTION 01 74 19

### RECYCLING

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section Includes:
  - 1. Waste Management Goals
  - 2. Waste Management Plan
  - 3. Reuse
  - 4. Recycling
  - 5. Materials Sorting and Storage On Site
  - 6. Lists of Recycling Facilities Processors and Haulers
  - 7. Waste Management Plan Form
  
- B. Related Sections:
  - 1. Section 01 00 00 - Basic Requirements

##### 1.2 WASTE MANAGEMENT GOALS

- A. Dane County requires that as many waste materials as possible produced as result of this project be salvaged, reused or recycled in order to minimize impact of construction waste on landfills and to minimize expenditure of energy and cost in fabricating new materials. Additional information may be found in The Dane County Green Building Policy, Resolution 299, 1999-2000.
  
- B. Contractor shall develop, with assistance of Public Works Project Engineer and Engineer, Waste Management Plan (WMP) for this project. Outlined in RECYCLING section of this specification are examples of materials that can be recycled or reused as well as recommendations for waste sorting methods.

##### 1.3 WASTE MANAGEMENT PLAN

- A. Contractor shall complete WMP and include cost of recycling / reuse in Bid. WMP will be submitted to Public Works Project Engineer within fifteen (15) days of Notice to Proceed date. Copy of blank WMP form is in this Section. Submittal shall include cover letter and WMP form with:
  - 1. Information on:
    - a. Types of waste materials produced as result of work performed on site;
    - b. Estimated quantities of waste produced;
    - c. Identification of materials with potential to be recycled or reused;
    - d. How materials will be recycled or reused;
    - e. On-site storage and separation requirements (on site containers);
    - f. Transportation methods; and
    - g. Destinations.

#### 1.4 REUSE

- A. Contractors and subcontractors are encouraged to reuse as many waste materials as possible. Salvage should be investigated for materials not reusable on site.

#### 1.5 RECYCLING

- A. These materials can be recycled in Dane County area:
  1. Wood.
  2. Wood Pallets.
  3. Asphalt & Concrete.
  4. Bricks & Masonry
  5. Corrugated Cardboard.
  6. Metal.
  7. Barrels & Drums.
  8. Solvents.

#### 1.6 MATERIALS SORTING AND STORAGE ON SITE

- A. Contractor shall provide separate containers for recyclable materials. Number of containers will be dependent upon project and site conditions.
- B. Contractor shall provide on-site locations for subcontractors supplied recycling containers to help facilitate recycling.

#### 1.7 LISTS OF RECYCLING FACILITIES PROCESSORS AND HAULERS

- A. Web site [www.countyofdane.com](http://www.countyofdane.com) has recycling symbol (link) near top of page that lists current information for Dane County Recycling Markets. Contractors can also contact Dane County's Recycling Manager at 608/267-8815, or local city, village, town recycling staff listed in above referenced web site. Statewide listings of recycling / reuse markets at available from Wisconsin Department of Natural Resources, [www.dnr.state.wi.us/org/aw/wm/markets](http://www.dnr.state.wi.us/org/aw/wm/markets).

1.8 WASTE MANAGEMENT PLAN FORM

A. Contractor Information:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone No.: \_\_\_\_\_ Recycling Coordinator: \_\_\_\_\_

MATERIAL	ESTIMATED QUANTITY	DISPOSAL METHOD (CHECK ONE)		RECYCLING / REUSE COMPANY OR DISPOSAL SITE
Salvaged & reused building materials	_____ cu. yds. _____ tons	_____ Recycled	_____ Reused	Name: _____
Glass	_____ cu. yds. _____ tons	_____ Recycled	_____ Reused	Name: _____
Wood	_____ cu. yds. _____ tons	_____ Recycled	_____ Reused	Name: _____
Wood Pallets	_____ units	_____ Recycled	_____ Reused	Name: _____
Fluorescent Lamps	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
Foam Insulation	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
Asphalt & Concrete	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
Bricks & Masonry	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
PVC Plastic	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
Corrugated Cardboard	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
Metals	_____ cu. yds. _____ tons	_____ Recycled	_____ Reused	Name: _____
Carpet Padding	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
Gypsum / Drywall	_____ cu. yds. _____ tons	_____ Recycled	_____ Reused	Name: _____

Shingles	_____ cu. yds. _____ tons	_____ Recycled _____ Landfilled	_____ Reused _____ Other	Name: _____
Barrels & Drums	_____ units	_____ Recycled _____ Landfilled	_____ Reused _____ Other	Name: _____
Solvents	_____ gallons	_____ Recycled _____ Landfilled	_____ Reused _____ Other	Name: _____
Other	_____	_____ Recycled _____ Landfilled	_____ Reused _____ Other	Name: _____
Other	_____	_____ Recycled _____ Landfilled	_____ Reused _____ Other	Name: _____
Other	_____	_____ Recycled _____ Landfilled	_____ Reused _____ Other	Name: _____
Other	_____	_____ Recycled _____ Landfilled	_____ Reused _____ Other	Name: _____
Other	_____	_____ Recycled _____ Landfilled	_____ Reused _____ Other	Name: _____

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

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**SECTION 02 41 19**  
**SELECTIVE STRUCTURE DEMOLITION**  
**CONCRETE REMOVAL**

**PART 1 - GENERAL**

**Part 1 – General**

Summary  
Related Work  
References  
Submittals

**Part 2 – Products**

Equipment  
Rebar Cleaning and Concrete Preparation

**Part 3 – Execution**

Shoring  
Protection  
Layout  
Sawcutting  
Concrete Removal  
Cleanup

“Applicable provisions of Division 1 shall govern work under this section.”

Highlighted portions in specifications signifies **WORK BY OWNER – NOT IN CONTRACT**

**SUMMARY**

Section Includes:

**DEMOLITION FOR REPAIR OF SPALLED CONCRETE**

Furnish all materials, labor, services and incidentals necessary for the partial depth and or full depth (under the direction of the Engineer) demolition of spalls (topside, underside and vertical), in cast in place slabs, beams, walls & columns, stair risers, treads and landings. The restoration contractor to provide the removal of unsound concrete, abrasive grit blasting of acceptable reinforcing, replacement of unacceptable reinforcing with new as directed by Engineer; cleaning the exposed sound concrete prior to placing new concrete.

**REPAIR OF RANDOM CRACKS**

Furnish all labor, materials, equipment and tools as specified for repair of random cracks in cast-in-place structural slabs & roof slabs as detailed. Routing equipment shall be able to provide the profile as shown in details. Random cracks to be routed are existing random cracks with sealant installed & cracks 1/8” or larger in preparation to epoxy gravity feeding work.

**TRENCH DRAIN EPOXY COATING**

All work for the preparation of epoxy coating & gravity feeding of joints of trench drain. Remove existing trench drain grates. Prepare surfaces by gritblasting removed grating, the interior and perimeter of the topside slab surface. Rout the perimeter joint between drain and concrete slab to profile shown in details. Remove all debris.

**TRENCH DRAIN REMOVAL AND REPLACEMENT**

All work for the preparation of the removal of failed trench drain and all required components for the preparation of a new

1 trench drain installation in the same location. Field measure existing drain prior to removal, new drain configuration to  
2 match drain being removed. Sawcut perimeter as shown on drawings. Remove existing trench drain. Prepare surfaces by  
3 gritblasting existing concrete surface. Install new drain per manufacturer's written instructions connecting to existing  
4 leader pipe.

5  
6 **WORK BY OWNER – NOT IN CONTRACT**

7 **REMOVAL OF DETERIORATED SILL WALL @ LEVEL 07 STAIR TOWERS**

8 Furnish all materials, labor, services and incidentals necessary for the demolition of deteriorated wall below windows on  
9 three stair towers. The restoration contractor to provide the removal of unsound concrete to configuration shown on  
10 details, abrasive grit blasting of acceptable reinforcing, replacement of unacceptable reinforcing with new as directed by  
11 Engineer; cleaning the exposed sound concrete prior to forming and placing new concrete.

12  
13 **WORK BY OWNER – NOT IN CONTRACT**

14 **CRYSTALLINE CEMENTITIOUS PARGE COATING OF STAIR TOWER ROOF SLABS & WING WALL CAPS**

15 All work for the preparation of roof slabs to receive xypex coating. Prepare surfaces by pressure washing to roof slab and  
16 wing wall horizontal & vertical surfaces that will receive cementitious waterproof parge coating.

17  
18 **EPOXY BROADCAST COATING ON STAIR TREADS AND LANDINGS**

19 All work for the preparation of horizontal surfaces including cast stair nosings as noted on stair sections, all stair treads  
20 and landings to receive epoxy broadcast coating. Prepare surfaces by gritblasting that will receive epoxy coating.

21  
22 **WORK BY OWNER – NOT IN CONTRACT**

23 **REMOVAL OF DISPLACED CMU WING WALL ON SOUTH EAST STAIR TOWER, LEVEL 07**

24 Furnish all materials, labor, services and incidentals necessary for the demolition of displaced cmu wing wall to top of  
25 existing perimeter beam. The restoration contractor to provide the removal of CMU and related concrete to configuration  
26 shown on details, drill to install reinforcing dowels, cleaning of exposed sound concrete by gritblasting prior to forming  
27 and placing new concrete parapet wall extension.

28  
29 **REBONDING OF ALUMINUM STAIR NOSINGS**

30 All work for the preparation of gravity feeding of joints of stair nosings. Prepare surfaces by routing the perimeter joint  
31 between at stair nosing and concrete tread to profile shown in details. Remove all debris.

32  
33 **RELATED WORK**

34 03 01 30.71 – Rehabilitation of Cast-In-Place Concrete

35 03 01 31.71 – Rehabilitation of Cast-In-Place Concrete – Redi-Mix

36 07 92 13 – Elastomeric Joint Sealants

37  
38 **REFERENCES**

39 ACI International - Manual of Concrete Practice 201.2R

40 ACI International – Field Guide to Concrete Repair Application Procedures (RAP# 1-12)

41 ICRI International Concrete Repair Institute

42  
43 **SUBMITTALS**

44 Prior to any removal, submit a plan for confining water and dust, collecting and disposal of broken concrete, steel  
45 reinforcement and other waste material as a result of the removal operations.

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**PART 2 – PRODUCTS**

**EQUIPMENT**

**DEMOLITION FOR REPAIR OF SPALLED CONCRETE**

Jack Hammers: Use jack hammers with a total weight not exceeding:

- 30 pound and equipped with moil pointed type points.
- Chipping hammers of nominal 15 pound class or less with moil pointed type points for removal of concrete from beneath reinforcing may be required if excessive damage, in the opinion of the engineer, is being done to the slab or reinforcing bars.

Abrasive Grit Blasting equipment:

- Oil free grit blasting equipment capable of removal of corrosion from steel components, and to provide surface preparation prior to the application of the concrete patching mortar.

High Pressure Water Blasting (pressure washer) Equipment: (Typical preparation of topside slabs prior to coating)

- Power washing equipment shall be a minimum of 4000psi with a rotating nozzle wand head (0 degree impact with 25 degree fan, typical).

Shotblasting Equipment: (Required for topside preparation for application of Epoxy Healer Sealer on Level 03)

- Utilizing high velocity blast media directed in a controlled pattern and direction toward concrete surface. Equipment shall contain and recirculation blast media with an integrated debris vacuum and containment system. Shotblasting equipment shall be capable of removing all surface coatings and profiling the surface per coating manufacturer's requirements.

**REPAIR OF RANDOM CRACKS**

The equipment and tools for repair of random cracks shall be able to provide the profile as shown in details. Use of conventional concrete saw with thin blade used in a multi pass procedure is NOT ALLOWED. Provide equipment that is specifically designed to cut or grind the detailed configuration in a single pass. Dust collection system is required.

**PART 3 – EXECUTION**

**DEMOLITION FOR REPAIR OF SPALLED CONCRETE:**

**SHORING**

Provide shoring and needle beams as shown on plans prior to selective demolition. If unforeseen conditions arise; the E.O.R. will direct the installation of additional shoring as required. The Contractor to stop work in areas where the underside removal depth needs to exceed 1/3 depth of the slab, provide notification to E.O.R. immediately.

If shoring is located adjacent to vehicular traffic, provide "jersey barrier" protection (solid concrete or water-filled plastic) to protect shoring from displacement by vehicles.

**PROTECTION**

The Contractor is to provide protection for the existing drains and sumps to control runoff of debris contaminated water, at a minimum install filter fabric under each drain grate receiving runoff from the construction area. Contractor to control dust from general demolition work by wetting surfaces and debris.

1 Continuous Dust Partitions area required dividing the demolition and gritblasting operations from the operational portion  
2 of the building or parking structure. Continuous fiber reinforced visqueen (floor to ceiling) over wood stud supports @ 4'-  
3 0" o.c. minimum. If construction zone is adjacent to vehicular traffic, the lower portion of the wall shall be clad with a  
4 continuous 4'-0" tall plywood or OSB wall.  
5

6 Protect the slab or structural members directly below the demolition area from falling pieces of concrete. Do not drop  
7 demolished concrete more than 9', if fall exceeds 9' provide intermediate platform typically the workers platform to catch  
8 concrete. If platform is used the design of the platform by others needs to accommodate all loads applied during concrete  
9 removal.  
10

11 The contractor is to provide protection for the existing M.E.P. utilities and components during the demolition and  
12 restoration of the structure. Provide temporary protection for the M.E.P. services from damage due to weather and the  
13 general construction work. The contractor is to provide protection for the existing drains and sumps to control runoff of  
14 debris contaminated water. Contractor to control dust from general demolition work by wetting surfaces and debris.  
15

16 Contractor to support and release anchors of any M.E.P. services where needed to complete the restoration of the  
17 structure. Once restoration is complete the Contractor to reinstall old anchors or provide new anchors of equal or greater  
18 capacity that are compliant with the current codes.  
19

#### 20 **LAYOUT**

21 All delaminated areas on the project will be identified and marked by the Contractor and verified by the Engineer before  
22 any, jackhammering commences. Do not layout areas to be demo'd in an irregular or sawtooth pattern, layout demo areas  
23 in single or interlocking square or rectangular sections with a straight sawcut pattern.  
24

#### 25 **SAWCUTTING**

26 Saw-cut edges square or back-cut slightly to provide a key for the patch. DO NOT CUT REBAR. Sawcut depth shall  
27 only be to the top of rebar or 1/2" minimum. Chip edges square to the minimum depth (typically 3/4") required by the  
28 particular repair mortar, concrete or spray applied mortar  
29

30 Do not sawcut perimeter to repairs to columns. Chip perimeter edges square to the minimum depth (typically 3/4") required  
31 by the particular repair mortar, concrete or spray applied mortar.  
32

#### 33 **CONCRETE REMOVAL**

34 Do not Chip edges of areas to be patched with a feather profile, square chip the edges. Remove concrete to beyond the  
35 outer boundary mark of unsound concrete.  
36

37 The unsound concrete on the top and bottom surfaces shall be removed to sound concrete. Remove concrete to beyond the  
38 outer boundary mark of unsound concrete. Care shall be exercised to avoid cracking of the underlying sound concrete or  
39 debonding embedded reinforcing. If the depth of concrete removal reaches 1/3 of the slab depth notify the Engineer.  
40

41 If during the removal of unsound concrete, more than half of the reinforcing bar diameter is exposed or if the bar is not  
42 firmly bonded to the surrounding concrete, or if adjacent concrete surfaces are rust contaminated, then the remaining  
43 concrete around the bar shall be removed. Radial clearance between the bar and the concrete shall be a minimum of 3/4  
44 inch. Support bars for the main reinforcing steel shall not be exposed provided there is no corrosion on these bars.  
45

46 Clean all exposed sound concrete to receive patching mortar or new concrete by grit blasting to remove any dirt, debris  
47 and bond inhibiting materials.  
48

49 **Cleaning or Replacing Reinforcement:** Exposed reinforcing shall be thoroughly grit blasted to remove all rust and  
50 unsound concrete. Grit blast is required for the entire surface of concrete that is prepared to receive repair mortar to  
51 remove any loose debris or surface contamination.  
52



1 The Engineer shall be allowed 24 hours for the inspection of properly prepared concrete surfaces and reinforcement,  
2 before the scheduled concrete placement.

3  
4 Bars that are damaged or that have lost more than 10% of their original area at any point along the length shall be  
5 considered unacceptable and shall be removed and replaced with an equivalent new bar of equal length. No. 8 bars and  
6 smaller that have lost between 5% and 10% of their original area at any point can be gritblast-cleaned and reused.  
7 Supplemental steel will be added next to the existing bars.

8  
9 All exposed or supplemental reinforcing bars shall be no closer than 3/4 inch, measured radially from existing concrete.  
10 The elevation of all exposed or supplemental reinforcing shall be maintained at the original height.

11  
12 Where portions of reinforcing bars are exposed, the Engineer will determine if the embedded portion of the bar is soundly  
13 bonded to the remaining concrete. If the bar is not soundly bonded, remove concrete around and under the bar for a length  
14 as determined by the Engineer.

15  
16 **EXISTING ROUTED AND SEALED RANDOM CRACKS & CONTROL / CONSTRUCTION JOINTS:**

17 Remove all existing sealant from previously routed random cracks / joints filled with sealant, rout crack / joint surfaces to  
18 grind all sealant from surfaces of concrete (see repair of random cracks above). Remove all existing perimeter cove  
19 sealant at the interface of the slab and a vertical wall, curb and columns; grind all bonded sealant from concrete surfaces  
20 (horizontal & vertical).

21  
22 Moving cracks or joints (as noted on plans) to be prepared similar to the existing routed and sealed cracks and additional  
23 protected by a sacrificial backer rod installed into crack to protect epoxy sealer from entering and bonding crack / joints

24  
25 **UNSEALED CRACKS 1/8" WIDE OR LARGER:**

26 V-Rout larger cracks, vacuum debris from crack upon completing grinding work. Fill cracks with oven dried sand prior to  
27 gravity feeding cracks.

28  
29 Grind any joints to receive gravity feed epoxy per details at trench drains and debonded aluminum stair nosings.

30  
31 **REBAR, IMBEDED STEEL PREPARATION**

32 Grit blasting equipment shall be capable of removing rust from the entire circumference of the exposed reinforcement,  
33 imbedded steel & rusted precast steel connections. Prepare all steel to SSPC-SP5, white metal blast cleaning. The  
34 Engineer shall be allowed 24 hours for the inspection before the scheduled concrete or repair mortar placement.

35  
36 **CLEAN UP**

37 Contractor shall remove all loose concrete from the site and leave the area broom clean.  
38 Debris shall not be flushed down the existing sump or drains.

39  
40 **END OF SECTION**

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**SECTION 03 01 30.70**  
**REHABILITATION OF CAST-IN-PLACE CONCRETE - REDIMIX**

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**PART 1 – GENERAL**

- Part 1 – General
  - Summary
  - Notification
  - Protection of Adjacent Work
  - References
  - Submittals
  - Tests
- Part 2 – Products
  - Materials
  - Concrete Type, Strength and Use
  - Concrete Mix Design
  - Testing of Concrete Mix Designs
- Part 3 – Execution
  - Batching and Mixing
  - Redi-Mix Concrete
  - Placing
  - Finishing
  - Curing
  - Limitation of Operations

Applicable provisions of Division 01 shall govern work of this section.

**SUMMARY**

Include all materials, labor, services and incidentals necessary for the completion of this section of the work.

The extent of cast-in-place structural concrete work consists of the partial depth and full depth repair of the structural slabs, concrete walls concrete removed as shown on the drawings.

**NOTIFICATION**

This Contractor shall notify the Engineer at least 24 hours prior to any major concrete pour.

**PROTECTION OF ADJACENT WORK**

This Contractor shall be responsible to see that due care is exercised and avoid staining any adjacent finished material during concrete work. Any such damage shall be made good by this Contractor without expense to the Owner.

**REFERENCES**

**INDUSTRY STANDARDS, SPECIFICATIONS AND CODES**

**GENERAL**

Comply with all provisions of the following codes and standards except as modified herein.

All referenced codes and standards including all revisions and commentaries shall be the most currently adopted

1 as of the date of these contract documents.

2  
3 **AMERICAN CONCRETE INSTITUTE (ACI)**

4  
5 ACI 301 Specification for Structural Concrete for Buildings  
6 ACI 318 Building Code Requirements for Reinforced Concrete.  
7 Additional ACI sections are noted in later text.

8  
9 **AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)**

10  
11 Specific ASTM numbers are noted in later text.

12  
13 **ALLOWABLE TOLERANCES**

14  
15 Flatwork true to plane 1/8" in 10'.  
16 Vertical surfaces true to plane 1/4" floor to floor.  
17 Form displacement maximum 1/8".  
18 Air pockets 3/8" diameter maximum.

19  
20 **SUBMITTALS**

21  
22 Submit in accordance with General Conditions.

23  
24 **MIX DESIGNS**

25  
26 Mix design shall be in accordance with ACI 211.1 Standard Practice for Selecting Proportions for Normal, Heavyweight  
27 and Mass Concrete. Furnish mix designs by independent testing laboratory based upon schedule herein with test reports  
28 for each mix. Submit material content per cubic yard of each class of concrete furnished including:

- 29  
30 - Dry weight of cement  
31 - Saturated surface - dried weights of fine and course aggregates  
32 - Quantities, type and name of admixtures  
33 - Weight of water

34  
35 Submit to Engineer and obtain approval prior to placing concrete.

36  
37 **TEST REPORTS**

38  
39 Submit reports of concrete compression, yield, air content and slump tests. Furnish copies to Engineer of Record and  
40 General Contractor.

41  
42 **TESTS**

43  
44 **SLUMP AND AIR CONTENT TESTS**

45  
46 A slump test shall be made on each truck load of concrete. The temperature of the concrete shall also be taken at the  
47 same time cylinders are made. Slump tests shall be made in accordance with ASTM C-143.

48  
49 Air content tests shall be made on each truck load of concrete. Air content tests shall be made in accordance with ASTM  
50 C-231.

51  
52 **STRENGTH TESTS**

1 A set of concrete field specimens consisting of four 6" x 12" cylinders shall be made on each truck load of concrete.

2  
3 All cylinders shall be made and tested by a qualified approved test laboratory which meets the requirements of ASTM  
4 E-329 and their reports will be sent to the Consulting Engineer and the Contractor. Costs for these tests shall be paid by  
5 the Contractor.

6  
7 Samples of concrete for test specimens shall be made from a composite sample secured from a single load of concrete in  
8 accordance with ASTM C-172. The same concrete shall not be used for slump and cylinders. When in the opinion of the  
9 Engineer it is desirable to take samples elsewhere, they shall be taken as indicated by him.

10  
11 Cylinders for strength tests shall be made in accordance with ASTM C-31. Test specimens shall be molded immediately  
12 after sample is taken and then placed in site storage provided by Contractor. Storage shall be in a shed, box or other  
13 enclosure maintained at a temperature of between 60°F and 80°F. Specimens shall be stored not less than 16 hours prior  
14 to removal to laboratory. Three specimens shall be cured under laboratory conditions and one specimen shall be field  
15 cured except that when in the opinion of the Engineer, additional specimens are to be cured under job conditions.

16  
17 The field cured cylinder shall be strength tested at 7 days. Two laboratory cured cylinders shall be strength tested at 28  
18 days and the remaining cylinder shall be held in the event that further testing is required. Testing of cylinders shall be in  
19 accordance with ASTM C-39. Each test report shall contain the following information for each set of cylinders:

- 20  
21 - Individual test specimen strength  
22 - Type of failure  
23 - Slump  
24 - Air content  
25 - Concrete and air temperature  
26 - Specimen number  
27 - Portion of structure represented by the concrete tested.  
28 - Date cast  
29 - Date tested  
30 - Concrete properties specified  
31 - Notice if tests indicate concrete is not in conformance with specifications  
32

33 Strength of concrete shall be considered satisfactory if the average of the two 28-day tests in each set of cylinders equals  
34 or exceeds the specified 28-day strength and neither of the 28-day tests is 500 PSI or more below specified 28-day  
35 strength.

36  
37 In the event of adverse weather conditions, the Engineer may take three additional concrete cylinders in addition to those  
38 already specified. These cylinders shall be stored on the structure in the vicinity of the area they represent and shall be  
39 cured in the same manner as that portion of the structure. One of the field-cured test cylinders shall be sent to the testing  
40 laboratory for a 3-day test and the other two will be tested at 28 days. Field-cured cylinders shall remain in the structure  
41 until 24 hours prior to being tested.

42  
43 Cost of additional field-cured cylinders if tests indicate compliance with specifications at the required 28-day  
44 compressive strength shall be paid for by Contractor.

45  
46 Should results of cylinder tests not meet preceding requirements, the Contractor shall submit revised mix design data for  
47 concrete which will conform to the specifications. In the event of failure of test cylinder specimens for any portion of  
48 work, the Contractor at the Contractor's expense shall have sample cores cut from that portion of structure represented by  
49 unsatisfactory test specimens. And if the Engineer has reason to believe that cylinder strength tests are not representative  
50 of the strength of concrete in place, he shall require drilled cores to be cut and tested at the Contractor's expense.

51  
52 Three cores shall be taken from each area in question according to ASTM C-42. Concrete in the area represented by core  
53 tests will be considered structurally adequate if the average of the three cores is equal to at least 85% of required 28-day

1 strength. If these strength acceptance criteria are not met by core tests, the Contractor shall remove all questionable areas  
2 of concrete at the Contractor's expense.

## 3 4 **PART 2 – PRODUCTS**

### 5 6 **MATERIALS**

#### 7 8 **CEMENT**

9  
10 For normal concrete, cement shall meet the requirements of ASTM C-150, Type 1 Portland Cement.

11  
12 For air-entrained concrete, cement shall meet the requirements of ASTM C-150, Type 1A Portland Cement or the cement  
13 specified for normal concrete may be used with an air-entraining admixture conforming to ASTM C-260.

#### 14 15 **AGGREGATES**

16  
17 Comply with requirements of ASTM C-33.

18  
19 Fine aggregate shall consist of natural sand.

20  
21 Coarse aggregate shall be crushed stone or gravel.

22  
23 Fine and coarse aggregates for normal weight concrete shall conform to ASTM C-33 and shall consist of sand, gravel or  
24 crushed stone. Aggregate particles shall be clean, hard, tough, durable, of uniform quality, free from soft, thin elongated  
25 pieces, disintegrated stone, dirt, organic or other injurious materials occurring either free or as a coating. The source of  
26 the aggregates shall be identified and submitted to the Engineer for his review. Aggregate gradation shall conform to  
27 ASTM C-33 with the following limitations:

28  
29 - Minimum percentages of coarse aggregate by weight of total aggregate shall be 55%.

30  
31 - Coarse aggregate gradation shall conform to gradation size number 7 or 3/8" pea gravel.

#### 32 33 **WATER**

34  
35 Use clean, fresh water free from oil, acid, organic matter or other deleterious substances.

#### 36 37 **ADMIXTURES**

38  
39 No other admixtures will be allowed except those listed without Engineer's approval.

40  
41 **Air-Entraining:** Shall conform to ASTM C-260. The entrained air content shall be controlled at 7% for 3/8" aggregate  
42 concrete within limits of  $\pm 1\frac{1}{2}\%$ .

43  
44 **Water-Reducing:** Shall conform to ASTM C-494, Type A Pozzoloth - 122N (Master Builders). Approval required by  
45 Engineer.

46  
47 **Retarding Densifier:** Shall conform to ASTM C-494, Type D Liquid Plastiment (SIKA - Plastocrete 161R).

48  
49 **Calcium Chloride:** Not permitted as additive and not permitted in admixtures.

#### 50 51 **CONCRETE TYPE, STRENGTH AND USE**

52  
53 The strength indicated is 28 day design compressive strength.

<u>Concrete Type</u>	<u>Strength</u>	<u>Use</u>
Normal weight aggregate concrete	4500 PSI	All concrete except columns

**CONCRETE MIX DESIGN**

The Contractor shall develop a mix design in a qualified approved testing laboratory which meets the requirements of ASTM E-329. Mix designs for the normal weight concrete shall be proportioned in accordance with ACI 211.1 and this specification. Mix designs proposed for use when tested in laboratory shall have an average 28-day compressive strength of 4500 PSI, if concrete construction facility does not have a record based on 30 consecutive strength tests representing similar materials and conditions expected. The cement content shall be at least 6.5 bags per cubic yard. Water-cement ratio shall be such as to produce a slump of 3" ± 1" without exceeding a water-cement ratio of 0.45 by weight. In addition, slump shall be such that the finished surface follows that of the existing inclined ramps without sagging or bulging due to gravity on the plastic mix.

Specified slumps shall apply at a time when concrete is discharged at job site. In all cases, concrete shall have a slump not exceeding that specified.

The entrained air content shall be 6 ± 1% and shall be measured according to ASTM C-231.

Whenever temperature is above 80°F, Contractor shall provide when required by the Engineer, an approved admixture to be added to the concrete for retarding initial set of concrete. Admixture shall be used in strict accordance with manufacturer's recommendations.

**TESTING OF CONCRETE MIX DESIGNS**

Mix designs of each separate mix shall be prepared and the following data shall be submitted to the Engineer for each mix design:

- Sieve analysis for fine and coarse aggregate
- Test for aggregate organic impurities
- Proportions of all materials
- Mixing method
- Mill certificates for cement
- Slump during laboratory tests
- Air content during laboratory tests
- 7-day and 28-day laboratory compression test results (minimum 3 cylinders for the 7-day and 3 cylinders for the 28-day tests)
- Chloride ion content of the proposed mix

A mix design previously used and which complies with the specifications may be submitted for approval. All information noted above shall be included. During progress of construction, tests will be made by an approved testing laboratory to determine if concrete complies with quality specified. Contractor shall cooperate in making of such tests to the extent of allowing free access to work for selection of samples and storage of specimens and in affording protection to specimens against injury or loss through his operations. Contractor shall furnish all concrete for testing.

**PART 3 – EXECUTION**

The Contractor shall have the option of either on-site batching and mixing of the concrete or the use of Redi-Mix concrete as described in this section.

**REDI-MIX CONCRETE**

1 Ready-mix concrete shall be measured, mixed and delivered according to ASTM C-94 except as modified herein.  
2

3 Design mixes so that the average of any five consecutive strength tests of laboratory cured specimens will be at least 15%  
4 greater than minimum strength specified. No more than 10% of strength tests may have values less than specified  
5 minimum. No test may have less than 90% of the specified minimum strength.  
6

7 Delete the references for allowing additional water to be added to the batch for material with insufficient slump. Addition  
8 of water to the batch is not permitted.  
9

10 During hot weather or under conditions contributing to rapid setting of concrete, a shorter mixing time than specified in  
11 ASTM C-94 may be required. When the air temperature is between 85°F and 90°F, reduce the mixing and delivery time  
12 from 1½ hours to 75 minutes and when the air temperature is above 90°F, reduce the mixing and delivery time to 60  
13 minutes.  
14

#### 15 **READY-MIX DELIVERY TICKET** 16

17 Furnish with each batch of concrete before unloading at the site a delivery ticket on which is printed, stamped or written  
18 the following information:  
19

- 20 - Name of ready-mix batch plant
- 21 - Serial number of ticket
- 22 - Date and truck number
- 23 - Name of Contractor
- 24 - Job name and location
- 25 - Specific class or designation of concrete
- 26 - Amount of concrete (cubic yards)
- 27 - Time loaded or of first mixing of cement and aggregates
- 28 - Type, name and amount of admixture
- 29 - Type, brand and amount of cement
- 30 - Total water content by producer (or W/C ratio)
- 31 - Maximum size of aggregate
- 32 - Weights of fine and course aggregates  
33

#### 34 **PLACING** 35

36 Before placing concrete, all equipment for mixing and transporting concrete shall be cleaned, vibrators shall be checked  
37 for workability, all frost, ice, mud, debris and water shall be removed from forms, forms shall be thoroughly wetted or  
38 oiled and reinforcement shall be securely tied in place and thoroughly cleaned of ice and other coatings which may  
39 destroy or reduce bonding with concrete. No concrete shall be placed until Engineer has approved the forms and  
40 condition and placement of reinforcement. Conveying the concrete from mixer to place of deposit shall not cause  
41 separation or loss of materials. The Contractor shall provide suitable runways or planking to prevent deflection and  
42 movement of bars which extend into the newly placed concrete.  
43

44 Placing of concrete shall be such that it shall be deposited as nearly as possible in its final position to avoid segregation  
45 due to rehandling or flowing. Placing shall be at such a rate that at all times concrete shall be plastic and flow readily into  
46 corners of forms and into spaces between rebars. No concrete that has partially hardened or has been contaminated by  
47 foreign materials shall be deposited. When concreting is commenced, it shall be carried on as a continuous operation  
48 until a panel or section is completed. When being deposited, concrete shall not be allowed to fall a vertical distance  
49 greater than 4' from point of discharge to point of deposit.  
50

51 All newly placed concrete shall be consolidated by means of vibration. Generally, vibration shall be accomplished by  
52 means of surface and internal vibrators. Surface vibrators shall have operating frequencies in the range of 3000 to 6000  
53 RPM and internal vibrators shall run at a minimum speed of 7000 RPM depending on the nature of concrete being

1 consolidated. Extra vibrators shall be kept at project site to be used in case a vibrator will not work. Concrete 3" or more  
2 in thickness and edges of placement, column bases and other fixed objects shall be vibrated internally in addition to  
3 surface vibration. A technical description of the vibrating screed shall be submitted to the Engineer for review.  
4

5 Where new concrete is cast against existing concrete surfaces, wet the existing surface for 1 hour prior to placement but  
6 do not allow puddles to form. The area shall be blown dry with compressed air if necessary to free the area of puddles.  
7 Coat the existing surfaces including vertical edges with a thick grout of equal parts of sand and cement and a maximum  
8 allowable water content of 4.5 gallons per bag of cement. The consistency of this grout shall be such that it can be  
9 applied with a stiff broom to the old concrete in a thin, even coating that will not run or puddle in low spots. The rate of  
10 progress in applying grout shall be limited so that the grout does not become dry before it is covered with fresh concrete.  
11 Retempering the grout shall not be allowed.  
12

### 13 **FINISHING**

14  
15 Concrete surfaces subject to vehicle traffic:

16  
17         These surfaces shall be screeded to the proper slope and elevation, bull floated and light broom finished to match  
18 existing.  
19

20 Concrete surfaces to receive elastomeric membrane:

21  
22         These surfaces shall be screeded to the proper slope and elevation and floated with a smooth finish.  
23

24 Maximum variation in slab surface from planar shall be ¼" in 10'. If variations greater than this exist, the Engineer may  
25 direct the Contractor to grind the floor to bring the surface within requirements. Patching of low spots shall not be  
26 permitted. Grinding shall be done as soon as possible, preferably within 3 days but not until concrete is sufficiently  
27 strong to prevent dislodging coarse aggregate particles.  
28

29 Sprinkling of dry cement or a mixture of dry cement and sand on surface of fresh concrete to absorb water or to stiffen  
30 the mix shall not be permitted during any stage of construction.  
31

### 32 **CURING**

33  
34 Concrete shall be maintained above 50°F and in a moist condition for at least the first 7 days after placing.  
35

36 For concrete surfaces which are to receive an overlay, curing shall be accomplished by burlap covers kept continuously  
37 wet, continuous waterproof paper or 4 mil polyethylene sheeting conforming to ASTM C-171 with edges lapped and  
38 tightly sealed by sand, wood planks, pressure-sensitive tape, mastic or glue.  
39

40 The concrete shall be sounded by the Contractor in the presence of the Engineer with a chain drag after the curing time.  
41 Any hollowness shall be corrected by the Contractor by removing the concrete at these locations and recasting at no extra  
42 cost to the Owner.  
43

44 Adequate protection shall be provided for concrete during freezing or near freezing weather. All concrete materials,  
45 reinforcement, forms, filler and ground with which concrete is to come in contact shall be free of frost, ice and snow.  
46 Whenever air temperature is below 40°, the minimum temperature of concrete when discharged shall be 65°F and  
47 concrete during the required curing period shall be maintained at a temperature not less than 50°F. Throughout heating  
48 period concrete shall be kept moist as specified. Placement and curing of concrete during cold weather shall conform to  
49 requirements of ACI 306R.  
50

51 Placement and curing of concrete during hot weather shall be in conformance with the requirements of ACI 305R.  
52  
53



1 **LIMITATIONS OF OPERATIONS**  
2

3 Areas from which unsound concrete has been removed and the surface has been prepared shall be kept free of slurry  
4 produced by wet sawing or wet scarifying by planning the work so that this slurry will drain away from the completed  
5 prepared area. All such slurry shall be removed prior to placement of new concrete.  
6

7 Concrete shall not be placed adjacent to a previous casting less than 36 hours old; however, this restriction does not apply  
8 to a continuation of placement in a lane or strip beyond a joint in the same lane or strip.  
9

10 If concrete placement is stopped or delayed for a period of 60 minutes, further placement shall be discontinued and may  
11 resume only after a period of not less than 12 hours. This restriction does not prohibit continuation of placement  
12 provided a gap is left in the lane or strip; the gap shall be sufficient in length for the finishing machine to clear the  
13 previously placed concrete.  
14

15 Preparation of an area may be started in a lane or a strip adjacent to newly placed concrete the day following its  
16 placement. If work is started before the end of the 7 day curing period, the work shall be restricted as follows:  
17

- 18 - Sawing or other operations shall interfere with the curing process for the minimum time only and in  
19 the immediate work area only, and the curing shall be resumed properly.
- 20
- 21 - No power-driven tools heavier than a 15 pound chipping hammer shall be used.  
22
- 23 - Proper support chairs or other uniform support must be provided for reinforcing which extends into  
24 newly placed concrete. No loads heavier than foot traffic shall be allowed on the reinforcing.  
25
- 26 - No vehicles or construction equipment shall be permitted on a finished course until 72 hours after  
27 placement. At temperature below 55°F, a longer waiting time will be required and must be approved  
28 by the Engineer.  
29

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31 End of Section

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**SECTION 03 01 30.71**  
**REHABILITATION OF CAST IN PLACE CONCRETE**

**PART 1 – GENERAL**

**Part 1 – General**

Summary

Related Work

**Part 2 – Products**

Acceptable Products

**Part 3 – Execution**

Repair Procedures

“Applicable provisions of Division 1 shall govern work under this section.”

Highlighted portions in specifications signifies **WORK BY OWNER – NOT IN CONTRACT**

**SUMMARY**

**STRUCTURAL CONCRETE REPAIR**

Furnish all materials, labor, services and incidentals necessary for the partial depth demolition of spalls in cast in place slabs, beams, columns and walls (topside, underside and vertical). The restoration contractor to provide the removal of unsound concrete, abrasive grit blasting of acceptable reinforcing, replacement of unacceptable reinforcing with new as directed by Engineer; cleaning the exposed sound concrete prior to placing new concrete. Use one of the specified products and repair procedures. Coordinate the work schedule and inspection required by the Engineer

**TRENCH DRAIN EPOXY COATING**

Remove existing trench drain grates. Note any grating hardware that is failed or missing. Clean debris from trench drain, protect outlet. Gritblast removed grating, the interior and perimeter of the topside slab surface. Rout the perimeter joint between drain and concrete slab see details. Remove all debris. Gravity feed epoxy in prepared perimeter joint. Apply new epoxy coating to all faces of trench drain perimeter slab. Reinstall existing grating, replace any missing or failed grating attachment hardware.

**WORK BY OWNER - NOT IN CONTRACT**

**CRYSTALLINE CEMENTITIOUS COATING OF HORIZONTAL & VERTICAL SURFACES OF STAIR TOWER CONCRETE ROOF SLAB (3 Stair Tower Roofs & Wing Wall Caps)**

Prepare existing concrete surfaces. Install new parge coating of crystalline cementitious waterproofing. Rout & install backer rod and sealant into cracks between wing walls and roof slab.

**RELATED WORK**

02 41 19 – Selective Structure Demolition

07 19 00 – Epoxy Crack Healer Penetrating Sealer

07 92 13 – Elastomeric Joint Sealants

**PART 2 – PRODUCTS**

**ACCEPTABLE PRODUCTS**

1. **Vertical & Overhead Trowel Grade Repair Mortar:**

Sikatop 123Plus by Sika Inc.

Emaco S88 CI by BASF Inc.

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- 2. **Horizontal / Formed Vertical Concrete Repair Mortar:**  
(Neat or with 3/8” coarse aggregate added for deep repairs)  
Sikatop 111Plus by Sika Inc.  
Emaco S66 CI by BASF Inc.  
10-60 Rapid Mortar by BASF Inc.
- 3. **Corrosion Inhibitor & Bonding Agent:** Armatec 110 Epochem by Sika Inc.  
Emaco P24 by BASF Inc.
- 4. **Corrosion Inhibitor:** (Use only w/LA40 PMAC)  
Zincrich Rebar Primer by BASF Inc.
- 5. **Epoxy Repair Mortar:** (with manufacturers recommended aggregate added.)  
Sikadur 22, Lo-Mod by Sika Inc.  
EP-35 by BASF Inc.
- 6. **Pourable / Pumpable Repair Mortar:** LA40 PMAC  
(For slab repair only)
- 7. **Coating for Interior of Trench Drains:** Sikadur 62, Lo-Mod by Sika Inc.  
(Roller applied 2 coat system) Novolac AR170 by BASF Inc.

**WORK BY OWNER - NOT IN CONTRACT**

- 8. **Coating for Stair Tower Concrete Roofs:** Megamix I by Xypex Inc.  
(Parge coat horizontal & vertical C.I.P. roof slab)

**PART 3 - EXECUTION**

**REPAIR PROCEDURES**

**A. HORIZONTAL, VERTICAL & OVERHEAD CONCRETE PATCHING:**

**Surface Preparation:** Remove unsound material, dirt, oil, grease and other bond – inhibiting materials. Remove loose concrete from reinforcing to expose entire circumference of corroded rebar per 02 41 19. Prepare all steel by gritblasting to SSPC-SP5, white metal blast cleaning. Apply corrosion inhibitor to exposed rebar prior to sistering new reinforcing, if required. Area to receive repair mortar shall be SSD (surface saturated dry) and a scrub coat of repair mortar to be applied to area to receive repair mortar. Form if required. Apply repair mortar, finish and cure patch. **Conform to Manufacturer’s written instructions for preparation, mixing, application, finishing and curing.**

**B. EPOXY REPAIR MORTAR PATCHING:**

**Surface Preparation:** Remove unsound material, dirt, oil, grease and other bond – inhibiting materials. Remove loose concrete from reinforcing to expose entire circumference of corroded rebar per 02 41 19. Prepare all steel by gritblasting to SSPC-SP5, white metal blast cleaning. Form if required. Apply epoxy repair mortar, finish and cure patch. **Conform to Manufacturer’s written instructions for preparation, mixing, application, finishing and curing.**

**C. POURABLE / PUMPABLE REPAIRS:**

**Surface Preparation:** Remove unsound material, dirt, oil, grease and other bond – inhibiting materials. Remove loose concrete from reinforcing to expose entire circumference of corroded rebar per 02 41 19. If application is for underside repairs, identify high points in removed surface for the location of 2” diameter installation and venting cores. Verify spacing of holes with BASF Representative. Locate cores as not to

1 cut existing reinforcing during coring operation. Prepare all steel by gritblasting to SSPC-SP5, white metal  
2 blast cleaning. Apply corrosion inhibitor to exposed rebar prior to sistering new reinforcing, if required.  
3 Form underside or vertical surface and allow holes in formwork for wetting concrete surfaces SSD (surface  
4 saturated dry) that will receive repair mortar. Seal all formwork joints with sealant. Mix, pump or pour  
5 repair mortar vibrating as required, cure patch. **Conform to Manufacturer's written instructions for  
6 preparation, mixing, application, finishing and curing.**

7  
8 **D. COATING OF INTERIOR OF TRENCH DRAINS:**

9 **Surface Preparation:** Protect drain outlet from debris during repair work. Clean drain to remove any  
10 accumulated debris. Sound interior of trench drain's concrete surfaces and any imbedded steel to identify  
11 and structural repairs required. If delaminations are found, consult with Engineer for repair materials &  
12 procedures. Gritblast removed grating, entire interior surface of the trench drain including a 4" wide  
13 perimeter of the adjacent topside surface. Gritblast all exposed steel to SSPC-SP5, white metal blast  
14 cleaning. Vacuum gritblasting debris from trench drain. Apply tape topside perimeter for 3" wide strip to  
15 receive coating. Mix and apply primer if required and first coat of epoxy with roller to interior and the  
16 prepared topside perimeter at Manufacturer's recommended coverage. Mix and apply second coat once first  
17 coat is tack free but within manufacturer's recommended window. Broadcast oven dried silica quartz sand  
18 to rejection into wet epoxy at topside perimeter. Sweep off excess aggregate and reinstall Grating.  
19 **Conform to Manufacturer's written instructions for preparation, mixing and application.**

20  
21 **WORK BY OWNER - NOT IN CONTRACT**

22 **E. CRYSTALLINE CEMENTITIOUS COATING OF HORIZONTAL & VERTICAL SURFACES**  
23 **OF STAIR TOWER CONCRETE ROOF SLAB (3 Stair Tower Roofs & Wing Wall Caps) :**

24 **Surface Preparation:** Remove all unsound material, dirt, oil, grease and other bond – inhibiting materials  
25 from all surfaces of the cast in place concrete stair tower roof slabs. Pressure-wash all surfaces of the  
26 concrete stair tower roof slabs. Presoak concrete surfaces to receive parge coat to Surface Saturated Dry  
27 (SSD) condition. Apply 3/8" parge coating of Megamix I with a trowel to entire vertical and horizontal  
28 faces C.I.P. concrete roof slabs and integrated wing wall caps. Where cracks have formed between wing  
29 walls and roof slab, rout cracks and install backer rod with a 2 component urethane sealant, once parge coat  
30 is fully cured (36 hours). **Conform to Manufacturer's written instructions for preparation, mixing,  
31 application, finishing and curing.**

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**SECTION 03 20 00**  
**CONCRETE REINFORCEMENT**

**PART 1 – GENERAL**

**Part 1 – General**

Work Included  
Related Work and Requirements  
Quality Assurance  
Qualifications  
Submittals

**Part 2 – Products**

Reinforcing Steel  
Accessories  
Fabrication  
Product Delivery, Storage, and Handling

**Part 3 – Execution**

Inspection  
Placement  
Welding of Reinforcements  
Field Quality Control

Applicable provisions of Division 01 shall govern all work of this section.

**WORK INCLUDED**

Include all materials, labor, services and incidentals necessary for the completion of this section of the work.

Work includes fabrication and placement of reinforcement for cast-in-place concrete including bars, ties, dowels, stirrups, supports, carry bars and accessories required.

The work also includes the addition of supplemental reinforcing and accessories to replace existing bar cross section loss due to corrosion as directed by E.O.R.

**RELATED WORK AND REQUIREMENTS**

Section 02 41 19 - Selective Structure Demolition  
Section 03 00 00 - Concrete Work  
Section 03 01 40.70 – Rehabilitation of Precast Concrete  
Section 03 01 40.71 – Rehabilitation of Cast-In-Place Concrete

**QUALITY ASSURANCE**

**INDUSTRY STANDARDS, SPECIFICATIONS AND CODES**

**GENERAL**

Comply with all provisions of the following codes and standards except as modified herein.

All referenced codes and standards including all revisions and commentaries shall be the most currently adopted as of the date of these contract documents.

**AMERICAN CONCRETE INSTITUTE (ACI)**

ACI 301 Specifications for Structural Concrete for Buildings.  
ACI 318 Building Code Requirements for Reinforced Concrete.

1 ACI 315 Details and Detailing of Concrete Reinforcement.

2  
3 CONCRETE REINFORCING STEEL INSTITUTE (CRSI)

4  
5 Manual of Standard Practice.  
6 Recommended Practice for Placing Reinforcing Bars.

7  
8 AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

9  
10 Specific ASTM numbers are noted in later text.

11  
12 **QUALIFICATIONS**

13  
14 ACCEPTABLE MANUFACTURERS

15  
16 Shall be regularly engaged in the manufacture of steel bar, welded wire fabric reinforcing and mechanical splicing  
17 devices.

18  
19 INSTALLER QUALIFICATIONS

20  
21 Shall have three years experience in the installation of steel bar and welded wire fabric reinforcing.

22  
23 SOURCE QUALITY CONTROL

24  
25 Mill test certificates identifying chemical and physical analysis of each load of reinforcing steel delivered if requested.

26  
27 STEEL PROPERTIES

28  
29 Submit certification of grade, chemical analysis and tensile properties of steel furnished if requested.

30  
31 **SUBMITTALS**

32  
33 Submit in accordance with Section 01 30 00.

34  
35 **PART 2 – PRODUCTS**

36  
37 **REINFORCING STEEL**

38  
39 REINFORCING BARS

40  
41 Shall conform to ASTM A-615 "Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete  
42 Reinforcement".

43  
44 All reinforcing bars shall be deformed except that plain bars may be used for spirals.

45  
46 All column ties, beam stirrups, hairpins and dowels shall be Grade 40. If Grade 40 is unavailable, Grade 60 may be used.

47  
48 All main reinforcing bars and other bars not listed above shall be Grade 60 unless noted otherwise on the contract  
49 documents.

50  
51 **ACCESSORIES**

52  
53 SUPPORTS FOR REINFORCEMENT

54  
55 Provide supports for reinforcement including bolsters, chairs, spacers and other devices for spacing, supporting and  
56 fastening reinforcement in place.

1  
2 Use wire bar type supports complying with CRSI recommendations unless otherwise indicated. Do not use wood, brick  
3 and other unacceptable materials.  
4

5 For exposed-to-view concrete surfaces where legs of supports are in contact with forms provide supports with legs which  
6 are plastic protected. For sandblasted or bush-hammered concrete provide stainless steel protected or special stainless bar  
7 supports.  
8

9 In areas of concrete removal, short lengths of reinforcing bar shall be used to provide support for bars on chipped or  
10 rough concrete surfaces using similar spacing of supports.  
11

## 12 ADHESIVE ANCHOR SYSTEM

13

14 Hilti HY 150 (Substrate above 40°F)

15 Hilti HY 150 ICE (Substrate 40°F to 0°F)

16 Simpson ET (Substrate above 40°F)

17 Simpson AT (Substrate 40°F to 0°F)  
18

19 The adhesive used shall be a two component, structural grade epoxy material which meets the requirements of ASTM C-  
20 881 Types I, II, IV, and V, Grade 3, Class B and C. For cold weather applications the adhesive used shall be a two  
21 component, structural grade acrylic material which meets the requirements of ASTM C-881 Types I, IV, Grade 3, Class  
22 B and C  
23

24 The epoxy/acrylic shall be an odorless resin supplied in a two component dispensing system which keeps the resin and  
25 hardener separated until they are dispensed. The resin and hardener shall be mixed manufacturers ratio through a  
26 motionless static mixing nozzle provided by the manufacturer of the system. Cartridge type systems shall have pushers  
27 containing an "O" ring to prevent leakage during dispensing. The epoxy used shall have a minimum shelf life of two  
28 years.  
29

30 Anchor holes shall be drilled with a bit meeting the requirements of ANSI Standard B212.15 and shall be approved by  
31 the manufacturer. The epoxy and anchor hardware components shall be installed according to the manufacturer's written  
32 instructions.  
33

## 34 FABRICATION

35

36 All reinforcement shall be bent cold unless otherwise permitted by the Engineer.  
37

## 38 UNACCEPTABLE MATERIALS

39

40 Reinforcement with any of the following defects will not be permitted in the work:  
41

- 42 - Bar lengths, depths and bends exceeding specified fabrication tolerances.
- 43 - Bends or kinks not indicated on drawings or final shop drawings.
- 44 - Bars with reduced cross-section due to excessive rusting or other cause.  
45

## 46 PRODUCT DELIVERY, STORAGE AND HANDLING

47

### 48 GENERAL

49

50 Deliver reinforcement to the project site in bundles marked with metal tags indicating bar size, lengths and other  
51 information corresponding to markings shown on placement drawings.  
52

53 Handle and store materials to prevent dirt or excessive rust.  
54  
55

1  
2  
3 **PART 3 – EXECUTION**

4 **INSPECTION**

5 Examine the formwork and other conditions under which concrete reinforcement is to be placed and notify Formwork  
6 Contractor of unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been  
7 corrected in a manner to your satisfaction.  
8

9 **PLACEMENT**

10  
11 Comply with the specified codes and standards and CRSI "Recommended Practice for Placing Reinforcing Bars" for  
12 details and methods of reinforcement placement and supports and as herein specified.  
13

14 Clean reinforcement to remove loose rust and mill scale, earth, ice and other materials which reduce or impair bond with  
15 concrete.  
16

17 Position, support and secure reinforcement against displacement by formwork, construction or concrete placement  
18 operations. Locate and support reinforcing by metal chairs, runners, bolsters, spacers and hangers as required.  
19

20 Place reinforcement to obtain coverages for concrete protection as indicated. Arrange, space and securely tie bars and bar  
21 supports together with 16 gauge wire to hold reinforcement accurately in position during concrete placement operations.  
22 Set wire ties so that ends are directly away from exposed concrete surfaces.  
23

24 All exposed or additional reinforcing shall be no closer than 3/4" measured radially from existing concrete. The elevation  
25 of all exposed or additional reinforcing shall be maintained at the original height.  
26

27 Provide two #3 bars 3" apart on four sides of floor drains in slabs.  
28

29 Provide sufficient number of supports and sizes as required to carry reinforcement. Maximum spacing of chairs is 48" on  
30 center. Do not place reinforcing bars more than 2" beyond the last leg of any continuous bar support. Do not use  
31 supports as bases for runways for concrete conveying equipment and similar construction loads.  
32

33 **PLACING REINFORCING STEEL**

34 The placement of bars should conform to the CRSI Manual of Standard Practice.  
35

36 Replacement of unacceptable reinforcing or the installation of supplemental reinforcing sistered to existing with new will  
37 be directed by Engineer once existing reinforcing is gritblasted to remove corrosion.  
38

39 Runways or another approved protection scheme shall be provided for reinforcing located in a pour or which extends into  
40 the pour in order to prevent damage from moving equipment or pumping equipment.  
41

42 **WELDING OF REINFORCEMENT**

43  
44 Welding of reinforcement covered by this section is prohibited.  
45

46 **FIELD QUALITY CONTROL**

47  
48 Notify Engineer when reinforcing is in place so he may review existing bar conditions once existing bars have been  
49 gritblasted. Engineer shall have a minimum of 24 hour notice prior to placement of concrete. Engineer will provide  
50 direction of installation of supplemental reinforcing required due to existing bar section loss due to corrosion.  
51

52 Tend to reinforcing at all times during concrete placement and make necessary adjustments to reinforcing which has been  
53 dislodged by concrete placement or workmen.  
54

55 End of Section



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**SECTION 03 37 12**  
**GUNITE**

**PART 1 – GENERAL**

**Part 1 – General**

- Summary
- References
- Submittals
- Applicator Qualifications
- Delivery, Storage and Handling

**Part 2 – Products**

- Concrete Type, Strengths and Uses
- Materials
- Mix Proportions and Preconstruction Testing

**Part 3 – Execution**

- Preparation of Chipped-Out Surfaces to Receive Gunite
- Equipment
- Batching and Mixing
- Placement of Gunite
- Finishing
- Curing
- Limitations of Operations
- Field Quality Control

Applicable provisions of Division 01 shall govern work of this section.

The word "Gunite" used in this specification shall mean the dry mix process as described in ACI 506R.

Related work includes Specification Section 03 37 13 "Shotcrete" which refers to the wet mix process as described in ACI 506R. Refer to section 02 41 19 Selective Structural Demolition

**SUMMARY**

Include all materials, labor, services and incidentals necessary for the completion of this section of the work.

Furnish the necessary equipment and materials to apply gunite patches on the underside of the parking structure slab, columns or beams.

**REFERENCES**

**INDUSTRY STANDARDS, SPECIFICATIONS AND CODES**

**GENERAL**

Comply with all provisions of the following codes and standards except as modified herein.

All referenced codes and standards including all revisions and commentaries shall be the most currently adopted as of the date of these contract documents.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

53		
54	ASTM C-33	Specification for Concrete Aggregate
55	ASTM C-39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
56	ASTM C-42	Standard Method of Obtaining and Testing Drilled Cored and Sawed Beams of
57		Concrete
58	ASTM C-150	Specification for Portland Cement
59	ASTM C-309	Standard Specification for Liquid Membrane - Forming Compounds for Curing Concrete
60	ASTM E-329	Specification for Inspection and Testing Agencies for Concrete, Steel and Bituminous
61		Materials as used in Construction
62		

63 Additional ASTM numbers are noted in later text.

64  
65 **AMERICAN CONCRETE INSTITUTE (ACI)**

66		
67	ACI 301	Specification for Structural Concrete in Buildings
68	ACI 305	Recommended Practice for Hot Weather Concreting
69	ACI 306	Recommended Practice for Cold Weather Concreting
70	ACI 318	Building Code Requirements for Reinforced Concrete
71	ACI 506	Guide to Shotcrete
72	ACI 506.2	Specification for Materials, Proportioning and Application of Shotcrete
73		Field guide to Concrete Repair Application Procedures:
74		RAP Bulletin # 12 Concrete Repair by Shotcrete Application
75		

76 **SUBMITTALS**

77  
78 The Contractor shall submit trial mix proportions with compressive strength results in accordance with Section 01 30 00  
79 and as described later in this section.

80  
81 The Contractor shall submit test results of gunite core tests after each day's gunning in accordance with Section 01 30 00  
82 and as described later in this section.

83  
84 **APPLICATOR QUALIFICATIONS**

85  
86 The Contractor shall have three years of experience in performing work similar to that shown in the drawings and  
87 specifications. The foreman of the gunite crew shall have a minimum of two years experience as a gunite nozzleman,  
88 finisher and gunman. The nozzleman shall have certification or a minimum 3000 hours experience as a nozzleman and  
89 completed at least one similar application as a nozzleman.

90  
91 The Contractor shall submit a list of three projects in which similar work to that specified was successfully completed.  
92 This list shall contain the following for each of the three projects:

- 93  
94 - Project Name  
95 - Owner of project  
96 - Owner's representative, address and phone number  
97 - One-sentence description of work  
98 - Cost of this gunite work  
99 - Total restoration cost of project  
100 - Date of completion

101  
102 The sum of the costs for gunite work of the five projects provided above shall be a minimum of \$100,000.

103  
104

105  
106 **DELIVERY, STORAGE AND HANDLING**  
107

108 Cement shall be stored in weathertight enclosures which shall provide protection from dampness and contamination.  
109 Aggregate stockpiles shall be arranged and used in a manner to avoid segregation or contamination with foreign matter or  
110 other aggregates. Reinforcement shall be stored so as to avoid contact with the ground.  
111

112  
113 **PART 2 – PRODUCTS**  
114

115 Contractor's option to use batched material or use of pre-portioned bag mix.  
116

117 **PRE-PORTIONED BAG MIX**  
118

119 MS-D1 Synthetic Fiber Shotcrete by King Packaged Materials Company, Ontario CA  
120

121 **CONCRETE TYPE, STRENGTHS AND USES**  
122

123 The minimum compressive strength indicated, based on 3" diameter, 3" long core specimens shall be as follows:  
124

<u>Concrete Type</u>	<u>Strength</u>	<u>Use</u>
Gunite	7 days - 3300 PSI 28 days - 4000 PSI	Beams and underside of slab repair

129  
130 Ends of the test specimens shall be properly prepared for testing as described in ASTM C-42 "Obtaining and Testing  
131 Drilled Cores and Sawed Beams of Concrete".  
132

133 **MATERIALS**  
134

135 **CEMENT**  
136

137 Shall be Portland Cement conforming to ASTM C-150, Type 1.  
138

139 **ADMIXTURES**  
140

141 Admixtures shall be submitted to the Engineer for approval.  
142

143 The total chloride ion content of the mix shall not exceed 0.10% by weight of cement.  
144

145 Silica fume shall be used in the mix for exterior exposure or a silane sealer with 40% solids shall be applied over the  
146 gunite repair.  
147

148 **WATER**  
149

150 Mixing water shall be fresh, clean and potable.  
151

152 **REINFORCING**  
153

154 Corroded reinforcing shall be prepared per Section 03365 "Preparation of Chipped Out Surfaces to Receive Gunite".  
155

156 **AGGREGATES**

157  
158 Aggregates shall be clean, free of salt and organic impurities and conform to the requirements of ASTM C-33. The  
159 combined gradation shall conform to one of the gradations shown below:  
160

161 GRADATION LIMITS FOR COMBINED AGGREGATE - GRADATION NO. 1  
162

163 Sieve Size	164 U.S. Standard	165 Percent by
166 <u>Square Mesh</u>		167 <u>Weight Passing</u>
168 1/2"		169 -
170 3/8"		171 100
172 No. 4		173 95 - 100
174 No. 8		175 80 - 100
176 No. 16		177 50 - 85
178 No. 30		179 25 - 60
180 No. 50		181 10 - 30
182 No. 100		183 2 - 10

184 **MIX PROPORTIONS AND PRECONSTRUCTION TESTING**  
185

186 The required gunite mix shall be developed prior to the actual application of gunite to any surface forming a permanent  
187 part of the repair work. A trial mix shall be made with the same ingredients and tested in the same mixing and placing  
188 equipment that is proposed for use in the work. The mix design proposed for use, when tested as described below shall  
189 have a minimum compressive strength of 3300 PSI at 7 days and 4000 PSI at 28 days.  
190

191 A sand to cement ratio of 3½ to 4.0 is recommended, the actual mix proportions used will be at the discretion of the  
192 Contractor so long as the requirements for strength and proper steel encasement are met. The lowest water-cement ratio  
193 compatible with the above parameters is recommended.  
194

195 Mix designs of each separate mix shall be prepared and the following data shall be submitted to the Engineer for each  
196 mix design. The Contractor shall be responsible for costs relating to testing.  
197

- 198 - Sieve analysis for fine and coarse aggregate
- 199 - Test for aggregate organic impurities
- 200 - Proportions of all materials
- 201 - Mixing method
- 202 - Mill certificates for cement
- 203 - Slump at the pump
- 204 - Air content at the pump

205 Two test panels shall be made using the trial mix by one of the nozzlemen expected to work on the job. The panel shall  
206 be at least 18" x 18" x 3"; they shall be gunned in an upside-down horizontal position simulating actual field conditions.  
207 At least 6 cubes or cores shall be cut from each of the test panels. These specimens shall be cut from the gunited test  
208 panels not earlier than 5 days after gunning. The specimens shall be examined by the Engineer for sand pockets or  
lamination. Three specimens shall be tested for compressive strength at 7 and 28 days. For cube specimens and core  
cylinders with a length/diameter ratio less than 2, the minimum compressive strength shall be at least equal to the  
specified strength divided by 0.85. During storage, the specimens shall be kept continuously moist. Costs for cutting  
and testing shall be paid by the Owner.

The proportions of materials determined on the basis of developed mix proportions and trial mix testing along with  
compressive strength data shall be submitted to the Engineer for approval. After approval by the Engineer, these  
proportions shall be used in the actual application of gunite and shall not be varied without further approval.

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**PART 3 – EXECUTION**

**PREPARATION OF CHIPPED-OUT SURFACES TO RECEIVE GUNITE**

The Engineer will locate and mark the areas to be repaired.

Refer to section 02 41 19 Selective Structural Demolition

**EQUIPMENT**

**GENERAL**

Placing equipment shall consist of spray nozzle for providing ejection of dry materials and water in the mixture; separate hoses deliver dry materials and water to the nozzle; a suitable machine to introduce the dry materials to the delivery hose under air pressure; and air and water supply systems. The entire system shall be so arranged that the nozzleman may use air and water in any combination to prepare the surfaces or to clean completely. In addition, a separate air hose and blow pipe shall be available to remove dust and rebound during gunite application. Equipment shall be provided to allow application of gunite to all surfaces at a minimum range of one foot from the nozzle.

**WATER SYSTEM**

The water system shall be capable of supplying sufficient quantity at 90 PSI minimum pressure through a regulating valve, easily and accurately controlled by the nozzleman.

**AIR SUPPLY**

The air supply shall be capable of supplying the delivery machine at the pressures and volumes recommended by the manufacturer of the machine. No air supply system shall be used that delivers air contaminated by oil.

**DELIVERY MACHINE**

The delivery machine shall be capable of introducing dry materials to the delivery hose at a uniform rate, with ejection from the nozzle at velocities that apply materials to the treated surface with minimum rebound and maximum adherence and density.

**BATCHING AND MIXING**

Weight batching shall be used to control mix proportions. With the Engineer's permission, volume batching may be used during gunite operations provided that a minimum of one weight batching check is made every 8 hours for control purposes. Cement may be batched by integral bags.

Aggregate and cement shall be thoroughly mixed in the surface dry state before being deposited in the placing equipment. The moisture content of the combined aggregate at the time of mixing shall meet the approval of the inspector and should be in the range of 3% to 6% of weight of the oven-dry (110°C) aggregate.

The water content of the mix should be such as to produce the minimum slump that can be handled by the pump. A slump in the range of 1½" to 3" at the pump is normally suitable. The applied mix shall be dry enough to prevent sagging or sloughing from the repair surface.

261 **PLACEMENT OF GUNITE**

262  
263 The provisions of "Guide to Shotcrete" (ACI 506) and "Specification for Materials, Proportioning and Application of  
264 Shotcrete" (ACI 506.2) should be followed insofar as they apply to the work.

265  
266 The thickness of any given layer of gunite shall be such as to preclude sagging or falling away. If wind or air currents  
267 cause separation of the nozzle stream during placement, gunite shall be discontinued or suitable means shall be provided  
268 to screen the nozzle stream.

269  
270 The surface of freshly placed gunite shall be broomed or scraped to remove any loose material if additional layers of  
271 gunite are to be applied thereto after hardening. Such surfaces shall also be dampened before applying succeeding layers.

272  
273 No gunite shall be placed if drying or stiffening of mix takes place at any time prior to delivery to the nozzle. Under no  
274 circumstances shall any rebound or previously expended material be included in the work or used in the gunite mix.

275  
276 If during the placement of gunite there is any overspray on adjacent surfaces including replacement subsequently to be  
277 gunited, all such overspray or rebound shall be removed prior to final set and before placement of gunite on such  
278 surfaces.

279  
280 Gunite which lacks uniformity, exhibits segregation, honeycombing, or lamination, or which contains any dry patches,  
281 voids or sand pockets shall be removed and replaced.

282  
283 The nozzle shall be held at such a distance and angle so that material shall be fully placed behind reinforcement before  
284 any material is allowed to accumulate on its face.

285  
286 Provide alignment wires to establish thickness and plane surfaces. Install alignment wires at corners and offsets not  
287 established by form work. Ensure alignment wires are tight, true to line and placed to allow further tightening.

288  
289 **FINISHING**

290  
291 Scraping with a featheredge or screed to remove high spots shall not be done until the gunite has become stiff enough to  
292 withstand the pull of the screeding device.

293  
294 The final surface finish shall be troweled for architectural appearance. The finished surface shall retain the original  
295 architectural form. Partial forming of edges and corners with multiple passes of gunite shall be provided as directed by  
296 the Engineer.

297  
298 **CURING**

299  
300 Freshly applied gunite shall be protected from premature drying and temperatures below 40°F and shall be maintained  
301 with minimal moisture loss at a relatively constant temperature.

302  
303 Gunite shall be kept continuously moist for at least 7 days. The following method shall be used:

304  
305 Apply a curing compound in accordance with ASTM C-309 "Specifications for Liquid Membrane - Forming  
306 Compounds for Curing Concrete". Two applications shall be made; the second shall be within an hour of the  
307 first application. Curing compounds shall not be used on any surface which additional shotcrete or other  
308 cementitious materials are to be bonded. Curing compounds shall be compatible with the surface sealer to be  
309 used.

310  
311 **LIMITATIONS OF OPERATIONS**

312

313 No traffic shall be permitted in the bay above during the guniting work for 48 hours thereafter.

314

315 Traffic and pedestrian movement through the work area shall be limited to prevent damage or injury resulting from the  
316 work. Adjacent surfaces shall be protected, as much as possible, and shall be cleaned after the guniting work is completed.

317

### 318 **FIELD QUALITY CONTROL**

319

320 Specimens for determining compressive strength shall be made by the Contractor for each 8-hour period that guniting is  
321 placed.

322

323 A test panel with minimum dimensions of 18" x 18" x 3" shall be gunned in the same position as the work represented  
324 and field cured in the same manner as the work. The panels shall be gunned by the nozzleman doing most of the work.

325

326 At least three 3" diameter cores or 3" cubes shall be cut from each panel for testing. Panels shall not be removed prior to  
327 12 hours after shotcreting. Specimens shall not be cut until immediately prior to testing. All cutting and testing shall be  
328 performed by a qualified approved testing laboratory which meets the requirements of ASTM E-329 and their reports  
329 will be sent to the Engineer and the Contractor. Cost for fabrication of the test panel shall be paid for by the Contractor.  
330 Cost for cutting and testing shall be paid for by the Owner.

331

332 Testing of cores and cubes shall be in accordance with ASTM C-42. Each test report shall contain the following  
333 information for each set:

334

- 335 - Individual test specimen strength, type of failure
- 336 - Specimen number
- 337 - Portion of structure represented by the concrete tested
- 338 - Date cast
- 339 - Date tested
- 340 - Concrete properties specified
- 341 - Notice if tests indicate concrete is not in conformance with specifications.

342

343 The specimens shall be tested at an age of 7 days. Strength of concrete shall be considered satisfactory if average of two  
344 7-day tests in each set of cores or cubes equals or exceeds 3300 PSI and neither of the 7-day tests is 500 PSI or more  
345 below the specified 7-day strength.

346

347 Should results of test not meet preceding requirements associated guniting work will either be rejected by the Engineer or  
348 additional testing will be performed at 28 days. If strength acceptance criteria are not met by core tests at 28 days, the  
349 Contractor shall remove and replace all questionable areas of concrete at the Contractor's expense. The costs of  
350 additional tests shall be paid for by the Contractor.

351

352 Contractor may choose to have cores removed and tested from the work in place rather than the test panels at his expense.

353

354 The Engineer may perform additional destructive and non-destructive testing to detect voids in the guniting repairs. If any  
355 voids are found, the costs of these initial tests as well as all subsequent tests shall be paid by the Contractor. The  
356 Contractor shall also remove and replace at no cost to the Owner, all guniting repairs found to contain voids. If no voids  
357 are found, the costs of all tests will be paid by the Owner.

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End of Section

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**SECTION 03 37 13**  
**SHOTCRETE**

**PART 1 – GENERAL**

**Part 1 – General**

Summary  
References  
Submittals  
Applicator Qualifications  
Delivery, Storage and Handling

**Part 2 – Products**

Concrete Type, Strengths and Uses  
Materials  
Mix Proportions and Preconstruction Testing

**Part 3 - Execution**

Preparation of Chipped-Out Surfaces to Receive Shotcrete  
Batching and Mixing  
Placement of Shotcrete  
Finishing  
Curing  
Limitations of Operations  
Field Quality Control

Applicable provisions of Division 01 shall govern work of this section.

The word "Shotcrete" used in this specification shall mean the wet mix process as described in ACI 506R.

Related work includes Specification Section 03 37 12 "Gunite" which refers to the dry mix process as described in ACI 506R. 02 41 19 Selective Structural Demolition

**SUMMARY**

Include all materials, labor, services and incidentals necessary for the completion of this section of the work.

Furnish the necessary equipment and materials to apply shotcrete patches on the underside of the parking structure slab, columns or beams.

**REFERENCES**

**INDUSTRY STANDARDS, SPECIFICATIONS AND CODES**

**GENERAL**

Comply with all provisions of the following codes and standards except as modified herein.

All referenced codes and standards including all revisions and commentaries shall be the most currently adopted as of the date of these contract documents.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)



53	ASTM C-33	Specification for Concrete Aggregate
54	ASTM C-39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
55	ASTM C-42	Standard Method of Obtaining and Testing Drilled Cored and Sawed Beams of
56		Concrete
57	ASTM C-150	Specification for Portland Cement
58	ASTM C-260	Standard Specification for Air Entrained Admixtures for Concrete
59	ASTM C-309	Standard Specification for Liquid Membrane - Forming Compounds for Curing Concrete
60	ASTM E-329	Specification for Inspection and Testing Agencies for Concrete, Steel and Bituminous
61		Materials as used in Construction

62  
63 Additional ASTM numbers are noted in later text.

64  
65 **AMERICAN CONCRETE INSTITUTE (ACI)**

- 66
- 67 ACI 301 Specification for Structural Concrete in Buildings
- 68 ACI 305 Recommended Practice for Hot Weather Concreting
- 69 ACI 306 Recommended Practice for Cold Weather Concreting
- 70 ACI 318 Building Code Requirements for Reinforced Concrete
- 71 ACI 506 Guide to Shotcrete
- 72 ACI 506.2 Specification for Materials, Proportioning and Application of Shotcrete
- 73 Field Guide to Concrete Repair Application Procedures:
- 74 RAP Bulletin # 12 Concrete Repair by Shotcrete Application

75  
76 **SUBMITTALS**

77  
78 The Contractor shall submit trial mix proportions with compressive strength results in accordance with Section 01 30 00  
79 and as described later in this section.

80  
81 The Contractor shall submit test results of shotcrete core tests after each day's gunning in accordance with Section 01 30  
82 00 and as described later in this section.

83  
84 **APPLICATOR QUALIFICATIONS**

85  
86 The Contractor shall have three years of experience in performing work similar to that shown in the drawings and  
87 specifications. The foreman of the shotcrete crew shall have a minimum of two years experience as a shotcrete  
88 nozzleman, finisher and gunman. The nozzleman shall have certification or a minimum 3000 hours experience as a  
89 nozzleman and completed at least on similar application as a nozzleman.

90  
91 The Contractor shall submit a list of three projects in which similar work to that specified was successfully completed.  
92 This list shall contain the following for each of the three projects:

- 93
- 94 - Project Name
- 95 - Owner of project
- 96 - Owner's representative, address and phone number
- 97 - One-sentence description of work
- 98 - Cost of this shotcrete work
- 99 - Total restoration cost of project
- 100 - Date of completion

101  
102 The sum of the costs for shotcrete work of the five projects provided above shall be a minimum of \$100,000.

103  
104 **DELIVERY, STORAGE AND HANDLING**

105  
106 Cement shall be stored in weathertight enclosures which shall provide protection from dampness and contamination.  
107 Aggregate stockpiles shall be arranged and used in a manner to avoid segregation or contamination with foreign matter or  
108 other aggregates. Reinforcement shall be stored so as to avoid contact with the ground.  
109

## 110 **PART 2 – PRODUCTS**

111  
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113  
114 Contractor's option to use batched material or use of pre-portioned bag mix.  
115

### 116 **PRE-PORTIONED BAG MIX**

117  
118 MS-W1 Synthetic Fiber Shotcrete by King Packaged Materials Company, Ontario CA  
119

### 120 **CONCRETE TYPE, STRENGTHS AND USES**

121  
122 The minimum compressive strength indicated, based on 3" diameter, 3" long core specimens shall be as follows:  
123

124 <u>Concrete Type</u>	125 <u>Strength</u>	126 <u>Use</u>
127 Shotcrete	128 7 days - 3300 PSI 129 28 days - 4000 PSI	130 Beams and underside of slab repair

131 Ends of the test specimens shall be properly prepared for testing as described in ASTM C-42 "Obtaining and Testing  
132 Drilled Cores and Sawed Beams of Concrete".  
133

### 134 **MATERIALS**

#### 135 **CEMENT**

136 Shall be Portland Cement conforming to ASTM C-150, Type 1.  
137

#### 138 **ADMIXTURES**

139 Admixtures shall be submitted to the Engineer for approval.  
140

141 The total chloride ion content of the mix shall not exceed 0.10% by weight of cement.  
142

#### 143 **AIR ENTRAINING**

144 Shall conform to ASTM C-260. The entrained air content shall be controlled in a range of 6% to 8% of total air at the  
145 pump.  
146

147 Air entraining shall be required for all shotcrete used in exterior applications.  
148

#### 149 **WATER**

150 Mixing water shall be fresh, clean and potable.  
151

#### 152 **REINFORCING**

157 Corroded reinforcing shall be prepared per Section 03360 "Preparation of Chipped-Out Surfaces to Receive Shotcrete".

158

159 **AGGREGATES**

160

161 Aggregates shall be clean, free of salt and organic impurities and conform to the requirements of ASTM C-33. The  
162 combined gradation shall conform to one of the gradations shown below:

163

164 **GRADATION LIMITS FOR COMBINED AGGREGATE - GRADATION NO. 1**

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Sieve Size	Percent by
U.S. Standard	Weight Passing
<u>Square Mesh</u>	
1/2"	-
3/8"	100
No. 4	95 - 100
No. 8	80 - 100
No. 16	50 - 85
No. 30	25 - 60
No. 50	10 - 30
No. 100	2 - 10

178

178 **MIX PROPORTIONS AND PRECONSTRUCTION TESTING**

179

180 The required shotcrete mix shall be developed prior to the actual application of shotcrete to any surface forming a  
181 permanent part of the repair work. A trial mix shall be made with the same ingredients and tested in the same mixing and  
182 placing equipment that is proposed for use in the work. The mix design proposed for use, when tested as described  
183 below shall have a minimum compressive strength of 3300 PSI at 7 days and 4000 PSI at 28 days.

184

185 A sand to cement ratio of 3½ to 4.0 is recommended, the actual mix proportions used will be at the discretion of the  
186 Contractor so long as the requirements for strength and proper steel encasement are met. The lowest water-cement ratio  
187 compatible with the above parameters is recommended.

188

189 Mix designs of each separate mix shall be prepared and the following data shall be submitted to the Engineer for each  
190 mix design. The Contractor shall be responsible for costs relating to testing.

191

192

193

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197

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199

- Sieve analysis for fine and coarse aggregate
- Test for aggregate organic impurities
- Proportions of all materials
- Mixing method
- Mill certificates for cement
- Slump at the pump
- Air content at the pump

200

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208

Two test panels shall be made using the trial mix by one of the nozzlemen expected to work on the job. The panel shall  
be at least 18" x 18" x 3"; they shall be gunned in an upside-down horizontal position simulating actual field conditions.  
At least 6 cubes or cores shall be cut from each of the test panels. These specimens shall be cut from the shotcreted test  
panels not earlier than 5 days after shotcreting. The specimens shall be examined by the Engineer for sand pockets or  
lamination. Three specimens shall be tested for compressive strength at 7 and 28 days. For cube specimens and core  
cylinders with a length/diameter ratio less than 2, the minimum compressive strength shall be at least equal to the  
specified strength divided by 0.85. During storage, the specimens shall be kept continuously moist. Costs for cutting  
and testing shall be paid by the Owner.

209 The proportions of materials determined on the basis of developed mix proportions and trial mix testing along with  
210 compressive strength data shall be submitted to the Engineer for approval. After approval by the Engineer, these  
211 proportions shall be used in the actual application of shotcrete and shall not be varied without further approval.  
212

## 214 **PART 3 – EXECUTION**

### 217 **PREPARATION OF CHIPPED-OUT SURFACES TO RECEIVE SHOTCRETE**

218  
219 The Engineer will locate and mark the areas to be repaired.

220  
221 Refer to section 02 41 19 Selective Structural Demolition  
222

### 223 **BATCHING AND MIXING**

224  
225 Weight batching shall be used to control mix proportions. With the Engineer's permission, volume batching may be used  
226 during shotcreting operations provided that a minimum of one weight batching check is made every 8 hours for control  
227 purposes. Cement may be batched by integral bags.  
228

229 Aggregate and cement shall be thoroughly mixed in the surface dry state before being deposited in the placing equipment.  
230 The moisture content of the combined aggregate at the time of mixing shall meet the approval of the inspector and  
231 should be in the range of 3% to 6% of weight of the oven-dry (110°C) aggregate.  
232

233 The water content of the mix should be such as to produce the minimum slump that can be handled by the pump. A  
234 slump in the range of 1½" to 3" at the pump is normally suitable. The applied mix shall be dry enough to prevent sagging  
235 or sloughing from the repair surface.  
236

### 237 **PLACEMENT OF SHOTCRETE**

238  
239 The provisions of "Guide to Shotcrete" (ACI 506) and "Specification for Materials, Proportioning and Application of  
240 Shotcrete" (ACI 506.2) should be followed insofar as they apply to the work.  
241

242 The thickness of any given layer of shotcrete shall be such as to preclude sagging or falling away. If wind or air currents  
243 cause separation of the nozzle stream during placement, shotcreting shall be discontinued or suitable means shall be  
244 provided to screen the nozzle stream.  
245

246 The surface of freshly placed shotcrete shall be broomed or scraped to remove any loose material if additional layers of  
247 shotcrete are to be applied thereto after hardening. Such surfaces shall also be dampened before applying succeeding  
248 layers.  
249

250 No shotcrete shall be placed if drying or stiffening of mix takes place at any time prior to delivery to the nozzle. Under  
251 no circumstances shall any rebound or previously expended material be included in the work or used in the shotcrete mix.  
252

253 If during the placement of shotcrete there is any overspray on adjacent surfaces including replacement subsequently to be  
254 shotcreted, all such overspray or rebound shall be removed prior to final set and before placement of shotcrete on such  
255 surfaces.  
256

257 Shotcrete which lacks uniformity, exhibits segregation, honeycombing or lamination, or which contains any dry patches,  
258 voids or sand pockets shall be removed and replaced.  
259

260 The nozzle shall be held at such a distance and angle so that material shall be fully placed behind reinforcement before

261 any material is allowed to accumulate on its face.

262

263 Provide alignment wires to establish thickness and plane surfaces. Install alignment wires at corners and offsets not  
264 established by form work. Ensure alignment wires are tight, true to line and placed to allow further tightening.

265

266 **FINISHING**

267

268 Scraping with a featheredge or screed to remove high spots shall not be done until the shotcrete has become stiff enough  
269 to withstand the pull of the screeding device.

270

271 The final surface finish shall be troweled for architectural appearance. The finished surface shall retain the original  
272 architectural form. Partial forming of edges and corners with multiple passes of shotcrete shall be provided as directed by  
273 the Engineer.

274

275 **CURING**

276

277 Freshly applied shotcrete shall be protected from premature drying and temperatures below 40°F and shall be maintained  
278 with minimal moisture loss at a relatively constant temperature.

279

280 Shotcrete shall be kept continuously moist for at least 7 days. The following method shall be used:

281

282 Applying a curing compound in accordance with ASTM C-309 "Specifications for Liquid Membrane - Forming  
283 Compounds for Curing Concrete". Two applications shall be made; the second shall be within an hour of the  
284 first application. Curing compounds shall not be used on any surface which additional shotcrete or other  
285 cementitious materials are to be bonded. Curing compounds shall be compatible with the surface sealer to be  
286 used.

287

288 **LIMITATIONS OF OPERATIONS**

289

290 No traffic shall be permitted in the bay above during the shotcreting work for 48 hours thereafter.

291

292 Traffic and pedestrian movement through the work area shall be limited to prevent damage or injury resulting from the  
293 work. Adjacent surfaces shall be protected as much as possible and shall be cleaned after the shotcrete work is  
294 completed.

295

296 **FIELD QUALITY CONTROL**

297

298 Specimens for determining compressive strength shall be made by the Contractor for each 8-hour period that shotcrete is  
299 placed.

300

301 A test panel with minimum dimensions of 18" x 18" x 3" shall be gunned in the same position as the work represented  
302 and field cured in the same manner as the work. The panels shall be gunned by the nozzleman doing most of the work.

303

304 At least three 3" diameter cores or 3" cubes shall be cut from each panel for testing. Panels shall not be removed prior to  
305 12 hours after shotcreting. Specimens shall not be cut until immediately prior to testing. All cutting and testing shall be  
306 performed by a qualified approved testing laboratory which meets the requirements of ASTM E-329 and their reports  
307 will be sent to the Engineer and the Contractor. Cost for fabrication of the test panel shall be paid for by the Contractor.  
308 Cost for cutting and testing shall be paid for by the Owner.

309

310 Testing of cores and cubes shall be in accordance with ASTM C-42. Each test report shall contain the following  
311 information for each set:

312

- 313 - Individual test specimen strength, type of failure
- 314 - Specimen number
- 315 - Portion of structure represented by the concrete tested
- 316 - Date cast
- 317 - Date tested
- 318 - Concrete properties specified
- 319 - Notice if tests indicate concrete is not in conformance with specifications.

320  
321 The specimens shall be tested at an age of 7 days. Strength of concrete shall be considered satisfactory if average of two  
322 7-day tests in each set of cores or cubes equals or exceeds 3300 PSI and neither of the 7-day tests is 500 PSI or more  
323 below the specified 7-day strength.

324  
325 Should results of test not meet preceding requirements, associated shotcrete work will either be rejected by the Engineer  
326 or additional testing will be performed at 28 days. If strength acceptance criteria are not met by core tests at 28 days, the  
327 Contractor shall remove and replace all questionable areas of concrete at the Contractor's expense. The costs of  
328 additional tests shall be paid for by the Contractor.

329  
330 Contractor may choose to have cores removed and tested from the work in place rather than the test panels at his expense.

331  
332 The Engineer may perform additional destructive and non-destructive testing to detect voids in the shotcrete repairs. If  
333 any voids are found, the costs of these initial tests as well as all subsequent tests shall be paid by the Contractor. The  
334 Contractor shall also remove and replace at no cost to the Owner, all shotcrete repairs found to contain voids. If no voids  
335 are found, the costs of all tests will be paid by the Owner.

336  
337  
338 End of Section

**SECTION 03 64 23  
EPOXY INJECTION**

**Part 1– General**

- Summary
- References
- Applicator Qualifications
- Source Quality Control
- Submittals
- Product Delivery, Storage and Handling

**Part 2 – Product**

- Materials
- Equipment

**Part 3 – Execution**

- Examinations
- Surface Preparation, Injection and Delivery Systems
- Field Quality Control

Applicable provisions of Division 1 shall govern work of this section.

**PART ONE – GENERAL**

**SUMMARY**

Include all materials, labor, services and incidentals necessary for the completion of this section of the work.

**TOPSIDE SLAB DELAMINATION INJECTION**

The Contractor shall provide all necessary materials, equipment and labor necessary to inject the interface between areas of debonded 1 1/2" +/- topping slab and the structural slab below, see bid form for estimated quantities. This work shall be performed in conjunction with and prior to the application of the gravity fed epoxy crack healer penetrating sealer. Provide unit pricing on bid form for the rebonding of delaminated concrete from the topside. Note the topping slab contains a titanium mesh anode for the cathodic protection system; injection will leave the anode undisturbed while rebonding the topping.

**VERTICAL WALL CRACK INJECTION**

The Contractor shall provide all necessary materials, equipment and labor necessary to inject wall cracks the full depth of the wall member.

**UNDERISDE CRACK INJECTION OF SLAB DELAMINATION INJECTION**

This injection work consists of providing underside injection of the partially delaminated underside spalls & delaminating slab cracks in three specific areas:

1. The Level 01 interior slab located above the rectifier room, shop, office and bathrooms.
2. The exterior slabs above the hallways to the lowest Level 01 parking, bathrooms, and the overhang slab adjacent to the shop overhead door.
3. Isolated spalls located within the underside cathodic protection area on the north half of Level 02, 03 & 04

NOTE:

55 This injection work is meant as a cost saving measure to replace the conventional removal and replacement method  
56 of mildly delaminated underside spall repairs that are still tight to the structure. The underside slab delaminated  
57 areas to be injected can be isolated or located adjacent to badly delaminated underside slab spalls. Injection areas on  
58 the bid form are estimates from the engineering inspections and physical sounding of the underside slab. Actual  
59 injection quantities may vary due to field conditions exposed during construction. Injection is not meant for the  
60 repair of severe delamination areas due to extensive reinforcing corrosion, conventional removal of spall concrete,  
61 gritblast bars and cementitious repairs will be performed in these areas. Injection will concentrate on leaking cracks  
62 that have mild delamination along their partial length, areas where delaminations are tight to the surrounding sound  
63 concrete and with minor cracking. Severe delaminated areas causing spall displacement and separation from the  
64 structure, will be conventionally repaired. These displaced spalled areas will be knocked down first with the  
65 remaining areas to be injected.

66  
67 The repairs of underside spalls will be combination of epoxy injection and conventional concrete removal and  
68 replacement. This injection work shall be performed in conjunction with the removal of unsound concrete.

#### 69 70 PAYMENT

71 Payment is based on successful injection of cracks per lineal foot or delamination per square foot of delamination  
72 rebonding.

#### 73 74 REFERENCES

#### 75 76 INDUSTRY STANDARDS, SPECIFICATIONS AND CODES

#### 77 78 GENERAL

79  
80 Comply with all provisions of the following codes and standards except as modified herein.

81  
82 All referenced codes and standards including all revisions and commentaries shall be most currently  
83 adopted as of the date of these contract documents.

#### 84 85 AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)

86  
87 Specified AASHTO numbers are noted in later text.

#### 88 89 AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

90  
91 Specific ASTM numbers are noted in later text.

#### 92 93 AMERICAN CONCRETE INSTITUTE INTERNATIONAL

94  
95 Manual of Concrete Practice 201.2R

96 Field Guide to Concrete Repair Application Procedures - RAP Bulletin #1

97  
98 ICRI (International Concrete Repair Institute)

#### 99 100 APPLICATOR QUALIFICATIONS

101  
102 The Contractor shall meet all of the following requirements:

- 103  
104 - The Contractor shall have a minimum of three years of experience in performing epoxy injection  
105 work.  
106  
107 - The Contractor shall submit a list of at least five projects in which epoxy injection was performed  
108 successfully. This list shall contain the following for each of the five projects:



- 109
- 110 - Project name
- 111 - Owner of project
- 112 - Owner's representative, address and telephone number
- 113 - One sentence description of work
- 114 - Cost of portion of work involving epoxy injection
- 115 - Total cost of project
- 116 - Date of completion
- 117

118 The sum of the costs of the five or more projects provided above shall be a minimum of \$30,000.

119  
120 A full-time, on-site supervisor shall be provided by the Contractor for the duration of the epoxy injection work. This  
121 supervisor shall have had 12 years of documented supervisory experience with the products to be used. The  
122 Contractor shall submit a list of projects the supervisor has worked on with the same information as required above.

123  
124 In lieu of the above requirements, the Contractor shall meet all of the following requirements:

- 125
- 126 - The manufacturer of the epoxy shall have a minimum of three years of experience providing  
127 epoxies similar to those specified in this section.
- 128
- 129 - The manufacturer of the epoxy shall supply a representative who will train the Contractor's crew  
130 on the proper techniques of injecting epoxy with an injection system approved by the  
131 manufacturer. This representative shall have 3 years of field experience supervising the injection  
132 of epoxy. The Contractor shall submit a list of projects the representative has worked on with the  
133 same information as required above.
- 134
- 135 - The manufacturer's representative shall be present at the site for a minimum of five 8-hour  
136 working days and shall train the Contractor's crew in the injection of epoxy during the start-up  
137 stage of this portion of the work.
- 138

### 139 **SOURCE QUALITY CONTROL**

140  
141 The material supplier shall provide the following test data for each production run or batch of epoxy formulation to  
142 be used:

- 143
- 144 - Tensile strength by ASTM D-638
- 145 - Elongation at break by ASTM D-638
- 146 - Flexural strength by ASTM D-790
- 147 - Flexural modulus by ASTM D-790
- 148 - Compressive yield strength by ASTM D-695
- 149 - Compressive modulus by ASTM D-695
- 150 - Heat deflection temperature by ASTM D-648
- 151 - Slant shear by AASHTO-237
- 152

### 153 **SUBMITTALS**

154  
155 Submit in accordance with Section 01 30 00.

156  
157 The Contractor shall submit the following to the Engineer:

- 158
- 159 - Documentation showing he meets the applicator qualifications as specified.
- 160
- 161 - Technical data sheets for each epoxy product or formulation to be used showing that the products  
162 meet the requirements of the specifications. Technical data shall include:

- 163
- 164 - Intended use
- 165 - Pot life (neat)
- 166 - Initial cure time (1000 PSI)
- 167 - Tack free (thin film)
- 168 - Final cure (75% ultimate strength)
- 169 - Tensile strengths by ASTM D-638 (14 days)
- 170 - Tensile elongation by ASTM D-638 modified (14 days)
- 171 - Flexural strength and modulus per ASTM D-790 at 24 hours, 3 days and 7 days
- 172 at 77°F
- 173 - 24-hourr compressive strength by ASTM C-109 modified (1 part epoxy to 3¼
- 174 parts aggregate)
- 175 - A technical description of the epoxy injection equipment
- 176
- 177 - Products MSDS sheets
- 178

179 **DELIVERY, STORAGE AND HANDLING**

180

181 The product shall be delivered and handled according to the manufacturer's recommendations.

182

183 Damaged, open containers shall not be used.

184

185 All labels shall clearly indicate:

- 186
- 187 - Name of manufacturer
- 188 - Manufacturer's product name or product number
- 189 - Manufacturer's lot number
- 190 - Mix ratio
- 191 - Conformance with the injection adhesive specification
- 192 - SPI hazardous material rating and appropriate warnings for handling
- 193
- 194

195 **PART TWO – PRODUCTS**

196

197 **MATERIALS**

198

199 Furnish epoxies shall be insensitive to the presence of water and is a two component epoxy resin designed for the

200 structural rebonding of concrete.

201

202 The typical epoxy for injection shall be:

- 203
- 204 - Sikadur 35 Hi-Mod LV as manufactured by Sika Corporation, Lyndhurst, NJ 07071.
- 205

206 The epoxy gel shall be:

- 207 - Sikadur 31 Hi Mod Gel manufactured by Sika Corporation or equal as approved by the Engineer.
- 208 Or
- 209 - Sikadur 33 Fastset manufactured by Sika Corporation or equal as approved by the Engineer.
- 210

211 Furnish all associated injecting accessories including vessels, drill bits from port manufacturer, ports, caps, cleaners,

212 etc.

213

214 Or approved equal

215

216

217 **EQUIPMENT**

218

219 The equipment used to inject the epoxy shall perform all of the following:

220

221 - Marked vessels for part A & B

222

223 - Automatic metered proportioning of materials by volume within the mix ratio tolerances set by the  
224 manufacturer of the epoxy material.

225

226 - Mix the epoxy automatically and completely using in line manifold device.  
227 (Batch mixing will not be permitted).

228

229 - Inject the material under pressures up to 200 PSI maximum.

230

231 - Double injection leads to inject two ports (delamination injection)

232

233

234 **PART THREE – EXECUTION**

235

236 A pre-installation conference with the Engineer, the Contractor’s Injection Supervisor and the Owner is required  
237 prior to proceeding with the work

238

239 **EXAMINATION**

240

241 Existing and environmental conditions: The Contractor shall examine the condition of surfaces into which the  
242 epoxy is to be injected. He shall follow the recommendations of the manufacturer with regard to limitations of the  
243 materials in various moisture and temperature levels.

244

245 **SURFACE PREPARATION, INJECTION AND DELIVERY SYSTEM**

246

247 **PERSONAL PROTECTION EQUIPMENT**

248 The Contractor shall provide PPE for all workers in contact with resin. Provide notification to Owner 24 hours prior  
249 to injection. Adequate ventilation shall be provided for work area.

250

251 **GENERAL**

252

253 The Contractor shall notify the Engineer 24 hours prior to the start of the first injection

254

255 Contractor to protect all adjacent surfaces, including dust protection barriers if required, prior to starting surface  
256 preparation and injection work.

257

258 Transport, mix, inject and cure the resin per written manufacturer’s instructions.

259

260 Prepare surface to receive paste over a minimum of 1/2” of either side of crack to assure bond. Remove all foreign  
261 materials from concrete surface that will inhibit bonding. Wire brushing of area below paste over shall be  
262 performed. Grinders shall not be used for surface preparation due to the excessive dust that may clog the crack.  
263 Vacuum the entire length of crack prior to installing paste over.

264

265 To contain the injected resin, the bottom, side and top surfaces of cracked members shall be sealed with a gel-  
266 consistency epoxy prior to injection and shall contain appropriate injection ports.

267

268 Test metering of pump in two separate vessels and compare to manufacturer’s ratio by volume prior to injection.

269

270 Prior to injection: Run resin through pump to vacate any pump cleaners (acetone) from entire system into sacrificial  
271 vessel. Once cleaner is displaced from system, fill sacrificial vessel with resin to assure proper catalyst of resin  
272 components.

273  
274 Injection shall be a continuous, successive port to port process, with the resin flowing from the next port prior to  
275 moving to the next port.

276  
277 If opposite side of structure being injected is accessible but member cannot be observed directly by the injection  
278 pump operator, an additional observer on the back side of structure with communication device between the two  
279 workers shall be employed during the injection process.

280  
281 Once injection is complete, the Contractor shall clean surfaces of excess epoxy, epoxy gel and injection ports by  
282 grinding or other appropriate means so that only the edge thickness of completed epoxied cracks is noticeable. No  
283 spray of injection ports shall extend beyond the plane of the surfaces of the site concrete.

284  
285 **VERTICAL MEMBERS:**

286 The epoxy shall be injected into cracks or joints only from the lower elevations of the members, progressively  
287 working to the highest.

288  
289 **CRACK INJECTION**

290 Where cracks in slabs to be injected have sealant, waterproofing material or other debris in the cracks, the cracks  
291 shall be cleaned at the top of slab using low pressure hot water or high pressure water jet as appropriate. Refer to  
292 manufacturers written procedures.

293  
294 The epoxy injected into the cracks or joints shall be highly suited for this usage. The pressure injection system shall  
295 be capable of filling cracks as small as .002" wide.

296  
297 In the event that unsound concrete is located in a zone along the crack and this prevents the complete injection of the  
298 cracks, notify the Engineer. The Engineer will determine if unsound concrete shall be removed prior to crack  
299 injection.

300  
301 Contractor to adjust injection pump pressure based on width of crack being injected. Injection of hairline cracks may  
302 not be suitable for "pumping to refusal", increase pressure up to 200 psi for 5 minutes, or requirements by material  
303 manufacturer.

304  
305 **CONCRETE DELAMINATION INJECTION**

306 The Contractor to sound and mark delaminated areas prior to injection and maintain marks until Engineer can verify  
307 quantities for payment.

308  
309 Install a minimum of 3 ports in epoxy paste - per area, evenly spaced (2 ports may be approved by Engineer for  
310 small areas). Inject by skipping every other port to avoid trapping of air.

311  
312 Sound delaminations to determine flow pattern of resin. Install additional ports as required to assure entire  
313 delamination is properly injected. Mark out areas of delamination that cannot be successfully injected, Notify  
314 Engineer, to receive approval for traditional concrete delamination removal and placement of repair mortar.

315  
316 **FIELD QUALITY CONTROL**

317  
318 **SAMPLES**

319  
320 The Contractor shall supply samples of the injection epoxy to the Engineer or testing laboratory for the purpose of  
321 performing compression tests and/or Shore Hardness tests.

322  
323 A minimum of three samples per day per injection machine of each epoxy formulation or use shall be made.

324  
325 Samples shall be made by placing epoxy into 3/8" inside diameter test tubes. The height of the sample shall be  
326 approximately 1" so that after trimming a cylinder of 3/8" diameter and 3/4" length can be obtained for compression  
327 testing.

328  
329 **\*\*\* OR \*\*\***

330  
331 Samples shall be made by placing epoxy into 3" diameter test tubes to a height of approximately 1/2". The epoxy is  
332 to be tested for Shore Hardness as directed by the Engineer.

333  
334 **CORES**

335  
336 The Contractor shall be responsible for drilling and removing two 2" diameter cores into the members at the  
337 direction of the Engineer, to determine whether the crack injection is complete. Depth of coring will be determined  
338 by the Engineer. If injection is incomplete (less than 90% of the injected crack void), re-injection and additional  
339 cores may be required at the direction of the Engineer, at no extra cost to the Owner.

340  
341 **WATER TEST**

342  
343 The Contractor shall perform a water test (see Specification Section 01800) after all cracks are sealed. Any new  
344 cracks that leak will be repaired by the Contractor and paid for by the Owner. Cracks that leak after being repaired  
345 will be repaired at the Contractor's expense. Retest repaired areas.

346  
347  
348 **END OF SECTION**  
349

1  
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**SECTION 04 01 20.91**  
**MASONRY RESTORATION AND REPAIR**

**PART 1 – GENERAL**

**Part 1 – General**

- Work Included
- Quality Assurance
- Submittals
- Delivery, Storage and Handling

**Part 2- Products**

- Masonry Materials
- Mortar Materials
- Mortar Mixes
- Masonry Anchors

**Part 3 – Execution**

- Tuckpointing
- CMU Replacement and Repair
- Glass Block
- New CMU Walls

23 Applicable provisions of Division 01 shall govern work of this section.

24  
25 **Highlighted portions in specifications signifies WORK BY OWNER – NOT IN CONTRACT**

26  
27 **WORK INCLUDED**

28  
29 Include all labor, materials, services and incidentals necessary for the completion of this section of the work.

30  
31 The work outlined in this section shall include everything necessary for and incidental to executing and completing all  
32 work as shown and herein specified including mortar materials, mortar mixes and tuckpointing.

33  
34 The general extent of the exterior masonry and related work;

- Selective removal and replacement of glass block at stair towers
- Build a new CMU wall at the bottom of the SW stair tower.

35  
36  
37 **WORK BY OWNER – NOT IN CONTRACT**

- Rebuild of CMU walls at the roof level of the stair towers,
- Repoint and repair CMU walls at the roof level stair towers

38  
39  
40  
41 Involved for various items of work will be the exterior masonry, as specified herein and indicated on the drawings.

42  
43 It is the general intent of these plans and specifications to restore the exterior walls and related items to their original  
44 appearance when the work is complete.

45  
46 All work shall be performed by skilled mechanics who are considered specialists in the field of work similar to that  
47 required under this contract and who have a minimum of five years experience in this type of work. Any damage caused  
48 by the Contractor shall be corrected at his expense to the satisfaction of the Owner. This set of contract documents  
49 contemplates and comprises a complete and workmanlike job as herein indicated and anything to that result is hereby  
50 included the same as if particularly mentioned.

1  
2 **QUALITY ASSURANCE**

3  
4 **INDUSTRY STANDARDS, SPECIFICATIONS AND CODES**

5  
6 **GENERAL**

7 Specification for Masonry Structures (ACI 530.1-02/ASCE 6-02/-95TMS 602-02)

8  
9 Cold Weather Masonry Construction, PCA IS248

10  
11 Hot and Cold Weather Masonry Construction, PCA LT232 (published by the Masonry Industry Council)

12  
13 Standard Specification for Admixtures for Masonry Mortars, ASTM C 1384

14  
15 Comply with all provisions of the following codes and standards except as modified herein.

16  
17 All referenced codes and standards including all revisions and commentaries shall be the most currently adopted  
18 as of the date of these contract documents.

19  
20 **AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)**

21  
22 Specific ASTM numbers are noted in later text.

23  
24 **SUBMITTALS**

25  
26 Submit in accordance with Division 1.

27  
28 **SAMPLES**

29  
30 Submit mortar samples to Engineer upon request for approval of color and texture. Mortar samples to be submitted to  
31 Owner and E.O.R. for approval.

32  
33 **MORTAR TESTS**

34  
35 The autoclave expansion of the cementitious portion of the mortar materials when mixed in proportions required under  
36 "Mortar Mixes", shall not exceed ½% when tested according to ASTM C-151. The air content of any mortar required  
37 under "Mortar Mixes" shall not exceed 5% when tested according to ASTM C-231 and/or ASTM C-173.

38  
39 **DELIVERY, STORAGE AND HANDLING**

40  
41 Carefully pallet or neatly stack CMU on the site undamaged and adequately protected. Upon delivery of CMU to the job  
42 site, compare with the approved sample and report any deviations immediately to Owner. Conform to requirements  
43 specified herein. Cull-out, credit and immediately remove from the site any defective CMU. Re-sort or cull as necessary  
44 especially when plant palletted, to avoid spotty or irregular ranges of color or texture in the finished wall.

1  
2  
3 **PART 2 – PRODUCTS**  
4

5 **MASONRY MATERIALS**  
6

7 **CONCRETE MASONRY UNITS**  
8

9 Concrete Block Masonry Units: (CMU)

10 Shall be manufacturer's standard units with nominal face dimensions 16" long x 8" high (15-5/8" x 7-5/8" actual). Units  
11 shall conform to ASTM C-90 or ASTM C-145, Grade N-I. Lightweight units shall be made with approved aggregate  
12 conforming to ASTM C-331.

13 Special Shapes: Provide where required for lintels, corners, jambs, control joints, headers, bonding and other special  
14 conditions.

15  
16 **GLASS BLOCKS UNITS**  
17

18 Shall be partially evacuated, hollow masonry units made of clear, colorless glass without a highly reflective oxide surface  
19 coating. Shape and size shall be as detailed. Manufacturer: Pittsburgh-Corning: 8 x 8x 4 Argus Parallel Flutes Series,  
20 and 12 x 12 x 4 Vue Series.

21  
22 **JOINT REINFORCEMENT**  
23

24 Horizontal reinforcement shall be standard ladder-type with #9 gauge side rods and cross rods  
25

26 **MORTAR MATERIALS**  
27

28 **PORTLAND CEMENT**  
29

30 Shall conform to ASTM C-150, Type I, except Type III may be used for cold weather protection. Only one brand and  
31 kind of portland cement from one source shall be used for the work. Brands are subject to approval based on mortar  
32 color desired and obtainable by use of the various brands readily available. No white cement or non-staining cement  
33 should be required.

34  
35 **HYDRATED LIME**  
36

37 Shall be pressure hydrated non-air entrained and conform to ASTM C-207, Type S.  
38

39 **SAND**  
40

41 Shall be clean, free from loam, silt, vegetable matter, salts and other injurious substances and shall conform to ASTM  
42 C-144 except that sand for mortar in joints 1/4" or less shall all pass a No. 16 sieve. Sand is further subject to approval of  
43 the Engineer based on mortar color desired and obtainable by use of local sands readily available. All sand shall be from  
44 one source.

45  
46 **WATER**  
47

48 Shall be potable, fresh, clean, clear and free of injurious amounts of oil, acid, alkali, salts, organic matter or other  
49 detrimental substances and handled in clean containers.

50  
51 **PLASTICIZER**  
52

53 Shall be Master Builders Company's "Omicron Type X Mortarproofing", Sonneborn Building Products "Hydrocide



1 Powder", W.R. Grace and Company, "Hydratite" or approved non-air entraining equal. Use shall be in accordance with  
2 manufacturer's printed instructions.

3  
4 **OTHER ADMIXTURES**

5  
6 Shall not be used at any time and will not be knowingly approved. Use of any air entraining admixtures, chlorides or  
7 nitrates with or without approval, will be sufficient cause to require removal and replacement of all masonry work  
8 containing or treated with same.

9  
10 **MORTAR MIXES**

11  
12 All equipment for mixing, transporting and applying mortar shall be clean and free from hardened mortar, dirt, ice or  
13 other foreign matter.

14  
15 Measure materials for mortar by volume in a manner whereby proportions can be controlled within 2%. Mix  
16 cementitious materials, powdered admixtures and masonry sand dry. Add admixtures in solution and water to bring to  
17 proper consistency for use. Mix materials in an approved type machine mixer of adequate capacity for a minimum time  
18 of 5 minutes after all materials have been introduced and until materials are evenly distributed throughout the batch and  
19 the mixture is uniform in color and consistency.

20  
21 Use maximum water consistent with good workability and freedom from smearing the face of masonry work. Use no  
22 mortar that has stood more than one hour after initial mixing. Re-temper mortar less than one hour old as necessary to  
23 maintain its workability, but use before it is one hour old or otherwise discarded. No anti-freeze ingredient or  
24 contaminate of any type permitted.

25  
26 Type 1: Mortar for exterior walls and load bearing partitions: Shall conform to ASTM C-270, Type S (lime  
27 cement) Mortar. (1:1/2:4-1/2)

28  
29 Tuckpointing mortar shall be ASTM C-270, pre-hydrated, Type "N" Lime-Cement Mortar (1:1:6) or a  
30 non-shrink tuckpointing mortar approved by the A/E before the bid date. To pre-hydrate mortar, thoroughly  
31 mix all ingredients dry. Then mix again adding only enough water to produce a damp unworkable mix which  
32 will retain its form when pressed into a ball. After keeping mortar in this dampened condition for one to two  
33 hours add sufficient water to bring it to the proper consistency; that is, somewhat drier than conventional masonry  
34 mortar

35  
36 Glass Block Use Type S mortar with integral type waterproofer added to the mortar mix.

37  
38 The proportions listed above with three figures given are (Portland cement:lime:damp, loose sand) respectively by  
39 volume. The proportions are listed only as samples for the required type mortars and shall be modified as necessary  
40 within tolerances to suit the particular masonry sand being used.

41  
42 **MASONRY ANCHORS**

43  
44 Provide Dur-o-flex, spiral flexible stainless steel wall stabilization anchors, installed in Dur-o-pair epoxy by Dur-o-wall  
45 Inc. or equal.

46  
47 **PART 3-EXECUTION**

48 **WORK BY OWNER – NOT IN CONTRACT**

49 **TUCKPOINTING**

50  
51 Any mortar joint that is loose, crumbled, cracked, badly weathered, (deeper than 1/8" behind masonry surface) or  
52 unbonded to adjacent masonry units shall be deemed "defective". Any mortar joint that lacks mortar or has lost bond  
53 shall be deemed "profusely defective".

1  
2 All cracks, "defective" and "profusely defective" mortar joints shall be cut out or ground out the full width of the joint to  
3 a minimum depth of ¾". Where the mortar is broken or loose beyond a depth of ¾", remove to the full depth of the  
4 breakage where firm solid mortar is encountered and tuckpoint. All joints must be cut clean of unsound mortar material  
5 in a square manner full depth of cut. Furrow shaped joints will not be acceptable.  
6

7 The cutting out of joints shall be done with suitable tools, either hand tools or mechanical equipment, in such a manner as  
8 will not loosen adjacent joints or injure the edges or corners of the masonry units. Where the mortar is tightly bonded at  
9 one side of the joint and if the contour permits, the cutting shall be done with portable electric grinders with abrasive  
10 wheels to minimize spalling at the edges of the masonry units. It will be the A/E's prerogative to forbid the use of tools or  
11 methods which do not produce the quality of work which is expected and to insist on methods and tools which will do the  
12 work properly.  
13

14 After the joint has been cutout, all loose material shall be removed by brush, air jet or water stream. Following this  
15 cleaning, the joint shall be thoroughly moistened and damp but without free water on the surface at the time of pointing.  
16 At that time, the joint shall be completely filled with mortar placed in layers and firmly pressed into place. Following at  
17 the proper interval, the joint shall be compressed and tooled with a smooth rounded iron of selected width to produce a  
18 smooth dense surface, very slightly concave and tightly pressed against the edges of the masonry units.  
19

20 All necessary protection shall be provided to prevent damage to roofs and adjacent areas.  
21

22 Pointing shall only be done when the outside air temperature is 40°F or above and the wall is given proper protection  
23 from the elements.  
24

25 The finished joint shall match the adjacent existing untreated joints as closely as possible in regard to appearance.  
26

27 **WORK BY OWNER – NOT IN CONTRACT**  
28 **CMU REPLACEMENT & REPAIR**  
29

30 Establish lines, levels and coursing. Protect from disturbance.  
31

32 Provide temporary bracing during erection of masonry work. Maintain in place until building structure provides  
33 permanent bracing.  
34

35 Maintain masonry courses to uniform width. Make vertical and horizontal joints equal and of uniform thickness.  
36

37 Lay masonry units in running bond. Coursing; New coursing shall match adjacent existing coursing. Form concave  
38 mortar joints in exposed to view surfaces and flush elsewhere.  
39

40 Install Dur-o-flex masonry anchor system when performing full width wall removal as noted on plans. Dur-o-flex anchor  
41 system to be installed at a min. of 24"o.c. horizontal and 16"o.c. vertical.  
42

43 Lay masonry in full bed of mortar, properly jointed with other work. Buttering corners of joints and deep or excessive  
44 furrowing of mortar joints is not permitted.  
45

46 Fully bond intersections and external and internal corners.  
47

48 Do not shift or tap masonry units after mortar has taken initial set. Where adjustment must be made, remove mortar and  
49 replace.  
50

51 Remove excess mortar.  
52

1 Perform jobsite cutting with proper tools to provide straight unchipped edges. Take care to prevent breaking masonry unit  
2 corners or edges.

3  
4 Remove and replace masonry units which are loose, chipped, broken, stained or otherwise damaged, or if units do not  
5 match adjoining units as intended. Provide new units to match adjoining units and install in fresh mortar or grout,  
6 pointed to eliminate evidence of replacement.

## 7 8 **GLASS BLOCK**

9  
10 Remove existing glass block as shown on the drawings taking care not to damage adjacent block.

11  
12 Do not remove existing joint reinforcement in the existing joint.

13  
14 Clean surfaces of adjacent block and install anchors to adjacent concrete walls.

15  
16 Place mortar and install glass block per the manufacturers' instructions.

17  
18 Remove surplus mortar from the glass block and clean glass.

## 19 20 **NEW CMU WALLS**

### 21 22 **EXAMINATION**

23  
24 Inspect work of other sections on which or to which unit masonry is to be built, supported or attached to determine  
25 completeness and proper alignment to receive unit masonry. Do not commence work until all defective work has been  
26 corrected.

### 27 28 **GENERAL**

29  
30 Reinforced hollow unit masonry is that type of construction made with hollow masonry units in which certain cells are  
31 continuously filled with concrete or grout, and in which reinforcement is embedded. Only Type M or Type S mortar  
32 consisting of a mixture of portland cement, hydrated lime and aggregate shall be used.

### 33 34 **PREPARATION**

35  
36 Verify that items provided by other sections of work are properly sized and located.

37  
38 Establish lines, levels and coursing. Protect from disturbance.

39  
40 Provide temporary bracing during erection of masonry work. Maintain in place until building structure provides  
41 permanent bracing.

### 42 43 **CONSTRUCTION REQUIREMENTS**

44  
45 Horizontal joint reinforcement is required for all single wythe CMU walls. Minimum horizontal reinforcement shall be  
46 standard ladder-type with #9 gauge side rods and cross rods. Spacing shall be 16" o.c. or less if coursing is not in 8"  
47 module.

48  
49 All reinforced hollow unit masonry shall be built to preserve the unobstructed vertical continuity of the cells to be filled.  
50 Walls and cross webs forming such cells to be filled shall be full-bedded in mortar to prevent leakage of grout. Bond  
51 shall be provided by lapping units in successive vertical courses. All laps shall be in accordance with ACI 318.

52  
53 Vertical cells to be filled shall have vertical alignment sufficient to maintain a clear, unobstructed continuous vertical cell

1 measuring not less than 2" by 3".  
2  
3 Vertical cells containing reinforcement shall be filled solidly with grout. Grout shall be poured in lifts of 8' maximum  
4 height. All grout shall be consolidated at time of pouring by puddling or vibrating and then reconsolidated by again  
5 puddling later, before plasticity is lost.  
6  
7 At the time of placement, grout shall have a minimum slump of 8".  
8  
9 When total grout pour exceeds 8' in height the grout shall be placed in 4' lifts and special inspection during grouting shall  
10 be required. Minimum cell dimension shall be 3".  
11  
12 When grouting is stopped for one hour or longer, horizontal construction joints shall be formed by stopping the pour of  
13 grout not less than ½" below the top of the uppermost unit grouted.  
14  
15 The grout compressive strength shall be greater than or equal to the specified compressive strength of the masonry units.  
16  
17 No admixtures will be allowed without prior approval by the A/E.  
18  
19 COURSING  
20  
21 Place masonry to lines and levels indicated.  
22  
23 Maintain masonry courses to uniform width. Make vertical and horizontal joints equal and of uniform thickness.  
24  
25 Lay concrete masonry units in running bond. Course one block unit and one mortar joint to equal 8". Form concave  
26 mortar joints in exposed to view surfaces and flush elsewhere.  
27  
28 PLACING AND BONDING  
29  
30 Generally use standard size CMU throughout.  
31  
32 Construct face CMU piers between windows using both standard and modular units as required to maintain uniform  
33 joints.  
34  
35 Patch, in-fill and tooth at existing building, using colored mortar (if required to match).  
36  
37 Lay masonry in full bed of mortar, properly jointed with other work. Buttering corners of joints and deep or excessive  
38 furrowing of mortar joints not permitted.  
39  
40 Fully bond intersections, and external and internal corners.  
41  
42 Do not shift or tap masonry units after mortar has taken initial set. Where adjustment must be made, remove mortar and  
43 replace.  
44  
45 Remove excess mortar.  
46  
47 Perform jobsite cutting with proper tools to provide straight unchipped edges. Take care to prevent breaking masonry unit  
48 corners or edges.  
49  
50 Cut mortar joints of masonry units flush where resilient base is scheduled or cavity insulation vapor barrier adhesive is  
51 applied.  
52  
53 Isolate masonry partitions from vertical structural framing members with a control joint as indicated.

1  
2 The top course of all walls or joist bearing point unless otherwise noted shall be a bond beam filled with concrete (not  
3 grout) with two #5 reinforcing bars continuous.  
4

5 All pilasters noted shall be filled solid with concrete (not grout) and include four #4 reinforcing bars minimum vertical  
6 unless noted otherwise.  
7

#### 8 CONTROL JOINTS 9

10 Do not continue horizontal joint reinforcing across control joints.  
11

12 Form control joints as work progresses, minimum 1/2" wide or as detailed. Use removable joint form providing positive  
13 bond break and preventing accumulation of mortar droppings.  
14

15 Remove form and leave joint free and clear of any obstructions.  
16

#### 17 BUILT-IN WORK 18

19 As work progresses, build-in metal door frames, fabricated metal frames, window frames, wood nailing strips, anchor  
20 bolts, plates, reglets and other items to be built in the work supplied by other sections.  
21

22 Build-in items plumb and level.  
23

24 Bed anchors of metal door and glazed frames in mortar joints. Fill frame voids solid with mortar. Fill masonry cores  
25 with grout minimum 8" from framed openings.  
26

27 Do not build-in organic materials subject to deterioration.  
28

#### 29 CUTTING AND FITTING 30

31 Cut and fit masonry units for chases, pipes, conduit, sleeves, ductwork, door and window openings. Cooperate fully with  
32 other sections of work to ensure correct size, shape and location.  
33

34 Obtain A/E's review prior to cutting or fitting any area which is not indicated on drawings or which may impair  
35 appearance or strength of masonry work.  
36

#### 37 FIELD QUALITY CONTROL 38

39 Clean completed work as the work progresses to avoid excessive final cleaning.  
40

41 Maintain protective boards at exposed external corners which may be damaged by construction activities.  
42

43 Provide protection without damaging completed work.  
44

45 At day's end, cover unfinished walls to prevent moisture infiltration.  
46

End of Section

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**SECTION 05 50 00**  
**METAL FABRICATIONS**

**PART 1 – GENERAL**

**Part 1 – General**

- Summary
- References
- Submittals
- Delivery, Storage and Handling

**Part 2 – Products**

- General
- Materials
- General Fabrication

**Part 3 – Execution**

- Erection
- Schedule of Items

Applicable provisions of Division 01 shall govern all work of this section.

**SUMMARY**

Include all materials, labor, services and incidentals necessary for the completion of this section of the work.

Custom fabricated, ferrous metal items 14 gauge and heavier, prime paint finished.

Pre-fabricated steel, including but not limited to toilet room grab bars, wire mesh and chainlink fencing, support posts & hardware for pedestrian control, stair handrails & the replacement of corroded imbedded vertical railing sections with new surface base assemblies and miscellaneous steel sections for installation of items shown on the drawings.

Refer to Schedule at the end of this section.

Rolled steel plates, shapes and bars, tubular steel and bolts shall be of domestic manufacture and shall be clean and free of rust and/or pitting.

**REFERENCES**

**INDUSTRY STANDARDS, SPECIFICATIONS AND CODES**

**GENERAL**

Comply with all provisions of the following codes and standards except as modified herein.

All referenced codes and standards including all revisions and commentaries shall be the most currently adopted as of the date of these contract documents.

**AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)**

- Specification for Structural Steel Buildings - Allowable Stress Design and Plastic Design
- Code of Standard Practice for Steel Buildings and Bridges
- Specification for Structural Joints Using ASTM A-325 and A-490 Bolts; approved by the Research Council on Structural Connections of the Engineering Foundation
- Structural Steel Detailing

55 AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

56

57 Specific ASTM numbers are noted in later text.

58

59 AMERICAN WELDING SOCIETY (AWS)

60

61 D1.1 Structural Welding Code - Steel

62 D1.3 Structural Welding Code - Sheet Steel

63

64 **SUBMITTALS**

65 Submit in accordance with General Conditions.

66

67 **SHOP DRAWINGS**

68

69 Submit shop drawings of metal fabrications and prefabricated items.

70

71 Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners and accessories.

72

73 Include erection drawings, elevations and details where applicable.

74

75 Indicate welded connections using standard AWS welding symbols. Indicate net weld lengths.

76

77 Any fabrication from shop drawings that have not been approved by the Engineer are at fabricator's own risk.

78

79 **DELIVERY, STORAGE AND HANDLING**

80

81 Handle steel with care to avoid bending, twisting or other damage.

82

83 Unload under supervision of Contractor.

84

85 Place on blocking to keep steel off ground.

86

87 Store steel to allow drainage of water from all parts.

88

89

**PART 2 – PRODUCTS**

90

91 **GENERAL**

92 Provide and install items as listed in Schedule at end of this section, complete in respect to function as intended.

93

94 **MATERIALS**

95 **STEEL STRUCTURAL SHAPES**

96

97 Shall conform to ASTM A-6 and A-36.

98

99 **STAINLESS STEEL STRUCTURAL SHAPES**

100

101 Shall conform with A304 Alloy

102

103 **PIPE**

104

105 Shall be welded and seamless steel pipe conforming to ASTM A-53, Grade B, Schedule 40, plain finish.

106

107 **BOLTS, NUTS AND WASHERS**

108

109 Shall be high strength steel type conforming to ASTM A-325 unless noted otherwise.  
110 CHAINLINK FENCING  
111  
112 2" Std. Industrial Grade chainlink fence, 9 ga. coated wire w/ PVC coating, color selection by Owner.  
113  
114 WELDING MATERIALS  
115  
116 Shall be applicable AWS D1.1, type required for materials being welded.  
117  
118 EXPANSION BOLTS  
119  
120 Stainless Steel Hilti Kwik Bolt III or approved equal  
121  
122 PRIMER PAINT  
123  
124 Exterior Exposure: Shall be " Tnene-Zinc 90-96" by Tnemec Company, Inc.  
125  
126 **GENERAL FABRICATION**  
127 Verify dimensions on site prior to shop fabrication.  
128  
129 Fit and shop assemble sections in largest practical sizes.  
130  
131 Accurately form and fit components and connections. Grind exposed edges and welds smooth and flush.  
132  
133 Supply components required for proper anchorage of metal fabrications. Fabricate anchorage and related components of  
134 same material and finish as metal fabrication unless otherwise specified in Schedule herein.  
135  
136 Thoroughly clean surfaces of rust, scale, grease and foreign matter prior to prime painting.  
137  
138 Prime paint items as scheduled. Do not shop prime surfaces in contact with concrete or requiring field welding. Shop  
139 prime one coat at a rate to provide a uniform dry film thickness of 4.0 mils.  
140  
141  
142 **PART 3 – EXECUTION**  
143  
144 **ERECTION**  
145 Obtain Engineer's permission prior to site cutting or making adjustments which are not part of scheduled work.  
146  
147 Install items square and level, accurately fitted and free from distortion or defects.  
148  
149 Make provision for erection stresses by temporary bracing. Keep work in alignment.  
150  
151 Replace items damaged in course of installation.  
152  
153 Perform field welding in accordance with AWS D1.1.  
154  
155 After installation, touch up field welds and scratched and damaged prime painted surfaces. Use a primer consistant with  
156 shop coat.  
157  
158  
159  
160  
161  
162



163	<b>SCHEDULE OF ITEMS</b>
164	Supply and install metal fabrications listed herein complete with anchorage and attachments necessary for installation.
165	
166	1. Stair Handrails and anchors
167	
168	2. Hot dipped galvanized steel closure angle and anchors at glass block openings
169	
170	3. Vinyl coated galvanized chain link closure at stairs, including galvanized tubes, pipes and rails & connectors.
171	
172	3. Galvanized wire mesh panels and angles for pedestrian barrier between stair runs
173	
174	4. 1 ¼" O.D. Stainless steel toilet-room grab bars.
175	
175	5. Steel mesh at stair closures
176	
176	6. New railing base vertical assemblies
177	
178	End of Section
179	

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3 **SECTION 07 18 17**  
4 **BROADCAST EPOXY OVERLAY**  
5

6 **Part 1 – General**

7 Summary  
8 Related work and Requirements  
9 Quality Assurance  
10 Delivery, Storage and Handling  
11 Job Conditions  
12 Submittals  
13 Warranty

14 **Part 2 – Products**

15 Manufacturers  
16 Materials  
17 Performance Criteria

18 **Part 3 – Execution**

19 Surface  
20 Mixing & Application  
21 Cleaning  
22

23 “Applicable provisions of Division 1 shall govern work under this section.”  
24

25 **PART 1 - GENERAL**

26  
27 **SUMMARY**

28 This specification describes the application of a waterproof, slip resistant wearing surface using a low  
29 modulus epoxy binder and selected aggregate. Install on stair treads and intermediate stair landings and a  
30 portion of the raised slab on the parking levels adjacent to stairs. Install over cast original cast iron stair  
31 nosings, do not install over aluminum nosings, install around aluminum nosings.  
32

33 **RELATED WORK AND REQUIREMENTS**

34 02 41 19 – Selective Structure Demolition  
35 07 19 10 – Epoxy Crack Healer – Penetrating Sealer  
36

37 **QUALITY ASSURANCE**

38 Manufacturing qualifications: The manufacturer of the specified product shall be ISO 9001 certified and have  
39 in existence a recognized ongoing quality assurance program independently audited on a regular basis.

40 Contractor qualifications: Contractor shall be qualified in the field of concrete repair and protection with a  
41 successful track record of 5 years or more. Contractor shall maintain qualified personnel who have received  
42 product training by a manufacturer's representative.

43 Install materials in accordance with all safety and weather conditions required by manufacturer or as  
44 modified by applicable rules and regulations of local, state and federal authorities having jurisdiction.  
45 Consult Material Safety Data Sheets for complete handling recommendations.

46 **DELIVERY, STORAGE, AND HANDLING**

47 All materials must be delivered in original, unopened containers with the manufacturer's name, labels,  
48 product identification, and batch numbers. Damaged material must be removed from the site immediately.

1 Store all materials off the ground and protect from rain, freezing or excessive heat until ready for use.  
2 Condition the specified product as recommended by the manufacturer.

3 **JOB CONDITIONS**

4 Ensure that substrate surface and ambient air temperature are minimum of 50 degrees F (10 degrees C) and  
5 rising at application time and remain above 50 degrees F (10 degrees C) for at least 24 hours after  
6 application. Ensure that frost or frozen surfaces are thawed and dry.

7 Do not apply material if snow, rain, fog, and mist are anticipated within 12 hours after application. Allow  
8 surfaces to attain temperature and conditions specified before proceeding with overlay application.

9 Do not apply over sealant joints, control joints, or other materials that will be affected by solvent.

10 Hot-Weather Application:

11 In hot weather, precondition materials to 65 to 70 degree F before mixing and applying.

12 Continuous mixes of 30 gallons can be mixed every 3 minutes but shall be dumped within 6 minutes, be  
13 spread within 10 minutes of placement, and broadcast aggregate within 20 minutes.

14 Protection: Precautions should be taken to avoid damage to any surface near the work zone due to mixing  
15 and handling of the specified coating.

16  
17 **SUBMITTALS**

18 Submit per division 1 Requirements

19 **WARRANTY**

20 Provide a written warranty from the manufacturer against defects of materials for a period of five (5) years,  
21 beginning with date of substantial completion of the project.

22  
23 **PART 2 - PRODUCTS**  
24

25 **MANUFACTURER**

26 Subject to compliance with requirements, provide products from the following manufacturer:

27 BASF Building Systems

28 889 Valley Park Drive

29 Shakopee, MN 55379

30 Customer Service: 800- 433-9517

31 Technical Service: 800-243-6739

32 Direct Phone: 952-496-6000

33 Internet: [www.BASFbuildingsystems.com](http://www.BASFbuildingsystems.com)

34  
35 Specifications and Drawings are based on manufacturer's proprietary literature from BASF Building  
36 Systems. Other manufacturers shall comply with minimum levels of material, color selection, and detailing  
37 indicated in Specifications or on Drawings. Architect will be sole judge of appropriateness of substitutions.

38 **MATERIALS**

39 Overlay: A rapid-curing, skid-resistant, epoxy-based concrete overlay system. Mixed with aggregate it is  
40 designed for use as a repair mortar.

41 Acceptable Product: Trafficguard EP35 by BASF Building Systems.

1 Color: Dark Amber.

2  
3 Aggregate: Use Medium Black Beauty aggregate manufactured by Reed Minerals, Mechanicsburg, PA  
4 17055, in bids. Owner to choose final aggregate after contract is awarded and samples from contractor have  
5 been reviewed. Costs will be adjusted at that time if required.  
6

7 **PERFORMANCE CRITERIA**

8 Viscosity, poise, at 75 degrees F (24 degrees C) #3 spindle at 20 rpm: 10 – 25 per Brookfield.

9 Compressive Strength, ASTM C579:

10 3 hours: 1,000 psi (7.0 MPa).

11 24 hours: 5,000 psi (34.5 MPa).

12 7 days: 6,000 psi (41 MPa).

13 Compressive strength, ASTM D 695 at 7 days: 6,500 psi (51.7 MPa).

14 Compressive modulus, ASTM D 695: 6.5 x 10 to the 4th psi (448 MPa).

15 Tensile Strength, ASTM D638:

16 7 days: 2500 (17.2 MPa).

17 Tensile Strength, ASTM D638:

18 7 days: 30 percent.

19 Bond strength, ASTM C882, moist at 14 days: 2,500 psi (17.2 MPa).

20 Water absorption, ASTM D 570, 14 day cure, 24 hour immersion: 0.4 percent.

21 Thermal compatibility, ASTM C 884, 7 day cure: No delamination or horizontal cracks.

22 Permeability of chloride ions, AASHTO T 277, 28 day cure: 73 coulombs (negligible).

23 Setting Time, ASTM C191, at 72 degrees F (22 degrees C), 50 percent relative humidity

24 Initial: 15 minutes.

25 Final: 30 minutes

26 \* Aggregate used shall conform to ASTM C-190.

27  
28 **PART 3 – EXECUTION**

29 **SURFACE**

30 Contractor to repair all delaminations and associated structural defects in surfaces prior to application of  
31 broadcast system

32  
33 Prepare all surfaces to receive broadcast system by gritblasting concrete and all imbedded metal. Remove  
34 gritblasting debris by sweeping & vacuum.

35  
36 Tape all vertical surfaces adjacent to horizontal application areas. Provide a dam of tape or other material at  
37 nosing of stairs.  
38

1 Apply Epoxy Healer Sealer Penetrating Sealer to all intermediate stair landing slabs prior to the installation of  
2 the broadcast aggregate system

3 **MIXING & APPLICATION**

4 Precondition all components to 70 degrees F (21 degrees C) for 24 hours before using.

5 Mix and apply per written manufacturers instructions

6 Overlay by Broadcast Aggregate Method:

7 Spread the mixed overlay material onto the substrate with a notched squeegee at a rate of 40 sf/gallon (1.0 sm/L)  
8 or 2.5 gallons/100 sf. Place the epoxy to permit a continuous operation.

9  
10 Begin the aggregate broadcast immediately, but stop to maintain a wet edge. Broadcast to complete rejection  
11 (approximately 1.1 lb/sf (5.4 kg/sm). If wet spots develop, immediately broadcast additional aggregate until a dry  
12 surface is re-established.  
13

14 **CURING:**

15 Allow proper curing of repair mortar, conducted per ACI 308 “Standard Practice for Curing Concrete.”

16 Where ambient conditions (high temperature, low humidity, or moderate to high winds) may cause rapid  
17 moisture loss, use an ASTM C309-compliant curing compound, sprayed onto surface of finished repair in  
18 continuous film.

19 Apply curing compound when surface cannot be marred by application process.

20 **CLEANING**

21 Clean wet repair mortar material from tools and equipment with water or solvent. Remove cured materials  
22 mechanically.

23 Clean up and properly dispose of excess aggregate & debris remaining on Project site related to application.

24 Remove temporary coverings and protection from adjacent Work areas.

25 **PROTECTION**

26 Protect repair mortar system and traffic membrane from damage during construction.

27 Protect repair mortar system and traffic membrane from freezing for 24 hours after application.

28 Protect surface prior to installation of finish topping from damage by use of plywood, Masonite, or other suitable  
29 protection course, until Substantial Completion.

30

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32

END OF SECTION

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**SECTION 07 19 10**  
**WATER REPELLENTS**  
**EPOXY CRACK HEALER - PENETRATING SEALER**

31  
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35  
36

**Part 1 – General**

Summary  
Related Work and Requirements  
Reference  
Quality Assurance  
Delivery, Storage and Handling  
Job Conditions  
Submittals  
Warranty

37  
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40

**Part 2 – Products**

Materials

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49

**Part 3 – Execution**

Pre-Installation Conference  
Acceptance of Concrete Surfaces  
Slab Moisture Testing  
Surface Preparation  
Mixing & Application  
Application Procedure  
Leak Testing  
Cleaning

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51  
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56

“Applicable provisions of Division 1 shall govern work under this section.”

**PART 1 - GENERAL**

**SUMMARY**

This specification describes the individually treat large cracks by gravity feeding epoxy until rejection, then flooding of entire deck for bonding of small cracks & sealing of concrete surface by topical treatment with a 100% solids epoxy resin. A broadcast of silica sand to be applied into the uncured surface of the flood coat to provide slip resistance and or a mechanical bond with future broadcast overlay system.

**RELATED WORK AND REQUIREMENTS**

02 41 19 – Selective Structure Demolition  
07 92 13 – Elastomeric Joint Sealants

**REFERENCES**

**INDUSTRY STANDARDS, SPECIFICATIONS AND CODES**

**GENERAL**

Comply with all provisions of the following codes and standards except as modified herein.

All referenced codes and standards including all revisions and commentaries shall be most currently adopted as of the date of these contract documents.

**AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)**

Specified AASHTO numbers are noted in later text.

**AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)**

1 Specific ASTM numbers are noted in later text.

2  
3 AMERICAN CONCRETE INSTITUTE INTERNATIONAL

4  
5 Manual of Concrete Practice 201.2R

6  
7 Field Guide to Concrete Repair Application Procedures - RAP Bulletin #2

8  
9 ICRI (International Concrete Repair Institute)

10  
11 **QUALITY ASSURANCE**

12 Manufacturing qualifications: The manufacturer of the specified product shall be ISO 9001 certified and  
13 have in existence a recognized ongoing quality assurance program independently audited on a regular basis.

14  
15 Contractor qualifications: Contractor shall be qualified in the field of concrete repair and protection with a  
16 successful track record of 5 years or more. Contractor shall maintain qualified personnel who have received  
17 product training by a manufacturer's representative.

18  
19 Install materials in accordance with all safety and weather conditions required by manufacturer, or as  
20 modified by applicable rules and regulations of local, state and federal authorities having jurisdiction.  
21 Consult Material Safety Data Sheets for complete handling recommendations.

22  
23 **DELIVERY, STORAGE, AND HANDLING**

24 All materials must be delivered in original, unopened containers with the manufacturer's name, labels,  
25 product identification, and batch numbers. Damaged material must be removed from the site immediately.

26  
27 Store all materials off the ground and protect from rain, freezing or excessive heat until ready for use.

28  
29 Condition the specified product as recommended by the manufacturer.

30  
31 **JOB CONDITIONS**

32 Environmental Conditions: Do not apply material if it is raining, or if such conditions appear to be  
33 imminent. Minimum application concrete surface temperature: 50°F and rising.

34  
35 Protection: Precautions should be taken to avoid damage to any surface near the work zone due to mixing  
36 and handling of the specified product. Provide manufacturer's recommended PPE for all workers handling  
37 or near the epoxy operation.

38  
39 **SUBMITTALS**

40 Submit manufacturer's literature, to include: Product Data Sheets, and appropriate Material Safety Data  
41 Sheets (MSDS) per General Conditions of the Contract.

42  
43 **WARRANTY**

44 Contractor shall submit a One year, limited warranty against improper workmanship and defective  
45 materials, from date of completion. The Contractor will provide the owner with a copy of the maintenance  
46 guidelines as set forth by the National Parking Association (NPA) in the Parking garage Maintenance  
47 Manual. The owner will notify the Contractor within thirty (30) days of any defect.

1  
2  
3 **PART 2 – PRODUCTS**

4 **MATERIALS**

5 **Degreasing Agent:**

6 Citrus Degreaser and Cleaner by BASF Corporation, BASF Building Systems  
7 889 Valley Park Drive  
8 Shakopee, MN 55379  
9 www.BASFbuildingsystems.com

10 **Epoxy Crack Healer / Sealer:**

11 Epoxel GS Structural by BASF Corporation, BASF Building Systems  
12 889 Valley Park Drive  
13 Shakopee, MN 55379  
14 www.BASFbuildingsystems.com

15  
16 Sikadur 55 SLV by Sika Corporation,  
17 1682 Marion Williamsport Road,  
18 Marion, Ohio 43302  
19 www.sikaconstruction.com

20 or approved equal

21  
22 **Aggregate:**

23 Oven Dried Silica Quartz Sand Gradation per epoxy Manufacturer's requirements

24  
25  
26 **PART 3 – EXECUTION**

27  
28  
29 **PRE-INSTALLATION CONFERENCE**

30 A mandatory pre-installation conference is required prior to the start of operations for this section. The  
31 conference to be attended by the Contractor, Owners Representative and directed by the Engineer. Date of  
32 the conference to be coordinated between the Engineer & Contractor, in accordance with the pace of the  
33 work. Notification and signage for the application of Epoxy to the Users of the ramp will be by Dane  
34 County.

35  
36 **ACCEPTANCE OF CONCRETE SURFACES**

37 Commencement of coating installation implies acceptance of concrete and surface as suitable for coating  
38 application. Contractor to perform a topside chain drag of the entire surface that is scheduled to receive  
39 epoxy flood coat. Inject any delaminated topping prior to installation of the epoxy flood coat. Repair  
40 topside spalled concrete by conventional removal and replacement prior to installing epoxy sealer only  
41 under the direction of the Engineer.

42  
43 Perform moisture testing of any new patches (if present) per manufacturer's recommended procedures prior  
44 to installation of penetrating sealer at Contractors expense. Only commence with application of membrane  
45 system once desired testing results have been achieved. Provide in writing to the Engineer, testing  
46 procedures performed and testing results.

47  
48 **SURFACE PREPARATION**

49 Prior to installation the General Contractor and Installer shall meet & consult with local manufacturer's  
50 Representative prior to starting surface preparation work to verify proper installation & testing procedures  
51 are followed. This representative shall also inspect and approve the surface preparation prior to installation  
52 of membrane system.

53  
54 Surface must be clean and sound which, in all cases requires some form of preparation. Substrate must be  
55 prepared in accordance with manufacturer's printed instructions. Degrease and pressure wash existing  
56 membrane as recommended by the Manufacturer. Power washing equipment shall be a minimum of



1 4000psi with a rotating nozzle wand head (0 degree impact with 25 degree fan, typical).

2  
3 Special Preparation on Level 03 North bay: light shotblast finish to entire concrete slab surface to bare  
4 concrete in order to remove the painted markings of the accessible stalls and bike storage locker areas.  
5 Degrease slab as needed.

6  
7 **Existing routed and sealed random cracks & control / construction joints:**

8 Remove all existing sealant from previously routed random cracks / joints filled with sealant, rout crack /  
9 joint surfaces to grind all sealant from surfaces of concrete. Remove all existing perimeter cove sealant at  
10 the interface of the slab and a vertical wall, curb and columns; grind all bonded sealant from concrete  
11 surfaces (horizontal & vertical).

12  
13 Moving cracks or joints (as noted on plans) to be prepared similar to the existing routed and sealed cracks  
14 and additional protected by a sacrificial backer rod installed into crack to protect epoxy sealer from  
15 entering and bonding crack / joints

16  
17 **Unsealed cracks 1/8" wide or larger:**

18 V-Rout larger cracks, vacuum debris from crack upon completing grinding work. Fill cracks with oven  
19 dried sand prior to gravity feeding cracks.

20  
21 **MIXING AND APPLICATION**

22 Mixing the epoxy adhesive binder (per manufacturers written instructions): Typically, proportion 1 (one)  
23 part Component 'B' to 2 (two) parts Component 'A' by volume into a clean pail. Mix thoroughly for 3  
24 minutes with a low-speed drill (400-600 rpm) drill with Jiffy mixer until uniformly blended. Mix only that  
25 quantity which can be used within its pot life.

26  
27 **APPLICATION PROCEDURE**

28 Follow Manufacturer's written instructions for application. Large open cracks can be prefilled with oven  
29 dry sand and must be filled prior to the application. . If crack is reflected through the slab to the underside  
30 or edge of slab, seal cracks from underside, when accessible, to prevent leakage. Pour mixed epoxy resin  
31 over all visible cracks for 5 – 10 minutes, provide temporary dam if needed. Repeat the ponding procedure  
32 until the cracks are filled to rejection. Care must be taken not to allow the epoxy resin to set in these  
33 ponded areas prior to filling the crack to rejection, treat a limited amount of cracks to prevent the premature  
34 setting of material. Spread material out over the horizontal substrate and broadcast oven dried sand before it  
35 sets.

36  
37 After the larger visible cracks have been sealed, commence flood coat sealing the entire prepared slab  
38 surface. Pour the mixed epoxy resin onto the substrate in a serpentine line. Spread material using notched  
39 rubber squeegee and rollers. Allow material to penetrate the pores of the substrates. Re-apply epoxy until  
40 the substrate is sealed and all cracks are filled to rejection. The finished appearance of the substrate should  
41 be wet looking with no visible surface film. Broadcast the treated area with oven dry sand evenly over  
42 entire surface at a rate of 15 to 20 lbs./ per 100 sq. ft.. Allow material to cure for 6 hours @ 75° F before  
43 removal of any loose sand and then open to traffic.

44  
45 Prevent excess sand from entering all drains during broadcast and removal.

46  
47 Adhere to all limitations and cautions for the epoxy resin adhesive in the manufacturers current printed  
48 literature

49  
50 **LEAK TESTING**

51 Provide 24 hour notification to Engineer prior to performing leak testing. Upon removal of loose aggregate  
52 and proper cure time, the Contractor is to perform a water leak test of the section completed. Contractors  
53 observer below will mark any leaking areas on the under side of the slab where water is leaking through the  
54 slab, and contractor will at no extra charge re-apply epoxy sealer to individual cracks or localized flood  
55 coat or repair of sealant work to the effected area above the observed leak. Repeat water leak test  
56 procedure.

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**CLEANING**

The uncured epoxy resin adhesive can be cleaned from tools with approved solvent. The cured epoxy resin adhesive can only be removed mechanically.

Leave finished work and work area in a neat, clean condition without evidence of spillovers onto adjacent areas

**END OF SECTION**

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**ELASTOMERIC JOINT SEALANTS**  
**SECTION 07 92 13**

**PART 1 – GENERAL**

**Part 1 - General**

Description  
Related Work and Requirements  
System Performance  
Quality Assurance  
References  
Submittals  
Colors  
Delivery, Storage and Handling  
Project/Site Conditions

**Part 2 – Products**

Materials

**Part 3 – Execution**

Inspection  
Preparation  
Installation  
Testing  
Protection and Cleaning

Applicable provisions of Division 1 shall govern work of this section.

**DESCRIPTION**

Joint sealers, including joint backing, tape, or backer rod and primer.

**Base Bid Work:**

To include at least the following: 3/4” to 1” coves/cants at transition between slab and vertical surfaces (curbs, columns, walls, etc.)

Installation of sealant at interior and exterior perimeter or doors and windows

Labor, material, tools, equipment and services necessary for and reasonably incidental to the execution of caulking and sealant work shown on the Drawings or specified herein.

**RELATED WORK AND REQUIREMENTS**

02 41 19 - Selective Structure Demolition Concrete Removal  
07 19 10 – Epoxy Crack Healer – Penetrating Sealer (Base Bid Item)

**SYSTEM PERFORMANCE**

Provide joint sealers that have been produced and installed to establish and maintain watertight and airtight continuous seals.

**QUALITY ASSURANCE**

Employ only qualified workers thoroughly skilled and specially trained in the techniques of caulking, who can demonstrate to the satisfaction of the A/E their ability to fill joints solidly and neatly.

Single Source Responsibility for Joint Sealer Materials: Obtain joint sealer materials from a single manufacturer for each different product required.

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**REFERENCES**

Sealant and Waterproofers Institute  
"Sealants: The Professionals Guide".

**SUBMITTALS**

Submit in accordance with General Conditions of Contract.

**COLORS**

Grey from standard color palette (Base Bid Work).  
Choose a stock color to closely match urethane membrane topcoat color (Alternate Bid Work)

**Product Data:** Submit manufacturer's technical data for each joint sealer product required, including instructions for joint preparation and joint sealer application.

**DELIVERY, STORAGE AND HANDLING**

Deliver materials to project site in original unopened containers or bundles with labels informing about manufacturer, product name and designation, color, expiration period for use, pot life, curing time and mixing instructions for multi-component materials.  
Store and handle materials to prevent their deterioration or damage due to moisture, temperature changes, contaminants or other causes.  
Do not use caulking materials that have been stored for a period of time exceeding the maximum recommended shelf life of the materials.

**PROJECT/SITE CONDITIONS**

**Examination:**  
Examine Drawings and verify that all joints are properly detailed and proportioned for expansion and/or control, as recommended in writing by the sealant manufacturer. Immediately notify A/E of any deviations.

**Environmental Requirements:**

Do not proceed with the installation of sealants under adverse weather conditions when joint to be sealed is damp, wet or frozen, or when ambient and substrate temperatures are below or above the manufacturer's recommended limitations for installation. Consult with manufacturer for specific instructions before proceeding.

**GUARANTEE**

Provide written 5-year guarantee warranting all sealant work required under contract, to be watertight and free from defects in materials or workmanship for a (5 year) period of time from the date of substantial completion. A single-source performance written warranty shall be furnished by the sealant system manufacturer. The five year warranty shall cover cohesive and adhesive failure, weathering, abrasions or tearing, and water leakage through sealant joint for all sealant on the deck.

Include the following on the warranty submittal: State Agency/Location/Address, Parking ramp name, Dane County project number.

1  
2 **MATERIALS**

3 **General:** Provide joint sealers, joint fillers and other related materials that are compatible with one another and with  
4 joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and  
5 field experience.  
6

7 **Elastomeric Joint Sealants:** Provide manufacturer's standard chemically curing, elastomeric sealant of base polymer  
8 indicated which complies with ASTM C 920 requirements, including those referenced for Type, Grade, Class and Uses.  
9

10 **2-Component Polyurethane Sealant:**

11 VERTICAL & COVE JOINTS

12 FS TT-S-00227E, Class A, Type 2 (non-sag).

13  
14 Dymeric 240FC by Tremco Inc. Beachwood, OH. 44122 or

15  
16 Sikaflex -2c NS by Sika Corp. Lyndhurst, NJ. 07071 or

17  
18 Sonolastic NP2 by Sonneborn (BASF Corporation) Shakopee, MN 55379

19  
20 Or Approved Equal

21  
22 HORIZONTAL JOINTS

23 FS TT-S-00227, Class A, Type 1 (Self-leveling).

24  
25 Sikaflex -2c SL by Sika Corp. Lyndhurst, NJ. 07071 or

26  
27 Vulkem 900/901 by Tremco Inc. Beachwood, OH. 44122 or

28  
29 NP2 by Sonneborn (BASF Corporation) Shakopee, MN 55379

30  
31 Approved equal  
32

33 **Joint Sealant Backing:**

34  
35 **General:** Provide sealant backings of material and type which are non-staining; are compatible with joint substrates,  
36 sealants, primers and other joint fillers; and are approved for applications indicated by sealant manufacturer based on  
37 field experience and laboratory testing.  
38

39 **Plastic Foam Joint Fillers:** ASTM C 1330, Type C. Preformed, compressible, resilient, nonwaxing, nonextruding  
40 strips of flexible, nongassing plastic foam of material indicated below; nonabsorbent to water and gas and of size, shape  
41 and density to control sealant depth and otherwise contribute to producing optimum sealant performance.  
42

43 Provide closed-cell polyethylene foam, subject to approval of sealant manufacturer, for cold-applied sealants only.  
44 Open cell joint backing is **not permitted**.  
45

46 **Miscellaneous Materials:**

47  
48 **Primer:** Provide type recommended by joint sealer manufacturer where required for adhesion of sealant to joint  
49 substrates indicated. Verify whether primer is staining or nonstaining prior to application.  
50

51 **Cleaners for Nonporous Surfaces:** Provide nonstaining, chemical cleaners of type which are acceptable to  
52 manufacturers of sealants and sealant backing materials, which are not harmful to substrates and adjacent nonporous  
53 materials, and which do not leave oily residues or otherwise have a detrimental effect on sealant adhesion or in-service  
54 performance.  
55

1 **Masking Tape:** Provide non-staining, nonabsorbent type compatible with joint sealants and to surfaces adjacent to  
2 joints.  
3

### 4 **PART 3 – EXECUTION**

#### 5 **INSPECTION**

6  
7 Installer shall inspect joints indicated to receive joint sealers for compliance with requirements for joint  
8 configuration, installation tolerances and other conditions affecting joint sealer performance. Installer shall notify  
9 A/E in writing listing any conditions detrimental to performance of joint sealer work. Do not allow joint sealer work  
10 to proceed until unsatisfactory conditions have been corrected.

11  
12 Once work is complete in a bay, perform water test for leaking sealant joints in conjunction with requirements of  
13 section 07 19 10.

#### 14 **PREPARATION**

##### 15 **Surface Cleaning of Joints:**

16 Clean surfaces immediately before installing joint sealers to comply with recommendations of joint sealer manufacturers  
17 and the following requirements:  
18

19  
20 Remove all foreign material from joint substrates which could interfere with adhesion of joint sealer, including dust,  
21 paints, except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant  
22 manufacturer; oil, grease, waterproofing, water repellents, water surface dirt and frost.

23  
24 Clean concrete, masonry, unglazed surfaces of ceramic tile and similar porous joint substrate surfaces to produce a clean,  
25 sound substrate capable of developing optimum bond with joint sealers. Remove laitance and form release agents from  
26 concrete.  
27

28 Cut or grind to remove existing sealant. Grind substrate to remove existing sealant from concrete surface. Rout to  
29 configuration shown on drawings if existing joints do not comply with configuration shown on drawings. Provide dust  
30 collection procedures. Vacuum routed cracks prior to installing joint components.  
31

32 **Joint Priming:** Prime joint substrates where recommended by joint sealer manufacturer. Apply primer to comply with  
33 joint sealer manufacturer's recommendations. Confine primers to areas of joint /sealer bond, do not allow spillage or  
34 migration onto adjoining surfaces.  
35

36 **Masking Tape:** Use masking tape where required to prevent contact of sealant with adjoining surfaces which otherwise  
37 would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears.  
38 Remove tape immediately after tooling without disturbing joint seal.  
39

#### 40 **INSTALLATION**

41 **General:** Comply with joint sealer manufacturer's printed installation instructions applicable to products and  
42 applications indicated, except where more stringent requirements apply.  
43

44 **Elastomeric Sealant Installation Standard:** Comply with requirements of ASTM C 962 for use of joint sealants as  
45 applicable to materials, applications and conditions indicated.  
46

47 **Joint Sealant Backings:** Install joint fillers of type indicated to provide support of sealants during application and at  
48 position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths which  
49 allow optimum sealant movement capability. Do not leave gaps between ends of joint fillers. Do not stretch, twist,  
50 puncture or tear joint fillers. Remove absorbent joint fillers which have become wet prior to sealant application and  
51 replace with dry material.  
52

53 At 90 degree transitions in substrate (curbs, columns, deck penetrations) provide a sealant cant by placing ¼" diameter  
54 backer rod into corner transition. Apply bead of sealant one inch in width over backer rod. Tool sealant bead to a 45  
55 degree cant.

1  
2 **Sealants:** Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint  
3 substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional  
4 shapes and depths relative to joint widths which allow optimum sealant movement capability.  
5

6 **Tooling of Nonsag Sealants:** Immediately after sealant application and prior to time skinning or curing begins, tool  
7 sealants to form smooth, uniform beads of concave joint configuration, unless otherwise indicated, to eliminate air  
8 pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealant from surfaces adjacent  
9 to joint. Do not use tooling agents which discolor sealants or adjacent surfaces or are not approved by sealant  
10 manufacturer.

11  
12 **QA / QC:** Visually inspect entire membrane upon completion for defects in system. Bubbles and or defects in membrane  
13 system are to be cut out, grind edges to a feather, surface prepare area, prime and recoat area as required. Perform water  
14 test on entire deck checking for leaks.  
15

16 **TESTING**

17 Once work is complete in a bay, perform water test for leaking sealant joints in conjunction with requirements of  
18 section 07 19 10 (Base Bid) or section 07 18 16 (Alternate Bid).  
19

20 **PROTECTION AND CLEANING**

21 Protect joint sealers during and after curing period from contact with contaminating substances or from damage resulting  
22 from construction operations or other causes so that they are without deterioration or damage at time of Substantial  
23 Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated  
24 joint sealers immediately and reseal joints with new materials to produce joint sealer installations with repaired areas  
25 indistinguishable from original work.  
26

27 Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials  
28 approved by manufacturers of joint sealers and of products in which joints occur.  
29  
30

**END OF SECTION**

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**SECTION 07 95 10**  
**VEHICULAR EXPANSION JOINTS**

**Part 1– General**

Description  
Related Work  
Submittals  
Product Delivery, Storage and Handling  
Acceptable Manufacturers  
Coordination  
Quality Assurance

**Part 2 – Product**

Materials

**Part 3 – Execution**

Inspection  
Preparation  
Fabrication  
Installation  
Clean and Protect

Applicable provisions of Division 1 shall govern work of this section.

**PART 1 – GENERAL**

**DESCRIPTION**

The work shall consist of removing existing failed expansion joint on Level 05 (all 3 bays), repair or reconfiguring adjacent concrete surfaces to manufacturers specifications, furnish and install expansion joints in accordance with the manufacturer’s details, specifications, installation instructions and the details shown on the plans and the requirements of the specifications.

The expansion joint shall be a watertight continuous neoprene or elastomeric gland adhered to vertical face of joint with epoxy adhesives. Where joint terminates at walls or columns the joint shall have a minimum return vertically 6” above horizontal surface.

**RELATED WORK**

03 01 30.71 – Rehabilitation of Cast-In-Place Concrete

07 92 13 - Elastomeric Joint Sealants

**SUBMITTALS**

Submit manufacturer's shop drawings, product data, samples, substitutions for approval as required by individual specification sections.

Unless otherwise noted, provide 1 electronic copy of each submittal in pdf format. Submit to project E.O.R. .

Standard Drawings - Submit typical expansion joint cross-section(s) indicating pertinent dimensioning, general construction, blockout dimensions and product data information and MSDS sheets. Approved Installers shall prepare and submit details of all special conditions to the manufacturer for review and approval prior to installation.



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**PRODUCT DELIVERY, STORAGE AND HANDLING**

Deliver products in each manufacturer’s original, intact, labeled containers and store under cover in a dry location until installed. Store off the ground, protect from weather and construction activities.

**COORDINATION**

General contractor is responsible to coordinate block out dimensions and properties required for expansion joint installation based on which expansion joint is used.

**QUALITY ASSURANCE**

Warranty: The expansion system when installed by the manufacturer’s approved installer shall be warranted for a period of 5 years for normal traffic usage under specified movements and design conditions. Normal traffic is considered to include snow removal equipment as described by the National Parking Association publication “Parking Garage Maintenance Manual.”

The provided five (5) year warranty shall be a joint and several performance warranty. Each party, Approved Installer and manufacturer, will jointly warrant and provide at no charge, all materials and labor needed to properly repair or replace defective or damaged product within the term of the warranty. In the event of either party’s non-performance, the full burden and responsibility for any warranty repair shall fall upon the remaining party.

Manufacturer: Shall have a minimum of ten (10) years experience specializing in the manufacturing of heavy-duty vehicular expansion control systems. Verification of experience will be required.

Application: The specified expansion control systems shall be installed by an approved installer, factory trained and certified in the proper installation of the specified expansion control system.

Products: Expansion control systems shall be installed with manufacturer’s blockout repair and infill materials.

The approved installer shall be insured and also licensed, as required, by the local state agency within the project’s jurisdiction.

**PART 2 – PRODUCT**

**MATERIALS**

General: Provide expansion joint system designed by one manufacturer with materials compatible with each other and all substrate material in contact with it. The above is based on manufacturers research development, testing and field experience.

Expansion joint system shall be:

Jeene Series System as manufactured by Watson Bowman Acme Corp. and as indicated on drawings. Verify model number upon removal of existing joint.

JP Series System as manufactured by Erie Metal Specialties as indicated on drawings. Verify JP series number upon removal of existing joint.

Furnish all system components as defined by the manufacturer including; gland, primers, 2 component epoxy adhesive bonding agents, and any other required components.

107 **FABRICATION**

108  
109 Elastomeric or neoprene Rubber Membrane Seal Gland - Ship in the longest practical continuous length in  
110 manufacturer's standard shipping carton or on wooden pallets shrink wrapped.  
111  
112 Joint Seal Directional Changes - At all horizontal changes in direction provide seals with factory heat welded splices  
113 such as 90° corners, tees and crosses. The seal shall extend a minimum of 2'-0" in each direction from the factory  
114 splice.  
115  
116 Only straight, butt splice connections shall be allowed on the jobsite following manufacturers written instructions  
117 utilizing specialty heat fusing equipment or the manufacturer specialty-splicing adhesive.  
118  
119 All factory and field fused connections shall incorporate bonding of the complete seal profile. This includes fusing  
120 of all internal and external web configurations. Expansion joint glands shall be shipped in the longest practical  
121 continuous length on manufacturer's standard shipping pallet.  
122  
123 Adhesives, Sealants, Primer shall be shipped in manufacturer's standard cartridge or carton.

124  
125 **PART 3 – EXECUTION**

126  
127 **INSPECTION**

128  
129 Upon removal of existing joint Installer shall inspect concrete surfaces to receive expansion joint for compliance  
130 with requirements for expansion joint configuration, installation tolerances and other conditions affecting expansion  
131 joint performance. Installer shall notify A/E in writing listing any conditions detrimental to performance of  
132 expansion joint work. Do not allow expansion joint work to proceed until unsatisfactory conditions have been  
133 corrected.  
134

135 **PREPARATION**

136  
137 Clean out joints immediately before installing expansion joint to comply with recommendations of joint sealer  
138 manufacturers and the following requirements:  
139

140 **INSTALLATION**

141 The contractor shall provide a properly formed, solid concrete surface per the manufacturer and project  
142 requirements. Any edge or area in need of repair shall utilize one of the expansion joint's manufacturers specified  
143 repair materials to provide a solid surface.  
144

145 Protect all expansion joint component parts from damage during installation of adjacent materials and thereafter  
146 until completion of structure.  
147

148 Expansion Joint systems shall be installed in strict accordance with the manufacturer's typical details and written  
149 instructions along with the advice of their qualified representative.  
150

151 Provide and install all typical and specialized components for a continuous expansion joint for each specific  
152 condition encountered.  
153

154 Expansion joint systems shall be set to the proper width for the ambient temperature at the time of installation as  
155 defined by manufacturer. Substrate temperature shall be verified with hand-held infrared thermometer  
156

157 **CLEAN AND PROTECT**

158  
159 Protect adjacent surfaces to the installed joint.

160  
161 Protect Joint Membrane System during construction. Heavy construction vehicles will not be permitted to cross the  
162 joint without specific and written permission by the Engineer. Subsequent damage to the expansion joint system  
163 shall be repaired at the contractor's expense.  
164

End of Section

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**SECTION 08 11 00**  
**HOLLOW METAL DOORS AND FRAMES**

**PART 1 – GENERAL**

**Part 1 – General**

Work Included  
Quality Assurance  
Guarantee  
Submittals

**Part 2 – Products**

Materials  
Fabrications

**Part 3 – Execution**

Installation

Applicable provisions of Division 01 shall govern work of this Section.

**Highlighted portions in specifications signifies WORK BY OWNER – NOT IN CONTRACT**

**WORK INCLUDED**

Include all materials, labor, services and incidentals necessary for the completion of this section of the Work.

Include all hollow metal doors and frames and their preparation to receive specified hardware.

Lower Level new door & frame in bathroom as base bid.

**WORK BY OWNER – NOT IN CONTRACT**

Level 07 stair towers door integrated windows .

**QUALITY ASSURANCE**

**INDUSTRY STANDARDS, SPECIFICATIONS AND CODES**

**GENERAL**

Comply with all provisions of the following codes and standards except as modified herein.

All referenced codes and standards, including all revisions and commentaries, shall be the most currently adopted as of the date of these contract documents.

STEEL DOOR INSTITUTE (SDI)

UNDERWRITER LABORATORIES (UL)

FACTORY MUTUAL (FM)

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

**GUARANTEE**

Provide manufacturers standard 10 year guarantee on welded door seams.

57 **SUBMITTALS**

58

59 Submit in accordance with Section 01 30 00

60 Shop drawings shall show construction details for doors and frames together with schedule showing quantity, type  
61 and swing required, details and mounting hinges, strikes, slips, closers, installation instructions, stops for glass, etc.

62 Obtain A/E approval prior to fabrication.

63

64

**PART 2 – PRODUCTS**

65

66 **MATERIALS**

67

68 **ACCEPTABLE PRODUCTS AND MANUFACTURERS:**

69 Except as otherwise specified herein or specifically approved by the A/E, the hollow metal doors and frames shall be  
70 products of any of the following manufacturers, subject to compliance with specification requirements:

71

72 Ceco: Regent, G Design, Series Doors and Series Frames or approved equal.

73

74 **DOOR HARDWARE**

75 **WORK BY OWNER – NOT IN CONTRACT**

76 Level 07 Stair Tower Door Hardware:

77 Provide: Roton 780-244HD continuous hinge (dark bronze), Ives 8300 4x16, US26D push plate on exterior, Ives  
78 8105-8 pull, 4x16 8300 plate US26D on interior, Norton DCP7500T closer (dark bronze), Ives 8400 US26D kick  
79 plate on exterior, 3 rubber silencers.

80

81 Lower Level Bathroom Hardware:

82 Provide: 1 1/2 pair 4 1/2"x4 1/2" Ball Bearing hinges with NRP, lockset with privacy function, door stop, kick plate,  
83 3 rubber silencers.

84

85 **GLAZING**

86 1/4" Tempered glass typical

87

88 **FABRICATION**

89

90 **DOORS**

91 Hollow metal doors shall be 1-3/4" thick full-flush steel doors. Doors shall be constructed of the finest commercial  
92 quality cold rolled, full pickled sheet steel face panels (minimum 16 gauge). The face panels shall be spot welded to  
93 20 gauge internal stiffeners and the complete inner core shall be made from small cell honeycomb core. All edges  
94 of the doors shall have a continuous steel channel welded to the face plates and intermediate steel channels welded  
95 to the face panels of appropriate gauge to eliminate "oil canning" or buckling of face panel at light cut outs.

96

97 The door shall be provided with 16 gauge steel reinforcement for closers and miscellaneous surface applied  
98 hardware, 14 gauge flat steel reinforcement for lock hardware and 10 gauge flat steel reinforcement for hinges.

99 Mortise drill and tap for hardware at the factory in accordance with approved hardware list. No hardware shall be  
100 attached with self-tapping or sheet metal screws.

101

102 The clearance for doors, except for fire doors, shall be 1/8" at jambs and head, 1/8" at meeting stiles of pairs of doors,  
103 and 5/8" at bottom of doors with thresholds, unless indicated or specified otherwise.

104

105 Exterior doors and shall not have exposed seams or joints.

106

107 **FRAMES AND SIDELIGHTS**

108 Hollow metal steel frames for doors, shall conform to the size and shape shown on the drawings. All frames shall be  
109 single or double rabbet flush frames fabricated of 16 gauge metal. All frames shall be cold rolled, pickled and oiled  
110 steel sheets with clean, smooth surfaces. All joints of the frame shall be mitered or butted and continuously arc-  
111 welded for the full depth and width of the frame. All welds on exposed surfaces shall be dressed smooth and flush.

112 Provide steel reinforcement as detailed.

113  
114 Provide no less than three anchors at each jamb for anchoring to partition; type of anchor to be determined by wall  
115 construction as recommended by manufacturer. Clip angles, 12 gauge minimum, with 2 holes in each angle for  
116 anchorage to floor to be welded to bottom of all frames. Provide in the strike jamb according to hardware schedule  
117 three holes for silencers and fill holes with removable plug prior to shipping. See Schedule for double doors with 2  
118 silencers in head of frame. Provide removable spreaders securely fastened to bottom of jambs for rigidity during  
119 shipment and handling.

120  
121 All frames shall be prepared at factory. Mortise, reinforce, drill, and tap at factory for all hardware in accordance  
122 with approved hardware list. No hardware shall be attached with self tapping or sheet metal screws. Reinforce for  
123 all surface applied hardware. All hardware cut outs to have 1/8" minimum plate reinforcements welded to frame  
124 and tapped holes protected in masonry partitions by steel plaster boxes welded behind reinforcement.

125  
126 Labeled door frames shall bear appropriate underwriter's label.

127  
128 **LOUVERS IN DOOR**

129 Provide prefabricated screw on louver, factory installed on bathroom door.

130  
131 **FINISH**

132 All frames and doors to receive prime coat of baked on rust inhibiting prime paint, cleaned, and bonderized.

133  
134 Finish painting shall be accomplished by Owner.

135  
136

### **PART 3 - EXECUTION**

137  
138  
139 **INSTALLATION**

140  
141 Furnish doors and frames to Carpentry Contractor for installation.

142  
143 Erect all metal frames for doors in a straight, plumb, true and secure manner. Provide all necessary bracing to hold  
144 frames in proper place until properly fastened to structure. Not less than three (3) anchors shall be installed at each  
145 door jamb. Type of anchorage items and spacing shall be determined by wall construction and as recommended by  
146 frame manufacturer and as approved by A/E.

147  
148 **FINISH HARDWARE**

149 All finish hardware will be installed by the contractor.

150  
151

152 **END OF SECTION**

153