

BID OF _____

2012

PROPOSAL, CONTRACT, BOND AND SPECIFICATIONS

FOR

MADISON MUNICIPAL BUILDING ELECTRICAL PANEL UPGRADE

CONTRACT NO. 6937

IN

MADISON, DANE COUNTY, WISCONSIN

AWARDED BY THE COMMON COUNCIL
MADISON, WISCONSIN ON _____

PLEASE RETURN PLANS AND SPECIFICATIONS TO:

**CITY ENGINEERING DIVISION
1600 EMIL STREET
MADISON, WISCONSIN 53713**

www.cityofmadison.com/business/pw

**MADISON MUNICIPAL BUILDING ELECTRICAL PANEL UPGRADE
CONTRACT NO. 6937**

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This Proposal, and Agreement have
been prepared by:

**CITY ENGINEERING DIVISION
CITY OF MADISON
MADISON, DANE COUNTY, WISCONSIN**



Robert F. Phillips, P.E., City Engineer

SECTION A: ADVERTISEMENT FOR BIDS

REQUEST FOR BID FOR PUBLIC WORKS CONSTRUCTION CITY OF MADISON, WISCONSIN

A BEST VALUE CONTRACTING MUNICIPALITY

CONTRACT NO.	PROJECT NAME:
6937	MADISON MUNICIPAL BUILDING ELECTRICAL PANEL UPGRADE
SBE GOAL	5%

Plans and Specifications are available at 1600 Emil Street, Madison, WI 53713; 608-267-1197 or on our website at www.cityofmadison.com/business/pw/contracts/openforBid.cfm.

PREQUALIFICATIONS

Bidders who have not been prequalified by the City Engineer and Affirmative Action Director for the period of **February 1, 2012 to January 31, 2013** must submit their application on or before 1:00 p.m., AUGUST 24, 2012, Room 115, City-County Building, Madison, WI 53703. Postmark is not applicable. Contractors be prequalified by the City Engineer including an affirmative action plan approved by the Affirmative Action Director prior to the bid opening or the bid will be rejected. Forms are available at the same location or on our website at www.cityofmadison.com/business/pw/forms.cfm.

PRE-BID MEETING

Representatives of the Affirmative Action Department will be present to discuss the Small Business Enterprise requirements on AUGUST 17, 2012 at 1:00 PM at 1600 Emil Street, Madison Wisconsin.

OTHER REQUIREMENTS

Sealed bids must be accompanied with a Bid Bond equal to at least 5% of the bid or a Certificate of Annual/Biennial Bid Bond or certified check, payable to the City Treasurer.

Prevailing Wage Rates may be required and are attached in Section I of the contract. See Special Provisions to determine applicability.

Deadline for the Submittal of Bid is AUGUST 24, 2012 by 1:00 PM, at 1600 Emil Street, Madison, WI 53713.

Bid Opening will be on AUGUST 31, 2012 at 1:30 PM at 1600 Emil Street, Madison, WI 53713.

REQUEST FOR BIDS FOR PUBLIC WORKS CONSTRUCTION FOR THE CITY OF MADISON, WISCONSIN

A BEST VALUE CONTRACTING MUNICIPALITY

Plans and Specifications for Public Works Projects that are open for bid are available on the City of Madison website at <http://www.cityofmadison.com/business/PW/contracts/openforBid.cfm> or by calling City Engineering at 608-266-4751.

Sealed bids must be accompanied with a Bid Bond equal to at least 5% of the bid or a Certificate of Annual/Biennial Bid Bond or certified check, payable to the City Treasurer.

Prevailing Wage Rates may be required and are attached in Section I of the contract. See Special Provisions to determine applicability.

Bidders must be prequalified with the City Engineer and the Affirmative Action Director. Deadline date for submittal of application is noticed on our website. Forms are available on the web at <http://www.cityofmadison.com/business/pw/forms.cfm> or by contacting City Engineering at 608-266-4620

Publ. WSJ AUGUST 10 & 17, 2012

SECTION B: INSTRUCTIONS TO BIDDERS

The City of Madison Standard Specifications for Public Works Construction - 2012 Edition, as supplemented and amended from time to time, forms a part of these contract documents as if attached hereto.

These standard specifications are available on the City of Madison Public Works website at www.cityofmadison.com/Business/PW/specs.cfm or by contacting City Engineering Division, Room 115, City-County Building, 210 Martin Luther King Jr. Blvd., Madison, WI 53703.

The Contractor shall review these Specifications prior to preparation of proposals for the work to be done under this contract, with specific attention to Article 102 **“BIDDING REQUIREMENTS AND CONDITIONS”** and Article 103 **“AWARD AND EXECUTION OF THE CONTRACT.”** For the convenience of the bidder, below are highlights of three subsections of the specifications.

Section 102.1: Pre-Qualification of Bidders

In accordance with Wisconsin State Statutes 66.0901 (2) and (3), all bidders must submit to the Board of Public Works proof of responsibility on forms furnished by the City. The City requires that all bidders be qualified on a biennial basis.

Bidders must present satisfactory evidence that they have been regularly engaged in the type of work specified herein and they are fully prepared with necessary capital, materials, machinery and supervisory personnel to conduct the work to be contracted for to the satisfaction of the City. All bidders must be pre-qualified by the Board of Public Works for the type of construction on which they are bidding prior to the opening of the bid.

In accordance with Section 39.02(9)(a)1. of the Madison General Ordinances, all bidders shall submit in writing to the Affirmative Action Division Manager of the City of Madison, a Certificate of Compliance or an Affirmative Action Plan at the same time or prior to the submission of the proof of responsibility forms. The bidder shall be disqualified if the bidder fails to or refuses to, prior to opening of the bid, submit a Certificate of compliance, Affirmative Action Plan or Affirmative Action Data Update, as applicable, as defined by Section 39.02 of the Madison General Ordinances (entitled Affirmative Action) and as required by Section 102.11 of the Standard Specifications.

Section 102.4: Proposals

No bid will be accepted that does not contain an adequate or reasonable price for each and every item named in the Schedule of Unit Prices.

A lump sum bid for the work in accordance with the plans and specifications is required. The lump sum bid must be the same as the total amounts bid for the various items and it shall be inserted in the space provided.

All papers bound with or attached to the proposal form are considered a part thereof and must not be detached or altered when the proposal is submitted. The plans, specifications and other documents designated in the proposal form will be considered a part of the proposal whether attached or not.

A proposal submitted by an individual shall be signed by the bidder or by a duly authorized agent. A proposal submitted by a partnership shall be signed by a member/partner or by a duly authorized agent thereof. A proposal submitted by a corporation shall be signed by an authorized officer or duly authorized registered agent of such corporation, and the proposal shall show the name of the State under the laws of

which such corporation was chartered. The required signatures shall in all cases appear in the space provided therefore on the proposal.

Each proposal shall be placed, together with the proposal guaranty, in a sealed envelope, so marked as to indicate name of project, the contract number or option to which it applies, and the name and address of the Contractor. Proposals will be received at the place and until the hour on the date designated in the advertisement. When sent by mail, the sealed proposal marked as indicated above shall be enclosed in an additional envelope. Proposals sent by mail, submitted in person or otherwise delivered must be in the hands of the official conducting the letting by the hour on the date designated in the advertisement. Proposals received after the date designated will be returned to the bidder unopened.

The Bidder shall execute form ERD-7777 (R.9/03), a part of these proposal pages and submit same with the bidder's proposal, if applicable. REFER TO PROPOSAL SECTION.

Section 102.5: Bid Deposit (Proposal Guaranty)

No proposal shall be considered unless either (i) it is accompanied by a bid deposit of the character and amount described in the Advertisement for Bids or (ii) a biennial bid bond in an amount and form acceptable to the City of Madison has been previously submitted.

Bid deposits of unsuccessful bidders shall be returned following the award of the contract by the Common Council. Bid deposit of the successful bidders shall be returned within forty-eight (48) hours following execution of the contract and bond as required.

Bidders for this Contract(s) must be Pre-Qualified for at least one of the following type(s) of construction denoted by an

Building Demolition

- | | |
|---|--|
| 101 <input type="checkbox"/> Asbestos Removal | 110 <input type="checkbox"/> Building Demolition |
| 120 <input type="checkbox"/> House Mover | |

Street, Utility and Site Construction

- | | |
|---|---|
| 201 <input type="checkbox"/> Asphalt Paving | 265 <input type="checkbox"/> Retaining Walls, Precast Modular Units |
| 205 <input type="checkbox"/> Blasting | 270 <input type="checkbox"/> Retaining Walls, Reinforced concrete |
| 210 <input type="checkbox"/> Boring/Pipe Jacking | 275 <input type="checkbox"/> Sanitary, Storm Sewer & Water Main Const. |
| 215 <input type="checkbox"/> Concrete Paving | 280 <input type="checkbox"/> Sewer Lateral Drain Cleaning/Internal TV Insp. |
| 220 <input type="checkbox"/> Con. Sidewalk/Curb & Gutter/Misc. Concrete Work | 285 <input type="checkbox"/> Sewer Lining |
| 221 <input type="checkbox"/> Concrete Bases and Other Concrete Work | 290 <input type="checkbox"/> Sewer Pipe Bursting |
| 225 <input type="checkbox"/> Dredging | 295 <input type="checkbox"/> Soil Borings |
| 230 <input type="checkbox"/> Fencing | 300 <input type="checkbox"/> Soil Nailing |
| 235 <input type="checkbox"/> Fiber Optic Cable/Conduit Installation | 305 <input type="checkbox"/> Storm & Sanitary Sewer Laterals & Water Svc. |
| 240 <input type="checkbox"/> Grading and Earthwork | 310 <input type="checkbox"/> Street Construction |
| 242 <input type="checkbox"/> Infrared Seamless Patching | 315 <input type="checkbox"/> Street Lighting |
| 245 <input type="checkbox"/> Landscaping, Maintenance | 318 <input type="checkbox"/> Tennis Court Resurfacing |
| 250 <input type="checkbox"/> Landscaping, Site and Street | 330 <input type="checkbox"/> Traffic Control During Construction |
| 251 <input type="checkbox"/> Parking Ramp Maintenance | 320 <input type="checkbox"/> Traffic Signals |
| 255 <input type="checkbox"/> Pavement Sealcoating and Crack Sealing | 325 <input type="checkbox"/> Traffic Signing & Marking |
| 260 <input type="checkbox"/> Petroleum Above/Below Ground Storage Tank Removal/Installation | 335 <input type="checkbox"/> Trucking |
| | 399 <input type="checkbox"/> Other _____ |

Bridge Construction

- 501 Bridge Construction and/or Repair

Building Construction

- | | |
|--|---|
| 401 <input type="checkbox"/> Floor Covering (including carpet, ceramic tile installation, rubber, VCT) | 435 <input type="checkbox"/> Masonry |
| 402 <input type="checkbox"/> Building Automation Systems | 437 <input type="checkbox"/> Metals |
| 403 <input type="checkbox"/> Concrete | 440 <input type="checkbox"/> Painting and Wallcovering |
| 404 <input type="checkbox"/> Doors and Windows | 445 <input type="checkbox"/> Plumbing |
| 405 <input checked="" type="checkbox"/> Electrical - Power, Lighting & Communications | 450 <input type="checkbox"/> Pump Repair |
| 410 <input type="checkbox"/> Elevator - Lifts | 455 <input type="checkbox"/> Pump Systems |
| 412 <input type="checkbox"/> Fire Suppression | 460 <input type="checkbox"/> Roofing and Moisture Protection |
| 413 <input type="checkbox"/> Furnishings - Furniture and Window Treatments | 461 <input type="checkbox"/> Solar Photovoltaic/Hot Water Systems |
| 415 <input type="checkbox"/> General Building Construction, Equal or Less than \$250,000 | 465 <input type="checkbox"/> Soil/Groundwater Remediation |
| 420 <input type="checkbox"/> General Building Construction, \$250,000 to \$1,500,000 | 466 <input type="checkbox"/> Warning Sirens |
| 425 <input type="checkbox"/> General Building Construction, Over \$1,500,000 | 470 <input type="checkbox"/> Water Supply Elevated Tanks |
| 428 <input type="checkbox"/> Glass and/or Glazing | 475 <input type="checkbox"/> Water Supply Wells |
| 429 <input type="checkbox"/> Hazardous Material Removal | 480 <input type="checkbox"/> Wood, Plastics & Composites-Structural & Architectural |
| 430 <input type="checkbox"/> Heating, Ventilating and Air Conditioning (HVAC) | 499 <input type="checkbox"/> Other _____ |
| 433 <input type="checkbox"/> Insulation - Thermal | |

State of Wisconsin Certifications

- 1 Class 5 Blaster - Blasting Operations and Activities 2500 feet and closer to inhabited buildings for quarries, open pits and road cuts.
- 2 Class 6 Blaster - Blasting Operations and Activities 2500 feet and closer to inhabited buildings for trenches, site excavations, basements, underwater demolition, underground excavations, or structures 15 feet or less in height.
- 3 Class 7 Blaster - Blasting Operations and Activities for structures greater than 15 ' in height, bridges, towers, and any of the objects or purposes listed as "Class 5 Blaster or Class 6 Blaster".
- 4 Petroleum Above/Below Ground Storage Tank Removal and Installation (Attach copies of State Certifications.)
- 5 Hazardous Material Removal (Contractor to be certified for asbestos and lead abatement per the Wisconsin Department of Health Services, Asbestos and Lead Section (A&LS).) See the following link for application: <http://www.dhs.wisconsin.gov/Asbestos/Cert/Index.htm>. State of Wisconsin Performance of Asbestos Abatement Certificate must be attached.
- 6 Other _____

SECTION C: SBE

Instructions to Bidders City of Madison SBE Program Information

2 Small Business Enterprise (SBE) Program Information

2.1 Policy and Goal

The City of Madison reaffirms its policy of nondiscrimination in the conduct of City business by maintaining a procurement process which remains open to all who have the potential and ability to sell goods and services to the City. It is the policy of the City of Madison to allow Small Business Enterprises (SBE) maximum feasible opportunity to participate in City of Madison contracting. The bidder acknowledges that its bid has been submitted in accordance with the SBE program and is for the public's protection and welfare.

Please refer to the "ADVERTISEMENT FOR BIDS" for the goal for the utilization of SBEs on this project. SBEs may participate as subcontractors, vendors and/or suppliers, which provide a commercially useful function. The dollar value for SBE suppliers or 'materials only' vendors shall be discounted to 60% for purposes of meeting SBE goals.

A bidder which achieves or exceeds the SBE goal will be in compliance with the SBE requirements of this project. In the event that the bidder is unable to achieve the SBE goal, the bidder must demonstrate that a good faith effort to do so was made. Failure to either achieve the goal or demonstrate a good faith effort to do so will be grounds for the bidder being deemed a non-responsible contractor ineligible for award of this contract.

A bidder may count towards its attainment of the SBE goal only those expenditures to SBEs that perform a commercially useful function. For purposes of evaluating a bidder's responsiveness to the attainment of the SBE goal, the contract participation by an SBE is based on the percentage of the total base bid proposed by the Contractor. The total base bid price is inclusive of all addenda.

Work performed by an SBE firm in a particular transaction can be counted toward the goal only if it involves a commercially useful function. That is, in light of industry practices and other relevant considerations, does the SBE firm have a necessary and useful role in the transaction, of a kind for which there is a market outside the context of the SBE Program, or is the firm's role a superfluous step added in an attempt to obtain credit towards goals? If, in the judgment of the Affirmative Action Division, the SBE firm will not perform a commercially useful function in the transaction, no credit towards goals will be awarded.

The question of whether a firm is performing a commercially useful function is completely separate from the question of whether the firm is an eligible SBE. A firm is eligible if it meets the definitional criteria and ownership and control requirements, as set forth in the City of Madison's SBE Program.

If the City of Madison determines that the SBE firm is performing a commercially useful function, then the City of Madison must then decide what that function is. If the

commercially useful function is that of an SBE vendor / supplier that regularly transacts business with the respective product, then the City of Madison will count 60% of the value of the product supplied toward SBE goals.

To be counted, the SBE vendor / supplier must be engaged in selling the product in question to the public. This is important in distinguishing an SBE vendor / supplier, which has a regular trade with a variety of customers, from a firm which performs supplier-like functions on an ad hoc basis or for only one or two contractors with whom it has a special relationship.

A supplier of bulk goods may qualify as an eligible SBE vendor / supplier if it either maintains an inventory or owns or operates distribution equipment. With respect to the distribution equipment; e.g., a fleet of trucks, the term "operates" is intended to cover a situation in which the supplier leases the equipment on a regular basis for its entire business. It is not intended to cover a situation in which the firm simply provides drivers for trucks owned or leased by another party; e.g., a prime contractor, or leases such a party's trucks on an ad hoc basis for a specific job.

If the commercially useful function being performed is not that of a qualified SBE vendor / supplier, but rather that of delivery of products, obtaining bonding or insurance, procurement of personnel, acting as a broker or manufacturer's representative in the procurement of supplies, facilities, or materials, etc., only the fees or commissions will apply towards the goal.

For example, a business that simply transfers title of a product from manufacturer to ultimate purchaser; e. g., a sales representative who re-invoices a steel product from the steel company to the Contractor, or a firm that puts a product into a container for delivery would not be considered a qualified SBE vendor / supplier. The Contractor would not receive credit based on a percentage of the cost of the product for working with such firms.

Concerning the use of services that help the Contractor obtain needed supplies, personnel, materials or equipment to perform a contract: only the fee received by the service provider will be counted toward the goal. For example, use of a SBE sales representative or distributor for a steel company, if performing a commercially useful function at all, would entitle the Contractor receiving the steel to count only the fee paid to the representative or distributor toward the goal. This provision would also govern fees for professional and other services obtained expressly and solely to perform work relating to a specific contract.

Concerning transportation or delivery services: if an SBE trucking company picks up a product from a manufacturer or a qualified vendor / supplier and delivers the product to the Contractor, the commercially useful function it is performing is not that of a supplier, but simply that of a transporter of goods. Unless the trucking company is itself the manufacturer or a qualified vendor / supplier in the product, credit cannot be given based on a percentage of the cost of the product. Rather, credit would be allowed for the cost of the transportation service.

The City is aware that the rule's language does not explicitly mention every kind of business that may contribute work on this project. In administering these programs, the City would, on a case-by-case basis, determine the appropriate counting formula to apply in a particular situation.

2.2 Contract Compliance

Questions concerning the SBE Program shall be directed to the Contract Compliance Officer of the City of Madison Department of Civil Rights, Affirmative Action Division, 210 Martin Luther King, Jr. Blvd., Room 523, Madison, WI 53703; telephone (608) 266-4910.

2.3 Certification of SBE by City of Madison

The Affirmative Action Division maintains a directory of SBEs which are currently certified as such by the City of Madison. Contact the Contract Compliance Officer as indicated in Section 2.2 to receive a copy of the SBE Directory or you may access the SBE Directory online at www.cityofmadison.com/dcr/aaTBDir.cfm.

All contractors, subcontractors, vendors and suppliers seeking SBE status must complete and submit the **Targeted Business Certification Application** to the City of Madison Affirmative Action Division by the time and date established for receipt of bids. A copy of the Targeted Business Certification Application is available by contacting the Contract Compliance Officer at the address and telephone indicated in Section 2.2 or you may access the Targeted Business Certification Application online at www.cityofmadison.com/dcr/aaTBDir.cfm. Submittal of the Targeted Business Certification Application by the time specified does not guarantee that the applicant will be certified as a SBE eligible to be utilized towards meeting the SBE goal for this project.

2.4 Small Business Enterprise Compliance Report

2.4.1 Good Faith Efforts

Bidders shall take all necessary affirmative steps to assure that SBEs are utilized when possible and that the established SBE goal for this project is achieved. A contractor who self performs a portion of the work, and is pre-qualified to perform that category of work, may subcontract that portion of the work, but shall not be required to do so. When a bidder is unable to achieve the established SBE goal, the bidder must demonstrate that a good faith effort to do so was made. Such a good faith effort should include the following:

- 2.4.1.1 Attendance at the pre-bid meeting.
- 2.4.1.2 Using the City of Madison's directory of certified SBEs to identify SBEs from which to solicit bids.
- 2.4.1.3 Assuring that SBEs are solicited whenever they are potential sources.
- 2.4.1.4 Referring prospective SBEs to the City of Madison Affirmative Action Division for certification.
- 2.4.1.5 Dividing total project requirements into smaller tasks and/or quantities, where economically feasible, to permit maximum feasible SBE participation.
- 2.4.1.6 Establishing delivery schedules, where requirements permit, which will encourage participation by SBEs.
- 2.4.1.7 Providing SBEs with specific information regarding the work to be performed.
- 2.4.1.8 Contacting SBEs in advance of the deadline to allow such businesses sufficient time to prepare a bid.

- 2.4.1.9 Utilizing the bid of a qualified and competent SBE when the bid of such a business is deemed reasonable (i.e. 5% above the lowest bidder), although not necessarily low.
- 2.4.1.10 Contacting SBEs which submit a bid, to inquire about the details of the bid and confirm that the scope of the work was interpreted as intended.

2.4.2 Reporting SBE Utilization and Good Faith Efforts

The Small Business Enterprise Compliance Report is to be submitted by the bidder in a separate sealed envelope marked: **“ENVELOPE 2 - SBE COMPLIANCE REPORT.”** This report is due by the specified bid closing time and date. Bids submitted without a completed SBE Compliance Report as outlined below shall be deemed non-responsible and the bidder ineligible for award of this contract.

- 2.4.2.1 If the Bidder meets or exceeds the goal established for SBE utilization, the Small Business Enterprise Compliance Report shall consist of the following:

- 2.4.2.1.1 **Cover Page**, Page C-7; and
- 2.4.2.1.2 **Summary Sheet**, C-8.

- 2.4.2.2 If the bidder does not meet the goal established for SBE utilization, the Small Business Enterprise Compliance Report shall consist of the following:

- 2.4.2.2.1 **Cover Page**, Page C-7;
- 2.4.2.2.2 **Summary Sheet**, C-8; and
- 2.4.2.2.3 **SBE Contact Report**, C-9 and C-10. (A separate Contact Report must be completed for each applicable SBE which is not utilized.)

2.5 Appeal Procedure

A bidder which does not achieve the established goal and is deemed non-responsible for failure to demonstrate a good faith effort to achieve such goal and subsequently denied eligibility for award of contract may, within 72 hours of receiving such notification, appeal that decision to a special appeals committee composed of three (3) members of the Affirmative Action Commission, three (3) members of the Board of Public Works and a seventh member appointed by the Mayor. All appeals must be made in writing to the City Engineer and received within 72 hours of City of Madison’s notice. Postmark not applicable.

2.6 SBE Requirements After Award of the Contract

The successful bidder shall identify SBE subcontractors, suppliers and vendors on the subcontractor list in accordance with the specifications. The Contractor shall submit a detailed explanation of any variances between the listing of SBE subcontractors, vendors and/or suppliers on the subcontractor list and the Contractor’s SBE Compliance Report for SBE participation.

No change in SBE subcontractors, vendors and/or suppliers from those SBEs indicated in the SBE Compliance Report will be allowed without prior approval from the Engineer and the Affirmative Action Division. The contractor shall submit in writing to the City of Madison Affirmative Action Division a request to change any SBE citing specific reasons which necessitate such a change. The Affirmative Action Division will use a general test of reasonableness in approving or rejecting the contractor's request for change. If the request is approved, the Contractor will make every effort to utilize another SBE if available.

The City will monitor the project to ensure that the actual percentage commitment to SBE firms is carried out.

2.7 SBE Definition and Eligibility Guidelines

A Small Business Enterprise is a business concern awarded certification by the City of Madison. For the purposes of this program a Small Business Enterprise is defined as:

- A. An independent business operated under a single management. The business may not be a subsidiary of any other business and the stock or ownership may not be held by any individual or any business operating in the same or a similar field. In determining whether an entity qualifies as a SBE, the City shall consider all factors relevant to being an independent business including, but not limited to, the date the business was established, adequacy of its resources for the work in which it proposes to involve itself, the degree to which financial, equipment leasing and other relationships exist with other ineligible firms in the same or similar lines of work. SBE owner(s) shall enjoy the customary incidents of ownership and shall share in the risks and profits commensurate with their enjoyment interests, as demonstrated by an examination of the substance rather than form or arrangements that may be reflected in its ownership documents.
- B. A business with annual gross receipts of less than \$750,000 when averaged over the past three year period;

Firm and/or individuals that submit fraudulent documents/testimony may be barred from doing business with the City and/or forfeit existing contracts.

SBE certification is valid for one (1) year unless revoked.

MADISON MUNICIPAL BUILDING ELECTRICAL PANEL UPGRADE
CONTRACT NO. 6937

Small Business Enterprise Compliance Report

Cover Sheet

This information MUST be submitted in a separate sealed envelope marked
"ENVELOPE NO. 2 - SBE COMPLIANCE REPORT."

Prime Bidder Information:

Company: _____

Address: _____

Telephone Number: _____ Fax Number: _____

Contact Person/Title: _____

Prime Bidder Certification:

I, _____, _____ of
Name Title
_____ certify that the information
Company

contained in this SBE Compliance Report is true and correct to the best of my knowledge and belief.

Witness' Signature

Bidder's Signature

Date

**MADISON MUNICIPAL BUILDING ELECTRICAL PANEL UPGRADE
CONTRACT NO. 6937**

Small Business Enterprise Compliance Report

SBE Contact Report

**This information MUST be submitted in a separate sealed envelope marked
“ENVELOPE NO. 2 - SBE COMPLIANCE REPORT.”**

Submit separate copy of this form for each SBE which you are not able to utilize towards meeting the SBE goal for this project. Attach separate sheets if necessary.

SBE Information:

Company: _____

Address: _____

Telephone Number: _____

Contact Person/Title: _____

1. Outline below all efforts to solicit a bid from the above SBE. Include date, means of contact, who from your company made this contact and the result.

2. Describe the information provided to the aforementioned SBE regarding the scope of work for which he/she was to provide a bid.

Is this the same scope of work on which the subcontractor you intend to utilize based his/her bid?

Yes No

3. Did this SBE submit a bid? Yes No

4. Is the General Contractor pre-qualified to self-perform this category of work?

Yes No

5. If you responded "Yes" to Question 3, please check the items below which apply and provide the requested detail. If you responded "No" to Question 3, please skip ahead to item 6 below.

The SBE listed above is unavailable for work on this project for the following reasons. Provide specific detail for this conclusion.

The SBE listed above is unqualified for work on this project. Provide specific details for this conclusion.

The SBE listed above provided a price that was unreasonable (i.e. more than 5% above the lowest bidder). Provide specific detail for this conclusion including the SBE's price and the price of the subcontractor you intend to utilize.

A contract with the SBE listed above may constitute a breach of the bidder's collective bargaining agreements. Provide specific detail for this conclusion including, but not limited to, correspondence from the SBE indicating it will not sign a project labor agreement and/or correspondence from the applicable trade union indicating a project labor agreement will not be allowed at the time of project bidding.

Other; please specify reason(s) other than listed above which made it impossible for you to utilize this SBE on this project.

6. Describe any other good faith efforts:

SECTION D: SPECIAL PROVISIONS

MADISON MUNICIPAL BUILDING ELECTRICAL PANEL UPGRADE CONTRACT NO. 6937

It is the intent of these Special Provisions to set forth the final contractual intent as to the matter involved and shall prevail over the Standard Specifications and plans whenever in conflict therewith. In order that comparisons between the Special Provisions can be readily made, the numbering system for the Special Provisions is equivalent to that of the Specifications.

Whenever in these Specifications the term "Standard Specifications" appears, it shall be taken to refer to the City of Madison Standard Specifications for Public Works Construction and Supplements thereto.

SECTION 102.10: MINIMUM RATE OF WAGE SCALE

For this project, payment of prevailing wages (white sheet) is not required if either: a single trade accounts for 85% or more of the total labor costs of the project and the bid is less than \$48,000; or no single trade accounts for 85% or more of the total labor costs of the project and the bid is less than \$100,000. For bids not meeting either of these conditions, prevailing wages shall be required.

If required, the wages and benefits paid on the contract shall not be less than those specified in the Prevailing Wage Determination included with these contract documents for the following types of work:

- Building and Heavy Construction
- Sewer, Water, and Tunnel Construction
- Local Street and Miscellaneous Paving Operations
- Residential and Agricultural Construction

All bidders are notified that all labor employed on City contracts must be paid in accordance with the minimum rate of wage scale included in the Contract Documents.

For the information of the employees working on the project, a copy of the wage scale included in the contract documents and the provisions of Section 66.0903(8) of the Wisconsin Statutes shall be kept posted by the employer and in at least one conspicuous and easily accessible place at the site of the project.

The Contractor shall keep weekly payroll records setting forth the name, address, telephone number, classification, wage rate and fringe benefit package of each employee who worked on such City project and all other projects the employee worked in the same period, and the Contractor must keep records of the individual time each employee worked on the project and for each day of the project. Such records shall also set forth the total number of hours of overtime credited to each such employee for each day and week and the amount of overtime pay received in that week. Such records shall, in addition, set forth the full weekly wages earned by each such employee and the actual hourly wage paid to that employee. The Contractor shall submit payroll records to the Engineer every week for those periods when work is being done on the project. Said submittal shall be within twenty-one (21) calendar days of the end of the Contractor's weekly pay period.

The Contractor shall ensure that employees shall be paid unconditionally and shall receive the full amounts accrued at the time of payment, computed at rates not less than those stated in the City of Madison "Minimum Rate of Wage Scale" and that each employee's rate shall be determined by the work that is done within the trade or occupation classification which should be properly assigned to such employee. Questions regarding an employee's classification or rate of pay within that classification, shall be resolved by the practice that predominates in the industry and on which the trade or occupation

rate/classification is based. Therefore, rate of pay, classification and work jurisdiction disputes shall be resolved by relying upon practices established by collective bargaining agreements and guidelines used in such determinations by appropriate recognized trade unions operating within the City of Madison.

The Contractor shall agree that the normal rate of wage paid to the Contractor's employees on other projects shall not be reduced or otherwise diminished as a result of the requirement to pay no less than the minimum rate of wage scale on a City project. Mulcting of employees on City projects by contractors, such as by kickbacks or other such devices, is prohibited.

These contract provisions shall apply to all work performed on the contract by the Contractor with its own organization and with assistance of laborers under its immediate superintendency and to all work performed by piecework or by subcontract. No laborer, worker, or mechanic shall be employed directly upon the site of the work except on a wage basis, but this shall not be construed to prohibit the rental of equipment from individuals.

In the event of a refusal by the Contractor to submit payroll records as required by the contract, the City of Madison shall have the option to cancel this contract and request the Surety to perform or to relet the balance of the work for bids, and in that event, to charge the Contractor for any loss which the City may incur thereby.

SECTION 102.12: BEST VALUE CONTRACTING

This Contract shall be considered a Best Value Contract if the Contractor's bid is equal to or greater than \$51,500 for a single trade contract; or equal to or greater than \$251,000 for a multi-trade contract pursuant to MGO 33.07(7).

ARTICLE 102.3 EQUAL BENEFITS REQUIREMENT (SEC. 39.07, MGO)

This provision applies to contracts executed by the City on July 1, 2012 or later, unless exempt by Sec. 39.07 of the Madison General Ordinances (MGO).

For the duration of this Contract, the Contractor agrees to offer and provide benefits to employees with domestic partners that are equal to the benefits offered and provided to married employees with spouses, and to comply with all provisions of Sec. 39.07, MGO. If a benefit would be available to the spouse of a married employee, or to the employee based on his or her status as a spouse, the benefit shall also be made available to a domestic partner of an employee, or to the employee based on his or her status as a domestic partner. "Benefits" include any plan, program or policy provided or offered to employees as part of the employer's total compensation package, including but not limited to, bereavement leave, family medical leave, sick leave, health insurance or other health benefits, dental insurance or other dental benefits, disability insurance, life insurance, membership or membership discounts, moving expenses, pension and retirement benefits, and travel benefits.

Cash Equivalent. If after making a reasonable effort to provide an equal benefit for a domestic partner of an employee, the Contractor is unable to provide the benefit, the Contractor shall provide the employee with the cash equivalent of the benefit.

Proof of Domestic Partner Status. The Contractor may require an employee to provide proof of domestic partnership status as a prerequisite to providing the equal benefits. Any such requirement of proof shall comply with Sec. 39.07(4), MGO.

Notice Posting, Compliance. The Contractor shall post a notice informing all employees of the equal benefit requirements of this Contract, the complaint procedure, and agrees to produce records upon request of the City, as required by Sec. 39.07, MGO.

Subcontractors. Contractor shall require all subcontractors, the value of whose work exceeds the single-trade minimum set forth in Sec 33.07(7)(b)5., MGO, to provide equal benefits in compliance with Sec. 39.07, MGO.

See Section 39.07 MGO for exemptions from this requirement. Exemptions from this requirement include a Contractor whose employees are under a collective bargaining agreement that was in effect prior to July 1, 2012, however, the Contractor must agree to propose to the applicable collective bargaining unit(s) that an equal benefit requirement consistent with this ordinance be incorporated into the next collective bargaining agreement or in the existing agreement upon amendment, extension or other modification that occurs after July 1, 2012.

SECTION 105.1: AUTHORITY OF THE ENGINEER

The Engineer shall resolve all questions which arise as to the quality and acceptability of materials furnished, work performed, manner of performance, rate of progress of the work, interpretation of the plans and Specifications, acceptable fulfillment of the contract, compensation, and disputes and mutual rights between Contractors under the Specifications. The Engineer shall determine the amount and quantity of work performed and materials furnished.

All decisions of the Engineer shall, when so requested, be rendered in writing. They shall be final and conclusive in all matters unless within ten (10) days after such decision the Contractor applies in writing to the Board of Public Works for a review of such decision.

Any change proposed by a Contractor in SBE subcontractors, vendors or suppliers from those SBEs indicated on the SBE Compliance Report must be approved by the Engineer and the City's Manager of the Affirmative Action Division (hereafter, AAD). When requested, such decision shall be rendered in writing. Such decisions shall be final and conclusive in all matters unless within ten (10) days after such decision the Contractor or the affected SBE applies in writing to the Board of Public Works for a review of such decision.

In the event the Engineer and the AAD disagree over the proper decision to be made regarding an SBE, the Mayor shall appoint a third person to resolve the disagreement, within 30 days of appointment. The decision thus rendered may be reviewed by the Board of Public Works upon request of the Contractor or the affected SBE as set forth in Sections 105.1 and 105.2 of the City's standard specifications.

SECTION 107.14 WEAPONS PROHIBITION

Contractor shall prohibit, and shall require its subcontractors to prohibit, its employees from carrying weapons, including concealed weapons, in the course of performance of work under this Contract, other than while at the Contractor's or subcontractor's own business premises. This requirement shall apply to vehicles used at any City work site and vehicles used to perform any work under this Contract, except vehicles that are an employee's "own motor vehicle" pursuant to Wis. Stat. sec. 175.60(15m).

SECTION 109.2 PROSECUTION OF THE WORK

The Contractor shall begin work on or before **SEPTEMBER 29, 2012.** The total time of completion for the contract shall be **NINETY (90) CALENDAR DAYS.**

Work shall begin only after the start work letter is received. If it is desirable to begin work before the above-mentioned date, the Contractor shall establish a mutually acceptable date with the Project Manager.

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SECTION 01 00 02
GENERAL REQUIREMENTS

PART 1 GENERAL

SCOPE

The work under this section includes general rules for the project. Included are the following topics:

PART 1 – GENERAL

1. Scope of Work
2. Pre-Bid Information
3. Commencement and Completion
4. Contacts
5. Qualifications of Bidder
6. Work by the City and City Furnished Equipment
7. Salvage Materials
8. Provisions for Future Work
9. Special Site Provisions
10. Alternates
11. General
12. Guarantees
13. Sustainable Construction Methods and Materials
14. Schedule of Operations
15. Documents
16. Quality Assurance
17. Codes and Permits
18. Submittals
19. Drawings and Specifications
20. Operation and Maintenance Data
21. Safeguards – Existing Equipment, Underground Utilities and Artifacts
22. Access Panels
23. Sleeves and Openings
24. Lose and Detachable Parts
25. Stairs, Scaffolds, Hoists, Elevators or Cranes

PART 2 - PRODUCTS

1. Specified Items – Substitutes
2. Approved Testing Laboratories

PART 3 - EXECUTION

1. Installation
2. General Installation Methods
3. Delivery, Handling and Storage of Materials
4. Demolition
5. Cutting, Patching and Painting
6. Excavation, Backfill, and Surface Restoration
7. Dewatering
8. Sealing and Firestopping
9. Cleaning
10. Continuity of Service and Shutdown
11. Project Meetings
12. Temporary Construction
13. Identification
14. Lubrication
15. Punch List
16. Tests and Final Acceptance
17. Training and Demonstration
18. Fence
19. Roadway
20. Signs

1
2 **1. SCOPE OF WORK**

3 Work for this project shall consist of replacement of electrical distribution panels for the second and third
4 floors of the Madison Municipal Building, MMB, locate at 215 Martin Luther King Jr. Blvd, Madison WI.
5 Existing distribution panels, circuits and feeders shall be maintained while new fusible disconnects,
6 feeder wires, conduit, panel boards and terminal boards enclosures are set in place near the existing
7 panels. Circuits shall be switched over to the new panel boards after normal work hours as to provide
8 minimal disruption to the daily activities of the building. Existing distributions and feeders wire shall be
9 remove and dispose of by the contractor in a manner to allow the City to fur out walls to enclose the new
10 panels and existing conduit runs.

11
12
13 **2. PRE-BID INFORMATION**

14 Arrange site visits with city project manager.

15
16 **3.CONTRACT TIME-COMMENCEMENT AND COMPLETION**

17 This section not used. Refer to section D, 109.2.

18
19
20 **4. CONTACTS**

21 The City's designee for architectural and engineering is: Mike Hein
22 Company: Hein Engineering Group
23 Address: 319 W Beltline Hwy # 111 Madison, WI 53713
24 Phone: : (608) 288-9260
25 Email: hein@chorus.net

26
27 The City's designee for project management: Paul Stauffer
28 Company: City of Madison
29 Address: 210 Martin Luther King Jr. Blvd. Room 115
30 Phone (608) 266-4366
31 Email: pstauffer@cityofmadison.com

32
33 The City's designee for the site contact: Paul Stauffer
34 Company: City of Madison
35 Address: 210 Martin Luther King Jr. Blvd. Room 115
36 Phone (608) 266-4366
37 Email: pstauffer@cityofmadison.com

38
39
40 **5. QUALIFICATIONS OF BIDDER**

41 By submitting the bid, the bidder certifies as to meeting the following requirements:

42
43 Has completed one or more projects of at least 50% of the size or value of the division of work being bid and the
44 type of work completed is similar to that being bid. If a greater magnitude of experience is deemed necessary,
45 other than size or value of the work, such requirements will be described in the appropriate technical section of
46 these specifications.

47
48 Has access to all necessary equipment and has organizational capacity and technical competence necessary to do
49 the work properly and expeditiously.

50
51 Maintains a permanent place of business.

52
53 **6. WORK BY THE CITY AND CITY FURNISHED EQUIPMENT**

54 All asbestos removal. Existing building materials that may have hazardous content and are located within the work
55 area (example: floor tile, ceiling tile, pipe insulation) shall be sampled, tested, and removed by the City. If any sus-
56 pect hazardous building materials are found by the contractor during demolition or renovation work that have not
57 been sampled and tested, work must stop and a certified hazardous material inspector must be contacted by the
58 City to assess the situation. Inaccessible areas may exist within the facility.

59
60 The following work will be accomplished by the City or will be let under separate contracts and will not be included
61 under this Contract:

62 The City's Facility Maintenance staff shall fur out walls to enclose the electrical panels at a later date. The contrac-
63 tor shall coordinate the final locations of the electrical panel boards and terminal panels with the maintenance staff
64 through the Project Manager. Locations of the panels shall be approved by the Project Manager before proceeding
65 with the installation.

1 **7. SALVAGE MATERIALS**

2
3 No materials removed from this project shall be reused except as specifically noted below. All materials removed
4 shall become the property of and shall be disposed of by the Contractor.
5

6 **8. PROVISIONS FOR FUTURE WORK**

7 Not applicable to this project
8

9 **9. SPECIAL SITE CONDITIONS**

10 Most construction operations shall be limited to the hours between 7:30 a.m. and 6:00 p.m., Mondays through Fri-
11 days, except for holidays. The city shall make efforts to accommodate these hours of work. **The contractor shall**
12 **provide a schedule that coordinates with the activities of the building. Some after hours work shall be re-**
13 **quired if normal operation of the building are required to be disrupted, e.g. shutting off power when switch-**
14 **ing over to the new panel boards.** A request must be made to the Project Manager forty-eight hours in advance
15 for approval of work days or hours other than those stated above. Compliance is required with the City of Madison
16 Noise Ordinance.
17

18 There is no vehicle parking is available for Contractor's use in the MMB parking lot. The contractor shall make
19 other arrangements for parking.
20

21 No permanently reserved on-site loading zone will be provided for Contractor's use. For loading and unloading, a
22 vehicle-parking stall may occasionally be reserved for a short time duration (e.g. one to two hours) if arranged in
23 advance with the site contact. Arrangements for onsite storage of contractors equipment and supplies shall be
24 made through the Site Contact.
25

26 No permanently reserved on-site space for a trash container will be provided. Occasionally a trash container may
27 be brought in for a short duration (e.g. two to three days) if arranged in advance with the site contact. The trash
28 container shall not take up a parking space in the MMB parking lot.
29

30 Remainder of the building and site will be in use during construction. Contractors shall take particular care to avoid
31 disturbance and disruption to the existing building structure and to the ongoing activities of the occupants.
32

33 A temporary field office and temporary toilets are not required. The Contractor's labor force may use City facilities
34 upon approval by the City. The Contractor shall maintain the toilets and other spaces provided by the City in clean
35 and sanitary condition at all times.
36

37 **10. ALTERNATES**

38 Not applicable to this project.
39

40 **11. GENERAL**

41 The City of Madison Standard Publications for Public Works Construction – current Edition, as supplemented from
42 time to time, forms a part of these contract documents as if attached hereto.
43

44 These Standard Specifications are available upon request form the City Engineer, City Engineering Division, Room
45 115, City County Building, 210 Martin Luther King Jr. Blvd., Madison, WI 53710. An electronic copy is available
46 from the City Website <http://www.cityofmadison.com/business/pw/specs.cfm>. The Contractor shall review these
47 specifications prior to preparation of proposal for the work to be done under this contract. Failure to do so does not
48 relive the Contractor from meeting all requirements.
49

50 All articles in these General Requirements are applicable to all Divisions and Sections apply to each Division of
51 these Specifications as fully as if repeated within that Division. The Conditions of the Contract, General and Sup-
52 plementary General Conditions, and these General Requirements shall apply to the Contractor and engaged in this
53 work. Items listed under Scope of Work for each Division of the Specifications are not necessarily all inclusive.
54

55 Portions of these specifications are of the abbreviated, simplified type and may include incomplete sentences.
56 Omissions of words or phrases such as "the Contractor shall", "in conformity with", "shall be", "as noted on the
57 drawings", "in accordance with details", are intentional. Omitted words or phrases shall be supplied by inference in
58 the same manner, as they are when a note occurs on the drawings. Such terms as approved, reviewed, equal, as
59 directed, as required, as permitted, acceptable, satisfactory mean by or to the City Engineer or designee.
60

61 These specifications and drawings are intended to include everything necessary to perform the entire work proper-
62 ly. Every item necessarily required might not be specifically mentioned or shown. Unless expressly stated, all sys-
63 tems and equipment shall be complete and operable. The words "furnish", "install", and "provide" shall mean the
64 same in a sense that the Contractor shall furnish and install all the necessary materials, apparatus, and devices to
65 complete the equipment and systems installation herein specified, except such parts as are specifically exempted
66 herein. If an item is either called for in the specifications or shown on the plans, it shall be considered sufficient for
67 the inclusion of said item in this contract. If a conflict exists within the Specifications or exists within the Drawings,

1 the Contractor shall furnish the item, system, or workmanship, which is the highest quality, largest, largest quantity
2 or most closely fits the City's intent. Materials and labor shall be new (unless noted or stated otherwise), first class,
3 and workmanlike, and shall be subject at all times to the City's or designee's inspections, tests and approval from
4 the commencement until the acceptance of the completed work. Whenever a particular manufacturer's product is
5 named, it is intended to establish a level of quality and performance requirements unless more explicit restrictions
6 are stated to apply. It must be understood that the details and drawings are diagrammatic. The Contractor shall
7 verify all dimensions at the site and be responsible for their accuracy. If items are too large to fit into existing space
8 Contractor shall provide smaller model of same type upon approval by The City at no cost to the City. All sizes as
9 given are minimum except as noted. Prior to bidding bidder must visit site to become familiar and verify existing
10 conditions. Failure to do so does not relieve the bidder from the responsibility to verify existing conditions, to point
11 out errors in drawings or specifications or code violations.

12
13 Bidders shall bring inadequacies, omissions or conflicts to the City's attention at least ten (10) days before the date
14 set for bid opening. Prompt clarification will be supplied to all bidders of record by addendum. Failure to request
15 clarification or interpretation of the drawings and specifications will not relieve the successful Bidder of responsibili-
16 ty. Signing of the contract will be considered as implicitly denoting that the Contractor has thorough understanding
17 of the scope of work and comprehension of the contract documents. The City is not responsible for verbal instruc-
18 tions.

19
20 Information pertaining to existing conditions that are described in the specifications or appear on the drawings is
21 based on available records. While such data has been collected with reasonable care, there is no expressed or
22 implied guarantee that conditions so indicated are entirely representative of those actually existing. This informa-
23 tion is provided to inform the Contractor of known, existing conditions so that due diligence is taken by the Contrac-
24 tor to avoid damage. Where site observation or documents indicate existing underground utilities/services in close
25 proximity (within four feet horizontally and/or four feet vertically) to necessary new construction work, the Contractor
26 shall be responsible to test, probe or otherwise determine exact locations so as to prevent damage to such utili-
27 ties/services.

28
29 It is expected that Contractors have access to their own cell phone for their own use. No additional telephone ser-
30 vice will be provided.

31
32 The City will not furnish Watchpersons. The Contractor shall provide such precautionary measures, to include the
33 furnishing of watchpersons if deemed necessary, to protect persons and property from damage or loss where the
34 Contractor's work is involved.

35
36 Contractors shall cooperate with all the testing consultants and verify system completion to the testing consultants.
37 Demonstrate the starting, interlocking and control features of each system so the testing Contractor can perform its
38 work. Testing and balancing (TAB) Contractor shall be direct subcontractor to the Contractor and shall not be the
39 mechanical Contractor or subcontractor to mechanical Contractor.

40
41 The Contractor resumes responsibility for all work specified in this contract except for work explicitly noted as be
42 done by the City or a Contractor separately hired by the City. The Contractor shall immediately inform the City of
43 the name of the person(s) designated as Superintendent representing the Contractor at the site.

44 The Contractor shall take complete charge of the work under this contract and coordinate the work of all trades on
45 the project. All Contractors shall work in cooperation with the Contractor and with each other, and fit their work into
46 the structure as job conditions may demand. The City shall make all final decisions as to the right-of-way and run
47 of pipe, ducts, etc., at prearranged meetings with responsible representatives of the Contractors involved. Contrac-
48 tor(s) shall coordinate the work with adjacent work with other Contractors prior to installation and shall cooperate
49 with all other trades to facilitate the general progress of the work. The Contractor shall coordinate and schedule
50 the work of all its subcontractors, and shall furnish all information required by them for proper scheduling and ex-
51 ecution of the work. In the same manner, the Contractor shall coordinate the work with that of the City, and any
52 other Contractor operating in the area, including reasonable adjustments of schedule in order to allow other Con-
53 tractors or the City to do their work. Coordinate all work with other Contractors prior to installation. Any installed
54 work that is not coordinated and that interferes with other Contractor's work shall be removed or relocated at the
55 installing Contractor's expense.

56
57 Each trade shall afford all other trades every reasonable opportunity for the installation of their work and for the
58 storage of their material. In no case will the Contractor(s) be permitted to exclude from the premises or work, any
59 other Contractor or employees thereof, or interfere with any other Contractor in the executing or installation of their
60 work. In case it is indicated which trade is responsible for which work, this is meant as a suggestion and it is the
61 Contractor's responsibility in its contracts with subcontractors to clarify who ultimately will do the work. If conflicts
62 arise between the Contractor and subcontractor about who is responsible for which work to be done it is the Con-
63 tractor's responsibility to make sure the work gets done in time even if the dispute between Contractor and subcon-
64 tractor gets settled later.

1 The City Engineer shall have the right to make final and binding decisions on disputes between the Contractor and
2 any other subcontractor operating in the area regarding: (a) access to the site with work force, equipment, and/or
3 materials to their work area or (b) their adjacent work areas.
4

5 The Contractor shall cooperate with other trades and City personnel in locating work in a proper manner. Should it
6 be necessary to raise or lower or move longitudinally any part of the electrical or piping or ducting work to better fit
7 the general installation, such work shall be done at no extra cost to the City, provided such decision is reached
8 prior to actual installation. The Contractor shall check location of electrical outlets with respect to other installations
9 before installing.
10

11 The Contractor shall provide and maintain in working order during the entire construction period, a minimum of
12 three (3) fire extinguishers on each floor level, including basement of the building, and one (1) in temporary office.
13 Extinguishers shall be nonfreezing type such as A-B-C rated dry chemical, of not less than 10-pound capacity
14 each. In addition, any subcontractor who maintains an enclosed shed on the site shall provide and maintain, in an
15 accessible location, one or more similar nonfreezing type fire extinguisher in each enclosed shed.
16

17 The area to be set aside for the work under this contract is shown on the drawings, and the Contractor shall con-
18 fine the construction to the immediate area within the construction limits. The Contractor shall immediately upon
19 entering the site for purpose of beginning work, locate general reference points and take such action as is neces-
20 sary to prevent their destruction. The Contractor shall lay out its work and be responsible for all lines, elevations
21 and measurements of the building and other work executed under its Contract. The Contractor must exercise
22 proper precaution to verify dimensions on the drawings before laying out work and will be held responsible for any
23 error resulting from failure to exercise such precaution. The Contractor shall verify grades, lines, levels, locations,
24 and dimensions as shown on drawings and report any errors or inconsistencies to the City before commencing
25 work. Starting of work by the Contractor shall imply acceptance of existing conditions. Confine all operations,
26 equipment, apparatus and storage of materials, to the immediate area of work to the greatest possible extent.
27 Contractor shall ascertain, observe and comply with all rules and regulations in effect on the project site, including
28 but not limited to parking and traffic regulations, use of walks, security restrictions and hours of allowable ingress
29 and egress. Any special traffic control during construction involving lane closures shall be in accordance with the
30 federal standard, Manual of Uniform Traffic Control Devices.
31

32 Using datum, the lot lines and present levels have been established as shown on the drawings. Other grades,
33 lines, levels and benchmarks, shall be established and maintained by the Contractor, who shall be responsible for
34 them. As work progresses, the Contractor shall lay out on forms and floor, the locations of all partitions, walls and
35 fix column centerlines as a guide to all trades. The Contractor shall make provision to preserve property line
36 stakes, benchmarks, or datum point. If any are lost, displaced or disturbed through neglect of any Contractor, Con-
37 tractor's agents or employees, the Contractor responsible shall pay the cost of restoration.
38

39 The City's payment and guarantee provisions and when and how the City will accept the work are listed in the
40 Standard Specifications under Sections 105.15 and 110.5.
41

42 **12. GUARANTEES**

43 All work, material and equipment is guaranteed by the Contractor to be free of faults for at least one year or longer
44 if specified elsewhere. This year begins from the date of final acceptance from the City, which is stated in the Stan-
45 dard Specifications under Section 105.16. The Contractor agrees to return to the project and commence work as
46 directed upon notification by the City and will furnish at his own expense all necessary labor and material to make
47 proper repairs or corrections made necessary by defective material or inferior workmanship furnished or performed
48 under this contract. If a subcontractor is not complying, the Contractor is held responsible.
49

50 All corrections and repairs are to be made no more than 30 days after notification of the Contractor for equipment
51 and material that is not critical to the operation of the building. Critical equipment and material, including but not
52 limited to HVAC, roofing, electrical, elevator, shall be repaired or brought into temporary and safe working condition
53 in less than 7 days and temporary alternatives have to be provided by the Contractor. If Contractor fails to do so
54 the City reserves the right to perform the work himself or subcontract a different Contractor and charge the Con-
55 tractor the full cost of the repair and correction and cost of any material, rental fee, labor and equipment to provide
56 temporary relief and protection to enable safe operation of the building.
57

58 **13. SUSTAINABLE CONSTRUCTION METHODS AND MATERIALS**

59 All construction methods and materials shall meet these requirements unless specified differently elsewhere. Con-
60 tractor is to provide all documentations, certifications and other material necessary to prove compliance to the City
61 and third party certifiers.
62

63 **Construction Activity Pollution Prevention:**

- 64 - Follow Requirements in Storm Water Pollution Prevention Plan (SWPPP) and Erosion and Sedimentation
65 Control (ESC) Plan
- 66 - Stabilize any relocated and moved soil with fast growing grasses and place mulch (hay, woodchips, straw)
67 on it to cover and hold soil

- 1 - Divert surface runoff from distributed areas into sediment basin or sediment traps with a mound of stabilized soil
- 2
- 3 - Construct posts with filter fabric media to remove sediment from stormwater leaving the site.
- 4

5 Site Development:

- 6 - Follow requirements in site development plan and don't disturb areas beyond the marked areas
- 7

8 Construction Waste Management:

9 The contractor shall be responsible for meeting all the requirements of the Madison General Ordinance, Chapter
10 10, Section 10.185, Recycling and Reuse of Construction and Demolition Debris, for commercial buildings. The
11 contractor shall be required to obtain the Certification and Audit of Compliance as required. In addition the contractor
12 shall make all reasonable efforts to:

- 13 - Recycle all recyclable material. This includes any material for which there is a recycling facility in Wisconsin.
- 14
- 15 - Separate all waste material in plastic, metal, paper, acoustical tile, brick, concrete, clean wood, glass, gypsum drywall, carpet and insulation and provide designated on-site collection areas.
- 16
- 17 - Keep track of volume and weight of each material and track if it was recycled or disposed otherwise.
- 18 - Keep track of volume and weight of donated material and site reused on site
- 19 - Haul all recyclable material to recycling facility if one is available in the county at no cost to the City.
- 20 - It is permissible to separate waste off-site by specialized recycling contractor. This contractor needs to be provide proof of recycling and needs to be WASTECAP certified as "Accredited Professional in Construction and Demolition Debris Recycling".
- 21
- 22
- 23

24 Indoor Air Quality:

- 25 - During construction the recommended control measures of the Sheet Metal and Air Conditioning Contractors National Association (SMACNA) IAQ guidelines for occupied buildings under construction, (1995, chapter 3) must be met or exceeded.
- 26
- 27
- 28 - Stored on-site or installed absorptive material must be protected from moisture damage.
- 29 - In case permanently installed air handlers are used for ventilation, filtration media with a Minimum efficiency Reporting Value (MERV) of 8 shall be used at each return air grille, as determined by ASHRAE 52.2-1999. Contractor shall replace all filtration media immediately prior occupancy.
- 30
- 31 - All to be installed ductwork, air handlers and other equipment later connected to the indoor air path are to be protected from dirt and debris.
- 32
- 33
- 34

35 **14. SCHEDULE OF OPERATIONS**

36 Within 10 calendar days after the effective date of Start Work Letter, the Contractor shall provide an installation
37 schedule to the project manager. This schedule must show the completion of the project within the stated Contract
38 Time of Completion for the project. Extensions to Contract Time of completion must be made in writing to the
39 project manager or as the requirements of the City's Standard Specifications section 109.8.

40 Updated schedule shall be provided to the project manager as the duration of the project changes.

41
42
43 Install work in phases to accommodate City's occupancy requirements. During the construction period coordinate
44 electrical schedule and operations with the City.

45
46 **15. DOCUMENTS**

47 All electronic files used or created for this project become property of the City. All files have to be submitted to the
48 City upon request and once each phase (design, construction) is completed. Only Microsoft Office, PDF, and AutoCAD
49 version 2008 and lower documents are acceptable. All documents that once existed in Microsoft or AutoCAD
50 version must be submitted in such. AutoCAD files have to be submitted in original drawing form for further
51 use in future projects. Sheet-set files alone will not be sufficient. All AutoCAD files must be submitted as PDF in
52 addition. The Contractor can use CAD files and other files necessary for this project upon request.

53
54 The City or designee will provide the Contractor with a suitable set of Contract Documents on which daily records
55 of changes and deviations from contract shall be recorded. Dimensions and elevations on the record drawings
56 shall locate all buried or concealed piping, conduit, or similar items.

57
58 The daily record of changes shall be the responsibility of Contractor's field superintendent. No arbitrary mark-ups
59 will be permitted. During the first week of each month, the Contractor shall present, at the project site, the job copy
60 showing variations and changes to date to the City for review.

61
62 During first week of each month, the Contractor shall present at the project site all changes to architectural/
63 engineering plans for review. At completion of the project, the Contractor shall submit the marked-up record
64 drawings to the City prior to final payment.

65

1 Contractor shall provide list with all equipment installed. This list shall contain, but not limited to, type, make and
2 special product key and number. For grant purposes the contractor may have to provide detailed information about
3 equipment installed and labor provided to third party institutions, such as Focus on Energy.
4

5 **16. QUALITY ASSURANCE**

6 Any installed material not meeting the specification requirements must be replaced with material that meets these
7 specifications without additional cost to the City.
8

9 All products and materials used are to be new, undamaged, clean and in good condition. Existing products and
10 materials are not to be reused unless specifically indicated.
11

12 Where equipment or accessories are used which differ in arrangement, configuration, dimensions, ratings, or engi-
13 neering parameters from those indicated on the contract documents, the Contractor is responsible for all costs
14 involved in integrating the equipment or accessories into the system and for obtaining the performance from the
15 system into which these items are placed. This may include changes found necessary during the testing, adjust-
16 ing, and balancing phase of the project.
17

18 Welding procedures, welders, and welding operators for all building service piping to be in accordance with certi-
19 fied welding procedures of the National Certified Pipe Welding Bureau and Section 927.5 of ASME B31.9 Building
20 Services Piping or AWS 10.9 Qualification of Welding Procedures and Welders for Piping and Tubing. Before any
21 metallic welding is performed, Contractor to submit his Standard Welding Procedure Specification together with the
22 Procedure Qualification Record as required by Section 927.6 of ASME B31.9 Building Services Piping. Before any
23 metallic welding is performed, Contractor to submit his Standard Welding Procedure Specification together with the
24 Procedure Qualification Record as required by Section IX of the ASME Boiler and Pressure Vessel Code and/or
25 the National Certified Pipe Welding Bureau. Before any polyethylene fusion welding is performed, Contractor to
26 submit certification that the welders to be used on this project have successfully demonstrated proper welding pro-
27 cedures in accordance with the Code of Federal Regulations, Title 49, Part 192, Section 192.285.
28

29 Contractor shall assume the responsibility for the protection of all finished construction under the Contract and
30 shall repair and restore any and all damage of finished work to its original state. Wheeling of any loads over any
31 type of floor, either with or without plank protection, will be permitted only in rubber-tired wheelbarrows, buggies,
32 trucks or dollies. Where structural concrete is also the finished surface, care must be taken to avoid marking or
33 damaging those surfaces. All structures and equipment shall be constructed, installed and operated with guards,
34 controls and other devices in place.
35

36 Contractor shall obtain complete data at the site and inspect surfaces that are to receive the Work before proceed-
37 ing with fabricating, assembling, fitting or erecting any work under this contract. Contractor shall notify the City in
38 writing in case of discrepancies between existing work and drawings, and of any defects in such surfaces that are
39 to receive the Contractor's work. The City will evaluate the notice and direct what remedial action will be taken.
40

41 Starting of work implies acceptance of existing work or the work of others. Removal and replacement of work ap-
42 plied to defective surfaces, in order to correct defects, shall be done at the expense of the Contractor who applied
43 work to defective surfaces.
44

45 The Contractor shall:

- 46 - Provide, erect and maintain all required planking, barricades, guard rails, temporary walkways, etc., of suf-
47 ficient size and strength necessary for protection of stored material and equipment; paved surfaces,
48 walks, curbs, gutters and drives; streets adjacent to or within project area; adjoining property and all
49 project work to prevent accidents to the public and the workmen at the job site.
- 50 - Notify adjacent property owners if their property interferes with the work so that arrangements for proper
51 protection can be made.
- 52 - Provide and maintain proper shoring and bracing to prevent earth from caving or washing into the building
53 excavation. Provide temporary protection around openings through floors and roofs, including elevator
54 openings, stairwells, and edge of slabs.
- 55 - Provide and maintain proper shoring and bracing for existing underground utilities, sewers, etc., encoun-
56 tered during excavation work, to protect them from collapse or other type of damage until such time as
57 they are to be removed, incorporated into the new work, or can be properly backfilled upon completion of
58 new work.
- 59 - Provide protection against rain, snow, wind, ice, storms, or heat to maintain all work, materials, apparatus,
60 and fixtures, incorporated in the work or stored on the site, free from injury or damage. At the end of the
61 day's work, cover all new work likely to be damaged. Remove snow and ice as necessary for safety and
62 proper execution of the work.
- 63 - Protect the building and foundations from damage at all times from rain, ground water and back up from
64 drains or sewers. Provide all equipment and enclosures as necessary to provide this protection.
- 65 - Damaged property shall be repaired or replaced in order to return it to its original condition. Damaged
66 lawns shall be replaced with sod.

- 1 - Protect materials, work and equipment, not normally covered by above protection, until construction
- 2 proceeds to a point where the general building protection of the area where located, dispenses with the
- 3 necessity therefore. Protect work outside of the building lines such as trenches and open excavations, as
- 4 specified above.
- 5 - Take all necessary precautions to protect the City's property as well as adjacent property, including trees,
- 6 shrubs, buildings, sanitary and storm sewers, water piping, gas piping, electric conduit or cable, etc., from
- 7 any and all damage which may result due to work on this project.
- 8 - Repair work outside of property line in accordance with the requirements of the authority having jurisdic-
- 9 tion.
- 10 - Repair any work, damaged by failure to provide proper and adequate protection, to its original state to the
- 11 satisfaction of the City or remove and replace with new work at the Contractor's expense.
- 12 - Protect trees indicated on the drawings to remain and trees in locations that would not interfere with new
- 13 construction, from all damage. Do not injure trunks, branches, or roots of trees that are to remain. Do
- 14 cutting and trimming only as approved and as directed by the City.
- 15 - The value of trees destroyed or damaged will be charged against the account of the Contractor responsi-
- 16 ble for the damage in an amount equal to the expense of replacing the trees with those of similar kind and
- 17 size.

18
19 The contractor shall be fully responsible for inspecting the work of its suppliers, and subcontractors to assure that
20 the work complies with the standards for materials and workmanship required by the contract documents.

21
22 The Contractor shall:

- 23 - Monitor quality control over subcontractors, suppliers, manufacturers, products, services, site conditions,
- 24 and workmanship, to produce work of the quality specified in the contract documents.
- 25 - Comply fully with manufacturer's instructions, including each step in sequence.
- 26 - Request clarification from the City before proceeding with work when manufacturers' instructions or refer-
- 27 ence standards conflict with Subcontract Documents.
- 28 - Comply with specified standards as a minimum quality for the work except when more stringent toler-
- 29 ances, codes, or manufactures instructions require more precise workmanship.
- 30 - Ensure that work is performed by persons specializing in the specific trade and class of work required,
- 31 and qualified to produce workmanship of specified quality.
- 32 - Secure products in place with positive anchorage devices designed and sized to withstand seismic, static
- 33 and dynamic loading, vibration, physical distortion or disfigurement.

34
35 If reference standards or manufacturers' instructions contain provisions that would alter or are at variance with rela-
36 tionships between the parties to the contract set forth in the contract Documents, the provisions in the contract
37 Documents shall take precedence.

38
39 When required by individual Specification sections, Contractor shall provide the following services from a manufac-
40 turer's representative:

- 41 - Review of Specifications and design and concurrence or suggestions for modification.
- 42 - Site observation of conditions of use and substrate.
- 43 - Observation of the installation work in progress and on completion.
- 44 - Start up, testing, and adjustment of equipment.
- 45 - Instruction to the City in operation and maintenance.
- 46 - Provide written signed report by manufacturer's representative documenting services provided and any
- 47 comments or recommendations.

48
49 The work will be inspected by City inspectors and/or independent inspection service personnel under coordination
50 of the City. All work is subject to inspection and shall remain accessible and exposed until it has been inspected by
51 the City. The contractor shall notify the City inspector when critical work inspections points of the project are visible
52 or uncovered as required by the City inspector. Any work covered up or made inaccessible before such inspection
53 shall be uncovered and made accessible without additional expense to the City. The City can request inspection of
54 delivered material to confirm meeting of standards and specifications. An installation under supervision of the City
55 can be requested to check proper installation. Contractor is to grant access to all material and finished and un-
56 finished work at any time upon request. At least 3 business days notice has to be given to the City prior to arrival of
57 material and equipment to be inspected. This includes concrete, which will be sampled and tested by the City.

58
59 Inspection or testing performed by the City Engineer or his designee shall not relieve the Contractor from responsi-
60 bility for performing his own quality control and for complying with the requirements of the contract Documents. The
61 City will not be responsible for the Contractor's failure to carry out work in accordance with the contract Documents.

62
63 Cooperate and arrange meetings with City or designee (Cx) with any commissioning process . Fill out and submit
64 all documents required by Cx. Commissioning checklists need to be filled out truthfully at the time indicated. This
65 includes but is not limited to delivery checklist (at time of delivery), installation checklist (at time of installation) and
66 start up checklist (at time of startup).

67 Commissioning involves among other things:

- 1 - Inspection of material arriving at site regarding right type, number and undamaged package and proper storage.
- 2
- 3 - Inspection of installation
- 4 - Test of proper function
- 5 - Review of Training and submitted O&M material
- 6 - Test of proper function before end of warranty period
- 7

8 **17. CODES AND PERMITS**

9 Applicable provisions of Public Law, the Constitution and Laws and Statutes of the State of Wisconsin and the codes and regulations of the Department of Energy are hereby referred to and made a part of this contract and all work performed shall be in accordance with such laws, regulations and the latest edition or supplement or amendment thereto in effect at the time of submittal of bid shall be considered to be the issue in effect (unless shown otherwise) of all applicable codes including, but not limited to:

- 15 1. Wisconsin Building Code
- 16 2. Wisconsin Electrical Code
- 17 3. Wisconsin Mechanical Code
- 18 4. Wisconsin Plumbing Code
- 19 5. Wisconsin Energy Code
- 20 6. Wisconsin Fire Code
- 21 7. NFPA 70 National Electrical Code
- 22 8. General Services Administration 41 CFR Part 101-19
- 23 9. Americans with Disabilities Act (ADA)
- 24 10. Energy Conservation Performance Standards,
- 25 11. Local Codes
- 26

27 Contractor is expected to know or to ascertain, in general and in detail, the requirements of all codes and ordinances, and all rulings and interpretations of code requirements being made by all authorities having jurisdiction over the work performed by them, applicable to the construction and operation of systems covered by this contract. Where codes or standard specifications other than those listed in this paragraph are referred to in the different Divisions of these specifications, it is understood that they apply as fully as if cited here. Where differences exist between codes affecting this work, the code affording the greatest protection to the City shall govern.

34 Maintenance clearances shall be maintained around equipment as required by the Codes and Standards, and as recommended by the equipment manufacturers. The maintenance envelope and equipment access shall be kept clear of any obstruction. It is Contractor's responsibility to enforce these requirements with all the Contractors. The Contractor shall be responsible for correcting any infringement on this requirement at no cost to the City.

39 All cost for items and procedures necessary to satisfy requirements of all applicable codes, ordinances and authorities, whether or not these are specifically covered by drawings or specifications. All cases of serious conflict or omission between the drawings, specifications, and codes shall be brought to the City's attention as herein before specified. The Contractor shall carry out work and complete construction as required by applicable codes and ordinances and in such a manner as to obtain approval of all authorities whose approval is required.

45 Contractor is responsible for obtaining permits at its own cost including expenses for supporting documents. Deliver original permits to the City before work starts. Obtain and pay for all required installation inspections except those provided by the City. Deliver originals of these certificates to the City. Include copies of the certificates in the Operating and Maintenance Instructions. Contractor shall arrange all required inspections and correct all deficiencies at no cost to the City.

51 The Contractor must maintain all licenses required for the work performed and required by authorities. In addition all licenses and certificates required elsewhere have to be maintained. If a Contractor loses a license for whatever reason he must inform the City immediately after learning about that himself. The Contractor must submit proof of holding the license or certificate upon request.

56 **18. SUBMITTALS**

57 Documents have to be submitted in electronic form (PDF) as described elsewhere in addition to hardcopies no later than 3 business days after start work letter is issued. The City or designee will review, and process shop drawings and other required submittals with reasonable promptness. No delay will be allowed in the progress of the job attributable to Contractor's failure to supply submittals in time.

62 The Contractor shall submit three (3) prints of all shop drawings, submittal data consisting of brochures, product data sheet, catalogs, material lists, wiring diagrams, Material Safety Data Sheets (MSDS), samples, erection drawings, and equipment layouts for review by the City Engineer or his designee. General catalog sheets showing a series of the same device is not acceptable unless the specific model is clearly marked. Submittals shall be processed with such promptness as not to cause delay to the work or to that of any other Contractor. Each submittal shall be provided together with a transmittal letter or form. The following information shall be included on all

1 submitted documents: Agency/Location/Address obtained, project number, building name, project name. Submittals shall be grouped to include complete submittals of related systems, products, and accessories in a single submittal. Mark dimensions and values in units to match those specified. Include wiring diagrams of electrically powered equipment.

6 Submit all original documents providing information regarding sustainability requirements including but not limited to recycled content, VOC, certified wood, disposal certificates and transportation distance. Contractor is required to prove that material and methods used meet all requirements specified elsewhere.

10 The City or designee will return the marked and stamped drawings together with transmittal letter or form to Contractor. If re-submittal is required, the City Engineer or designee will so note and Contractor shall make another submission for review after correction resolving the review comments on the prior submittals. The above procedure shall be repeated until the City Engineer or designee favorably reviews the submittal. The submittals must be approved before material is ordered and fabrication is authorized.

16 The City Engineer's or designee's favorable review of shop drawings and other submittals shall not relieve the Contractor of responsibility for deviations from drawings or specifications, unless the Contractor has in writing called the City Engineer's or designee's attention to such deviations at the time of submission, and the City Engineer or designee has acknowledged in writing such deviations; nor shall it relieve the Contractor from responsibility for errors of any sort in such drawings. If deviations, discrepancies, or conflicts between shop drawing submittals and the drawings and specifications are discovered either prior to or after the shop drawing submittals are reviewed by the City Engineer or designee, the drawings and specifications shall control and shall be followed. The Contractor shall be responsible for and shall check the correctness of all documents including those subcontractors prior to submitting them to the City for review.

26 The Contractor shall furnish prints of the favorably reviewed final shop drawings, erection drawings, equipment layouts and vendor data to subcontractors and suppliers for the proper coordination of their work. The Contractor shall keep one (1) complete set of the above documents at the job site for the use of the City.

30 After the completion of the project, and prior to final payment, submit:

- 31 - One (1) copy of the Waste Manifest Records to the The City, if required in accordance with "Safety and Environment" Requirements Article "HAZARDOUS SUBSTANCES".
- 33 - The original and one (1) copy of all guarantee/warranty documents.

35 **19. DRAWINGS AND SPECIFICATIONS**

36 Drawings indicate approximate locations of the various items. These items are shown approximately to scale and attempt to show how these items should be integrated with building construction. Locate all the various items on-the-job measurements in conformance with code and cooperation with other trades.

39 Before locating items, confer with the City as to desired location in the various areas. In no case items shall be located by scaling drawings. Contractor must relocate items and bear cost of redoing work or other trades' work necessitated by failure to comply with this requirement.

43 If electrical items are to be relocated within 10 feet of location shown on drawings and Contractor is informed before work is begun on this portion of the job, the relocation shall be at Contractor's expense.

45 Drawings are schematic in nature and are not intended to show exact locations of conduit but rather to indicate distribution, circuitry, and control.

48 Standard Specifications: Standard Specifications such as ANSI, AASHO, AWWA, AISC, Commercial Standards, Federal Specifications, NEMA, UL, and the like incorporated in the requirements by reference shall be those of the latest edition at time of receiving bids, unless otherwise specified. The manufacturers, producers and their agents of required materials shall have such specifications available for reference and are fully familiar with their requirements as pertains to their product or material.

54 Contract Drawings and Specifications on the Job: contract drawings shall be kept on the job by the Contractor shall include at least one copy of Drawings and Specifications, all approved shop and erection drawings and schedules, lists of materials and equipment, as-built drawings, addenda and bulletins, documents relevant to the work. The list of Subcontract drawings is attached to these Specifications.

59 Maintain a complete, precise, accurate dimensioned record of actual locations of the work, including concealed and embedded work, size and type of equipment, and every change or deviation from original contract drawings at the site. Keep this record legible and correct weekly as the job progresses on black or blue-line prints. Keep Record Drawings available for inspection at all times. Drawings will be inspected before approval of requests for payment.

65 It shall be the responsibility of the Contractor to submit to the City within ten (10) days after final inspection, one complete marked-up set of contract drawings fully illustrating all revisions made by all the crafts in the course of the work. This shall include all field changes, adjustments, variances, substitutions and deletions, whether covered by

1 Change Order or not. Underground utility installations must be located precisely as constructed on the marked-up
2 drawings.

3
4 The Contractor shall not take advantage of any apparent error or omission in the plans or specifications, and the
5 City shall be permitted to make such corrections and interpretations as may be deemed necessary for the fulfill-
6 ment of the intent of the plans and specifications.

7
8 In addition to verifying at the site all measurements shown on the Drawings, Contractor shall consult the Drawings
9 and Specifications of related work or existing construction that may in any manner affect the work of this contract.
10 Contractor shall promptly report to the City, in writing, any errors, omissions, violations, or inconsistencies that may
11 be discovered as a result of such verifications; otherwise, it shall be understood that Contractor accepts all such
12 related data and conditions without reservations.

13
14 Layout of existing piping, conduits, and locations of equipment are shown as exactly as could be determined during
15 design of the facilities; but their accuracy, particularly when such layouts and drawings are schematic, cannot be
16 guaranteed. Contractor shall check all Specifications including the Drawings for possible interference with electric-
17 al, mechanical, and structural details, as well as interference with existing building or equipment, and shall notify
18 the City of the interference for resolution of the interference before commencing work. Any completed work that
19 interferes shall be corrected by Contractor at Contractor expense so that the original design can be followed.

20. OPERATION AND MAINTENANCE DATA

20
21 Submit data bound in 8-1/2 x 11 inch (A4) text pages, Use three D side rings if necessary and binders with durable
22 plastic covers. Submit all documents in electronic form as well as in hardcopy. Prepare binder cover with printed
23 title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project and subject matter of binder when mul-
24 tiple binders are required.

25
26 Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with
27 tab titling clearly printed under reinforced laminated plastic tabs.

28 Contents: Prepare a Table of Contents for each volume, with each Product or system description identified, typed
29 on 20-pound white paper, in three parts as follows:

30
31 - Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, subcon-
32 tractors, and major equipment suppliers.

33
34 - Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For
35 each category, identify names, addresses, and telephone numbers of subcontractors and suppliers. Identify the
36 following:

- 37 1. Significant design criteria.
- 38 2. List of equipment (including assigned equipment numbers).
- 39 3. A description of recommended replacement parts and materials, which the City should stock.
- 40 4. Parts list for each component.
- 41 5. A summary of equipment vendors, or location where replacement parts can be purchased.
- 42 6. List indicating types and grades of oil and/or grease, packing materials, normal and abnormal tolerances
43 for devices, and method of equipment adjustment.
- 44 7. Copies of all approved submittals.
- 45 8. Operating instructions.
- 46 9. Maintenance instructions for equipment and systems, Preventive maintenance recommendations.
- 47 10. Maintenance instructions for finishes, including recommended cleaning methods and materials, and spe-
48 cial precautions identifying detrimental agents.
- 49 11. Manufacturer's wiring diagrams for electrically powered equipment.
- 50 12. A complete set of record control drawings.
- 51 13. Additional information as indicated in the technical specification sections

52
53 - Part 3: Project documents and certificates, including the following:

- 54 1. Product data.
- 55 2. Air and water balance reports.
- 56 3. Certificates.
- 57 4. Photocopies of warranties.
- 58 5. Name, address, and telephone number of the person or office to contact for service during the warranty
59 period.
- 60 6. Name, address, and telephone number of the person or service organization to be contacted for service
61 after the warranty period.

62
63 Submit 1 draft copy of completed volumes 15 [fifteen] days after approval of applicable submittal or receipt of the
64 product. Revise content of all document sets as required prior to final submission. Submit 2 [two] sets of revised
65 final volumes, within 10 [ten] days after final inspection.

1 **21. SAFEGUARDS - EXISTING EQUIPMENT, UNDERGROUND UTILITIES AND ARTIFACTS**

2 Existing utilities, including those listed as abandoned, shall not be moved or otherwise disturbed without written
3 verification by the City that the utility is abandoned.

4
5 When altering existing facilities, the Contractor shall take every precaution to preserve and protect existing facili-
6 ties, both those to be altered and those to remain unaltered that are within the limits of the work.

7
8 The Contractor shall notify the City of structural members, piping, conduit, or equipment not indicated for removal
9 that may cause interference with the work. Work shall not proceed in the affected area until instructions have been
10 issued. Do not drill or penetrate existing structures without prior permission. The removal of existing work shall be
11 by methods that will not jeopardize the integrity of structures or systems that are to remain.

12
13 Existing utilities, including but not limited to roof drainage systems, underground cables, ducts, roadways, man-
14 holes, building fire alarm, public address or telecommunications wiring shall not be moved or otherwise disturbed,
15 nor electrical circuits or switches operated or taken in or out of service, without prior consent of the City. Contractor
16 shall compensate loss to the City resulting from damage to utilities.

17
18 If bones or artifacts are encountered during digging, the City requires that the Contractor stop work within a 50-foot
19 radius of the find and immediately notify the City. Work may continue only with approval from the City.

20
21 **22. ACCESS PANELS AND DOORS**

22 All serviceable and replaceable devices, including but not limited to valves, boxes, and dampers shall receive an
23 access at a location and in a size that enables proper servicing and repair of the device without removal of other
24 material. The sizes described below are minimum sizes and might be increased if the type and size of device re-
25 quires it. Install all piping, conduit, ductwork, and accessories to permit access to equipment for maintenance.
26 Coordinate the exact location of wall and ceiling access panels and doors with the City or designee making sure
27 that access is available for all equipment and specialties. Relocate access panel or door if equipment is not prop-
28 erly accessible to perform all maintenance and repair at no cost to the City.

29
30 **LAY-IN CEILINGS:**

31 Removable lay-in ceiling tiles in 2 X 2 foot or 2 X 4 foot configuration are sufficient; no additional access provisions
32 are required unless specifically indicated.

33
34 **CONCEALED SPLINE CEILINGS:**

35 Removable sections of ceiling tile held in position with metal slats or tabs compatible with the ceiling system used.

36
37 **METAL PAN CEILINGS:**

38 Removable sections of ceiling tile held in position by a pressure fit will be provided under Section 09500.

39
40 **PLASTER WALLS AND CEILINGS:**

41 16 gauge frame with not less than a 20 gauge hinged door panel, prime coated steel for general applications,
42 stainless steel for use in toilets, showers, and similar wet areas, concealed hinges, screwdriver operated cam latch
43 for general applications, key lock for use in public or secured areas, UL listed for use in fire rated partitions if re-
44 quired by the application. Use the largest size access opening possible, consistent with the space and the item
45 needing service; minimum size is 12" by 12".

46
47 **23. SLEEVES AND OPENINGS**

48 The Contractor requiring sleeved openings shall furnish and install all sleeves required for their penetrations. Con-
49 tractors furnishing sleeves to others for installation shall do this in a timely manner so as not to impede the project
50 schedule.

51
52 Openings that are required and are not shown on the structural and/or architectural drawings shall be the respon-
53 sibility of the Contractor requiring the openings. The Contractor shall install sleeves for these openings or cut open-
54 ings as needed (including floor openings within chases).

55
56 The Contractor shall be responsible for coordinating locations of their sleeves with work of other trades. The Con-
57 tractor who requires sleeves and/or openings shall submit through the Contractor, to the City for review and ap-
58 proval, layout drawings of all such required sleeves and/or openings. Sleeve and opening layout drawings shall be
59 received by the City a minimum of two weeks prior to installation of the sleeves and openings. Sleeve and opening
60 sizes and locations shall be dimensioned from column lines and floor elevations or from a point of reference ap-
61 proved by the City.

62
63 Provide galvanized sheet metal sleeves for pipe and conduit penetrations through interior and exterior walls to pro-
64 vide a backing for sealant or firestopping. Patch wall around sleeve to match adjacent wall construction and finish.
65 Grout area around sleeve in masonry construction. In finished spaces where pipe penetration through wall is ex-
66 posed to view, sheet metal sleeve shall be installed flush with face of wall. Pipe sleeves in new poured concrete
67 construction shall be schedule 40 steel pipe (sized to allow insulated pipe to run through sleeve), cast in place.

1
2 In all piping floor penetrations, fire rated and non-fire rated, top of sleeve shall extend 2 inches above the adjacent
3 finished floor. In existing floor penetrations, core drill sleeve opening large enough to insert schedule 40 sleeve and
4 grout area around sleeve with hydraulic setting, non-shrink grout. If the pipe penetrating the sleeve is supported by
5 a pipe clamp resting on the sleeve, weld a collar or struts to the sleeve that will transfer weight to existing floor
6 structure.
7

8 For floor penetrations through existing floors in mechanical, food service areas, parking ramps, sanitary pumping
9 stations, swimming pool equipment rooms, chemical storage and hazardous waste storage rooms and other wet
10 locations or locations that can get wet by accident or failure of a component, core drill opening and provide a
11 sleeve fastened to floor surrounding the penetration or group of penetrations to prevent water from entering the
12 penetration. Top of sleeve shall be 4 inches above the adjacent floor. Provide urethane caulk between angles and
13 floor and fasten angles to floor a minimum of 8" on center. Seal corners water tight with urethane caulk. Or, core
14 drill sleeve openings large enough to insert schedule 40 sleeve and grout area around sleeve with hydraulic setting
15 non-shrink grout/cement. Size sleeve to allow insulated pipe to pass through sleeve and paint the sleeve.
16

17 Pipe sleeves for conduits 6" in diameter and smaller, in new poured concrete construction, shall be schedule 40
18 steel pipe, plastic removable sleeve or sheet metal sleeve, all cast in place.
19

20 **24. LOOSE AND DETACHABLE PARTS**

21 Contractor shall retain all loose and small detachable parts of apparatus and equipment furnished under this Con-
22 tract, until completion of the work and shall turn them over to the City to receive them.
23

24 Furnish one can of touch-up paint for each different color factory finish furnished by the Contractor. Deliver touch-
25 up paint with other "loose and detachable parts".
26

27 **25. STAIRS, SCAFFOLDS, HOISTS, ELEVATORS OR CRANES**

28 The Contractor shall furnish and maintain equipment such as temporary stairs, fixed ladders, ramps, chutes, run-
29 ways and the like as required for proper execution of work by all trades, and shall remove them on completion of
30 the work. The Contractor shall erect permanent stair framing as soon as possible. Provide stairs with temporary
31 treads, handrails, and shaft protection. Contractors requiring scaffolds shall make arrangements with the Contrac-
32 tor, or shall provide their own and remove them on completion of the work. The Contractor shall underlay its interior
33 scaffolds with planking to prevent uprights from resting directly on the floor construction.
34

35 Contractor shall provide and pay for its own hoist/crane or other apparatus necessary for unloading/setting or mov-
36 ing their equipment and materials. Installation and removal of equipment for this activity must be accounted for in
37 the Project Schedule. Equipment and operations for this activity shall comply with applicable Department of Com-
38 merce and OSHA requirements. No material hoist may be used to transport personnel unless it meets Department
39 of Commerce and OSHA requirements for that purpose.
40

41 Existing elevators may be used on a limited basis with the City's permission and agreement. The Contractor will
42 pay costs of warranty extensions and additional service work required. Appropriate protection must be provided by
43 the using Contractor and that Contractor shall be responsible for any structural, mechanical or finish damage to the
44 elevator and its parts and to adjoining building finishes and components.
45

46 **PART 2 – PRODUCTS**

47 **1. SPECIFIED ITEMS - SUBSTITUTES**

48
49
50 Wherever catalog numbers and specific or trade names are used in conjunction with a designated material, prod-
51 uct, thing, or service mentioned in these Specifications, they are used to establish the standards of quality, utility,
52 and appearance required. Substitutions, which are equal in quality, utility, and appearance to those specified, will
53 be approved, subject to the following provisions:
54
55

56 All Substitutions must be accepted by the City Engineer or designee in writing. The City Engineer or designee will
57 accept, in writing, such proposed substitutions as are in his or her opinion, equal in quality, utility, and appearance
58 to the items or materials specified. Such acceptance shall not relieve the Contractor from complying with the re-
59 quirements of the drawings and specifications, and the Contractor shall be responsible at Contractor's own ex-
60 pense for any changes resulting from Contractor proposed substitutions which affect the other parts of Contractor's
61 own work or the work of others.
62

63 The manufacturer shall be a company specializing in the manufacture of the specified equipment and accessories
64 with minimum five years documented experience.
65

1 Failure of the Contractor to submit proposed substitutions for approval in the manner described above and within
2 the time prescribed shall be sufficient cause for disapproval by the City Engineer or designee of any substitutions
3 otherwise proposed.
4

5 **2. APPROVED TESTING LABORATORIES**

6 The following laboratories are approved for providing electrical product safety testing and listing services as re-
7 quired in these specifications:

- 8 - Underwriters Laboratories Inc.
- 9 - Electrical Testing Laboratories, Inc.

11 **PART 3 – EXECUTION**

13 **1. INSTALLATION**

14 Install in accordance with manufacturer's instructions and all code requirements. Provide the City or designee with
15 copy of manufacturer's instructions prior to installation. Coordinate equipment location with piping, ductwork, con-
16 duit and equipment of other trades to allow sufficient clearances. Locate equipment to provide access space for
17 servicing all components. Install in accordance with recognized industry practices. The manufacturer's latest rec-
18 ommendations at the time of bidding shall be used.

19 Startup and test equipment and adjust operating and safety controls for proper operation.

21 Contractor shall coordinate work with existing equipment so that all systems, equipment and other components will
22 fit the available space, and will allow proper service and repair. Each location needs to be approved by the City or
23 designee. This also applies to existing equipment if newly installed equipment interferes with its accessibility. Loca-
24 tion of equipment has to fit into existing panels, decoration or finish. The City can request minor position changes
25 of equipment before the work has begun.

27 The Contractor shall cooperate in reducing objectionable noise or vibration. If noise or vibration is a result of im-
28 proper material or installation, these conditions shall be corrected at no cost to the City. Abnormal buzzing in
29 equipment is not acceptable.

31 **Carpentry, Cutting, Patching, and Core Drilling:**

32 Provide carpentry, cutting, patching, and core drilling required for installation of material and equipment specified in
33 the scope of work. Do not cut, core, or drill structural members without consent of the The City.

35 **Waterproof Construction:**

36 Maintain waterproof integrity of penetrations of materials intended to be waterproof. Provide flashings at exterior
37 roof penetrations. Caulk penetrations of foundation walls and floors watertight. Provide membrane clamps at pe-
38 netrations of waterproof membranes. Provide waterproof NEMA 3R enclosures for all equipment or devices
39 mounted outside or otherwise exposed to the weather.

41 **Workmanship:**

42 Install using procedures defined in NECA Standard of Installation and shall be conform with all codes and regula-
43 tions. Materials and equipment of the types for which there are National Board of Fire Underwriters' Laboratories
44 (UL) listing and label service shall be so labeled and shall be used by Contractor.

46 **Modifications to existing construction and Alterations:**

47 Alter, extend and reconnect existing conduit as necessary. Reconnect existing conduits, which were reused, cut or
48 exposed because of construction as quickly as possible. Where wiring is involved, new wires shall be "pulled in"
49 between the nearest available accessible reused outlets to the extent allowed by the governing code. Furnish and
50 install new conduits for wires if they cannot be "pulled in" to existing conduits. All new conduits, wiring, and elec-
51 trical items shall be connected to the existing systems so as to function as a complete unit. Where existing elec-
52 trical equipment, devices, fixtures, electrically operated items, etc., interfere with any remodeling work, they shall
53 be removed and reinstalled in another location to avoid such interferences. all existing and relocated equipment
54 shall be left in good operating condition. Include in bid removal from service of existing electrical material and
55 equipment as specified hereinafter, as noted on the drawings, or as needed by field conditions.

57 **Painting of Equipment and Hardware:**

58 Provide moisture resistant paint for all exterior painting. Colors shall be as shown on the drawings unless specified.
59 Refer to individual Sections and construction drawings for painting requirements. All exposed conduits, raceways
60 and gutters inside and outside the building shall be painted to match the wall color.

62 **2. DELIVERY, STORAGE AND HANDLING OF MATERIALS**

63 Contractor or the Contractor's authorized representative must be present to accept delivery of all equipment and
64 material shipments. The City will not knowingly accept, unload or store anything delivered to the site for the Con-
65 tractor's use. Inadvertent acceptance of delivered items by any or employee of the City shall not constitute accep-
66

1 tance or responsibility for any of the materials or equipment. It is the Contractor's responsibility to assume liability
2 for equipment or material delivered to the job site.
3

4 Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays. Mate-
5 rials and equipment shall be delivered to the site in adequate time to ensure uninterrupted progress of the work
6 and inspection of material by the City. Deliver materials in manufacturer's original, unopened, undamaged contain-
7 ers with identification labels intact. Care shall be taken to prevent damage to materials and equipment during load-
8 ing, transporting and unloading. Packaged materials and equipment shall be delivered to the site in original, unda-
9 maged containers bearing manufacturer's name, with seals unbroken. Packaged units shall be delivered in their
10 original crates. Store in a clean and dry space. Maintain factory wrapping or provide an additional heavy canvas
11 or heavy plastic cover to protect units from dirt, water, construction debris, and traffic. Promptly inspect shipments
12 to insure that the material is undamaged and complies with specifications. Materials or equipment, which do not
13 conform to the Specifications or are damaged shall not be incorporated in the work and shall be immediately re-
14 moved from the site.
15

16 Arrange for the necessary openings in the building to allow for admittance of all apparatus. When the building
17 access was not previously arranged and must be provided by this Contractor, restore any opening to its original
18 condition after the apparatus has been brought into the building.
19

20 Contractor shall confine equipment, apparatus, storage of materials and operations to limits indicated on the draw-
21 ings or by specific direction of the City. The storage of materials on the grounds and within the building shall be in
22 strict accordance with the instructions of the City. Storage of materials within the building shall at no time exceed
23 the design carrying capacity of the structural system. The City assumes no responsibility for materials stored in
24 building or on the site. The Contractor assumes full responsibility for damage due to the storage of materials. Re-
25 pairing of areas used for placing of sheds, offices, and for storage of materials shall be done by the Contractor.
26

27 Material shall be stored according to manufacturer's recommendations as a minimum. Provide and maintain water-
28 tight storage sheds on the premises where directed, for storage of materials that might be damaged by weather.
29 Sheds shall have wood floors raised at least 6" above the ground. Materials, construction sheds, and earth stock-
30 piles shall be located so as not to interfere with the installation of the utilities nor cause damage to existing lines.
31 Should it be necessary at any time to move material sheds or storage platforms, the Contractor shall move it at the
32 Contractor's expense, when directed by the City. All materials affected by moisture shall be stored on platforms
33 and protected from the weather. In addition, material must be stored in a location protected from vandalism and
34 weather. If material is stored outside, it must be covered with opaque plastic or canvas with provision for ventilation
35 to prevent condensation and for protection from weather. If necessary, material will be stored off site at the Con-
36 tractor's expense. Offsite storage agreements will not relieve the Contractor from using proper storage techniques.
37 Storage and protection methods must allow inspection to verify products.
38

39 All materials shall be stored in a manner that prevents release of hazardous material to the environment. All ha-
40 zardous materials, including motor fuels, shall be properly handled and contained to prevent spills or other releas-
41 es. The Contractor shall develop and maintain a contingency plan to provide emergency response, containment,
42 and cleanup of spills of hazardous materials resulting from contract activities. All spills and releases shall be re-
43 ported to the City as soon as possible. Please note that the Standard Specifications Section 107.4(f) must be fol-
44 lowed and overrides any provision in these specifications.
45

46 Cover pipes and ducts to prevent corrosion or deterioration while allowing sufficient ventilation to avoid condensa-
47 tion. Do not store materials directly on grade. Protect pipe, duct, tube, and fitting ends so they are not damaged.
48 Where end caps are provided or specified, take precautions so the caps remain in place. Protect fittings, flanges,
49 and unions by storage inside or by durable, waterproof, above ground packaging.
50

51 Store windows and doors in upright position, off ground, under cover and protected from sunlight, weather and
52 construction activities.
53

54 3. DEMOLITION

55 Perform all demolition as indicated on the drawings to accomplish new work. Demolition Drawings are based on
56 casual field observation and/or existing record documents. Verify field measurements and circuiting arrangements
57 as shown on Drawings, verify that abandoned wiring, piping, ducting and equipment serve only abandoned facili-
58 ties. Report discrepancies to the City before disturbing existing installation. Beginning of demolition means instal-
59 ler accepts existing conditions.
60

61 Before demolition of any load bearing concrete a ground-penetrating radar or concrete X-ray scan needs to be
62 performed to detect any rebar. This work shall be performed at least a week before demolition starts to give A/E
63 the opportunity to resolve any issues by rebar or other obstacles in unexpected locations. Drawings with existing
64 subsurface obstacles may not be correct and shall not be relied on.
65

66 Where demolition work is to be performed adjacent to existing work that remains in an occupied area, construct
67 temporary dust partition to minimize the amount of contamination of the occupied space. Where pipe or duct is

1 removed and not reconnected with new work, cap ends of existing services as if they were new work. Coordinate
2 work with the City to minimize disruption to the existing building occupants.
3

4 All pipe, wiring and associated conduit, insulation, ductwork, and similar items demolished, abandoned, or deacti-
5 vated are to be removed from the site by the Contractor. Maintain the condition of material and/or equipment that is
6 indicated to be reused equal to that existing before work began. All piping and ductwork specialties are to be re-
7 moved from the site by the Contractor unless they are dismantled and removed or stored by the City. Verify
8 whether or not PCB ballasts exist in light fixtures, which will be disposed of. If PCB light fixture ballasts exist, then
9 follow requirements in other sections related to electrical work.
10

11 Patch holes and openings caused by removal of material and equipment, or formerly covered by such, with like
12 material and texture of surrounding surface. Painting is not necessary unless noted otherwise.
13

14 Approval of all legal institutions shall be obtained prior to disposal of any equipment and materials. All disposal has
15 to be in compliance with all local, county, state and nationwide regulations. All disconnected wiring shall be re-
16 moved from all raceway systems, panels, enclosures pull boxes, junction boxes etc. irrespective of whether the
17 removal is specified in the construction documents or not. The empty raceway systems shall be tagged spare on
18 both ends of each termination.
19

20 Don't demolition equipment and material that is to stay in place. Repalce and repair any equipment and installa-
21 tions that get damaged during demolition.
22

23 **4. CUTTING, PATCHING AND PAINTING**

24 Cutting and patching required to access work in existing walls, in chases, above inaccessible ceilings, below floors,
25 etc., shall be by the Contractor who requires the access, unless shown on the bid documents otherwise or noted
26 otherwise.
27

28 The Contractor shall do all cutting, or fitting of the work as required to make its several parts fit together, or to re-
29 ceive the work of others, as shown or reasonably implied by the drawings or specifications, or as may be directed
30 by the City. Holes cut in exterior walls and/or roofs shall be waterproofed.
31

32 The Contractor who cuts shall also be responsible for patching. Where cutting and patching is required, the Con-
33 tractor shall hire individuals skilled in such work to do cutting and patching. The Contractor who removes or relo-
34 cates building components which leaves a remaining opening shall be responsible for patching the opening.
35

36 Patching includes repairing openings to match adjacent construction and painting the surface to match existing
37 surface including texture.
38

39 Painting means covering the entire wall where patching is to be done to nearest break point or corner unless indi-
40 cated to be done by other trades. All paining will require patching. This includes all painting included in other sec-
41 tions.
42

43 Contractor shall not endanger any work by cutting, digging or otherwise and shall not cut or alter the work of others
44 without their consent.
45

46 Do not pierce beams or columns without permission of the City and then only as directed in writing. If any duct-
47 work, piping, conduit, etc. is required through walls or floors where no sleeve has been provided, use a core drill or
48 saw cut to prevent damage and structural weakening.
49

50 Wherever any material, finish, or equipment, is damaged, the skilled trade shall accomplish the repair or replace-
51 ment, in that particular work and the cost shall be charged to the party responsible for the damage. The City re-
52 serves the right to disallow any means and/or methods that, in the opinion of the City, are harmful to and/or not in
53 the best interest of preserving the improvements receiving the work.
54

55 **5. CONCRETE WORK**

56 Provide all layout drawings, anchor bolts, metal shapes, and/or templates required to be cast into concrete or used
57 to form concrete for support or installation of electrical, mechanical, plumbing piping, fixtures, specialties and
58 equipment. This includes but is not limited to piping thrust restraints, pipe supports, hydrant supports, manholes,
59 catch basins, grease traps, septic tanks, distribution boxes, valve pits, meter pits, cleanout cover pads, yard hy-
60 drant pads, etc. Coordinate locations of equipment, pipe penetrations in wet areas, etc. with other trades.
61

62 Unless noted otherwise provide cast in place concrete for equipment pads, manhole bases and thrust blocks. Con-
63 crete to be 3,000 psi at 28 days, 3/4 inch aggregate, five bags cement, three inch slump, air entraining admixture.
64 The ACI 614 Recommended Practice for Measuring, Mixing and Placing of Concrete shall constitute the execution
65 requirements.
66
67

1 **6. EXCAVATION, BACKFILL, AND SURFACE RESTORATION**

2 The Contractor shall take all measures necessary to become acquainted with the location of underground service,
3 utilities, structures, etc., which may be encountered or be affected by the Contractor's work, and shall be responsi-
4 ble for damage caused by neglect to provide proper precautions or protection. As a minimum to become ac-
5 quainted with such underground appurtenances, the Contractor shall: 1) Observe existing conditions visible at the
6 site immediately prior to commencement of work; 2) Review available site plans incorporated in the contract docu-
7 ments and/or provided by the City; 3) Final check with the City for additions to or changes from conditions indicated
8 on site plans for the facility.
9

10 Before excavation in areas with utilities nearby, a ground-penetrating radar or ground radar scan needs to be per-
11 formed to detect any subsurface obstacles. This work shall be performed at least a week before demolition starts to
12 give A/E the opportunity to resolve any issues by utilites or other obstacles in unexpected locations. Drawings with
13 existing utilites may not be correct and shall not be relied on.
14

15 Verify the locations of any water, drainage, gas, sewer, electric, telephone or steam lines which may be encoun-
16 tered in the excavation. Underpin and support all lines. Cut off service connections encountered which are to be
17 removed at the limits of the excavation and cap. Existing pipes, electrical work, and all other utilities encountered,
18 which may interfere with new work, shall be re-routed, capped, cut off, or replaced by the Contractor.
19

20 Perform all excavation and backfill work necessary to accomplish indicated systems installation. Excavate to below
21 bottom of pipe and structure bedding (4" in stable soils, 6" in rock or wet trenches and 8" in unstable soil). Finish
22 bottoms of excavations to true, level surface. Install lines passing under foundations with minimum of 1-1/2 inch
23 clearance to concrete and insure there is no disturbance of bearing soil. Excavate whatever materials are encoun-
24 tered as required to place at the elevations shown, all pipe, manholes, and other work. Remove debris and rubbish
25 from excavations before placing bedding and backfill material.
26

27 Remove rock encountered in the excavation to a minimum dimension of six (6) inches outside the pipe. Rock exca-
28 vation includes all hard, solid rock in ledges, bedded deposits and unstratified masses, all natural conglomerate
29 deposits so firmly cemented as to present all the characteristics of solid rock; which material is so hard or so firmly
30 cemented that in the opinion of the City Engineer it is not practical to excavate and remove same with a power
31 shovel except after thorough and continuous drilling and blasting. Rock excavation includes rock boulders of 1/2
32 cubic yard or more in volume. Rock excavation will be computed on the basis of the depth of rock removed and a
33 trench width two (2) feet larger than the outside diameter of the pipe where one (1) pipe is laid in the trench and
34 three (3) feet larger than the combined outside diameter where two (2) pipes are laid in the trench. Include 6" pipe
35 and structure bedding in rock excavation. Include rock excavation shown on the plans in the Base Bid.
36

37 Bed pipe up to a point 12" above the top of the pipe. Take care during bedding, compaction and backfill not to dis-
38 turb or damage piping. Bedding up to a point 12" inches above the top of a pipe or conduit shall be thoroughly
39 compacted sand or crushed stone chips meeting the following gradations:
40

<u>Gradation for Bedding Sand</u>		<u>Gradation for Crushed Stone Chip Bedding</u>	
<u>Sieve Size</u>	<u>% Passing (by Wt)</u>	<u>Sieve Size</u>	<u>% Passing (by Wt)</u>
1 inch	100	1/2 inch	100
No. 16	45 - 80	No. 4	75 - 100
No. 200	2 - 10	No. 100	10 - 25

47
48 Provide shoring, sheet piling and bracing in conformance with the Wisconsin Administrative Code to prevent earth
49 from caving or washing into the excavation. Shore and underpin to properly support adjacent or adjoining struc-
50 tures. Abandon in place shoring, sheet piling and underpinning below the top of the pipe, or, if approved in ad-
51 vance by the City Engineer, maintained in place until other permanent support approved by the City Engineer is
52 provided.
53

54 Tunnel or remove sidewalk and curb in areas of excavation to the nearest joint. Remove pavements, curbs and
55 gutters to neat and straight lines to the limits of removal. Make sawcut lines parallel to existing joints, or parallel or
56 perpendicular to pavement edges to form a neat patch. Carefully remove remaining pavement within the sawcut
57 area. Leave existing base materials between the area disturbed by the work and the sawcut line undisturbed by
58 the sawcutting, pavement removal, or pavement replacement processes.
59

60 Strip topsoil from area to be excavated, free from subsoil and debris, and store separately for later re-spreading.
61 No topsoil shall be removed from site and all topsoil is property of the City. Remove surplus excavated non-topsoil
62 materials from site and dispose properly.
63

64 At no time place excavated materials where they will impede surface drainage unless such drainage is being safely
65 rerouted away from the excavation.
66

1 Provide and maintain all fencing, barricades, signs, warning lights, and/or other equipment necessary to keep all
2 excavation pits and trenches and the entire subgrade area safe under all circumstances and at all times. No exca-
3 vation shall be left unattended without adequate protection.
4

5 Elevations shown on the plans are subject to such revisions as may be necessary to fit field conditions. No adjust-
6 ment in compensation will be made for adjustments up to two (2) feet above or below the grades indicated on the
7 plans.
8

9 Three days before backfilling, the City shall be notified so that the City Surveyor can obtain the three-dimensional
10 coordinates of all buried utilities. Buried utilities including the pipeline and any other utilities exposed during
11 construction shall not be covered with backfill without the prior approval of the City. Coordination of this survey re-
12 quirement is the responsibility of the Contractor. Surveyors will be provided by the when scheduled. The cost for
13 delay or dig-up related to the Contractor's failure to schedule the utility survey shall be paid by the Contractor. Al-
14 ternately, the Contractor shall install reference points consisting of nail and hub/flagging at all changes in grade or
15 alignment of the new pipeline and for all other utilities exposed by the excavation. The Contractor shall keep a sep-
16 arate written record referenced to each point with the following information:
17

18 (1) Offset and depth to top and centerline of utility, accurate to 0.1 feet

19 (2) Type of utility (i.e. gas, water, etc.)

20 (3) Size of utility (i.e. 2", 4", 16" wide duct, etc.)

21 (4) Type of material of utility (i.e. cast iron, PVC, etc.)

22 2. Identification tape shall be installed 12" above the buried utility crown. The identification tape shall be
23 continuous for the entire length of utility. Before backfilling for buried utilities over identification tape, the City con-
24 struction inspector will verify that identification tape has been installed.
25

26 Mechanically compact bedding and backfill to prevent settlement. The initial compacted lift to not exceed 24" com-
27 pacted to 95% density per Modified Proctor Test (ASTM D-1557). Subsequent lifts under pavements, curbs, walks
28 and structures are not to exceed 12" and be compacted to 95% density per Modified Proctor Test. In all other areas
29 where construction above the excavation is not anticipated within 2 years, mechanically compact backfill in lifts not
30 exceeding 24" to 90% density per Modified Proctor Test. Route the equipment over each lift of the material so that
31 the compaction equipment contacts all areas of the surface of the lift.
32

33 Backfill above the bedding in lawn areas shall be thoroughly compacted excavated material free of large stones,
34 organic, perishable, and frozen materials.
35

36 Backfill above the bedding under existing and future utilities, paving, sidewalks, curbs, roads and buildings shall be
37 granular materials, pit run sand, gravel, or crushed stone, free from large stones, organic, perishable, and frozen
38 materials.
39

40 Completely restore the surface of all disturbed areas as described below to a like condition of the surface prior to
41 the work. Level off all waste disposal areas and clean up all areas used for the storage of materials or the tempo-
42 rary deposit of excavated earth. Remove all surplus material, tools and equipment. Topsoil shall be spread upon
43 order from the City, typically right before any planting to avoid disturbance of topsoil by construction activities.
44

45 Lawns: Topsoil with 4" of clean, friable, fertile topsoil conforming to D.O.T. Section 625, free from debris, lumps,
46 rocks, roots, plants and seeds. Grade surfaces to match adjacent elevations. Rake smooth, free of lumps and de-
47 bris. Sod with good quality nursery sod conforming to D.O.T. Section 631, be uniform, dense, free from weeds and
48 consist of approximately 60% Kentucky blue grass and the balance perennial rye, fescue and white clover. Place
49 sod with joints staggered and abutting. Maintain lawn areas for one month after installation. Department will be
50 responsible for necessary watering and mowing. Contractor needs to inform Department about watering needs. Do
51 necessary weeding, repair, reseeding or resodding until uniform catch is obtained.
52

53 Curb and Gutter: Concrete curb and gutter conforming to the City requirements and D.O.T. Section 601, Type D or
54 L.
55

56 Sidewalk and Walkways: Non-reinforced concrete conforming to D.O.T. Section 602, thickness to match existing,
57 cross slope of one-fourth inch per foot, scored into squares approximately equal to width.
58

59 Bituminous Concrete Pavements: 4" thick crushed stone base course conforming to D.O.T. Section 304 (excluding
60 304.2.4) and two pass bituminous concrete pavement conforming to D.O.T. Section 407, first course 1-1/2" binder,
61 second course 1-1/2" surface.
62

63 7. DEWATERING

64 Provide, operate and maintain all pumps and other equipment necessary to drain and keep all excavation pits,
65 trenches and the entire subgrade area free from water under all circumstances. Obtain general permit from the
66 Wisconsin Department of Natural Resources district office for discharge of construction dewatering effluent. Obtain

1 well permit from the Wisconsin Department of Natural Resources district office for dewatering wells discharging
2 more than 70 GPM. Comply with permit requirements.

3
4 Temporary pumps required for pumping water from building excavation or from building proper shall be provided by
5 the Contractor, including temporary connections. Permanent sump pumps shall not be installed until building is
6 substantially complete and when approved by the City. The Contractor shall remove temporary pumps and connec-
7 tions when approved by the City.

8 9 **8. SEALING AND FIRESTOPPING**

10 The Contractor penetrating a fire rated wall/floor/ceiling is responsible for sealing this opening to the same rating
11 as the wall/floor/ceiling is rated.

12
13 Sealing and firestopping of sleeves/openings between conduits, cable trays, wire ways, troughs, cablebus, bus-
14 duct, pipes, ducts etc. and the structural or partition opening shall be the responsibility of the Contractor whose
15 work penetrates the opening. The Contractor responsible shall hire individuals skilled in such work to do the seal-
16 ing and firestopping. These individuals hired shall normally and routinely be employed in the sealing and fireproof-
17 ing occupation.

18 19 **FIRE AND/OR SMOKE RATED PENETRATIONS:**

20 Install approved product in accordance with the manufacturer's instructions where an installation penetrates a
21 fire/smoke rated surface. When pipe is insulated, use a product, which maintains the integrity of the insulation and
22 vapor barrier.

23
24 Where firestop mortar is used to infill large fire-rated floor openings that could be required to support weight, pro-
25 vide permanent structural forming. Firestop mortar alone is not adequate to support substantial weight.

26
27 Whenever possible, avoid penetrations of fire and smoke rated partitions. When they cannot be avoided, verify
28 that sufficient space is available for the penetration to be effectively fire and smoke stopped. All firestopping sys-
29 tems shall be by the same manufacturer. Firestop systems shall be UL listed or tested by an independent testing
30 laboratory approved by the Department of Commerce. The Contractor will be responsible for selecting the appro-
31 priate UL tested fire stop system for each application required on the project and will submit this to the City or de-
32 signee for review. Each firestop manufacturer has specific details for different applications they have tested.

33
34 Manufacturers: 3M, STI/SpecSeal, Tremco, Hilti or approved equal.

35
36 Submittals: Contractor shall submit product data for each firestop system. Submittals shall include product charac-
37 teristics, performance and limitation criteria, test data, MSDS sheets, installation details and procedures for each
38 method of installation applicable to this project. For non-standard conditions where no UL tested system exists,
39 submit manufacturer's drawings for UL system with known performance for which an engineering judgment can be
40 based upon. Use a product that has a rating not less than the rating of the wall or floor being penetrated. Refer-
41 ence architectural drawings for identification of fire and/or smoke rated walls and floors.

42
43 Contractor shall use firestop putty, caulk sealant, intumescent wrapstrips, intumescent firestop collars, firestop
44 mortar or a combination of these products to provide a UL listed system for each application required for this
45 project. Provide mineral wool backing where specified in manufacturer's application detail.

46 47 **NON-RATED PENETRATIONS:**

48 **Conduit Penetrations Through Below Grade Walls:**

49 In exterior wall openings below grade, use a modular mechanical type seal consisting of interlocking synthetic rub-
50 ber links shaped to continuously fill the annular space between the uninsulated conduit and the cored opening or a
51 water-stop type wall sleeve.

52 53 **Conduit and Cable Tray Penetrations:**

54 At conduit and cable tray penetrations of non-rated interior partitions, floors and exterior walls above grade, use
55 urethane caulk in annular space between conduit and sleeve, or the core-drilled opening.

56
57 In exterior wall openings below grade, assemble rubber links of mechanical seal to the proper size for the pipe and
58 tighten in place, in accordance with manufacturer's instructions.

59
60 At all interior partitions and exterior walls, pipe penetrations are required to be sealed. Apply sealant to both sides
61 of the penetration in such a manner that the annular space between the pipe sleeve or cored opening and the pipe
62 or insulation is completely blocked.

63 64 **9. CLEANING**

65 The Contractor shall clean up and remove from the premises, on a daily basis accumulation of surplus materials,
66 rubbish, debris and scrap and shall repair all damage to new and existing equipment resulting from its work. When
67 job is complete, this Contractor shall remove all tools, excess material and equipment, etc., from the site.

1
2 All installed items shall be cleaned at time of installation, and all lens exteriors shall be cleaned just prior to final
3 inspection. Equipment shall be thoroughly cleaned of all stains, paint, spots, dirt and dust. All temporary labels not
4 used for instruction or operation shall be removed. Dust, dirt and other foreign matter shall be removed completely
5 from all internal surfaces of all mechanical and electrical units, cabinets, ducts, pipes, etc. Dirt, soil, fingerprints,
6 stains and the like, shall be completely removed from all exposed finished surfaces.
7

8 Contractor shall wash all glass immediately prior to the occupancy of this project. Work shall include the removal
9 of labels, paint splattering, glazing compound and sealant. Surfaces shall include mirrors and both sides of all
10 glass in windows, borrowed lights, partitions, doors and sidelights. In addition to the above, the Contractor shall be
11 responsible for the general "broom" cleaning of the premises and for expediting all of the cleaning, washing, wax-
12 ing and polishing required within the technical sections of the specifications governing work under this Contract.
13 The Contractor shall also perform "final" cleaning of all exposed surfaces to remove all foreign matter, spots, soil,
14 construction dust, etc., so as to put the project in a complete and finished condition ready for acceptance and use
15 intended.
16

17 If rubbish and debris is not removed, or if surfaces are not cleaned as specified above, the City reserves the right
18 to have said work done by others and the related cost(s) will be deducted from monies due the Contractor.
19

20 **10. CONTINUITY OF SERVICE AND SHUTDOWN**

21 Contractor shall provide and maintain continuous service (power, controls, alarms, communication, elevators,
22 HVAC, roads etc.) during the entire construction period. No outages shall be permitted on existing systems except
23 at the time and during the interval specified by the City. Any outage must be scheduled when the interruption
24 causes the least interference with normal institutional schedules and business routines and might be scheduled
25 during after-hours if regular business hours are not acceptable to the City. No extra costs will be paid to the Con-
26 tractor for such outages, which must occur outside of regular weekly working hours. Cost to the utility is paid by
27 Contractor. The Contractor shall provide temporary utility services and bypasses for any disruptions not completed
28 within this period. The Contractor shall restore any circuit interrupted as a result of this work to proper operation as
29 soon as possible.
30

31 If the building is occupied and continues operation during construction, retrofit or demolition, Contractor must
32 maintain ventilation and air conditioning for as large parts of the building as technically feasible. Spreading of dirt,
33 dust and other construction related material must be kept to a minimum. Occupied and work areas must be sepa-
34 rated by seals. All work affecting air conditioning and ventilation must be coordinated with the daily work in the
35 building and approved by the supervisor or department head at the building. If air conditioning, heating and ventila-
36 tion has to be taken out of service for longer periods of time in parts of the building and work would be affected
37 negatively, the Contractor shall provide temporary sufficient air conditioning, heating and ventilation in coordination
38 with the department. All such taking out of service has to be coordinated and approved by the supervisor or de-
39 partment head at the building.
40

41 If the shutdown involves the interface with, or modification of, existing building energy system(s), the Contractor
42 shall be required to show the reviewed submittal and shop drawings of the proposed modifications. Shutdown
43 schedules shall have been reviewed and approved by the City at least 72 hours prior to date of shutdown. Post-
44 ponement by the City of scheduled shutdowns shall not constitute a basis for additional charges to the City.
45

46 Prior to the shutdown of any building energy system(s) the Contractor shall provide the following:

- 47 - Proof of receipt of all materials required for the shutdown or a written commitment from the responsible
- 48 suppliers that the required materials will be available at the time of the shutdown.
- 49 - A list of the qualified Contractor personnel assigned to perform the work.
- 50 - Analysis of any affect on the utility or building energy system(s) and the estimated duration of the shut-
- 51 down.
- 52 - Work plan for the shutdown
- 53 - A twenty-four-hour emergency callback phone number to be used by the City in the event of any problems
- 54 or concerns with the modifications made to the building system(s) after the Contractor has left the site.
55

56 The startup of electrical and mechanical utility systems constructed by Contractor shall be performed by Contractor
57 in coordination with the City.
58

59 **11. PROJECT MEETINGS**

60 Project meetings will be held at the time designated by the City. If the principal of the firm does not attend meet-
61 ings, a responsible representative of the Contractor who can bind the Contractor to a decision at the meetings shall
62 attend. The City or designee will write a report covering all items discussed and decisions reached and copy of
63 such report distributed to all parties involved.
64

65 During construction, weekly project meetings may be held at the discretion of the City. The minutes of these meet-
66 ings will be prepared by the Contractor and one copy issued as expeditiously as possible to the each party. In-

1 volved in the project the Contractor will submit, in writing, questions and/or answers (previously obtained verbally)
2 to be confirmed at each meeting.

3 4 **12. TEMPORARY CONSTRUCTION**

5 Temporary construction shall conform to all requirements and laws of state and local authorities, which pertain to
6 operation, safety, and fire hazards. Contractor shall furnish and install all items necessary for conformance with
7 such requirements, whether called for under separate sections of these Specifications or not. Contractor shall pro-
8 vide, maintain, and remove upon completion of his work:

- 9 - Temporary crossovers and bypass to utilities, electrical connections, traffic and footbridges, and walkways
10 used to maintain services or communications, which cannot be interrupted or curtailed.
- 11 - Temporary rigging, scaffolding, shoring, hoisting equipment, and all other temporary work as required for
12 this project.
- 13 - Temporary barricades around openings and excavations for this project.

14
15 Temporary lighting, if necessary during the period of construction, shall be supplied and maintained by the Con-
16 tractor at Contractor expense so that construction work can be safely performed. The temporary lighting system
17 shall be sufficient to enable all trades to safely complete their work and to enable the City to check all work as it is
18 being done. Illumination shall be 5 foot-candles minimum in all areas and, in addition, shall meet or exceed the
19 requirements of 29 CFR 1926.56 Illumination (OSHA regulations). In accordance with the latest issue of the Na-
20 tional Electrical Code, all temporary electrical circuits for construction purposes shall be equipped with combination
21 ground fault interrupter and circuit breakers meeting the requirements of UL for Class A, Group 1 devices. The
22 ground fault interrupter portion shall be solid-state type, insulated and isolated from the breaker mechanism. A test
23 button shall be provided for checking the device. The breaker mechanism shall provide overload and short circuit
24 protection and shall be operated by a toggle switch with over center switching mechanism so that contact cannot
25 be held closed.

26 27 **TEMPORARY HEAT**

28 All heating required after enclosure of the building shall be classified as TEMPORARY HEAT and be provided by
29 the Contractor. It shall be the responsibility of the Contractor to see that every precaution is used to prevent unne-
30 cessary escape of heat. The Contractor shall provide and pay for temporary heat. A minimum temperature of 45
31 degrees and a maximum temperature of 65 degrees for the building shall be maintained, except for a period of at
32 least ten days prior to the placing of interior woodwork and throughout the placing of this and other finish, varnish-
33 ing, painting, tiling etc., and until substantial completion to provide sufficient heat to insure a temperature in the
34 spaces involved of not less than 70 degrees nor more than 80 degrees. Temperatures must be checked during
35 nighttime and on weekends. Restitution shall be made by Contractor responsible for damage to building and con-
36 tents caused by overheating, freezing, fumes, soot or residue given off by temporary heating or lack of thereof.

37
38 Permanent heating system may be used for temporary heating. Warranty period may not be affected by use of
39 permanent heating. If permanent system is used, the Heating Trade shall install in their permanent location heating
40 coils or connectors as approved by the City, with controls to maintain temperatures required. Temporary filters
41 shall be used in the permanent system. Provide bases, shields, etc., around heating elements to prevent too rapid
42 drying of adjacent concrete, masonry or plaster. Relocation of some of the permanent heating system equipment
43 may be required during construction to prevent interference with new construction. Temporary units may be in-
44 stalled in such areas during the time permanent equipment is not operating due to relocation. The temporary heat-
45 ing system shall be removed after the permanent heating system has been installed and is operating. Surfaces and
46 structure shall be patched as required. Temporary heating equipment shall be relocated by the Heating Trade as
47 required during construction to prevent interference with new construction.

48
49 The use of temporary units whose product of combustion will damage fresh concrete, mortar or other building ma-
50 terials, will not be allowed. Use of coke or oil salamanders is prohibited. All portable temporary heating units shall
51 be properly ventilated to prevent combustion gases from remaining in the heating area.

52 If electrical power is required for oil or gas portable heating units, it may be taken from the available temporary
53 power source and paid for by the Contractor. Heating units and the area surrounding the units shall be kept in a
54 clean and safe condition.

55 56 **TEMPORARY ELECTRICAL SERVICE**

57 The Contractor shall make all arrangements with the local utility company for metered electrical service, pay for the
58 installation of all temporary service to utility point of termination shown on drawings, and upon completion of
59 project, pay for removal of temporary service. The Contractor shall patch surfaces and structure after services
60 have been removed. The Contractor shall pay for all electrical energy consumed for construction purposes for all
61 trades including temporary offices, for operation of ventilating equipment, for heating of building, and for testing
62 and operating of all equipment. The Contractor shall continue to pay for energy used until substantial completion
63 even though equipment has been connected to the permanent wiring.

64
65 Contractor shall provide and maintain 200 ampere electrical services in single phase or multiphase as required by
66 equipment to be used. Provide at multiple services to ensure service to run at less than 75% of its capacity at all
67 times and to enable short cable runs of less than 300 ft to equipment to be used.

1
2 The Contractor shall provide meter base and wiring to point of utility termination, provide main fused service switch,
3 and fused or breaker distribution panel(s). The Contractor shall also provide, at no cost to others, all lamps, wiring,
4 switches, sockets and similar equipment required for temporary system until substantial completion. Upon comple-
5 tion of the project, the Contractor shall remove the temporary system.
6

7 After Substantial Completion of the permanent electrical system and building wiring, permanent receptacles may
8 be used during finishing work. Permanent wiring for lighting fixtures, switches and receptacles shall be installed
9 only after all masonry and plastering has been completed, but this wiring shall not be used for motors larger than
10 fractional HP or for welding equipment. Circuits for larger motors and welding equipment may be provided with
11 special circuits to mains of electrical panels at the expense of those trades requiring them, provided that special
12 permission is obtained from the City and the installation is made by skilled electricians.
13

14 All temporary wiring and electrical installations shall be in accordance with applicable codes. Any power outage
15 occasioned by tying into the existing electrical system for temporary or permanent use shall be coordinated with
16 the City. The City does not guarantee the quantities or quality of power or water available for Contractor's use, nor
17 will it be responsible in any manner for interruptions in service or for the effects of interruptions.
18

19 All Trades shall furnish their extension cords and lamps other than those furnished for general lighting. All Trades
20 and other separate Contractors shall be allowed to use the service provided for general lighting and fractional
21 horsepower hand tools at no cost.
22

23 If a Contractor contemplates the use of equipment that requires a different voltage or greater capacity than that
24 specified, then that Contractor must arrange with Utility for this additional service and pay for installation of the ser-
25 vice and the necessary additional switches and wiring required. The meter shall be taken out in the Contractor's
26 name.
27

28 TEMPORARY WATER, SEWER AND PUMPS

29 The Contractor shall supply all water required for construction and other purposes until the permanent water supply
30 system is accepted and in operation. As soon as possible Contractor shall install and pay for permanent water
31 mains into new building, provide temporary gate valve and freezing protection, extend piping and provide a 3/4"
32 hose bib for use by all Contractors. Permanent lines maybe used.
33

34 Waste of water shall be avoided and valves, connections, pumps pipes and hoses shall be provided by Contractor
35 kept in perfect condition.
36

37 Sewer work shall be started and finished as soon as possible. Including backfill.
38

39 Water supply used by workmen shall be kept clean and sanitary at all times.
40

41 TOILETS

42 The Contractor shall provide and maintain sanitary temporary toilets, located where directed by the City, in suffi-
43 cient number required for the force employed. The toilets shall comply with International Building Code Chapter 29
44 on Plumbing Systems. Toilets shall be self-contained chemical type.
45

46 As soon as conditions will allow, the Plumbing Trade shall provide temporary toilets within the building, where di-
47 rected, and equip the room with at least two temporary water closets and one temporary lavatory, each with con-
48 nections to cold water and sanitary sewer. The Contractor shall provide a temporary wood enclosure with doors;
49 remove when directed. After directed by the City, the Plumber shall remove the temporary fixtures and replace
50 them with permanent fixtures. After temporary toilet accommodations are provided within the building, the Contrac-
51 tor shall remove the temporary outside toilets.
52

53 The Contractor shall maintain the temporary toilets in a sanitary condition at all times and shall supply toilet paper
54 until completion of the job.
55

56 FIELD OFFICES

57 The Contractor shall provide, maintain and remove upon completion a temporary watertight office where directed
58 for use by the Contractor and Trades. The office shall be equipped with a plan rack, a suitable table for examina-
59 tion of plans and shall have adequate equipment for document files and space for job meetings. Exterior of offices
60 shall be of neat appearance, and if deemed necessary by the City, shall be painted to achieve such appearance;
61 heat offices during cold weather; provide each office with at least one glazed movable window and one door with a
62 cylinder lock and latch set. Provide and maintain artificial light, minimum of 40 foot-candles, and two duplex outlets
63 where directed. When directed, move the office into a suitable area in the building.
64

65 13. IDENTIFICATION

66 Identify all equipment by stenciling (not less than 1 inch high letters/numbers) with one coat of black enamel
67 against a light background or white enamel against a dark background. Use a primer where necessary for proper

1 paint adhesion. Where stenciling is not appropriate for equipment identification, engraved name plates may be
2 used (White letters on a black background, 1/16 inch thick plastic laminate, beveled edges, screw mounting, Se-
3 tonply Style 2060 by Seton Name Plate Company or Emedolite Style EIP by EMED Co., or equal by W. H. Brady)
4

5 Identify interior piping not less than once every 30 feet, not less than once in each room, adjacent to each access
6 door or panel, and on both side of the partition where accessible piping passes through walls or floors. Place flow
7 directional arrows at each pipe identification location. Label all pipes with name of loop and arrows for flow direc-
8 tion with permanent label. Label all gauges. Use one coat of black enamel against a light background or white
9 enamel against a dark background.
10

11 Identify all exterior buried piping for entire length with underground warning tape except for sewer piping which is
12 routed in straight lines between manholes or cleanouts. Place tape 6"-12" below finished grade along entire length
13 of pipe. Extend tape to surface at building entrances, meters, hydrants and valves. Where existing underground
14 warning tape is broken during excavation, replace with new tape identifying appropriate service and securely
15 spliced to ends of existing tape.
16

17 Identify valves with brass tags bearing a system identification and a valve sequence number. Identify medical gas
18 and vacuum valves with brass tags and wall or cabinet mounted color coded engraved nameplate with the follow-
19 ing "(Type of Gas) Shutoff Valve for (Location or Zone)". Valve tags are not required at a terminal device unless the
20 valves are greater than ten feet from the device, located in another room or not visible from device. Provide a
21 typewritten valve schedule and pipe identification schedule indicating the valve number and the equipment or areas
22 supplied by each valve and the symbols used for pipe identification; locate schedules in mechanical room and in
23 each Operating and Maintenance manual. Schedule in mechanical room to be framed under clear plastic.
24

25 Provide all buried utilities, conduit and pipes with detectable underground warning tape, 5.0 mil overall thickness,
26 6" width, .0035" thick aluminum foil core with polyethylene jacket bonded to both sides. Color code tape and print
27 caution along with name of buried service in bold letters on face of tape.
28 Manufacturers: Thor Enterprises Magnatec or equal by Carlton, MSI Marking Services, Seton.
29

30 All underground non-metallic sewers/mains and water services/mains shall be provided with tracer wire installa-
31 tions. Tracer wire installations shall conform with Section 182.0715(2r) of Wisconsin Statutes and prevailing De-
32 partment of Commerce Chapter 84 requirements. Tracer wire shall be continuous solid copper or steel plastic
33 coated with split bolt or compression-type connectors.
34

35 SNAP-AROUND PIPE MARKERS:

36 One-piece, preformed, vinyl construction, snap-around or strap-around pipe markers with applicable labeling and
37 flow direction arrows, 3/4" min. size for lettering. Provide nylon ties on each end of pipe markers. Equal to Seton
38 Setmark.
39

40 VALVE TAGS:

41 Round brass tags with 1/2 inch numbers, 1/4 inch system identification abbreviation, 1-1/4 inch minimum diameter,
42 with brass jack chains, brass "S" hooks or one piece nylon ties around the valve stem, available from EMED Co.,
43 Seton Name Plate Company, or W. H. Brady.
44

45 14. LUBRICATION

46 Lubricate all bearings with lubricant as recommended by the manufacturer before the equipment is operated for
47 any reason. Once the equipment has been run, maintain lubrication in accordance with the manufacturer's instruc-
48 tions until the work is accepted by the City. Maintain a log of all lubricants used and frequency of lubrication; in-
49 clude this information in the Operating and Maintenance Manuals at the completion of the project.
50

51 15. PUNCH LIST

52 Contractor's supervisor at site shall acknowledge receipt of punch list.
53

54 Multiple punch lists can be submitted.
55

56 If Contractor fails to perform required corrective work in less than 30 days upon receipt of punch list by Contractor,
57 the City can perform corrections himself and charge the Contractor.
58

59 Contractor shall advise the City or designee that the necessary work has been performed. If the City or designee
60 verify if punch list items were not resolved and the work was not performed in less than 30 days upon receipt of
61 punch list by Contractor, the Contractor shall be required to compensate the for additional site visits at a rate of \$
62 100/hour plus mileage with the amount paid to the City or designee prior to processing the final payment.
63

64 16. TESTS AND FINAL ACCEPTANCE

65 The complete installation consisting of the several parts and systems and all equipment installed according to the
66 requirements of the Contract Documents, shall be ready in all respects for use by the City and shall be subjected to
67 a test at full operating conditions and pressures for normal conditions of use.

1
2 Proper notice has to be given to enable the City or designee to attend all tests. Failure to give proper notice can
3 result in repeated tests to be paid for by the Contractor. Tests are acceptable on properly working equipment only
4 and have to be repeated as often as required by the City at no cost to the City. If tests have to be repeated by an
5 City-hired Contractor due to equipment not installed or working properly, the Contractor shall reimburse the City for
6 additional testing expenses.

7
8 Contractor shall make all necessary adjustments and replacements affecting the work, which is necessary to fulfill
9 the City's requirements and to comply with the directions and recommendations of the manufacturer of the several
10 pieces of equipment, and to comply with all codes and regulations, which may apply to the entire installation. Con-
11 tractor shall also make all required adjustments to comply with all provisions of the drawings and specifications.
12

13 Prior to acceptance, all elements of operating equipment, including those of mechanical nature and those that
14 slide, swing, turn, or are intended to move in any way and those of an electrical nature, shall be given an operating
15 test to assure to the satisfaction of the City that such equipment operates as required. Contractor shall make all
16 adjustments, replacements, and such other modifications as needed. If it is necessary to run equipment in order to
17 complete the work, for periods that exceed the manufacturer's recommended maintenance interval, the Contractor
18 will provide such required maintenance at no additional cost to the City.
19

20 Notice that the work is ready for final inspection and acceptance shall consist of a written notice issued to the City
21 by the Contractor stating that the Contractor has carefully inspected all portions of the work, has reviewed in detail
22 the drawings and specifications, and that to the best of the Contractor's knowledge all conditions of the contract
23 documents have been fulfilled. Upon receipt of this notice, the City and the Contractor shall make a joint inspec-
24 tion of the work. After deficiencies, if any, have been corrected or accounted for, and after all work is satisfactorily
25 complete, the City will accept the work; and Notice of Completion will be filed by the City.
26

27 Prior to final acceptance, filing of the Notice of Completion or processing of final payment, the following shall be
28 done and submitted reviewed and accepted by the City:

- 29 - Certificates of compliance and guarantees required under various Sections
- 30 - Operating and maintenance manuals
- 31 - Instruction to City personnel, as required
- 32 - Test reports (TAB, fire alarm, elevator etc.)
- 33 - Certifications and registrations (boiler etc.)
- 34 - All keys
- 35 - Replacement material as required in specifications
- 36 - All required operations tests
- 37 - All documents required by commissioning, LEED certification and other project related documents
- 38 - Satisfy all commissioning requirements
- 39 - As -built documents
- 40 - All punch list items resolved
- 41 - All training provided (except deferred seasonal training)
- 42 - All warranty issues brought to Contractor's attention so far resolved
- 43 - Warranty documents signed by representative of manufacturer, guarantee documents, roofing agreement
44 and other warranty related documents

45
46 No official closeout and final payment will be made before all requirements are met.
47

48 **17. TRAINING AND DEMONSTRATION**

49 The City's facility staff (and occupants and service Contractors as needed), shall receive orientation and training on
50 features, systems and equipment in this facility requisite with the complexity and criticality of the system and the
51 City's needs.
52

53 Additional training requirements may be found in specific equipment sections. The City may videotape all training
54 sessions.
55

56 Only training on equipment that works as designed is acceptable.
57

58 The Contractor shall be responsible for training coordination and scheduling and ultimately for ensuring that train-
59 ing is completed on all equipment per the Specifications. Unless otherwise required or approved, the training shall
60 be given during regular business hours during a regular work week.
61

62 The City or designee will be responsible for coordinating and approving the content and adequacy of the training of
63 the City personnel for commissioned equipment. The City or designee will develop an overall training plan after
64 meeting with the City and appropriate facility staff to determine needs and areas of emphasis for this project. The
65 City or designee will develop criteria for determining that the training was satisfactorily completed, including attend-
66 ing some of the training, etc. The City or designee recommends approval of the training to the City.
67

1 Training shall consist of, as needed and at the discretion of the City or designee, the installing technician, installing
2 Contractor and the appropriate trade or manufacturer's representative on each major piece of equipment. Practical
3 building operating expertise as well as in-depth knowledge of all modes of operation of the specific piece of equip-
4 ment as installed in this project is required. More than one party will be required to execute the training on primary
5 equipment. The Contractor shall attend and present at sessions in addition to the controls training, as requested, to
6 discuss the interaction of the controls system as it relates to the equipment being discussed.
7

8 Follow the outline in the table of contents of the operation and maintenance manual and illustrate whenever possi-
9 ble the use of the O&M manuals for reference. Training Shall Include the Following:

- 10 - Use of the printed installation, operation and maintenance instruction material included in the O&M ma-
11 nuals.
- 12 - A review of the written O&M instructions emphasizing safe and proper operating requirements, preventa-
13 tive maintenance, and special tools needed and spare parts inventory suggestions. The training shall in-
14 clude start-up, operation in all modes possible, shutdown, seasonal changeover, as applicable, and any
15 emergency procedures.
- 16 - Discussion of relevant health and safety issues and concerns.
- 17 - Discussion of warranties and guarantees.
- 18 - Common troubleshooting and maintenance issues, problems and solutions.
- 19 - Explanatory information included in the O&M manuals and the location of all related plans and manuals in
20 the facility.
- 21 - Discussion of any peculiarities of equipment installation or operation.
- 22 - The format and training agenda in The HVAC Commissioning Process, ASHRAE Guideline 1 is recom-
23 mended, as applicable.
- 24 - Hands-on training shall include start-up, operation in all modes possible, including manual, shutdown and
25 any emergency procedures and preventative maintenance for all pieces of equipment.
- 26 - Training shall occur after functional testing and piping and equipment labeling are complete unless ap-
27 proved otherwise by the City.
28

29 HVAC control systems:

- 30 - For the primary HVAC equipment, the controls Contractor shall provide a short discussion of the control of
31 the equipment during the mechanical or electrical training conducted by others.
- 32 - The standard operating manual for the system and any special training manuals shall be provided for and
33 retained by each trainee. In addition, the system technical manual shall be demonstrated during training.
34 Manuals shall include detailed description of the subject matter for each session. The manuals shall cover
35 all control sequences and have a definitions section that fully describes all relevant words used in the ma-
36 nuals and in all software displays. Manuals will be approved by the City or designee.
- 37 - The trainings will be tailored to the needs and skill-level of the trainees and be oriented to the specific sys-
38 tem installed in this project.
- 39 - The trainers shall be knowledgeable on the system and its use in buildings. For the on-site sessions, the
40 most qualified trainer(s) shall be used. The City shall approve the instructor prior to scheduling the train-
41 ing.
- 42 - During any demonstration, should the system fail to perform in accordance with the requirements of the
43 O&M manual or sequence of operations, the system shall be repaired or adjusted as necessary and the
44 demonstration repeated.
45

46 There shall be three training sessions:

47 Training I - Control System: The first training shall be 4 hours in length.

48 Training II - Building Systems: The second session shall be held on-site for a period of 12 hours of actual hands-
49 on training after the completion of system commissioning. The session shall include instruction on:

- 50 - A review of the as-built drawings and O&M manuals, a walk-through of the facility to identify control panels
51 and device locations.
- 52 - Specific hardware configuration of installed systems in this building and specific instruction for operating
53 the installed system, including HVAC systems, lighting controls and any interface with security and com-
54 munication systems.
- 55 - Security levels, alarms, system start-up, shut-down, power outage and restart routines, changing set
56 points and alarms and other typical changed parameters, overrides, freeze protection, manual operation
57 of equipment, optional control strategies that can be considered, energy savings strategies and set points
58 that if changed will adversely affect energy consumption, energy accounting, procedures for obtaining
59 vendor assistance, etc.
- 60 - All trending and monitoring features (values, change of state, totalization, etc.), including setting up, ex-
61 ecuting, downloading, viewing both tabular and graphically and printing trends. Trainees will actually set-
62 up trends in the presence of the trainer.
- 63 - Every screen shall be completely discussed, allowing time for questions.
- 64 - Use of keypad or plug-in laptop computer at the zone level.
- 65 - Use of remote access to the system via phone lines or networks.
- 66 - Setting up and changing an air terminal unit controller.
- 67 - Graphics generation.

- 1 - Point database entry and modifications.
 - 2 - Understanding FMCS field panel operating programming (when applicable).
- 3 Training III - Deferred On-Site: The third training will be conducted on-site 6 months after occupancy and consist of
4 8 hours of training in one session. The session will be structured to address specific topics that trainees need to
5 discuss and to answer questions concerning operation of the systems.

6
7 Testing Adjusting and Balancing: The Contractor shall have the following special training responsibilities relative to
8 the testing, adjusting and balancing (TAB) work:

9 The TAB technician shall meet with facility staff after completion of TAB and instruct them on the following:

- 10 - Go over the final TAB report, explaining the layout and meanings of each data type.
- 11 - Discuss any outstanding deficient items in control, ducting or design that may affect the proper delivery of
12 air or water.
- 13 - Identify and discuss any terminal units, duct runs, diffusers, coils, fans and pumps that are close to or are
14 not meeting their design capacity.
- 15 - Discuss any temporary settings and steps to finalize them for any City-furnished, City-installed equipment.
- 16 - Other salient information that may be useful for facility operations, relative to TAB.

17 18 **18. ROADWAY**

19 The Contractor may build a temporary roadway for delivery of materials at the Contractor's own expense and main-
20 tain it until completion of construction or until service drives are installed. Where possible, build temporary road-
21 way within the confines of the new roadway and allow others to use it at no cost. Any gravel topping used for tem-
22 porary roadway shall be at least 6" below finished elevation of permanent drives. If temporary roadway is not in-
23 tended to be converted to a permanent road, all road materials shall be removed upon termination of access need,
24 and the confines of the temporary roadway shall be repaired to match adjacent area.

25 26 **19. FENCE**

27 The Contractor shall provide a neat appearing protective fence where indicated on the drawing, constructed of
28 standard studded T-Posts of sufficient length for line posts and spaced not to exceed 8'-0" apart. Corner posts and
29 gate posts are to be galvanized steel pipe of not less than 2 1/2" o.d. and shall be properly braced. A 4-foot high
30 wooden snow fence shall be securely fastened to the supports. Plastic fencing is not acceptable. The snow fence
31 shall project 4" above the fence posts. Provide gates, properly constructed and braced, complete with hinges,
32 hasps, and padlocks in number and location required for proper control, delivery and distribution of material and
33 equipment. Gateposts shall be adequately back tied and anchored to insure a rigid installation. All protective fenc-
34 ing shall be maintained in an upright, orderly fashion throughout the construction schedule. In areas where existing
35 trees are to be protected, the area inside the protective fencing shall not be used for any purpose related to con-
36 struction activities, such as material storage, vehicle parking, portable toilets, or other disruptive activities that
37 would result in damage of any kind to the site inside the fence.

38 39 **20. SIGNS**

40 Contractor shall furnish and install signs, located as directed by the City. The signs shall be readily legible to the
41 general public, subcontractors, material men, and truck drivers approaching the site and shall include the following
42 information:

- 43 - Project.
- 44 - Subcontract No.
- 45 - Subcontractor Name.
- 46 - Access to Buildings: Contractor shall keep access to existing buildings clear at all times.

47
48 The Contractor shall order, paint and erect the sign. The sign shall be placed on the property where directed and
49 shall be maintained for the duration of the construction period.

50
51 No individual advertising signs, plaques or credits, temporary or permanent, will be permitted on the building or
52 premises, except the name of the Contractor on Contractor's office or material shed.

53
54 **END OF SECTION**

SECTION 16050 - BASIC MATERIALS AND METHODS

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. Applicable provisions of Division 1 shall govern Work under this Section.
- B. Furnish all labor, materials, equipment and accessories required to complete all electrical work as shown on the Drawings and specified herein, and shall include, but is not necessarily limited to:
- 16050 Basic Materials and Methods
 - 16110 Raceways
 - 16120 Wires and Cables
 - 16130 Boxes
 - 16140 Wiring Devices
 - 16160 Panelboards
 - 16190 Supporting Devices
 - 16450 Grounding and Bonding
- C. Work Included in Division 16:
1. General: The mention hereinafter of article, operation, material, equipment or method requires that the E.C. shall provide such article of quality noted, in the quantity required, shall perform each operation, and use such method, material or equipment prescribed, all in complete accordance with the conditions stated. The E.C. shall provide all materials, labor, tools, equipment and transportation as necessary to complete the project in conformity with the drawings, the specifications, and other Contract Documents. In general, this work includes everything essential for a complete electrical system in operating order as shown or implied on the drawings or hereinafter specified.
 2. All work shall be in accordance with all Local & State Inspection Authorities having jurisdiction together with the recommendations of the manufacturer whose equipment is to be supplied and connected by the E.C.. All materials shall bear a UL label where a UL Standard and/or test exists.
 3. Before submitting his bid, each bidder shall examine the drawings relating to this work and shall become fully informed as to the extent and character of the work required and its relation to other work in the building. No consideration will be granted for any alleged misunderstanding of materials to be furnished or work to be done, it being understood that the tender of a proposal carries with it the agreement to all items and conditions referred to herein or indicated on the accompanying drawings.
 4. The E.C., in conjunction with the Architect's representative, shall establish exact location of all materials and equipment to be installed in consideration of construction features, equipment of other trades and requirements and purpose of equipment installed by the E.C..
- D. Summary of Electrical Work:
1. Drawings and Specifications: Electrical drawings are schematic. Reference shall be made to architectural drawings and dimensions, type of construction, layout, door swings, ceiling types, etc. Unless dimensioned, electrical items are shown in approximate locations. Minor relocations of these items may be made by the Architect/Engineer prior to rough-in at no expense to the Owner.
 2. Any conflict between the drawings and specifications shall be brought to the attention of the Architect/Engineer.
 3. Note that the electrical drawings are only a portion of the complete set of plans. The complete set of plans shall be used to define the electrical work. This shall include, but not be limited to, using the architectural plans for dimensions, the structural plans for concrete details, equipment plans for rough-in requirements, and mechanical plans for equipment sizes and locations.

4. The complete specifications will be utilized to define the electrical work. Electrical work which is not defined on the electrical drawings or in the electrical or specifications, but is defined elsewhere on the drawings or in the specifications, shall be the responsibility of the Contractor equally with work which is defined on the electrical drawings and in the electrical specifications.
5. General Outline: The facilities and systems of the electrical work can be described (but not by way of limitation) as follows:
 - a. Electrical power distribution system, including the electrical connecting of equipment not specified to be connected as work of another Division.
 - b. Demolition and remodeling.

E. Coordination of Electrical Work:

1. General: This Contractor shall coordinate his work with all other trades and the Architect/Engineer. The Contractor shall confer with the other trades and the Architect/Engineer so that all concerned will be thoroughly familiar with the specific items and areas of the coordination.
2. Conflicts of any type shall be immediately reported to the Architect/Engineer.
3. Equipment shall be assembled at the place of its permanent location if the size of the building openings does not permit passage of completely assembled units. This practice shall not waive or infringe upon any Manufacturer's warranty of guarantee.
4. The Contractor shall furnish and be responsible for the proper installation of all reinforcement required for wall or ceiling attached equipment.
5. Arrange electrical work in a neat, well organized manner with conduit and similar services running parallel with primary lines of the building construction.
6. Locate operating and control equipment properly to provide easy access, and arrange entire electrical work with adequate access for operation and maintenance.
7. Advise other trades of openings required in their work for the subsequent move-in of large units of electrical work (equipment).
8. All conduit shall be concealed except in mechanical and electrical rooms.
9. Coordinate Drawings: For locations where several elements of electrical (or combined mechanical and electrical) work must be sequenced and positioned with precision in order to fit into the available space, prepare coordination drawings (shop drawings) showing the actual physical dimensions (at accurate scale) required for the installation. Prepare and submit coordination drawings prior to purchase-fabrication-installation of any of the elements involved in the coordination.

1.2 RELATED DOCUMENTS

- A. Applicable provisions of Division 1 shall govern work under this section.

1.3 DEFINITIONS

- A. Provide: Furnish and install, complete and ready for service.
- B. Exposed: Exposed to view in any room, corridor or stairway.
- C. E.C.: Electrical Contractor.
- D. Engineer: HEIN Engineering Group.
- E. A/E: Architect/Engineer.
- F. ANSI: American National Standards Institute
- G. NEC: National Electric Code
- H. NEMA: National Electric Manufacturers Association

I. NFPA: National Fire Protection Association

J. UL: Underwriters Laboratories, Inc.

1.4 PERMITS AND LICENSES

A. Prepare and submit to all authorities having jurisdiction, for their approval, all applications and working drawings required by them. Secure and pay for all licenses and permits required.

1.5 QUALITY ASSURANCE, STANDARDS AND SYMBOLS

A. General: Specifically, for the electrical work (in addition to standards specified in individual work section), the following standards are imposed, as applicable to the work in each instance:

1. Standards for Materials and Workmanship: All materials shall conform with the standard of the UL in every case where the UL has established a standard of such materials. In addition, these materials shall bear the UL label to show their conformance. Materials not covered by UL standards shall be processed, supplied or manufactured to NEMA, IEEE, or other accepted industry standards for these materials and shall also be labeled or properly identified as being in conformance with the appropriate standards. Substitute standards for those listed is not acceptable. Materials and equipment shall be protected during delivery and handling to prevent damage; and shall be stored in a clean dry area to prevent contamination. Damaged materials shall not be used.
2. All materials and work shall conform to the applicable portions of the latest issues of the following standards:
 - a. UL
 - b. NEMA
 - c. NEC
 - d. NECA
 - e. ANSI
 - f. IEEE
 - g. ASTM
 - h. NFPA
 - i. IPCEA
 - j. FM
 - k. ETL
 - l. FIA
3. All work shall be installed in accordance with National and State laws, ordinances and regulations. Comply with all applicable OSHA regulations.
4. All materials shall have a UL label where a UL Standard and/or test exists.
5. All work shall be executed in a neat and workmanlike manner by workers thoroughly qualified in the trade of duties they are to perform. A rough or unworkmanlike installation will be cause for removal and replacement of said installation.

B. Substitution of Materials:

1. All requests for substitution shall be in writing and shall include therewith sufficient product information to permit the Architect/Engineer to evaluate the request.
2. The Architect/Engineer specifically reserves the right to reject or approve any and all substitute materials or equipment in order to insure compliance with the minimum standards of quality established for the project herein specified, and also to insure that any substitute materials or equipment maintains the trends of style and appearances established for this project.
3. When an item is approved as an equal, either by specification or by approved substitution, this item shall give the same end results, to the Architect/Engineer's satisfaction, as the item it has replaced from the specification. Any modification, additional fittings or change to the approved item or to concomitant items to accomplish these results shall be at the expense of the Contractor.

4. The Contractor shall choose from the listed manufacturers for specific items or a substitute manufacturer if approved, but once a manufacturer has been chosen all similar items shall be by the same manufacturer.

1.6 JOB CONDITIONS

A. Job Site:

1. The Contractor shall be familiar with conditions which will affect his work, and locations where the work will be performed and other pertinent factors.
2. The Contractor shall furnish all labor and materials to complete each installation ready for use.
3. No additional allowances will be granted because the Contractor's knowledge of jobsite conditions was incomplete.

B. Products, Electrical Work:

1. Product Listing: Prepare the product listing for electrical work. Include listing of each significant item of equipment and material used in the work; and indicate the generic name, product name, manufacturer, model number, related specification number(s).
 - a. Submit list to the Architect/Engineer for approval.
2. Compatibility: Provide products which are compatible with other products of the electrical work, and with other work requiring interface with the electrical work, including electrical connections and control devices. For exposed electrical work, coordinate colors and finishes with the other work.

1.7 REMODELING REQUIREMENTS

- A. Prebid Survey: Electrical Contractor shall survey the job site before submitting his bid to determine the extent of areas requiring demolition, relocating and remodeling. The extent of equipment and materials to be removed. Routings for existing and new piping services and systems. Examine accessibility, material storage and working space available.
- B. Maintenance of Service: The building will be continuously occupied during the construction period except as noted. Special efforts shall be made to avoid interference with building functions. Consult with the Owner prior to performing work in public areas of building or to turn off services, so that Owner can advise as to most suitable time for the necessary interruptions. All such work and interruptions to services shall be performed at times which are approved by the Owner.
- C. Demolition: Carefully examine the present building site, together with all of the drawings and specifications. Within areas involving remodeling, each Contractor shall be responsible for removal of, relocation of, or revisions to existing equipment, wiring, piping, fixtures and all other existing facilities under appropriate headings of his work, which is necessary to accomplish the final arrangement indicated on the Architect's plans. To assist the Contractor in meeting the above requirement, the drawings note certain of these items, but the absence of such notes shall not limit the responsibility of each Contractor to perform all work as described in this paragraph.
- D. Disposition of Demolition Materials and Equipment: Materials demolished or removed shall become the property of the Contractor and shall be removed from the site, except items which are to be reused or are specifically noted as remaining the property of the Owner.
- E. Cutting or Patching Existing Facility:
 1. Electrical Contractor will be required to do all remodeling, cutting and/or construction removal and all patching or construction replacement as required for his work except for specific cutting and patching described in the documents as being performed by a specific Contractor.

2. Electrical Contractor shall not endanger any work by any demolition, cutting, digging or otherwise. Any cost caused by defective or ill-timed work shall be borne by the contractor responsible.
3. Electrical Contractor requiring cutting and patching shall hire men skilled in such cutting and patching to do the work.
4. All new work in existing areas shall match existing work in material, quality, texture, finish and color unless specifically noted or scheduled otherwise.

1.8 DEMOLITION

- A. The Contractor is responsible for removal and relocation of all existing plumbing equipment and related items affected by the remodeling area.
- B. To assist the Contractor in meeting the above design intent, the drawings note certain of these items, but the absence of such notes shall not limit responsibility of the Contractor to perform all demolition work as required to accomplish new design plan.
- C. Contractor shall coordinate his remodeling efforts with the building functions and avoid interference wherever possible. All such interruptions of existing services shall be performed at times which are approved by the Postmaster.

1.9 WORK SEQUENCE

- A. The Contractor shall review the work sequence and determine if any dates of completion can not be met for his work. Any conflicts with completion dates shall be brought to the Engineer's attention prior to submitting a bid. No time extensions will be granted after contracts are awarded unless permitted in other parts of these specifications.

1.10 DIMENSIONS AND DEFINITE LOCATIONS

- A. The drawings depicting electrical work are diagrammatic and depict, in their approximate location, symbols representing electrical equipment. The exact location shall be established in the field in accordance with instructions from the Architect.
- B. Unless specifically stated to the contrary, no measurement of an electric drawing by scale shall be used as a dimension to work by. Dimensions noted on the electric drawings are subject, in each case, to measurements of adjacent or previously completed work and all such measurements necessary shall be taken before undertaking any work dependent upon time.

1.11 DRAWINGS

- A. The E.C. shall prepare, at his expense, complete field installation drawings necessary for the proper installation of his work. These drawings shall be submitted to the Engineer when requested for review and such copies of same as are necessary shall be provided for others as directed.
- B. The E.C. shall keep a detailed record, up-to-date, of the manner and location in which all installations are actually made, properly indexing each feeder, pull box and protective device.
- C. As Built Drawings: See General Requirements - Division 1.
- D. In the event of a conflict between the drawings and specifications the E.C. shall base his bid on the greater quantity, cost or quality of the item in question, unless such conflict is resolved by addenda.

1.12 MATERIALS AND EQUIPMENT

- A. Provide all new materials and equipment to form a complete installation, unless otherwise specified.
- B. All equipment supplied shall be based on materials and equipment of manufacturers specified. No substitutions will be allowed except as provided in Instructions to Bidders.

- C. All items specified shall be the latest type or model produced by the manufacturer specified. If descriptive specification or model number is obsolete, substitute current product.

1.13 FLOOR, WALL AND CEILING OPENINGS

- A. Pipe sleeves must be set for all pipes passing through new masonry construction. Coordinate with G.C. as to size and location of openings.
- B. Coordinate the location of sleeves, openings, chases, furred spaces, etc., with the other Contractors. Provide all sleeves, hangers and inserts that are to be built into the structure during the progress of construction.
- C. Pipe sleeves shall be Schedule 40 galvanized steel pipe and shall extend completely through the construction.
- D. Sleeves for pipe 4" and smaller shall be at least two pipe sizes larger than the pipe passing through.
- E. Sleeves shall extend 3/8" above the finished floor. In mechanical rooms and other areas where water may accumulate, sleeves shall extend 2" above the finished floor.
- F. Pack annular space between sleeves and insulation or pipe with fiberglass. Where penetrations occur through mechanical rooms or fire rated walls, floors, fill with Dow-Corning 3-6548 Silicone RTV Foam.

1.14 SHOP DRAWINGS

- A. Submit to Engineer for review, in accordance with Division 1, shop drawings and/or equipment brochures for the following:
1. Electrical Distribution Equipment.
 2. Distribution Panels and Cabinets.
 3. Termination Blocks.
 4. Raceway Systems.
- B. Submit in advance of construction requirements and as to cause no delay in the E.C.'s work and to allow the Engineer reasonable time to review them to make necessary corrections.
- C. All data submitted for Engineer's review shall be numbered consecutively, shall be noted to correlate with the electrical drawings and shall bear the name and location of the project, the name of the E.C., the date of submittal, the date of the drawings and the date of each correction and revision. If more than one type of lighting fixture (or other materials) are on submitted sheet, the one specified shall be conspicuously checked with red pencil by the E.C..
- D. It will be taken for granted that the E.C. has examined the shop drawings and equipment brochures prior to submission and that materials and equipment depicted thereon will readily fit into the construction. Also, all work completed, related to materials or equipment depicted thereon, has been properly installed and all work to be done prior to the installation of the materials and equipment in question will be done in accordance with requirements thereon.
- E. No materials or equipment subject to prior review shall be fabricated or installed by the E.C., save at his own risk, without such review. The Engineer's review of such drawings and brochures shall not relieve the E.C. or responsibility for deviations from the requirements of the drawings and specifications, unless he has, in writing, called the Engineer's attention to such deviations at the time of submission, nor shall it relieve him from responsibility for errors of any sort in shop drawings or equipment brochure.

1.15 DELIVERY STORAGE AND HANDLING

- A. All materials shall be suitably stored and protected prior to installation and all work shall be protected after installation, during construction and all work prior to acceptance.
- B. The E.C. shall furnish and remove upon completion of the project, all scaffolding, rigging, hoisting and services necessary for delivery, erection and installation of all equipment and apparatus required to be installed by the E.C..

1.16 MAINTENANCE MANUALS

- A. The E.C. shall assemble and submit to the Architect for subsequent submission to the Architect/Engineer, in accordance with Division 1, complete sets of a Manual of Operation and Maintenance for each of the separate systems furnished as a part of the electrical subcontractor.
- B. Each manual shall consist of an approved loose leaf type bound volume instructing the Architect/Engineer's personnel in the use, operation and maintenance of the system in question. The manual shall cover all phases of operation of the equipment and it shall be illustrated with photographs, drawings, wiring diagrams, etc., as required to accurately and adequately describe the operation, construction and adjustable features of the complete system and each component part. The manual shall be complete with an equipment parts listing to facilitate the ordering of spare and replacement parts.
- C. Each manual shall contain two sets of final shop drawings depicting equipment as installed.
 - 1. Equipment Parts Lists: Include a complete list of all equipment furnished for project, with a tabulation of descriptive data of all the equipment replacement parts proposed for each type of equipment or system. Properly identify each part of part number and manufacturer.

1.17 CLEANING AND PAINTING

- A. All rubbish resulting from this work shall be removed and disposed of on a daily basis and in such manner as to be acceptable to the Architect.
- B. The E.C. shall clean all exposed iron work, interior and exterior of panels and pull boxes, etc., and remove all rubbish and debris resulting from the work.
- C. Where painted surfaces of equipment have been abused, removed, or rusted during construction, the E.C. shall paint same to match original factory or surrounding finish.

1.18 TESTS AND ACCEPTANCE

- A. The operation of the equipment and electrical installations done does not constitute an acceptance of the work by the Architect/Engineer. The final acceptance is to be made after the E.C. has adjusted his equipment and demonstrated that it fulfills the requirements of the drawings and the specifications.
- B. After the work is completed and prior to acceptance, the E.C. shall conduct the following tests, tabulate data, date, sign and submit to the Engineer: clamp ammeter test on each feeder conductor with all utilization equipment energized. The load current in each phase conductor of the feeder of the portion thereof supplying the panel shall not differ from the average connected load currents in the several conductors by more than 10%. If the load current does differ by more than 10%, the E.C. shall change phase loading to same or receive written approval from the Engineer that this is not required due to the nature of the load.
- C. At the time of connection, or energizing, check all motors for proper rotation, conferring with contractor furnishing equipment, if necessary, to determine proper direction.
- D. Upon completion of the installation, the E.C. shall furnish certificates of approval from all authorities having jurisdiction. He shall demonstrate that all work is complete and in perfect operating condition, with raceway and conduit system properly grounded, all wiring free from grounds, shorts, and that the

entire installation is free from any physical defects. In the presence of the Engineer and the Architect/Engineer, the E.C. shall demonstrate the proper operation of all miscellaneous systems.

- E. All materials and workmanship is subject to inspection, examination and tests by the Architect/Engineer at any time.

1.19 EXTRA STOCK/SPARE PARTS

- A. Fuses, Electrical: Provide three (3) fuses of each size and type specified for this project.
- B. Circuit Breakers: Provide 10, extra 20 amp, 1 pole breakers.

1.20 DEFECTS

- A. Should it be found by the Engineer that the fixtures, equipment or any portion thereof furnished and installed under this subcontract fail to comply with the specifications and drawings, with respect or regard to the quality, amount of value of material, appliances or labor used in the work, it shall be rejected and replaced by the E.C. and all work disturbed by changed necessitated in consequence of said defects or imperfections shall be made good at the E.C.'s expenses.

1.21 WARRANTY

- A. The Contractor shall warranty: All materials furnished to be perfect in every respect; and, if not, replace same immediately. Replace any material or part showing defects within a minimum of one year of acceptance, or within warranty period of the item if greater than one year. This one year warranty period shall be binding even though it may exceed the product warranty period normally furnished by some manufacturers. Repair or replacement shall bear an additional 12 months warranty as called for, dated from final acceptance of the repairs or replacement. The apparatus to be installed in strict accordance with these specifications and the various code covering this work. Neither the final acceptance nor any provisions in the Contract Documents shall relieve this Contractor of the responsibility for negligence, faulty materials or workmanship within the extent and period provided by this contract.

1.22 IDENTIFICATION

- A. General:
1. Materials and equipment shall be clearly identified as listed below.
 2. Locate identification conspicuously.
 3. Terminology to be approved by Architect.
 4. See plans for any additional items to be identified.
 5. Loads such as motors shall be described by function rather than by the system of arbitrary number as shown on electrical plans.
 6. Use abbreviations sparingly.
- B. All panels and cabinets shall be stencilled with 2" letters indicating usage, plan designation and voltage. In Equipment and Mechanical Rooms this identification may be on the exterior of unit; in other areas identification shall be inside door or cover.
- C. Junction and pull boxes shall be stencilled utilizing a coded identification system. The following junction and pull boxes shall be identified using a coded system. Coding shall be submitted to Engineer for approval.
1. Light and Power - 120/208V.
- D. On all 3 phase systems, each phase shall be identified at all terminals using code markers.
- E. Laminated Bakelite Plates: Engraved plastic nameplate shall be securely fastened to the following equipment. Size 1" x 4" with 3/8" high letters unless space available dictates differently.

1. Each section of main distribution switchboards and panelboards. Mount one next to each protection device to identify load served by each circuit breaker.
 2. Each contactor, time switch, metering cabinet, starter, motor disconnect switch. In Equipment and Mechanical Rooms this identification may be on the exterior of unit, in other areas identification shall be inside door or cover.
 3. Each feeder at all accessible locations, i.e., panels, junction boxes, pull boxes, etc. (strap plate to feeder conductors in junction boxes or pull boxes).
 4. Each end of empty conduit runs to indicate the intended use of the conduit and the location of opposite end. Use room numbers that are permanently assigned.
- F. Typewritten Directory: Each panelboard shall be provided with a typewritten directory in a steel frame with plastic cover contained on the inside of panel door. These directories shall indicate load served and rooms served by each protective device in the respective panel.
- G. Conductor Identification:
1. Identify each conductor at each conductor or splice point with permanently attached wrap around adhesive markers as manufactured by Brady Company.
 2. This identification shall include branch circuit number, control circuit number, or any other appropriate number or lettering that will expedite future tracing and "trouble shooting".
 3. All wire shall be color coded per the NEC. In addition, color coding shall be used to identify phases, neutral, ground and voltages. Coding shall be:
 - 120/208V - Phase A - Black
 - Phase B - Red
 - Phase C - Blue
 - Neutral - White
 - Ground - Green
 - Isolated Ground - Green with one yellow stripe

1.23 ACCESS PANELS

- A. Access panels required by code or otherwise to electrical equipment shall be provided by Electrical Contractor. Access panels shall be in accordance with Division 1 complete with master cylinder lock.

PART 2 - PRODUCTS

--- Not Used ---

PART 3 - EXECUTION

--- Not Used ---

END OF SECTION

SECTION 16110 - RACEWAYS**PART 1 - GENERAL****1.1 DESCRIPTION**

- A. Provide complete raceway system as specified for power, low-voltage voice/data and fire alarm systems. Maintain raceway system in new condition until final acceptance by Owner.
1. Conduit systems.
- B. Telecommunication and voice/data systems outlets shall have conduit from devices stubbed to above accessible ceilings. Where accessible ceilings do not exist, raceway system shall be complete to cable tray or voice/data closet.

1.2 RELATED DOCUMENTS

- A. Applicable provisions of Division 1 shall govern work under this section.
- B. Specified Elsewhere:
1. Div. II Equipment
 2. 16050 Basic Materials and Methods
 3. 16120 Wires and Cables
 4. 16130 Boxes
 5. 16190 Supporting Devices
 6. 16450 Grounding and Bonding

1.3 QUALITY ASSURANCE

- A. Regulatory Requirements:
1. National Electrical Code, NEC: Comply with NEC/NFPA No. 71 as applicable to construction and installation of electrical conduit.
 2. National Electrical Manufacturer's Association, NEMA: Comply with applicable portions of NEMA standards pertaining to non-metallic duct and fittings for underground installation.
 3. Underwriters Laboratories: Provide electrical conduit listed and labeled by UL.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Provide color-coded end-cap thread protectors on exposed threads of threaded metal conduit.
- B. Storage:
1. Store pipe and tubing inside and protect from weather.
 2. When necessary to store outdoors, elevate well above grade and enclose with durable, watertight wrapping.
- C. Handle conduit and tubing carefully to prevent bending and end damage and to avoid scarring the finish.

PART 2 - PRODUCTS**2.1 APPROVED MANUFACTURERS**

- A. Conduit:

1. Allied Tube and Conduit Corporation.
2. Wheatland Tube Company.
3. Steel duct Conduit Products.

B. Couplings:

1. Appleton Electric Company.
2. Crouse-Hinds Company.
3. Killark Electric Manufacturing Company.

2.2 MATERIALS

A. Conduit:

1. Rigid Threaded: Steel, ANSI C80.1
2. Electrical Metallic Tubing: ANSI C80.3
3. Rigid Nonmetallic Tubing: Schedule 40 PVC; NEMA TC-2 & WC-1094

B. Rigid Steel Conduit and Fittings:

1. Manufactured to ANSI C80.1 standards
2. Fittings: Threaded steel type as per ANSI/NEMA FB1

C. Electrical Metallic Tubing and Fittings:

1. EMT ANSI C80.3 galvanized tubing.
2. Fittings:
 - a. Compression or setscrew type, formed steel construction per ANSI/NEMA FB1.
 - b. *Cast or indenter-type fitting will not be accepted.*

D. Flexible Metal Conduit & Fittings:

1. Steel construction as per FS WW-C566.
2. Fittings: Setscrew type, formed all steel construction, ANSI/NEMA FB1.

E. Rigid Nonmetallic Tubing.

F. Intermediate Metallic Tubing.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Wiring: All wiring shall be installed in raceways as herein specified. All raceway runs shown on the drawings are diagrammatic; exact locations shall be determined in the field.

1. Conceal all conduits in finished areas.
2. Concealed raceways shall be installed in the walls, above ceilings, below floors or in furred out spaces so as to be completely concealed from view by occupants during their normal activities in use of the space.
3. Exposed raceways shall be run in straight lines at right angles or parallel with walls, beams and columns.
4. Provide raceways as required by the access control equipment controls for door operating and monitoring.

- B. Raceway Installation: All raceways, which are not buried or embedded in concrete, shall be supported by straps, suitable clamps or hangers to provide a rigid installation. Perforated strap or wire hangers will not be acceptable. In no case shall raceways be supported or fastened to other pipe. No raceway smaller than 1/2" shall be used, except that light fixture switch legs may be 3/8".
1. Bends: Not more than three 90 degree bends will be allowed in one raceway run. Where more bends are necessary, a conduit or pull box shall be installed. All bends in 1" and smaller conduit or electrical metallic tubing shall be made with proper bender. All other bends shall be machine made.
 2. Joints: Joints in rigid metal shall be threaded type made up watertight with white lead or compound applied to male threads only and all field joints shall be cut square, reamed smooth and properly threaded to receive couplings. Electrical metallic tubing systems shall utilize watertight compression type fittings throughout. No indenter type fittings or running threads will be permitted.
 3. Locknuts: Double locknuts shall be provided on all conduit terminations with the exception of conduits terminating in threaded hubs and couplings. Locknuts shall be of a type that has sharp beveled teeth that dig into the metal when tightened and will not loosen through vibration.
 4. Bushing: Bushing shall be provided on all conduits with the exception of conduits terminating in hubs and couplings. Insulating bushings consisting of insulating inserts in metal housing shall be provided on all installations. Insulating bushings shall be grounding type where required by the National Electrical Code.
 5. Heating Ducts and Pipes: Care shall be used to avoid proximity to heating duct and hot water lines. Where such crossings are unavoidable, raceway shall clear covering or line by at least 6".
- C. Utilize rigid steel conduit or rigid nonmetallic conduit where exposed to moisture, buried in earth or in concrete.
- D. Utilize electrical metallic tubing(EMT) or intermediate metal conduit in other above-grade locations.
- E. For underground conduit: use PVC-coated rigid conduit or rigid non-metallic conduit.
- F. Install conduit and tubing products as indicated, in accordance with manufacturers written instructions and applicable requirements of NEC and NEMA Standard and Installation.
- G. Install conduit concealed in all areas excluding mechanical, electrical and other unfinished rooms, connections to motors and connections to surface cabinets.
- H. Coordinate installation of conduit in masonry work.
- I. Do not install conduit larger than 1" in concrete slabs.
- J. Install conduit free from dents and bruises.
- K. Plug conduit end to prevent entry of dirt or moisture.
- L. Clean out conduit before installation of conductor.
- M. Alter conduit routing to avoid structural obstructions, minimizing cross-overs.
- N. Seal conduit with oakum or fiberglass where conduits leave heated area and enter unheated area.
- O. Building Expansion Joints:
1. Install UL listed expansion fittings complete with grounding jumpers where conduits cross building expansion joints.
 2. Provide bends or offsets in conduits adjacent to building expansion joints where conduit is installed above suspended ceiling.

- P. Route all exposed conduits parallel or perpendicular to building lines.
- Q. Allow minimum 6" clearance at flues, steam pipes and heat source.
- R. Underground Conduit: Direct burial minimum.
1. Support multiple runs vertically and horizontally with plastic spacers 8' on center.
 2. Slope conduit to drainage point.
 3. Adjust final layout to coordinate with existing utilities.
 4. Trench and backfill as detailed on drawings.
 5. Encase conduit with 3" concrete cover under driveways.
- S. Cap all spare conduits.
- T. Provide all empty raceways with a heavy-duty nylon cord, full length of raceway. Tag cord for identification.
- U. Maintain safe clearances from hazardous adjacent equipment, hot water piping, flues, high temperature piping, ductwork, etc.

END OF SECTION

SECTION 16120 - WIRES AND CABLES**PART 1 - GENERAL****1.1 WORK INCLUDES**

- A. Provide all wires and cables required for a complete electrical system.

1.2 RELATED WORK

- A. Applicable provisions of Division 1 shall govern work under this section.

B. Specified Elsewhere:

1. 16110 Raceways
2. 16130 Boxes

1.3 QUALITY ASSURANCE

A. Regulatory Requirements:

1. National Electrical Code, NEC: Comply with NEC/NFPA No. 70, as applicable to construction and installation of electrical cable, wire and connectors.
2. Underwriter Laboratories, UL: Electrical cable, wire and connectors listed and labeled by UL.

- B. References: National Electrical Manufacturers Association/Insulated Power Cable Engineer's Association, NEMA/IPCEA.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Provide factory-wrapped waterproof flexible barrier material for covering wire and cable on wood reels, where applicable; and weather-resistant fiberboard containers for factory packaging of cable, wire and connections to protect against physical damage in transit.
- B. Store cable, wire and connectors in factory-installed coverings in clean, dry indoor space, which provides protection against weather.
- C. Do not install damaged cable, wire and connectors; remove from project site.

PART 2 - PRODUCTS**2.1 ACCEPTABLE MANUFACTURERS**

A. Wire and Cable:

1. Anaconda Wire and Cable Company.
2. Collyer Insulated Wire Company, Division.
3. Electrical Cable Division.
4. General Cable Corporation.
5. General Electric Company.
6. Phelps Dodge Cable and Wire Company.

B. Connectors:

1. AMP, Inc.
2. Burndy Corporation.

3. General Electric Company.
4. Ideal Industries, Inc.
5. 3M Company.
6. O.Z./Gedney Company.
7. Thomas and Betts Company.
8. Buchanon.

2.2 MATERIALS

A. Wire and Cable:

1. 98% conductivity copper.
2. 600 volt insulation.
3. Branch circuit wiring #10 and smaller shall be solid or stranded THWN or THHN. Sizes #8 and larger stranded type THWN or THHN. Stranded wire shall be used for all motor connections regardless of size. Lighting fixture wiring shall be 90 deg C THHN.
4. Conductors smaller than No. 12 AWG gauge not permitted except for alarm and signal circuits, which may be #14 AWG minimum.
5. Color code and identify all wiring as specified in Section 16050.

B. Exterior Wiring: Comply with NEC for wet location wiring.

C. Wiring for systems other than power:

1. Conform to system manufacturer standards as to size, type and coding, subject to specified minimums.
2. Size conduit as required by system manufacturer, but no smaller than shown.

D. Connectors: Splices and taps for No. 10 or smaller shall be with twist-on insulated connectors. Splices in wire No. 8 and larger shall be made with split-bolt or compression connectors equal to Burndy Hydent requiring a tool and die application. Tape all non-insulated compression connectors to achieve full 600V insulation.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Make conductor length for parallel feeders identical.

B. Lace or clip groups of feeder conductors at new panel board.

C. Conductors size indicated on drawings indicates amperage requirements using copper conductors and type THHN insulation unless otherwise noted.

D. Install wire and cable in NEC Code conforming raceway.

E. Pulling:

1. Use wire-pulling lubricant for pulling No. 4 AWG and larger wire. Use special care to avoid overstraining of conductors.
2. Pull conductors together where more than one is being installed in raceway.
3. Do not use pulling means, including fish tape, cable or rope, which can damage raceway.
4. All raceways shall be thoroughly swabbed out with a dry swab to remove moisture and debris before conductors are drawn into place. All ends of raceways shall be tightly plugged with tapered plugs or capped bushings until the conduits are pulled to prevent water and debris from entering conduits. All conduits stubbed up through floors shall be capped and aligned during construction by the use of spacers and caps.

- F. Install wire in conduit runs after concrete and masonry work is complete, conduit shall be clean and dry.
- G. Splicing:
1. Splice only in accessible junction boxes.
 2. Install splices and taps which have equivalent or better mechanical strength and insulation as conductor.
 3. Use splices and tap connectors which are compatible with conductor material.
 4. No. 10 and smaller joints: Utilize connectors as herein fore specified with PVC or nylon covers.
 5. No. 8 and larger joints: Clean and join with tool and die compression type fitting.

END OF SECTION

SECTION 16130 - BOXES**PART 1 - GENERAL****1.1 DESCRIPTION OF WORK**

- A. Pull Boxes.
- B. Splice and Junction Boxes.

1.2 RELATED DOCUMENTS

- A. Applicable provisions of Division 1 shall govern work under this section.
- B. Specified Elsewhere:
 - 1. 16110 Raceways
 - 2. 16120 Wires and Cables
 - 3. 16140 Wiring Devices
 - 4. 16450 Grounding and Bonding

1.3 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. National Electrical Code, NEC: Comply with applicable portions of NEC, Standard of installation.
 - 2. National Electrical Manufacturer's Association, NEMA: Comply with NEMA standards as applicable.

PART 2 - PRODUCTS**2.1 ACCEPTABLE MANUFACTURERS**

- A. Boxes:
 - 1. Appleton Electric Company.
 - 2. Crouse-Hinds Company.
 - 3. General Electric Company.
 - 4. Hoffman Company.
 - 5. Killark Electric Manufacturing Company.
 - 6. Lew Electric Fitting Company.
 - 7. O.Z./Gedney Company.
 - 8. Pyle-National Company.
 - 9. Raco, Inc.
 - 10. Square D Company.
 - 11. Steel City Division.
 - 12. Thomas and Betts Company, Inc.
 - 13. Wiremold/Walker.

2.2 MATERIALS

- A. Pull Boxes and Splice/Junction Boxes:
 - 1. Pull Boxes and Splice/Junction Boxes: NEC metal construction with screw or hinged cover.

2. Flush Mounted Pull Boxes: Overlapping covers with flush head cover retaining screws, prime coated.
- B. Conduit Bodies:
1. Galvanized or aluminum cast-metal of type, shape and size to fit each respective location.
 2. Constructed with threaded conduit ends, removable cover and corrosion-resistant screws.
- C. Bushings, Knockout Closures and Locknuts: Provide corrosion-resistance punched-steel box knockout closures, conduit locknuts and malleable iron conduit bushing, type and size to suit respective use.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Pull Boxes and Splice/Junction Boxes: Locate pull boxes and junction boxes above removable ceilings or in electrical rooms, utility rooms or storage areas.
- B. Boxes supplied by others: Verify exact mounting location and type of mounting.
- C. Provide knockout closures to cap unused knockout holes where blanks have been removed.
- D. Support all boxes independently of conduit.
- E. Utilize surface raceway in locations indicated and where required due to solid masonry surfaces recessing the raceway is not possible.

END OF SECTION

SECTION 16140 - WIRING DEVICES**PART 1 - GENERAL****1.1 DESCRIPTION OF WORK**

- A. Terminal Blocks.

1.2 RELATED DOCUMENTS

- A. Applicable provisions of Division 1 shall govern work under this section.

B. Specified Elsewhere:

1. 16130 Boxes
2. 16185 Equipment Connections
3. 16450 Grounding and Bonding

1.3 SUBMITTALS

- A. Submit products and technical data per Division 1 and Section 16050.

PART 2 - PRODUCTS**2.1 TERMINAL BLOCKS**

- A. Terminal Blocks: NEMA Class 9080 type G.

1. Solderless box lug for #8 -#22 THHN/CU wiring.
2. 600-volt, 60-amp.
3. Mounted on 35 mm DIN 3 track.
4. Fingersafe per DIN 57470.
5. Equal to Square D GR series.
6. Provide color to match conductor insulation color.

- B. Any device switches or receptacles necessary for completion of the work, but not called for in the Contract Documents shall be furnished and installed by the Contractor as needed at no additional cost to the Owner. Such devices shall meet the intended standards described in this Section.

PART 3 - EXECUTION**3.1 GENERAL**

- A. Install terminal blocks per manufacturers recommendations. Color-code all terminal blocks.
- B. Provide pre-assembled terminal blocks, where possible.
- C. Verify all device locations before rough in.
- D. Install a green ground wire from each enclosing metal box.

END OF SECTION

SECTION 16160 - PANELBOARDS**PART 1 - GENERAL****1.1 DESCRIPTION OF WORK**

- A. Branch circuit panelboards.

1.2 RELATED DOCUMENTS

- A. Applicable provisions of Division 1 shall govern under work of this section.

B. Specified Elsewhere:

1. 16050 Basic Materials and Methods
 - a. Identification.
 - b. Spare Breakers.
2. 16450 Grounding and Bonding

1.3 QUALITY ASSURANCE

A. Regulatory Requirements:

1. National Electrical Code, NEC: Comply with NEC/NFPA No. 70/ANSI C1, as applicable to installation of cabinets, cutout boxes and panelboards.
2. Underwriters Laboratories, UL:
 - a. Comply with specified UL publications pertaining to panelboards, enclosures and panelboard accessories.
 - b. Units listed and labeled by UL.

1.4 REFERENCES

A. National Electrical Manufacturers Association, NEMA:

1. PB.1: Panelboards.
2. PB.1.1: Instructions for Safe Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less.

1.5 SUBMITTALS

- A. Submit in accordance with Division 1 and Section 16050.
- B. Shop Drawings: Submit dimensioned drawings of installed panelboards and enclosures.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Store panelboards and enclosure indoors. Protect from weather.
- B. When necessary to store outdoors, elevate well above grade and enclose with durable waterproof wrapping.
- C. Handle panelboards and enclosures carefully to prevent breakage, denting and scarring of finish.

PART 2 - PRODUCTS**2.1 GENERAL**

- A. Panelboards shall be constructed in accordance with latest NEMA, UL and NEC requirements and shall bear UL label.
- B. Panelboard cabinets including boxes and fronts, shall be code gauge galvanized steel. Cabinets shall be minimum 20" wide by 5-3/4" deep. Panel cover shall be finished in manufacturer's standard color. Main lugs shall be top or bottom mounted to coordinate with incoming feeder entrance location.
- C. Panel buses shall be drilled for future additions in "spaces".
- D. Neutral bus shall be 100% rated copper with lugs for conductors.
- D. Provide isolated ground bus, where indicated, in addition to normal ground bus. Label isolated ground bus appropriately.
- E. A typewritten circuit schedule shall be installed in a metal frame covered with plastic inside the panel cover door.
- F. Fronts shall be complete with cylinder type lock and catch. All cylinders shall be keyed alike with 2 keys per panelboard. All keys shall be turned over to Owner at completion of job.
- G. Branch Circuit Breakers: Branch circuit breaker shall be bolt-on, quick-make, quick-break with thermal magnetic trip. Multi-pole breakers shall have common trip, UL listed as multi-pole units. Handle ties are not permitted. Minimum interrupting rating (RMS symmetrical amps) shall be 10,000 amps. All breakers shall have trip rating engraved in handle.
- H. All panelboards shall be from one manufacturer.

2.2 PANELBOARDS

A. Acceptable Manufacturers:

- 1. Square D Company.
- 2. Siemens.

B. Enclosures:

- 1. Refer to NEMA No. 250.
- 2. Panels:
 - a. Surface or flush mounted as shown on drawings, complete with panel trim having concealed hinges and trim mounted screws.
 - b. Provide locking door with flush latch.
- 3. Tub: Galvanized.
- 4. Keys:
 - a. Provide 2 keys for each panel.
 - b. Make keys interchangeable for panels.

C. 120/208 or 277/480 Volt Breaker Panelboards as indicated on plans:

- 1. Refer to NEMA PB.1.
- 2. Panelboards:
 - a. 3 phase, 4 wire, solid neutral design with sequence style bussing and full capacity neutral, composed of assembly of piping-on molded case circuit breakers with thermal and magnetic trip and trip-free position separate from either ON or OFF position.
 - b. Provide common simultaneous trip for 2 and 3 pole breakers.
 - c. Provide interrupting rating of 10,000 AIC at 208 volts, 14000 AIC @ 480 Volts.

PART 3 - EXECUTION**3.1 INSTALLATION**

- A. Refer to NEMA PB.1.
- B. Coordinate installation of panelboards and enclosures with cable and raceway installation work.
- C. Provide mounting brackets, busbar drillings and filler pieces for unused spaces.
- D. Anchor enclosures firmly to walls and structural surfaces, insuring that they are permanently and mechanically secure.
- E. Provide electrical connections within enclosures.
- F. Prepare and affix typewritten directory to inside cover of panelboard indicating loads controlled by each circuit.
- G. Install panelboards so that no cracks or gaps exist between breakers, breaker cover, panelboard cover and wall (where flush).
- H. All wires shall be neatly installed inside the panelboard box.
- I. Unused spaces shall be filled with metal filler designed for the purpose by the manufacturer.
- J. Stub four(4) empty 3/4" conduits into accessible ceiling space for future wiring requirements.

END OF SECTION

SECTION 16190 - SUPPORTING DEVICES**PART 1 - GENERAL****1.1 DESCRIPTION OF WORK**

- A. Conduit and equipment supports.

1.2 RELATED DOCUMENTS

- A. Applicable provisions of Division 1 shall govern work under this section.

B. Specified Elsewhere:

1. 16110 Raceways

1.3 QUALITY ASSURANCE

A. Regulatory Requirements:

1. National Electrical Code, NEC: Comply with NEC/NFPA No. 70, as applicable to supports.
2. Underwriters Laboratories, UL: Supports listed and labeled by UL.

PART 2 - PRODUCTS**2.1 CONDUIT SUPPORTS**

A. Material:

1. Single Runs:
 - a. Galvanized two hole conduit straps or ring bolt type hangers with specialty spring clips.
 - b. *Do not use plumber's perforated straps.*
2. Multiple Runs: Conduit rack with 25% spare capacity.
3. Vertical Runs: Channel support with conduit fittings.
 - a. 25 ft intervals.

B. Anchor Methods:

1. Hollow Masonry: Toggle bolts or spike type expansion anchors.
2. Solid Masonry: Lead expansion anchors or preset inserts.
3. Metal Surfaces: Machine screws, bolts or welded studs.
4. Wood Surfaces: Wood screws.
5. Concrete Surfaces: Self-drilling anchors or power driven studs.

C. Mounting Racks and Supports:

1. Provide rack and supports of galvanized or painted steel channel sections with bolted or welded fittings.
2. Provide exterior treated 3/4" plywood mounting surface with gray paint finish on both sides and edges.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Maintain headroom, neat mechanical appearance and to support equipment loads.
- B. Suspend, support from and attach only to the structural elements at intervals required by code, with threaded rod, channels, "stand-off" and other clips and NECA approved devices.
 - 1. Do not use "stand-off" clips for attachment to walls and partitions.
 - 2. Install raceways tight to wall.
- C. To the fullest extent possible, group several conduits together and run parallel, supporting with rod and channel.

END OF SECTION

SECTION 16450 - GROUNDING AND BONDING**PART 1 - GENERAL****1.1 DESCRIPTION OF WORK**

- A. Provide and install materials for a complete grounding system integral with the power distribution in accordance with the National Electrical Code.
- B. Distribution grounding system.
- C. Equipment grounding system.

1.2 RELATED DOCUMENTS

- A. Applicable provisions of Division 1 shall govern work under this section.
- B. Specified Elsewhere:
 - 1. 16110 Raceways
 - 2. 16120 Wires and Cables
 - 4. 16160 Panelboards

1.3 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. Institute of Electrical and Electronic Engineers, IEEE: Comply with applicable IEEE Standards pertaining to electrical grounding.
 - 2. National Electrical Code, NEC: Comply with NEC/NFPA No. 70, as applicable to materials and installation of electrical grounding systems and associated equipment and wiring.
 - 3. Underwriters Laboratories:
 - a. Comply with UL Standards pertaining to electrical grounding and bonding.
 - b. UL 467: Grounding and Bonding Equipment.

PART 2 - PRODUCTS**2.1 MATERIALS**

- A. Materials used for grounding conductors shall be as called for in National Electrical Code Article #250-81.
- B. Ground Fittings:
 - 1. OZ Company:
 - a. Type BF
 - b. Type OG
 - c. Type LG
 - d. Type MG

PART 3 - EXECUTION**3.1 INSTALLATION**

- A. Electrical service, electrical equipment enclosures and associated metallic raceway system shall be permanently grounded and bonded together by a grounding electrode conductor as per NEC

requirements with a ground clamp to a 1-1/4 inch or larger cold water metallic pipe on street side of water meter and ground rod electrodes.

1. Provide water meter shunt; cable to pipe connections #4/0 AWG copper cable shunt.
- B. Damp Locations: All convenience outlets, switches, fixtures, boxes and plates in damp locations or outdoors shall be fully grounded by a separate green grounding conductor.
- C. Panelboard Grounding: Install grounding conductor from main service to each panelboard and ground bar as indicated on Drawings:
1. Provide separate circuit grounding conductors to dedicated ground circuits, surge suppression receptacles (computers), and GFI receptacles.
- D. Bonding Jumpers:
1. Maintain ground continuity by separate insulated green ground wire in fixture cords, flexible connections or similar location where raceway system is interrupted.
 2. Light Fixtures: Provide separate green wire grounded from fixture housing to nearest conduit system box, where flexible conduit is used.
 3. Receptacles: Provide green wire bonding jumper from all new receptacles to metal back box.
- E. Equipment Grounding Conductors: Provide separate, insulated grounding conductor within each feeder raceway.
- F. Device Boxes: Provide new green wire ground from panel ground bar to all new devices located in the raceway systems.
1. Provide dedicated ground wire to GFI and surge suppression receptacles.

END OF SECTION

SECTION E: PROPOSAL

**MADISON MUNICIPAL BUILDING ELECTRICAL PANEL UPGRADE
CONTRACT NO. 6937**

Bidder must state a Unit Price and Total Bid for each item. The Total Bid for each item must be the product of quantity, by Unit Price. The Grand Total must be the sum of the Total Bids for the various items. In case of multiplication errors or addition errors, the Grand Total with corrected multiplication and/or addition shall determine the Grand Total bid for each contract. The Unit Price and Total Bid must be entered numerically in the spaces provided. All words and numbers shall be written in ink.

1. The undersigned having familiarized himself/herself with the Contract documents, including Advertisement for Bids, Instructions to Bidders, Form of Proposal, City of Madison Standard Specifications for Public Works Construction - 2012 Edition thereto, Form of Agreement, Form of Bond, and Addenda issued and attached to the plans and specifications on file in the office of the City Engineer, hereby proposes to provide and furnish all the labor, materials, tools, and expendable equipment necessary to perform and complete in a workmanlike manner the specified construction on this project for the City of Madison; all in accordance with the plans and specifications as prepared by the City Engineer, including Addenda to the Contract Nos. _____ through _____ issued thereto, at the prices for said work as contained in this proposal.
2. If awarded the Contract, we will initiate action within seven (7) days after notification or in accordance with the date specified in the contract to begin work and will proceed with diligence to bring the project to full completion within the number of work days allowed in the Contract or by the calendar date stated in the Contract.
3. The undersigned Bidder or Contractor certifies that he/she is not a party to any contract, combination in form of trust or otherwise, or conspiracy in restraint of trade or commerce or any other violation of the anti-trust laws of the State of Wisconsin or of the United States, with respect to this bid or contract or otherwise.
4. Accompanying this Proposal is Bid Bond or Certified Check in the amount of _____ Dollars (\$ _____) or a Certificate of Biennial Bid Bond as required by the Advertisement for Bids.
(IF BID BOND IS USED, IT SHALL BE SUBMITTED ON THE FORMS PROVIDED BY THE CITY. FAILURE TO DO SO MAY RESULT IN REJECTION OF THE BID).
5. I hereby certify that all statements herein are made on behalf of _____
(name of corporation, partnership, or person submitting bid)
a corporation organized and existing under the laws of the State of _____ a
partnership consisting of _____; an individual trading as _____; of
the City of _____; State of _____; that I have examined and carefully prepared this
Proposal, from the plans and specifications and have checked the same in detail before submitting
this Proposal; that I have fully authority to make such statements and submit this Proposal in (its,
their) behalf; and that the said statements are true and correct.

SIGNATURE

TITLE, IF ANY

Sworn and subscribed to before me this
_____ day of _____, 20 _____

(Notary Public or other officer authorized to administer oaths)

My Commission Expires _____

Bidders shall not add any conditions or qualifying statements to this Proposal.

**MADISON MUNICIPAL BUILDING ELECTRICAL PANEL UPGRADE
CONTRACT NO. 6937**

State of Wisconsin
Department of Workforce Development
Equal Rights Division
Labor Standards Bureau

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
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

ERD-7777-E (R. 09/2003)

**MADISON MUNICIPAL BUILDING ELECTRICAL PANEL UPGRADE
CONTRACT NO. 6937**

Best Value Contracting

1. The Contractor shall indicate the non-apprenticeable trades used on this contract.

2. Some Contractors are exempt due to the size of the work force. Apprenticeable trades are those trades considered apprenticeable by the State of Wisconsin.

Check Here if the Contractor has a total skilled work force of four or less individuals in all apprenticeable trades combined. This contractor is exempt from Best Value Contracting.

3. The Contractor shall indicate on page E-4 which apprenticeable trades are to be used on this Contract and shall indicate by checking the appropriate box for the trades used, how the contractor will comply with Madison General Ordinance 33.07(7).

Legend

Number of Journeyworkers	The Contractor shall indicated for trades to be used on this Contract only, the number of journeyworkers that the Contractor has employed company wide.
W-ATT	The Contractor is an active trade trainer in the State of Wisconsin for the trade indicated.
US-ATT	The Contractor is an active trade trainer in an apprenticeship program approved by the U.S. Department of Labor or another state apprenticeship agency in the trade indicated.
SB-ATT	The Contractor shall become an active trade trainer prior to beginning work on the Contract in the trade indicated.

The Contractor has reviewed the list on page E-4 and shall not use any apprenticeable trades on this project.

The Contractor has reviewed this list on E-4 and has checked the appropriate box by each apprenticeable trade to be used on the project.

**MADISON MUNICIPAL BUILDING ELECTRICAL PANEL UPGRADE
CONTRACT NO. 6937**

Apprenticeable Trades

Check the box in the column "Trade Used on This Project" for each apprenticeable trades used on this project. For those trades used on the project indicated the number of journeyworkers that are employed company wide and check a box to the right of the trade as to how the Contractor will comply MGO 33.07(7). Refer to the legend on page E-3 for the meaning associated with each heading. The Contractor must check one of the boxes on the right for each apprenticeable trade used and checked on the left.

Trade Used on Contract	Apprenticeable Trades	Number of Journeyworkers	W-ATT	US-ATT	SB-ATT
<input type="checkbox"/>	Bricklayer		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Carpenter		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Cement Mason / Concrete Finisher		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Cement Mason (Heavy Highway)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Construction Craft Laborer		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Data Communication Installer		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Electrician		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Environmental Systems Technician / HVAC Service Tech/HVAC Install / Service		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Glazier		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Heavy Equipment Operator / Operating Engineer		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Insulation Worker (Heat & Frost)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Iron Worker		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Iron Worker (Assembler, Metal Bldgs)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Painter & Decorator		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Plasterer		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Plumber		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Residential Electrician		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Rofer & Waterproofer		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Sheet Metal Worker		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Sprinklerfitter		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Steamfitter		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Steamfitter (Refrigeration)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Steamfitter (Service)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Taper & Finisher		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Telecommunications (Voice, Data & Video) Installer-Technician		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Tile Setter		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PROPOSAL

NAME OF BIDDER

MADISON MUNICIPAL BUILDING ELECTRICAL PANEL UPGRADE

CONTRACT NO. 6937

ACCOUNT NUMBER: CB53-58401-810595-00-53W1498

		TOTAL BID
	LUMP SUM BID	

SECTION F: BID BOND

KNOW ALL MEN BY THESE PRESENT, THAT _____
(a corporation of the State of _____) (individual), (partnership), hereinafter referred to as the "Principal") and _____, a corporation of the State of _____ (hereinafter referred to as the "Surety") and licensed to do business in the State of Wisconsin, are held and firmly bound unto the City of Madison, (hereinafter referred to as the "Obligee"), in the sum of five per cent (5%) of the amount of the total bid or bids of the Principal herein accepted by the Obligee, for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The conditions of this obligation are such that, whereas the Principal has submitted, to the City of Madison a certain bid, including the related alternate, and substitute bids attached hereto and hereby made a part hereof, to enter into a contract in writing for the construction of:

MADISON MUNICIPAL BUILDING ELECTRICAL PANEL UPGRADE CONTRACT NO. 6937

1. If said bid is rejected by the Obligee, then this obligation shall be void.
2. If said bid is accepted by the Obligee and the Principal shall execute and deliver a contract in the form specified by the Obligee (properly completed in accordance with said bid) and shall furnish a bond for his/her faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said bid, then this obligation shall be void.

If said bid is accepted by the Obligee and the Principal shall fail to execute and deliver the contract and the performance and payment bond noted in 2. above executed by this Surety, or other Surety approved by the City of Madison, all within the time specified or any extension thereof, the Principal and Surety agree jointly and severally to forfeit to the Obligee as liquidated damages the sum mentioned above, it being understood that the liability of the Surety for any and all claims hereunder shall in no event exceed the sum of this obligation as stated, and it is further understood that the Principal and Surety reserve the right to recover from the Obligee that portion of the forfeited sum which exceed the actual liquidated damages incurred by the Obligee.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by an extension of the time within which the Obligee may accept such bid, and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, on the day and year set forth below.

Seal

Principal

Date

By:

Name of Surety

By:

Date

This certifies that I have been duly licensed as an agent for the above company in Wisconsin under License No. _____ for the year _____, and appointed as attorney in fact with authority to execute this bid bond and the payment and performance bond referred to above, which power of attorney has not been revoked.

Date

Agent

Address

City, State and Zip Code

Telephone Number

NOTE TO SURETY & PRINCIPAL

The bid submitted which this bond guarantees may be rejected if the following instrument is not attached to this bond:

Power of Attorney showing that the agent of Surety is currently authorized to execute bonds on behalf of the Surety, and in the amounts referenced above.

Certificate of Biennial Bid Bond

TIME PERIOD - VALID (FROM/TO)
NAME OF SURETY
NAME OF CONTRACTOR
CERTIFICATE HOLDER <p style="text-align: center;">City of Madison, Wisconsin</p>

This is to certify that a biennial bid bond issued by the above-named Surety is currently on file with the City of Madison.

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

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

Signature of Authorized Contractor Representative

Date

SECTION G: AGREEMENT

THIS AGREEMENT made this _____ day of _____ in the year Two Thousand and Twelve between _____ hereinafter called the Contractor, and the City of Madison, Wisconsin, hereinafter called the City.

WHEREAS, the Common Council of the said City of Madison under the provisions of a resolution adopted _____, _____, and by virtue of authority vested in the said Council, has awarded to the Contractor the work of performing certain construction.

NOW, THEREFORE, the Contractor and the City, for the consideration hereinafter named, agree as follows:

1. **Scope of Work.** The Contractor shall, perform the construction, execution and completion of the following listed complete work or improvement in full compliance with the Plans, Specifications, Standard Specifications, Supplemental Specifications, Special Provisions and contract; perform all items of work covered or stipulated in the proposal; perform all altered or extra work; and shall furnish, unless otherwise provided in the contract, all materials, implements, machinery, equipment, tools, supplies, transportation, and labor necessary to the prosecution and completion of the work or improvements:

MADISON MUNICIPAL BUILDING ELECTRICAL PANEL UPGRADE CONTRACT NO. 6937

2. **Completion Date/Contract Time.** Construction work must begin within seven (7) calendar days after the date appearing on mailed written notice to do so shall have been sent to the Contractor and shall be carried on at a rate so as to secure full completion SEE SPECIAL PROVISIONS, the rate of progress and the time of completion being essential conditions of this Agreement.
3. **Contract Price.** The City shall pay to the Contractor at the times, in the manner and on the conditions set forth in said specifications, the sum of _____ (\$ _____) Dollars being the amount bid by such Contractor and which was awarded to him/her as provided by law.
4. **Wage Rates for Employees of Public Works Contractors**

General and Authorization. The Contractor shall compensate its employees at the prevailing wage rate in accordance with section 66.0903, Wis. Stats., DWD 290 of the Wisconsin Administrative Code and as hereinafter provided.

“Public Works” shall include building or work involving the erection, construction, remodeling, repairing or demolition of buildings, parking lots, highways, streets, bridges, sidewalks, street lighting, traffic signals, sanitary sewers, water mains and appurtenances, storm sewers, and the grading and landscaping of public lands.

“Building or work” includes construction activity as distinguished from manufacturing, furnishing of materials, or servicing and maintenance work, except for the delivery of mineral aggregate such as sand, gravel, bituminous asphaltic concrete or stone which is incorporated into the work under contract with the City by depositing the material directly in final place from transporting vehicle.

“Erection, construction, remodeling, repairing” means all types of work done on a particular building or work at the site thereof in the construction or development of the project, including without limitation, erecting, construction, remodeling, repairing, altering, painting, and decorating, the transporting of materials and supplies to or from the building or work done by the employees of the Contractor, Subcontractor, or Agent thereof, and the manufacturing or furnishing of materials, articles, supplies or equipment on the site of the building or work, by persons employed by the Contractor, Subcontractor, or Agent thereof.

“Employees working on the project” means laborers, workers, and mechanics employed directly upon the site of work.

“Laborers, Workers, and Mechanics” include preapprentices, helpers, trainees, learners and properly registered and indentured apprentices but exclude clerical, supervisory, and other personnel not performing manual labor.

Establishment of Wage Rates. The Department of Public Works shall periodically obtain a current schedule of prevailing wage rates from DWD. The schedule shall be used to establish the City of Madison Prevailing Wage Rate Schedule for Public Works Construction (prevailing wage rate). The Department of Public Works may include known increases to the prevailing wage rate which can be documented and are to occur on a future specific date. The prevailing wage rate shall be included in public works contracts subsequently negotiated or solicited by the City. Except for known increases contained within the schedule, the prevailing wage rate shall not change during the contract. The approved wage rate is attached hereto.

Workforce Profile. The Contractor shall, at the time of signature of the contract, notify the City Engineer in writing of the names and classifications of all the employees of the Contractor, Subcontractors, and Agents proposed for the work. In the alternative, the Contractor shall submit in writing the classifications of all the employees of the Contractor, Subcontractors and Agents and the total number of hours estimated in each classification for the work. This workforce profile(s) shall be reviewed by the City Engineer who may, within ten (10) days, object to the workforce profile(s) as not being reflective of that which would be required for the work. The Contractor may request that the workforce profile, or a portion of the workforce profile, be submitted after the signature of the contract but at least ten (10) days prior to the work commencing. Any costs or time loss resulting from modifications to the workforce profile as a result of the City Engineer’s objections shall be the responsibility of the Contractor.

Payrolls and Records. The Contractor shall keep weekly payroll records setting forth the name, address, telephone number, classification, wage rate and fringe benefit package of all the employees who work on the contract, including the employees of the Contractor’s subcontractors and agents. Such weekly payroll records must include the required information for all City contracts and all other contracts on which the employee worked during the week in which the employee worked on the contract. The Contractor shall also keep records of the individual time each employee worked on the project and for each day of the project. Such records shall also set forth the total number of hours of overtime credited to each such employee for each day and week and the amount of overtime pay received in that week. The records shall set forth the full weekly wages earned by each employee and the actual hourly wage paid to the employee.

The Contractor shall submit the weekly payroll records, including the records of the Contractor’s subcontractors and agents, to the City Engineer for every week that work is being done on the contract. The submittal shall be within twenty-one (21) calendar days of the end of the Contractor’s weekly pay period.

Employees shall receive the full amounts accrued at the time of the payment, computed at rates not less than those stated in the prevailing wage rate and each employee's rate shall be determined by the work that is done within the trade or occupation classification which should be properly assigned to the employee.

An employee's classification shall not be changed to a classification of a lesser rate during the contract. If, during the term of the contract, an employee works in a higher pay classification than the one which was previously properly assigned to the employee, then that employee shall be considered to be in the higher pay classification for the balance of the contract, receive the appropriate higher rate of pay, and she/he shall not receive a lesser rate during the balance of the contract. For purposes of clarification, it is noted that there is a distinct difference between working in a different classification with higher pay and doing work within a classification that has varying rates of pay which are determined by the type of work that is done within the classification. For example, the classification "Operating Engineer" provides for different rates of pay for various classes of work and the Employer shall compensate an employee classified as an "Operating Engineer" based on the highest class of work that is done in one day. Therefore, an "Operating Engineer's" rate may vary on a day to day basis depending on the type of work that is done, but it will never be less than the base rate of an "Operating Engineer". Also, as a matter of clarification, it is recognized that an employee may work in a higher paying classification merely by chance and without prior intention, calculation or design. If such is the case and the performance of the work is truly incidental and the occurrence is infrequent, inconsequential and does not serve to undermine the single classification principle herein, then it may not be required that the employee be considered to be in the higher pay classification and receive the higher rate of pay for the duration of the contract. However, the Contractor is not precluded or prevented from paying the higher rate for the limited time that an employee performs work that is outside of the employee's proper classification.

Questions regarding an employee's classification, rate of pay or rate of pay within a classification, shall be resolved by reference to the established practice that predominates in the industry and on which the trade or occupation rate/classification is based. Rate of pay and classification disputes shall be resolved by relying upon practices established by collective bargaining agreements and guidelines used in such determination by appropriate recognized trade unions operating within the City of Madison.

The Contractor, its Subcontractors and Agents shall submit to interrogation regarding compliance with the provisions of this ordinance.

Mulcting of the employees by the Contractor, Subcontractor, and Agents on Public Works contracts, such as by kickbacks or other devices, is prohibited. The normal rate of wage of the employees of the Contractor, Subcontractor, and Agents shall not be reduced or otherwise diminished as a result of payment of the prevailing wage rate on a public works contract.

Hourly contributions. Hourly contributions shall be determined in accordance with the prevailing wage rate and with DWD. 290.01(10), Wis. Admin. Code.

Apprentices and Subjourneypersons. Apprentices and subjourneypersons performing work on the project shall be compensated in accordance with the prevailing wage rate and with DWD 290.02, and 290.025, respectively, Wis. Admin. Code.

Straight Time Wages. The Contractor may pay straight time wages as determined by the prevailing wage rate and DWD 290.04, Wis. Admin. Code.

Overtime Wages. The Contractor shall pay overtime wages as required by the prevailing wage rate and DWD 290.05, Wis. Admin. Code.

Posting of Wage Rates and Hours. A clearly legible copy of the prevailing wage rate, together with the provisions of Sec. 66.0903(10)(a) and (11)(a), Wis. Stats., shall be kept posted in at least one conspicuous and easily accessible place at the project site by the Contractor and such notice shall remain posted during the full time any laborers, workers or mechanics are employed on the contract.

Evidence of Compliance by Contractor. Upon completion of the contract, the Contractor shall file with the Department of Public Works an affidavit stating:

- a. That the Contractor has complied fully with the provisions and requirements of Sec. 66.0903(3), Wis. Stats., and Chapter DWD 290, Wis. Admin. Code; the Contractor has received evidence of compliance from each of the agents and subcontractors; and the names and addresses of all of the subcontractors and agents who worked on the contract.
- b. That full and accurate records have been kept, which clearly indicate the name and trade or occupation of every laborer, worker or mechanic employed by the Contractor in connection with work on the project. The records shall show the number of hours worked by each employee and the actual wages paid therefor; where these records will be kept and the name, address and telephone number of the person who will be responsible for keeping them. The records shall be retained and made available for a period of at least three (3) years following the completion of the project of public works and shall not be removed without prior notification to the municipality.

Evidence of Compliance by Agent and Subcontractor. Each agent and subcontractor shall file with the Contractor, upon completion of their portion of the work on the contract an affidavit stating that all the provisions of Sec. 66.0903(3), Wis. Stats., have been fully complied with and that full and accurate records have been kept, which clearly indicate the name and trade or occupation of every laborer, worker or mechanic employed by the Contractor in connection with work on the project. The records shall show the number of hours worked by each employee and the actual wages paid therefor; where these records shall be kept and the name, address and telephone number of the person who shall be responsible for keeping them. The records shall be retained and made available for a period of at least three (3) years following the completion of the project of public works and shall not be removed without prior notification to the municipality.

Failure to Comply with the Prevailing Wage Rate. If the Contractor fails to comply with the prevailing wage rate, she/he shall be in default on the contract.

5. **Affirmative Action.** In the performance of the services under this Agreement the Contractor agrees not to discriminate against any employee or applicant because of race, religion, marital status, age, color, sex, disability, national origin or ancestry, income level or source of income, arrest record or conviction record, less than honorable discharge, physical appearance, sexual orientation, political beliefs, or student status. The Contractor further agrees not to discriminate against any subcontractor or person who offers to subcontract on this contract because of race, religion, color, age, disability, sex or national origin.

The Contractor agrees that within thirty (30) days after the effective date of this agreement, the Contractor will provide to the City Affirmative Action Division certain workforce utilization statistics, using a form to be furnished by the City.

If the contract is still in effect, or if the City enters into a new agreement with the Contractor, within one year after the date on which the form was required to be provided, the Contractor will provide updated workforce information using a second form, also to be furnished by the City. The second form will be submitted to the City Affirmative Action Division no later than one year after the date on which the first form was required to be provided.

The Contractor further agrees that, for at least twelve (12) months after the effective date of this contract, it will notify the City Affirmative Action Division of each of its job openings at facilities in Dane County for which applicants not already employees of the Contractor are to be considered. The notice will include a job description, classification, qualifications and application procedures and deadlines. The Contractor agrees to interview and consider candidates referred by the Affirmative Action Division if the candidate meets the minimum qualification standards established by the Contractor, and if the referral is timely. A referral is timely if it is received by the Contractor on or before the date started in the notice.

Articles of Agreement

Article I

The Contractor shall take affirmative action in accordance with the provisions of this contract to insure that applicants are employed, and that employees are treated during employment without regard to race, religion, color, age, marital status, disability, sex or national origin and that the employer shall provide harassment free work environment for the realization of the potential of each employee. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training including apprenticeship insofar as it is within the control of the Contractor. The Contractor agrees to post in conspicuous places available to employees and applicants notices to be provided by the City setting out the provisions of the nondiscrimination clauses in this contract.

Article II

The Contractor shall in all solicitations or advertisements for employees placed by or on behalf of the Contractors state that all qualified or qualifiable applicants will be employed without regard to race, religion, color, age, marital status, disability, sex or national origin.

Article III

The Contractor shall send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding a notice to be provided by the City advising the labor union or worker's representative of the Contractor's equal employment opportunity and affirmative action commitments. Such notices shall be posted in conspicuous places available to employees and applicants for employment.

Article V

The Contractor agrees that it will comply with all provisions of the Affirmative Action Ordinance of the City of Madison, including the contract compliance requirements. The Contractor agrees to submit the model affirmative action plan for public works contractors in a form approved by the Director of Affirmative Action.

Article VI

The Contractor will maintain records as required by Section 39.02(9)(f) of the Madison General Ordinances and will provide the City Affirmative Action Division with access to such records and to persons who have relevant and necessary information, as provided in Section 39.02(9)(f). The City agrees to keep all such records confidential, except to the extent that public inspection is required by law.

Article VII

In the event of the Contractor's or subcontractor's failure to comply with the Equal Employment Opportunity and Affirmative Action Provisions of this contract or Section 39.03 and 39.02 of the Madison General Ordinances, it is agreed that the City at its option may do any or all of the following:

1. Cancel, terminate or suspend this Contract in whole or in part.
2. Declare the Contractor ineligible for further City contracts until the Affirmative Action requirements are met.
3. Recover on behalf of the City from the prime Contractor 0.5 percent of the contract award price for each week that such party fails or refuses to comply, in the nature of liquidated damages, but not to exceed a total of five percent (5%) of the contract price, or five thousand dollars (\$5,000), whichever is less. Under public works contracts, if a subcontractor is in noncompliance, the City may recover liquidated damages from the prime Contractor in the manner described above. The preceding sentence shall not be construed to prohibit a prime Contractor from recovering the amount of such damage from the non-complying subcontractor.

Article VIII

The Contractor shall include the above provisions of this contract in every subcontract so that such provisions will be binding upon each subcontractor. The Contractor shall take such action with respect to any subcontractor as necessary to enforce such provisions, including sanctions provided for noncompliance.

Article IX

The Contractor shall allow the maximum feasible opportunity to small business enterprises to compete for any subcontracts entered into pursuant to this contract.

**MADISON MUNICIPAL BUILDING ELECTRICAL PANEL UPGRADE
CONTRACT NO. 6937**

IN WITNESS WHEREOF, the Contractor has hereunto set his/her hand and seal and the City has caused these presents to be sealed with its corporate seal and to be subscribed by its Mayor and City Clerk the day and year first above written.

Countersigned:

Company Name

Witness Date

President Date

Witness Date

Secretary Date

CITY OF MADISON, WISCONSIN

Provisions have been made to pay the liability that will accrue under this contract.

Approved as to form:

Finance Director

City Attorney

Signed this _____ day of _____, 20_____

Witness

Mayor Date

Witness

City Clerk Date

SECTION H: PAYMENT AND PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we _____
as principal, and _____
Company of _____ as surety, are held and firmly bound unto the City of
Madison, Wisconsin, in the sum of _____ (\$_____) Dollars, lawful money of the
United States, for the payment of which sum to the City of Madison, we hereby bind ourselves and our
respective executors and administrators firmly by these presents.

The condition of this Bond is such that if the above bounden shall on his/her part fully and faithfully
perform all of the terms of the Contract entered into between him/herself and the City of Madison for the
construction of:

**MADISON MUNICIPAL BUILDING ELECTRICAL PANEL UPGRADE
CONTRACT NO. 6937**

in Madison, Wisconsin, and shall pay all claims for labor performed and material furnished in the
prosecution of said work, and save the City harmless from all claims for damages because of negligence
in the prosecution of said work, and shall save harmless the said City from all claims for compensation
(under Chapter 102, Wisconsin Statutes) of employees and employees of subcontractor, then this Bond is
to be void, otherwise of full force, virtue and effect.

Signed and sealed this _____ day of _____,

Countersigned:

Company Name (Principal)

Witness

President Seal

Secretary

Approved as to form:

Surety Seal
 Salary Employee Commission

City Attorney

By _____
Attorney-in-Fact

This certifies that I have been duly licensed as an agent for the above company in Wisconsin under
License No. _____ for the year 20_____, and appointed as attorney-in-fact with
authority to execute this payment and performance bond which power of attorney has not been revoked.

Date

Agent

MINIMUM WAGE SCALE

FOR

PUBLIC WORKS IMPROVEMENTS

APPROVED BY: BOARD OF PUBLIC WORKS

MADISON, WISCONSIN

February 7, 2012

The attached "Prevailing Wage Rate Determination: (Pages 1 through 30), issued February 7, 2012, is hereby approved as the Minimum Wage Scale of the City of Madison.

ISSUE DATE: 1/13/2012

PROJECT:

ALL PUBLIC WORKS PROJECTS UNDER SEC 66.0903, STATS -CITY OF MADISON
MADISON CITY, DANE COUNTY, WI
Determination No. 201200105

PROJECT OWNER:

ROBERT F. PHILLIPS, CITY ENGINEER
CITY OF MADISON-ENGINEERING
210 MARTIN L KING JR BLVD, RM 115
MADISON, WI 53703

REQUESTER:

ROBERT F. PHILLIPS, CITY ENGINEER
CITY OF MADISON-ENGINEERING
210 MARTIN L KING JR BLVD, RM 115
MADISON, WI 53703

ADDITIONAL CONTACT:

NORMAN DAVIS, CONTRACT COMPLIANCE
CITY OF MADISON-DEPT OF CIVIL RTS-AA DIV
210 MARTIN L KING JR BLVD, RM 523
MADISON, WI 537033342

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.

ISSUED BY:

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/>

PREVAILING WAGE RATE DETERMINATION

Issued by the State of Wisconsin
Department of Workforce Development
Pursuant to s. 66.0903, Wis. Stats.
Issued On: 1/13/2012

DETERMINATION NUMBER: 201200105

EXPIRATION DATE: Prime Contracts MUST Be Awarded or Negotiated On Or Before 12/31/2012. If NOT, You MUST Reapply.

PROJECT NAME: ALL PUBLIC WORKS PROJECTS UNDER SEC 66.0903, STATS.-CITY OF MADISON

PROJECT LOCATION: MADISON CITY, DANE COUNTY, WI

CONTRACTING AGENCY: CITY OF MADISON-ENGINEERING

CLASSIFICATION:	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: dwd.wisconsin.gov/er/prevailing_wage_rate/Dictionary/dictionary_main.htm .
OVERTIME:	<p>Time and one-half must be paid for all hours worked:</p> <ul style="list-style-type: none">- over 10 hours per day on prevailing wage projects- over 40 hours per calendar week- Saturday and Sunday- 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;- The day before if January 1, July 4 or December 25 falls on a Saturday;- The day following if January 1, July 4 or December 25 falls on a Sunday. <p>Apply the time and one-half overtime calculation to whichever is higher between the Hourly Basic Rate listed on this project determination or the employee's regular hourly rate of pay. Add any applicable Premium or DOT Premium to the Hourly Basic Rate before calculating overtime.</p> <p>A DOT Premium (discussed below) may supersede this time and one-half requirement.</p>
FUTURE INCREASE:	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.
PREMIUM PAY:	If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whenever such pay is applicable.
DOT PREMIUM:	This premium only applies to highway and bridge projects owned by the Wisconsin Department of Transportation and to the project type heading "Airport Pavement or State Highway Construction." DO NOT apply the premium calculation under any other project type on this determination.
APPRENTICES:	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.
SUBJOURNEY:	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.

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.

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.

BUILDING OR HEAVY CONSTRUCTION

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.

SKILLED TRADES

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
101	Acoustic Ceiling Tile Installer	29.06	15.16	44.22
102	Boilermaker	31.09	23.75	54.84
103	Bricklayer, Blocklayer or Stonemason Future Increase(s): Add \$.50/hr on 6/1/2012; Add \$.80 on 6/1/2013 Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	32.26	16.60	48.86
104	Cabinet Installer	29.06	15.16	44.22
105	Carpenter	29.06	15.16	44.22
106	Carpet Layer or Soft Floor Coverer	29.06	15.16	44.22
107	Cement Finisher	32.03	15.13	47.16
108	Drywall Taper or Finisher	26.10	13.65	39.75
109	Electrician Future Increase(s): Add \$.50/hr on 6/1/2012. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	32.55	18.68	51.23
110	Elevator Constructor	43.79	25.48	69.27
111	Fence Erector	25.50	0.26	25.76
112	Fire Sprinkler Fitter	36.39	16.75	53.14
113	Glazier	36.23	11.22	47.45
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	19.11	50.01
117	Lather	29.06	15.16	44.22

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
118	Line Constructor (Electrical)	35.97	18.08	54.05
119	Marble Finisher	31.16	16.27	47.43
120	Marble Mason	32.66	16.20	48.86
121	Metal Building Erector	22.00	4.11	26.11
122	Millwright	30.66	15.21	45.87
123	Overhead Door Installer	18.00	4.86	22.86
124	Painter	25.65	14.11	39.76
125	Pavement Marking Operator	26.00	0.00	26.00
126	Piledriver	29.56	15.16	44.72
127	Pipeline Fuser or Welder (Gas or Utility)	29.54	18.84	48.38
129	Plasterer	29.03	15.16	44.19
130	Plumber	36.20	15.02	51.22
132	Refrigeration Mechanic Future Increase(s): Add \$.85/hr on 12/1/11; Add \$.90/hr on 6/1/12; Add \$.85/hr on 12/1/12.	40.35	16.21	56.56
133	Roofer or Waterproofer	28.06	0.00	28.06
134	Sheet Metal Worker	34.23	20.19	54.42
135	Steamfitter Future Increase(s): Add \$.85/hr on 12/1/11; Add \$.90/hr on 6/1/12; Add \$.85/hr on 12/1/12.	40.35	16.21	56.56
137	Teledata Technician or Installer	21.26	6.99	28.25
138	Temperature Control Installer	32.55	18.68	51.23
139	Terrazzo Finisher	18.00	5.35	23.35
140	Terrazzo Mechanic	31.16	16.27	47.43
141	Tile Finisher Future Increase(s): Add \$.50/hr on 6/1/2012; Add \$.80/hr on 6/1/2013.	23.77	16.00	39.77
142	Tile Setter Future Increase(s): Add \$.50/hr on 6/1/2012; Add \$.80/hr on 6/1/2013.	29.71	16.00	45.71
143	Tuckpointer, Caulker or Cleaner	22.00	9.75	31.75
144	Underwater Diver (Except on Great Lakes)	36.20	18.81	55.01
146	Well Driller or Pump Installer	25.32	15.30	40.62

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
CODE	TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
		\$	\$	\$
147	Siding Installer	16.74	2.58	19.32
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	32.37	16.48	48.85
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	28.78	15.16	43.94
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	17.80	9.00	26.80
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	23.38	12.48	35.86
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.30	10.97	32.27

TRUCK DRIVERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
CODE	TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
		\$	\$	\$
201	Single Axle or Two Axle	18.00	6.98	24.98
203	Three or More Axle Future Increase(s): Add \$1.57/hr on 6/1/2012.	18.00	13.83	31.83
204	Articulated, Euclid, Dumptror, Off Road Material Hauler Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	31.89	17.98	49.87
205	Pavement Marking Vehicle	19.25	10.84	30.09
207	Truck Mechanic	18.00	13.68	31.68

LABORERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
CODE	TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
		\$	\$	\$
301	General Laborer Future Increase(s): Add \$.50/hr. on 06/04/2012; Add \$.75/hr. on 06/03/2013 Premium Increase(s): Add \$1.00/hr for certified welder; Add \$.25/hr for mason tender	24.14	13.45	37.59
302	Asbestos Abatement Worker	23.96	12.88	36.84
303	Landscaper	17.00	6.36	23.36
310	Gas or Utility Pipeline Laborer (Other Than Sewer and Water)	20.39	12.20	32.59
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	16.51	0.00	16.51
314	Railroad Track Laborer	14.00	4.77	18.77

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

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
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 Mfg'r's Rated Capacity of 130,000 Lbs. or Over; Backhoe (Track Type) Having a Mfg'r'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). Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	32.42	17.98	50.40
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).	31.89	14.44	46.33
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. Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	31.89	17.98	49.87
504	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	36.20	18.81	55.01
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).	37.45	19.45	56.90

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> \$
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.	26.80	18.52	45.32
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.	27.75	19.15	46.90

**HEAVY EQUIPMENT OPERATORS
EXCLUDING SITE PREPARATION, UTILITY, PAVING LANDSCAPING WORK**

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> \$
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. Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013. 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.	34.62	17.98	52.60
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). Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013. Premium Increase(s): Add \$.25/hr for cranes with lifting capacity of 45 ton or over.	33.62	17.98	51.60
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). Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	32.42	17.98	50.40

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
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). Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	31.89	17.98	49.87
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.	35.59	19.10	54.69
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. Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	29.19	17.98	47.17
514	Gas or Utility Pipeline, Except Sewer & Water (Primary Equipment). Future Increase(s): Add \$2/hr. on 1/1/2013.	34.89	19.68	54.57
515	Gas or Utility Pipeline, Except Sewer & Water (Secondary Equipment).	30.32	17.40	47.72
516	Fiber Optic Cable Equipment	22.00	7.27	29.27

SEWER, WATER OR TUNNEL CONSTRUCTION

Includes those projects that primarily involve public sewer or water distribution, transmission or collection systems and related tunnel work (excluding buildings).

SKILLED TRADES

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
103	Bricklayer, Blocklayer or Stonemason	32.66	16.20	48.86
105	Carpenter Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	33.43	19.31	52.74
107	Cement Finisher Future Increase(s): Add \$1.86 on 6/1/12; Add \$1.87 on 6/1/13; Add \$1.87 on 6/1/14; Add \$1.87 on 6/1/15; Add \$1.75 on 6/1/16. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.	30.68	15.68	46.36
109	Electrician Future Increase(s): Add \$1.40/hr on 6/1/2012. Add \$1.60/hr on 6/1/2013. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	31.54	20.95	52.49
111	Fence Erector	25.50	0.26	25.76
116	Ironworker Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	31.31	22.22	53.53
118	Line Constructor (Electrical)	35.97	18.08	54.05
125	Pavement Marking Operator	26.00	0.00	26.00
126	Piledriver	29.56	15.16	44.72
130	Plumber	36.20	15.02	51.22
135	Steamfitter	39.90	15.76	55.66
137	Teledata Technician or Installer	21.26	6.99	28.25

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
143	Tuckpointer, Caulker or Cleaner	22.00	9.75	31.75
144	Underwater Diver (Except on Great Lakes)	36.20	18.81	55.01
146	Well Driller or Pump Installer	24.22	14.80	39.02
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	32.37	16.48	48.85
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	28.78	15.16	43.94
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	17.80	9.00	26.80
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	23.38	12.48	35.86
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.30	10.97	32.27

TRUCK DRIVERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
201	Single Axle or Two Axle	23.00	8.64	31.64
203	Three or More Axle	21.17	9.51	30.68
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add \$1.75/hr on 6/1/2012; Add \$1.85/hr on 6/1/2013. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	22.50	16.19	38.69
205	Pavement Marking Vehicle	19.25	10.84	30.09
207	Truck Mechanic	21.17	9.51	30.68

LABORERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
301	General Laborer Future Increase(s): Add \$.70/hr. on 06/04/2012; Add \$.80/hr. on 06/03/2013 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.	25.28	13.44	38.72

Fringe Benefits Must Be Paid On <u>All</u> 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>
		\$	\$	\$
303	Landscaper	17.00	6.36	23.36
304	Flagperson or Traffic Control Person	12.00	17.89	29.89
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	16.51	0.00	16.51
314	Railroad Track Laborer	14.00	4.77	18.77

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

Fringe Benefits Must Be Paid On <u>All</u> 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>
		\$	\$	\$
521	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 &/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. Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013. Premium Increase(s): Add \$.25/hr for cranes with lifting capacity of 45 ton or over.	33.62	17.98	51.60
522	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & 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 & Distributor; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With a Lifting Capacity of 4,000 Lbs. & Under; Dredge (NOT Performing Work on the Great Lakes); Milling Machine; Skid Rig; Telehandler; Traveling Crane (Bridge Type). Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	32.42	17.98	50.40

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
523	Air Track, Rotary or Percussion Drilling Machine &/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 & Under), Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & 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). Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	31.89	17.98	49.87
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.	30.89	17.16	48.05
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/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	29.19	17.98	47.17
526	Boiler (Temporary Heat); Forklift; Greaser; Oiler.	29.19	17.96	47.15
527	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	36.20	18.81	55.01
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.	36.20	18.81	55.01

Fringe Benefits Must Be Paid On <u>All</u> 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> \$
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.	26.80	18.52	45.32
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.	26.80	18.52	45.32

AIRPORT PAVEMENT OR STATE HIGHWAY CONSTRUCTION

Includes all airport projects (excluding buildings) and all projects awarded by the Wisconsin Department of Transportation (excluding buildings).

SKILLED TRADES

<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u> \$	<u>HOURLY FRINGE BENEFITS</u> \$	<u>TOTAL</u> \$
Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
103	Bricklayer, Blocklayer or Stonemason	32.66	15.92	48.58
105	Carpenter	30.23	15.16	45.39
107	Cement Finisher Future Increase(s): Add \$1.86 on 6/1/12; Add \$1.87 on 6/1/13; Add \$1.87 on 6/1/14; Add \$1.87 on 6/1/15; Add \$1.75 on 6/1/16. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.	30.68	15.68	46.36
109	Electrician	37.25	14.68	51.93
111	Fence Erector	35.62	0.00	35.62
116	Ironworker	30.90	19.11	50.01
118	Line Constructor (Electrical)	35.97	18.08	54.05
124	Painter	28.00	11.15	39.15
125	Pavement Marking Operator	26.65	14.92	41.57
126	Piledriver	29.56	15.16	44.72
133	Roofer or Waterproofer	28.06	0.00	28.06
137	Teledata Technician or Installer	21.26	6.99	28.25
143	Tuckpointer, Caulker or Cleaner	22.00	9.75	31.75
144	Underwater Diver (Except on Great Lakes)	36.20	18.81	55.01
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	35.42	12.90	48.32
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	35.50	14.27	49.77
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.18	14.07	39.25
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	23.38	12.48	35.86

154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.30	10.97	32.27
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TRUCK DRIVERS

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> \$
201	Single Axle or Two Axle Future Increase(s): Add \$1.75/hr on 6/1/2012; Add \$1.85/hr on 6/1/2013. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	22.35	16.19	38.54
203	Three or More Axle Future Increase(s): Add \$1.75/hr on 6/1/2012; Add \$1.85/hr on 6/1/2013. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	22.50	16.19	38.69
204	Articulated, Euclid, Dumptor, Off Road Material Hauler	24.91	15.63	40.54
205	Pavement Marking Vehicle	23.84	14.76	38.60
206	Shadow or Pilot Vehicle	24.76	15.35	40.11
207	Truck Mechanic	24.91	15.35	40.26

LABORERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
301	General Laborer Future Increase(s): Add \$1.60/hr on 6/1/2012; Add \$1.70/hr on 6/1/2013; Add \$1.60/hr on 6/1/2014. Premium Increase(s): Add \$.10/hr for topman, air tool operator, vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add \$.15/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add \$.20/hr for blaster and powderman; Add \$.25/hr for bottomman; Add \$.35/hr for line and grade specialist; Add \$.45/hr for pipelayer. / DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	27.20	13.45	40.65
302	Asbestos Abatement Worker	23.96	12.88	36.84
303	Landscaper Future Increase(s): 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): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	27.20	13.45	40.65
304	Flagperson or Traffic Control Person Future Increase(s): Add \$1.60/hr on 6/1/2012; Add \$1.70/hr on 6/1/2013; Add \$1.60/hr on 6/1/2014. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.	23.55	13.45	37.00

Fringe Benefits Must Be Paid On <u>All</u> 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>
		\$	\$	\$
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	16.51	0.00	16.51
314	Railroad Track Laborer	14.00	4.77	18.77

**HEAVY EQUIPMENT OPERATORS
AIRPORT PAVEMENT OR STATE HIGHWAY CONSTRUCTION**

Fringe Benefits Must Be Paid On <u>All</u> 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>
		\$	\$	\$
531	Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Traveling Crane (Bridge Type). Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	34.22	18.90	53.12
532	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	33.72	18.90	52.62

Fringe Benefits Must Be Paid On <u>All</u> 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> \$
533	<p>Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A-Frames.</p> <p>Future Increase(s): 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): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).</p>	33.22	18.90	52.12

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
CODE	TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
		\$	\$	\$
534	Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawyer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Telehandler; Tining or Curing Machine. Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	32.96	18.90	51.86
535	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	32.67	18.90	51.57
536	Fiber Optic Cable Equipment.	22.00	7.27	29.27
537	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	36.20	18.81	55.01

Fringe Benefits Must Be Paid On <u>All</u> 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>
		\$	\$	\$
538	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.	36.20	18.81	55.01
539	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.	26.80	18.52	45.32
540	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.	26.80	18.52	45.32

LOCAL STREET OR MISCELLANEOUS PAVING CONSTRUCTION

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).

SKILLED TRADES

<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>FRINGE BENEFITS MUST BE PAID ON ALL HOURS WORKED</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
			\$	\$	\$
103	Bricklayer, Blocklayer or Stonemason		32.66	16.20	48.86
105	Carpenter		29.06	15.16	44.22
107	Cement Finisher		30.68	15.68	46.36
	Future Increase(s): Add \$1.86 on 6/1/12; Add \$1.87 on 6/1/13; Add \$1.87 on 6/1/14; Add \$1.87 on 6/1/15; Add \$1.75 on 6/1/16.				
	Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.				
109	Electrician		28.74	17.86	46.60
	Future Increase(s): Add \$.50/hr. effective 06/04/2012.				
	Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.				
111	Fence Erector		25.50	0.26	25.76
116	Ironworker		30.90	19.11	50.01
118	Line Constructor (Electrical)		35.97	18.08	54.05
124	Painter		25.65	14.11	39.76
125	Pavement Marking Operator		26.00	0.00	26.00
126	Piledriver		29.56	15.16	44.72
133	Roofer or Waterproofer		28.06	0.00	28.06
137	Teledata Technician or Installer		21.26	6.99	28.25
143	Tuckpointer, Caulker or Cleaner		22.00	9.75	31.75
144	Underwater Diver (Except on Great Lakes)		36.20	18.81	55.01
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY		35.42	12.90	48.32

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	29.64	14.64	44.28
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.18	13.07	38.25
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	23.38	12.48	35.86
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.30	10.97	32.27
TRUCK DRIVERS				

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
201	Single Axle or Two Axle	15.00	0.00	15.00
203	Three or More Axle	19.50	4.97	24.47
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	31.89	17.98	49.87
205	Pavement Marking Vehicle	19.25	10.84	30.09
206	Shadow or Pilot Vehicle	15.00	0.00	15.00
207	Truck Mechanic	19.50	4.97	24.47

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
301	General Laborer	26.15	12.29	38.44
303	Landscaper	23.71	15.07	38.78
304	Flagperson or Traffic Control Person	12.00	17.89	29.89
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	16.51	0.00	16.51
314	Railroad Track Laborer	14.00	4.77	18.77

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

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
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. Future Increase(s): 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): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	34.22	18.90	53.12
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 \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	33.72	18.90	52.62

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
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.	33.22	18.90	52.12

Future Increase(s):

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):

DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
CODE	TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
		\$	\$	\$
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. Future Increase(s): 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): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	33.22	18.90	52.12
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.	30.42	17.58	48.00
546	Fiber Optic Cable Equipment.	22.00	7.27	29.27
547	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	36.20	18.81	55.01
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.	36.20	18.81	55.01
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.	26.80	18.52	45.32
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.	26.80	18.52	45.32

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

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> \$
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.	34.62	17.96	52.58
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. Future Increase(s): 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): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	33.72	18.90	52.62

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
553	Air, Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & 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. & Under); Bituminous (Asphalt) Plant & 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 & 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 & A-Frames. Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14.	32.67	18.55	51.22
554	Backfiller; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawyer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self-Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Telehandler.	31.52	17.89	49.41
555	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14.	32.67	18.55	51.22
556	Fiber Optic Cable Equipment.	22.00	7.27	29.27

RESIDENTIAL OR AGRICULTURAL CONSTRUCTION

Includes single family houses or apartment buildings of no more than four (4) stories in height and all buildings, structures or facilities that are primarily used for agricultural or farming purposes, excluding commercial buildings. For classification purposes, the exterior height of a residential building, in terms of stories, is the primary consideration. All incidental items such as site work, driveways, parking lots, private sidewalks, private septic systems or sewer and water laterals connected to a public system and swimming pools are included within this definition. Residential buildings of five (5) stories and above are NOT included within this definition.

SKILLED TRADES

<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	27.00	2.47	29.47
102	Boilermaker	31.09	23.75	54.84
103	Bricklayer, Blocklayer or Stonemason	32.00	3.00	35.00
104	Cabinet Installer	22.00	2.74	24.74
105	Carpenter	27.00	3.46	30.46
106	Carpet Layer or Soft Floor Coverer	23.95	2.78	26.73
107	Cement Finisher	21.33	4.25	25.58
108	Drywall Taper or Finisher	23.80	1.55	25.35
109	Electrician	22.00	9.18	31.18
110	Elevator Constructor	43.79	25.48	69.27
111	Fence Erector	17.64	4.33	21.97
112	Fire Sprinkler Fitter	36.39	16.97	53.36
113	Glazier	36.23	11.22	47.45
114	Heat or Frost Insulator	29.04	19.73	48.77
115	Insulator (Batt or Blown)	18.95	1.70	20.65
116	Ironworker	30.90	19.11	50.01
117	Lather	28.15	15.14	43.29
119	Marble Finisher	31.16	16.27	47.43
120	Marble Mason	32.66	16.20	48.86
121	Metal Building Erector	17.50	2.80	20.30
123	Overhead Door Installer	17.00	0.00	17.00
124	Painter	25.65	6.33	31.98
125	Pavement Marking Operator	26.00	0.00	26.00

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> \$
129	Plasterer	19.00	0.29	19.29
130	Plumber	30.00	10.34	40.34
132	Refrigeration Mechanic	30.96	0.00	30.96
133	Roofer or Waterproofofer	29.85	1.55	31.40
134	Sheet Metal Worker	21.03	3.40	24.43
135	Steamfitter	32.59	11.05	43.64
137	Teledata Technician or Installer	19.23	5.32	24.55
138	Temperature Control Installer	22.45	4.11	26.56
139	Terrazzo Finisher	18.00	5.35	23.35
140	Terrazzo Mechanic	31.16	16.27	47.43
141	Tile Finisher	23.96	13.36	37.32
142	Tile Setter	21.00	0.00	21.00
143	Tuckpointer, Caulker or Cleaner	23.96	12.88	36.84
146	Well Driller or Pump Installer	15.10	12.38	27.48
147	Siding Installer	18.80	1.42	20.22

TRUCK DRIVERS

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> \$
201	Single Axle or Two Axle	19.86	2.54	22.40
203	Three or More Axle	19.50	14.27	33.77
205	Pavement Marking Vehicle	19.25	10.84	30.09
207	Truck Mechanic	19.00	1.75	20.75

LABORERS

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> \$
301	General Laborer	16.09	7.18	23.27
302	Asbestos Abatement Worker	17.00	2.21	19.21
303	Landscaper	25.00	0.54	25.54

311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	16.51	0.00	16.51
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**HEAVY EQUIPMENT OPERATORS
RESIDENTIAL OR AGRICULTURAL CONSTRUCTION**

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> \$
557	Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Backhoe (Track Type); Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boring Machine (Directional, Horizontal or Vertical); Bulldozer or Endloader; 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; Crane, Shovel, Dragline, Clamshells; Forestry Equipment, Timberco, Tree Shear, Tub Grinder, Processor; 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; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); 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); Winches & A-Frames.	29.45	15.37	44.82
558	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Backfiller; Belting, Burlap, Texturing Machine; Boiler (Temporary Heat); Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Farm or Industrial Type Tractor; Forklift; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Jeep Digger; Lift Slab Machine; Mulcher; Oiler; Post Hole Digger or Driver; Power Subgrader; Pump (3 Inch or Over) or Well Points; Robotic Tool Carrier (With or Without Attachments); Rock, Stone Breaker; Roller (Rubber Tire, 5 Tons or Under); Screed (Milling Machine); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Stump Chipper; Telehandler; Vibratory Hammer or Extractor, Power Pack.	26.45	14.35	40.80

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