

Project Manual
TECHNICAL SPECIFICATIONS

Madison Municipal Building Flagpole Replacement

215 Martin Luther King, Jr. Blvd
Madison, WI 53703

06/25/2026

Munis #15642-401-200
Contract # 9805



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PART 1 – GENERAL

1.1. SUMMARY

- A. Each project has varying requirements for permits, inspections, and fees based on the scope, size, and location of the project.
- B. The City of Madison (Owner) is subject to all permits, inspections and associated fees for construction, demolition, utility connection, storm water management, and other similar requirements that may be required to complete the scope of work associated with these contract documents.
- C. The General Contractor (GC) shall be responsible for obtaining all permits, inspections and paying for all associated fees unless specifically identified within this specification.

1.2. REFERENCES

- A. The following references are not intended to be all inclusive. It shall be the GC's responsibility to determine all requirements based on the scope of work in the contract documents.
- B. City of Madison Ordinances: Review all ordinances that may require a permit or fee that may be connected with a required permit. Contact the following City Agencies to determine the exact requirements during bidding
 - 1. Building Inspection
 - 2. Zoning
 - 3. Engineering
 - 4. Water Utility
 - 5. Traffic Engineering
 - 6. Others as may be specified by the contract documents.
- B. State Statutes
- C. Other Regulatory Regulations
- D. Other Agencies or companies that may have related requirements
 - 1. Madison Metropolitan Sewerage District
 - 2. Local gas and electric utility companies
 - 3. Other utility companies

1.3. GENERAL CONTRACTORS REQUIREMENTS

- A. The GC shall be responsible for all of the following:
 - 1. Execute application for all required permits as may be required by the scope of work described within the contract documents.
 - 2. Scheduling all required inspections that may be conditions of any required permits.
 - 3. Paying for other permits not explicitly stated as excluded in this section.
- B. The GC is not responsible for paying for the City Building, City HVAC, City Electrical, City Plumbing, Madison Fire Department Sprinkler and Madison Fire Department Fire Alarm permits.
- C. The GC shall provide high quality scanned images of all required permits and inspections and upload them to the Contract Documents-Regulatory Documents Library on the Project Management Web Site.

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 – EXECUTION – THIS SECTION NOT USED

END OF SECTION

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SUBSTITUTION REQUEST FORM (DURING BIDDING)

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PART 1 – GENERAL

1.1. SUMMARY

- A. The City of Madison uses a specific list of preferred products for various specification items to establish standards of quality, utility, and appearance required.
- B. The City of Madison will not allow substitutions for specified Products except as follows:
 - 1. The Product is no longer produced or the product manufacturer is no longer in business.
 - 2. The manufacturer has significantly changed performance data, product dimensions, or other such design criteria for the specified Product(s).
 - 3. Products specified by naming one or more Products or manufacturer's and "or approved equal" or "approved equivalent."
- C. The procedures in this specification shall apply to all proposals by Contractors, Suppliers, Vendors, and Manufacturers when the conditions in item 1.1.B. above have been met during the bidding phase.

1.2. RELATED SPECIFICATIONS

- A. 01 25 13 Product Substitution Procedures

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 - EXECUTION

3.1. REQUESTING A SUBSTITUTION DURING BIDDING

- A. In the event that a substitution is requested during the bidding phase the Contractor, Supplier, Vendor, or Manufacturer shall do all of the following:
 - 1. Submit a Substitution Request Form for each different product. Use a printed/scanned copy of the form at the end of this specification as a cover sheet.
 - 2. Support your request with complete data, drawings, specifications, performance data and samples as appropriate. A complete submission shall include the following:
 - a. Substitution Request Form as a cover sheet
 - b. Comparison of qualities of the proposed substitutions with that specified.
 - c. Changes required in other elements of the Work because of the substitution.
 - d. Effect on the construction schedule.
 - e. Cost data comparing the proposed substitution with the Product specified.
 - f. Any required license fees or royalties.
 - g. Availability of maintenance service and source of replacement materials.
 - 3. Submit the Substitution Request Form and all required supporting documentation to the City Project Manager and Project Architect.
 - a. Submissions to be done as complete PDF files for each product, appropriately titled
 - b. Email submissions to the Project Architect and City Project Manager at the email addresses provided on the last page of Section D of the contract documents.
 - i. The subject line shall include the contract number and "Request for Substitution".
Example: Contract 1234 – Request for Substitution
 - 4. Submissions must be received by the substitution request deadline specified in Section A of the Contract Documents.

3.2. SUBMISSION REVIEW

- A. The Project Architect, City Project Manager, members of the design team, and the Owners staff shall review all submissions for substitutions during the bidding phase.

3.3. SUBSTITUTION APPROVAL

- A. All requests for substitutions that have been approved shall be published by Addenda to the bid documents.

NOTE SEE NEXT PAGE FOR SAMPLE SUBSTITUTION REQUEST FORM.

3.4. SUBSTITUTION REQUEST FORM

For Pre-bid Substitution Requests all text boxes on this form are required information for a complete request.

		Substitution Request	
Today's Date:			
Project Title:			
Project Number:		Contract Number:	
By completing and submitting this form for review the General Contractor affirms that all of the following statements are correct: 1 The General Contractor affirms that this request is in compliance with the requirements described in <i>Specification 01 25 13 Product Substitution Procedures</i>. 2 The function, appearance, and quality of the proposed substitution are equal or superior to the specified item. 3 The proposed substitution does not affect dimensions shown on the drawings. 4 The proposed substitution will have no adverse affects on other trades, the construction schedule, or any specified warranty requirements. 5 Maintenance and service parts will be locally available for the proposed substitution. (GC shall provide supporting documentation in the attachments section below.) 6 The General Contractor shall be responsible for any and all costs associated with this substitution request if approved. This includes but is not limited to fees for building design, engineering design fees, detailing fees, plan review fees, construction costs, and inspection fees.			
<u>GC Substitution Request:</u>			
General Title:			
Related Specification:			
Reason for Substitution:			
Proposed Substitution: (include Name, Model, etc.)			
Submitted By:		Phone:	
		Email:	
Company:			

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PART 1 – GENERAL

1.1. SUMMARY

- A. The Reimbursable Hourly Worksheet is a contractor provided document that indicates the basic rate of pay, fringe benefits, and each companies cost of required insurance for all Trades and Classifications that will be performing productive labor during the execution of this contract.
 - 1. Rates shall be similar to recognized rates published by the Bureau of Labor Statistics, Associated General Contractors (AGC), Associated Builders and Contractors (ABC), appropriate union contracts, and other similar organizations or documents.
- B. The Reimbursable Labor Rate Worksheet shall provide the basis for labor rates being used on Change Order Request forms.

1.2. RELATED SPECIFICATIONS

- A. Section 01 26 57 Change Order Request
- B. Section 01 29 76 Progress Payment Procedures
- C. Section 01 31 23 Project Management Web Site (PMWS)
- D. Section 01 32 19 Submittals Schedule

PART 2 – PRODUCTS – NOT USED

PART 3 - EXECUTION

3.1. GENERAL REQUIREMENTS

- A. Prior to the Pre-Construction Meeting the City Project Manager (CPM) or the City Construction Manager (CCM) shall provide the GC a copy of the *Reimbursable Labor Rate Worksheet.xls*.
 - 1. See the last page of this specification for an example of the worksheet.
- B. The GC shall provide all subcontractors that will be performing productive labor during the execution of this contract with additional copies of the worksheet as needed.
- C. All contractors shall be required to fill out and submit completed worksheets for all Trades and Classifications of labor that will be performing productive labor during the execution of this contract.

3.2. GENERAL CONTRACTORS RESPONSIBILITIES

- A. The GC shall consolidate all Trades and Classifications into one master Excel Workbook of all trades.
- B. The GC shall provide the combined workbook as required by Section 1.6 of Specification 01 32 19 Submittals Schedule for review and approval by the Owners Representatives.
 - 1. Submittal shall be an Exported PDF of the completed Excel Workbook.
 - a. As an Exported PDF the individual worksheets will be bookmarked and the document will be word searchable for easy reference.
- C. The GC shall only use the rates posted in the approved submittal throughout the execution of this contract.

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Reimbursable Hourly Rate Worksheet

(see bottom of page for instructions)

Project Name: _____
Project Location: _____
Project Number: _____
Contractor: _____
Rates are based on the
following documentation: _____

Enter TRADE Here:

Carpenter

<u>Classification:</u>		<u>Foreman</u>	<u>Journeyman</u>	<u>Laborer</u>	<u>Apprt 1</u>	<u>Other</u>	<u>Other</u>	<u>Other</u>
Base Rate (BR)		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Vacation		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Health Insurance		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Pension		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Apprenticeship		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sub-total		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BR Sub-total		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Work. Comp	% of BR	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Gen Liability	% of BR	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WI Unemploy	% of BR	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Fed Unemploy	% of BR	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FICA	% of BR	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sub-total		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL COST		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Enter YOUR percentage of base rate in the column below.

% of BR	
0	- Work. Comp
0	- Gen Liability
0	- WI Unemploy
0.6	- Fed Unemploy
7.65	- FICA

Form Instructions:

1. Provide a work sheet for ALL Trade Classifications that will be performing on site productive labor during the execution of this project.
2. Responsible contractor to complete only boxes that are shaded, all non-shaded boxes are formula driven.
3. Contractor shall provide the name of the source used for these rates. (union contract, Bureau of Labor and Statistics, AGC, ABC, etc.) and be prepared to provide copies if so requested.

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END OF SECTION

SECTION 00 62 76.13
SALES TAX FORM

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PART 1 – GENERAL

1.1. SUMMARY

- A. The City of Madison is a qualifying tax exempt entity in the State of Wisconsin.
- B. The Contractor shall refer to *Section 102.9 – Bidders Understanding of the City of Madison FACILITIES MANAGEMENT SPECIFICATIONS for Public Works Construction* for more information on Tax Exempt Status.
- C. This project constructs or remodels facilities owned by the City of Madison in Madison, Wisconsin.

1.2. RELATED SPECIFICATION SECTIONS

- A. Parts of this specification will reference articles within “The City of Madison FACILITIES MANAGEMENT SPECIFICATIONS for Public Works Construction”.
 - 1. Use the following link to access the FACILITIES MANAGEMENT SPECIFICATIONS web page:
<http://www.cityofmadison.com/business/pw/specs.cfm>
 - a. Click on the “Part” chapter identified in the specification text. For example if the specification says “Refer to City of Madison FACILITIES MANAGEMENT SPECIFICATION 210.2” click the link for Part II, the Part II PDF will open.
 - b. Scroll through the index of Part II for specification 210.2 and click the text link which will take you to the referenced text.

1.3. TAX EXEMPT FORM

- A. The Contractor can access Wisconsin Sales and Use Tax Exemption Certificates (form S-211, Wisconsin Department of Revenue) from the City of Madison Finance website.
 - 1. City of Madison tax exempt information and signature by Purchasing Supervisor is already completed.
 - 2. Website: <http://www.cityofmadison.com/employeeenet/finance/purchasing>
 - a. Under the title *Purchasing Forms*, scroll down to the form link titled *Sales Tax Exempt Form S-211*.

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 – EXECUTION – THIS SECTION NOT USED

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PRODUCT SUBSTITUTION PROCEDURES

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PART 1 – GENERAL

1.1. SUMMARY

- A. The City of Madison uses a specific list of preferred products for various specification items to establish standards of quality, utility, and appearance required.
- B. The City of Madison will not allow substitutions for specified Products except as follows:
 1. The Product is no longer produced, or the product manufacturer is no longer in business.
 2. The manufacturer has significantly changed performance data, product dimensions, or other such design criteria for the specified Product(s).
 3. Products specified by naming one or more Products or manufacturer's and "or approved equal" or "approved equivalent."
- C. The City of Madison will not allow substitutions for specified Products as follows:
 1. For Products specified by naming only one Product and manufacturer, no substitute product will be considered.
 2. For Products specified by naming several Products or manufacturers select any one of the products or manufacturers named, which complies with the specifications. No substitute product will be considered.
- D. Request for substitutions from any party other than the General Contractor (GC) will not be accepted.

1.2. RELATED SPECIFICATIONS

- A. Section 00 43 25 Substitution Request Form (During Bidding)
- B. Section 01 26 13 Request for Information (RFI)
- C. Section 01 31 23 Project Management Web Site (PMWS)
- D. Section 01 33 23 Submittals

PART 2 – PRODUCTS

2.1. SUBSTITUTION REQUEST FORM

- A. During bidding all contractors (General and Sub-contractors) and suppliers of materials or products shall reference Specification Section 00 43 25 and provide a pdf copy of the Substitution Request form located at the end of that section with all required attachments directly to the Project Architect.
- B. After bidding only the GC shall submit a request and shall use the form located at the end of this specification and submit the request on the Project Management Web Site.

PART 3 - EXECUTION

3.1. REQUESTING A SUBSTITUTION DURING BIDDING

- A. In the event that a substitution is requested during the bidding phase the Contractor or Supplier shall meet the substitution request deadline listed in the bidding documents. No substitution request will be considered during the bidding period after the stated substitution request deadline.
- B. See specification 00 43 25 Substitution Request Form (During Bidding).

3.2. REQUESTING A SUBSTITUTION AFTER AWARD OF CONTRACT

- A. A substitution request will only be considered after award of contract if it meets the qualifying provisions as described in 1.1.B.1 and .2 above.
- B. The GC shall submit a substitution request using the digital form on the Project Management Web Site.

1. Consulting Staff, Owner and Owners Representatives will review the request and provide the appropriate approvals and feed back to the GC.

3.3. UNAUTHORIZED SUBSTITUTIONS

- A. Any Contractor who substitutes products without proper authorization by the Owner and Architect will be required to immediately remove and replace the product and all costs required to conform to the Contract Documents shall be borne by the General Prime Contractor.

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NOTE SEE NEXT PAGE FOR SAMPLE SUBSTITUTION REQUEST FORM.

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For Pre-bid Substitution Requests all text boxes on this form are required information for a complete request.

 Substitution Request	
Today's Date:	
Project Title:	
Project Number:	
Contract Number:	
By completing and submitting this form for review the General Contractor affirms that all of the following statements are correct: 1 The General Contractor affirms that this request is in compliance with the requirements described in <i>Specification 01 25 13 Product Substitution Procedures</i>. 2 The function, appearance, and quality of the proposed substitution are equal or superior to the specified item. 3 The proposed substitution does not affect dimensions shown on the drawings. 4 The proposed substitution will have no adverse affects on other trades, the construction schedule, or any specified warranty requirements. 5 Maintenance and service parts will be locally available for the proposed substitution. (GC shall provide supporting documentation in the attachments section below.) 6 The General Contractor shall be responsible for any and all costs associated with this substitution request if approved. This includes but is not limited to fees for building design, engineering design fees, detailing fees, plan review fees, construction costs, and inspection fees.	
<u>GC Substitution Request:</u>	
General Title:	
Related Specification:	
Reason for Substitution:	
Proposed Substitution: (include Name, Model, etc.)	
Submitted By:	
Company:	
Phone:	
Email:	

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END OF SECTION

**SECTION 01 26 13
REQUEST FOR INFORMATION (RFI)**

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PART 1 – GENERAL

1.1. SUMMARY

- A. Contractors shall use the RFI form/process to request additional information or clarification regarding the construction documents.
- B. All RFI documentation will be processed through the through the Project Management Web Site (PMWS).

1.2. RELATED SPECIFICATIONS

- A. Section 01 26 46 Construction Bulletin (CB)
- B. Section 01 26 57 Change Order Request (COR)
- C. Section 01 26 63 Change Order (CO)
- D. Section 01 31 23 Project Management Web Site (PMWS)

1.3. PERFORMANCE REQUIREMENTS

- A. RFI issues initiated by any contractor shall be done through the General Contractor (GC).
 - 1. RFIs submitted by any Sub-contractor under the GCs control shall be returned with no response.
- B. Submit a new RFI for each issue. Only multiple questions that are of a similar nature may be combined into one RFI shall be allowed and responded to.

1.4. QUALITY ASSURANCE

- A. The GC shall be responsible for all of the following:
 - 1. Ensure that any request for additional information is valid and the information being requested is not addressed in the construction documents.
 - 2. Ensure that all requests are clearly stated and the RFI form is completely filled out.
 - 3. Ensure that all Work associated an RFI response is carried out as intended.
- B. The Project Architect /Project Engineer (A/E PROJ MGR) shall be responsible for the following:
 - 1. Ensure that all responses to contractor initiated RFIs are properly responded to in a timely fashion.
 - a. The CPM, Owner, consulting staff, and other City staff shall be responsible for the initial review of the RFI. The A/E PROJ MGR shall be responsible for codifying all consultant and Owner/City staff comments into a unified RFI response.

PART 2 – PRODUCTS

2.1. REQUEST FOR INFORMATION FORM

- A. The RFI form is located on the Project Management Web Site.

PART 3 - EXECUTION

3.1. CONTRACTOR INITIATED RFI

- A. Immediately on discovery of the need for additional information or interpretation of the Contract Documents any contractor may initiate an RFI for additional information or clarification through the GC.
- B. The GC shall use the Project Management Web Site and completely fill out the form.

1. Thoroughly explain the issue at hand, provide backup information (photographs, sketches, drawings, data, etc.) as necessary, and clearly state the question or problem that requires a resolution. Combine like or related issues but do not include multiple issues on one form.
- a. Example. If a duct interferes with other critical piping and electrical work include all issues into one RFI.
- b. Example. If you have a question regarding the chiller and another regarding toilet partitions create separate RFIs.

3.3. RFI RESPONSES

- A. Responses to simple RFI issues shall be completed within five (5) working days of the RFI form being submitted.
- B. Responses to more complex issues may require additional time or may require a Construction Bulletin to be published. The initial RFI shall be responded to within five (5) working days stating that the RFI is being reviewed and provide an estimated date for the response.
- C. The following GC generated RFIs will be returned without action:
 1. Requests for approval of submittals
 2. Requests for approval of substitutions
 3. Requests for approval of Contractor's means and methods.
 4. Requests for coordination information already indicated in the Contract Documents.
 5. Requests for adjustments in the Contract Time or the Contract Sum.
 6. Requests for interpretation of A/E's actions on submittals.
 7. Incomplete RFI or inaccurately prepared RFI.

3.4. COMMENCEMENT OF WORK RELATED TO AN RFI

- A. The GC shall only proceed with the Work of an RFI when additional information is not required.
- B. The GC shall not proceed with any Work associated with an RFI while it is under review.
- C. The GC shall not proceed with any Work associated with an RFI that clearly states a CB will be issued in response to the RFI.
- D. The GC will be required to immediately remove and replace unauthorized Work and all costs required to conform to the Contract Documents shall be borne by the GC.

END OF SECTION

**SECTION 01 26 46
CONSTRUCTION BULLETIN (CB)**

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PART 1 – GENERAL

1.1. SUMMARY

- A. Construction Bulletins (CB) are formal published construction documents that modify the original contract bid documents after construction has commenced. CBs may be published for many reasons, including but not limited to the following:
 - 1. Clarification of existing construction documents including specifications, plans, and details
 - 2. Change in product or equipment
 - 3. A response to a Request for Information
 - 4. Change in scope of the contract as either an add or a deduct of work
- B. CBs provide a higher degree of detail in response to a Request for Information (RFI) through directives, revised plans/details, and specifications as necessary.
- C. The CB may change the original contract documents through additions or deletions to the Work.
- D. Where the directives of a CB are significant enough to warrant a Change Order Request (COR) the GC shall use all information provided in the CB to assemble all required back-up documentation for additions and deletions of materials, labor and other related contract costs for the COR.
- E. All CB documentation will be processed through the Project Management Web Site (PMWS).

1.2. RELATED SPECIFICATIONS

- A. Section 01 26 13 Request for Information (RFI)
- B. Section 01 26 57 Change Order Request (COR)
- C. Section 01 26 63 Change Order (CO)
- D. Section 01 31 23 Project Management Web Site (PMWS)

1.3. PERFORMANCE REQUIREMENTS

- A. Project Architect /Project Engineer (A/E PROJ MGR): The A/E PROJ MGR shall be the only person authorized to publish a CB as needed for any reason indicated in section 1.1.A above. The A/E PROJ MGR shall consult as necessary with any of the following while drafting the CB and shall confirm final direction with the CPM prior to issuing a CB:
 - 1. City Project manager (CPM)
 - 2. Owner
 - 3. Members of the consulting staff
 - 4. Members of city staff
 - 5. The General Contractor
 - 6. Sub-contractors
 - 7. Commissioning Agent (CxA)
- B. General Contractor: The GC shall be responsible for the following as needed:
 - 1. Executing the directives of the CB when they believe that no changes in labor, materials, equipment, or contract duration will be required for additions or deletions.
 - 2. Submit a COR when they believe that a change in labor, materials, equipment or contract duration will be required for additions or deletions.

1.4. QUALITY ASSURANCE

- A. The A/E PROJ MGR shall be responsible for ensuring the final CB sufficiently provides direction, details, specifications and other information as necessary for the GC to perform the intended Work.
- B. The A/E PROJ MGR shall be responsible for ensuring the final CB is published as expeditiously as practical based on the complexity of the CB being written. CBs that may affect the GC critical path shall be given priority.

PART 2 – PRODUCTS

2.1. CONSTRUCTION BULLETIN FORM

- A. The CB form is located on the Project Management Web Site.

PART 3 - EXECUTION

3.1. WRITING THE CONSTRUCTION BULLETIN

- A. The A/E PROJ MGR shall draft a CB as needed using the Construction Bulletin form on the Project Management Web Site.
 - 1. The A/E PROJ MGR and/or consulting staff as necessary shall provide specifications, model numbers and performance data, details and other such information necessary to clearly state the intentions of the CB.
 - 2. The consulting staff, CPM, Owner, CxA and other City Staff shall review the draft and recommend changes as needed.
 - 3. The A/E PROJ MGR shall amend the draft as necessary into a final CB for review.
 - 4. Full plan sheets and entire specification sections referred to within a CB, shall be reissued with the CB.
- B. Once the final CB has been approved the A/E PROJ MGR shall “Submit” the CB through the Project Management Web Site to the City Project Manager.
- C. The City Project Manager will close and distribute the CB.

3.2. EXECUTING THE CONSTRUCTION BULLETIN

- A. The GC shall acknowledge receipt of the CB on the Project Management Web Site as instructed in the Tutorial Manual provided to the awarded contractor.
- B. The GC shall notify all Sub-contractors of the CB and publish the CB to all field sets of drawings and specifications as appropriate.
- C. The GC shall execute the directives of the CB or submit COR documentation as necessary during the execution and implementation of the CB.
 - 1. See Specification 01 26 57 Change Order Request (COR)

END OF SECTION

SECTION 01 26 57
CHANGE ORDER REQUESTS (COR)

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PART 1 – GENERAL

1.1. SUMMARY

- A. Except in cases of emergency, no changes in the Work required by the Contract Documents may be made by the General Contractor (GC) without having prior approval of the City Engineer or their representative.
- B. The City may at any time, without invalidating the Contract and without Notice to Sureties, order changes in the Work by written Change Order (CO). Such changes may include additions and/or deletions.
- C. Where the City desires to make changes in the Work through use of written Change Order Request (COR), the following procedures apply:
 1. If requested by the City, the GC shall prepare and submit a detailed proposal, including all cost and time adjustments to which the GC believes it will be entitled if the change proposed is incorporated into the Contract. The City shall be under no legal obligation to issue a Change Order for such proposal.
 2. The parties shall attempt in good faith to reach agreement on the adjustments needed to the Contract to properly incorporate the proposed change(s) into the Work. In the event that the parties agree on such adjustments, the City may issue a Change Order and incorporate such changes and agreed to adjustments, if any.
 3. In some instances, it may be necessary for the City to authorize Work or direct changes in Work for which no final and binding agreement has been reached and for which unit prices are not applicable. In such cases the following shall apply.
 - a. Upon written request by the City, the GC shall perform proposed Work
 - b. The cost of such change may be determined in accordance with this specification.
 - c. In the event agreement cannot be accomplished as contemplated herein, the City may authorize the Work to be performed by City forces or to hire others to complete the Work. Such action on the part of the City shall not be the basis of a claim by the GC for failure to allow it to perform the changed Work.
- D. Where changes in the Work are made by the City through use of a force account basis, the GC shall as soon as practicable, and in no case later than ten (10) working days from the receipt of such order, unless another time period has been agreed to by both parties, give the City written Notice, stating:
 1. The date, circumstances and source of the extra work; and,
 2. The cost of performing extra work described by such Order, if any; and,
 3. Effect of the order on the required completion date of the Project, if any.
- E. The giving of each Notice by the GC as prescribed by this specification, shall be a requirement to liability of the City for payment of any additional costs incurred by the GC in implementing changes in the Work. Under this specification, no order or statement of the City shall be treated as a Change Order, or shall entitle the GC to an equitable adjustment of the terms of this Contract or damages for costs incurred by the GC on any activity for which the Notice was not given.
- F. In the event Work is required due to an emergency as described in this specification the GC must request an equitable adjustment as soon as practicable, and in no case later than ten (10) working days of the commencement of such emergency.

- G. All GC requests for equitable adjustment shall be submitted to the CPM per the specifications below. Such requests shall set forth with specificity the amount of and reason(s) for the proposed adjustment and shall be accompanied by supporting information and documents.
- H. No adjustment of any kind shall be made to this Contract, if asserted by the GC for the first time, after the date of final payment.
- I. This specification shall be used by the GC when preparing documentation for any COR to ensure each has been properly and completely filled out as required by the City of Madison.
- J. All COR documentation will be processed through the Project Management Web Site (PMWS).

1.2. RELATED SPECIFICATION SECTIONS

- A. Section 01 26 13 Request for Information (RFI)
- B. Section 01 26 46 Construction Bulletins (CB)
- C. Section 01 26 63 Change Order (CO)
- D. Section 01 31 23 Project Management Web Site (PMWS)
- E. Parts of this specification will reference articles within "The City of Madison FACILITIES MANAGEMENT SPECIFICATIONS for Public Works Construction".
 - 1. Use the following link to access the FACILITIES MANAGEMENT SPECIFICATIONS web page:
<http://www.cityofmadison.com/business/pw/specs.cfm>
 - a. Click on the "Part" chapter identified in the specification text. For example if the specification says "Refer to City of Madison FACILITIES MANAGEMENT SPECIFICATION 210.2" click the link for Part II, the Part II PDF will open.
 - b. Scroll through the index of Part II for specification 210.2 and click the text link which will take you to the referenced text.

1.3. DEFINITIONS AND STANDARDS

- A. LABOR: The amount of time and cost associated with the performance of human effort for a defined scope of Work. Labor is further defined as follows:
 - 1. Labor rate is the total hourly rate which includes the basic rate of pay, fringe benefits plus each company's cost of required insurance, also referred to as a reimbursable labor rate.
 - 2. Unit labor is the labor hours anticipated to install the corresponding unit of material.
 - 3. Labor cost is the labor hours multiplied by the hourly labor rates.
- B. MATERIAL: Actual material cost is the amount paid, or to be paid, by the GC for materials, supplies and equipment entering permanently into the Work, including cost of transportation and applicable taxes. The cost shall not exceed the usual and customary cost for such items available in the geographical area of the project
- C. LARGE TOOLS AND MAJOR EQUIPMENT: Large tools and major equipment are those with an initial cost greater than \$1,500, whether from the GC or other sources.
 - 1. Tool and equipment use and time allowed is only for extra work associated with change orders.
 - a. Rental Rate is the machine cost associated with operating a piece of equipment for a defined length of time (hour, day, week, or month) and shall not exceed the usual and customary amount for such items available in the geographical area of the project.
 - b. Rental cost is the rental rate multiplied by the anticipated duration the equipment shall be required.
 - 2. The GC shall provide a breakdown of all rental rates to indicate what items and costs are associated with the rate. Examples of items to include in the breakdown would be fuel consumption, lubrication, maintenance and other similar expenses but not including profit and overhead.
 - 3. When large tools and equipment needed for Change Order work are not already at the job site, the actual cost to get the item there is also reimbursable.
- D. BOND COST: The cost shall be calculated at 1% of the total proposed change order.
- E. SUB-CONTRACTOR COSTS: Sub-contractor costs are for those labor, material, and equipment costs required by subcontracted specialties to complete the Change Order work.
- F. OVERHEAD AND PROFIT Markup: The allowable markup percentage to a COR by the GC and Sub-contractors for overhead and profit. All of the following are expenses associated with overhead and profit and shall not be reimbursable as individual items on any COR:
 - 1. CHANGE ORDER PREPARATION: All costs associated with the preparing and processing of the change order.
 - 2. DESIGN, ESTIMATING, AND SUPERVISION: All such efforts, unless specifically requested by Owner as additional Work to be documented as a COR or portion thereof.

3. INSTALLATION LAYOUT: The layout required for the installation of material and equipment, and the installation design, is the responsibility of the GC.
4. SMALL TOOLS AND SUPPLIES: The cost of small hand tools with an initial cost of \$1,500 or less, along with consumable supplies and expendable items such as drill bits, saw blades, gasoline, lubricating or cutting oil, and similar items.
5. GENERAL EXPENSE: The general expense, which is those items that are a specific job cost not associated with direct labor and material such as job trailers, foreman truck, and similar items.
6. RECORD DRAWINGS: The preparation of record or as-built drawings.
7. OTHER COSTS: Any miscellaneous cost not directly assessable to the execution of the Change Order including but not limited to the following:
 - a. All association dues, assessments, and similar items.
 - b. All education, training, and similar items.
 - c. All drafting and/or engineering, unless specifically requested by Owner as additional Work to be documented as a Change Order proposal or portion thereof.
 - d. All other items including but not limited to review, coordination, estimating and expediting, field and office supervision, administrative work, etc.
- G. Contract Extension: The necessary amount of time to be added to the contract deadlines for the completion of a change order.

1.4. CONTRACT EXTENSION

- A. The GC shall not assume that every COR will require a Contract Extension. If the GC feels a contract extension is warranted, they shall provide sufficient scheduling information that shows how the COR being requested impacts the critical path of the project.
- B. The City of Madison strongly encourages the GC to explore alternative methods and practices prior to submitting a COR with a request for contract extension.

1.5. OVERHEAD AND PROFIT MARKUP

- A. Pursuant to the City of Madison FACILITIES MANAGEMENT SPECIFICATIONS for Public Works Construction, Section 104.7, Extra Work, the following maximum allowable markups shall be strictly enforced on all change orders associated with the execution of this contract.
 1. The total maximum overhead and profit shall not exceed fifteen percent (15%) of the total costs.
 2. The total maximum overhead and profit shall be distributed as follows:
 - a. For work performed and materials provided solely by the General Contractor, fifteen percent (15%) of the total costs.
 - b. For work performed and materials provided solely by Sub-contractors and supervised by the General Contractor:
 - i. Supervision of the GC, five percent (5%) of the total Sub-contractor cost.
 - ii. Sub-contractors work and materials ten percent (10%) of the total Sub-contractor cost.

1.6. PERFORMANCE REQUIREMENTS

- A. The GC shall become thoroughly familiar with this specification as it will identify procedures and expenses that are or are not allowed under the Change Order and Change Order Request process.
- B. The GC shall be responsible for all of the following:
 1. Carefully reviewing the CB that is associated with the COR.
 2. Collecting required supporting documentation from all contractors that quantify the need for a COR.
 - a. Labor hours and wage rates
 - b. Material costs
 - c. Equipment costs
- C. The following shall apply to establishing prices for labor, materials, and equipment costs:
 1. Where Work to be completed has previously been established by individual bid items in the contract bid proposal the GC shall use the unit bid prices previously established.
 2. Where Work to be completed was bid as a Lump Sum without individual bid items the GC shall provide a breakdown of all labor, materials, equipment including unit rates and quantities required.
- D. The completion date is determined by Owner. The schedule, however, is the responsibility of the GC. Time extensions for extra Work will be considered when a schedule analysis of the critical path shows that the Change Order Request places the Work beyond the completion date stated in the Contract.

1.7. QUALITY ASSURANCE

- A. The GC shall be responsible for ensuring that all COR supporting documentation meets the following requirements prior to completing the COR form on the Project Management Web Site:
 - 1. Sufficiently indicates labor, material, and other expenses related to completing the intent of the CB.
 - 2. No costs exceed the usual and customary amount for such items available in the geographical area of the project, and no costs exceed those established under the contract.
- B. The Project Architect /Project Engineer A/E PROJ MGR, Commissioning Agent (CxA), City Project Manager (CPM), other members of the consulting staff, and city staff shall review all COR requests to ensure that the intent of the CB will be met under the proposal of the COR or request additional information as necessary.

PART 2 – PRODUCTS

2.1. CHANGE ORDER REQUEST FORM

- A. The COR form is located on the Project Management Web Site.

PART 3 - EXECUTION

3.1. ESTABLISHING A CHANGE ORDER REQUEST

- A. Upon receipt of a Construction Bulletin (CB) where the GC believes a significant change in contract scope warrants the submittal of a COR the GC shall do all of the following within ten (10) working days after receipt of the CB:
 - 1. Review the CB with all necessary trades and sub-contractors required by the change in scope.
 - a. Additions or deletions to the contract scope shall be as directed within the CB.
 - b. Additions or deletions of labor and materials shall be determined by the GC based on the directives of the CB.
 - 2. Assemble all required back-up documentation for additions and deletions of materials, labor and other related contract costs as previously outlined in this specification.
 - 3. Submit a COR request form on the Project Management Web Site.
- B. Submitting a COR does not obligate the GC to complete the work associated with the COR nor does it obligate the Owner to approve the COR as a change to the contract.

3.2. SUBMIT A CHANGE ORDER REQUEST FORM

- A. This specification shall provide a subject overview only. In depth instructions shall be provided to the awarded Contractor in a PDF Instructional Manual.
- B. The GC shall select the appropriate link on the Project Management Web Site.
- C. The software will open a new COR form and the GC shall provide all of the following information:
 - 1. DO NOT perform any calculations on this worksheet, only provide the raw data as requested below. All calculations, totals, and markups shall be computed as described within this specification.
 - 2. Provide a summary description of the COR request, and justification for any requested time extension to the contract, indicate the number of calendar days being requested for the extension and add any attachments to the form as needed.
 - 3. Provide all GC self-performance data including all of the following:
 - a. Materials description, quantities, and unit costs.
 - b. Labor hours and rates for all Foremen, Journeymen, and Apprentices by trade.
 - c. Equipment descriptions, quantities, unit costs and rates.
 - 4. Provide all Sub-contractor data including all of the following:
 - a. Materials description, quantities, and unit costs.
 - b. Labor hours and rates for all Foremen, Journeymen, and Apprentices by trade.
 - c. Equipment descriptions, quantities, unit costs and rates.
 - 5. Ensure all calculations performed by the form have been completed correctly. Contact the CPM directly if you suspect an error before hitting the save button.
- D. When all data has been entered submit the COR form. This will kick off the COR Review and Approval process.

3.3. CHANGE ORDER REQUEST REVIEW, APPROVAL, AND PROCESSING

- A. The A/E PROJ MGR and CPM shall review all CORs submitted by the GC.

- 1 1. Additional consulting staff and city staff having knowledge of the components of the COR shall review
- 2 and advise the A/E PROJ MGR and CPM as to the accuracy of the items, quantities, and associated costs
- 3 of the COR as directed by the CB.
- 4 2. The CPM shall review the COR with the Owner.
- 5 B. If required the A/E PROJ MGR and CPM, shall in good faith, further negotiate the COR with the GC as necessary.
- 6 All amendments to any COR shall be documented within the Project Management Web Site software.
- 7 C. After final review of the COR the CPM and Owner may accept the COR.
- 8 D. The CPM shall prepare the COR in the form of an official Board of Public Works Change Order for final review and
- 9 approval as outlined in Section 01 26 63 Change Order (CO).
- 10 E. The GC shall not act upon any accepted COR until it has received final approval through the Public Works process
- 11 as an official CO to the Work unless instructed to do so by the CPM. Proceeding without the final approval of a
- 12 fully authorized Change Order is at the GC's own risk.
- 13

14 **3.4. EMERGENCY CHANGE ORDER REQUEST**

- 15 A. In the event Work is required due to an emergency as described in the Contract Documents, the GC must
- 16 request an equitable adjustment as soon as practicable, and in no case later than ten (10) working days of the
- 17 commencement of such emergency.
- 18 B. The GC shall provide full documentation of all labor, materials and equipment used during the period of
- 19 emergency as part of the COR submittal.
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END OF SECTION

**SECTION 01 26 63
CHANGE ORDER (CO)**

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PART 1 – GENERAL

1.1. SUMMARY

- A. Except in cases of emergency, no changes in the Work required by the Contract Documents may be made by the General Contractor (GC) without having prior approval of the City Project Manager (CPM).
- B. The City may at any time, without invalidating the Contract and without Notice to Sureties, order changes in the Work by written Change Order. Such changes may include additions and/or deletions.
- C. The Change Order (CO) is a Board of Public Works (BPW) form that is reviewed and approved by a specific process.
- D. The CO form is typically made up of multiple Change Order Requests (CORs) and/or Bid Items as appropriate depending on the type of project and how the contract was bid.
- E. All CO documentation shall be processed through the Project Management Web Site (PMWS).

1.2. RELATED SPECIFICATION SECTIONS

- A. Section 01 26 13 Request for Information (RFI)
- B. Section 01 26 46 Construction Bulletin (CB)
- C. Section 01 26 63 Change Order Request (COR)
- D. Section 01 31 23 Project Management Web Site (PMWS)

1.3. BOARD OF PUBLIC WORKS PROCEDURE

- A. The Board of Public Works has a very explicit procedure for the review and approval of all change orders associated with any Public Works Contract as follows:
 - 1. The Supervisory Chain of the CPM shall review and approve any CO under \$20,000 provided it does not include either of the following:
 - a. The CO does not request a time extension to the contract.
 - b. The CO does not cause the contract contingency sum to be exceeded.
 - 2. The Board of Public Works shall review and approve any CO that requires any of the following:
 - a. Any CO over \$20,000.
 - b. Any CO requesting a time extension to the contract regardless of the monetary value of the CO.
 - c. Any CO that causes the contract contingency sum to be exceeded.
- B. The Board of Public Works generally meets every other week and only once in August and December. The GC is cautioned that, under normal scheduling, a CO requiring a BPW review will take a minimum of two (2) weeks to achieve final approval.
 - 1. The City shall not be responsible for additional delays to the Work caused by the scheduling constraints of the Board of Public Works.
- C. **SPECIAL NOTE:** The GC is cautioned to never proceed unless told to do so by the CPM. Only in rare instances may the CPM give a written notice to proceed on a COR without an approved CO. Proceeding without the written notice of the CPM or an approved CO is at the GC's own risk.

PART 2 – PRODUCTS

2.1. CHANGE ORDER FORM

- A. The CO form is located on the Project Management Web Site. The CPM shall click the link in the left margin of the project web site opening a new form. Project information is pre-loaded, the CPM only needs to enter information and make attachments as needed to complete the form.

PART 3 - EXECUTION

3.1. PREPARATION OF THE CHANGE ORDER

- A. The CPM shall prepare the required CO forms in the Project Management Web Site as follows:
1. Provide information for all contract information.
 2. Provide a general description of the items described within the change order.
 3. Provide detailed information for each item on the CO form. At the option of the CPM, they may include multiple Change Order Requests each as their own item.
 4. Provide required pricing and accounting information as needed for the item.
 5. Insert attachments of contractor/architect provided information that clarifies and quantifies the CO. Attachments may include but not be limited to material lists, estimated labor, revised details or specifications, and other documents that may be related to the requested change.
 6. Save the final version of the completed CO.

3.2. EXECUTION OF THE CHANGE ORDER

- A. Upon saving the CO as described in section 3.1 above, the software associated with the Project Management Web Site shall notify the GC that the CO has been drafted and is ready for review. The GC shall do the following:
1. Open the CO form using the link provided in the email notification and review all items on the form.
 2. The GC shall notify the CPM immediately of any errors or discrepancies on the form and shall not sign or save it.
 - a. The CPM shall make any corrections as needed, re-save the form, and notify the GC.
 3. If/when the GC concurs with the CO form as drafted the GC shall digitally sign the form and click SAVE.
- B. After the GC digitally signs/saves the CO it shall be routed through the Project Management Web Site for additional review and/or approvals. The CPM shall do the following:
1. Monitor the review process to ensure the software is working properly at each review step.
 2. Ensure that proper BPW procedures are executed as needed by the CO approval process.
 - a. Schedule the CO on the next available BPW agenda if required.
 - i. Attend the BPW meeting to speak on the CO to board members and answer questions.
 - ii. The GC and/or the Project Architect /Project Engineer (A/E PROJ MGR) may be required to attend the BPW meeting to address specific information as it relates to the Work and/or materials associated with the CO.
 3. Monitor final approval and distribution of the CO.
 4. Notify the GC that the CO has been completed.
 5. Ensure that the CO is posted to the next Public Works payment schedule.
 6. Verify that the GC's next Progress Payment-Schedule of Values show the CO as part of the contract sum.
- C. Upon final approval of the CO the GC may proceed with executing the Work associated with the CO.

END OF SECTION

SECTION 01 29 73
SCHEDULE OF VALUES

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PART 1 – GENERAL

1.1. SUMMARY

- A. The Schedule of Values (SOV) is a Contractor provided statement that allocates portions of the total contract sum to various portions of the contracted work and shall be the basis for reviewing the Contractors Progress Payment Requests.
- B.
- C. The General Contractor shall be responsible for filling out and updating the SOV in the Project Management website with each Progress Payment Request.

1.2. RELATED SPECIFICATIONS

- A. Section 01 26 63 Change Order (CO)
- B. Section 01 29 76 Progress Payment Procedures
- C. Section 01 31 23 Project Management Web Site (PMWS)
- D. Section 01 32 26 Construction Progress Reporting
- E. Section 01 33 23 Submittals
- F. Parts of this specification will reference articles within "The City of Madison FACILITIES MANAGEMENT SPECIFICATIONS for Public Works Construction".
 - 1. Use the following link to access the FACILITIES MANAGEMENT SPECIFICATIONS web page:
<http://www.cityofmadison.com/business/pw/specs.cfm>
 - a. Click on the "Part" chapter identified in the specification text. For example, if the specification says "Refer to City of Madison FACILITIES MANAGEMENT SPECIFICATION 210.2" click the link for Part II, the Part II PDF will open.
 - b. Scroll through the index of Part II for specification 210.2 and click the text link which will take you to the referenced text.

1.3. RELATED DOCUMENTS

- A. The following documents shall be used as the basis for initiating and maintaining the SOV worksheets throughout the execution of this contract.
 - 1. Drawing documents and specifications (including general provisions) as provided with the bid set documents and any published addendums.
 - 2. Documents associated with revisions or clarifications to number 1 above after awarding of the contract, including but not limited to:
 - a. Construction Bulletins
 - b. Request for Information
 - c. Approved Change Orders
 - 3. The latest daily/weekly Construction Progress Report
 - 4. Other specifications as identified in Section 1.2 above

1.4. BASIS OF VALUES

- A. The Contractor shall provide a breakdown of the Contract Sum in sufficient detail to assist the Architect and City Project Manager in evaluating Progress Payment Requests. The breakdown detail may require a labor and material breakdown for each division of work or trade or as directed by the CPM.

- B. The total sum of all items shall equal the Contract Sum.

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 - EXECUTION

3.1. APPLICATION FOR PAYMENT

- A. The Contractor shall use the Project Management website or Payment with each Progress Payment Request.
- B. Completely fill out the Pay Application per the tutorial provided for the PMWS
1. Fill out to reflect the current status of the contract through the payment date being requested.
 2. The City of Madison calculates retainage on Public Works Contracts as follows:
 - a. In general, across the duration of the contract, 2.5% of the total contract sum, including change orders, is withheld for retainage as referenced from the City of Madison FACILITIES MANAGEMENT SPECIFICATION 110.2:
 - i. Beginning with Progress Payment 1, 5% retainage will be withheld until such time that 50% of the total contract sum has been paid out.
 - ii. No additional retainage will be withheld after 50% of the total contract sum has been paid, unless additional change orders have been approved after the 50% milestone has been reached. Per City of Madison FACILITIES MANAGEMENT SPECIFICATION 110.2, additional retainage up to 10%, may be held in the event there are holds placed by Affirmative Action or liquidated damages by BPW.
 - iii. Retainage for additional change orders after the 50% milestone will be withheld at the rate of 2.5% of the total cost of the change order.
 - iv. Retainage is based on the change orders posted to the City's contract worksheet at the time the progress payment is processed.
- C. Only change orders that have been finalized and posted to the City of Madison's Application for Partial Payment worksheet may be itemized into the SOV documents.
- D. The Contractor shall sign and date the application.

3.2. PROJECT MANAGEMENT WEBSITE SOV SPREADSHEET

- A. The Contractor shall use the PMWS spreadsheet provided by the City to itemize their SOV for this contract. Provide additional sheets as necessary.
- B. Provide information by any method that allocates portions of the total contract sum to various portions of the contracted work. Possible methods include combinations of the following:
1. By division of work
 2. By contractor, sub-contractor, sub sub-contractor
 3. By specialty item or group
 4. Other methods of breakdown as may be requested by the City Project Manager or City Construction Manager at the pre-construction meeting.
- C. Provide total cost of the item/description of work including proportionate shares of profit and overhead related to the item.

3.3. INITIAL SCHEDULE OF VALUES SUBMITTAL

- A. The Contractor shall upload their initial SOV to the Project Management Web Site, no later than five (5) working days after the Pre-construction Meeting.
1. The level of detail shall be as described in section 3.2 above.
- B. The Project Architect /Project Engineer (A/E PROJ MGR) and the City Project Manager (CPM) shall review the SOV as any other submittal and may require modifications to reflect additional detail as necessary.
- C. The Contractor shall resubmit the SOV as necessary until such time as the A/E PROJ MGR and CPM have sufficient detail for assessing and approving future Progress Payment Applications.
- D. Progress Payment Application 1 will not be processed until such time as the Contractor has met this requirement regardless of the amount of work completed per the application.

3.4. SOV FOR PROGRESS PAYMENT REQUESTS

- A. The Contractor shall update the initial SOV with each Progress Payment Application as follows:
1. Initial items and values as part of Section 3.3 above will not be adjusted once the original Schedule of Values submittal has been approved.

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2. Change orders shall be added as additional items and values at the bottom of the SOV as they become approved and posted to the City's contract worksheet. The value for each change order shall be the value indicated on the SOV and shall stand alone. Values shall not be split out or combined with other existing items with similar work descriptions on the original SOV.
 3. Fill out columns to properly reflect the work completed and materials received since the last Progress Payment Application.
 4. Only materials delivered and stored on the project site may be reflected on SOV progress updates.
- B. Provide an updated project schedule with each Progress Payment application.
- C. See Specification 01 29 76 Progress Payment Procedures for additional information on submitting Progress Payment Applications.

END OF SECTION

SECTION 01 29 76
PROGRESS PAYMENT PROCEDURES

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PART 1 – GENERAL

1.1. SUMMARY

- A. The General Contractor (GC) shall review this and all related specifications prior to submitting progress payment requests.
- B. Progress payment requests (Partial Payment-PP) for this contract shall be applied for by the GC in the Project Management Web Site (PMWS)
- C. The City Project Manager (CPM) shall review and amend or approve the PP on the Project Management Web Site.
- D. After approval of the PP by the CPM, they shall forward the PP to the appropriate agencies for BPW contractual review and payment processing.

1.2. RELATED SPECIFICATIONS

- A. Section 01 26 63 Change Order (CO)
- B. Section 01 29 73 Schedule of Values
- C. Section 01 31 19 Progress Meetings
- D. Section 01 31 23 Project Management Web Site (PMWS)
- E. Section 01 32 16 Construction Progress Schedules
- F. Section 01 33 23 Submittals
- G. Section 01 45 16 Field Quality Control Procedures
- H. Section 01 77 00 Closeout Procedures
- I. Section 01 78 13 Completion and Correction List
- J. Section 01 78 23 Operation and Maintenance Data
- K. Section 01 78 36 Warranties
- L. Section 01 78 39 As-Built Drawings
- M. Section 01 78 43 Spare Parts and Extra Materials

1.3. RELATED DOCUMENTS

- A. The following documents shall be used when evaluating PP requests.
 - 1. Daily and weekly construction progress reports filed since the last payment request.
 - 2. Contractors Schedule of Values as updated from the last payment request. See Specification 01 29 73.
 - 3. Any document that may be required to be submitted for review and approval, as noted by the specifications listed in Section 1.2 above, or the Progress Payment Milestone Schedule in Section 1.4 below, to achieve a required bench mark of contract progression or contract requirement.

1.4. PROGRESS PAYMENT MILESTONES

- A. City Engineering-Facility Management has developed the Project Payment Milestone Schedule (Section 1.4 below) to assist the GC in providing required construction specific documentation and general contractual documentation in a timely manner.
- B. The Progress Payment Milestone Schedule is not an all inclusive list. Multiple agencies review progress payment requests and contract closeout requests. Missing, incomplete, or incorrect documentation for any agency may be a cause for not processing progress payments. It shall be the sole responsibility of the Contractor for providing documentation as required or requested to the appropriate agencies.

- 1 C. The milestone schedule is based on the contract total sum and shall be valid for most contracts. Milestone
2 submittals will be required with whatever progress payment hits the percentage of contract total indicated in
3 the schedule.
- 4 D. The CPM shall review the milestone schedule with each progress payment request and at their option may elect
5 to hold processing the progress payment until such time as the contractor has met the requirements for
6 providing construction specific documentation.
- 7 E. It shall be the General Contractors responsibility to comply with all BPW Contract Administration requirements
8 and related deadlines as outlined in the Award Letter, Award Checklist, and Start Work Letter.
9

Progress Payment (PP) Milestone Schedule		
Milestone Description	Due Before	Remarks
BPW Contract Administration Documentation • Workforce profiles • Best Value Contracting Documentation • Sub-contractors prequalification approval & Affirmative Action plans • Other as may be required	PP-1, or start work as applicable	• For GC and Sub-contractors before PP-1 regardless of scheduling • Sub-contractors (if applicable), due 10 days before they may start work • Sub-contractors (if applicable), due 10 days before they may start work
Required Construction Submittals/Administrative Documents • Contractors Project Directory • Schedule of Values • Submittals Schedule • Waste Management Plan • Closeout Requirement Checklist • Warranty Checklist	PP-1	References • Specification 01 31 23 • Specification 01 29 73 • Specification 01 32 19 • Specification 01 74 19 • Specification 01 77 00 • Specification 01 78 36
Construction Progress Milestones • Early submittals, per submittal schedule • Detailed Contract Schedules	PP-1	See specifications for specific requirements • Specification 01 32 19, Examples: concrete mix, structural steel, products with long lead times • See Specification 01 32 16
General Construction Progress Requirements are all up to date • Progress Schedules • Submittals/Re-submittals (ongoing) • Schedule of Values • Waste Management documentation • QMOs are being addressed and closed • Progress Cleaning • As-Built Drawings	Each future PP	Verified with each Progress Payment Request • Specification 01 32 16 • Specification 01 33 23 • Specification 01 29 73 • Specification 01 74 19 • Specification 01 45 16 • Specification 01 74 13 • Specification 01 78 39
* All of the above are being updated on the Project Management Web Site as required		
BPW Contract Administration Documentation • Weekly payroll reports • Best Value Contracting Reports • SBE Reports	25% CT or PP 2	See 1.4.E above. <i>This progress payment will be with held by BPW for any missing contractual documentation.</i>

Progress Payment (PP) Milestone Schedule		
Milestone Description	Due Before	Remarks
Construction Progress Milestones - Construction/Contract Closeout Meeting #1 - Submittals/Re-submittals complete	50% CT	- Specification 01 31 19 - Specification 01 33 23
Operation and Maintenance (O & M) drafts	60% CT	Specification 01 78 23
Construction/Contract Closeout Meeting #2 Construction closeout checklist	70% CT	- Specification 01 31 19 - Specification 01 77 00
BPW Contract Administration Documentation Request Finalization Review from BPW	80% CT	This is a recommendation to the GC and is not a requirement of this PP. Specification 01 77 00
Construction Progress Milestones - Operation and Maintenance (O & M) finals, accepted - All major QMO issues resolved - As-Built Drawings, Division Trades ready for GC review	80% CT	- Specification 01 78 23 - Specification 01 45 16; Items that could prevent occupancy - Specification 01 78 39
All of the following shall be completed for this PP: - Regulatory Inspections completed - All QMO reports closed - Attic Stock completed - Final Cleaning	90% CT	Contractor to determine the proper order of completion: - Governing ordinances and statutes - Specification 01 45 16 - Specification 01 78 43 - Specification 01 74 13
Construction Closeout Procedures: - Letter of Substantial Compliance sent to BI and DHS as needed - Certificate of Occupancy issued - As-Built Drawings, finals, accepted - City Letter of Substantial Completion - Warranty letters dated and issued	100% CT	- Specification 01 77 00 - Generated/Signed by the Architect - Building Inspection - Specification 01 78 39 - Signed by the City Engineer - Specification 01 78 36
* Completion of this begins the one year warranty.		
BPW Contract Administration Documentation Contract Closeout Procedures - Construction Closeout has been completed - Contractor requests final payment of retainage upon receiving City Letter of Substantial Completion - All BPW contractual requirements are verified	Final	- Specification 01 77 00 - Contractor must provide any missing BPW Contractual Documentation
* Completion of this closes the contract but not the warranty period/bond.		
NOTE: CT = Contract Total less held retainage		

1.5. PROGRESS PAYMENT SUBMITTAL

- A. Each progress payment submittal shall be completed in the Project Management Website. See guide on the Project Management Website for the procedure.
- B. Submit all required construction progress documentation to the appropriate Project Management Web Site component as described in guides.
- C. In general the following shall apply to all PP requests:
 - 1. Materials or products:
 - a. On order, being shipped, etc. may not be invoiced.
 - b. Received and stored on the project site may be invoiced.
 - c. Being manufactured off site at any location may not be invoiced (example: cabinetry, ductwork, etc.)
 - d. Completed products stored off site locally waiting for delivery to the project site may be invoiced with prior approval by the CPM. All of the following conditions must be met to be allowed:
 - i. Items must be visually inspected by CPM to verify product is complete.
 - ii. Item must be stored inside a compatible structure and the structure and contents must be insured.
 - iii. Contractor is responsible for condition until installation is completed.
 - 2. All labor and equipment, including rental time for the current progress period may be invoiced.
 - 3. Only completed installations may be invoiced to 100% based on the Schedule of Values.
- D. **DO NOT** submit BPW Contract Administration Documentation for review with Progress Payment Requests, submit them directly to the correct agency and in the correct format as instructed from information in your BPW Contract Award Packet instructions.

PART 2 - PRODUCTS - THIS SECTION NOT USED

PART 3 - EXECUTION

3.1. GENERAL CONTRACTOR PROCEDURE

- A. The GC shall use the Project Management Website for each PP request.
 - 1. The GC shall subtotal the work completed to date for all of the original Schedule of Value items.
 - 2. Ensure that any newly posted change orders have been entered.
 - 3. The GC shall submit the PP request in the Project Management Website. The username and date will be automatically recorded.
 - 4. The GC shall provide the dates from and to for the PP being requested.
 - 5. The GC shall provide the list of all contractors/sub-contractors that were actively working during the dates indicated above. The guide details the appropriate location for this list.
 - a. All contractors/sub-contractors named must be in compliance with all City requirements (Pre-qualified, Affirmative Action Plan on file, etc). The PP will be held and not processed by the City of Madison until all contractors/sub-contractors are in compliance.
 - b. Do not list the names of suppliers or manufacturers, doing so will slow down processing and require a re-submittal of the paperwork.
 - 6. The GC shall attach a copy of the current Project Schedule.

3.3. CITY PROJECT MANAGER PROCEDURE

- A. The CPM shall review all documents submitted by the GC to ensure the schedule of values accurately reflects the work completed to date.
- B. The CPM may elect to hold processing of any progress payment pending submittal of required progress payment milestones.
- C. When verified, the CPM shall send the PP and required documentation to the appropriate City agencies for further processing of the payment request.
- D. The PP processing will be completed and available for view within the PMWS.

END OF SECTION

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PROJECT COORDINATION

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PART 1 – GENERAL

1.1. SUMMARY

- A. Project Coordination covers many areas within the execution of the Contract Documents and the requirements of proper coordination are the applicable to all contractors executing the Work of this contract.
- B. This specification provides general information regarding project coordination for the General Contractor and all Sub-contractors. All contractors shall be familiar with project coordination requirements and responsibilities that may be defined in other specification within these Contract Documents.
- C. The General Contractor shall at all times be responsible for the project, project site, and execution of the Contract Documents.

1.2. RELATED SPECIFICATIONS

- A. Section 01 29 76 Progress Payment Procedures
- B. Section 01 31 19 Progress Meetings
- C. Section 01 31 23 Project Management Web Site
- D. Section 01 32 16 Construction Progress Schedules
- E. Section 01 32 19 Submittals Schedule
- F. Section 01 33 23 Submittals
- G. Section 01 43 39 Mockups
- H. Section 01 45 16 Field Quality Control Procedures
- I. Section 01 60 00 Product Requirements
- J. Section 01 77 00 Closeout Procedures, including all specifications referenced therein

1.3. GENERAL REQUIREMENTS

- A. The following general requirements shall applicable to all contractors:
 - 1. Cooperate with the Owner, all authorized Owner Representatives, Project Architect and all consultants of the Owner.
 - 2. Materials, products, and equipment shall be new, as specified and to industry standards except where otherwise noted.
 - 3. Labor and workmanship shall be of a high quality and to industry standards.
- B. Existing conditions:
 - 1. Verify all existing conditions noted in the contract documents with actual filed locations. Verify dimensions, sizes and locations, of structural, equipment, mechanical and utility components.
 - 2. Report any inconsistencies, errors, omissions, or code violations in writing to the General Contractor (GC) immediately.
 - 3. Annotate any inconsistencies, errors, omissions on the GC As-Built record drawings immediately for future reference.
- C. Contract Documents:
 - 1. The Contract Documents are intended to include everything necessary to perform the work. Every item required may not be specifically mentioned, shown, or detailed.
 - a. Except where specifically stated all systems and equipment shall be complete, installed, and fully operable.
 - b. If a conflict exists within the contract documents the contractor shall furnish the item, system, or workmanship of the highest quality, largest, largest quantity, or most closely fits the intent of the contract documents.

- c. Manufacturers recommended installation details shall be verified and used prior to installation of products and equipment so as to not void warranties.
- D. Errors and Omissions
 1. No Contractor shall take any advantage of any apparent error or omission in the construction documents.
 2. The City of Madison shall be permitted to make such corrections and interpretations as may be deemed necessary for the fulfillment of the intent of the construction documents.
- E. Owners Representatives
 1. All contractors shall be familiar with various Owner Representatives having Quality Management responsibilities for the duration of this project including but not limited to the following:
 - a. Project Architect, responsible for all decisions affecting the code compliance and design intent of the construction documents.
 - b. Consulting Architects and Engineers, responsible for providing consulting services to the Project Architect, Owner, and City Project Manager, also responsible for Quality Management of the construction documents.
 - c. Owner, the designated representative of the City Agency that will occupy the project upon completion.
 - d. City Project Manager, responsible for all day to day decisions regarding the execution and performance of this Public Works Contract.
 - e. Consulting City Staff, responsible for providing consulting services to the Project Architect, Owner, and City Project Manager, also responsible for Quality Management of the construction documents.
 - f. Commissioning Agent (CxA), responsible for ensuring that the project is meeting the Owner's Project Requirements and related quality assurance procedures.
 2. Owner Representatives shall be attending progress meetings, pre-installation meetings, performing or being present for final testing and acceptance and quality management reporting during the execution of the contract documents as outlined in other specifications.

1.4. GENERAL CONTRACTOR PERFORMANCE REQUIREMENTS

- A. Assume the responsibility for all Work specified in the Contract Documents except where specifically identified to be performed by the Owner or other contractor separately hired by the Owner.
 1. Coordinate all work by Owner, equipment provided Owner, or contractor hired by the Owner into the project schedule.
- B. Provide all construction management responsibilities as specified in other Division 1 specifications including but not limited to:
 1. Scheduling of work
 2. Coordination of work between other Trades and Sub-contractors
 3. Construction administration and management
 4. Site layout, cleanliness, and protection of completed work/stored materials
 5. Waste Management
 6. Quality Assurance and Quality Control
- C. Use Diggers Hotline and private utility locating companies to accurately locate all public and private utilities on the property as needed. The GC is responsible for any repair or replacement to any public or private utility damaged during the execution of the Work
- D. Report any inconsistencies, errors, omissions, or code violations in writing to the Project Architect immediately. Failure to report inconsistencies prior to beginning work shall indicate that the GC accepted all existing conditions.
- E. The GC shall be responsible for assigning work and related responsibilities where the Contract Documents may not clearly state who is responsible for providing the work, material, or product.
- F. Provide construction management oversight of all items described in Section 1.5 below.
- G. Coordinate and assist CxA as outlined within 01 91 00 and as directed by Owner.

1.5. SUB-CONTRACTOR PERFORMANCE REQUIREMENTS

- A. Be familiar with all of the contract documents as they pertain to your Work, adjacent work and the overall progress of the project.
 1. All Sub-contractors shall be familiar with all Division 1 specifications as they may apply to progress, progress payments, quality control construction management, and closeout of the contract.
- B. Coordinate your Work with all adjacent work and existing conditions.

- PART 2 – PRODUCTS – THIS SECTION NOT USED**
- PART 3 – EXECUTION – THIS SECTION NOT USED**

END OF SECTION

**SECTION 01 31 19
PROJECT MEETINGS**

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PART 1 – GENERAL

1.1. SUMMARY

- A. The purpose of this specification is to identify various project related meetings and the responsible parties for scheduling, agendas, minutes, and required attendance.
- B. This specification is not intended to be inclusive of all meeting types or a complete list of required meetings.
- C. This specification is not intended to cover planning and execution meetings between the General Contractor (GC) and their sub-contractors.

1.2. RELATED SPECIFICATIONS

- A. 01 31 23 Project Management Web Site
- B. 01 32 16 Construction Progress Schedules
- C. 01 43 39 Mockups

1.3. PROJECT MEETING TYPES

- A. The following project meeting types may be used but not limited to the following
 - 1. Preconstruction Meeting
 - 2. Project Management Web Site – Tutorial Meeting
 - 3. Construction Progress Meetings
 - 4. Pre-installation Meetings (including mock-up review meetings)
 - 5. Weekly Trade Meetings
 - 6. Special Meetings
 - 7. Commissioning Meetings

1.4. GENERAL REQUIREMENTS

- A. Representatives of Contractors, Subcontractors, and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.

PART 2 – PRODUCTS – NOT USED IN THIS SECTION

PART 3 - EXECUTION

3.1. PRECONSTRUCTION MEETING

- A. After execution of the Contract the City Project Manager (CPM) shall schedule and conduct the Preconstruction Meeting at the Owner's facilities. The CPM shall coordinate the meeting agenda with the Project Architect and the GC Project Manager.
- B. The CPM shall be responsible for the final agenda.
- C. The CPM and Project Architect shall take notes on the meeting and post completed meeting minutes.
- D. Attendance shall be required by all of the following:
 - 1. Owner Representative(s)
 - 2. Architect and applicable sub consultant(s)

3. General Contractor and applicable subcontractors and suppliers
4. City Quality Management Staff
5. Commissioning Agent
6. Others, as may be invited for particular agenda items.
- E. Topics of the Preconstruction Meeting shall include but not be limited to the following:
 1. Staff and contractor introductions
 2. Completion Date
 3. BPW Administrative requirements and due outs
 - a. Small Business Enterprise (SBE) (if applicable)
 - b. Certified payroll forms
 - c. Workforce profiles
 - d. Best Value Contracting (BVC)
 4. General Facility Management Division 1 Specifications, including:
 - a. Section 01 29 76 Progress Payment Procedures
 - b. Section 01 31 23 Project Management Web Site (overview)
 - c. Section 01 45 16 Field Quality Control Procedures
 - d. Section 01 77 00 Closeout Procedures
 5. Project Meeting scheduling
 - a. Section 01 31 19 Project Meetings
 6. Construction Schedule
 7. Commissioning Process

3.2. PROJECT MANAGEMENT WEB SITE – TUTORIAL MEETING

- A. The CPM shall schedule and conduct a virtual tutorial presentation of the PMWS prior to the beginning of construction.
- B. The CPM shall be responsible for the final agenda, there will be no minutes.
- C. The required attendance list in 3.1.D. above shall apply except for City Staff in items 1 and 4 who are already familiar with the PMWS system.

3.3. CONSTRUCTION PROGRESS MEETINGS

- A. In general, all of the following shall apply:
 1. Representatives of Contractors, Subcontractors, and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.
 2. The attendance shall be from the required attendance list in 3.1.D. above.
- B. The General Contractor Project Manager (GCPM) shall:
 1. Schedule and conduct all construction progress meetings biweekly or more frequently as required.
 2. Prepare agenda for meetings including, but not limited to the following:
 - a. Safety
 - b. Current Schedule, including review of the critical path and 6-week look ahead schedule
 - c. Status of project related documentation (Submittals, RFIs, CBs, etc.)
 - d. Quality Observation Log and status of correction of deficient items
 - e. Project questions and issues from meeting attendees
 - f. BPW Administration Check
 - g. Other as needed
 - h. Status of CORs and COs to be reviewed outside the standard progress meeting time.
 3. Make physical arrangements for meetings.
 4. GCPM to post meeting agendas to the appropriate libraries on the Project Management Web Site (PMWS) no less than two (2) working days prior to the scheduled meeting. Notify all required attendees, applicable parties to the contract, and others affected of the posted meeting agenda.
 5. Preside at meetings.
 6. Route a meeting attendance roster for attendees to sign-in on.
 7. GCPM to record the minutes of the meeting; include significant proceedings and decisions. Post meeting minutes to the PMWS no more than two (2) working days after the completed meeting. Meeting minutes shall include a scanned copy of the attendance sign-in sheet. Notify all required meeting attendees, applicable parties to the contract, and others affected by decisions made at the meetings.
 8. The above requirements do not apply to GC/sub-contractor meetings.

3.4. PRE-INSTALLATION MEETINGS

- A. The GCPM shall schedule and conduct all pre-installation meetings, including mockup reviews, before each construction activity that requires coordination with other trades.
- B. The GCPM shall be responsible for the final agenda and meeting minutes.
- C. The GCPM will work with all concerned parties to resolve issues as needed and submit RFI's if necessary.
- D. Required attendance shall be from the list in 3.1.D. above and shall be personnel having a stake in the outcome of the installation or knowledge of the system being installed.
- E. In the event the Contractor installs equipment or materials without a pre-installation meeting the Contractor shall be solely responsible for removing, replacing, repositioning materials and equipment as instructed by the Project Architect or City Project Manager at no additional cost to the City.

3.6 PRE-CONTRACT CLOSEOUT MEETINGS

- A. Two (2) Pre-contract Closeout Meetings shall be held to review the closeout procedures, requirements, and contract deliverables.
 - 1. Pre-contract Closeout Meeting #1 shall be scheduled prior to the 50% Progress Payment Request is being requested. This meeting shall discuss items such as closing out QMO reports, providing O&M drafts and finals, payroll and Affirmative Action documentation, and other contract deliverables.
 - 2. Pre-contract Closeout Meeting #2 shall be scheduled prior to the 80% Progress Payment Request is being requested. This meeting shall discuss, but not be limited to, the status of scheduling final regulatory inspections, cleaning up outstanding QMO's, demonstration and training, attic stock; and finalization review of payroll and other related documents.
- B. The GCPM shall schedule, coordinate, and make physical arrangements for both meetings.
- C. All of the following shall be required to attend both meetings:
 - 1. The GCPM and the GC Field superintendent
 - 2. All Subcontractor Project Managers regardless of the current status of their work.
 - a. The GCPM may excuse a Subcontractor PM if they are confident that all contractual requirements for closeout by the subcontractor have been completed and/or delivered to the GCPM. The list of attendees shall be reviewed and agreed upon with CPM ahead of the meeting.
 - b. At the option of these project managers the field supervisors may also attend.
 - 3. The Project Architect and at least one design consultant from each discipline represented by the plans and specifications to address open QMOs, final tests, reports, etc.
 - 4. The Owner
 - 5. The CPM
 - 6. Quality Management staff as needed to address open QMOs, final tests, reports, etc.
 - 7. The Commissioning Agent
- D. The CPM shall publish an agenda and chair the meeting.

3.7 OTHER SPECIAL MEETINGS

- A. The Contractor shall schedule special meetings per the requirements of the LEED Specification, the Project Quality Management Plan, the Commissioning Plan and as indicated by other specifications.
- B. Special meetings include but are not limited to the following:
 - 1. Waste Management Conference
 - 2. Equipment start up meetings
 - 3. Testing and balancing meetings
 - 4. Commissioning meetings
 - 5. Other meetings as necessitated by the contract documents

END OF SECTION

**SECTION 01 31 23
 PROJECT MANAGEMENT WEB SITE**

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PART 1 – GENERAL

1.1. GENERAL DESCRIPTION

- A. The City of Madison (CoM) has established a cloud-based Project Management Tool (PMT) using an Autodesk product called Autodesk Construction Cloud (ACC).
- B. The software is used throughout the design, construction and warranty process of major remodels and new construction projects.
- C. Initially deployed in mid-2023, the PMT software will be deployed on all projects. The PMT software is cloud-based software and therefore will receive regular updates and enhancements.

1.2. AUTODESK CONSTRUCTION CLOUD PROCEDURE OVERVIEW

- A. The CoM PMT is 3 main modules. The [Autodesk Docs \(https://help.autodesk.com/view/DOCS/ENU/\)](https://help.autodesk.com/view/DOCS/ENU/) module is a document management file system that is the foundation of ACC. The [Build https://help.autodesk.com/view/BUILD/ENU/](https://help.autodesk.com/view/BUILD/ENU/) module has many sections that assist in performing day to day functions of design/construction management while reducing the use of different software platforms, surface mail, email and email attachments. Finally, the [Cost management \(https://help.autodesk.com/view/BUILD/ENU/?guid=Cost_Overview\)](https://help.autodesk.com/view/BUILD/ENU/?guid=Cost_Overview) module is used to manage project finances.
 1. Files within Autodesk Docs can store a wide variety [file formats \(https://help.autodesk.com/view/DOCS/ENU/?guid=Supported_Files_Docs\)](https://help.autodesk.com/view/DOCS/ENU/?guid=Supported_Files_Docs) including but not limited to Word, Excel, PDF, photographs (all popular formats), etc.
 2. The Issues section within the Build module is used for Punch Lists, Quality Control and Warranty issues.
 3. File Folder and module section access are controlled by Permission Groups and Permission Level
- B. A tutorial document on the web based PMT will be provided to the General Contractor (GC) who is awarded the contract. Additional training will be provided as needed for the GC and Sub-Contractors (SC) by the CoM.
- C. The PMT has predefined work flows that channel automated alerts as documents are uploaded, reviewed, and completed. These workflows are designed for inbound information from the contractor as well as outbound information from the Architectural/Engineer consultant and the Owner.
- D. The GC will be required to receive email notifications, access the internet to review related documentation and be able to upload/download documentation to the various project modules or folders.
- E. The SC's will be required (at a minimum) to receive email notifications and access the internet to review related documentation. Prior to setting up the final PMT the GC and CPM shall meet to review all ACC workflows, the GC will determine to what level over the minimum requirements the SC's will be involved.
- F. At final project closeout with the GC, the CoM will provide the Project Architect/Project Engineer (A/E PROJ MGR) and the GC, an exported version of the complete project in ACC.

1.3. RELATED SPECIFICATIONS

- A. The following specification sections are directly related to the CoM PMT system.
 1. 01 25 13 Product Substitution Procedures
 2. 01 26 13 Request for Information (RFI)
 3. 01 26 46 Construction Bulletins (CB)
 4. 01 26 57 Change Order Request (COR)
 5. 01 26 63 Change Order (CO)
 6. 01 29 76 Progress Payment Procedures
 7. 01 31 19 Project Meetings
 8. 01 32 16 Construction Progress Schedules
 9. 01 32 26 Construction Progress Reporting

- | | | |
|-----|----------|--|
| 10. | 01 32 33 | Photographic Documentation |
| 11. | 01 33 23 | Submittals |
| 12. | 01 45 16 | Field Quality Control Procedures (Owner) |

PART 2 - PRODUCTS

2.1. AUTODESK CONSTRUCTION CLOUD SYSTEM RELATED PRODUCTS

- A. Autodesk Construction Cloud is an Autodesk based software that requires no additional software installation, hardware or other special requirements/applications for the users. There are no costs associated with the use of this system.
- B. Please consult Autodesk's web site for the [latest system requirements](https://help.autodesk.com/view/BUILD/ENU/?guid=System_Requirements_ACC) (https://help.autodesk.com/view/BUILD/ENU/?guid=System_Requirements_ACC)

PART 3 - EXECUTION

3.1. POST BID-OPENING

- A. After bids have been opened, a successful bidder has been determined, and bid acceptance procedures have been initiated the City Project Manager (CPM) will contact the GC to provide the following information.
 - 1. [Autodesk Construction Cloud Help \(https://help.autodesk.com/view/BUILD/ENU/\)](https://help.autodesk.com/view/BUILD/ENU/) and [Learning Center \(https://learnacc.autodesk.com/\)](https://learnacc.autodesk.com/) are kept up to date with latest ACC features.
 - 2. For more customized workflows, Project Management Software Tutorials have been developed. These tutorials are in a PDF printable format with screen shots and associated instructions on how to access and use the PMT.
 - 3. A blank Project Directory in an Excel spread sheet format. The contractor shall provide the following information for GC and SC staffs as indicated on the spreadsheet. This will generally be the Project Manager for the GC as well as the Sub-contractors and the GC Site Supervisor.
 - a. Last Name, First Name
 - b. Company Name
 - c. Email address (valid, work related)
 - 4. Phone Contact number and professional name must be entered by each user themselves via <https://profile.autodesk.com/>
 - 5. The GC shall provide the above information for all SC's where the GC is not self-performing the work.
 - 6. The GC may provide project foreperson information for work being self-performed if he/she so desires.

3.2. POST PRE-CONSTRUCTION MEETING

- A. The GC/PM will return the completed Project Directory spread sheet to the CPM no later than the Pre-construction meeting.
- B. The City Project Admin is responsible for uploading all project directory data into ACC, adding users to project and licenses to users for all non-city staff (GC/SC staffs).
- C. All GC/SC staff will be notified through an automated email from Autodesk directing them to create an Autodesk account if they do not already have one. It is the responsibility of each GC/SC to follow the instructions to setup their own account
- D. Once the GC/PM has received his/her project invitation, uploading of contract related documents can begin. This would include but not be limited to project schedules, submittals, RFI's, and other documents as needed.
- E. All workflows, review of documentation, and general archiving of construction related documentation will be conducted on the PMWS. These documents will generally not be emailed.
- F. The following documents related to the execution of the contract will not be part of the PMT:
 - 1. All documentation related to executing the contract, such as:
 - a. Sub Contractors list
 - b. Affirmative Action documentation
 - c. Bonding documentation
 - d. Documentation associated with payroll verification
 - e. Final documentation associated with closing out the contract
 - 2. Any documentation required/generated by ordinance, code or statute, such as:
 - a. Erosion Control inspections
 - b. Building Inspection Department inspections

END OF SECTION

SECTION 01 32 16
CONSTRUCTION PROGRESS SCHEDULES

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PART 1 – GENERAL

1.1. SCOPE

- A. This specification is to identify various project related schedules associated with indicating construction progress and outlook. The following schedules are the responsibility of the General Contractor (GC).
 - 1. Overall Project Schedule
 - 2. 6 Week Look-out Schedule
- B. This specification is not intended to include internal schedules generated by the contractors during their planning and execution of the contract.

1.2. RELATED SPECIFICATIONS

- A. Section 01 29 76 Progress Payment Procedures
- B. Section 01 31 23 Project Management Web Site
- C. Section 01 31 19 Progress Meetings
- D. Section 01 74 13 Progress Cleaning
- E. Section 01 77 00 Closeout Procedures
- F. Section 01 78 23 Operation and Maintenance Data
- G. Section 01 78 36 Warranties
- H. Section 01 78 39 As-Built Drawings
- I. Section 01 78 43 Spare Parts and Extra Materials
- J. Other specification within the construction documents that may indicate the need for scheduling any event with Owner, Project Architect, Owner Representatives, including any owner provided equipment.

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 - EXECUTION

3.1. OVERALL PROJECT SCHEDULE (OPS)

- A. The GC shall prepare an OPS that covers the duration of the contract from the pre-construction meeting through the end of construction to final contract closeout.
 - 1. The GC shall review Specification 01 77 00 Closeout Procedures to become familiar with definitions, differences, and requirements for closing out the construction and contract including the association with progress payments.
- B. The GC shall provide copies and lead a discussion on the OPS during the pre-construction meeting.
- C. The OPS shall indicate start and end dates of each task associated with the project.
- D. The OPS shall clearly indicate the critical path of the project.
- E. The GC shall update the OPS as often as necessary during the duration of the project. Updates will be briefed as needed during bi-weekly progress meetings.

3.2. 6 WEEK LOOK-OUT SCHEDULES (LOS)

- A. The GC shall prepare the initial LOS to include detail of daily tasks for the first six (6) weeks of construction in depth for the Pre-construction meeting. The LOS shall be compatible and complimentary to the OPS.
- B. The GC shall provide copies and lead a discussion on the LOS during the pre-construction meeting.
- C. The LOS shall indicate start and end dates of each major task, associated related sub-tasks, and required parallel or pre-requisite tasks required to complete the major task on time.
- D. The LOS shall also include identifying and scheduling such events as:

- ### 3.3. PROJECT MANAGEMENT WEB SITE (PMWS)

- END OF SECTION**

SECTION 01 32 19
SUBMITTALS SCHEDULE

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PART 1 – GENERAL

1.1. SUMMARY

- A. The General Contractor shall submit a complete and comprehensive list of all submittals anticipated during the execution of this contract.
- B. The GC shall include the Administrative submittals identified in item 1.5 below and shall be required to up load them to the Project Management Web Site.
- C. The initial Submittals Schedule shall be based on the original contract documents used at the time of bidding and any posted addenda through awarding of the contract.
- D. The Submittal Schedule may be appended during the execution of the contract based on amendments to the contract in the form of Change Orders, Construction Bulletins, and other related documents that add, or change the scope of the work.

1.2. RELATED SPECIFICATIONS

- A. Section 01 29 76 Progress Payment Procedures
- B. Section 01 31 23 Project Management Web Site (PMWS)
- C. Section 01 33 23 Submittals

1.3. RELATED DOCUMENTS

- A. The following documents shall be used as the basis for initiating the original Submittals Schedule.
 - 1. Drawing documents and specifications (including general provisions) as provided with the bid set documents and any published addenda.
- B. The following documents shall be used to amend the submittals schedule as needed during the execution of this contract.
 - 1. Documents associated with revisions or clarifications to number A.1 above after awarding of the contract, including but not limited to:
 - a. Construction Bulletins
 - b. Approved Change Orders

1.4. SUBMITTAL DEFINITIONS

- A. Administrative Submittal: Any submittal that may be required by a Division 1 Specification and as noted in Section 1.5 below.
- B. Critical Path Submittal: Any early submittal that needs a priority review due to early construction use or long lead times where a delay could affect the critical path of the construction schedule
- C. Submittal: Any material, product, equipment, or general requirement as outlined in this and other specifications that require a favorable review or acceptance prior to proceeding with procuring the item or proceeding with the Work.

1.5. SUBMITTAL REQUIREMENTS

- A. The GC and all Sub-contractors shall review the construction documents including the specifications of their individual Division or Trade to compile a complete list of all materials, products, or equipment that will require a positively reviewed submittal to be completed prior to procurement and installation.

1. Submittals shall include but not be limited to any of the following that may apply:
 - a. Shop Drawings
 - b. Product Data
 - c. Assembly Drawings
 - d. Engineered Drawings
 - e. Product Samples
- B. The following items will require an approved submittal, verify with specifications for specific needs and requirements:
 1. Contractor certifications for specialized work such as hydrovac excavation, electrical, concrete cutting and patching, etc.

1.6. ADMINISTRATIVE SUBMITTALS

- A. The GC shall upload the following submittals within 15 working days of receipt of the City of Madison Start Work Letter. All Administrative Submittals shall be approved prior to requesting Progress Payment Number 1.
 1. Contractors Project Directory, see specification 01 31 23, discuss requirements with CPM
 2. Schedule of Values, see Specification 01 29 73
 3. Submittals Schedule, see Specification 01 32 19
 4. Waste Management Plan, see Specification 01 74 19
 5. Closeout Requirement Checklist, see Specification 01 77 00
 6. Warranty Checklist, see Specification 01 78 36

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 - EXECUTION

3.1. OVERALL RESPONSIBILITIES OF ALL CONTRACTORS

- A. All contractors shall be responsible for reviewing the drawings and specifications within their Divisions of Work to provide a complete and comprehensive list of submittals to the General Contractor.
- B. Each list shall indicate the title of the submittal, the associated specification of the submittal, whether the submittal can be considered an early/middle/late submittal, the anticipated date the submittal will be provided and the anticipated date the submittal needs to be approved.
- C. Contractors shall be aware that the goals for submittal review by the Architect staff and City staff will be as follows:
 1. For items on the Critical Path as identified by the GC, five (5) working days
 2. For most other submittals ten (10) working days
 3. Additional time may be needed for complex submittals or if re-submittals are required.
- D. The City will provide a spreadsheet to provide the format of the Submittal Schedule as part of the first administrative submittals.

3.2. GENERAL CONTRACTORS RESPONSIBILITIES

- A. The General Contractor shall be responsible for all of the following:
 1. Consolidating all submittal lists from individual contractors into one master list.
 2. Reviewing all submitted lists for completeness, timing with the overall contract, etc. The GC shall meet with individual contractors to make changes as necessary.
 3. Upload the completed Submittals Schedule to the Submittal Library on the Project Management Web Site for review as SD 003.0. See Specification 01 33 23 Submittals for more information on this procedure.
 4. Resubmit the schedule as needed after initial reviews have been completed.
- B. The GC shall work with other contractors to amend the Submittals Schedule throughout the execution of the project based on changes and modifications as needed.
- C. The GC and Project Architect shall be responsible for reviewing and briefing the submittal schedule and submittals status at each bi-weekly construction meeting.

3.3. STAFF REVIEW RESPONSIBILITIES

- A. The Project Architect, consulting staff, Commissioning Agent (CxA), Owner, and city staff will review the Submittal Schedule for completeness per the plans and specifications within their divisions of work. The reviewing staff may provide comments as needed. Some examples might include the following:
 1. Submittal not required
 2. Provide photos of samples with digital submittal
 3. Insure one submittal for complete system

- 1
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4. Append the schedule to include...
 5. See Specification <xyz> for additional requirements
- B. The Project Architect and City Project Manager will finalize review comments regarding the Submittal Schedule. Re-submittal of the submittal schedule may be required.

END OF SECTION

SECTION 01 33 23
SUBMITTALS

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PART 1 – GENERAL

1.1. SUMMARY

- A. The General Contractor (GC) shall be responsible for providing submittals for review of all contractors and sub-contractors as designated in the construction documents. Submittals shall include but not be limited to all of the following:
1. Equipment specified and pre-approved in the specification; to ensure quality, construction, and performance specifications have not changed since final design.
 2. Equipment specified by performance in the specification; to ensure that the intended quality, construction, and performance specified is met by the selected material or product.
 3. Shop, piece, erection, and other such drawings as indicated in the specifications to ensure all structural, dimensional, and assembly requirements are being met.
 4. Submittals indicating installation sequencing
 5. Submittals indicating control sequencing
 6. Contractor licensing, certification, and other such regulatory documentation when required by a specification.
 7. Other submittals as may be required by individual specifications.
- B. The submittal process shall not be used to determine alternates to specified products or equipment. All considerations shall be reviewed during the bidding process and acceptable alternates shall be acknowledged by addendum prior to the closing of bidding. See bidding instructions for the information on submitting alternates for consideration.
- C. In the event that a manufacturer has significantly changed a product (discontinued a model, changed dimension or performance data changed available colors, etc.) since bid opening the GC shall submit a Request for Information (RFI) to the Project Architect requesting other approved alternates prior to uploading a digital submittal.
- D. Contractors and sub-contractors shall be responsible for knowing the submittal requirements of ALL sections within their scope of work under the contract. The Owner reserves the right to request documentation on any materials, equipment, or product being installed where a submittal is not on file. If the material, equipment, or product installed is determined not to meet the intent of the specification the contractor/sub-contractor shall be required to remove and replace the items involved. The GC shall be solely responsible for all costs associated with the removal and replacement.
- E. Doors, Frames + Hardware Submittals - After submission of all door/frame/hardware submittals (and related low voltage door hardware submittals) Contractor will organize a meeting(s) with Owner, Architect, General Contractor, Electrician, Door/Frame/Hardware Supplier(s)/Installer(s), Low-Voltage Supplier/Installer, and others as applicable to comprehensively review and explain each door opening's submitted hardware package operation. Prior to this meeting the low voltage contractor shall have completed a review with the Madison Fire Department for all access control doors and be prepared to explain any conflicts or concerns with all parties. No procurement of door hardware (and related low voltage components) shall be procured until this meeting is completed; and until related submittals are returned to by the Owner/Architect team.

1.2. RELATED REFERENCES

- A. Section 01 29 76 Progress Payment Procedures
- B. Section 01 31 23 Project Management Web Site (PMWS)
- C. Section 01 32 19 Submittals Schedule
- D. All Technical Specifications, contract documents, construction drawings, and any published addendums during the bidding process.

- E. All contract documents generated during the execution of the contract including but not limited to Requests for Information (RFI) and Construction Bulletins (CB).

1.3. SUBMITTAL REQUIREMENTS

- A. A completed submittal shall meet the following requirements:
1. Digital submittal shall be original PDF of manufacturer's data sheets or high quality color scan of the same.
 - a. Submittals shall not include sales fliers or other similar documents that typically do not provide complete manufacturers data.
 2. Documents within the PDF submittal shall be printable to a sized sheet no less than 8-1/2 by 11 inches and no larger than 24 by 36 inches.
 3. At the beginning of each submittal the contractor shall identify the plan reference (WC-1, EF-3, etc.) in RED block letters that the submittal is for.
 4. Where multiple model numbers appear in a table the contractor shall identify the specific model being submitted by using a RED square, box, or other designation to distinguish the correct model from others on the page.
- B. A complete submittal will include all information associated with the product or equipment as presented in plans, equipment tables, and specifications. Information shall include but not be limited to the following:
1. Dimensional data
 2. Performance data
 3. Resource requirements, power, water, waste, etc.
 4. Clearance and maintenance requirements
 5. Finish information, colors, textures, etc.
 6. Warranty information
- C. Where a submittal includes material samples (carpet, tile, paint draw downs, etc.) the contractor shall do the following:
1. The Contractor shall submit the sample(s) as indicated in the specification.
 2. The Contractor shall include a quality photograph(s) of the product with the digital submittal. Photographs shall meet the following requirements:
 - a. Formatted to be between 500Kb and 1.0 Mb in file size
 - b. Have no glare or flash reflection on the sample
 - c. Sample fills the frame of the photo and shows detail as needed. Include multiple photos from other angles as needed.
 - d. Scanned copies of products or photos are not acceptable.
- D. Uploaded submittals should be relative and related to a specific written specification.
1. Do not upload submittals under a broad category or division (I.E. HVAC 23 00 00). Always upload by the specific specification that identifies a required product or performance to be met.
 2. Group related items together if the specification is written that way. (I.E. all of the plumbing fixtures and trim relative to one specific specification should be submitted together).
 3. Submittals shall be grouped and adhere to the divisions in the submittal schedule. Submittals that do not conform to the submittal schedule and/or specification divisions will be rejected for re-submittal.

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 - EXECUTION

3.1. GENERAL CONTRACTOR'S PROCEDURES

- A. All required submittals will be uploaded to the Project Management Web Site (PMWS) by the GC.
1. Fill in required information on the form that will be used for routing the review and comments.
 2. Attach all documentation as described in Section 1.3 above.
 - a. Submit samples under separate cover to the Project Architect when necessary.
- B. Uploading the submittal indicates that the GC has reviewed and approved the submittal against the contract document requirements.
- C. The GC shall discuss submittal status at all progress meetings and shall monitor submittal review/approval/re-submittal so as to not incur delays in the project schedule.
- D. A completed upload of the submittal to the PMWS initiates the review process workflow.
- E. The GC and sub-contractors shall provide re-submittals as required.

3.2. SUBMITTAL REVIEW

- A. Upon completion of the submittal upload by the GC the PMWS automatically notifies the appropriate Architect/Engineer and Owner Representative, including CxA, by Division/Specification number that there is a submittal for review.
- B. The submittal shall be reviewed internally by the required Architect/Engineer and Owner Representative and CxA in a timely fashion and provide commentary on missing items, incorrect information, or incomplete shop drawings, etc as needed.
- C. When the internal review is completed the PMWS will notify the Project Architect the submittal is ready for final review.

3.3. PROJECT ARCHITECT'S REVIEW

- A. Upon completion of the internal review the Project Architect shall review all internal review comments, confer with the CPM and CxA as needed and determine the appropriate disposition status for the submittal (approved or resubmit).
- B. The Project Architect shall summarize final internal review comments onto the submittal cover sheet, provide a final disposition of the submittal and update the review status of the submittal to "Complete..." (with or w/o comments) or "Rejected".
- C. A completed Final Review status will be completed by the City Project or City Construction Manager and initiates the PMWS to notify the GC and appropriate sub-contractor(s) that the review of the submittal has been completed.

END OF SECTION

SECTION 01 43 39
MOCKUPS

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PART 1 – GENERAL

1.1. SUMMARY

- A. Definition
 - 1. Mockups are field samples constructed, applied, or assembled at the project site for review by the Owner, Owners Representative, Architect and Consultants.
 - 2. Mockups are three dimensional, true scale models that illustrate materials and methods, equipment, workmanship, or location; based on plans, details, and assemblies.
- B. Approved mockups establish the standard of quality by which the final work will be judged.
- C. Approved mockups shall be properly documented and entered into the Submittal Library on the Project Management Web Site like any other required submittal. See section 3.4 below for more information.

1.2. RELATED SPECIFICATIONS

- A. Section 01 26 13 Request for Information (RFI)
- B. Section 01 26 46 Change Bulletin (CB)
- C. Section 01 26 63 Change Order (CO)
- D. Section 01 31 19 Project Meetings
- E. Section 01 32 16 Construction Progress Schedules
- F. Section 01 33 23 Submittals

1.3. RELATED DOCUMENTS

- A. The following documents shall be used for preparing mockups.
 - 1. All plans, specifications, and details including those derived as revisions (RFI, CB, CO).
 - 2. Construction Progress Schedules. Mockups shall be done and completed in a timely fashion for review and approval so as to not impact the Contractors project schedule.
 - 3. Any Manufacturers installation/assembly instructions.

1.4. PERFORMANCE REQUIREMENTS

- A. All Contractors shall be responsible for providing and constructing mockups as specified in their Division of Work in the plans and specifications.
- B. Materials to be used shall be as specified in the construction documents, full sized and properly assembled.
- C. Completed mockups shall be of sufficient size to provide visible detail of all components as needed for the sample.

1.5. QUALITY ASSURANCE

- A. The General Contractor (GC) shall be responsible for coordinating all of the following as needed:
 - 1. Designating the location for the mockup construction
 - 2. Coordinating the work of all contractors and materials required to complete the mockup
 - 3. Ensuring that the mockup meets the intent of the construction documents before scheduling the mockup review meeting.

PART 2 - PRODUCTS

2.1. MATERIALS

- A. The materials used in mockups shall be only those materials indicated in the plans, specifications, and favorably reviewed submittals.
- B. Mockups shall be made of full scale materials as delivered to the project site.
- C. All materials associated with a particular detail, construction method, manufacturer's installation instructions shall be properly represented and visible in the mockup. This includes but is not limited to finished mortar joints, sealants, backer rods, tie bars, rebar, etc.

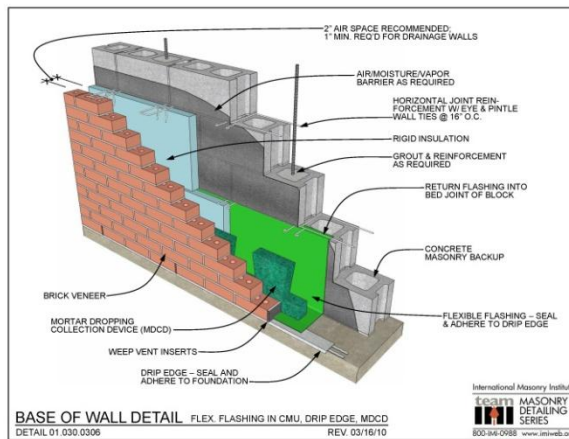
PART 3 - EXECUTION

3.1. REVIEW THE PLANS AND SPECIFICATIONS

- A. The GC shall review the plans and specifications with all required contractors prior to constructing the mockup.
 1. Mockups that will be built and remain in place, if favorably reviewed, will be installed in an area easily accessible for review.
 2. Mockups that will not be built in place or will not remain will be constructed in a space on the project site protected from weather, construction traffic, and other such disturbances until such time as the associated work has been completed.
 3. Insure all products being represented in the mockup meet the plans, specifications, and any published changes.

3.2. MOCKUP CONSTRUCTION

- A. Mockups shall be of sufficient size to show various material adjacencies, connectivity, patterns, and other such related features.
- B. Mockups shall be constructed in a layered fashion so that all products being used can be seen and evaluated.
- C. The construction detail below is an example of a properly layered mockup.



- D. REQUIRED MOCK UPS INCLUDE:
 1. Patch material at the existing planters or walking surfaces

3.3. MOCKUP REVIEW

- A. The General Contractor and all associated Sub-contractors (Contracting Team) shall meet with the Owner, Owners Representative, Architect and Consultants (Design Team) as necessary to review the mock-up. Contractors shall be prepared to answer questions on materials and methods as necessary.
- B. The Contracting and Design Teams shall review the mockup in detail for materials, methods, and workmanship with respect to the intent of the contract documents. Improvements or adjustments shall be discussed as needed.
- C. If the mockup is incomplete or does not show sufficient detail of products and workmanship the General Contractor shall resubmit a new mockup.

- 1 D. Re-submittal of mockups to meet the intent of the contract documents shall be the responsibility of the General
2 Contractor. No Change Orders will be processed for additional time or materials associated with re-submitting a
3 mockup for approval.
4 1. In the event that a submitted mockup meets the criteria of the contract documents but does not meet
5 the expectations of the design team and alternative methods or materials are discussed the following
6 procedure shall be used:
7 a. Project Architect shall publish a Construction Bulletin (CB) to detail the required/recommended
8 changes.
9 b. The GC shall prepare and submit a new mockup.

10
11 **3.4. FINAL SUBMITTAL**

- 12 A. The field approved mockup shall be submitted by the General Contractor as any other submittal for project
13 documentation purposes. The mockup submittal shall consist of the following:
14 1. Digitally photograph the field approved mockup. Take as many detailed photos as necessary to capture
15 the complexity of the mockup.
16 2. Provide a written summary of the approved mockup. Include all recommended adjustments, level of
17 expected workmanship, and other such detail as discussed during the mockup review.
18 3. Submit the mockup to the Project Management Web Site. See Specification 01 33 23 Submittals for
19 additional information.
20
21
22

23 **END OF SECTION**
24

SECTION 01 45 16
FIELD QUALITY CONTROL PROCEDURES

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PART 1 – GENERAL

1.1. SUMMARY

- A. The City of Madison has developed a multi-faceted Quality Management Program that begins with contract signing and runs through contract closeout to ensure the best quality materials, workmanship, and product are delivered for the contracted Work.
1. The Project Management Web Site is a Construction Management tool that provides contractors and staff a single on-line location for the daily operations and progression of the Work.
2. The Quality Management Observation (QMO) is an ongoing observation of the construction process as it progresses. The City of Madison does not use a "Punch List" or "Corrections List" as it is typically known throughout the construction industry. The QMO process acts as an "in progress punch list".
- a. By using the QMO process the City of Madison's goal is to have a zero item punch list prior to the 90% progress payment and owner occupancy.
- B. All contractors shall be required to review the specifications identified in Section 1.2 below, and other related specifications identified therein to become familiar with the terminology and expectations of this City of Madison Public Works contract.
- C. It is the intent of this specification to outline the requirements, expectations, and responsibilities of the General Contractor (GC), Project Architect, and other representatives of the Owner for items of Quality Assurance and Quality Control.
1. This specification is not intended to conflict with Specification 01 40 00 Quality Requirements or other specifications requiring testing and inspecting services.
2. This specification does not relieve the GC from any requirements associated with regulatory inspections performed by the City of Madison Building Inspection Unit, or inspectors from other agencies as required by code.
3. Any testing performed by an Owner's Representative does not relieve the GC from performing any testing that may be required by the construction documents.

1.2. RELATED SPECIFICATION SECTIONS

- A. Section 01 26 13 Request for Information (RFI)
- B. Section 01 29 76 Progress Payment Procedures
- C. Section 01 31 13 Project Coordination
- D. Section 01 31 23 Project Management Web Site (PMWS)
- E. Section 01 77 00 Closeout Procedures
- F. Section 01 78 13 Completion and Correction List

1.3. PERFORMANCE REQUIREMENTS

- A. All contractors shall be responsible for a proper quality assurance/quality control (QA/QC) program throughout the execution of the Work defined within the construction documents, including all recognized construction industry standards and all applicable regulatory codes.
- B. The GC shall be responsible for all of the following:

1. Monitor the quality of all workmanship, supplies, materials, and products being installed by all contractors and installers to ensure they meet or exceed the minimum requirements set forth by the construction documents.
 2. Submit a Request for Information (RFI) whenever manufacturers' instructions or referenced standards conflict with the construction documents before proceeding with the Work.
 3. Ensure that Work requiring special certifications or licensing is being performed by is being performed and supervised by personnel that meet the appropriate requirements.
 - a. Ensure that all certificates and licenses are current throughout the execution of the project.
- C. The CoM and its representatives shall perform quality assurance and quality control activities throughout the execution of this project. This in no way relieves the GC of maintaining an acceptable QA/QC program. =

1.4. QUALITY ASSURANCE

- A. The GC shall be responsible for the following:
1. All materials, equipment, and products shall be new, clean, undamaged, and meet the performance specifications defined within the construction documents including favorably reviewed submittals.
 - a. Any material, equipment, or product that does not meet the requirements of the construction documents shall be removed and replaced, including any adjacent and related work, at the GCs expense.
 2. All Work shall be performed by persons properly trained and/or qualified to produce workmanship of the quality specified in the construction documents.
 3. Providing access to updated as-builts, addenda, submittals, bulletins and other related construction documents at the project site.
- B. The CoM and its representatives may be responsible for any of the following:
1. Attend pre-installation meetings
 2. Attend construction progress meetings
 3. Review all submittals
 4. Conduct field visits for QA/QC purposes, provide feedback to the GC and sub-contractors using Quality Management Observation (QMO) reports.
 5. Review delivered equipment
 6. Witness equipment installations, startups, testing as specified in other specifications

1.5. QUALITY MANAGEMENT OBSERVATION REPORT

- A. The Quality Management Observation report or QMO is used as a QA/QC tool by those entities responsible for QA/QC activities, including but not limited to, the GC, CoM, Project Architect /Project Engineer(A/E PROJ MGR), CX agent, etc.
- B. QMOs are designed to be an early observation of non-conforming construction work before it becomes buried by follow on work. As such it is most often used as an "in progress punch list".
- C. QMO forms are part of the Quality Control Library on the Project Management Web Site.

PART 2 – PRODUCTS - THIS SECTION NOT USED

PART 3 - EXECUTION

3.1. QUALITY MANAGEMENT RESPONSIBILITIES

- A. While making routine progress visits to the construction project the GC, CPM, CxA and A/E PROJ MGR, and applicable others shall observe the details of the construction and installations to ensure that the intent of the construction documents is being followed.
- B. If during the progress visit there is a determination of contract non-conformance a QMO report shall be initiated to begin the documentation process.
 1. The GC field superintendent shall be informed immediately of any issue that may cause harm, damage to finished work, or be buried prior to properly filing a QMO report.
- C. The following information when filing a QMO report:
1. Open a QMO report in the Project Management Web Site
 2. Enter the date and time of the field visit
 3. Provide references to construction documents if any (examples; specification, drawing page, details, approved submittals, RFI, CB, etc)
 4. Provide a short title for the observation being made
 5. Provide a detailed description of the observation being made

6. Select all categories (Sitework, Structure, Enclosure, Interior, etc) from the given list that may apply to the observation being reported.
 - a. For each category selected additional boxes shall open with contractor names associated with each category.
7. Select all contractors from the lists provided that may need to be aware of the observation.
8. Provide any attachments that may help provide reference to the observation.
- D. The software for the Project Management Website will email notifications that a QMO report has been initiated.

3.2. RESPONDING TO A QMO

- A. The GC shall be responsible for determining the course of action required to remedy the non-conforming issue and shall coordinate and direct the contractor(s) responsible for any work related to the observation.
- B. All contractors assigned to remedy the observation by the GC shall provide follow-up responses
 1. Open the QMO report in the Project Management Web Site.
 2. Enter a description of your follow-up response in the box provided.
 3. Add attachments (pictures) if needed to show the work has been completed.

3.3. GENERAL CONTRACTORS FOLLOW-UP

- A. The GC shall inspect the work to ensure that all assigned contractors have remedied the observation to the intent of the construction documents.
- B. The GC shall respond with any additional comments in their response box.

3.4. QMO CLOSEOUT PROCEDURE

- A. The person who initiated the QMO shall review the remedied work and if properly corrected shall close and date the QMO form.
 1. In the event there are still issues the Quality Manager can add additional comments in the response area, and re-issue the QMO for additional review as needed.
- B. Once the person who initiated the QMO has closed the item the CPM shall review and verify with the A/E PROJ MGR that the Observation has been properly remedied and provide final closure on the QMO.

3.5. CONSTRUCTION CLOSEOUT

- A. The GC shall note that successful close out QMOs are required for construction closeout as follows:
 1. Certain progress payments as identified in Specification 01 29 76 are contingent QMO reports being properly closed out.
 2. Specification 01 77 00 defines all construction closeout requirements.

END OF SECTION

SECTION 01 45 29
TESTING LABORATORY SERVICES

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PART 1 – GENERAL

1.1. REQUIREMENTS INCLUDED

- A. The Contractor shall employ and pay for the services of an independent testing laboratory to perform specified services and testing.
- B. Testing Laboratory inspection, sampling and testing is required for:
 - 1. Section 03 30 00: Cast-In-Place Concrete

1.2. RELATED REQUIREMENTS

- A. Conditions of the Contract: Inspections and testing required by laws, ordinances, rules, regulations, orders or approvals of public authorities.
- B. Related Requirements Specified in Other Sections:
 - 1. Division 26: Testing of Electrical Systems

1.3. QUALIFICATION OF LABORATORY

- A. Meet "Recommended Requirements of Independent Laboratory Qualification" published by American Council of Independent Laboratories.
- B. Meet basic requirements of ASTM E 329, "Standards of Recommended Practice for Inspection and Testing Agencies for Concrete and Steel as Used in Construction."
- C. Authorized to operate in State in which the Project is located.

1.4. LABORATORY DUTIES

- A. Cooperate with Owner, A/E and Contractor; provide qualified personnel after due notice.
- B. Perform specified inspections, sampling and testing of materials and methods of construction:
 - 1. Comply with specified standards.
 - 2. Ascertain compliance of materials with requirements of Contract Documents.
- C. Promptly notify the Owner, A/E and Contractor of observed irregularities or deficiencies of work or products.
- D. Promptly submit written report of each test and inspection; one copy each to A/E, Consulting Engineer, Owner and Contractor. Each report shall include:
 - 1. Date issued.
 - 2. Project Title and number.
 - 3. Testing laboratory name, address and telephone number.
 - 4. Name and signature of laboratory inspector.
 - 5. Date and time of sampling or inspection.
 - 6. Record of temperature and weather conditions.
 - 7. Date of test.
 - 8. Identification of product and specification section.
 - 9. Location of sample or test in the Project.
 - 10. Type of inspection or test.
 - 11. Results of tests and compliance with Contract Documents.
 - 12. Interpretation of test results, when requested by A/E or the Contractor.
- E. Perform additional tests as required by Owner, A/E or the Contractor.

1 **1.5. LIMITATIONS OF AUTHORITY OF TESTING LABORATORY**

- 2 A. Laboratory is not authorized to:
- 3 1. Release, revoke, alter, or enlarge on requirements of Contract Documents.
- 4 2. Approve or accept any portions of the Work other than those portions of the Work scheduled for testing.
- 5 3. Perform any duties of the Contractor.
- 6

7 **1.6. CONTRACTOR'S RESPONSIBILITIES**

- 8 A. Cooperate with laboratory personnel, provide access to Work and to manufacturer's operations.
- 9 B. Secure and deliver to the laboratory, adequate quantities of representative samples of materials proposed to be
- 10 used and which require testing. Submit concrete mix designs to A/E for approval prior to pouring concrete.
- 11 C. Provide to the laboratory the preliminary design mix proposed to be used for concrete, and other material mixes
- 12 that require control by the testing laboratory.
- 13 D. Furnish copies of Product test reports as required.
- 14 E. Furnish incidental labor and facilities:
- 15 1. To provide access to Work to be tested.
- 16 2. To obtain and handle samples at the Project site or at the source of the product to be tested.
- 17 3. To facilitate inspections and tests.
- 18 4. For storage and curing of test samples.
- 19 F. Notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and
- 20 scheduling of tests.
- 21 G. Make arrangements with laboratory and pay for additional samples and tests required for Contractor's
- 22 convenience.
- 23 H. Employ and pay for the services of a separate, equally qualified independent testing laboratory to perform
- 24 additional inspections, sampling and testing required when initial tests indicate work does not comply with
- 25 Contract Documents.
- 26 I. Temporarily halt the progress of the Work when tested materials do not comply with Contract Documents and
- 27 promptly notify the Owner or their designated representative and A/E.
- 28 J. Remove and replace at no cost to the Owner, all defective materials discovered upon testing not to comply with
- 29 Contract Documents, including cost for retesting and re-inspecting replaced Work that failed to comply with the
- 30 Contract Documents.
- 31

32 **1.7. SPECIFIC TEST, INSPECTIONS, AND METHODS REQUIRED**

- 33 A. **Section 03 30 00: Cast-In-Place Concrete**
- 34 1. Secure sample of aggregates Contractor proposes to use and test for compliance with Specifications.
- 35 2. Certify compliance with Specifications of cement proposed for use by the Contractor.
- 36 3. Review and approve the Contractor's proposed concrete mix proportions for the required concrete
- 37 strengths using materials Contractor proposed to use on the project. Incorporate specified admixtures
- 38 and not less than amounts of cement specified.
- 39 4. Perform appropriate laboratory tests, including compression tests of cylinders and slump test to
- 40 substantiate mix designs.
- 41 5. Inspect and test materials during concrete work to substantiate compliance with Specifications and mix
- 42 requirements.
- 43 a. Testing:
- 44 i. Sample and test concrete in accordance with ASTM C 31, ASTM C 143, ASTM C 172, and
- 45 ASTM C 231.
- 46 ii. Perform slump tests in accord with ASTM C 143 from same concrete batch used for test
- 47 cylinders and record results and comments on compression test reports.
- 48 iii. Perform compression tests in accordance with ASTM C39.
- 49 iv. When air-entrained concrete is used, a minimum of one (1) air content test shall be
- 50 performed in accordance with ASTM C 231 for each set of test cylinders taken.
- 51 v. Identify all test cylinders with symbols to indicate location on the job where concrete test
- 52 was made. Record on project record drawings.
- 53 vi. Strength tests shall be made for: each day's pour; each class of concrete; each change of
- 54 supplies or sources; and for each 100 cubic yards of concrete or fraction thereof.
- 55 vii. One slump test shall be made for each set of test cylinders taken following the procedure
- 56 in ASTM C 143.
- 57 b. Test Cylinders for all Concrete
- 58 i. Each test shall consist of a minimum of four cylinders.

- ii. Make test cylinders in conformity with ASTM C 31.
- iii. After 24 hours three cylinders to be carefully transported to the testing laboratory for moisture curing and one cylinder to be field cured.
- iv. One field cured cylinder to be tested at 7 days and two laboratory cured cylinders to be tested at 28 days. Reserve one cylinder for further testing.
- v. The average of all strength tests representing each class of concrete, as well as the average of any three consecutive strength tests for each class of concrete, shall be equal to or greater than the specified strength.
- vi. If the A/E has reason to believe that cylinder strength tests are not representative of the strength of concrete in place, A/E shall require drilled cores to be cut and tested at the Contractor's expense. Coring and testing shall be in accordance with ASTM C 42 Standard Method of Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.

D. **Section 31 20 00: Soil Compaction Control and Trenching and Backfilling**

- 1. Soils Engineer to be onsite during excavation operation.
- 2. Visually inspect, test, and certify that exposed undisturbed underlying soil is suitable for required footing bearing capacity and placement of fills.
- 3. Maximum and minimum density of fill soil for compaction percentage of relative density and moisture density shall be determined in accordance with ASTM Designation D 1557. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable.
- 4. Number of tests as follows:
 - a. Subgrade, Undisturbed and Demolition Surfaces: Visual inspection and probe; test if required.
 - b. Interior Fills: One test per 2,500 sq. ft for each two foot or less lift.
 - c. Exterior Fills: One test per 2,500 sq. ft for each two foot or less lift.
 - d. Utility Trenches: One test per 50 lineal feet for each two foot or less lift.

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 – EXECUTION – THIS SECTION NOT USED

END OF SECTION

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

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PART 1 – GENERAL

1.1. SUMMARY

- A. This Section includes general procedural requirements for temporary facilities and controls including, but not limited to the following:
1. Temporary Utilities
 2. Telecommunications Services
 3. Temporary Sanitary Facilities
 4. Barriers
 5. Fencing
 6. Exterior Enclosures
 7. Security
 8. Vehicular Access and Parking
 6. Waste Removal
 7. Project Identification
 8. Field Offices

1.2. RELATED SPECIFICATION SECTIONS

- A. Section 01 31 19 Progress Meetings
B. Section 01 31 23 Project Management Web Site
C. Section 01 74 19 Construction Waste Management and Disposal

1.3. QUALITY ASSURANCE

- A. Regulations: Comply with industry standards and applicable laws and regulations if authorities having jurisdiction, including but not limited to:
1. Building Code requirements
 2. Health and safety regulations
 3. Utility company regulations
 4. Police, Fire Department and Rescue Squad rules
 5. Environmental protection regulations
 6. Joint Commission - Hospital Accreditation Standards

- B. Standards: Comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities".
- C. Electrical Service: Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70 "National Electric Code".

1.4. TEMPORARY UTILITIES

- A. Contractor will provide the following:
 - 1. Electrical power and metering, consisting of existing facilities.
 - 2. Water supply, consisting of existing facilities.
- B. General:
 - 1. Existing facilities may be used.
 - 2. New permanent facilities may be used.
- C. Water Service: water is available from existing building services.
 - 1. Use trigger-operated nozzles for water hoses, to avoid waste of water.
 - 2. Contractor shall provide a continuous water supply from mid-December 2024 through the end of February 2025 for rink filling and maintenance.
- D. Temporary Electric Power Service: Electrical Contractor shall extend temporary power from existing building services.
- E. Temporary Lighting: Electrical Contractor shall provide temporary lighting with local switching
 - 1. Install and operate temporary lighting, minimum of 30 fc, to fulfill security and protection requirements, without operating the entire system, and will provide adequate illumination for all areas of work, including construction operations and traffic conditions.
- F. Temporary Heat: General Contractor shall provide temporary heat required by construction activities, for curing or drying of completed installations or protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.
 - 1. Heating Facilities: Except where use of the permanent system is authorized, provide vented self-contained LP gas or fuel oil heaters with individual space thermostatic control.
 - a. Use of gasoline-burning space heaters, open flame, or salamander type heating units is prohibited.

1.5. TELECOMMUNICATIONS SERVICES AND WI-FI

- A. Provide, maintain, and pay for telecommunications services to field office at time of project mobilization through construction closeout.
- B. Telecommunications services shall include:
 - 1. Windows-based personal computer dedicated to project telecommunications.
 - 2. Shared access to the internet via WIFI or similar wireless connection.
 - a. Access must be capable to support minimum of 10 wireless devices.
 - 3. Email Account/address dedicated for GC Project Manager of GC Supervisor on site.

1.6. TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Temporary toilets: Comply with regulations and health codes for the type, number, location, operation, and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs.
 - 1. Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Provide covered waste containers for used material.
 - 2. Toilets: Install self-contained toilet units. Shield toilets to ensure privacy.
- C. Maintain daily in clean and sanitary condition
- D. Water: Provide potable water approved by local health authorities

1.7. BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

1 **1.8. FENCING**

- 2 A. Construction: Refer to Plan Documents and Specification Section 01 76 00: Fencing Materials and Barricades

4 **1.9. EXTERIOR ENCLOSURES**

- 5 A. Provide temporary weather tight closure of exterior openings to accommodate acceptable working conditions
6 and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures
7 identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors
8 with self-closing hardware and locks.

10 **1.10. SECURITY**

- 11 A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized
12 entry, vandalism, or theft.

14 **1.11. VEHICULAR ACCESS AND PARKING**

- 15 A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for
16 emergency vehicles.
17 B. Coordinate access and haul routes with governing authorities and Owner.
18 C. Provide and maintain access to fire hydrants, free of obstructions.
19 D. Existing paved area within the designated Lands for Work areas may be used for construction parking until
20 project completion. Parking is available for vehicles at the MMB driveway on West Wilson St. Under no
21 circumstances shall vehicles be parked on unpaved areas, outside of the Lands for Work, or in such a way that
22 they block access to the Madison Municipal Building entrance(s). Refer to REF DOC 1 Lands for Work for detailed
23 information on parking.

25 **1.12. WASTE REMOVAL**

- 26 A. See Section 01 74 19 - Waste Management, for additional requirements.
27 B. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
28 C. Provide containers with lids. Remove trash from site periodically.
29 D. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible
30 containers; locate containers holding flammable material outside the structure unless otherwise approved by the
31 authorities having jurisdiction.
32 E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

34 **1.13. PROJECT IDENTIFICATION**

- 35 A. Provide project identification sign of design and construction indicated in Section 01 58 13.
36 B. Erect on site at location determined by Owner .
37 C. No other signs are allowed without Owner permission except those required by law.

39 **1.14. FIELD OFFICES**

- 40 A. Office: Weather tight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy
41 furniture, drawing rack and drawing display table.
42 B. Field Office shall be located within the Lands for Work, but does not need to be a separate trailer.
43 C. Provide space for Project Meetings with table and chairs to accommodate a minimum of 6 persons.
44 D. Provide a computer identified in Section 1.4 Telecommunications Services (above), for use during progress
45 meetings in connection with reviewing construction progress information posted to the Project Management
46 Web Site (Specification 01 31 23).

48 **PART 2 - PRODUCTS**

50 **2.1. TEMPORARY PARTITIONS**

- 51 A. Provide dustproof partitions to limit dust and dirt migration and to separate occupied areas from fumes and
52 noise.
53 1. Non-fire rated partitions, standard
54 a. Wood stud framing, 6-mil polyethylene

55 **2.2. EQUIPMENT**

- 56 A. Temporary Lifts and Hoists: Contractors requiring temporary lifts and hoists shall provide facilities for hoisting
57 materials and employees.

- B. Electrical Outlets: Electrical Contractor shall provide properly configured NEMA polarized outlets to prevent insertion of 110-120 volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button and pilot light, for connection of power tools and equipment.
- C. Electrical Power Cords: Contractors requiring power cords shall provide grounded extension cords; use "hard-service" cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords, if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
- D. Lamps and Light Fixtures: Electrical Contractor shall provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered glass enclosures, where exposed to breakage. Provide exterior fixtures where exposed to moisture.
- E. Heating Units: General Contractor shall provide temporary heating units that have been tested and labeled by UL, FM or another recognized trade association related to the type of fuel being consumed.
- F. First Aid Supplies: General Contractor shall provide first aid supplies complying with governing regulations.
- G. Fire Extinguishers: General Contractor shall provide hand-carried, portable UL-rated, fire extinguishers of NFPA recommended classes for the exposures, extinguishing agent and size required by location and class of fire exposure.

PART 3 - EXECUTION

3.1. TEMPORARY FIRE PROTECTION

- A. Until fire protection needs are supplied by permanent facilities, General Contractor shall install and maintain temporary fire protection facilities of the types needed to protect against reasonably predictable and controllable fire losses.
- B. Comply with NFPA 10 "Standard for Portable Fire Extinguishers," and NFPA 241 "Standard for Safeguarding Construction, Alterations and Demolition Operations".
- C. Locate fire extinguishers where convenient and effective for their intended purpose.
- D. Store combustible materials in containers in fire-safe locations.
- E. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways and other access routes for fighting fires.
- F. Prohibit smoking on the premises.
- G. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
- H. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site
- I. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

3.2. COLLECTION AND DISPOSAL OF WASTE

- A. Collect waste from construction areas and elsewhere daily
- B. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly.
- C. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F.
- D. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner.

3.3. ENVIRONMENTAL PROTECTION

- A. Provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways and subsoil might be contaminated or polluted, or that other undesirable effects might result.
- B. Avoid use of tools and equipment which produce harmful noise.
- C. Restrict use of noise making tools and equipment to hours that will minimize complaints from persons or firms near the site.

3.4. REMOVAL OF TEMPORARY UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, and materials prior to Substantial Completion inspection.
- B. Remove underground installations to a minimum depth of 2 feet (600 mm). Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing facilities used during construction to original condition.

1 E. Restore new permanent facilities used during construction to specified condition.

2

3

4

5

END OF SECTION

SECTION 01 58 13
TEMPORARY PROJECT SIGNAGE

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PART 1 – GENERAL

1.1. SECTION INCLUDES

- A. Project identification sign.

1.2. QUALITY ASSURANCE

- A. Design sign and structure to withstand 50 miles/hr wind velocity.
B. Sign Painter: Experienced as a professional sign painter for minimum three years.
C. Finishes, Painting: Adequate to withstand weathering, fading, and chipping for duration of construction.

1.3. SUBMITTALS

- A. Shop Drawing: Show content, layout, lettering, color, structure, sizes.

PART 2 - PRODUCTS

2.1. SIGN MATERIALS

- A. Structure and Framing: New, wood, structurally adequate.
B. Sign Surfaces: Exterior grade plywood with medium density overlay, minimum 3/4" thick, standard large sizes to minimize joints.
C. Rough Hardware: Galvanized

2.2. PROJECT IDENTIFICATION SIGN

- A. One painted sign, 32 sq ft area, bottom 6 feet above ground.
B. Content:
 1. Project title, City of Madison, Parks Division logo and name of Owner as indicated on Contract Documents.
 2. Name of Prime Contractor.

PART 3 - EXECUTION

3.1. INSTALLATION

- A. Install project identification sign within 30 days after date fixed by Notice to Proceed.
B. Erect at designated location.
C. Install sign surface plumb and level, with butt joints. Anchor securely.

3.2. REMOVAL

- A. Remove sign, framing supports, and foundations at completion of Project and restore the area.

END OF SECTION

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PRODUCT REQUIREMENTS

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PART 1 – GENERAL

1.1. SUMMARY

- A. The purpose of this specification is to provide general guidelines and responsibilities related to the receiving, handling, and storage of all materials and products from arrival on the job site through installation.
 - 1. Immediate inspection of delivered goods means a timely replacement if damaged.
 - 2. Proper storage helps prevent damage and loss by weather, vandalism, theft, and job site accidents.
 - 3. Proper storage helps with job site performance and safety.
 - 4. Proper handling helps prevent damage and job site accidents.
- B. Each Contractor shall be directly responsible for the receiving, handling, and storage of all materials and products associated with the Work of their Division or Trade.
- C. Each Contractor responsible for Work associated with Owner provided materials or products shall be responsible for the receiving, handling and storage of the material/product as outlined in Section 3.8 below..

1.2. RELATED SPECIFICATIONS

- A. Parts of this specification will reference articles within “The City of Madison FACILITIES MANAGEMENT SPECIFICATIONS for Public Works Construction”.
 - 1. Use the following link to access the FACILITIES MANAGEMENT SPECIFICATIONS web page:
<http://www.cityofmadison.com/business/pw/specs.cfm>
 - a. Click on the “Part” chapter identified in the specification text. For example if the specification says “Refer to City of Madison FACILITIES MANAGEMENT SPECIFICATION 210.2” click the link for Part II, the Part II PDF will open.
 - b. Scroll through the index of Part II for specification 210.2 and click the text link which will take you to the referenced text.
 - c. City Standard Detail Drawings (SDD) may be located from the index in Part VIII.
- B. Section 01 74 13 Progress Cleaning
- C. Section 01 76 00 Protecting Installed Construction
- D. Other Divisions and Specifications that may address more specifically the requirements for the storage and handling of materials and products associated Work of other Divisions or Trades.

1.3. QUALITY ASSURANCE

- A. The GC shall be responsible for ensuring that these minimum storage and handling requirements are met by all contractors on the project site including but not limited to the following:
 - 1. Receiving deliveries of materials, products, and equipment.
 - a. Inspect all deliveries upon arrival for damage, completeness, and compliance with the construction documents.
 - i. Deliveries shall remain in original packaging or crates, shipping manifest shall be kept with the delivery and the packaging shall have visible identification of the items within the packaging.

- b. Immediately report any damaged products or equipment to the GC, begin arrangements for immediate replacement.
 - c. Materials or equipment that have been damaged, are incomplete, or do not comply with the construction documents shall not be permitted to be installed.
 2. All materials and products shall be stored within the designated limits of the project site. Only store the amount of material necessary for upcoming operations so as not to interfere with other construction activities and access to Work by the Owner and Architect. Any offsite storage shall be at the expense of the contractor storing the material or product. All offsite storage requirements shall comply with this specification. All offsite storage of materials is subject to Owner Representative Quality Management review at any time.
 3. Large storage containers may be used but shall be weather tight, securable, placed on concrete blocks, timbers, or jack stands and shall be level.
 4. When lifting equipment is required the equipment rating shall be greater than the loading requirements of the item being lifted. In addition all of the following shall apply as necessary:
 - a. Only designated and/or designed lift points shall be used.
 - b. Large items shall have tag lines and handlers at all times during lifting operations.
 - c. Lift at multiple points as needed to prevent bending.
 5. Materials and products stored inside of the structure shall comply with all of the following:
 - a. Storage shall not be allowed to impede the flow of work in progress.
 - b. Storage shall not be allowed to hide completed work from review and inspections.
 - c. Storage shall not exceed the design loads of the structural components it is being stored upon.
 6. All materials and products shall be stored according the manufacturers minimum recommended requirements. All of the following shall be considered before storing any product or material:
 - a. Dust and dirt
 - b. Moisture and humidity, including rain and snow
 - c. Excessive temperatures, direct sun, etc
 - d. Product or material weight and size
 - e. Potential for breakage
 - f. Product incompatibility with other products such as corrosiveness, chemical reactions, flammability, etc.
 - g. Product or material value and replacement cost
 7. The Contractor shall be responsible for providing fully functional tarps or plastic wrap, to protect materials and products from the weather. All coverings shall be free of large holes and tears, and shall be tied, strapped, or weighted down to resist blowing.
 8. The Contractor shall be responsible for any temporary heating, cooling, or other utility requirement that may be associated with the storage of a material or product.
 9. The Contractor shall be responsible for securing materials and products of value such as copper, A/V equipment, etc. Such items shall be stored in securable shipping containers, job trailers or other such storage devices. Container shall be kept secured when not in use.
- B. The GC shall inspect the job site daily to ensure that all products and materials stay weather tight and are secured against vandalism or theft as required by this specification.
- C. The Owners Representative may at any time request improvements regarding storage of any material or product being provided under these construction documents.

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 - EXECUTION

3.1. GENERAL CONTRACTOR REQUIREMENTS

- A. Designate material storage and handling areas as needed including all of the following:
 1. Designate specific areas of the site for delivery and storage of materials to be used during the execution of the Work.
 2. Designated areas shall not be located so as to interfere with the installation of any Work including Work by others such as the installation of utilities or the maintenance of existing utilities. This shall include not storing items in active utility easements as designated by the site plan.
- B. Arrange for openings in the building as needed to allow delivery and installation of large items. Openings shall be appropriately sized to include the use of booms, slings, and other such lifting devices that may be larger than the item being installed.

- 1 1. When openings are required in completed Work (new or existing) the GC shall be responsible for
- 2 providing an appropriate opening and for restoring the opening to the original or better condition upon
- 3 completion. Restoration shall be weather tight and complete.
- 4 C. Repeated moving and handling of items being stored shall not be allowed. The GC shall be responsible for any
- 5 damage and replacement because of mishandling or excessive handling.
- 6

7 **3.2. BULK MATERIAL**

- 8 A. Bulk material such as sand, gravel, top soil and other types of fill shall be stored away from the construction area
- 9 and shall be stock piled as follows:
- 10 1. All bulk material shall be piled safely and efficiently in as small an area as practical. Only store the
- 11 amount of material necessary for upcoming operations so as not to interfere with other construction
- 12 activities and access to Work by the Owner and Architect.
- 13 2. All stock piles shall have silt fence/sock properly installed around the perimeter to prevent erosion and
- 14 loss of material. Refer to City of Madison FACILITIES MANAGEMENT SPECIFICATION Section 210.1(f) and
- 15 other related specification or details.
- 16 3. Fine grained material shall be protected with tarps to prevent blowing. Tarps shall be weighted or staked
- 17 to stay in place.
- 18 B. Bulk material such as brick, concrete block, stone, and other palletized materials shall be stored on original
- 19 shipping pallets until ready for use.
- 20

21 **3.3. DRY PACKAGED MATERIAL**

- 22 A. Dry packaged material such as cement, mortar, etc shall be stored on pallets, on slightly elevated ground or clear
- 23 stone pad to keep water away from the base of the material being stored. Protect from moisture.
- 24

25 **3.4. STRUCTURAL AND FRAMING MATERIAL**

- 26 A. All structural and framing material shall be stored in an organized manner arranged by type, size and dimension.
- 27 Materials shall be stored on pallets or timbers as necessary and shall not be allowed to lie directly on the ground.
- 28 B. Long and heavy items shall be supported at several points to prevent bending and warping.
- 29

30 **3.5. EQUIPMENT**

- 31 A. Equipment delivered to the site shall be stored away from all construction activities until the item can either be
- 32 moved inside or properly installed.
- 33 B. Equipment shall be stored on slightly elevated ground or clear stone pad to keep water away from the base of
- 34 the equipment.
- 35

36 **3.6. FINISH PRODUCTS**

- 37 A. Finish products such as flooring, tile, counters, lockers, toilets, partitions, lighting, and other similar items should
- 38 not be delivered and stored until the structure has been enclosed, is weather tight, temperature controlled and
- 39 the contractor is ready for such items to be installed.
- 40 1. Storage of finished products outside for any length of time shall not be allowed.
- 41 B. Products that cannot be stored inside the structure shall be stored in secured containers or job trailers until such
- 42 time as they are ready to be installed.
- 43 C. Products with a high potential for breakage such as glass, mirrors, tiles, toilet fixtures, etc. shall be stored with
- 44 additional protection as necessary such as but not limited to the following:
- 45 1. Store in original shipping containers until ready for installation.
- 46 2. Do not store in high traffic areas.
- 47 3. Shield with other materials such as cardboard, plywood, or similar products.
- 48

49 **3.7. DUCTWORK, PIPING, AND CONDUIT**

- 50 A. All piping and conduit shall be stored horizontally unless otherwise specified by the manufacturer or Division and
- 51 Trade Specifications.
- 52 1. Do not store directly on grade.
- 53 2. Cover metal pipes and tubes to prevent rust and corrosion, allow ventilation to prevent condensation.
- 54 3. Whenever possible use pipe stands for storing pipe and conduit to prevent tripping and rolling hazards.
- 55 B. All ductwork shall be stored horizontally or vertically as necessary unless otherwise specified by the
- 56 manufacturer or Division and Trade Specifications.
- 57 1. During storage, both ends of each duct shall be protected with plastic sheathing to prevent dust and dirt
- 58 from getting inside the duct. Sheathing shall be sufficiently taped to the duct.

2. After installation, free/open ends shall remain protected with taped plastic sheathing and or temporary filters as specified by division or Trade specifications.

3.8. OWNER PROVIDED, CONTRACTOR INSTALLED EQUIPMENT

- A. Section 3.8.A. shall apply to all equipment being provided to any contractor directly from the Owner for installation under the contract.
 1. The Owner or Owners Representative shall do the following:
 - a. Inspect all deliveries upon receipt and notify manufacturer of any issues directly.
 - b. Review the received shipment with the contractor.
 - i. Only provide products or materials to the contractor that were not damaged through shipping or handling.
 - ii. Confirm missing products or materials and anticipated delivery schedule if known.
 2. The Contractor responsible for the installation of Work associated with Owner provided materials or products shall "take ownership" and provide safe and secure storage and handling as previously described within this specification.
 - i. The Contractor shall be liable for the repair or replacement of any material or product damaged after taking ownership of the product from receipt through final acceptance.
- B. Section 3.8.B. shall apply to all equipment being provided by the Owner but shipped directly to any sub-contractor or the project site for installation under the contract.
 1. The GC and/or Contractor responsible for the Work associated with the Owner provided materials or products shall do the following:
 - a. Inspect all deliveries upon receipt and notify the Owner or Owners Representative of any issues directly.
 - i. Owner or Owners Representative shall notify manufacturer of any issues directly.
 - b. Review the received shipment with the Owner or Owners Representative
 - i. Confirm missing products or materials and anticipated delivery schedule if known.
 2. The Contractor shall "take ownership" and provide safe and secure storage and handling as previously described within this specification.
 - i. The Contractor shall be liable for the repair or replacement of any material or product damaged after taking ownership of the product from receipt through final acceptance.

END OF SECTION

SECTION 01 73 29
CUTTING AND PATCHING

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PART 1 – GENERAL

1.1. SUMMARY

- A. This Section includes general procedural requirements for cutting and patching including, but not limited to the following:
 - 1. Examination
 - 2. Preparation
 - 3. Performance
 - 4. Cleanup and Restoration

1.2. RELATED SPECIFICATION SECTIONS

- A. Divisions 02 through 32 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
- B. Refer to Sheet S0 in drawing set.

1.3. DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.4. QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that may result in increased maintenance or decreased operational life or safety.
- C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity that results in reducing their capacity to perform as intended, or that may result in increased maintenance or decreased operational life or safety. Some miscellaneous elements include the following:
 - 1. Water, moisture, or vapor barriers
 - 2. Membranes and flashings
 - 3. Exterior curtain-wall construction
 - 4. Equipment supports
 - 5. Piping, ductwork, vessels, and equipment
 - 6. Noise and vibration control elements and systems
- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

1 **1.5. WARRANTY**

- 2 A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting
3 and patching operations, by methods and with materials so as not to void existing warranties.
4 B. All cutting and patching work performed under this contract shall be warranted like new work as defined by the
5 Specification governing the work.
6

7 **PART 2 - MATERIALS**

8
9 **2.1. GENERAL**

- 10 A. Comply with requirements specified within other sections of the Specifications.
11 B. In-Place Materials: Use materials identical to existing in-place materials. For exposed surfaces use materials that
12 visually match in-place adjacent surfaces to the fullest extent possible.
13 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the
14 visual and functional performance of in-place materials.
15

16 **PART 3 - EXECUTION**

17
18 **3.1. EXAMINATION**

- 19 A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
20 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including
21 compatibility with in-place finishes or primers.
22 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.
23

24 **3.2. PREPARATION**

- 25 A. Temporary Support: Provide temporary support of Work to be cut.
26 B. Protection: Protect in-place construction and existing conditions during cutting and patching to prevent damage.
27 Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting
28 and patching operations. If the failure to protect, or the lack of protection, of in-place construction and/or
29 existing conditions results in damage, the contractor shall be responsible for repair to previous condition.
30 C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
31 D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be
32 removed, relocated, or abandoned, bypass such services/systems before cutting to eliminate interruption to
33 occupied areas.
34

35 **3.3. PERFORMANCE**

- 36 A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the
37 earliest feasible time, and complete without delay.
38 1. Cut in-place construction to provide for installation of other components or performance of other
39 construction, and subsequently patch as required to restore surfaces to their original condition.
40 B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations,
41 including excavation, using methods least likely to damage elements retained or adjoining construction. If
42 possible, review proposed procedures with original Installer; comply with original Installer's written
43 recommendations.
44 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and
45 chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance
46 of adjacent surfaces. Temporarily cover openings when not in use.
47 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
48 3. Concrete or Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
49 4. Excavating and Backfilling: Comply with requirements in applicable Division 31 Sections where required by
50 cutting and patching operations.
51 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap,
52 valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other
53 foreign matter after cutting.
54 6. Proceed with patching after construction operations requiring cutting are complete.
55 C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following
56 performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and
57 comply with installation requirements specified in other Sections.

- D. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.

3.4. CLEANUP AND RESTORATION

- A. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
1. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 2. Restore damaged pipe covering to its original condition.
 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 4. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
 5. Ceilings: Patch, repair, or re-hang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 6. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weather tight condition.
 7. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.
 8. Any smoke and fire caulking that has been disturbed must be replaced by the Contractor as required by code.

END OF SECTION

**SECTION 01 74 13
PROGRESS CLEANING**

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PART 1 – GENERAL

1.1. SUMMARY

- A. Throughout the execution of this contract all contractors shall be responsible for maintaining the project site in a standard of cleanliness as described in this specification.
- B. All contractors shall also comply with the requirements for cleaning as described in other specifications.
- C. Work included in this specification shall include but not be limited to:
 - 1. Safety Cleaning
 - 2. Project Site Cleaning
 - 3. Progress Cleaning
 - 4. Final Cleaning

1.2. RELATED SPECIFICATIONS

- A. Section 01 60 00 Product Requirements
- B. Section 01 74 19 Construction Waste Management and Disposal
- C. Section 01 76 00 Protecting Installed Construction

1.3. QUALITY ASSURANCE

- A. The General Contractor (GC) shall conduct daily inspections, more often if necessary, of the entire project site to ensure the requirements of cleanliness are being met as described within these specifications.
- B. All contractors shall comply with other regulatory requirements as they apply to waste recycling, reuse, hauling, and disposal requirements of any governmental authority having jurisdiction.
- C. The Owner reserves the right to have work done by others in the event any contractor fails to perform cleaning as described within these specifications. The cost of any Owner provided cleaning shall be charged to the contractor through a deduct change order.

PART 2 - PRODUCTS

2.1. CLEANING MATERIALS AND EQUIPMENT

- A. The Contractor shall provide all required personnel, equipment, and materials necessary to maintain the required level of cleanliness as described in this specification.
- B. Use only cleaning materials and equipment that are compatible with the surface being cleaned, as recommended by the manufacturer, or as approved by the A/E.
- C. Use only cleaning materials, equipment, and methods as recommended in the manufacturers care and use guide of the material, finish or equipment being cleaned.

PART 3 - EXECUTION

3.1. SAFETY CLEANING

- A. All Contractors shall be responsible for safety cleaning as required by OSHA and other regulatory requirements as applicable.
- B. Safety Cleaning shall include but not be limited to the following:

1. All work areas, passageways, ramps, and stairs shall be kept free of debris, scrap materials, pallets, and other large items that would obstruct exiting routes. Small items such as tools, electrical cords, etc are picked up when not in use.
2. Form and scrap lumber shall have nails/screws removed or bent over. Lumber shall be neatly stacked in an area designated by the GC.
3. Spills of oil, grease, and other such liquids shall be cleaned immediately or sprinkled with sand/oil-dry first, then cleaned.
4. Oily, flammable, or hazardous items shall be stored in appropriate covered containers and storage devices unless actively being used.
5. Oily, or flammable rags, and other such waste shall only be disposed of in authorized covered containers.
6. Disposal by burning shall not be allowed at any time.

3.2. PROJECT SITE CLEANING

- A. This section applies to the general cleanliness of the project site as a whole for the duration of the execution of this contract.
- B. Exterior Project Site Areas
 1. The GC and other Contractors as appropriate shall ensure the following levels of cleanliness are applied to the exterior project site areas.
 - a. The overall appearance of the project site is neat and orderly. Defined areas for material storage, material waste, job trailers, and the project area are clean and well maintained.
 - b. The construction fence is maintained, erect with no gaps, and properly posted per all regulatory requirements.
 - c. All erosion control measures are properly maintained, cleaned, and repaired as necessary.
 - d. All loose materials (construction or waste) are properly tied or weighted down to resist blowing.
 - e. All construction materials are properly covered with fully functional tarps or plastic wrap, protected from the weather, coverings are tied, strapped, or weighted down to resist blowing.
 - f. Dust control is applied as necessary or as required by any regulatory requirement.
- C. Interior Project Site Areas
 1. All Contractors shall ensure the following levels of cleanliness are applied to the interior project site areas.
 - a. The overall appearance of the project site is neat and orderly. Defined areas for material storage, material waste, and project area are clean and well maintained.
 - b. Stored materials are kept in original shipping containers whenever possible. Stored materials not in shipping containers are properly stored and protected according to other applicable specifications.
 - c. All scraps and debris shall be properly disposed of as often as necessary to keep work areas, passageways, stairs, and ramps free of debris and clear for emergency exiting.
 - d. Boxes, pallets, and other such shipping containers, are broken down, stored in a consolidated area or, disposed of as often as is necessary.
 - e. Hand tools, supplies, materials, electrical cords not being used are picked up and stored in gang boxes, not left as walking hazards in work areas, passageways, etc.
- D. Job Trailer
 1. The interior of the job trailer shall be kept clean and available as a work space at all times. The GC shall ensure that the following is provided for within the job trailer:
 - a. Meeting space including tables and chairs.
 - b. Sufficient space for all contractors to access the official construction documents, provide updates, etc.

3.3. PROGRESS CLEANING

- A. This sub-section shall apply to all Progress Cleaning prior to the installation of finishes, fixtures, and trim (IE rough-in).
 1. For the purposes of this section "clean" shall be defined as a level of cleanliness free of dust and other material capable of being removed by use of reasonable effort using a good quality janitor broom and shop-vac.
 2. Daily cleanings shall be conducted by all contractors at the end of the work day as follows:
 - a. Debris in excavated areas shall be removed prior to backfill and compaction.
 - b. Debris in wall cavities, chase spaces, etc shall be removed prior to enclosing the spaces.
 - c. Large items shall be properly stored, returned to designated areas, or disposed of as necessary.

- 1 d. Loose materials shall be properly secured.
- 2 e. Flammable or hazardous materials are properly stored or disposed of.
- 3 3. Weekly cleaning shall be conducted by all contractors as designated by the GC. Weekly cleanings shall
- 4 include all the above for a daily cleaning and other necessary cleaning as designated by the GC.
- 5 B. This sub-section shall apply to Progress Cleaning in preparation for the installation of finishes, fixtures, and trim.
- 6 a. Surfaces receiving finishes shall be thoroughly cleaned prior to contractors applying finish
- 7 materials. The GC shall be responsible for inspecting the area and surfaces being cleaned for
- 8 finish prior to the sub-contractor applying the finish. This shall include but not be limited to the
- 9 following:
- 10 i. Wall surfaces shall be wiped clean of dirt and oily residues, vacuumed free of dust, and
- 11 shall be free of surface imperfections prior to painting or installing wall coverings.
- 12 ii. Metal surfaces shall be wiped clean of dirt and oily residues, and be free of surface
- 13 imperfections prior to painting.
- 14 iii. Flooring shall be broom swept of large and loose items then vacuumed clean of dust and
- 15 small particles, and damp mopped clean and dried prior to installing any flooring finish.
- 16 Additional cleaning may be required depending on the preparation requirements
- 17 recommended by the flooring material manufacturer.
- 18 C. This sub-section shall apply to Progress Cleaning after the installation of finishes, fixtures, and trim.
- 19 1. For the purposes of this section "clean" shall be defined as a level of cleanliness free of dust and other
- 20 material capable of damaging or visually disfiguring finished work, finishes, fixtures, and trim.
- 21 2. Progress Cleaning at this point in the contract shall be conducted immediately as follows:
- 22 a. Dust, dirt, etc shall be swept and vacuumed off of finish flooring and trim.
- 23 b. Liquid spills shall be cleaned up according to the spill type. This shall include drips and spills
- 24 caused by paint, stain, sealants, and other such items.
- 25 3. The Contractor(s) at no additional cost to the Owner shall be responsible for replacing any finished work,
- 26 finishes, fixtures, and trim damaged or disfigured because of inadequate or improper cleaning.
- 27

28 3.4. FINAL CLEANING

- 29 A. As noted in Specification 01 29 76 Progress Payment Procedures, Progress Payment Milestone Schedule, Final
- 30 Cleaning shall not be conducted prior to requesting the 90% contract total progress payment and all of the
- 31 following shall be complete:
- 32 1. All final regulatory inspections including but not limited to Building Inspection Department and Madison
- 33 Fire Department inspections have been successfully completed.
- 34 2. All Quality Management Observation (QMO) reports have been closed out.
- 35 3. All Demonstration and Training has been completed.
- 36 4. All Attic Stock has been consolidated and located to its designated area
- 37 5. All protection for installed construction shall be removed prior to final cleaning by the contractor
- 38 responsible for providing the protections. This shall include the removal of any adhesive residues left
- 39 behind from tapes. Contractors shall only use manufacturer authorized cleaning materials for removing
- 40 adhesives, etc.
- 41 B. For the purposes of this section "clean" shall be defined as a level of cleanliness generally provided by skilled
- 42 cleaners using commercial quality building maintenance equipment and materials.
- 43 C. The GC shall be responsible for ensuring that all requirements under this section are being met.
- 44 D. General Requirements
- 45 1. Employ experienced personnel or professional cleaners for final cleaning as necessary for the areas or
- 46 equipment being cleaned.
- 47 2. Cleaning equipment used shall be commercial grade equipment commonly used by professional cleaners.
- 48 3. Cleaning equipment and materials shall be cleaned, rinsed, or replaced to ensure a uniform level of
- 49 cleanliness is being maintained during the final cleaning. This shall include but not be limited to the
- 50 following:
- 51 a. Vacuum cleaner bags and/or filters are changed and/or cleaned as often as necessary.
- 52 b. Dust & wipe down rags are washed, rinsed, or replaced before starting each room.
- 53 c. Mopping equipment
- 54 i. Mop water for washing shall have cleaning solution added to the amount and temperature
- 55 per manufacturer's recommendations. Mop washing water shall be replaced often to
- 56 maintain the levels of the cleaning solution and temperature required.
- 57 ii. Mop water for rinsing shall remain clean, clear, and be replaced as often as necessary.
- 58 iii. Mop heads shall be rinsed often and replaced as necessary.

- iv. Mop heads and buckets shall be thoroughly rinsed with each change of water.
- v. Only new mop heads shall be used for rinsing.
- E. Refer to all other specifications in this contract for specific requirements regarding final cleaning of finishes, fixtures, equipment, etc.
- F. Exterior Cleaning shall include but not be limited to the following:
 1. All exterior glazing surfaces have been professionally cleaned and are free of dust and streaking.
 2. Metal roofs, siding, and other surfaces shall be clean of dirt and free of splashed or excess materials such as sealants, mortar, paint, etc.
 3. All exterior furnishings shall be clean, waste receptacles shall be empty.
 4. Paved areas shall be clean, free of dirt, oily stains and other such blemishes
 5. Exterior lights and diffusers are clean and free of dust.
- G. Interior Cleaning shall include but not be limited to the following:
 1. Remove all labels, stickers, tags, and other such items which are not required by code as permanent labels.
 2. All interior glazing surfaces, including mirrors, have been professionally cleaned and are free of dust and streaking.
 3. All interior surfaces have been cleaned of excess materials such as paint, sealants, etc and have been wiped free of dust.
 4. Interior metals, fixtures, and trim have been cleaned free of dust and oily residues
 5. Carpet flooring has been thoroughly cleaned; vacuumed free of dust, excess glues and other stains removed per manufacturers use and care instructions.
 6. Resilient flooring has been thoroughly cleaned; vacuumed free of dust, excess glues and other stains removed, mopped and buffed per manufacturers use and care instructions.
 7. Interior non-occupied concrete floors shall be broom cleaned, vacuumed free of dust, excess glues and other stains removed per manufacturers use and care instructions.
 8. Light fixtures, lamps, diffusers and other such items have been dusted and cleaned as necessary.

3.5. CALL BACK WORK

- A. The GC shall be responsible for ensuring that any contractor returning to the project site for completion or correction work has re-cleaned and restored the area to the levels described in section 3.4 above upon completion of the work. This shall include but not be limited to the following:
 1. The immediate area(s) where work was completed.
 2. Adjacent areas where dust or debris may have traveled.
 3. Other areas occupied during the completion of the call back work.
 4. Path of entrance/exit, to/from the area(s) of work.

END OF SECTION

SECTION 01 74 19
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

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PART 1 – GENERAL

1.1. SUMMARY

- A. This specification includes administrative and procedural requirements for the recycling, re-use, salvaging, and disposal of non-hazardous construction and demolition waste.
- B. The General Contractor (GC) shall be fully responsible for complying with all applicable ordinances and other such regulatory requirements during the execution of this contract.

1.2. RELATED SPECIFICATIONS

- A. 01 29 76 Progress Payment Procedures
- B. 01 31 23 Project Management Web site
- C. 01 32 19 Submittals Schedule
- D. 01 33 23 Submittals
- E. 01 77 00 Closeout Procedures
- F. Other Divisions and Specifications that may address the proper disposal of construction or demolition waste as it pertains to work being conducted under that particular specification.

1.3. CITY ORDINANCES

- A. There are two (2) Madison General Ordinances (MGO) that the City of Madison has regarding construction and demolition waste.
 - 1. MGO 10.185, Recycling and Reuse of Construction and Demolition Debris, describes the requirements associated with this ordinance including definitions, documentation requirements, and penalties.
 - 2. MGO 28.185, Approval of Demolition (Razing, Wrecking) and Removal, describes the requirements associated with applying for and receiving a demolition permit.
- B. All City of Madison, Board of Public Works, contracts being conducted by City Engineering, Facility Management, for construction, remodeling, or demolition shall comply with the above ordinances regardless of project type or size.

1.4. DEFINITIONS

- A. Clean: Untreated and unpainted material, free of contamination caused by oils, solvents, caulks, and other chemicals.
- B. Construction and Demolition Debris: Materials resulting from the construction, remodeling, repair, and demolition of utilities, structures, buildings, and roads.
- C. Disposal: Off-site removal of construction and demolition debris and the subsequent sale, recycling, reuse, or deposit in authorized landfill or incinerator.
- D. Hazardous: Exhibiting the characteristics of hazardous substance, i.e. ignitability, corrosiveness, toxicity, or reactivity and including but not limited to asbestos containing materials, lead, mercury and PCBs.
- E. Non-hazardous: Exhibiting none of the characteristics of a hazardous substance.

- F. Nontoxic: Not immediately poisonous to humans or poisonous after a long period of exposure.
- G. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product.
- H. Recycle: Any process by which construction or demolition debris is diverted from final disposal as solid waste at a permitted landfill and instead is collected, separated, and/or processed into raw materials for new, reused, or reconstituted products; or for the recovery of materials for energy production processes.
- I. Recycler: Any recycling facility, transfer station, or other waste handling facility which accepts construction and demolition debris for recycling, or for other transferring to a recycling facility.
- J. Recycling: The process of sorting, cleaning, treating, or reconstituting solid waste and other discarded materials for the purpose of preparing the material to be recyclable. Recycling does not include burning, incinerating or thermally destroying waste.
- K. Return: To give back reusable items or unused products to vendors for credit.
- L. Reuse: Shall mean any of the following:
 - 1. The on-site use of reprocessed construction and demolitions debris.
 - 2. The off-site redistribution of a material, for use in the same manner or similar manner at another location.
 - 3. The use of non-toxic, clean wood as an alternative fuel source.
- M. Salvage: To remove a waste material from the project site for resale or reuse by the Owner or others.
- N. Toxic: Poisonous to humans either immediately or after a long period of exposure.
- O. Trash: Any product or material unable to be re-used, returned, recycled, or salvaged.
- P. Waste: Extra materials or products that have reached the end of its useful life or its intended use. Waste includes salvageable, returnable, recyclable and re-useable construction and demolition materials, and trash.

1.5. PERFORMANCE REQUIREMENTS

- A. The GC shall develop a Waste Management Plan that results in end-of-project rates for salvage/recycling/reuse of 95 percent (minimum) by weight of the total waste generated by the Work. Percentages may be adjusted on a project by project basis depending on selected LEED goals associated with the project.
- B. The GC shall salvage or recycle 100 percent of all uncontaminated packaging materials including but not limited to the following:
 - 1. Paper
 - 2. Cardboard
 - 3. Beverage containers
 - 4. Boxes
 - 5. Plastic Sheet and film
 - 6. Polystyrene packaging
 - 7. Wood crates and pallets
 - 8. Plastic pails and buckets
- C. Promote a resourceful use of supplies and materials through proper planning and handling. Generate the least amount of waste possible by minimizing errors, poor planning, breakage, mishandling, contamination or other similar factors.
- D. Use all reasonable means to divert construction waste from landfills and incinerators through recycling, reuse, or salvage as appropriate.

1.6. SUBMITTALS AND DELIVERABLES

- A. The GC shall provide their completed Waste Management Plan to the Project Management Web Site as a submittal for review by the Project Architect and City Project Manager.
 - 1. See item 1.8 below for Waste Management Plan submittal requirements.
 - 2. The Waste Management Plan shall be completed, submitted, and approved as a pre-requisite for Progress Payment number 1.
 - 3. Copies of all documentation required by this specification shall be submitted to the appropriate Project Management Web Site Library. Documentation shall be reviewed by the City Project Manager during all Progress Payment reviews for compliance and accuracy.
- B. The Waste Management Coordinator shall provide copies of items 1 through 5 below to the appropriate Project Management Web Site Library and shall update the Waste Management Summary Log to reflect the records being submitted.
 - 1. Records of Donations: Indicate receipt and acceptance of itemized salvageable waste donated to individuals or organizations. Indicate if the organization is tax exempt.

2. Records of Sales: Indicate receipt and acceptance of itemized salvageable waste sold to individuals or organizations. Indicate if the organization is tax exempt.
3. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts and invoices.
4. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts and invoices.
5. Statement of Refrigerant Recovery: The Refrigerant Recovery Technician responsible for recovering refrigerant shall provide the GC with a statement indicating all of the following:
 - a. All recovery was performed according to EPA Regulations.
 - b. All refrigerant present was recovered; indicate the total quantity recovered by unit.
 - c. Date of Recovery.
 - d. Name, address, company name, and phone number of technician performing the recovery.
 - e. Technician shall sign and date the statement.
- C. LEED Submittal: The GC shall provide the following information using the appropriate LEED letter template upon project completion: indicating that the requirements of the credit have been met. *NOTE: This requirement shall only apply to projects having a LEED certification goal.*
 1. Total waste material generated.
 2. Total waste material diverted by diversion method; recycling, salvage, re-use, etc.
 3. Which waste streams have been diverted; minimum four different streams required to achieve LEED credit
 4. Statement that the credit requirements have been met.
 5. GC shall sign the letter.

1.7. QUALITY ASSURANCE

- A. Waste Management Coordinator: The GC shall be responsible for designating a Waste Management Coordinator. Coordinator may be the GC Supervisor, GC Project Manager or other member of the GC staff having knowledge of proper waste management procedures and all applicable regulations.
- B. Regulatory Requirements: comply with all hauling and disposal regulations of authorities having jurisdiction.
- C. The Waste Management Coordinator shall comply with Specification 01 31 19 Project Meetings, Section 3.7.B.1 and conduct a Waste Management Conference at the job site. This conference shall be repeated as necessary as additional trades are added to the Work. The conference shall include but not be limited to the following:
 1. Identify the Waste Management Coordinator; provide trade contractors with name, phone, and email information.
 2. Review and discuss the Waste Management Plan and the roles of the Coordinator.
 3. Review the requirements for documenting and reporting procedures of each type of waste and its disposition.
 4. Review procedures for material separation; indicate availability and locations of containers and bins.
 5. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
 6. Review waste management procedures specific to each trade.
- D. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.

1.8. WASTE MANAGEMENT PLAN

- A. Develop a plan consisting of waste identification, a waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume. Use the same units of measure throughout the waste management plan.
 1. Waste Identification: Indicate anticipated types and quantities of site clearing, demolition waste, and construction waste that will be generated during the execution of this contract. Include assumptions for the estimates.
 2. Waste Reduction Work Plan: The work plan shall consist of but not be limited to all of the following:
 - a. Identify methods for reducing construction waste. Re-using, framing and forming materials, re-planning material cuts to minimize waste, etc.
 - b. Identify what types of materials will be recycled. Provide lists of local companies that receive and/or process the materials. Include names, addresses, and phone numbers.
 - c. Identify what types of materials will be disposed of and whether it will be disposed of in a landfill facility or by incineration facility. Provide lists of local companies that receive and/or process the materials. Include names, addresses, and phone numbers.
 - d. Identify methods to be used on site for separating waste including all of the following:

- i. Sizes of containers to be used.
 - ii. Labels to be used on the containers to identify the type of waste allowed in the container.
 - iii. Designated locations on the project site for waste material containers.
 - B. If project requires demolition incorporate the ordinance required (MGO 28.185) Recycling and Reuse Plan into the Waste Management Plan.
 - C. Provide all of the following for the Waste Management Coordinator:
 1. Name, employer, employer address, phone number, and email address of the designated coordinator.
 - a. The GC shall also provide this information with the required Project Directory Submittal at the beginning of the project.
 - D. If at the option of the GC, they choose to contract with a Waste Management Disposal Company that allows comingled and unsorted waste materials, the GC shall include with their Waste Management Plan the following:
 1. Name, address, phone number, state permitting information, and other pertinent information about the disposal company.
 2. Documentation from the disposal company indicating company policies and procedures regarding comingled and unsorted waste materials to include:
 - a. GC responsibilities on the project site.
 - b. Disposal company procedures for receiving, sorting, recycling, and disposing of comingled and unsorted waste material.

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 - EXECUTION

3.1. PLAN IMPLEMENTATION

- A. Implement the approved waste management plan. Provide adequate containers, storage space, signage, transportation and other items required to implement the plan during the execution of this contract.
- B. The GC and Waste Management Coordinator shall be responsible for monitoring and reporting the status of the Waste Management Plan and shall monitor the waste management practices on site as frequently as needed.
- C. Train all workers, sub-contractors, and suppliers on proper waste management procedures as appropriate for the work being conducted on the project site.
 1. Distribute the waste management plan to everyone concerned within seven (7) days of submittal approval.
 2. Distribute the waste management plan to new workers, sub-contractors, and suppliers when they first appear on the project site.
 3. Conduct additional training as needed during the execution of the contract to keep a positive focus on the waste management plan.
- D. Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent and used facilities.
 1. Designate and label specific areas on the project site necessary for separating materials to be salvaged, recycled, reused, donated, and sold.
 2. Comply with any specification or regulatory requirements pertaining to dust, dirt, environmental protection, and noise control.

3.2. HAZARDOUS AND TOXIC WASTE

- A. The Owner shall be responsible under separate contract for the removal of any asbestos related materials. All other materials shall be removed by the GC.
- B. All hazardous and toxic waste shall be separated, stored, and disposed of according to all applicable regulations.
- C. All hazardous and toxic materials on site shall have a Material Safety and Data Sheet (MSDS) available that indicates storage requirements, emergency information, and disposal requirements as necessary.

3.3. GENERAL GUIDELINES FOR ALL WASTES

- A. Recycle all paper and beverage containers used by workers, sub-contractors, suppliers and visitors to the project site.
- B. All revenues, savings, rebates, tax credits, and other such incentives received from recycling, reusing, or salvaging waste materials shall accrue to the GC unless specified otherwise in the contract documents.
- C. Separate recyclable, reusable, and salvageable waste from other waste materials, trash, and debris except where Waste Management Disposal Company allows comingled waste materials, see section 1.8.D above.

1. Separate by type in appropriate containers or designated areas according to the approved waste management plan away from the construction area. Do not store within the drip lines of existing trees.
2. Inspect containers and bins frequently for contamination and inappropriately sorted materials. Remove contaminated materials and resort as necessary.
3. Stockpile bulk materials such as sand, topsoil, stone, etc., on site away from the construction area and without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water, and cover to prevent windblown dust. Do not store within the drip lines of existing trees.
4. Whenever possible store items off the ground and/or protect them from the weather.

3.4. GUIDELINES FOR RECYCLABLE, RE-USABLE, AND SALVAGEABLE WASTE

- A. The following guidelines is not a complete or all inclusive list and shall be adjusted as needed by the methods and procedures identified in the Waste Management Plan.
- B. Asphalt Paving: Break-up into transportable pieces or grind, transport to an authorized recycling facility.
- C. Carpet and Pad: Separate carpet and pad scraps, containerize and transport to an authorized recycling facility.
- D. Ceiling System Components: Suspended ceiling system components shall be sorted by material type as follows:
 1. Broken, cut, or damaged tiles shall be containerized, transport to an authorized recycling facility.
 2. Damaged, or cut tracks, trim and other metal grid system components shall be sorted with other metals of similar types, palletize, transport to an authorized recycling facility.
- E. Clean Fill: When allowed by Division 31 Specifications; concrete, masonry, stone, asphalt pavement, sand and other such materials may be used as clean fill on this project site. The GC shall verify with the Project Architect, Structural Engineer, or Civil Engineer as necessary prior to using any materials as clean fill. Materials shall be processed, placed, and compacted as specified. If not being re-used on site, transport to an authorized recycling facility.
- F. Clean Wood Materials: Including but not limited framing cutoffs, wood sheathing or paneling materials, structural or engineered wood products, and pallets or crates. Clean Wood shall be free of paints, stains, oils, preservatives and other such contaminants.
 1. Useable pieces shall be sorted by type and dimension, bundled and transported off site by the GC or returned to the supplier.
 2. Non-useable pieces shall be palletized or containerized, transport to an authorized recycling facility.
 3. Clean, uncontaminated sawdust and wood shavings shall be bagged, transport to an authorized recycling facility.
- G. Concrete: Break-up into transportable pieces, remove all reinforcing and other metals, transport to an authorized recycling facility.
- H. Glass Products: Shall be sorted by types, do not include light fixture lamps and bulbs. Products broken in shipment shall be returned to the supplier. Broken or cracked items still in frames shall be taped to prevent further breakage and injury to workers. Transport to an authorized recycling facility.
- I. Gypsum Board: Stack large clean pieces on wooden pallets or container, store in a dry location, transport to an authorized recycling facility.
- J. Light Fixture Lamps and Bulbs: Fluorescent tubes shall be containerized, transport to an authorized recycling facility.
- K. Masonry and CMU: Remove all metal reinforcing, anchors, and ties, clean undamaged pieces and neatly stack on pallets, transport damaged pieces to an authorized recycling facility.
- L. Metals: Sort metals by type as follows, this does not include piping:
 1. Architectural metals including but not limited to siding, soffit, and roofing panels shall be sorted by material, palletize or bundle as needed and transport to an authorized recycling facility.
 2. Structural steel, sort by size and type; palletize and transport to an authorized recycling facility.
 3. Miscellaneous metals such as aluminum, brass, bronze, etc shall be sorted by type, containerized or palletized as necessary, transport to an authorized recycling facility.
- M. Packaging and shipping materials
 1. Cardboard boxes and containers: Breakdown all cardboard boxes and containers into flat sheets. Bundle and store in a dry location until transported for recycling.
 2. Pallets:
 - a. Whenever possible require deliveries using pallets to remove them from the project site.
 - b. Neatly stack pallets in preparation for reusing them or providing them to other companies for salvage or re-use.
 - c. Break down pallets into component wood pieces that comply with the requirements for recycling clean wood materials. Neatly stack or palletize pieces in preparation for transportation.

3. Crates: Break down crates into component wood pieces that comply with the requirements for recycling clean wood materials. Neatly stack or palletize pieces in preparation for transportation.
4. Polystyrene Packaging: Separate and bag materials.
- N. Piping and conduit: Reduce all piping and conduit to straight lengths, sort and store by size, material and type. Remove supports, hangers, valves, boxes, sprinkler heads, and other such components, sort and store by size, material and type. Transport to authorized recycling facilities according to material types.
- O. Roofing: Roofing materials shall be sorted and containerized by type, transport to authorized recycling facilities according to material types.
- P. Site-Clearing Waste: Sort all site waste by type.
 1. Only stockpile soils types and quantities required for re-use on the project site. All remaining quantities shall be transported off site to an authorized facility that receives such materials.
 2. Brush, branches, and trees with no marketable re-use shall be transported to facilities for chipping into mulch.
 3. Trees with a marketable re-use shall be salvaged and transported to facilities that specialize in processing trees for future use as wood products.

3.5. GUIDELINES FOR DISPOSAL OF WASTES

- A. The following guidelines shall be adjusted as needed by the methods and procedures identified in the Waste Management Plan.
- B. Any waste that is contaminated, organic, or cannot be recycled, re-used, or salvaged shall be legally disposed of in an authorized landfill or incinerator. Disposal methods shall follow all applicable regulatory requirements.
- C. No waste material of any kind, except those types designated as clean fill in section 3.4 above, shall be allowed to be buried on the project site at any time.
- D. No burning of any kind of waste material shall be permitted on this project site at any time.
- E. Paint and Stain: Paints, stains, and their containers shall be disposed of as follows:
 1. Whenever possible containers should be thoroughly cleaned immediately after emptying and sorted with as appropriate (metal or plastic) for recycling
 2. Empty containers, regardless of type or base material, may be disposed of with lids off with general garbage.
 3. Latex paint may be placed with general garbage if properly solidified as follows:
 - a. Small amounts (an inch or less in can): Remove lids and allow paint to dry out in the can and harden. Protect cans from rain and freezing.
 - b. Large amounts (more than one inch): Mix paint with equal amounts of cat litter, stir and allow to completely dry. Alternate method: mix with commercial paint hardener.
 4. Oil-based or combustible paints and stains, regardless of liquid or solid, shall be transported to an approved facility that takes such items such as Dane County Clean Sweep Sites.
- F. Treated Wood Materials: Treated wood materials including but not limited to wood that has been painted, stained, or chemically treated shall not be recycled or incinerated.

END OF SECTION

SECTION 01 76 00
PROTECTING INSTALLED CONSTRUCTION

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PART 1 – GENERAL

1.1. SUMMARY

- A. The purpose of this specification is to provide clear responsibilities, guide lines, and requirements related to providing protection to already installed construction.
- B. Already installed construction shall include but not be limited to the following:
 - 1. Any existing site feature such as pavement, curbs, drainage features, utilities, landscaping features (trees, shrubbery, plantings, flagpoles, etc) and other such exterior items not associated with the building whether on or adjacent to the project site.
 - 2. Any existing structure on or adjacent to the project site.
 - 3. Any existing interior work that may be adjacent to the new work including all paths of ingress/egress to areas associated with accessing the Work.
 - 4. Any existing feature of any kind within the public right-of-way that may be on the project site property, adjacent to the project site or across the street from the project site.
- C. All contractors shall be familiar with the specifications of their Division of Work for specific requirements on protection of the Work.
- D. The requirements noted within this specification do not relieve any contractor of the responsibility for compliance with any code, statute, ordinance, or other such regulatory requirement having jurisdictional authority over these contract documents.

1.2. QUALITY ASSURANCE

- A. It shall be the responsibility of every contractor and worker assigned to the project to be diligent in protecting all existing work, and newly installed construction.
- B. It shall be the General Contractors' (GC) responsibility under the contract to provide all reasonable protection methods, materials, or precautionary measures required to protect new or existing construction as described in within this specification to the project as a whole.
 - 1. The GC shall be responsible to ensure any damaged new or existing construction is repaired or replaced at no additional cost to the Contract.
 - 2. The GC at their discretion may direct other contractors to provide and maintain protection of completed work associated with their Division of Work. I.E.: The carpet installer may be required by the GC to provide carpet protection along traveled paths, ingress/egress, etc after installation.
- C. It shall be the responsibility of the GC to ensure that all materials being used to protect installed construction are compatible with, and/or adjacent to, the materials being protected. This shall include but not be limited to the material used as covering, tapes used to fasten protective materials, etc.

1.3. RELATED SPECIFICATIONS

- A. Parts of this specification will reference articles within "The City of Madison FACILITIES MANAGEMENT SPECIFICATIONS for Public Works Construction".
 - 1. Use the following link to access the FACILITIES MANAGEMENT SPECIFICATIONS web page:
<http://www.cityofmadison.com/business/pw/specs.cfm>
 - a. Click on the "Part" chapter identified in the specification text. For example if the specification says "Refer to City of Madison FACILITIES MANAGEMENT SPECIFICATION 210.2" click the link for Part II, the Part II PDF will open.
 - b. Scroll through the index of Part II for specification 210.2 and click the text link which will take you to the referenced text.
 - c. City Standard Detail Drawings (SDD) may be located from the index in Part VIII.
- B. Section 01 60 00 Product Requirements
- C. Section 01 74 13 Progress Cleaning

PART 2 - PRODUCTS

2.1. FENCING MATERIALS AND BARRICADES

- A. Except where noted in other areas of the construction documents, the responsible contractor shall provide a six foot galvanized chain link fence including full height mesh screen at the project lines as shown Lands for Work plan. For temporary barricade situations, the responsible contractor may provide one of the following that sufficiently provide a sturdy physical barrier and/or visual barrier as necessary for the intended application.
 - 1. Standard orange construction barrels each with a standard rubber base ring and reflective tape
 - a. Provide flashing amber lights as needed to increase night time visibility
 - 2. Steel "T" style fence posts
 - 3. 4'0" high standard orange construction fence
 - 4. Traffic barricades
 - 5. Jersey barriers
 - 6. Other types of fencing or barricades typically used in the construction industry
- B. The contractor responsible for providing the fencing materials and barricades shall also be responsible for maintaining them. This shall include but not limited to fixing damaged fencing, standing up barrels that have been knocked over, realigning barrels, and ensuring flashing lights are fully operational at all times.
- C. The following fencing and barricade designations, and their use descriptions shall be used throughout this specification to provide uniformity in describing protection requirements.
 - 1. Type A, Jersey Barriers, to be used as permanent blocking devices to deny access to alternate project site entrances or exits.
 - 2. Type B, Traffic Barricades, to be used as temporary blocking devices to deny access to alternate project site entrances or exits.
 - 3. Type C, Construction Barrels without construction fencing shall be used for lane closures, temporary blocking devices to deny access and the protection of single locations (I.E. identify the location of an access structure) that do not require fencing.
 - 4. Type D, Construction Barrels with construction fencing where it becomes necessary to surround an object with a complete visual barricade and it is impractical or unacceptable to install fence posts. The surround shall be constructed in such a manner as to provide a buffer zone around and access to the item being protected.
 - 5. Type E, Steel "T" Fence Posts shall be used at the project lines, as indicated on the Civil Drawings, with six foot galvanized chain link fencing to surround an object with a complete visual barricade and it is practical to install fence posts. The surround shall be constructed in such a manner as to provide a buffer zone around and access to the item being protected. All posts shall be driven installed. Surface mounted posts to only be used for temporary barricades.
 - 6. Type X, Other fencing or barricade types that may be designated and detailed within the construction documents shall use additional alpha numeric designations.

2.2. EROSION CONTROL PROTECTION

- A. Refer to City of Madison FACILITIES MANAGEMENT SPECIFICATION 210.2 for authorized materials associated with erosion control materials.

2.3. INTERIOR FINISH PROTECTION MATERIALS

- A. Except where noted in other areas of the construction documents or this specification the responsible contractor:
 - 1. Shall not provide the cheapest or least effective method as an effort to meet any protection requirement.
 - 2. Shall provide materials of sufficient quality, and durability to provide adequate protection based on the seasonal conditions and the anticipated duration at the time the protection will be needed.
 - 3. Shall provide sufficient quantity of protection material to protect the construction as needed.
- B. Prior to installing protective measures the responsible contractor shall propose to the GC, Project Architect (PA)/Project Engineer (PE) and City Project Manager (CPM) the proposed plan for protection, materials to be used and samples as necessary.
 - 1. The PA/PE and CPM reserve the right to disapprove any proposed method and/or material and/or make alternate proposals.

PART 3 - EXECUTION

3.1. GENERAL EXECUTION REQUIREMENTS

- A. The GC shall be responsible for ensuring all of the following procedures and requirements are implemented as needed for the duration of the Work performed under this contract.
- B. The GC shall also be responsible for the following:
 - 1. Reporting any incident of damage to existing property, right-of-way, or utility to the CPM immediately upon rendering the incident safe, and notifying emergency response teams, and emergency utility crews as needed.
 - 2. Conduct a site walk through prior to leaving at the end of each day to assess:
 - a. Protection measures are properly in place, provide correction actions as necessary.
 - b. Note damage to existing completed work and schedule repair/replacement as needed.
 - 3. Ensure all contractors and workers are being diligent in protecting existing work, and newly installed construction.

3.2. PROTECT ADJACENT PROPERTIES

- A. Whenever possible through the design process the City of Madison shall have previously provided notice to adjacent property owners that work will be occurring on or near their property. The City of Madison shall also have obtained any permanent or temporary easements that may be necessary to complete any Work on adjacent properties.
- B. It shall be the responsibility of the GC to do the following for all Work under this contract being performed on or adjacent to the property line:
 - 1. Contact the adjacent property owner and provide them with information on the work to be done, equipment to be used, and estimated duration of the work. Information to be updated and communicated to property owner(s) as construction progresses and site conditions change.
 - a. If any adjacent property is a rented or leased space the GC shall also make contact and provide the same information to the tenants.
 - b. Determine from the owner and/or tenants if there are any concerns for children, pets, special plantings, or other concerns.
 - 2. Discuss the following with all contractors performing work on or near the property line.
 - a. Work to be completed and timeline.
 - b. Concerns of adjacent property owners/tenants from item 1 above.
 - c. Which protective measures will be necessary to protect adjacent properties and address the concerns of adjacent property owners/tenants.
 - 3. Ensure all protective measures are placed and maintained during the execution of Work on or adjacent to the property line. Interact with the adjacent property owners/tenants as needed.
- C. Any contractor doing work on or adjacent to the property line shall install and maintain any protective measure identified in the contract documents, this specification, or as directed by the GC.
- D. The GC shall be responsible for restoring any damage to structure and property located on or adjacent to the property line.
 - 1. Restoration shall include but not be limited to repair or replacement using like materials and finishes to its original condition or better.
 - 2. Restoration of landscaping materials shall include watering of any seed, sod, or other planting of any kind for a reasonable period of time to encourage germination and root development.
- E. The GC shall keep the CPM informed directly to any issues pertaining to adjacent property owners and tenants.

3.3. PROTECT LANDSCAPING FEATURES

- A. Except where specifically stated in other areas of the construction documents the following minimal protection requirements shall apply under this section.
1. Whenever possible do not install new landscape features until exterior building construction has been completed, equipment such as scaffolding and lifts are no longer needed and have been removed, and heavy equipment operation is no longer required.
 2. Whenever possible remove and temporarily store all existing landscape features such as benches, waste receptacles, signage, and other such features that will be within the area of Work that can be removed.
 3. Landscape features that cannot be removed such as flag poles, light poles, light bollards, etc. shall be protected with Type D fencing for areas on pavement or Type E fencing for areas on soil.
 4. Planting beds shall be protected using Type E fencing around the exposed perimeter of the planting bed as needed.
 5. The City of Madison FACILITIES MANAGEMENT SPECIFICATION 107.13 shall apply to all tree protection in and around the project site at all times.

3.4. PROTECT UTILITIES

- A. The contractor shall be responsible for notifying all utilities to determine emergency response procedures and protection requirements prior to installing any construction protection.
1. This includes requesting utility marking through Diggers Hotline.
 - a. Call 811 or 1-800-242-8511 to request a public utility locate
 - b. For emergency locate call (262) 432-7910 or (877) 500-9592
 2. Contact the Owner and CPM for any available private utility information on the property that may be available prior to calling a private utility locating company.
- B. Except where specifically stated in other areas of the construction documents the following minimal protection requirements shall apply under this section.
1. Hydrants, lamp posts, electrical transformers, and other utility pedestals shall be protected with Type D fencing for areas on pavement or Type E fencing for areas on soil. Fence posts shall be located so as to not be directly over the utility main.
 2. Storm sewer structures in pavement shall have proper inlet protection according to City of Madison FACILITIES MANAGEMENT SPECIFICATION 210.1(g) and Type C Construction Barrels when necessary.
 3. Storm sewer structures in turf and other landscaped areas shall have proper inlet protection according to City of Madison FACILITIES MANAGEMENT SPECIFICATION 210.1(g) and Type E fencing for areas on soil.
 4. Stormwater management features such as greenways, retention/detention ponds, bio-filtration ponds and other such features shall be properly protected according to the appropriate erosion control measure specified on the Erosion Control Plan. See multiple sections of City of Madison FACILITIES MANAGEMENT SPECIFICATION 210.1
 - a. For the protection of hard to see items such as structures, castings, inlets, etc. in grassy areas provide Type E fencing for areas on soil.
 - c. For the protection of storm water management features having special soils and plants such as bio-filtration ponds provide Type E fencing for areas on soil.
 5. Other structures and covers including but not limited to cleanouts, wiring hand holes, valve boxes, access structures, grease trap structures, etc shall be protected as follows:
 - a. Provide Type E fencing for areas on soil.
 - b. When paving operations are complete provide a construction barrel or cone near structures as necessary depending on required heavy construction traffic.

3.5. PROTECT PUBLIC RIGHT OF WAY

- A. Except where specifically stated in other areas of the construction documents the following minimal protection requirements shall apply under this section.
1. All public right-of-way (area from behind the sidewalk to the centerline of the street) shall remain open and accessible except during periods of active work. At such times the public right of way shall be properly closed and signed as referenced in City of Madison FACILITIES MANAGEMENT SPECIFICATION 107.9.
 2. Bus stops and bus stop structures shall remain accessible at all times.
 3. Traffic signage and traffic signals, traffic control boxes shall be protected with Type D fencing for areas on pavement or Type E fencing for areas on soil.

- a. Protection at traffic signage/signals shall not obstruct the viewing of the sign/signal for its intended purpose at any time.
- B. When additional protection for traffic control is required, the use of barricades, guardrails, lane closures and other such procedures will be detailed within the construction documents.
- C. When additional protection for overhead sidewalk cover is required the contract documents shall indicate the specific location and structural requirements of the protective structure.

3.6. PROTECT STORED MATERIALS

- A. All contractors shall refer to Specification 01 60 00 Product Requirements for all storage and protection requirements of building materials and products delivered to the site.

3.7. PROTECT WORK - EXTERIOR

- A. Provide all temporary services that may be required to protect the installed material from heat, cold, humidity, etc, while materials such as concrete, mortar, sealants, paints, etc, are drying and/or curing.
- B. Open trenches, pits, and other such excavations shall be properly covered, lined, or shored as needed during periods of inclement weather to prevent the caving of soils onto existing work in progress. Refer to the appropriate specifications and/or regulatory requirements governing this type of work as necessary.
- C. Provide adequate protection at all openings with heavy duty tarps, plastic sheathing, or wood framing and sheathing as needed to protect interior work in progress from inclement weather as needed.
- D. Protect exterior finishes of all kinds with heavy duty tarps or plastic sheathing as needed while landscaping is being installed through full germination of seeded areas or installation of filter fabric and mulches to keep dust, dirt, and mud off of finished exterior surfaces.
- E. Designate specific curb mounting points and provide wood blocking where small vehicles, skid loaders and other such equipment may need access to areas being landscaped.
- F. Provide plywood turning pads for skid loaders to turn on to prevent tire marking on new pavement.
- G. Do not permit the parking of vehicles with any kind of fluid leaks to park on new pavement.
- H. The contractor shall be responsible for cleaning, repairing, or replacing any completed work or work in progress under this specification as deemed necessary by the CPM without additional cost to the contract.

3.8. PROTECT WORK - INTERIOR

- A. The GC shall do all of the following:
 - 1. Provide all temporary services that may be required to protect the installed material from heat, cold, humidity, etc, while materials such as concrete, mortar, sealants, paints, etc, are drying and/or curing.
 - 2. Provide adequate visual and/or physical protection as needed to protect newly completed interior work such as paint, flooring material, sealants, grouts, etc that may be drying and/or curing.
 - 3. Provide adequate space and materials for cleaning boots, tool boxes, supplies, and other items coming into the project site once finish work has begun.
 - 4. Clean dirtied areas and repair/replace damaged areas immediately.
- B. The contractors responsible for interior work shall be responsible for protecting their work and finishes from dirt, mud, snow, spills, splatters, and physical damage after installation as follows:
 - 1. Protect vinyl composite, rubber composite, painted/stained concrete, and tiled flooring as follows:
 - a. Define foot traffic areas and protect with Ramboard Temporary Floor Protection products as a minimum basis of design or other protection product(s) compatible with installed flooring product if Ramboard is not compatible. Products to be used shall be new.
 - i. Tape all edges, seams, etc with a good quality tape that does not leave sticky residue. Do not allow any debris or other material between the installed flooring and the protection material.
 - ii. Repair tears immediately, replace worn areas with like material as necessary.
 - 2. Protect carpeted areas as follows:
 - a. Define foot traffic areas and protect with a minimum of 6mil, clear, polyethylene sheeting 3 feet wide. Products to be used shall be new.
 - i. Tape all edges, seams, etc with a good quality tape that does not leave sticky residue. Do not allow any debris or other material between the installed flooring and the protection material.
 - ii. Repair tears immediately, replace worn areas with like materials as necessary.
 - 3. Protect all finished walls in high traffic areas with Ramboard Temporary Wall protection products or approved equal.

- 1 i. Tape all edges, seams, etc with a good quality tape that does not leave sticky residue. Do
- 2 not allow any debris or other material between the installed flooring and the protection
- 3 material.
- 4 ii. Repair tears immediately, replace worn areas with like materials as necessary.
- 5 3. Protect counter tops, cabinets, and other finished surfaces with large sheets of thick cardboard or
- 6 Ramboard products. Do not allow toolboxes, finish materials, parts and other such items to be placed on
- 7 finished materials.
- 8 C. All protection shall stay in place until the CPM, PA/PE, and GC mutually deem the project is ready for Final
- 9 Cleaning. The contractors responsible for protecting the work shall be responsible for removing the protection
- 10 and removing any adhesive residue at that time. Contractors shall only use manufacturer authorized cleaning
- 11 materials for removing adhesives, etc.
- 12 D. Contractors doing work in un-protected areas of finished work shall be required to provide drop cloths and other
- 13 protection as noted within this specification for the duration of their work.
- 14 1. Finished areas shall be sufficiently covered to accommodate all equipment, and materials being used to
- 15 complete the work being done.
- 16 2. Finished areas shall be sufficiently covered to prevent splatters, over spray, etc when doing touch-up
- 17 work.
- 18 3. Contractors who do not provide sufficient protection under this sub-section shall be responsible for any
- 19 costs associated with cleaning, repairing or replacing already finished construction at no additional cost
- 20 to the contract.
- 21
- 22
- 23
- 24
- 25

END OF SECTION

**SECTION 01 77 00
CLOSEOUT PROCEDURES**

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PART 1 – GENERAL

1.1. SUMMARY

- A. The purpose of this specification is to clearly define and quantify the requirements associated with closing a City of Madison Public Works Contract for facility related work.
- B. All contracts have two distinct but related paths. Each path needs to be properly closed independently in order to close the contract as a whole.
 1. Construction closeout is related to closing out all of the Work associated with the construction documents.
 - a. It shall be the responsibility of all contractors to be fully aware of the required Work and closeout requirements involved in their individual trades.
 2. Contract closeout is related to closing out all of the administrative aspects of the contract in general.
 - a. It shall be the responsibility of all contractors to be fully aware of the administrative requirements required by the contract and to provide the supporting documentation required.
 3. Construction Closeout must be completed before Contract Closeout can begin.
- C. This specification will provide general knowledge associated with the following areas:
 1. Construction Closeout Requirements
 2. Construction Closeout Procedure
 3. Contract Closeout Requirements
 4. Contract Closeout Procedure
 5. Final Payment and Certificate of Completion

1.2. RELATED SPECIFICATIONS

- A. Contractors shall review all references to other specifications including specifications relating to the execution of the Work associated with their Division or Trade.
- B. Section 01 29 76 Progress Payment Procedures
- C. Section 01 31 23 Project Management Web Site (PMWS)
- D. Section 01 32 26 Construction Progress Reporting
- E. Section 01 45 16 Field Quality Control Procedures
- F. Section 01 74 13 Progress Cleaning
- G. Section 01 45 16 Construction Waste Management and Disposal
- H. Section 01 76 00 Protecting Installed Construction
- I. Section 01 78 13 Completion and Correction List
- J. Section 01 78 23 Operation and Maintenance Data
- K. Section 01 78 36 Warranties
- L. Section 01 78 39 As-Built Drawings
- M. Section 01 78 43 Spare Parts and Extra Materials
- N. Other requirements as noted in the contract documents signed by the General Contractor

1 **1.3. DEFINITIONS**

- 2 A. **Substantial Compliance:** A letter provided to the City of Madison Building Inspection and signed by the Project
3 Architect indicating that all Work has been completed to a level that would allow Owner Occupancy and that all
4 construction is in compliance with the construction documents. A copy of this letter is also provided to the
5 State of Wisconsin Department of Health and Safety as necessary to clear plan review requirements. This letter
6 does not represent construction closeout.
- 7 B. **Certificate of Occupancy:** The Regulatory letter from the City of Madison Building Inspection Department
8 indicating that all regulatory requirements and inspections have been completed and the building may now be
9 occupied for its intended use. This letter does not represent construction closeout.
- 10 C. **Certificate of Substantial Completion:** A letter provided by the Department of Public Works, signed by the City
11 Engineer indicating that Construction activities are substantially complete. This letter does represent
12 construction closeout and the date of this letter begins the date of the Warranty Period.
- 13 D. **Construction Closeout:** The point in the contract where all contractual requirements associated the execution of
14 the Work as described in the plans, specifications, and other documents have been successfully met and the
15 items described in 1.3.A, .B, and .C above have been completed.
- 16 E. **Final Progress Payment:** The progress payment associated with achieving Construction closeout as described in
17 1.3.D above. At this point the contractor may request all monies associated with the contract be paid with the
18 exception of held retainage.
- 19 F. **Contract Closeout:** The point in the contract where all contractual requirements associated with the City of
20 Madison, Board of Public Works contract has been successfully met.
- 21 G. **Final Payment:** The final contract payment submittal that may be approved by the City of Madison after all
22 contractual requirements of the Public Works Contract have been met and any remaining monies (retainage)
23 due to the contractor may be released for the Final Payment.

24
25 **1.4. QUALITY ASSURANCE – CONSTRUCTION CLOSEOUT**

- 26 A. All contractors shall be responsible for properly executing the construction closeout requirements associated
27 with their Work as described in the specifications governing their Work.
- 28 B. The GC shall be responsible for all of the following:
- 29 1. Ensuring that all contractors have met the construction closeout requirements associated with their
30 Work.
- 31 2. Coordinate the collection of all construction closeout deliverables from all contractors, provide the
32 deliverables to the Project Architect and City Project Manager for review as necessary, and ensure all
33 contractors correct deficiencies of deliverables and resubmit as needed for final acceptance.
- 34 3. Ensure all closeout requirements identified in the Construction Closeout Checklist below have been
35 completed as intended by the construction documents.

36
37 **1.5. QUALITY ASSURANCE – CONTRACT CLOSEOUT**

- 38 A. The City of Madison, Department of Civil Rights (DCR) monitors contract compliance for construction and
39 procurement contracts to ensure that local, state and federal regulations are followed by contractors working on
40 City of Madison Public Works (PW) projects. DCR will monitor all PW projects from contract award through the
41 final payment at the close of the project. Contractors will be required to submit reporting paperwork
42 throughout the PW project process.
- 43 1. Contractors are encouraged to visit the web site identified below for additional information, checklists,
44 forms, and other information provided by DCR as it relates to Contract Compliance.
45 <http://www.cityofmadison.com/Business/PW/contractCompliance.cfm>
- 46 2. Questions regarding the process should be directed to parties and offices as identified on the various
47 forms, documents, and instructions or contact:
48 City of Madison, Department of Civil Rights
49 210 Martin Luther King Jr. Blvd., Room 523
50 Madison, WI 53703
51 (608) 266-4910
- 52 B. All Sub-Contractors have submitted the applicable required documents described in item 1.5.D below to the
53 General Contractor (GC) for Contract Closeout.
- 54 C. The GC has submitted the required applicable documents described in item 1.5.D below for all contractors to the
55 appropriate City of Madison Agency per instructions associated with each submittal.
- 56 D. The documents required for submittal to the City of Madison for Contract Closeout may include any/all of the
57 items listed below depending on contract type. It is the sole responsibility of all contractors to know and submit
58 the required and complete documentation in a timely fashion.

1. Weekly Payroll Reports
2. Employee Utilization Reports
3. Documentation required for Small Business Enterprise (SBE) goals
4. Other documents as maybe required or requested through the Finalization Review Process

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 - EXECUTION

3.1. CONSTRUCTION CLOSEOUT CHECKLIST

- A. All contractors shall be responsible for reviewing the drawings and specifications within their Divisions of Work to provide a complete and comprehensive list of all Construction Closeout Requirements to the GC.
1. The checklist shall include all items identified within the construction documents that require any of the following (and examples) prior to moving into Contract Closeout Procedures:
 - a. Documents indicating a specified level of performance has been achieved, such as:
 - i. Test reports of all types
 - ii. Startup reports
 - b. Required documentation, such as:
 - i. As-builts and record drawings
 - ii. Operation and maintenance data
 - c. Physical items to be turned over to the owner, such as:
 - i. Attic stock
 - ii. Keys
 - d. Required maintenance completed, such as:
 - i. Ducts cleaned
 - ii. Filters replaced
 - e. Commissioning and LEED related items and submittals
 - f. Owner and Maintenance Training
- B. Each list shall indicate the title of the closeout requirement, the associated specification of the requirement, the required result or deliverable, the responsible contractor(s), and a column to verify the item has been turned in and completed.
- C. The GC shall be responsible for all of the following:
 1. Consolidating all the closeout lists into one master Construction Closeout Checklist.
 - a. The checklist shall be in a tabular data format similar to the sample below
 2. Upload the completed checklist to the Project Management Web Site for review.
 3. Resubmit the checklist as needed after initial reviews have been completed.
- D. The GC shall work with all contractors to amend the Construction Closeout Checklist throughout the execution of the project based on changes and modifications as necessary.

<u>Title</u>	<u>Specification</u>	<u>Description</u>	<u>Responsibility</u>	<u>Completed</u>
Quality Management Observation Reports	01 45 16	All QMO reports have been properly responded to, reviewed and closed by the CPM.	All, GC	
As-Built Drawings	01 78 39	As-Built drawings have been reviewed and accepted per the specification	All, GC	
Testing and Balancing of HVAC	23 09 23	Provide final TnB reports indicating design performance has been achieved	HVAC	

3.2. CONSTRUCTION CLOSEOUT REQUIREMENTS

- A. The timely submittal or completion of closeout requirements shall go hand in hand with the Progress Payment Milestone Schedule that can be found in Specification 01 29 76 Progress Payments. No payments shall be made until all requirements for that payment have been met.
1. The GC and all major Subcontractors, Project Architect /Project EngineerA/E PROJ MGR, and CPM, shall review all requirements for Construction/Contract Closeout during two (2) special meetings.
 - a. The first meeting shall be held at the 50% Contract Total Payment milestone. This meeting shall discuss the requirements associated with various construction/contract closeout documentation and events when they are due with respect to progress payments.

- b. The second meeting shall be held at the 70% Contract Total Payment milestone. This meeting shall review the contractors progress regarding the closeout checklist, begin making plans for upcoming deadlines such as scheduling training, where to put attic stock, and when they are due with respect to progress payments.
2. The GC, A/E PROJ MGR, and CPM, shall utilize the Construction Closeout checklist to ensure that all construction closeout requirements have been met.

3.3. CONSTRUCTION CLOSEOUT PROCEDURE

- A. Upon successful completion and final acceptance of all Construction Closeout Requirements the GC may submit to the CPM and A/E PROJ MGR the request for Final Progress Payment (100% contract total, less retainage).
- B. The A/E PROJ MGR will confirm with the design consultants, CPM, and other City of Madison staff that all requirements of the Work have been completed and will do the following:
 1. Approve the final progress payment application
 2. Provide the required signed payment documents to the CPM
 3. Provide the required Letter of Substantial Compliance to the following as required:
 - a. State Safety and Building Division
 - b. Local Building Inspection office
 - c. GC
 - d. CPM
- C. The CPM shall draft the City Letter of Substantial Completion for signature by the City Engineer. This letter shall state any of the following that may still be tied to the contract and/or warranty:
 1. Indicate that the date of the letter shall also be the beginning of the Warranty period.
 2. Indicate any allowed due outs, reasons for them, and anticipated dates of finalization.
 - a. QMO issues such as off season testing of equipment
 - b. Off season training of equipment
- D. The GC and all subcontractors shall finalize all warranty letters associated with their Work using the date noted on the City Letter of Substantial Completion, and provide the CPM with all warranties as described in Specification 01 78 36 Warranties. Upon receipt and final approval of the Warranties the CPM may initiate final processing of the Final Progress Payment (100% contract total, less retainage).

3.4. CONTRACT CLOSEOUT REQUIREMENTS

- A. The GC and all sub-contractors shall follow all requirements associated with documenting contract compliance and provide documentation as required or requested by DCR or PW staff. All contractors are encouraged to stay current with submissions of the following documentation:
 1. Weekly Payroll Reports no later than the Progress Payment equal to 50% of the contract total.
 2. Employee Utilization Reports
 3. Agent or Subcontractor Affidavit of Compliance with Prevailing Wage Rate Determination
 4. Prime Contractor Affidavit of Compliance with Prevailing Wage Rate Determination
 5. Documentation required for Small Business Enterprise (SBE) goals
 6. Other documents as maybe required or requested through the Finalization Review Process
- B. Near the Progress Payment equal to 80% of the contract total the GC shall request in writing a Finalization Review. At that time DCR or PW staff shall prepare a report of all contract documentation submitted to date. A list of missing items or outstanding issues will be emailed to the GC. No additional follow-up will be generated by DCR or PW Staff.

3.5. CONTRACT CLOSEOUT PROCEDURE

- A. The Contract Closeout Procedure will not begin until the Construction Closeout Procedure has been completed.
- B. When the GC feels they have successfully met all of the Contract Closeout Requirements associated with Section 3.3 above the GC may submit to the request for Final Payment to the CPM.
- C. The CPM shall sign and submit the Final Payment request for processing.
- D. DCR and PW staff shall do a complete review of all documentation associated with item 3.3.A above.
- E. The GC shall be notified directly by DCR or PW Staff of any documentation that may still be missing, have incomplete information, or other outstanding issues. It shall be the responsibility of the GC to continue follow-up with DCR and PW staff until all documentation has been successfully submitted and accepted.
- F. When all required documentation associated with Contract Closeout has been successfully submitted and accepted by DCR and PW Staff the City of Madison shall process the Final Payment of any remaining monies including retainage.

END OF SECTION

SECTION 01 78 13
COMPLETION AND CORRECTION LIST

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PART 1 – GENERAL

1.1. SUMMARY

- A. The City of Madison has developed a multi-faceted Quality Management Program that begins with contract signing and runs through contract closeout to ensure the best quality materials, workmanship, and product are delivered for the contracted Work.
1. The Project Management Web Site is a Construction Management tool that provides contractors, consultants, and staff a single on-line location for the daily operations and progression of the Work.
 2. The Quality Management Observation (QMO) is an ongoing observation of the construction process as it progresses. The City of Madison does not use a "Punch List" or "Corrections List" as it is typically known throughout the construction industry. The QMO process acts as an "in progress punch list". Work identified as not in compliance with the contract documents by the Owner, Owner Representatives, Owner Consultants, etc. shall be resolved immediately at the Contractor's expense. Unresolved issues will be subject to withholding of progress payment(s) until completed.
 3. Very stringent expectations are tied to Construction Closeout and Contract Closeout procedures. Specific milestones throughout the project need to be met and the milestones are tied to the Progress Payment Schedule.
- B. All contractors shall be required to review the specifications identified in Section 1.2 below, and other related specifications identified therein to become familiar with the terminology and expectations of this City of Madison Public Works contract.

1.2. RELATED SPECIFICATIONS

- | | | |
|----|------------------|------------------------------------|
| A. | Section 01 29 76 | Progress Payment Procedures |
| B. | Section 01 31 23 | Project Management Web Site (PMWS) |
| C. | Section 01 45 16 | Field Quality Control Procedures |
| D. | Section 01 77 00 | Closeout Procedures |

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 – EXECUTION – THIS SECTION NOT USED

END OF SECTION

SECTION 01 78 23
OPERATION AND MAINTENANCE DATA

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PART 1 – GENERAL

1.1. SUMMARY

- A. The purpose of this specification is to provide clear responsibilities and guide lines related to providing well documented and complete Operation and Maintenance (O&M) Data related to general facility use, equipment, systems, finishes, and materials to City of Madison Staff (Owner, Owner Representatives, Maintenance, and Custodial Personnel) as needed.
- B. Operation and Maintenance Data shall apply to both of the following categories except where specific requirements are noted under their separate titles as follows:
 1. Operation and Maintenance Data: Generally shall mean the owner manual that provides information on start-up, shut-down, operation, troubleshooting, maintenance, parts, and other such documentation as it pertains to all equipment and systems installed under the Work.
 2. Use and Care instructions: Where applicable use and care instructions shall also be considered O&M for such things as flooring, tile, partitions, and other such finishes and trim related items, installed under the Work.

1.2. RELATED SPECIFICATIONS

- A. Section 01 29 76 Progress Payment Procedures
- B. Section 01 31 23 Project Management Web Site
- C. Section 01 77 00 Closeout Procedures
- D. Section 01 78 13 Completion and Correction List
- E. Section 01 78 19 Maintenance Contracts
- F. Section 01 78 36 Warranties
- G. Section 01 79 00 Demonstration and Training
- H. Other Divisions and Specifications that may address more specifically the requirements for O&M Data.

1.3. QUALITY ASSURANCE

- A. All O&M Data shall meet the requirements identified in Section 1.4 below.
- B. All contractors shall provide O&M Data for each piece of equipment, system, or finish installed during the installation of the Work. O&M Data shall be provided to the General Contractor (GC) for verification and submittal.
- C. The GC shall be responsible for receiving all required O&M Data files from all contractors for verifying that all files submitted meet the requirements in Section 1.4 below.

1.4. O&M DATA REQUIREMENTS

- A. O&M Data shall be provided in digital PDF format as follows:
 1. PDF files shall be complete first generation consumer useable editions of PDF documents as provided by any of the following:
 - a. Product manufacturer
 - b. Supplier of product
 - c. Product manufacturer internet site
 2. Acceptable PDF files shall have the following functionality:

- 1 a. Word searchable
- 2 b. Key areas are bookmarked
- 3 c. Table of Contents and/or Index linked to content is preferred whenever possible.
- 4 3. Scanned printed material, with word searchable capabilities, saved as a PDF, is not acceptable and will be
- 5 rejected without further review.
- 6 B. O&M Data shall include but not be limited to the following manufacturers' published information as appropriate
- 7 for the equipment, system, material, or finish:
- 8 1. Installation instructions
- 9 2. Parts lists, assembly diagrams, explosion diagrams
- 10 3. Wiring diagrams
- 11 4. Start-up, shut-down, troubleshooting and other related operation procedures
- 12 5. Lubrication, testing, parts replacement, and other such maintenance procedures
- 13 6. General use, care, and cleaning instructions
- 14 7. Special precautions and safety requirements
- 15 8. A list of certified equipment vendors, service companies, parts suppliers including company name,
- 16 address, and phone number
- 17 9. A list of the recommended spare parts to have on hand at all times
- 18 10. A list by type of all recommended lubes, oils, packing material, and other maintenance supplies
- 19 11. Copies of final test reports, balance reports, and other related documentation
- 20 12. Warranty information for equipment and systems
- 21

22 1.5. O&M DATA SUBMITTALS

- 23 A. O&M Data shall be prepared as identified in this specification and shall be submitted for review as per the
- 24 schedule identified in Specification Section 01 29 76, Progress Payment Procedures.
- 25 B. O&M Data Draft submittals will be reviewed for content, procedure, and compliance only. A general critique
- 26 with recommendations for improvement will be made but re-submittals will not be required.
- 27 C. O&M Data Final submittals will be reviewed for content, procedure, and compliance. Re-submittals will be
- 28 required until such time as each submittal is accepted.
- 29

30 ***NOTE:** Acceptance of O&M Data Final submittals is required to be complete prior to scheduling and conducting owner*

31 *related training and construction closeout.*

32

33 **PART 2 – PRODUCTS – THIS SECTION NOT USED**

34

35 **PART 3 - EXECUTION**

36

37 3.1. O&M DATA PREPARATION - GENERAL

- 38 A. All contractors shall prepare O&M Data for draft and final submission as follows:
- 39 1. Obtain digital PDF files for each piece of equipment, system, material or finish as described in Sections
- 40 1.4.A.1 and 1.4.A.2 above.
- 41 2. Verify that all information as described in Section 1.4.B above is included with the PDF file. Obtain
- 42 missing information as necessary for a complete submittal.
- 43 B. Rename each individual PDF file as follows.
- 44 1. Do not use special characters such as #, %, &, /, etc. These characters are reserved by the Project
- 45 Management Web Site software the City of Madison uses; however the under-score (or under-bar) '_' is
- 46 an allowed character.
- 47 2. Use the following format and examples for renaming your file:
- 48 a. Format: ***Equipment name_What_Project name_Contract number_Year***
- 49 i. *Equipment Name* represents the name of any equipment, system, material or finish as
- 50 designated in the Contract Documents.
- 51 ii. *What* represents what the file is about
- 52 iii. *Project Name* represents the title of the project or contract. A shortened version of the
- 53 title may be identified by the City Project Manager to be used by all contractors.
- 54 iv. *Contract number* is the specific identification number the Work was bid under and appears
- 55 on the plan set title sheet and in each sheet title block
- 56 v. *Year* represents the year the contract will be closed out
- 57 b. Examples of file names
- 58 i. AHU 2_Operation Manual_Fire Admin_1234_2015

- ii. CPT 2_Use and Care_MPD West_9876_2011
- C. All contractors shall submit the completed digital PDF files to the GC in sufficient time for the GC to meet the O&M Data submission deadlines as described in Specification Section 01 29 76, Progress Payment Procedures.
- D. O&M Data shall be submitted and reviewed as described in sections 3.2 and 3.3 below.

3.2. O&M DATA DRAFT SUBMITTAL

- A. All contractors shall prepare and submit the following for an O&M Data Draft review submittal:
1. Prepare three (3) complete O&M Data file samples as described in section 3.1 above.
 2. Review all specifications within their Division of Work and prepare a complete O&M Data checklist listing all equipment, systems, materials, or finishes. Checklist shall be in tabular form similar to the example below and shall indicate the title (and plan identifier when applicable) of the O&M Data, the associated specification, and a column to verify the item has been turned in and completed.
- B. The GC shall be required to review all contractors' samples and checklists for compliance with this specification and shall return any to the originating contractor that are insufficient for re-submittal.
1. When acceptable to the GC, they shall upload each O&M Data draft submittal file to the O&M Draft library on the Project Management Web Site.
- C. The Project Architect, City Project Manager, CxA, Consulting Staffs and Owner Representatives shall review the O&M Data draft submittals and checklist within fifteen (15) working days as follows:
1. Provide general critique comments by Division on O&M Data samples submitted. Critique is intended to provide all contractors with information on strengths and weaknesses of their submittals.
 - a. Re-submittal of the O&M Data samples will not be required.
 2. Review in detail the O&M Data Checklist for completeness. Provide comments as needed.
 - a. Re-submittal of the O&M Checklist will be required until accepted.

<u>Title</u>	<u>Specification</u>	<u>Completed</u>
Overhead Door Operator	08 36 00	
Air Handling Unit (AHU-3)	23 00 00	
Water Heater (WH-1)	22 30 00	

3.3. O&M DATA FINAL SUBMITTAL

- A. All contractors shall prepare and submit the following for an O&M Data Final review submittal:
1. Prepare complete O&M Data files as described in Section 3.1 above according to their approved checklist as described in Section 3.2 above.
 2. Submit completed checklist and all final O&M Data files to the GC for final submittal review.
- B. The GC shall be required to spot check all contractors' submittals for completeness against their checklists and for compliance with this specification and shall return any to the originating contractor that are insufficient for re-submittal.
1. When acceptable to the GC, they shall upload each O&M Data final submittal file to the O&M Final library on the Project Management Web Site.
- C. The Project Architect, City Project Manager, CxA, Consulting Staffs and Owner Representatives shall review the O&M Data final submittals and checklist within fifteen (15) working days as follows:
1. Review the files submitted against the checklist and request any missing files through the GC.
 2. Review in detail all of the O&M Data files for completeness.
 - a. Submittals shall be accepted or rejected as individual PDF files.
 - b. Contractors shall re-submit entire O&M submittal if any portion is rejected or incomplete.

3.4. CONSTRUCTION CLOSEOUT

- A. All contractors shall review Specification 01 77 00, Closeout Procedures and Specification 01 79 00 Demonstration and Training.
1. Acceptance of all final O&M Data submittals is required prior to scheduling Demonstration and Training Sessions.
 2. Completion of all Demonstration and Training Sessions is required to receive the Substantial Compliance for Occupancy Certificate, and to begin Construction Closeout procedures.

END OF SECTION

SECTION 01 78 36
WARRANTIES

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PART 1 – GENERAL

1.1. SUMMARY

- A. The purpose of this specification is to provide clear responsibilities and guide lines related to providing all Warranties and Guarantees related to the Work, workmanship, materials, equipment, and other such items required by the Construction Documents.
- B. Manufacturers' disclaimers and limitations on product warranties do not relieve any contractor of the warranty on the Work that includes the product.
- C. Manufacturers' disclaimers and limitations on product warranties do not relieve suppliers, manufacturers and any contractor required to provide special warranties under the contract documents.

1.2. RELATED SPECIFICATIONS

- A. Section 01 29 76 Progress Payment Procedures
- B. Section 01 31 23 Project Management Web Site
- C. Section 01 77 00 Closeout Procedures
- D. Section 01 78 23 Operation and Maintenance Data
- E. Other Divisions and Specifications that may address more specifically the requirements for Warranties related to the installation of all items and equipment installed under the execution of the Work.

1.3. DEFINITIONS

- A. See specification 01 77 00 for the definitions of the following terms that may also be used in this specification:
 - 1. Substantial Compliance
 - 2. Certificate of Occupancy
 - 3. Certificate of Substantial Completion
 - 4. Construction Closeout
 - 5. Contract Closeout
- B. Emergency Repair: The Owner or Owner Representative reserves the right to make emergency repairs as required to keep equipment or materials in operation or to prevent damage to property and injury to persons without voiding the contractors warranty or bond or relieving the contractor of their responsibilities during the warranty period.
- C. Installer: The company or contractor hired to install a finished product that was manufactured and supplied specifically for the Work within this contract. The Installer may or may not be the same company that supplied the product. See the definition for supplier.
- D. Supplier: Any company that makes a specific finished product for the Work from information within the Contract Documents. Examples of suppliers would include custom cabinets, steel stairs and railings, etc. A supplier would not be a company that distributes items manufactured by others such as an electrical or plumbing supplier.
- E. Warranty: A written guarantee from the manufacturer to the owner on the integrity of a product and its installation, and the manufacturers' responsibility to repair or replace the defective product or components within a specified time from the date of ownership. Warranty may also be used interchangeably with Guarantee. The following warranty types may be part of any specification within the Work associated with the Construction Documents:

1. Expressed Warranty: A warranty that provides specific repair or replacement for covered components of a product over a specified length of time.
 2. Implied Warranty: A warranty that is not stated explicitly by a seller or manufacturer that the product is merchantable and fit for the intended purpose.
 3. Standard Product Warranty: Preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner. Standard warranties may be for any amount of time but shall not be for anything less than one (1) year from the warranty date.
 4. Special Warranty: A written warranty required by the Contract Documents either to extend the time limit provided under a standard warranty or to provide greater rights to the Owner.
- F. Warranty Date: The effective date that begins all warranty periods required for products, installations, and work-manship associated with the execution of the Work for this contract. The Warranty Date shall be set by the CPM.
- G. Related Damages and Losses: When correcting failed or damaged Warranted Work, remove and reinstall (or replace if necessary) the construction that has been damaged as a result of the failure or the construction that must be removed and replaced to obtain access for the correction of Warranted Work.
- H. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected reinstate the warranty by a new written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation unless specifically noted otherwise in a specification.
- I. Replacement Cost: All costs that may be associated with Work being replaced under warranty including but not limited to the following:
1. Related damages and losses
 2. Labor, material and equipment
 3. Permits and inspection fees
 4. This shall be regardless of any benefit the Owner may have had from the Work through any portion of its anticipated useful service life.
- J. Replacement Work: All materials, products, required labor, and equipment necessary to replace failed or damaged warranted to an acceptable condition that complies with the requirements of the original Construction Documents.
- K. Owners Recourse: Expressed warranties made to the Owner are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which the Owner can enforce such other duties, obligations, rights, and remedies.
1. Rejection of Warranties: The Owner reserves the right to reject any warranty and to limit the selection of products with warranties not in conflict with the requirements of the contract documents.
 2. Where the Contract Documents require a Special Warranty or similar commitment on the Work or product, the Owner reserves the right to refuse acceptance of the Work until the Contractor presents evidence the entities required to countersign such required commitments have done so.

1.4. GENERAL CONTRACTORS RESPONSIBILITIES

- A. The General Contractor (GC) shall be responsible to remedy, at their expense, any defect in the Work and any damage to City owned or controlled real or personal property when the damage is a result of:
1. The GC's failure to conform to Contract Document requirements.
 - a. Any substitutions not properly approved and authorized may be considered defective.
 2. Any defect in workmanship, materials, equipment, or design furnished by the GC or Sub-contractors.
- B. All warranties as described in this specification and these Contract Documents shall take effect on the date established by the CPM, as noted in Section 1.3F above.
1. All warranties shall remain in effect for one (1) year thereafter unless specifically stated otherwise in the Contract Documents or where standard manufacturer warranties are greater.
- C. The GC's warranty with respect to Work repaired or replaced, including restored or replaced Work due to damage, will run for one (1) year from the date of Owner Acceptance of said repair or replacement.
1. This shall be regardless of any benefit the Owner may have had from the Work through any portion of its anticipated useful service life.
- D. Warranty Response
1. See Section 3.5 of this specification.

PART 2 – PRODUCTS - THIS SECTION NOT USED

PART 3 - EXECUTION

3.1. WARRANTY CHECKLIST

- A. All contractors shall be responsible for reviewing the drawings and specifications within their Divisions of Work to provide a complete and comprehensive list of all Warranty Requirements to the GC.
- B. Each list shall indicate the title (and plan identifier when applicable) of the warranted item, the associated specification of the warranted item, the terms of the warranty (years), and a column to verify the item has been turned in and completed.
- C. The GC shall be responsible for all of the following:
1. Consolidating all the warranty lists into one master Warranty Checklist.
 - a. The checklist shall be in a tabular data format similar to the sample below.
 2. Upload the completed checklist to the Submittal Library on the Project Management Web Site for review. See Specification 01 33 23 Submittals for more information on this procedure.
 3. Resubmit the schedule as needed after initial reviews have been completed.
- D. The GC shall work with all contractors to amend the Warranty Checklist throughout the execution of the project based on changes and modifications as necessary.

<u>Title</u>	<u>Specification</u>	<u>Terms</u>	<u>Completed</u>
Overhead Door Operator	08 36 00	MFR 2yr	
Exterior Bench and Trash Receptacles	12 93 00	MFR 3 year warranty on finish	
Kitchen Sink (SK-1)	22 42 00	MFR 5 year	
Disposal (D-1)	22 42 00	MFR 7 year parts and in-home service	
Toilet (WC-1)	22 42 00	MFR 1 year limited	

3.2. LETTERS OF WARRANTY

- A. All letters of warranty shall be in a typed letter format and provide the following information:
1. The letter shall be on official company stationary including company name, address, and phone number.
 2. Indicate project name, contract number, and contract address the warranty is for on the reference line.
 3. Provide a description of the warranty(ies) being provided.
 - a. Include Division, Trade, or Specification information as necessary.
 - b. Only combine warranties of related Divisional Work together. Create new letters for additional Divisions as necessary.
 4. Indicate the effective Warranty Date. As noted in Section 1.3.F above, the Warranty Date shall be the date the Certificate of Substantial Completion was signed by the City Engineer.
 5. Contractor Letters of Warranty shall only be signed by a principal officer of the company.
 6. After signing the letter provide the GC with a high quality color scanned image in PDF format and the original signed letter.
- B. The GC shall be responsible for the Final Warranty submittal as identified in Section 3.4 below.
- C. The GC shall obtain letters of warranty from all of the following:
1. The General Contractor shall provide warranty letters for all Work that was self performed under the contract documents, identify all trades or Divisions of Work.
 2. All Sub-contractors shall provide warranty letters for Work performed under the contract documents; identify all trades or Divisions of Work.
 3. Suppliers, as required by other specifications within the Construction Documents where the manufacture of a specific product unique to the Work of this contract was required.
 - a. The terms and conditions of the Supplier Letter of Warranty shall be as defined by the specifications associated with the Work but shall not be less than the industry standard of repair, or replace defective materials and workmanship within one (1) year of the warranty date.
 - b. When the supplier is also the installer a single written letter may be submitted identifying both the warranty for the manufacture of the product and the warranty for the installation of the product.
 4. Installers as required by other specifications within the Construction Documents where the installation of a specific product unique to the Work of this contract was required.
 1. The terms and conditions of the Installer Letter of Warranty shall be as defined by the specifications associated with the Work but shall not be less than the industry standard of repair,

- 1 or replace defective materials and workmanship associated with the installation of the product
2 within one (1) year of the warranty date.
3 5. Special Letters of Warranty shall be required from any contractor, supplier, installer or manufacturer who
4 agrees to provide warranty services required by any Division Specification in excess of their Standard
5 Product Warranty.
6

7 **3.3. STANDARD PRODUCT WARRANTY**

- 8 A. All contractors shall be responsible for collecting and providing copies of all standard product warranties for
9 commercially available products purchased and installed under this contract.
10 B. Only one copy of the manufacturers' standard warranty needs to be submitted as representative for all
11 quantities of the same model number used throughout the Work.
12 C. Provide the manufacturers certificate, letter, or other standard documentation for each Standard Product
13 Warranty submitted as follows:
14 1. Whenever possible a PDF version of the document shall be used.
15 a. If a PDF version is used all additional information shall be completed using simple PDF editing
16 tools such as text boxes, highlight, etc.
17 b. If a PDF version is not available and an original document is furnished the additional information
18 shall be neatly hand written and highlighted on the document in such a fashion so that it does not
19 obscure any part of the written warranty.
20 2. Provide the following additional information on each warranty document:
21 a. Contract warranty date.
22 b. Provide the manufacturer name and model number of the product if not specified within the
23 warranty.
24 i. Where the manufacturer name and model number is specified within the warranty it shall
25 be highlighted for visibility.
26 c. Provide the plan identifier (LAV-1, WC-2, etc) when applicable.
27 D. Each completed warranty shall be saved as a digital PDF. The file shall be named using the specification number
28 and item description. I.E. 22 42 00 Toilet (WC-1).pdf
29 a. Where an original certificate was furnished provide a high quality colored scan of the completed
30 document with the additional information. Save the scanned image in PDF format and use the
31 same naming convention as indicated above.
32 E. Provide all PDF files and any original documents to the GC for final consolidation to be provided to the Owner.
33

34 **3.4. FINAL WARRANTY SUBMITTAL**

- 35 A. The GC shall receive all required warranties (digital PDF and any original documents) from all contractors,
36 suppliers, installers and manufacturers.
37 B. The GC shall inventory all received warranties with the Warranty Submittal List to ensure all required warranties
38 have been received and all warranty periods are correct according to the specifications.
39 C. Provide with each Operation and Maintenance Manual a complete copy of any associated warranty.
40 D. Scan all warranties into a single organized electronic PDF file as follows:
41 1. Organize the PDF file into an orderly sequence based on the table of contents of the Specifications.
42 2. Provide a typed Table of Contents for the entire file at the front of the document.
43 3. Provide bookmarks and links to each individual PDF to enable quick navigation through the PDF
44 document.
45 E. Upload the warranty submittal to the appropriate document library on the Project Management Web Site for
46 review by the Project Architect (PA)/Project Engineer (PE) and CPM.
47 F. Correct any deficiencies or omissions and resubmit as necessary.
48

49 **3.5. WARRANTY NOTIFICATION, RESPONSE, EXECUTION AND FOLLOW-UP**

- 50 A. Warranty Notification:
51 1. The City of Madison, Project Management Web Site, uses an email notification system for all warranty
52 related issues. The GC will be required to provide, and keep current during the warranty period, a
53 minimum of two (2) email addresses and phone numbers of current employees to receive email
54 notifications and provide response regarding Work associated with these construction documents.
55 a. In the event a Warranty Issue is deemed by the City of Madison to be an emergency, the GC shall
56 first receive a phone call with a follow-up email from the Project Management Web Site.
57 b. The Contract Closeout-Warranty Issue Library on the Project Management Web Site uses a form
58 for each warranty issue that is logged into the system.

- i. The GC shall open each warranty issue form, review the issue description and any attached documentation or photos.
 - ii. The GC shall also notify any other sub-contractor, supplier, or installer that may be required to review the warranty issue.
- B. Warranty Response:
 1. The GC shall upon notification by the City of Madison provide warranty response as follows:
 - a. Critical Systems or equipment: Where damage to equipment and other building components, or injury to personnel is probable provide immediate emergency shut-down information and an on-site response team as soon as possible but in no case shall on-site response exceed 24 hours.
 - b. For non-critical responses where damage or injury is unlikely provide on-site response no later than the next business day.
 - c. Where Technical Assistance support is part of the written warranty provide all assistance necessary via phone, text, or internet systems as indicated by the warranty. If issues cannot be resolved provide on-site response no later than the next business day.
 - d. If the request cannot be supported in sufficient time as outlined above the Owner (or Owner Representative) reserves the right to contact other contractors or service companies having similar capability to expedite the repair or replacement and shall invoice all associated costs to the Owner back to the GC.
- C. Warranty Execution:
 1. The GC shall provide all repairs or replacements as necessary to restore broken or damaged Work to the original level of acceptance as intended by the Contract Documents.
 - a. Provide all materials, equipment, products, and labor necessary to complete the repair or replacement associated with the Warranty Issue.
 - b. Provide all cleaning services as may be required before, during, and after the repair or replacement as per Specification 01 74 13 Progress Cleaning.
 - c. Provide any protection necessary for existing construction as per Specification 01 76 00 Protecting Installed Construction
 - d. Provide new letters of warranty when required.
- D. Warranty Follow-up:
 1. Logged Warranty Issues:
 - a. The GC shall provide complete documented responses of all logged Warranty Issues. Responses shall provide a description of work completed, by who, inclusive dates, and photos of completed or repaired work.
 - i. Provide call back response if work is not acceptable.
 - b. The City Project Manager shall review the submitted response documentation and do a field inspection if necessary.
 - i. If work is not acceptable, contact GC to review details and expectations of the repair as needed.
 - ii. If work is acceptable close the Warranty Issue.
 2. Quarterly Warranty Reviews:
 - a. The GC shall be responsible for scheduling quarterly on-site review with all of the following:
 - i. City Project Manager, and other City staff as needed
 - ii. Owner and Owner Tenant Representative
 - iii. Commissioning Agent (CxA)
 - iv. Plumbing, Heating, Electrical Sub-contractors
 - v. Other Sub-contractors that may be responsible for open Warranty issues
 - b. Quarterly reviews shall be scheduled at 3 months, 6 months, and 11 months after the effective date of the warranty. The review meetings shall:
 - i. Review the status of all open Warranty Issues, determine course of action and estimated date of completion.
 - ii. In the appropriate quarter, provide shut-down, start-up, testing, and training of off-season equipment as required by the contract documents.
 - iii. The 11th month review shall review all open Warranty Issues, final plan for resolution, and all Warranty Issues where a new letter of warranty may have been issued.

END OF SECTION

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SPARE PARTS AND EXTRA MATERIALS

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PART 1 – GENERAL

1.1. SUMMARY

- A. This specification is intended to provide clear guidelines and identify the responsibilities of all contractors as they pertain to City of Madison contract procedures regarding spare parts, special tools, special materials, and extra materials.
- B. Each contractor shall be responsible for knowing the specific requirements of their Division Specifications as they may relate to the general information provided in this specification.
- C. The General Contractor (GC) shall be responsible for ensuring all contractors provide spare parts and extra materials as described in this specification.

1.2. RELATED SPECIFICATIONS

- A. 01 29 76 Progress Payment Procedures
- B. 01 31 23 Project Management Web Site
- C. 01 77 00 Closeout Procedures
- D. Other Divisions and Specifications that may address more specifically how to proceed with spare parts, special tools, special materials, and extra materials.

1.3. DEFINITIONS

- A. Spare Parts: Any component of a product or assembly that comes pre-packaged or was specially ordered for the explicit use of the product or assembly. This shall include but not be limited to fastening devices, mounting brackets, replacement parts, wheels, pulleys, wiring, alternate assembly pieces, etc.
- B. Special Tools: Any tool of any kind that was pre-packaged or specially ordered, and is required to be used for the installation or maintenance of an installed product or assembly as part of this contract.
- C. Special Materials: Any oil, lubricant, glue, touch-up paint, or other such material that comes pre-packaged or was specially ordered and is required to be used for the installation or maintenance of an installed product or assembly as part of this contract.
- D. Extra Materials (Attic Stock): Any surplus materials in new and useable condition that was installed a part of this contract. Attic Stock shall include but not be limited to the following: ceiling tiles, paint, stain, floor coverings, ceramic tiles, light bulbs/lamps, filters, strainers, etc. Attic Stock shall include partially opened bulk items and additional unopened quantities as directed by other specifications.

1.4. PERFORMANCE REQUIREMENTS

- A. All contractors shall be responsible for consolidating spare parts, special tools, special materials, and attic stock as it pertains to the specific Work within their Division or Trade.
- B. All contractors shall use this specification as a general guideline regarding the requirements for turning spare parts, special tools, special materials, and attic stock over to the owner. Contractors shall explicitly follow specification requirements within their own Division of Trade.

1.5. QUALITY ASSURANCE

- A. The General Contractor (GC) shall be responsible for all of the following:

1. Coordinate the location for and the delivery of all spare parts, special tools, special materials, and attic stock being provided by all contractors under this contract to one centralized location as designated by the Owner.
2. Verify that all items being delivered are:
 - a. Clean, new, and in a usable condition.
 - b. Properly sealed, protected, and labeled
 - c. Properly documented

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 – EXECUTION

3.1. PACKAGING

- A. Whenever possible all surplus items should remain in their original packaging such as parts envelopes.
- B. Package small parts in re-sealable plastic bags (Ziploc) or envelopes with clasp fasteners. Do not use envelopes that seal with glue or tape envelopes closed. Do not leave packaging unsealed.
- C. Package like parts together for products or assemblies. I.E. keep all spare parts for flushometers together.
- D. Many small packages may be grouped together into a larger container by trade.
- E. Do not use unrelated boxes or containers for packaging spare items. I.E. do not use a light fixture box for spare breakers, or flushometers parts.

3.2. LABELING

- A. Whenever possible the original labeling indicating part numbers and other pertinent information shall remain on the original packaging.
- B. If original labeling is not available the contractor shall label all parts and packages using tape or labels and permanent black markers. Tape or labels being used shall absorb the permanent marker without bleeding or allowing ink to be smeared or rubbed off.
- C. Labels shall include the name of the product or equipment the item belongs to, part number and/or name, and any other information that would assist maintenance personnel in identifying the piece and related product.
- D. Labels shall include plan or specification designations (WC-1, LAV-3, DF-2, CPT-1, etc) that identify the particular product or finish material it represents.
- E. Labels for parts stored in clear re-sealable plastic bags may be placed inside the bag. Label shall face out and be able to be read from one side. Multiple bags shall be numbered individually for identification.
- F. Label the outside of large containers with the trade name (Plumbing, Electrical, etc).

3.3. INVENTORY

- A. All contractors shall provide the GC with complete inventories of all spare parts, special tools, special materials, and attic stock that they are providing at the end of the contract. The inventories shall be organized as follows:
 1. The cover sheet shall indicate the Contractors name, address, phone number, identify that the document is the “Spare Parts and Extra Materials Inventory”, and identify the Division or Trade the inventory is for.
 2. Provide an inventory in a tabular format of all items being provided under this and other specifications. The minimum information to be provided for each item on the inventory shall be as follows:
 - a. Bag or container number, all items of one bag or container shall be grouped together on the inventory
 - b. Item description
 - c. Item size (if applicable)
 - d. Total quantity provided
 - e. Identify if item is a spare part, tool, special material, or attic stock
- B. The GC shall consolidate inventories from all sub-contractors into one tabular data sheet organized by Division or Trade of Work.
 1. Upon completing the consolidated list the GC shall upload the completed inventory to the Contract Closeout-Attic Stock Library on the Project Management Web Site.
 2. The GC shall notify the Project Architect and City Project Manager that the scans have been uploaded.
 3. Consulting Staff and Owner Staff shall review the inventories prior to Final Review to verify that minimum required quantities have been met. Deficiencies shall be noted and returned back to the GC for corrective action.

3.4. STORAGE

- A. Prior to the 80% Progress Payment milestone the GC shall coordinate with the City Project Manager and Maintenance Personnel where spare parts, special tools, special materials, and attic stock shall be stored.
- B. The GC shall instruct all contractors as to the location and proper storage procedures.
- C. The GC shall be responsible for ensuring the storage area is kept neat and orderly as follows:
 - 1. Like items are stored together by material, product, or trade as necessary.
 - 2. Liquids are stored in sealable containers and the lids have been properly installed to prevent drying out, spillage, etc.
 - 3. All labels are clearly visible and provide the required information.
- D. Large items shall be stored so as not to damage other items. Do not stack heavy items or items with distinct shapes/outlines on softer items that may get crushed or imprinted.

3.5. CLOSEOUT PROCEDURE

- A. Prior to the 90% Progress Payment milestone the GC shall review all attic stock already stored by the contractors to ensure the following:
 - 1. Materials are stored in the proper location(s).
 - 2. All boxes, containers and items are properly labeled according to the submitted/approved inventory.
 - 3. Quantities are correct according to the submitted/approved inventory.
- B. The GC shall ensure that all deficiencies are corrected prior to conducting Demonstration and Training Sessions.
- C. The GC shall review with Maintenance Staff all inventories and labeling during the scheduled Demonstration and Training Sessions.
- D. Any discrepancies associated with Attic Stock shall be resolved and verified prior to the CPM releasing the 90% CT progress payment.

END OF SECTION

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SELECTIVE DEMOLITION**

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PART 1 – GENERAL

1.1. SCOPE

- A. Selective demolition of structural and non-structural site improvements, excluding removal of hazardous materials and toxic substances.
- B. Selective demolition of HVAC, Plumbing, Electrical, Fire Protection and Telecommunications systems.
- C. Pollution Control during building demolition, including noise control.
- D. Removal and legal disposal of all demolition materials and all tipping fees paid by the demolition contractor.
- E. Abandonment and removal of existing utilities and utility structures.

1.2. RELATED REQUIREMENTS

- A. Section 01 26 57 – Change Order Requests
- B. Section 01 31 19 – Project Meetings
- C. Section 01 31 23 – Project Management Web Site
- D. Section 01 74 19 - Construction Waste Management and Disposal: Limitations on disposal of removed materials; requirements for recycling
- E. Section 01 76 00 – Protecting Installed Construction

1.3. REFERENCE STANDARDS

- A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2009.

1.4. SUBMITTALS

- A. See Section 01 33 23 Submittals for submittal procedures.
- B. Schedule: Submit for approval the structural demolition schedule.
- C. Project Record Documents: Accurately record actual locations of capped and active utilities and other subsurface construction features encountered and any deviation from the design.

1.5. PRE-INSTALLATION MEETINGS

- A. Convene minimum two weeks prior to starting any demolition work.

1.6. SEQUENCING

- A. Immediate areas of work will not be occupied during demolition.
- B. No responsibility for buildings and structures to be demolished will be assumed by the owner.

1.7. QUALITY ASSURANCE

- A. Codes and Regulations: Comply with all governing codes and regulations. Use experienced workers.

PART 2 - PRODUCTS

2.1. MATERIALS

A. FILL MATERIALS

1. Backfill material for all on-site demolition shall consist of quality, on-site subsoil or quality import granular soils.

B. REPAIR MATERIALS

1. This will apply to all existing site improvements that are scheduled to remain.
2. Use repair materials identical to existing materials.
 - a. If identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 - b. Use materials whose installed performance equal or surpasses that of existing materials.

PART 3 - EXECUTION

3.1. SELECTIVE DEMOLITION SCOPE

- A. This contract is for selective demolition work of site improvements at the Madison Municipal Building located at 215 Martin Luther King Jr Blvd, Madison, WI. This contract includes the removal of the existing flagpole and footing, removal of lighting fixtures as noted, removal of existing concrete only with approval from CPM, and excavation of new flagpole footings. The contractor shall leave the site clean and safe at the completion of the contract.

3.2. GENERAL PROCEDURES AND PROJECT CONDITIONS

A. DEMOLITION

1. Demolition Operations: Do not damage improvements indicated to remain. Items of salvage value will be removed from the building per the Reuse & Recycling Plan. Storage or sale of items at the project site is prohibited.
2. Remove other items indicated in the Reuse & Recycling Plan from the premises per the Reuse & Recycling Plan.
3. All other materials from the demolition of the existing structure are to be properly disposed of offsite by the contractor including removal of abandoned utilities and wiring systems.
4. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
5. Obtain required permits.
6. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
7. Provide, erect, and maintain temporary barriers and security devices.
8. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
9. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
10. Do not close or obstruct roadways or sidewalks without permit.
11. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
12. Protect existing structures and other elements that are not to be removed.
13. Cease operations if public safety or remaining structures are endangered. Perform temporary corrective measures until operations can be continued properly.
14. Stop work immediately if adjacent structures appear to be in danger.
15. Provide adequate protection against accidental trespassing. Secure project after working hours.
16. Restore finishes of any areas damaged during demolition that were noted to remain.
 - a. All existing site improvements are to remain.
17. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
18. Perform demolition in a manner that maximizes salvage and recycling of materials.
19. Comply with requirements of Section 01 74 19 - Waste Management.
20. Dismantle existing construction and separate materials.
21. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.

3.3. EXISTING UTILITIES

- A. Protect existing utilities to remain from damage.
- B. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- C. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- D. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- E. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

3.4. SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as shown.
 - 2. Report discrepancies to City Construction Manager before disturbing existing installation.
 - 3. Engage a professional engineer to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.
 - 4. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
 - 5. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.
- B. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove items indicated on drawings.
- C. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove existing systems and equipment as indicated.
 - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
 - 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - 3. Verify that abandoned services serve only abandoned facilities before removal.
 - 4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- D. Protect existing work to remain.
 - 1. Prevent movement of structure; provide shoring and bracing if necessary.
 - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work. Obtain CPM approval before proceeding with any cutting work.
 - 3. Repair adjacent construction and finishes damaged during removal work.
 - 4. Patch as specified for patching new work.
- E. Site clean up
 - 1. Remove debris, junk, and trash from site.
 - 2. Remove from site all materials not to be reused on site; comply with requirements of Section 01 7419 – Waste Management.
 - 3. Clean up spillage and wind-blown debris from public and private lands.
 - 4. Leave site in clean condition, ready for subsequent work.

END OF SECTION