

**Monona Terrace Airwall Replacement  
1 John Nolen Drive  
Madison, Wisconsin 53703**

**08.23.18**

For  
City of Madison  
Contract #: 8244 Munis #: 80007



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**SECTION 00 31 46  
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11 **PART 1 – GENERAL**

12

13 **1.1. SUMMARY**

14

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

21

22 **1.2. REFERENCES**

23

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

38

39 **1.3. GENERAL CONTRACTORS REQUIREMENTS**

40

- 40 A. The GC shall be responsible for all of the following:
  - 41 1. Execute application for all required permits as may be required by the scope of work described within the  
42 contract documents.
  - 43 2. Paying all fees associated with the application of any required permits.
  - 44 3. Scheduling all required inspections that may be conditions of any required permits.
- 45 B. The GC shall provide high quality scanned images of all required permits and inspections to the City Project  
46 Manager (CPM).

47

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

49

50 **PART 3 – EXECUTION – THIS SECTION NOT USED**

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**END OF SECTION**

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**SECTION 01 25 13**  
**PRODUCT SUBSTITUTION PROCEDURES**

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14 **PART 1 – GENERAL**

15  
16 **1.1. SUMMARY**

- 17 A. The City of Madison uses a specific list of preferred products for various specification items to establish  
18 standards of quality, utility, and appearance required.  
19 B. The City of Madison will not allow substitutions for specified Products except as follows:  
20 1. The Product is no longer produced or the product manufacturer is no longer in business.  
21 2. The manufacturer has significantly changed performance data, product dimensions, or other such design  
22 criteria for the specified Product(s).  
23 3. Products specified by naming one or more Products or manufacturer’s and “or approved equal” or  
24 “approved equivalent.”  
25 C. The City of Madison will not allow substitutions for specified Products as follows:  
26 1. For Products specified by naming only one Product and manufacturer, no substitute product will be  
27 considered.  
28 2. For Products specified by naming several Products or manufacturers select any one of the products or  
29 manufacturers named, which complies with the specifications. No substitute product will be considered.  
30 D. Request for substitutions from any party other than the General Contractor (GC) will not be accepted.  
31

32 **1.2. RELATED SPECIFICATIONS**

- 33 A. Section 01 26 13 Request for Information (RFI)  
34 B. Section 01 33 23 Submittals  
35

36 **PART 2 – PRODUCTS**

37  
38 **2.1. SUBSTITUTION REQUEST FORM**

- 39 A. During bidding all contractors (General and Sub-contractors) and suppliers of materials or products shall provide  
40 hard copy of the Substitution Request form and all required attachments directly to the Project Engineer.  
41 B. After bidding only the GC shall submit a request and shall use the form provided by CPM.  
42

43 **PART 3 - EXECUTION**

44  
45 **3.1. REQUESTING A SUBSTITUTION DURING BIDDING**

- 46 A. In the event that a substitution is requested during the bidding phase the Contractor or Supplier shall meet the  
47 substitution request deadline listed in the bidding documents. No substitution request will be considered during  
48 the bidding period after the stated substitution request deadline. In general this procedure shall be as follows:  
49 1. Submit the Substitution Request Form including all required supporting documentation to the City  
50 Project Manager and Project Engineer by the substitution request deadline specified in Section A of the  
51 Contract Documents.  
52 2. Submit a Substitution Request Form for each product, supported with complete data, drawings and  
53 samples as appropriate, including:  
54 i. Comparison of qualities of the proposed substitutions with that specified.  
55 ii. Changes required in other elements of the Work because of the substitution.  
56 iii. Effect on the construction schedule.  
57 iv. Cost data comparing the proposed substitution with the Product specified.  
58 v. Any required license fees or royalties.

- 1 vi. Availability of maintenance service and source of replacement materials.  
2 3. The Owner and Engineer will review the Substitution Request Form and if approved the City of Madison  
3 will publish a bidding addendum authorizing the replacement. The Owner and Engineer may reject any  
4 substitution request without providing specific reasons.  
5 B. Substitutions submitted and approved during the bidding phase shall be announced by the City of Madison by  
6 addenda prior to the bid due date.  
7

8 **3.2. REQUESTING A SUBSTITUTION AFTER AWARD OF CONTRACT**

- 9 A. A substitution request will only be considered after award of contract if it meets the qualifying provisions as  
10 described in 1.1.B.1 above.  
11 B. The GC shall submit a substitution request using the form provided by CPM.  
12 1. Consulting Staff, Owner and Owners Representatives will review the request and provide the appropriate  
13 approvals and feed back to the GC.  
14

15 **3.3. UNAUTHORIZED SUBSTITUTIONS**

- 16 A. Any Contractor who substitutes products without proper authorization by the Owner and Engineer will be  
17 required to immediately remove and replace the product and all costs required to conform to the Contract  
18 Documents shall be borne by the General Prime Contractor.  
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22 **END OF SECTION**  
23

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

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15

**PART 1 – GENERAL**

**1.1. SUMMARY**

- 19 A. Contractors shall use the RFI form/process to request additional information or clarification regarding the  
20 construction documents.  
21 B. Form will be provided by CPM.  
22

**1.2. RELATED SPECIFICATIONS**

- 24 A. Section 01 26 46 Construction Bulletin (CB)  
25 B. Section 01 26 57 Change Order Request (COR)  
26 C. Section 01 26 63 Change Order (CO)  
27

**1.3. PERFORMANCE REQUIREMENTS**

- 29 A. RFI issues initiated by any contractor shall be done through the General Contractor (GC).  
30 1. RFIs submitted by any Sub-contractor under the GCs control shall be returned with no response.  
31 B. Submit a new RFI for each issue. Only multiple questions that are of a similar nature may be combined into one  
32 RFI shall be allowed and responded to.  
33

**1.4. QUALITY ASSURANCE**

- 35 A. The GC shall be responsible for all of the following:  
36 1. Ensure that any request for additional information is valid and the information being requested is not  
37 addressed in the construction documents.  
38 2. Ensure that all requests are clearly stated and the RFI form is completely filled out.  
39 3. Ensure that all Work associated an RFI response is carried out as intended.  
40 B. The Project Engineer (PE) shall be responsible for the following:  
41 1. Ensure that all responses to contractor initiated RFIs are properly responded to in a timely fashion.  
42 a. The CPM, Owner, consulting staff, and other City staff shall be responsible for the initial review of  
43 the RFI. The PE shall be responsible for codifying all consultant and Owner/City staff comments  
44 into a unified RFI response.  
45

**PART 2 – PRODUCTS**

**2.1. REQUEST FOR INFORMATION FORM**

- 49 A. Will be provided by CPM.  
50

**PART 3 - EXECUTION**

**3.1. CONTRACTOR INITIATED RFI**

- 54 A. Immediately on discovery of the need for additional information or interpretation of the Contract Documents  
55 any contractor may initiate an RFI for additional information or clarification through the GC.

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**3.2. RFI RESPONSES**

- A. Responses to simple RFI issues shall use the response section of the RFI form and 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.

**3.3. COMMENCEMENT OF WORK RELATED TO AN RFI**

- A. The GC shall only proceed with the Work of an RFI where, 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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14

**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.

**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)

**1.3. PERFORMANCE REQUIREMENTS**

- A. Project Engineer (PE): The PE shall be the only person authorized to publish a CB as needed for any reason indicated in section 1.1.A above. The PE 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
- B. General Contractor: The GC shall be responsible for the following as needed:
1. Executing the directives of the CB when he/she believes that no changes in labor, materials, equipment, or contract duration will be required for additions or deletions.
  2. Submit a COR when he/she believes that a change in labor, materials, equipment or contract duration will be required for additions or deletions.

**1.4. QUALITY ASSURANCE**

- A. The PE 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 PE 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.

1 **PART 2 – PRODUCTS**

2

3 **2.1. CONSTRUCTION BULLETIN FORM**

4 A. Will be provided by CPM.

5

6 **PART 3 - EXECUTION**

7

8 **3.1. WRITING THE CONSTRUCTION BULLETIN**

9 A. The PE shall draft a CB as needed using the form provided by CPM.

10 1. The PE and/or consulting staff as necessary shall provide specifications, model numbers and performance  
11 data, details and other such information necessary to clearly state the intentions of the CB.

12 2. The consulting staff, CPM, Owner, and other City Staff shall review the draft and recommend changes as  
13 needed.

14 3. The PE shall amend the draft as necessary into a final CB for review

15 B. Once the final CB has been approved the PE shall submit it to the GC.

16

17 **3.2. EXECUTING THE CONSTRUCTION BULLETIN**

18 A. The GC shall acknowledge receipt of the CB.

19 B. The GC shall notify all Sub-contractors of the CB and publish the CB to all field sets of drawings and specifications  
20 as appropriate.

21 C. The GC shall execute the directives of the CB or submit COR documentation as necessary during the execution  
22 and implementation of the CB.

23 1. See Specification 01 26 57 Change Order Request (COR)

24

25

26

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28

**END OF SECTION**

**SECTION 01 26 57**  
**CHANGE ORDER REQUESTS (COR)**

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18  
19 **PART 1 – GENERAL**

20  
21 **1.1. SUMMARY**

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

- 1 G. All GC requests for equitable adjustment shall be submitted to the CPM per the specifications below. Such  
2 requests shall set forth with specificity the amount of and reason(s) for the proposed adjustment and shall be  
3 accompanied by supporting information and documents.  
4 H. No adjustment of any kind shall be made to this Contract, if asserted by the GC for the first time, after the date  
5 of final payment.  
6 I. This specification shall be used by the GC when preparing documentation for any COR to ensure each has been  
7 properly and completely filled out as required by the City of Madison.  
8

9 **1.2. RELATED SPECIFICATION SECTIONS**

- 10 A. Section 01 26 13 Request for Information (RFI)  
11 B. Section 01 26 46 Construction Bulletins (CB)  
12 C. Section 01 26 63 Change Order (CO)  
13 D. Parts of this specification will reference articles within "The City of Madison Standard Specifications for Public  
14 Works Construction".  
15 1. Use the following link to access the Standard Specifications web page:  
16 <http://www.cityofmadison.com/business/pw/specs.cfm>  
17 a. Click on the "Part" chapter identified in the specification text. For example if the specification  
18 says "Refer to City of Madison Standard Specification 210.2" click the link for Part II, the Part II  
19 PDF will open.  
20 b. Scroll through the index of Part II for specification 210.2 and click the text link which will take you  
21 to the referenced text.  
22

23 **1.3. DEFINITIONS AND STANDARDS**

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

- 1 4. SMALL TOOLS AND SUPPLIES: The cost of small hand tools with an initial cost of \$1,500 or less, along  
2 with consumable supplies and expendable items such as drill bits, saw blades, gasoline, lubricating or  
3 cutting oil, and similar items.  
4 5. GENERAL EXPENSE: The general expense, which is those items that are a specific job cost not associated  
5 with direct labor and material such as job trailers, foreman truck, and similar items.  
6 6. RECORD DRAWINGS: The preparation of record or as-built drawings.  
7 7. OTHER COSTS: Any miscellaneous cost not directly assessable to the execution of the Change Order  
8 including but not limited to the following:  
9 a. All association dues, assessments, and similar items.  
10 b. All education, training, and similar items.  
11 c. All drafting and/or engineering, unless specifically requested by Owner as additional Work to be  
12 documented as a Change Order proposal or portion thereof.  
13 d. All other items including but not limited to review, coordination, estimating and expediting, field  
14 and office supervision, administrative work, etc.  
15 G. Contract Extension: The necessary amount of time to be added to the contract deadlines for the completion of a  
16 change order.  
17

18 **1.4. CONTRACT EXTENSION**

- 19 A. The GC shall not assume that every COR will require a Contract Extension. If the GC feels a contract extension is  
20 warranted he/she shall provide sufficient scheduling information that shows how the COR being requested  
21 impacts the critical path of the project.  
22 B. The City of Madison strongly encourages the GC to explore alternative methods and practices prior to submitting  
23 a COR with a request for contract extension.  
24

25 **1.5. OVERHEAD AND PROFIT MARKUP**

- 26 A. Pursuant to the City of Madison Standard Specifications for Public Works Construction, Section 104.7, Extra  
27 Work, the following maximum allowable markups shall be strictly enforced on all change orders associated with  
28 the execution of this contract.  
29 1. The total maximum overhead and profit shall not exceed fifteen percent (15%) of the total costs.  
30 2. The total maximum overhead and profit shall be distributed as follows:  
31 a. For work performed and materials provided solely by the General Contractor, fifteen percent  
32 (15%) of the total costs.  
33 b. For work performed and materials provided solely by Sub-contractors and supervised by the  
34 General Contractor:  
35 i. Supervision of the GC, five percent (5%) of the total Sub-contractor cost.  
36 ii. Sub-contractors work and materials ten percent (10%) of the total Sub-contractor cost.  
37

38 **1.6. PERFORMANCE REQUIREMENTS**

- 39 A. The GC shall become thoroughly familiar with this specification as it will identify procedures and expenses that  
40 are or are not allowed under the Change Order and Change Order Request process.  
41 B. The GC shall be responsible for all of the following:  
42 1. Carefully reviewing the CB that is associated with the COR.  
43 2. Collecting required supporting documentation from all contractors that quantify the need for a COR.  
44 a. Labor hours and wage rates  
45 b. Material costs  
46 c. Equipment costs  
47 C. The following shall apply to establishing prices for labor, materials, and equipment costs:  
48 1. Where Work to be completed has previously been established by individual bid items in the contract bid  
49 proposal the GC shall use the unit bid prices previously established.  
50 2. Where Work to be completed was bid as a Lump Sum without individual bid items the GC shall provide a  
51 breakdown of all labor, materials, equipment including unit rates and quantities required.  
52 D. The completion date is determined by Owner. The schedule, however, is the responsibility of the GC. Time  
53 extensions for extra Work will be considered when a schedule analysis of the critical path shows that the Change  
54 Order Request places the Work beyond the completion date stated in the Contract.  
55

56 **1.7. QUALITY ASSURANCE**

- 57 A. The GC shall be responsible for ensuring that all COR supporting documentation meets the following  
58 requirements prior to completing the COR form:

- 1 1. Sufficiently indicates labor, material, and other expenses related to completing the intent of the CB.
- 2 2. No costs exceed the usual and customary amount for such items available in the geographical area of the
- 3 project, and no costs exceed those established under the contract.
- 4 B. The Project Engineer (PE), City Project Manager (CPM), other members of the consulting staff, and city staff shall
- 5 review all COR requests to ensure that the intent of the CB will be met under the proposal of the COR or request
- 6 additional information as necessary.

7  
8 **PART 2 – PRODUCTS**

9  
10 **2.1. CHANGE ORDER REQUEST FORM**

- 11 A. Will be provided by CPM.

12  
13 **PART 3 - EXECUTION**

14  
15 **3.1. ESTABLISHING A CHANGE ORDER REQUEST**

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

28  
29 **3.2. CHANGE ORDER REQUEST REVIEW, APPROVAL, AND PROCESSING**

- 30 A. The PE and CPM shall review all CORs submitted by the GC.
- 31 1. Additional consulting staff and city staff having knowledge of the components of the COR shall review
  - 32 and advise the PE and CPM as to the accuracy of the items, quantities, and associated costs of the COR as
  - 33 directed by the CB.
  - 34 2. The CPM shall review the COR with the Owner.
- 35 B. If required the PE and CPM, shall in good faith, further negotiate the COR with the GC as necessary. All
- 36 amendments to any COR shall be documented.
- 37 C. After final review of the COR the CPM and Owner may accept the COR.
- 38 D. The CPM shall prepare the COR in the form of an official Board of Public Works Change Order for final review and
- 39 approval as outlined in Section 01 26 63 Change Order (CO).
- 40 E. The GC shall not act upon any accepted COR until it has received final approval through the Public Works process
- 41 as an official CO to the Work unless instructed to do so by the CPM. Proceeding without the final approval of a
- 42 fully authorized Change Order is at the GC's own risk.

43  
44 **3.3. EMERGENCY CHANGE ORDER REQUEST**

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

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52  
53 **END OF SECTION**

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

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4 PART 1 – GENERAL ..... 1  
5 1.1. SUMMARY ..... 1  
6 1.2. RELATED SPECIFICATION SECTIONS ..... 1  
7 1.3. BOARD OF PUBLIC WORKS PROCEDURE ..... 1  
8 PART 2 – PRODUCTS ..... 1  
9 2.1. CHANGE ORDER FORM ..... 1  
10 PART 3 - EXECUTION ..... 1  
11 3.1. PREPARATION OF THE CHANGE ORDER ..... 2  
12 3.2. EXECUTION OF THE CHANGE ORDER ..... 2  
13

14 **PART 1 – GENERAL**

15  
16 **1.1. SUMMARY**

- 17 A. Except in cases of emergency, no changes in the Work required by the Contract Documents may be made  
18 by the General Contractor (GC) without having prior approval of the City Project Manager (CPM).  
19 B. The City may at any time, without invalidating the Contract and without Notice to Sureties, order changes in  
20 the Work by written Change Order. Such changes may include additions and/or deletions.  
21 C. The Change Order (CO) is a Board of Public Works (BPW) form that is reviewed and approved by a specific  
22 process.  
23 D. The CO form is typically made up of multiple Change Order Requests (CORs) and/or Bid Items as appropriate  
24 depending on the type of project and how the contract was bid.  
25

26 **1.2. RELATED SPECIFICATION SECTIONS**

- 27 A. Section 01 26 13 Request for Information (RFI)  
28 B. Section 01 26 46 Construction Bulletin (CB)  
29 C. Section 01 26 63 Change Order Request (COR)  
30

31 **1.3. BOARD OF PUBLIC WORKS PROCEDURE**

- 32 A. The Board of Public Works has a very explicit procedure for the review and approval of all change orders  
33 associated with any Public Works Contract as follows:  
34 1. The Supervisory Chain of the CPM shall review and approve any CO under \$10,000 provided it does not  
35 include either of the following:  
36 a. The CO does not request a time extension to the contract.  
37 b. The CO does not cause the contract contingency sum to be exceeded.  
38 2. The Board of Public Works shall review and approve any CO that requires any of the following:  
39 a. Any CO over \$10,000.  
40 b. Any CO requesting a time extension to the contract regardless of the monetary value of the CO.  
41 c. Any CO that that causes the contract contingency sum to be exceeded.  
42 B. The Board of Public Works generally meets every other week and only once in August and December. The GC is  
43 cautioned that, under normal scheduling, a CO requiring a BPW review will take a minimum of two (2) weeks to  
44 achieve final approval.  
45 1. The City shall not be responsible for additional delays to the Work caused by the scheduling constraints  
46 of the Board of Public Works.  
47 C. *SPECIAL NOTE:* The GC is cautioned to never proceed unless told to do so by the CPM. Only in rare instances  
48 may the CPM give a written notice to proceed on a COR without an approved CO. Proceeding without the  
49 written notice of the CPM or an approved CO is at the GC's own risk.  
50

51 **PART 2 – PRODUCTS**

52  
53 **2.1. CHANGE ORDER FORM**

- 54 A. Provided by CPM.  
55

56 **PART 3 - EXECUTION**

1 **3.1. PREPARATION OF THE CHANGE ORDER**

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

12  
13 **3.2. EXECUTION OF THE CHANGE ORDER**

- 14 A. The GC shall do the following:
- 15 1. Review all items on the CO form.
  - 16 2. The GC shall notify the CPM immediately of any errors or discrepancies on the form and shall not sign or  
17 save it.
    - 18 a. The CPM shall make any corrections as needed, re-save the form, and notify the GC.
  - 19 3. If/when the GC concurs with the CO form as drafted the GC shall digitally sign the form.
- 20 B. The CPM shall do the following:
- 21 1. Monitor the review process
  - 22 2. Ensure that proper BPW procedures are executed as needed by the CO approval process.
    - 23 a. Schedule the CO on the next available BPW agenda if required.
      - 24 i. Attend the BPW meeting to speak on the CO to board members and answer questions.
      - 25 ii. The GC and/or PE may be required to attend the BPW meeting to address specific  
26 information as it relates to the Work and/or materials associated with the CO.
    - 27 3. Monitor final approval and distribution of the CO.
    - 28 4. Notify the GC that the CO has been completed.
    - 29 5. Ensure that the CO is posted to the next Public Works payment schedule.
    - 30 6. Verify that the GC's next Progress Payment-Schedule of Values show the CO as part of the contract sum.
- 31 C. Upon final approval of the CO the GC may proceed with executing the Work associated with the CO.
- 32  
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34

35 **END OF SECTION**

36



**SECTION 01 29 73**  
**SCHEDULE OF VALUES**

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4 PART 1 – GENERAL ..... 1  
5 1.1. SUMMARY ..... 1  
6 1.2. RELATED SPECIFICATIONS ..... 1  
7 1.3. RELATED DOCUMENTS ..... 1  
8 1.4. BASIS OF VALUES ..... 1  
9 PART 2 – PRODUCTS – THIS SECTION NOT USED ..... 2  
10 PART 3 - EXECUTION ..... 2  
11 3.1. AIA DOCUMENT G702 – APPLICATION AND CERTIFICATE FOR PAYMENT ..... 2  
12 3.2. AIA DOCUMENT G703 – CONTINUATION SHEET ..... 2  
13 3.3. INITIAL SCHEDULE OF VALUES SUBMITTAL ..... 2  
14 3.4. SOV FOR PROGRESS PAYMENT REQUESTS ..... 3  
15

**PART 1 – GENERAL**

**1.1. SUMMARY**

- 19 A. The Schedule of Values (SOV) is a Contractor provided statement that allocates portions of the total contract  
20 sum to various portions of the contracted work and shall be the basis for reviewing the Contractors Progress  
21 Payment Requests.  
22 B. AIA Document G702 – Application and Certificate for Payment and AIA Document G703 Continuation Sheet shall  
23 be filled out in sufficient detail to be used as a guideline in determining work completed and materials stored on  
24 site when verifying Progress Payment Requests.  
25 C. The General Contractor shall be responsible for filling out, updating, and providing these work sheets with each  
26 Progress Payment Request.  
27

**1.2. RELATED SPECIFICATIONS**

- 29 A. Section 01 26 63 Change Order (CO)  
30 B. Section 01 29 76 Progress Payment Procedures  
31 C. Section 01 32 26 Construction Progress Reporting  
32 D. Section 01 33 23 Submittals  
33 E. Parts of this specification will reference articles within “The City of Madison Standard Specifications for Public  
34 Works Construction”.  
35 1. Use the following link to access the Standard Specifications web page:  
36 <http://www.cityofmadison.com/business/pw/specs.cfm>  
37 a. Click on the “Part” chapter identified in the specification text. For example if the specification  
38 says “Refer to City of Madison Standard Specification 210.2” click the link for Part II, the Part II  
39 PDF will open.  
40 b. Scroll through the index of Part II for specification 210.2 and click the text link which will take you  
41 to the referenced text.  
42

**1.3. RELATED DOCUMENTS**

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

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**1.4. BASIS OF VALUES**

- A. The Contractor shall provide a breakdown of the Contract Sum in sufficient detail to assist the Engineer 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. AIA DOCUMENT G702 – APPLICATION AND CERTIFICATE FOR PAYMENT**

- A. The Contractor shall use AIA Document G-702 Application and Certificate for Payment with each Progress Payment Request.
- B. Completely fill out the Project Information section as follows:
  - 1. TO OWNER; provide all owner related information as provided in the contract documents.
  - 2. PROJECT; provide all contract information including contract number, title and address.
  - 3. FROM CONTRACTOR; provide all contractor related information.
  - 4. VIA ARCHITECT; provide all the architect’s related information including the architect’s project reference number if different from the owners.
  - 5. Indicate the current APPLICATION NO., PERIOD TO date, and CONTRACT DATE.
- C. Completely fill out the Contractors Application for Payment section.
  - 1. Fill out lines 1 through 9 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 Standard 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 Standard 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.
- D. Completely fill out the Change Order Summary section. 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.
- E. The Contractor shall sign and date the application and it shall be properly notarized.
- F. The Contractor shall not fill in any information in the Architects Certificate for Payment section.

**3.2. AIA DOCUMENT G703 – CONTINUATION SHEET**

- A. The Contractor shall use AIA Document G-703 Continuation Sheet to itemize his/her SOV for this contract. Provide additional sheets as necessary.
- B. Provide information in Column A (Item No.), Column B (Description of Work), and Column C (Scheduled Value) 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.

1 **3.3. INITIAL SCHEDULE OF VALUES SUBMITTAL**

- 2 A. The Contractor shall provide his/her initial SOV to the CPM no later than five (5) working days after the Pre-  
3 construction Meeting.  
4 1. The initial SOV shall provide information in Column A (Item No.), Column B (Description of Work), and  
5 Column C (Scheduled Value) only.  
6 2. The level of detail shall be as described in section 3.2 above.  
7 B. The Project Engineer (PE) and the City Project Manager (CPM) shall review the SOV as any other submittal and  
8 may require modifications to reflect additional detail as necessary.  
9 C. The Contractor shall resubmit the SOV as necessary until such time as the PE and CPM have sufficient detail for  
10 assessing and approving future Progress Payment Applications.  
11 D. Progress Payment Application 1 will not be processed until such time as the Contractor has met this requirement  
12 regardless of the amount of work completed per the application.  
13

14 **3.4. SOV FOR PROGRESS PAYMENT REQUESTS**

- 15 A. The Contractor shall update the initial SOV with each Progress Payment Application as follows:  
16 1. Initial items and values as part of Section 3.3 above will not be adjusted once the original Schedule of  
17 Values submittal has been approved.  
18 2. Change orders shall be added as additional items and values at the bottom of the SOV as they become  
19 approved and posted to the City's contract worksheet. The value for each change order shall be the  
20 value indicated on the SOV and shall stand alone. Values shall not be split out or combined with other  
21 existing items with similar work descriptions on the original SOV.  
22 3. Fill out Columns D, E, F and G to properly reflect the work completed and materials received since the last  
23 Progress Payment Application.  
24 4. Only materials delivered and stored on the project site may be reflected on SOV progress updates.  
25 B. Provide updated G702 and G703 sheets with each Progress Payment application.  
26 C. See Specification 01 29 76 Progress Payment Procedures for additional information on submitting Progress  
27 Payment Applications.  
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**END OF SECTION**

**SECTION 01 29 76**  
**PROGRESS PAYMENT PROCEDURES**

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4 PART 1 – GENERAL ..... 1  
5 1.1. SUMMARY ..... 1  
6 1.2. RELATED SPECIFICATIONS ..... 1  
7 1.3. RELATED DOCUMENTS ..... 1  
8 1.4. PROGRESS PAYMENT MILESTONES ..... 1  
9 1.5. PROGRESS PAYMENT SUBMITTAL ..... 4  
10 PART 2 - PRODUCTS - THIS SECTION NOT USED ..... 4  
11 PART 3 - EXECUTION ..... 4  
12 3.1. GENERAL CONTRACTOR PROCEDURE ..... 4  
13 3.2. PROJECT ARCHITECT PROCEDURE ..... 5  
14 3.3. CITY PROJECT MANAGER PROCEDURE ..... 5  
15

16 **PART 1 – GENERAL**

17  
18 **1.1. SUMMARY**

- 19 A. The General Contractor (GC) shall review this and all related specifications prior to submitting progress payment  
20 requests.  
21 B. Progress payment requests (Partial Payment-PP) for this contract shall be submitted digitally by the GC to the  
22 CPM.  
23 C. The Project Engineer (PE) and City Project Manager (CPM) shall review and amend or approve the PP as needed.  
24 D. After approval of the PP by the CPM, he/she shall forward the PP to the appropriate agencies for BPW  
25 contractual review and payment processing.  
26

27 **1.2. RELATED SPECIFICATIONS**

- 28 A. Section 01 26 63 Change Order (CO)  
29 B. Section 01 29 73 Schedule of Values  
30 C. Section 01 31 19 Progress Meetings  
31 D. Section 01 32 26 Construction Progress Reporting  
32 E. Section 01 33 23 Submittals  
33 F. Section 01 77 00 Closeout Procedures  
34 G. Section 01 78 23 Operation and Maintenance Data  
35 H. Section 01 78 36 Warranties  
36 I. Section 01 78 39 As-Built Drawings  
37 J. Section 01 79 00 Demonstration and Training  
38

39 **1.3. RELATED DOCUMENTS**

- 40 A. The following documents shall be used when evaluating PP requests.  
41 1. Construction progress reports filed since the last payment request.  
42 2. Contractors Schedule of Values as updated from the last payment request. See Specification 01 29 73.  
43 3. Any document that may be required to be submitted for review and approval, as noted by the  
44 specifications listed in Section 1.2 above, or the Progress Payment Milestone Schedule in Section 1.4  
45 below, to achieve a required bench mark of contract progression or contract requirement.  
46

47 **1.4. PROGRESS PAYMENT MILESTONES**

- 48 A. City Engineering-Facility Management has developed the Project Payment Milestone Schedule (Section 1.4  
49 below) to assist the GC in providing required construction specific documentation and general contractual  
50 documentation in a timely manner.  
51 B. The Progress Payment Milestone Schedule is not an all inclusive list. Multiple agencies review progress payment  
52 requests and contract closeout requests. Missing, incomplete, or incorrect documentation for any agency may  
53 be a cause for not processing progress payments. It shall be the sole responsibility of the Contractor for  
54 providing documentation as required or requested to the appropriate agencies.  
55 C. The milestone schedule is based on the contract total sum and shall be valid for most contracts. Milestone  
56 submittals will be required with whatever progress payment hits the percentage of contract total indicated in  
57 the schedule.

- 1 D. The CPM shall review the milestone schedule with each progress payment request and at his/her option may  
 2 elect to hold processing the progress payment until such time as the contractor has met the requirements for  
 3 providing construction specific documentation.  
 4 E. It shall be the General Contractors responsibility to comply with all BPW Contract Administration requirements  
 5 and related deadlines as outlined in the Award Letter, Award Checklist, and Start Work Letter.  
 6

<b>Progress Payment (PP) Milestone Schedule</b>		
<b>Milestone Description</b>	<b>Due Before</b>	<b>Remarks</b>
BPW Contract Administration Documentation <ul style="list-style-type: none"> <li>• Workforce profiles</li> <li>• Best Value Contracting Documentation</li> <li>• Sub-contractors prequalification approval &amp; Affirmative Action plans</li> <li>• Other as may be required</li> </ul>	PP-1, or start work as applicable	<ul style="list-style-type: none"> <li>• For GC and Sub-contractors before PP-1 regardless of scheduling</li> <li>• Sub-contractors (if applicable), due 10 days before they may start work</li> <li>• Sub-contractors (if applicable), due 10 days before they may start work</li> </ul>
Required Construction Submittals/Administrative Documents <ul style="list-style-type: none"> <li>• Contractors Project Directory</li> <li>• Schedule of Values</li> <li>• Submittals Schedule</li> <li>•</li> <li>• Closeout Requirement Checklist</li> <li>• Warranty Checklist</li> </ul>	PP-1	References <ul style="list-style-type: none"> <li>• Specification 01 31 23</li> <li>• Specification 01 29 73</li> <li>• Specification 01 32 19</li> <li>•</li> <li>• Specification 01 77 00</li> <li>• Specification 01 78 36</li> </ul>
Construction Progress Milestones <ul style="list-style-type: none"> <li>• Early submittals, per submittal schedule</li> <li>• Detailed Contract Schedules</li> </ul>	PP-1	See specifications for specific requirements <ul style="list-style-type: none"> <li>• Specification 01 32 19, Examples: concrete mix, structural steel, products with long lead times</li> <li>• See Specification 01 32 16</li> </ul>
General Construction Progress Requirements are all up to date <ul style="list-style-type: none"> <li>• Progress Schedules</li> <li>• Submittals/Re-submittals (ongoing)</li> <li>• Schedule of Values</li> <li>• Progress Reporting</li> <li>•</li> <li>•</li> <li>• QMOs are being addressed and closed</li> <li>• Progress Cleaning</li> <li>• As-Built Drawings</li> </ul>	Each future PP	Verified with each Progress Payment Request <ul style="list-style-type: none"> <li>• Specification 01 32 16</li> <li>• Specification 01 33 23</li> <li>• Specification 01 29 73</li> <li>• Specification 01 32 26</li> <li>•</li> <li>•</li> <li>• Specification 01 45 16</li> <li>• Specification 01 74 13</li> <li>• Specification 01 78 39</li> </ul>
<b>* All of the above are updated as required</b>		
BPW Contract Administration Documentation <ul style="list-style-type: none"> <li>• Weekly payroll reports</li> <li>• Best Value Contracting Reports</li> <li>• SBE Reports</li> </ul>	25% CT or PP 2	See 1.4.E above. <i>This progress payment will be withheld by BPW for any missing contractual documentation.</i>
Construction Progress Milestones <ul style="list-style-type: none"> <li>• Construction/Contract Closeout Meeting #1</li> <li>• Submittals/Re-submittals complete</li> </ul>	70% CT	<ul style="list-style-type: none"> <li>• Specification 01 31 19</li> <li>• Specification 01 33 23</li> </ul>
Operation and Maintenance (O & M) drafts	60% CT	Specification 01 78 23

<b>Progress Payment (PP) Milestone Schedule</b>		
<b>Milestone Description</b>	<b>Due Before</b>	<b>Remarks</b>
BPW Contract Administration Documentation <ul style="list-style-type: none"> <li>Request Finalization Review from BPW</li> </ul>	80% CT	This is a recommendation to the GC and is not a requirement of this PP. <ul style="list-style-type: none"> <li>Specification 01 77 00</li> </ul>
Construction Progress Milestones <ul style="list-style-type: none"> <li>Operation and Maintenance (O &amp; M) finals, accepted</li> <li>All major QMO issues resolved</li> <li>As-Built Drawings, Division Trades ready for GC review</li> </ul>	80% CT	<ul style="list-style-type: none"> <li>Specification 01 78 23</li> <li>Specification 01 45 16; Items that could prevent occupancy</li> <li>Specification 01 78 39</li> </ul>
All of the following shall be completed for this PP: <ul style="list-style-type: none"> <li>Regulatory Inspections completed</li> <li>All QMO reports closed</li> <li>Demonstration and Training completed</li> <li>Attic Stock completed</li> <li>Final Cleaning</li> </ul>	90% CT	Contractor to determine the proper order of completion: <ul style="list-style-type: none"> <li>Governing ordinances and statutes</li> <li>Specification 01 45 16</li> <li>Specification 01 79 00</li> <li>Specification 01 78 43</li> <li>Specification 01 74 13</li> </ul>
Construction Closeout Procedures: <ul style="list-style-type: none"> <li>Letter of Substantial Compliance sent to BI and DHS as needed</li> <li>Certificate of Occupancy issued</li> <li>As-Built Drawings, finals, accepted</li> <li>City Letter of Substantial Completion</li> <li>Warranty letters dated and issued</li> </ul>	100% CT	See Specification 01 77 00 <ul style="list-style-type: none"> <li>Generated/Signed by the Engineer</li> <li>Building Inspection</li> <li>Specification 01 78 39</li> <li>Signed by the City Engineer</li> <li>Specification 01 78 36</li> </ul>
<b>* Completion of this begins the one year warranty.</b>		
BPW Contract Administration Documentation Contract Closeout Procedures <ul style="list-style-type: none"> <li>Construction Closeout has been completed</li> <li>Contractor requests final payment of retainage upon receiving City Letter of Substantial Completion</li> <li>All BPW contractual requirements are verified</li> </ul>	Final	See Specification 01 77 00 <ul style="list-style-type: none"> <li>Contractor must provide any missing BPW Contractual Documentation</li> </ul>
<b>* Completion of this closes the contract but not the warranty period/bond.</b>		
<b>NOTE: CT = Contract Total less held retainage</b>		

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**1.5. PROGRESS PAYMENT SUBMITTAL**

- A. Each progress payment submittal shall be:
1. Digital in PDF format
  2. PDF shall be in color
  3. Uploaded to the appropriate Project Management library and properly named per the tutorial instructions provided to the awarded contractor.
- B. Submit all required construction progress documentation
- 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.

- 1 c. Being manufactured off site at any location may not be invoiced (example: cabinetry, ductwork,  
2 etc.)  
3 d. Completed products stored off site locally waiting for delivery to the project site may be invoiced  
4 with prior approval by the CPM. All of the following conditions must be met to be allowed:  
5 i. Items must be visually inspected by CPM to verify product is complete.  
6 ii. Item must be stored inside a compatible structure and the structure and contents must be  
7 insured.  
8 iii. Contractor is responsible for condition until installation is completed.  
9 2. All labor and equipment, including rental time for the current progress period may be invoiced.  
10 3. Only completed installations may be invoiced to 100% based on the Schedule of Values.  
11 D. DO NOT submit BPW Contract Administration Documentation for review with Progress Payment Requests,  
12 submit them directly to the correct agency and in the correct format as instructed from information in your BPW  
13 Contract Award Packet instructions.  
14

15 **PART 2 - PRODUCTS - THIS SECTION NOT USED**

16  
17 **PART 3 - EXECUTION**

18  
19 **3.1. GENERAL CONTRACTOR PROCEDURE**

- 20 A. The GC shall provide an updated version of his/her schedule of values (AIA documents G702 & G 703) with each  
21 PP request.  
22 1. The AIA - Application and Certificate for Payment (G702) shall be properly filled out and prepared for the  
23 Architects review. See specification 01 29 73, Schedule of Values for more information.  
24 2. The AIA - Continuation sheets (G703) shall be properly filled out and indicate the dollar value of the  
25 completed work to date for each item on the form. See specification 01 29 73, Schedule of Values for  
26 more information.  
27 a. The GC shall subtotal the work completed to date for all of the original Schedule of Value items.  
28 b. Divide the sub total of work completed by the Original Contract Total to obtain a percentage  
29 complete of the original Lump Sum Bid. This percentage may be taken out to five (5) decimal  
30 places (round fifth place up or down as needed).  
31 i. Example: \$5,192.55 of completed work divided by \$10,000 original Contract Total =  
32 0.519255, round this to 0.51926  
33 c. Write the percentage in Column 10 on the City Tabular Sheet for the original lump sum bid item in  
34 RED ink.  
35 3. Ensure that any newly posted change orders from the City of Madison provided tabulation sheet have  
36 been entered on the G703 continuation sheets. Repeat steps a thru c above for each change order on  
37 the schedule of values and the City Tabular Sheet.  
38 B. The GC shall fill out the City of Madison Application and Certificate of Payment cover sheet as follows:  
39 1. The GC shall not change any pre-printed information and shall not write in the box that indicates previous  
40 progress payments.  
41 2. The GC shall sign and date the form where indicated.  
42 3. The GC shall provide the dates from and to for the PP being requested.  
43 4. The GC shall provide the list of all contractors/sub-contractors that were actively working during the  
44 dates indicated above.  
45 a. All contractors/sub-contractors named must be in compliance with all City requirements (Pre-  
46 qualified, Affirmative Action Plan on file, etc). The PP will be held and not processed by the City of  
47 Madison until all contractors/sub-contractors are in compliance.  
48 b. Do not list the names of suppliers or manufacturers, doing so will slow down processing and  
49 require a re-submittal of the paperwork.  
50 C. The General Contractor (GC) shall scan all of the documents listed below in the order shown, save the scan as a  
51 single PDF file for each PP request.  
52 1. City cover sheet – Application and Certificate for Payment  
53 2. City tabulation sheet(s)  
54 3. AIA G702 - Application and Certificate for Payment  
55 4. AIA G703 - Continuation Sheet(s)  
56 5. Any miscellaneous documents that may be requested as backup documentation for the pay request.  
57 a. Lien waivers are not required and shall not be submitted.  
58 b. Do not provide contractual administrative documents such as pay reports with pay requests.

1 c. Do not supply progress deliverables with pay requests.  
2

3 **3.2. PROJECT ENGINEER PROCEDURE**

- 4 A. The PE shall review the AIA-continuation sheets provided by the GC to determine if the Schedule of Values  
5 accurately reflects the work completed for the inclusive dates indicated.  
6 B. The PE shall advise the CPM of any discrepancies in the schedule of values.  
7 C. The PE shall work with the GC and the CPM to resolve any issues prior to signing the AIA - Application and  
8 Certificate for Payment.  
9 D. When verified, the PE shall digitally sign the original PDF version of the AIA - Application and Certificate for  
10 Payment.  
11

12 **3.3. CITY PROJECT MANAGER PROCEDURE**

- 13 A. The CPM shall review all documents submitted by the GC and work with the PE to ensure the schedule of values  
14 accurately reflects the work completed to date.  
15 B. The CPM may elect to hold processing of any progress payment pending submittal of required progress payment  
16 milestones.  
17 C. When verified, the CPM shall digitally sign the City Cover Sheet and forward the required documentation to the  
18 appropriate City agencies for further processing of the payment request.  
19

20 **END OF SECTION**  
21



**SECTION 01 31 13  
PROJECT COORDINATION**

1  
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4 PART 1 – GENERAL ..... 1  
5 1.1. SUMMARY ..... 1  
6 1.2. RELATED SPECIFICATIONS ..... 1  
7 1.3. GENERAL REQUIREMENTS ..... 1  
8 1.4. GENERAL CONTRACTOR PERFORMANCE REQUIREMENTS ..... 2  
9 1.5. SUB-CONTRACTOR PERFORMANCE REQUIREMENTS ..... 2  
10 PART 2 – PRODUCTS – THIS SECTION NOT USED ..... 3  
11 PART 3 – EXECUTION – THIS SECTION NOT USED ..... 3  
12

**PART 1 – GENERAL**

**1.1. SUMMARY**

- 16 A. Project Coordination covers many areas within the execution of the Contract Documents and the requirements  
17 of proper coordination are the applicable to all contractors executing the Work of this contract.  
18 B. This specification provides general information regarding project coordination for the General Contractor and all  
19 Sub-contractors. All contractors shall be familiar with project coordination requirements and responsibilities  
20 that may be defined in other specification within these Contract Documents.  
21 C. The General Contractor shall at all times be responsible for the project, project site, and execution of the  
22 Contract Documents.  
23

**1.2. RELATED SPECIFICATIONS**

- 24 A. Section 01 29 76 Progress Payment Procedures  
25 B. Section 01 31 19 Progress Meetings  
26 C. Section 01 32 16 Construction Progress Schedules  
27 D. Section 01 32 19 Submittals Schedule  
28 E. Section 01 33 23 Submittals  
29 H. Section 01 60 00 Product Requirements  
30 I. Section 01 77 00 Closeout Procedures, including all specifications referenced therein  
31  
32

**1.3. GENERAL REQUIREMENTS**

- 34 A. The following general requirements shall applicable to all contractors:  
35 1. Cooperate with the Owner, all authorized Owner Representatives, Project Engineer and all consultants of  
36 the Owner.  
37 2. Materials, products, and equipment shall be new, as specified and to industry standards except where  
38 otherwise noted.  
39 3. Labor and workmanship shall be of a high quality and to industry standards.  
40 B. Existing conditions:  
41 1. Verify all existing conditions noted in the contract documents with actual filed locations. Verify  
42 dimensions, sizes and locations, of structural, equipment, mechanical and utility components.  
43 2. Report any inconsistencies, errors, omissions, or code violations in writing to the General Contractor (GC)  
44 immediately.  
45 3. Annotate any inconsistencies, errors, omissions on the GC As-Built record drawings immediately for  
46 future reference.  
47 C. Contract Documents:  
48 1. The Contract Documents are intended to include everything necessary to perform the work. Every item  
49 required may not be specifically mentioned, shown, or detailed.  
50 a. Except where specifically stated all systems and equipment shall be complete, installed, and fully  
51 operable.  
52 b. If a conflict exists within the contract documents the contractor shall furnish the item, system, or  
53 workmanship of the highest quality, largest, largest quantity, or most closely fits the intent of the  
54 contract documents.  
55 c. Manufacturers recommended installation details shall be verified and used prior to installation of  
56 products and equipment so as to not void warranties.  
57 D. Errors and Omissions  
58 1. No Contractor shall take any advantage of any apparent error or omission in the construction documents.

- 1                    2.     The City of Madison shall be permitted to make such corrections and interpretations as may be deemed  
2                    necessary for the fulfillment of the intent of the construction documents.  
3     E.     Owners Representatives  
4                    1.     All contractors shall be familiar with various Owner Representatives having Quality Management  
5                    responsibilities for the duration of this project including but not limited to the following:  
6                    a.     Project Engineer, responsible for all decisions affecting the code compliance and design intent of  
7                    the construction documents.  
8                    b.     Owner, the designated representative of the City Agency that will occupy the project upon  
9                    completion.  
10                    c.     City Project Manager, responsible for all day to day decisions regarding the execution and  
11                    performance of this Public Works Contract.  
12                    d.     Consulting City Staff, responsible for providing consulting services to the Project Engineer, Owner,  
13                    and City Project Manager, also responsible for Quality Management of the construction  
14                    documents.  
15                    2.     Owner Representatives shall be attending progress meetings, pre-installation meetings, performing or  
16                    being present for final testing and acceptance and quality management reporting during the execution of  
17                    the contract documents as outlined in other specifications.  
18

19     **1.4.    GENERAL CONTRACTOR PERFORMANCE REQUIREMENTS**

- 20     A.     Assume the responsibility for all Work specified in the Contract Documents except where specifically identified  
21                    to be performed by the Owner or other contractor separately hired by the Owner.  
22                    1.     Coordinate all work by Owner, equipment provided Owner, or contractor hired by the Owner into the  
23                    project schedule.  
24     B.     Provide all construction management responsibilities as specified in other Division 1 specifications including but  
25                    not limited to:  
26                    1.     Scheduling of work  
27                    2.     Coordination of work between other Trades and Sub-contractors  
28                    3.     Construction administration and management  
29                    4.     Site layout, cleanliness, and protection of completed work/stored materials  
30                    5.     Waste Management  
31                    6.     Quality Assurance and Quality Control  
32     C.     Use Diggers Hotline and private utility locating companies to accurately locate all public and private utilities on  
33                    the property as needed. The GC is responsible for any repair or replacement to any public or private utility  
34                    damaged during the execution of the Work  
35     D.     Report any inconsistencies, errors, omissions, or code violations in writing to the Project Engineer immediately.  
36                    Failure to report inconsistencies prior to beginning work shall indicate that the GC accepted all existing  
37                    conditions.  
38     E.     The GC shall be responsible for assigning work and related responsibilities where the Contract Documents may  
39                    not clearly state who is responsible for providing the work, material, or product.  
40     F.     Provide construction management oversight of all items described in Section 1.5 below.  
41

42     **1.5.    SUB-CONTRACTOR PERFORMANCE REQUIREMENTS**

- 43     A.     Be familiar with all of the contract documents as they pertain to your Work, adjacent work and the overall  
44                    progress of the project.  
45                    1.     All Sub-contractors shall be familiar with all Division 1 specifications as they may apply to progress,  
46                    progress payments, quality control construction management, and closeout of the contract.  
47     B.     Coordinate your Work with all adjacent work and existing conditions.  
48                    1.     Perform your work in proper sequence according to the GC's project schedule and in relation to the work  
49                    of other trades.  
50                    2.     Notify other sub-contractors and trades whose work may be connected to, combined with, or influenced  
51                    by your work and allow them reasonable time and access to complete their work.  
52                    3.     Join your work to the work of others in accordance with the intent of the Contract Documents.  
53                    4.     Order materials and schedule deliveries to facilitate the general progress of the Work.  
54     C.     Cooperate with all other trades to facilitate the general progress of the work. This shall include providing every  
55                    reasonable opportunity for the installation of work by others and the storage of their materials and equipment.  
56                    1.     In no case shall any contractor exclude from the premises or work any Sub-contractor or their employees.  
57                    2.     In no case shall any contractor interfere with the execution or installation of Work by any other Sub-  
58                    contractor or their employees.

- 1           D.     Arrange your work, equipment, and materials and dispose of your construction waste so as to not interfere with  
2                   the work or storage of materials of others.  
3           E.     Coordinate all work as indicated during pre-installation meetings with Owner Representatives, the GC and other  
4                   trades. Any work improperly coordinated shall be relocated as designated by the Owner Representative at no  
5                   additional cost to the City.

6

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

8

9     **PART 3 – EXECUTION – THIS SECTION NOT USED**

10

11

12

13

14

END OF SECTION

**SECTION 01 31 19  
PROJECT MEETINGS**

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5	1.1. SUMMARY .....	1
6	1.2. RELATED SPECIFICATIONS .....	1
7	1.3. PROJECT MEETING TYPES .....	1
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9	PART 2 – PRODUCTS – NOT USED IN THIS SECTION.....	1
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11	3.1. PRECONSTRUCTION MEETING .....	1
12	3.2. CONSTRUCTION PROGRESS MEETINGS.....	2
13	3.3. PRE-INSTALLATION MEETINGS.....	2
14	3.4. PRE-CONTRACT CLOSEOUT MEETINGS .....	2
15	3.5. OTHER SPECIAL MEETINGS.....	3

**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 his/her sub-contractors.

**1.2. RELATED SPECIFICATIONS**

- A. 01 32 16 Construction Progress Schedules

**1.3. PROJECT MEETING TYPES**

- A. The following project meeting types may be used but not limited to the following
  - 1. Preconstruction Meeting
  - 2. Construction Progress Meetings
  - 3. Pre-installation Meetings (including mock-up review meetings)
  - 4. Special 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 Engineer and the GC Project Manager.
- B. The CPM shall be responsible for the final agenda.
- C. The CPM and Project Engineer 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. Engineer and applicable sub consultant(s)
  - 3. General Contractor and applicable subcontractors and suppliers
  - 4. City Quality Management Staff
  - 5. 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

- 1                   3.    BPW Administrative requirements and due outs
- 2                   a.    Small Business Enterprise (SBE) (if applicable)
- 3                   b.    Certified payroll forms
- 4                   c.    Workforce profiles
- 5                   d.    Best Value Contracting (BVC)
- 6                   4.    General Facility Management Division 1 Specifications, including:
- 7                   a.    Section 01 29 76    Progress Payment Procedures
- 8                   b.    Section 01 45 16    Field Quality Control Procedures
- 9                   c.    Section 01 77 00    Closeout Procedures
- 10                  5.    Project Meeting scheduling
- 11                  a.    Section 01 31 19    Project Meetings
- 12                  6.    Construction Schedule

13  
14 **3.2. CONSTRUCTION PROGRESS MEETINGS**

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

42 **3.3. PRE-INSTALLATION MEETINGS**

- 43    A.    The GCPM shall schedule and conduct all pre-installation meetings, including mockup reviews, before each
- 44           construction activity that requires coordination with other trades.
- 45    B.    The GCPM shall be responsible for the final agenda and meeting minutes.
- 46    C.    The GCPM will work with all concerned parties to resolve issues as needed and submit RFI's if necessary.
- 47    D.    Required attendance shall be from the list in 3.1.D. above and shall be personnel having a stake in the outcome
- 48           of the installation or knowledge of the system being installed.
- 49    E.    In the event the Contractor installs equipment or materials without a pre-installation meeting the Contractor
- 50           shall be solely responsible for removing, replacing, repositioning materials and equipment as instructed by the
- 51           Project Engineer or City Project Manager at no additional cost to the City.
- 52

53 **3.4 PRE-CONTRACT CLOSEOUT MEETINGS**

- 54    A.    One (1) Pre-contract Closeout Meetings shall be held to review the closeout procedures, requirements, and
- 55           contract deliverables.
- 56           1.    Pre-contract Closeout Meeting #1 shall be scheduled prior to the 80% Progress Payment Request is being
- 57           requested. This meeting shall discuss, but not be limited to, the status of scheduling final regulatory

- 1 inspections, cleaning up outstanding QMO's, demonstration and training, O&M manuals, attic stock; and  
2 finalization review of payroll and other related documents.
- 3 B. The GCPM shall schedule, coordinate, and make physical arrangements for both meetings.
- 4 C. All of the following shall be required to attend both meetings:
- 5 1. The GCPM and the GC Field superintendent
- 6 2. All Subcontractor Project Managers regardless of the current status of their work.
- 7 a. The GCPM may excuse a Subcontractor PM if he is confident that all contractual requirements for
- 8 closeout by the subcontractor have been completed and/or delivered to the GCPM. The list of
- 9 attendees shall be reviewed and agreed upon with CPM ahead of the meeting.
- 10 b. At the option of these project managers the field supervisors may also attend.
- 11 3. The Project Architect and at least one design consultant from each discipline represented by the plans
- 12 and specifications to address open QMOs, final tests, reports, etc.
- 13 4. The Owner
- 14 5. The CPM
- 15 6. Quality Management staff as needed to address open QMOs, final tests, reports, etc.
- 16 7. The Commissioning Agent
- 17 D. The CPM shall publish an agenda and chair the meeting.

18

19 **3.5 OTHER SPECIAL MEETINGS**

- 20 A. The Contractor shall schedule special meetings per the requirements of these specifications.
- 21 B. Special meetings may include but are not limited to the following:
- 22 1. Equipment start up meetings
- 23 2. Testing and balancing meetings
- 24 3. Other meetings as necessitated by the contract documents

25

26

**END OF SECTION**

**SECTION 01 32 16**  
**CONSTRUCTION PROGRESS SCHEDULES**

1  
2  
3  
4 PART 1 – GENERAL ..... 1  
5 1.1. SCOPE ..... 1  
6 1.2. RELATED SPECIFICATIONS ..... 1  
7 PART 2 – PRODUCTS – THIS SECTION NOT USED ..... 1  
8 PART 3 - EXECUTION ..... 1  
9 3.1. OVERALL PROJECT SCHEDULE (OPS) ..... 1  
10

11 **PART 1 – GENERAL**

12  
13 **1.1. SCOPE**

- 14 A. This specification is to identify various project related schedules associated with indicating construction progress  
15 and outlook. The following schedules are the responsibility of the General Contractor (GC).  
16 1. Overall Project Schedule  
17 B. This specification is not intended to include internal schedules generated by the contractors during their  
18 planning and execution of the contract.  
19

20 **1.2. RELATED SPECIFICATIONS**

- 21 A. Section 01 29 76 Progress Payment Procedures  
22 B. Section 01 31 19 Progress Meetings  
23 C. Section 01 74 13 Progress Cleaning  
24 D. Section 01 77 00 Closeout Procedures  
25 E. Section 01 78 23 Operation and Maintenance Data  
26 F. Section 01 78 36 Warranties  
27 G. Section 01 78 39 As-Built Drawings  
28 H. Section 01 79 00 Demonstration and Training  
29 I. Other specification within the construction documents that may indicate the need for scheduling any event with  
30 Owner, Project Engineer, Owner Representatives, including any owner provided equipment.  
31

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

33  
34 **PART 3 - EXECUTION**

35  
36 **3.1. OVERALL PROJECT SCHEDULE (OPS)**

- 37 A. The GC shall prepare an OPS that covers the duration of the contract from the pre-construction meeting through  
38 the end of construction to final contract closeout.  
39 1. The GC shall review Specification 01 77 00 Closeout Procedures to become familiar with definitions,  
40 differences, and requirements for closing out the construction and contract including the association with  
41 progress payments.  
42 B. The GC shall provide copies and lead a discussion on the OPS during the pre-construction meeting.  
43 C. The OPS shall indicate start and end dates of each task associated with the project.  
44 D. The OPS shall clearly indicate the critical path of the project.  
45 E. The GC shall update the OPS as often as necessary during the duration of the project. Updates will be briefed as  
46 needed during progress meetings.  
47

48 **END OF SECTION**  
49

**SECTION 01 33 23**  
**SUBMITTALS**

1  
2  
3  
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5 1.1. SUMMARY ..... 1  
6 1.2. RELATED REFERENCES ..... 1  
7 1.3. SUBMITTAL REQUIREMENTS ..... 1  
8 PART 2 – PRODUCTS – THIS SECTION NOT USED ..... 2  
9 PART 3 - EXECUTION ..... 2  
10 3.1. GENERAL CONTRACTORS PROCEDURES ..... 2  
11 3.2. SUBMITTAL REVIEW ..... 2  
12 3.3. PROJECT ENGINEERS REVIEW ..... 2

**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.
- D. 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 Engineer requesting other approved alternates prior to uploading a digital submittal.
- E. 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.

**1.2. RELATED REFERENCES**

- A. Section 01 29 76 Progress Payment Procedures  
B. Section 01 32 19 Submittals Schedule  
C. Section 01 32 26 Construction Progress Reporting  
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.



- 1 a. Submittals shall not include sales fliers or other similar documents that typically do not provide
- 2 complete manufacturers data.
- 3 2. Documents within the PDF submittal shall be printable to a sized sheet no less than 8-1/2 by 11 inches
- 4 and no larger than 24 by 36 inches.
- 5 3. At the beginning of each submittal the contractor shall identify the plan reference (WC-1, EF-3, etc.) in
- 6 RED block letters that the submittal is for.
- 7 4. Where multiple model numbers appear in a table the contractor shall identify the specific model being
- 8 submitted by using a RED square, box, or other designation to distinguish the correct model from others
- 9 on the page.
- 10 B. A complete submittal will include all information associated with the product or equipment as presented in
- 11 plans, equipment tables, and specifications. Information shall include but not be limited to the following:
- 12 1. Dimensional data
- 13 2. Performance data
- 14 3. Resource requirements, power, water, waste, etc
- 15 4. Clearance and maintenance requirements
- 16 5. Finish information, colors, textures, etc.
- 17 6. Warranty information
- 18 C. Where a submittal includes material samples (carpet, tile, paint draw downs, etc.) the contractor shall do the
- 19 following:
- 20 1. The Contractor shall submit the sample(s) as indicated in the specification.
- 21 2. The Contractor shall include a quality photograph(s) of the product with the digital submittal.
- 22 Photographs shall meet the following requirements:
- 23 a. Formatted to be between 500Kb and 1.0 Mb in file size
- 24 b. Have no glare or flash reflection on the sample
- 25 c. Sample fills the frame of the photo and shows detail as needed. Include multiple photos from
- 26 other angles as needed.
- 27 d. Scanned copies of products or photos are not acceptable.
- 28 D. Uploaded submittals should be relative and related to a specific written specification.
- 29 1. Do not upload submittals under a broad category or division (I.E. HVAC 23 00 00). Always upload by the
- 30 specific specification that identifies a required product or performance to be met.
- 31 2. Group related items together if the specification is written that way. (I.E. all of the plumbing fixtures and
- 32 trim relative to one specific specification should be submitted together).
- 33 3. Submittals shall be grouped and adhere to the divisions in the submittal schedule. Submittals that do not
- 34 conform to the submittal schedule and/or specification divisions will be rejected for re-submittal.
- 35

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

37  
38 **PART 3 - EXECUTION**

39  
40 **3.1. GENERAL CONTRACTORS PROCEDURES**

- 41 A. All required submittals will be submitted electronically by the GC.
- 42 B. Uploading the submittal indicates that the GC has reviewed and approved the submittal against the contract
- 43 document requirements.
- 44 C. The GC shall discuss submittal status at all progress meetings and shall monitor submittal review/approval/re-
- 45 submittal so as to not incur delays in the project schedule.
- 46 D. The GC and sub-contractors shall provide re-submittals as required.
- 47

48 **3.2. SUBMITTAL REVIEW**

- 49 A. The submittal shall be reviewed internally by the required Architect/Engineer and Owner Representative in a
- 50 timely fashion and provide commentary on missing items, incorrect information, or incomplete shop drawings,
- 51 etc as needed.
- 52 B. When the internal review is completed the CPM will notify the Project Engineer the submittal is ready for final
- 53 review.
- 54 C. Information will be transmitted electronically.
- 55

1 **3.3. PROJECT ENGINEERS REVIEW**

- 2 A. Upon completion of the internal review the Project Engineer shall review all internal review comments, confer  
3 with the CPM as needed and determine the appropriate disposition status for the submittal (approved or  
4 resubmit).
- 5 B. The Project Engineer shall summarize final internal review comments onto the submittal cover sheet, provide a  
6 final disposition of the submittal and update the review status of the submittal to "Complete..." (with or w/o  
7 comments) or "Rejected".
- 8 C. A completed Final Review status initiates the CPM to notify the GC and appropriate sub-contractor(s) that the  
9 review of the submittal has been completed.
- 10 D. Information will be transmitted electronically.

11  
12 **END OF SECTION**  
13

**SECTION 01 41 00  
REGULATORY REQUIREMENTS**

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11

**PART 1 – GENERAL**

**1.1. REQUIREMENT INCLUDED**

Unless otherwise specifically directed by Contractor each Subcontractor and each Sub-subcontractor shall comply with provisions of this Section as required for proper execution and completion of their Work or portions thereof

**1.2. PROCEDURES**

Comply with and give notices required by applicable laws, statutes, ordinances, codes, rules, and regulations, and lawful orders of public authorities having jurisdiction applicable to performance of the Work. Comply with and give notices required by Owner’s and Contractor’s insurance companies, local utilities and labor regulations relating to the performance of the Work, the protection of adjacent property, and the maintenance of passage ways, guard fences and other protective facilities.

The Contractor shall acquire all permits, licenses, and approvals necessary for the execution of this Contract and performance of the Work and provide evidence of such applicable permits, licenses, and approvals at the Pre-Construction Meeting or before commencement of the Work.

Where Contract Documents require abatement of asbestos containing materials, prior written Notice to the State of Wisconsin, Department of Natural Resources is required. The Contractor shall provide evidence of such Notice prior to commencement of the Work.

Procure all certificates of inspection, use, and occupancy, and all permits and licenses, pay all charges and fees and give all notices necessary and incidental to the due and lawful prosecution of the Work. Certificates of inspection, use and occupancy shall be delivered to the Owner upon completion of the Work in sufficient time for occupation of the Project in accordance with the approved schedule for the Work. The costs of such procurement, payment and delivery shall be included within the Base Bid.

Exercise precaution at all times for the protection of persons (including employees) and property. Observe the safety provisions of applicable laws, building and construction codes. Refer to the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America.

It is not Contractor’s responsibility to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, and rules and regulations. However, if Contractor observes that portions of the Contract Documents are at variance therewith, Contractor shall promptly notify A/E and Owner in writing, and necessary changes shall be accomplished by appropriate Modification.

If Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities having jurisdiction, the Contractor shall assume full responsibility for such Work and shall bear the costs attributable to correction.

Refer to the Sections of the Work for referenced codes, standards, tests, etc., applicable to the Work.

**1.3. NOTICES**

Concealed or Unknown Conditions:

If the Contractor encounters conditions at the site are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual

1 nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction  
2 activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the  
3 Owner and the Engineer before conditions are disturbed and in no event later than 21 days after first observance of the  
4 conditions. The Engineer will promptly investigate such conditions and, if the Engineer determines that they differ  
5 materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any of the  
6 Work, will recommend and equitable adjustment in the Contract Sum or Contract Time, or both. If the Engineer  
7 determines that the conditions at the site are not materially different from those indicated in the Contract Documents  
8 and that no change in the terms of the Contract is justified, the Engineer shall promptly notify the Owner and Contractor  
9 in writing, stating the reasons.

10  
11 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers,  
12 archaeological sites, or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend  
13 any operations that would affect them and shall notify the Owner and Engineer. Upon receipt of such notice, the Owner  
14 shall promptly take any action necessary to obtain governmental authorization required to resume operations. The  
15 Contractor shall continue to suspend operations until otherwise instructed by the Owner but shall continue with all  
16 other operations that do not affect those remains or features.

17  
18 **1.4 PERMITS**

19 Permits, Fees, Licenses, and Inspections: Unless otherwise provided in the Contract Documents, Contractor shall secure  
20 and pay for the building permit as well as for other permits, fees, licenses, inspections and approvals by government and  
21 utility agencies, necessary for proper execution and completion of the Work that are customarily secured after  
22 execution of the Contract and legally required at the time bids are received or negotiations concluded.

23  
24 Owner will obtain plan approvals and pay all fees required by the Wisconsin Department of Safety and Professional  
25 Services.

26  
27 Contractor shall obtain all permits and pay all fees required by local utilities for permanent electric and gas service.

28  
29 Contractor shall obtain copies of all required permits and certificates of inspection applicable to the work.

30  
31 Contractor shall furnish A/E and Owner with copy of all required permits and certificates.

32  
33 **PART 2 – PRODUCTS - THIS SECTION NOT USED**

34  
35 **PART 3 – EXECUTION - THIS SECTION NOT USED**

36  
37  
38  
39

**END OF SECTION**

**SECTION 01 45 16**  
**FIELD QUALITY CONTROL PROCEDURES**

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17

18 **PART 1 – GENERAL**

19  
20 **1.1. SUMMARY**

- 21 A. The City of Madison has developed a multi-faceted Quality Management Program that begins with contract  
22 signing and runs through contract closeout to ensure the best quality materials, workmanship, and product are  
23 delivered for the contracted Work.  
24 2. The Quality Management Observation (QMO) is an ongoing observation of the construction process as it  
25 progresses. The City of Madison does not use a “Punch List” or “Corrections List” as it is typically known  
26 throughout the construction industry. The QMO process acts as an “in progress punch list”.  
27 a. By using the QMO process the City of Madison’s goal is to have a zero item punch list prior to the  
28 90% progress payment and owner occupancy.  
29 B. All contractors shall be required to review the specifications identified in Section 1.2 below, and other related  
30 specifications identified therein to become familiar with the terminology and expectations of this City of  
31 Madison Public Works contract.  
32 C. It is the intent of this specification to outline the requirements, expectations, and responsibilities of the General  
33 Contractor (GC), Project Engineer, and other representatives of the Owner for items of Quality Assurance and  
34 Quality Control.  
35 1. This specification is not intended to conflict other specifications requiring testing and inspecting services.  
36 2. This specification does not relieve the GC from any requirements associated with regulatory inspections  
37 performed by the City of Madison Building Inspection Unit, or inspectors from other agencies as required  
38 by code.  
39 3. Any testing performed by an Owner’s Representative does not relieve the GC from performing any  
40 testing that may required by the construction documents.  
41

42 **1.2. RELATED SPECIFICATION SECTIONS**

- 43 A. Section 01 26 13 Request for Information (RFI)  
44 B. Section 01 29 76 Progress Payment Procedures  
45 C. Section 01 31 13 Project Coordination  
46 D. Section 01 77 00 Closeout Procedures  
47

48 **1.3. PERFORMANCE REQUIREMENTS**

- 49 A. All contractors shall be responsible for a proper quality assurance/quality control (QA/QC) program throughout  
50 the execution of the Work defined within the construction documents, including all recognized construction  
51 industry standards and all applicable regulatory codes.  
52 B. The GC shall be responsible for all of the following:  
53 1. Monitor the quality of all workmanship, supplies, materials, and products being installed by all  
54 contractors and installers to ensure they meet or exceed the minimum requirements set forth by the  
55 construction documents.  
56 2. Submit a Request for Information (RFI) whenever manufacturers’ instructions or referenced standards  
57 conflict with the construction documents before proceeding with the Work.

- 1                    3.     Ensure that Work requiring special certifications or licensing is being performed by is being performed  
2                    and supervised by personnel that meet the appropriate requirements.  
3                    a.     Ensure that all certificates and licenses are current throughout the execution of the project.  
4                    C.     The City of Madison and its representatives shall perform quality assurance and quality control activities  
5                    throughout the execution of this project. This in no way relieves the GC of maintaining an acceptable QA/QC  
6                    program.  
7

8 **1.4.    QUALITY ASSURANCE**

- 9                    A.     The GC shall be responsible for the following:  
10                    1.     All materials, equipment, and products shall be new, clean, undamaged, and meet the performance  
11                    specifications defined within the construction documents including favorably reviewed submittals.  
12                    a.     Any material, equipment, or product that does not meet the requirements of the construction  
13                    documents shall be removed and replaced, including any adjacent and related work, at the GCs  
14                    expense.  
15                    2.     All Work shall be performed by persons properly trained and/or qualified to produce workmanship of the  
16                    quality specified in the construction documents.  
17                    3.     Providing access to updated as-builts, addenda, submittals, bulletins and other related construction  
18                    documents at the project site.  
19                    B.     The City of Madison and its representatives may be responsible for any of the following:  
20                    1.     Attend pre-installation meetings  
21                    2.     Attend construction progress meetings  
22                    3.     Review all submittals  
23                    4.     Conduct field visits for QA/QC purposes, provide feedback to the GC and sub-contractors using Quality  
24                    Management Observation (QMO) reports.  
25                    5.     Review delivered equipment  
26                    6.     Witness equipment installations, startups, testing as specified in other specifications  
27

28 **1.5.    QUALITY MANAGEMENT OBSERVATION REPORT**

- 29                    A.     The Quality Management Observation report or QMO is used as a QA/QC tool by those entities responsible for  
30                    QA/QC activities, including but not limited to, the GC, CoM, PE, Cx agent, etc.  
31                    B.     QMOs are designed to be an early observation of non-conforming construction work before it becomes buried  
32                    by follow on work. As such it is most often used as an "in progress punch list".  
33                    C.     QMO reports and tracking will be distributed electronically. The distribution list will be established by the GC and  
34                    CPM.  
35

36 **PART 2 – PRODUCTS - THIS SECTION NOT USED**

37  
38 **PART 3 - EXECUTION**

39  
40 **3.1.    QUALITY MANAGEMENT RESPONSIBILITIES**

- 41                    A.     While making routine progress visits to the construction project the GC, CPM, and PE, and applicable others shall  
42                    observe the details of the construction and installations to ensure that the intent of the construction documents  
43                    is being followed.  
44                    B.     If during the progress visit there is a determination of contract non-conformance a QMO report shall be initiated  
45                    to begin the documentation process.  
46                    1.     The GC field superintendent shall be informed immediately of any issue that may cause harm, damage to  
47                    finished work, or be buried prior to properly filing a QMO report.  
48                    C.     The following information will be included in a QMO report:  
49                    1.     The date and time of the field visit  
50                    2.     References to construction documents if any (examples; specification, drawing page, details, approved  
51                    submittals, RFI, CB, etc)  
52                    3.     Short title for the observation being made  
53                    4.     Detailed description of the observation being made  
54                    5.     Assignment of categories (Sitework, Structure, Enclosure, Interior, etc) from the given list that may apply  
55                    to the observation being reported.  
56                    6.     Assignment of responsible contractor(s) that may need to be aware of the observation.  
57                    7.     Any attachments that may help provide reference to the observation.  
58

1 **3.2. RESPONDING TO A QMO**

- 2 A. All contractors receiving email notification of a QMO Observation shall review the details of the observation.  
3 B. The GC shall be responsible for determining the course of action required to remedy the non-conforming issue  
4 and shall coordinate and direct the contractor(s) responsible for any work related to the observation.  
5 C. All contractors assigned to remedy the observation by the GC shall provide follow-up responses on the QMO  
6 report as follows:  
7 1. In the "Follow-Up Response" area enter a description of your follow-up response in the box provided.  
8 2. Add attachments (pictures) if needed to show the work has been completed.  
9

10 **3.3. GENERAL CONTRACTORS FOLLOW-UP**

- 11 A. The GC shall inspect the work to ensure that all assigned contractors have remedied the observation to the  
12 intent of the construction documents.  
13 B. The GC shall respond with any additional comments in his/her response box.  
14

15 **3.4. QMO CLOSEOUT PROCEDURE**

- 16 A. The person who initiated the QMO shall review the remedied work and if properly corrected shall close and date  
17 the QMO form.  
18

19 **3.5. CONSTRUCTION CLOSEOUT**

- 20 A. The GC shall note that successful close out QMOs are required for construction closeout as follows:  
21 1. Certain progress payments as identified in Specification 01 29 76 are contingent QMO reports being properly  
22 closed out.  
23 2. Specification 01 77 00 defines all construction closeout requirements.  
24  
25  
26

27 **END OF SECTION**  
28

**SECTION 01 60 00**  
**PRODUCT REQUIREMENTS**

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18

**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 Standard Specifications for Public Works Construction”.
1. Use the following link to access the Standard 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 Standard 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.



- 1                   b.     Immediately report any damaged products or equipment to the GC, begin arrangements for  
2                   immediate replacement.
- 3                   c.     Materials or equipment that have been damaged, are incomplete, or do not comply with the  
4                   construction documents shall not be permitted to be installed.
- 5                   2.     All materials and products shall be stored within the designated limits of the project site. Only store the  
6                   amount of material necessary for upcoming operations so as not to interfere with other construction  
7                   activities and access to Work by the Owner and Engineer. Any offsite storage shall be at the expense of  
8                   the contractor storing the material or product. All offsite storage requirements shall comply with this  
9                   specification. All offsite storage of materials is subject to Owner Representative Quality Management  
10                  review at any time.
- 11                  3.     Large storage containers may be used but shall be weather tight, securable, placed on concrete blocks,  
12                  timbers, or jack stands and shall be level.
- 13                  4.     When lifting equipment is required the equipment rating shall be greater than the loading requirements  
14                  of the item being lifted. In addition all of the following shall apply as necessary:
- 15                   a.     Only designated and/or designed lift points shall be used.
- 16                   b.     Large items shall have tag lines and handlers at all times during lifting operations.
- 17                   c.     Lift at multiple points as needed to prevent bending.
- 18                  5.     Materials and products stored inside of the structure shall comply with all of the following:
- 19                   a.     Storage shall not be allowed to impede the flow of work in progress.
- 20                   b.     Storage shall not be allowed to hide completed work from review and inspections.
- 21                   c.     Storage shall not exceed the design loads of the structural components it is being stored upon.
- 22                  6.     All materials and products shall be stored according the manufacturers minimum recommended  
23                  requirements. All of the following shall be considered before storing any product or material:
- 24                   a.     Dust and dirt
- 25                   b.     Moisture and humidity, including rain and snow
- 26                   c.     Excessive temperatures, direct sun, etc
- 27                   d.     Product or material weight and size
- 28                   e.     Potential for breakage
- 29                   f.     Product incompatibility with other products such as corrosiveness, chemical reactions,  
30                   flammability, etc.
- 31                   g.     Product or material value and replacement cost
- 32                  7.     The Contractor shall be responsible for providing fully functional tarps or plastic wrap, to protect  
33                  materials and products from the weather. All coverings shall be free of large holes and tears, and shall be  
34                  tied, strapped, or weighted down to resist blowing.
- 35                  8.     The Contractor shall be responsible for any temporary heating, cooling, or other utility requirement that  
36                  may be associated with the storage of a material or product.
- 37                  9.     The Contractor shall be responsible for securing materials and products of value such as copper, A/V  
38                  equipment, etc. Such items shall be stored in securable shipping containers, job trailers or other such  
39                  storage devices. Container shall be kept secured when not in use.
- 40                  B.     The GC shall inspect the job site daily to ensure that all products and materials stay weather tight and are  
41                  secured against vandalism or theft as required by this specification.
- 42                  C.     The Owners Representative may at any time request improvements regarding storage of any material or product  
43                  being provided under these construction documents.
- 44

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

46

47 **PART 3 - EXECUTION**

48

49 **3.1. GENERAL CONTRACTOR REQUIREMENTS**

- 50                  A.     Designate material storage and handling areas as needed including all of the following:
- 51                   1.     Designate specific areas of the site for delivery and storage of materials to be used during the execution  
52                   of the Work.
- 53                   2.     Designated areas shall not be located so as to interfere with the installation of any Work including Work  
54                   by others such as the installation of utilities or the maintenance of existing utilities. This shall include not  
55                   storing items in active utility easements as designated by the site plan.
- 56                  B.     Arrange for openings in the building as needed to allow delivery and installation of large items. Openings shall  
57                  be appropriately sized to include the use of booms, slings, and other such lifting devices that may be larger than  
58                  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 Engineer.
- 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 Standard Specification Section 210.1(f) and other related  
15                   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.

- 1                    2.     After installation, free/open ends shall remain protected with taped plastic sheathing and or temporary  
2                    filters as specified by division or Trade specifications.  
3  
4 **3.8.    OWNER PROVIDED, CONTRACTOR INSTALLED EQUIPMENT**  
5     A.     Section 3.8.A. shall apply to all equipment being provided to any contractor directly from the Owner for  
6             installation under the contract.  
7             1.     The Owner or Owners Representative shall do the following:  
8                    a.     Inspect all deliveries upon receipt and notify manufacturer of any issues directly.  
9                    b.     Review the received shipment with the contractor.  
10                    i.     Only provide products or materials to the contractor that were not damaged through  
11                    shipping or handling.  
12                    ii.    Confirm missing products or materials and anticipated delivery schedule if known.  
13             2.     The Contractor responsible for the installation of Work associated with Owner provided materials or  
14             products shall “take ownership” and provide safe and secure storage and handling as previously  
15             described within this specification.  
16                    i.     The Contractor shall be liable for the repair or replacement of any material or product  
17                    damaged after taking ownership of the product from receipt through final acceptance.  
18     B.     Section 3.8.B. shall apply to all equipment being provided by the Owner but shipped directly to any sub-  
19             contractor or the project site for installation under the contract.  
20             1.     The GC and/or Contractor responsible for the Work associated with the Owner provided materials or  
21             products shall do the following:  
22                    a.     Inspect all deliveries upon receipt and notify the Owner or Owners Representative of any issues  
23                    directly.  
24                    i.     Owner or Owners Representative shall notify manufacturer of any issues directly.  
25                    b.     Review the received shipment with the Owner or Owners Representative  
26                    i.     Confirm missing products or materials and anticipated delivery schedule if known.  
27             2.     The Contractor shall “take ownership” and provide safe and secure storage and handling as previously  
28             described within this specification.  
29                    i.     The Contractor shall be liable for the repair or replacement of any material or product  
30                    damaged after taking ownership of the product from receipt through final acceptance.  
31  
32  
33

**END OF SECTION**

**SECTION 01 73 29  
CUTTING AND PATCHING**

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17

**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. Division 07 Section "Penetration Fire Stopping" for patching fire-rated construction.

**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.
- C. Level Alpha

**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 Engineer'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 during cutting and patching to prevent damage. Provide protection  
27 from adverse weather conditions for portions of Project that might be exposed during cutting and patching  
28 operations. If the failure to protect, or the lack of protection, of in-place construction and/or existing conditions  
29 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.

1 D. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of  
2 installation.  
3

4 **3.4. CLEANUP AND RESTORATION**

5 A. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a  
6 manner that will eliminate evidence of patching and refinishing.

7 1. Clean piping, conduit, and similar features before applying paint or other finishing materials.

8 2. Restore damaged pipe covering to its original condition.

9 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another,  
10 patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish,  
11 color, texture, and appearance. Remove in-place floor and wall coverings and replace with new  
12 materials, if necessary, to achieve uniform color and appearance.

13 4. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch  
14 and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats  
15 until patch blends with adjacent surfaces.

16 5. Ceilings: Patch, repair, or re-hang in-place ceilings as necessary to provide an even-plane surface of  
17 uniform appearance.

18 6. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weather tight  
19 condition.

20 7. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint,  
21 mortar, oils, putty, and similar materials.

22 8. Any smoke and fire caulking that has been disturbed must be replaced by the Contractor as required by  
23 code.  
24  
25

26 **END OF SECTION**  
27

**SECTION 01 74 13  
PROGRESS CLEANING**

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16

**PART 1 – GENERAL**

**1.1. SUMMARY**

- 20 A. Throughout the execution of this contract all contractors shall be responsible for maintaining the project site in a  
21 standard of cleanliness as described in this specification.  
22 B. All contractors shall also comply with the requirements for cleaning as described in other specifications.  
23 C. Work included in this specification shall include but not be limited to:  
24 1. Safety Cleaning  
25 2. Project Site Cleaning  
26 3. Progress Cleaning  
27 4. Final Cleaning  
28

**1.2. RELATED SPECIFICAITONS**

- 30 A. Section 01 60 00 Product Requirements  
31 B. Section 01 74 19 Construction Waste Management and Disposal  
32 C. Section 01 76 00 Protecting Installed Construction  
33

**1.3. QUALITY ASSURANCE**

- 35 A. The General Contractor (GC) shall conduct daily inspections, more often if necessary, of the entire project site to  
36 ensure the requirements of cleanliness are being met as described within these specifications.  
37 B. All contractors shall comply with other regulatory requirements as they apply to waste recycling, reuse, hauling,  
38 and disposal requirements of any governmental authority having jurisdiction.  
39 C. The Owner reserves the right to have work done by others in the event any contractor fails to perform cleaning  
40 as described within these specifications. The cost of any Owner provided cleaning shall be charged to the  
41 contractor through a deduct change order.  
42

**PART 2 - PRODUCTS**

**2.1. CLEANING MATERIALS AND EQUIPMENT**

- 46 A. The Contractor shall provide all required personnel, equipment, and materials necessary to maintain the  
47 required level of cleanliness as described in this specification.  
48 B. Use only cleaning materials and equipment that are compatible with the surface being cleaned, as  
49 recommended by the manufacturer, or as approved by the A/E.  
50 C. Use only cleaning materials, equipment, and methods as recommended in the manufacturers care and use guide  
51 of the material, finish or equipment being cleaned.  
52

**PART 3 - EXECUTION**

**3.1. SAFETY CLEANING**

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

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

12  
13 **3.2. PROJECT SITE CLEANING**

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

48  
49 **3.3. PROGRESS CLEANING**

- 50 A. This sub-section shall apply to all Progress Cleaning prior to the installation of finishes, fixtures, and trim (IE  
51 rough-in).
  - 52 1. For the purposes of this section "clean" shall be defined as a level of cleanliness free of dust and other  
53 material capable of being removed by use of reasonable effort using a good quality janitor broom and  
54 shop-vac.
  - 55 2. Daily cleanings shall be conducted by all contractors at the end of the work day as follows:
    - 56 a. Debris in excavated areas shall be removed prior to backfill and compaction.
    - 57 b. Debris in wall cavities, chase spaces, etc shall be removed prior to enclosing the spaces.
    - 58 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.

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

27  
28 **3.5. CALL BACK WORK**

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

36  
37  
38  
39 **END OF SECTION**  
40

**SECTION 01 74 19**  
**CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

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13  
14 **PART 1 – GENERAL**

15  
16 **1.1. SUMMARY**

- 17 A. This specification includes administrative and procedural requirements for the recycling, re-use, salvaging, and  
18 disposal of non-hazardous construction and demolition waste.  
19 B. The General Contractor (GC) shall be fully responsible for complying with all applicable ordinances and other  
20 such regulatory requirements during the execution of this contract.  
21

22 **1.2. RELATED SPECIFCAITONS**

- 23 A. 01 29 76 Progress Payment Procedures  
24 B. 01 33 23 Submittals  
25 C. 01 77 00 Closeout Procedures  
26 D. Other Divisions and Specifications that may address the proper disposal of construction or demolition waste as it  
27 pertains to work being conducted under that particular specification.  
28

29 **1.3. CITY ORDINANCES**

- 30 A. There are two (2) Madison General Ordinances (MGO) that the City of Madison has regarding construction and  
31 demolition waste.  
32 1. MGO 10.185, Recycling and Reuse of Construction and Demolition Debris, describes the requirements  
33 associated with this ordinance including definitions, documentation requirements, and penalties.  
34 2. MGO 28.185, Approval of Demolition (Razing, Wrecking) and Removal, describes the requirements  
35 associated with applying for and receiving a demolition permit.  
36 B. All City of Madison, Board of Public Works, contracts being conducted by City Engineering, Facility Management,  
37 for construction, remodeling, or demolition shall comply with the above ordinances regardless of project type or  
38 size.  
39  
40

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

42  
43 **PART 3 - EXECUTION**

44  
45  
46 **3.1. GENERAL GUIDELINES FOR ALL WASTES**

- 47 A. Recycle all paper and beverage containers used by workers, sub-contractors, suppliers and visitors to the project  
48 site.  
49 B. All revenues, savings, rebates, tax credits, and other such incentives received from recycling, reusing, or  
50 salvaging waste materials shall accrue to the GC unless specified otherwise in the contract documents.  
51 C. Separate recyclable, reusable, and salvageable waste from other waste materials, trash, and debris except where  
52 Waste Management Disposal Company allows comingled waste materials, see section 1.8.D above.  
53 1. Separate by type in appropriate containers or designated areas according to the approved waste  
54 management plan away from the construction area. Do not store within the drip lines of existing trees.  
55 2. Inspect containers and bins frequently for contamination and inappropriately sorted materials. Remove  
56 contaminated materials and resort as necessary.

- 1                    3.     Stockpile bulk materials such as sand, topsoil, stone, etc., on site away from the construction area and  
2                                without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water, and  
3                                cover to prevent windblown dust. Do not store within the drip lines of existing trees.  
4                    4.     Whenever possible store items off the ground and/or protect them from the weather.  
5
- 6     **3.2.    GUIDELINES FOR RECYCLABLE, RE-USABLE, AND SALVAGEABLE WASTE**
- 7             A.     The following guidelines is not a complete or all inclusive list and shall be adjusted as needed by the methods  
8                    and procedures identified in the Waste Management Plan.
- 9             B.     Asphalt Paving: Break-up into transportable pieces or grind, transport to an authorized recycling facility.
- 10            C.     Carpet and Pad: Separate carpet and pad scraps, containerize and transport to an authorized recycling facility.
- 11            D.     Ceiling System Components: Suspended ceiling system components shall be sorted by material type as follows:
- 12                    1.     Broken, cut, or damaged tiles shall be containerized, transport to an authorized recycling facility.
- 13                    2.     Damaged, or cut tracks, trim and other metal grid system components shall be sorted with other metals  
14                    of similar types, palletize, transport to an authorized recycling facility.
- 15            E.     Clean Fill: When allowed by Division 31 Specifications; concrete, masonry, stone, asphalt pavement, sand and  
16                    other such materials may be used as clean fill on this project site. The GC shall verify with the Project Engineer,  
17                    Structural Engineer, or Civil Engineer as necessary prior to using any materials as clean fill. Materials shall be  
18                    processed, placed, and compacted as specified. If not being re-used on site, transport to an authorized recycling  
19                    facility.
- 20            F.     Clean Wood Materials: Including but not limited framing cutoffs, wood sheathing or paneling materials,  
21                    structural or engineered wood products, and pallets or crates. Clean Wood shall be free of paints, stains, oils,  
22                    preservatives and other such contaminants.
- 23                    1.     Useable pieces shall be sorted by type and dimension, bundled and transported off site by the GC or  
24                    returned to the supplier.
- 25                    2.     Non-useable pieces shall be palletized or containerized, transport to an authorized recycling facility.
- 26                    3.     Clean, uncontaminated sawdust and wood shavings shall be bagged, transport to an authorized recycling  
27                    facility.
- 28            G.     Concrete: Break-up into transportable pieces, remove all reinforcing and other metals, transport to an  
29                    authorized recycling facility.
- 30            H.     Glass Products: Shall be sorted by types, do not include light fixture lamps and bulbs. Products broken in  
31                    shipment shall be returned to the supplier. Broken or cracked items still in frames shall be taped to prevent  
32                    further breakage and injury to workers. Transport to an authorized recycling facility.
- 33            I.     Gypsum Board: Stack large clean pieces on wooden pallets or container, store in a dry location, transport to an  
34                    authorized recycling facility.
- 35            J.     Light Fixture Lamps and Bulbs: Fluorescent tubes shall be containerized, transport to an authorized recycling  
36                    facility.
- 37            K.     Masonry and CMU: Remove all metal reinforcing, anchors, and ties, clean undamaged pieces and neatly stack on  
38                    pallets, transport damaged pieces to an authorized recycling facility.
- 39            L.     Metals: Sort metals by type as follows, this does not include piping:
- 40                    1.     Architectural metals including but not limited to siding, soffit, and roofing panels shall be sorted by  
41                    material, palletize or bundle as needed and transport to an authorized recycling facility.
- 42                    2.     Structural steel, sort by size and type; palletize and transport to an authorized recycling facility.
- 43                    3.     Miscellaneous metals such as aluminum, brass, bronze, etc shall be sorted by type, containerized or  
44                    palletized as necessary, transport to an authorized recycling facility.
- 45            M.     Packaging and shipping materials
- 46                    1.     Cardboard boxes and containers: Breakdown all cardboard boxes and containers into flat sheets. Bundle  
47                    and store in a dry location until transported for recycling.
- 48                    2.     Pallets:
- 49                            a.     Whenever possible require deliveries using pallets to remove them from the project site.
- 50                            b.     Neatly stack pallets in preparation for reusing them or providing them to other companies for  
51                            salvage or re-use.
- 52                            c.     Break down pallets into component wood pieces that comply with the requirements for recycling  
53                            clean wood materials. Neatly stack or palletize pieces in preparation for transportation.
- 54                    3.     Crates: Break down crates into component wood pieces that comply with the requirements for recycling  
55                    clean wood materials. Neatly stack or palletize pieces in preparation for transportation.
- 56                    4.     Polystyrene Packaging: Separate and bag materials.

- 1 N. Piping and conduit: Reduce all piping and conduit to straight lengths, sort and store by size, material and type.  
2 Remove supports, hangers, valves, boxes, sprinkler heads, and other such components, sort and store by size,  
3 material and type. Transport to authorized recycling facilities according to material types.  
4 O. Roofing: Roofing materials shall be sorted and containerized by type, transport to authorized recycling facilities  
5 according to material types.  
6 P. Site-Clearing Waste: Sort all site waste by type.  
7 1. Only stockpile soils types and quantities required for re-use on the project site. All remaining quantities  
8 shall be transported off site to an authorized facility that receives such materials.  
9 2. Brush, branches, and trees with no marketable re-use shall be transported to facilities for chipping into  
10 mulch.  
11 3. Trees with a marketable re-use shall be salvaged and transported to facilities that specialize in processing  
12 trees for future use as wood products.  
13

14 **3.3. GUIDELINES FOR DISPOSAL OF WASTES**

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

**SECTION 01 76 00**  
**PROTECTING INSTALLED CONSTRUCTION**

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**PART 1 – GENERAL**

**1.1. SUMMARY**

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

**1.2. QUALITY ASSURANCE**

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

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**1.3. RELATED SPECIFICATIONS**

- A. Parts of this specification will reference articles within “The City of Madison Standard Specifications for Public Works Construction”.
  - 1. Use the following link to access the Standard 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 Standard 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 may provide any 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 with construction 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.
  - 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 Standard 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.

- 1                   2.     Shall provide materials of sufficient quality, and durability to provide adequate protection based on the  
2                                   seasonal conditions and the anticipated duration at the time the protection will be needed.  
3                   3.     Shall provide sufficient quantity of protection material to protect the construction as needed.  
4        B.     Prior to installing protective measures the responsible contractor shall propose to the GC, Project Engineer (PE)  
5                   and City Project Manager (CPM) the proposed plan for protection, materials to be used and samples as  
6                   necessary.  
7                   1.     The PE and CPM reserve the right to disapprove any proposed method and/or material and/or make  
8                                   alternate proposals.  
9

10 **PART 3 - EXECUTION**

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12 **3.1. GENERAL EXECUTION REQUIREMENTS**

- 13        A.     The GC shall be responsible for ensuring all of the following procedures and requirements are implemented as  
14                   needed for the duration of the Work performed under this contract.  
15        B.     The GC shall also be responsible for the following:  
16                   1.     Reporting any incident of damage to existing property, right-of-way, or utility to the CPM immediately  
17                                   upon rendering the incident safe, and notifying emergency response teams, and emergency utility crews  
18                                   as needed.  
19                   2.     Conduct a site walk through prior to leaving at the end of each day to assess:  
20                                   a.     Protection measures are properly in place, provide correction actions as necessary.  
21                                   b.     Note damage to existing completed work and schedule repair/replacement as needed.  
22                   3.     Ensure all contractors and workers are being diligent in protecting existing work, and newly installed  
23                                   construction.  
24

25 **3.2. PROTECT ADJACENT PROPERTIES**

- 26        A.     Whenever possible through the design process the City of Madison shall have previously provided notice to  
27                   adjacent property owners that work will be occurring on or near their property. The City of Madison shall also  
28                   have obtained any permanent or temporary easements that may be necessary to complete any Work on  
29                   adjacent properties.  
30        B.     It shall be the responsibility of the GC to do the following for all Work under this contract being performed on or  
31                   adjacent to the property line:  
32                   1.     Contact the adjacent property owner and provide him/her with information on the work to be done,  
33                                   equipment to be used, and estimated duration of the work. Information to be updated and  
34                                   communicated to property owner(s) as construction progresses and site conditions change.  
35                                   a.     If any adjacent property is a rented or leased space the GC shall also make contact and provide  
36                                   the same information to the tenants.  
37                                   b.     Determine from the owner and/or tenants if there are any concerns for children, pets, special  
38                                   plantings, or other concerns.  
39                   2.     Discuss the following with all contractors performing work on or near the property line.  
40                                   a.     Work to be completed and timeline.  
41                                   b.     Concerns of adjacent property owners/tenants from item 1 above.  
42                                   c.     Which protective measures will be necessary to protect adjacent properties and address the  
43                                   concerns of adjacent property owners/tenants.  
44                   3.     Ensure all protective measures are placed and maintained during the execution of Work on or adjacent to  
45                                   the property line. Interact with the adjacent property owners/tenants as needed.  
46        C.     Any contractor doing work on or adjacent to the property line shall install and maintain any protective measure  
47                   identified in the contract documents, this specification, or as directed by the GC.  
48        D.     The GC shall be responsible for restoring any damage to structure and property located on or adjacent to the  
49                   property line.  
50                   1.     Restoration shall include but not be limited to repair or replacement using like materials and finishes to  
51                                   its original condition or better.  
52                   2.     Restoration of landscaping materials shall include watering of any seed, sod, or other planting of any kind  
53                                   for a reasonable period of time to encourage germination and root development.  
54        E.     The GC shall keep the CPM informed directly to any issues pertaining to adjacent property owners and tenants.  
55

56 **3.3. PROTECT LANDSCAPING FEATURES**

- 57        A.     Except where specifically stated in other areas of the construction documents the following minimal protection  
58                   requirements shall apply under this section.



- 1                   1.     Whenever possible do not install new landscape features until exterior building construction has been  
2                                 completed, equipment such as scaffolding and lifts are no longer needed and have been removed, and  
3                                 heavy equipment operation is no longer required.  
4                   2.     Whenever possible remove and temporarily store all existing landscape features such as benches, waste  
5                                 receptacles, signage, and other such features that will be within the area of Work that can be removed.  
6                   3.     Landscape features that cannot be removed such as flag poles, light poles, light bollards, etc. shall be  
7                                 protected with Type D fencing for areas on pavement or Type E fencing for areas on soil.  
8                   4.     Planting beds shall be protected using Type E fencing around the exposed perimeter of the planting bed  
9                                 as needed.  
10                  5.     The City of Madison Standard Specification 107.13 shall apply to all tree protection in and around the  
11                                 project site at all times.  
12

13 **3.4. PROTECT UTILITIES**

- 14                  A.     The contractor shall be responsible for notifying all utilities to determine emergency response procedures and  
15                                 protection requirements prior to installing any construction protection.  
16                                 1.     This includes requesting utility marking through Diggers Hotline.  
17   a.     Call 811 or 1-800-242-8511 to request a public utility locate  
18   b.     For emergency locate call (262) 432-7910 or (877) 500-9592  
19                                 2.     Contact the Owner and CPM for any available private utility information on the property that may be  
20   available prior to calling a private utility locating company.  
21                  B.     Except where specifically stated in other areas of the construction documents the following minimal protection  
22                                 requirements shall apply under this section.  
23                                 1.     Hydrants, lamp posts, electrical transformers, and other utility pedestals shall be protected with Type D  
24   fencing for areas on pavement or Type E fencing for areas on soil. Fence posts shall be located so as to  
25   not be directly over the utility main.  
26                                 2.     Storm sewer structures in pavement shall have proper inlet protection according to City of Madison  
27   Standard Specification 210.1(g) and Type C Construction Barrels when necessary.  
28                                 3.     Storm sewer structures in turf and other landscaped areas shall have proper inlet protection according to  
29   City of Madison Standard Specification 210.1(g) and Type E fencing for areas on soil.  
30                                 4.     Stormwater management features such as greenways, retention/detention ponds, bio-filtration ponds  
31   and other such features shall be properly protected according to the appropriate erosion control  
32   measure specified on the Erosion Control Plan. See multiple sections of City of Madison Standard  
33   Specification 210.1  
34   a.     For the protection of hard to see items such as structures, castings, inlets, etc. in grassy areas  
35   provide Type E fencing for areas on soil.  
36   c.     For the protection of storm water management features having special soils and plants such as  
37   bio-filtration ponds provide Type E fencing for areas on soil.  
38                                 5.     Other structures and covers including but not limited to cleanouts, wiring hand holes, valve boxes, access  
39   structures, grease trap structures, etc shall be protected as follows:  
40   a.     Provide Type E fencing for areas on soil.  
41   b.     When paving operations are complete provide a construction barrel or cone near structures as  
42   necessary depending on required heavy construction traffic.  
43

44 **3.5. PROTECT PUBLIC RIGHT OF WAY**

- 45                  A.     Except where specifically stated in other areas of the construction documents the following minimal protection  
46                                 requirements shall apply under this section.  
47                                 1.     All public right-of-way (area from behind the sidewalk to the centerline of the street) shall remain open  
48   and accessible except during periods of active work. At such times the public right of way shall be  
49   properly closed and signed as referenced in City of Madison Standard Specification 107.9.  
50                                 2.     Bus stops and bus stop structures shall remain accessible at all times.  
51                                 3.     Traffic signage and traffic signals, traffic control boxes shall be protected with Type D fencing for areas on  
52   pavement or Type E fencing for areas on soil.  
53   a.     Protection at traffic signage/signals shall not obstruct the viewing of the sign/signal for its  
54   intended purpose at any time.  
55                  B.     When additional protection for traffic control is required, the use of barricades, guardrails, lane closures and  
56                                 other such procedures will be detailed within the construction documents.  
57                  C.     When additional protection for overhead sidewalk cover is required the contract documents shall indicate the  
58                                 specific location and structural requirements of the protective structure.

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**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.
    - 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 counter tops, cabinets, and other finished surfaces with large sheets of thick cardboard or Ramboard products. Do not allow toolboxes, finish materials, parts and other such items to be placed on finished materials.

- 1 C. All protection shall stay in place until the CPM, PE, and GC mutually deem the project is ready for Final Cleaning.  
2 The contractors responsible for protecting the work shall be responsible for removing the protection and  
3 removing any adhesive residue at that time. Contractors shall only use manufacturer authorized cleaning  
4 materials for removing adhesives, etc.
- 5 D. Contractors doing work in un-protected areas of finished work shall be required to provide drop cloths and other  
6 protection as noted within this specification for the duration of their work.
- 7 1. Finished areas shall be sufficiently covered to accommodate all equipment, and materials being used to  
8 complete the work being done.
- 9 2. Finished areas shall be sufficiently covered to prevent splatters, over spray, etc when doing touch-up  
10 work.
- 11 3. Contractors who do not provide sufficient protection under this sub-section shall be responsible for any  
12 costs associated with cleaning, repairing or replacing already finished construction at no additional cost  
13 to the contract.  
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**END OF SECTION**

**SECTION 01 77 00  
CLOSEOUT PROCEDURES**

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17

**PART 1 – GENERAL**

**1.1. SUMMARY**

- 21 A. The purpose of this specification is to clearly define and quantify the requirements associated with closing a City  
22 of Madison Public Works Contract for facility related work.  
23 B. All contracts have two distinct but related paths. Each path needs to be properly closed independently in order  
24 to close the contract as a whole.  
25 1. Construction closeout is related to closing out all of the Work associated with the construction  
26 documents.  
27 a. It shall be the responsibility of all contractors to be fully aware of the required Work and closeout  
28 requirements involved in their individual trades.  
29 2. Contract closeout is related to closing out all of the administrative aspects of the contract in general.  
30 a. It shall be the responsibility of all contractors to be fully aware of the administrative requirements  
31 required by the contract and to provide the supporting documentation required.  
32 3. Construction Closeout must be completed before Contract Closeout can begin.  
33 C. This specification will provide general knowledge associated with the following areas:  
34 1. Construction Closeout Requirements  
35 2. Construction Closeout Procedure  
36 3. Contract Closeout Requirements  
37 4. Contract Closeout Procedure  
38 5. Final Payment and Certificate of Completion  
39

**1.2. RELATED SPECIFICATIONS**

- 41 A. Contractors shall review all references to other specifications including specifications relating to the execution of  
42 the Work associated with their Division or Trade.  
43 B. Section 01 29 76 Progress Payment Procedures  
44 C. Section 01 32 16 Construction Progress Schedules  
45 D. Section 01 74 13 Progress Cleaning  
46 E. Section 01 45 16 Construction Waste Management and Disposal  
47 F. Section 01 76 00 Protecting Installed Construction  
48 G. Section 01 78 23 Operation and Maintenance Data  
49 H. Section 01 78 36 Warranties  
50 I. Section 01 78 39 As-Built Drawings  
51 J. Section 01 79 00 Demonstration and Training  
52 K. Other requirements as noted in the contract documents signed by the General Contractor  
53

**1.3. DEFINITIONS**

- 55 A. **Substantial Compliance:** A letter provided to the City of Madison Building Inspection and signed by the Project  
56 Engineer indicating that all Work has been completed to a level that would allow Owner Occupancy and that all  
57 construction is in compliance with the construction documents. A copy of this letter is also provided to the

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

21 **1.4. QUALITY ASSURANCE – CONSTRUCTION CLOSEOUT**

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

33 **1.5. QUALITY ASSURANCE – CONTRACT CLOSEOUT**

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

- 1 5. Documentation required for Small Business Enterprise (SBE) goals
- 2 6. Other documents as maybe required or requested through the Finalization Review Process

3  
 4 **PART 2 – PRODUCTS – THIS SECTION NOT USED**

5  
 6 **PART 3 - EXECUTION**

7  
 8 **3.1. CONSTRUCTION CLOSEOUT CHECKLIST**

- 9 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.
- 10 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:
- 11 a. Documents indicating a specified level of performance has been achieved, such as:
- 12 i. Test reports of all types
- 13 ii. Startup reports
- 14 b. Required documentation, such as:
- 15 i. As-builts and record drawings
- 16 ii. Operation and maintenance data
- 17 c. Physical items to be turned over to the owner, such as:
- 18 i. Attic stock
- 19 ii. Keys
- 20 d. Required maintenance completed, such as:
- 21 i. Ducts cleaned
- 22 ii. Filters replaced
- 23 e. Owner and Maintenance Training
- 24 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.
- 25 C. The GC shall be responsible for all of the following:
- 26 1. Consolidating all the closeout lists into one master Construction Closeout Checklist.
- 27 a. The checklist shall be in a tabular data format similar to the sample below
- 28 2. Resubmit the checklist as needed after initial reviews have been completed.
- 29 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	23 09 23	Provide final TAB reports indicating design performance has been achieved	HVAC	

30  
 31  
 32  
 33  
 34  
 35  
 36  
 37 **3.2. CONSTRUCTION CLOSEOUT REQUIREMENTS**

- 38 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.
- 39 1. The GC and all major Subcontractors, PE, and CPM, shall review all requirements for Construction/Contract Closeout during two (2) special meetings.
- 40 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.
- 41 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.

- 1                    2.     The GC, PE, and CPM, shall utilize the Construction Closeout checklist to ensure that all construction  
2                    closeout requirements have been met.  
3

4 **3.3. CONSTRUCTION CLOSEOUT PROCEDURE**

- 5     A.     Upon successful completion and final acceptance of all Construction Closeout Requirements the GC may submit  
6             to the CPM and PE the request for Final Progress Payment (100% contract total, less retainage).  
7     B.     The PE will confirm with the design consultants, CPM, and other City of Madison staff that all requirements of  
8             the Work have been completed and will do the following:  
9             1.     Approve the final progress payment application  
10            2.     Provide the required signed payment documents to the CPM  
11            3.     Provide the required Letter of Substantial Compliance to the following as required:  
12                a.     State Safety and Building Division  
13                b.     Local Building Inspection office  
14                c.     GC  
15                d.     CPM  
16     C.     The CPM shall draft the City Letter of Substantial Completion for signature by the City Engineer. This letter shall  
17             state any of the following that may still be tied to the contract and/or warranty:  
18             1.     Indicate that the date of the letter shall also be the beginning of the Warranty period.  
19             2.     Indicate any allowed due outs, reasons for them, and anticipated dates of finalization.  
20     D.     The GC and all subcontractors shall finalize all warranty letters associated with their Work using the date noted  
21             on the City Letter of Substantial Completion, and provide the CPM with all warranties as described in  
22             Specification 01 78 36 Warranties. Upon receipt and final approval of the Warranties the CPM may initiate final  
23             processing of the Final Progress Payment (100% contract total, less retainage).  
24

25 **3.4. CONTRACT CLOSEOUT REQUIREMENTS**

- 26     A.     The GC and all sub-contractors shall follow all requirements associated with documenting contract compliance  
27             and provide documentation as required or requested by DCR or PW staff. All contractors are encouraged to stay  
28             current with submissions of the following documentation:  
29             1.     Weekly Payroll Reports no later than the Progress Payment equal to 50% of the contract total.  
30             2.     Employee Utilization Reports  
31             3.     Agent or Subcontractor Affidavit of Compliance with Prevailing Wage Rate Determination  
32             4.     Prime Contractor Affidavit of Compliance with Prevailing Wage Rate Determination  
33             5.     Documentation required for Small Business Enterprise (SBE) goals  
34             6.     Other documents as maybe required or requested through the Finalization Review Process  
35     B.     Near the Progress Payment equal to 80% of the contract total the GC shall request in writing a Finalization  
36             Review. At that time DCR or PW staff shall prepare a report of all contract documentation submitted to date. A  
37             list of missing items or outstanding issues will be emailed to the GC. No additional follow-up will be generated  
38             by DCR or PW Staff.  
39

40 **3.5. CONTRACT CLOSEOUT PROCEDURE**

- 41     A.     The Contract Closeout Procedure will not begin until the Construction Closeout Procedure has been completed.  
42     B.     When the GC feels he/she has successfully met all of the Contract Closeout Requirements associated with  
43             Section 3.3 above the GC may submit to the request for Final Payment to the CPM.  
44     C.     The CPM shall sign and submit the Final Payment request for processing.  
45     D.     DCR and PW staff shall do a complete review of all documentation associated with item 3.3.A above.  
46     E.     The GC shall be notified directly by DCR or PW Staff of any documentation that may still be missing, have  
47             incomplete information, or other outstanding issues. It shall be the responsibility of the GC to continue follow-  
48             up with DCR and PW staff until all documentation has been successfully submitted and accepted.  
49     F.     When all required documentation associated with Contract Closeout has been successfully submitted and  
50             accepted by DCR and PW Staff the City of Madison shall process the Final Payment of any remaining monies  
51             including retainage.  
52

53  
54 **END OF SECTION**  
55

**SECTION 01 78 23**  
**OPERATION AND MAINTENANCE DATA**

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16

**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 77 00 Closeout Procedures  
C. Section 01 78 36 Warranties  
D. Section 01 79 00 Demonstration and Training  
E. 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:
    - a. Word searchable
    - b. Key areas are bookmarked
    - c. Table of Contents and/or Index linked to content is preferred whenever possible.



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

19 **1.5. O&M DATA SUBMITTALS**

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

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

28 *related training and construction closeout.*

29

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

31

32 **PART 3 - EXECUTION**

33

34 **3.1. O&M DATA PREPARATION - GENERAL**

- 35 A. All contractors shall prepare O&M Data for draft and final submission as follows:
- 36 1. Obtain digital PDF files for each piece of equipment, system, material or finish as described in Sections
- 37 1.4.A.1 and 1.4.A.2 above.
- 38 2. Verify that all information as described in Section 1.4.B above is included with the PDF file. Obtain
- 39 missing information as necessary for a complete submittal.
- 40 B. Rename each individual PDF file as follows.
- 41 1. Do not use special characters such as #, %, &, /, etc. These characters are reserved by the Project
- 42 Management Web Site software the City of Madison uses; however the under-score (or under-bar) ' \_ ' is
- 43 an allowed character.
- 44 2. Use the following format and examples for renaming your file:
- 45 a. Format: ***Equipment name\_What\_Project name\_Contract number\_Year***
- 46 i. *Equipment Name* represents the name of any equipment, system, material or finish as
- 47 designated in the Contract Documents.
- 48 ii. *What* represents what the file is about
- 49 iii. *Project Name* represents the title of the project or contract. A shortened version of the
- 50 title may be identified by the City Project Manager to be used by all contractors.
- 51 iv. *Contract number* is the specific identification number the Work was bid under and appears
- 52 on the plan set title sheet and in each sheet title block
- 53 v. *Year* represents the year the contract will be closed out
- 54 b. Examples of file names
- 55 i. AHU 2\_Operation Manual\_Fire Admin\_1234\_2015
- 56 ii. CPT 2\_Use and Care\_MPD West\_9876\_2011
- 57 C. All contractors shall submit the completed digital PDF files to the GC in sufficient time for the GC to meet the
- 58 O&M Data submission deadlines as described in Specification Section 01 29 76, Progress Payment Procedures.

1 D. O&M Data shall be submitted and reviewed as described in sections 3.2 and 3.3 below.

2

3 **3.2. O&M DATA DRAFT SUBMITTAL**

4 A. All contractors shall prepare and submit the following for an O&M Data Draft review submittal:

- 5 1. Prepare three (3) complete O&M Data file samples as described in section 3.1 above.  
6 2. Review all specifications within his/her Division of Work and prepare a complete O&M Data checklist  
7 listing all equipment, systems, materials, or finishes. Checklist shall be in tabular form similar to the  
8 example below and shall indicate the title (and plan identifier when applicable) of the O&M Data, the  
9 associated specification, and a column to verify the item has been turned in and completed.

10 B. The GC shall be required to review all contractors' samples and checklists for compliance with this specification  
11 and shall return any to the originating contractor that are insufficient for re-submittal.

- 12 1. When acceptable to the GC, he/she shall electronically submit each O&M Data draft submittal file to the  
13 CPM.

14 C. The Project Engineer, City Project Manager, Consulting Staffs and Owner Representatives shall review the O&M  
15 Data draft submittals and checklist within fifteen 15 working days as follows:

- 16 1. Provide general critique comments by Division on O&M Data samples submitted. Critique is intended to  
17 provide all contractors with information on strengths and weaknesses of their submittals.  
18 a. Re-submittal of the O&M Data samples will not be required.  
19 2. Review in detail the O&M Data Checklist for completeness. Provide comments as needed.  
20 a. Re-submittal of the O&M Checklist will be required until accepted.  
21

<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	

22

23 **3.3. O&M DATA FINAL SUBMITTAL**

24 A. All contractors shall prepare and submit the following for an O&M Data Final review submittal:

- 25 1. Prepare complete O&M Data files as described in Section 3.1 above according to their approved checklist  
26 as described in Section 3.2 above.  
27 2. Submit completed checklist and all final O&M Data files to the GC for final submittal review.

28 B. The GC shall be required to spot check all contractors' submittals for completeness against their checklists and  
29 for compliance with this specification and shall return any to the originating contractor that are insufficient for  
30 re-submittal.

- 31 1. When acceptable to the GC, he/she shall electronically submit each O&M Data final submittal file to the  
32 CPM.

33 C. The Project Engineer, City Project Manager, Consulting Staffs and Owner Representatives shall review the O&M  
34 Data final submittals and checklist within fifteen (15) working days as follows:

- 35 1. Review the files submitted against the checklist and request any missing files through the GC.  
36 2. Review in detail all of the O&M Data files for completeness.  
37 a. Submittals shall be accepted or rejected as individual PDF files.  
38 b. Contractors shall re-submit entire O&M submittal if any portion is rejected or incomplete.  
39

40 **3.4. CONSTRUCTION CLOSEOUT**

41 A. All contractors shall review Specification 01 77 00, Closeout Procedures and Specification 01 79 00  
42 Demonstration and Training.

- 43 1. Acceptance of all final O&M Data submittals is required prior to scheduling Demonstration and Training  
44 Sessions.  
45 2. Completion of all Demonstration and Training Sessions is required to receive the Substantial Compliance  
46 for Occupancy Certificate, and to begin Construction Closeout procedures.  
47  
48  
49

50 **END OF SECTION**

51

**SECTION 01 78 36**  
**WARRANTIES**

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16

**PART 1 – GENERAL**

**1.1. SUMMARY**

- 20 A. The purpose of this specification is to provide clear responsibilities and guide lines related to providing all  
21 Warranties and Guarantees related to the Work, workmanship, materials, equipment, and other such items  
22 required by the Construction Documents.  
23 B. Manufacturers’ disclaimers and limitations on product warranties do not relieve any contractor of the warranty  
24 on the Work that includes the product.  
25 C. Manufacturers’ disclaimers and limitations on product warranties do not relieve suppliers, manufacturers and  
26 any contractor required to provide special warranties under the contract documents.  
27

**1.2. RELATED SPECIFICATIONS**

- 29 A. Section 01 29 76 Progress Payment Procedures  
30 B. Section 01 77 00 Closeout Procedures  
31 C. Section 01 78 23 Operation and Maintenance Data  
32 D. Other Divisions and Specifications that may address more specifically the requirements for Warranties related to  
33 the installation of all items and equipment installed under the execution of the Work.  
34

**1.3. DEFINITIONS**

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

- 1                   2.     Implied Warranty: A warranty that is not stated explicitly by a seller or manufacturer that the product is
- 2                                    merchantable and fit for the intended purpose.
- 3                   3.     Standard Product Warranty: Preprinted written warranties published by individual manufacturers for
- 4                                    particular products and are specifically endorsed by the manufacturer to the Owner. Standard warranties
- 5                                    may be for any amount of time but shall not be for anything less than one (1) year from the warranty
- 6                                    date.
- 7                   4.     Special Warranty: A written warranty required by the Contract Documents either to extend the time
- 8                                    limit provided under a standard warranty or to provide greater rights to the Owner.
- 9     F.     Warranty Date: The effective date that begins all warranty periods required for products, installations, and
- 10                                   work-manship associated with the execution of the Work for this contract. The Warranty Date shall be set by
- 11                                   the CPM.
- 12     G.     Related Damages and Losses: When correcting failed or damaged Warranted Work, remove and reinstall (or
- 13                                   replace if necessary) the construction that has been damaged as a result of the failure or the construction that
- 14                                   must be removed and replaced to obtain access for the correction of Warranted Work.
- 15     H.     Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected reinstate the
- 16                                   warranty by a new written endorsement. The reinstated warranty shall be equal to the original warranty with an
- 17                                   equitable adjustment for depreciation unless specifically noted otherwise in a specification.
- 18     I.     Replacement Cost: All costs that may be associated with Work being replaced under warranty including but not
- 19                                   limited to the following:
- 20                                   1.     Related damages and losses
- 21                                   2.     Labor, material and equipment
- 22                                   3.     Permits and inspection fees
- 23                                   4.     This shall be regardless of any benefit the Owner may have had from the Work through any portion of its
- 24                                   anticipated useful service life.
- 25     J.     Replacement Work: All materials, products, required labor, and equipment necessary to replace failed or
- 26                                   damaged warranted to an acceptable condition that complies with the requirements of the original Construction
- 27                                   Documents.
- 28     K.     Owners Recourse: Expressed warranties made to the Owner are in addition to implied warranties and shall not
- 29                                   limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods
- 30                                   shall not be interpreted as limitations on the time in which the Owner can enforce such other duties, obligations,
- 31                                   rights, and remedies.
- 32                                   1.     Rejection of Warranties: The Owner reserves the right to reject any warranty and to limit the selection of
- 33                                   products with warranties not in conflict with the requirements of the contract documents.
- 34                                   2.     Where the Contract Documents require a Special Warranty or similar commitment on the Work or
- 35                                   product, the Owner reserves the right to refuse acceptance of the Work until the Contractor presents
- 36                                   evidence the entities required to countersign such required commitments have done so.
- 37
- 38     **1.4. GENERAL CONTRACTORS RESPONSIBILITIES**
- 39     A.     The General Contractor (GC) shall be responsible to remedy, at his/her expense, any defect in the Work and any
- 40                                   damage to City owned or controlled real or personal property when the damage is a result of:
- 41                                   1.     The GC's failure to conform to Contract Document requirements.
- 42                                   a.     Any substitutions not properly approved and authorized may be considered defective.
- 43                                   2.     Any defect in workmanship, materials, equipment, or design furnished by the GC or Sub-contractors.
- 44     B.     All warranties as described in this specification and these Contract Documents shall take effect on the date
- 45                                   established by the CPM, as noted in Section 1.3F above.
- 46                                   1.     All warranties shall remain in effect for one (1) year thereafter unless specifically stated otherwise in the
- 47                                   Contract Documents or where standard manufacturer warranties are greater.
- 48     C.     The GC's warranty with respect to Work repaired or replaced, including restored or replaced Work due to
- 49                                   damage, will run for one (1) year from the date of Owner Acceptance of said repair or replacement.
- 50                                   1.     This shall be regardless of any benefit the Owner may have had from the Work through any portion of its
- 51                                   anticipated useful service life.
- 52     D.     Warranty Response
- 53                                   1.     See Section 3.5 of this specification.

54     **PART 2 – PRODUCTS - THIS SECTION NOT USED**

55

56     **PART 3 - EXECUTION**

57

1 **3.1. WARRANTY CHECKLIST**

- 2 A. All contractors shall be responsible for reviewing the drawings and specifications within their Divisions of Work  
3 to provide a complete and comprehensive list of all Warranty Requirements to the GC.  
4 B. Each list shall indicate the title (and plan identifier when applicable) of the warranted item, the associated  
5 specification of the warranted item, the terms of the warranty (years), and a column to verify the item has been  
6 turned in and completed.  
7 C. The GC shall be responsible for all of the following:  
8 1. Consolidating all the warranty lists into one master Warranty Checklist and submitting electronically.  
9 a. The checklist shall be in a tabular data format similar to the sample below.  
10 2. Resubmit the schedule as needed after initial reviews have been completed.  
11 D. The GC shall work with all contractors to amend the Warranty Checklist throughout the execution of the project  
12 based on changes and modifications as necessary.  
13

<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	

14

15 **3.2. LETTERS OF WARRANTY**

- 16 A. All letters of warranty shall be in a typed letter format and provide the following information:  
17 1. The letter shall be on official company stationary including company name, address, and phone number.  
18 2. Indicate project name, contract number, and contract address the warranty is for on the reference line.  
19 3. Provide a description of the warranty(ies) being provided.  
20 a. Include Division, Trade, or Specification information as necessary.  
21 b. Only combine warranties of related Divisional Work together. Create new letters for additional  
22 Divisions as necessary.  
23 4. Indicate the effective Warranty Date. As noted in Section 1.3.F above, the Warranty Date shall be the  
24 date the Certificate of Substantial Completion was signed by the City Engineer.  
25 5. Contractor Letters of Warranty shall only be signed by a principal officer of the company.  
26 6. After signing the letter provide the GC with a high quality color scanned image in PDF format and the  
27 original signed letter.  
28 B. The GC shall be responsible for the Final Warranty submittal as identified in Section 3.4 below.  
29 C. The GC shall obtain letters of warranty from all of the following:  
30 1. The General Contractor shall provide warranty letters for all Work that was self performed under the  
31 contract documents, identify all trades or Divisions of Work.  
32 2. All Sub-contractors shall provide warranty letters for Work performed under the contract documents;  
33 identify all trades or Divisions of Work.  
34 3. Suppliers, as required by other specifications within the Construction Documents where the manufacture  
35 of a specific product unique to the Work of this contract was required.  
36 a. The terms and conditions of the Supplier Letter of Warranty shall be as defined by the  
37 specifications associated with the Work but shall not be less than the industry standard of repair,  
38 or replace defective materials and workmanship within one (1) year of the warranty date.  
39 b. When the supplier is also the installer a single written letter may be submitted identifying both  
40 the warranty for the manufacture of the product and the warranty for the installation of the  
41 product.  
42 4. Installers as required by other specifications within the Construction Documents where the installation of  
43 a specific product unique to the Work of this contract was required.  
44 1. The terms and conditions of the Installer Letter of Warranty shall be as defined by the  
45 specifications associated with the Work but shall not be less than the industry standard of repair,  
46 or replace defective materials and workmanship associated with the installation of the product  
47 within one (1) year of the warranty date.  
48 5. Special Letters of Warranty shall be required from any contractor, supplier, installer or manufacturer who  
49 agrees to provide warranty services required by any Division Specification in excess of their Standard  
50 Product Warranty.

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**3.3. STANDARD PRODUCT WARRANTY**

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

**3.4. FINAL WARRANTY SUBMITTAL**

- A. The GC shall receive all required warranties (digital PDF and any original documents) from all contractors, suppliers, installers and manufacturers.
- B. The GC shall inventory all received warranties with the Warranty Submittal List to ensure all required warranties have been received and all warranty periods are correct according to the specifications.
- C. Provide with each Operation and Maintenance Manual a complete copy of any associated warranty.
- D. Scan all warranties into a single organized electronic PDF file as follows:
  - 1. Organize the PDF file into an orderly sequence based on the table of contents of the Specifications.
  - 2. Provide a typed Table of Contents for the entire file at the front of the document.
  - 3. Provide bookmarks and links to each individual PDF to enable quick navigation through the PDF document.
- E. Submit electronically, the warranty submittal for review by the PE and CPM.
- F. Correct any deficiencies or omissions and resubmit as necessary.

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

- A. Warranty Notification:
  - 1. The City of Madison uses an email notification system for all warranty related issues. The GC will be required to provide, and keep current during the warranty period, a minimum of two (2) email addresses and phone numbers of current employees to receive email notifications and provide response regarding Work associated with these construction documents.
    - a. In the event a Warranty Issue is deemed by the City of Madison to be an emergency, the GC shall first receive a phone call with a follow-up email from the CPM.
- 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.

- 1                   c.     Where Technical Assistance support is part of the written warranty provide all assistance  
2                   necessary via phone, text, or internet systems as indicated by the warranty. If issues cannot be  
3                   resolved provide on-site response no later than the next business day.  
4                   d.     If the request cannot be supported in sufficient time as outlined above the Owner (or Owner  
5                   Representative) reserves the right to contact other contractors or service companies having  
6                   similar capability to expedite the repair or replacement and shall invoice all associated costs to  
7                   the Owner back to the GC.  
8     C.     Warranty Execution:  
9           1.     The GC shall provide all repairs or replacements as necessary to restore broken or damaged Work to the  
10           original level of acceptance as intended by the Contract Documents.  
11           a.     Provide all materials, equipment, products, and labor necessary to complete the repair or  
12           replacement associated with the Warranty Issue.  
13           b.     Provide all cleaning services as may be required before, during, and after the repair or  
14           replacement as per Specification 01 74 13 Progress Cleaning.  
15           c.     Provide any protection necessary for existing construction as per Specification 01 76 00 Protecting  
16           Installed Construction  
17           d.     Provide new letters of warranty when required.  
18     D.     Warranty Follow-up:  
19           1.     Logged Warranty Issues:  
20           a.     The GC shall provide complete documented responses of all logged Warranty Issues. Responses  
21           shall provide a description of work completed, by who, inclusive dates, and photos of completed  
22           or repaired work.  
23           i.     Provide call back response if work is not acceptable.  
24           b.     The City Project Manager shall review the submitted response documentation and do a field  
25           inspection if necessary.  
26           i.     If work is not acceptable, contact GC to review details and expectations of the repair as  
27           needed.  
28           ii.    If work is acceptable close the Warranty Issue.  
29           2.     Warranty Reviews:  
30           a.     The GC shall be responsible for scheduling on-site review with all of the following:  
31           i.     City Project Manager, and other City staff as needed  
32           ii.    Owner and Owner Tenant Representative  
33           iii.   Plumbing, Heating, Electrical Sub-contractors  
34           iv.   Other Sub-contractors that may be responsible for open Warranty issues  
35           b.     Reviews shall be scheduled at 6 months, and 11 months after the effective date of the warranty.  
36           The review meetings shall:  
37           i.     Review the status of all open Warranty Issues, determine course of action and estimated  
38           date of completion.  
39           ii.    As appropriate, provide shut-down, start-up, testing, and training of off-season equipment  
40           as required by the contract documents.  
41           iii.   The 11th month review shall review all open Warranty Issues, final plan for resolution, and  
42           all Warranty Issues where a new letter of warranty may have been issued.  
43  
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**END OF SECTION**

**SECTION 01 78 39  
AS-BUILT DRAWINGS**

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**PART 1 – GENERAL**

**1.1. SUMMARY**

- 21  
22 A. This specification is intended to provide clear guidelines and identify the responsibilities of all contractors as they  
23 pertain to City of Madison contract procedures regarding the accurate recording of the Work associated with the  
24 execution of this contract. This shall include but not be limited to work that will be hidden, concealed, or buried.  
25 B. Each contractor shall be responsible for maintaining an accurate record of all installations, locations, and  
26 changes to the contract documents during the execution of this contract as it may relate to their specific division  
27 or trade.  
28 C. The General Contractor (GC) shall be responsible for ensuring all contractors provide as-built record information  
29 to the Master As-Built Document Set as described in this specification.  
30

**1.2. RELATED SPECIFICAITONS**

- 31  
32 A. 01 26 13 Request for Information  
33 B. 01 31 23 Construction Bulletin  
34 C. 01 26 63 Change Orders  
35 D. 01 29 76 Progress Payment Procedures  
36 E. 01 33 23 Submittals  
37 F. 01 77 00 Closeout Procedures  
38 G. Other Divisions and Specifications that may address more specifically the requirements for field recording the  
39 installation of all items associated with the execution of this contract by Division or Trade.  
40

**1.3. RELATED DOCUMENTS**

- 41  
42 A. Other related documents shall include but not be limited to the following:  
43 1. Bidding documents including drawings, specifications, and addenda.  
44 2. Required regulatory documents of conditional approval.  
45 3. Field orders, verbal or written by inspectors having regulatory jurisdiction.  
46 4. Shop drawings and installation drawings.  
47

**1.4. PERFORMANCE REQUIREMENTS**

- 48  
49 A. The GC shall be responsible for maintaining the “Master As-Built Document Set” at all times during the execution  
50 of this contract. This document set shall include all of the following:  
51 1. Master As-Built Plan Set  
52 2. Master As-Built Specification Set  
53 3. Other Document Sets  
54 B. The GC shall designate one person of the GC staff to be responsible for maintaining the Master As-Built  
55 Document Set. This shall include, posting updates, revisions, deletions and the monitoring of all contractors  
56 posting as-built information as described in this specification.



- 1 C. All contractors shall use this specification as a general guideline regarding the requirements for documenting  
2 their completed Work. Contractors shall explicitly follow additional specification requirements within their own  
3 Division of Trade as it may apply to this specification.  
4

5 **1.5. QUALITY ASSURANCE**

- 6 A. The GC shall be responsible for all of the following:  
7 a. Spot checking all sub-contractors field documents to insure daily information is being recorded as  
8 work progresses.  
9 b. Discuss as-built recording to the plan set at weekly job meetings with all sub-contractors on site.  
10 c. Schedule time with sub-contractors in the job trailer for recording as-built information to the plan  
11 set.  
12 d. Insure that all sub-contractors are providing clear and accurate information to the plan set in a  
13 neat and organized manner.  
14 e. Insure sub-contractors who have completed work have finalized recording all as-built information  
15 to the plan set before releasing them from the project site.  
16 B. The Project Engineer, the City Project Manager, and other design team staff will perform random checks of the  
17 Master As-Built Document Set during the execution of this contract to ensure as-built information is being  
18 recorded in a timely fashion as the Work progresses. An updated and current Master As-Built Document Set is a  
19 stipulation for approval of the progress payment.  
20

21 **PART 2 – PRODUCTS**

22  
23 **2.1. OFFICE SUPPLIES**

- 24 A. The GC shall provide a sufficient supply of office products at all times for all contractors to use in recording as-  
25 built information into the plan set. This shall include but not be limited to the following:  
26 a. Red ink pens, medium point. Pens that bleed through paper, markers, and felt tips will not be  
27 accepted.  
28 b. The use of highlighters is acceptable. Assign colors to various trades for consistency in recording  
29 information.  
30 c. Straight edges of various lengths for drawing dimension, extension and other lines.  
31 d. Civil and Architectural scales  
32 e. Clear transparent, non-yellowing, single sided tape.  
33 f. Correction tape or correction fluid for correcting small errors.  
34

35 **PART 3 - EXECUTION**

36 **3.1. FIELD DOCUMENT AS-BUILTS**

- 37 A. The GC and all Sub-contractors shall be responsible for keeping their own field set of as-built documents  
38 including plans, specifications and published changes.  
39 B. Field sets shall be kept dry and in good condition at all times.  
40 C. No Work shall be buried, covered, or hidden, by any additional Work, regardless of Contractor or Trade, until  
41 locations of all materials and equipment has been properly documented as described below.  
42 D. All contractors shall be required to record the following as-built information:  
43 a. Notes on the daily installation of materials and equipment.  
44 b. Sketches, corrections, and markups indicating final location, positioning, and arrangement of  
45 materials and equipment such as pipes, conduits, valves, cleanouts, pull boxes and other such  
46 items. Note all final locations on plan sheets, indicate dimension off identifiable building features.  
47 Riser diagrams need only be corrected for significant changes in locations, routing or  
48 configuration.  
49 i. The use of photographs in lieu of hand drawn sketches is acceptable.  
50 ii. Photos shall be taken according to Specification 01 32 33 Photographic Documentation  
51 iii. Print photo and markup with dimensions or notes as necessary.  
52 c. Identify by the use of existing plan symbology and notes the size, type, quantity, and use as  
53 applicable of materials such as pipes, valves, conduits, etc.  
54 d. Note whether horizontal runs are below slab or above ceiling, include dimensions above or below  
55 finished floor elevation.  
56 E. All contractors shall be responsible for transferring the information from their field set of documents to the  
57 Master As-Built Plan Set kept in the GC job trailer. See Section 3.3.D. below for the proper procedure.  
58 F. All contractors shall update the GC Master Plan Set as often as necessary, but not less than once per work week.

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**3.2. SITE SURVEY AS-BUILT**

- A. The Land Surveyor Sub-Contractor shall provide digital as-built information including but not be limited to the following:
  - a. For underground buried utility laterals and services of all types locate all of the following that may apply:
    - i. Connection points at all mains
    - ii. Storm discharge points to open air
    - iii. All corners and bends regardless of angle, large radius sweeps shall have multiple point locations sufficient to define the sweep.
    - iv. All vertical drops
    - v. All wells
    - vi. Private buried utilities such as buried electrical cables, irrigation systems, etc.
    - v. Other information that may need to be located in the future by the owner prior to digging
  - b. Record all surface features including but not limited to the following:
    - i. Building corners, pavement edges, and other permanent structural features.
    - ii. All surface covers for inlets, catch basins, cleanouts, access structures, curb stops and other such devices.
    - iii. Other permanent surface features such as hydrants, lamp posts, and other permanent site amenities.
  - c. The following data shall be recorded while locating items in sub-sections 3.2.a and 3.2.b above:
    - i. Flow lines at both ends of pipes
    - ii. Pipe sizes and material types
    - iii. Rim elevations for all covers
    - iv. Sump elevations and invert elevations of all structures
    - v. Spot elevations for all pads, driveways, walks, stoops, and floors
- B. The Surveyor shall provide the final digital as-built on a media and in a format specified in Specification 00 31 21 Survey Information to the GC for turn in to the Project Engineer and the Civil Engineer.
- C. The Surveyor shall provide two printed as-built site plans to the GC for inclusion in the Master As-Built Plan Set as follows:
  - 1. One sheet to show all features (but not contour information) with text neatly organized for each item identified.
  - 2. One sheet showing contours, contour labels, and features from item 1 above, but with no additional text.

**3.3. MASTER AS-BUILT DOCUMENT SET**

- A. The GC shall be responsible for maintaining the Master As-Built Document Set in the job trailer at all times.
  - 1. The Master As-Built Plan Set (Plan Set) shall begin with one complete bid set of drawings and any additional sheets that were supplied by published addenda during the bidding process. The cover sheet shall be titled as the "Master As-Built Plan Set" in large bold red letters approximately 2" in height and shall not be used for any other purpose.
    - a. The Plan Set shall be kept dry, legible, and in good condition at all times.
    - b. The Plan Set shall be kept up to date with new revisions within two (2) working days of supplemental drawings being issued. Revisions shall be posted as follows:
      - i. Insert new, revised sheets into the plan set. Void old sheets but do not remove them from the plan set. Indicate date received and what document (RFI, CB, CO, etc) caused the change.
      - ii. Insert new, revised individual details into the plan set. Void old details, tape new details over the old details with a "tape hinge" to allow them to be viewed. Indicate date received and what document (RFI, CB, CO, etc) caused the change.
      - iii. Add new details in appropriate white space on relevant sheets. If no space is available use the back side of the previous sheet or insert a new sheet. Indicate date received and what document (RFI, CB, CO, etc) caused the change.
    - c. The Plan Set shall be available at anytime for easy reference during progress meetings and for emergency location information of new work already completed.
  - 2. The Master As-Built Specification Set (Spec Set) shall begin with one complete bid set of specifications and any additional specifications that were supplied by published addenda during the bidding process. The Spec Set shall be provided in three "D" ring type binders of sufficient thickness to accommodate the specification set. Multiple binders are allowed as necessary. Label the front cover and binding edge with

- 1 "Master As-Built Specifications" in bold red letters. Provide other information as necessary to distinguish  
2 the contents of multi-volume sets.
- 3 a. The Spec Set shall be kept dry, legible, and in good condition at all times.  
4 b. The Spec Set shall be kept up to date with new revisions within two (2) working days of  
5 supplemental drawings being issued.  
6 c. The Spec Set shall be available at anytime for easy reference during progress meetings.
- 7 3. Other Document Sets may be kept at the GCs option in three "D" ring type binders of sufficient thickness  
8 to accommodate the documentation. Other documentation sets may include but not be limited to RFIs,  
9 CBs, COs, etc.
- 10 C. The Land Surveyor Sub-Contractor shall be required to use digital surveying for all exterior site surveying, and  
11 provide deliverable digital as-builts as specified in Specification 00 31 21 Survey Information. As soon as practical  
12 the surveyor shall provide the GC with a preliminary copy of installed buried utilities for inclusion with the plan  
13 set in the job trailer. The surveyor shall provide final digital as builts as per section 3.2 above.
- 14 D. All contractors shall be responsible for updating the Plan Set from their field sets at least once per work week.  
15 Updates shall include but not be limited to the following procedures:
- 16 a. All updates shall be done only in red ink. Place a "cloud" around small areas of correction to call  
17 attention to the change.
- 18 b. Whenever possible place general work notes, field sketches, supplemental details, photos, and  
19 other such information on the reverse side of the preceding sheet. Installation notes including  
20 dates shall be kept neatly organized in chronological order as necessary.
- 21 c. Accurately locate items on the plan set as follows:
- 22 i. For items that are located as dimensioned provide a check mark or circle indicating the  
23 dimension was verified.
- 24 ii. For items that are within 5 feet of the location indicated on the plans leave as shown and:
- 25 • Provide correct dimensions to existing dimension strings or,  
26 • Accurately locate with new dimension strings
- 27 iii. For items that are more than 5 feet from the location indicated on the plans
- 28 • Accurately draw the items in the new location as installed and,  
29 • Accurately locate with new dimension strings and,  
30 • Note that the existing location is void.
- 31 d. Include dimensioned locations for items that will be buried, concealed, or hidden in the ground,  
32 under floors, in walls or above ceilings.
- 33 i. Dimensions shall be pulled from identifiable building features, not from centers of columns  
34 or other buried features.
- 35 ii. When necessary pull more dimensions as needed from opposing directions to properly  
36 locate single items.  
37

38 **3.4. AS-BUILT REVIEW AND ACCEPTANCE**

- 39 A. The GC shall provide the Master As-Built Plan Set to the Project Engineer (PE), the City Project Manager (CPM),  
40 and other design team staff for content review prior to the Progress Payment Milestone indicated in  
41 Specification 01 29 76 Progress Payment Procedures. The submitted plan set shall include the digital survey  
42 information produced under Section 3.2 above.
- 43 1. If the plan set is not approved:
- 44 a. The PE and CPM shall only be required to generalize deficiencies by trade there shall be no  
45 requirement or expectation to generate a "punch list" of required corrections.
- 46 b. The GC and Sub-contractors as necessary shall be responsible for inspecting the installation and  
47 correcting the drawings as needed.
- 48 c. The GC shall re-submit the plan set for review.
- 49 2. If the plan set is approved the PE shall take possession of the plan set to be used in providing the owner  
50 with digital CAD record drawings. Upon completion of transferring the information to CAD the PE shall  
51 provide the Owner with CAD record drawings, record PDFs, and the Master As-Built Plan Set.  
52

53 **3.5. CHANGES AFTER ACCEPTANCE**

- 54 A. No Contractor shall be responsible for making changes to the As-Built record documents after acceptance by the  
55 PE and CPM except when necessitated by changes resulting from any Work made by the Contractor as part of  
56 his/her guarantee.  
57

58 **END OF SECTION**

**SECTION 01 79 00  
DEMONSTRATION AND TRAINING**

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16

17 **PART 1 – GENERAL**

18  
19 **1.1. SUMMARY**

- 20 A. The purpose of this specification is to provide clear responsibilities and guidelines related to providing  
21 Demonstration and Training (D&T) Sessions related to general facility use, equipment, systems, finishes, and  
22 materials to City of Madison Staff (Owner, Owner Representatives, Maintenance, and Custodial Personnel) as  
23 needed.  
24 B. All D&T shall be coordinated through the General Contractor (GC), Project Engineer (PE) and City Project  
25 Manager (CPM), and will be based on or customized to the needs of City of Madison Staff being trained. New  
26 equipment and systems may have complete D&T sessions as described in this specification while equipment or  
27 systems staff is familiar with may have sessions more focused on maintenance only.  
28

29 **1.2. RELATED SPECIFICATIONS**

- 30 A. Section 01 29 76 Progress Payment Procedures  
31 B. Section 01 78 23 Operation and Maintenance Data  
32 C. Section 01 78 36 Warranties  
33 D. Section 01 78 39 As-Built Drawings  
34 E. Other Divisions and Specifications that may address more specifically the requirements for D&T sessions related  
35 to the installation of all items and equipment installed under the execution of the Work.  
36

37 **1.3. QUALITY ASSURANCE**

- 38 A. All contractors shall have the responsibility of preparing for and conducting D&T sessions as determined by this  
39 and other Division or Trade related specifications, Owner Operation and Maintenance Manuals, and other such  
40 documentation related to the Work.  
41 B. The GC shall have responsibility for:  
42 1. Ensuring that all contractors required to conduct a D&T session have successfully completed all of the  
43 following:  
44 a. Turned in all required documentation for review and documentation has been approved/accepted  
45 prior to scheduling D&T sessions.  
46 b. Other required documentation as needed is available and ready for use during the D&T session.  
47 c. All systems have been started, tested, and running as per appropriate specification and/or  
48 manufacturers recommendations prior to scheduling D&T sessions.  
49 d. All contractors are sufficiently prepared for their D&T session  
50 e. Documents the D&T session including date, time, contractor and company name, attendees and  
51 other information regarding the session  
52 2. Organizing the coordination and scheduling of all D&T sessions between all contractors and the  
53 appropriate representatives of the Owner. These representatives may include any of the following  
54 depending on the Work of the Contract:  
55 a. Owner – end users  
56 b. Facility Maintenance personnel  
57 i. Facility general operation procedures including custodial services  
58 ii. Electrical

- 1                                   iii.    Mechanical
- 2                                   iv.    Plumbing
- 3                                   v.    Site
- 4                                c.    Information Technology (IT) Department
- 5                                d.    Traffic Engineering – Radio Shop
- 6                                e.    Architects, Engineers and Facility Management staff as project completion overview

7

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

9

10 **PART 3 - EXECUTION**

11

12 **3.1. GENERAL REQUIREMENTS**

- 13    A.    The GC shall develop a specific D&T plan to be scheduled and conducted as described below but no sooner than
- 14            the meeting discussed in 3.2.A.2 below.
- 15    C.    The GC shall not schedule D&T sessions to preclude required personnel from attending multiple sessions.

16

17 **3.2. COORDINATING AND SCHEDULING THE TRAINING**

- 18    A.    The GC, PE, and CPM, shall review all Training and Demonstration requirements during two (2) special meetings.
  - 19      1.    The first meeting shall be held at the 50% Contract Total Payment. During this meeting the following
  - 20            shall be discussed:
    - 21              a.    Preliminary schedule of training dates to be completed prior to beginning construction closeout.
    - 22              b.    List of documentation and items that need to be completed and available before and during the
    - 23              training session.
    - 24              c.    Who (Owner, Maintenance, etc) will be attending what training session(s).
  - 25      2.    The second meeting shall be held at the 80% Contract Total Payment. This meeting shall review due outs
  - 26            that have not yet been completed for the 90% Contract Total Payment and the requirements necessary
  - 27            for Construction Closeout. All Demonstration and Training sessions shall be completed prior to receiving
  - 28            the 90% progress payment and beginning Construction Closeout Procedures (see Specification 01 77 00).
  - 29            a.    This does not include any requirement associated with off season equipment preparation and/or
  - 30            demonstration and Training Sessions.
- 31    B.    All of the Construction Work shall be operationally ready prior to conducting training as follows:
  - 32      1.    All contractors shall have their As-Built Drawing Records available for reviewing locations of system
  - 33            components during training.
  - 34      2.    All final and approved Operations and Maintenance Data shall be completed no less than two (2) full
  - 35            weeks prior to the scheduled training.
  - 36      3.    All systems shall have been started, functionally tested, balanced, and fully operational, and all piping
  - 37            and equipment labeling complete at least two (2) days prior to the scheduled training.
    - 38              a.    Seasonal equipment shall not be trained out of season. Contractors having seasonal equipment
    - 39              shall work with the GC and CPM for coordinating additional training sessions as appropriate for
    - 40              seasonal equipment.
- 41    C.    Correction list items that prevent a piece of equipment or system from being fully operational for training shall
- 42            be corrected prior to conducting the training.

43

44 **3.3. TRAINING OBJECTIVES**

- 45    A.    For each piece of equipment or system installed train on the following objectives/topics as applicable:
  - 46      1.    System design, concept, and capabilities
  - 47      2.    Review of related contractor as-built drawings
  - 48      3.    Facility walkthrough to identify key components of the system
  - 49      4.    System operation and programming including weekly, monthly, annual test procedures
  - 50      5.    System maintenance requirements
  - 51      6.    System troubleshooting procedures
  - 52      7.    Testing, inspection, and reporting requirements associated with any regulatory requirements
  - 53      8.    Identification of any correction list items still outstanding
  - 54      9.    Review of system documentation including the following:
    - 55            a.    Operation and maintenance data
    - 56            b.    Warranties
    - 57            c.    Valve charts, tags, and pipe identification markers
- 58    B.    For each piece of specialty equipment train on the following objectives/topics as applicable:

- 1 1. Manufacturers operations instructions
- 2 2. Manufacturers use and care instructions
- 3 3. Manufacturers maintenance and troubleshooting instructions
- 4 4. System operation and programming including weekly, monthly, annual test procedures
- 5 5. Identification of any correction list items still outstanding
- 6 6. Review of system documentation including the following:
  - 7 a. Operation and maintenance data
  - 8 b. Warranties
- 9 C. End User Orientation
  - 10 1. Facility walkthrough
  - 11 2. Security and emergency features
  - 12 3. General facility operation procedures
- 13 D. Facility General Use and Custodial Services – if requested
  - 14 1. Facility walkthrough
  - 15 2. Security and emergency features
  - 16 3. General facility operation procedures
  - 17 4. Care and maintenance of specialty items, finishes, etc as requested
  - 18 5. Attic stock inventory and material designations

19  
20 **3.4. DEMONSTRATION AND TRAINING PROGRAM PREPARATION**

- 21 A. Each contractor having a responsibility for providing D&T sessions shall meet with the GC, CPM, and other City  
22 Staff as needed to review the extent of the Training Objectives in section 3.3 above needed for each piece of  
23 equipment, system, finish, etc. This meeting shall occur no less than four (4) weeks prior to the anticipated  
24 training session.
- 25 B. The contractor shall use the information from item 3.4.A above to prepare a formal training program for each  
26 piece of equipment or system based on the Training Objectives in 3.3 above.
  - 27 1. The formal training program shall include the following information:
    - 28 a. Session title
    - 29 b. List of systems, equipment, use, care, etc to be covered during the session
    - 30 c. Provide the following for each systems, equipment, use, care, etc to be covered during the session
      - 31 i. Name and affiliation of each instructor to be used. As needed and discretion of the Owner  
32 the GC to require attendance by the installing technician, installing Contractor and the  
33 appropriate trade or manufacturer’s representative.
      - 34 ii. Qualifications of each instructor to be used. Practical building operation expertise as well  
35 as in-depth knowledge of all modes of operation of the specific piece of equipment as  
36 installed in this project is required by the training personnel. If Owner determines training  
37 was not adequate, the training shall be repeated until acceptable to Owner.
      - 38 iii. A checklist of all documentation and system/equipment requirements necessary to  
39 complete a successful training session and the current status of each
      - 40 iv. Any additional documents, training aids, video or other items to be used to complete the  
41 training
      - 42 v. Any special requirements or needs associated with item iv above to complete the training
    - 43 d. The intended audience for the training
    - 44 e. The approximate duration of each objective or topic to be covered
  - 45 2. Submit the completed training program to the GC for review and approval by the PE and CPM.
- 46 C. The PE and CPM shall work with staff as necessary to ensure all points of anticipated training needs have been  
47 met. The PE and CPM will approve the program as submitted or recommend changes for re-submittal as  
48 necessary.

49  
50 **3.5. CONDUCTING A DEMONSTRATION AND TRAINING SESSION**

- 51 A. All contractors shall conduct their required D&T Sessions as follows:
  - 52 1. Begin with a classroom session
    - 53 a. Provide a sign in sheet indicating all training to be conducted, instructors, etc.
    - 54 b. Provide an overview of the training to be conducted including the approximate schedule.
  - 55 2. Conduct a general walk-through of the site.
    - 56 a. Point out locations of various equipment, valves, charts, and other related items.
    - 57 b. Use the Division or Trade As-Built record drawings to indicate locations of hidden or buried items.
  - 58 3. Provide a demonstration of general equipment/system operation including using the O&M manual.

- 1 a. Startup and shutdown procedures.
- 2 b. Normal operational levels as depicted by any gauges, software, etc.
- 3 c. Indicate warning devices, signs etc. and demonstrate emergency shut-down procedures.
- 4 4. Provide a demonstration of all owner level maintenance using the O&M manual.
- 5 a. Indicate frequency of maintenance.
- 6 b. Provide and review all spare parts, special tools, and special materials.
- 7 5. Provide and review all spare parts, special tools, special materials, or attic stock as applicable.
- 8 6. While conducting D&T sessions:
- 9 a. Allow hands on training whenever practical.
- 10 b. Answer questions promptly
- 11 c. Repeat demonstrations and procedures as necessary.
- 12 B. Within two (2) working days of completing the D&T session the contractor responsible for the session shall turn-
- 13 in any documentation generated including the sign in roster to the GC.
- 14 C. The GC shall turn over all training documentation to the PE and CPM upon completion of D&T sessions.
- 15 D. Re-schedule any training that has been determined to be inadequate or inappropriate for any reason including
- 16 but not limited to any of the following;
- 17 1. Unqualified instructor
- 18 2. System installation incomplete or untested to the specifications
- 19 3. Equipment failure during demonstration
- 20 4. Un-expected cancellation
- 21

22 **3.6. CLOSEOUT PROCEDURE**

- 23 A. Prior to receiving the 90% Progress payment the GC shall:
- 24 1. Verify with the PE and CPM that each Demonstration and Training Session was conducted properly and
- 25 according to the submitted plan.
- 26 2. Any required "Off Season" equipment testing, balancing, and Demonstration and Training Sessions have
- 27 been tentatively scheduled with the GC, necessary sub-contractors, instructors and Owner/Owner
- 28 Representatives as necessary.
- 29
- 30

31 **END OF SECTION**

32

**SECTION 10 22 39  
FOLDING PARTITION PANEL REPLACEMENT**

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**PART 1 – GENERAL**

**1.1. DESCRIPTION OF WORK**

- A. Extent of Folding Doors and Partitions is shown on the drawings. Work includes taking down and disposing of all existing panels in the Meeting Rooms and Hall of Ideas. Install new panels into the existing track meeting the following specifications. See Alternates for replacement of existing pocket doors in each room. Types of Folding doors and partitions required include the following:
1. Flat wall type folding panels only. Existing track to remain.

**1.2. QUALITY ASSURANCE**

- A. Installer Qualifications: Firm with not less than 5 years of successful experience in installation of units similar to those required for this project and which is acceptable to or licensed by the manufacturer of folding doors and partitions.
- B. Sound Transmission Classification (STC): Where shown, provide folding partition units capable of achieving STC rating indicated, when tested in accordance with procedures of ASTM E90.
- C. Flame Spread Rating: Use only facing materials which have a Flame Spread Rating of 25 or less when tested in accordance with ASTM E84.

**1.3. SUBMITTALS**

- A. Product Data: Submit manufacturer's technical data and installation instructions for each type of Operable Partition.
- B. Certifications: Submit certifications by independent testing laboratories for the following:
- STC rating.
- C. Submittal drawings: Furnish submittal drawings showing complete sections, details and dimensions. Drawings to be submitted to Owner for review and approval prior to manufacture of panels. Submittal drawings shall fully detail:
1. Panel carriers, locations and operating details.



- 1                    2. Top and bottom retractable seals with method of activation and location of operating mechanism.
- 2                    3. Vertical seals on panels and expandable jamb attached to last panel for final closure. Show actual nesting
- 3                    depth of panel vertical seals.
- 4                    4. Panel construction showing gauges and thicknesses of all materials.
- 5                    5. Construction of pass doors showing compliance with ADA and latching, hardware, operation, full width
- 6                    panic device and accessories per this specification.
- 7                    6. Pocket door construction including jambs and concealed operating hardware (for pricing of alternate bid
- 8                    item)
- 9                    D. Product delivery, storage, and handling: This Contractor is responsible for taking down and disposing of existing panels,
- 10                    new panels, all freight charges, receiving, unloading and moving of materials to site. Factory wrap all panels in heavy
- 11                    plastic prior to crating and hang panels with protective plastic wrap in place. Remove wrapping to complete installation.
- 12                    This Contractor is responsible for all dumpsters for existing materials and packing materials for new panels.

14 **1.4. WARRANTY**

- 15                    A. Partitions and installation: Partitions and installation shall be guaranteed under normal usage for a period of two (2)
- 16                    years after substantial completion.

18 **PART 2 - PRODUCTS**

20 **2.1. ACCEPTABLE MANUFACTURERS**

- 21                    A. Manufacturer: Provide each type of Partition assembly as a complete unit by one manufacturer including necessary
- 22                    hardware, fittings, accessories and anchorages.
- 23                    B. Provide Operable Partitions by one of the following modified to be in strict conformance with all aspects of this
- 24                    specification:
- 25                    HUFCOR Model 642 with type 40 carriers and 641 with type 36 carriers.
- 26                    C. Other manufacturers may bid in conformance with function, utility, operation and will modify their partitions to be in
- 27                    conformance with this specification. Requests for substitution of products should use the form found in specification
- 28                    01 25 13 Product Substitution Procedures, and be submitted for review prior to the date listed Existing tracks will not
- 29                    be replaced. All bidders must include compatible carriers to fit into existing tracks.

31 **2.2. FLAT PANEL TYPE FOLDING PARTITIONS**

- 32                    A. Operation shall consist of a series of manually operated panels, top-supported, with mechanically operated bottom
- 33                    seals. Type I panels to be center stacked, hinged in groups of two, as shown in the Meeting Rooms. No single panels
- 34                    or groups of three panels will be permitted. Type II panels to be individual panels with remote stack as shown as
- 35                    shown in the Hall of Ideas.
- 36                    B. STC Rating: STC rating of 55 +/-1 STC.
- 37                    C. Existing Track and Suspension System: Existing track is Hufcor standard aluminum #40 track for Meeting Rooms and
- 38                    #36 for the Hall of Ideas. Provide one (1) four-wheel self-lubricating ball bearing carrier, equal to Hufcor type 40 for
- 39                    each Meeting Room panel and two carriers, equal to Hufcor type 36 for each panel in the Hall of Ideas. Replacement
- 40                    of track shall not be permitted.
- 41                    D. Panels: Partition shall consist of equal size panels, 4" thick and not to exceed 48" wide. Panel faces shall be minimum
- 42                    18-gauge steel with 1/2" gypsum board acoustical backer. Faces shall be mounted in full perimeter metal frames to
- 43                    enclose and protect all edges of the surface material. Panel faces shall be removable and replaceable on the job site
- 44                    for future service, repairs and re-facing.
- 45                    E. Panel Quantities and Sizes: See drawings for panel sizes and quantities. No exception from these drawings will be
- 46                    accepted.
- 47                    F. Panel Frame Finish: Frames shall be steel with lambs wool baked powder coat finish.
- 48                    G. Weight of Panels shall not exceed 11 pounds per square foot.
- 49                    H. Sound Seals shall be as follows: VERTICAL seals between panels shall be deep nesting tongue and groove type. Both
- 50                    top and bottom horizontal mechanical seals shall be operated by a removable handle concealed in the panel edge.
- 51                    Top and Bottom retractable seals are required for all panels, including pass door and expandable closure seal panels.
- 52                    The seals shall not contact the floor or track during movement of the panels. Operation of the seals shall require no
- 53                    more than a 180 degree turn of the handle. Operating mechanism shall be located approximately 42" above finished
- 54                    floor. Horizontal floor seals shall provide for minimum 2" floor and 1" top clearance and exert minimum of 40 pounds
- 55                    of downward stabilizing pressure when extended. Constant contact sweep style seals, foot bolts, bump or trip-back
- 56                    seals or activation of seals from panel face shall not be permitted. Mechanical seals shall allow panels to be locked
- 57                    into place anywhere along track runs independent of other panels. Seals for all panels hinged in a group shall operate
- 58                    simultaneously.

- 1 I. Jambs: Panels shall fade into pockets as shown. Pocket doors have gaskets on edges to seal against panel faces and  
2 are designed for a minimum 4" thick panel. Provide compressible vinyl seal on lead edge of first panel. Fixed wall  
3 jambs shall not be acceptable.
- 4 J. Lead panel in stack position shall be capable of activating bottom seals to lock partition in place and prevent  
5 movement of panels by unauthorized persons.
- 6 K. Panel hinges on Meeting Room panels shall integral with or concealed by metal edge frame, such as piano or Soss  
7 type hinges. Butt type hinges protruding more than 1/4" from panel face shall not be acceptable.
- 8 L. Pass Door Panels: Provide panels with inset pass doors where shown on plans. Pass door panels shall have same  
9 retractable pressure seals at the top and the two bottom legs. Pass door shall have adjustable floating seal at  
10 bottom. Pass door panels shall not change top and bottom retractable seals on adjacent panels. Pass doors to be  
11 minimum 7'-0" x 3'-0" and include ADA compliant hardware. Provide full width non-locking panic device on push side  
12 of all pass doors and pull type latching hardware on opposite side. Roller or magnetic latching shall not be  
13 acceptable. Provide photo luminescent exit sign above each inset pass door where noted on drawings.
- 14 M. Pocket Doors (Alternate bid item 1): Provide acoustical pocket doors where shown. All operating hardware to be  
15 concealed. Hinges to be piano or Soss type. Butt hinges and face or surface mounted foot or floor bolts shall not be  
16 acceptable. Provide one (1) new type 3 pocket door for the Hall of Ideas, and provide seven (7) new type 3 pocket  
17 doors for the Meeting Rooms under Alternate 1.
- 18 E. Finishes:
- 19 Panel Frames: Powder coated enamel in lambs wool.  
20 Panel Faces: Pattern and color to match existing panel faces. Basis of design to be Hufcor Revelations woven polyester  
21 fabric. Pattern to be Silk Road. Color to match existing - Raw Silk #22-02.  
22 Pocket Doors (Alternates 1 & 2): Outside faces to match same Revelations woven fabric as on basic panels. Inside faces  
23 to be standard vinyl in color similar to the Revelations fabric.
- 24 B. Attic Stock: Provide one roll of 50 yards of the Revelations fabric to the owner at time of delivery of new panels.  
25 Fabric to be wrapped in plastic and marked as "Attic Stock for new Folding Panels 2018".  
26

### 27 **PART 3 - EXECUTION**

#### 28 29 **3.1. INSTALLATION**

- 30 A. General: Comply with manufacturer's recommended installation procedures unless more stringent requirements are  
31 indicated elsewhere.
- 32 B. Acoustical Units: Install units with STC rating so that seals are in contact with entire perimeter when unit is in closed  
33 position, forming light-tight barrier.
- 34 C. Light-Leakage Test: Illuminate one side of partition installation and observe vertical joints and top and bottom seals  
35 for voids. Adjust partitions for alignment and full closure of vertical joints and full closure along top and bottom seals.
- 36 D. Owner Training: Engage a factory-authorized service representative to train Owner's maintenance personnel to  
37 adjust, operate, and maintain operable panel partitions.  
38

#### 39 **3.2. ADJUSTMENTS**

- 40 A. Adjust units as necessary to assure smooth, quiet operation without warping or binding. Check and readjust  
41 operating hardware so that latches engage accurately and positively without forcing and binding.  
42

#### 43 **3.3. ALTERNATES**

- 44 A. Alternate #1: Provide price to replace the one (1) existing pair of pocket doors in the Hall of Ideas and seven (7) existing  
45 pair of pocket doors in the meeting rooms, and replace with new pocket doors as described in the specifications above.  
46  
47  
48

**END OF SECTION**